

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

APRIL 1952

TWO DOLLARS

Addresses

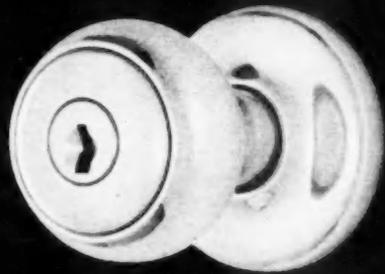
and Equipment

Corp., Chevrolet Motor Div.
such as those involving developments
more popular major items in need of
work. For example, the design of
Works is indeed a...
Garage Hardware Dept.
taken to make this index as accurate
American Builder is not responsible
omissions and other discrepancies

... of Manufacturers With Advertisements in This Section Appear in Boldface

**BUILDER-DEALER
Catalog
Directory**
FOR THE
Light Construction Industry

SEE ADVERTISERS INDEX FOR DETAILED
INFORMATION



behind the glistening finish—

precision manufactured security



kwikset sales and service co.
anaheim, california



INSIDE and OUTSIDE

YOU SAVE BUILDING TIME AND LABOR WITH *Fenestra* READY-TRIMMED WINDOW UNITS

Sash, frame, hardware, inside trim, outside trim—all in one modern unit that comes to the site completely assembled for easy handling, quick trouble-free installation! Now all standard sizes of popular Fenestra® Residence Steel Casements are available in this new time and money-saving package.

Goes in Simplest Rough Opening

Sheathing is run over studs and cripples, nailed and cut flush around opening. No need to recess for stops, etc. Same rough opening preparation for frame, brick veneer or stucco.

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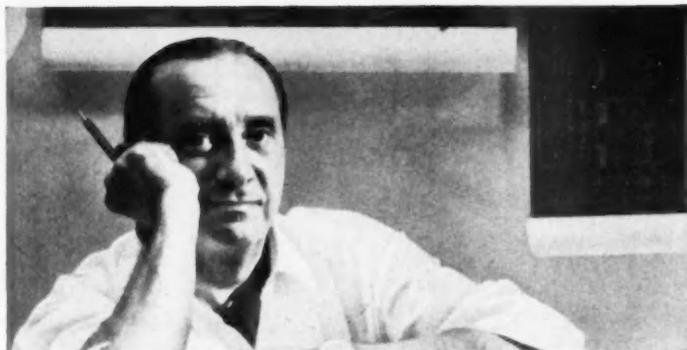
Fenestra Steel Casement Units are weather-tight. The windows are graceful and beautiful. They always open easily. They are washed, screened, and storm-sashed from the warm, comfortable *inside* of the house. And they are available Super Hot-Dip Galvanized and Bonderized (on special order), so they never need maintenance painting. Call your Fenestra Representative today. Or write Detroit Steel Products Company, Dept. AB-4, 2268 E. Grand Blvd., Detroit 11, Michigan.

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A complete package • Sash • Frame • Hardware • Inside Trim • Outside Trim

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Northridge Project, Jackson Heights, N. Y.

Erwin Gerber, Architect

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AMERICAN BUILDER

AMERICAN BUILDER

Founded—1879

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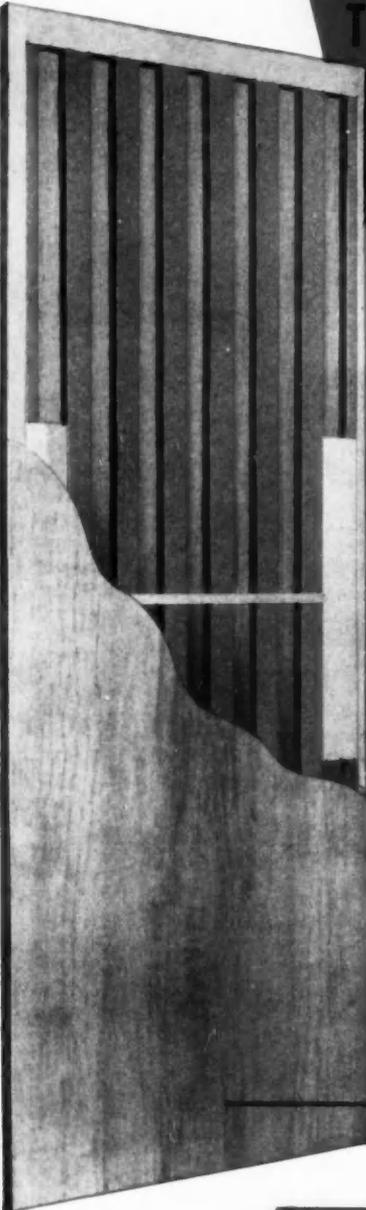
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The **HASKO** "MOBILE"
FLUSH DOOR
with a "FLEX CORE"...

...has a simple, sound assembly for maximum strength and durability yet is made to meet the price market.

This adaptation of the hollow-core principle meets the demand for high quality and low cost. *This is another engineering achievement by HASKO for the builder who needs better flush doors.* It is truly an economy door of outstanding quality.

LOW COST The HASKO "MOBILE" FLUSH DOOR is priced competitively, and is made and backed by a responsible manufacturer.

QUALITY GUARANTEED The HASKO "MOBILE" FLUSH DOOR carries the same guarantee and responsibility as the famous Hasko Arch-Kor Flush Door. It features "balanced" construction, and the warp-resistant, sound deadening and proper ventilation characteristics engineered into all Hasko Flush Doors. Its frame is constructed of selected kiln dried lumber and allows a generous amount of stock for trimming, plus sturdy 3/16" thick face panels.

8-WAY HANGING SPEEDS INSTALLATION Large 3x25 (5x25 including frame) double lock-blocks provide for fast, easy 8-way hanging of the HASKO "MOBILE" FLUSH DOOR.

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TESTED Thorough tests prove durability. The HASKO "MOBILE" FLUSH DOOR has withstood kiln tests of as high as 48 hours at 170 degrees. The Hasko name means sound construction, high quality, expert design and craftsmanship.



WRITE today for the special HASKO "MOBILE" FLUSH DOOR Bulletin. Orders will be filled in the sequence in which they are received.



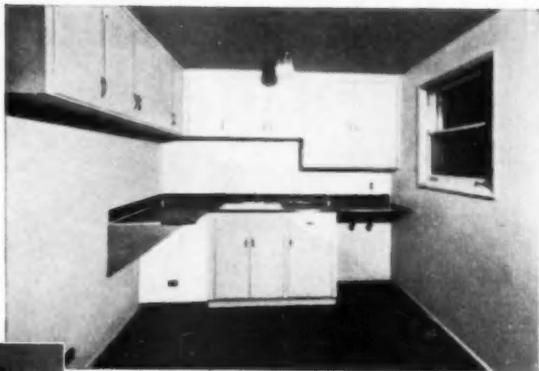
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HASKELITE MANUFACTURING CORPORATION
Grand Rapids 7, Michigan

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ORDINARY INTO**



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Westinghouse Appliances Mean Extra Value to Home Seekers

No builder in his right mind would include appliances in the houses he builds unless they attract more prospects . . . make houses easier to sell . . . reflect the quality of his houses. And that is just what appliances do!

We have just completed a country-wide survey of purchasers of Westinghouse-equipped homes. The results bear out the wisdom of equipping houses with Westinghouse Appliances. They prove conclusively that the appliances were a dominant reason for buying these homes. They reveal what appliances people want and how they want them financed.

We believe the information will be valuable to you. Send the coupon below, we'll rush a copy to you.

. . . of course, it's electric!

Westinghouse Electric Corporation
Electric Appliance Division
Mansfield, Ohio

Please send me a copy of your booklet "Do Appliances Help House Sales?"

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Street _____

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YOU CAN BE SURE ... IF IT'S **Westinghouse**



Even the Lowest-Priced Houses Can Afford These Three NuTone Products

Let the NuTone Package make your low cost houses **MORE ATTRACTIVE, MORE COMFORTABLE and MORE SALEABLE!**

For only \$84.95 or less (at list prices) . . . the NuTone Package gives you the "edge" over competition . . . because the NuTone Package "dresses up" your homes . . . with **ALL 3 NUTONE PRODUCTS** . . . A NuTone Ventilating Fan, to eliminate kitchen grease and cooking fumes . . . a NuTone Door Chime for a friendly musical greeting at the front door . . . and a NuTone Heat-A-Lite, the revolutionary new Electric Ceiling Heater and Light, to make bathrooms "toasty warm."

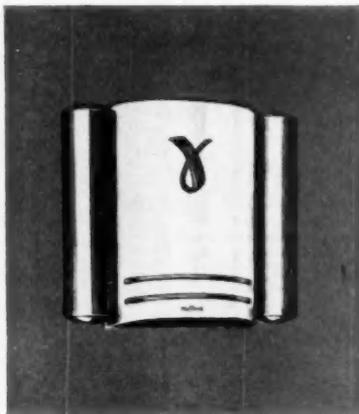
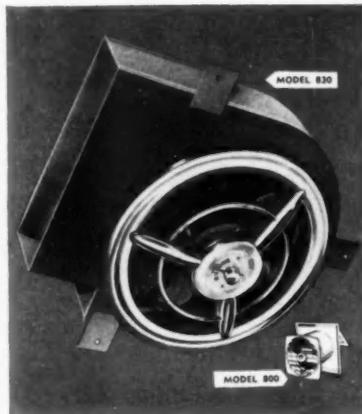
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TRADE MARK

NUTONE, INC., Dept. AB-6, Cincinnati 27, Ohio.

\$84 QUESTION

NEW HOME BUYERS ARE "SHOPPING" FOR
LOW-COST HOUSES . . . BUT THE QUESTION IS

WHOSE LOW-COST HOUSES WILL THEY BUY?



THE ANSWER IS . . . **THEY'LL BUY YOUR HOUSES WITH**

NuTone's *\$84⁹⁵ OR LESS AT LIST Package

* The NuTone package includes Model 800 NuTone Ventilating Fan at \$27.75 list (or Model 830 NuTone Ventilating Fan at \$26.50 list); a NuTone model K-16 Door Chime at \$7.25 list; and a NuTone Heat-A-Lite Model 900, at \$49.95 list — ALL INDIVIDUALLY PACKAGED.

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NUTONE HELPS YOU SELL YOUR HOMES FASTER

Turn the low cost housing market into YOUR MARKET . . . with the NuTone \$84.95* package. Write today for complete details about this plan, including free literature, diagrams, specifications and data for installing NuTone Ventilating Fans, Door Chimes and Electric Ceiling Heaters.

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Firm _____ Position Held _____
Address _____
City _____ Zone _____ State _____

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in 5 New Furnaces

added to COLEMAN

Blend-Air[®]
HEATING AND VENTILATING SYSTEM



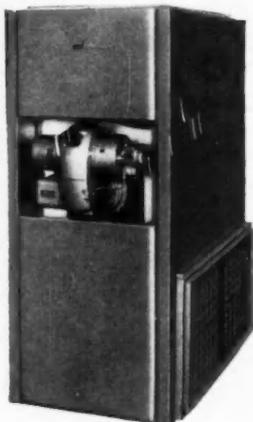
GAS

3 NEW MODELS

(Natural, Mfd., Mixed, LP-Gas)

75,000, 100,000 and 125,000 BTU input

Factory-assembled complete with rugged combustion chamber, burner, blower-motor unit, inner casing—all enclosed in beautifully styled cabinet. Internal wiring ready to connect to thermostat and house service. Controls factory-installed, conveniently located in vestibule compartment. Unusually compact for models of this capacity, assuring outstanding performance to suit every home. Approved by American Gas Association.



OIL

2 NEW MODELS

80,000 and 97,000 BTU output

They take unusually small floor space to give dependable heating performance at low operating cost. Equipped with Coleman gun-type burner. Smartly designed with neutral tan baked enamel finish. Filter frame removable to either side for flexibility in installation. *Other Coleman features:* Even-Flo Blower Unit, Exclusive Coleman Draft Meter and Chimney Crown, completely automatic Control System for trouble-free operation. Listed under label service of Underwriters' Laboratories.

The
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of
Coleman
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1. MAGIC BLENDER

in each room blends room air with freshly heated furnace air right in the wall, then RE-circulates for even warmth.



2. 3/4-INCH HEAT TUBES

carry freshly heated air to Blenders. Small enough to fit any construction, old or new.



3. BLEND-AIR FURNACE

with fresh air intake uses up as little as 6 sq. ft. of floor space anywhere—basement, closet, utility room.

These 5 new Coleman Forced Air Furnaces

now make it possible to equip more homes with the revolutionary, low-cost Blend-Air Heating and Ventilating System. Users everywhere praise its low-cost performance and evenly distributed automatic comfort—it's the kind of heating performance customers are willing to buy—makes homes easier to sell. Send coupon for complete information. The Coleman Company, Inc., Wichita 1, Kansas.

Comfort costs so little with a Coleman
America's leader in home heating



Coleman[®]

THE COLEMAN COMPANY, INC.
Dept. AB-752, Wichita 1, Kansas

Please send complete information on Coleman Blend-Air.

Name _____

Street _____

City _____ State _____



Westinghouse **micarta** will
PLASTIC SURFACE
clinch sales

at less cost, time and trouble!

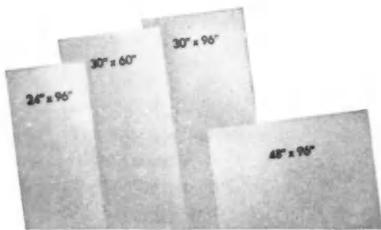
Experience is proving that when the "Better Half" of the home-buying couple spots MICARTA-topped surfaces in kitchens and bathrooms she quickly jumps to the salesman's side.

There's a reason. She knows from national advertising on Television and in Better Homes & Gardens that MICARTA'S[®] tough, super-smooth surface requires just a swish of a damp cloth to keep it sparkling clean. In her mind's eye she has matched MICARTA'S full-range of decorator colors with her own personal color scheme.

The "Other Half" wants his *money's worth* . . . and so do you. Tell him MICARTA will last a lifetime, never needs to be replaced. Your "money's worth" comes in the form of MICARTA pre-bonded to plywood for easier, faster installation by any good carpenter.

Add the "housewife appeal" of MICARTA to your own savings in time and labor, and you'll agree with other builders that MICARTA is a "smart, effective salesman".

J-06473



MICARTA panels come in four sizes to eliminate almost all waste. 24" x 96"
 . . . 48" x 96" . . . 30" x 60" . . . 30" x 96".
 (All $\frac{3}{8}$ " thick)

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CITY _____ ZONE _____ STATE _____

AD-4-92



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in hardwood floors*

■ Specify *prefinished* Bruce Strip Floors to give owners more value for less money.

The factory-applied finish brings out all the natural beauty of the wood . . . doesn't cover up or discolor the grain. Tests have proved it will outwear surface finishes at least 3 to 1. And housewives find their *prefinished* Bruce Hardwood Floors far easier to keep clean and beautiful.

The cost of this modern hardwood flooring is usually less than the same grade of unfinished flooring plus the expense of on-the-job finishing. There's a saving of 3 to 5 days' time on every house because there's no sanding and finishing, no holding up the work of other trades. Write for complete information on *prefinished* Bruce Strip Floors. See our section in Sweet's File.

Bruce
 *Prefinished*
STRIP FLOORS

PRODUCT OF E. L. BRUCE CO., MEMPHIS 1, TENN.

*World's largest maker of
hardwood floors*

A New American Builder Service

THIS issue of *American Builder* is the first complete catalog and reference data book ever prepared for the entire light construction industry. Its function is two-fold. First, it contains a directory of building products arranged alphabetically, and with supplementary listings and other information to facilitate use. Second, it contains a wealth of reference data material on the use of most building products. It is in every sense a "Where to get it—How to use it" book.

Supplementing the alphabetical listing of products are several others. One is an alphabetical listing of brand names identified with the producers who use those names. Second, is an alphabetical list of producers. Finally, there is a list of trade associations, also arranged alphabetically. Thus, a reader interested in a given product, can turn to the products list, and find the names of the manufacturers who produce the product. If the reader knows only a brand name he can turn to the brand name listing, and immediately determine the name of the manufacturer of products under that brand name. The listing of manufacturers permits the reader to instantly find an address. Finally, the association listing is included to enable the reader to get information of a general nature on any given class of products. Manufacturers whose products are advertised in *American Builder* appear in bold type. The purpose of this emphasis is to enable the reader to comb through his library of *American Builder* issues for the specific

information contained in the advertising of a given manufacturer or group of manufacturers.

The main editorial section of the book is the reference data section. This is divided into chapters with the contents of each clearly noted. Advertising, with the exception of a few pages that were not classifiable or came in too late to be classified is included in the chapter which treats the product or products advertised.

This association of advertising with the reference data saves time for the reader and directs him quickly to an invaluable source of useful editorial and advertising information on any given product. To accomplish this type of make-up it was necessary to solve many unprecedented production and printing problems. It was possible only through excellent cooperation on the part of advertisers and advertising agencies, and perfect liaison between our business and editorial staffs.

The magnitude of the job that faced the publishers probably can be appreciated when it is known that approximately 5,775,000 separate impressions in the printing shop were necessary to produce the issue. The publishers are proud of this latest first in a long line of *American Builder* firsts, and in commending our own editorial and business personnel together with advertisers and advertising agencies, view this trail-blazing issue as another indication of *American Builder's* continuing leadership in the light construction industry.

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AB Washington News Letter

For the Light Construction Industry

A special service for American Builder readers. The latest Washington developments affecting the light construction industry assembled by special Washington correspondent and sent by wire to be printed and bound in your American Builder at the last minute before it is mailed. A regular monthly feature.

Washington, March 24, 1952.

▶ **THOSE NEW CONSTRUCTION REGULATIONS**, pending since the first of the year, have been issued by NPA. Order M-100 applies to that "separate breed" — the home builders. Another regulation, Revised CMP Reg. 6, covers other construction. Both orders became effective March 6.

▶ **ORDER M-100**, the housing regulation, covers construction or alteration of housing up to four-unit size, except Wherry-Act housing. Larger multi-unit structures are under CMP Reg. 6.

▶ **THE NEW ORDERS ARE Milder** than old regulations. There are substantial relaxations on the use of steel. The only curtailment of importance is a reduction (by 25 pounds) in the amount of copper permitted for houses with copper water distribution systems. Mixed water service systems are permitted, as noted below.

▶ **SELF-AUTHORIZATION REMAINS** in effect. Home builders can self-certify orders for CMP materials, the same as under former regulations. NPA dropped plans for imposing new limitations on housing, like square-footage or a bath-and-a-half per unit.

▶ **M-100 SETS UP THE FOLLOWING** self-certification allowances per unit on housing started after March 6:

Structures using copper water distribution systems: 1,850 pounds of steel, 35 pounds of copper.

Structures using copper water distribution systems: 1,950 pounds of steel, 135 pounds of copper.

Where a local building code requires type B or K copper tubing for underground water service connections, but steel pipe is used inside: 2,135 pounds of steel, 80 pounds of copper. If copper pipe is used inside: 1,950 pounds of steel, 145 pounds of copper.

▶ **ANOTHER PROVISION** of M-100 permits self-certification of up to 50 per cent of the above amounts for alterations. But a home must be at least a year old before this can be done.

▶ **IF ALTERATION** of an existing structure includes initial electrical wiring, an added 17.5 pounds of copper per unit can be self-certified. Similarly, additional materials can be self-authorized to cover initial plumbing installation. New units using electrical energy heating systems get a bonus of 15 extra pounds of copper.

▶ **ONE BIG CHANGE** from previous regulations: Builders may substitute aluminum for copper in electrical wiring systems. One pound of aluminum for two pounds of copper. If aluminum wiring is used, the copper allotment per unit must be reduced accordingly.

▶ **NO ALUMINUM** can be self-certified, except for wiring. Likewise, no structural or stainless steel is permitted in new home construction. There are several specific prohibitions, also, on the use of copper fabricated on the job site. Examples: Downspouts, gutters and accessories; linoleum stripping, roofing, and in cement or composition flooring.

▶ **A VIRTUAL BAN ON SEASONAL HOUSING** is contained in M-100. This ban hits both new construction and alterations. After March 6 a builder can't self-certify for this type construction unless he first obtains an "exception" to the order — and NPA says it won't grant many. Only in cases of "undue hardship." But if construction or alteration of a "seasonal" house was already under way on March 6, a builder can use regular self-certification to go ahead and complete the job.

▶ **FOR TEMPORARY HOUSING**, self-certification is out. A CMP-4C application must be filed and approved (by HHFA) on all such housing. Again, the rule does not apply if construction or alteration was already under way before March 6.

- ▶ **USE OF FOREIGN OR USED STEEL**, including structural, is permitted under both M-100 and CMP reg. 6. It won't be charged against the self-certification quota in any case. Members of the construction industry advisory committee held out for this and won. But NFA warns that it won't match this "free" steel with added amounts of copper or aluminum.
- ▶ **BUILDERS CAN USE** a "D0" rating to obtain materials and equipment other than basic controlled metals of steel, copper and aluminum. The allotment symbol for housing is "U-7."
- ▶ **CONSTRUCTION UNDER WAY** when M-100 was issued will continue to be governed by regulations previously in effect. In some cases, this will mean a more liberal copper allotment. If a builder finds material benefits in the new order, NFA says he can switch over and use it. He can also use the new aluminum-wiring provision. But all housing started after March 6 has no choice. It is regulated entirely by the new rules.
- ▶ **ONE AIM OF M-100**, according to NFA, is to bring materials out of inventory and get them charged against CMP. Under former regulations a builder could supplement his self-certifying quota by using from his own inventory. This is no longer permitted. Under the new rules, anything used from inventory must be considered a part of the per-unit quota, the same as though it were acquired from an outside source by self-certification.
- ▶ **REVISED CMP REG. 6** follows the new housing order in easing up on steel. A principal change from former regulations is the increase, from two to five tons, in the amount of carbon steel that can be self-authorized each quarter for a commercial, non-industrial project. But only two of the five tons can be structural. And no wide-flange beams at all.
- ▶ **LIBERAL RELAXATION** for new commercial and industrial construction is indicated for last two quarters of '52. DPA is encouraging filing of all applications for processing now so work can start promptly. Any prolonged strike in the steel industry could reverse this outlook.
- ▶ **MORE PRE-COMMITMENT AUTHORITY** for FNMA may be forthcoming to help builders meet defense housing needs. Industry spokesmen are pounding away on the theme that such authority is needed to help break the present mortgage bottleneck.
- ▶ **RESOLUTIONS** were introduced in Congress March 13 to add \$52,000,000 to FNMA'S pre-commitment authority. This addition would cover more than 5,600 units in 37 specific critical areas. Applications for pre-commitment on this housing were made before FNMA'S authority expired last December 31; but the agency had used up all its \$200,000,000 authorization before it got around to them.
- ▶ **DIRECT-LOANS-TO-VETERANS BILL** passed the House, 341 to 0. It's now pending before a Senate committee. The bill would guarantee VA at least \$25,000,000 a quarter for making direct home and farmhouse loans to veterans. It would add a total of \$125,000,000 to the agency's "revolving fund."
- ▶ **HOUSE APPROPRIATIONS COMMITTEE**, at work on the big 1953 budget, has recommended that Congress authorize construction of only 25,000 public housing units during the next fiscal year. The budget request was for 75,000.
- ▶ **THE HOUSE HAS WHITTLED** large chunks off President Truman's recent request for more funds for defense housing activities of HHFA and FSA. Provision of community facilities and services is a joint HHFA-FSA responsibility under the Defense Housing Act, and \$44,500,000 was requested for this work. The House, in passing the bill, approved only \$13,375,000. In addition, President Truman asked \$25,000,000 for public housing under HHFA. This was cut to \$12,500,000.
- ▶ **FEBRUARY HOUSING STARTS** were estimated at 77,000 by the Bureau of Labor Statistics. This compares with a January total of 68,000, and with 80,600 starts in February 1951. Private building alone accounted for approximately 74,500 of the starts in February 1952.
- ▶ **WAGE BOOSTS** for construction workers may result from new policy just announced by the Wage Stabilization Board. The board said it would approve pay increases of up to 15 cents an hour in 1952. Nor will it oppose establishment of health and welfare plans for construction workers, provided employer contributions to such plans do not exceed 7 1/2 cents an hour.

Here's the Home Building Picture Across the Nation

AMERICAN BUILDER again presents its exclusive, nation-wide quarterly survey of current industry opinion on the most pertinent problems of the day and the outlook for the immediate future.

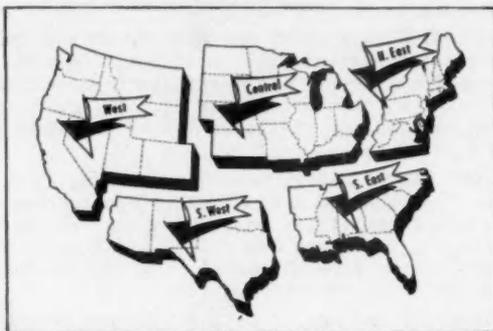
Last-minute telegraphic reports from leading active builders, reproduced here in capsule form, provide the most authentic and up-to-date information available. The adjoining map indicates the states represented in the regional summaries.

Consensus:

Out of the haze of varied opinions, there appears to be a definite feeling of quiet optimism, which was lacking in the January report. The newly enacted NPA M-100 regulation (discussed in detail in the *American Builder* Washington News Letter on pages 14 and 15) is expected to accelerate this favorable trend.

During the next six months, home starts may decline slightly—possibly 10 per cent—and building costs are not expected to change. Three months ago, estimates forecast an average drop of 20 per cent in starts and rise of 5 to 10 per cent in costs.

Sales resistance is increasingly apparent in moderate and



high-cost homes, while the mortgage situation remains much the same as in January, with conventional loans readily available, FHA in fair supply and VA very tight.

Few difficulties are reported due to NPA poundage limitations; materials supply lines are improving and talk of labor shortage has all but vanished.



Home Starts in Next Six Months— Increase or Decrease?

Northeast

Reports generally cancel each other out, indicate little over-all change in tempo, but represent improvement over forecast of last January. Central New York looks for an increase of 50 per cent, while New England centers expect general improvement, as much as 15 per cent in Boston and Hartford, Conn. Long Island expects to hold even while New Jersey centers vary from no change to a drop of 20 per cent. Philadelphia and Washington anticipate moderate decline.

Southeast

General decline forecast, excepting South Florida and Montgomery, Ala. Falling off of 40 per cent expected at Memphis and New Orleans.

Central

Iowa cities see 5 to 10 per cent more activity, except Davenport, which fears a 40 per cent drop. South Bend, Ind., expects a 15 per cent boost, while the St. Louis situation will probably remain static. Other areas forecast a slight cut, averaging 10 to 15 per cent or about the same as predicted in January.

Southwest

Area-wide decline of 25 per cent freely predicted, but San Antonio, Texas, believes the drop will be limited to 10 per cent.

West

Denver anticipates activity will be equalled or slightly surpassed. Spokane, Wash., anticipates no change. Other cities list decreases, from 10 per cent in Los Angeles to 30 per cent in Tacoma, Wash.

Is Sales Resistance Increasing? In What Price Brackets?

Northeast

Ready sales are the rule in lower-price ranges, with definite resistance beginning at \$12,000 in Philadelphia; at \$15,000 in Hartford, Conn., central New York and northern New Jersey; at \$20,000 in Boston and at \$35,000 in Essex and Morris Counties, N. J. Washington finds it hard to move homes requiring more than \$5,000 cash.

Southeast

Jackson, Miss., alone reports no particular resistance. Other centers note fair to strong resistance in all ranges except South Florida, where the sales slowdown begins at \$15,000 and Memphis, troubled mainly in the \$17,000 to \$20,000 bracket.

Central

Buyers becoming increasingly reticent in most areas, but Cincinnati and St. Paul, Minn., anticipate upward swing with arrival of spring. South Bend, Ind., experiencing difficulty in low-cost brackets, while Wisconsin, Illinois and Dayton, Ohio, note definite lack of sales over \$15,000. Regulation X down payment requirements generally held responsible for slowdown.

Southwest

Increasing resistance evident throughout territory, with only San Antonio, Texas, considering situation as "not serious yet." Market seen sluggish for homes priced at \$15,000 and up.

West

Fair resistance laid to financing difficulties. Sales still brisk in \$8,000 to \$10,000 bracket at Denver, with slower market, but "no distress housing deals at present" above that range.

"MISTER-That's Mortar!"

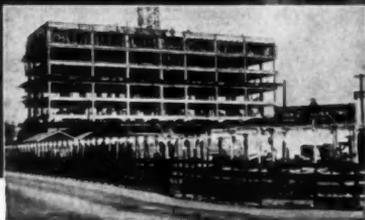


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Building Costs—What Changes May Come in the Next Six Months?

Northeast

Consensus indicates little or no change. Philadelphia, central New York and Delaware see a 5 per cent increase.

Southeast

Costs appear stabilized, with only Jacksonville, Fla., expecting an increase, 5 per cent. Slight decreases are predicted for South Florida and Birmingham, Ala.

Central

Slight rise in costs foreseen, with Sioux City, Iowa, topping the list at 5 to 10 per cent and Des Moines, Iowa, placing the figures at 5 to 8 per cent. Stable conditions are reported at Milwaukee, St. Louis, South Bend, Ind., and Davenport, Iowa, the latter explaining that lower cost of materials will offset the rising labor bill. If sales fall off, Cincinnati predicts a reduction in home prices as great as 10 per cent, with builders and suppliers cutting margins.

Southwest

Present levels likely to continue.

West

Opinion divided as to costs remaining the same or increasing. Rise of 10 per cent expected in Tacoma, Wash., while Denver rates it at 5 per cent. Los Angeles attributes an undetermined increase to labor conditions.

What's the Mortgage Money Situation?

Northeast

Availability of money for conventional, FHA and VA mortgages ranges from "good" in Boston to "very limited" in Washington, D. C. Philadelphia and Delaware have no VA money at all and in northern New Jersey only a small amount can be had upon payment of a premium. Conventional and FHA funds generally are in good supply, except for Philadelphia, where the FHA supply is tight.

Southeast

VA practically nil, although Birmingham, Ala., lists some loans available for houses priced above \$10,000. FHA and conventional loans reported available, but not plentiful, in Jacksonville, Fla. FHA situation is critical in New Orleans and all type of mortgages are very short in South Florida. In most cases, conventionals present no major problem.

Central

Scarcity of VA loans acute in all reporting centers, but recent improvement is noted in Davenport, Iowa, and Dayton, Ohio. Davenport reports FHA backing "reluctantly available," which seems to apply to South Bend, Ind., and Sioux City, Iowa. Conventional mortgages are in fair supply at 5 per cent interest, with top valuation about 60 per cent.

Southwest

No VA money available "at reasonable rate." San Antonio, Texas, reveals a 3 to 4 per cent premium is required, while Houston points out some loans can be had at 1½ to 5 per cent brokerage. FHA and conventional mortgages range from available to plentiful, except for the Texas Panhandle where "higher yields" are necessary.

West

Conventionals "available at a price" in Los Angeles; adequate elsewhere. FHA supply tight to fair in Spokane and Tacoma, Wash., otherwise satisfactory. VA situation universally bad—Denver has limited loans at "substantial discount."

Are NPA Poundage Limitations On Metals Hindering Completions?

Northeast

No problems on completions, as yet. Essex and Morris County, N. J., builders of large homes find it impossible to build units with more than two baths.

Southeast

Memphis reports regulations limit home size to about 1,400 sq. ft. of floor area. No difficulties revealed.

Central

St. Paul, Minn., which encountered difficulty with copper allocation for water supply lines, finds new M-100 order solves its problem. St. Louis has no problem now but fears latest regulation may cause trouble. Des Moines, Iowa, reports serious restriction of the market for larger custom-built houses.

Southwest

No difficulties.

West

No problems, other than elimination of the luxury home.

Is Labor Supply Adequate In All Trades?

Northeast

Manpower situation reported plentiful everywhere, although Hartford, Conn., warns it is becoming increasingly hard to find competent help.

Southeast

Supply ranges from adequate to abundant in all reporting centers.

Central

No shortage listed anywhere but in western Illinois, which finds the carpenter situation tightening. A minor degree of unemployment is cropping up in St. Paul, Minn.

Southwest

Adequate supply everywhere.

West

Only Denver reports a problem—scarcity of bricklayers, lathers and plasterers.

Are Materials in Adequate Supply?

Northeast

Sufficient quantities of all materials generally noted, the only exceptions being a growing copper scarcity in New York's Chemung Valley area and a tight supply of galvanized sheets in Essex County, N. J.

Southeast

Copper, aluminum and steel all on the critical list at New Orleans, Birmingham, Ala., lacks copper. No other shortages reported.

Central

Sole shortage acknowledged at the moment is large-sized copper wire at Dayton, Ohio. Cincinnati anticipates a cement crisis in late summer.

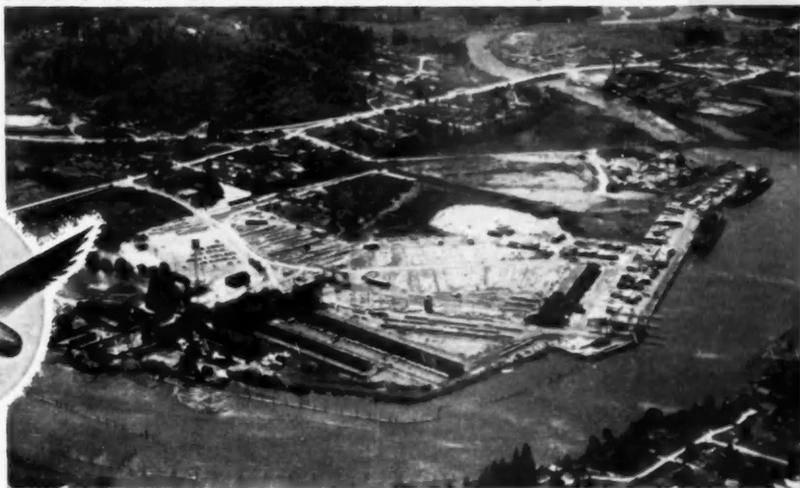
Southwest

Copper is off approximately 15 per cent in northern Texas. All supplies adequate at other reporting centers.

West

No signs of shortage in evidence, excepting Denver which foresees a future tightening of copper.

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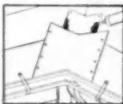
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AMERICAN BUILDER

ASSOCIATIONS

Their Plans and Activities

Dealer Meetings Draw Record Crowds As Industry Eyes Effects of Curbs

Keen interest in the status of the industry under current and potential government controls is pushing attendance to record levels at state and regional lumber dealer association conventions. Registration has hit the 4,000 mark at several meetings. Highest reported so far is the new Northeastern record of 4,748.

The traditional annual "get-togethers" of around 30 of the allied groups began in January and will continue through April. Becoming increasingly popular, the conventions are also long on history—it was the 71st annual meeting for the Ohio association and many are in their 50's and 60's.

Here are some convention highlights:

NORTHEASTERN

The Defense Production Authority's announcement that critical materials would be 40 per cent less available for home construction in 1952 than in 1951 has been labeled as "utterly unrealistic" by the Northeastern Retail Lumbermen's Association.

In a strongly worded resolution adopted at its recent record-breaking 58th annual convention in New York, the association charged that such a cutback would not create savings vitally affecting defense production, although it would probably provoke serious unemployment in the industry.

Held in the Hotel Statler, the sessions drew an all-time high registration of 4,748 persons, while 122 exhibitors occupied 163 booth spaces.

Frank H. Morin of Fulton, N. Y., was elected president to succeed Russell L. Fish of Scituate, Mass. Other new officers named were J. Harold Stacey, Windsor, Vt., first vice president; Devo W. Johnson, Ellenville, N. Y., second vice president; Arthur Clifford, Bridgeport, Conn., third vice president; Jay LeFevre, New Paltz, N. Y., fourth vice president, and Oliver J. Veling, Buffalo, treasurer.

Other resolutions adopted urged the government to stop yielding to demands by specially favored pressure groups for wage increases; asked Congressmen to scrutinize carefully all requests for appropriations and eliminate all non-essential expenditures from the national budget; called for cutbacks in public housing starts comparable to those set for private enterprise; recommended that all proposed public projects be submitted to local referendum and demanded legislation referring that all cooperatives "bear their fair share of the

tax burden."

Roy Wenzlick, St. Louis real estate and construction analyst, provoked considerable interest among the dealers with the statement that, generally, it is now



**Frank H. Morin,
Northeastern President**

inadvisable to build new homes in the over-\$15,000 class unless the sales order is in hand.

Senator Harry F. Byrd of Virginia closed the four-day session with a luncheon address, in which he charged that "fiscal irresponsibility" of the Truman administration had placed the nation on a path to insolvency and socialism.

(Continued on next page)

Steel Cabinet Producers Form Trade Association

Final organizational plans were completed recently by the Steel Kitchen Cabinet Manufacturers Association. Nineteen companies made up the original membership of the new group, with others considering affiliation.

Member companies at time of organization were:

Acme Metal Products Corp., American Central Division of Avco Manufacturing Corp., Berger Manufacturing Division of Republic Steel Corp., Crosley Division of Avco Manufacturing Corp., Elgin Steel Kitchens, Geneva Modern Kitchens, Inc., Harrison Steel Cabinet Co., Hubeny Brothers, Inc., Ing Rich Metal Products Co.

Lyon Metal Products Co., Marvel Metal Products Co., Miller Metal Products Co., Morton Manufacturing Co., Mullins Manufacturing Co., Murray Corporation of America, Palley Manufacturing Co., St. Charles Manufacturing Co., Shirley Corp., and Tracy Manufacturing Co., division of Edgewater Steel Co.

Named president of the new association was M. M. Miller, president of Miller Metal Products Co. F. F. Duggan general sales manager of American Central Division, Avco Manufacturing Co., is vice president, and Arthur J. Tuscani, trade association management firm head, is executive secretary and treasurer.

Air Mortgage Problems at Senate Hearing



LAWMAKERS AND HOME BUILDERS meet at recent seminar called by Senate banking and currency committee to discuss mortgage finance problems in connection with stimulation of defense and military construction. From left: John M. Dieckman, National Association of Home Builders legislative counsel; Senator Burnet M. Maybank of South Carolina, committee chairman; Emanuel M. Spiegel, New Brunswick, N. J., NAHB first vice president; Alan E. Brockbank, Salt Lake City, NAHB president; and Senator John M. Sparkman of Alabama.

Dealer Meetings Draw Record Attendance

(Continued from preceding page)

OHIO

A near-record attendance was reported at the 71st annual convention and materials exposition of the Ohio Association of Retail Lumber Dealers. Nearly 4,000 dealers, manufacturers and their guests were on hand for the recent meeting in the Cleveland public auditorium.

Product exhibits were more comprehensive this year, emphasizing growing competition, according to Findley M. Torrence, association secretary. Exhibits numbered 161.

More than 12 hours of panel discussions were conducted at top-management clinics during the three days of the convention. Topics included: more effective selling; better retailer-consumer relations; employee education; and improved merchandising policies.

An impressive display illustrating mill-work design and shop management was staged by the Cleveland Lumber Trade School. Suggested by the Cleveland Lumber Institute, the school exhibit was a new convention feature.

James Clemens of the Schertz Lumber Co., Youngstown, was elected president of the group for 1952, succeeding William Stine of Bryan. Also named to new offices were Homer Prakel, Versailles, first vice president; and Ralph Lutz, Lexington, second vice president. Re-elected were Allen Brain, treasurer; secretary Torrence; and Charles E. Benson, assistant secretary.

SOUTHWESTERN

A total registration of 4,250 at this year's convention broke all previous records for the Southwestern Lumbermen's Association. This was the 64th annual meeting of the group, made up of dealers from Missouri, Kansas, Arkansas and Oklahoma.

Business sessions were held at the Kansas City, Mo., municipal auditorium, where 177 exhibitors used 227 product display spaces.

The program reportedly met with greater enthusiasm than on any other recent occasion. The list of guest speakers included U. S. representative O. K. Armstrong of Springfield, Mo.; Garner M. Lester, president, National Tax Equality Association, Jackson, Miss.; Don A. Campbell, Lebanon, Ky.; NRLDA past president; and Dr. Allen A. Stockdale, National Association of Manufacturers.

Association officers elected to serve in 1952 are: Henry H. Jones, Little Rock, Ark., president; Fred S. Stephenson, Chickasha, Okla., first vice president; Sam M. Arnold, Kirksville, Mo., second vice president; C. M. McAllister, Garden City, Kans., third vice president; C. Wilbur Baker, Kansas City, Mo., treasurer; Frank E. Tyler, Kansas City, Mo., counsel; and Allan T. Flint, Kansas City, Mo., secretary-manager.



BOARD OF TRUSTEES of Ohio Association of Retail Lumber Dealers, including new and retiring chairmen of group's 26 districts, and association officers. Officers are (from left, front row) fifth person, William H. Stine, retiring president; seventh, Allen Brain, treasurer; second row fifth, James H. Clemens, new president; seventh, Findley M. Torrence, secretary; third row, sixth, Homer Prakel, first vice president; fourth row, eighth, Ralph C. Lutz, second vice president.



1952 OFFICERS Of Southwestern Lumbermen's Association: (from left) C. M. McAllister, third vice president; Fred S. Stephenson, first vice president; Henry H. Jones, president; Sam M. Arnold, second vice president; and Allan T. Flint, secretary-manager.

NORTHWESTERN

"We've had a lot of 'specialty' people enter the building field in the past few years and one of the reasons for this is that the retail dealer has been too busy to realize his obligation to the customer," R. Clem Knecht, president of the Northwestern Lumbermen's Association, told members of the group at its recent 62nd annual convention in Minneapolis.

Knecht, who was re-elected to a second term as association head, opened the meeting with a talk on "Dealers' Obligations." Speaking of giving a complete and conscientious service to the customer, he declared: "If the dealer does not apply himself and do these things for the customer, someone else will—and the dealer will not only lose that business, but some more with it."

The lumber dealer, Knecht said, has

an obligation not only to contribute financially to local agencies but to take an active part in community affairs by making it his business to see that the people who are running the various organizations are capable of doing so. He also urged greater interest and participation in government at the state and national levels.

Other convention speakers included Joseph T. King, association Washington counsel; Joseph L. Wood, assistant treasurer, Johns-Manville Corp.; Ralph W. Carney, vice president of the Coleman Co.; and James Q. du Pont, extension division, the du Pont Co.

The four state vice presidents of the association are Neill D. Woodworth, Little Falls, Minn.; Dean Piper, Minot, N.D.; George Westover, Pierre, S.D.; and Harold Weitz, Des Moines, Iowa.

WISCONSIN

More than 3,500 persons, the largest crowd in the group's convention history, were on hand for the 62nd annual meeting of the Wisconsin Retail Lumbermen's Association in the Milwaukee auditorium. Exhibit space was filled to capacity by 190 booths.

Talks by several nationally-recognized business experts featured the general sessions. These included "Taxes," by Joseph F. Leopold, industrial relations counsel, Dallas, Texas; "Credits and Collections," Harry L. Judd, U. S. Gypsum Co.; "Salesmanship," Tom Collins, publicity director, City National Bank and Trust Co., Kansas City, Mo.;



HEADING WISCONSIN LUMBERMEN in 1952 are (from left) W. E. Wolfe, treasurer; H. P. McDermott, secretary; and J. N. Hamar, president

and "Psychology in Business," Dr. George W. Crane, Northwestern University psychologist and author, Chicago.

Another highlight of the business program was a panel discussion on "Friendly Relationship between Manufacturer, Wholesaler and Retailer," moderated by Edward G. Gavin, *American Builder* editor.

J. N. Hamar of Houghton, Mich., was reelected president of the association, and W. E. Wolfe, Waukesha, Wis., was elected treasurer, succeeding J. E. Richardson, Sheboygan Falls, Wis. Newly-elected directors are John Winquist, Crystal Falls, Mich., and W. L. Roettiger, Fountain City, Wis.

KENTUCKY

Elbert Myers of the Old Plating Mill, Glasgow, was elected president of the



Elbert Myers

Kentucky Retail Lumber Dealers Association at the group's recent annual meeting in the Brown Hotel, Louisville. He succeeds Sam Levy of Louisville.

R. E. McConnell, Paris, was named vice president.

Directors named for two year terms, in addition to McConnell and Levy, are W. W. Henderson, Hopkinsville; Graham McCormick, Lexington; Claude Berry, Eminence; W. C. Hale, Hickman; Kenneth Lawson, Baxter; D. M. Daugherty, Falmouth; and Graham Montley, Bowling Green.

Launch One-Year Course At College Level for Lumber Yard Careerists

Opening of a trade school for retail lumber yard and counter personnel, to be operated in cooperation with Oklahoma A & M Tech School at Okmulgee, has been announced by the Oklahoma Lumbermen's Association.

Plans reported by R. A. "Bob" Parker, president of OLA, and L. K. Covelle, A & M Tech director, call for two divisions of the school—a one-year course under the trade preparatory division for students with no experience in the retail lumber business; and, for those with experience, an eight-week program in the trade extension division, covering subjects the student needs most.

The one-year course requires 12 full months and covers the following curriculum:

Commercial-Business English, business letter writing, penmanship, typing, business machines, business law, insur-



INSPECTING FACILITIES of Oklahoma A. & M Tech School are (from left) Dale Carter, Tulsa, vice president of Oklahoma Lumbermen's Association; L. K. Covelle, school president; and R. A. Parker, Ponca City, Okla., president

ance, lien laws, real estate, finance, collections, labor laws, merchandising, economics, business arithmetic, accounting, and stock control.

Light Construction—Cost estimating, carpentry, cabinet making, draftsmanship, free hand drawing, blueprint reading, building materials, wood, metal, glass, wallboard, millwork, paint, concrete, and interior decorating.

Human Relations—Personnel, customer courtesies, salesmanship, business ethics, and public speaking.

For the eight-week extension division course, the student may select any of the above courses. Enrollment starts each eight weeks during the year. The first period started March 3.

Courses were adapted by the association's educational committee. Teachers for the academic courses will be supplied by the school, with OLA supplementing the instruction with lectures by men in the industry.

School director Covelle said it was the sponsors' feeling that the program can render a worthwhile service to young men and women who want to enter the retail lumber industry and can afford only one year of college. In addition, it offers a refresher course to those already in the field.

The school is open to anyone with the ability to learn and desire to work, Covelle said. High school graduation is not a pre-requisite.

Donald DeWitt New Head of Maple Flooring Group

Donald S. DeWitt, president of the Holt Hardwood Co., Oconto, Wis., was elected president of the Maple Flooring Manufacturers Association at the group's 55th annual meeting, held February 1 in Chicago. DeWitt who was



Donald DeWitt

vice president, succeeds W. C. Abendroth, who served during the past five years.

Also elected at the meeting were W. W. Gamble, White Lakes, Wis., vice president; S. A. Wells, Menominee, Mich., treasurer; and L. M. Clady, Chicago, secretary-manager.

DeWitt has been active in trade association and Northern hardwood industry affairs for more than 25 years. During World War II he served on national industry advisory committees and is active on similar committees during the present emergency.

140 More Dealers Get "Minute Men" Buttons

"Minute Man" lapel buttons in recognition of active participation in its new public relations campaign have been sent by the National Retail Lumber Dealers Association to 140 more dealers throughout the country.

In distributing the buttons, C. B. Sweet, chairman of the group's public affairs committee, reported that more than 2,800 newspaper clippings were on file in the national's public relations department.



Dealer's Viewpoint

H. R. NORTHUP, Executive Vice President,
National Retail Lumber Dealers Association

Political Struggle for Critical Materials Takes Clearer Shape

The extent to which politics influences the course of the defense controls program insofar as construction is concerned has become increasingly evident in recent weeks.

It was generally assumed that political considerations would be given more and more weight with the approach of election day, but the pattern has developed even more clearly than had been anticipated.

If that pattern continues to develop—and there is no reason to think it won't—the housing and light construction industry will have to remain continually alert to see that its interests are not overshadowed in the political struggle for critical materials in the months ahead.

The first indications that DPA and NPA were vulnerable to political pressures appeared after a large group of mayors and municipal school officials complained to Congress that elementary school construction was receiving too little steel and copper. Shortly afterwards their allocations were increased.

Then the highway builders and users supported by State governors, complained that the highways needed and deserved more steel. They got it.

Small business groups went to Congress and complained that allotments had been reduced to the point where many little manufacturers would be forced out of business. Larger allotments were promised.

Employment in the building trades began to fall off sharply in

New York City. Both New York senators intervened with the defense agencies. Senators from other States followed suit. NPA promptly readied a plan for allocating more critical materials for construction purposes in "distressed areas."

After taking steps to please those groups, some of whom unquestionably deserved help, our defense officials decided it was time to make a smart political play in the opposite direction. Since so-called "luxury housing" always is a good political target, they conceived the idea of limiting all new homes to one and a half bathrooms—a move calculated to please many more voters than it would offend.

That proposal fell of its own weight in view of the fact that copper was the only critical material involved and the amount of copper per home was restricted anyhow. But the political purpose probably was served.

The point is that no administrator in Washington can divorce himself from politics even in time of national emergency. If he isn't "reasonable," he doesn't stay very long in his job. Just as politics has played a leading part in bringing about adjustments in allotments of critical materials, so will the same force play an equally prominent part in determining how fast decontrol will come and who will get the breaks when that process starts.

Those who sit back and wait for justice to take its course are likely to be disappointed.

industries. Page advertisements in Rose's honor, paid for by suppliers, appeared in the three metropolitan newspapers.

He has been very active in the Detroit association, serving as first vice president in 1950.

Head Plywood Institute

Recently elected president of the Hardwood Plywood Institute was M. C. McIver, president of the Penokee Veneer Co. and board chairman of the Splicedwood Corp., Mellen, Wis. F. S. Kuhn of the Southern Laminating Co., Memphis, was named vice president. Charles E. Close of Chicago was re-elected secretary-treasurer.

Home Builders League Salutes New Industry Locating in S. Jersey

Industrial expansion taking shape in the Camden-South Jersey area, which is expected to reach \$2 billion when completed, was recently hailed by the Home Builders League of South Jersey with a "testimonial salute" to the new industries.

Included in the huge blueprint for expansion are many new industrial plants, equipment, new housing for new employees, a network of highways, bridges and other transportation facilities.

The formal salute was a League-sponsored dinner at the Hotel Walt Whitman, Camden, attended by more than 450 representatives of industry. Principal speaker was Thomas E. Millson, executive vice president of the National Steel Corp., which plans to build a \$200 million plant in the area.

An additional "welcome" was given in a special Home Builders League section of the Camden Courier-Post, which the League and other local firms supported with advertising. The section covered details of the expansion program, plans announced by the home builders to provide housing when it is needed, and other home building news.

Heads NAHB Executives



NEW LEADER of the Executive Officers' Council: James W. Pearson, executive director of the Home Builders Association of Metropolitan Washington. He was elected president of the NAHB division at its annual meeting held during the convention last January.

N. Y. Employer Officers

Fred J. Driscoll was reelected president of the Building Trade Employers' Association of New York City for a second term. Other officers named at the group's recent annual meeting were Harry J. Stelman, vice president, and William B. F. Drew, second vice president, both reelected; Joseph A. Courter, third vice president; and William Angus, treasurer. W. Arthur Riehl was reappointed secretary.

Detroit Builder Edward Rose Gets City-Wide Tribute

One of the highest tributes ever paid a Detroit builder was received by Edward Rose when he celebrated his 30th anniversary in the business recently.

Rose, who has erected 8,000 homes during his career, was honored at a party given by his four sons, now learning the building business. Awards were presented by the National Association of Home Builders, the Builders Association of Metropolitan Detroit, Michigan Corporation and Securities Commission, and Detroit Common Council.

On hand for the event were officials of the city, the Veterans Administration, Federal Housing Administration, building material firms and other allied

Des Moines Gets Top Home Week Awards

First prize awards in *American Builder's* 1951 National Home Week Contest were presented to the Home Builders Association of Des Moines at a recent dinner in the Iowa city.

Des Moines won in Group II—associations with from 150 to 250 members. The awards—hand-lettered scrolls—



WALTER GILBERT (right), 1951 president of the Home Builders Association of Des Moines, receives National Home Week award from Arthur V. Hansen, *American Builder* architectural editor

were presented by *American Builder* architectural editor Arthur V. Hansen to Walter Gilbert, president, and William C. Leachman, Home Week committee chairman, of the Des Moines group.

In other highlights of the dinner, the Des Moines Sunday Register received a certificate from the National Association of Home Builders for winning second prize in the contest for National Home Week sections; and the Des Moines Register and Tribune Co. was awarded a plaque by the Des Moines association for the newspapers' cooperation in promoting both National Home Week and the spring Better Homes Exposition, which drew a record 75,000 persons.

Robert Lyons New President Of Northern Hemlock Group

Robert W. Lyons of the Wm. Bonifas Lumber Co., Neenah, Wis., was elected president of the Northern Hemlock and Hardwood Manufacturers Association at the group's recent meeting in Land o' Lakes, Wis. Approximately 135 members and guests were on hand for the annual event.

Also named to office were C. D. Zagelmeier, Newberry, Mich., vice president, and W. W. Gamble Jr., White Lake, Wis., treasurer.

Speakers included A. E. Swanke, retiring president; Thomas Mason, National Production Authority; Richard G. Kimbell, National Lumber Manufacturers Association; and Frank Moore, purchasing agent, Chicago and North Western Railroad.

Cortright's Column

FRANK W. CORTRIGHT, Executive Vice President, National Association of Home Builders of the United States



More Metal for Automobiles—Why Not for Home Building?

Washington is more concerned these days with the subject "Guns vs. Butter" than with anything else, political matters excepted.

The subject isn't new. "Guns vs. Butter" was neatly packaged last year when the National Production Authority announced the Controlled Materials Plan, with resulting civilian sacrifices. Production of steel, copper and aluminum was estimated and allocations made as between civilian and military needs. But a new, major factor, recently introduced calculations of last year, and even early this year, appears to have been astonishingly inaccurate.

Result is daily announcements such as this morning's headline "Surplus Metal Going to Civilian Products." It seems that automobiles will be given additional steel, copper and aluminum in the second quarter. In the meantime, restrictive orders for housing continue to limit the quantities of these metals. It is particularly confusing when one considers how little metal a house requires as contrasted with automobiles and when one reads of the great housing shortages of defense workers and military personnel. Just why this Administration selects housing as the first industry in which drafted sacrifices must be made, for so-called patriotic reasons, is difficult to understand.

The supply of metal items isn't our only problem. At recent hearings before the Committee on Banking and Currency nearly thirty of the nation's outstanding experts in building and mortgage lending discussed at length a series of problems related to 1952 production of housing.

Some of the obstacles disclosed: inadequate interest rates in FHA and VA; inadequate supply of FNMA authorization; unsatisfactory FHA debentures; unrealistic acceptance by the FHA on the risks involved in defense housing; problems related to the Wherry bill housing for military personnel. These are real problems entirely unrelated to the allocation of copper, steel and aluminum.

Housing Administrator Foley gave a rather reassuring statement concerning probable volume of 1952 housing. He indicated that although a 40 per cent reduction in the critical materials made available to this industry should produce 800,000 new dwelling units, sufficient ingenuity on the part of the industry to substitute other materials might produce a housing volume in excess of 800,000 units. This is encouraging. Home builders historically have been able to find substitute materials of equal quality when necessary.

Then Mr. Martin, Chairman of the Board of Governors of the Federal Reserve System, made several equally interesting and important statements. He estimates that a net investment of new funds of about four and a quarter billion dollars will be necessary to support 800,000 starts. He states, "if . . . people continue to place savings with savings banks, insurance companies and savings and loan associations, these institutions, normally large purchasers of mortgages, will have we think, substantial funds to invest." Thus, the top authority in the banking field believes that new construction financing will be available. Better still, he agreed that a program of this size is not inflationary and "can be meshed into the present picture without seriously disrupting the economy."

Generally speaking, throughout the three-day round table discussion, bankers favored increased interest rates, and FHA debenture rates. Home builders, represented by NAHB president Brockbank, assumed no position on this highly controversial point but did maintain that financing was inadequate in many parts of the country and a particularly difficult problem in the more remote areas where the permanence of housing projects could properly be questioned. An optimistic observer of this conference could reach the conclusion that between the builders, lenders, government agencies and the Congress, satisfactory solutions to the financing problems will be reached.

However, this is of little value unless the "Guns vs. Butter" issue is settled within the mobilization agencies and the NPA allocates a sufficient quantity of basic metals for home building. The time has come for a careful re-check of the statistical phases of this important question. A clear-cut, definite policy should be set up which would be as equitable to the home buyer and the home building industry as allocations have been to the automobile industry and most other great industries throughout the country.

Seattle Master Builder Leaders



EXECUTIVE COUNCIL for 1952 of the Seattle Master Builders Association. Seated are (from left) A. C. Goodwin, president; Dan M. Narodici, vice president; J. W. Morrison, secretary; and Albert LaPierre, treasurer. Standing are Trustees Ross P. Hebb, V. O. Stringfellow, Harold Larsen, Samuel Andersen, H. K. Schroeder and Kenneth Larsen. Not in picture are trustee F. R. McAbee and executive vice president V. H. Dent.

Story of Home Building Told in Grade School Instructional Unit

Students in the grade schools of the country now have a chance to learn about the housing industry through a program just launched by the educational committee of the National Association of Home Builders.

The program, according to Fritz Furns, committee chairman, is part of the association's long-range public relations campaign "to develop a better understanding of the social and economic significance of housing, and of the services performed by the home building industry." The course, for intermediate and upper grades, takes the form of an industry-sponsored educational "unit" in a recent issue of *The Grade Teacher*.

An accepted teaching aid, this publication is circulated to 360,000 public school teachers who are said to instruct more than 12,000,000 students. As the unit is designed for classroom use, reprints are available in quantity to teachers desiring to use it.

A feature of the unit is a play, to be performed by the students, depicting the search of a typical American family for a new home. It covers the reasons why the family wants a new home, introduces the present day home builder and tells how he works, and shows the newest features of modern houses.

Supplementing the information contained in the play are exercises and work projects to be carried out at home or in the classroom. They are correlated to subjects commonly taught, such as lan-

guage arts, social studies, arts and crafts, maps and chart-making, science and arithmetic. Field trips to local housing projects, lumber or brick yards, or nearby plants of building material manufacturers are also suggested.

While the school program is largely self-operating, the educational committee is urging individual builders and local NAHB affiliates to cooperate with schools in their localities in order to obtain maximum utilization.

Texans Honor Fred Seale



JACK SEALE (right), Amarillo, Texas, home builder, is presented a bronze plaque in memory of his father, Fred M. Seale, who died in November. Making the presentation is Troy Jones, past president of the Texas Panhandle Home Builders Association and Texas State Home Builders Association. The Seale Company, organized in 1940 by Fred Seale, has built around 1,500 homes in Amarillo. Jack Seale, now general manager, is the new president of the Texas Panhandle Association.

Perlite Institute Names Richard Davis Secretary

Richard L. Davis has taken the post of secretary-treasurer of the Perlite Institute, it has been announced by J. John Brook, institute president and board chairman.

As secretary of the Industrial Mineral Wool Institute for the past 11 years, Davis was given credit for the establishment of the industry's product certification program and the introduction of a number of standards and specifications



Richard L. Davis

in the Bureau of Standards, American Society for Testing Materials, and the technical committee on heat insulations of the Federal Specifications Board.

From 1934 to 1941 Davis was with the management engineering firm of Stevenson, Jordan and Harrison, serving first as a statistician and subsequently in various executive and managerial capacities.

Material Handling Group Names 1952 Officers

L. West Shea of the Union Metal Manufacturing Co., Canton, Ohio, was elected president of the Material Handling Institute, Inc., at the group's recent annual meeting in New York.

The 78 member companies of the institute produce industrial trucks, hoists, conveyors, monorails, casters, batteries, steel strapping, and containers.

Named to the posts of first and second vice president respectively were John C. Mervis of American Engineering Co., Philadelphia, and H. M. Palmer, Lewis-Shepard Products, Inc., Watertown, Mass.

47 Complete Dealer Course

Forty-seven students completed the recent 30-day course of the Indiana Lumber and Builders' Supply Association, held in cooperation with Purdue University. It was the eighth of the group's annual training programs for dealer employees.

The Association called the course the most successful it has sponsored so far.

Active in organizing the 1952 course were Harold V. Main, Indiana association education committee chairman; Merle M. McClure, coordinator of adult education for Purdue; and Robert L. Craft, association field representative.

Insulations for your every need



FIBERGLAS ROLL BLANKETS—Asphalted, vapor-resistant paper on one side. Perforated paper on other side. Available in 15", 19" and 23" widths; thick, medium and "economy" thicknesses.



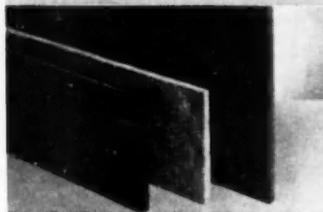
FIBERGLAS BATT BLANKETS—15" wide available in 24" and 48" lengths; 23" wide in 36" lengths. Same type of construction as roll blankets. Vapor barrier on one side. Thick, medium and "economy" thicknesses.



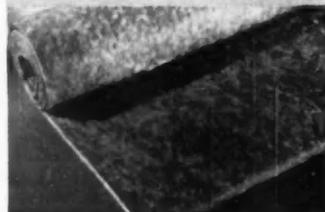
FIBERGLAS UTILITY BATTS—15" wide, 10 1/2" long. For general use, packing into narrow spaces and irregularly shaped spaces. Available full thick only.



FIBERGLAS POURING WOOL—For pouring or hand packing in spaces between studs and joints. Packed in paper bags, 20 sq. ft. of 4" thickness per bag.



FIBERGLAS PERIMETER INSULATION—For stopping heat losses through the concrete floor slab of basementless homes. Available in three types: PF panels 12" x 48" x 1/2" and AE (asphalt enclosed) panels 12" x 36" x 1/2", 1 1/2" and 2". Paper-faced 4-lb. density 24" x 60" x 3/4", 1", 1 1/2" and 2".



FIBERGLAS INSULATION FOR CRAWL SPACES—For underside of floors built over unexcavated areas. Available in a wide variety of types and sizes.



FIBERGLAS CAVITY WALL INSULATION—A pouring type product approved by Structural Clay Products Institute for masonry construction. Packed in 30-lb. bags.



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And—when you insulate with Fiberglas materials, you add another selling feature to your homes. Buyers know Fiberglas, are quick to accept it as a sign of quality construction.

Standardize upon Fiberglas Insulations for all your homes. You'll provide more comfort, more permanent protection against the weather, and you'll save money!

For complete information, check the Fiberglas Branch Office nearest you or the dealers of these five national distributors:



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Or—write Owens-Corning Fiberglas Corporation, Dept. 62-D, Toledo 1, Ohio.

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LETTERS

Notes Concerning The Convention Daily

Sir: I wish to express my gratitude to the entire staff of the *American Builder* for the splendid cooperation they gave me and, particularly, for the splendid contribution made by your fine publication in giving us again the Convention Daily.

It has become a definite part of our annual convention. I know that hundreds of builders, dealers, and others look forward to having it each morning, and from the members I get reports that hundreds of copies were either sent or taken back home so those who did not attend would have an opportunity to realize what they missed.

I do not know of a better way to create interest in future conventions than through pictures and the printed word emanating each day from all our activities.

Paul S. Van Auken,
NAHB Convention and
Exposition Director

Sir: As usual, you fellows did an outstanding job for NAHB at the convention. Your part in our program certainly was appreciated. The Convention Daily, I can assure you, is a very important part of the success of this great meeting.

J. B. Haverstick,
NAHB Convention Chairman

Sir: I certainly enjoyed reading your "Convention Daily" while attending the recent NAHB conference in Chicago. It was my intention to preserve each of these daily issues in my office files, but due to the press of other pending matters, I apparently misplaced them. I would certainly appreciate it if you would forward to me a copy of each "Convention Daily" issue.

Franklin L. Burns, President,
D. C. Burns Realty & Trust Co.

Sir: May I again express my appreciation, and the appreciation of the delegates of this association, for the splendid convention coverage in your *American Builder* Convention Daily. This daily coverage is, without a doubt, one of the highlights of the affair, and is followed religiously by a great many of the delegates in attendance.

I took home approximately 250 copies of each issue which is being mailed to our builder-members so

they may enjoy the magnitude of this national get-together. Next year it is my intention to send out daily mailings to our members direct from Chicago.

Many thanks for the splendid coverage of our National Home Week promotion. It is going to give our 1952 promotion a terrific boost. Be assured we will make the best of the valuable publicity.

Lawrence W. Nelson,
Executive Vice President,
Minneapolis Home Builders Assn.

Sir: Could you favor us with 24 copies of each issue of the Convention Daily published by you Monday through Thursday at the 1952 NAHB Convention in Chicago? You're to be congratulated on your fine coverage of this convention.

There is no doubt in our minds but that your "Whose Is It?—Where Is It?" contest stimulated traffic to each and every booth at the show. Congratulations on this splendid promotion.

John M. Gaughan,
Advertising Manager,
Wadsworth Homes

Contest

Sir: It was indeed a pleasure to cooperate with you and the other members of the staff of the *American Builder* for the "Whose Is It?—Where Is It?" contest.

There seemed to be a tremendous amount of interest in the contest, because I recall many people coming by our booth to check our picture, which appeared in the first issue of the Convention Daily.

Certainly I think it is a very excellent undertaking for your publication, and one that created a great deal of interest among the exhibitors and those who attended the exhibit and convention. In the event you have this contest next year, we will be more than glad to cooperate in the event we exhibit our products at the NAHB show.

John A. Reagan, Jr.,
Advertising Manager,
Sonoco Products Company

Express Our Appreciation

Sir: I want to take this opportunity to express our appreciation for the *American Builder* award for our participation in National Home Week. From all appearances we will

be in Class II next year, and I assure you we will expect to win this coveted award in '53. By appointing a chairman now, we expect to get off to a good start and wind up with a bang.

Ken Stowell, President
Wichita Assn. of Home Builders

Change Our Address Please

Sir: Attached is an address tab from one of my *American Builder* magazines. I wish that you would be sure and change the address on the rest of my issues because I do not want to miss a single issue, if possible.

As a rule when I see a new issue it's in the evening. It is very seldom that I get to tear the wrapper off because my wife usually has done it for me and is talking about the blueprint plan as soon as I get home.

We just built a new home for ourselves. The *American Builder* helped us considerably, as we gained many ideas from its pages and incorporated some of our own and got what we think is an ideal plan, at least for our purpose and liking.

From the operative builder's point of view, I like the Technical Guide and How-To-Do-It departments because we do a great deal of repair and remodeling work.

J. F. Morton,
Omaha, Nebr.

Useful to Small Town Contractors

Sir: I recently renewed my subscription for a period of three years. You certainly turn out a fine magazine and one that is useful to a small town contractor like myself where it is hard to keep up with the latest trends in construction.

S. D. Crellin,
General Contractor,
Welwyn, Sask., Canada

Thanks for Your Interest

Sir: Instead of congratulating you for publishing my article (*American Builder*, Dec. 1951, Pg. 176) and telling you that the "Builder" will be a better magazine in the future because of it, I would like to thank you for interest in my contribution, and for the check which you sent.

Somewhere in your file you have another contribution of mine having to do with stairways, and the reclaiming of attic space in small houses. I sent these articles to you as "feelers" to see if you would publish them on merit.

I am an associate professor of Industrial Arts-Education here in the

state university in Bowling Green, Ohio, and have held this position for slightly over 28 years. I have taught engineering drawing for over 15 years, and have set up courses in Architectural Engineering. My major interest is wood working and I have been teaching three courses on that subject, although I have also had a finger in machine shop, general metals, patternmaking, arc welding, finishing, and related subjects.

E. C. Powell
Bowling Green, Ohio

► At the present time there is quite a backlog of "How-to-do-it" suggestions on hand. Your contribution having to do with stairways and reclaiming attic space in small houses is among them. We hope to use it in an early issue. We are always interested in how-to-do-it ideas that offer job shortcuts to our builder-readers.—The Editor.

Thanks For Accepting

Sir: Thank you very much for accepting two more of my "How-to-do-it" suggestions and sending me a check in the amount of ten dollars.

You can rest assured that I shall endeavor to submit more and better ideas from time to time, for I know that these suggestions will be a great help to the readers of the *American Builder* magazine.

Thanking you again most sincerely, I remain,

Herbert E. Fey,
New Braunfels, Texas

Please Send

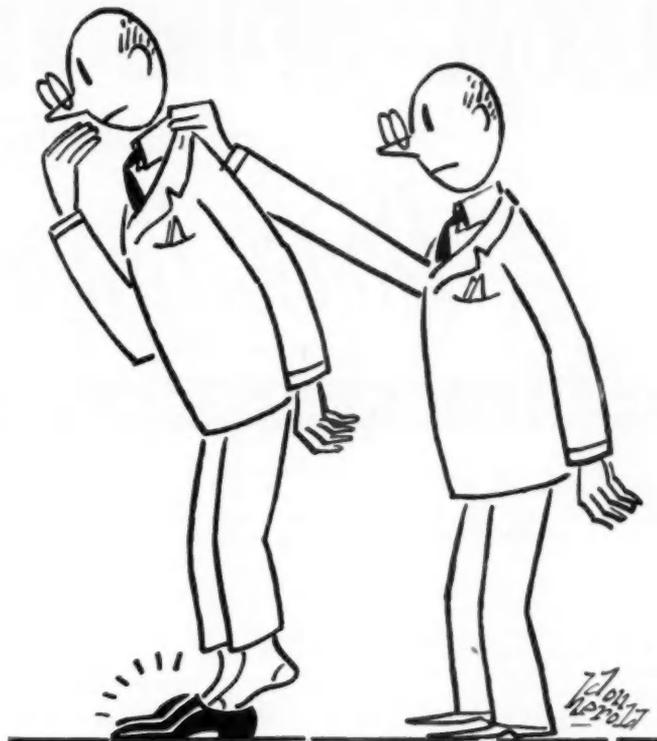
Sir: As a draftsman, I have read your magazine with a great deal of interest for several years. Even though it is my employer's copy and sometimes it takes several weeks to get passed down, it is still timely.

You have had two series of articles I would like to have: Engineered House Construction and Construction Lumber and Recommended Framing Practices. Will you advise me if I can still get reprints of these and if so how much will they cost?

D. Coliopy
Trail, B.C.
Canada

► The two series of articles are being sent to you. We trust they will be of use to you in your further study of these subjects.—
The Editor.

• Letters to the Editor should be sent to 79 W. Monroe St., Chicago 3, Ill. Your comments are invited.



Put yourself in your prospect's shoes...

As a shopper in your community, how do you go about finding all the products and services you need?

If you do what 9 out of 10 shoppers do—you probably go right to the 'yellow pages' of your local telephone directory.

That is a buying habit that has been going on for over 60 years. We know...because we've checked with folks in communities throughout the nation again and again.

That's why so many building contractors consider it smart advertising to have their name and sales message in the 'yellow pages'.

Check the headings in your local Classified...make sure your name is under the products you sell and services you render.



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FOR FURTHER INFORMATION,
CALL YOUR LOCAL TELEPHONE BUSINESS OFFICE



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Will add prestige to your promotion... VOLUME TO YOUR SALES

SEE FOR YOURSELF

You'll find plenty of pulling power added to your Spring promotional activities, if you build them around the forthcoming issue and the top-quality names on its advertising pages—names like the typical best-sellers whose pre-view trade messages appear below!

Additional high-style colors—Coral, Lilac and Cadet Blue are being featured in **AMTICO RUBBER FLOORS** designed by famous decorators. Full color national advertising includes photos of rooms created by Elizabeth Draper, William Pahlmann and others. See, also, sensational new Amtico Plastics Rubber Flooring—a value packed blend of rubber and plastic.

Beauty and protection are two outstanding qualities of **CABOT'S CREOSOTE SHINGLE STAINS**. Deep penetrating, these stains bring out the natural beauty of wood grain. Excellent range of colors, from clear brilliant hues to weathering grays and browns, 60-90% creosote oil content gives cloboards, shingles and siding lasting protection.

Using increased space and color, this company's May ad in *House Beautiful* features the exclusive **CASE ONE PIECE WATER CLOSET** and styled "Windell" Lavatory. The One-Piece is the first water closet with integral low-level tank, first with non overflow. Fixtures available in white and 26 colors.

CONGOLEUM-NAIRN'S new "Fashion Floors" of Gold Seal Inlaid Linoleum give you the opportunity to offer to your clients custom designed floors for the cost of an ordinary linoleum pattern. Congoalum Nairn is promoting this unique idea in a stunning full color page in six leading home-making magazines.

AWNING WINDOWS—Illustrated catalog no. 89 gives sizes and types, hardware specifications and construction data on **GATE CITY** awning windows. Prices, discounts, and complete architectural file are available. Write to the Gate City Sash and Door Company, Fort Lauderdale, Florida.

Helping dealers to sell more... profitably... has been **KIRSCH** policy for four decades. Certainly Kirsch has profited through this policy. So have dealers. Many times as much! On fabrics and workroom services, as well as on the dropery hardware. It's no wonder that dealers have a firmly-rooted feeling for Kirsch.

Sanitary garbage storage—safeguards against breeding disease spreading insects and odors. **MAJESTIC UNDERGROUND CARBAGE RECEIVER**. Housing with step-operated lid is buried in the ground conveniently near the kitchen door. Removable inner can simplifies removal by collector. Free folder by writing to the Majestic Co., Huntington, Indiana.

Build an **OUTDOOR FIREPLACE**—the subject of a profusely illustrated 52 page book containing complete details and plans of numerous fireplace designs, plus information on needed materials, construction helps, cooking tips and recipes. Title

is "How to Enjoy an Outdoor Cook-Nook". Price 25c. **MAJESTIC CO.**, Huntington, Indiana.

Model "MS" **SANETTE** is an outstanding example of what can be done in styling up an ordinary utility item in the kitchen. This deluxe step-on can is of new, square, space saving design... to harmonize with modern cabinet-type appliances. It is fitted with a round, easiest-to-clean, leak-proof, hand-dipped galvanized inner pail. Master Metal Products, Buffalo, N. Y.

"National Water System Month—May 1952" is the theme of a **MYERS WATER SYSTEM** advertisement appearing in the May issue of *House Beautiful*. A new promotion aid on water systems being offered Myers dealers is a plastic illuminated sign for indoor display purposes. For information on sign and other aids, write: F. E. Myers and Bros. Co., Ashland, Ohio.

The **MOR-SUN PRESSED STEEL FURNACE** (for gas and oil) is unique in that it is Mass Precision Produced! Every part is die pressed—assuring complete uniformity of component parts. But beauty on the outside and rugged efficiency on the inside are not enough; the Mor-Sun gives even more—dependability—through use of quality control equipment. Mor-Sun finest, most beautiful furnace in the world.

The biggest and most aggressive advertising campaign in the history of **OZITE** is now in full swing. Qualities which only Ozite can claim are being stressed in ads and the story will be told over 115,000,000 times in 52.

PHILCO FREEZER—exclusive sloping front design puts 70% of storage at the Comfort Level—above the knees. Least bending... most toe and knee room. Striking "Key Largo" color styling... automatic interior light... counterbalanced hinges... famous Philco sealed power system. In 12.5 and 8.1 cu. ft. sizes.

The Savage line is more popular this year than ever before. Home owners are snapping up the nationally advertised 21-inch **SAVAGE YARD CHIEF**. Those with smaller lawns prefer the 18-inch power mower. The rotary sells fast where grass is coarse. Cash in. Write for catalogue.

SETFAST CANVAS PAINT is especially made to renew and beautify old faded canvas awnings, deck chairs, outdoor umbrellas, and similar absorbent canvas articles. It revives colorless fibers, grass or sisal rugs. Setfast comes in a wide choice of colors and is easily applied. Sold in leading paint and hardware stores.

SUNBEAM HEDGE TRIMMER answers the trimming needs of all shrubbery, hedges, ornamental trees, etc. Powerful, high speed, lighter, easier to

handle. Saves time, gives perfect results without arm-aching drudgery. Perfect for side trimming and shaping—cutting weeds, coarse grasses—precision instrument and powered to do long tedious trimming jobs.

SPEEDLINE LAWN AND GARDEN TOOLS are a complete matched set of the 20 most popular types used by home gardeners. Specially designed for light weight and strength. Heads are one-piece steel forgings, heat treated. Handles are ash, finished with weather-resisting blue lacquer for identification and matching eye appeal.

For people over 40—for Professional Truck Farmers and Poultrymen—it's **WATERBURY PORTABLE POWER** as the Down Payment on Productive Leisure and Great Yields at lower costs. Remember Waterbury's all-time record low in service and maintenance costs—a specific Profit Factor.

The **WARNER CO.**, Chicago, interprets today's textured trend in wall decoration with their **BAMBOO TEXTURE WALLPAPER** from their new Town House collection. Its colorful, yet subdued, bamboo design makes it adaptable to the contemporary or traditional. There is a plain colored companion fabric for each color style. Samples of wallpaper and fabric are available to the consumer for 25c.

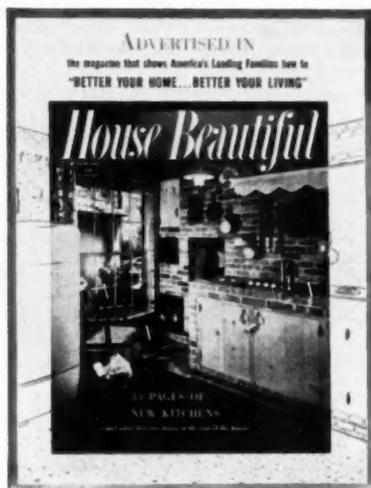
Lawn mower sales are now in full swing. The new **WORCESTER ROTARY AND ELECTRIC MOWERS** are proving to be fast sellers, as are the 21-inch Worcester Shear Master featured in national advertising and the 18-inch power mower. Get your share of this extra business. Write today for catalogue.

The Hollywood broadloom quality is being presented at the Spring shows by the **M. J. WHITTALL ASSOC.**, Inc. of Worcester, Mass. It is a plain color carpet in which the pattern is formed by random height pile making a graceful burl of the wood design. It is available in grey, beige, juniper and jade green in 27", 9", and 12" widths priced in the lower wilted brackets for retail at \$11.50 per square yard.

Now, even though there is still snow on your lawn, **NOW** is the time to apply **VIGORO**. Melting snow and early spring rain will soak it into the soil feeding the awakening grass roots to give your lawn a fine early start. Feed Vigoro now.

"This House Will Give You Ideas" and it will, too. Ideas about the greater comfort your customers can get in a **CARRIER WEATHERMAKER HOME**. Details of the new Air Conditioning Unit which heats and cools to make a house completely pleasantly, luxuriously livable the year around. Offers booklet of complete information.

THE PRODUCTS YOU CARRY!



Special offer

Want a special display for your windows or counters . . . as a prestige influence on prospective customers? It's yours for the asking—featuring a *House Beautiful* cover and enlarged to a dramatic 21" x 33" size! Simply check the square indicated on the coupon below and mail it to us. But we suggest you do it *today*. The supply is limited.

SEND TODAY for eye catching "Right from *House Beautiful*" display cards, an effective tie-in newspaper mat . . . a special *House Beautiful* cover display enlargement. They're available *free of charge*.

For display cards, mounted with advertisements you want to feature, check any or all of the products on the *May* issue listing below that are preceded by a number. For a mat, in which product names can easily be inserted, and a special cover display, check the squares indicated. Fill in your name and mailing address, mail to: Merchandising Division, *House Beautiful* Magazine, 572 Madison Avenue, New York 22, N. Y.

- 1. AMERICAN STANDARD HEATING
- 2. AMTICO RUBBER FLOORS
- 3. ANCHOR FENCES
- 4. BLUE RIDGE PATTERNED GLASS
- 5. PERMANENT MAGNET DOOR CATCH
- * BRIGGS & STRATTON GASOLINE ENGINES
- 6. BRUCE HARDWOOD FLOORS
- 7. BURNHAM BASE RAY RADIANT BASEBOARDS
- 8. CABOT COLLOPAKES
- 9. CABOT CREOSOTE STAINS
- 10. CAMBRIDGE CERATILE
- 11. CARRIER AIR CONDITIONING
- 12. CASE PLUMBING FIXTURES
- 13. CHAMBERLIN STORM WINDOWS
- 14. CHRYSLER AIR TEMP
- 15. CINCO-THERMOSEAL SCREEN AND STORM SASH
- 16. CONGOLEUM-NAIRN GOLD SEAL INLAID LINOLEUM
- 17. CRANE PLUMBING FIXTURES
- 18. CURTIS SILENTITE WINDOWS
- 19. CUTLER HAMMER MULTI BREAKER
- * DEMING CUSHIONETTE WATER SYSTEM
- 20. DOWFLAKE
- 21. DUBOIS FENCES
- 22. ELJER PLUMBING FIXTURES
- 23. ESTATE RANGES
- 24. FAIRBANKS MORSE WATER HEATER
- 25. GATE CITY WOOD AWNING WINDOWS
- 26. HABITANT FENCES
- 27. HAMILTON CLOTHES DRYER
- 28. HARTSHORN TEXTONE SHADES
- 29. HEINEKE EXCELLO POWER MOWER
- 30. HOMKO POWER MOWER
- 31. HUNTER ATTIC FANS
- 32. ILG ELECTRIC BASEMENT DRYER
- 33. INERTOL RAMUC ENAMEL FOR POOLS

- 34. INSINKERATOR
- 35. JOHNSTON POWER MOWER
- 36. KIRSCH DRAPERY HARDWARE
- 37. LORD & BURNHAM ORLYT GREENHOUSE
- 38. LORENTZEN BLINDS
- 39. LUMINALL PAINTS
- * LYON KITCHENS
- 40. MAJESTIC UNDERGROUND GARBAGE RECEIVER
- * MAJESTIC OUTDOOR FIREPLACE
- 41. MALLARD SCREEN DOOR GRILLE
- 42. MARBLE INSTITUTE FLOORING
- 43. MASTER METAL SAMETTE
- * MICHIGAN PEAT
- 44. MILCOR PICK UP CART & TOOL RACK
- 45. MISSISSIPPI STRUCTURAL CORRUGATED GLASS
- 46. MODERNFOLD DOORS
- 47. MORRISON STEEL FURNACE
- 48. MUELLER CLIMATROL
- 49. MYERS WATER SYSTEM
- 50. NACO FERTILIZER
- 51. OASIS AIR DRIER
- 52. OZITE CARPET CUSHION
- 53. PERMA-STONE
- 54. PHILCO FREEZER
- 55. PITTSBURGH CORNING GLASS BLOCKS
- 56. PORTLAND CEMENT CONCRETE HOUSES
- 57. PRECISION FOLDING STAIRWAY
- 58. PRESTELINE BUILT-IN ELECTRIC RANGE
- 59. OLD QUAKER ATOMASTIC PAINT
- 60. RA-PID-GRO
- 61. RIDE-A-MOWER
- 62. ROBBINS & MYERS ATTIC FANS
- 63. ROTO ROOTER SEWER SERVICE
- 64. RUSCO COMBINATION SCREEN & STORM WINDOWS

- 65. RUSTICRAFT FENCES
- 66. SAVAGE YARD CHIEF
- 67. SEFTAST CANVAS PAINT
- 68. SMITH PERMAGLAS AUTOMATIC WATER HEATER
- 69. SOSIS INVISIBLE HINGES
- 70. SPEEDLINE TOOLS
- 71. STASCO TOILET SEAT
- 72. STOCKWELL COUNTRY MODERN WALLPAPER
- 73. STRAHAM WALLPAPER
- 74. SUNBEAM HEDGE TRIMMER
- 75. SWIFT END-O-PEST
- 76. TRIM MASTER JR.
- 77. TRI-GEN ROSE SPRAY
- 78. U.S. CARPET CUSHION
- 79. U.S. RUG UNDERLAY
- 80. U.S. QUARRY TILE
- 81. UPSON KUYER KRAK
- 82. VIGORO
- 83. WARNER BAMBOO TEXTURE WALLPAPER
- 84. WATERBURY PORTABLE LOWER
- * WEBSTER BASEBOARD HEATING
- 85. WHITTALL BROADLOOM
- 86. WIN-DOR JALOUSIES
- 87. WINKLER AUTOMATIC HEATING
- 88. WORCESTER SHEAR MASTER

- No card available
- "Seen in *House Beautiful*" Mat
- SPECIAL COVER DISPLAY

NAME _____

ADDRESS _____

CITY _____

AB—May

ON and OFF the RECORD

MAN OF THE YEAR—It's Gene Klein, the citizen mayor of thriving Amarillo, Texas. The News Globe-Times, local newspaper, voted him the 1951 Award for Community Service. Stating that a citizen mayor serving for virtually no salary might



Gene Klein

"justifiably go about his own business, leaving the running of the city to the city manager," the newspaper comments that Mr. Klein has made a full time job of his mayoralty, spending as much time at the City Hall as he does in the office of his Star Lumber Co.

STANDS FIRMLY—"The mayor," says the newspaper's editors, "has had to say 'No' firmly and often, and so he has made enemies. This newspaper has not always been in accord with him, but the mayor of a town the size of Amarillo can't be expected to please all the citizens all the time."

TRAVELS WIDELY—"He travels frequently and far," continues the newspaper. "He has argued railroad presidents out of underpasses. He has kept the state highway department aware of the acute traffic problem here. He has maintained the city's water supply ahead of demand. He has wrestled with tough problems. Wisely he has hired experts to advise him in his work."

NO SURPRISE—To hundreds of builders and retail lumbermen who know this dynamic and personable Texan, the newspaper's choice comes as no surprise. And speaking of public relations, isn't this kind of volunteer leadership in civic development about the best there is?

CELLARS VS BASEMENTS—W. G. Stephens of Phoebus, Va., really started something when he

questioned the use of the word "basement" in a recent *American Builder* story. Of all the volunteer entries into the debate, one from J. H. Lilly, building inspector of Cedar Rapids, Iowa, seems to represent the consensus most completely. It's in accord with what Mr. Stephens claimed in the first place.

THE IOWA LAW—Says Mr. Lilly, "the law of the State of Iowa defines cellars and basements as follows: 'A basement is a story partly underground, but having at least one-half of its height above the curb level, and also one-half of its height above the highest level of adjoining ground. A basement should be counted as a story. A cellar is a story having more than one-half of its height below the curb level, or below the highest level of the adjoining ground. A cellar shall not be counted as a story for purposes of height measurement.'"

BUILDING CODES—Mr. Lilly continues, "The Basic Building Code of the BOCA and the Uniform Building Code of the I.C.B.O. both carry definitions of basements and cellars. In the various Departments of Building Inspection these definitions are very much in use, especially in multiple dwellings, for the purpose of determining whether or not apartments may be located below the first floor of the building. A typical cellar as defined is not suitable for living quarters, while a basement can be so utilized, provided other requirements are met."

PHEW!—It's been a long pull to get this subject thoroughly aired—or excavated. And now, in spite of the practice of most architects to label any sub-terranean or partly sub-terranean story "basement," guess we'll have to alert the staff to measure the heights against the curb levels and adjoining ground, and then pick the right term.

ALIBI—It is inexcusable, of course, but we had always held the opinion that a cellar was merely an undeveloped basement—dirt floor, unfinished ceiling, unfinished walls—a place that was supposed to be cool and damp for the storage of roots. We thought it was the earth floor under an old-fashioned farm house that determined a cellar, and that it became a dignified thing called a basement merely by providing a floor, and dressing it up.

KIWANIAN OF YEAR—In Durham, North Carolina, the Kiwanian of the year is James H. Coman, Jr., of the Coman Lumber Co. He was awarded the title and the trophy that goes with it in recognition of his "work as chairman of the Agricultural Committee which sponsored the Fat Stock Show and Sale in April, 1951."

THE COMANS—Jim, Sr., with three talented sons due home from the war in 1946, anticipated their problems, and started a lumber yard in Durham. With one boy an architect,

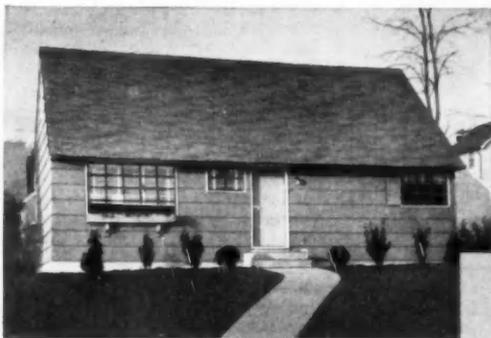
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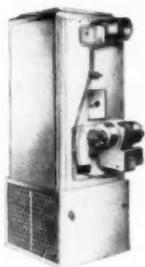
James H. Coman, Jr., Kiwanian of Year, see story above

New Homes Sell Faster With

DELCO-HEAT Says N.Y. Builder



Delco-Heat "OPC" Conditionair—a vertical-type, oil-fired forced warm air furnace—designed for utility room, alcove, or closet installation or wherever floor space is limited. Three sides of the unit are clear of flue outlet and controls so it may be easily installed in recessed areas. Capacity 75,000 BTU per hour output. Other Conditionair models to 200,000 BTU output also available.



"We have used Delco-Heat in our homes on Long Island because of the terrific sales appeal it has with the buying public," writes Mr. Jack Wyn, President, Wyn Homes Inc., Great Neck, New York. "We have found that Delco-Heat Conditionairs are the most economical furnaces we can install. And many customers have told us how pleased they are with the performance of their Delco-Heat units."

Wheeling Metal Fabricators, Inc., Hempstead, N. Y., made the Wyn Homes installation. Pictured above, from left to right, are Mr. Jack Wyn, Mr. Irving Steckler, of Wheeling Metal Fabricators and Mr. Nat Eisenberg, of Wyn Homes, Inc.

Delco-Heat oil-fired steel boiler—for radiant heating systems—or conventional steam or hot water systems in popular size homes. It's ideal for installation in restricted areas or utility rooms. Available with round or cabinet-type jacket. Net rating, 300' steam or 480' hot water radiation.



The sales appeal and prestige of General Motors Delco-Heat is becoming increasingly apparent to builders all over the country. Home owners demand the highest quality, most dependable heating equipment available and that's what they get with Delco-Heat.

Builders especially like Delco-Heat because the line is complete. There is a Delco-Heat Conditionair, boiler or burner to meet every builder's need. And Delco's low, competitive prices fit any budget.

Delco makes gas or oil-fired heating equipment for any size home—any type heating system. Get the facts now! Send coupon below.

For a good deal

DEAL WITH DELCO

GENERAL MOTORS
DELCO-HEAT

CLIP AND MAIL TODAY!

DELCO APPLIANCE DIVISION, Dept. AB
GENERAL MOTORS CORP., Rochester 1, N. Y.

Please send me complete details and specifications on all Delco-Heat units.

Name _____

Address _____

City _____ Zone _____ State _____



Oil-fired
Water Heaters



Conversion
Oil Burners



Electric
Water Systems



Gas
Conditionairs



Conversion
Gas Burners

On and Off the Record

(Continued from page 34)

another endowed with administrative ability, and a third with unquestioned sales ability. Jim, Sr., reasoned that a retail lumber and building business was an enterprise that all four, including himself, could run happily and successfully. He was right. Again, speaking of public relations, it appears that Jim, Jr. is doing very well.

ED KIRWAN—Writing to his Congressman this Kentucky retail lumber dealer proposed "that for the period of the emergency Congress set the basic work week at 50 hours instead of 40, and forbid any and all premium pay, regardless of any contracts or agreements to the contrary, until after the fiftieth hour. I believe that the increased production resulting from such extension of work time would greatly lessen the impact of the war effort on the civilian economy."

THE REPLY—In part Kirwan's Congressman agreed. In fact, he did agree, but stated that "I am afraid that from a practical standpoint this will be very difficult to accomplish during the life of the present Congress. The errors of the past half generation are catching up with us and sometimes I am quite discouraged as to the outlook for the future." As stated in this column some time ago the only reason the work week was pegged to 40 hours was to distribute the work during the depression. Now, if production is a matter of life and death, what's wrong with a presidential order to step it up to 50 hours? Of course, we're being naive when we ask the question. We know the answer as well as anyone else. But it's still a good question.

PERFECTION—Out of one of the winter conventions came this provocative thought. It's author said, "There is no such thing as a perfect salesman, and there never will be. A salesman PRACTICES selling just exactly as a physician PRACTICES medicine. Merchandising and medicine are always changing, and it is continuous application of practice to both that determine the effectiveness of either a salesman or a physician."

TAX LEGISLATION—On January 21 the Georgia House passed a tax limitation resolution. Similar action by five more states is needed for the introduction of a bill in Congress designed to limit personal and corporate income taxes to 25 per cent of gross income.

SAY IT AGAIN—That's what Gates Ferguson, Celotex director of advertising, has been doing in a forceful, down-to-earth way for the past several years as a feature speaker at lumber dealer and home builder meet-



Gates Ferguson

ings. He talks merchandising—what it is, and why it must be improved. In great demand and as a repeat speaker several times before the same organizations, Mr. Ferguson wraps his story in a new package each year—uses the same theme, but gives it a new twist. It's this repeating of the theme that is getting results.

TESTIMONIALS—At several retail lumbermen conventions this year, the conductor of this column has shared speakers' rostrums with Mr. Ferguson, who was making his second or third appearance in each case. Without exception, at the end of each program, a number of dealers came to him to state that they had taken some of his advice from previous speeches they had listened to, and were back for more ideas. A few stated that they had watched competitors put some of the Ferguson ideas into use, and had come to the convention to make notes on what they evidently were passing up.

THIS IS PROOF—That Ferguson's ideas are catching on is definitely proved by the testimonials he is receiving in person. That he should continue preaching his gospel of merchandising over and over again to the same people, and to new members that he adds to his audience each year is proved by the fact that the same people do come back year after year for more ideas. Again, it's this business of sticking to the theme year after year that gets results, and as Ferguson presents his fresh, new, package of merchandising ideas and principles annually, interest and results multiply.

LOS ANGELES—The public housing battle, raging at white heat in this city, is producing a tremendous impetus to cleaning up broken down houses. Opponents of public housing

have always maintained that most of the problem of sub-standard housing would disappear if the sanitation and public safety laws were enforced. Since the big push for law enforcement started a few weeks ago 350 houses were placed in livable condition by their owners.

PUBLIC SUPPORT—Home builders in Los Angeles have enlisted the solid support of churches, Parent-Teacher Associations and other civic groups.

THE PROBLEM—It's finance. Noticeable is the fact that the owner of a broken down property can get money to purchase a television set, but can't get money for a new roof. Currently, the problem is being attacked by starting a lending institution for the purpose.

REPAIR MARKET—With financing made available there will be a tremendous market for materials for repair and rehabilitation in Los Angeles. And, if Los Angeles home builders can solve the problem of run-down properties, so can builders in other cities.

MANUFACTURERS—If the new home market is cut back below production potential for many materials in 1952, it might be well for manufacturers to think of tailoring some of their advertising to telling how to use their materials in repair and rehabilitation.

NATIONAL HOME WEEK—It is a natural, simple, easy and highly effective public relations program, and the most successful merchandising program the home building industry ever had.

DEALERS—But, why hasn't it caught on with retail lumber dealers? Only a few score of them have conducted National Home Week observances in their communities. Those who have, endorse it with enthusiasm. What about the others? Why doesn't the idea click with all of them?

FORTY PER CENT—There is, or can be, a great difference between a cutback of 40 per cent in critical metals for housing and a 40 per cent cutback in housing starts. The difference can, and probably will be measured by the ingenuity of builders in finding ways to stretch critical metals over more houses than heretofore, and in finding ways to perform some construction operations without metals, where they have been used in the past. Unless government, for reasons that have nothing to do with material supply, decrees a flat cut, 1952 will see close to 1,000,000 starts.

only **BH&G**

is so **BIG**—both ways!



It's the world's only package of 3½-million ideal building materials prospects — screened for the BUY on their minds!

7 out of 10 families building new homes read Better Homes & Gardens! But that's only the beginning —

BH&G, with 3½-million circulation, is the *top-ranking* magazine of special interest to *all* families owning, maintaining and improving homes!

BH&G families have bigger-than-average incomes. They repair or remodel their bigger-than-average homes at the rate of 1¼-million jobs a year!

These are all mighty good reasons

why ads about your wares do so much for you in BH&G — but here's the biggest reason of all: BH&G families are editorially screened for the BUY on their minds—for their interest in, and ability to buy, what's new or better. AND—these 3½-million families consider BH&G their friendly counselor on all home improvements!

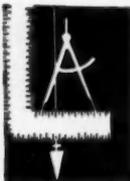
No wonder lumber and building materials dealers—by a vote of 7 to 1—acclaim BH&G as their greatest selling aid among all magazines!



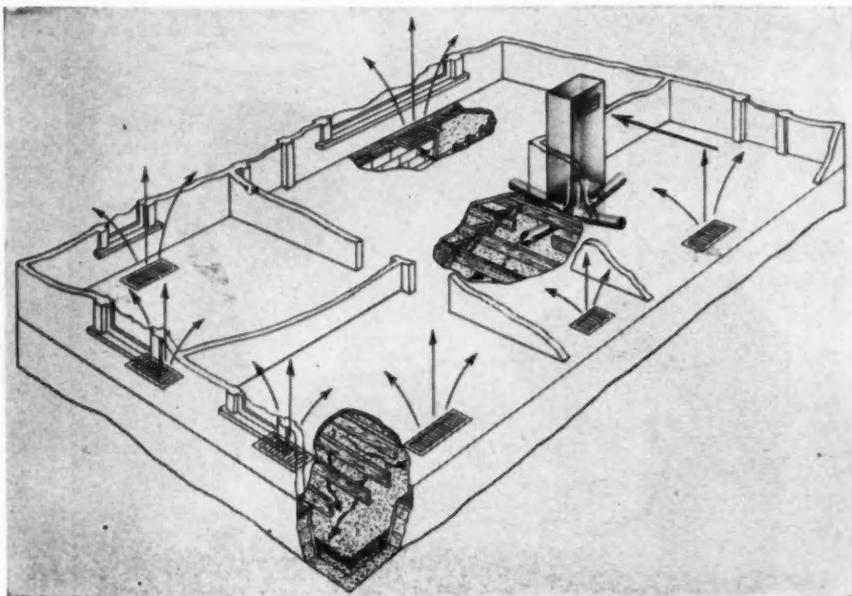
Serving a **SCREENED MARKET**

of 3½-Million Better Families

MEREDITH PUBLISHING COMPANY, Des Moines, Iowa



TECHNICAL GUIDE for Builders and Craftsmen



CRAWL SPACE PLENUM SYSTEM of perimeter heating is used only in a crawl space house

Crawl Space Plenum System of Warm Air Heating

discharges heated air, circulated freely through the crawl space, so that it enters the room directly through registers placed in the floor, which serves as a radiant panel

IN this system the entire crawl space is used as a warm air supply plenum or chamber. Stub ducts from a sheet metal plenum suspended from the floor joists distribute the heated air evenly through the crawl space. Warm air then enters rooms above through perimeter floor registers placed beneath the windows. With this combination forced warm air and radiant system a substantial part of the heat required by the room is supplied by the warmed floors.

CRAWL SPACE PREPARATION. The preparation and treatment of the crawl space walls and floor are of the utmost importance. All organic matter from the earth beneath the structure must be removed. Foundation walls must be well constructed and insulated. A protective covering must be laid over the ground to avoid moisture problems.

The crawl space must not be used for storage. The

access opening (not smaller than 18x24 inches) must be equipped with a tight fitting door. The floor of the habitable areas above the crawl space must not be insulated. The crawl space floor must be at least 18 inches and not more than 24 inches below the bottom of the floor joists.

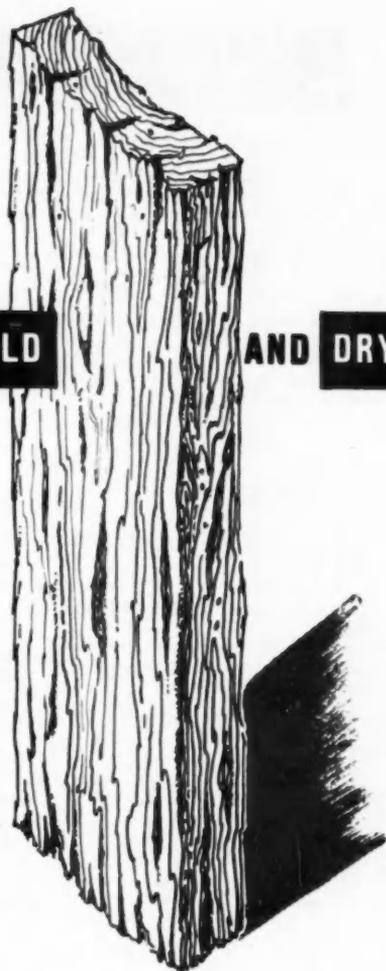
FOUNDATION WALL CONSTRUCTION. The walls should be constructed to minimize air leakage, moisture penetration and heat losses through them. The outside of the walls should be covered with $\frac{1}{2}$ -inch coating of portland cement plaster and then given a heavy coat of undiluted hot tar or asphalt.

The heat loss through the crawl space must not be greater than that of the rest of the structure above. A $\frac{3}{8}$ -inch-thick vaporproof insulation board can be nailed or cemented to the inside surface of the wall. The insulation should completely cover the foundation wall from a few

WOOD WON'T ROT WHEN IT'S

COLD

AND DRY



Living fungi, which break down the substance of wood are microscopic and abundant. But they need a certain amount of WARMTH and DAMPNES to develop. Dampness will also peel off paint, crumble plaster, rust iron and steel.

Some insulations promote and retain destructive condensation inside walls and other structural spaces. In addition to warmth, vapor of water also flows right through asphalt, paper, plaster and most building materials, including ordinary insulations. It condenses when it strikes a colder surface and reaches a dew-point.

An empty space is the best insulator against heat flow by Conduction; but does not prevent heat flow by Radiation and Convection. Of all heat transferred through structural spaces, 50% to 80% is by Radiation; all but 5% of the rest is Convection. Multiple accordion aluminum sheets throw back all but 3% of the Radiation which strikes them, and block Convection. Their insignificant mass, 1 oz. to the square foot, and their multiple air space construction, minimize Conduction.

They have zero permeability to water vapor and all other gases, including air, hot and cold. Because of their structure, they are non-condensation-forming, for a dew-point can never be reached on any of their surfaces. Neither can they sustain nor retain fortuitous moisture.

Simple and illuminating discussions of vapor and heat flow, including explanations of how to prevent timber rot, will be found in the just-off-the-press, completely revised, 5th edition of "Simplified Physics of Vapor and Thermal Insulation," 56 pages of facts and figures.

The commercial forms of tough, multiple accordion aluminum sheets are Infra Type 6, Type 4, and Type 4 Jr.

INFRA INSULATION, INC.

525 Broadway, New York, N. Y. — WORTH 4-2241

INFRA THERMAL FACTORS. TYPE 6

Up-Heat C.089, R 11.23 = 4 $\frac{1}{2}$ " dry rockwool

Wall-Heat C.073, R 13.69 = 5 $\frac{1}{2}$ " dry rockwool

Down-Heat C.044, R 72.72 = 9" dry rockwool

INFRA INSULATION, INC.
525 Broadway, N.Y., N.Y. Dept. B-4
Please send FREE "Simplified Physics of
Vapor and Thermal Insulation," new,
revised 5th edition.

Name _____

Firm _____

Address _____

Send Prices of Infra Insulations Send Sample



TECHNICAL GUIDE for Builders and Craftsmen

(Continued from page 38)

inches above the crawl space floor to the top of the masonry. The insulation must not extend down into the ground. The outside walls between joists from top of the plate to bottom of the floor boards must also be well insulated.

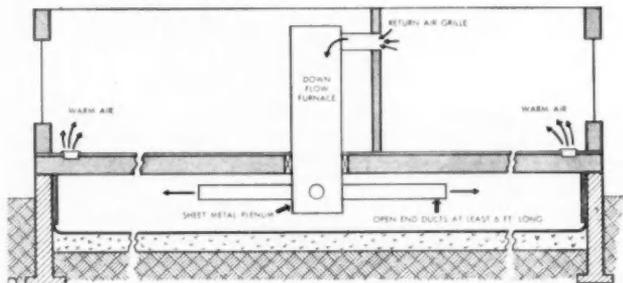
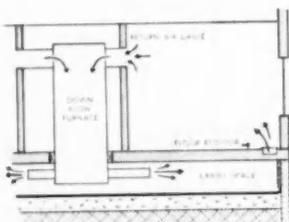
All openings and cracks through walls that lead to the outdoors must be sealed to prevent moisture penetration and air leakage.

VENTILATION. Vent openings in outside walls are required by FHA to minimize humidity conditions. A minimum of two vent openings are required with a total free area of one square foot for each 100 lineal feet of outside wall. Vents must be closed during heating season and opened during the summer.

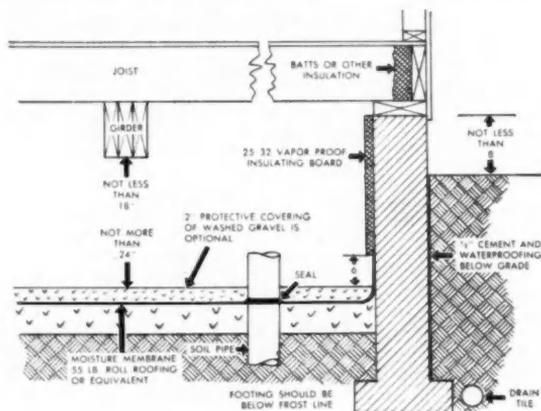
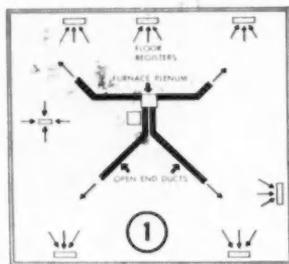
Crawl Space Plenum System

The floor of the crawl space must be treated to prevent the heated air from coming in contact with moisture-laden surfaces. One acceptable method is to place a moisture membrane upon the earth and pour a two-inch-thick slab over it. Another method is to place a four-inch-thick layer of coarse fill upon the ground surface and cover it with a moisture-proof membrane. This must form a continuous covering over the entire area with joints between laps (at least four inches) sealed with a suitable compound. The membrane must be carried up the side of the foundation at least six inches and terminated under the foundation wall insulation.

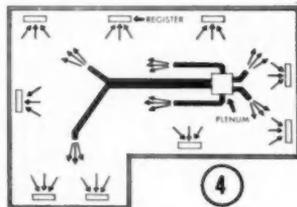
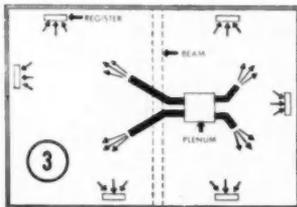
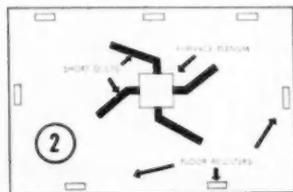
CRAWL SPACE PLENUM SYSTEM. This system differs in many respects from any other that has been (Continued on page 44)



CRAWL SPACE must be tightly sealed to minimize air leakage, moisture penetration



PLANS numbered 1, 2, 3 and 4 indicate methods of installation for various plan arrangements. Air from the furnace is delivered into the crawl space through a minimum of four ducts, each at least six feet long. These ducts are necessary to evenly distribute the heated air and assure uniform air temperatures at each register. When necessary ducts should be more than six feet long so the projected air stream will reach the desired areas



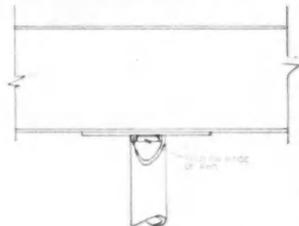
Ideas for the Man on the Job

A SHINGLING BRACKET



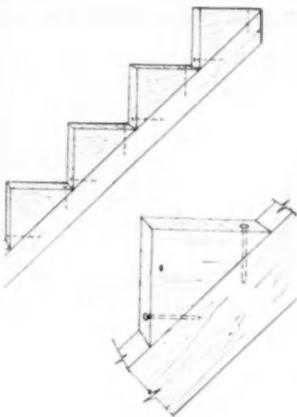
To make an effective shingling bracket take the blocks that are cut out of stair stringers and nail a strip of heavy gauge sheet iron on one side. Nail the top of the metal strip under the shingles and use a 2x6 inch plank on top of wood blocks for a toe hold. The exposed portion of sheet metal is cut off at the edge of shingles when roofing is done.—John Menkveld, Grand Rapids, Mich.

SETTING STEEL POSTS



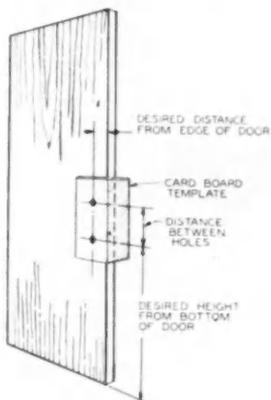
When setting steel posts under an I-beam, weld $\frac{1}{2}$ inch ring on the top and bottom plates the same size as the inside diameter of post. Plates can be welded to beam at the shop. The posts can then be set without welding.—John Menkveld, Grand Rapids, Mich.

CUTTING STAIR STRINGERS



To save one 2x10 inch member when cutting stair stringers, use the blocks that are cut out of two stringers to nail to a 2x4 inch member to make the third stringer. This stringer can be used in the center.—John Menkveld, Grand Rapids, Mich.

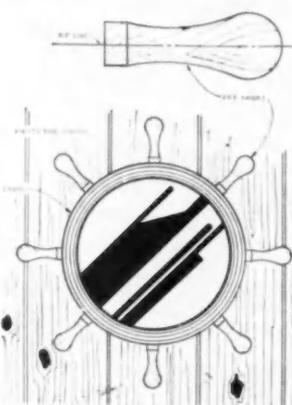
CUPBOARD DOOR TEMPLATE



This simple device is a template for marking holes for installing cupboard door handles.

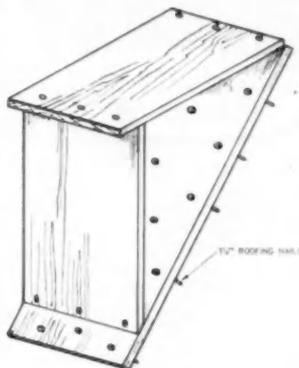
Template is made of cardboard, usually the same box in which the handles are delivered. Mark the holes with a sharp awl.—John Menkveld, Grand Rapids, Mich.

TRIMMING KNOTTY PINE ROOM



When making a port hole window in a knotty pine room, trim the window as usual and then take ordinary file handles and rip them in half. Use these cut handles to obtain the wheel effect around window.—John Menkveld, Grand Rapids, Mich.

ROOF BOARD BRACKET



This is a bracket that can be picked up and placed anywhere on the roof in the process of applying roof boards or shingles. The bracket is made of $\frac{3}{4}$ inch thick material and of shape to fit the pitch of the roof. Through the bottom member drive several $1\frac{1}{4}$ inch roofing nails so the points show about $\frac{3}{8}$ inches. This will keep the bracket from sliding.—John Menkveld, Grand Rapids, Mich.

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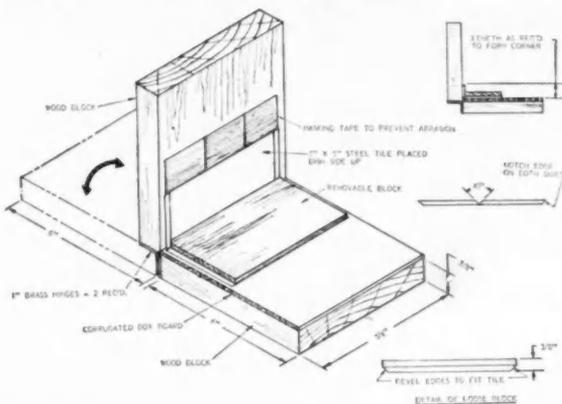
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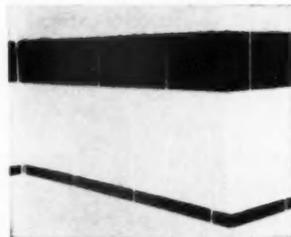
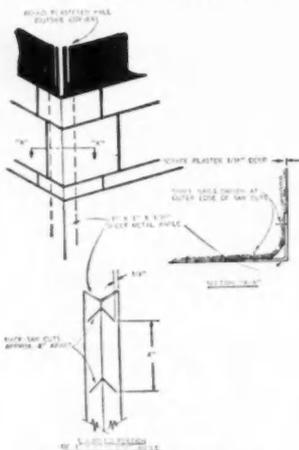
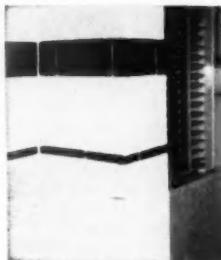


TECHNICAL GUIDE
for Builders and Craftsmen

How to Bend Metal Tile for Corner Installation



A method of bending metal tile at corners is shown in the drawings and photograph here. A jig is made of two 1x6 boards, hinged. Corrugated box board is glued to one board and masking tape to the other to avoid scuffing the surface of the tile. When tile is at room temperature it is placed in the jig. A small block is used to hold tile in place while bending. Edges of the 3/8-inch-thick block are beveled to fit tile. Cut the edge of each side of tile with tin snips at point of bend before bending. By bending tile at corners a better appearance is obtained than by using hard-to-get chrome strips.—LeRoy Bradley, Lorain, Ohio.



at chimneys and cupboards that extend into the kitchen. To make a sharp corner for the application of steel tile, the method shown in photograph above and drawing, left, was used.

No. 16 gauge 1x1-inch sheet metal angles were formed with slots cut as shown with a hacksaw. The slots permit adjustment to the wall surface and for nailing angle to wall.—LeRoy Bradley, Lorain, Ohio.

In many of the older houses plastered corners are rounded, especially

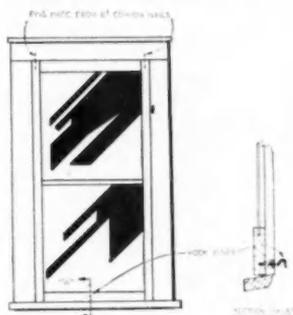
Ideas for the Man on the Job

PLACING SCREEN MOULDINGS



Nail together screen mouldings shown at B with ends projecting. Saw through mouldings at B with thin saw. Mouldings of various widths may be mitered by sawing on a line through C-C. Window screens with a three-inch bottom rail can be cut this way, or as shown in E-E or C-C.—M. J. Hiland, Lansing, Ill.

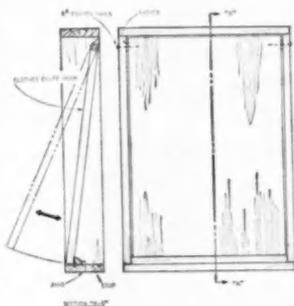
HANGING STORM WINDOWS



For hanging stationary storm windows, two pins are placed in the top rail of the sash that fit into corresponding holes in the head casing. Place a hook and eye on the inside to be secured to sill.—John Menkveld, Grand Rapids, Mich.

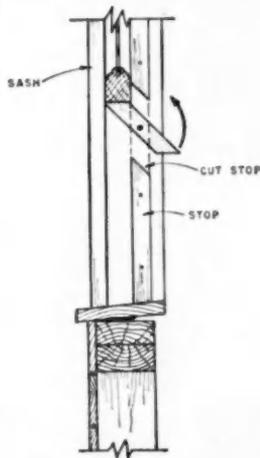
Continued From Page 41

A CLOTHES CHUTE DOOR



A simple method of hanging a clothes chute door is to pivot it on two nails. These nails to be placed about one inch from the top of the door. The door will then close of its own weight.—John Menkveld, Grand Rapids, Mich.

HOLDING BARN SASH OPEN



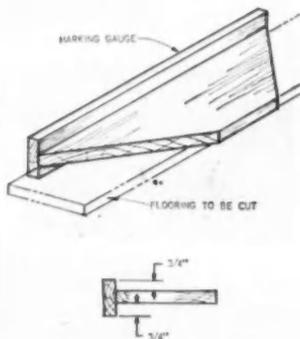
To hold barn sash open, cut the stop on one side on an angle at the desired height. Drive a nail in the center of the cutout portion of stop and then permit sash to rest on one end of stop with the other side of stop against the fixed portion.—John Menkveld, Grand Rapids, Mich.

IMPROVISED STAR DRILL



To make an improvised star drill take a piece of pipe of the required diameter and file notches in one end with a saw file. This can be used in a pinch when a star drill is not available.—John Menkveld, Grand Rapids, Mich.

MARKING GAUGE FOR FLOORS



Instead of using a mitre square for cutting subfloor make a block with both cuts on either end; nail a cleat on the side and with the use of this gauge the work can be done faster.—John Menkveld, Grand Rapids, Mich.

FACTS FOR BUILDERS

ABOUT "CONSTRUCTION BY ADHESION"

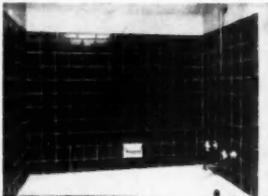


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MEAN SUBSTANTIAL SAVINGS IN LABOR AND
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2. Insulating Ducts.
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4. Installing floor runners; bonding furring strips.



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Today it is normal procedure to install clay tile in hotel bathrooms without losing a night's revenue. This illustration shows one of the 244 rooms in the White Plaza Hotel, Dallas, Texas, in which MIRACLE ADHESIVE was used to do the job from the time the guest left his room in the morning until he returned that afternoon.



2.

Plaster applied over wire and cork which has been attached to aluminum ducts using MIRACLE ADHESIVE and MIRACLE SPINDLE ANCHORS of John Hancock Mutual Life Insurance Co., Building, Boston, Mass. ARCHITECT, Cream and Ferguson, BUILDER, Turner Construction Co.



3.

FIBERGLAS insulation Type PF-613, 2" thick — bonded to concrete ceiling using MIRACLE PRONGED ANCHORS at Radio City Studio 68, New York, N. Y. CONTRACTOR, William J. Scully, Inc., New York, N. Y.



4.

WOOD RUNNERS installed on concrete floors with MIRACLE ADHESIVE and MIRACLE ANCHOR NAILS to support 2" solid partitions. Washington Circle Apartments, Washington, D. C. GENERAL CONTRACTOR, Charles N. Tompkins Company.

WRITE MIRACLE EXHIBIT AT ARCHITECTS SAMPLES CORP.
101 PARK AVE., NEW YORK CITY

TECHNICAL GUIDE for Builders and Craftsmen

Crawl Space Plenum System

(Continued from page 40)

described. All the heated air delivered by the furnace is discharged into the crawl space which then serves as a supply chamber for the registers in the floor above. There is no duct connection between the furnace and the registers.

The crawl space must be considered as an additional room and its heat losses also entered as a room. The perimeter registers should be placed in the floor beneath the windows. The return air grilles are placed near the ceiling. All grilles should be properly sized.

The air from the furnace is delivered into the crawl space through a minimum of four ducts, each at least six feet long, attached to the suspended plenum chamber beneath the furnace. These ducts are necessary to evenly distribute the heated air in the crawl space area and assure approximately equal air temperature at each register.

Judgment must be used in placing these ducts. It is desirable to keep them less than six feet long. When necessary, however, they may be more than six feet long if the added length is needed so the air stream projected from them will reach the desired areas, which are usually the corners of the building. In a small house with a centrally located furnace, a duct should be directed toward each corner of the crawl space. All of them should be the same size and about the same length. If a beam interferes with free air circulation within the space, one or more of the ducts should be extended beyond the beam. In an L-shaped house or one with a portion extending out from the main part, a duct should be extended far enough out to assure the delivery of warm air and good circulation in the crawl space beneath. In an installation of this kind the ducts should be sized in proportion to the percentage of the total heat loss of the structure that is represented by the climatic conditions.

The use of this system may result in more rapid shrinkage of the wood floor and subfloor structural members than in the crawl space houses with other types of heating systems. It should not cause undue concern since it is merely an acceleration of a completely normal drying out process. The recommendations set forth in this text comply fully with the requirements of pamphlet 90 of the National Board of Fire Underwriters.

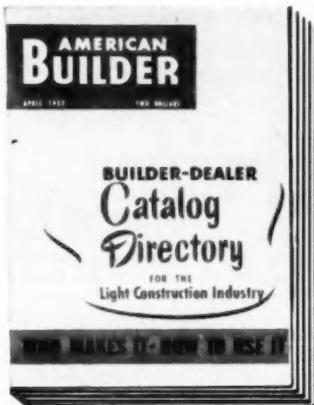
FURNACE SELECTION. Practically any type of automatically fired, oil or gas burning forced warm air furnace may be used. The down-flow furnace which takes return air in at the top and discharges heated air downwards from its base is best fitted for this particular type of installation. A down-flow furnace installed on the wood floor of a crawl space house must be set over a plenum of proper size and both the furnace and plenum supported by a base of non-combustible material. The space between the plenum and framing must be packed with fireproof insulation.

Data and drawings through courtesy of National Warm Air Heating and Air Conditioning Association, Cleveland, Ohio.

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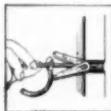
PAINE Spring Wing TOGGLE BOLTS

cut fastening and hanging costs

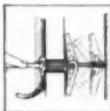


Whether you are building a new home or office or are repairing an old building you'll have no fastening problems if you use Paine Spring Wing Toggle Bolts. Spring Wing Toggle Bolts provide a secure and permanent fastening in hollow walls and ceilings and other hollow spots where it is impossible to reach the other side. They may be used in wood, gypsum, marble, lath and plaster, tile and sheet rock. They are especially useful for installing heavy shelves, partitions, wall mirrors, lights, and plumbing fixtures.

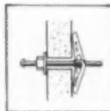
For the big user, try Paine's Toggle Bolt Clamp that grips the bolt when it is to be tightened, so it can be tightened with a screw-driver. It cuts installation time in half and saves the mechanic's fingers. Get Paine Toggle Bolts from your supplier today.



Just drill a hole. Un-screw wing. Put bolt through item to be fastened. Thread wing back on bolt. Push wing through hole.



The wing springs open when through hole. Pull on bolt while tightening to prevent wing turning.



When hanging objects that must be moved periodically, use a nut and washer as shown above.

THE PAINE COMPANY

7 Westgate Drive

Addison, Illinois

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- Expansion Anchors
- Sudden Depth Drills
- Wood Screw Anchors
- Pipe and Conduit Clamps and Straps

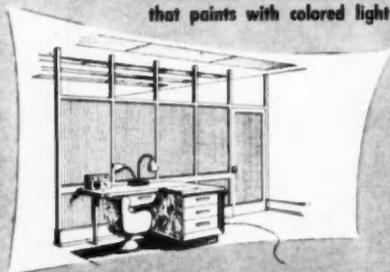
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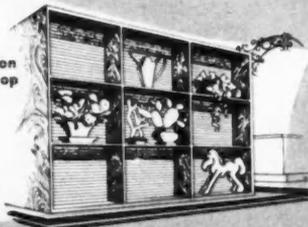
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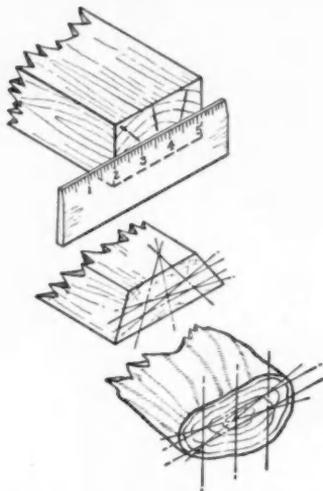
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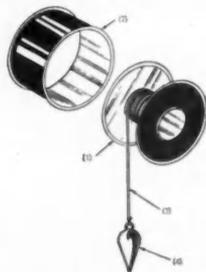
TECHNICAL GUIDE for Builders and Craftsmen

How to Find the Center of Any Irregular Member



Where an irregular piece is used for lath work and it is necessary to find the center, first lay the piece to be worked flat on a bench and mark across end. Turn piece one fourth the way around and make second mark. Make the other two marks in the same way. If the piece is circular make marks approximately at right angles to each other. The center of the small figure will be easily determined for lath centers.—M. J. Hiland, Lansing, Ill.

A Spool for Plumb Line



A handy way of carrying and using the plumb line is to wind and store it on an empty adhesive tape spool. The plumb line (3) is tied to and wound on the tape spool (1), with the plumb bob tied to the other end of the plumb line (3). The spool cover (2) is slipped partially off the spool (1) when the line (3) is wound and unwound. When the line (3) is stored or ready for use, the spool cover (2) is closed, thus clamping the line (3) tightly between the spool (1) and cover (2), preventing line from unwinding further than desired.—W. W. Howe, Longview, Wash.



READY FOR ACTION IN WASHINGTON with NAHB President Alan E. Brockbank opening the session

Congressmen Impressed as Builders Swap Ideas At Trade Secrets Meeting in Washington

HERE a builder finds out how to save both metal and costs with a new heating design. There a developer turns up a new style of window. Across the continent, a novel storage wall idea proves practical. And so it goes: the ingenuity of the local home builder continues to meet the test of high costs and material shortages.

After months of spreading success stories among themselves and those closely allied to the industry, NAHB members produced a highly affective "trade secrets" presentation in Washington last January during a time when NPA was considering further restrictions.

It was no secret that the more than a dozen Congressmen and Federal officials who attended were noticeably impressed while listening not to skilled orators but to builders from all sections of the country, proudly disclosing their part in a vast cooperating drive to build better value into housing.

NAHB President Alan E. Brock-

bank conducted the two-hour session in the absence of his predecessor, W. P. "Bill" Atkinson, who pioneered the "trade secrets" movement. More such informative meetings are on the way.

Each exchange in this continuing series produces some new development, it seems. The Washington conference heard the first details about a product of intense research which may, in time, revolutionize the plumbing industry.

Carl Bestor of Purdue University described a new type toilet said to virtually eliminate the need for waste disposal, even though using but a small percentage of the water required in present models.

Pointing out that a river purifies itself after flowing two miles, Bestor said similar action in the toilet is obtained speedily by bubbling air through a tank by means of an air compressor. This is operated at 20 pounds pressure by a one-sixth horsepower motor.

Use of this water closet does away with both sewer and septic tank, Bestor claimed, the only waste connection leading to a 60-gallon drum. The product is now said to be undergoing tests by health authorities.



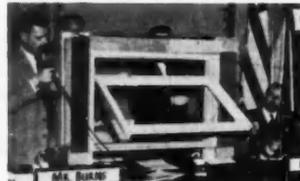
V-SLOT CONCRETE BLOCK offered by Martin J. Bartling Jr., Knoxville, Tenn., who estimates its use can save about 200 linear feet of wire per house. Exterior is designed to look like shingle siding. Next to Bartling (at mike) is scale model of his storage wall closet, built of wood to effect savings on shelving, flooring, hardware and trim



NEWEST SECRET IS THIS "WASTELESS" TOILET, being described by Carl Bestor of Purdue University as a radical new design needing no sewer or septic tank



TWO FITTINGS DO WORK OF NINE in this arrangement, making possible an extra half bathroom for only \$55 more. This is an innovation of Andrew Place

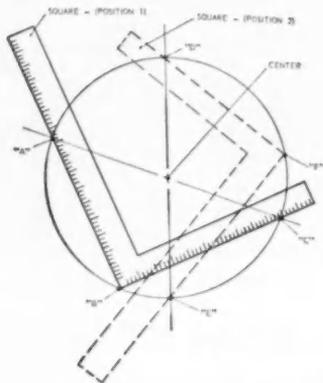


WINDOW UNIT, also exhibited by Place, a wooden awning type easily washed inside and out. It has a Thermopane glass framed in 1 3/4-inch stock



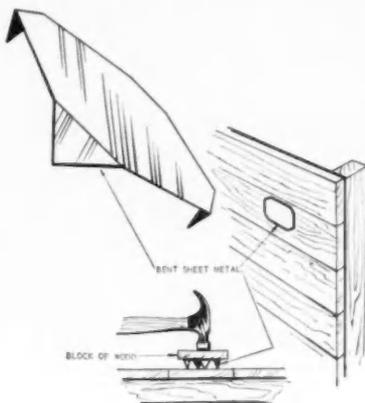
TECHNICAL GUIDE for Builders and Craftsmen

How to Locate the Center of a Circle



This is an easy method for locating the center of a circle with the aid of a carpenter's square. Place the square on the circle as shown in position 1. Mark point A, B, and C with a line. Join points D and E with a line. The point of intersection of these lines A-C and D-E is the center of the circle.—Fred Chatt, Cicero, Ill.

How to Plug Holes in Wood Forms



Cut small squares of sheet metal to the required size with sufficient lap for the proper covering of hole. Bend $\frac{1}{4}$ inch of each corner to form prongs as illustrated. Place the prepared piece of sheet metal over the hole in wood forms. Force prongs lightly into wood surface to hold it in position and then drive into the wood surface with a block of wood and hammer.—Alexander J. Benko, Spotswood, N.J.



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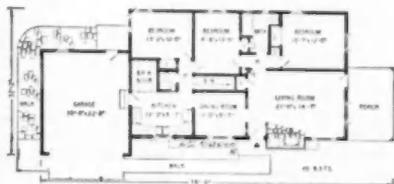
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 TOPEKA, KANSAS

"Ask The Experts"

Got a problem you haven't solved? Can't solve? Haven't the time to solve?

Have you solved a problem with an answer you aren't sure of?

Are you doing some particular job—big or little—in a way that you think might be improved?

Then "ASK THE EXPERTS"—a group of industry authorities—experts in their fields. They'll give you the answer.

Address your questions to: "Ask The Experts," *American Builder*, 79 West Monroe St., Chicago 3, Ill.

As many questions and answers as space permits will be published monthly in *American Builder*, under the head—"Ask The Experts."

Furring Strips

To eliminate nailing strips and the extra thickness, it is proposed to apply ½-inch insulation board decorative plank 16 inches by 12 feet to a painted plastered brick wall with adhesive. The walls are in good repair and are not too uneven. Can a durable job result and what kind of adhesive should be used? Is spotting the adhesive better than spreading it?

B.D., Wonewoc, Wis.

We would suggest that you move with caution in regard to applying the material, such as you suggest, directly to plastered brick walls, providing, of course, that the plaster was applied directly to the brick wall.

As a rule, you will invite an unpleasant moisture condition when you apply the insulated plank without furring strips. However, if the walls have been plastered for some time and you have not run into that condition, then it may be safe to use adhesive on the material. Adhesive should be spread over the entire surface with a notched spreader.

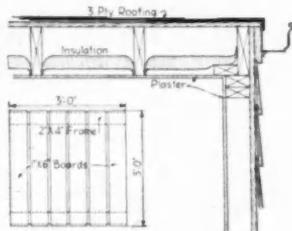
Leaking Roof

I have a laundry room in my basement that is under our porch. When it rains, water seeps through the wooden deck and makes the laundry room damp and cold. I thought of concreting the deck but that is too expensive. How can I waterproof the deck so that I can insulate and install heat in the basement. I would like to cover the deck with some material as seamless as possible and not too expensive.

A.B., Philadelphia 29, Pa.

I believe that your best answer to the problem would be to apply a 90

pound roll roof directly to the wood deck. In order to prevent the surface of the roofing from being scuffed up from the porch traffic, it would be necessary to place a removable wood deck on top. This wood decking would



cover the entire surface of the porch but would be built-up in approximately 3x3-foot sections for easy removal, and also for proper drainage. The decking squares could be made of 1x4 or 1x6 boards spaced one inch apart. The boards can be nailed to 2x4 inch framing members, laid parallel with the pitch of the porch floor.

Cement Base Paint

About two years ago a new house was constructed of cinder blocks and was painted with two coats of white Aquella. I am considering repainting the cinder blocks this spring with white cement and lime mixed, five parts of cement to one part of lime. I am familiar with the wetting procedure before and after. Please let me know whether I would get satisfactory results?

G.P., New Milford, Conn.

Rather than attempting to cover the present surface of the wall with the white cement and lime mixture, it would be better to purchase a pre-

pared cement base paint that would correspond, or be equal to, Federal Specifications T.T.P. 21. The prepared cement base has a water repellent in the mix which is essential. The mixture that you attempt to prepare yourself does not have the hiding power or qualities that are obtained in the prepared material. If you use according to the manufacturer's instructions, you should get satisfactory results.

Concrete Finishing

Many architects specify a 4-inch mesh reinforced concrete underslab, covered with a mopped waterproof membrane, and topped with a 3- or 4-inch slab.

We find it difficult to get a nice finish job on the top slab due to quick setting and shrinking, leaving a pattern of wide cracks. In hot weather I have seen cement set hard in 10 minutes, after pouring. The bulk cement used in our transit mix, is usually hot from the kiln.

Is there any method of pouring or a retarder that we can use to get a better finish job?

W.O.D., Riverside, Calif.

Judging from the fact that you are having difficulty getting a good finish from cement on the top slab due to quick setting and shrinkage, it would appear that the temperature of the transit mix is too high. This causes the concrete to set too rapidly. The correct temperature should be 70 degrees or less.

The quick setting, shrinking and the appearance of the wide cracks could be attributed to a number of causes. The brazing or cracking could be caused by over-finishing of the cement which causes the water to come to the surface and be quickly evaporated.

The quick evaporation can also be caused by the hot sun pouring down on the freshly poured slab. If possible, shade should be provided for the slab. This would ward off the hot sun. Another reason is that the bottom slab could be too hot at the time of the pouring. The mopped waterproof membrane's black color would have a tendency to absorb and hold the heat. In correcting the heat problem, you will correct the difficulty.

Aluminum Sash

About two years ago I purchased some aluminum casement windows. I have not installed them yet and have stored them in a good dry room with no heat. I

have noticed some dark streaks on them and rubbing these I found small cavities in the metal. Do you have any information on this condition? Is there a paint or a coating I could put on them to stop this condition?

F.H.M., Waynesburg, Pa.

I would suggest that you take the windows out of the storage area, thoroughly rub them with steel wool and clean them. Then apply one coat of clear lacquer over all the exposed surface. This will keep the frames in good condition until they are ready to be installed.

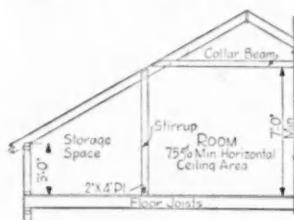
Unfinished Attic

I am seeking information on construction details for an unfinished attic in a Cape Cod style home. Better Homes and Gardens referred me to your magazine. Can you help?

J.S., Fairlawn, N.J.

It is rather difficult to give a clear and concise answer to a problem such as yours where information is meager and sketchy.

We are assuming that your house is the typical Cape Cod with a vertical knee wall of about 30 inches, with the balance of the wall following the slope of the roof rafters. In order to



make this space available for a room area, vertical studs 16 inches on center should be placed parallel to the present knee wall so that a minimum of five feet shall be established for this vertical surface. Top and bottom plates, of course, shall be placed on the present rough floor and the underside of the rafters, on which to secure the studs. Two by four collar beams spaced 16 inches O.C. or the same as the roof rafters, shall be placed horizontally at the established ceiling line. These collar beams to be secured to the roof rafters.

Most building codes have set up definite requirements in regard to the development of attic space. Basic requirements are that knee walls shall be a minimum of five feet in height, and that the flat area of the ceiling of the room shall not be less than 75 per

cent of the floor area. Also, that the ceiling height shall not be less than seven feet from the finished floor to the finished ceiling.

It is recommended that insulation be installed in the walls, the exposed roof rafters, and the ceiling around the room or rooms to assure maximum comfort.

Renewing Marble

Could you please inform me as to a good way to clean, finish, or repolish marble.

J.H.S., Oelwein, Iowa

Old marble that is dull can best be cleaned by using oxalic acid and tin oxide to form a paste. To apply it to the marble, make a burlap or wool mop that has been moistened. Dip the mop into the mixture of oxalic acid and tin oxide and rub vigorously on the surface of the marble. This should renew the surface.

Correct Sander

I would appreciate very much if you would recommend a reliable type of power sander for smoothing gypsum board taped joints.

E.P.T., Schenectady, N.Y.

An orbit type of sander has found favor with a great many of those engaged in this type of work. It can be purchased from any of the leading power tool manufacturers.

Laminated Gypsum Wallboard

Could you give me information on laminated gypsum wallboard? I would like information of size of nails and types of cement. Also tell me what type of spreader blades are used.

H.A.Z., Garden City South, Long Island, N.Y.

The Gypsum Association recommends that 13 gauge, cooler type uncoated nails spaced 5-7 inches O.C. on the ceiling and 6-8 inches O.C. on the side walls be used to hold the first layer. The second ply gypsum wallboard is laminated to the first with the same cement as used for the joints, or that recommended by the manufacturer.

Adhesive is applied to the back side of the wallboard with a notched trowel in an irregular pattern to an even distribution. The adhesive should extend to the extreme edges of the wallboard. The trowel notches should be approximately $\frac{1}{4} \times \frac{1}{4}$ inches and not more than two inches O.C.

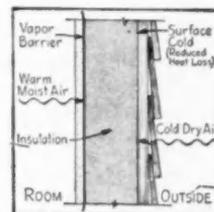
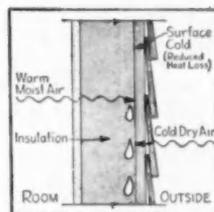
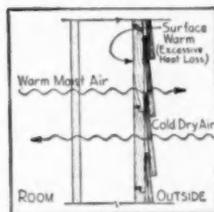
The second layer can be nailed to

hold in place or shorn, in lieu of nailing. Nails can be placed 12 inches O.C. on the ceiling and 16-24 inches on side walls. Permanent or temporary scaffolding nails can be used.

Will Insulated Sheathing Hold Paint?

There is a problem that I have failed to see answered as yet and I wish to "Ask the Experts" for an answer. I have heard the question argued but every one seems to have a different answer. The question is: Will wood siding or a composition board hold paint if applied directly against insulated sheathing? If not, what is the difference in applying it against wood sheathing with a waterproof paper between?

W.F.W., Addison, Pa.



There is no problem in holding paint on wood siding or composition board providing a good moisture barrier is placed against the inside face of the vertical studs. Condensation and moisture develop inside a wall surface when warm moist air from the inside comes in contact with the cold exterior surface. The moisture barrier on the inside prevents the warm air from going through the wall, thus eliminating the moisture.

AMERICAN BUILDER BLUEPRINT HOUSE

One Plan... Three Exteriors

Architect:
Norman R. Johnson,
St. Paul, Minn.

Builder:
Twin City Bldg. & Improvement Co.,
St. Paul, Minn.

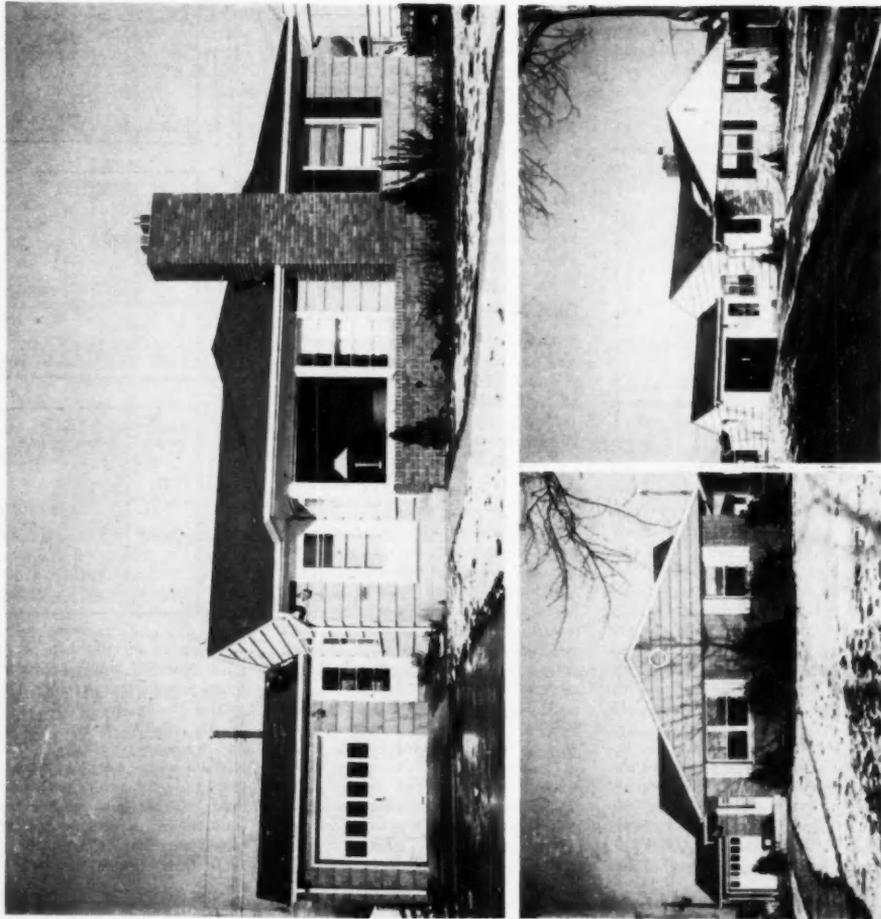
THREE designs from the same plan, with each design distinctive in its own right as if it were a custom-prepared job, features this month's *American Builder* Blueprint House. The variations are accomplished through judicious use of materials, colors, and changes in roof arrangements. By relocating the fireplace chimney and altering the fenestration a distinctly modern note is obtained in one house.

Each house contains approximately 1,000 square feet of living area, exclusive of the garage. The sale price of each is \$17,000, including a 60 by 125-foot lot in an exclusive section of the city. The price includes a concrete drive, walks, and complete landscaping, including shrubs.

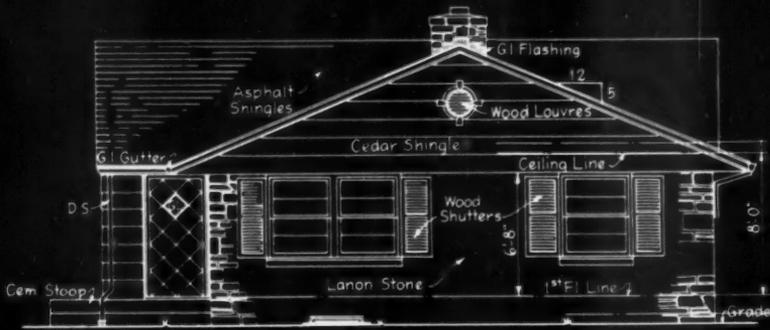
A living room, dinette, kitchen, three bedrooms and a bath, and the average number of closets comprise the layout of the first floor. A full basement is provided with space devoted to heating, storage and laundering. The attic, accessible from a scuttle in the ceiling of the hall, contains additional storage space. The square type of plan employed produces the greatest amount of economy during the construction.

While the firm that built these houses erects approximately 200 houses per year, they hold to standard construction methods in all work. Short cuts are obtained on the job by men accustomed to using on-the-site power equipment.

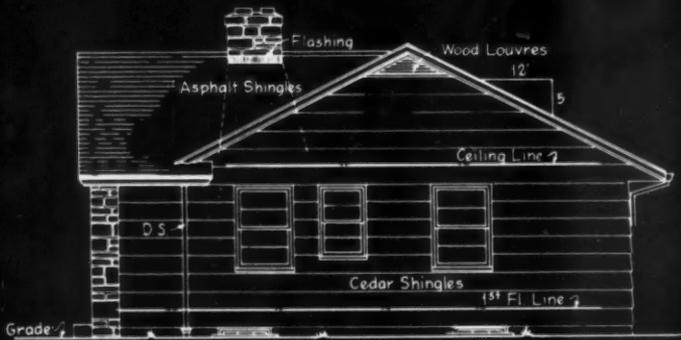
Basement walls are built up of concrete blocks, water-proofed with an exterior cement coating. Floor and wall framing are of wood, with brick or stone veneer on front. Roof is covered with asphalt shingles. Exterior surfacing of frame walls is double course siding shingles.



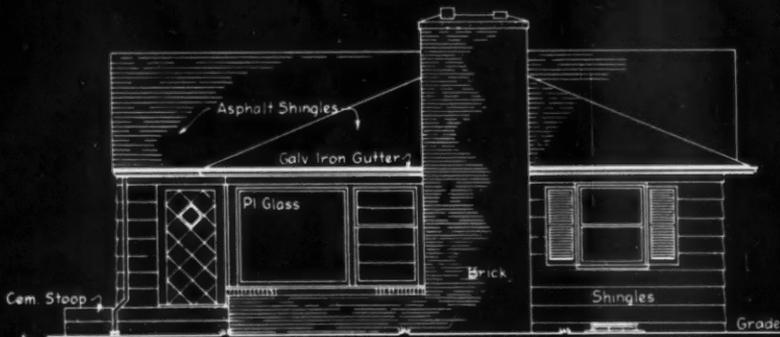
Relocation of chimney is one positive design change in these houses. Basic changes in roof lines and exterior materials further distinguish the models, one from the other



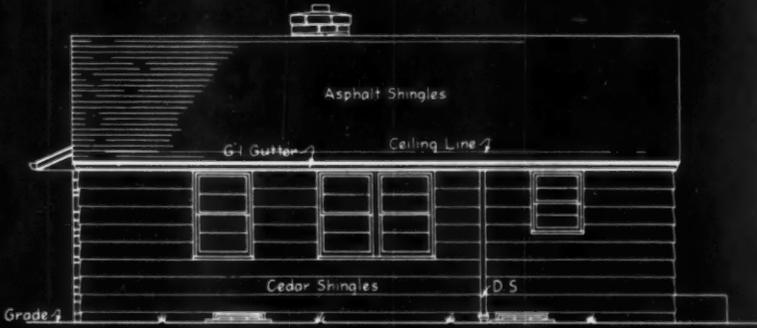
FRONT ELEVATION



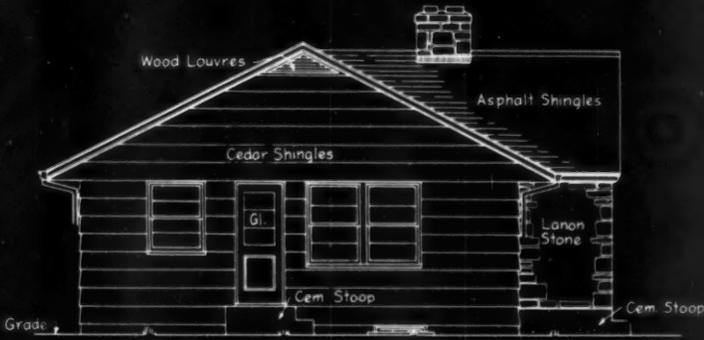
RIGHT SIDE ELEVATION



ALTERNATE FRONT ELEVATION



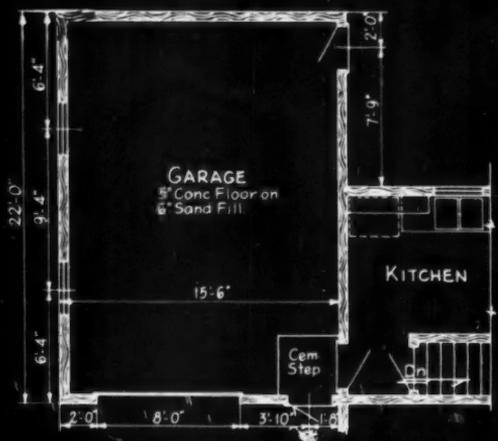
REAR ELEVATION



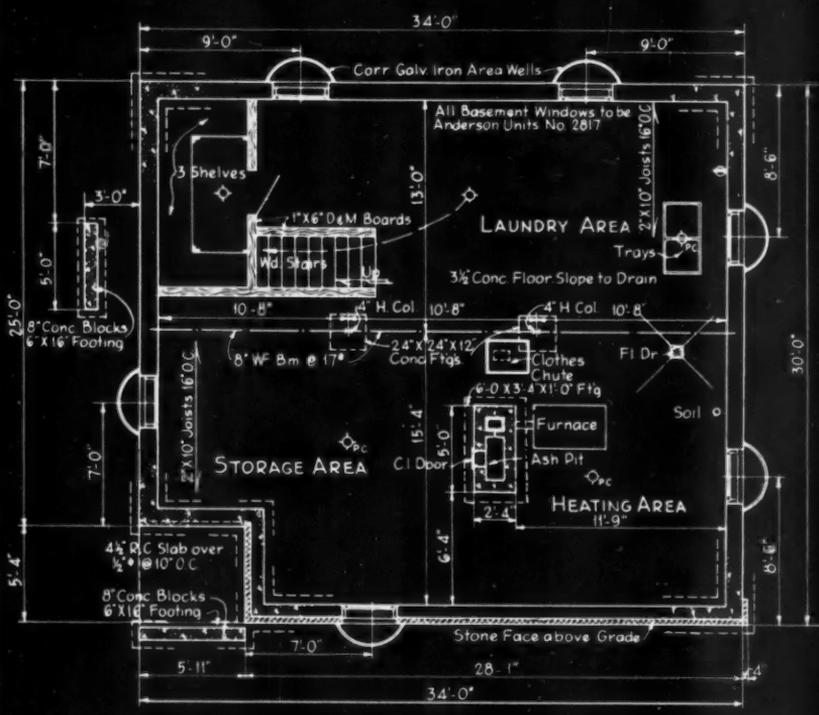
LEFT SIDE ELEVATION



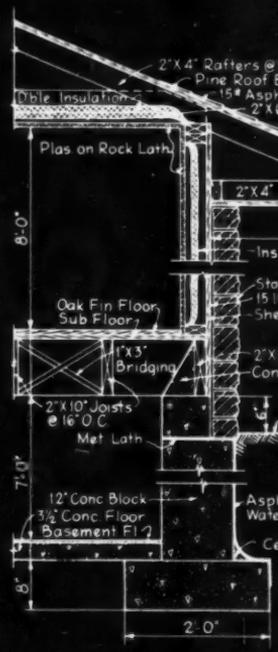
ALTERNATE LEFT SIDE ELEVATION



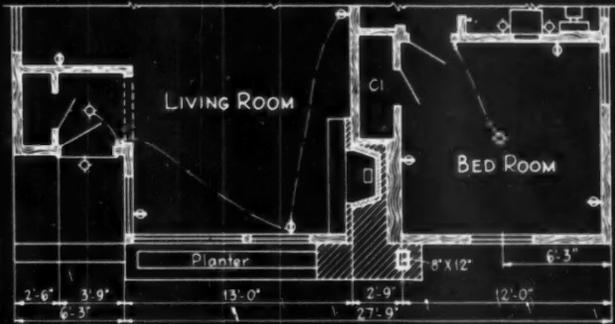
ATTACHED GARAGE



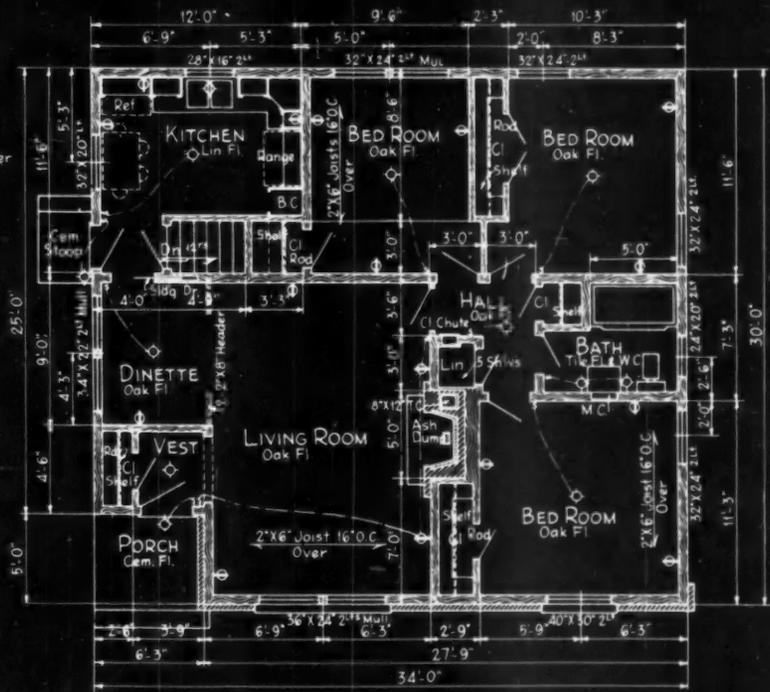
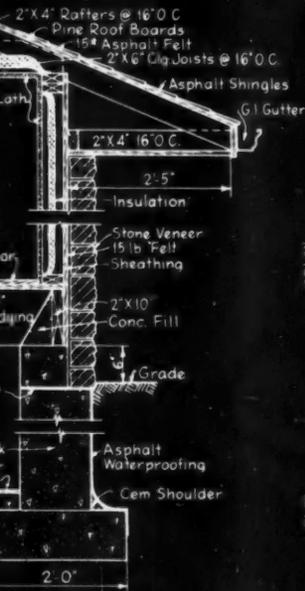
BASEMENT PLAN



WALL SECTION



ALTERNATE FLOOR PLAN



FIRST FLOOR PLAN

DESIGN NO. A.B. 178

AMERICAN BUILDER BLUE PRINT SERIES

Designed By

Norman R. Johnson,

Architect

664 So. Cleveland Ave.

St. Paul, Minn.

Simmons Boardman Pub. Corp. 79 W. Monroe St. Chicago, ILL.

Quantity List of Materials

For American Builder Blueprint House No. AB 178

Norman R. Johnson, Architect

General Information

House — Type	Frame — Veneer Front
Area	990 sq. ft.
Cube	18,810 cu. ft.
Height taken for cube was 19 feet	
Porch — Area	48 sq. ft.

Excavating

Trench for foundation	12 lin. ft.
Chimney and column footings	3 cu. ft.
Excavation for basement	257 yards

Cement Work

Foundations	210 cu. ft. conc. footings
	910 sq. ft. 12 in. block
	150 sq. ft. 8 in. block
Concrete Work	866 sq. ft.
Waterproofing	1,025 sq. ft.
Wire Lath	130 lin. ft. 1 ft. wide
Miscellaneous	50 sq. ft. porch stoop, 4 1/2 in. thick, reinforced

Masonry

Type	Stone
Walls	250 sq. ft.
Window Sills	3 stone sills
Chimney	Brick or stone
Flue Lining	20' — 8" x 12"
	12' — 12" x 12"
Cap	Cement
Fireplace	Brick or Stone
Throat and Damper	1
Lintels	1
Miscellaneous	Ash drop and cleanout doors

Iron Work

Structural	720 pounds
Miscellaneous	80 L.F. 1/2" reinforcing rod

Millwork

Windows — Type	Double hung and basement casements
Windows glazed including trim	1 — 2 ft. 28" x 16"
	7 — 2 ft. 32" x 24"
	1 — 2 ft. 24" x 20"
	1 — 2 ft. 40" x 24"
	2 — 2 ft. 36" x 24"
	1 — 2 ft. 32" x 20"
	6 — 6 ft. 28" x 17"
Exterior doors	
Type — Sash	1 — 2'6" x 6'8"
Slab	1 — 3'0" x 6'8"
Exterior millwork	Shutters — 2 pair
	Entrance Fascias — front (1)
	Louvers — 3
Interior doors including jamb and trim	7 — 2'0" x 6'8"
	6 — 2'6" x 6'8"
	1 — 2'4" x 6'8"
Special Interior Doors	1 of the 2'6" doors is sliding
Special Interior Millwork	Fireplace mantel; kitchen cases and counter tops

Carpentry

Joists	2 — 2" x 10" — 18'
	24 — 2" x 10" — 16'
	26 — 2" x 10" — 12'
	4 — 2" x 10" — 10'
Bridging	100 lin. ft. 1" x 3"
Studding and Plates	210 — 2" x 4" — 8'
	50 — 2" x 4" — 12'
	8 — 2" x 4" — 14'
	20 — 2" x 4" — 16'
	3 — 2" x 6" — 8'
Ceiling Joist	16 — 2" x 6" — 16'
	5 — 2" x 6" — 20'
	13 — 2" x 6" — 14'
	30 — 2" x 6" — 12'
	2 — 2" x 8" — 10'
Roof Rafters	2 — 2" x 8" — 20'
	54 — 2" x 6" — 16'
	10 — 2" x 6" — 18'
Framing Lintels	6 — 2" x 8" — 8'
	1 — 2" x 6" — 8'
Subfloor	1070 b.f.m.
Roof Sheathing	1300 b.f.m.
Side Wall Sheathing	1650 b.f.m.
Side Wall Materials	11 sq. cedar shingles
Grounds depend on interior wall material for lath and plaster	
Carpenter Stairs	2 — 2" x 12" — 14'
	34 lin. ft. 2" x 10"
	34 lin. ft. 1" x 8"
	200 b.f.m. D&M for basement
Flooring	Hardwood — 700 sq. ft. area to cover
	Softwood — 120 sq. ft. area to cover
	Tile floor and wainscot in bathroom
Exterior Material	
Soffits	125 b.f.m. D&M Soffit material
Eaves	160 lin. ft. 1" x 6" fascia
	100 lin. ft. bed moulding
Insulation	860 sq. ft. double thick balsam wool
	1000 sq. ft. standard thick balsam wool
Rain Conduction	
Gutters	53 feet
Downspouts	30 feet
Flashing	Valley, chimney, window heads
Miscellaneous	Clothes chute

Roofing

Type: 210# composition shingles Area: 11 squares

Interior Walls

Area to be covered 360 sq. yds. lath and plaster

● This quantity list will be subject to variation depending on the common practices in various sections and municipalities of the country, the techniques of individual builders, the types of materials available locally and cost factors. The list published here is a suggested one, complete enough so that it can be used in arriving at a reasonably accurate estimate of the quantities and cost of materials that will be required to complete the structure. It was prepared by experts at the Edward Hines Lumber Co., Chicago.

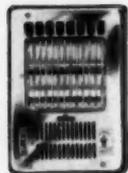


HOW TO PICK THE RIGHT HEETAIRE

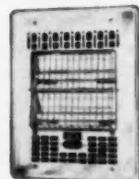
for every room
You Build or Modernize



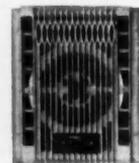
Series 200 HEETAIRE
1000 to 2000 watts



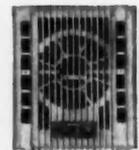
Series 230 HEETAIRE
1250 to 3000 watts



Series 240 HEETAIRE
1500 to 1500 watts



Series 210 HEETAIRE
3000 to 5000 watts



Series 250 HEETAIRE
1500 to 3000 watts

The **FOUR FACTORS** to be considered in choosing specific HEETAIREs for specific jobs are:

1. Size of Room
2. Exposure of Room
3. Use of Room
4. Climate

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In general, wattages per cubic foot determine the size of HEETAIRE recommended—but these wattages vary according to heat loss in the room (wall, window and door exposures) and according to the outside temperatures (e.g., more wattages per cubic foot are necessary in New York State than in Tennessee). In addition, the use of room to be heated determines the temperature desired and the type of HEETAIRE recommended—radiant (infra-red) heat, or heated air. Radiant heat is recommended for rooms where the primary objects to be heated are people (Series 200, 230, 240); heated air is recommended where general temperature levels are to be maintained (Series 210, 250).

Series 210 and 250 HEETAIREs are recommended for both supplementary and general heating.

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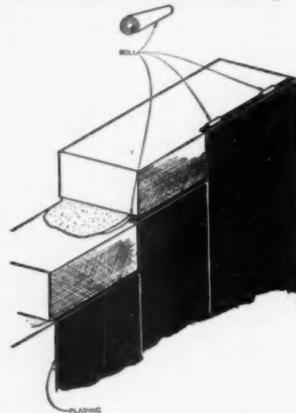
151 SENECA ST., BUFFALO 3, N. Y.

No. D-89 Window Wall, Exposed Ceiling

Window walls and exposed wood ceilings are most effectively used in conjunction with post and beam construction of sidewalls and roof as shown in detail drawing on opposite page.

In this case a 5 foot 6 inch wide unit of spacing was established around which the entire plan was developed. Walls are built up of 4x6 inch vertical posts on which are placed double 2x12 roof beams separated with 2x2-inch spacers. These beams bolted to the posts form a frame, which make all walls, both interior and exterior, non-load-bearing or curtain walls. Two inch thick decking, with one inch of rigid insulation and a built-up roof, form the roof surface.

How to Flash a Chimney



When flashing a chimney, instead of using flashing hooks or nails, roll together a one inch strip of waste metal about eight inches long into a tight roll until it forms the thickness of the raked out joint. Insert the roll into the joint to hold the flashing and caulk as usual.—John Menkveld, Grand Rapids, Mich.

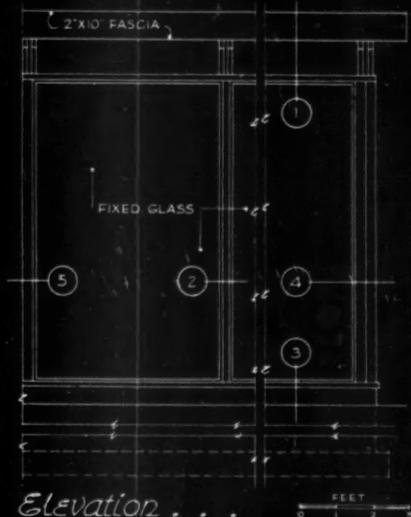
Cold Drinks Preferred

A simple and effective way to keep soda, milk or other drinks cold is to put the bottle into a wool sock. (or other piece of cloth, cotton will do). Soak the sock in water and hang bottle in a breezy place. The evaporation of the water in the sock will keep the contents of the bottle cold.—Geo. Wilson, New Haven, Conn.

AMERICAN BUILDER'S BETTER DETAIL PLATE

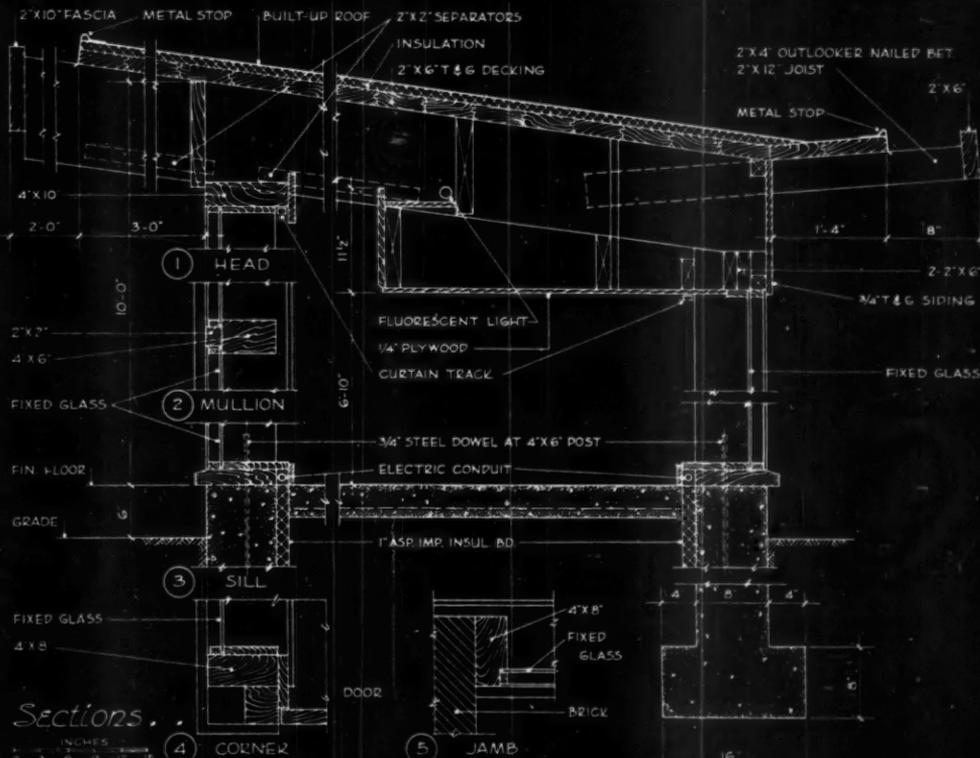
Detailed by K. Roderick O'Neal A.I.A. for American Builder

NO. D-89 WINDOW WALL . . . EXPOSED WOOD CEILING



Elevation

FEET
0 1 2 3



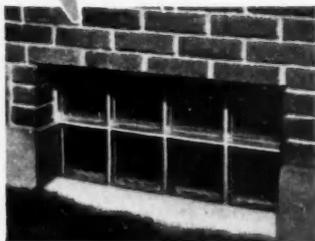
Sections

INCHES
0 3 6 9 12 15

16

"We push
glass block
for basement
windows"

says a typical
glass block dealer



"When customers come to us with replacement problems for rotted, or broken basement windows, we always suggest replacement with Insulux Glass Block."

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A panel of Insulux Glass Block can't rust nor rot, never needs painting. Glass block is extremely hard to break . . . makes a sound, weathertight, insulating panel. And glass block lets in all the light yet blocks out sight.

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When installing acoustical tile choose a job-designed nail that combines ease of application with these special features: a head end which allows the nail to be driven home without damaging the tiles . . . a collar which holds the tiles firmly in place . . . annular threading which gives superior holding power. The nails are furnished with a plated finish to prevent rust streaks where moisture is present. Send for free samples and descriptive literature.



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Brooklyn 22, N. Y.
Established 1850

No. G-30 Steel Framing for Show Window

This month's detail plate, which deals with the construction techniques employed in the remodeling of a store building, is the first of two dealing with this problem.

The object here was to design a show window ceiling, housing all the necessary lighting effects to permit a brightly lighted display window.

The merchandise that was to be displayed required a window approximately 7 feet 6 inches high. To retain the width and height of the original store front opening, the new show window ceiling was built 7 feet 8 inches above the show window floor. This ceiling arrangement, which projects six feet from the side-walls, gives the appearance of hanging in space without any visible means of support. To accomplish this, cantilever construction was employed.

Due to the fact that the building wall was constructed of 2x4 studs, it was impossible to use this wall for support. To accomplish a cantilever effect, a 3-inch channel vertical tie extends from the bottom of the five inch channel outriggers of the canopy framing, down to the floor level where it is attached to a 3x3x1/4 inch angle. Above the five inch outrigger and five inches out from the edge of the outrigger, a 3x3x1/4 angle extends to the ceiling where it is fastened to a continuous steel channel. A 3x3x1/4 angle follows the outside edge of the canopy framing to make for a rigid job.

The show window floor framing is constructed entirely of 3x3x1/4 inch angles. This frame is supported at the wall on 3x3x1/4 angles attached to the 3-inch channel vertical ties. The front of the show window frame is cantilevered over the bulkhead framing which is also constructed of 3x3x1/4 inch angles.

The entire canopy framing and show window floor framing are made up of all welded construction and were delivered to the site as a single unit. The installation was speedy and because of shop fabrication the measurements were accurate. This enabled the show window metal contractor and carpenter to proceed without further delay.

AMERICAN BUILDER

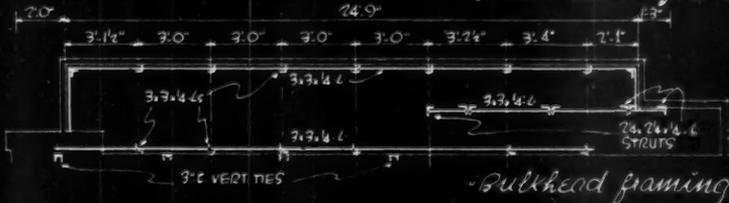
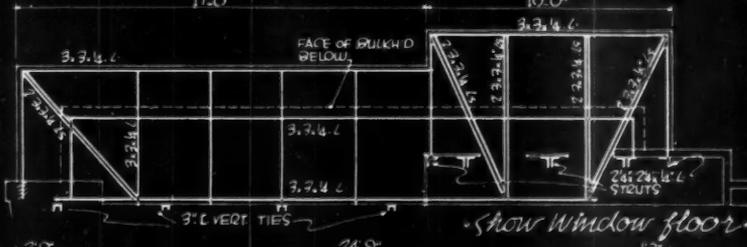
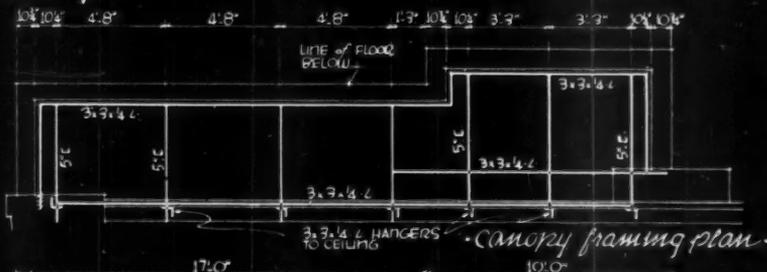
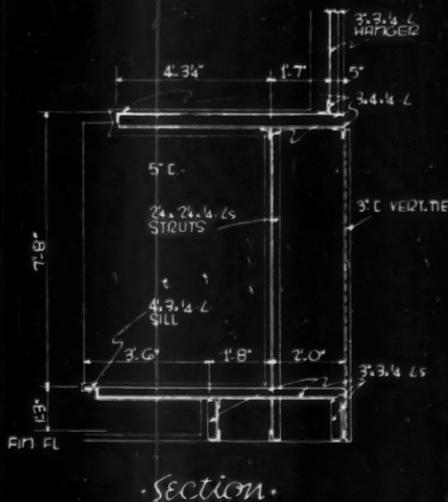
AMERICAN BUILDER'S STORE FRONT DETAILS

Designed and detailed by Louis J. Gluskin for American Builder

Nº G-30 · STEEL FRAMING for SHOW WINDOW ·



Botell's · NYC.



Kinds of Paint Coatings And Their Nature . . .

Chapter 3 in a series of 8 articles on paint in the building business. This one outlines the various general types of coatings for specific surfaces

MANY types and grades of house paint coatings flood the market. They can be classified broadly in three groups of high-grade white or tinted paints whose reliability has been well established. All three groups use linseed or other drying oil for the vehicle, no resin of any kind, and variable proportions of volatile thinner and drier. They differ in the nature of the pigments used, and the Forest Products Laboratory classifies them on this basis. In group L is included pure white-lead in ready-to-use form; group TLZ includes ready-mixed paints made with titanium dioxide, white lead, and zinc oxide; group TZ includes lead-free paints made with titanium dioxide and zinc oxide for use in places where fumes of hydrogen sulfide are present, causing white lead to turn black.

To generations of builders and painters, "paint" has meant just one thing—pure white-lead in oil. Although use of this old-fashioned staple has been widely supplanted by the modern mixed-pigments paints (group TLZ), lead-in-oil is still used and comes as a soft paste containing 89 per cent basic carbonate of white lead, 9 per cent linseed oil, and 2 per cent turpentine or mineral spirits, to be thinned properly by the painter and tinted if desired. In spite of the great advantages of the mixed-pigments paints, white lead is still looked on by many experts as the most all-around, foolproof type, and the advice, "Burn it off and paint it with white lead," is still often the answer to many an apparently insoluble paint problem. White lead paint has a reputation of performing well under adverse conditions such as extreme dryness, or a thickly painted surface, or a wood that does not retain paint

well. Perhaps the chief advantage of white lead is its high resistance to cracking and scaling. It has an inherent tendency to develop a pattern of checking, but this goes on more or less inconspicuously for a long time, and there is a long period when the white lead surface looks fairly well. The end result of normal white lead disintegration is a fine crumbling of the pigment, which leaves an easy surface over which to repaint. When the new coating is applied, it soaks up the residue of the old paint. The mixed-pigment paints, by contrast, tend to break up in a much coarser pattern, and if they are not repainted strictly in time, may have to be scraped and burned off before repainting can be done successfully.

White lead has many disadvantages, of course. It chalks only moderately and is only moderately resistant to discoloration by dirt and mildew (or in damp places, it may chalk away too rapidly). The big objection to it for use on city houses is that it will quickly take on a gray stain from the sulfur dioxide fumes which come from burning coal, petroleum, or other sources. This grayness will persist for the first three years or so, until the chalking process gets under way sufficiently to clean the surface somewhat.

The titanium pigments came to the fore about 1930 and by 1936 had become the principal ready-made paints,

They were revolutionary because of their high degree of hiding power. Pure titanium oxide has 8.6 times the hiding power of basic carbonate white lead. Also, since the titanium and extender pigments used in a TLZ paint are inert (not reacting with fatty acids to form soaps), they do not fail by checking as does white lead. In a TLZ formulation, the good bond of lead and zinc is combined with the poor binding of titanium to produce a coating in which the breaks caused by weathering are less definite. Checking is thus controlled.

A good TLZ paint will generally begin to chalk in from 9 to 15 months. The rain washing down over the house takes off this chalking with its accumulation of dirt, leaving the house bright in appearance. Naturally the TLZ paints are enormously popular, especially for white jobs. However, the chalking process leads to erosion of the paint, and although erosion is desirable (since without it the paint surface would eventually become too thick, causing cracking and peeling), repainting at the needful time is absolutely essential for the TLZ surface. For a good TLZ 3-coat job, repainting will probably have to be done in about 5-6 years; in 3½ years for a 2-coat job. Ninety-nine per cent of house paint sold is of the controlled chalking or self-cleaning type. But some buyers will object, for instance, to the stain on a roof



Pittsburgh Plate Glass Company

TZ (LEAD-FREE) PAINT for industrial areas and situations where fumes of hydrogen sulfide are present. These two houses are located in Morgantown, West Virginia, where heavy industrial



fumes are a problem. Both houses were painted at the same time, No. 1 with a first-quality white lead and oil base paint, No. 2 with a lead-free paint. The houses are shown after 14 months of exposure.

caused by chalking which has been washed down from the face of dormer windows; and too much chalking of a tinted paint will of course lead to early fading. So there are available non-chalking types, and one designed especially for tinting purposes which will not chalk as easily as the white TLZ.

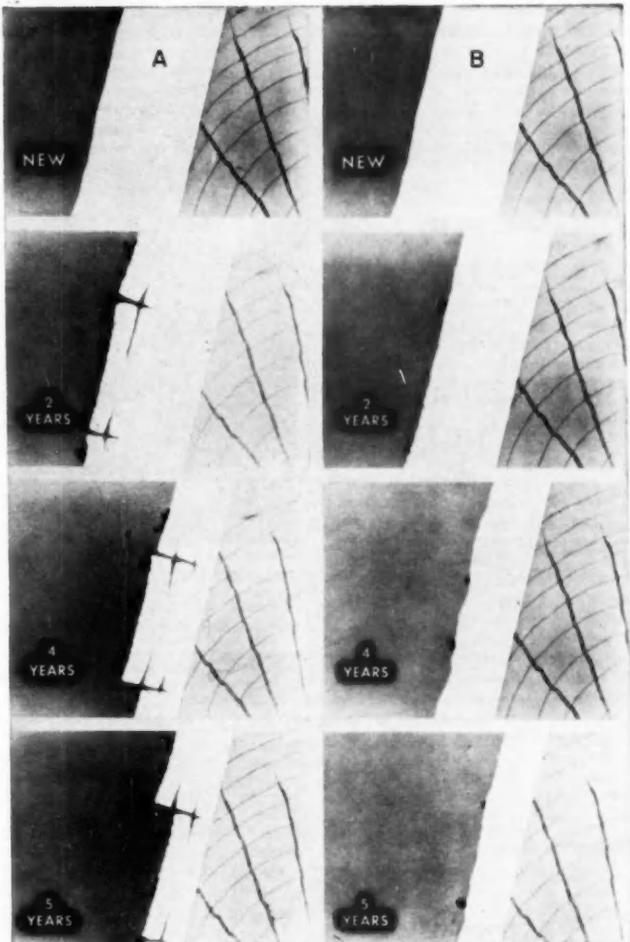
The mixed-pigment type TZ, in which the lead is left out, is made for use in areas where there is a heavy concentration of hydrogen sulfide fumes, as in a heavily industrialized area, or a seashore location where decaying seaweed gives off sulfide fumes. Since the lead is omitted, the TZ paint is not so durable as other types. But it will resist dirt and mildew well. It usually remains free from checking and cracking until time for repainting, but may chalk too freely. It is used as white paint only, and if tinted will fade badly and in most tints will lose its resistance to hydrogen sulfide.

Mildew-resistant house paint, designed for use on houses located in areas where there is danger from mildew, is available. Sometimes the manufacturer will market a fungicide additive which will give the regular house paint resistance to attack by mildew spores.

Priming Coats

For exterior use, white lead is good for priming as well as finish coatings on wood of any kind. And for the following woods, which retain paint longest and withstand weathering well, a good house paint thinned properly can be used successfully as an undercoat: Western redcedar, other cedars except Eastern redcedar, Southern Cypress, and redwood. However, a modern primer is desirable with woods of all kinds, and is especially necessary with the following: Northern and Western white pine, Sugar pine, commercial white fir, Eastern and Western hemlock, Ponderosa pine, Eastern and Western spruce, Douglas-fir, Western larch, and Southern yellow pine.

Modern priming coats are of two types. There is the titanium-lead type, made of titanium dioxide and white lead in a vehicle of raw and bodied linseed oil. It has controlled penetration—i.e., the oils do not penetrate too deeply into the wood. There is also an aluminum primer, especially useful for priming new surfaces of the following woods: Douglas-fir, Western larch, and Southern yellow pine. However, when aluminum is used, it should be followed by two coats of house paint. Aluminum primer is also recommended by the Forest Products Laboratory for use when the finish coating is to be of the



New Jersey Zinc Company

TITANIUM-LEAD-ZINC HOUSE PAINTS (B), in contrast with old-style house paint (A), are designed to stay cleaner, wear down uniformly without checking. However, unless repainting is

done strictly in time, a TLZ coating at the end of its life will tend to break down in a coarse pattern. If neglected, it may have to be removed before repainting can be done successfully.

TZ type, for resistance to fumes of hydrogen sulfide. This primer is not recommended, however, for use in repainting.

Priming of inside woodwork involves the use of special priming paints made for use on highly absorptive surfaces such as plaster, cement, and wallboard. The pigments are carried in bodied oils or varnishes and seal surfaces well without penetrating into them excessively.

Stains

Stains for exterior wood are basically paints very much diluted with linseed oil, a volatile thinner, and

sometimes creosote. They are, of course, cheaper than paints and do not give as good protection against weathering. Good stains contain only pure, finely divided, opaque pigments, free from transparent pigments. Pure iron oxide, chrome, and carbon pigments are considered very satisfactory; white pigments less so. The liquid part of the stain should be at least one-third linseed oil by volume, with two-thirds often recommended. Stains are most suitable for rough surfaces such as shingles or siding placed with the sawed side out.

Stains are also much used for interior work to change the color of

the wood. Usually such a stain is one made of pigments combined with oils or varnish together with necessary thinners. On flat-grain Southern yellow pine, Douglas-fir, or other softwoods with wide bands of summerwood, a thin coating of shellac is usually applied as a sealer before using a stain.

Roof, Trim, Porches and Decks

Roof paints are largely modifications of house paints and may contain some resinous material in their vehicles. They may also be of the alkyd (a synthetic) resin type.

Trim colors of the highest quality are enamel-like pigmentations of high oil content alkyd resins. Trim colors are designed especially for use on house trim, shutters, trellis and other trim structures. They have durability as good as, or better than house paints. Also, they have the added features of high gloss, good gloss retention, and superior color retention.

Exterior wood steps, floors of open porches, and other outside surfaces that will be subjected to heavy traffic require paints that harden much more rapidly than house paints do. Nothing could be more foolish than to paint a porch floor with the same paint used for the exterior of the house; it would break down at once. Paint for these high-traffic surfaces are made with varnish rather than oil vehicles, and this type of formulation wears down by the scraping of the traffic rather than by the slower action of the weather. This type of paint is used as its own primer.

Masonry Paints

There are many protective coatings available for cast concrete, brick, stucco, asbestos-cement siding, unglazed tile, and lightweight aggregate block. These paints can be classed in four groups: highly pigmented oil paint, cement-water paint, synthetic resin-emulsion paint, and paint containing rubber in the vehicle. Under proper but varying conditions they all do a good job of protecting masonry from the inroads of weathering and provide relative degrees of waterproofing.

Oil paint which has been formulated especially for masonry surfaces has good hiding power and provides a durable finish when two coats are applied. Two coats are necessary. When oil paint is used, open-textured surfaces require a preliminary coat of a cement-sand base material. Also, application of oil paint to new masonry should be deferred until the walls have had time to dry.

Cement-water paints are water-dilutable paints in which portland cement is the binder. They are par-

ticularly suitable for the painting of such open-textured surfaces as cinder, concrete and light-weight aggregate block—also for the walls of new structures that normally contain water-soluble alkaline salts. This type of coating comes in attractive colors, has high hiding power, and may be safely applied to damp walls.

The resin-emulsion paints which



Sherwin-Williams

MILDEW-RESISTANT paint is available for houses in areas with high humidities. The house shown here is a case in point. It is located in a mildew danger zone and was painted properly with a mildew-resistant paint—almost, that is. When the painter came to the porch he had run short of the special paint, so he finished up the porch using a regular gloss white house paint. The difference in mildew effect between porch and siding is obvious.

are suitable for masonry are water-thinned. They bridge the gap between water- and oil-base paints. They have dry film properties similar to those of a flat oil paint and contain the same pigments used in oil paints, but are composed of water-thinned materials, forming an oil-in-water emulsion (the oil molecule is inside the water molecule, the water evaporating and leaving an oil film). A typical resin-emulsion paint is easily applied by brush or spray and dries within a few hours to a smooth, opaque, flat finish. With the exception of magnesite stucco, most porous masonry—including asbestos-cement siding which has not previously received a coat of waterproofing compound—may be finished with one of the resin-emulsion paints.

Of the rubber-base paints which may be used successfully on masonry, there are two varieties. The rubber-solution type is one in which the synthetic rubber is incorporated in a vehicle of treated drying oils, aromatic hydrocarbons, and coal tar thinners, and pigmented with opaque, weather-resistant pigments. The rubber-emulsion type treats the synthetic rubber resin with an emulsifying

agent, so that the paste paints are reducible with water. Considered especially appropriate for painting asbestos-cement siding and shingles, these coatings also have the ability to seal in stains on old masonry. They also serve as protective primers under finishing coats of resin-emulsion or oil-base paints. They may be applied by brush or spray to dry or slightly damp walls.

Metal Protective Paints

These are metal primers designed to form a good adhesive bond between the metal and the top coat. They are also formulated to retard, inhibit, and prevent rust corrosion. In composition and quality, they vary—from the general utility paint, pigmented with iron oxide and extender pigments, dispersed in an aspar varnish vehicle, to the highly durable zinc yellow primers in alkyd resin vehicles. Zinc yellow primers do an out-standing job. However, where there is not a thorough surface preparation including the removal of all rust, it is better to use a red lead-linseed oil type of primer.

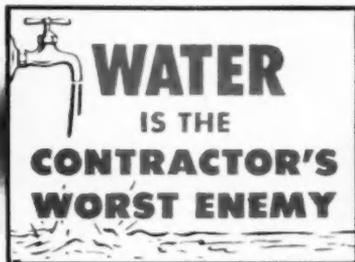
Metal protective top coats are usually oil-type paints or alkyd resin top-quality exterior enamels. They are applied over the primer in one or two coats to give maximum durability. Aluminum paints are frequently used over primers, and are composed of aluminum flake dispersed in oleoresinous or alkyd varnishes. Zinc dust paints, in either oil or alkyd resin vehicles, may be used both as top coat and primer. Their outstanding characteristic is good adhesion to galvanized iron without metal pre-treatment.

Paints for Interior Work

Oil-type flat wall paints are made with an oil-varnish vehicle and prime pigments that have high hiding power. In addition, they contain extender pigments to build up the pigment volume so that a flat sheen is provided by the dry film. On these classes of paint—a word of caution. Flat wall paint business runs into large volume and is competitive. Most manufacturers market a "first line" quality flat wall paint under their own name. To meet acutely competitive conditions some manufacturers also market a "second line" quality product at a lower price. These products contain less oil in the vehicle and more low-cost resinous materials, such as limed rosin. Made with less hiding power per gallon and cheaper extender pigments, they are likely to become more quickly embrittled with age, lose their adhesion faster and peel sooner. In flat wall paints particularly, as in all paints generally, you get just what

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Oil-type flat wall paints, as well as oil-type house paints, are marketed in both ready-mixed and paste form, and some new types for interior use are practically odorless. The paste product is usually sold to painters who then add oil and thinners to the paste. They end up with a ready-to-apply product which is comparable to the ready-mixed paint in composition. By this procedure certain economies to the painter are supposedly achieved.

The first-line quality flat wall paints are good but not necessarily the best that can be made. Certain other classes of finishes are superior to them and command a premium price. Such paints are the so-called eggshell finishes, used widely in quality jobs on woodwork and based on non-yellowing alkyd resin vehicles (the vehicle of the ordinary flat wall paint is oleoresinous). The eggshell surface reflects light diffusively. The non-yellowing characteristics, the superior tint retention, and the better washability of the alkyd resin type of flats bring the premium price. (Alkyd resins are made by combining soybean oil, glycerine (or penta) and phthalic anhydride.)

Semi-gloss and gloss finish paints are also used for wood trim in general and for walls and ceilings where good washability is important and moderately or highly glossy surfaces are customary. These too, are enamel types, made with a varnish vehicle, normally applied in two coats after the wood has been primed. Highly glossy finishes accentuate any defects or irregularities in the wood surface unless the wood has been carefully smoothed and finished.

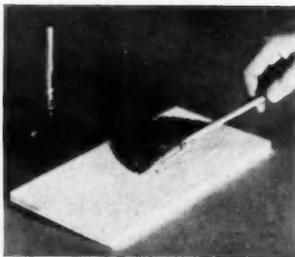
One-coat flats in today's market are flat wall paints with higher than normal prime pigment content. They also have certain vehicle modifications to make the paint give optimum one-coat performance. The performance spread between the so-called one-coat flats and many of the first-line quality flat paints is more narrow today than it was a year or two ago. In many instances it has vanished completely.

White wash is a mixture of lime and water, and in the same class is calcimine, which is a mixture of glue and whitening. The water-mixed paints became an important class of coatings with the development of casein paints. These coatings were based on lithopone as the hiding pigment and casein in a form convertible to a true binder. Easy to apply, they had high hiding power. In paint development they led to the emergence of a whole



Ewing Galloway

RESIN-EMULSION paints may be used on most porous masonry surfaces. (An "emulsion" is not a "solution" but a liquid dispersion in which the particles of one substance are suspended in those of another. For instance, in an oil-in-water emulsion the oil molecule is inside the water molecule; in a water-in-oil emulsion, the oil molecule is outside the water molecule. Both types of emulsion produce a film, although the first is generally preferable.) The three other main types of masonry paints include high pigmented oil paints, cement-water paint, and paint containing rubber in the vehicle.



Sherwin-Williams

FIRE-RETARDANT PAINTS for interior use are a new development with some manufacturers. They are applied between the primer and the finish coat, and are made to withstand great heat without bursting into flame. Instead, as the photograph shows, they swell up into a cinder-like blister which acts to push the flame away from the wood surface. So far, such paint has had a limited use, chiefly in connection with shipboard finishes.

new class of coatings—the resin-oil emulsion paints, in which resins and oils were emulsified and added to casein. The greater insolubility of the resins and oils combined in emulsions resulted in greater washability.

The market for these oleoresinous flat wall paints grew by leaps and bounds during the war years, and large-volume emulsion paint business was built on these highly pigmented finishes. The vehicle of these paints could be oleoresinous casein or other protein binder combinations using various emulsifying agents, together with anti-foaming agents and preservatives. The latter were necessary to prevent the putrefaction of the pro-

tein portion of the binder. Tons of this material were spread over wallpaper and other wall surfaces, dried quickly, and allowed home owners or painters to do a fast decorating job. These paints were marketed as pastes, which the buyer thinned to working consistency with water.

There were, however, notable disadvantages to these oleoresinous emulsion paints. Between the products of various manufacturers there was wide variation in performance characteristics—particularly in washability. The best of them could not compare in washability with any first-line oil-type flat wall paint. Also, the sheen was nearly always a dead flat. So there was a real need for a paint with all the ease of application of oleoresinous emulsion paints, but with the washability of oil flats and an alkali resistance superior to such flats and semi-gloss finishes. At the same time, such a finish needed to be as free from "ghosting" (porous spots of lighter color than rest of wall) as the dead flat emulsion paints, but provide the sheen of satins and eggshells. The stage was thus ready for the appearance of the rubber-base (latex) paints for wall finishes.

Rubber-Base Paints

Meanwhile there had come on the market various flat wall paints based on cyclicized rubber (which is different from the chlorinated natural rubber used in paints for marking concrete floors or swimming pools). These were paints which had low vehicle solids dissolved in organic solvents. They had outstandingly good washability and alkali resistance far in excess of the ordinary oil-type flat wall paints. They could be applied directly over porous surfaces and unneutralized plaster. From these, paint chemistry took the next step. Into the line of development came paints which have rubber latex as the main portion of their vehicle.

Marketed in ever-increasing volume for interior work are the satin-sheen type of rubber-base wall paints which dry quickly to a film that has many characteristics of rubber itself. Most of the particles in the paint are too large to strike into the surface, but coalesce into a solid film, even over porous surfaces. Pioneered on the market in 1949 these latex paints were developed with the needs of the amateur painter and decorator in mind and are very easy to use. They are odorless and contain neither drying oils, turpentine nor similar paint thinner. The thinner in the can is water.

The latex in some of these new paints is a natural rubber latex. In



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others, it is a synthetic rubber latex. Different latices are available and are selected by the chemist to produce certain performance characteristics. From these latex materials as the major portion of emulsion paint vehicles, paint chemists have developed lines of emulsion paints which have the fast drying of the oleoresinous paints, together with the ability to be applied over surfaces of varying porosity without variation in dry film appearance and sheen. Being rubber-based, they have an alkali resistance far superior to the varnish or alkyl resin-base flat wall paints generally described as oil-type flats. This enables them to be applied directly to unneutralized plaster without the use of special washes and intermediary primers and sealers, and without the danger of the alkali-burning of oil paints. Because of their high molecular weight vehicles, they can be applied over porous surfaces or surfaces with varying porosity and still come up with ghost-free uniform sheen. In addition, latex emulsion paints furnish the excellent washability which the old oleoresinous emulsion paints lacked. Moreover, they offer a high eggshell or satin luster which was heretofore unobtainable in emulsion paints, with any satisfactory degree of uniformity and reproducibility. They are marketed in either paste or ready-mixed form.

However, rubber-base paints are not to be thought of as the final solution to all problems related to flat wall or interior decorating finishes. They have some disadvantages. For instance, a latex paint can't be applied directly to new woodwork nor can it be used on metal without first priming the metal to prevent rusting from the water-thinner of the paint. While it has more sheen than an oil-base paint, the effect of a rubber-base finish is not so rich or handsome. When applied at low temperature (50 degrees) and high humidity, the paint may tend to effloresce—a deposit of sodium sulphate crystals may appear over the wall in patches, giving it a smoky appearance. The adhesion of a latex coating is not as good as an oil or synthetic resin enamel type, and the paint can come off in patches. Since latex paint will rust metal, care must be taken with nail heads. If stored in cold temperatures, the paint may freeze and in thawing out lose some of its properties. No adequate body of experience is yet available on what happens when latex coatings are painted over with other types of wall finish.

Some paint manufacturers have preferred not to come on the market

with rubber latex emulsion paints. Instead, they have directed their efforts toward organic solvent-thinned instead of water-thinned paint products designed to do virtually all that latex paints will do, and still retain the adhesion and adhesion retention characteristics of alkyl and oleoresinous paint systems. The latest synthetic resinous finishes to be launched on the market at roughly the sheen level of the latex paints offer comparable washability and uniformity of appearance plus outstanding exterior durability, but with less chemical resistance than the latex paints offer.

Varnishes

Varnish is not just varnish—to be put on everywhere or anywhere. The so-called all-purpose varnishes are at best compromises. Their performance on any given surface can always be excelled by the use of a varnish designed especially for that job.

A *spar varnish* is one of high oil and low resin content. It is designed to be flexible, water resistant, and weather resistant. Its particular function is to give maximum protection to surfaces subject to exterior exposure on which a clear coating is wanted. A spar varnish is the wrong type of finish to use indoors. On interior woodwork it will be too soft and on warm humid days may get tacky. On floors, it is not tough enough to give satisfactory wear. On furniture, it would soften under body heat.

An *interior varnish* has less oil and more resin content than a spar. It is designed for woodwork, but is not hard and tough enough for floors or furniture. If used outside, it would be less durable than spar.

A *floor varnish* is still higher in resin content than interior varnishes. It contains enough oil to give it sufficient flexibility so that it can stand the bumping of hard hitting heels and furniture moving. Its higher resin content gives it the extra toughness needed to withstand the wear and abrasion from heavy foot traffic.

A *rubbing varnish*, a bar varnish and furniture varnishes are of still higher resin content. They have a high gloss which may be rubbed with pumice and oil to any desired lower lustre. If they are to be used on table tops or bars, they are made with the type of resins which are alcohol resistant.

Flat varnishes are available in any of the above types. The difference is that they contain stearates or silicates, or other ingredients which cause them to dry to a lower than normal gloss.

(Continued from page 68)

Shellac varnishes are solutions of shellac in alcohol and are classified according to composition and color. The solvent generally used in their manufacture is denatured alcohol. They produce a pleasing finish, with a dull lustre, and can be applied easily and dry rapidly. However, they turn white from contact with water and are easily injured.

Varnishes are like any other paint product. You get what you pay for. The best and most economical in the long run is the varnish with higher initial cost.

Certain high-quality varnishes on the market are actually solutions of oil-modified glyceryl phthalate resins. These are clear alkyd resins. As such, they may—for the sake of simplicity—be thought of as varnishes of a special type. Their major use however, is not as varnish in the usual sense, but as vehicles for enamel.

Enamels are designed to dry to a high gloss. Where a semi-gloss enamel is desired the pigment volume is built up with the extender type of pigments to a point where the desired degree of gloss is obtained. The semi-glosses are neither flat nor shiny.

The main difference between an interior enamel and an exterior enamel is to be found in the vehicle. Remembering that an enamel is essentially a pigmented varnish, it will be plainly understood that it would be entirely undesirable to use an interior enamel for exterior use because satisfactory performance could not be expected.

There are important differences, other than differences in the vehicle, between interior and exterior enamels. The pigmentation of exterior enamels is confined to the use of those pigments which give optimum exterior durability, light-fastness, and fade resistance. These features are much less important in interior enamels which are not subject to intense ultraviolet rays. There are certain pigments which give very delicate and beautiful clear-toned finishes. For interior use, they are perfectly satisfactory, but would fail miserably in an exterior enamel.

Within the range of interior enamels, vehicle choice is very important. The best architectural white enamels are made from titanium dioxide pigments dispersed in soybean or castor oil modified glycerol or pentaerythritol phthalate resins, because such vehicles give the maximum non-yellowing of the paint film with age. Such whites are usually blued whites, because—to the human eye—the whitest-appearing white is a blue tint. An absolute white appears to the eye as having a yellow cast. Refrigerators and such other appliances are finished in blued-whites.

There are several types of special interior enamels designed for specific functions beyond the usual interior enamel performance. Among these are rubber-base enamels, used mostly on concrete floors where an alkali condition may be present. Vinyl resin-based enamels are specialized finishes utilized only where their outstanding chemical resistance can be used advantageously. Such applications are more frequently found in industry than in the home.

Floor enamels, designed to have excellent wear and abrasion resistance, are included among enamels because of their high gloss. They are, however, somewhat related to paints with respect to their pigmentation because—to increase their wear resistance—certain low oil absorption extender pigments are used in considerable volume, in addition to the prime pigments. The vehicles for floor paints are usually oleoresinous varnishes or alkyd resins. The particular vehicle used is selected for its tough, hard resistance to continued abuse.

Luminosity

Various luminous coatings are available and their use in home building is chiefly in connection with interior

(Continued on page 70)

WET CELLARS START NATION WIDE CONGRESSIONAL INVESTIGATION OF G. I. HOMES...

LEGION PUSHES HOUSING PROBE;
TOWNS
DATA READIED HERE ASSEMBLY
IN BUILDING INQUIRY
Housing Probe Told
U. S. Inspectors Lead
Housing Gripped Politically
U. S. Inspectors Lead
Housing Gripped Politically

Water held the highspot throughout the hearings. Seepage in cellars and through foundation walls;

WET CELLARS ARE BUILDERS' PUBLIC ENEMY NUMBER ONE!

These headlines are samples of the type of headlines that may mean trouble for you.

KAY-TITE

when applied properly, is approved by the Veterans Administration and the Federal Housing Administration in the North Jersey Area. Kay-Tite is used by most builders in Northern New Jersey to solve their wet cellar wall problem. One U. S. military department tested Kay-Tite against seven competitors—and then wrote Kay-Tite into their specifications!

We know Kay-Tite is the best—
but we let users prove it!

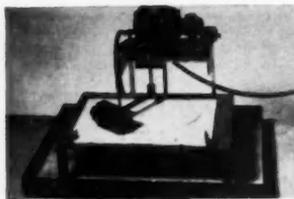
SEND THIS COUPON FOR

INFORMATION FOR BUILDERS

KAYTITE COMPANY BOX 550 WEST ORANGE, N. J.
PLEASE SEND BUILDERS INFORMATION:

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CITY STATE
ATTENTION OF

KAY-TITE COMPANY
WEST ORANGE • NEW JERSEY
ELEVEN FAR WESTERN STATES CONTACT KAY-TITE COMPANY
1717 WESTLAKE AVENUE, NORTH, SEATTLE 9, WASHINGTON
More than 20 years of satisfactory performance



SCRUB TESTS with a laboratory machine demonstrate the new standard of washability set by rubber-base water-mixed paints for wall finishes. First panel to right is casein paint after 30 oscillations of one-pound weighted brush. Second example is a resin-oil emulsion coating after 5,000 oscillations. Third, a rubber-base product after 10,000 oscillations. These tests were made on paints aged 30 days, using 0.25 per cent soap solution.

New Jersey Zinc Company photos

detail such as marking the edge of a door, light switch, edge of a window sill, or edges of furniture which would be a hazard in the dark. These paints glow for about six to eight hours after they have been "charged" by natural or artificial light, and are easily applied, in at least two coats. New surfaces should be primed and already painted ones should be given an enamel undercoat to seal off any lead in the former paint.

Waterproofing

The common problem of damp basements has naturally brought into the market a great variety of paint products and others which claim to have "waterproofing" qualities when applied to masonry walls. In approaching this whole problem of waterproof coatings it must be clearly understood that no such coating is of itself a cure-all. Improper drainage of the site, poor workmanship, and defective construction in the building itself can nullify any type of waterproofing.

The so-called waterproof coatings include the four types of masonry paints, described above; colorless surface waterproofings, some of which have a silicone base, some containing chlorinated rubber in solution with benzol or naphtha, and still others being a water emulsion of waxes; cementitious coatings and proprietary materials (portland cement and sand, iron dust and sal ammoniac, etc.); hot bituminous coatings (asphalt, coal tar, asphalt roof coating, asphalt emulsion, bituminous plastic cement) used on outside walls below grade and also often used on

the inside faces of masonry walls.

Tests by the National Bureau of Standards have established that two coats of cement-water paint applied to the exposed faces of masonry walls are highly effective as waterproofing. The coats were found to be less permeable when applied with a stiff brush, and reached a maximum durability when fine sand was added to the paint used for the first coat. Cement-water coatings applied to dry, highly-absorptive walls were more permeable than those applied to damp walls in the Bureau's tests; and coatings of thin consistency were more permeable than those of normal consistency. Mixing the paint with water repellent, hygroscopic salts, diatomaceous silica, or an opaque pigment waterproofing.

The Bureau's tests showed that coatings on masonry of oil-base did not increase its effectiveness as a paints and of emulsified resin paints were permeable and much less effective as waterproofings than the cement-water paints. The most effective and durable of the pigmented waterproofings tested were those containing portland or magnesium oxychloride cement.

The colorless waterproofings were generally found to be ineffective, and permeable walls treated with them leaked excessively.

Investigating the waterproofing properties of bituminous coatings applied to the inside faces of walls, the Bureau found these coatings to be of little benefit on walls that leaked badly. Blisters filled with water developed in the coatings, and the rate of leakage from blisters that had col-

lapsed was high. Brush coatings of portland cement and sand leaked slightly but were more effective for waterproofing inside walls than were bituminous coatings. Trowel coatings of portland cement mortars, prepared with or without the admixture of iron powder and sal ammoniac, were found to be very resistant to water penetration.

Recommended as a method of waterproofing brick walls without changing their appearance is the re-pointing of the face joints with mortar. The Bureau found a portland cement grout applied to the joints of brick walls to be an excellent method of waterproofing. The grout may contain one part of cement to about 1½ parts of fine sand and is applied to the dampened joints with a stiff brush.

In the May Issue

PAINTING EXTERIOR SURFACES

When to paint

Preparing surfaces

How woods affect paint

Selecting the right system

Estimating

and

many other aspects of successful house painting.

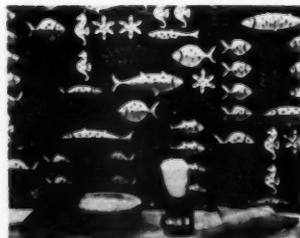
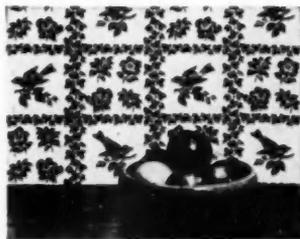
Wallpapers and Fabric Wall Coverings

Wallpaper styling has broken away from the stereotyped floral and geometric patterns of yesterday. The trend is toward papers designed freely to express the character of contemporary architecture and modern home furnishings. This greatly widened choice of papers to suit modern taste is bringing about a revival in the use of wallpaper for every room in the house.

Part of this development is the appearance of papers which have high washability, great decorative value, and perform about as effectively as a good washable paint. One such type is a plastic paper five times stronger than ordinary wallpaper and guaranteed to retain its original color through at least 100 washings. Packaged in a double roll box, it comes pre-trimmed, both sides, ready to hang.

Another type, considerably more expensive, bridges over toward the fabric wall coverings and is classed as "thermoplastic wall covering." It

(Continued on page 72)



Vartar, Inc.

STAINPROOF WALL COVERING is made by fusing colors, paper and plastic resins, and does not peel or chip. It has extremely high washability and comes in roll form, to be applied like wallpaper.

APRIL 1952

More Builders and Home Owners demand

WOODLIFE

The Original
WATER REPELLENT
PRESERVATIVE

CONTAINING
PENTACHLOROPHENOL

TREATED WOOD

because . . .

What is WOODLIFE

It is the original water repellent preservative for wood. It contains PENTACHLOROPHENOL, PLUS the added benefits of Tetrachlorophenol and 2-Chloroathophenylphenol.



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Warping, Swelling, Shrinking, Checking, Grain-raising, Fungus decay or rot, Staining (discoloration), Termites, Lyctus beetles, Carpenter ants.

makes an excellent base for . . .

Paint, Varnish, Enamel, Oil Stain, Putty.

meets highest standards for wood preservation

N. W. M. A. preservative standards and U. S. Gov't. specifications for water repellent preservatives.

WOODLIFE protected wood lasts longer. Since **WOODLIFE** was first introduced, leading millwork manufacturers have been using this modern preservative treatment. Builders and home owners now want lumber and other wood products treated.

WOODLIFE is nationally advertised and its use by home owners and farmers is booming. But obviously dip treating will give the best protection, it gives deeper penetration. The demand for treated wood is on the move. The reputation of **WOODLIFE** backed by years of laboratory testing and thousands of **WOODLIFE** treated jobs assures the correct answer to the demand for treated wood.



a **WOODLIFE** treating tank

WOODLIFE available in

Quarts-Gallons-5 Gallons-30-55 Gal. Drums

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Better Homes
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It's so easy, and costs so little, to give greater dimensional stability to doors, windows, flooring and fitted mill work—just one coat of Cuprinol on all sides before you paint.

For Cuprinol so reduces the absorption of moisture by lumber that for all practical purposes wooden construction will not swell, shrink or warp. Cuprinol stops rot and termites, too.

You will appreciate it, your customers will appreciate it, for wood treated with Cuprinol lasts longer, stays stronger.

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CALBAR is now available in 26 colors to match or harmonize with every building material on the market. It's elasticized, non-staining and complies with Federal Specifications and those of the Asbestos-Cement Products Association.

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WASHABLE WALLPAPERS, produced in attractive designs suitable for modern decorative needs, are available.

is a composite wall covering made by fusing colors, paper and plastic resins, and does not peel or chip. It is described as a stainproof wall and ceiling covering which looks like new even after 25,000 scrubblings with soap and water. It resists stains of all kinds, is fade-resistant, resists mold, mildew, and vermin, is fire-resistant, odorless, unaffected by excessive heat or extreme cold, and resists steam, water, and salt water. It comes in roll form and is applied like wallpaper, although a special adhesive is used for better adhesion at tight butt joints and at corners. Each unit is 50 feet long and two feet wide, the equivalent of about three rolls of regular wallpaper.

Included in the washable wall covering category are the fabric wall materials. These are decorative surface materials produced by the application of coatings of paint, plastic and lacquer to a fabric base, usually canvas. The surface is generally hardened by baking processes but remains flexible and is applied like wallpaper. Highly washable, these materials have some structural reinforcement value on both plaster and dry-wall construction. They are especially popular for bathrooms and kitchens because of the washability factor, but are being much used also for interior wall finishing throughout in houses whose partitions are in plasterboard or plywood panels. There are undecorated fabric materials which provide a base for



These are two patterns in a line of super-washable plastic wallpapers.

Trinz Company, Inc.

calcimine, water or oil paints, or as a lining for wallpaper. Widths vary from 27 to 48 inches, and lengths from 9 to 33¼ feet.

How to Apply

All surfaces should be thoroughly dry and free from cracks, holes, blisters, rough spots, patches or edges. All such defects must be cut, sandpapered, scraped or properly filled with spackle or plaster of paris. Examine rolls before cutting to required lengths. Brush the strips thoroughly with a good grade of strained flour paste of comparatively thin consistency. Fold strips evenly with pattern side down and trim selvage on the zinc strip of working table with a true straightedge and sharp paper hanger's knife or trimmer. Material without selvage should be similarly trimmed about ½-inch on each side.

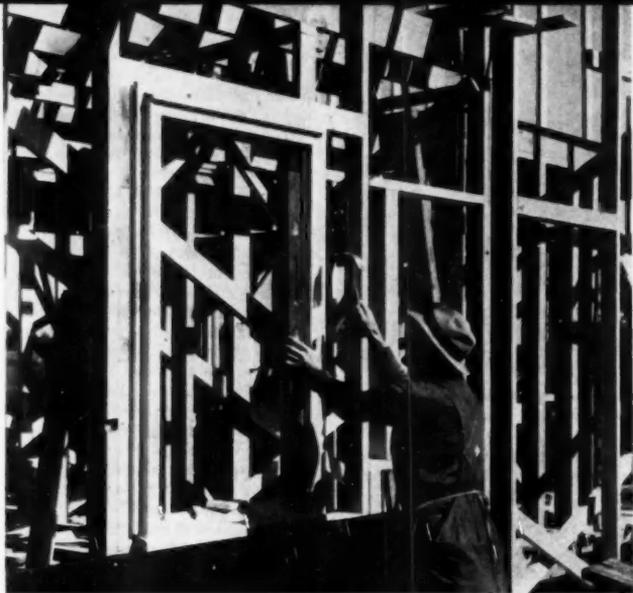
Immediately after pasting, hang strips plumb with pattern matched. Brush with a stiff short bristle brush, taking care not to stretch the material.

Use only butt seams, and make these by overlapping the preceding strip slightly and sliding off to butt. Seal the seam in position using a broad-knife only and with only minimum pressure. Never use a hard roller.

To clean a surface covered with a washable or fabric material—use a luke-warm solution of mild, neutral soap, applied with clean sponges or soft cloth.

It isn't what you know that is so important—it's knowing WHERE to go to get the information you need to do a job or solve a problem.

Builders and Dealers keep their AMERICAN BUILDER CATALOG-DIRECTORY handy so they can refer to it frequently. Turn to pages D-1 to D-104 in back of book.



RESearch in the manufacture of different types of glass as well as research and development in wood, metals and some plastics has made possible great advances in window construction in the past decade. The double-pane window, the "window wall," the various combination units, the clerestory, jalousie, pivoted, and others are all found in modern design.

Metal Casements

The Aluminum Window Manufacturers Association and the Metal Window Institute have set up specifications for the trade pertaining to aluminum and steel windows, respectively. Steel windows are bonderized and painted with special primer, while aluminum windows are cleaned and coated with clear lacquer by the manufacturer and do not require painting.

Metal windows are made of hot rolled steel or extruded aluminum, mitred at corners, with joints welded. Design features are very similar, most manufacturers making an "economy" line as well as a regular

line. Some metal casements are equipped with crank openers, and some have special hinges so that both sides of the casement may be cleaned from the inside.

Light in weight, metal casements are surprisingly strong, durable, and easy to work with. However, care should be taken in installation to avoid rough handling which might bend slender frames or sash out of shape. Following manufacturer's instructions for installation should result in snug-fitting windows with all screens and storm sash fitting properly and hardware functioning easily.

Wood Casements

The out-swinging type of wood casement is most popular with builders and home owners because apparently it can be more easily made weather-tight. Some types have storm sash which open with the window proper, and others have extra deep rabbets to accommodate the ready-made double pane units in common use. As with metal casements, sash are often hinged with offset butts to allow cleaning of both sides from the



STEEL CASEMENTS are available in a wide range of sizes and styles



ALUMINUM CASEMENTS and double-hung units do not require painting

WINDOWS, DOORS FRAMES, STAIRS

Windows

Casements

- Steel
- Wood
- Horizontal Sliding
- Double-hung
- Steel
- Wood
- Awning Types
- Walls of Glass
- Double glass
- Glass block
- Pivoted and Projected
- Storm Sash and
- Combinations
- Essence and Utility
- Special Types

Doors

- Wood
- Metal
- Glass
- Combination
- Cabinet and Capboard
- Special Types

Frames

- Basic Principles
- Door Frames
- Window Frames
- Wood
- Metal

Stairs

- Finishing
- Wood Stairs
- Metal Stairs
- Disappearing

Weatherstripping

ALL FACTORS RELATIVE TO
 THESE products closely related to those covered in this
 section, see the reference section on Steel Building Products also Glass, Glass Block,
 Sliding and Crank Products



WOOD CASEMENTS are easy to install and to make weather-tight. Double-paned glass may be used, and screens and storm sash may be constructed as a part of the sash

inside. Screen and storm sash, when available with the unit, are hung on the inside and do not interfere with its operation.

Complete wood window units are easy to install and save the contractor time and money, but care should be taken in installation. These windows need proper openings so that frames set square and plumb. Bowing of head, jams, and sills should be avoided. Frame and sash should be painted with two coats immediately after installation (or before) but no paint should be allowed on any of the metal weather stripping. Clean up any excess paint or plaster to restore original smooth operation to units which may tend to stick.

Horizontal Sliding Windows

The horizontal sliding window came into being when someone turned a double-hung window on its side. Since 1940, the spring-type weather stripping has made possible weather-tight operation. This type of window permits larger glass areas than most other types of movable window, and has increased in popularity because of that fact.

Made of wood, steel, or aluminum, horizontal sliding windows are adaptable to almost any type of architecture or construction, as sizes conform to modular standards for masonry openings, and multiple openings are formed by hooking up single units with side casings. Screens and storm sash are installed on the outside. Double-pane construction is also used.

Double-Hung Windows

The double-hung window is probably the most common in American architecture, and modern improvements in weights, balances, and weather stripping have kept these windows competitive with most other types in modern construction.

Metal Double-Hung

Metal double-hung windows have

the same characteristics of other metal windows; they are weather-stripped at the factory, easy to install, easy to care for and operate. Most are made in box-type sections, with glazing done on the job. Some provide for double glazing.

Bonderized steel units require painting, but aluminum does not. However, care must be taken with aluminum to avoid scratches and to avoid stains from plaster droppings which may get onto the sash. A good trick is to coat aluminum sash with petroleum jelly right after it is put in place.

Manufacturers offer a great range of opening sizes, installation hardware and special features. Even though these are fundamentally similar, their slight variations make it imperative to decide on brand and sizes to be used before construction is begun on outside walls, and to follow closely manufacturers' instructions as to installation.

Wood Double-Hung

Modern methods which produce factory-assembled complete units have resulted in substantial savings in building costs as against the old-fashioned windows built on the site. Weather strip is placed in the assembled frame, and balances are

hooked up ready to operate. Weights and pulleys are now used in only the "economy" types, and complete units are delivered to the building site ready for installation.

The National Woodwork Manufacturers Association has established standards and specifications for the trade, and opening sizes are set up to conform to modular principles. Weather stripping has advanced to the point where some manufacturers are using tension-type weather strip to hold the window in any position and eliminate the need for balances of any kind. This also allows for easy removal of the window for cleaning and painting without removing any interior frame stops.

Ponderosa pine modular windows have all the natural insulating advantages of wood, hold paint or other finishes well, and can be treated with preservatives at the factory to prevent decay or insect attack. The removable feature of those using spring weather stripping operates by pushing the sash to one side against spring pressure so that the other side is free and pulls inward. Paint-stuck windows may be freed in the same manner. Such tension-types may also be turned on their side to use as economical sliding windows instead of using regular sliding windows which require more expensive and elaborate tracks to run on.

Awning Types

The awning-type of window, wood or metal, is basically a casement window turned on its side with the hinge at the top. Wood awning windows usually have sash or vents hung from the top and hinged by brackets to the jamb. The bottom rail of one unit interlocks with the top rail of the one below. The sash are usually controlled by worm or gear mechanisms, and good ventilation is possible, as most units may be opened to 90 degrees. In many types, units may be left open without danger of rain driving in.

HORIZONTAL SLIDING windows permit large glass areas. Weather stripping minimizes heat loss. Wood or metal sash may be used. Double glass is possible



Most awning units, either wood or metal, are delivered to the site as complete packages, ready for installation. Installation is the same in most cases as for other types of window units, the same precaution for metal units being necessary as for metal casement or double-hung types. Weather stripping and interior storm sash and screens make them feasible for use in any climate.

Some units have motor-driven operators. Most of them permit the bottom vent to be open a crack without the others being open at all, and allow the top unit to drop inside for easy cleaning of the remainder from inside the room. Both wood and metal are available in a complete range of sizes.

Walls of Glass

The modern trend is definitely toward the use of larger glass areas in home construction. Picture windows have grown to be whole walls of glass, and two of the nation's largest glass manufacturers are making available a double-pane unit which reduces heat loss or gain from windows and makes the glass wall truly practical.

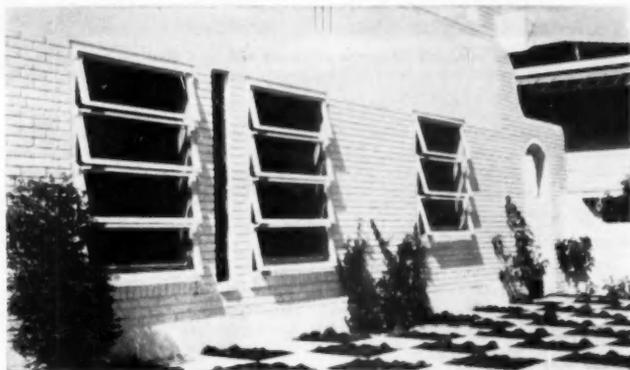
Glass block is frequently used with picture windows, a common application being a plate glass or double-pane picture window flanked on each side with sections of glass block into which is built a ventilating louver unit.

Plate glass is frequently used where problems of insulation and heat loss are not acute, but the double-pane unit is becoming ever more popular in the "window wall" type of construction. This double pane typically consists of two pieces of good quality plate glass mounted in rubber with an air space of $\frac{1}{4}$ inch or so between. This provides insulation and reduces the condensation which usually occurs on glass in cold climates. Triple glass units are also available, when heavy insulation is desired.

WOOD DOUBLE-HUNG sash have high insulating value, and modern weather strips eliminate sash balances in some lines. Spring weather strips permit easy removal of sash for cleaning or painting



DOUBLE-HUNG aluminum windows are weather-stripped at the factory and do not require painting. Care should be taken to prevent scratching or staining during construction



AWNING WINDOWS supplement architectural treatment where horizontal lines are wanted. Good ventilation is possible; wood and metal units are supplied in a variety of sizes

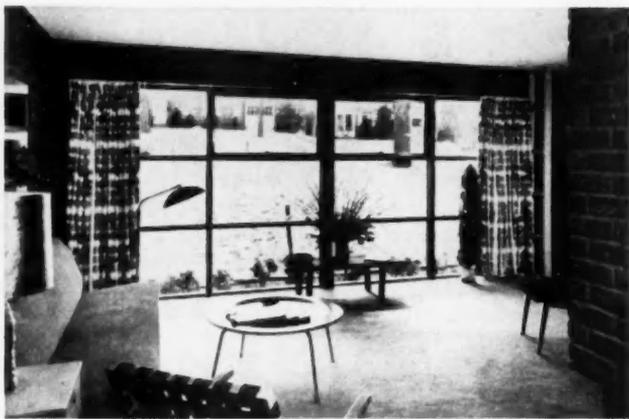
Most sash manufacturers provide for the use of this glass with their units, and installation of this type is no more complicated than for ordinary glass. In addition, double-pane construction usually eliminates the need for storm sash.

The problem of securing ventilation while at the same time having a large expanse of glass is usually met by making the glass area of

smaller lights or units, with some of them permanently fixed and others opening, as awning or casement types. In some cases a group of double-hung windows located immediately adjacent to each other will produce the same effect. For large panes of glass, many builders have found the horizontal sliding construction most suitable where the "glass wall" effect is desired.

Pivoted and Projected Types

Included in this category are awning windows with a hopper vent at the bottom which swings inward instead of outward; the heavy projected units; and the semi-protective pivoted types. With pivoted vents, the unit swings horizontally at the center instead of at the top, as in awning types, so that the vent projects outward and also inward at the same time. This allows windows to be kept open during rains; the projecting portion keeps the rain out, while the inner portion acts as a baffle to deflect air towards the ceiling. Units are available in wood, steel, solid



WINDOW WALLS using a combination of hinged sash and glass set in stops may be purchased as a stock unit in various sizes. Double pane construction reduces heat loss

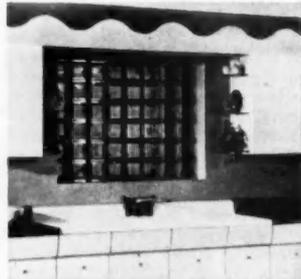
bronze, or aluminum. They come with standard hardware and may be fitted with screens and in some cases with storm sash, particularly on the opening-out vents.

Combination Units

Combination screen and storm sash are available from a host of manufacturers, and are made in wood, aluminum, stainless steel, and other materials. Screens are furnished either full length or in half-length sections, wired with copper or aluminum cloth. Storm sash usually comes in two sections, making the combination unit a three-piece affair.

One manufacturer lists 20 stock sizes, and others make many more, as well as fabricating such units to order to fit existing windows of almost any structure. Metal units are sometimes built with a wood subframe, with steel or aluminum parts carefully finished and joined to the subframe.

Some manufacturers are producing



GLASS BLOCKS provide privacy. They may be used alone or combined with picture windows. Ventilating louvers are available to be used with glass block

what amounts to triple-hung units, which have a standard double-hung window plus a double-hung storm sash plus a one-half screen unit—all built into the same prefabricated frame, complete with weather stripping and balances, or pressure weather stripping for easy removal and cleaning of the sections. Ready for installation at time of construction, these units simplify matters a great deal for the builder.

Storm sash for casement and the awning-type windows, as well as screens, are devised for handling and installation on the inside of the window. Rubber or other weather seal is usually provided around the edges, and storm sash frequently comes with built-in ventilator lights so that winter ventilation may be controlled as desired.

Basement and Utility Windows

Wood or metal basement and utility window units, set up and ready to install, come with or without storm sash and screen, and are normally provided with frames, hardware and accessories in one package from the manufacturer. Frames are grooved to hold mortar, and wood units are chemically treated to resist rot and insects. Screen and storm sash are fitted to fasten from the inside.

One type of basement window is fitted with reversible sash which may be hung to open either at top or bottom. Removable sash may be reversed in a matter of seconds. Utility window units are made to fit modular principles, come already glazed, with top vent opening inward; an outer screen across this opening is built in to keep out insects and vermin. All units are easy to operate, lock se-

curely, and have few moving parts to get out of order. They are ideal for barns, farm and storage buildings

Special Types

There are many and varied special types of windows available both as standard units and as custom-made installations. Among them are the electrically-operated picture windows which are hung from a metal screen which rolls up at the top. As the screen unrolls, the window drops down into a slot and the screen covers the opening. These motor-driven units come complete in a package, ready for installation.

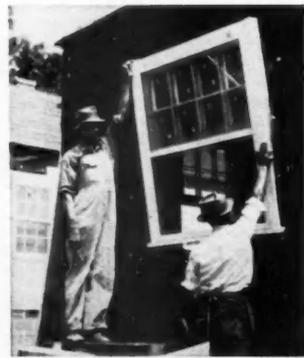
Another special type is a modification of the simple utility window, and is a bottom-hinged panel opening inward with screening across the opening. The entire unit is in a metal frame ready for installation in a glass block wall. Modular units are available.

Louvered window units for use with picture windows can be obtained in wood or metal. These are strictly ventilating devices, can be closed and made weather-tight. Other types of jalousie windows, with horizontal strips of glass, are rated as weather-tight and provide controlled ventilation as well. Glass jalousies are frequently installed in door panels.

Another manufacturer produces a louvre-type shade screening of metal with the louvres set close enough to keep out pests and insects but far enough apart to provide ventilation and shade. This also affords privacy, as you can see out but people on the outside cannot see in.

Tension screens are another recent development which housewives have found convenient, especially

(Continued on page 80)



STEPS in the installation of a factory-built unit. This window, complete with screen and storm sash, may be quickly installed in one operation on the job

This "silent salesman" SURE SELLS HOUSES



customers WANT

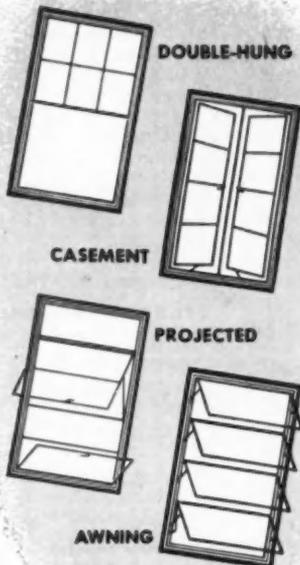
Quality Approved **ALUMINUM WINDOWS**

You don't need a lot of fast sales talk when your houses have windows that carry the "Quality-Approved" seal.

The attractive, smart appearance of aluminum windows brings prospects in. The "Quality-Approved" seal tells them that your house is as good as it looks. It's the buyer's assurance of lifetime trouble-free window service—for "Quality-Approved" windows never rot, rust, warp; always open and close freely; never need paint.

The "Quality-Approved" seal is your assurance of windows that meet the highest quality standards of design, construction, materials and low air infiltration. The windows are easy to handle and install; they save you money on installation; help you sell your houses faster and free you from the trouble and expense of complaints and call-backs.

You can get early delivery of standard sizes in any style—double-hung, casement, projected, awning. For detailed information, see any "Quality-Approved" manufacturer, consult Sweet's Builder's File (Section 4c ALU) or write Dept. AB-4.



Aluminum Window Manufacturers Association

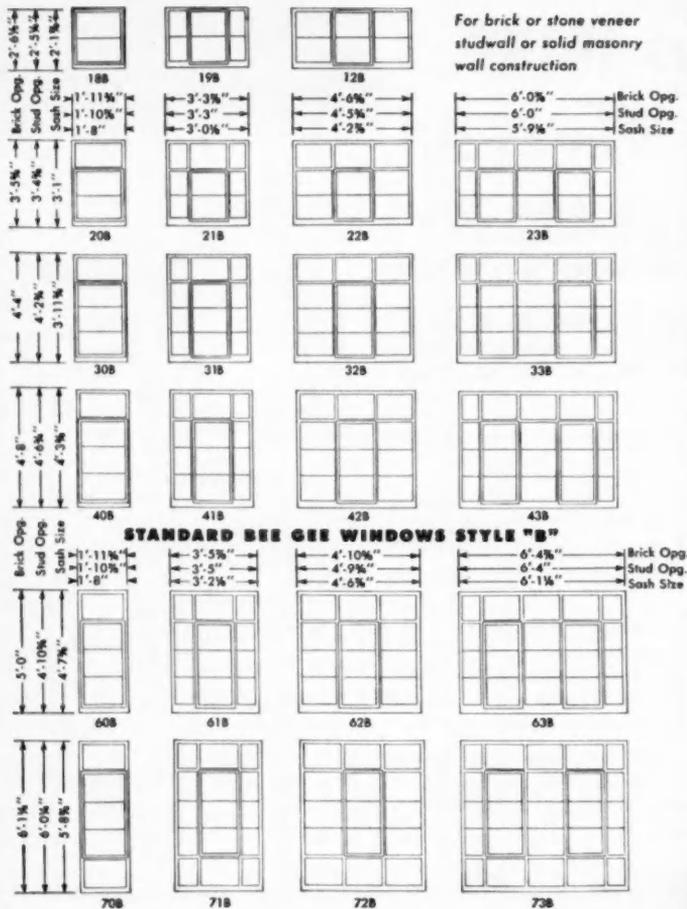
74 Trinity Place, New York 6, N. Y.

BEE GEE

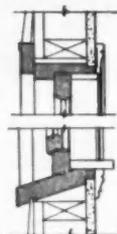
MODERN WOOD

WINDOWS

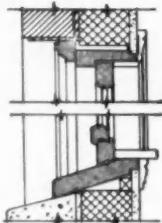
BEE GEE Modern All-Wood Windows are finding more and more favor with customers everywhere. They're light and airy... with the styling particular people want. The modern BEE GEE Window is a complete unit consisting of FRAME, pre-fit glazed SASH with the glass bedded in putty, a bronze SCREEN and all HARDWARE installed at the factory. The more than 42 styles and sizes are shipped ready to set in the wall.



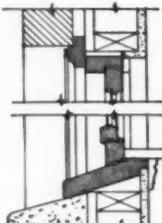
FRAME DETAILS



Stud Wall Type



Solid Masonry Type

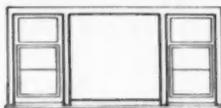


Brick or Stone Veneer with Plaster Reveal*

*Plaster Reveal available also in Stud Wall and Solid Masonry Frames.

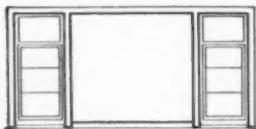
CLEAN THE OUTSIDE FROM THE INSIDE

Housewives immediately sense the convenience of this famous Bee Gee feature. Bee Gee Windows meet the needs of every home, fit every budget... a source of lasting pride and satisfaction. At your request the 20 sizes of Bee Gee Picture Windows can be shipped completely glazed with either Thermopane or Twindow.



(20-B)

(20-B)



(30-B)

(30-B)



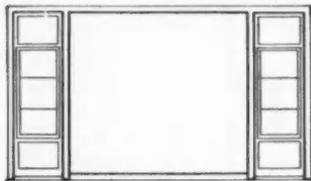
(40-B)

(40-B)



(60-B)

(60-B)



(70-B)

(70-B)

HOW TO ORDER BEE GEE WINDOWS

1. State the quantity needed, the unit number, and the type of frame construction desired, such as "Studwall, Solid Masonry, or Brick Veneer."
2. If narrow jambs are needed for Plaster Reveal, just state "Plaster Reveal" with your frame construction.
3. Standard jambs are 1 7/8" x 5 1/8". Narrow jambs down to 3/8" wide are available for Plaster Reveal on inside, or where wall construction necessitates less than 5/8" wide, without extra cost.
4. Clear glass always shipped unless "Obscure" is specified.
5. When marble stools of more than 3/4" thickness are to be used, it is only necessary to specify "For Marble Stools" and a frame for this type of stool will be furnished at no extra cost.
6. Frames for bay windows or corner windows with extended sills for mitering will be furnished if requirements are specified on order, at a slightly higher price.
7. Frames for all sizes are available for Studwall, Brick, or Stone Veneer, and for Solid Masonry Walls.

**SOLD BY
YOUR LUMBER
DEALER**

Write today for the complete BEE-GEE Window details and Catalog.

BROWN-GRAVES CO., Dept. AB-103
Akron 1, Ohio

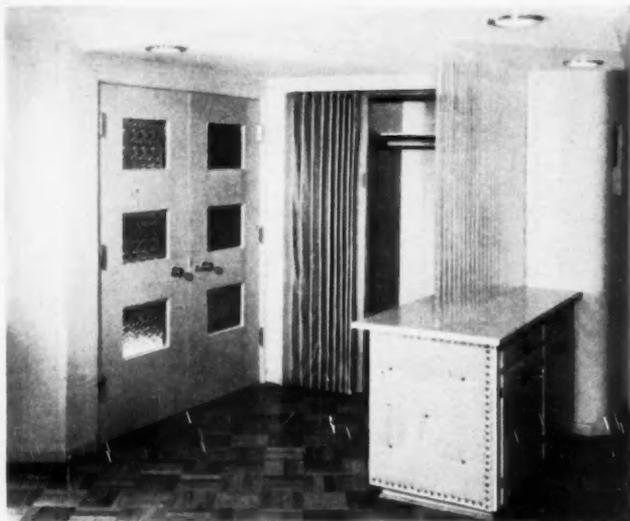
NAME _____

ADDRESS _____

CITY _____

STATE _____

BROWN-GRAVES CO.
Akron 1, Ohio



THIS MODERN front entrance uses architectural glass in the front doors, a folding door for the guest closet, and a structural glass partition

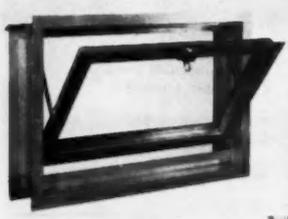
(Continued from page 76)

when it comes to cleaning windows. Screens snap into place from the inside, roll up for storage and are easily manipulated.

Wood Doors

Wood doors are made of many species, including softwoods, hardwoods, plywood, fir, Ponderosa pine, and in a variety of types of construction including flush, paneled, and in combination with glass inserts or panels.

Exterior doors for both home and commercial entrances are frequently heavier and more ornate than many interior doors. Both Ponderosa pine and Douglas fir doors come in a wide variety of sizes and designs, for both interior and exterior applications. The Fir Door Institute has set standards and specifications for the trade in the fir door group, and doors are



STAINLESS STEEL ventilating windows for glass block openings have heads and jambs of heavy construction to support load. Rigid construction minimizes glass breakage, and metal to metal sealing insures tightness

manufactured to close standards for alignment, balance, and function.

Popular among more recent developments has been the hollow core flush door made up of interior sections in grid or arch or ribbed form with an outer layer of plywood or other laminated material. The engineered interior construction is said to give such doors unusual strength and rigidity, while the exterior finishes are usually very fine and susceptible of adaptation to many types of interior design.

Attractive designs and finishes may be obtained from using such woods as red oak, white oak, white gum, red gum, black walnut, or mahogany, to mention a few of the possibilities.

A substantial number of wood doors have been made with fireproofing treatment, the wood being impregnated with fire-resistant chemicals. This increases the weight of the doors about 30 per cent, and several such doors have been made to pass the one-hour fire exposure test of the underwriters' laboratories.

Metal Doors

Metal doors of steel, bronze, aluminum, and a wide range of alloys are available in models which fit into both exterior and interior design. Hollow metal doors are easy to install, cannot sag, splinter, warp, or swell, and will give good performance for long periods of time.

Installation of metal doors is easy, as most manufacturers have already taken care of mortising, drilling,

tapping, and prime painting. Cutting and fitting jambs, stops, and trim is eliminated. Frame and door need no mortising for hinges, locks and strikes. The net result is substantial time saved in installation.

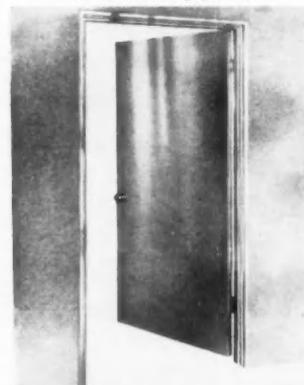
Other types include metal-covered and tubular construction, and many metal doors are used in combination with large glass areas. Many manufacturers furnish sliding as well as conventional types of metal doors, and most of these doors come complete with frame and instructions for installation. As with metal windows, certain precautions must be taken to avoid scratches, to use a second coat of paint on steel doors and frames (unless a baked-on synthetic paint is used) and to avoid staining the metal with plaster droppings or other material.

Glass Doors

Glass doors for both exterior and interior applications follow the trend in modern design toward the use of larger glass areas in walls of both commercial and residential buildings. In commercial buildings, glass doors have come into common use for stores. In residential buildings glass doors are useful as a design feature creating a spacious appearance while affording separation; for example, keeping kitchen odors from the rest of the house, or preventing the colder air in enclosed porch from entering the rest of the living space.

Some glass door installations utilize stainless steel frames and fittings, but most use aluminum extrusions reinforced with structural steel. Because of the relatively great weight of these doors, special care must be

(Continued on page 84)



ALUMINUM FLUSH DOOR and jamb shown are easily installed, will not warp, and are fireproof. 24-gauge aluminum is combined with phenolic impregnated honey-comb filler. All standard sizes are available

*Mengel Flush Doors —
the Permanent Furniture
of Your Building!*



Regional Division
THE MENGEL COMPANY
Louisville 1, Kentucky

Division and successors of Fisher... manufacturers of windows
... doors... Flush doors... The American... integrated
... timber... and... door...
... manufacturers of... in America...



**THIS UNIQUE CORE
PREVENTS WARPING IN
MENGEL**

HOLLOW-CORE *Flush* DOORS

Mengel Hollow-Core Flush Doors *stay flat*. Mengel's exclusive, Insulok core is just one of the important "reasons why". This patented interlocking grid has no directional "grain", provides a rigid, neutral core. Each strip is $\frac{3}{8}$ " wide, and the strips are only 1" apart. This closely-spaced grid provides greater bonding surface than is found in any competitive hollow-core door — helps give Mengel Doors unmatched strength and resistance to warping . . .

Mengel Flush Doors have genuine hardwood stiles, rails, lock blocks, cross-banding and faces. They are the finest that can be built. They are fully guaranteed without limitation as to time — yet sell for little more than soft wood doors.

STANDARDOR

Ask about Mengel's popular new economy door, Standardor. Made by the same craftsmen as the famous Mengel Door, yet simplified for large volume production bringing substantial cost-savings to you!



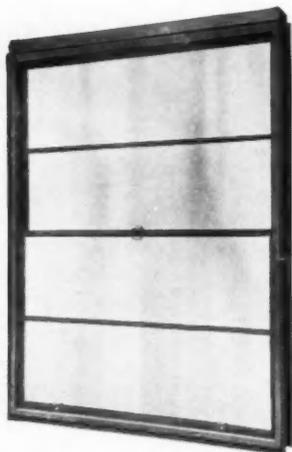
TRUSCON RESIDENTIAL DOUBLE-HUNG STEEL WINDOWS

Smart... Strong... Economical

The excellent design of these popular windows makes them adaptable to all types of home architecture, from extreme modern to early provincial. The construction is extremely rugged, assuring long service. The slender frame and muntin bars permit the entry of the maximum of light, and assure a more pleasant view through the windows.

Truscon Double-Hung Steel Windows cost no more to buy and install than ordinary windows. Completely factory assembled and equipped throughout with stainless steel weatherstripping, they are delivered ready for installation. Their cost will fit the budgets of the most modestly priced homes. They can be economically installed. And, considering their long life, they actually cost LESS.

Combination Screen and Storm Sash Available at Reasonable Prices.



The twelve years of experience which architects, builders and owners have had with this window in all climatic locations, on installations in numerous small homes, apartment houses, dormitories, low-cost housing projects, and hotels, authoritatively confirms its superlative performance ability.



Truscon Double-Hung Steel Windows permit emphasizing the horizontal lines so much in vogue in modern architecture.



Combinations of Truscon Double-Hung Steel Window types permit wide "picture" vistas.



Attractive effects are secured for the more conventional requirements by Truscon Double-Hung Windows in "E" Muntin or Colonial Design.

TYPES AND SIZES

GLASS		GLASS		GLASS		GLASS		GLASS		GLASS		GLASS		GLASS	
31"	32"	33"	34"	35"	36"	37"	38"	39"	40"	41"	42"	43"	44"	45"	46"
GL 40" x 12"	20" x 12"	24" x 12"	28" x 12"	32" x 12"	36" x 12"	40" x 12"	44" x 12"	48" x 12"	52" x 12"	56" x 12"	60" x 12"	64" x 12"	68" x 12"	72" x 12"	76" x 12"
E1031	E2031	E2431	E2831	E3231	E3631	E4031	E4431	E4831	E5231	E5631	E6031	E6431	E6831	E7231	E7631
GL 40" x 16"	20" x 16"	24" x 16"	28" x 16"	32" x 16"	36" x 16"	40" x 16"	44" x 16"	48" x 16"	52" x 16"	56" x 16"	60" x 16"	64" x 16"	68" x 16"	72" x 16"	76" x 16"
E2039	E2039	E2439	E2839	E3239	E3639	E4039	E4439	E4839	E5239	E5639	E6039	E6439	E6839	E7239	E7639
GL 40" x 20"	20" x 20"	24" x 20"	28" x 20"	32" x 20"	36" x 20"	40" x 20"	44" x 20"	48" x 20"	52" x 20"	56" x 20"	60" x 20"	64" x 20"	68" x 20"	72" x 20"	76" x 20"
E2045	E2045	E2445	E2845	E3245	E3645	E4045	E4445	E4845	E5245	E5645	E6045	E6445	E6845	E7245	E7645
GL 40" x 24"	20" x 24"	24" x 24"	28" x 24"	32" x 24"	36" x 24"	40" x 24"	44" x 24"	48" x 24"	52" x 24"	56" x 24"	60" x 24"	64" x 24"	68" x 24"	72" x 24"	76" x 24"
E2051	E2051	E2451	E2851	E3251	E3651	E4051	E4451	E4851	E5251	E5651	E6051	E6451	E6851	E7251	E7651
GL 40" x 28"	20" x 28"	24" x 28"	28" x 28"	32" x 28"	36" x 28"	40" x 28"	44" x 28"	48" x 28"	52" x 28"	56" x 28"	60" x 28"	64" x 28"	68" x 28"	72" x 28"	76" x 28"
E2057	E2057	E2457	E2857	E3257	E3657	E4057	E4457	E4857	E5257	E5657	E6057	E6457	E6857	E7257	E7657
GL 40" x 32"	20" x 32"	24" x 32"	28" x 32"	32" x 32"	36" x 32"	40" x 32"	44" x 32"	48" x 32"	52" x 32"	56" x 32"	60" x 32"	64" x 32"	68" x 32"	72" x 32"	76" x 32"
E2063	E2063	E2463	E2863	E3263	E3663	E4063	E4463	E4863	E5263	E5663	E6063	E6463	E6863	E7263	E7663
GL 40" x 36"	20" x 36"	24" x 36"	28" x 36"	32" x 36"	36" x 36"	40" x 36"	44" x 36"	48" x 36"	52" x 36"	56" x 36"	60" x 36"	64" x 36"	68" x 36"	72" x 36"	76" x 36"
E2069	E2069	E2469	E2869	E3269	E3669	E4069	E4469	E4869	E5269	E5669	E6069	E6469	E6869	E7269	E7669
GL 40" x 40"	20" x 40"	24" x 40"	28" x 40"	32" x 40"	36" x 40"	40" x 40"	44" x 40"	48" x 40"	52" x 40"	56" x 40"	60" x 40"	64" x 40"	68" x 40"	72" x 40"	76" x 40"
E2075	E2075	E2475	E2875	E3275	E3675	E4075	E4475	E4875	E5275	E5675	E6075	E6475	E6875	E7275	E7675
GL 40" x 44"	20" x 44"	24" x 44"	28" x 44"	32" x 44"	36" x 44"	40" x 44"	44" x 44"	48" x 44"	52" x 44"	56" x 44"	60" x 44"	64" x 44"	68" x 44"	72" x 44"	76" x 44"
E2081	E2081	E2481	E2881	E3281	E3681	E4081	E4481	E4881	E5281	E5681	E6081	E6481	E6881	E7281	E7681
GL 40" x 48"	20" x 48"	24" x 48"	28" x 48"	32" x 48"	36" x 48"	40" x 48"	44" x 48"	48" x 48"	52" x 48"	56" x 48"	60" x 48"	64" x 48"	68" x 48"	72" x 48"	76" x 48"
E2087	E2087	E2487	E2887	E3287	E3687	E4087	E4487	E4887	E5287	E5687	E6087	E6487	E6887	E7287	E7687
GL 40" x 52"	20" x 52"	24" x 52"	28" x 52"	32" x 52"	36" x 52"	40" x 52"	44" x 52"	48" x 52"	52" x 52"	56" x 52"	60" x 52"	64" x 52"	68" x 52"	72" x 52"	76" x 52"
E2093	E2093	E2493	E2893	E3293	E3693	E4093	E4493	E4893	E5293	E5693	E6093	E6493	E6893	E7293	E7693
GL 40" x 56"	20" x 56"	24" x 56"	28" x 56"	32" x 56"	36" x 56"	40" x 56"	44" x 56"	48" x 56"	52" x 56"	56" x 56"	60" x 56"	64" x 56"	68" x 56"	72" x 56"	76" x 56"
E2099	E2099	E2499	E2899	E3299	E3699	E4099	E4499	E4899	E5299	E5699	E6099	E6499	E6899	E7299	E7699
GL 40" x 60"	20" x 60"	24" x 60"	28" x 60"	32" x 60"	36" x 60"	40" x 60"	44" x 60"	48" x 60"	52" x 60"	56" x 60"	60" x 60"	64" x 60"	68" x 60"	72" x 60"	76" x 60"
E2105	E2105	E2405	E2805	E3205	E3605	E4005	E4405	E4805	E5205	E5605	E6005	E6405	E6805	E7205	E7605
GL 40" x 64"	20" x 64"	24" x 64"	28" x 64"	32" x 64"	36" x 64"	40" x 64"	44" x 64"	48" x 64"	52" x 64"	56" x 64"	60" x 64"	64" x 64"	68" x 64"	72" x 64"	76" x 64"
E2111	E2111	E2411	E2811	E3211	E3611	E4011	E4411	E4811	E5211	E5611	E6011	E6411	E6811	E7211	E7611
GL 40" x 68"	20" x 68"	24" x 68"	28" x 68"	32" x 68"	36" x 68"	40" x 68"	44" x 68"	48" x 68"	52" x 68"	56" x 68"	60" x 68"	64" x 68"	68" x 68"	72" x 68"	76" x 68"
E2117	E2117	E2417	E2817	E3217	E3617	E4017	E4417	E4817	E5217	E5617	E6017	E6417	E6817	E7217	E7617
GL 40" x 72"	20" x 72"	24" x 72"	28" x 72"	32" x 72"	36" x 72"	40" x 72"	44" x 72"	48" x 72"	52" x 72"	56" x 72"	60" x 72"	64" x 72"	68" x 72"	72" x 72"	76" x 72"
E2123	E2123	E2423	E2823	E3223	E3623	E4023	E4423	E4823	E5223	E5623	E6023	E6423	E6823	E7223	E7623
GL 40" x 76"	20" x 76"	24" x 76"	28" x 76"	32" x 76"	36" x 76"	40" x 76"	44" x 76"	48" x 76"	52" x 76"	56" x 76"	60" x 76"	64" x 76"	68" x 76"	72" x 76"	76" x 76"
E2129	E2129	E2429	E2829	E3229	E3629	E4029	E4429	E4829	E5229	E5629	E6029	E6429	E6829	E7229	E7629
GL 40" x 80"	20" x 80"	24" x 80"	28" x 80"	32" x 80"	36" x 80"	40" x 80"	44" x 80"	48" x 80"	52" x 80"	56" x 80"	60" x 80"	64" x 80"	68" x 80"	72" x 80"	76" x 80"
E2135	E2135	E2435	E2835	E3235	E3635	E4035	E4435	E4835	E5235	E5635	E6035	E6435	E6835	E7235	E7635
GL 40" x 84"	20" x 84"	24" x 84"	28" x 84"	32" x 84"	36" x 84"	40" x 84"	44" x 84"	48" x 84"	52" x 84"	56" x 84"	60" x 84"	64" x 84"	68" x 84"	72" x 84"	76" x 84"
E2141	E2141	E2441	E2841	E3241	E3641	E4041	E4441	E4841	E5241	E5641	E6041	E6441	E6841	E7241	E7641
GL 40" x 88"	20" x 88"	24" x 88"	28" x 88"	32" x 88"	36" x 88"	40" x 88"	44" x 88"	48" x 88"	52" x 88"	56" x 88"	60" x 88"	64" x 88"	68" x 88"	72" x 88"	76" x 88"
E2147	E2147	E2447	E2847	E3247	E3647	E4047	E4447	E4847	E5247	E5647	E6047	E6447	E6847	E7247	E7647
GL 40" x 92"	20" x 92"	24" x 92"	28" x 92"	32" x 92"	36" x 92"	40" x 92"	44" x 92"	48" x 92"	52" x 92"	56" x 92"	60" x 92"	64" x 92"	68" x 92"	72" x 92"	76" x 92"
E2153	E2153	E2453	E2853	E3253	E3653	E4053	E4453	E4853	E5253	E5653	E6053	E6453	E6853	E7253	E7653
GL 40" x 96"	20" x 96"	24" x 96"	28" x 96"	32" x 96"	36" x 96"	40" x 96"	44" x 96"	48" x 96"	52" x 96"	56" x 96"	60" x 96"	64" x 96"	68" x 96"	72" x 96"	76" x 96"
E2159	E2159	E2459	E2859	E3259	E3659	E4059	E4459	E4859	E5259	E5659	E6059	E6459	E6859	E7259	E7659
GL 40" x 100"	20" x 100"	24" x 100"	28" x 100"	32" x 100"	36" x 100"	40" x 100"	44" x 100"	48" x 100"	52" x 100"	56" x 100"	60" x 100"	64" x 100"	68" x 100"	72" x 100"	76" x 100"
E2165	E2165	E2465	E2865	E3265	E3665	E4065	E4465	E4865	E5265	E5665	E6065	E6465	E6865	E7265	E7665
GL 40" x 104"	20" x 104"	24" x 104"	28" x 104"	32" x 104"	36" x 104"	40" x 104"	44" x 104"	48" x 104"	52" x 104"	56" x 104"	60" x 104"	64" x 104"	68" x 104"	72" x 104"	76" x 104"
E2171	E2171	E2471	E2871	E3271	E3671	E4071	E4471	E4871	E5271	E5671	E6071	E6471	E6871	E7271	E7671
GL 40" x 108"	20" x 108"	24" x 108"	28" x 108"	32" x 108"	36" x 108"	40" x 108"	44" x 108"	48" x 108"	52" x 108"	56" x 108"	60" x 108"	64" x 108"	68" x 108"	72" x 108"	76" x 108"
E2177	E2177	E2477	E2877	E3277	E3677	E4077	E4477	E4877	E5277	E5677	E6077	E6477	E6877	E7277	E7677
GL 40" x 112"	20" x 112"	24" x 112"	28" x 112"	32" x 112"	36" x 112"	40" x 112"	44" x 112"	48" x 112"	52" x 112"	56" x 112"	60" x 112"	64" x 112"	68" x 112"	72" x 112"	76" x 112"
E2183	E2183	E2483	E2883	E3283	E3683	E4083	E4483	E4883	E5283	E5683	E6083	E6483	E6883	E7283	E7683
GL 40" x 116"	20" x 116"	24" x 116"	28" x 116"	32" x 116"	36" x 116"	40" x 116"	44" x 116"	48" x 116"	52" x 116"	56" x 116"	60" x 116"	64" x 116"	68" x 116"	72" x 116"	76" x 116"
E2189	E2189	E2489	E2889	E3289	E3689	E4089	E4489	E4889	E5289	E5689	E6089	E6489	E6889	E7289	E7689
GL 40" x 120"	20" x 120"	24" x 120"	28" x 120"	32" x 120"	36" x 120"	40" x 120"	44" x 120"	48" x 120"	52" x 120"	56" x 120"	60" x 120"	64" x 120"	68" x 120"	72" x 120"	76" x 120"
E2195	E2195	E2495	E2895	E3295	E3695	E4095	E4495	E4895	E5295	E5695	E6095	E6495	E6895	E7295	E7695
GL 40" x 124"	20" x 124"	24" x 124"	28" x 124"	32" x 124"	36" x 124"	40" x 124"	44" x 124"	48" x 124"	52" x 124"	56" x 124"	60" x 124"	64" x 124"	68" x 124"	72" x 124"	76" x 124"
E2201	E2201	E2401	E2801	E3201											



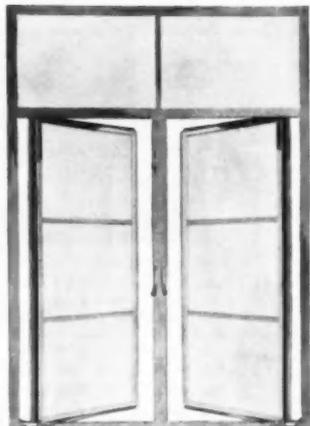
TRUSCON RESIDENTIAL STEEL CASEMENTS

Graceful..Distinctive..Popular

These are the most aristocratic of all windows for the home, yet their adaptability permits them to be designed into architecture of any type. Their slender, graceful lines permit the entry of maximum light. Their wide swinging vents; pleasing glass panels; easy operation; and beautiful appearance appeal to home builders in every budget class.

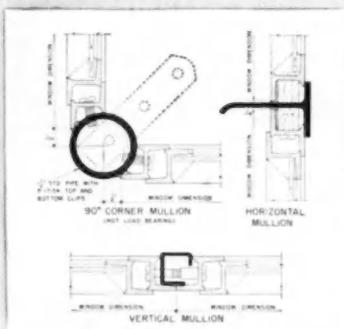
In rooms where windows are opened and closed frequently or where ventilation requirements are great and varied, Truscon Residential Steel Casements fill a utilitarian need in addition to being highly decorative. Side hinged casements can be so opened that they invite or retard the inward flow of air. High, small or unusually placed window openings all become more useful and attractive when fitted with Steel Casements.

Screens and Storm Sash Available at Reasonable Prices.



Truscon Residential Casements are equipped with Roto or Lever Operators which open or close the ventilators without the necessity of moving the screen. The ventilators are held securely in any open position. The concealed-latch locking handles provide positive cam action, drawing the ventilators tightly closed and weathertight. In ventilated units, all glass can be washed from the interior side.

TYPES AND SIZES



4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"
12	1207	22	2202	32	3202	42	4202	52	5202
12	1207	23	2307	33	3307	43	4307	53	5307
14	1407	24	2407	34	3407	44	4407	54	5407
16	1607	26	2607	36	3607	46	4607	56	5607
18	1807	28	2807	38	3807	48	4807	58	5807
20	2007	30	3007	40	4007	50	5007	60	6007
22	2207	32	3207	42	4207	52	5207	62	6207
24	2407	34	3407	44	4407	54	5407	64	6407
26	2607	36	3607	46	4607	56	5607	66	6607
28	2807	38	3807	48	4807	58	5807	68	6807
30	3007	40	4007	50	5007	60	6007	70	7007
32	3207	42	4207	52	5207	62	6207	72	7207
34	3407	44	4407	54	5407	64	6407	74	7407
36	3607	46	4607	56	5607	66	6607	76	7607
38	3807	48	4807	58	5807	68	6807	78	7807
40	4007	50	5007	60	6007	70	7007	80	8007
42	4207	52	5207	62	6207	72	7207	82	8207
44	4407	54	5407	64	6407	74	7407	84	8407
46	4607	56	5607	66	6607	76	7607	86	8607
48	4807	58	5807	68	6807	78	7807	88	8807
50	5007	60	6007	70	7007	80	8007	90	9007
52	5207	62	6207	72	7207	82	8207	92	9207
54	5407	64	6407	74	7407	84	8407	94	9407
56	5607	66	6607	76	7607	86	8607	96	9607
58	5807	68	6807	78	7807	88	8807	98	9807
60	6007	80	8007	90	9007	100	10007		

TABLE OF GLASS SIZES

MIN.	SIZE
A	48" x 36"
B	48" x 48"
C	48" x 60"
D	54" x 36"
E	54" x 48"
F	54" x 60"
G	60" x 36"
H	60" x 48"
I	60" x 60"
J	66" x 36"
K	66" x 48"
L	66" x 60"
M	72" x 36"
N	72" x 48"
O	72" x 60"

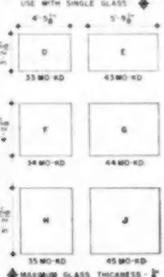


Truscon Residential Steel Casements harmonize with any type of architecture.

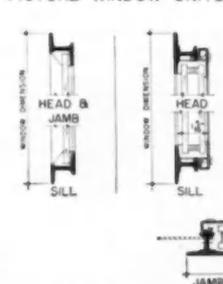


Attractive room settings and picture windows are possible with Truscon Steel Casements.

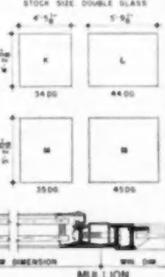
OUTSIDE PUTTY GLAZED TYPES FOR USE WITH SINGLE GLASS



PICTURE WINDOW UNITS

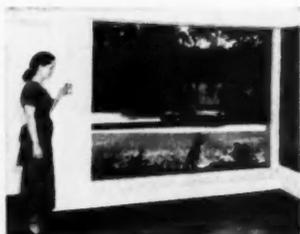


INSIDE GLAZED TYPES FOR USE WITH STICK SIZE DOUBLE GLASS



- "HD" PICTURE WINDOW UNITS ARE SHIPPED RIGGED DOWN FOR FIELD ASSEMBLY.
- DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.
- ELEVATIONS ARE SHOWN AS VIEWED FROM THE OUTSIDE. HAND OF CASEMENTS IS DETERMINED BY LOCATION OF HINGES AS VIEWED FROM THE OUTSIDE.
- FOR STICK OPENINGS OR ROUGH OPENINGS SIZES USE WINDOW DIMENSIONS SHOWN AND ADD 1/2" IN WIDTH AND 1/2" IN HEIGHT.

POPULAR PATTERNS FOR INTERIOR DOORS



THIS LARGE double glazed picture window is raised and lowered electrically. A specially-treated screen covers the opening when the window is lowered

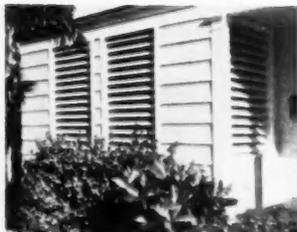
(Continued from page 80)

taken to follow the manufacturer's instructions, so that the doors hang true and operate correctly, with door frames plumb and in proper alignment. Special glass with as much as four times the strength of ordinary plate glass is employed to make possible large doors which have no supporting cross-pieces.

Such glass doors are made to close tolerances, normal being plus 0, minus 1/16. Doors may be of any size up to 48 inches by 108 inches, depending upon the strength of hinges. Doors are provided with adjustable pivot distances of from 1 3/8 to 2 5/8 inches, and standard builders' hardware is used. Door pulls or bars

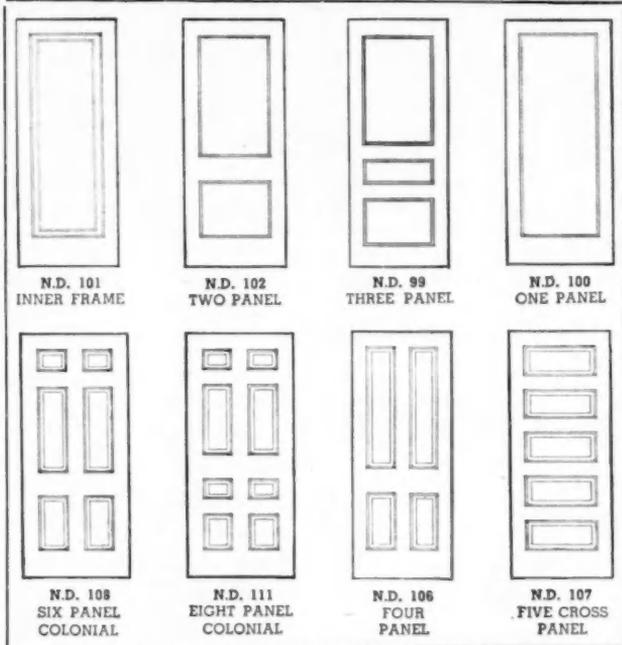


GLASS DOORS for stores and public buildings readily combine with other treatments in the modern manner



JALOUSIES PROVIDE protection from sun and rain and also give ventilation

POPULAR SIZES				
1'-6" x 6'-6"	2'-0" x 6'-8"	2'-4" x 6'-8"	2'-6" x 6'-8"	2'-8" x 6'-8"
1'-6" x 5'-8"	2'-0" x 7'-0"	2'-4" x 7'-0"	2'-6" x 7'-0"	2'-8" x 7'-0"
2'-0" x 6'-0"	2'-4" x 6'-0"	2'-6" x 6'-0"	2'-8" x 6'-0"	3'-0" x 6'-8"
2'-0" x 6'-6"	2'-4" x 6'-6"	2'-6" x 6'-6"	2'-8" x 6'-6"	3'-0" x 7'-0"



National Woodwork Manufacturers Assn. Data

of light tubular construction are used, with holes for these drilled at the factory so that exact location must be specified in advance. Weather-tightness of glass doors is said to be equal to that of metal doors used for the same purpose.

Combination Doors

In addition to doors which combine wood and metal, wood and glass, metal and glass in various ways, a number of manufacturers who produce combination screen and storm sash also produce combination screen and storm doors. Door and insert units are available both in wood and metal, in a wide range of stock sizes. They come equipped with interchangeable inserts for screening or storm glass.

Cabinet and Cupboard Doors

Cabinets and cupboards offer an opportunity for the builder who operates his own millwork department. He can fabricate suitable cabinet

units ready for installation. There are, however, a large number of companies which provide a full range of metal and wood doors, both of the hinged and sliding types, for cabinet and cupboard applications.

Sliding doors for wardrobe cabinets have become increasingly popular

(Continued on page 86)

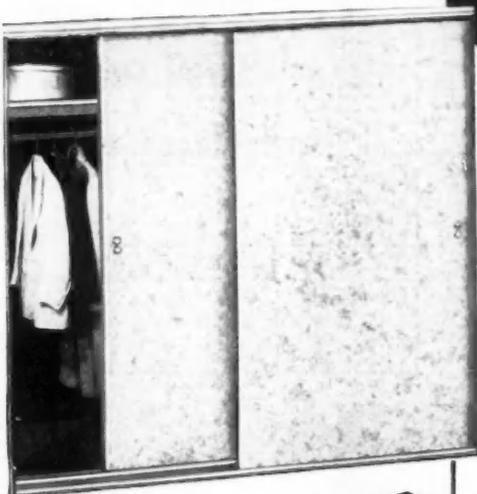


SLIDING WARDROBE doors permit easier access to contents of closet and also save floor space

New **SOLID** Success! **NATIONAL**

SLI-D-O-O-RS

Sensational, New Sliding Doors



Will Not Warp!

They're Solid ...
Made of United States
Plywood Corporation's
Amazing, New novoply.

Constructed with United States Plywood Corporation's amazing NOVOPLY, SLI-D-O-O-RS are guaranteed not to warp. They are solid throughout and slide silently on precision-engineered, ball-bearing rollers.

From every point of view, SLI-D-O-O-RS offer every advantage ...

- Adjustment and construction procedures have been reduced to the simplest minimum.
- SLI-D-O-O-RS are a combination of NOVOPLY and hardwood jambs, headers and saddle for completely warp-proof, easy operating, sliding action. Oak saddle blends with finished hardwood floor.
- SLI-D-O-O-RS are supplied with fascia so that only the handsome sliding doors are visible.
- NOVOPLY takes paint beautifully. It will not bleed or produce an unsightly "orange peel" effect.
- Priced right for builder and customer.
- When properly adjusted, rear slide guides permit removal of door or fasten securely to prevent door from falling from casing. Doors are as attractive from the back as from the front.



Easy to install

Silent sliding

NOVOPLY unexcelled
for painting surface

Ball-bearing rollers

◀ Rear View

Write for
complete,
informative
folder

DIMENSIONS:

Two Door Openings . . .

Outside jamb to outside jamb: 2'0", 2'6", 3'0", 3'6", 4'0", 5'0", 6'0", 7'0", 8'0".

Outside header to outside saddle: 6'9 1/2" or 8'0".

Three Door Openings . . .

Outside jamb to outside jamb: 6'0", 7'6", 9'0", 10'6", 12'0".

Outside header to outside saddle: 6'9 1/2" or 8'0".

SPECIAL SIZES WILL BE MADE TO
ORDER IF QUANTITIES WARRANT IT.

Trade Mark
Registered—
Patented
Other Patents
Pending.

NATIONAL

SLI-D-O-O-RS

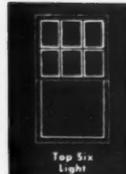
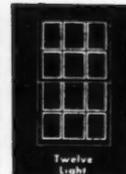
America's Newest, Finest, Sliding Doors

are Made Only By

NATIONAL DOOR CO.

7 Michigan Avenue, Kenilworth, N. J.

POPULAR MODULAR SIZES OF WOOD WINDOWS

OPENING SIZES	GLASS SIZES— $\frac{1}{8}$ " CHECK RAIL WINDOWS					
<p>(Note: Windows are made $\frac{1}{8}$" narrower and $\frac{1}{8}$" shorter than window opening sizes shown below)</p>						
	Two Light	Four Light High	Top Three Light Wide	Top Six Light	Twelve Light	
	2-0x3-2	20x16	20x 7 $\frac{1}{2}$	6 $\frac{1}{2}$ x16	6 $\frac{1}{2}$ x 8	6 $\frac{1}{2}$ x 8
	2-0x3-6	20x18	20x 8 $\frac{1}{2}$	6 $\frac{1}{2}$ x18	6 $\frac{1}{2}$ x 9	6 $\frac{1}{2}$ x 9
	2-0x3-10	20x20	20x 9 $\frac{1}{2}$	6 $\frac{1}{2}$ x20	6 $\frac{1}{2}$ x10	6 $\frac{1}{2}$ x10
2-0x4-6	20x24	20x11 $\frac{1}{2}$	6 $\frac{1}{2}$ x24	6 $\frac{1}{2}$ x12	6 $\frac{1}{2}$ x12	
2-0x5-2	20x28	20x13 $\frac{1}{2}$	6 $\frac{1}{2}$ x28	6 $\frac{1}{2}$ x14	6 $\frac{1}{2}$ x14	
2-4x3-2	24x16	24x 7 $\frac{1}{2}$	7 $\frac{1}{2}$ x16	7 $\frac{1}{2}$ x 8	8 x 8	
2-4x3-6	24x18	24x 8 $\frac{1}{2}$	7 $\frac{1}{2}$ x18	7 $\frac{1}{2}$ x 9	8 x 9	
2-4x3-10	24x20	24x 9 $\frac{1}{2}$	7 $\frac{1}{2}$ x20	7 $\frac{1}{2}$ x10	8 x10	
2-4x4-2	24x22	24x10 $\frac{1}{2}$	7 $\frac{1}{2}$ x22	7 $\frac{1}{2}$ x11	8 x11	
2-4x4-6	24x24	24x11 $\frac{1}{2}$	7 $\frac{1}{2}$ x24	7 $\frac{1}{2}$ x12	8 x12	
2-4x4-10	24x26	24x12 $\frac{1}{2}$	7 $\frac{1}{2}$ x26	7 $\frac{1}{2}$ x13	8 x13	
2-4x5-2	24x28	24x13 $\frac{1}{2}$	7 $\frac{1}{2}$ x28	7 $\frac{1}{2}$ x14	8 x14	
2-8x3-2	28x16	28x 7 $\frac{1}{2}$	9 $\frac{1}{2}$ x16	9 $\frac{1}{2}$ x 8		
2-8x3-6	28x18	28x 8 $\frac{1}{2}$	9 $\frac{1}{2}$ x18	9 $\frac{1}{2}$ x 9		
2-8x3-10	28x20	28x 9 $\frac{1}{2}$	9 $\frac{1}{2}$ x20	9 $\frac{1}{2}$ x10	9 $\frac{1}{2}$ x10	
2-8x4-2	28x22	28x10 $\frac{1}{2}$	9 $\frac{1}{2}$ x22	9 $\frac{1}{2}$ x11		
2-8x4-6	28x24	28x11 $\frac{1}{2}$	9 $\frac{1}{2}$ x24	9 $\frac{1}{2}$ x12	9 $\frac{1}{2}$ x12	
2-8x4-10	28x26	28x12 $\frac{1}{2}$	9 $\frac{1}{2}$ x26	9 $\frac{1}{2}$ x13	9 $\frac{1}{2}$ x13	
2-8x5-2	28x28	28x13 $\frac{1}{2}$	9 $\frac{1}{2}$ x28	9 $\frac{1}{2}$ x14	9 $\frac{1}{2}$ x14	
3-0x3-2	32x16	32x 7 $\frac{1}{2}$		Top Four Light Four Wide		
3-0x3-6	32x18	32x 8 $\frac{1}{2}$	7 $\frac{1}{2}$ x16	Top Eight Light Four Wide		
3-0x3-10	32x20	32x 9 $\frac{1}{2}$	7 $\frac{1}{2}$ x18	7 $\frac{1}{2}$ x 8	7 $\frac{1}{2}$ x 8	
3-0x4-6	32x24	32x11 $\frac{1}{2}$	7 $\frac{1}{2}$ x20	7 $\frac{1}{2}$ x10	7 $\frac{1}{2}$ x10	
			7 $\frac{1}{2}$ x24	7 $\frac{1}{2}$ x12	7 $\frac{1}{2}$ x12	
3-4x3-10	36x20	36x 9 $\frac{1}{2}$	8 $\frac{1}{2}$ x20	8 $\frac{1}{2}$ x10	8 $\frac{1}{2}$ x 8	
3-4x4-6	36x24	36x11 $\frac{1}{2}$	8 $\frac{1}{2}$ x24	8 $\frac{1}{2}$ x12	8 $\frac{1}{2}$ x12	

(Continued from page 84)

lar, especially since high construction costs have cut bedroom space to the point where sliding doors in thin wall partitions make for a real space-saving in the room. Decorative effects may be obtained by using flush types or panel types.

Special Types

Louved doors have become popular in warm climates for entrance installations, and in colder climates for interior uses. Louvres may be of glass, wood or metal, and doors are available in a wide range of materials to fit into design requirements. The jalousie-type of door claims the advantages of controlled ventilation with privacy.

Sliding doors either hung on a track with rollers overhead or resting on rollers at the bottom, are often used by the builder to gain space or add convenience to the home. They are particularly useful in connection with entrances to basement or attic stairs, in hallways where swinging doors would be in the way, and between rooms which can be thrown together for added spaciousness by opening the doors. These are frequently used in pairs like double doors. Sliding doors for closets are also available from a number of manufacturers.

One manufacturer of recessed doors makes a special type of sliding



FLEXIBLE DOORS and room dividers are used like standard doors. No trim is needed. Usually they hang from ceiling



PLASTIC AND FABRIC coverings for folding doors mounted on steel frames make possible great space saving and can be used as design features

National Woodwork Manufacturers Assn. Data

door without ordinary tracks above or below, but built in a "package" with an extended double frame and spring construction which suspends the door while it is pulled shut. The unit comes ready for installation in standard wall construction.

Folding doors of hinged construction are largely being supplanted in new construction with flexible folding doors of several types. These are either vinyl-covered plastic units mounted in steel frames which come ready to install or strong, lightweight wood slat material woven together and suspended from an overhead track. They operate easily, and add a note of vertical corrugation which works into other design elements in the room in a pleasing manner. Builders estimate that folding doors take from 20 to 50 per cent of the space needed by ordinary doors.

Fire-resistant doors for special purposes in small commercial buildings are also found useful in home construction in the custom-built field. These may be of metal or metal-covered wood, and in some instances are of chemically-treated wood. Various manufacturers provide a wide range of models and sizes which have passed the underwriters' one-hour fire-rating test.

Roll-Up Doors

Rolling doors for garage entrances or service entrances include roll-up

(Continued on page 92)

The internal construction of ATLAS FLUSH DOORS

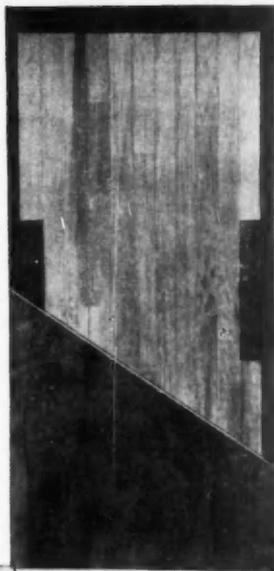
means
lasting beauty and
lasting strength

The exterior beauty of an Atlas Flush Door rests not alone on the simplicity of its lines and the superior quality of its surface panels . . . Its engineered, internal construction is a major factor that assures permanently fine appearance.

Whatever you choose for surface panels — Northern Hardwoods, Southern Gum, Western Fir or rarer imported woods: Avodire, Mahogany, Prima Vera and the like—the principles of construction remain the same.

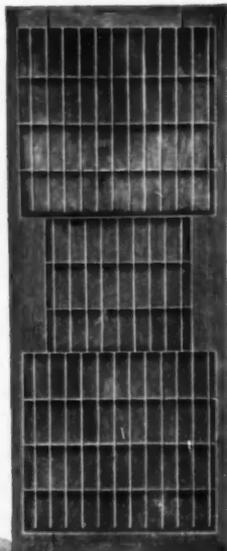
There is an Atlas Flush Door to fit every architectural scheme and every budget. If the door is to be painted, less expensive paint grade veneers are available. Similarly, stains on gum offer a choice of Mahogany, Walnut and other "furniture" finishes—with economy.

Every Atlas Flush Door is the product of a single, wholly integrated organization. From standing tree to completed door, there is one standard of control and inspection — one responsibility. We'd like you to know more about Atlas Hollow Core and Solid Core Flush Doors. For illustrated literature, kindly address your request to Department 62.



SOLID CORE

The core material of the Atlas Solid Core Flush Door is Balsa Wood — inert, proof against stress and warpage. With the same K factor as cork, Balsa has important sound-deadening qualities. Its low thermal conductivity means efficient insulation. Its light weight means light weight for the finished door. The core blocks are positioned within a kiln-dried frame. Lock blocks on both sides permit the door to be hung from either right or left.



HOLLOW CORE

In the Atlas Hollow Core Flush Door, kiln-dried soft wood struts —running both laterally and perpendicularly—interlock to form a grid. Wherever two struts interlock, the outer corners are beveled to permit free air circulation. The carefully machined frames are of kiln-dried White Fir or Ponderosa Pine. Lock blocks on each side permit hanging from either right or left. Before the surface panels are bonded to core and frame, the interior surfaces have been completely sized, to counter-balance the pull of the final exterior finish.



13 MANUFACTURING PLANTS

Anderson, Cal.	Gladstone, Mich.
Crescent City, Cal.	Munising, Mich.
Laurel, Del.	Goldsboro, N. C. (2)
Brunswick, Ga.	Plymouth, N. C.
Haulton, Me.	Klamath Falls, Ore. (2)
Greenville, Me.	Portland, Ore.
Patten, Me.	Williamsport, Pa.
Cadillac, Mich.	Newport, Vt.

PANEL AND DOOR DIVISION

ATLAS

PLYWOOD CORPORATION

24 SALES OFFICES AND WAREHOUSES

Boston, Mass.	New York, N. Y.
Los Angeles, Cal. (2)	Goldsboro, N. C.
Oakland, Cal.	Cleveland, Ohio
Sacramento, Cal.	Dayton, Ohio
San Francisco, Cal.	Oklahoma City, Okla.
Denver, Colo.	Tulsa, Okla.
Chicago, Ill.	Portland, Ore.
Evansville, Ind.	Pittsburgh, Pa.
Detroit, Mich.	Corpus Christi, Tex.
Gladstone, Mich.	Houston, Tex.
Grand Rapids, Mich.	San Antonio, Tex.
	Tacoma, Wash.

STATLER BUILDING, BOSTON 16, MASS. • Telephone: Hancock 6-0016 • Teletype: BS-644

APRIL 1952

ANDERSEN Windowalls

4 Complete WOOD Window Units



ANDERSEN GLIDING WINDOW UNITS: Sash glide from side to side in plastic sill tracks. Sash can be removed. Fully weather-stripped. Single light or horizontal glazing. Equipped with screen and double glazing.

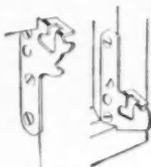
ANDERSEN BASEMENT-UTILITY WINDOW UNITS

Packed in cartons, completely set up for quick installation. Includes screen. Storm sash optional. Modular sizes.



REVERSIBLE SASH

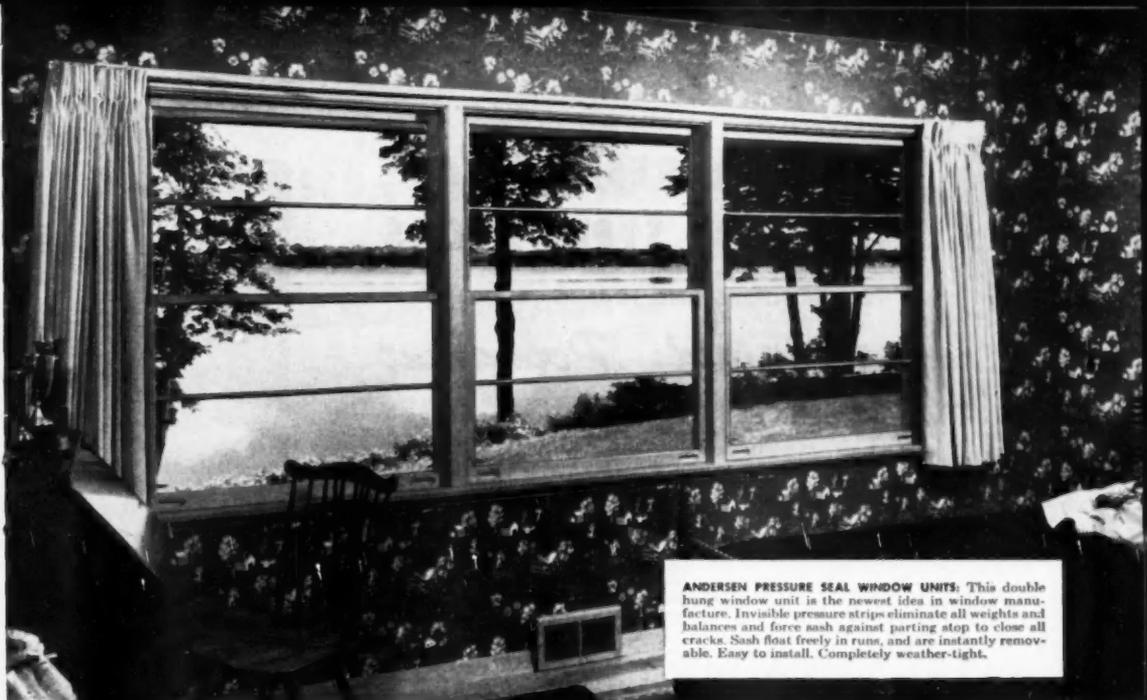
Ingenious hardware permits hinging of sash at top or bottom. Removable sash can be reversed in a matter of seconds.



MANY ABOVE-GROUND USES

In stack or ribbon groupings, or singly, this Andersen unit has many above-ground uses. Ideal for cabins, garages, farm and commercial buildings.

• Specification data on Andersen WINDOWALLS is in *Suvet's Architectural and Builders' Catalogs* or will be sent by us upon request. See your local lumber or millwork dealer for further information.



ANDERSEN PRESSURE SEAL WINDOW UNITS: This double hung window unit is the newest idea in window manufacture. Invisible pressure strips eliminate all weights and balances and force sash against parting stop to close all cracks. Sash float freely in runs, and are instantly removable. Easy to install. Completely weather-tight.



ANDERSEN CASEMENT WINDOW UNITS: Wide variety of sizes, including picture window combinations. Outswinging sash. Comes complete with hardware, weatherstripping, and inside screen and double glazing. One-light, horizontal or cut-up glazing.

NEW! WIDER SASH

ANDERSEN CASEMENTS are now available in *two* sash widths, 18 inches and 22½ inches. The illustration above shows the 18 inch sash.

Windowalls ANDERSEN WINDOWALLS are complete window units . . . precision manufactured from beautiful, *insulating* wood. See your local millwork dealer or write us for more information.

® TRADEMARK OF ANDERSEN CORPORATION

Andersen Corporation • Window Specialists • Bayport, Minnesota



TRUSCON RESIDENTIAL INTERIOR STEEL DOORS

SWING DOORS AND FRAMES - SERIES 50

Smart...Rigid...Permanent

Truscon Series 50 Steel Doors and Frames are designed to meet interior requirements for all types of residential structures. Precision engineered and manufactured of high quality steel, these doors and frames insure perfect fit and permanent trouble-free operation. Most popular sizes of doors and frames are available for prompt delivery from strategically located warehouses.

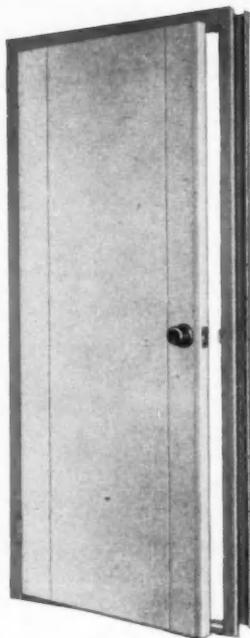
Designed to compete in cost with doors of any other material, low cost is achieved through the economies of mass production. Additional construction savings are made possible by ease and speed of installation which can be accomplished in less than one third the time required for "on the job assembled" types.

Doors are $1\frac{3}{8}$ " thick and of a pleasing, flush design. They are available in the standard height of 6'-0", and with the five most popular widths, 1'-8", 2'-0", 2'-6", 2'-8" and 3'-0", being stocked in warehouses. Special widths and heights can be furnished on request. Four types of locksets, designed to meet all normal requirements of residential doors, are offered. They are either Schlage Type "A" or Lockwood Type SB with both of bright brass material.

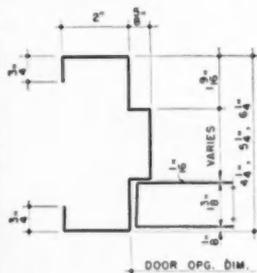
Frames for the doors are designed to fit practically every type of wall construction. Shipped knocked down, they are easily and quickly assembled with the corner connections forming neat hairline joints. Frames are available in depths of $2\frac{3}{4}$ ", $3\frac{1}{2}$ ", $4\frac{1}{4}$ ", $5\frac{1}{4}$ " and $6\frac{1}{4}$ ", with the last two depths procurable from warehouses in the stock door sizes mentioned above.

Doors shipped from warehouse stocks are packaged in sturdy cartons for protection during shipment. Each door leaf is designed for use in either right or left hand swing, and to open in or out. Frames, however, must be ordered right or left hand to accommodate required swing of door and are bundled for shipment.

Underwriters' Labeled Doors and Frames are available on special order. Consult the nearest Truscon representative for detailed information.

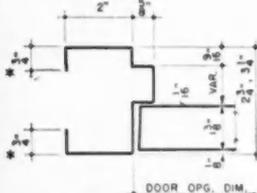


FRAME DETAILS



4 $\frac{1}{4}$ ", 5 $\frac{1}{4}$ ", & 6 $\frac{1}{4}$ " FRAMES

* THIS DIMENSION IS $\frac{1}{2}$ " FOR 2 $\frac{3}{4}$ " FRAME.



2 $\frac{3}{4}$ " & 3 $\frac{1}{4}$ " FRAMES

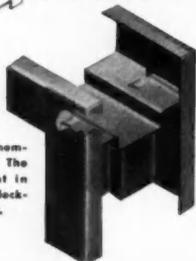
2 $\frac{3}{4}$ " FRAMES ARE FORMED FROM 16 GA. STEEL, ALL OTHERS ARE 18 GAUGE.

* WAREHOUSE STOCK FRAMES ARE 5 $\frac{1}{4}$ " AND 6 $\frac{1}{4}$ " DEPTHS.

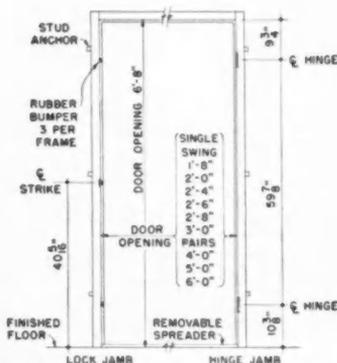
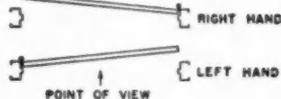
ANCHORS



Jamb and head members assembled. The two tenons bent in place, securely locking the joint.



HAND OF DOOR MAY BE DETERMINED BY REFERRING TO SKETCHES BELOW. NOTE THAT DOOR MUST ALWAYS SWING AWAY FROM POINT VIEWED.



ELEVATION - TYPICAL SWING DOOR FRAME

2 $\frac{3}{4}$ " FRAMES ARE OF 16 GA. STEEL; ALL OTHERS OF 18 GA.



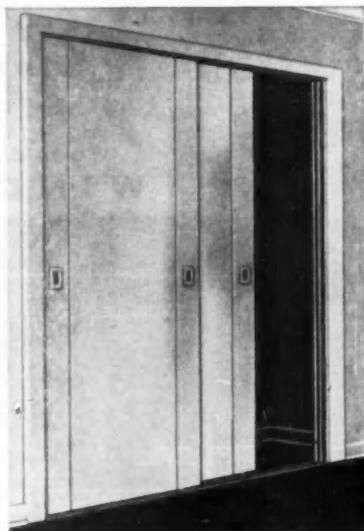
TRUSCON RESIDENTIAL STEEL DOORS

SLIDING CLOSET DOORS - SERIES 51 AND 51B

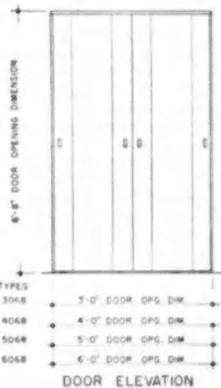
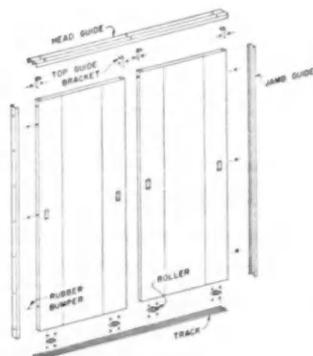
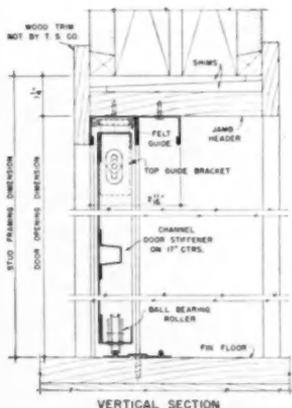
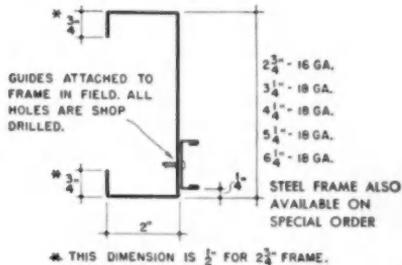
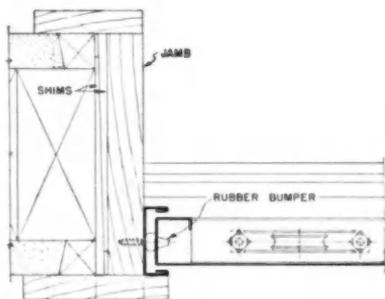
These modern Sliding Doors provide total closet accessibility, more usable floor space and materially reduce construction costs. Outstanding economy is obtained through the elimination of material and labor required, (1) to construct and plaster approximately one half the area occupied by the full width of the Sliding Door opening, and (2) to furnish and install frame, swing door and hardware.

Series 51 and 51B Flush Type Sliding Closet Doors are precision made of prime quality cold rolled sheets heavily reinforced for rigidity, thus insuring perfect fit and permanent trouble-free operation. Each door is equipped with two ball bearing rollers, dense felt top guides and rubber bumpers at jambs to provide smooth, quiet operation.

Finger pulls of brass are fitted into each side of both panels at the factory. Units are available in four standard widths, 3'-0", 4'-0", 5'-0" and 6'-0". Height of all doors is 6'-8".



Two sizes carried in stock:
4'-0" x 6'-7 $\frac{3}{4}$ " and 5'-0" x 6'-7 $\frac{3}{4}$ "



* DENOTES TYPES STOCKED IN WAREHOUSE

Pella

WOOD CASEMENT
WINDOWS



MAKE CUSTOM WINDOW EFFECTS FROM STOCK-SIZE UNITS

Pella stock-size casement units can be combined into hundreds of custom-like effects of varying width and height. Installation cost is minimized because Pella wood casements are factory-fitted and assembled, individually packaged, ready to place in rough wall openings.



CHECK THESE CONVENIENT Pella FEATURES

ROLSCREENS—Pella casements are equipped with inconspicuous inside Rolscreens that roll up and down like window shades. Rolscreens operate with finger-tip ease. Never need painting, storing, putting up or taking down.

DUAL GLAZING AND WEATHERSTRIPPING—All Pella casements are dual glazed to insulate against winter cold and summer heat. Sash is weatherstripped on all four sides to eliminate drafts.

EASY TO OPERATE—Pella's patented hinge design and construction assure easy operation.

FIT ALL TYPES OF ARCHITECTURE—Pella casements fit snugly into wood, frame, brick, stone, brick veneer, etc. They convey dignity and stateliness to Colonial architecture . . . emphasize Cape Cod "coziness" . . . lend breadth to Modern or Ranch styles.

3-LIGHT WIDE UNIT—Only Pella builds these wide casement units, made possible through Pella's patented hinge design, superior sash construction and steel inner frame. Ventilating windows have glass sizes up to 24" wide by 60" high!

ROLSCREEN COMPANY, Dept. D-27, Pella, Iowa
Without obligation, send me "PELLA CASEMENT Installation Instructions in Full Size Casement Details No. 1050M."

Name

Firm

Address

City State

PELLA CASEMENTS • ROLSREENS • VENETIAN BLINDS

FOR FURTHER INFORMATION
See Sweet's Builder's File 17c/ROL or mail the coupon today for a complete set of Casement Details No. 1050M.



GLASS SLIDING DOORS facilitate gardening for this home owner. Similar applications are useful for porches and solariums

(Continued from page 86)

type of grilles used also in porch and patio treatments in modern home construction. Rolling doors are neat in appearance, easy to operate, save space, give weather protection, burglar protection, and fire protection if treated with fire-resistant material. They can be operated automatically if desired.

Modern revolving doors are almost universally installed of glass and metal construction in modern small commercial buildings. Advantages of revolving doors are said by manufacturers to include traffic control, air control, savings on fuel bills, increased store profits from added floor space, and automatic collapsing features for emergency operation. Revolving units operating on similar

(Continued on page 90)



TWO VIEWS of revolving unit used in small home closet construction. All stored material is easily reached

AMERICAN BUILDER

Now

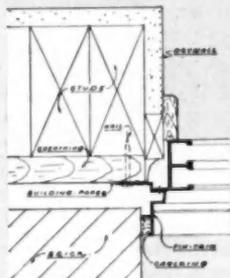
**FOR BRICK, BRICK VENEER
CEMENT BLOCK or STUCCO**



**7 modular sizes
with FIN-TRIM**

NUMBER	WINDOW DIMENSION
No. 2020 M	2'-0" x 2'-0"
No. 3020 M	3'-0" x 2'-0"
No. 3034 M	3'-0" x 3'-4"
No. 3420 M	3'-4" x 2'-0"
No. 3434 M	3'-4" x 3'-4"
No. 4020 M	4'-0" x 2'-0"
No. 4034 M	4'-0" x 3'-4"

NOTE: Sizes shown are Grid Sizes. For Masonry Opening Sizes add $\frac{1}{4}$ " to height and width.



**JAMB SECTION WITH FIN-TRIM
IN BRICK VENEER CONSTRUCTION**

**5 standard sizes
wood frame installation**

NUMBER	WINDOW DIMENSION
No. 110165	1'-9 $\frac{1}{2}$ " x 1'-5 $\frac{1}{2}$ "
No. 111175	1'-11" x 1'-7"
No. 3020 S	3'-0 $\frac{1}{4}$ " x 2'-0 $\frac{1}{4}$ "
No. 3921 S	3'-9 $\frac{1}{4}$ " x 2'-1 $\frac{1}{4}$ "
No. 4638 S	4'-6" x 3'-8"

ALWINTITE
Horizontal Sliding Windows
with universal FIN-TRIM

Save installation time Reduce materials' cost
Eliminate need for wood frame

HIT of the Chicago builders show, ALWINTITE sliding windows with FIN-TRIM are the rave of builders everywhere.

With the new universal FIN-TRIM you can build in your sliding windows as you go along. No longer is it necessary to first install a wood buck to hold the window. Now your windows can be nailed in place, in frame construction, with any exterior finish—can be built in position in cement block or brick construction.

Think what this means in terms of quicker installations, reduced labor, lower costs. When you order your sliding windows with the new FIN-TRIM, there are no accessories to bother with, no special frames, no exterior wood trim or casing to buy, apply or paint. You won't have to paint around the outside of the windows, no matter what kind of finish you use. And what's more, you have a window that's flashed all around—one that gives a weathertight installation.

ALWINTITE sliding windows are the lowest priced aluminum windows on the market today—a "must" for every builder interested in keeping costs down with sales appeal high. Investigate now. Ask your local ALWINTITE dealer today or write for complete details to Dept. AB-4.

ALWINTITE DIVISION
GENERAL BRONZE
CORPORATION

Stewart Avenue • Garden City, N. Y.

**DOUBLE-HUNG WINDOWS • SLIDING WINDOWS • VIEWALL WINDOWS
TRIPLE CHANNEL COMBINATION STORM WINDOWS AND SCREENS**

INSIDE TOP
DETAIL



SLOT (A) ENGAGES SCREWS IN TOP OF
WINDOW FRAME BY PUSHING TAB ON
FITTING (B) WHICH SLIDES IN SLOT (C)



Builders say: **TENSION-tite** window screens *pay off*

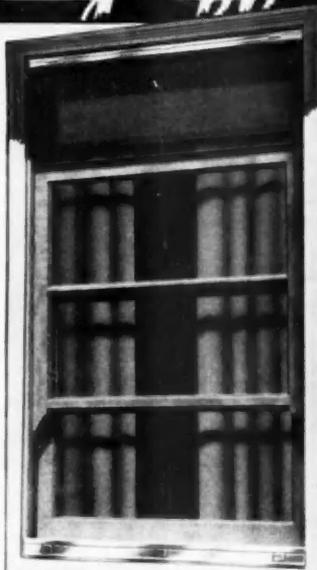
* Trade Mark

Preferred by home-owners
--- yet it's the **lowest cost**
screen to install!

- All aluminum! Rust-proof!
- Attractive - Non-staining
- No painting --- No fitting
- Sizes for all d. h. wood windows
- **Exclusive GUIDE BAR**
Speeds Installation

★ **Immediate delivery** ★
NO USE RESTRICTION

UNDER NPA - M - 4A



Also available with
Kaiser SHADE screening

TENSION-tite shade screens keep out the direct rays of the sun as well as insects. Use these screens on south and west windows to make the hottest rooms the coolest.

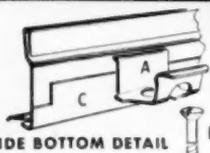
RL

RUDIGER - LANG CO.

Factories in Berkeley, Calif., and Toccoa, Ga.

2701 EIGHTH STREET, BERKELEY 10, CALIFORNIA

P. O. BOX 468, TOCCOA, GEORGIA



INSIDE BOTTOM DETAIL



CATCH (A) ENGAGES SCREW (B) ON SILL. THIS CATCH ALSO HOLDS THE ADJUSTMENT BAR (C) WHICH IS PUSHED DOWN ON SILL FOR INSECT-TIGHT FIT. BAR (C) ALSO SERVES AS A TEMPLATE OR GUIDE, LOCATING THE CORRECT POSITION OF THE SCREWS WHEN INSTALLING SCREEN.

These Superior Features make
Roddiscraft FLUSH DOORS
 EASIER TO SELL — BUILD LASTING CUSTOMER SATISFACTION

FOR OFFICE BUILDINGS, SCHOOLS, HOSPITALS,
 HOTELS, INSTITUTIONS, APARTMENT HOUSES



RODDIS-CRAFT SOLID CORE Flush Doors

FIRE RESISTANT — exceed the 40 minute fire test. Provide extra protection where needed in multiple and single dwelling units.

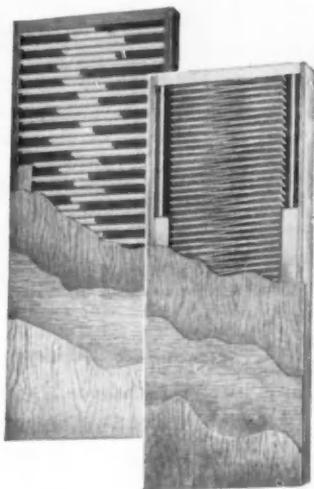
SOUND RESISTANT — develop an average sound transmission loss of 30.9 decibels — only a little less than specially constructed sound retardant doors of much greater cost.

RESISTANT TO ABUSE — core, crossbandings and face veneers welded into a single unit with the inherent strength of true plywood construction.

WATERPROOF — for exterior and interior use. Phenolic resin glue provides two completely waterproof shields over entire area of the door on each side of the core.

STANDARD THICKNESS FACE VENEERS — provide greatest resistance to checking and abuse — permit better matching.

FOR RESIDENCES, MULTIPLE DWELLINGS AND
 OTHER INSTALLATIONS



RODDIS-CRAFT Housemart Hollow Core Doors

7-Ply construction — 3-ply face panel bonded to both sides of the core assembly — offers these added advantages:

1. Extra strength
2. Greater resistance to distortion
3. Sure protection against core pattern showing through face veneers after finish is applied

Roddiscraft Housemart Hollow Core doors are generously made — contain ample wood at side and top and bottom edges for trimming and the safe anchoring of hardware. Lock blocks on both sides offer a wide choice of hanging positions.

There is a Roddiscraft Door to meet every specification calling for wood doors. Call your Roddiscraft dealer for complete information.

NATIONWIDE Roddiscraft WAREHOUSE SERVICE

Cambridge 39, Mass. . . 229 Vassar St.
 Charlotte 6, N. C. . . . 123 E. 27th St.
 Chicago 32, Ill. . . . 3865 W. 41st St.
 Cincinnati 2, Ohio . . . 836 Deart St.
 Dallas 10, Texas . . . 2800 Mezzell St.
 Detroit 14, Mich. . . 11855 E. Jefferson St.
 Houston 10, Texas . . 2403 Sabine St.
 Kansas City 3, Kan., 35 Southwest Blvd.
 Los Angeles 58, Cal., 2620 E. Vernon Ave.
 Louisville 10, Ky. . . 1201-5 S. 15th St.

Marshfield, Wis. . . . 115 S. Palmetto St.
 Milwaukee 8, Wis. . . 4601 W. State St.
 New Hyde Park, L. I., N. Y.
 Plaza Ave. & S. 18th St.
 New York 55, N. Y. . . 920 E. 149th St.
 Port Newark 5, N. J. . . 103 Marsh St.
 Philadelphia 34, Pa., Richmond & Tiona Sts.
 St. Louis 16, Mo., 3344 Morganford Road
 San Antonio 6, Texas . 727 N. Cherry St.
 San Francisco 24, Cal., 345 Williams Ave.



THIS BEAUTIFUL NEW HOME HAS AMERICA'S FINEST WINDOWS

Fleettlite

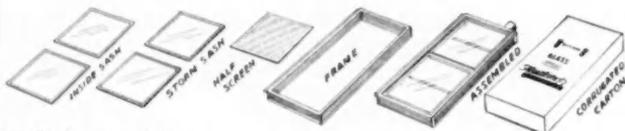
Double, Double-Hung Aluminum



71 Saratoga Road
Egbertsville
(Buffalo, New York suburb)
Highland & Highland
Architects

70 Contribute Modern Beauty
Reduce Building Time
Provide Living Comfort
Ease Housekeeping

A Fleettlite Window is different
—all parts are manufactured and
assembled in the factory and it is shipped complete, ready to install.



Fleettlite is a complete year-round unit amazing in its ingenuity of design and in the benefits it offers home builders and home owners.

OVER 500 CONTRACT-BUILT HOMES IN THE BUFFALO AREA

... and thousands throughout the country are now equipped with Fleettlite windows. Owners are delighted with the beauty, convenience and everlasting investment value.

They appreciate the freedom from the chore of removing, storing and reinstalling storm sash and screen. They like the way Fleettlite sash snap out for cleaning. For warmer winters and cooler summers.

WRITE TODAY
for complete literature on
Fleettlite Windows

Fleettlite
AMERICA'S *Smart* WINDOW

As advertised in House Beautiful, House and Garden, Small Homes Guide, American Builder, Practical Builder, Architectural Forum, and Sweets Architectural File.

Made by ...

FLEET OF AMERICA, INC., 112 PEARL STREET, BUFFALO, N. Y.

(Continued from page 92)

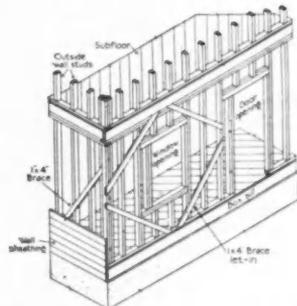
mechanical principles are available for closet installations, with fixtures to increase accessibility of the closet's contents.

Framing

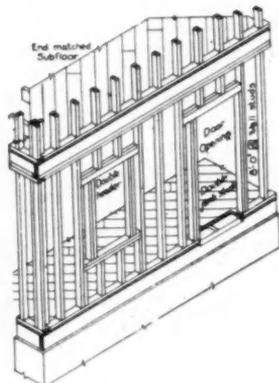
In house construction, wall openings for windows and doors must be properly reinforced to avoid weakening the entire structure. The extent of reinforcement and the type of treatment depend upon the size and location of the opening. In framing, it is common good practice to double headers, with the larger dimensions set vertically at the top. Where openings are wider than conventional windows or doors, diagonal bracing or trussing is required to obtain sufficient strength to avoid sagging or failure. Good nailing practices are particularly essential at this point.

All rough window and door openings must be of the correct size to take the window or door frame with-

(Continued on page 100)



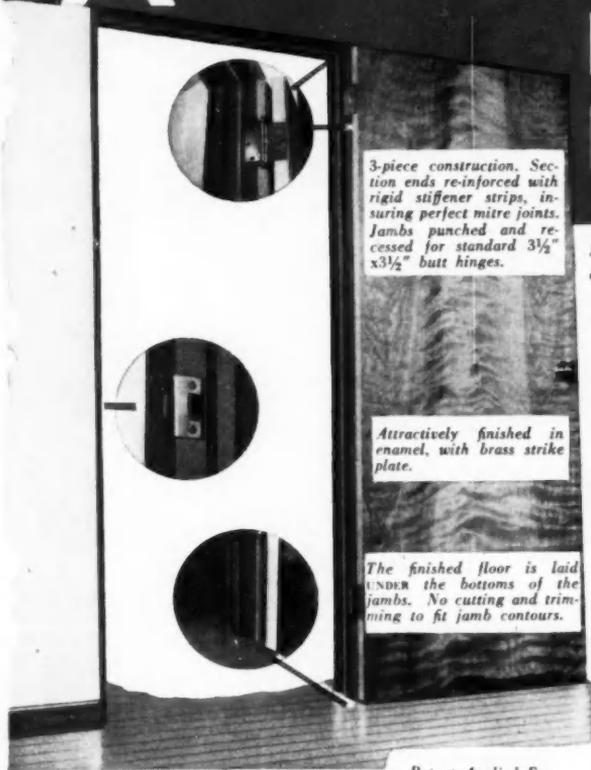
CUT-IN OR LET-IN bracing around openings or at corners should be close to a 45-degree angle. Adequate corner bracing or diagonal sheathing are prerequisites of good construction



ACCURATELY FITTED door and window framing is an indication of careful building for permanent stability

AMERICAN BUILDER

Kewanee STEEL DOOR FRAMES



3-piece construction. Section ends re-inforced with rigid stiffener strips, insuring perfect mitre joints. Jamb's punched and recessed for standard 3½" x 3½" butt hinges.

Attractively finished in enamel, with brass strike plate.

The finished floor is laid UNDER the bottoms of the jamb's. No cutting and trimming to fit jamb contours.

Seen and praised by hundreds of enthusiastic builders at the N.A.H.B. Convention.

UNIQUE IN DESIGN

... for the modern cost-conscious builder

LOWER FIRST COST — the most economical door frame on the market.

LOWER INSTALLED COST — can be installed in a fraction of the time required for ordinary jamb and trim. No temporary plaster stops to be erected and dismantled, no trim to be applied later, no mortising of jambs for hinges and strike. No filling of nail holes, no prime painting.

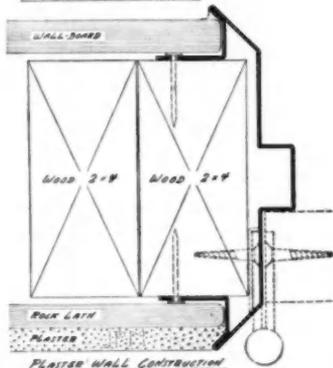
NAIL HOLES are provided every 7" along flanges of frame, assuring rigid attachment to sub-frame and preventing vibration.

Patent Applied For

FURNISHED IN STANDARD SIZES

Frames supplied for 1⅝" or 1¾" doors

DRY WALL CONSTRUCTION



RECESSED EDGE designed for both plaster and wall board. Edge of frame provides a plaster ground and cuts down plastering time.

SHIPPED KNOCKED DOWN — compactly packaged for easy handling and storage. Assembled without use of tabs or slots.

JAMBS PUNCHED AND RECESSED for standard 3½" x 3½" butt hinges. Hinges furnished only when specified and then at extra cost.

TRIM APPEARANCE — in tune with today's modern interiors.

Sold Through Leading Building Material Dealers

Kewanee Manufacturing Co.

452 Burlington Ave.,

Kewanee, Illinois

Look what you save with "MODERNFOLD" Doors

"Modernfold" Doors Save Space

... because they *fold* rather than *swing*. A standard size "Modernfold" door stacks neatly against a door jamb when not in use; brings to life valuable floor and wall space normally "killed" by a fully opened swinging door.

At left, a large "Modernfold" door serves as a "movable wall" to divide rooms. Folding it against the outside wall creates a large 30-foot living room... unfolding it fully adds an extra bedroom. The ability of "Modernfold" doors to make rooms do double duty helps speed sales for today's small homes builders.

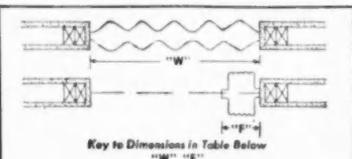
"Modernfold" Doors Save Maintenance Costs

Folding framework is steel—double strength. Patented hinge plates at both top and bottom provide smooth, accordion-like folding action; assure extra strength and rigidity. Unusually tall doors equipped with additional hinges.



Patented steel framework

Covering is heavy cotton fabric impregnated with Vinyl resin plastic. Withstands more flexing and abrasion than leather. Flame-resistant. Resists peeling, chipping, cracking and fading. Waterproof. Washes with soap and water. Available in 22 beautiful colors.



Key to Dimensions in Table Below
"W" "H"

In Sizes to Fit Every Requirement

STOCK DOORS—Available from distributor's stock

Name	Width "W"	Height "H"	Stock "H"
Leader.....	2'-4"	6'-8½"	6½"
Master.....	2'-10½"	6'-8½"	7½"
STANDARD DOORS			
Duke.....	2'-4"	6'-8½"	6½"
Regent.....	2'-10½"	6'-8½"	7½"
Norfolk.....	3'-5"	6'-8½"	8½"
Colton.....	3'-11½"	6'-8½"	9½"
Morton.....	4'-5½"	6'-8½"	10½"
Shelton.....	5'-1½"	6'-8½"	11½"
Dixon.....	5'-6"	6'-8½"	12½"
Alden.....	6'-½"	6'-8½"	13½"
Clinton.....	6'-7"	6'-8½"	14½"
Winton.....	7'-1½"	6'-8½"	15½"
Morgan.....	7'-7½"	6'-8½"	16½"
Broadmoor.....	8'-2"	6'-8½"	17½"
Leeds.....	2'-10½"	8'-0"	7½"
LaGrange.....	3'-5"	8'-0"	8½"
Lagan.....	3'-11½"	8'-0"	9½"
Leland.....	4'-5½"	8'-0"	10½"
Langhollow.....	5'-0"	8'-0"	11½"
Livingston.....	5'-6"	8'-0"	12½"
Lacomb.....	6'-½"	8'-0"	13½"
Lincoln.....	6'-7"	8'-0"	14½"
Lament.....	7'-1½"	8'-0"	15½"
Lansing.....	7'-7½"	8'-0"	16½"
Lexington.....	8'-2"	8'-0"	17½"
Liverpool.....	8'-8½"	8'-0"	18½"
Lorain.....	9'-3"	8'-0"	19½"
Lindell.....	9'-9"	8'-0"	20½"
Lancaster.....	10'-3½"	8'-0"	21½"

Any two doors listed above may be combined as a pair. Custom-built doors available up to 20 ft. high, 60 ft. long. Can be furnished for curved installations, and with mechanical operators.

"MODERNFOLD" DOORS SAVE INSTALLATION TIME



Step 1. Slide head track onto trolleys, raise door to standing position, fasten it in place.



Step 2. Attach jamb clips, screws jamb post to them. No planing or fitting necessary.



Step 3. Job is done! No hardware to install. No painting or finishing required.

Look in your classified directory—under "doors"—for the name of our installing distributor.

NEW CASTLE PRODUCTS, New Castle, Ind.

SOLD AND SERVICED NATIONALLY

In Canada: Modernfold Doors
1315 Greens Avenue, Montreal



the doors that fold like an accordion

modernfold
DOORS

by NEW CASTLE

COPYRIGHTED NEW CASTLE PRODUCTS 1952

New Castle Products
Box No. 834, New Castle, Indiana
Gentlemen:
Please send me full details.

Name.....

Address.....

City..... County..... State.....



Beautiful and Convenient R·O·W Windows
are Removable—to wash both sides indoors

R·O·W wood windows are available in a large variety of sizes and styles to meet all architectural requirements. For a catalog of sizes and details, write directly to R·O·W Sales Company, 1332 Academy, Ferndale 20, Michigan.

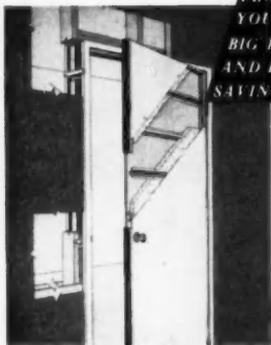
R·O·W World's
Largest Selling
Wood Window





HOW TO REALLY SPEED DOOR AND FRAME INSTALLATION

VMP STEEL
FRAMES GIVE
YOU THREE
BIG TIME
AND LABOR
SAVINGS



1. Pre-welded into complete one-piece assembly, VMP steel frames require no on-the-site assembly.
2. Mortises in doors and frames for locksets pre-cut at factory — no on-the-site mortising.
3. VMP flush metal doors exactly fit frames for perfect operation — no on-the-site cutting or fitting.

Why even consider using wood or any other door and frame when you get these three big installation cost cuts with VMP metal doors and frames. How much more satisfied you and your customers will be! For VMP steel frames never warp, sag, or crack. Never change dimension. Give longest, most dependable service. No customer complaints. No costly callbacks to repair doors or frames. And they're fireproof, too!

Order VMP metal doors and frames for plaster wall, masonry wall and dry wall construction, and cut your door and frame installation costs — way down!

FREE: Architect's and builder's manual illustrated with two-color isometric drawings gives valuable door and frame cost cutting data. Send for your personal copy — yours without charge. Just write "VMP Steel Frames" on your letterhead or card, and mail today to Dept G4.



VIRGINIA METAL PRODUCTS
CORPORATION

80 Hudson Street, New York 13, New York

(Continued from page 96)

out difficulty. This assures tightness and rigidity of construction. Before framing rough openings for windows, the dimensions of the window frames, including sash balances or weights, must be verified. These vary according to the type and weight of sash.

To make an opening for a door, add three inches to the width of the door and three inches to its height for both outside and inside doors. Measurements will vary slightly with individual door units. The main point to remember when framing any window or door is that the opening must be strong and rigid in all respects, and planned so that the door or window can be caulked or sealed and made weather-tight.

(Continued on page 104)

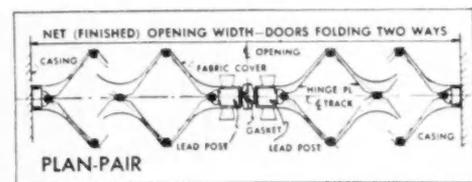
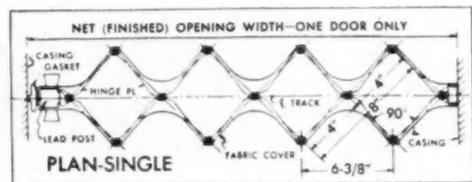
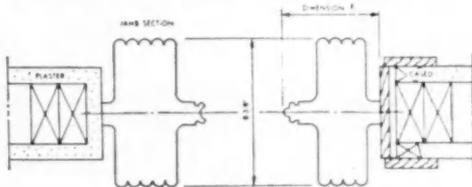
ACCORDION TYPE DOORS, STYLES AND SIZES

EXPOSED TRACK ONLY—INCLUDING FINISH HARDWARE— AND WITH SELECTED FABRICS

NAME	WIDTH "W"	HEIGHT "H"	STACK "P"	WEIGHT
Duke	2'-4"	6'-8½"	6½"	45
Regent	2'-10½"	6'-8½"	7½"	50
Norfolk	3'-5"	6'-8½"	8½"	55
Colton	3'-11½"	6'-8½"	9½"	60
Morton	4'-5½"	6'-8½"	10½"	65
Shelton	5'-0"	6'-8½"	11½"	70
Alden	6'-0½"	6'-8½"	13½"	80
Winton	7'-1½"	6'-8½"	15½"	95
Broadmoor	8'-2"	6'-8½"	17½"	115
Logan	3'-11½"	8'-0"	9½"	70
Leland	4'-5½"	8'-0"	10½"	80
Longfellow	5'-0"	8'-0"	11½"	85
Lacomb	6'-0½"	8'-0"	13½"	95
Lamont	7'-1½"	8'-0"	15½"	110
Lexington	8'-2"	8'-0"	17½"	130
Lorain	9'-3"	8'-0"	19½"	150
Lancaster	10'-3½"	8'-0"	21½"	175

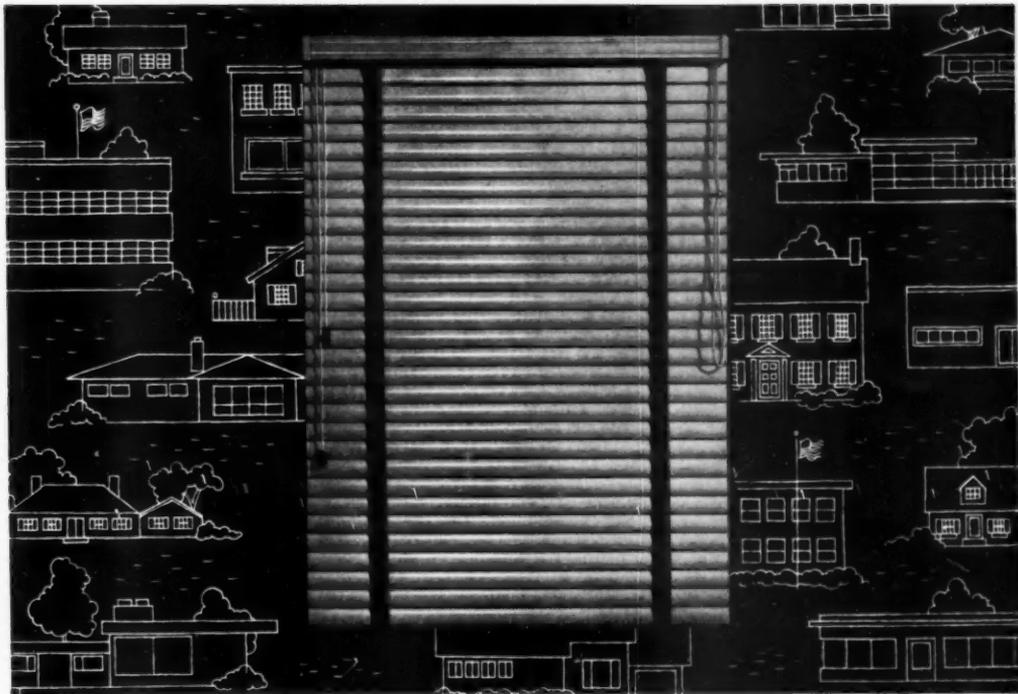
STOCK DOORS Immediately Available in Neutral Colors

Leader	2'-4"	6'-8½"	6½"	45
Master	2'-10½"	6'-8½"	7½"	50



Modernfold Door Data

AMERICAN BUILDER



out front wherever top quality is a must:

the all-*Flexalum*® blind

stays new, beautiful... clean!

new decorating possibilities!

uniform quality... recognized quality!

Never before... a blind that stands so far ahead of the rest in quality and beauty, yet costs so little to maintain!

- Flexalum tapes are non-porous plastic. Wipe clean with a damp cloth, last for years, won't fade, shrink, stretch or fray.
- cords are wipe-clean plastic too. Retain their tensile strength, wear longer without fraying or breaking.
- slats are sleek aluminum, spring-tempered for greater resilience, will keep their shape. Mar-proof finish won't chip, crack, peel, rust.
- sturdy top and rigid bottom bar also mar-proof finished.
- sealed-in-steel, friction-free mechanism is lubricated for life.
- plastic tassels are noiseless, unbreakable.
- extended top bar holds draperies too, without extra hardware.
- complete versatility of cord arrangement: Flexalum cords can be installed wherever most convenient.
- complete and perfect color-matching of every part... or choice of dramatic color contrasts.
- one and only one reputable manufacturer is responsible for every part of the all-Flexalum blind... your assurance that every Flexalum blind will be of the same superior quality.
- National advertising has convinced your customers of Flexalum quality. Let Flexalum help convince them of the quality of your building!

Write for free 8-page catalogue containing full details on the all-Flexalum blind.

HUNTER DOUGLAS CORPORATION, Riverside, California or 150 Broadway, New York 38 Canada: Hunter Douglas Ltd., Montreal, Que.

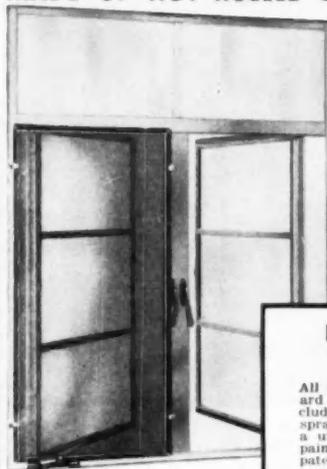


STEEL
Craft

REG. U.S. PAT. OFF.

A COMPLETE LINE OF FROM ONE SOURCE

STEELCRAFT STEEL RESIDENCE CASEMENTS MADE OF HOT ROLLED SECTIONS...BONDERIZED



Steelcraft Steel Residence Casements are made of heavy hot rolled solid sections of uniform thickness, with butt welded mitred corners. Extra long reinforced hinges with bronze pins and washers provide ample clearance for safe and easy cleaning of the exterior of the glass from the inside. Sections are designed for maximum daylight. Heavy bronze finish roto or lever type hardware may be used for ease in operation of the ventilator. Screens and storm sash are easily attached to the inside of the frame. All casements are BONDERIZED.

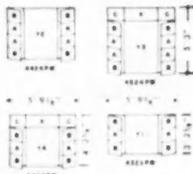
BONDERIZING SPECIFICATIONS FOR ALL STEEL PRODUCTS

All building products shall receive the standard Steelcraft Bonderized finish which includes a thorough cleaning by high pressure sprays of a hot alkaline solution and hot water, a uniform etch in bonderite chemicals, and painted with one coat of gray primer by the patented flow coat process to insure complete coverage, oven dried, and baked a minimum of twenty minutes at 300°F. This entire process of cleaning, bonderizing, prime paint, and oven drying shall be continuous and automatic without manual handling.

CHECK THESE FEATURES

- COMPLETE LINE
- HEAVY HOT ROLLED STEEL SECTIONS
- BONDERIZED
- CORNERS MITRED AND BUTT WELDED
- EXTRA HEAVY REINFORCED HINGES
- AMAZINGLY LOW PRICED

All Sizes and Types of Picture Frames, Windows, Combinations



COMBINO PICTURE FRAMES WITH CASEMENTS

DETAILS OF
HOT-ROLLED
SECTIONS



1. Inner and Outer Sections



2. Mating Bolt



3. Transom Bar

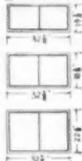
THE STEELCRAFT MANUFACTURING COMPANY

STEEL BASEMENT WINDOW

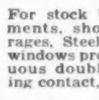


Steelcraft tilt-in type steel basement windows are made of hot rolled sections, which provide double weathering contact

throughout. Armless ventilators provide trouble-free operation and are easily removed. Positive handle locks sash tight against frame. Screens are easily attached to the outside of the window. They are BONDERIZED.



STEEL UTILITY WINDOW



For stock barns, basements, shops and garages, Steelcraft utility windows provide continuous double weathering contact, and removable tilt-in type armless ventilators. Draft guards can be furnished.

They are BONDERIZED and given a shop prime coat of paint baked on in accordance with Steelcraft's Bonderizing Specifications.



INTERIOR STEEL CASING



Consisting of head, jamb, and sill members, this casing eliminates plaster returns, stools and trim. Made of galvanized steel BONDERIZED. Shipped knocked down for assembly in the field. Available in all types and sizes for Residence Steel Casements.

OUTSIDE-INSIDE TRIM

This one-piece outside-inside surround is installed at a fraction of the normal time required for multiple trim and casing. This unit eliminates plaster returns, stools and trim. In dry wall construction, the wall material is slipped under the surround, eliminating additional trim. Made of galvanized steel, and BONDERIZED.



EXTERIOR SURROUND

Designed with identical contours and ends accurately coped, this surround presents neat corners and joints in the assembly. They are nailed to the rough openings and the casement is attached with self-tapping screws. Made of galvanized steel, BONDERIZED.



STEEL BUILDING PRODUCTS

WITH ONE RESPONSIBILITY

STEEL SLIDING CLOSET DOORS



- Packaged Ready to Install
- Easy to install
- Cut construction cost
- Give added closet space
- Bigger selling point in home

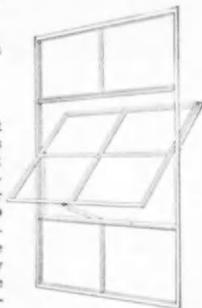
Steelcraft's new metal slide closet doors give extra storage space to any closet and give direct access too. No cutting . . . fitting . . . or unnecessary "extras". This door and frame is a complete packaged unit ready for installation!

direct access too. No cutting . . . fitting . . . or unnecessary "extras". This door and frame is a complete packaged unit ready for installation!

PIVOTED STEEL WINDOWS

- Hot rolled new billet steel
- Sturdy heavy duty construction
- Double contact weathering
- Built-in bearing type pivot
- Easily installed

Made of hot rolled new billet steel, Steelcraft pivoted windows are engineered for permanent easy operation of the vented section. They cannot stick, warp or shrink and are BONDERIZED for protection. The outside sections are angle shaped to provide firm anchorage in the masonry or mullion connection. Double Flat contact weathering is provided on all four sides of the ventilator.



STEEL DOOR FRAMES

Use this modern building product at a great reduction in cost. One-piece all welded construction . . . won't crack, shrink, swell or warp. Reinforced mitred corners won't open. Hinges spot welded to frame; adjustable brass strike plate furnished.



KNOCKED DOWN DOOR FRAMES

Knocked down door frames are designed for economical shipping, for maximum storage space, for quick easy assembly and installation. They provide long trouble-free service and neat appearance.

DETAILS OF
HOT-ROLLED
SECTIONS



STEEL DOORS

Steelcraft industrial steel doors will not warp, shrink, swell, chip or splinter. They are fire-resistant and will give years of trouble-free service. They come to the job with lockset and hinge cut-outs already fabricated to receive standard tubular lock-sets . . . no fitting, no drilling or mortising, simply insert hardware and hang door. Rights and lefts are interchangeable by reversing the doors. Steelcraft doors are finished with a special baked-on enamel providing an excellent base for field painting.



LOW COST ALUMINUM STORM SASH



for any metal casement window

Easily installed by home owner on inside of casement . . . just like screens. No fitting, no cutting or trimming, no special tools. Packaged, for over the counter sales.

STEEL LINTELS



Steelcraft formed steel lintels are available in a wide range of stock sizes for any window or door opening. Continuous ribs strengthen the heavy gauge steel, and provide an excellent base for brick and mortar. All lintels are BONDERIZED.

STEEL
Craft

MAIL THIS COUPON TODAY

THE STEELCRAFT MANUFACTURING CO., DEPT. AB-452
9017 BLUE ASH ROAD, ROSSMOYNE, O. (in Greater Cincinnati)

Please send literature on full line

I am particularly interested in _____

Name _____ Title _____

Company Name _____

Business Address _____

City _____ Zone _____ State _____

ROSSMOYNE, OHIO NEAR CINCINNATI

THIS WINDOW IS

**BETTER
EQUIPPED!**



This concavity is important

It's equipped with Dura-seal . . . the combination metal weatherstrip and sash balance! It provides the best weather protection and the easiest window operation!

● Dura-seal's jamb member is made in one piece and its concave back surface provides a flexibility which maintains a constant air seal and smooth window operation even when the sash expands or contracts due to changeable atmospheric conditions. (Springs are completely covered—photograph shows cover down on lower sash to illustrate spring.)

● Full jamb weatherstripping provides better weather protection, eliminates paint-stuck windows and improves window appearance.

● Because Dura-seal is self-adjusting, it assures trouble-free operation with no replacement or maintenance costs.

BUILDERS! Ask your lumber dealer about Dura-seal or see Sweet's File, Builders, Section 3g.

Zc

ARCHITECTS! See Sweet's File, Architectural, Section 19b.

Zc

ZIGERS

Dura-seal

COMBINATION
METAL WEATHERSTRIP
SASH BALANCE

Manufactured by
ZIGERS INCORPORATED
2076 South Chicago Avenue
Chicago 17, Ill.

Dura-seal is cut exactly to the pitch of the sill—another feature that helps make a more attractive and efficient window.



WOOD LOUVRE doors help control ventilation and afford privacy at the same time

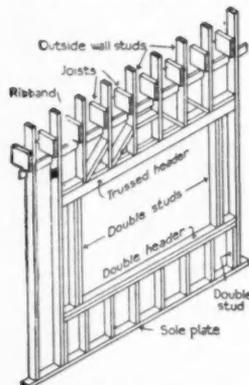
(Continued from page 100)

Door Frames

Modular co-ordination has been definitely established by Project A-62 of the American Standards Association. As a building technique, it plays an important part in door frame construction. Basic frame designs have become more versatile and use varied materials of different weights and thicknesses.

Metal door frames which fit into either frame or masonry construction are available from a number of manufacturers, and may be used freely with modular construction. The frames are secured to wood stud partitions with metal clips, to masonry partitions with loose "T" anchors placed at masonry joints, and to steel stud walls by anchors welded to the frame (these may be bolted or welded to the steel studs

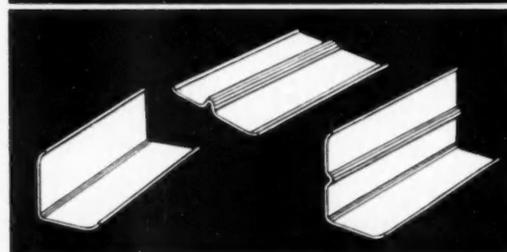
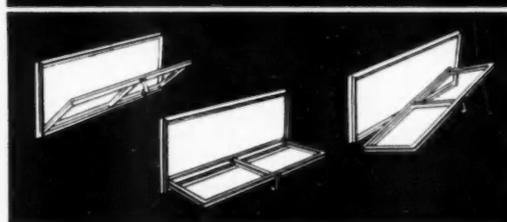
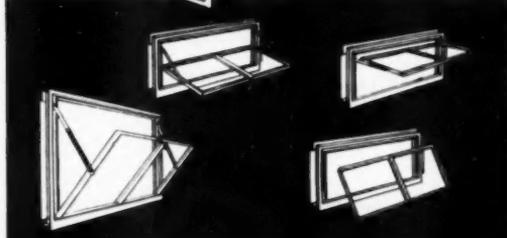
(Continued on page 106)



WHERE WIDE openings occur in the framing, extra care should be taken in header construction because so much of the load above is carried on these members. Illustrated is one good method. Note that diagonal members are carefully fitted and placed for rigidity

AMERICAN BUILDER

**FOR EASIER OPERATION,
BETTER VENTILATION,
WEATHERTIGHT SEAL**



MEMBER METAL WINDOW INSTITUTE

See our catalog in Sweet's 1951 Architectural 27b/Ve or Sweet's 1952 Light Construction File 4c/Ve. Write us for full information and name of nearest distributor.

VENTO STEEL WINDOWS

VENTO

RESIDENCE CASEMENT WINDOWS

Extension type hinges, gracefully designed Roto or Lever type operators and positive cam action locking handles, allowing ventilator adjustment without screen removal. Available in all standard types and sizes.

VENTO

"CHAMPION" BASEMENT WINDOWS

Three ventilation openings and sash removal. Double contact with leak-proof watershed sill. 14 gauge electrically welded frame, fins welded to jambs for quick installation. Three standard sizes, putty or puttyless glazing.

VENTO

"THRIFTY" BASEMENT WINDOWS

A real economy window especially designed for lower cost housing. Two position ventilation and easy sash removal. Fin flanges at jambs for quick installation. Three sizes, putty type only.

VENTO

LINTELS for BLOCK or BRICK CONSTRUCTION

Of ample load-bearing capacity for window or door openings. Formed lintels of 10 gauge steel for block construction, with stiffening crimp in center, in lengths from 2½ ft. to 5 ft. Formed lintels for brick construction 2½ ft. to 5 ft. long of 11 gauge steel; 5½ ft. to 7 ft. of 10 gauge steel.

Also Vento "Champion" Barred Basement Windows; Vento "Champion" Utility and Barn Windows; Vento "Thrifty" Utility and Special Type Windows.

VENTO

STEEL PRODUCTS CO.
INC.

247 Colorado Avenue

Buffalo 15, N. Y.

Residential Double Hung Metal Windows

	2'0"	2'4"	2'8"	3'0"	3'4"	
3'-1 $\frac{1}{2}$ "						
	B2031	B2431	B2831	B3031	B3431	
3'-9 $\frac{1}{2}$ "						
	B2039	B2439	B2839	B3039	B3439	
4'-5 $\frac{1}{2}$ "						3'8"
	B2045	B2445	B2845	B3045	B3445	B3845
5'-1 $\frac{1}{2}$ "						
	B2051	B2451	B2851	B3051	B3451	B3851
"B" TYPES						
			5'-9 $\frac{1}{2}$ "			
			B3059	B3459	B3859	

DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.

	2'0"	2'4"	2'8"	3'0"	3'4"	
	E2031	E2431	E2831	E3031	E3431	
	E2039	E2439	E2839	E3039	E3439	
						3'8"
	E2045	E2445	E2845	E3045	E3445	E3845
	E2051	E2451	E2851	E3051	E3451	E3851
"E" TYPES						
			5'-9 $\frac{1}{2}$ "			
			E3059	E3459	E3859	

DIMENSIONS SHOWN ARE WINDOW DIMENSIONS.

FIXED PANELS

	3'4"	4'0"	4'8"	3'4"	4'0"	4'8"	3'4"	4'0"	4'8"		
4'-5 $\frac{1}{2}$ "				5'-1 $\frac{1}{2}$ "				5'-9 $\frac{1}{2}$ "			
	F3445	F4045	F4845	F3451	F4051	F4851	F3459	F4059	F4859		

Metal Window Institute Data

4 Big Advantages of ALCASCO Aluminum Casements

1 • FULL 1 $\frac{1}{8}$ " SECTIONS

Available only in Alcasco . . . structurally stronger. Putty retaining groove—built into each section and designed for easy outside glazing.

2 • EXTENSION HINGES

Solid aluminum . . . sturdy and trouble free . . . Full support. Stainless steel pin assures correct ventilator operation at all times.

3 • INSULATED GLASS

Alcasco Aluminum Casements can be furnished for regular plate or insulated glass in $\frac{1}{2}$ ", $\frac{3}{4}$ ", or 1" thickness.

4 • INTERLOCKING MULLIONS

Easy to assemble — simple to install . . . Provides a perfect weather seal due to precision fabrication.

PLUS these other Alcasco aluminum casement features

- extruded members are smooth — fit snug at all points
- corners electrically flash welded — greater strength . . . more rigid . . . neat, smooth appearance
- stand inspection — customer satisfaction assured by the obvious evidence of careful workmanship
- selection — over forty styles to choose from

Send for details and descriptive literature.



ALCASCO Quality Certification, Aluminum Casements, Inc., Muskegon Heights, Michigan. Member, National Aluminum Association. Licensed by the Aluminum Industry Commission. Licensed by the Aluminum Industry Commission.

Alcasco

PRODUCTS, INC.

1780 CRESTON, MUSKEGON HEIGHTS, MICH.

A guy worth
listening to—
"AL"

THE BUILDER



Al is a builder who knows the score. He's been in the business a long time, through two wars, hard times, and two booms. Yes, Al knows the score. He knows it takes new thinking to stay on top, to keep his better men together and to keep building!

Al says:

"Be smart—
build in both markets"

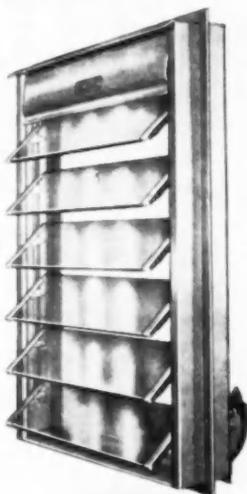
• "Your houses this year must be built to sell—if they are to turn over quicker than your competitors'. And man, that takes some smart figuring. Competition is keen! But here's an angle: Give your houses extra eye appeal—and they'll sell fast! One sure way to add eye appeal is with Ualco Jalousies. Their smart glass louvres and satin-smooth aluminum frames give a different touch. They literally "make" a sunroom, a breezeway—and, used with other Ualco Windows, create dramatic effects buyers really go for. Give them this feature, and I'll guarantee you'll sell ahead of competition.

"And to stay ahead . . . ready to jump the gun when restrictions are removed . . . keep your crews working; hold them together—by cultivating the vast remodeling market.

"With families growing, most people need to 'Make More Room'. By using Ualco Jalousies to enclose porches and patios, build breezeways and sunrooms, you can give 'em more room at a price they can't refuse.

"That's my advice. Go after the 4 billion dollar remodeling market in addition to new construction. Build in both markets—and CASH IN ON BOTH WITH UALCO JALOUSIES — America's newest, most wanted windows!"

You'll enjoy knowing Al. He's friendly and wise. From time to time he'll be passing along more of his ideas on building. Watch for him regularly.



Ualco
U-AL-CO

**ALUMINUM
JALOUSIES**

. . . Made by
World's Largest
Manufacturer of
Aluminum Casement
Windows

MAIL
TODAY TEAR OFF

• There's a Ualco Aluminum Window for Every Construction Requirement including:



Casement Windows



Hopper Windows



Double Hung Windows



Basement Windows



Tilted Windows

GUARANTEED

Immediate Delivery

from your supplier, despite restrictions—because of our vast, raw material supplies.

•
See Our Catalog
in Sweet's

UNION ALUMINUM CO., INC.
Sheffield, Alabama — AB 4

Please send me at once

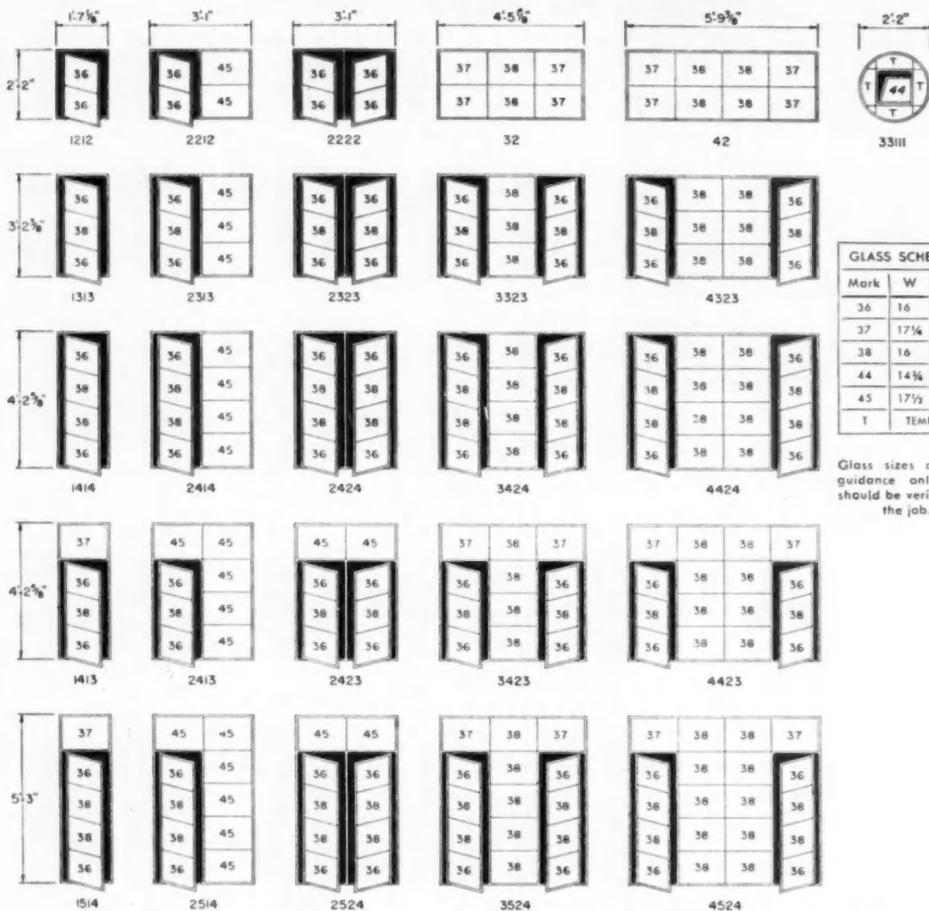
- Name of my nearest supplier of Ualco Aluminum Windows.
 Technical information and data.
 I'd like to know Al better. Please put my name on his mailing list.

Name _____

Address _____

City _____ State _____

Steel Casement Windows Types and Sizes



Glass sizes are for guidance only and should be verified on the job.

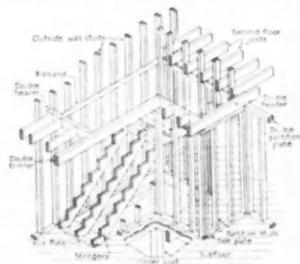
(Continued from page 104)
for proper anchorage). Metal frames are supposed to add considerable rigidity to door openings. In addition, they are neat in appearance, easy to install, and assure door frames which will be trouble free for years to come.

Window Frames

Wood window framing is finding the same modular principles helpful that are of great use in other phases of home construction. Even where complete window units are installed with frame included, the modular principles for arranging the rough window opening apply.

Metal window frames have been found especially useful in holding down over-all building costs because of their ease of installation, the job requiring only a matter of minutes.

Windows are designed to slide into standard stud framing before erection. The rough framing for the win-



STAIRWAYS should be framed with not less than three horses and of stock wide enough to leave 3 $\frac{1}{2}$ inches of material behind each cut. Landing must be supported and stair braced against thrust

slow opening can be set up on several saw horses, and the metal unit slid into place. The whole unit is then placed in the wall opening.

Stairways

Although stair framing and layout is a phase of construction confined largely to millwork manufacturing firms that employ professionals to help builders with these problems, the importance of good framing around the stair openings should never be underestimated by the designer or builder. Doubled and sometimes tripled joists with well-selected, properly fitted and adequately fastened headers are of utmost importance to achieve strength and rigidity. Joist hangers are particularly valuable around stair openings as double as-

(Continued on page 110)



FT. CAMPBELL, KENTUCKY. Wherry Housing Project, Southern Apartments, utilized thousands of Rusco Prime Windows.



SANTA ANA, CALIFORNIA. Rusco used on all Barkley Square and Sunshine Homes by builder Burt Huff.



QUINCY, MASSACHUSETTS. A. J. Spinelle, builder of Furnace Brook Acres homes, highly recommends Rusco.

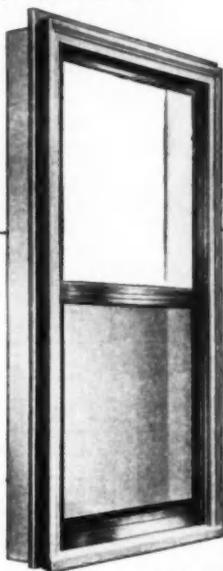
On job after job,
in every part of the country...

the **RUSCO**
PRIME WINDOW

is making big savings
in construction time,
labor and materials!

HERE ARE

4 BIG REASONS WHY...



All In One Unit

- GLASS • SCREEN
- BUILT-IN WEATHERSTRIPPING
- INSULATING SASH (Optional)
- SURROUND (wood casing metal casing or steel fins)

Glass and screen inserts easily removed from inside for convenience in cleaning. The Rusco removable sash feature has tremendous appeal as a convenience and safety feature.



- 1 A COMPLETE, PRE-ASSEMBLED UNIT, FACTORY PAINTED, HARDWARE FITTED, READY TO INSTALL
- 2 CAN BE FULLY INSTALLED IN AS LITTLE AS 5 MINUTES



1 Rusco Prime Window, with glass and screen panels removed, is taken from stockpile . . .



2 . . . placed in stud opening and plumbed . . .



3 . . . nailed to studs . . .



4 . . . glass and screen panels slipped into slides . . .



5 . . . and in less than 5 minutes the fully-installed window is ready for service!

- 3 CONVENIENCE OF COMPLETELY REMOVABLE AND INTERCHANGEABLE GLASS AND SCREEN PANELS
- 4 NO COSTLY CALL BACKS FOR ADJUSTMENTS

RUSCO HOT-DIPPED GALVANIZED **PRIME WINDOW**

AVAILABLE WITH OR WITHOUT INSULATING SASH

Made of Hot-Dipped Galvanized Steel, or Equal, Bonderized and finished with baked-on Outdoor Aluminum Enamel
For additional information or specifications write or wire . . .

F. C. RUSSELL COMPANY, DEPT. 7, AB-42, CLEVELAND 1, OHIO

Today's Biggest Boon to Dry Wall Installation

THE **NEW**
STEEL CASING
FOR DOOR AND
WINDOW TRIM

Firmly grips
board with a
SPRING-TIGHT
action!

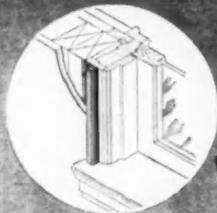


- Saves Time,
Money, Labor
-
- Precision Rolled,
Made from Sharon
Steel Galvanite
-
- Easy to Cut and Mitre
-
- Protective,
Decorative
-
- Paint Readily
Adheres to Surface
-
- Gives Faster,
Better Installation
with Permanent
Rigid, Snug Fit

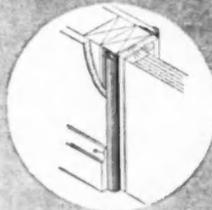
Write for
Descriptive Literature
and Samples

DRYWALL TRIM, INC.

545 FIFTH AVE., NEW YORK 17, N. Y.



APPLICATION AT WINDOW



APPLICATION AT DOOR

Heavy Duty Steel Swing Doors Styles and Sizes

SWING DOOR STOCK TYPES AND SIZES					
SINGLE DOORS			DOUBLE DOORS		
DESIGN	TYPE	DOOR OPS. DIM. WIDTH HEIGHT	DESIGN	TYPE	DOOR OPS. DIM. WIDTH HEIGHT
	2868-G	2'-8" 6'-8"		5468-G	5'-4" 6'-8"
	2870-G	2'-8" 7'-0"		5470-G	5'-4" 7'-0"
	3070-G	3'-0" 7'-0"		6070-G	6'-0" 7'-0"
	3870-G	3'-8" 7'-0"		7470-G	7'-4" 7'-0"
	2868-G2	2'-8" 6'-8"		5468-G2	5'-4" 6'-8"
	2870-G2	2'-8" 7'-0"		5470-G2	5'-4" 7'-0"
	3070-G2	3'-0" 7'-0"		6070-G2	6'-0" 7'-0"
	3870-G4	3'-8" 7'-0"		7470-G4	7'-4" 7'-0"
	4080-G6	4'-0" 8'-0"		8080-G6	8'-0" 8'-0"
	50100-G8	5'-0" 10'-0"		100100-G8	10'-0" 10'-0"
	2868-M	2'-8" 6'-8"		5468-M	5'-4" 6'-8"
	2870-M	2'-8" 7'-0"		5470-M	5'-4" 7'-0"
	3070-M	3'-0" 7'-0"		6070-M	6'-0" 7'-0"
	3870-M	3'-8" 7'-0"		7470-M	7'-4" 7'-0"
	4080-M	4'-0" 8'-0"		8080-M	8'-0" 8'-0"

Messer Industrial Door Data

Wood Awning Windows Standard Styles and Sizes

	2'-1 1/2"	3'-1 1/2"	4'-1 1/2"	6'-1 1/2"	6'-6 3/8"
3'-2 3/4"					
	2 34 18	2 36 18	2 48 18	2 72 18	2 36 18 9 L.
4'-9"					
	3 24 18	3 36 18	3 48 18	3 72 18	3 36 18 9 L.
6'-3 3/8"					
	4 24 18	4 36 18	4 48 18	4 72 18	4 36 18 9 L.
7'-9 3/8"					
	5 24 18	5 36 18	5 48 18	5 72 18	5 36 18 9 L.

Awninglite Window Data

sure that all members will be held to their original positions. Stair horses should be firmly secured against header of stair opening. In no case should they be hung from it.

Because 40 to 60 per cent of home accidents are falls, with about one-third of them on stairs, safety principles are paramount in importance in building stairs. Hold

(Continued on page 116)

500 gallons

OF WATER A MINUTE GUARANTEES THE

WEATHER-TIGHTNESS OF

Adlake

ALUMINUM WINDOWS



**ONLY ADLAKE ALUMINUM WINDOWS GIVE
YOU ALL THESE "PLUS" FEATURES:**

Woven-Pile Weather Stripping with Patented Serrated Guides

● Minimum Air Infiltration

● Finger-tip Control

● No Painting or Maintenance

● No Warp, Rot, Rattle, Stick, or Swell

During the water test, which is only one of the rugged tests that ADLAKE Aluminum Windows must pass, 500 gallons per minute are played upon the window. This actually goes beyond the air infiltration test of the A.W.M.A. at the Pittsburgh Testing Laboratory.

ADLAKE'S exclusive combination of woven-pile weather stripping with patented serrated guides forms a perfect weather seal. What's more, tests prove that ADLAKE's famous finger-tip control continues through *one million raisings*—and the windows last through the entire life of the building!

Yes, the standards of ADLAKE Aluminum Windows are kept high by quality control and thorough testing. That's why the ADLAKE name is your best assurance of dependability, long-range economy, and lasting beauty. Get the full story on ADLAKE Windows today . . . ADLAKE Representatives are in most major cities.



THE Adams & Westlake COMPANY

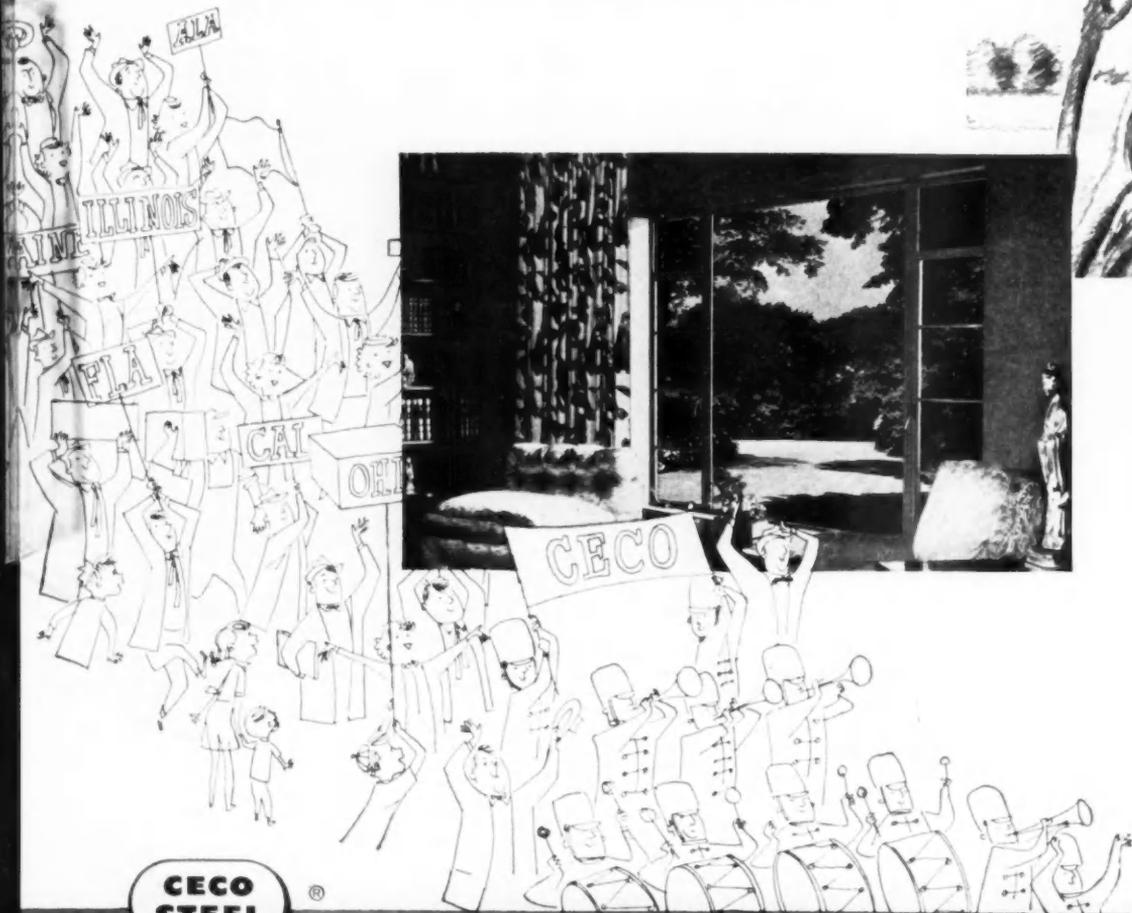
Established 1857 • ELKHART, INDIANA • New York • Chicago



The People's Choice!

CECO *metal* WINDOWS

Ride the tide of public preference
- build with CECO and be sure



**CECO
STEEL** ®

In construction products **CECO ENGINEERING**



There's good reason for the swing to Ceco Metal Windows because they offer so much in so many ways.

Yes, home owners *know* the advantages. In recent studies they told us they prefer metal windows for ever so many reasons—such as beauty and design—better ventilation—ease of opening and closing because metal won't stick.

They told us metal windows are easier to maintain—easier to clean and wash—easier to change storm windows and screens—and of course they said they give more light than any other window opening.

There's the story of Ceco Windows written in customer preference. But there is even more to

be said—for Ceco Windows blend harmoniously with every home design—accent the modern lines of Contemporary Architecture—emphasize the informality of the Ranch Style home—compliment the simplicity of Cape Cod Colonial.

Because they are better made—better engineered—they are stronger—last longer. When you build with Ceco Windows you know you build with the very best . . . you assure your customers savings too.

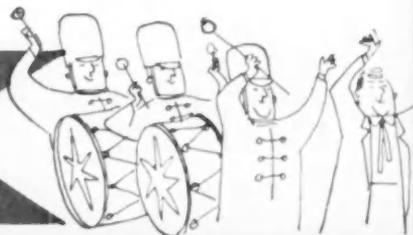
CECO STEEL PRODUCTS CORPORATION

General Offices: 5601 West 26th Street • Chicago 50, Illinois

Offices, warehouses and fabricating plants in principal cities



makes the big difference



NEW TYPE SCREENS ADD

10 Plus Values!

NEW ALUMINUM FRAMELESS TENSION SCREENS



Sealed Tight...
Held by tension.
Exclusive sill bar adjusts
to off-level sills.

1. INCREASE SALES APPEAL of homes, apartments, motels, cottages, etc.
2. NEAT APPEARANCE... CONVENIENT
3. LOW COST—LONG LIFE
4. EASY TO INSTALL
5. EASY TO HANDLE
6. NO PAINTING—WON'T RUST OR STAIN
7. SEALS TIGHT with exclusive free floating sill bar... assures snug fit at bottom... adjusts screen to uneven or off-level sill.
8. EXTRA STRONG VERTICAL EDGES are 5-strand selvage, of special flat wire, to keep edges taut.
9. PATENTED TENSION CATCH at sill holds Keystone Screen securely in place.
10. EASILY REPLACED

You can add a whole of a lot of sales-appeal to homes and apartments—at low cost—with Keystone Aluminum Tension Screens on all double-hung windows!

Saves 25 minutes per window in installation time. Easily installed—no heavy frames to cut or fit. No painting—no rust. A neat and attractive full-length, low-cost screen of outstanding long life! Users everywhere praise Keystone advantages! Send today for details!

SEND COUPON!

Keystone Wire Cloth Co.
Dept. D 16 Hanover, Pa.
Without obligation, send me complete details, prices and discounts on NEW profit-making Keystone Frameless Tension Screens.
Firm.....
Attn. of.....
Street.....
City..... State.....

Steel Picture Windows Types and Sizes

for standard glazing

$4\frac{1}{2}''$	$5\frac{1}{2}''$
73	74
55P	43P
$4\frac{1}{2}''$	
75	76
54P	44P
$5\frac{1}{2}''$	
77	78
53P	45P

Mark	W	H
73	51 $\frac{1}{2}$	36 $\frac{1}{2}$
74	67 $\frac{1}{2}$	36 $\frac{1}{2}$
75	51 $\frac{1}{2}$	48 $\frac{1}{2}$
76	67 $\frac{1}{2}$	48 $\frac{1}{2}$
77	51 $\frac{1}{2}$	61 $\frac{1}{2}$
78	67 $\frac{1}{2}$	61 $\frac{1}{2}$

Glass sizes are for guidance only and should be verified on the job.



Picture Window Combined with Casements

for insulating glazing

$4\frac{1}{2}''$	$5\frac{1}{2}''$
79	80
340G	440G
$5\frac{1}{2}''$	
81	82
350G	450G

Mark	W	H
79	50 $\frac{1}{2}$	47 $\frac{1}{2}$
80	66 $\frac{1}{2}$	47 $\frac{1}{2}$
81	50 $\frac{1}{2}$	60 $\frac{1}{2}$
82	66 $\frac{1}{2}$	60 $\frac{1}{2}$

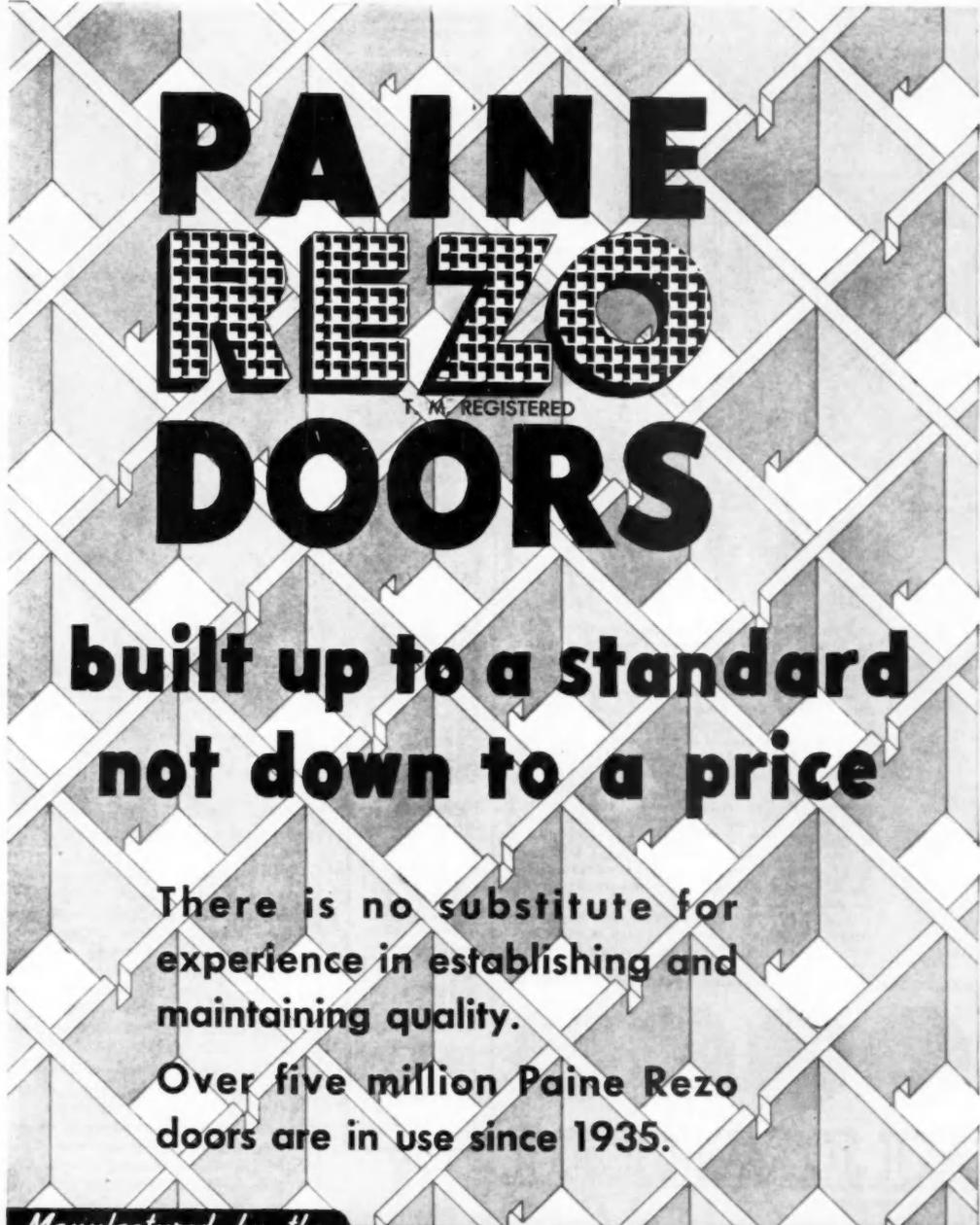
Glass sizes are for guidance only and should be verified on the job.



Combining Picture Windows with Casements

Ceco Steel Window Data

AMERICAN BUILDER



P A I N E **REZO** T. M. REGISTERED **D O O R S**

**built up to a standard
not down to a price**

There is no substitute for
experience in establishing and
maintaining quality.

Over five million Paine Rezo
doors are in use since 1935.

Manufactured by the

P A I N E L U M B E R C O . , L T D .

*Oshkosh
Wisconsin*

ESTABLISHED 1853

When Ordering Your Millwork
insist on

ALLWEATHER BALANCE STRIP



Your double hung window assembly will be as modern as tomorrow if equipped with the Double Duty ALLWEATHER Balance Strip.

Double Duty because it provides dependable tongue and groove weatherstrip with maximum area of contact, plus positive counter balance of sash. Lifting springs are concealed without the use of sleeves or covers.

Two types of parting bead are available. Illustrated is the Metal Hat Type Parting Bead which provides a completely metal covered sash runway. No wood parting bead is required.

The inset view shows a Metal Parting Bead Cover to be used with conventional wood parting bead. Both eliminate the need for painting.

The ALLWEATHER Balance Strip is covered by U. S. Patents . . . Nos. 2,284,436-2,284,438 . . . other patents pending.

THESE FEATURES MAKE ALLWEATHER BALANCE STRIP OUTSTANDING



ALLMETAL

NAME ALLMETAL REGISTERED U. S. PATENT OFFICE

2243 N. Knox Ave., Chicago 39, Ill. *Weatherstrip Company*



ALLMETAL WEATHERSTRIP CO.
2243 North Knox Avenue, Chicago 39, Illinois
Please send complete information and prices.

Name _____
Address _____
City _____ Zone _____ State _____

**CROSS MEMBER
WEATHERSTRIP
INSTALLATION
ALTERNATES**

**CROSS METAL
EQUIPMENT "AC"**



**CROSS METAL
EQUIPMENT "IB"**



**CROSS METAL
EQUIPMENT "FH"**



WOOD STAIRWAY in harmony with architectural treatment of interior

Stairways . . .

(Continued from page 110)

risers to 6¼ to 7 inches and treads to 10½ to 10¾ inches, slight variations being possible, but the sum of riser and tread should be about 17½ inches. All treads should be the same width and risers the same height in any one flight of stairs. Angle of rise should be between 30 degrees and 36 degrees, and a secure railing should be installed 36 inches above the center of the treads.

Allow for adequate headroom. Minimum distance between nose of treads and soffit over stairway in a line parallel with the stairs should be 6 feet 8 inches for main stairs and 6 feet 4 inches for basement and service stairs.

Metal Stairs

Metal stairs in light construction are useful for fire escapes, service stairs, and sometimes for main stairs in homes where design or decorative treatment permits. Stair stringers are usually made of steel channels, the weight of the load to be carried and that of the stair determining the size of the channel. For ornamentation an applied molding is secured to the top and bottom flange of the stringer.

Carriers, also known as horses or pitch blocks, are made of angles riveted to the stringers. Risers and undertreads are normally made of No. 14 or No. 12 USS gauge steel. Newels are normally square bent steel tubing with sanitary flush weld caps and drops, unless ornamentation is desired. Railings may carry almost unlimited ornamentation.

Metal stairs are also made in the form of permanent steel forms for concrete stairs, using only stringers and risers.

(Continued on page 120)

MORE AND MORE



THE
TREND
IS TO

Thomason

FLUSH DOORS

(ALL WOOD THROUGHOUT)

From coast to coast, architects are specifying and builders are using THOMASON Flush Doors. It requires practically the entire production facilities of one of the two large plants of the THOMASON PLYWOOD CORPORATION to meet the demand.

Available With These Face Veneers

In addition to the Gumwood faced door, the THOMASON Flush Door comes faced with veneers of Mahogany, Walnut, Oak, Birch, Knotty Pine, Cativo, or in any face veneer desired.

Also Made For Exterior Use

Available either plain or with any one of five standard patterns of light opening. Or you may have the THOMASON Flush Door with a solid all-wood core, faced with any type of veneer desired.

Sold Only Through Distributors

THOMASON
PLYWOOD CORPORATION

FAYETTEVILLE • NORTH CAROLINA

Auto-lok

AUTOMATIC LOCKING

WINDOWS

ALUMINUM OR WOOD

...Engineered TO HELP

...and to help you **SELL** the homes you build, **FASTER!** Builders everywhere say AUTO-LOK Windows swing the sale with prospective buyers, especially women. AUTO-LOK Windows are so practical...they have so many advantages over ordinary windows...they add so much to appearance...it's no wonder they often make the difference when the competitive chips are down!

Tightest closing windows ever made!

AUTO-LOK Windows close 10 times tighter than ordinary windows...save enough on fuel bills to pay for themselves over and over again. Open

widest...to catch every breeze and provide 100% ventilation, but no drafts. Perfect for any climate ...perfect for any type of architecture!

New homes aren't new without Auto-lok

No other window gives you all these outstanding features to pass on to home owners!



FRESH AIR WHILE IT'S RAINING...

No more running to close windows...rain can't enter through slanting sash!



WARMER IN WINTER...

Seals itself shut like the door of your refrigerator...keeps heat in...cold out!



COOLER IN SUMMER...

Opens widest...scoops air inward and upward...luxurious ventilation, but no drafts!



PRACTICAL BEAUTY...

Narrow horizontal lines add distinction to any home...lend themselves to a wider variety of architectural arrangements.



INTERCHANGEABLE SCREENS AND STORM SASH...

Can be handled all from the inside. Just flip the clips...no tools required. Reduce a day's work to minutes!



ABSOLUTELY EASIEST TO CLEAN...

Nothing to lift out...no gadgets to disengage. Simply open wide and clean the outside from the inside...top sash, too!



FRESH AIR NITE-VENT...

Bottom sash opens slightly for night ventilation, while upper sash remain securely locked and weathertight...fresh air circulation during bad weather, too!



FINGER-TIP CONTROL...

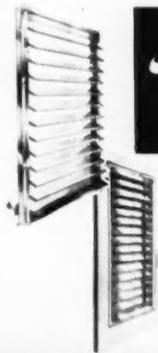
Operates at the touch of a finger! Perfectly balanced for a lifetime of friction-free operation...No adjustments ever...never sticks...never rattles!



CONCEALED HARDWARE...

No unsafe, unsightly mechanism exposed to collect dust. Compact roto-type operator handle does not interfere with drapes, blinds, etc.

NO WONDER THEY'RE THE WINDOWS WOMEN WANT MOST!



Windo Tite JALOUSIES

Add extra "buy appeal" to every home you design or build with WINDO-TITE Jalousies and Doors. Turn porches and breezeways into beautiful, comfortable rooms. Specify WINDO-TITE Jalousies...absolutely no operational "bugs"...made by the world's largest manufacturer of Awning Windows and Jalousies!

Sizes shown with asterisk are standard and normally carried in stock. Others are standard but not stocked.

STANDARD SIZES

16" x 16"	16" x 20"	16" x 24"	16" x 28"
20" x 16"	20" x 20"	20" x 24"	20" x 28"
24" x 16"	24" x 20"	24" x 24"	24" x 28"
28" x 16"	28" x 20"	28" x 24"	28" x 28"
32" x 16"	32" x 20"	32" x 24"	32" x 28"
36" x 16"	36" x 20"	36" x 24"	36" x 28"
40" x 16"	40" x 20"	40" x 24"	40" x 28"
44" x 16"	44" x 20"	44" x 24"	44" x 28"
48" x 16"	48" x 20"	48" x 24"	48" x 28"
52" x 16"	52" x 20"	52" x 24"	52" x 28"
56" x 16"	56" x 20"	56" x 24"	56" x 28"
60" x 16"	60" x 20"	60" x 24"	60" x 28"
64" x 16"	64" x 20"	64" x 24"	64" x 28"
68" x 16"	68" x 20"	68" x 24"	68" x 28"
72" x 16"	72" x 20"	72" x 24"	72" x 28"
76" x 16"	76" x 20"	76" x 24"	76" x 28"
80" x 16"	80" x 20"	80" x 24"	80" x 28"
84" x 16"	84" x 20"	84" x 24"	84" x 28"
88" x 16"	88" x 20"	88" x 24"	88" x 28"
92" x 16"	92" x 20"	92" x 24"	92" x 28"
96" x 16"	96" x 20"	96" x 24"	96" x 28"
100" x 16"	100" x 20"	100" x 24"	100" x 28"

WINDOW DIMENSIONS SHOWN ARE OVERALL (outside of flange to outside of flange)

Additional standard sizes may be ordered by specifying one half of either G-32 or G-42 widths in any standard height. Designation-G1-32 etc. (width 2'2 1/2" O; G1-42 etc. (width 2'10 1/4" O).

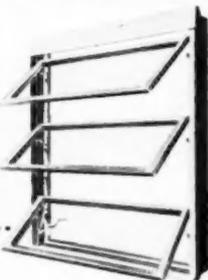
LUDMAN LEADS THE WORLD

YOU BUILD *Better, Brighter* **HOMES!**

Auto-lok
PATENTED LOCKING
MECHANISM

WOOD WINDOW

Easiest to install...
Saves installation
time and costs!

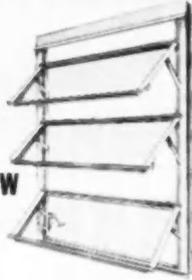


AUTO-LOK Wood Windows cost no more than a good grade of ordinary, old-fashioned windows... yet, you can't install a better window at any price! Delivered to the job completely assembled. No parts to lose! No hardware to install!

Auto-lok
PATENTED LOCKING
MECHANISM

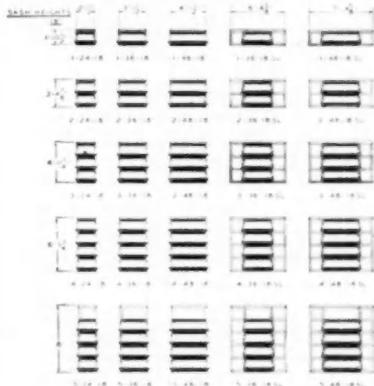
ALUMINUM WINDOW

Successfully combines
the best features
of all window types!



Designed and produced by men who know windows and wood problems. In both AUTO-LOK Aluminum and Wood Windows, the secret of wide acceptance is the patented AUTO-LOK Hardware...plus "floating seal" weatherstripping. Perfectly balanced operating mechanism eliminates wear and strain on every moving part, assures "no-wear" operational ease for the life of the building.

SCHEDULE OF SIZES

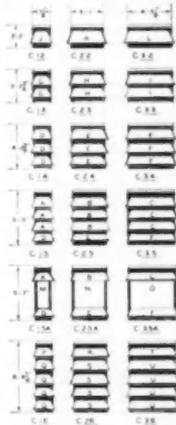


All sizes (dimensions) shown are back to back dimensions. To determine overall window sizes add 1" to each dimension. Fixed sidelights are separate right and left hand and may be ordered in pairs or singly.

STANDARD COMMODITY TYPES AND SIZES

The sizes shown are modular as standardized by the Metal Window Institute for casement windows.

Picture Window Combinations, Commodity-Modular, Modular Commodity and Modular Architectural sizes are also available upon request.



SIZES ARE OVERALL FROM OUTSIDE OF FLANGE TO OUTSIDE OF FLANGE

SEE YOUR LOCAL DEALER...or WRITE TODAY FOR THE NAME OF THE DEALER, NEAREST TO YOU, WHO HANDLES AUTO-LOK WINDOWS! Specify the AUTO-LOK Window you are interested in...Aluminum or Wood?

LUDMAN *Corporation*

BOX 4541, DEPT. AB4, MIAMI, FLORIDA

SALES OFFICES: NEW YORK • WASHINGTON, D. C. • ST. LOUIS • SAN FRANCISCO • BOSTON • CHICAGO • ATLANTA • HOUSTON

IN WINDOW ENGINEERING



"YEAH!"

"You bet! I'm putting Master No-Draft Sash Balances like this in every window. They give the windows smooth metal tracks to run on, and their counter-balancing springs make windows easy to raise and lower. Think what a selling point this gives me, Joe: windows that always work right . . . windows with no ropes to break, no pulleys to wear. But that isn't all! These Master No-Draft Sash Balances weatherstrip the windows, too. That means they keep out dust, dirt, wind and water . . . and cold, besides. What's more, they cost less to install, because they don't need pulleys, cords, weights or box-frames. And MAN . . . you ought to see how easy they are to put in!"

MASTER NO-DRAFT SASH BALANCES ARE PRECISION-MADE of the finest, highly-tempered non-corrosive metal. They can't rust. Springs are correctly-tensioned to give perfect balance of the upper and lower sash . . . and easy, fingertip operation. These sash balances are made in a factory that's recognized by the industry as outstanding for its efficiency and the craftsmanship of its workers.

SMOOTH OPERATION IS ASSURED by Master No-Draft Sash Balances, because they automatically adjust for shrinkage and expansion in the wood. Runways are completely metal-covered and require no painting. (Of course, cross-members should be installed). Double contact prevents rattle when windows are open.

USED BY THE U.S. GOVERNMENT AND PROMINENT BUILDERS all over the country, Master No-Draft Sash Balances are tested to mechanical perfection. They make windows neat and weathertight—and there's nothing to cause trouble. You can forget maintenance!

See Our Catalog in Sweet's $\frac{1}{2}$ " a

NOTE:
The Master No-Draft Sash Balance is the original patented combination sash balance and weather-strip—and still the best.

MASTER METAL STRIP SERVICE, INC.
1720 N. Kilbourn Avenue, Chicago 39, Illinois

Please send me, without obligation, complete information about Master No-Draft Sash Balance.

Name _____

Title _____

Address _____

City _____

Zone _____

State _____

Disappearing Stairs

A number of manufacturers fabricate disappearing stair units which are designed for use with attics without taking up the space normally required for a finished stairwell. No vertical or horizontal clearances are required in the attic or loft; all that is needed is to cut a rough opening and install the unit. Some models



DISAPPEARING STAIR in storage room makes ample space in attic available without wasting floor space

move by counterweights, some are of one-piece construction on the stringer, others have a semi-extensible feature to save more space. Safety treads, an insulated ceiling-door panel, and rigid construction are features of several models.

Weather Stripping

The problem of making door frames and window frames weathertight has brought about the development of a wide variety of weather stripping materials.

Perhaps the most popular types today are of metal construction, some being merely weather strip, some containing the sash-balance unit, others being incorporated into spring tension windows which work without balances or counterweights.

For existing windows there are also a variety of types of stripping which are designed to prevent drafts and unnecessary heat loss.

The Weatherstrip Research Institute is constantly working with builders and architects to make this type of weather protection more effective.



\$30³⁰

INCLUDING METAL SCREENS

COPCO Economy Living Room Window Unit (Catalog No. 5424P) with complete hardware. Lever Type Adjustors. (Rotary Type Adjustors \$2 extra.) Prices F.O.B. factory. Transportation and local Sales Tax extra.

Here's Sensational Value! COPCO'S Economy LIVING ROOM WINDOW

A beautiful large picture window (approximately 4 feet wide by 4 feet high) with full height ventilators on both ends (approximately 1½ feet wide by 4 feet high)—all built in one shop fabricated unit. With all this extra light and fresh air, you also gain approximately 1½ feet wider wall space for furniture arrangement than is provided by the ordinary picture window unit.

Here are a few of the many other reasons why COPCO'S Economy Living Room Window Unit is a truly sensational value:

EASY OPENING. COPCO'S Living Room Window glides open and shut with fingertip ease . . . especially desirable for that "hard-to-reach" area over the davenport.

BETTER CONTROLLED VENTILATION. COPCO'S "Air-Deflector" ventilator catches breezes from three directions. Flow of air easily controlled.

EASIER CLEANING. COPCO'S extension type hinge permits safe, easy cleaning of both sides of the glass from inside the room.

LIFETIME SCREENS. COPCO metal frame screens on inside of window are protected from weather . . . do not interfere with curtains or blinds . . . and can be put up or removed from inside the room—safely, quickly, easily.

QUALITY CONSTRUCTION. Made of specially designed, hot-rolled solid steel sections with welded construction . . . Duranized and finished with baked-on coat of rust-resistant paint . . . the same high quality as all other COPCO residence casement windows.

Copco's complete line of residence casements offers builders the most satisfactory window units for every room in the home. Get complete information from your local retailer of lumber and building materials . . . or mail coupon below.



GET FULL INFORMATION TODAY!

COPCO STEEL & ENGINEERING COMPANY

AB4

Metal Building Products Division
14306 Grand River Avenue
Detroit 27, Michigan

Without obligation, please send me additional information regarding the complete line of Copco Residential Metal Building Products.

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____



CASEMENTS



METAL TRIM



MEDICINE CABINETS



UTILITY WINDOWS



CLOTHES CHUTE DOORS



CLEANOUT DOORS



PACKAGE RECEIVERS



ASH DUMPS



BASEMENT WINDOWS



LINTELS AND COLUMNS

now



another important addition to
Curtis Woodwork

CURTIS NEW LONDONER HOLLOW-CORE FLUSH DOORS



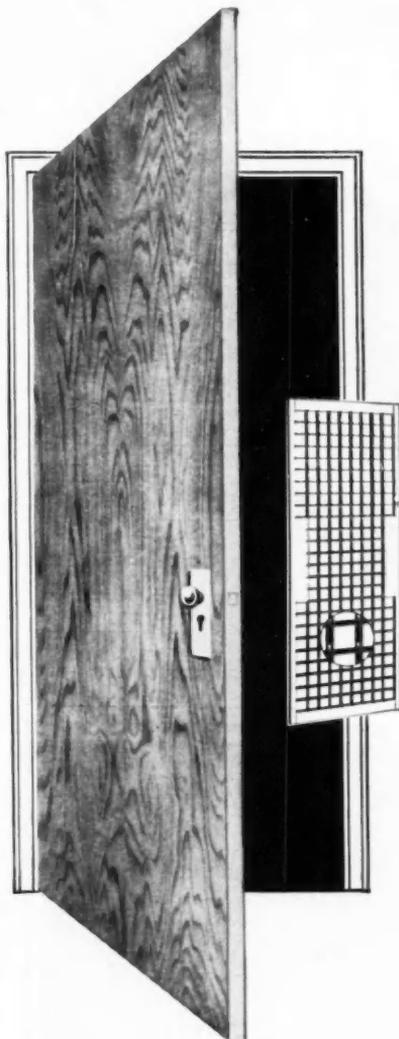
Once again Curtis enlarges its manufacturing facilities to provide a *complete* woodwork service to builders! Through the purchase of American Plywood Corporation, New London, Wisconsin, Curtis can now supply top-quality flush doors—the Curtis New Londoner—Curtis Plyoneer—and Curtis American solid-core door.

From every angle—beauty, fine craftsmanship, durability—Curtis New Londoner hollow-core flush doors match the high standard set for over 85 years by the popular Curtis panel doors. With these two types, Curtis today can meet your every need and taste in exterior and interior doors for homes, schools, public and industrial buildings.

The addition of the famous Curtis New Londoner all-wood flush doors to the Curtis line is further evidence that Curtis Woodwork products are always in step with current architectural trends and tastes. Those products include such famous ones as Curtis Silentite windows, a complete line of kitchen cabinets and a line of architectural woodwork which has won widespread praise from architects, builders and home owners alike.

Full information on Curtis New Londoner flush doors, Silentite windows and other Curtis Woodwork will be sent you on request.





What's BETTER About Curtis New Londoner All-Wood Hollow-Core Flush Doors . . .

Superior beauty—just as in the finest furniture, the wood grain figures of Curtis New Londoner flush doors are *matched* carefully to provide balanced, harmonized patterns. Doors are sanded with fine sandpaper for quick, easy finishing. Available in birch, maple, oak, and other woods.

Patented locked wood grid—made of precision milled, meshed and interlocked horizontal and vertical pine strips. Grid is firmly "welded" to both faces—no "floating" units.

Specially bonded faces—water-resistant bonds which stay tight under high humidity conditions. Bonding for exterior doors fully waterproofed.

A door that stays true—all Curtis New Londoner flush doors are kiln dried—then sealed against atmospheric changes. All interior structural strain is eliminated.

Sturdiness proved in over 4,000,000 installations—established reputation for quality with architects, builders and home owners.

Several choices of light openings are available.

Extremely easy to hang and finish—a popular feature with carpenters.

Both ends of doors branded with Curtis New Londoner name for easy identification.

Curtis Plyoneer Hollow-Core Flush Doors

These Curtis doors have the same high quality construction as the Curtis New Londoner hollow-core door, except that faces are not matched-grain.

Curtis American Solid-Core Flush Doors

The same inherent quality found in Curtis New Londoner hollow-core doors is available in Curtis American solid-core flush doors. These doors have a kiln dried core and are edged with hardwood strips all around. Face panels are phenolic bonded. Available in extra widths for school, hospital and institutional use.



CURTIS COMPANIES SERVICE BUREAU

AB-4 Curtis Building • Clinton, Iowa

I want to know more about Curtis New Londoner and Curtis American flush doors. Please send me complete information.

NAME.....

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HETTINGER'S

Triple Seal

PATENT NO. 2,472,580

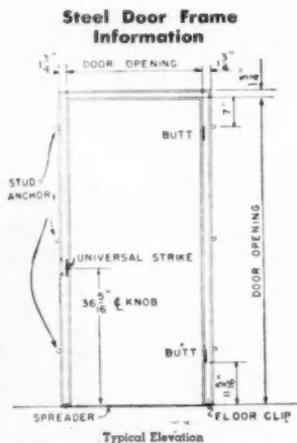
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ORDER
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YOU'LL
LIKE IT!**

THE WEATHERPROOF PRODUCTS CORPORATION

Waldo Station, P. O. Box 8498 Kansas City 5, Mo.



STANDARD DOOR OPENING SIZES		
Width	Height	
1'-2"	6'-6 1/2"	6'-8 1/2"
1'-6"	"	"
1'-8"	"	"
1'-10"	"	"
2'-0"	"	"
2'-4"	"	"
2'-6"	"	7'-0 1/2"
2'-8"	"	"
2'-10"	"	"
3'-0"	"	"

*Indicates standard stock types. Thorn Data

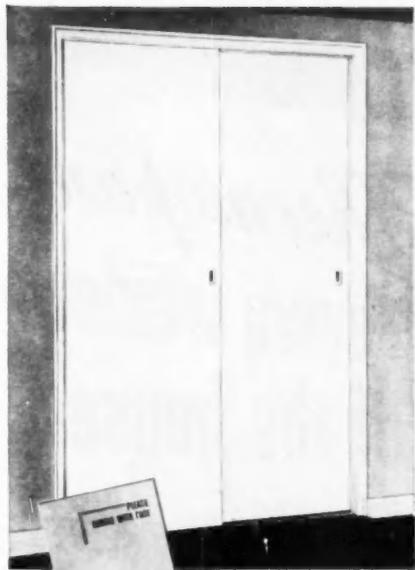
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A window to frame a view as this is the wish of everyone who plans to build or live a home.

They also want the practical advantages of HOPE'S STEEL WINDOWS... true, storm-tight fittings, and permanently smooth operation of the ventilator casements.

Hope's Residence Casements are well within the means of your customers not only because of their lower upkeep, their first cost is also competitive. Test this in your own estimating. Write for Catalog No. 102N, and prices.

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AMWELD® "K-D" Steel Sliding Closet Door Units

OFFER

what every builder
and home owner
wants...

The perfect product
for both new home
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A Complete Quality Product



Header, Jamb, Track,
Panels and Hardware
COMPLETE in
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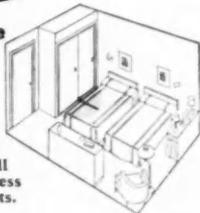
Savings in Installation
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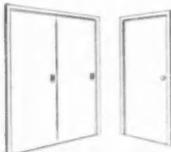
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at all the space you save

... from 6 to 9 square feet
of floor space (shaded
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door. A M W E L D

Sliding Closet
Doors permit
use of *all* this
space PLUS wall
space and full access
to closet contents.



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DEALERS: Ask us to send you complete information on how to become an AMWELD dealer.

BUILDERS: We will be glad to send you detailed prints and name of your nearest dealer.

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The complete AMWELD line of Interior Steel Doors—Frames—Assembled Sliding Closet Door Units and Labelled Fire Doors.

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LOW-COST METHODS MAKE THIS PRACTICAL

The appeal of picture windows has been tremendous—even more powerful when glazed with *Thermopane** insulating glass.

Now builders are taking the popularity of *Thermopane* and really putting it to work. They're offering *Thermopane* in every window of the house—in moderately priced houses.

Builders are doing it by using standard sizes of *Thermopane* in standard types and sizes of sash. They are simplifying glazing by cutting down on the number of glass sizes used. Some are using *only two sizes* for the entire house. Many are using economical *Thermopane* made of DSA window glass—giving you a choice according to budget demands.

Give your houses the extra appeal of *Thermopane* all around. Promote it—and watch prospects go for it.

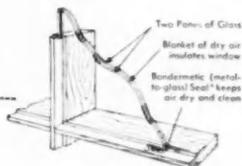
See your L-O-F Distributor for information on promotional material, and for detailed information on low-cost methods of installing *Thermopane*. Or write us. Libbey-Owens-Ford Glass Company, 342 Nicholas Bldg., Toledo 3, O.

Two Pages of Glass
Blanket of dry air insulates window
Bonded metallic (metal-to-glass) seal keeps air dry and clean



Thermopane

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1" Thick Units Standard Sizes of Thermopane 1/2" Thick Units

(2 Panes 1/4" Polished Plate With 1/2" Air Space)

Sash Manufacturer	Window Style	Sash Opening Width	Sash Opening Height	Glass Size Width	Glass Size Height	
Any manufacturer shown below can provide picture window sash without flanking units.	Picture Window Alone					Use any size shown in this column
Window wells can be constructed by using a series of Picture Window sash separated by mullions.	Window Well					Glass sizes shown are for 8" and 8 1/2" ceiling heights respectively, allowing 1'-0" from floor to sill and 1'-0" from head to ceiling
				42" x 66"	50 1/2" x 66"	
				64 1/2" x 66"	72 1/2" x 66"	
				84" x 66"	96" x 66"	
				84" x 72"	96" x 72"	
				96" x 72"	108" x 72"	
				108" x 72"	120" x 72"	
				120" x 72"	132" x 72"	
				132" x 72"	144" x 72"	
				144" x 72"	156" x 72"	
				156" x 72"	168" x 72"	
				168" x 72"	180" x 72"	
				180" x 72"	192" x 72"	
				192" x 72"	204" x 72"	
				204" x 72"	216" x 72"	
				216" x 72"	228" x 72"	
				228" x 72"	240" x 72"	
				240" x 72"	252" x 72"	
				252" x 72"	264" x 72"	
				264" x 72"	276" x 72"	
				276" x 72"	288" x 72"	
				288" x 72"	300" x 72"	
				300" x 72"	312" x 72"	
				312" x 72"	324" x 72"	
				324" x 72"	336" x 72"	
				336" x 72"	348" x 72"	
				348" x 72"	360" x 72"	
				360" x 72"	372" x 72"	
				372" x 72"	384" x 72"	
				384" x 72"	396" x 72"	
				396" x 72"	408" x 72"	
				408" x 72"	420" x 72"	
				420" x 72"	432" x 72"	
				432" x 72"	444" x 72"	
				444" x 72"	456" x 72"	
				456" x 72"	468" x 72"	
				468" x 72"	480" x 72"	
				480" x 72"	492" x 72"	
				492" x 72"	504" x 72"	
				504" x 72"	516" x 72"	
				516" x 72"	528" x 72"	
				528" x 72"	540" x 72"	
				540" x 72"	552" x 72"	
				552" x 72"	564" x 72"	
				564" x 72"	576" x 72"	
				576" x 72"	588" x 72"	
				588" x 72"	600" x 72"	
				600" x 72"	612" x 72"	
				612" x 72"	624" x 72"	
				624" x 72"	636" x 72"	
				636" x 72"	648" x 72"	
				648" x 72"	660" x 72"	
				660" x 72"	672" x 72"	
				672" x 72"	684" x 72"	
				684" x 72"	696" x 72"	
				696" x 72"	708" x 72"	
				708" x 72"	720" x 72"	
				720" x 72"	732" x 72"	
				732" x 72"	744" x 72"	
				744" x 72"	756" x 72"	
				756" x 72"	768" x 72"	
				768" x 72"	780" x 72"	
				780" x 72"	792" x 72"	
				792" x 72"	804" x 72"	
				804" x 72"	816" x 72"	
				816" x 72"	828" x 72"	
				828" x 72"	840" x 72"	
				840" x 72"	852" x 72"	
				852" x 72"	864" x 72"	
				864" x 72"	876" x 72"	
				876" x 72"	888" x 72"	
				888" x 72"	900" x 72"	
				900" x 72"	912" x 72"	
				912" x 72"	924" x 72"	
				924" x 72"	936" x 72"	
				936" x 72"	948" x 72"	
				948" x 72"	960" x 72"	
				960" x 72"	972" x 72"	
				972" x 72"	984" x 72"	
				984" x 72"	996" x 72"	
				996" x 72"	1008" x 72"	
				1008" x 72"	1020" x 72"	
				1020" x 72"	1032" x 72"	
				1032" x 72"	1044" x 72"	
				1044" x 72"	1056" x 72"	
				1056" x 72"	1068" x 72"	
				1068" x 72"	1080" x 72"	
				1080" x 72"	1092" x 72"	
				1092" x 72"	1104" x 72"	
				1104" x 72"	1116" x 72"	
				1116" x 72"	1128" x 72"	
				1128" x 72"	1140" x 72"	
				1140" x 72"	1152" x 72"	
				1152" x 72"	1164" x 72"	
				1164" x 72"	1176" x 72"	
				1176" x 72"	1188" x 72"	
				1188" x 72"	1200" x 72"	
				1200" x 72"	1212" x 72"	
				1212" x 72"	1224" x 72"	
				1224" x 72"	1236" x 72"	
				1236" x 72"	1248" x 72"	
				1248" x 72"	1260" x 72"	
				1260" x 72"	1272" x 72"	
				1272" x 72"	1284" x 72"	
				1284" x 72"	1296" x 72"	
				1296" x 72"	1308" x 72"	
				1308" x 72"	1320" x 72"	
				1320" x 72"	1332" x 72"	
				1332" x 72"	1344" x 72"	
				1344" x 72"	1356" x 72"	
				1356" x 72"	1368" x 72"	
				1368" x 72"	1380" x 72"	
				1380" x 72"	1392" x 72"	
				1392" x 72"	1404" x 72"	
				1404" x 72"	1416" x 72"	
				1416" x 72"	1428" x 72"	
				1428" x 72"	1440" x 72"	
				1440" x 72"	1452" x 72"	
				1452" x 72"	1464" x 72"	
				1464" x 72"	1476" x 72"	
				1476" x 72"	1488" x 72"	
				1488" x 72"	1500" x 72"	
				1500" x 72"	1512" x 72"	
				1512" x 72"	1524" x 72"	
				1524" x 72"	1536" x 72"	
				1536" x 72"	1548" x 72"	
				1548" x 72"	1560" x 72"	
				1560" x 72"	1572" x 72"	
				1572" x 72"	1584" x 72"	
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				1632" x 72"	1644" x 72"	
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				1668" x 72"	1680" x 72"	
				1680" x 72"	1692" x 72"	
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				1740" x 72"	1752" x 72"	
				1752" x 72"	1764" x 72"	
				1764" x 72"	1776" x 72"	
				1776" x 72"	1788" x 72"	
				1788" x 72"	1800" x 72"	
				1800" x 72"	1812" x 72"	
				1812" x 72"	1824" x 72"	
				1824" x 72"	1836" x 72"	
				1836" x 72"	1848" x 72"	
				1848" x 72"	1860" x 72"	
				1860" x 72"	1872" x 72"	
				1872" x 72"	1884" x 72"	
				1884" x 72"	1896" x 72"	
				1896" x 72"	1908" x 72"	
				1908" x 72"	1920" x 72"	
				1920" x 72"	1932" x 72"	
				1932" x 72"	1944" x 72"	
				1944" x 72"	1956" x 72"	
				1956" x 72"	1968" x 72"	
				1968" x 72"	1980" x 72"	
				1980" x 72"	1992" x 72"	
				1992" x 72"	2004" x 72"	
				2004" x 72"	2016" x 72"	
				2016" x 72"	2028" x 72"	
				2028" x 72"	2040" x 72"	
				2040" x 72"	2052" x 72"	
				2052" x 72"	2064" x 72"	
				2064" x 72"	2076" x 72"	
				2076" x 72"	2088" x 72"	
				2088" x 72"	2100" x 72"	
				2100" x 72"	2112" x 72"	

Beauty... Lower Cost... More Room Space



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Here's an ideal solution to three of the biggest problems in home design and construction. Wherever Ra-Tox Folding Doors have been used, they have won immediate approval of the home buyer. Today Ra-Tox Folding Doors offer the builder and architect a proved and practical means of achieving:

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Ra-Tox Doors open by folding to one side. All the wall and floor area wasted by swing type doors is available for use... an important factor in today's new homes, where room areas often are relatively small.

For new construction and for remodeling, Ra-Tox Folding Doors offer distinct opportunities for better design and lower cost. For complete information write for Bulletin 406... or refer to Sweet's File, Architectural, 1952 Edition, Section 1640.

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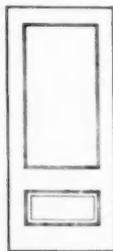


BETWEEN ROOM DOORS

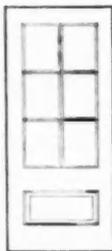


ROOM DIVIDERS

**Popular Patterns
For Exterior Doors**



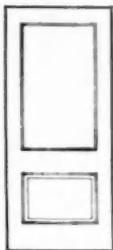
N.D. 507



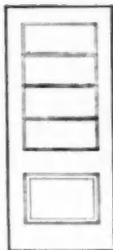
N.D. 508

Above 1 light design N.D. 507 can be divided as in Design N.D. 508 or other divisions are available as listed below:

- N.D. 509—9 lts., 3 w.
- N.D. 510—8 lts., 2 w.
- N.D. 511—9 marg. lts.
- N.D. 512—12 lts., 3 w.



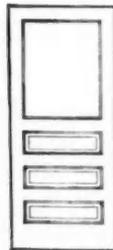
N.D. 500



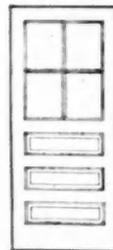
N.D. 506

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- N.D. 501—6 lts., 2 w.
- N.D. 502—9 lts., 3 w.
- N.D. 505—12 lts., 3 w.



N.D. 537

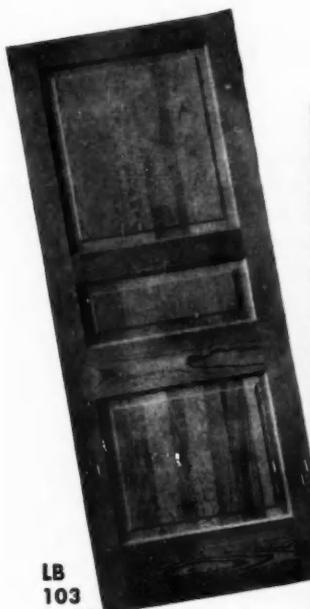


N.D. 538

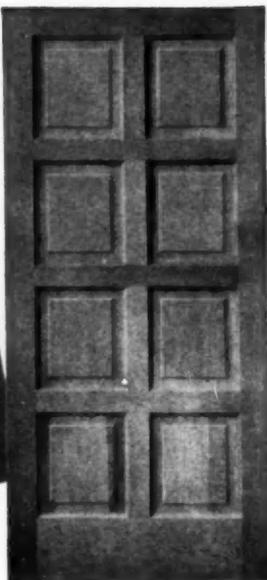
Above 1 light design N.D. 537 can be divided as in Design N.D. 538 or other divisions are available as listed below:

- N.D. 536—3 hor. lts.
- N.D. 539—6 lts., 3 w.
- N.D. 542—3 vert. lts.

Look to



LB
103



LB
109

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You'll find home sales are easier and faster when you give your customers the distinctive beauty and character of Long-Bell Doors. These two new interior designs in Ponderosa Pine will enhance the personality and appeal of any room—in any type of house. They are as much at home in a cozy Cape Cod cottage as in the rambling Ranch style house.

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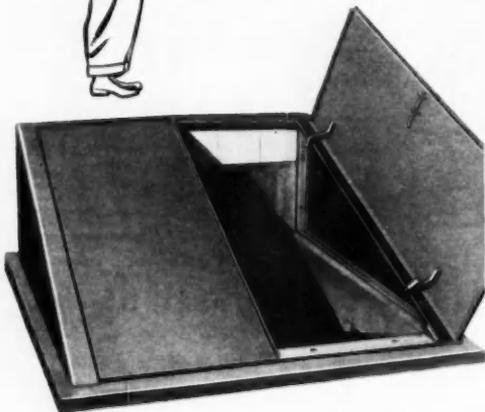
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A

SPACE

SAVER



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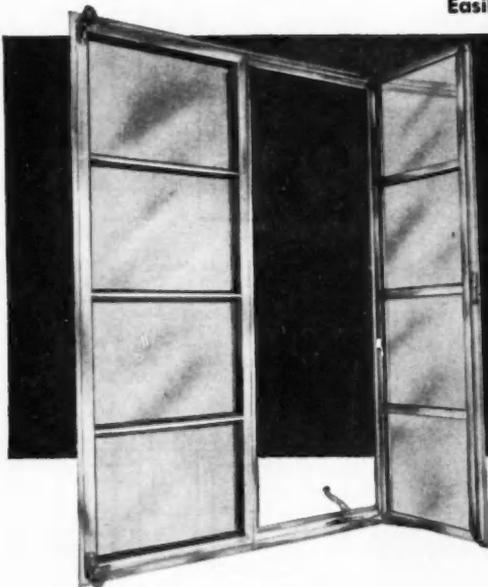
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with welded joints for greater strength and weather-tightness...carefully assembled from Reynolds own extruded shapes...outstanding for high satin finish. Protectively packaged two to a carton. Complete accessories include Storm Sash and Screens.

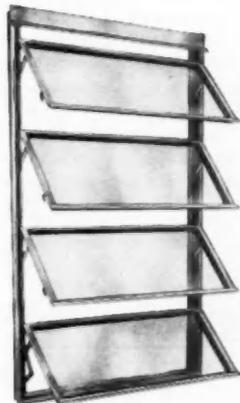
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Extra-heavy depth... stainless steel hardware...extruded aluminum trim...fully weather-stripped. Spiral precision balances (tape balances optional at extra cost). Supplied unglazed or factory-glazed with neoprene. Shipped ready to install.



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Featuring cross-lap weatherstripping in the tightest, smoothest operating version of this popular window type. Roto-operator opens bottom vent first. Full-open vents deflect both drafts and rain.



Write for catalog showing all types and sizes.
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Military needs for aluminum limit supply, but Reynolds is rapidly expanding primary capacity. Check your supplier.



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Architects:
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FOR THE DINING ROOM—*Satinol*® Doublex Glass makes a striking background for art objects. At night, illumination behind the translucent wall floods the room with softly diffused light.

FOR THE ENTRANCE HALL—people get a grand first impression from this interesting pattern of transmitted light, day or night.

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B-142 Nicholas Bldg., Toledo 3, Ohio

Please send me detail drawings and your illustrated idea book: "New Adventures in Decorating".

Name (please print).....

Street.....

City..... Zone..... State.....

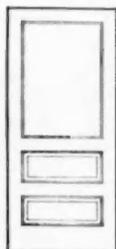


BLUE RIDGE
Patterned GLASS

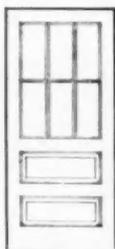


Exterior Doors . . .

(Continued from page 128)



N.D. 514

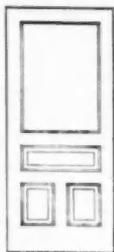


N.D. 516

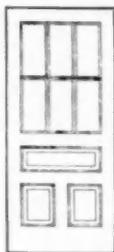
Above 1 light design N.D. 514 can be divided as in Design N.D. 516 or other divisions are available as

listed below:

N.D. 513—3 hor. lts.
N.D. 515—4 lts., 2 w.
N.D. 517—9 lts., 3 w.
N.D. 519—3 vert. lts.



N.D. 567



N.D. 569

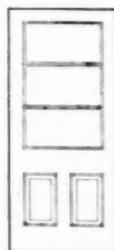
Above 1 light design N.D. 567 can be divided as in Design N.D. 569 or other divisions are available as

listed below:

N.D. 570—9 lts., 3 w.



N.D. 559



N.D. 563

Above 1 light design N.D. 559 can be divided as in Design N.D. 563 or other divisions are available as

listed below:

N.D. 560—4 lts., 2 w.
N.D. 561—6 lts., 2 w.
N.D. 562—9 lts., 3 w.

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NO DANCING!

Dance only for joy with new, different, better DURALL tension screens!

SAVE TIME! Duralls snap into place from inside your window. 2 easy clamps grip screen to window frame. All in just 9 seconds!

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SAVE TROUBLE! Duralls make window washing a snap. Release two clamps and Durall

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SAVE MONEY! Duralls do more, cost less, last longer than ordinary, old-fashioned screens. Write for our Catalog AIA-35-P-1.



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ROLLER BEARINGS



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factory packed
ROLLER BEARINGS
make raising and
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practically effortless.

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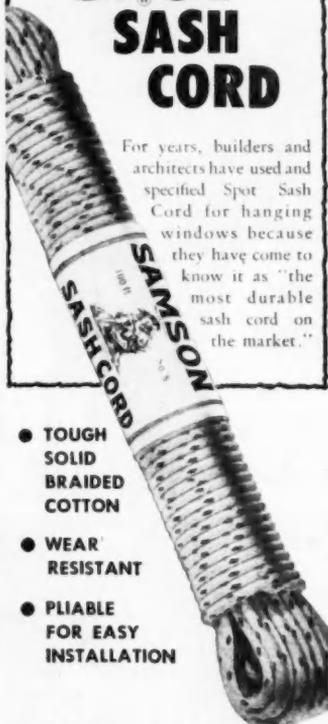
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- PLIABLE
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INSTALLATION

Look for the colored spots . . . your guarantee of quality. In new installations and replacements, use and recommend Spot Sash Cord.



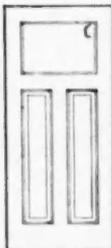
Samson
CORDAGE WORKS
Boston 10, Massachusetts

Exterior Doors . . .

(Continued from page 132)



N.D. 594



N.D. 591

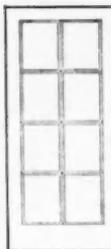
Above 1 light design N.D. 591 can be divided as in Design N.D. 594 or other divisions are available as listed below:

N.D. 592—3 vert. lts.

N.D. 593—4 vert. lts.



N.D. 620



N.D. 622

Above 1 light design N.D. 620 can be divided as in Design N.D. 622 or other divisions are available as listed below:

N.D. 623—9 Marg. lts

N.D. 625—10 lts., 2 w.

N.D. 626—12 lts., 3 w.

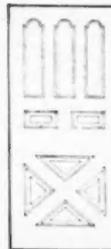
N.D. 627—15 lts., 3 w.

N.D. 630—5 hor. lts.

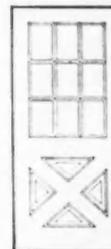
POPULAR SIZES

Nos. N.D. 620, 622

2'-0" x 6'-8", 2'-6" x 6'-8", 2'-8" x 6'-8"



N.D. 608



N.D. 612

POPULAR SIZES

Nos. N.D. 591, 594, 608, 612

2'-8" x 6'-8", 3'-0" x 6'-8", 3'-0" x 7'-0"



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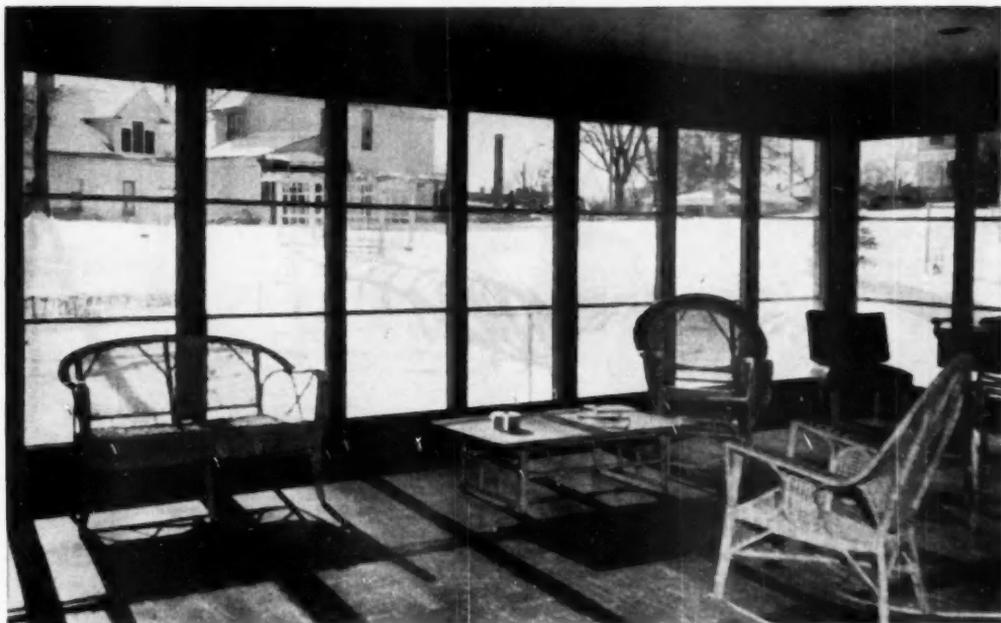


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No Special Tools Required
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Moisture-Proof Draft-Proof
Dust-Proof Protection
Complete in Cartons

For Full Details
Write Now

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Do you ever meet price resistance when selling a porch? Do your customers say, "that's the right price IF I could use this porch more than two months a year."

Raymor Windows give you the perfect answer for this customer . . . because Raymor Windows give you both a cool summertime porch AND a warm extra living room in the wintertime.

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2. Chemically treated outer frame is part of every Raymor Window unit which means easier installation, plus a guard against moisture rot.
3. Lifetime Lumite screens are used in every unit which means no bulge, no sag, no rust, no break.

Good delivery is assured despite current material shortages.

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AMERICA'S BEST
Windows

ARE THEIR OWN BEST SALESMAN

Self-Storing Window Co.

5901 Wayzata Blvd., Minneapolis, Minn. Dept. "B"

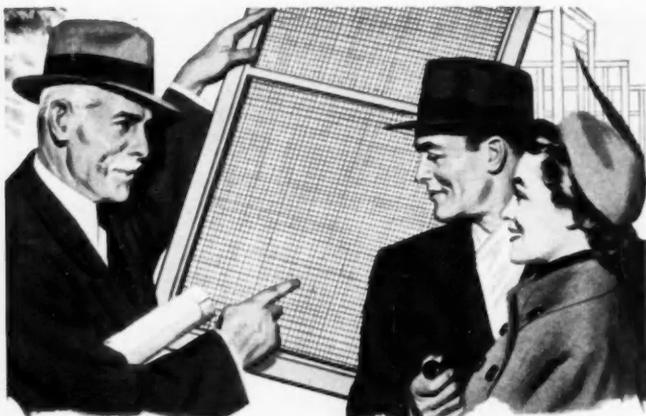
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Firm _____

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City _____ State _____



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BUILDING COSTS ARE HIGH—and home-buyers are looking for *value*. Often a small item, like LUMITE* saran screen cloth, says *value* in a big way . . . because:

It's a sign that you've built with the best materials.

It's proof you haven't overlooked important minor details.

That's how LUMITE plastic screening adds sale-ability to a house!

Longest-lasting screen cloth you can buy!

In actual comparison tests under the worst exposure conditions, LUMITE resisted the effects of weather outdoors better than ALL other kinds of screen cloth! Salt air, humidity, city smoke, acid fumes cannot harm LUMITE.



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40 Worth Street, New York 13, N. Y. 2

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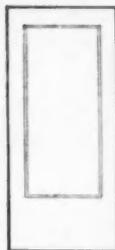
COMPANY

ADDRESS

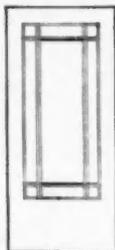
CITY ZONE STATE

Exterior Doors

(Continued from page 134)



N.D. 635



N.D. 638

Above 1 light design N.D. 635 can be divided as in Design N.D. 638 or other divisions are available as listed below:

- N.D. 636—3 vert. lts.
- N.D. 637—8 lts., 2 w.
- N.D. 640—10 lts., 2 w.
- N.D. 641—12 lts., 3 w.
- N.D. 642—15 lts., 3 w.
- N.D. 644—5 hor. lts.

POPULAR SIZES

Nos. N.D. 635, 638

2'-8" x 6'-8", 3'-0" x 6'-8", 3'-0" x 7'-0"

National Woodwork Manufacturers Association Data

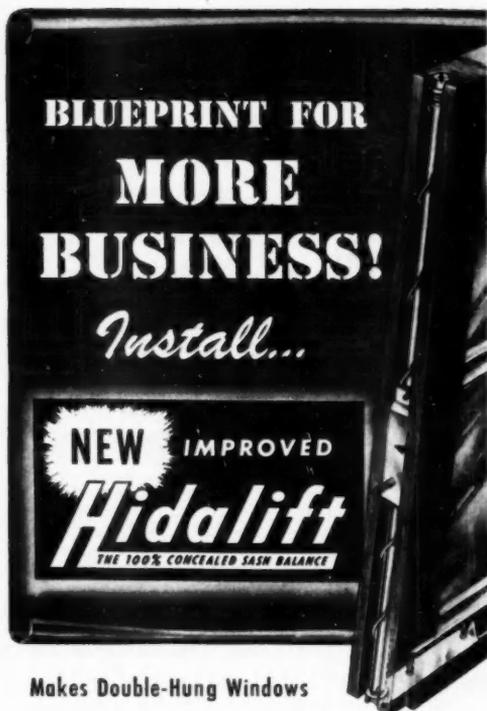
EXTERIOR doors come in a variety of constructions, weights, finishes and designs. Nearly every known pattern can now be obtained as a stock unit in a large variety of standard sizes. A number of patterns of stock design are shown, together with a group of flush type doors on which are secured bands of plywood and mouldings for additional decorative effects.

Trend to Flush Doors

The pronounced trend to flush doors is soundly based on public preference. Architects and builders use them to express the spirit of modernity, with the practical considerations of economy and enduring quality. Flush doors offer great versatility—providing any desired architectural or decorative designs, the popular ranch type, the modern colonial and the solar house.

Where natural finishes are desired, and where particularly severe weather conditions are encountered, doors should be treated with a clear water-proof preparation.

The illustrations that follow on pages 138, 139 and 141 are flush doors to which a variety of mouldings have been applied to provide individuality to the front door. These and many other variations can be obtained easily and inexpensively on the job by any carpenter.



Makes Double-Hung Windows

- Quieter Operating
- Less Costly To Maintain
- Easier to Raise and Lower
- More Attractive in Appearance

Hidalift offers more "SELL" features because it is:

100% CONCEALED—There's nothing exposed to mar the beauty of modern windows. No part protrudes or is otherwise exposed to view.

DESIGNED FOR EASY, FAST INSTALLATION—smooth-as-silk lifetime operation.

EASIER TO TENSION—Tensioning can be applied *before or after* installation without special tools.

FITS WINDOW with or without weatherstripping.

POSITIVE LIFTING POWER provided by highest quality coil spring.



TWO TYPES OF ATTACHING BRACKET—Tension is applied **DURING** installation by winding biinged bracket arm (on "C" type); **AFTER** installation by turning tensioning screw on both "L" and cup types.

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54 ideas for interior wall covering and trim; 27 helps on stair construction; 37 window suggestions; 54 ideas for installing doors; 29 tips on closets, shelves and built-in equipment; 24 flooring pointers; 35 aids in installing sanitary equipment; 44 short-cuts in laying out work; etc., etc. More than 700 illustrations show you exactly "how-to-do-it." All items indexed so that any particular idea or short-cut you want can be located instantly.

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Our stairways
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for 35 years.

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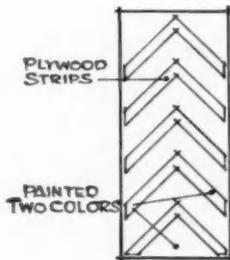
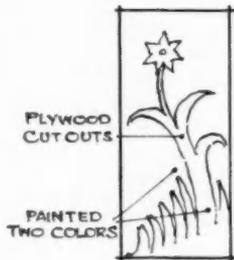
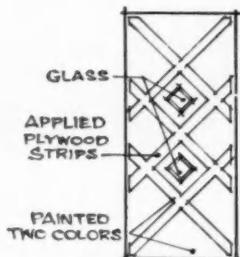
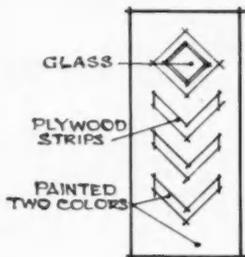


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Install a Bessler Dis-
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upper story. Simplicity
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and strongly built. A prac-
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ern space-saver.

Exterior Doors ...

(Continued from page 136)

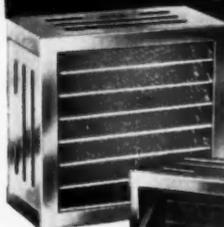


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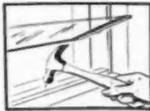
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2. Slide in Glass louvers



3. Close end of clips over glass



4. Install 1/4" steps for snug fit.



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Name

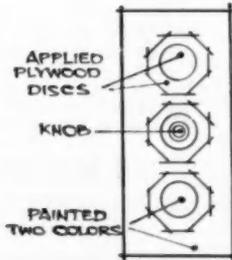
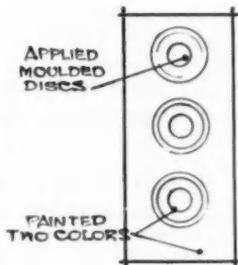
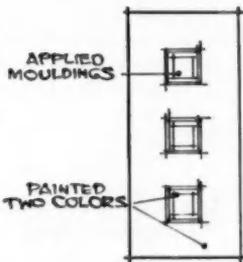
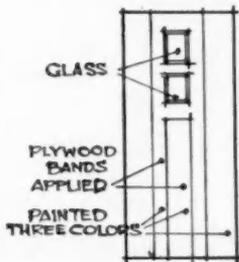
Address

City State

Occupation

Exterior Doors ...

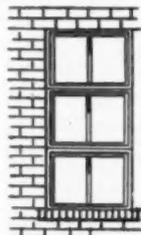
(Continued from page 138)



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Heavy steel, press-formed channel construction—double weather protection—ease of installation— instant removability of sash—these and many other Monarch engineered features have made In-A-Slides **FIRST CHOICE** among alert dealers and contractors.

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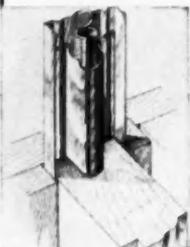
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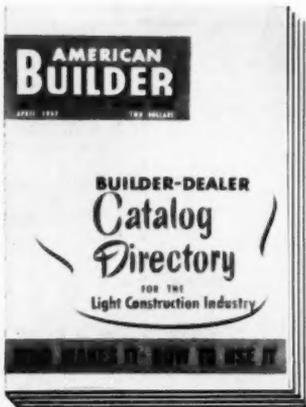


8

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3. Names and Addresses of Manufacturers

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5. List of Participating Communities in 1951 National Home Week

An alphabetical list by states of communities that have taken part and cashed in on the promotional value of National Home Week. Look and see if your community is listed.

★ If you have a special building problem—write us. Our editors have the knowledge and experience to be of real help to you. Don't hesitate to write. No obligation, of course.

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"What's New
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Windows?"

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Show them why it pays
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Awning - Window - Wise!

AVAILABLE in stock sizes and styles
to fit every need.

DELIVERED to the job completely
assembled, including hardware,
glazing and weatherstripping.

ECONOMICAL to warehouse and
handle.

AN EASY TO INSTALL, preservative-
treated WOOD Window.

PRICED RIGHT...of course!

GATE CITY SASH & DOOR CO.

"Wood Window Craftsmen Since 1910"

P. O. Box 901, Fort Lauderdale, Florida

MEMBER OF THE PRODUCER'S COUNCIL, INC.
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Try this new way to
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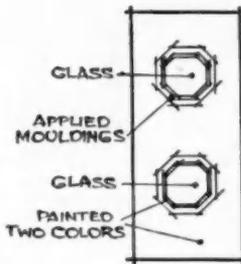
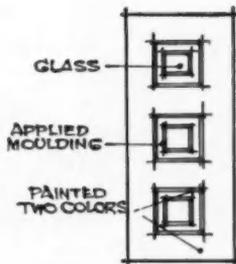
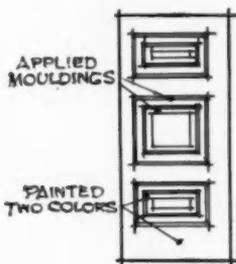
Gate City Sash & Door Co.
P. O. Box 901, Fort Lauderdale, Florida
Gentlemen: Please send literature and full
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AB-4

Name _____ State _____
Address _____ City _____

Exterior Doors ...

(Continued from page 131)



The ONE for your Job

One-der metal door frame

Solid
Welded
Mitres

Double
Stud
Anchor
Clips

Brass
Strike

Rat Sill
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Prime
Coated
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Installed Easily,
Rapidly and at
Lower Cost

Also, One-der
Window Frame

One-der Frames work readily with all
conventional forms of construction. There
is no job-site assembly, no pieces to put
together, no extra material to buy, no
finish carpenter labor. Whatever your
job, you will profit by using One-der
frames.

ONE-DER FRAME Corporation

2109 Third Avenue, North
Birmingham 3, Alabama



BILT-WELL

Superior Windows

give complete weathertight protection and slide easily at all times

Laboratory tests prove that Bilt-Well Superior Windows have almost double the weathertight efficiency required by the American Wood Window Institute's Specification.

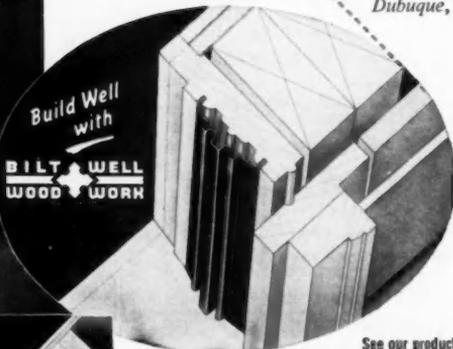
And, although Bilt-Well Superior Windows fit snugly, they open easily and quietly and slide smoothly under all weather conditions.

This unusual ease of operation is due to the patented Superior flexible Jamb-liner Weatherstrip which regulates the snug fit. In addition, the window is counterbalanced.

And, for you who are close to the building industry, here's special news! Bilt-Well Superior Windows are now adjustable to various wall thicknesses. See illustrations. Write us for further information.

CARR, ADAMS & COLLIER CO.

Dubuque, Iowa



See our products in

Sweet's Architectural Catalog pages 24B/CA and 17C/CA

Here's a list of the BILT-WELL LINE

Superior Unit Wood Windows • Exterior & Interior Doors • Entrances and Shutters • Clos-tite Casements • Carr-dor Garage Doors • Basement Unit Windows • Louvers & Gable Sash • Combination Doors • Screens & Storm Sash • Corner (China) Cabinets • Ironing Board Cabinets • Mantels & Telephone Cabinets • Nu-Style & Multiple-Use Cabinets • Stair Parts.

AMERICAN BUILDER



25/32" outside sheathing and 3/4" lath and plaster on 2 x 4's—and Superior full width jamb.



25/32" outside sheathing and dry-wall (1/2" or 5/8") inside on 2 x 4's, and "Superior" mines inside strip on jamb.



5/8" outside sheathing and dry-wall (1/4" or 1/2") inside on 2 x 4's, cut-off rib on blind stop and remove inside jamb strip.



1/2" outside sheathing and 3/4" dry-wall applied over 1/2" insulation board on 2 x 4's, cut-off rib on blind stop.



Attractive cabinet and fireplace hardware harmonizes with the design of this room

HARDWARE is an important sales aid. Automatic window operators, weather stripping, hardware which makes windows easy to open, easy to clean and efficient in ventilation, are all talking points. Doors hung on good hinges so that they will operate at a touch of the finger, quietly and easily, appeal to the housewife with small children. Push plates and escutcheon plates which make it easier to keep walls and woodwork clean also appeal, as do bathroom door locks which can be opened from the outside so that Junior can't lock himself in.

A house built to shout "quality" as you walk up to the front door gives the prospect a definite let-down when he takes hold of a cheap-appearing door knob, notices an indifferent lock, has trouble opening the door because it doesn't hang well on the hinges, and finds cheap trim used where good trim belongs. The effect of the finest layout of kitchen cabinets is spoiled when Mrs. Prospect pulls open a cabinet drawer and scratches her hand on a poorly-finished handle.

The use of high-quality fittings and hardware, well-designed shelf brackets, casters, latches, snaps, chains and guards for doors, door stops, door closers, bathroom fittings, clothes hooks and other wardrobe fittings, as

well as appropriate decorative trim and venetian blind or drapery fittings—all add in a thousand ways to the prospect's appreciation of the value of the property.

While impressed with modern design and efficient layout for comfortable living, prospects generally think in terms of the house built to last a hundred years. It is, of course, easier to point out structural features to a buyer who visits the house when it is under construction. Nevertheless, explanation of how heavy sill bolts are used to tie the frame to the foundation and how special truss fasteners, wall ties, sheathing nails, window-frame anchors, and other hardware items are used, will help to build appreciation for the "house that's built to last."

Specialties Help Sell, Too

The house with attached garage is now so common that much attention is paid by buyers to the problem of opening and closing garage doors. There are a number of manufacturers who have special hardware for this purpose, the easy functioning of which is a sales point for the builder. Combination screen and sash or storm door hardware, extra heavy hinges for some special purpose door, electric window and door operators,

HARDWARE AS A SALES AID

Locks

Door Fittings

Door Knobs, Handles,
Pulls

Weatherstripping

Door Closers

Push Plates

Window Fittings

Jack Pulleys and
Balances

Jack Bolts

Window Handles and LPH
Jack Hardware

Weather

Garage Hardware

Weatherstripping

Cabinet, Cupboard and Kitchen Cabinet Hardware

Sliding and Special Door Fittings

Screen and Storm Door
Hardware

Bathroom, Closet and Wardrobe Fittings

Garage Door Hardware and Fittings

Specialties and Special Order Trim

Builder's Hardware

Time Savers



Kitchen cabinet hardware is available in wide variety of styles to match fixtures

package or mail receptacles, and similar features are hardware items which add little to the total cost of the house but much to its salability.

When you use hardware as evidence of value, talk function. Explain that the locks and latches on the various doors were selected for certain special features of operation. Point out that finish hardware was selected to match the decorative scheme of the house, that it is easy to maintain and of a type easily replaced when necessary. Demonstrate throughout that the hardware used is not just "window-dressing" but represents function combined with beauty to increase the livability of the house.

Locks

Exterior doors require security-type locks, generally fitted with pin tumbler lock mechanisms. Front entrances may have handle-and-thumb levers for better appearance. Available for doors of contemporary design is a lockset having a longer backset, placing the knob five to seven inches away from the door edge.

Locks for interior doors are made for both key and push-button operation for privacy in bedrooms and bathrooms. Access may be obtained in emergencies by screwdriver or pin releases. Special knob and lock assemblies are available for closet and locker doors, storerooms, roof decks, French doors, and other one- or two-side locking requirements.

In addition to locks mortised into the lockstiles of doors, the home builder may be called upon to supply night latches and dead locks, and occasionally padlocks. A wide variety of choice is available.

Cylindrical and tubular locksets have been designed for ease and economy of installation. Round holes

are drilled for both lock and knob assemblies, and a minimum of mortising or routing is necessary for strike plates and lock plates. Adjustable mechanisms enable easy fitting to doors of different thicknesses, and installation costs are held to a minimum.

Most of these locksets have the lock mechanism in the center of the knob. Turn buttons or push buttons provide for locking from the inside on bathroom doors, etc.

In metropolitan areas, the use of a night or dead latch is often felt to be desirable for additional security. These should be of best quality.

Door Fittings

Door fittings will include such items as door closers, hinges, pulls and finger latches for sliding doors, and the like. The door fittings selected for a job depend on the type of doors used, the style of architecture, the price range of the building, and customer preferences.

Door closers are desirable for exterior doors. Relatively expensive, they will be omitted in lowest-cost housing, but should be suggested as an extra in housing for moderate to higher price levels.

Door hinges for interior and exterior use—butt hinges—should be selected to match the thickness of the doors. The clearance of the door away from the trim must also be considered, as must the "hand" of the door (right or left hand opening) so that correct hinges for the particular doors are available on the job at the right time and place.

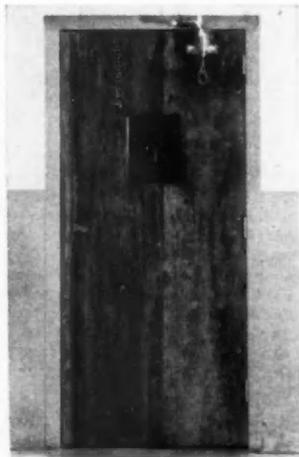
Hinges are made in medium and heavy weights. The heavy weight hinges are for factory, apartment building and industrial use, and will not ordinarily be required in small homes and light building construc-

tion. Medium weight hinges are made in both plain bearing and ball bearing types. Special hinges are available for metal door casements and metal doors; when these are used, care must be taken to select correct hinges if they are not provided by the manufacturer of the door units.

Door Knobs, Handles, Pulls

Push plates, pulls and miscellaneous door trim are generally supplied by the same source as that used for locksets, so that the entire door trim will match or be in harmony throughout the building. Most manufacturers provide complete assortments of this type of hardware in a wide selection of styles and finishes, so that selection, once a particular design or type

(Continued on page 147)



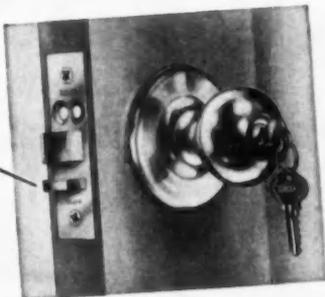
Door closers should not be overlooked as a sales point. Freedom from slamming and control of drafts are desirable

GIVE
CUSTOMERS' HOMES
AND YOUR
REPUTATION

THE BEST PROTECTION POSSIBLE!

--SARGENT LOCKS!

FOR ENTRANCE DOORS --
SARGENT INTEGRA-LOCKS
with the SENTRY BOLT



Sargent Integra-Locks give exterior doors—front and back—lifetime beauty...lifetime protection.

They give lifetime convenience, too—with key-in-knob action.

Your customers will appreciate your recommending and installing Sargent Integra-Locks on exterior doors for many reasons.

There is the exclusive Sargent SENTRY BOLT which gives added security, as shown above.

It is released, along with the latch, by just a quarter turn of the key.

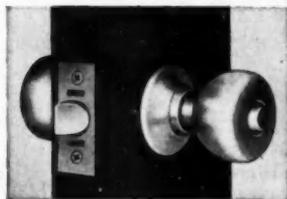
There's the unique Shear Pin in the knob of the Integra-Lock.

It breaks when subjected to extreme torsion causing the knob to spin harmlessly...but allowing a key owner to operate it.

There are these other Integra-Lock features that add up to the best possible protection today: features such as interchangeable precision parts...compact factory-assembled, factory-sealed lock cases...self-lubricating OILITE bearings. Easy installation. (Practically impossible to install incorrectly.)



FOR OTHER DOORS --
SARGENT "4500" LOCKS



Sargent "4500" locks not only give your customers the original tulip shaped knob but also offer a variety of operations such as those required for bathroom, passage and bedroom doors. A genuine pin tumbler cylinder function where security is needed.

They have quality in every detail. Are beautiful in design... match harmoniously with design of the Integra-Lock... make a handsome installation.

Quick and easy to install, too...needs only a 1 1/4" crossbore.

Also remember *this* great "4500" lock feature: *It has a full 1/2" throw!*

The bolt will travel the full distance every time. Separate spring for the latch bolt insures smooth forceful latching action—twin springs for knob hub create balanced knob performance.

No other lock in its price class has so many features! No wonder the "4500" lock leads among bored-in locks!



REMEMBER
SARGENT FOR YOUR
SCREEN DOOR HARDWARE, TOO!

Sargent Screen Door Hardware is built for lifetime service.

The Sargent Screen Door Closer takes up little space—only 2 1/4 inches between doors. Easily installed on practically any installation.

Adjustable spring lets door close surely, quickly, quietly...with control of spring power. Suitable for heavy duty use.

Sargent Screen Door Catches are simply applied by merely boring two holes...give easy action...keep doors shut tight. Lock from inside.

So check your screen door hardware requirements—and order SARGENT.

For full information about Sargent Locks and Sargent Screen Door Hardware ask your supplier...or write us. Dept. 5C.

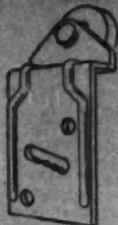
SARGENT
of New Haven

Sargent and Company
New York • New Haven, Conn. • Chicago

Builders Hardware and Fine Tools since 1864

THE ROCKET 1000 HAS EVERYTHING!

FEATURES



ROCKET CORNER
Nylon Corner Box Bolt Bearing Rollers for Lifetime Service. We mount to metal contact. Adjusting slot allows 5 different height adjustments!



DOUBLE TRACK
Available in two different sizes, for all doors up to 1 1/2". Rollers connect jump track! Track can be used as trim and painted to match room colors!



SINGLE TRACK
For all door sizes up to 50 lbs. Can be used as trim.



DOUBLE FLOOR GUIDE
U shaped guide for by-passing door installation.



SINGLE FLOOR GUIDE
U shaped guide for single sliding and bi-parting doors.

NEW-LOW COST-PACKAGED SLIDING DOOR HANGER

3 MODELS

No. 1040 SERIES

For By-Passing Multiple Doors up to 1 1/2" thick. (50 lbs. per door)

No. 1030 SERIES

For By-Passing Multiple Doors up to 3/4" thick. (50 lbs. per door)

No. 1020 SERIES

For Single Sliding and Bi-Parting Door Installations. (all door sizes to 50 lbs. per door)

LOW PRICE

Priced for quick turnover, ROCKET Hardware is Quality Hardware at down-to-earth prices. Write today for complete Price List!

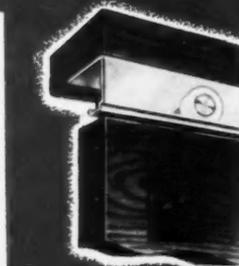
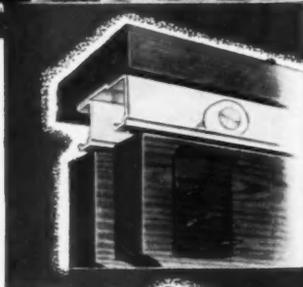
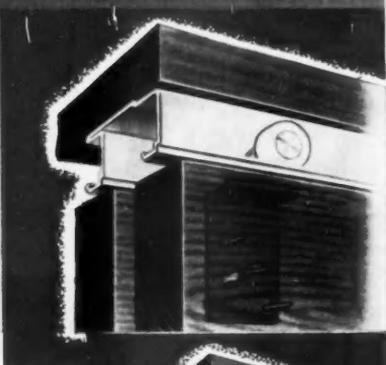
DEALER AIDS!

Merchandising material includes stuffers, ad mats, catalogue sheets, broadsides, window streamers. Powerful trade and consumer advertising. Working models for your counter or shelf!

PACKAGED!

ROCKET Hardware is packaged in bright red, eye-appealing tubes. Color coded labels result in open-sight selection of proper hardware by dealer. It's both profitable and convenient to stock and sell ROCKET Hardware!

Write today for immediate action from your supplier!



GRANT PULLEY & HARDWARE CO.
31-89 Whitestone Parkway, Flushing, L.I., N.Y.

(Continued from page 144)
of hardware is established, is no problem.

Knobs for cabinets, especially built-in cabinets in living and dining rooms or areas, should also be in harmony as to style and finish. If brass is used as the finish for locksets and knobs, the remaining accessory hardware should have this finish. Kitchen cabinet hardware, however, is usually chrome-plated regardless of the finish used throughout the rest of the house. Other door hardware, which should be considered at the time the selection of locksets is made, will include such items as stops and checks, base knobs, push and kick

plates, and chains and guards as a possible substitute for night latches.

Screen door closers are usually of light construction, operated by an air check device instead of the hydraulic mechanism of the regular closer for heavier doors, and need not be of finish to match. Standard screen door closers are adjustable, right or left.

Push plates on double acting doors, while they may be omitted, are one of the extra touches that give the builder an opportunity to demonstrate the excellence of his products at little additional cost. Glass, polished brass, and chrome-plate push panels are suitable for any type of trim, and require little installation expense.

The front door kick plate is another "extra" that may either be provided or omitted. Brass is durable but requires constant polishing to look well. Chrome needs no maintenance but may become scratched and pitted after continued use.

Weather stripping has been raised from the accessory class into a "must" in present-day home building. The buying public has been educated on the virtues of insulation and heat control in homes as a fuel-saving and draft-preventing measure. Weather stripping is equally important.

Base stops should be installed for wall protection at any point where

(Continued on page 150)

DOOR SCHEDULE							
Lock Type (Installation) — <i>Owner's Choice</i>		Quality — <i>Brass base for locksets;</i>		Finishes — <i>Polished brass (PB)</i>			
Manufacturer's Design — <i>Owner's Choice</i>		<i>steel base for hinges</i>		<i>Polished Chromium (PC)</i>			
				<i>Prime finish</i>			
PLAN NO.	LOCATION	LOCK	TRIM	FINISH	HINGES	OTHER ITEMS	NOTES
1	Front (1½" thick)	Cylinder	Handle Set— Outside Knob Set—Inside	PB Both Sides	Three 4" x 4" (Prime finish)	Doorbell Mail Receiver Threshold House Numbers (In Matched Set)	All cylinder locks for all exterior doors (over- head garage door included) and night latch to be keyed alike
2	Service (1½")	Cylinder	Knob Set	PB—Exterior PC—Interior	Three 4" x 4" (Prime finish)	Threshold Doorstop	
3	Overhead Garage	Cylinder			Overhead hardware by contractor		
4	Garage (1½")	Night Latch & Latch Set	Knob Set	PB	Three 4" x 4" (Prime finish)		
5	Combination Storm— Screen—Two Doors	Latch Set	Knob—Outside Lever—Inside	PB	Three 3" x 3" (Galvan- ized; brass pins)	Door Check and Safety Chain	Solid brass im- portant
6	Coat Closet (1½")	Latch Set	Knob—Room Side Spindle—Inside	PB	Three 3½" x 3½" (Prime finish)	Doorstop	
7	Bathroom (1½")	Bath Set	Knob Set	PB—Hall Side PC—Bathroom	Three 3½" x 3½" (Prime finish)	Doorstop	Emergency key for lock
8	Bedroom (1½")— Two Doors	Latch Set	Knob Set	PB—Two Sides	Three 3½" x 3½" (Prime finish)	Doorstop	
9	Sliding Closet (1½")—Two Pairs		Mortised Pulls	PB		Sheaves and Tracks	
10	Double-Acting (1½")				Checking Floor	Push-plates	
CABINET SCHEDULE							
11	Linen Door (1½") Drawers	Friction Catch	Pull Pulls	PB	2½" x 2½" Two on door		
12	Kitchen			PC	Manufacturer's cabinet hardware furnished by contractor		
13	Bathroom						
WINDOW SCHEDULE (Type and Number Required)							
14	Double Hung (13)	Sash Locks		PB or PC depending on location		Bar Lifts	
15	Casement (1)			PC	Manufacturer's hardware supplied by contractor		
16	Storm Sash (12)			Hooks and hangers supplied by contractor		Ventilating devices where desired	
17	Screens (12)			Hangers to match storm sash hooks			
MISCELLANEOUS — Closet Accessories (Clothes hooks, hat racks, shoe holders)							

BEHIND THESE BEAUTIFUL WALLS AND THOUSANDS OF OTHERS

Throughout the Country...



YOU'LL FIND **GEMCO** PRODUCTS
That Saved Many Man-Hours
and Cut Building Costs!

Because labor time is such a vital factor today, more and more builders are using *Gemco* products . . . eliminating the slow, hazardous jobs of drilling for anchorage to brick, tile, concrete, and steel. You, too, can save many man-hours and cut costs on residential, commercial and industrial buildings the *Gemco* way.

GEMCO ANCHOR NAILS

. . . for installing furring strips, plaster grounds, carpet strips, etc. Fastened to surface with approved adhesive, they have ample strength to hold sidewall loads in place securely. Easy to install; anchoring is sure, safe, permanent.

GEMCO ANCHOR BOLTS

. . . for quick, easy installation of metal cabinets, outlet boxes, dispensers, mailboxes, etc., on concrete, brick, steel, hollow tile, gypsum tile. No drilling or welding.

GEMCO Insulation Hangers

. . . ideal for installing batt-type insulation on concrete, brick, or metal. Many man-hours are saved over welding of wires or installing mechanical fasteners.

Other Goodloe E. Moore, Incorporated, products: **TUFF-BOND** outstanding adhesives . . . super-strength . . . waterproof . . . sticks almost anything to anything. **TUFF-TRED** Safety Stair Nosing . . . for protecting any type stair steps from wear, improving the safety factor, maintaining and restoring stairway beauty. Write, 'phone, wire . . .

GOODLOE E. MOORE

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DANVILLE, ILLINOIS

In Canada: W. D. ELMSLIE, Ltd.

409 Notre Dame St., West, Montreal 11, Quebec

HOW TO DETERMINE SIZES OF BUTT HINGES

Door sizes given are jamb opening dimensions.

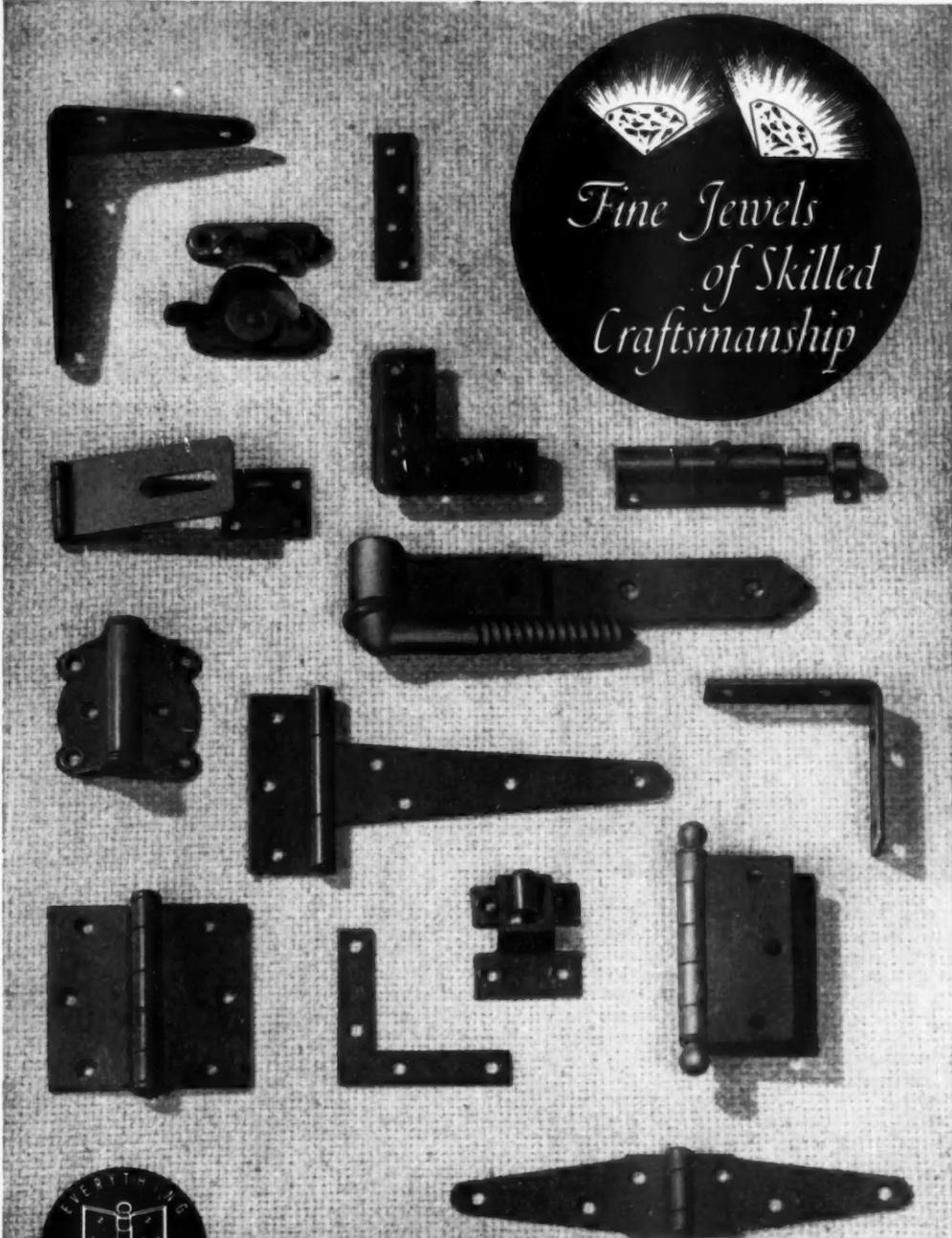
Thickness of Doors in inches	Width of doors or height of transoms in inches	Height of butt hinges (length of joint), inches
3/4 and 7/8 cupboard doors	To 24	2 1/2
7/8 and 1 1/8 screen doors	To 36	3
1 1/4 doors	To 36	3 1/2
1 1/4 and 1 3/8 doors	To 32	3 1/2
Do	Over 32 to 37	4
1 5/8, 1 3/4 and 1 7/8 doors	To 32	4 1/2
Do	Over 32 to 37	5
Do	Over 37 to 43	5 Extra heavy
Do	Over 43 to 50	6 Extra heavy
2, 2 1/4 and 2 1/2 doors	To 43	5 Extra heavy
Do	Over 43 to 50	6 Extra heavy
1 1/4 and 1 3/8 transoms	To 20	2 1/2
Do	Over 20 to 36	3
1 1/2, 1 5/8, 1 3/4 and 1 7/8 transoms	To 20	3
Do	Over 20 to 36	3 1/2
2, 2 1/4 and 2 1/2 transoms	To 20	3 1/2
Do	Over 20 to 36	4
Doors 60 inches high and under		2 butt hinges
Doors over 60 inches high and not over 90 inches high		3 butt hinges
Doors over 90 inches high and not over 120 inches high		4 butt hinges
Transoms 48 inches wide and under		2 butt hinges
Transoms over 48 inches wide and not over 84 inches wide		3 butt hinges

HOW TO DETERMINE TRIM CLEARANCES FOR BUTT HINGES

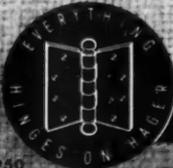
The table below lists clearances for trim of regular stock size butt hinges for wood or hollow metal doors. The clearance is estimated on butt hinges set back 1/4 inch for doors up to 2 1/4 inches and 3/4 inch for doors 2 1/2 inches to 3 inches in thickness. Where trim presents a specific problem in determining the proper width of the butt hinges for a door, take twice the thickness of the door, plus the thickness of the trim and deduct 1/2 inch for doors up to 2 1/4 inches in thickness, and 3/4 inch for doors 2 1/2 inches to 3 inches in thickness. The result will give the proper width at hinge to allow the door to open at 180°. Should the result come out uneven, use the next regular stock size.

Thickness of Door (Inches)	Size of Butt Hinge (Inches)	Maximum Clearance (Inches)
1 3/8	3 x 3	3/4
	3 1/2 x 3 1/2	1 1/4
	4 x 4	1 3/4
1 5/8	4 x 4	1 3/8
	4 1/2 x 4 1/2	1 7/8
	5 x 5	2 3/8
	6 x 6	3 3/8
1 3/4	4 x 4	1
	4 1/2 x 4 1/2	1 1/2
	5 x 5	2
	6 x 6	3
1 7/8	4 1/2 x 4 1/2	1 1/4
	5 x 5	1 3/4
	6 x 6	2 3/4
2	4 1/2 x 4 1/2	1
	5 x 5	1 1/2
	6 x 6	2 1/2
2 1/4	5 x 5	1
	6 x 6	2
	6 x 8	4
2 1/2	5 x 5	3/4
	6 x 6	1 3/4
	6 x 8	3 3/4

C. Hager & Sons Data#



*Fine Jewels
of Skilled
Craftsmanship*



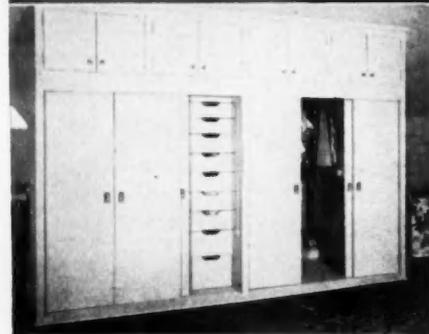
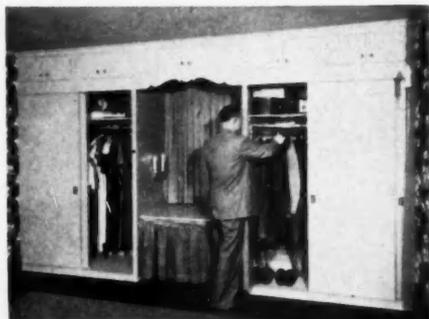
Everything HINGES ON HAGER!

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Richards-Wilcox

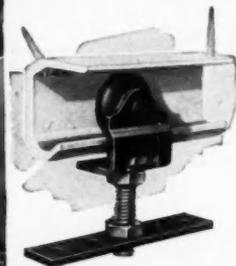
VANISHING DOOR

HARDWARE



Save space

Save trouble



SILVER STREAK
R-W No. 1019
Vanishing Door
Hangers and
Aluminum Track

The trend is to small homes today. And with this trend comes the necessity of utilizing every available inch of space. That's where the Richards-Wilcox Vanishing Door Hardware comes in. Specially designed for thin wall construction, noiseless operation and easy installation, they help make a room livable from wall to wall. R-W Silver Streak Vanishing Door Hangers and Aluminum Track are constructed for flexibility—for use on single or parallel wardrobe doors, or for sliding doors in any room.

Check these important points!

- Four types of hangers to accommodate various size doors and building requirements.
- Adapted to thin walls to save space and reduce building costs.
- No interference with room furnishings or decorations.
- Tight fit of door to floor avoids drafts, loss of heat.
- Adapted to single sliding and parallel sliding house doors.

For more information, contact our nearest office or request one of our illustrated folders describing in detail the uses and advantages of SILVER STREAK.



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A DIVISION OF THE RICHARDS-WILCOX GROUP
AURORA, ILLINOIS, U. S. A. • Branches in all principal cities



Lockset combines central cylinder, dead-lock bolt, and finger button control. Special locksets are available for glass doors, bathrooms, closets, etc.



Above is shown typical screen door closer for light duty doors. The medium duty door closer shown below handles combination screen and storm doors, is quickly installed

(Continued from page 147)

doors swing open so that the knobs could damage the walls. Selection can be made to fit the styling of the room and the rest of the hardware.

Window Fittings

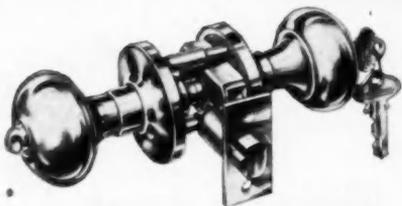
The relatively crude and haphazard window fittings of a generation ago have been replaced by carefully engineered, accurately made devices for all types of windows, whether they are casement hung, sliding, double sash, screens or storm windows.

Sash pulleys used in conjunction with weights for counter-balancing double sash, screens or storm window improved in design. The spring sash balance with the window suspended by a steel tape wins favor because of its positive action and ease of installation. Quality materials make maintenance and replacement negligible, and housewives like the inconspicuousness of the tape which is easily painted to match the woodwork of the window frame. Narrower tapes of improved steels further this trend, and smaller spring

(Continued on page 154)

LOCKWOOD BUILDERS' HARDWARE...

a complete line . . . designed to save on installation costs!



STANDARD DUTY KEY 'N KNOB SET . . . FOR HOMES, APARTMENTS AND OTHER LIGHT CONSTRUCTION

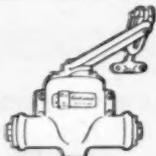
Made only of the finest materials. Designed for fast, economical installation. An exclusive Lockwood feature permits easily equalized knob projection on doors 1 1/4" or 1 3/8" thick. Made in a range of functions to cover all locking requirements.

Here are a few of the many Lockwood items that are showing contractors important savings on installation costs. At the same time, they give the owner attractive hardware that assures him of long, trouble-free service.



BOR-A-LIGN LOCKSET . . . FOR ECONOMICAL INSTALLATION ON LOW COST HOUSING

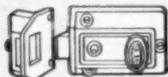
Steel aligning units guarantee free working assembly of knobs, trim and lock on door. Machine screws clamp set firmly in position. Made with functions for passage doors, without locking feature, and with privacy locking button inside, for bath and bedroom doors.



BALL BEARING DOOR CLOSER



SCREEN DOOR CLOSER



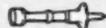
NIGHT LATCH



SASH FASTENER



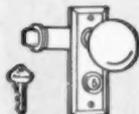
BAR SASH LIFT



WALL-TYPE DOOR STOP



BARCLAY DESIGN



CYLINDER SCREEN-STORM
DOOR LOCK



MADISON DESIGN



LOCKWOOD HARDWARE MANUFACTURING COMPANY
FITCHBURG • MASSACHUSETTS

CORBIN HARDWARE

"Sa...a-ay!
that's a Corbin Lock!"

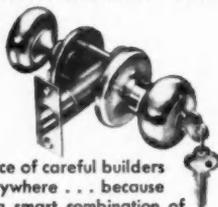


Handsome
Appearance

... Fine "feel"
... nationally known!



CORBIN TUBULAR LOCK



Choice of careful builders
everywhere . . . because
it's a smart combination of
quality with economy. For interior
and exterior doors.

Montgomery

LOCKSET

A classic design
that helps make
that first impression
a good one!



HELPS SELL HOUSES!

New homes sell *quicker* when buyers spot extra-quality touches—like the CORBIN name on hardware! It's a good reflection of the thought and quality you've expended on the entire house . . . and buyers *know* it, because Corbin hardware is backed by an impressive national advertising program.

Corbin hardware has a handsome appearance . . . a fine "feel" . . . and will give *years and years* of dependable security.

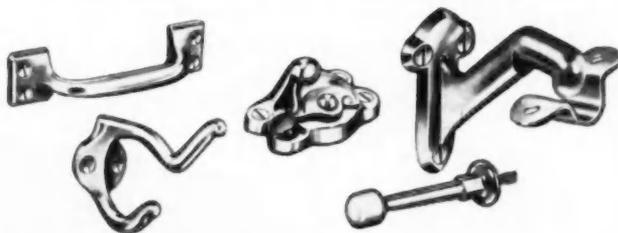
You'll find it's true—Corbin Hardware is an *important* part of your *quality* picture . . . adds little or nothing to your *cost* picture.

Always insist on Corbin hardware in the homes you build.

Nationally Advertised in

The Saturday Evening Post
Better Homes & Gardens
Small Homes Guide
House & Garden's Book of Building
House Beautiful's Building
& Maintenance Manual

PRESSURE-CAST ALUMINUM HARDWARE BY CORBIN



...for homes in every price range!

It's new . . . it's economical . . . it will never rust! Amazingly strong, Corbin's pressure cast aluminum hardware has the finest appearance you've ever seen. Available now in either brass finish or aluminum finish. Use it on every home you build . . . and insure customer satisfaction!

GOOD BUILDINGS DESERVE GOOD HARDWARE



P. & F. CORBIN Division

The American Hardware Corporation
New Britain, Connecticut, U. S. A.

**BE SURE OF LIFETIME DEPENDABILITY—
WITH CORBIN QUALITY!**

Surface Floor Spring Hinges



For light double-acting inside doors . . . between dining-room and kitchen, etc.

Screen Door Closer

Corbin No. 21 Door Closer does a fine job at low cost. Sturdily made for years of sure, quiet closing. Fits any screen door.



*This Library
demands*
PROTECTION
provided by
ADAMS-RITE
minimum backset
DEADLOCKS



Adams-Rite
Series 1451
Deadlocks provide
protection at the
entrance doors of the
business community.
Available in:
1. 2" Diameter 24"
Full Line City,
Hardware Distributor
A. J. Spurr Co.,
Los Angeles, Calif.

These unique Adams-Rite Deadlocks, built to the highest quality of design and workmanship, provide deadlocking security for doors with the narrowest stiles. Available to take any standard 1 1/4" diameter cylinder with a backset as small as 7/8" and a depth of only 1 1/2" or with a 3/4" diameter cylinder with a 1 1/8" backset which will avoid a 1/2" stop.

These Deadlocks give you a four-fold advantage:

- They are designed for template installation.
- They are made of rugged stamped steel and extruded brass. No delicate hand fitted parts.
- They conform to N. P. A. material regulations and are available from stock.
- Where desired, these Deadlocks are interchangeable with Adams-Rite Series 1451 Deadlatches.

Write for complete literature

ADAMS-RITE MANUFACTURING CO.
140 WEST CHEVY CHASE DRIVE, GLENDALE 4, CALIFORNIA, U. S. A.
SPECIALIZED LOCKS AND BUILDERS' HARDWARE



Modern design in window hardware combines efficient operation and attractive appearance. Casement latches and operating mechanisms shown at left and center assure smooth operation and draft-free closing.

(Continued from page 150)

balance units reduce the space requirements for otherwise lost space.

A variation of the spring balance provides balancing action which is supplied by a coiled spring in a vertical tube, operating a spiral lift this type is efficient in operation and is concealed completely in the casing.

**Window Handles and Lifts,
Sash Hardware**

Window lifts and handles, if not planned to match the woodwork, should be in keeping with the design and finish of the rest of the room hardware. Other sash hardware such as locks, bolts, adjusters, etc., should be chosen from the viewpoint of most efficient operation and best quality. Screen hangers, corner braces, and hangers, braces, and adjusters for storm sash should all be supplied and installed properly.

Shutter Hardware

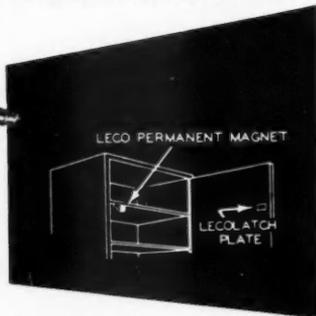
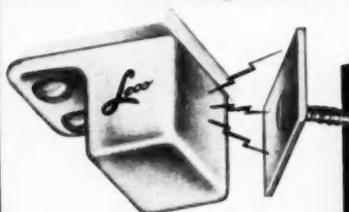
Many of today's popular styles of architecture feature shutters both for beauty and weather control. Shutter hinges are available in utility and decorative styles, finished to be weather-resistant and maintain appearance over long life.

Casement Hardware

Casement-hung windows require the best quality adjusters, hinges, and fasteners for continued ease of operation and weather-tightness against wind and water. While metal casement windows usually have operating mechanisms and hinges supplied as a part of the window assembly, the builder using wood casement sash will find equally efficient hardware available. Extension-type hinges allow both sides of the window to be reached for easy cleaning, and pro-

(Continued on page 158)

ADDS THAT EXTRA QUALITY TOUCH!
Leco-latch with the **PERMANENT MAGNET!**



USE LECO-LATCHES FOR:

Kitchen Cabinets • Music Cabinets
Medicine Cabinets • Tool Cabinets
House Trailer Cabinets • Ship and
Boat Lockers • Any Cabinet Door!

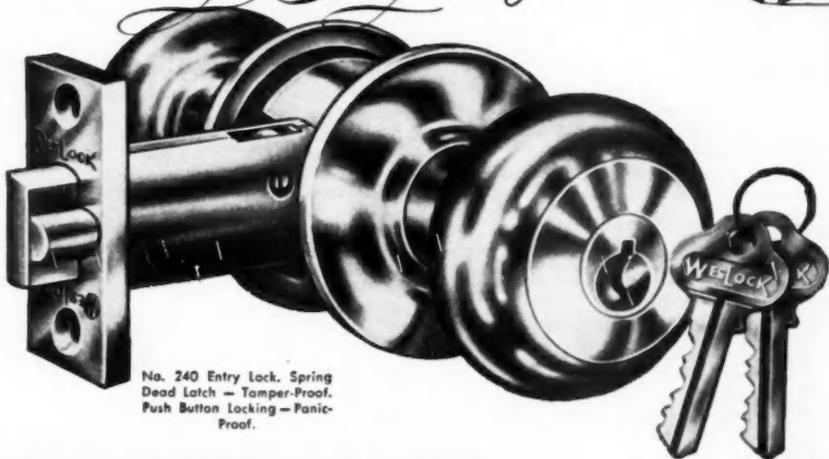
Lasts forever—nothing to get out of order. Works perfectly—even if doors sag or warp. Doors open easily—without snap, noise or jerk. Holds door in place firmly, yet gently. Easily installed. Improves appearance. **NATIONALLY ADVERTISED**—In Better Homes & Gardens, House Beautiful, Sunset, Popular Mechanics.

Adding Leco-Latches is the easy way to add extra sales appeal to that next new home you build!

For literature, prices and name of distributor, write

LABORATORY EQUIPMENT CORPORATION
ST. JOSEPH, MICHIGAN

Smartly Styled



No. 240 Entry Lock. Spring
Dead Latch — Tamper-Proof.
Push Button Locking — Panic-
Proof.

...FOR EVERY DOOR IN THE HOUSE

ACCEPTANCE of WESLOCKS by architects, builders and lending institutions for use on many of the nation's largest building projects is evidence of the outstanding values the line offers. For example, all WESLOCKS

have an easy spring latch with a light spring for the bolt and heavy-tension knob return—a feature found only in the most expensive locks. Also, WESLOCKS have key-in-knob construction, 5-pin tumbler locking mechanism for maximum security, split spindle, independent knob operation, factory assembled units, self-aligning feature and a wide choice of handles, ornamental escutcheons and finishes.

Best of all, WESLOCKS are priced to meet the most modest budgets. Truly, they offer you the best hardware value at any price.

Send today for catalog.



Another WESLOCK installation
Park Forest, Illinois. Contains a total of
3,010 apartments, 5,000 homes,
a shopping center and light industrial
area.

Living units are WESLOCK equipped.
Architects: Loetl, Schlossman & Bennett
Chicago, Ill.

Builder: American Community Builders, Inc.
Chicago, Ill.

Hardware Contractor: Schuham Hardware
Co., Chicago, Ill.

WESTWOOD

MANUFACTURING CO.
P.O. Box 2261, Terminal Annex
Los Angeles 54, California



Door Hardware

Locks and Hinges

Functional Lock Types

Security: Bit-key locks on rear and side doors provide the means for most illegal entries. Many bit-key locks can be easily picked or opened with a ten-cent skeleton key. They are not safe for outside doors without a separate dead bolt lock.

Cylinder locks insure against burglary and should be installed on all exterior doors used for entry by the family — not just the front door. Other exterior doors may be safeguarded with bolts which operate only from the inside.

Convenience: All cylinder locks used for one house (including garage) should be keyed alike — ordered to operate with the same key.

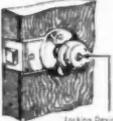
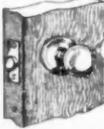
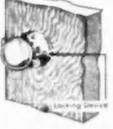
A cylinder dead lock on one closet permits prized possessions to be locked up during the owner's absence.

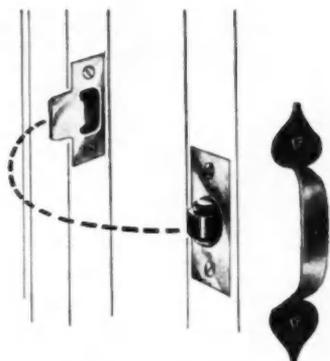
Economy: Bedroom and some closet doors can be "trimmed" with latch sets, thus saving the cost of unneeded key locks. Closet doors generally need knobs on the room side only; spindles, on the closet side.

CHART SHOWING SIZES OF HINGES

Thickness (In Inches)	Door Widths (In Inches)	Hinge Heights (In Inches)
3/4 to 1 1/8 cabinet doors.....	2 1/2
7/8 to 1 1/8 screen or combination doors.....	3
1 3/8 doors.....	3 1/2
1 3/4 doors.....	To 36 Over 36 to 40 Over 40	4 4 1/2 5
2, 2 1/4 and 2 1/2 doors.....	5
Transoms and casements		
1 3/8 and 1 3/4.....	3
2, 2 1/4 and 2 1/2.....	3 1/2

Types of Door Sets and How They Are Installed

	PREPARING THE DOOR	BIT-KEY (For Interior Doors)	CYLINDER (For Exterior Doors)	BATH SET (For Bath, Bedroom Doors)	LATCH SET (For Interior Doors Requiring No Lock)
<p>NOTCH INSTALLATION</p> <p>Most recent lock development for homes is the lockset which can be installed merely by cutting a notch in the door. Such locks come completely assembled in one unit ready for installation and are known as <i>notch locks</i>. This lock has been manufactured for years for use on commercial buildings.</p> <p>Outstanding characteristics: Installation speedy. Most expensive type of lock, but least expensive to install.</p>	 Notch	No Bit-Key Adaptation		 Locking Device	
<p>BORE-IN INSTALLATION</p> <p>There are a number of locksets on the market whose installation requires only the boring of two holes and the mortising of the faceplate. Position of the holes varies with the type of lock. These locksets are compact and are easily installed. There are two general types:</p> <p><i>Cylindrical:</i> A patented lock made by one manufacturer. Lock is unit-built (one-chamber) is housed in a round unit which operates the latch bolt. It has no screws fastening to the door except those on the face of the lock.</p> <p><i>Tabular:</i> Probably the most popular type lock today. Name is obtained from the fact that all the mechanism is housed in a round tube about 1" in diameter which is placed at right angles to shank.</p>	 Cylindrical	No Bit-Key Adaptation		 Locking Device	
<p>MORTISE INSTALLATION</p> <p>The "old reliable" and most common installation. Locks of <i>mortise</i> type require a rectangular cut-out in the edge of the door. One or two holes must be bored.</p> <p>Disadvantages: Slow and costly installation. Cut-out weakens door and makes it difficult to install small rooms. Poor carpentry work often causes latch and knob binding.</p>	 Mortise	No Bit-Key Adaptation		 Locking Device	
<p>RIM INSTALLATION</p> <p>Oldest type. Lock is placed on the surface of the door. Usually rim lock is made only in the bit-key adaptation. As a general rule, it is undesirable, despite fact that it is the least expensive of all types. Brass and iron rim locksets are sometimes designed for a distinctive architectural style; these authentic, period pieces are expensive.</p>	 Rim	No Bit-Key Adaptation	<p><i>Cylinder lock</i> is safest type — cannot be operated by the common skeleton key. Usually includes a latch and a dead bolt lock.</p>	<p><i>Bath set</i> locks from inside only. Must have device for unlocking from outside in case of emergency.</p>	<p><i>Latch set</i> has no locking device. Can be unlatched from either side.</p>

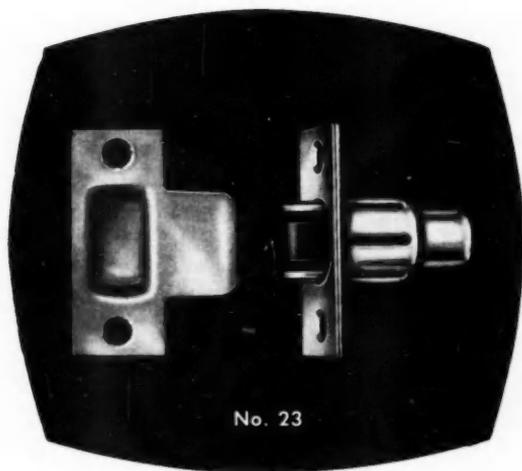


Home owners like

the convenience of interior doors *

equipped with the

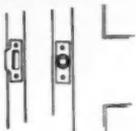
STANLEY ROLLER CATCH



No. 23

EASY TO INSTALL —

Simply bore a $\frac{3}{8}$ " hole, $2\frac{3}{8}$ " deep, at desired location on the door.



EASY TO ADJUST —

No tools needed. To adjust for clearance between door and casing, as well as to regulate tension of Catch, simply pull roller-plunger forward and turn with fingers. Each half-turn provides $\frac{1}{64}$ " adjustment (maximum adjustment $\frac{3}{8}$ ").

Home buyers marvel at the Stanley Roller Catch. It's so simple, so smooth and silent in operation, so convenient. It holds doors securely in closed position (all that's necessary for interior residential doors where a lock is not required) and eliminates rattling.

Not only do you build client *good will* . . . you reduce building costs when you equip interior doors with the Stanley No. 23 Roller Catch. It can be installed quickly and, even in small homes, represents a substantial saving.

Catch may be used on closet, wardrobe, and communicating doors . . . at top or bottom of door, as well as in the conventional latch position. Make the homes you build more convenient to live in — yes, and to buy. Install Stanley No. 23 Roller Catch.

**Not requiring a lock.*

The Stanley Works, New Britain, Conn.

REMEMBER  THREE HINGES TO A DOOR

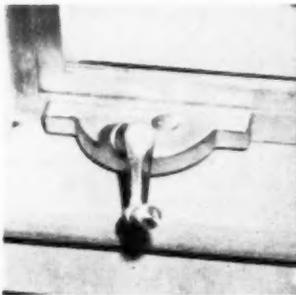
STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS
STEEL STRAPPING • STEEL



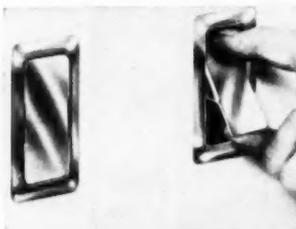
Casement locking handle at left above is especially designed for operation with Venetian blinds, will not mark or break blinds when they are being raised or lowered. Caseonet operating handle at right is gear operated, may be used with inside-mounted screens



(Continued from page 154)
vide better ventilation. Gear-type adjusters provide positive control of the sash opening and permit operation of the sash with interior screens in place. Automatic closing latches overcome the resistance of tight-fitting weather strip.

Weather Stripping Materials

Felt weather stripping is economical, easily installed, and will more than repay installation costs in fuel savings. Weather strip of spring bronze is more expensive, but provides a neater installation, and once



Flush-type latches for cupboards and drawers eliminate projections in narrow spaces

installed is reasonably permanent.

Many windows have built-in weather strip elements. In at least two such available, the sash balance is controlled by a spring action against the sash, which also performs the weather strip function. The growing demand for more window space in relation to wall areas makes efficient weather stripping more imperative, and of greater influence on sales.

Cabinet, Cupboard, and Kitchen Cabinet Hardware

When ready-made kitchen cabinets are supplied by manufacturers, hardware customarily comes as a part of the unit. Some manufacturers offer a choice, which should be made according to design and quality requirements.

When the builder constructs the kitchen cabinets as custom-built units or purchases unfinished units from the millwork supplier, the hardware must be obtained separately and installed. Because of sales appeal of quality kitchen installations, every effort should be made to use hardware and cabinet specialties that will enhance the builder's work. Labor-savers and space-savers such as pot holders, knife racks, etc. will more than repay their slight cost.

Built-in shelving, as in kitchen cabinets, wardrobes, bookcases, and

record storage cabinets, is given added flexibility of use by the incorporation of adjustable shelf brackets. The ability to add or remove shelving or vary shelf spacing leads to greater space economy and more efficient use.

Sliding and Special Door Fittings

One of the best techniques for conservation of space in modern homes is the use of sliding doors, especially for closets, wardrobes, and similar applications. Hangers, rollers, track, stops, and guides have been developed and refined to match modern structural materials. Manufacturers have developed hardware for all types of doors; both adjustable and non-adjustable hangers; special tracks for low headroom spaces; concealed guides, and many other features which make installations simple, economical, efficient and attractive.

Special flush-mounted finger pulls, latches and locksets have been created to coordinate with sliding doors giving complete access to all parts of wardrobes and storage units. Bumpers and stops make trouble free operation. Ball-bearing hangers and fibre rollers make sliding doors smooth and noiseless.

Screens and storm doors may readily be assembled by the builder, using a wide variety of door corner plates, braces and other materials for this work. Special hardware fittings are available providing for interchange of screens and storm sash in the same door frame. Latches, door closers, barrel bolts, and other accessory hardware is installed to suit customer preferences.

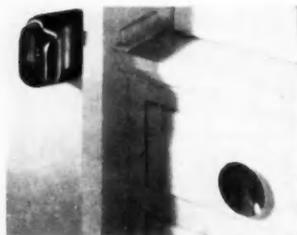
Bathroom, Closet, and Wardrobe Fittings

Bathroom fittings, although usually installed by the plumber, will be selected and in many instances purchased by the builder. Paper holders, towel bars, toothbrush and drinking glass containers, shower curtain rods

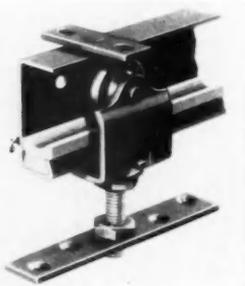
(Continued on page 162)



The popularity of Colonial cabinets is supported by a complete line of hardware of authentic design and appearance. Mechanical construction is of highest quality



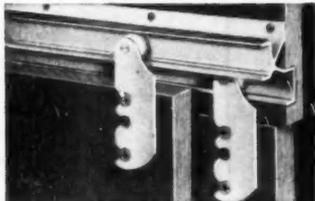
The drawer pulls and door latch shown are typical of best present-day styling



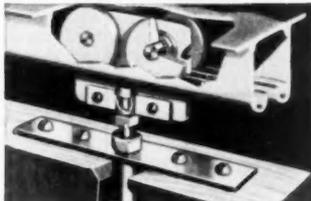
Nylon rollers and adjustable hangers make for smooth, trouble-free operation

ONLY **KENNATRACK**
HAS SLIDING DOOR HARDWARE

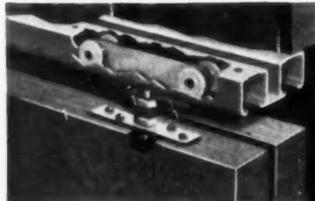
Specially Designed and
Engineered for every
interior application



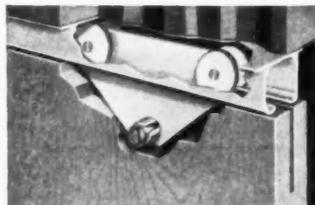
SERIES 250—For by-passing $\frac{3}{4}$ " to $1\frac{1}{4}$ " doors on cabinets, wardrobes and fixtures. Hanger permits mounting doors flush with cabinet face.



SERIES 400—For heavy closed pocket installations. This is generally considered the finest sliding door hardware obtainable. Allows vertical door adjustment. Ball-bearing hangers.



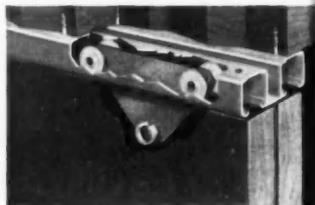
SERIES 600—A new double track designed for $1\frac{1}{2}$ " by-passing wardrobe and closet doors. Has newly designed adjustable hanger providing convenient means of aligning door to side jamb. Allows $\frac{1}{2}$ " vertical adjustment.



SERIES 300—Kennatrack's most popular hanger. Series 300 is for converging doors, closed and open pocket installation. Has exclusive mounting plug feature requiring minimum headroom of only one inch.



SERIES 800—Metal Sliding Passage Door Frame. Prefabricated. Complete with famous SERIES 400 heavy duty track attached to header at factory. Eliminates all warpage. Easily installed by anyone. Vertical and horizontal ADJUSTMENT features. Wood filler strips permit plaster base, trim and stops to be nailed or screwed to frame.



SERIES 650—Exclusive expansion-leve mounting plug feature requires minimum headroom space of only 1". Easily installed—just screw track to header! Acceptance of these features is proven by world-wide demand.

At McKenna we specialize in only *one* thing . . . sliding door hardware. As a result the KENNATRACK line is the most comprehensive and versatile line of sliding door hardware ever available. There is a KENNATRACK for every purpose. Each track is specially designed and engineered for a particular interior use. Each door slides smoothly not on two, not on four, but on EIGHT nylon wheels except on Series 250.

In addition there is a KENNATRACK Series 800 METAL PASSAGE DOOR FRAME.

It comes prefabricated and complete with SERIES 400 ball bearing heavy duty track attached to header at the factory. Can be assembled on the job in about 20 minutes.

Features of the KENNATRACK line are too numerous to mention. Moreover, you get all your sliding door hardware from one source. Ask any KENNATRACK jobber about KENNATRACK'S record for fast delivery, prompt service! Specify KENNATRACK for the plus in value.

Write Department 464 for full details.

JAY G. McKENNA, INC.

ELKHART, INDIANA

JAY G. McKENNA (Canada) Ltd., 104 Jarvis St., Toronto, Canada

SPECIALIZING EXCLUSIVELY IN THE MANUFACTURE OF SLIDING DOOR HARDWARE

APRIL 1952

159

HOW TO SIMPLIFY HARDWARE PURCHASING

ITEM	QUANTITY	DESCRIPTION	SOURCE
LOCKS Tubular, cylindrical Night latches Padlocks Knob and latch sets			
DOOR FITTINGS Closers Hinges Knobs, handles, pulls Stops, checks, base knobs Latches and bolts Chains and guards Push and kick plates Weather strip			
WINDOW FITTINGS Sash pulleys and cord Sash balances Handles and lifts Operators, adjusters Latches, locks, bolts Casement fittings Weather strip			
CABINET, CUPBOARD FITTINGS Hinges Handles, knobs, pulls Latches, catches Hasps, snaps Brackets Corners, plates Casters			
SLIDING & SPECIAL DOOR FITTINGS Screen and storm doors hardware Heavy hinges and hangers Sliding door hardware Folding door fittings			
GARAGE DOOR FITTINGS Hangers and tracks Locks and latches Operators			
BATHROOM FITTINGS Towel rods, hangers Paper holders, soap trays			
CLOSET, WARDROBE HARDWARE Latches Hinges Light sliding door hardware Hooks, clothes holders Rods			
SPECIALTIES & SPECIAL-TO-ORDER TRIM Decorative trim Venetian blind hardware Door chimes and knockers Screen hardware Drapery hardware			
OTHER:			



Operator 4703W, for heavy wood casements, embodies highest quality metals and workmanship. Its internal gearing was originated by, and is an exclusive feature of, The Getty Company. It operates through screens and on casements using butt or extension hinges—as do all Getty operators.



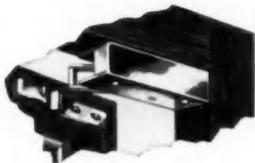
Operator 4715 is an inexpensive angle-drive operator for residential wood casements. It is precision-built, handsome of line, and lubricated for a lifetime of tough duty—as are all Getty operators.



Heavy duty reversible operator 4700 embodies the horizontal worm-and-gear principle. This low-priced, sturdy operator is interchangeable for left or right hand wood casements. It is easily installed—as are all Getty operators.



Locking Fastener 4608W is ideally designed for screened wood casements. It locks and unlocks the window without disturbing the screen. Its graceful handle has minimum projection, assuring adequate clearance for Venetian blinds. It's one of a family of high-quality fasteners.



Automatic Closer 4649 pulls top of out-swinging wood sash snugly against the frame. It helps prevent warping, assures all-around tight contact. Easily installed—6 screws; no mortising required.



Extension Hinge 2529 provides a 4" sash clearance for maximum ventilation and permits cleaning of the outside casement from inside the room. Firm corner support of sash is assured by flange-type leaf of cold-rolled steel, cadmium plated.



Operator 4703AF is exactly like 4703W but drilled to accommodate metal casements. Its internal gear construction is designed for heavy-duty service on residential and commercial casements.



Replacement Operator 4706H, for metal casements, is the only replacement operator adaptable to nearly all metal casements. The specially drilled holes of this operator permit perfect installation on most metal frames, regardless of the type of operator being replaced.



Locking Handle 4634 1/2 S is made for metal casements. Its protective action and ample leverage—characteristic of all Getty fasteners—assure perfect snugness and protection against the elements. It's one of more than 50 different metal casement fasteners produced by Getty.

Getty Operators are found on more casement windows than all other operators combined.

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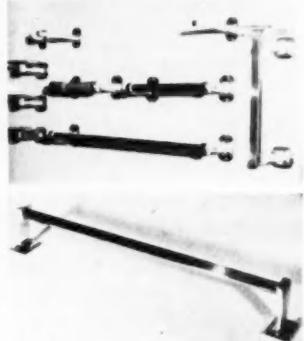
SIZES OF PACKAGED ALUMINUM NAILS

Site & Type of Nail	No. Nails Per Box	Coverage	Color of Box	Boxes Per Carton	Site & Type of Nail	No. Nails Per Box	Coverage	Color of Box	Boxes Per Carton
6d Wood Siding—Sinker Hd.	575	500 sq. ft. 1/2" x 8" Bevel Sdg.	Dr. Blue	36	1 1/2" Ori.-Wall	1530	1000 sq. ft. 1/2" Sheet Back	Purple	24
7d Wood Siding—Sinkers Hd.	575	500 sq. ft. 3/4" x 8" Bevel Sdg.	Dr. Blue	36	1 1/2" Ori.-Wall	1530	1000 sq. ft. 1/2" Sheet Back	Purple	24
8d Wood Siding—Sinkers Hd.	575	500 sq. ft. 1" x 8" Bevel Sdg.	Dr. Blue	24	1 1/2" Rock Lath	7665	35 square yards	Orange	16
10d Wood Siding—Sinkers Hd.	290	250 sq. ft. 1 1/4" x 8" Bevel Sdg.	Dr. Blue	24	1 1/4" Rock Lath	7665	35 square yards	Orange	16
6d Wood Siding—Casing Hd.	575	500 sq. ft. 1/2" x 8" Bevel Sdg.	Lt. Blue	36	1 1/2" Rock Lath	7665	35 square yards	Orange	16
7d Wood Siding—Casing Hd.	575	500 sq. ft. 3/4" x 8" Bevel Sdg.	Lt. Blue	36	1 1/2" Rock Lath	7665	35 square yards	Orange	16
8d Wood Siding—Casing Hd.	575	500 sq. ft. 1" x 8" Bevel Sdg.	Lt. Blue	24	2" Insulated Siding	1680	5 squares	Maroon	16
10d Wood Siding—Casing Hd.	290	250 sq. ft. 1 1/4" x 8" Bevel Sdg.	Lt. Blue	24	2 1/2" Insulated Siding	600	60 Squares Corners	Maroon	24
1 1/2" Asbestos Siding	885	5 sqs. Asbestos Sdg. Face Nailing	Red	48	1 1/2" Roofing	860	500 sq. ft. Roof Roofing	Green	36
1 1/2" Asbestos Shingle	885	5 sqs. Asb. Sdg. Conc. Nailing	Pink	48	1" Roofing	980	2 squares Sq. Tab. Shingles	Green	36
1 1/2" Asbestos Shingle	885	5 sqs. Asb. Sdg. Conc. Nailing	Pink	36	1 1/4" Roofing	980	3 squares Sq. Tab. Shingles	Green	24
1 1/2" Asbestos Shingle	885	5 sqs. Asb. Sdg. Conc. Nailing	Pink	24	1 1/2" Roofing	980	3 squares Sq. Tab. Shingles	Green	24
1 1/2" Cedar Shake	1680	1 sqs. Single Course	Brown	36	1 1/4" Roofing	980	3 squares Sq. Tab. Shingles	Green	16
1 1/2" Cedar Shake	1680	1 sqs. Double Course	Brown	24	2 1/2" Roofing	650	2 squares Sq. Tab. Shingles	Green	16
3d Cedar Shingle	3150	1 sqs. with 5" Exposure	Lt. Brn.	24	1 1/4" Roofing w/w/attached	1050	10 sqs. aluminum roofing	Brite Red	10
5d Standard Shingle	2600	General Purpose	Yellow	36	2" Roofing w/w/attached	1050	10 sqs. aluminum roofing	Brite Red	10
3d Standard Shingle	2600	Barn Buttens, Jaul Lining, etc.	Yellow	24					

(Continued from page 158)

and hangers, assist bars for bathtubs, all should be in keeping with the modern feeling of making the bathroom one of the display points of the house. Such accessories are available in chrome-plated brass, porcelain enamel, and ceramic tile. Only good quality materials should be chosen and carefully installed.

Closet and wardrobe fittings have come a long way in recent years from the simple hanger rod and clothes hooks of past generations.



Bathroom accessory hardware can add greatly to the beauty of the bathroom. Chrome-plated accessories are popular.

Pull-out rods open up for selection of garments and retract for compact storage. Tie racks, shoe racks, skirt and trouser hangers, hat holders and similar accessories keep clothes neater and add to garment life. Closet and wardrobe design may be tailored exactly to the owner's desires, and limited only by the customer's purse.

Garage Door Hardware and Fittings

Garage doors may be simply hinged, of the rolling type, or of overhead construction. Hinged doors are the most economical to install; sturdy hinges and latches should be used.

Rolling and sliding garage doors offer several advantages over folding doors. Hangers, track sections,

latches and locks permit long-lived installations free from maintenance problems. Special track sections resist rain and ice. Hangers adjust for possible sagging of doors or settling of foundations. Stops, guides, and track hangers permit installation in any type of material, inside or outside. Lock mechanisms provide full security, and guide rollers insure smooth operation.

The overhead type of garage door because of its economy of space, has become increasingly popular. Hardware design has made possible the use of this type of door. Spring counterbalances minimize effort, so that doors are raised or lowered at the touch of a finger. Track and roller units eliminate jamming and binding. Garages for high-cost homes may have motor-operated garage doors, and garage door control by photo-electric eye or radio-actuated mechanisms has been brought within the range of commercial installation.

Specialties and Special Order Trim

Hardware specialties include such items as door chimes, venetian blind hardware, curtain hardware and drapery fittings.

Picture windows dictate the use of drapery traverse hangers, which may best be installed by the builder. Consultation with the lady of the house will direct the style of hanger, finish, etc. In similar fashion, tie-backs for curtains, venetian blinds and accessories, door chimes, and other hardware extras can mean added profits and good will.

Nails, Screws, Fastening Devices

The array of builders' hardware items—screws, nails, anchors, bolts, nuts, and so on—is almost endless and is so well known that it needs little mention here.

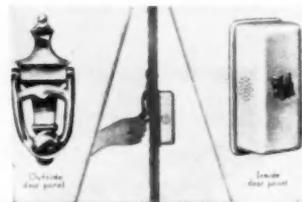
The use of aluminum nails in exposed woodwork to eliminate rust streaking is fast becoming standard practice in siding installation. The relatively slight additional cost is

negligible compared to the improved appearance and the value of these nails as a sales point. Other special-application nails, are drive screws and clinch nails for shingles and wallboard, and special nails for acoustical tile which eliminate damaging of the tile face.

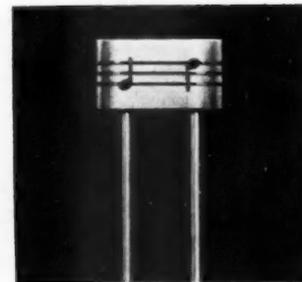
Again, there is a vast variety of form clamps, form ties, and other form hardware. The builder uses form ties that his workmen are accustomed to and that he has found efficient. Such devices are constantly being improved and new types offered, and the alert contractor will keep abreast of all such developments.

Bolts and nuts, washers and screws—these are all pretty much standard. But the manufacturers are giving new twists to old materials—improved

(Continued on page 163)



Door knocker actuates chime on inside of door mechanically, no electrical connections being required. Installation is quick and simple.



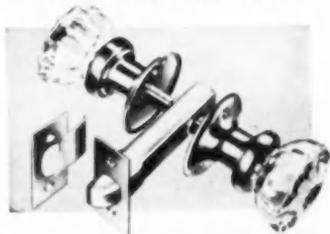
Door chimes have strong sales appeal. Typical models use one-chime unit to serve both back and front doors.



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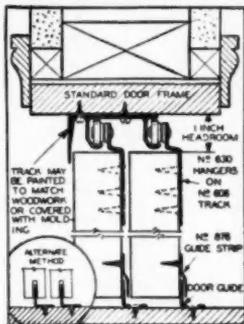


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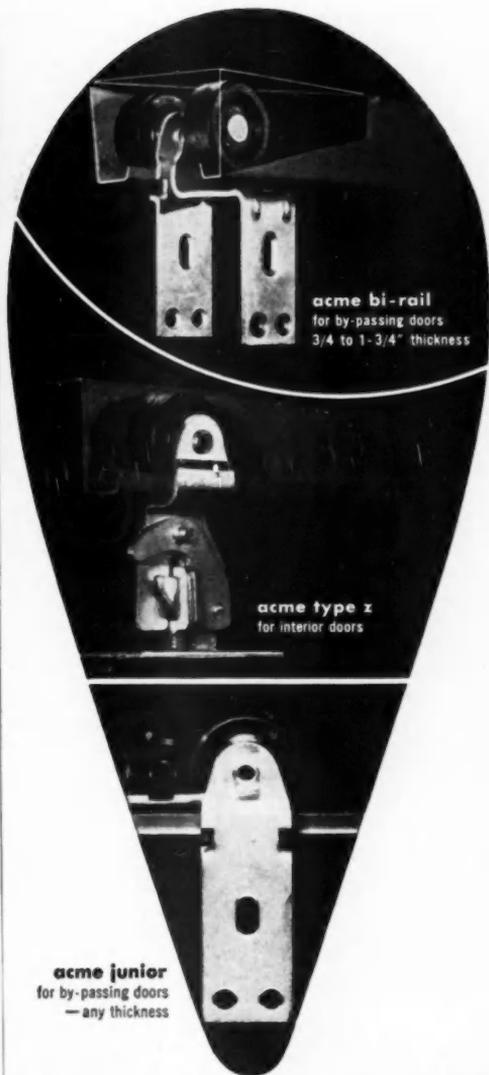
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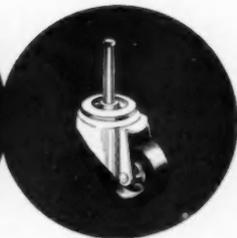
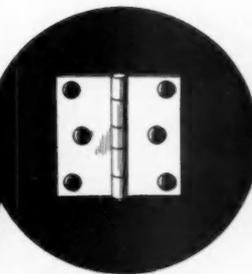
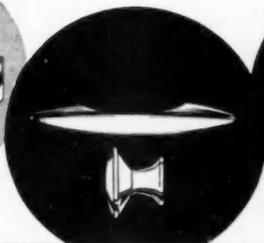
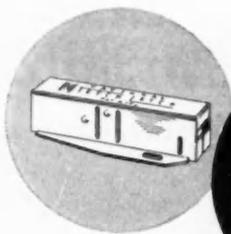


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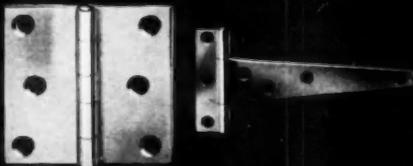


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Size and kind of Material	Board measure in ft.	Trade name	Lbs. of Nails Required			Length of nails	No. of nails to ea. bearing
			12" centers	16" centers	24" centers		
1 x 4 Boards and Ship-lap	1000	#4 common	60	48	30	2 1/2"	2
1 x 6 Boards and Ship-lap	1000	#4 common	40	32	20	2 1/2"	2
1 x 8 Boards and Ship-lap	1000	#4 common	31	27	16	2 1/2"	2
1 x 10 Boards and Ship-lap	1000	#4 common	25	20	13	2 1/2"	2
1 x 12 Boards and Ship-lap	1000	#4 common	31	24	16	2 1/2"	3
1 x 4 D & M Blind Nailed	1000	#4 common	30	24	15	2 1/2"	1
1 x 6 D & M Blind Nailed	1000	#4 common	20	16	10	2 1/2"	1
1 x 8 D & M Blind Nailed and 1 Face Nail	1000	#4 common	31	27	16	2 1/2"	2
1 x 10 D & M Blind Nailed and 1 Face Nail	1000	#4 common	25	20	13	2 1/2"	2
1 x 12 D & M Blind Nailed and 1 Face Nail	1000	#4 common	21	16	11	2 1/2"	2
2 x 4 to 2 x 16 Framing	1000	#204 common	20	16	10	4"	—
		#104 common	10	10	6	3 1/2"	—
		#104 common	8	6	4	3"	—
3 x 4 to 3 x 14 Framing	1000	#204 common	30	25	15	6"	—
2 x 6 D & M Flooring	1000	#204 common	35	27	18	4"	1
2 x 8 D & M Flooring	1000	#204 common	27	20	14	4"	1
1 x 4 Drop Siding	1000	#4 siding	45	35	—	2 1/2"	2
1 x 6 Drop Siding	1000	#6 siding	30	25	—	2 1/2"	2
1 x 8 Drop Siding	1000	#8 siding	23	18	—	2 1/2"	2
1 x 4 Bev. Siding	1000	#4 siding	23	18	—	2"	1
1 x 6 Bev. Siding	1000	#6 siding	15	13	—	2"	1
1 x 8 Bev. Siding	1000	#8 siding	12	10	—	2"	1
1 x 10 Bev. Siding	1000	#4 siding	45	35	—	2 1/2"	2
1 x 12 Bev. Siding	1000	#6 siding	60	50	—	2 1/2"	3
1 x 4 Ceiling	1000	#4 Finish	18	14	9	2 1/2"	1
1/2 to 3/4 Ceiling	1000	#4 Finish	11	8	6	2"	1
1" Finish Lumber	1000	#4 Finish	25	12	13	2 1/2"	2
1 1/2" Finish Lumber	1000	#6 Finish	12	10	6	3"	2
1 x 1 Flooring soft wood	1000	#4 Floor Brads	42	32	21	2 1/2"	1
1 x 4 Flooring soft wood	1000	#6 Floor Brads	32	26	16	2 1/2"	1
1 x 6 Flooring soft wood	1000	#8 Floor Brads	22	18	11	2 1/2"	1
1 x 1 1/2" Flooring, hard wood	1000	#4 Ceiling	13	10	—	1 1/2"	1
1 x 2" Flooring, hard wood	1000	#4 Ceiling	11	8	—	1 1/2"	1
1 x 1 1/2" Flooring, hard wood	1000	#4 Ceiling	27	20	—	2 1/2"	1
1 x 2 1/2" Flooring, hard wood	1000	#4 Ceiling	20	14	—	2 1/2"	1
1 x 2" Furring on Brick Walls — 100 Lineal Ft. — 204 Cot Nails, Requires 5 1/2 Lbs.		#4 Finish	Requires 1 lb. 16" on Centers.				
Base, per 100 Lineal Ft.		#4 Finish	Requires about 1/2 lb. Total				
Sides of Trim, per side of inside trim		#4 Finish	Requires about 1/2 lb. Total				
4" WOOD LATH, per 1000 lath.		#4 Finish	Requires 7 lbs.				
METAL LATH, per 100 Sq. Yds.		1" Staples, Requires 12 lbs.					
METAL LATH, per 100 Sq. Yds.		1 1/2" No. 12 Hook Head Nails, Requires 15 lbs.					
1/2" GYPSUM LATH, per 100 Sq. Yds.		1 1/2" x 13 Gauge — 5/16" Heads Smooth Diamond Points.	Requires 10 lbs.				
1/4" PLASTER BOARD, per 100 Sq. Yds.		1" x 13 Gauge — 5/16" Heads Smooth Diamond Points.	Requires 10 lbs.				
1/2" WALL BOARD, per 1000 Sq. Ft.		34 Flat Head Nail, Requires 5 lbs.					
3/4" WALL BOARD, per 1000 Sq. Ft.		42 Flat Head Nail, Requires 9 lbs.					
1" WALL BOARD, per 1000 Sq. Ft.		44 Flat Head Nail, Requires 9 lbs.					
BATTENS will require 1/2 lb. #4 Finish nails per 100 lineal feet.							
For various styles of wallboard, see manufacturer's directions for nailing.							

Table above from National Handbook

(Continued from page 162)
thread designs, lock washers and clamp nuts, screw heads which are more efficient with power screw drivers, etc. These are all little things but in a year can add up to many dollars saved through selection of the latest and best.

Both drywall construction and metal lath with plaster in hollow-wall construction have brought forth a wide array of special fastening devices, clips to hold the lath or

panels in place, channels to contain top and bottom of panels, spring-type slips to provide the basis for resilient hollow-wall and panel construction. Techniques for application vary from the simple hammer and pounding-block to fastening some types to the underside of the panels with mastic or cement paste developed for the purpose.

Time Savers

In addition to the rapid advance

in both builders' and finish hardware, manufacturers have also developed numerous small tools, jigs, and fixtures designed to speed the application and installation of their particular hardware items.

Lock manufacturers have brought out precision-engineered jigs which clamp on quickly to door and frame and assure perfect right-angle holes for proper lock fit. Boring kits and mortising tools are also available from lock manufacturers.

Many of the manufacturers of special builders' hardware items such as special clips and fasteners for the attachment of wallboard have also developed special tools for the application and installation of their products. Such instances are numerous. Asbestos siding shingles for instance, would be expensive to apply were it not for properly designed, efficient cutters for this material. Copper tubing installations have been made cheaper and better because the tubing manufacturer has also developed the tools for cutting, flaring, and attaching the tubing to fittings. The thin wall electrical conduit system would be impractical and expensive were it not for the special connectors, fasteners, and bending and fastening tools provided for working with this material.

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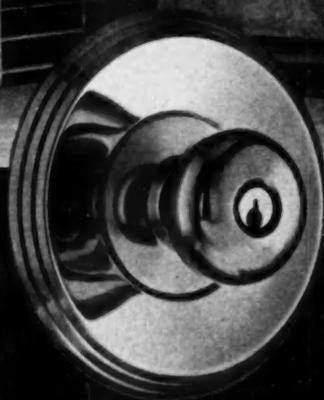
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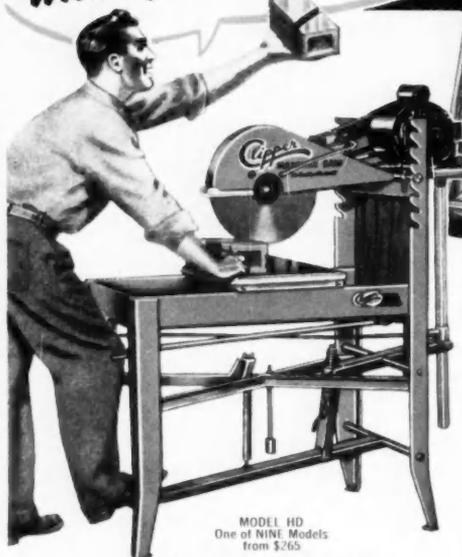
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LOOK! Joe... I made this cut
with my Clipper in 17 seconds!



MODEL HD
One of NINE Models
from \$265



Yes...

**CUT ANY MASONRY MATERIAL
EASIER, FASTER
with a NEW CLIPPER MASONRY SAW**

Yes, you can slice through the hardest materials in seconds with a CLIPPER MASONRY SAW. Smoother, faster cutting action than ever before. Contractors agree on the new WET or DRY cutting MODEL HD for the 100% Answer to ALL masonry cutting problems. Actually the HD is "4 SAWS IN 1"—it will meet your DUSTLESS cutting requirements in confined areas, it will cut DRY for outside operations, it can be "CONVERTED" to a (Light Duty) Concrete Saw and a Track Saw! Yes, now greater profits than ever before with a "CONVERTIBLE" Clipper Masonry Saw!

PATENTED CLIPPER FEATURES



PRESSURE
EQUALIZER



SELECT A NOTCH



SAVE A BLADE
DIAL



WET OR DRY
PUMP

With a Clipper on the job masonry cutting is easy . . . just place the material on Conveyor Cart . . . the SELECT-A-NOTCH instantly sets cutting head for material size. A quick setting of the Save-A-Blade Dial and the Pressure Equalizer Spring automatically cushions the blade for faster cutting—longer life. During DUSTLESS cutting the WET-or-DRY PUMP delivers the exact flow of water and when switching to Dry cutting the belts need not be disconnected.

Sold on FREE TRIAL!

Order TODAY on FREE TRIAL. Discover for yourself how Clipper will increase production . . . cut costs . . . increase profits. Only through the Clipper FREE TRIAL are you guaranteed . . . ACTUAL TEST on the job . . . FULL SATISFACTION . . . NO OBLIGATION!

**... NOW YOUR CLIPPER
IS "CONVERTIBLE"!**

At any time the cutting head of your Model HD Clipper can be placed on the "CONVERTIBLE" CART . . . you're ready to saw concrete or asphalt patches or trenches. No more fractures beyond removal lines—no spalling! But there's more . . . just set the CART on TRACKS and operate as a TRACK SAW on stone slabs. The Clipper "CONVERTIBLE" is an exclusive Clipper design.



① DRY-Masonry Saw



② WET-Masonry Saw

③ Light Duty
CONCRETE Saw



④ TRACK
Saw

4 SAWS IN 1

Clipper

KANSAS CITY 8, MISSOURI

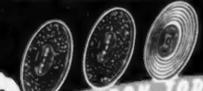
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INDOOR CUTTING SHOP OF CONTRACTOR. Workman at left uses power plane; at right, door is mortised for lock; third workman rabbets for butts with router. Power tools speed work and cut costs

IT IS impossible to think of the building industry without considering the great variety of tools necessary to building work. From the stone hammers and flint axes of primitive peoples have developed the hundreds of tools now in everyday use.

PURPOSE AND DESIGN OF TOOLS

The primary purpose of any tool is to extend the ability of the worker, to let him work more efficiently, or to do work that would otherwise be difficult or impossible. A rock may be used to hammer nails, but a hammer is more efficient, and a power nail-driving machine extends the ability of the worker many-fold. A worker could possibly bore holes with a crude piece of metal sharpened at one end, but a carpenter's bit and brace make this a matter of minutes (or a power drill, seconds), with a precision otherwise impossible.

Modern low-cost building methods would be impossible without today's tools. Sawing, digging, drilling, pipe threading, and countless other operations are accomplished with production tools at a fraction of the cost of obsolete methods. The tool which finds acceptance is the one that does the job more easily. Tools which take the least muscular effort, are most convenient in operation, and require the least adjustment in use are always preferred.

Safety is one of the most important factors in tool design. Saw guards, ground wires and efficient insulation for electrical tools, the use of quality steels to prevent chipping of hammers, drills, and chisels—these are typical of the added safety built into tools today.

Constant improvements in tool design improve the quality of the work. Power woodworking tools make every carpenter the equal of yester-



THE POWER HAND SAW is one of the most useful tools. Workman is shown making angle cuts on rafters at the job site

APRIL 1952

TOOLS, POWER AND HAND

Features and Types of Tools

Cost Reduction
Performance
Reliability
Maintenance

Hand Tools

Basic Types
Quality

Hand Power Tools

Drills
Saws
Sanders
Grinders
Planers
Hammers
Screws
Power Screwdrivers
Spray Guns
Stud Drivers

Production Power Tools

Power Saws
Radial Arm Saws
Power Walk Saws
Masonry Saws
Power Drills & Presses
Power Sanders
Grinders, Shapers
Planers
Pipe Threaders & Cutters
Welding Tools
Special Tools

Selection

Maintenance



WORKMEN USING POWER SANDERS to finish doors. Power drill press with auxiliary oversize table is shown in the background

day's most skilled and painstaking craftsmen. Abrasive wheels for cutting brick and tile let the mason do neater, stronger work. Power threading machines for the plumber and steamfitter give more uniform threads and make them less likely to leak. Cement vibrating and finishing machines help to produce a denser, harder surfaced concrete.

"The right tool for the job" is an axiom so old that it hardly needs repeating. No one would use a sledge to drive finishing nails, or a keyhole saw to cut a 6 by 6 timber. Tools are now tailored to fit the particular job. Only by getting the tools best suited for the work can the greatest economy and efficiency be realized.

As important as the selection of the correct tool is the proper maintenance after it is put in use. Power equipment should be lubricated at the intervals recommended by the manufacturer; saws and all other cutting tools should be kept sharp; adjustments for wear, as of pipe dies, should be made as soon as necessary; and dirt, abrasive materials, or other materials which would cause excessive wear should be removed from tools

promptly to avoid future trouble.

HAND TOOLS

The basic hand tools in daily use in the construction industry are, in form, much the same as for the past three or four centuries. The carpenter uses the saw, hammer, try-square, level, auger and brace and bit. The mason uses the trowel, line, brick hammer and chisels, and level. The laborer's basic tools are the shovel, pick, and sledge. The plumber depends on wrenches, cutter, reamer, stock and dies. The electrician uses pliers, soldering iron, and so on. All of the basic hand tools are so much a part of the work that little thought is actually given to their design, or to the slight but important improvements that have been made throughout the past few years. New steels have improved the quality of saws and chisels; aluminum levels are less likely to break, and are easier to handle than those of wood; plastic handles for tools wear and feel better than wood ones; and in many other little ways hand tools are better today than in the past. In general, it pays to get the best-quality tools. The

higher first cost is soon offset by the added life, better work, and ease of use of quality tools.

The contractor must have an adequate supply of tools for the greatest number of men he will have working at any one time. If there are six laborers on the job but only five shovels, one man will stand idle. But it is not sufficient to have just enough; even with the best of care, tools will break or become worn in use, so it is necessary to have reserve tools on hand to take care of breakage, or waiting periods, as when one saw blade is being sharpened.

Keeping track of tools can cut to a minimum the losses from pilferage and carelessness that are inevitable. The good worker will not walk away and leave his tools lying about, to be picked up by others or just carelessly lost. A system of tool checks for tools taken out of the shanty, the branding or stamping of tools with the company name or initials, and the safe locking up of tools at night, and when not in use, can all help to reduce tool losses.

HAND POWER TOOLS

The list of power tools for hand use on construction work grows almost daily, as manufacturers develop new designs. The following are among the more common:

Drills

Electric hand drills are made in perhaps a greater variety than any other hand power tool; one manufacturer lists 27 different types of 1/4-inch drills alone. Sizes of electric drills are from light 3/16 inch up to heavy 1-inch drills (for steel). Pistol grip, spade handle, and other styles permit selection of type to job. Speeds are variable in different models, from around 2000 rpm for small drills down to 200 to 300 rpm for larger sizes. Key type checks are almost universally used, as their greater gripping power offsets their slight additional cost as compared to hand chucks. Choice of a drill is first on size of work to be handled; second, the type of work will dictate the

(Continued on page 176)



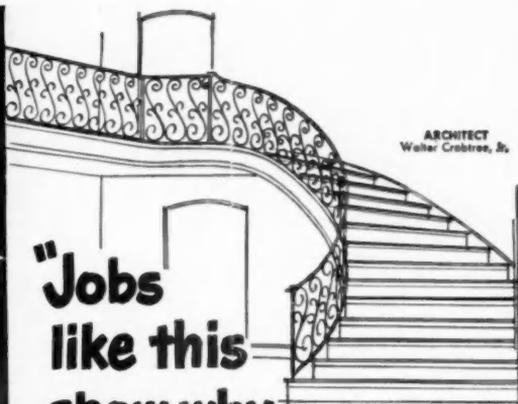
HAND POWER DRILLS are versatile tools finding constant use. At left, holes are being bored in mudsills. Right, two models of power drills



**RATE YOUR TOOL
MAINTENANCE
FOR PROFIT
ON CHART**



(See page 174)



ARCHITECT
Walter Cretton, Jr.

"Jobs like this show why we're sold on STANLEY ROUTERS"

H. B. SANSON, INC., West Hartford, Conn.
Cabinet Makers, step up efficiency with these versatile tools.

Mr. H. B. Sanson says, "Hand cutting the stringers for this circular stairway could have been a slow and tricky task. But with a Stanley Router and a handmade template we made precision cuts quickly and easily—at a big saving of time and 'muscle'."

"Wherever possible we use Stanley Routers . . . and the more we use them the more we save. They're important members of our building crew."

And it's for these same reasons—time and money saving—that more and more profit-minded contractors use Stanley Routers for all kinds of smooth, finished cuts. Use them on "specials" like this circular stairway and to put speed and precision into everyday jobs—mortising for hinges, edging stair treads, doors, panels, dovetailing, shaping, beading and fluting, and many other types of work limited only by the user's ingenuity.

See these cost-cutting Stanley Routers in action at your dealer's or write for descriptive literature to: Stanley Electric Tools, 400 Myrtle Street, New Britain, Connecticut.



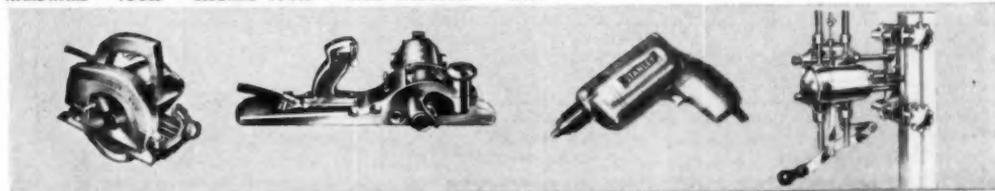
There's a complete line of portable Stanley Routers from $\frac{1}{2}$ to 3 h.p.—each designed and powered to do the job right.

HB8A	$\frac{1}{2}$ h.p., 20,000 r.p.m.
R8A	$\frac{1}{2}$ h.p., 20,000 r.p.m.
R5B0	$\frac{1}{2}$ h.p., 20,000 r.p.m.
R5B	1 h.p., 18,000 r.p.m.
R22	2 h.p., 18,000 r.p.m.
R33	3 h.p., 18,000 r.p.m.

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL



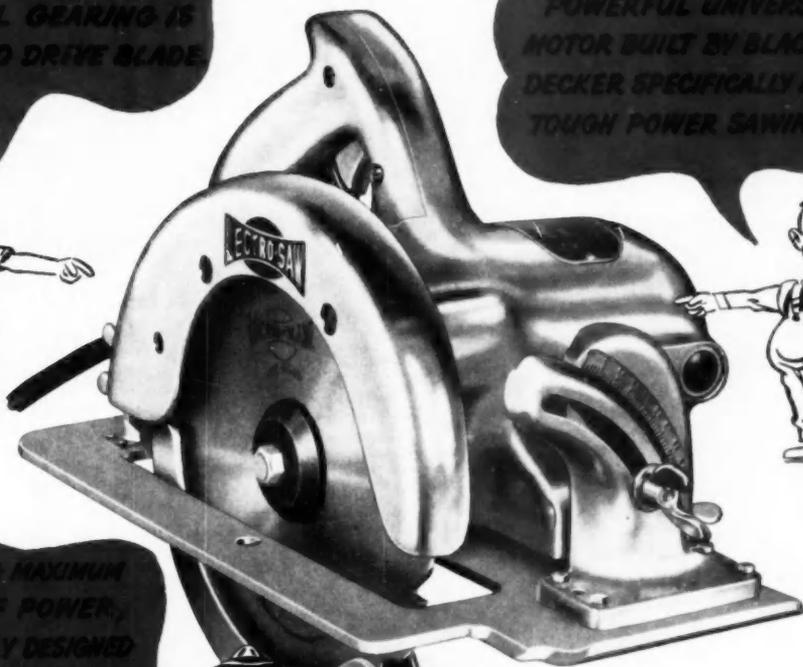
Tool Maintenance Is Profitable

How Good is Yours . . . yes more
or
less no

1. Do you have and use a regular, systematic schedule for inspection of all tools, both in the shop and on the job?			
2. Do you have a regular schedule for the lubrication of all power tools and moving machinery?			
3. Do you have a systematic routine for cleaning tools, both at the end of the day's work, and upon completion of the job?			
4. Are tools protected against sand, dust, grit, dirt, and other abrasives?			
5. Are tools having variable speeds always operated at the correct speed for the work being performed?			
6. Do you have a regular procedure for instructing each worker in the proper use, purpose, and care of the tools he uses?			
7. Do you impress each workman with the importance of keeping his tools in proper condition?			
8. Are you certain that each tool and machine is used only for work it is designed to handle?			
9. Are tools shut off when not in use?			
10. Do you have the instruction books, service manuals, and other information provided by the manufacturer on hand, and available to foremen and workmen?			
11. Do you have a clear-cut system for ordering repair parts, checking to see that they are delivered, and installed in the tools needing them?			
12. Do you have a manufacturer's representative or service man call regularly, at least once a year, to check tools for wear and proper maintenance?			
13. Are all the workmen instructed to report promptly any defects in operation of the tools they use?			
14. Are tools not in use on the job stored securely in the shop, properly protected against corrosion, moisture, fire, and theft?			
15. Are tools moved promptly from one job to another, so that tools needed at one job are not sitting idle, and does each job have the tools best suited for its needs?			

FOR SMOOTH FLOW OF
POWER, HIGH QUALITY
HELICAL GEARING IS
USED TO DRIVE BLADE.

POWERFUL UNIVERSAL
MOTOR BUILT BY BLACK &
DECKER SPECIFICALLY FOR
TOUGH POWER SAWING.



MAKING MAXIMUM
USE OF POWER,
SPECIALLY DESIGNED
S & D BLADES
CUT MOST EVERY
BUILDING MATERIAL
KNOWN IN A JIFFY.



Black & Decker
ELECTRIC
UTILITY
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**PORTABLE
ELECTRIC
TOOLS**

The Black & Decker Mfg. Co.,
Dept. H-666, Towson 4, Md.

Talk about ABUNDANT POWER
Look what Black & Decker Saws give you!

PLUS

- Easy Handling
- Fast Adjustment
- Maximum Safety
- Job Versatility

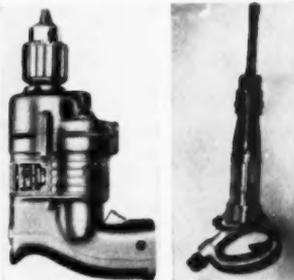
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POPULAR PRICES!

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- 6" Deluxe Heavy-Duty...\$76.50
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Black & Decker Saws and Blades and
handy, new Protector. Learn how they
pay for themselves in a few jobs! **WRITE
FOR FREE CATALOG.**



POWER DRILLS are available in a variety of sizes and types. Right is shown low speed, lightweight drill geared down to 450 r.p.m. for drilling steel, glass, brick and other hard materials. Left is a drill-hammer for masonry. The bit both hits and rotates at the same time, and has $\frac{1}{4}$ to $\frac{3}{8}$ -inch drill capacity

(Continued from page 172)

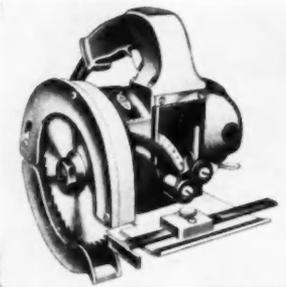
speed of operating; third, the question of intermittent or continuous use may be a factor in the cost. Drill bits must be matched to the work. Drill points for metal are not suited for continuous wood drilling. Different drills may be had for wood, steel, alloys, glass, marble, concrete, and ceramic tile. Drills must be properly sharpened, and it will usually be found that this is better done by one man skilled in this operation, rather than letting each worker sharpen his own.

Saws

The light, easily handled electric hand saw is one of the most common on-the-job power tools today, and it is doubtful if any other power tool has resulted in a greater saving in time and cost in construction work. From the setting of forms to final trim, carpenters are working better and faster with powered hand saws. Most common sizes are those using 6-inch and 8-inch blades, handling 1-inch stock and 2 by 4's with ease, although hand saws taking blades up to 12-inch diameter can be had for larger timbers. Built-in guards cover the blade at all times except where the saw is actually cutting, and "dead man's" switches prevent operation of the motor unless positive pressure is applied to the switch, so that the saw



A TYPICAL HAND DRILL having almost universal application on the job



TYPICAL HAND POWER SAW, with 6 $\frac{1}{2}$ -inch blade. Operates at 5300 r.p.m. An adjustable rip scale drive is built in. Note also protective guard and adjustment for bevel cuts

cannot be left running unattended. Some models have a tilting shoe for cutting bevels, and others have provision for attachments converting the hand saw to bench use, or for work as a radial saw.

A variety of blades are available: combination blades for general use, both cross-cutting and ripping; carbide-tipped blades for heavy duty use, and where nails may be encountered; abrasive wheels for cutting of brick, tile, light metals, and dado heads.

Sanders

Three basic types of sanding machines are in common use. Belt sanders, having a continuous belt of abrasive material passing over two rollers, and drum sanders, in which a band of abrasive is attached to a revolving drum, are suitable for production work on relatively large areas. Disc sanders, in which a disc of abrasive material is attached to a rotating rubber pad, enable the worker to get up to the edges of walls, and to operate in other "tight"



CUTTING WITH HAND POWER SAW. A portable electric generator supplies current for locations away from power lines

places. Reciprocating or oscillating sanders, in which a flat sheet of abrasive moves backward and forward, or in an oscillating movement, are convenient for small areas, for smoothing dry wall seams and other similar work. Any sander selected should have adequate power for the work, should use standard size belts, sleeves, discs, or sheets; should have adequate protection of the motor bearings and moving parts against the entry of dust and abrasive grit. Manufacturers' recommendations should be followed as to the type of abrasive which should be used for different surfaces. Many different grit sizes, bonds, and cutting materials make the power sander most versatile for all finishing operations.

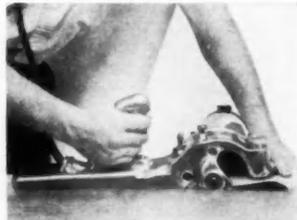
Grinders

Hand grinders may be of the self-contained variety, or may operate from a flexible shaft. For preparing work for welding, dressing down exposed welded joints, smoothing exposed concrete surfaces, finishing stonecutting operations, the hand grinder is invaluable. When fitted with the proper wheel, a flexible shaft grinder can be clamped in a vise to pinch hit for a bench grinder in sharpening tools.

(Continued on page 180)



THREE HAND SANDERS FOR FINISHING OPERATIONS. The unit at left operates with a reciprocating motion, using sheet sandpaper. Center is belt type, for larger areas. Right is an orbital type, in which the abrasive is moved in a circular motion



POWER PLANE shown does the same work as carpenter's plane, cheaper and better than by hand

**A New, Popular-Priced Line
of Small Circular Saws...
by DISSTON**

**... for all portable
electric hand saws**

Now your circular saw dollar buys faster, cleaner cutting and longer useful life than you ever thought possible in these days of rising prices. The new Disston line is priced to make it the *leader* in value... designed to make it the *leader* in performance!

New efficiency in combination sawing: The new Disston style W Combination Saw sets a new standard of cutting efficiency. It is of a radically different design, based on advanced principles... the result of fundamental research by Disston engineers aimed at meeting the demand of portable electric hand saw industry for a combination blade that would *cut faster and cleaner*... *stay sharp longer*... *yet put less strain on small motors*.

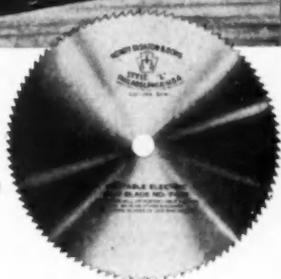
Disston Circular Saws are made in all tooth types—cut-off, planer, flooring and combination—with center holes to fit all popular makes of portable electric hand saws. Each is individually packaged and has etched plainly on it the name and model number of the machine it fits. You can be *sure* you have the *right* blade for *your* saw when you buy a Disston!

ASK FOR DISSTON SMALL CIRCULAR
SAWS AT YOUR CONTRACTOR SUPPLY
OR INDUSTRIAL SUPPLY HOUSE

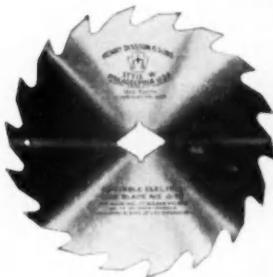
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CUT-OFF SAW



COMBINATION SAW



PLANER SAW



FLOORING SAW



New Production Line Economies



RADIAL SAW This new 16" Delta Radial Saw cuts through the entire 360° at every conceivable angle. All cuts are made above the work table, in clear view. For miter capacity and extraordinary versatility, this saw truly has no equal. Also available on 8", 10", 12" and 14" models.

DELTA TOOLS

Another



Product



CIRCULAR SAW Mass production ripping is exceedingly simple on this massive, rugged, big-capacity Delta 12" tilting arbor saw. Its accuracy is built-in for long years of usefulness. For dependable performance and operating economy, there's nothing finer. Also available in 10" and 8" models.



JOINTER The long work table on the Delta 8" Jointer makes it an ideal tool for easy handling of long boards. The special 4-knife cutter-head is 33½ per cent faster than a 3-knife machine. Making true "finish" cuts fast eliminates extra operations. Also available in 6" model.



BAND SAW Ideal for all curve cutting and taper work, the Delta 20" band saw is exceedingly fast, safe to use and most economical to operate. It will cut one piece at a time or many stacked pieces—with perfect accuracy. Also available in 14" and 36" models.



PLANER For converting rough lumber at high speed, the Delta 13" x 5" planer is an important money-saver. Rugged, safe, amply powered, it does a precision job on any stack from 13" x 5" boards to 6" pieces unbutted. No kick-back. Also available in 24" x 8" model.

and Profits Can Be Yours—with

DELTA "BIG 5" Machines

Precutting framing, doing your own millwork, building cabinets, streamlining lumber handling in Delta-tooled shops are definitely reducing building costs today!

More and more alert builders are finding in Delta's "Big 5" Machines a dependable means to cutting costs and increasing profits. The built-in precision accuracy of these fine tools, their durability and remarkable low-maintenance records, their superior safety features—all these make the "Big 5" ideal equipment for a central shop or on-the-site installation.

Here's How You Can Save Money USING THE DELTA "BIG 5"

- Straight-line, low-cost handling of lumber.
- Precut lumber into ready-to-use shapes for high speed construction.
- Re-work material for special uses—salvaging scrap, eliminating waste.
- Modernize job operations; Delta tools pay for themselves quickly, reduce your tool investment.
- Do more operations with fewer machines—Delta accessories are a big help.
- Save valuable space because of Delta's compact designs.
- Cut operating costs to a minimum—Delta machines are economical to run.
- Handle more work in less time—means you can build more houses at bigger profit.

All these cash advantages can be yours—and the way to find out "how" is to talk with your Delta dealer. He's thoroughly familiar with your production problems. Also send for the full specifications and descriptions of the "Big 5." Use the coupon.

There's a Delta Power Tool for Your Job
WOOD OR METAL WORKING

53 MACHINES • 246 MODELS • MORE THAN 1300 ACCESSORIES

For Delta Dealers, see your Classified Phone Directory under "Tools".

Only in Delta Tools can you get these

EXTRA QUALITY FEATURES

AT NO EXTRA COST

- 4-belt drive on 12" tilting arbor saw provides constant, even power-flow—no loss through slippage
- Double worm-gear reduction drive on Delta 13" x 5" planer automatically lubricated—means years of trouble-free service
- Delta finger-tip controls in instant reach—safety switches reduce accidents
- Delta's tables are massive, heavily ribbed, precision ground—accurate!
- Delta's handy up-front controls make operation easy
- Light-weight Delta tools are tops for mobility
- All Delta's pulleys are dynamically balanced—less vibration and bearing strain mean longer life.
- Special pre-loaded, sealed and lubricated-for-life ball bearings assure continuous accuracy
- Delta's motors are rugged, powerful, to NEMA standards, backed by nationwide service
- Delta tools have safety guards that protect!

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HEAVY DUTY FLOOR SANDERS using a revolving drum to which sandpaper is fastened. Finishing or refinishing may be done cheaply with modern sanders

(Continued from page 176)

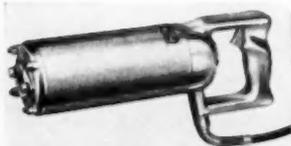
The selection of the correct wheel for grinding operations is often neglected; workers will use any wheel in the grinder, rather than change to the correct wheel. Foremen should see that a wheel for rough dressing of concrete is not used to sharpen tools, for example.

Grinders are more susceptible than any other tool to damage from dust and grit. Selection of tools which are adequately protected, and regular cleaning and lubrication are "musts" with grinding equipment.

Planes

Power-driven planes have been welcomed by builders for trim and finish carpentry work. They make the hanging of doors and windows, fitting of cabinets and trim woodwork a fast and easy job. The power plane is essentially a hand-held jointer. A revolving cutter head with three knives is fixed in relation to a base plate which may be adjusted to control the depth of cut. Also, an adjustable guide may be set to make accurate bevel cuts.

The power plane will usually be handled only by the one or two men doing the trim work, and they should be responsible for its care and maintenance. Blades should be sharpened immediately upon signs of dulling, and extra blades should be kept on hand if sharpening is not done on the job.



POWER HAMMER ABOVE OPERATES BY AIR PRESSURE of 30 to 100 pounds, and has no kick when held against the work



Hammers

All of the building trades find the power hammer a great saver of time and money. For breaking out concrete, drilling holes for inserts, notching heavy timbers, setting expansion plugs, hammers do in minutes work that would otherwise take hours. Lightweight, small units permit work in spaces too small to allow a chisel and sledge.

The severe vibration of the electric hammer makes the most rugged construction necessary for these tools. Shock-absorbing drive linkages added to the design have lengthened tool life greatly over the earliest units. Quality should not be sacrificed in the purchase of these tools.

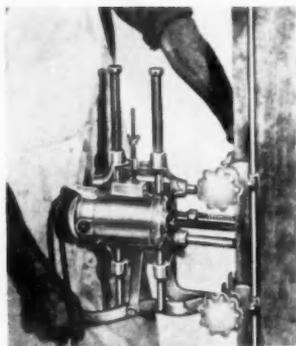
Many different tool bits for electric hammers permit the most efficient use for each job. Carbide-tipped drills for holes, special steel chisels for wood and bull points for breaking concrete, all speed up the job and make possible top efficiency.

Routers

The portable hand router, like the hand planer, lets the trim carpenter do faster, more accurate work. Rout-



HAND ROUTER to rout for hinges, uses a special template. The use of templates assures a perfect fitting hinge



LOCK MORTISER speeds job of installing and eliminates possibility of damaged doors

ing for locks and hinges, on-the-job fabrication of mouldings and similar work is made quick and simple with the hand router and appropriate jigs.

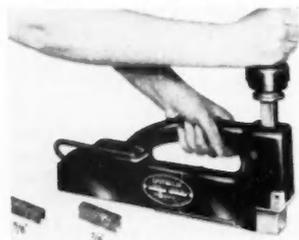
The hand router is ordinarily supplied with adjustable guides for straight and curved work, and has provision for controlling the depth of cut. Routing cutters and collars are supplied as needed, and special jigs for hinges, locks, etc., can easily be made as needed.

A special type of routing machine, the lock mortiser, makes quick work of what was formerly a slow job. Once set in place on the door by a jig, the actual cutting of the lock mortise takes as little as 30 seconds.

Power Screwdrivers and Nut Runners

Sheet metal workers, carpenters, iron workers, and other trades on jobs requiring driving of many screws or nuts of the same size will save money and manpower with electric tools for driving. The power tool drives screws and nuts faster and better than by hand, and is less likely to damage work by slippage. Typically, power drivers are fitted with interchangeable bits or sockets for different sizes, and have an adjustable

(Continued on page 185)



ABOVE A PORTABLE NAILING HAMMER that rapidly drives 16-gauge 7/8-inch staples into soft or hard wood with one blow of the fist or a rubber mallet. Easy loading, positive feed and drive assure rapid operation

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Radial Arm Saw Techniques

NOTCHED RAFTERS

The most efficient manner in which to cut the rafter shown in Fig. 5 would be to have two radial arm saw machines in line—one with a saw blade on the arbor and the other with a rafter notching head. The arm of the first machine would be set at the angle required to make the vertical cuts. The second machine would be set so rafter notching head would be at the angle of the notch, or bird mouth. The vertical angle of the bird mouth is the same

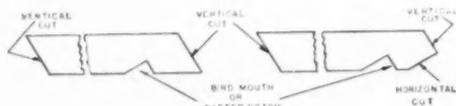


FIG. 5

FIG. 6

as the vertical cut. If the angle is 22 degrees 37 minutes (5/12 pitch), the motor would be beveled 22 degrees 37 minutes from the vertical.

Material is laid flat on the table and moved to the first machine where the first vertical cut is made. Then material is moved to a swinging stop for the second vertical cut. Material is turned on edge and moved to second machine where the notch is cut. An example of this cut is shown in Fig. 7 below.

If only one machine is used the best method to follow would be to make all the vertical cuts and then stack the material. Change the blade for a rafter notching head and cut the required notches.



To make cuts shown in Fig. 6, above three machines should be in line—two equipped with saw blades and one with a rafter notching head. This arrangement produces best results. The first machine should be set up to make vertical cuts, the second to make horizontal cuts, and the third machine to make the notch or bird mouth.

If only one machine is used, vertical cuts are made first and the material stacked. The arm of machine is then swung through to the angle of the horizontal cuts and these are made. The blade is taken off the machine and replaced with a rafter notching head to make the notch.

With one machine, and using only a saw blade, the vertical cuts are made first, and then the horizontal cuts. With the material on edge, the plate cut of the notch is made. The fourth time through, the vertical cut of the notch is made.

With two machines available to make the cuts shown in Fig. 6, above, it is suggested that the horizontal and vertical cuts be made first. Then, using the method that applies to the equipment available, cut the notches.

MITER CUTS



The miter cut shown in Fig. 8 is made with the arm of the machine turned to the angle of the cut. With the arm turned, two pieces of material laid flat, one on top of the other, can be cut at the same time.

If material is placed on edge the arm is left in normal position and the saw blade is set at a bevel, shown in Fig. 9. As many as eight rafters can be mitered at one time in this manner.

To make the compound miter bevel the saw is set at 45 degrees. Swing the arm to the angle of the plumb line, and with the material laid flat, make the cut. This method is shown in Fig. 10.

The stop shown in Fig. 11 is the recommended type for

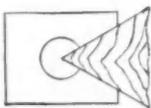
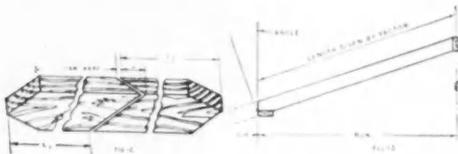


FIG. 10

miter cutting. It will prevent material from resting on the point or sharp edge while the cut is made.

Time and labor can be saved if cuts are laid off to make the jacks into pairs at each cut. This is done by starting with the short right hand jack and the long left hand jack. Stops are set according to the increment of increase (see table "Spacing of Increment"). This method uses a nearly constant length of lumber. When short and miss cuts are used, figure out the pair of jacks required and rip material into usable jacks. In making layout allow 5/32 inch for saw kerf. See Fig. 12.



ROOFING TABLES

Desired Length x Run x Factor of Rise - 1/2 thickness of Ridge
Same add Overhead x Factor of Rise

Rise to Inches	Angle of Common & Per Foot of Run	Run Rafters	Angle of Rip & Rafters	Factor of Length L For Common Rafters	Factor of Length L For Rip & Rafters	Table of Spacing of Increments		Increaser On Rafters
						16' On C.C.	24' On C.C.	
4"	18° 26'	13' 11"	1.0542	1.6570	1.6207	16 3/8"	24 5/8"	24 5/8"
4 1/2"	20° 33'	12° 50"	1.0680	1.6311	1.6215	17 1/8"	24 5/8"	24 5/8"
5"	22° 57"	12° 23'	1.0833	1.6073	1.6223	17 5/8"	25 1/8"	25 1/8"
5 1/2"	24° 33'	11° 56'	1.1000	1.5856	1.6236	18 1/8"	25 1/8"	25 1/8"
6"	26° 34'	11° 26'	1.1180	1.5650	1.6252	18 3/8"	25 1/8"	25 1/8"
6 1/2"	28° 27"	10° 55'	1.1373	1.5464	1.6270	18 5/8"	25 1/8"	25 1/8"
7"	30° 14'	10° 21'	1.1577	1.5298	1.6290	18 7/8"	25 1/8"	25 1/8"
7 1/2"	32°	9° 48'	1.1792	1.5152	1.6311	19 1/4"	25 1/8"	25 1/8"
8"	33° 41'	9° 12'	1.2019	1.5025	1.6333	19 1/2"	25 1/8"	25 1/8"
8 1/2"	35° 19'	8° 38'	1.2255	1.4910	1.6357	19 3/4"	25 1/8"	25 1/8"
9"	36° 52'	8° 04'	1.25	1.4808	1.6382	20"	25 1/8"	25 1/8"
9 1/2"	38° 22'	7° 29'	1.2754	1.4720	1.6407	20 1/8"	25 1/8"	25 1/8"
10"	39° 48'	7° 00'	1.3017	1.4645	1.6433	20 1/4"	25 1/8"	25 1/8"
10 1/2"	41° 11'	6° 26'	1.3288	1.4580	1.6460	20 3/8"	25 1/8"	25 1/8"
11"	42° 31'	6° 00'	1.3566	1.4525	1.6487	20 3/4"	25 1/8"	25 1/8"
11 1/2"	43° 48'	5° 34'	1.3851	1.4480	1.6515	20 7/8"	25 1/8"	25 1/8"
12"	45°	5° 08'	1.4142	1.4442	1.6543	21 1/8"	25 1/8"	25 1/8"
12 1/2"	46° 10'	4° 42'	1.4440	1.4410	1.6572	21 1/4"	25 1/8"	25 1/8"
13"	47° 17'	4° 16'	1.4743	1.4383	1.6601	21 3/8"	25 1/8"	25 1/8"
13 1/2"	48° 22'	3° 50'	1.5052	1.4360	1.6631	21 3/4"	25 1/8"	25 1/8"
14"	49° 24'	3° 24'	1.5366	1.4341	1.6661	21 7/8"	25 1/8"	25 1/8"
14 1/2"	50° 23'	2° 58'	1.5688	1.4325	1.6691	22 1/8"	25 1/8"	25 1/8"
15"	51° 21'	2° 32'	1.6008	1.4312	1.6725	22 1/4"	25 1/8"	25 1/8"

Floor Maintenance

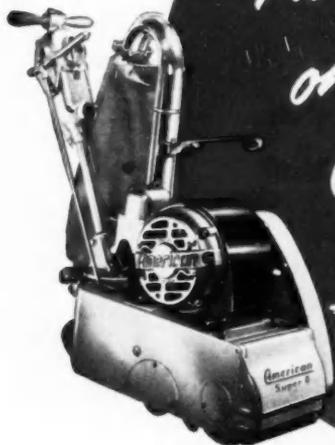
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1. FASTENING LAMINATED PLYWOOD BOWS of trailer frames with Bostitch staples holds them firmly in place while glue sets. Bostitch H4 self-feeding hammers, used on this job with rubber mallets, do the work 3 times faster and 30% lower in cost than hand nailing. It's easy to see why. One blow per staple. No slow placing of nails. No misses. Less worker fatigue. You, too, may find that Bostitch stapling hammers or machines can cut your costs of fastening wood, light metal, paper, leather, rubber or plastics.



2. ASSEMBLING SCREEN DOORS with Bostitch T5 stapling tacklers is twice as fast as hand tacking, reports this same trailer manufacturer. The reason is clear. One-hand, finger-squeeze operation is quick, easy and accurate ... leaves other hand free for holding the work.



3. APPLYING INSULATION to trailer walls is done better and faster with Bostitch T5 tacklers. Builders enjoy the same benefits.

4. ATTACHING GIMP to the trailer frames is also easy with Bostitch T5 tacklers. Staples can be accurately placed within 1/16" of edges.

Power Tools Make "Extras" Possible

An unusual amount of "extras" are incorporated in the new low-cost homes being built by the B-D Development Co. of Birmingham, Ala. R. H. Brown, president of the building concern, says that his latest 51-unit housing project will feature houses with a large number of "extras" and that this is being made possible by the savings realized through the use of modern power tools and equipment used by workers at the construction site.

Among the "extras" made possible by the savings through use of power equipment and incorporated into the homes are: Youngstown cabinet, sink and garbage disposal unit; Gerity-Michigan dishwasher; Bendix automatic washing machine; Westclox electric clock; International Harvester refrigerator; Hardwick gas range; Westinghouse exhaust fan and motor; Walker built-in ironing board; in addition, there is a chest of drawers in each bedroom, built into the closet with mirror above, and a book shelf built into the wall of the large bedroom.

Preliminary advertising brought 150 applicants for the 51 homes of the project.



Time is saved by use of this radial saw with 2 H.P. motor

Power equipment which resulted in the substantial savings included DeWalt 2 H.P. radial saw; Boice-Crane jointer and planer; Whiteman concrete finishing machine; Dayton grinder and sharpener; Dayton arc-welding unit; Black & Decker standard drill; Stanley router; Skilsaw 3-inch belt sander; Stanley electric planer; Bostitch staple hammers; Master Vibrator backfill tamper; Skilsaw portable power saws; Boice-Crane table saw; Heston & Anderson jointer.

The houses are two-bedroom units that were designed to sell for an average price of from \$7,850 to \$8,200, lot included. At the construction site a woodworking shop is set up and equipped with modern labor-saving power tools by means of which all framing members, including trusses, which are set 24 inches on center are cut, and entire wall panels are fabricated.

Excavation for foundation wall is a 12-inch trench into which is fitted a "tailor-made" steel form which allows for concrete pouring of footing and outside perimeter of concrete slab in one operation. Insulation material one-half-inch-thick and 4 inches wide is placed around floor joints and Sisalkraft material is placed on the floor over steel reinforcing mesh covering concrete slab base. This base is laid on a slag fill, 4 inches deep.

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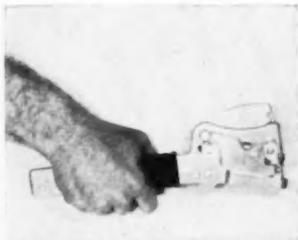
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STAPLING HAMMERS have a wide variety of uses on all building jobs. They are manufactured in a number of sizes and types adaptable to many operations, particularly the application of blanket and batt insulation



WORKMAN USING A POWER SCREW-DRIVER to fasten hinge butts in previously routed mortises. Power tools cut costs in finishing operations

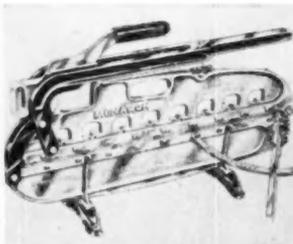
(Continued from page 180)
friction clutch which slips when the correct torque has been reached.

Spray Guns

Although painters are the principal users of spray equipment, other construction men also benefit from these tools. Spray units may be used for application of waterproofing compounds, sealers, form lubricants, and even insecticides.

Spray guns are made in a wide range of sizes and styles according to the volume of the work and type of material handled. For light liquids, atomizer-type guns are more economical and of lighter weight, while a pressure feed gun must be used for liquids of greater viscosity. The pres-

(Continued on page 188)



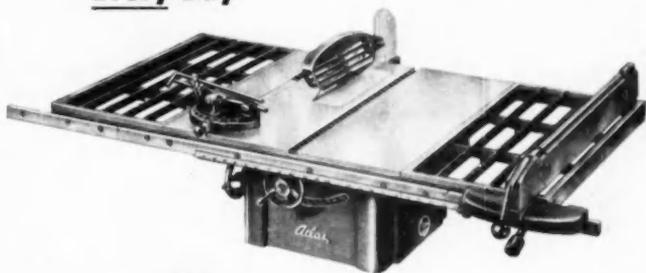
A TYPICAL SHINGLE CUTTER which handles asbestos siding and shingles. Two sizes available: 27 and 32-inch blades

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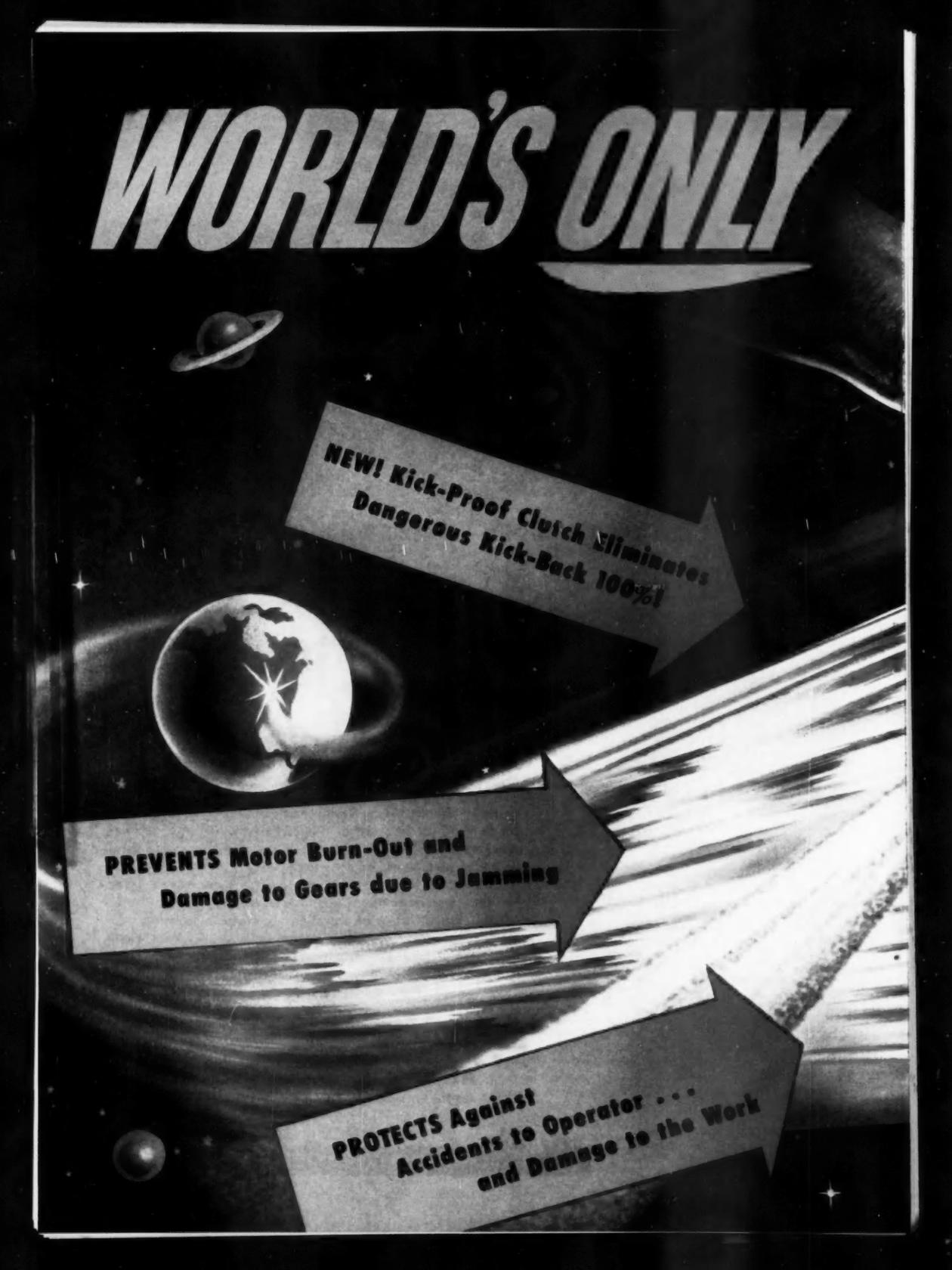
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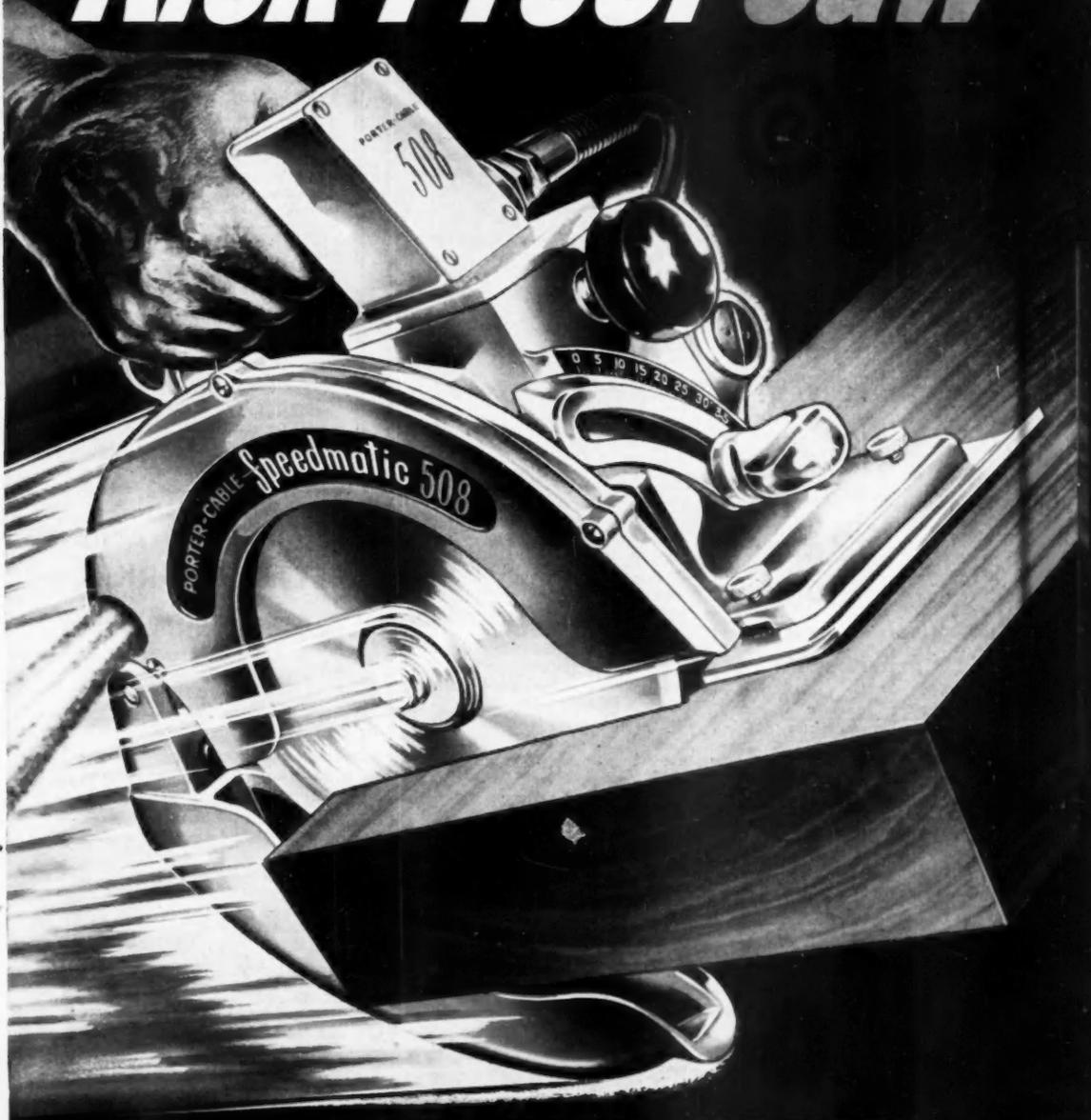


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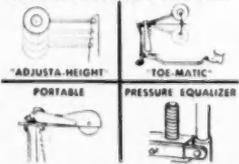
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A POWER SPRAY UNIT, fed from a pressure tank, is used in the shop for spraying doors, cabinets, and bookshelves. Note exhaust fan for worker protection against fumes

(Continued from page 185)

sure feed gun is to be preferred for most construction work. Light spray equipment, which can be carried from one part of the job to another, may get its air supply either from a motor-driven compressor or the piston displacement type, or from a diaphragm pump. The diaphragm pump is cheaper and lighter, but will require replacement of the rubber diaphragm at intervals; a piston pump, is heavier to carry and more expensive initially.

The heart of the spray gun is the nozzle in which air and paint are mixed to form the spray. Nozzles may be adjustable as to the size and shape of spray delivered, and as to the amount of paint and air combined. Gun and tips should be chosen for the material to be used, and cleaned after each day's work.

A tool which may be mentioned with spray units is the pressure-fed paint roller especially developed for the application of casein and rubber-base paints. Paint is contained in a pressurized tank and fed through a hose to a paint roller of porous material, permitting fast coverage of walls without the fumes and dust problem of spray paint.



SMALL JIG SAW shown weighs only 18 pounds, yet will handle 1-inch lumber, and will do many scroll, trim, and cornice jobs

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AMERICAN BUILDER



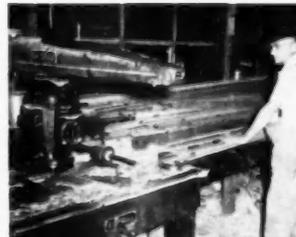
BAND SAW above has a built-in guard. Only required sawing portion of the blade is exposed. Table adjustments are provided, and anti-friction guides reduce saw blade steel crystallization



THIS CHAIN SAW is used for felling trees, and for sawing large timbers

Stud Drivers

An ingenious tool making use of a powder charge to drive hardened steel studs in concrete, masonry or steel permits the setting of door bucks and window frames in a minimum of time. A .22 or .38 caliber blank cartridge, containing a special explosive is inserted in a driving "gun" with a pointed stud of specially hardened steel. Firing the gun drives the pin through steel anchor plates into brick, concrete, or steel beams. Shields and grip safety devices protect the operator when in use, and prevent accidental discharge. Other studs with threaded ends can



THIS VERSATILE RADIAL SAW is fitted with a power feed, taking over the operator's work, and assuring safety against kick-backs when ripping. Power feed is driven by a separate motor, and the speed of the work may be varied from 22 to 90 feet per minute

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10" tilting-arbor saw and a 6" jointer driven by one, rather than two motors. Both machines can be used simultaneously, and have exclusive features providing more capacity for their size.

Capacity, durability and precision, we believe you will agree. That's why extra capacity, unusual sturdiness and real precision have been built into the



BOICE-CRANE 10" TILTING-ARBOR SAW

Square off work up to 13 inches wide without costly front extensions. Precision is MACHINED into every part. Important parts, such as the ripping gauge, aren't stamped or die cast but MACHINED FOR ACCURACY. The 28" trunnions assure super-accurate blade alignment. The 3/4-inch arbor and bearings the heaviest of any 10" saw. Handles heavy overloads. The only 10" saw which can be driven by low cost standard motors or linshaft (even gas engine). The motor is entirely separable from the arbor, eliminating needless wear on front fence aligner saves arbor reaching over blade to set. Accurate alignment on first lock-up. One knob, lightning fast, automatic control of both front and rear fence locks. Conveniently grouped controls quickly tilt, raise and lower blade. Positive locks. Fine miter—45° and 90°. Approved safety guard shields entire saw blade, lifts with blade. Dust chute encloses blade, discharges saw dust away from motor. Table 20" x 27" wide. Depth of cut: Saw Vertical 3"; Saw Tilted, 2 1/2" Bench or floor models.

The Saw That
Was Designed With
the Average Shop
in Mind.



THE BOICE-CRANE 14" BAND SAW

Versatility . . . cuts, sands, grinds any material . . . accurately . . . smoothly.
Speed . . . 2 to 4 times faster. Blade speed up to 4,100 f.p.m. at 1200 r.p.m. Vibrationless.
Capacity . . . Up to 27" dia., 7 3/4" thick; blades 1/4" to 3/8"
Safety . . . Entirely enclosed, except at cutting point. Single control blade guides safely adjusted, even when running.
Size . . . overall height of floor model, 67"; 15" x 15 1/2" in base.
Sturdiness . . . strong, one-piece, welded steel frame. Ball-arc, strong, light, milled Tealolite wheels; dia.: 14", 12 MODELS Single and 8-Speed Backgeared.

BOICE-CRANE HEAVY DUTY JIG SAW



The only 24" jig saw that cuts materials up to 5" thick and accommodates blades 5" to 9" long.

Wider range tensioner correctly tensions up to heavy duty 1/2" blades to guarantee a square face or plumb curve. Blades may be turned 90° for ripping long stock. Two adjustable blade guides.
50% longer blade stroke (1 1/2").
Does accurate, clean contour and straight cutting, inserted blade work, die filing, saber sawing and sanding.
Oversize, precision ground, highly polished cast iron work table (20" x 20") tilts 45° two ways.

Ball-bearing. Powerful dust blower.
Overall: 39" high, 20" wide, 38" deep.



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- faster sawing

Model 160
6" Saw



Model 180
8" Saw



Model 160—Straight cut: 2" max.; 3/4" min. Bevel cut at 45°: 1 1/4" max.; 3/8" min. Net weight 10 lbs. 8 oz.

Model 180—Straight cut: 2 29/32" max.; 1" min. Bevel cut at 45°: 2 1/16" max. Net weight: 17 lbs. 8 oz.

BRADFORD

ELECTRIC SAWS

Bradford engineered design has taken the awkward "bulk" out of old-time powered hand saws — and created a streamlined, precision tool that glides through the work with easy, effortless control. Only a Bradford has the fine balance that gives greater ease of handling in any working position.

Bradford Saws are designed inside and out to take on the toughest sawing jobs. Ball bearings with permanent lubrication are used throughout. Heat-treated alloy steel helical gears give maximum driving power. A powerful, 110 volt AC/DC motor drives the blade with quiet, cool-running efficiency.

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654 Evans Street Cincinnati, Ohio
Precision Since 1840



THE RADIAL SAW finds use in rafter notching, cutting joists and studding, making forms, and many other jobs. Trailer-mounted units are available for easy transport from job to job

be driven to anchor pipe hangers, electrical boxes or wood panels to masonry or steel.

Another portable stud-attaching device for steelwork makes use of the resistance welding principle. A small power supply is connected to a 110-volt current, and leads go to a stud-setting gun. Threaded end studs are inserted, a trigger is pulled, and perfect welding is automatic. The studs have ceramic collars for confining the weld to the base of the stud and forming a strengthening fillet.

PRODUCTION POWER TOOLS

Production power tools such as power saws, pipe-threading machines, and arc welders, are normally taken to the job site for use, but are too bulky to be carried around the job by one man. Most of the heavy work on the job is done by these tools, and they represent one of the most important investments of the contractor.

Power Saws

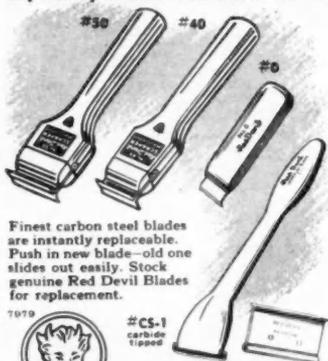
Power saws for woodworking are generally either table saws or radial saws. The table saw has the blade stationary with respect to the work, which is fed to the blade, while the radial saw has the blade and motor assembly mounted on a pivoted arm, along which the saw is moved with relation to the work.

Table saws are powered either by electric motor or gas engine and are made in all sizes to handle work up to the heaviest timbers. Those designed for trim and cabinet work have tilting tables or tilting blade assemblies (preferred, as the work remains flat at all times), accurate settings for mitre and bevel cuts, and may also be used for dadoing and ploughing grooves. Shaper cutter heads may be mounted so that mouldings may be cut on the saw. Accurate ripping and cross-cutting guides make quality finished work easy for the workman.

(Continued on page 192)

Red Devil WOOD SCRAPERS

Longer handles
for Easier handling
Supersharp Blades Cut Waste Motion



Finest carbon steel blades are instantly replaceable. Push in new blade—old one slides out easily. Stock genuine Red Devil Blades for replacement.



#CS-1
carbide
tipped

A Product of

Red Devil Tools
IRVINGTON 11, N. J., U. S. A.

FREE BOOK!



YOU, TOO,
CAN
START A
\$40 A DAY BUSINESS
IN YOUR
SPARE TIME!

Andy Phillips says: "My BELSAW CIRCULAR SAW SHOP gives me BIG PROFITS at LOW expense . . . I can run 35 to 40 saws in an 8-hour day . . . That make's me \$40 cash."

You can start this REPEAT CASH business in your own home or garage, while you are working at your regular job. Easy to operate, no experience needed. "Pays for itself from just 65 saw jobs."—Harvey Jensen.

For as little as \$15 down payment, you can get your BELSAW CIRCULAR SAW SHOP rushed to you.

You can make \$4 to \$5 an hour in your SPARE TIME sharpening and setting CIRCULAR SAWS for builders, lumber yards, factories . . . No Extra Equipment needed, no canvassing . . . send postcard for your Free Copy of "Life Time Security" today.

BELSAW MACHINERY CO
2001 Field Building Kansas City 2, Mo.

AMERICAN BUILDER

RCS

SUPER SAW

AIR COOLED
PATS. PEND.

Saves you more actual time, right on the job, than any other tool in your kit!

The ALL-PURPOSE "roughing-in" POWER SAW

NO STARTING HOLE NEEDED CUTS DIRECTLY INTO MATERIAL!

Just hold the Super Saw tightly against the material and use the guide as a fulcrum to "rock" the tool into a vertical position. Roughing in for toilet bowl through oak flooring, for instance, is completed in less than three minutes!

CUTS RIGHT THRU IMBEDDED NAILS, CUTS ALMOST ALL MATERIALS

Wood, even with imbedded nails, plaster, transite pipe, formica, ebonite, iron pipe, sheet metal and a host of other materials are easily and quickly cut with the Super Saw—even in those hard-to-get-at places which prevents a full size saw stroke!

FITS HEAVY DUTY 1/4" OR 5/16" DRILL

Simply insert the drive shaft into the drill chuck (2,000-5,000 R.P.M.), tighten chuck and the Super Saw is ready for use. (Also accommodates air drill or flexible shaft equipment.) Over-all length is only 10 3/4" and the Super Saw weighs only 3 pounds 6 ounces.

BUILT FOR CONSTANT DUTY OPERATION

Built-in blower keeps the Super Saw comfortably cool even when used continuously and air stream is directed so that chips or saw dust do not obscure the work. All friction surfaces are of alloy, phosphor bronze or high speed ball bearings; all wearing parts are replaceable.

SUPER-SAW BLADES AND LUBRICANT



Six standard blades of various lengths, tooth sizes and thicknesses give Super Saw its extreme versatility and keep blade replacement costs at a minimum. Special Super Saw non-fluid lubricant is supplied in tube which screws into grease fitting in Saw case: "one-shot" lubrication saves time, gives complete protection to moving parts.



Try it Yourself!

See the Super Saw at your Jobbers! Inspect it, try it! You'll agree that no other tool offers Super Saw's lifetime construction at such low cost . . . no other tool provides such drastic reduction in labor costs! Send the coupon today!

R. C. S. Tool Sales Corporation
Joliet, Illinois

Gentlemen:

Please send us Bulletin L4 and name of the nearest Super Saw distributor.

Name

Address

City Zone State

R.C.S. TOOL SALES CORPORATION
JOLIET, ILLINOIS, U.S.A.

"Well, blow
me down!..."



Look at these
LOW PRICES for

SIMONDS SI-CLONE SAWS"

**RIP • CUT-OFF • EASY-CUT
and COMBINATION**

6" .. \$1.75 9" .. \$2.65
7" ... 2.00 10" .. 3.15
8" ... 2.15 12" .. 4.35

Supplied with round or special-shape
center hole for portable electric hand-
saw machines.

Simonds, sawmakers for woodworkers since 1832, now offers this complete new line of high quality saws at new popular prices... 13 types of blades up to 12" diameter (including Dado Heads and Carbide-Tipped Saws) ... all made of Simonds Steel and fully guaranteed. Get them at your hardware dealer or local saw shop.



**SIMONDS
SAW AND STEEL CO.**

FITCHBURG, MASS.

Factory Branches in Boston, Chicago, San Francisco and
Portland, Ore. Canadian Factory in Montreal, Que.

(Continued from page 190)

Table saws for rough carpentry lack the precise adjustments of lighter units, but will handle larger work continuously. Table sizes are larger, blades are of greater diameter, and heavier motors are needed. Some of these units have the blade and shaft attached to a pivoted arm so that the saw may be pulled through the work, rather than feeding the work to the blade. This keeps the blade below the table surface except when actually cutting—an added safety feature. All table saws are fitted with blade guards, splitters to keep the work from binding the saw, and anti-kickback devices for operator protection. Most insurance companies require the use of the safety measures, and foremen and superintendents should see that they are in place at all times.

Radial Arm Saws

Radial arm saws, because of their great versatility, are fast becoming the builder's most popular saw. The radial adjustment of the arm on which the saw moves back and forth, and the rotation in a vertical plane of the motor and blade assembly combine to make possible any conceivable type of cut in lumber. The fact that the saw moves rather than the work, is a distinct advantage in handling heavy work such as joists and rafters. Table extensions (which may be fitted with rollers) permit accurate repetitive cuts. Dado heads may be ganged with spacing washers for cutting tenons, and motor may be swung vertically for shaping.

Radial saws may be trailer mounted for ease in transport from one location to another, and can be set up for operation in minutes after being spotted on the job. Home builders find the 8-inch and 10-inch blade sizes most efficient for handling work up to 4-inch thickness. Motors required are from two to five horsepower.

Band saws find on-the-job use where any quantity of cabinet work is done. Cornices and valances are turned out in quantity with templates. Trim for bookcases and built-in fireplaces can be made to fit, rather than trim precut pieces.

Power Hack Saws

Power hack saws, widely used by plumbing, heating, electrical and iron-work contractors cut pipe, rods, bars, beams and angles quickly and with greater accuracy than does a torch. Sawed ends of pipe need no reaming, and there is no burr left to retard the pulling of wires in conduit.

Two types of power hack saws are made. The reciprocating model

(Continued on page 194)

The "Improved Handy" ASBESTOS SHINGLE CUTTER



In a class by itself for efficient performance, economy and dependability.

Approved and recommended by the Asbestos Shingle Manufacturers.

**SPECIALTY TOOL
MANUFACTURERS**

732 S. Illinois St.
Belleville, Ill.

That's it!

I'll look it up in my
**AMERICAN BUILDER
Catalog-Directory**

I know I'll find it there



It's practically an encyclopedia of the building business with 5 Directory sections and 26 Product Reference Sections all in one handy, easy-to-use volume. Get acquainted with your Catalog-Directory. It can make money for you.

AMERICAN BUILDER

79 W. Monroe St.

Chicago 3, Ill.

750,000

DRIVE-IT FASTENINGS HERE!



Many thousands of dollars were saved by the modern DRIVE-IT powder operated fastening method used on the Park LaBrea project in Los Angeles. Over 750,000 drive pins fastened metal lath to concrete ceilings and floors from which wall partitions were secured.



split-second fastening to **concrete steel**

EXCLUSIVE DRIVE-IT FEATURES



DRIVE-IT is the only powder-actuated tool approved by Underwriters' Laboratory.



Exclusive Swivel Safety Pad easily rotated for getting into close quarter work.



DRIVE-IT is the only powder-actuated tool which requires but one standard power load regardless of penetration desired.



DRIVE-IT cannot be discharged accidentally due to the push and turn sequence. This, plus the large safety pad makes DRIVE-IT triple safe.



Exclusive Automatic Barrel Extension for fastenings inside junction boxes or other recesses.

Drive-it "300", lowest cost fastening tool...
Low original cost and low operating cost.



MAIL THIS COUPON TODAY!

Powder Power Tool Corp.
0719 S. W. Woods St.
Portland 1, Oregon

- Please send FREE catalogue and literature.
 I want a FREE demonstration of DRIVE-IT.

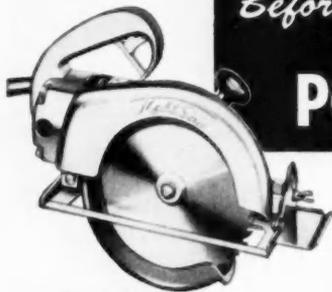
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Street _____

City _____ State _____



OVER 50 TYPES AND SIZES



Before You Buy Any
PORTABLE
POWER SAW

Check For All These Features
To Make Your Work
EASIER, FASTER
More **ACCURATE...**

**Model 86
MALLSAW Gives You
All These Performance
Advantages:**

- Easy to Use in Either Hand
- Handy on Ladders, Scaffolds, Roofs
- Readily Adapts to Cut Any Materials
- Powered by Heavy-Duty, Universal Motor

Expect years of dependable, trouble-free service from a Model 86 MALLSAW... a light-weight but powerful tool that speeds any sawing job. Supplied with 8 1/2" dia. combination blade, card, lubricant, wrench—all in handy metal carrying case. Extra blades available for dadoing, grooving tile, concrete, cutting light metals. Choose and use this handy MALLSAW—a quality tool, through and through!

See Your Nearest MALL Dealer — Or Mail Coupon for Latest Catalog.

Mall
TOOL COMPANY

7737 S. Chicago Avenue
Chicago 19, Illinois



SPECIFY
Evans
"WHITE-TAPE"
IN 6 FT., 8 FT. OR 10 FT. LENGTHS

Quality features packed into every inch of this outstanding white tape:

the best **WHITE TAPE** made at the lowest price yet

Snow-white blade with bold, legible, jet-black numerals and graduations. Graduated in 32nds for first 6 inches.

Sturdy die-cast case heavily chrome-plated, calibrated for quick reading inside and outside measurements.

Blade 1/2" wide made of finest high carbon steel—tempered—Bonderized—enamelled—baked.

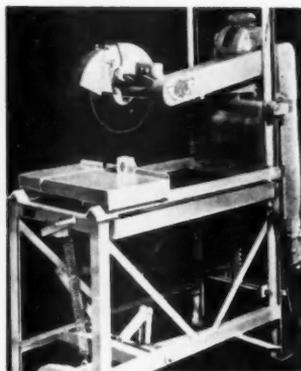
Blade replaceable in seconds—without tools—without even opening case. And Evans replacement blades cost far less.

Evans & Co. • ELIZABETH, N. J. • MONTREAL, QUE.

7847

Prices higher in far west and Canada. Order from your tool distributor.

Makers of Evans Folding Rule and "The Folding Yardstick"



THE MASONRY SAW uses either abrasive or diamond-tipped wheels, and will cut limestone, brick, cinder or concrete block, terra cotta, transite, marble tile, and granite

(Continued from page 192)

uses a straight blade which is drawn back and forth, automatically raising on the non-cutting stroke. The hand-saw type has the blade angled slightly in relation to the plane of the drive wheels, so that work of any length may be cut. This is the most popular power metal-cutting saw. Size is determined by the maximum thickness of work that may be cut; electricians find about a 6-inch size best, while plumbing and heating contractors will use sizes from 4 to 8 inches, depending on the biggest pipe handled on the job. Automatic stops are provided for duplicate work, such as cutting air chambers, and an automatic stop shuts the saw off at the completion of the cut. Adjustable vises hold the work at any angle, and the cut is straight and smooth, almost as good as can be had with a milling machine.

Masonry Saws

Brick, tile, and concrete block cutting saws have almost entirely replaced the tedious cutting of brick for odd-angled corners and cutting of concrete blocks to fit. A bonded abrasive wheel is generally used, although carbide and diamond toothed saws are available. The brick or tile to be cut is moved back and forth under the saw on a traveling carriage, and the saw is lowered into the work as cutting progresses by a foot pedal. Provision is made for wet cutting of extremely dense ceramics.

Power Drills and Drill Presses

The home workshop type of drill press, easily moved from job to job, is especially popular for cabinet work operations at the site. More accurate than the hand drill, these tools can also be set up with the proper at-

(Continued on page 196)

ONLY THOR OFFERS
SO MANY FEATURES



IN PORTABLE ELECTRIC SAWS

EXCLUSIVE LONG-SHAFT TRANSVERSE MOTOR MOUNTING transmits as much as 25% extra power, supports blade on oversize ball bearings from one side of the tool clear to the other.

EXCLUSIVE SAFETY-LOCK SWITCH—positive protection against accidental starting.

EXCLUSIVE SHOCK-ABSORBER GEARING harnesses the added power of these great new saws, gives extra life to motor, gears, spindle and blade.

EXCLUSIVE PROTECTED DEPTH AND BEVEL SCALES are in plain sight when you use them—out of the way when you don't. Always accurate.

EXCLUSIVE EXTRA-WIDE REENFORCED STEEL SAFETY BASE for better balance—easier to handle, far safer to use.

PLUS powerful, built-in sawdust blower . . . over-size ball bearing construction . . . automatic ball bearing blade-guard . . . die-cast aluminum housings . . . steel inserts for bearings and threads . . . fingertip depth and bevel control . . . convenient handles . . . steel tip guide . . . extra-capacity switches . . . most powerful motors ever used in electric saws.

Silver Line

means "new design"—from rip guide to switch—to give you the safest, easiest handling, most powerful saws on the market today. 15 new features . . . many of them exclusive . . . each of them thoroughly field tested and approved for economical, trouble-free operation. Six sizes to meet every demand from the lightweight "6" to the sturdy "12". Try these great new Silver Line Saws now available at your Thor distributor. Independent Pneumatic Tool Co., Aurora, Illinois.

Thor

PORTABLE POWER
TOOLS

ELECTRIC • PNEUMATIC

STANLEY Chisels

cut
clean
stay
keen

Stanley Chisels are designed to give your work the clean, smooth appearance of superior craftsmanship.

Forged from the finest chisel-steel made, Stanley blades are carefully heat-treated and accurately tempered to bring you keener-cutting, longer-lasting edges. Cross grinding assures perfectly proportioned bevels. Nicely balanced for better control.

Ask your hardware dealer to show you Stanley Chisels—available in a full range of styles and sizes. Stanley Tools, New Britain, Conn.



No. 60. Finest Chisel steel, blades heat-treated and tempered to hold keen edge. Blow-centering steel crowns protect tough plastic handles. Blades sized 1/4 to 2 inch. Also available in handy plastic kits.

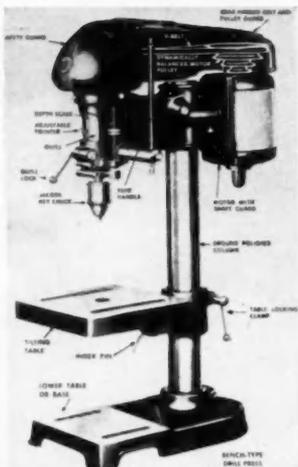
No. 750. Rugged, butt style socket chisels. Seasoned hickory handles capped with leather washers. One-piece high quality steel blades and sockets—no welded joints. Blade sizes 1/4 to 2 inch. Also available in convenient plastic kits.

THE TOOL BOX OF THE WORLD

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS
STEEL STRAPPING • STEEL



THE DRILL PRESS has adjustments permitting use as a shaper, router, mortise cutter, and for rapid drilling of either wood or metal

(Continued from page 194)
tachment for light duty as shapers and routers.

Power Sanding Equipment

Power floor-sanders are a necessity for every contractor. Much of the sales appeal of a finished home is in a carefully finished, fresh floor. Drum-type sanders handle large center areas quickly, while the edges and corners can be touched up with smaller units or hand disc sanders. The builder who does his own mill and cabinet work may find it desirable to have a belt sander on the job. This may be either a small belt machine, for smoothing edges of doors, or a large model, with traveling table for holding the work underneath the belt for panels.



THE SPINDLE SHAPER enables the contractor to save by making his own mouldings and trim. The unit shown above has two speeds, 7000 and 11,000 r.p.m. for different size cutters, and a vertical adjustment range of three inches THIS JOINER is mounted on a stand and powered by electric motor



THE
RIGHT
floor sanding paper
*any way you
look at it!*

● On the face, look at the sharp, steady working grains of Silicon Carbide, the "grinding wheel grit" abrasive grain. Our DURABONDED® and RESINIZED processes doubly anchor these grains to give you the finest possible abrasive covers.

On the back, you see the familiar BEHR-MANNING triangle trade mark that identifies an abrasive product line that has undergone thousands of hours of laboratory experiment, research and testing before you even put it on a sanding machine.

And on the job, watch the cover that cuts clean, smooth and fast for a far longer time without wild grain troubles, loading or limping.

WE'LL PROVE IT on your next job, with a free demonstration of RESINIZED SPEED-GRITS PAPERS. Tell us when and where — write today. Address Dept. AB-4.



Write for your copy

The "ABRASIVE GUIDE FOR FLOOR SANDING PRODUCTS" is full of handy information, net prices, etc. Address Dept. AB-4.

BEHR-MANNING

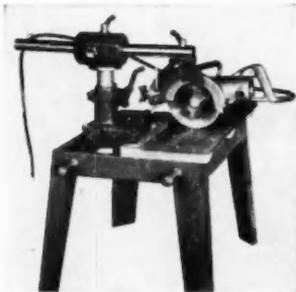
TROY, N.Y.

division of NORTON Company



COATED ABRASIVES
SHARPENING STONES
PRESSURE SENSITIVE TAPES

AMERICAN BUILDER



RADIAL ARM FOR MOUNTING ELECTRIC HAND SAWS has cut off movement of 24-inches. Bevels or miters 0 to 45 degrees left or right. 9 3/4 inch vertical adjustment

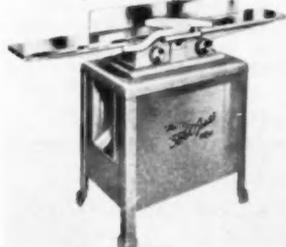
Routers and Shapers

Although it is not common to find shop-type routers and shapers on the job, the contractor who is building a volume of units at one location may cut costs by making his own mouldings and trim from undressed lumber. Power routers and shapers may be set up in a temporary cabinet and trim shop, and turned out on a quantity basis at a considerable saving.

Planers

The thickness planer, which planes rough lumber to finished size, will permit a saving in areas where rough boards are to be had at substantially lower cost. The boards are power-fed by rollers into revolving blades, giving a fine finish needing only light sanding. The jointer is a similar tool, in which the board is passed over a revolving head carrying the knives. Adjustments of the front table allow a shaving of any desired thickness, and a tilting fence permits accurate beveling. A separate section of the table permits rabbeting faster and more accurately than with a hand plane.

(Continued on page 200)



JOINTERS ON THE JOB in small operations are being used in many instances to save on material costs and time. They are available in a wide variety of sizes and prices

APRIL 1952

PARKS PLANERS

20" THICKNESS PLANER

The Parks No. 20

A modernly designed, low-priced, high-speed 20" x 6" planer that meets the surfacing needs of every type of wood-working shop. Ruggedly built for vibrationless operation—ensuring quality work, increased production and low operating costs. Provides two feed speeds—20 and 40 F. P. M. and 40 and 80 F. P. M. Four-knife cutterhead has speed of 3500 R. P. M. Complete descriptive literature on request.

Also Available
12" THICKNESS PLANER

A compact, heavy-duty 12"x4" machine that offers precision and ruggedness at low price. Literature on request.



The PARKS WOODWORKING MACHINE COMPANY
Manufacturers of Quality Woodworking Machines Since 1887

DEPT. 30-F, 1546 KNOWLTON STREET, CINCINNATI 25, OHIO

STRAIGHT-LINE RECIPROCATING ACTION GUARANTEES SCRATCH-FREE FINISHES



ONLY \$24.50
WITH 1500 CARBIDE CARTRIDGE AND COMPLETE ACCESSORIES

14,400
SANDING
STROKES
PER MIN.

•
EASY
ONE-HAND
OPERATION

•
21 SQ. IN.
SANDING
SURFACE



MODEL 2000 PRICE INCLUDES— this all-steel carrying case—also 25 ass't'd. abrasive sheets and a sheepskin polishing pad.

Contractors and builders find this powerful, fast cutting Dremel Sander the perfect answer to finer finishes on drywall joints, plaster, doors, woodwork, siding and other exterior surfaces. Its straight-line sanding action leaves no marks, swirls or cross-grain scratches. Light weight of only 5 lbs. and easy one-hand operation makes Model 2000 ideal for continuous use. Added stroke and extra power—plus 21 sq. in. of sanding surface—assure rapid production. Only 2 moving parts, never needs oiling, dustproof, overall size 3 1/2" x 4 1/2" x 7"; uses 110-120 V., A.C. Fully guaranteed. If your dealer cannot supply send order direct to factory.

DREMEL MANUFACTURING CO.
2414 18th Street Racine, Wis.



DE WALT precision-cuts for a \$10,000,000 HOUSING PROJECT!

60 DE WALT'S IN OPERATION
IN THE PLANTS OF AMERICAN HOUSES, INC.

photo by Rodney McCoy Mergan



Part of the 1,000 dwelling units built with American Houses at Fort Bragg, N. C.

One of today's outstanding projects is the 1,000-house job at Fort Bragg, North Carolina.

This military housing project is being built by T. A. Loving and Company of Goldsboro, N. C. and W. H. Weaver Construction Company of Greensboro, N. C.

The houses and apartments in this project were prefabricated by American Houses, Inc., who have over 60 DE WALT SAWS in operation in their three plants for precision cutting and mass assembly of a wide range of house models and designs.

• • •

This example of the use of DeWalt for precision cutting for multiple construction should interest all builders.

The building market is rapidly changing. You may want to devote your future efforts to other types of building: defense housing, military housing, low-cost rental housing, special wood structures, etc.

No matter what type of building you do—whether for a single structure or for a thousand—you have a valuable asset when one or more DeWalts are *on the job*. You build faster . . . better . . . more accurately . . . and at lower cost.

DeWalt models are available from $\frac{1}{2}$ H.P. to $7\frac{1}{2}$ H.P.

Shown on this page is the newest DeWalt GR—the "builder's saw." This model has 5 new features, including low dead rise motor which permits deeper cut. See what *all five* features mean to you by seeing an actual demonstration! Your DeWalt dealer will show you. Send coupon below for full information.

MAIL THIS COUPON TODAY!

DeWalt, Inc., 13 Fountain Avenue, Lancaster, Pa.

Please send me literature and complete specifications on the new DeWalt GR.

Name

Address

City.....State.....



NEW

DUAL V-BELT DRIVE

PORTABLE ELECTRIC SAW

\$89.50*

BY
SYNTRON

*8 1/2" blade
2 1/4" cut*

DUAL V-BELT DRIVE

— provides that "Velvet Smooth", faster, easier cutting — eliminates gears — cushions motor shock.

You'll find it hard to beat the powerful 6000 RPM cutting speed of this new SYNTRON Saw — trimming sub-flooring, fitting doors, seat and ridge cutting in roof framing, trimming roof sheathing and many other jobs.

When equipped with either abrasive discs or a diamond grit blade, the SYNTRON Saw easily cuts or scores tile, brick, concrete, terrazzo, etc.

In fact — once you have a SYNTRON Saw, you'll be surprised how many jobs you find on which to use it and how much time it saves.

*Price complete with combination saw blade and wrench, 15 ft. 3-conductor cable and instructions. Sturdy metal carrying case at \$8.00 extra.



Other portable power tools by SYNTRON



ELECTRIC HAMMERS AND RAMMER DRILLS



ELECTRIC DRILLS



"SELF-CONTAINED" GAS HAMMER PAVING BREAKERS



VIBRATING CONCRETE PLATE

SEE YOUR DISTRIBUTOR— OR WRITE DIRECT

SYNTRON COMPANY

613 Lexington Avenue
HOMER CITY, PENNA.

SAMSON BAR CUTTERS

- All Steel Construction
- Unbreakable Frame
- Easy Operation
- Immediate Shipment



Write for catalog of
Metal Working
Equipment

CAPACITY	No. 20	No. 23	No. 26
Rounds	5/8"	3/4"	7/8"
Squares	1/2"	5/8"	3/4"
Flats	2" x 1/4"	2 1/2" x 5/16"	2 1/2" x 3/8"
PRICE	\$47.15	\$63.00	\$72.00

f.o.b. New York, subject to change

JULIUS BLUM & CO., Inc.

Established 1910

534A West 22nd St., New York 11 • WAtkins 9-7042

(Continued from page 197)

Pipe Threaders and Cutters

Power pipe threading and cutting machines cut costs for plumbers, electricians, and steamfitters. In typical machines, the pipe is held in a chuck and rotated against a stationary cutting wheel and threading die. Built-in pumps automatically feed cutting oil as the thread is being cut, and quick-opening die heads eliminate lost motion in running the thread back. Pipe machines will handle work from 3/4-inch to 2-inch pipe, and will also power drive shafts for cutting and threading pipe up to 8 inches. With a pipe machine a mechanic can cut and thread 60 pieces of 3/4-inch pipe an hour, or can cut a 2-inch thread in 22 seconds—an enormous saving in time.

Welding Tools

The familiar acetylene torch is so familiar a part of building equipment as to need little comment. It is a "must" for burning rods, cutting beams and angles, repairing machinery.

Special Tools

In addition to the common tools that are used on all types of work, manufacturers have developed an in-

credible variety of tools for special work. Among those which may be mentioned are: pneumatic lifts for installing ceiling panels, automatic saw sharpeners, induction heated glue presses, and pipe-bending machines.

SELECTION

As portable power tools will represent a major investment on the part of the contractor, careful selection should be made before purchasing. No tool should be bought unless the economies effected by its use will more than offset the cost of the tool. In many cases the saving will be immediate. One contractor estimates that a power hand saw pays for itself in the first two months of use. Other tools, such as welders, may require two or three years of use before they pay for themselves. If it is possible to analyze the savings to be gained by the use of power equipment, this should be done. It may be found that tools which will be used only on one job, or only occasionally, may better be rented or borrowed from another contractor than purchased outright. On the other hand, if it is known that a tool will save money, then it should be bought as soon as possible. It is poor economy to buy under-

two SPACE-SAVING WOODWORKING MACHINES FOR YOUR PLANT

Whitney 105 SURFACER — 24" wide. Planes stock 1/16" to 8" thick. Feeds, 20 to 60 ft. per min. with Micro-feed Selector and Feed Indicator.

THESE Whitney Machines are accurate, dependable, economical. They have been developed especially for the contractor's and builder's shops and the average woodworking shop *to do the job* and to save space. They are the result of over 100 years' experience producing precision woodworking machinery. These machines will give BIG machine performance, occupying small floor space.

Write today for complete information. Ask for bulletins P2 and S2.

BAXTER D. WHITNEY & SON, INC.
Winchendon, Massachusetts, U. S. A.



Whitney 510 SHAPER — Belted, motor drive. Table, 36" x 31". Vertical adjustment of spindle, 3 1/2". Detachable spindle top.

Whitney

WOODWORKING MACHINERY

IN OUR
115th YEAR

BEST for BUILDERS

NEW IMPROVED TRI-SAW
All-Purpose Portable Power Hack Saw
only \$37⁵⁰



Zips through wood, sheet metal, lath, plaster, pipe, nails, etc. in seconds! Attaches to any heavy duty 1/4" or 5/16" drill.

Use this sensational time and work-saving tool. You'll say it is the best portable, all-purpose saw on the market. Write for circular.

ATTENTION!
JOBBERS AND DEALERS

Profitable possibilities for aggressive distributors. Wire, write or phone.

TRI-SAW CORPORATION

6611 Clayton Road - St. Louis 17, Mo.

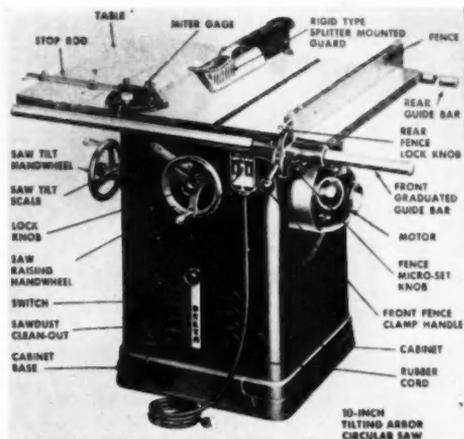


TABLE SAW is fitted with a great variety of adjustments for raising and lowering the blade, tilting the blade or table, and setting and locking rip fence and cross-cut guide

powered tools. The tool with a power rating more than adequate for the job will perform better, last longer, and be less likely to break down than the one which is "almost" big enough.

MAINTENANCE

Proper maintenance will do more

Who's got my AMERICAN BUILDER Catalog-Directory



If it's gone, it's probably because one of your associates found it very complete and useful as a buying guide. Or, perhaps he sought the answer to a building problem in one of the 26 Product Reference Sections that tell you Who Makes It and How to Use It.

Better find your copy and get acquainted with it. It can save time and make money for you.

AMERICAN BUILDER

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than any other one thing to insure trouble-free performance and long tool life. Lubrication, cleaning, and checking for worn or defective parts should be a regular routine. Responsibility for maintenance should be specifically assigned, rather than left to chance. Safety attachments should be inspected to see that they are in use and correctly installed. Manufacturers' recommendations should be followed for lubrication and maintenance. Use the correct grade of lubricants. Make periodic adjustments for wear if these are provided. Repairs which require factory attention should not be attempted in the field with make-shift or substitute parts.

Mechanization Cuts Costs, Reduces Time

Mechanization in the construction industry as a whole has been steadily increasing during the past 25 years, with World War II providing considerable impetus to the whole field. The development and improvement of earth-moving equipment now permits large scale excavation and site preparation within a fraction of the time formerly required. At present the range of this type of equipment available for both large and small jobs, including housing, has made this one of the most versatile of construction operations.

Recent developments would indicate that, with the range of tools suitable for on-site operations steadily increasing, there are increased opportunities for realization of cost reductions by even the small builder.

"The BARCO
RAMMER
Pays for
ITSELF!"



Says PAUL SCHLEICHER & SONS
GARY, INDIANA, HOUSING CONTRACTOR

"SOIL COMPACTION with the Barco Rammer has been the key to earlier completions and lower costs for us," says Paul Schleicher & Sons, Gary, Indiana, housing contractor.

The Barco Rammer is a new tool with many uses! No longer is it necessary to wait for loose earth fill, or backfill, to settle — tamp it immediately to HIGH DEGREE COMPACTION under slabs... around foundations and footings... on grades... in trenches — SAVE TIME! CUT COSTS!

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See for yourself — ask for our nearest distributor to give you a demonstration.

• Send for
CATALOG No. 621



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Builders of Portable Gasoline
HAMMERS and RAMMERS

REDUCE
FIRE HAZARDS
SPECIFY
STRAN-STEEL® FRAMING



**For | Roof Systems
Floor Joists
Quickly Erected Partitions—
or Complete Structures**

In addition to the many time-saving, money-saving, and structural advantages of Stran-Steel nailable framing, architects and their clients will appreciate the permanent protection offered by this non-combustible framing material. Specifying Stran-Steel roof systems and floor joists can mean the difference between a costly fire and one that is easily localized and controlled. Also, architects can point to lower insurance costs possible with Stran-Steel framing.

The versatility and strength of Stran-Steel framing make it easily adaptable to the latest trends in design. And the speed with which the precision pre-cut members can be assembled brings a worthwhile reduction of in-place building costs. Close-in time is shortened, and interior work can

Fire hazards will be minimized in the Robstown, Texas, Elementary School, because of the use of Stran-Steel framing. Wall finish on the interior will be gypsum plaster on rib lath. On the exterior, brick veneer over Steeltex wall lath with 3/4" mortar bond. Benjamin K. Wyatt, San Antonio, is the architect.

proceed before exterior completion. The nailability of Stran-Steel framing means additional economy, too, in the application of collateral materials.

If you are planning new industrial or commercial construction, or schools, hospitals and similar structures, it will pay you to investigate Stran-Steel framing. Complete literature available on request, or see Sweet's catalog service, architectural and builders' files.

GREAT LAKES STEEL CORPORATION
Stran-Steel Division Ecorse, Detroit 29, Mich.

NATIONAL STEEL CORPORATION





METAL building products used in light construction are far too numerous to catalog or describe in detail in this article. Plumbing, heating, wiring, appliances and fixtures in bathroom and kitchen, as well as numerous structural parts of the home use metal, either because of cost, ease of handling, strength, wear resistance, or some other special property no other material possesses for the job.

STRUCTURAL MEMBERS

The American Institute of Steel Construction specifies twelve advantages to steel construction: strength, uniformity of material, endurance under stress and service load, toughness against shock, adaptability, versatility for design, fire safety, compactness in space, speed of construction, salvage value, economy of material, and service from a giant industry.

Framing

Steel joists and complete steel framing in light construction have been found economical by many builders. Panel assemblies with nailable steel framing members may be partially fabricated at the shop of the steel distributor. Shop prefabrication can be supplemented by site cutting and final assembly. Assembling steel members on the site requires a power saw and portable welders. The nailable feature of the framing members makes it possible to apply other conventional materials to studs and joists with 8d nails.

Insulating board sheathing may be applied directly to the studs for the exterior wall. Dry-wall construction is possible inside without furring because of the nailable feature of the studs.

A number of manufacturers are now producing a wide range of stand-



LIGHTWEIGHT steel beams form sunshields and porch in this modern design. At right, workman bolts roof purlin to larger structural beam running length of house

METAL BUILDING

STEEL FRAMING

Advantages of Steel Framing

- 1. Speed of construction
- 2. Economy of material
- 3. Strength and durability
- 4. Fire resistance
- 5. Versatility in design
- 6. Compactness in space
- 7. Salvage value
- 8. Service from a giant industry

Structural Members

- 1. Steel joists
- 2. Steel studs
- 3. Steel beams
- 4. Steel channels
- 5. Steel angles
- 6. Steel plates
- 7. Steel girders
- 8. Steel ladders

Framing

- 1. Steel joist framing
- 2. Steel stud framing
- 3. Steel beam framing
- 4. Steel channel framing
- 5. Steel angle framing
- 6. Steel plate framing
- 7. Steel girder framing
- 8. Steel ladder framing

Insulating Board Sheathing

- 1. Steel joist sheathing
- 2. Steel stud sheathing
- 3. Steel beam sheathing
- 4. Steel channel sheathing
- 5. Steel angle sheathing
- 6. Steel plate sheathing
- 7. Steel girder sheathing
- 8. Steel ladder sheathing

Dry-Wall Construction

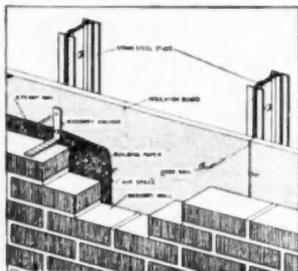
- 1. Steel joist construction
- 2. Steel stud construction
- 3. Steel beam construction
- 4. Steel channel construction
- 5. Steel angle construction
- 6. Steel plate construction
- 7. Steel girder construction
- 8. Steel ladder construction

Steel Ladders and Stairways

- 1. Steel joist ladders
- 2. Steel stud ladders
- 3. Steel beam ladders
- 4. Steel channel ladders
- 5. Steel angle ladders
- 6. Steel plate ladders
- 7. Steel girder ladders
- 8. Steel ladder ladders

Steel Ladders and Stairways

- 1. Steel joist ladders
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- 7. Steel girder ladders
- 8. Steel ladder ladders



DETAIL shows insulation installation with nailable steel studs. Masonry anchor is nailed to studs with 8-penny nail. Hook nails hold insulation securely

ard sizes and shapes useful in bridging, trusses, or as joists, many of which units are to a large degree prefabricated by the manufacturer, ready to use.

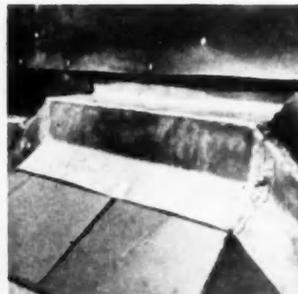
Columns and Posts

The familiar concrete-filled steel column has long been recognized as one of the strongest building members. It is fire-resistant, economical to install, and takes little space. These columns may either be fixed or adjustable, and may be filled with concrete by the manufacturer or on the building site.

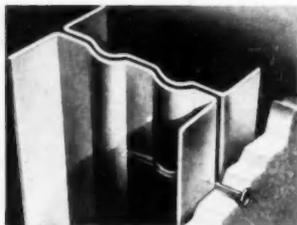
These columns are available in diameters from 2½ inches to over 12 inches, and lengths from 5 feet to 20 feet. Fitting in with modern demand for maximum usable floor area, these columns usually require from ¼ to ⅓ the space that "H" column boxed pillars would need. They may frequently be concealed in the thickness of walls or partitions for a further gain in space saved.

Reinforcing Rod and Wire

Reinforcing rod and wire mesh play an important part in concrete slab construction. Most prefabricated

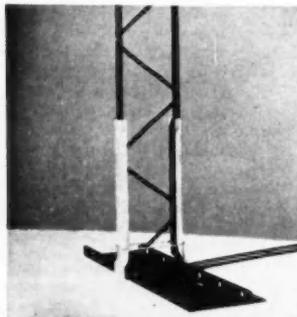


COPPER is popular for flashing because of its long-lasting qualities and ease of installation



DETAIL of nailable steel framing which is erected with ordinary carpenter's tools. Grooved framing sections make it possible to drive nails into the metal framework

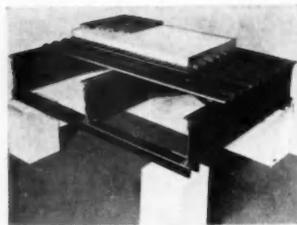
concrete slabs and joists embody some form of reinforcing rod. Load-bearing walls of combined brick and concrete construction usually contain rods also, and site-fabricated concrete slabs for floors, as well as for driveways and walks, usually contain wire mesh fabric of some kind. Other kinds of wire mesh are used for reinforcing concrete siding and for reinforcing the mortar used in tying brick veneer to sheathing.



SNAP-ON Trusstee stud shoe designed to speed erection of metal studs for metal lath construction. The snap-on holds shoe in place while wire tie is applied near floor

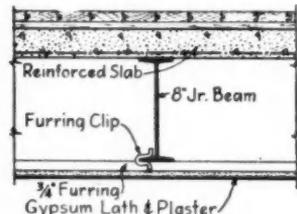


ROOF GUTTERS and downspouts are available of galvanized iron, stainless steel, copper and aluminum. Strength, durability, and tightly-sealed joints are important



CUTAWAY to show how nailable steel framing is screwed to channels, with steel sheeting nailed to top, on which concrete is poured with wood flooring laid over

Steel rod is also used to anchor ends of joists to concrete or masonry supports. When they rest on steel supports, welding is preferable. Steel strap functions similarly in holding up pipe, conduit, and ductwork in many locations throughout the modern building.



JUNIOR I-beams hold lath and plaster by means of furring clips as shown above



STEEL WEB joists carry wood subfloor or prefabricated steel decking. Channels carry 2 x 4's onto which wood subflooring is nailed



FLAT, square, and small-diameter tube shapes are popular for heating ducts in modern installations

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of sales proven fireplace supplies

Bennett—and *only* Bennett—offers you a *complete* line of fast-moving, profit-building fireplace supplies. So, when you standardize on Bennett, you can *combine purchases*—take advantage of top discounts. And . . . customer acceptance of Bennett fireplace products is as complete as the line itself. Recognized quality . . . continuous national advertising . . . assure that!

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BENNETT
Expanslip Throat Damper

Bennett Expanslip Throat Damper is a better damper at low cost. Steep 60° front slope gives sure draft. Structural steel with sturdy slip-joint eliminates breakage in shipping, handling and in use.



BENNETT
Cast-Iron Damper

Bennett Cast-Iron Damper—quality at competitive prices. Superior casting facilities in our own foundry enable us to produce this steep 50° slope damper, with interchangeable Rotary or Ratchet Control feature. With guaranteed steel valve or cast-iron valve.

BENNETT
Fireplace Unit

Bennett Simplified Standardized Fireplace is sized for standard brick, with no cutting or fitting. It lets you offer every customer "The Perfect Fireplace." Quicker and easier to build—it's priced within the reach of all. It's a big-volume, high-margin unit—a real profit builder for you. Count on this Bennett—the recirculating unit with *most* sales appeal.



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for all your fireplace supplies**

- Warm-Aire Fireplaces
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- Grates and Log Dogs

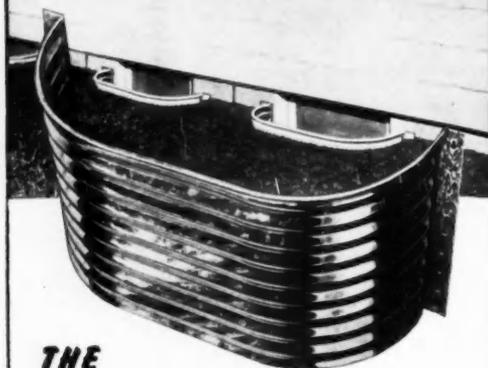
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Lux-Right

IMPERIAL

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in **QUALITY, STRENGTH and DESIGN**



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LUX-RIGHT AREAWALLS!
The Original and **ONLY** Areawall
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Every edge, every surface
thereby protected from corrosion.

Two Types: Streamlined-Straight and Round.
Both types come in a wide range of sizes.



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HUG-TITE FLANGES—on all
types—make the unit fit tight
to foundation. A steel product
first in Quality, Strength, Design,
acknowledged to be "the Nation's
Best" by contractors, builders, home-owners
everywhere. Often imitated, never equalled.



Owner

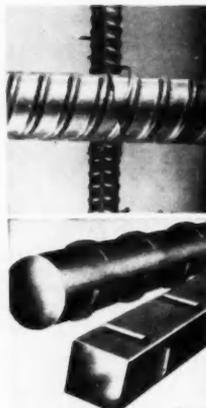
These **LUX-RIGHT** easy-to-in-
stall one-piece units save time,
labor, money. Hardened masonry
nails supplied with each unit. No
upkeep expense. Last word in
long, satisfying service. Free illustrated folder
shows sizes, proper installation, much other
helpful information. See your distributor,
building materials dealer, or write us direct.

ABS

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SAINT PAUL CORRUGATING CO.

Expert Sheet Metal Manufacturers for 67 Years
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STEEL RODS and bars used with concrete column and slab floor construction. Two types of bars are shown

FUNCTIONAL SHAPES

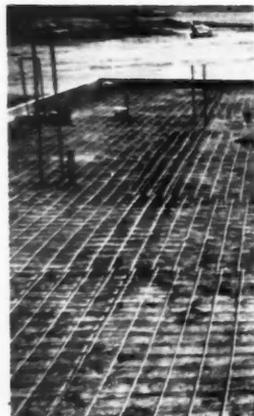
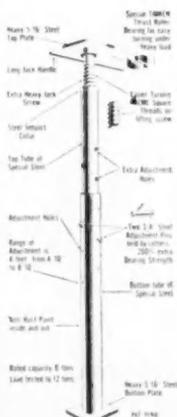
Metals commonly used in a wide range of functional shapes and designs include aluminum, steel, galvanized sheet metal, stainless steel, bronze, nickel-silver alloys, brass, and copper in various qualities. Some shapes are made by forming sheets into the desired shape; others are extrusions of heated metal through dies or molds to produce bars with the desired shape in uniform cross-section the full length of the stock.

Gutters—Roof Valleys

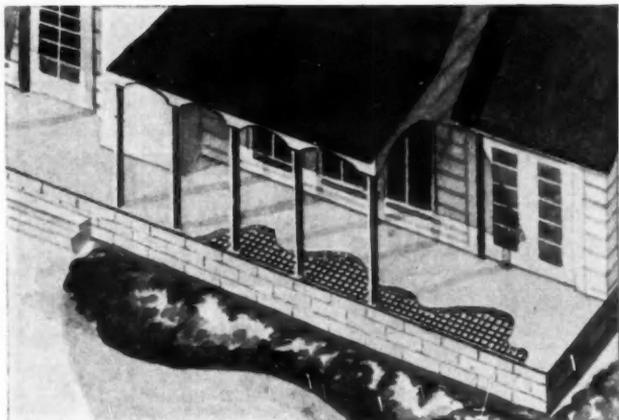
Stainless steel, copper, aluminum, and ordinary galvanized sheet metal are all used to provide roof drainage. Copper has for years demonstrated its long-lasting qualities, and stainless steel and aluminum are not far behind. Trough design for strength is important. Pipes and elbows should have tight seams, either double-locked or welded. Styles of trough and pipe may be either round or box-type.

Advocates of stainless steel stress its high strength-weight ratio which makes possible use of longer sections and easier installation, with fewer joints and hangers.

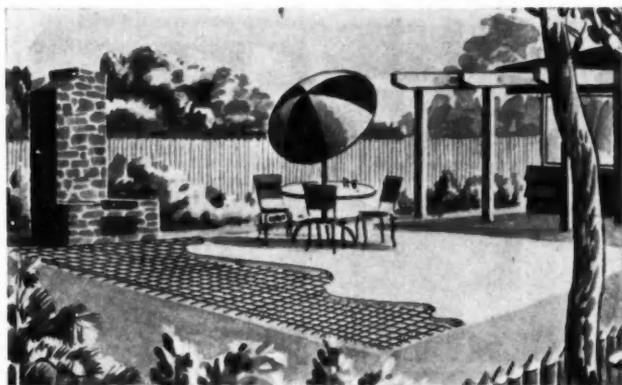
(Continued on page 212)



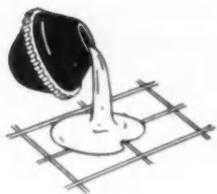
TYPICAL adjustable steel post is shown at left. It can be used to level up floors. Right, steel wire reinforcing mesh



▲ **PORCHES and**
PATIOS help sell homes
 ▼



Exceptional strength and durability are imparted to concrete construction by this "backbone" of high tensile strength steel. The slabs are "knitted" together, expand and contract as a unit, thus resisting cracking, spalling, and heaving.



● These pleasant centers for family gatherings make any home more attractive to the discriminating buyer. Built of concrete, reinforced with American Welded Wire Fabric, they add to the appearance, comfort and actual dollar value of a home.

Other powerful sales aids are concrete foundations, walls, floors, driveways and sidewalks. Home buyers know that concrete construction retains its original beauty year after year, free from unsightly cracks, when properly constructed and reinforced with U·S·S American Welded Wire Fabric.

It costs surprisingly little to reinforce all the concrete construction in and around your homes with American Welded Wire Fabric; yet the added value is a potent advantage when it comes to closing a profitable sale.

In every locality, American Welded Wire Fabric is readily available from jobbers' and dealers' stocks. Send for our illustrated folders. Just drop a line to our nearest sales office.

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AMERICAN WELDED WIRE FABRIC
reinforcement

UNITED STATES STEEL

Types and Styles of Metal Trim

BASIC GROUPS • Metal trims are divided into eight groups shown on this page. Each group includes several different styles of trims for the same general purpose. For example, nosings include those with flanges that extend under the coverings; those with a flange which fits into a groove; and those without flanges. Also, many Chromedge sections are not limited to a single use. For example, No. 102, a nosing listed as an INSERT TRIM, is also used as a cap trim. These trims are classified as to their most frequent use. (Insert trims are grouped separately).

CAP TRIMS • For upper edges of dado, wainscot, or cove-base. Those with a projecting lip at upper edge in back can be used also as nosings.

WALL TRIMS • or divider bars—conceal joints between panels of either like or contrasting coverings, used for decorative paneling.

INSERT TRIMS • Shown separately because of colorful inserts this group includes nosings, wainscot caps, corners and coves.

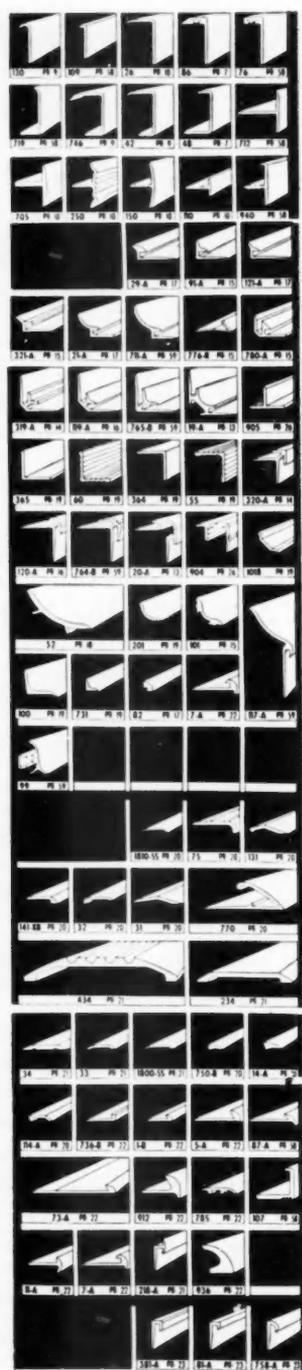
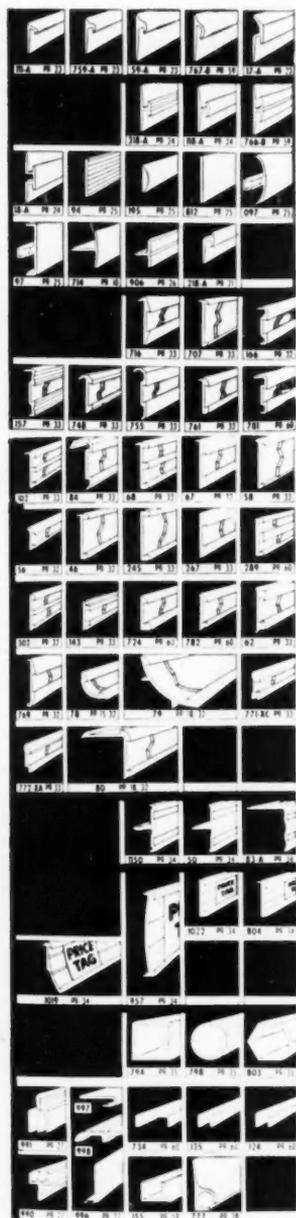
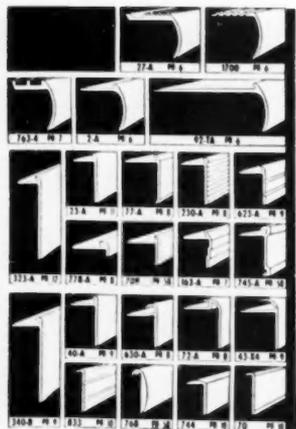
COLOR RECESS TRIMS • This group of nosings features painted recesses for decorative beauty.

PRICE TAG TRIMS • A separate group of nosings for specialized use. Available for all standard price tickets held by grooves in mouldings.

CORNERS AND COVES • Inside and outside corners, horizontal or vertical. Many have matching end stops and corner fittings.

EDGINGS AND BINDERS • These trims bind, seal or protect edges of coverings where exposed to wear, stress or moisture. Includes sink-well edgings, carpet-bindings, threshold saddles and similar sections.

NOSINGS • For outer edges of bars, counters, cabinets, tables, sink tops, drain boards, stair treads and similar points. Nosings with flat backs serve also as wall trims. Those with a raised lip provide non-drip counter edges.



Chromedge Data

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The Leigh Line is a complete line of metal building necessities that have received universal acceptance from home owners and builders. Each unit is built to fill a definite need in a more attractive and efficient manner.

Use Leigh Products on your new homes or remodeling jobs. You'll find they add that extra touch that closes the sale.



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RECESSED SHOE RACKS



BUILT-IN DUST CHUTES



SWING-AWAY GARBAGE CONTAINERS



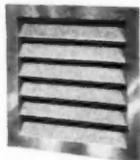
SCREEN DOOR GRILLES



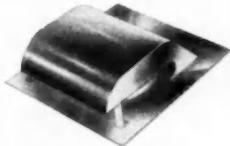
FLOWER BOXES



BUILT-IN MAIL CHUTES



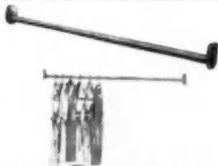
ATTIC VENTILATORS



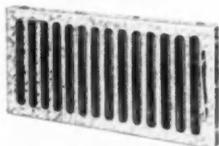
ROOF VENTILATORS



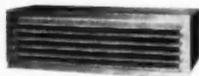
ADJUSTABLE TRIANGLE VENTS



ADJUSTABLE CLOSET RODS



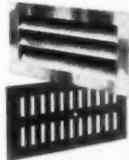
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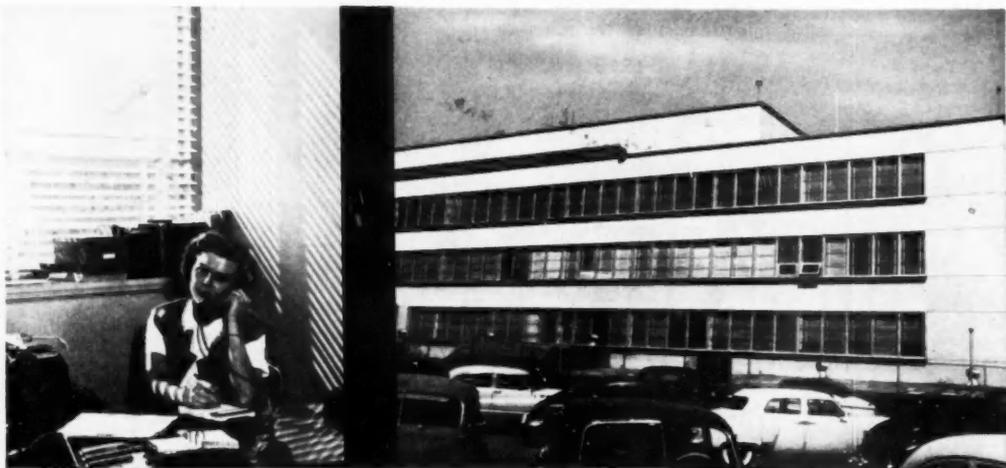
LEIGH BUILDING PRODUCTS DIVISION

AIR CONTROL PRODUCTS, INC.

COOPERSVILLE

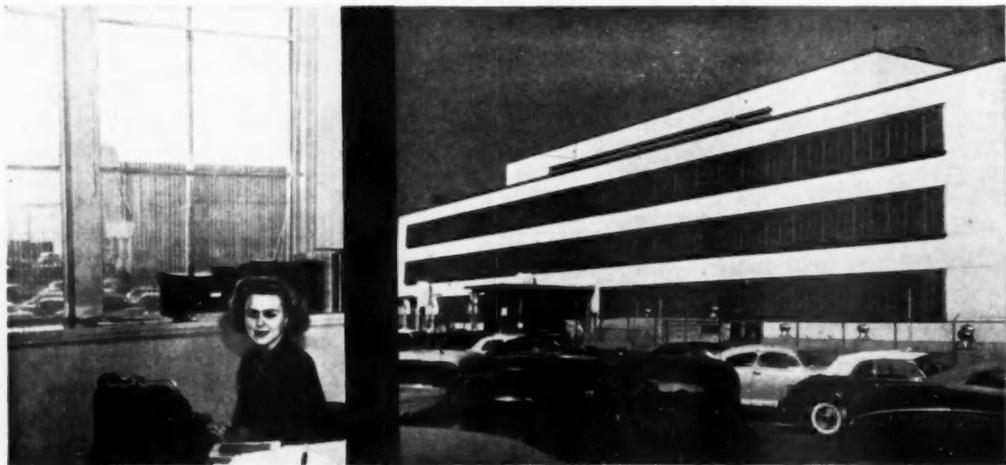
MICHIGAN

PLAN FOR TOMORROW



BEFORE

Sun-struck Windows of Lockheed Aircraft Corporation's Burbank, California plant created eyestraining glare, allowed heat rays to penetrate glass, caused uncomfortably high inside temperatures. Appearance of building exteriors was spoiled by unevenly adjusted blinds and the open and closed windows.



AFTER

Kaiser Aluminum Shade Screen now covers 10,000 square feet of windows on 7 buildings of the Lockheed plant. Thousands of tiny louvers deflect hot rays *before* they hit glass. Result: Glare eliminated. Interiors up to 15% cooler, more comfortable for work. Exteriors dramatically improved by uniformity of windows—emphasis of modern, horizontal lines.

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THERE'LL BE plenty of aluminum available for tomorrow's building requirements as a result of today's industry-wide expansion.

Kaiser Aluminum alone is building new facilities which will increase its pre-Korea production of primary aluminum by 132 per cent!

So make your plans now to utilize the many advantages of light, strong, corrosion-resistant aluminum.

Check Before You Substitute

Most Kaiser Aluminum today goes to help meet the needs of the national security program. That's why it is not always readily available.

However, before you specify less-satisfactory substitute materials, ask for Kaiser Aluminum.

You may still be able to give your clients the best—Aluminum!

A Few of Today's Modern Aluminum Applications

Building materials made of Kaiser Aluminum offer exclusive advantages in design, beauty, and quality. Shown here are a few recent applications that prove aluminum is your best building material for tomorrow's plans.

Write for Information

Write for full information about any Kaiser Aluminum building product—and for AIA files, Kaiser Aluminum offices in principal cities, Kaiser Aluminum & Chemical Sales, Inc., Oakland 12, California.

Kaiser Aluminum

Building materials for home, farm and industry



Kaiser Aluminum Siding, ideal for building or remodeling, gives sparkling modern look to Malley's Candy Shop, Cleveland. Weatherproof, rotproof, rustproof, aluminum siding lasts for generations. Baked-on enamel coat gives smooth surface that looks better, is easy to clean. Designed and erected by Lumi Land Distributing Co., Rocky River, Ohio.



Kaiser Aluminum Roofing on these Liggett & Myers tobacco warehouses is strong, *solid* corrugated aluminum. Bright surface reflects sun's rays—helps maintain uniform inside temperatures, often so important in warehousing goods. Specified by owner W. O. Crombie of Paris, Ky., because of aluminum's "complete lack of maintenance requirements."



Kaiser Aluminum Ductwork used in Los Angeles Times Building was fabricated *right on the job*, eliminating costly handling, trucking, storing of bulky pre-assembled sections. Easily fastened with rivets, by welding, or with sheet metal screws. Installed faster with less worker fatigue. And un-insulated aluminum delivers as much heat as insulated galvanized material at lower cost.



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The modern fireplace that fulfills all modern day requirements—used with gas or electricity.

Large variety of attractive models in brick, stone, wood, etc., available.

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AMERICAN DEVICE'S Adjustable Built-in MAIL BOX

fits any size wall
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illustrated folder

AMERICAN DEVICE
Manufacturing Co.
RED BUD, ILLINOIS, U. S. A.



METAL conduit used for surface raceways for telephone lines is easy to install in remodeling operations

(Continued from page 206)

Copper gutters, roof valleys and flashings provide durability which equalizes somewhat higher first-cost, and manufacturers provide a full range of stock gutters, downspouts, elbows, downspout heads, nails, and hangers.

Ducts and Pipe

Ductwork, pipe, conduit, and tubing are considered more in detail in the sections on heating, plumbing, and wiring the house. Nearly all types of structural metals are involved at some point, and manufacturers are constantly working with heating, plumbing, and electrical contractors to develop better products to serve these needs.

Cornices, Edgings

Architectural extruded metals may be bronze, brass, aluminum, nickel-silver alloy, copper, or other special alloys. As extrusions are wrought under pressure, they are usually free from blowholes and other defects common to castings, and have a high tensile strength. Extruded shapes can thus be used with thinner cross-sections, and finished with less labor.

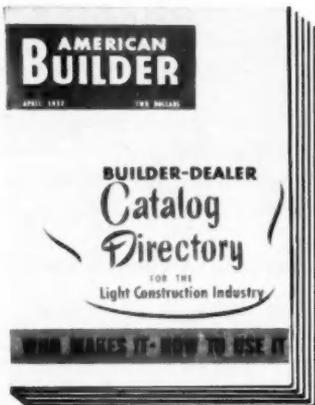
Primarily, such shapes include opening frames, entablatures, cornices, hars, flutings, pilasters, caps, counter screens, hand rails, edgings and beadings of all kinds. Some manufacturers stock standard shapes for



CEILINGS made with structural steel panels which are easy to install, have great rigidity, and fit into most designs

If you know
the Trade Name
but not the maker—

Look it up
here



In the TRADE NAMES Section

This is one of 3 sections printed on colored stock to help speed up your buying of building products.

After each trade name appears the name of the Manufacturer. Then turn to the Manufacturers Section (III) for complete name and address.

Get acquainted with your AMERICAN BUILDER Catalog-Directory. Put it to work for you. It can save you valuable time and money.

Ask us for specific building information. We are always glad to be of service.

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79 W. MONROE ST. CHICAGO 3, ILL.

Save Time and Boost Profits with Sink-Lok



FASTER - EASIER - FOOLPROOF

Here's the sink frame that really clamps coverings into place to stay—seals out moisture—hugs the sink with a tight, permanent, fit. Coverings can't work loose or curl up!

Easier to install, too! Sink-Lok frames overlap edges of the covering a full quarter-inch. No close scribing, cutting or fitting of materials. No special tools needed. No mortising or rabbeting of the sink-well hole—just cut a straight-walled opening for the sink. The frame anchors in place from underneath the sink top—supports the sink itself in addition to sealing the joint between the covering and the sink. No bolts or screws through the counter top.

Sink-Lok Frames are available for flat-rim sinks of any size, with either round or square corners, for installation on wood or plywood sink-cabinet tops from $\frac{3}{8}$ " to 1" thick, covered with any material up to $\frac{1}{8}$ -inch thick. Also available for most vitreous china sinks.

Write for complete information.



No. A-725 Frame and Lug, for standard flat-rim sinks installed on $\frac{3}{8}$ " to $\frac{3}{4}$ " plywood tops covered with ma-

terial up to $\frac{1}{8}$ ". Also available in Model No. B-725 for $\frac{7}{8}$ " to 1" plywood tops, and in Model No. C-726 for vitreous china sinks.

The **B & T** Metals Co.
Columbus 16, Ohio

HEATFORM

The Superior Heat Circulating Fireplace
• most efficient and durable of all •
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Comparison Proves Greater Heat Delivery



HEATFORM Model "A"
Eight stock sizes 24" to 72"

—because:

- More Heating Surface: air chambers surround firebox and upper front and side walls of the throat
- Larger cool air inlets and warm air outlets produce greater air circulation and more heat
- Contact of air to all heating surfaces due to multiple connecting air passages through and around the throat
- The heat surface of the dome and round air flues through the throat add one-third more heating surface

LONGER LIFE

—because:

- Ribbed reinforced fiberax side necessary strength to fit metal to control warpage. The ribs also add to the appearance of the firebox
- The larger air inlet and outlet diameter produces a greater volume of air circulation which removes the heat from the hot metal faster; thus preventing red-hot deteriorating temperatures
- Masonry downdraft shelf—no exposed metal beneath chimney flue to rust out



HEATFORM Model "S"
View of Fire from Front & Side

SUPERIOR FORM DAMPER



SUPERIOR FORM DAMPER
the Architects' Friend

- Saves labor time: no forms to build, no bricks to set, no throat to plaster. Eliminates cracking of masonry by use of rockwool and detached lintel bar. Heavy steel construction—lifetime service.

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(Slotted or Phillips Heads)

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SIZES range from 1/4" No. 2 to 4" No. 20 in steel and 4" No. 16 in brass.

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SOUTHERN SCREW COMPANY

118 RICKERT STREET
STATESVILLE, NORTH CAROLINA



CORRUGATED window well. Several manufacturers provide round, oblong, and square types

these purposes, and several will produce extrusions to the design of the architect on order.

SHEETS AND PANELS

Metal sheets and panels for use in flooring, ceiling, roofing, and siding applications, are considered at length in other sections of this issue. There are, however, a number of special types of sheets and panels which should be mentioned.

One manufacturer, for example, has devised an interlocking panel which forms floor, ceiling, and joists in one operation, also allowing space for large pipes and ducts, and providing convection surface to coordinate with radiant heating coils. The upper surface is prime painted, ready for flooring, and the lower surface may be left exposed for beam ceiling or may be covered with wire lath and plaster as desired. The same panels may be used vertically for partitions.

A number of manufacturers produce steel deck plates, some of which are designed to use either in forming floors or as steel forms for laying concrete floor slab. Some are also built with special acoustical properties. These all-steel panels and members have the advantages of low initial cost, flexibility in handling, ease



CORRUGATED roofing (galvanized) receiving protective coating of metallic paint



Send for our quotation on all your railing and column work. It pays! Send sketches or ask for our suggested designs.

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Designers-Crafters
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**Annular-threaded
metal weather
strip nails...
FOR GREATER
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USERS REPORT, Apr. 4—
"Fast replacing the old fashioned unthreaded nail!"

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Plated for maximum rust resistance. Early delivery in packages and in bulk. Write for prices and samples.

JOHN HASSALL INC.

192 CLAY STREET
Brooklyn 22, N. Y.

AMERICAN BUILDER



TYPICAL attractive fireplace in home of modern design utilizing a metal fireplace unit with hot air grilles located in wall near ceiling and cold air return grilles in baseboard at either side

of installation, and strength. Some types are also made of aluminum.

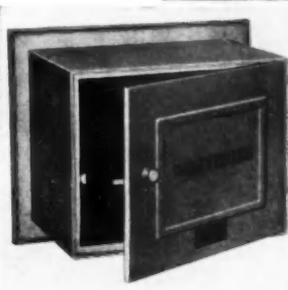
Corrugated roofing and siding is available in aluminum and galvanized sheet metal. Aluminum is non-rotting, light weight, easy to handle, provides long-term service.

Corrugated steel sheets offer the advantage of light weight with great strength and rigidity, and are used in the familiar round-type Quonset structure as well as in numerous all-steel storage and utility buildings erected with conventional square design and hung on metal framing members.

SPECIAL DOORS

While most kinds of doors are discussed in full detail in the section on windows and doors, certain special purpose doors are normally manufactured as complete "package" units made of metal.

STEEL access panel to provide access to drainage pipe in basementless building. Installed with metal wall around area of panel



PACKAGE receivers are available in various trims and colors, made of insulated steel, with inner and outer doors

LACLEDE JOISTS

add **STRENGTH**

plus *Beauty*

to the new

Charleston Memorial Hospital



Charleston Memorial Hospital,
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& Sillings, Architects, Thompson &
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Where lightweight strength, beauty... and functional design are vital—you'll find the answer in versatile Laclede Steel Joists. By specifying Laclede Joists for floor and roof construction you can speed completions and help conserve steel.

- No allocation needed—steel joists are a Class 'B' product.
- Prompt shipment from our enlarged mill facilities to suit your construction schedule.

Write for information on the complete line of Laclede quality steels for construction.



LACLEDE STEEL COMPANY

St. Louis, Mo.

DUR-O-WAL

TRUSSED

Design

NOW AVAILABLE

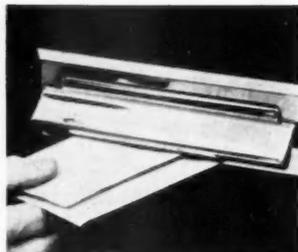
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DUR-O-WAL
PRODUCTS, INC.
P. O. Box 628
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DESIGN of this mail plate makes it draft-free. Available in polished brass, bronze, dull bronze, dull nickel, and chrome finishes

Access Doors

Access doors include roof hatches, ceiling hatches, floor hatches, and scuttles. Made of steel or aluminum, roof scuttles or hatches provide easily-installed, trouble-free access to the roof of the building. The only requirement is that a roof opening of the proper size be provided. The hatch is lined up over this opening and nailed or bolted to the rough roofing through holes provided in the flanges of the unit. They are watertight and fireproof and can be set up to lock from either inside or outside.

Heavy-duty compensating spring hinges are used in most types, and insulation is also built into the unit. Floor and ceiling hatches are made so that the door fits flush with floor or ceiling. Floor hatches in some instances have either smooth or patterned surface to prevent slipping.

Metals available include copper alloys, galvanized sheet metal, aluminum, bronze, and stainless steel. Some models have a locking feature to hold the door open so that it cannot slam shut, as well as rubber weatherstripping to prevent leaking of air or moisture. Flush steel panels are also available for installation into walls for ready access to concealed wall spaces, valves, traps, dampers,

Sidewalk Elevator and Pit Doors

Elevator doors are available in split-type for bow strike elevators, or single-piece platform type for corner post elevators. Transformer vault and pit doors are made in standard sizes with single-leaf construction. Pit doors with channel-type frames keep dirt and dust off the floor below if used indoors.

Basement and Bulkhead Doors

Doors for use with either frame or masonry construction are available as package units which are attractive, designed for long life, and easy to

Home sanitation helps FIGHT POLIO

Majestic UNDERGROUND GARBAGE RECEIVER

The practical and profitable answer to home sanitation needs

Snug-fitting lid bans disease-spreading pests. Keeps garbage from sight and smell. No freeze; no ferment. 10-year guarantee on top and shell. Inner can outlasts exposed types 5 times.



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THE NEAT
LID SHOWS



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this "selling help" booklet today!



The Majestic Co.

300-D Erie Street, Huntington, Indiana

Nationally Known and Advertised Building Products for Over 40 Years



STEEL cellar door and door frame units are sturdy, fire-resistant, easily installed and operated. Made in either copper-steel or aluminum and in various standard sizes

install. Where the unit joins either frame or masonry, special flanges are provided to make a secure seal against rain and dirt.

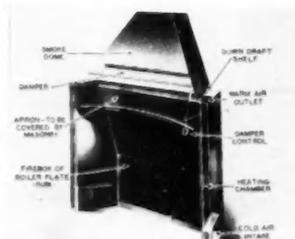
They are built to be resistant to corrosion, water, termites, to be burglar-proof and to function almost indefinitely. Units are shipped knocked down, with necessary screws and fittings and complete instructions from the manufacturer. These instructions should be followed carefully, especially as they pertain to caulking and sealing joints between masonry or frame and metal unit.

Ashpit and Cleanout Doors

Installed in the bottom of chimney or stack for easy removal of soot and ashes, ashpit and cleanout doors in some instances are cast iron, but in most modern types are made of steel with welded parts and heavy-duty hinges to give long wear. Ornamental styles are available for use with fireplaces in homes without basements. Ash dumps and fireplace dampers are also available as stock units easy to install where provision is made for them in advance.

Chute Doors

Both foundation chutes and grade-line chutes for coal may be set up to utilize ready-made door units which



DETAILS of metal fireplace unit shown above include features necessary for good air circulation to make fireplace a real heating unit



STAIR railings provide fertile field for ornamentation with metal work in iron, bronze and other alloys

accompany the chute. Mail chutes with suitable doors are also available for the builder who wishes to include them in his specifications. Many modern homes enjoy the convenience of a package-receiver, which is usually an insulated steel receptacle built into the wall with an outer and an inner door. Laundry chute doors are also available from stock from several manufacturers.

FIREPLACE UNITS

Old-fashioned fireplaces wasted heat, smoked up rooms, and caused

discomfort in various ways. For the builder who has a fireplace included in his plans, there are several fireplace heating units which are designed by engineers to provide added comfort and efficient fuel consumption.

While not recommended as a substitute for heating plants in northern climates, efficient fireplaces can save fuel bills by providing heat during many cool weather days. Units which circulate the heat to every part of the room or house through ducts are available in designs that permit their use with a wide range of ornamental fireplace types.

Firebox, throat, and flues are designed for correct operation, and dampers, down-draft shelves, and smoke domes are all built into correctly fabricated units.

Use of such units removes all guesswork from fireplace construction, as the only task remaining is to make provision for the unit selected in basic building planning, and build the ornamental masonry or stone fireplace around the unit proper. Should it be desired to heat more than one room with the unit, it should be located against an inner wall with heat outlets opening into the other rooms. Outlets may be arranged above the

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Artcraft produces the finest, most exacting custom-made ornamental iron work from specifications at amazingly low cost. This is in addition to our regular, low-priced, stock ornamental work. Write today for more information, or send specifications direct.

Delivery: Two weeks for custom work. Immediate delivery for stock items.

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GRILLE or louvre for ceiling fan is a typical installation. Similar metal louvres are also popular in doors to control drafts and room ventilation

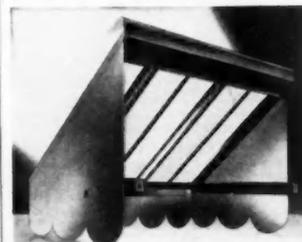
unit or at the side, through the top of the mantel, below the mantel, and with side outlets above or below the mantel. Units are also available for corner locations and for fireplaces designed with side and back enclosed with the other side and front open.

ORNAMENTAL METAL WORK

Ornamental metal work includes ornamental castings, wrought iron pieces, gates, canopies, fences, railings, brackets, grilles, window bars, hand rails, trellises, lamps, ornamental stairs and doors, and posts. Perhaps the most common material is cast iron, although many pieces are now made of aluminum and bronze. Lettering is available for use in smaller commercial buildings for signs, name plates, and similar purposes.

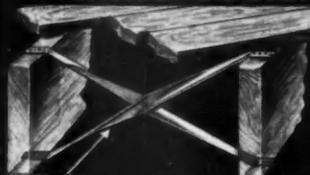
SHUTTERS AND LOUVRES, JALOUSIES

Modern door construction frequently utilizes jalousies or louvres, the primary purpose of which is to provide adequate ventilation in rooms, corridors, and closets. While jalousies or louvres are available with wood or glass slats, and one manufacturer at least is making glass jalousie-style windows, the greatest demand is for the metal jalousie unit for installation into doors. Made of furniture steel, aluminum, or other metals, and of almost any size, these units are shipped complete and ready for installation from several manufacturers.



POPULAR for small homes, metal awnings over both windows and doorways keep out rain, sun glare

CUT BUILDING COSTS!



Patented Bridge Joists secure cross timbers and strength for maximum load carrying capability.

Bridge Wood Joists the FASTER... BETTER Money-Saving Way

WITH NEW Metal CHAN-L-CROS CROSS BRIDGING

Chan-L-Crow is an advanced method of bridging wood joists that provides greater floor strength and cuts building costs. It reaches you ready for quick, easy installation... speeds construction because it eliminates sawing and fitting of wood. This greatly reduces time and costs... increases the contractor's profit!

Easy to Install

1. POSITION

2. SQUEEZE

3. LOCK

4. FINISH

Other Advantages That Make Chan-L-Crow Better

It distributes a concentrated load to adjacent joists to prevent deflection of beams by the practical application of the principle of tension... it is flexible enough so that joists off required centers can be fastened just as securely as those precisely placed... provision for nailing meets requirements of all building codes... does not interfere with laying of subflooring... cannot separate from joists when under load or as lumber shrinks.

Chan-L-Crow is available in sizes for 8, 10, and 12 inch joists... suitably finished to resist rust. It is also recommended for construction of arched ceilings.

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3206 Morganford Rd., St. Louis 16, Mo.

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for less money with
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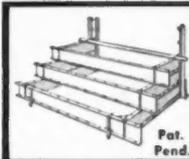


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Build the home of the future — sturdy, heat-conserving, re-inforced concrete. Fire, bomb and cyclone protection.

State franchises available.

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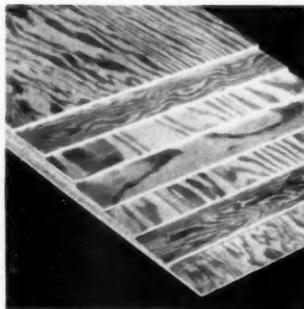


Pat. Pend.

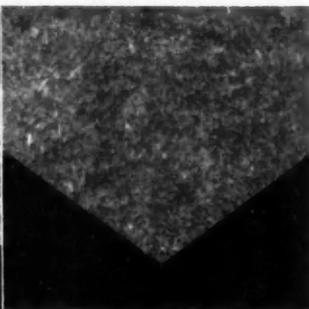
Cast a perfect step every time. Quick-setting, adjustable 1 to 6 feet. Time and labor saved on a few jobs pays for original cost. Recommendations of satisfied customers increase your business. Agents inquiries invited.

Write for full particulars

ADAPTO CORPORATION
4060 N. 100 St., Milwaukee 16, Wis.



SEVEN-PLY plywood showing the grain direction change with each alternating sheet of veneer



THE NATURAL BURL of standard hardboard is readily identified in this close-up of a sample

PLYWOOD is an engineered panel material made up of three or more layers of veneers bonded together with glue, with the grain direction of each ply at right angles to that in the adjacent ply. An odd number of plies is nearly always used to obtain balanced construction. While plywood panels are produced in a wide range of both soft and hardwoods, over 90 per cent of all plywood used in light construction is supplied by the Douglas fir plywood industry. Douglas fir plywood panels are produced under rigid performance standards and each carries a grade-mark for ready identification (see illustration page 220).

SHEATHING, SUBFLOORING, ROOF DECKING

Plyscord is the recommended grade of plywood for sheathing, subflooring and roof decking. Certain veneer defects not affecting its serviceability may appear on both surfaces. It has moisture-resistant bonding.

Plyscord $\frac{5}{8}$ -inch thick is recommended for use as roof sheathing over rafters 16 inches on center under both wood and asphalt shingles. Wood shingles, however, must be applied with nailing strips unless $\frac{1}{2}$ -inch plywood is used. The rafters may be spaced 24 inches on center when $\frac{1}{2}$ -inch plywood is used.

The minimum thicknesses of Plys-

cord when used for wall sheathing are $\frac{5}{8}$ -inch for 16-inch stud spacing and $\frac{3}{8}$ -inch for 24-inch stud spacing. Corner braces in house framing may be eliminated when 4 by 8-foot sheets of plywood are nailed with 6d nails, 6 inches on center on all edges and 12 inches on center at intermediate bearings. When $\frac{5}{8}$ -inch plywood is applied as wall sheathing, wood shingles may be fastened directly with ring-barbed nails. If barbed nails are not used, nailing strips must be employed. Likewise, ring-barbed nails must be used for application of asbestos cement shingles or siding to $\frac{5}{8}$ -inch plywood wall sheathing.

One-half inch plywood is permitted as a base for wood finish and all composition types of flooring when the following application methods are followed: (a) joist spacing not more than 16 inches on center; (b) blocking installed under all panel edges at right angles to joists and (c) nailed securely 6 inches on center at all edges and 10 inches on center at intermediate framing members. Further, joist spacing may be increased to 20 inches if $\frac{3}{8}$ -inch plywood is used and to 24 inches if $\frac{1}{2}$ -inch plywood is used when requirements (b) and (c) above are followed. Lay panels with outer grain across the joists.

In all cases correct nailing techniques must be followed for fastening the plywood and other components of floors, walls, and roofs. For nailing $\frac{5}{8}$ -, $\frac{3}{8}$ - and $\frac{1}{2}$ -inch Plyscord, 6d common nails should be used. The $\frac{3}{8}$ -inch Plyscord should be fastened with 8d common nails. Nails should be spaced not more than six inches apart at the edges of panels and not more than 12 inches apart on other bearings when plywood is used for sheathing or subflooring.

In applying Plyscord, especially on the roof, the edges should be protected

(Continued on page 220)

Recommended Thicknesses for PLYSCORD ROOF SHEATHING [Panels Lengthwise Across Rafters]		
ROOF LOAD*	RAFTER SPACING	THICKNESS
20 lb./sq. ft.	18 in.	5/16 in.
	22 in.	3/8 in.
	27 in.	1/2 in.
	33 in.	5/8 in.
40 lb./sq. ft.	12 in.	5/16 in.
	16 in.	3/8 in.
	21 in.	1/2 in.
	24 in.	5/8 in.

*For deflection limited to 1/360 of span.

PLYWOODS AND HARDBOARDS

Plywoods for

- Sheathing, Subflooring, Roof Decking
- Exterior Use
- Interiors
- Hardwood Plywood Interiors
- Form Uses

Hardboards

- Types and Uses
- Preparatory Conditions
- Working with Hardboards
- Making Bands
- Installing Hardboards
- Nailing
- Lap Siding
- Concrete Forms

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a new quality Douglas fir hardboard to help you save money ... save time ... save material. ALLWOOD hardboard ... amazingly tough ... amazingly versatile ... challenging comparison as a new leader in quality hardboard. Produced in the mountain forests of Oregon in a plant designed for maximum efficiency and positive quality control. Get all the facts on this new ALLWOOD hardboard. Distributed nationally by SIMPSON LOGGING COMPANY, Seattle, Washington.

Write for FREE booklet: The ALLWOOD Story

*Trade Mark of the Oregon Lumber Co.

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LUMBER
COMPANY**

Des., Oregon Baker, Oregon
Producers of John Day pine timber

Manufacturers of Lumber
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since 1888

Have a Cigar!

THERE'S A
NEW ADDITION
TO OUR FAMILY OF
QUALITY PRODUCTS



*T. M. Ore. Lbr. Co.

Simpson
QUALITY SINCE 1898

DOUGLAS FIR and WESTERN
HEMLOCK LUMBER
REDWOOD LUMBER
DOUGLAS FIR PLYWOOD
DOUGLAS FIR and HEMLOCK
DOORS
WOODFIBER INSULATING
BOARD PRODUCTS
ACOUSTICAL PRODUCTS
SIMPSON ALLWOOD
HARDBOARD

●
Simpson Allwood Hardboard is
manufactured by the Oregon
Lumber Company, Dee, Oregon.

●
SIMPSON LOGGING COMPANY
1065 Stuart Bldg., Seattle 1, Washington

NOW—to the already large family of Simpson quality forest products, we add **HARDBOARD**. This new product is available through better retail lumber dealers.

Simpson Allwood Hardboard is manufactured of Douglas fir fibers under rigid manufacturing controls to assure uniform quality. The line is *complete*—in thicknesses, sizes and types—and meets the demands and requirements of architects, builders, commercial users, farmers and home owners.

THESE ARE THE SIMPSON ALLWOOD HARDBOARDS

- Standard Hardboard
- Black Tempered Hardboard
- Tempered Hardboard
- Hardlite (lighter density)
- Underlayment
- Wall Tile

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Sales Division, 1065 Stuart Bldg., Seattle 1, Washington

AS

Please send me sample and further information about SIMPSON ALLWOOD HARDBOARD.

Firm name _____

Address _____

City _____

Zone _____

State _____

Attention of _____



CUTAWAY shows where the various grades of Douglas fir plywood are used in a building. For ready identification, panels are grade-marked before leaving the factory. The industry grade trademarks shown assure the user that the panels are genuine Douglas fir plywood manufactured in strict accordance with U. S. Commercial Standard CS45-48

(Continued from page 218A)

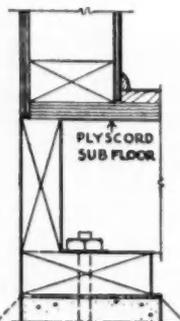
from the weather along cornices and rakes by a lumber strip, by flashing or by a strip of exterior waterproof type plywood.

Cover largest open areas first when applying sheathing and subflooring. Experienced crews find that an allowance of five per cent for waste is adequate when plywood is used.

FOR EXTERIORS

For exterior use, only the exterior grades of plywoods, with waterproof adhesive bonding, should be applied. Plyshield is specifically produced for use as siding; one face is sound veneer and ready for any type of finishing.

The minimum thickness of plywood recommended for siding is $\frac{3}{8}$ -inch, although, for economy in some types of construction, $\frac{1}{2}$ -inch panels are



EXTERIOR WALL section running across the joists. First joint is set $\frac{5}{16}$ -inch outside of stud line to provide for $\frac{5}{16}$ -inch plywood panel. This simplifies use of standard 4 by 8-foot sheathing panels applied either vertically or horizontally

used successfully. For construction of single-wall structures, such as warehouses, $\frac{1}{2}$ -inch or thicker Plyshield siding has been used with success and economy.

Exterior plywood siding should be applied with non-corrosive nails. The common, hot-dipped galvanized type is satisfactory. Nailing should be with

DOUGLAS FIR PLYWOOD

Stock Thicknesses, Widths and Lengths

INTERIOR A-A, INTERIOR A-B, PLYANEL and PLYBASE Sizes:

Thicknesses: $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{8}$, $\frac{1}{2}$, $\frac{3}{8}$ and $\frac{3}{4}$ inch

Widths: 30, 42, 48 inches

Lengths: 60, 72, 84, 96, 108, 120 and 144 inches

EXTERIOR A-A, EXTERIOR A-B, PLYSHIELD and UTILITY Sizes:

Thicknesses: $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{8}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{3}{4}$, $\frac{7}{8}$, 1 and $1\frac{1}{8}$ inches

Widths: 30, 36, 42, and 48 inches

Lengths: 60, 72, 84, 96, 108, 120 and 144 inches

SHEATHING and PLYSCORD Sizes:

Thicknesses: $\frac{3}{16}$, $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{8}$ inch

Width: 48 inches

Lengths: 96, 108, 120 and 144 inches

PLYFORM Sizes:

Thicknesses: $\frac{1}{2}$, $\frac{3}{16}$, $\frac{5}{8}$, $\frac{3}{4}$ & $\frac{1}{4}$ inch form liner

Width: 48 inches

Length: 96 inches

CONCRETE FORM Sizes:

Thicknesses: $\frac{3}{8}$ and $\frac{1}{2}$ inch

Width: 48 inches

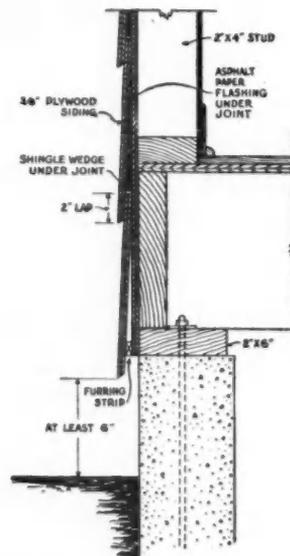
Length: 96 inches

6d common or with 6d box nails for $\frac{3}{8}$ -inch siding and 8d for thicker siding. When full-size 4 by 8-foot or longer panels are used, fastenings should be spaced not more than 6 inches on center at panel edges and 12 inches elsewhere. When narrow 12- to 24-inch panels are installed as lap-siding, nailing at panel ends should be not more than 4 inches on centers.

In applying exterior plywood for siding there are several simple and easily adapted methods for handling joints between the panels. Some suggested treatments for both horizontal and vertical joints as well as water table details are shown on these pages.

All edges of plywood siding, no matter whether butted, veed, covered, or exposed, should be bedded in a thick lead and oil paste or other suitable compound. This is knifed on as the panels are applied. Filler or bedding specifications are: 100 pounds of paste white lead, one and three-quarters gallons of raw linseed oil and one pint of dryer. Reduce dryer to one-half pint if boiled linseed oil is used.

If plywood is installed as lapped siding, the lap should be at least two inches and bedded in paste. The vertical joint should be backed with narrow strips of wood shingles tacked



PLYWOOD applied as wide lap siding. A shingle wedge and asphalt paper flashing are used under vertical joints. A two-inch lap is recommended and it should be bedded in lead and oil paste or a similar compound

Why EXTERIOR Weldtex

is your best bet for all exterior applications

It { **WON'T CHECK
WON'T CRACK
WON'T SHOW GRAIN RISE
STAYS BEAUTIFUL
FOREVER!**

and now available in REDWOOD!

How effectively (and economically) the Sky Line Inn, of Manchester, Vermont uses Exterior Weldtex! And the dining room of this charming inn has walls of lovely Interior Weldtex, guaranteed for the life of the building!



Exterior Weldtex* is the most beautiful and practical exterior plywood panel ever developed.

Right at home on the finest custom-designed dwellings and commercial buildings, Exterior Weldtex is also a *natural* for moderately-priced houses... gives them a richer, more luxurious look at *no extra cost!*

Exterior Weldtex has the warmth and beauty that only natural wood can provide... with deep, irregularly-cut striations that add a crisp, interesting shadow-line. Furthermore, these striations prevent checking and grain raising... and hide nail holes and joints.

In addition to standard Douglas Fir Weldtex, we now offer REDWOOD Weldtex. This new paneling adds the known weather resistance and beauty of redwood to the many Weldtex features.

Exterior Weldtex takes paint or stain perfectly and is approved by F.H.A. for Federal Housing jobs.

It comes in large, easily-installed panels 4'x8', 4'x9' and 4'x10'... as well as pre-cut Douglas Fir Weldtex Siding, 48"x15⁷/₈", packed 22 panels in a bundle.

Weldtex for Interiors

Interior Weldtex Panels lend themselves to unusual decorative treatments—horizontal, vertical, checkerboard, etc. They come in Douglas Fir, Southern Gum, Philippine Mahogany and California Pine, in sizes: 4'x6', 4'x7', 4'x8' (also 4'x9' and 4'x10' in Fir only).

And don't forget the 12", 16" and 24" Weldtex Squares of Southern Gum—the *newest* way to use this decorative plywood.

You and your workmen will like to work with Weldtex... your customers will be delighted with it. Order today from your Weldwood supplier.

In ordering or specifying Weldtex, please be sure to indicate either *Interior* or *Exterior* Grade, the latter bonded with waterproof resin adhesives and guaranteed against delamination.

WELDWOOD® Plywood

Manufactured and distributed by
UNITED STATES PLYWOOD CORPORATION
Largest Plywood Organization in the World
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Dealers Everywhere

*U. S. Pat. Nos.: 2286068, 2363492, 2363927.
Trade Mark Reg.

to the studs. The vertical butt joints may also be flashed by a strip of asphalt-impregnated building paper tacked over the shingle and lapped just over the course below. Horizontal edges of plywood used as lapped siding should be beveled slightly so water will drip from the outside edge.

FOR INTERIORS

Plypanel is the grade of fir plywood designed for finishing walls, ceilings, partitions, storage walls, cabinets and built-in furniture where only one surface is to be exposed.

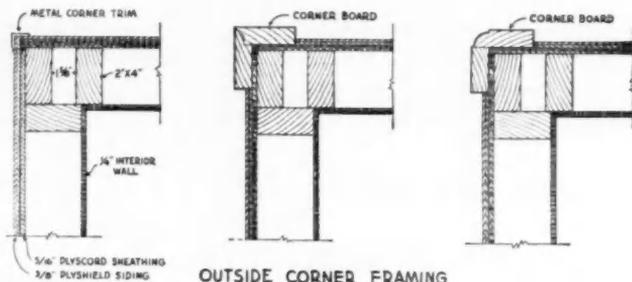
Thicknesses most popular for wall paneling are the $\frac{3}{8}$ -inch and $\frac{1}{2}$ -inch panels, while the $\frac{1}{2}$ -, $\frac{5}{8}$ - and $\frac{3}{4}$ -inch thicknesses have widespread use in cabinets, built-ins and doors.

For good wall construction, Plypanels $\frac{3}{8}$ -inch thick are recommended, over studs 16 inches on center. Apply panels either vertically or horizontally; the latter affords extra rigidity.

Some building codes require a 2- by 4-inch fire stop about four feet from the floor, between studs. This horizontal member serves as backing for plywood panels and is recommended.

Plywood panels $\frac{3}{8}$ -inch-thick are fastened with 6d finish or casing nails spaced 6 inches on center and $\frac{1}{4}$ -inch panels are applied with 4d finish nails.

Joints between plywood panels pose



TIGHT JOINTS are essential. The three corner joint treatments shown may be used whether plywood sheets are applied vertically, horizontally or as wide lap siding

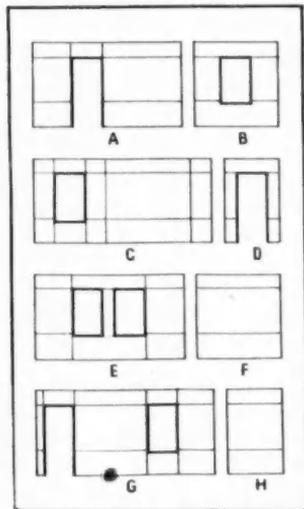
no problem under ordinary conditions. In fact, frank recognition of the joints as such can add much to the architectural effect. Panel edges may be butted flush, V-grooved, covered with decorative moldings or have inset moldings.

A basic principle in applying plywood paneling is to start at openings with vertical joints and divide plain wall spaces in any preferred, orderly arrangement. Often moldings are applied to obtain horizontal stream-lined effects or a variety of paneled designs. V-grooves, easily made with portable electric routers, can be effectively employed to simulate narrower panel-

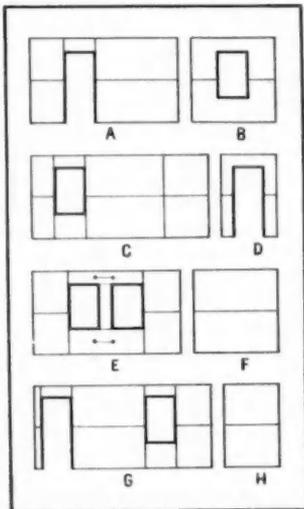
ing or to make designs on the panel face. Lapping of panels is particularly effective in ceilings.

Use furring strips when applying plywood over an already plastered wall.

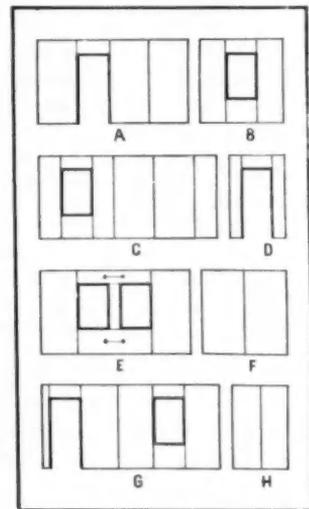
Interior finishing with plywood permits curved surfaces where they are desired. In many commercial installations this is an advantage because fixtures may also be made of plywood to harmonize with walls and ceilings. In developing curved surfaces with plywood, it is often desirable to install the panel to be bent first, and then to fit the flat surfaces. In a varying radius, the sharpest



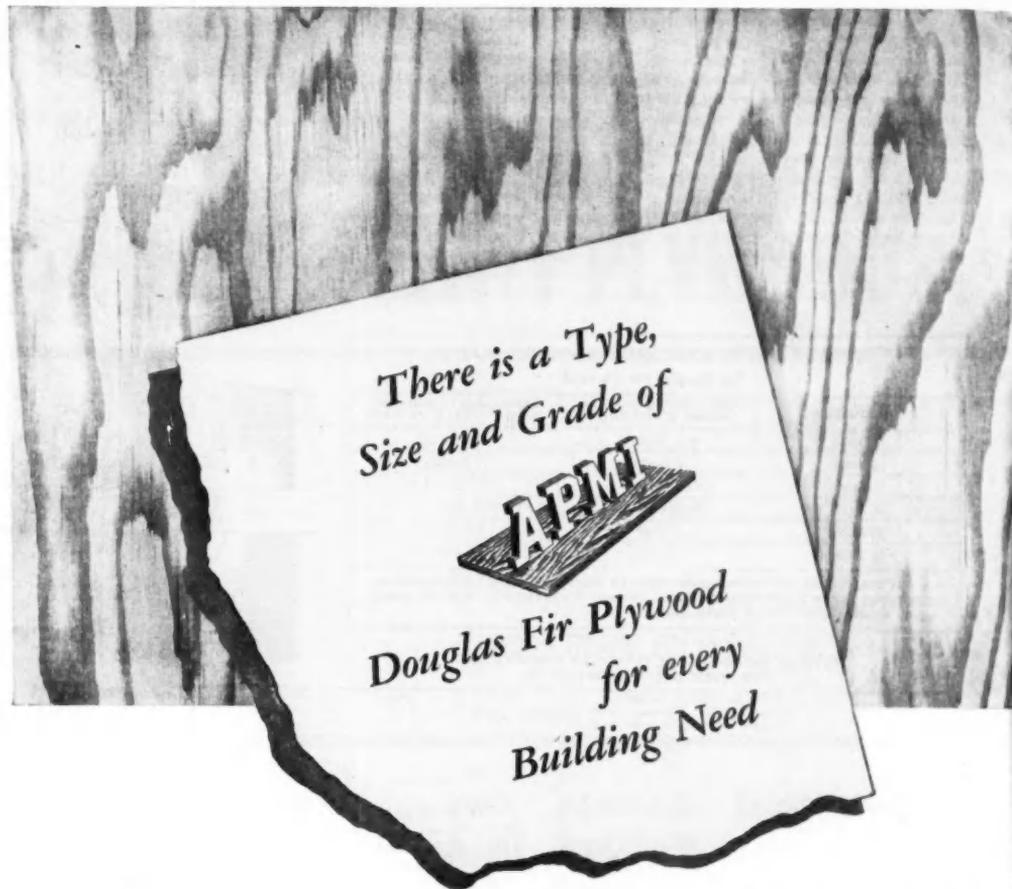
ABOVE are three basic interior plywood wall paneling design suggestions. The best rule to follow is to start paneling at the openings with vertical joints and then divide the plain wall space in an orderly pattern with panels placed in reasonably balanced horizontal or vertical spaces. Where the width of the wall is 10 feet or less, panels may be run



horizontally in two or three pieces with the openings cut out. Place vertical joints at each side of the top of door and at top and bottom of window openings. If the width of door or window opening is more than four feet, most designers do not hesitate to place panels horizontally. Combinations of vertical and horizontal arrangements may be used



in the same room with pleasing effect. Panels in 9- and 10-foot lengths are available to help solve special paneling problems. Joints between panels constitute no problem since they can be butted, veed, covered with molding, or handled in any one of the many ways illustrated at right below. Recognition of the joints as such adds to architectural effect



As one of the oldest and largest producers in the industry, Associated makes a type, size and grade of Douglas fir plywood for every building need:

Interior-type: For walls, ceilings, cabinets, built-ins; for sheathing and subflooring.

Exterior-type: For siding, outdoor signs, farm structures, boats of all sizes and shapes.

Sea Swirl (interior and exterior). A beautiful decorative plywood for remodeling and new construction.

Plastic surfaced plywood (exterior-type): For concrete forms, siding for commercial and industrial buildings.

Plyron (interior and exterior). Plywood core between hardboard surfaces. For all types of construction; built-ins, furniture.

All APMT plywood is manufactured in the heart of the Douglas fir region of Oregon; is grademarked and trademarked; is available through branch sales warehouses in major building cities, sold by experienced plywood men. Your inquiries are invited.

BRANCH SALES WAREHOUSES:

4268 Utah Street, St. Louis, Missouri
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ASSOCIATED PLYWOOD MILLS, INC.

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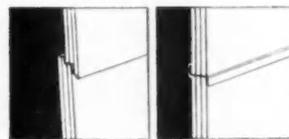
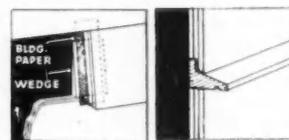
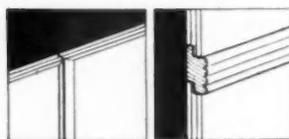
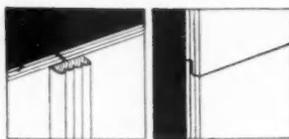
curve should be made and secured first. Use of continuous rounded backing, such as band-sawn framing, contributes to a better job and reduces the risk of rupturing the plywood.

For critical bends it is sometimes advisable to use two layers of thin panels. In using plywood for short radius, it may be soaked in hot water until warmed through. When this is done, only exterior type plywood should be used, and even then it is done at a greater risk of rupture, possible checking, and grain raising.

Bends are made more readily across

the grain. Saw kerfing on the concave side of a curve at regular intervals to a depth of about one-half the panel thickness helps materially. For severe bends, panels should be carefully selected for straight grain.

Flush joints for unbroken walls to be textured may be formed successfully with the tape joint procedure. Merely butt the panel edges and fill any openings with Spackle of Swedish putty. Over the joint, a perforated paper wall tape or gauze is imbedded in joint filler compound; when dry, a second layer of filler is applied and



APPROXIMATE MINIMUM BENDING RADII

For Douglas Fir Plywood

PANEL THICKNESS	APPROXIMATE MINIMUM RADIUS ACROSS GRAIN	APPROXIMATE MINIMUM RADIUS PARALLEL TO GRAIN
1/4 Inch	6 1/2 Inches	10 Inches
3/8 Inch	15 Inches	24 Inches
1/2 Inch	36 Inches	54 Inches
3/4 Inch	6 Feet	8 Feet
1 Inch	8 Feet	10 Feet
1 1/4 Inch	10 Feet	12 Feet

Note:—It should be recognized that an occasional panel may rupture at somewhat longer radius than indicated because of characteristics of the wood (such as short grain) in the particular panel.

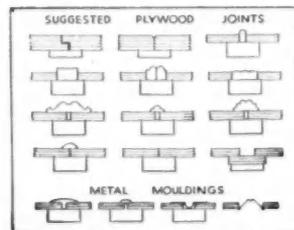
TYPICAL DOUGLAS FIR PLYWOOD THICKNESSES FOR FARM SERVICE BUILDINGS

	Floor		Walls		Roof		Notes
	Plywood Thickness	Joist Spacing	Plywood Thickness	Stud Spacing	Plywood Thickness	Rafter Spacing	
Grain Blies*	3/8"	12"	1/4" ⁸ / ₁₆ "	16"	3/8"	24"	12' Height
Round							
Rectangular	3/8"	12"	1/4"	12"	3/8"	24"	8' Height
Corn Cribs*	3/8"	12"	3/8"	16"	3/8"	24"	12' Height
Silos*			1/4"	3/8"	1/4"	3/8"	24"
Lining			1/4"	1/4"			
Horse Barn			1/2"	16"	3/8"	24"	Inside wall lining.
Stall Partitions			3/8"	24"			
Horse Trailers			3/8"	24"			Glued construction.
Call Barn			3/8"	16"	3/8"	24"	
Partitions			3/8"	24"			
Loafing Barn			3/8"	16"	3/8"	24"	
Milking Barn			3/8"	16"	3/8"	24"	
Milk House			3/8"	16"	3/8"	24"	
Hog Farrowing House			3/8"	16"	3/8"	24"	
Portable House	1/2"	16"	3/8"	16"	1/4"	16"	Glued construction.
Wallowing Trough	3/8"	24"	1/2"	24"			Glued construction.
Feeder	3/8"	24"	3/8"	24"	3/8"	24"	
Pig and Lamb Brooders	1/4"	24"	1/4"	24"	1/4"	16"	
Poultry House	3/8"	16"	3/8"	24"	3/8"	24"	
Portable Brooders	3/8"	16"	1/4"	24"	1/4"	24"	Glued construction.
Watering Tank and Trough	1/2"	24"	1/2"	24"			Glued construction.
Tobacco Curing Barn			3/8"	16"	1/4"	16"	
Fruit and Vegetable Storage			3/8"	16"	3/8"	24"	
Fumigation Chamber	3/8"	16"	1/4"	16"	1/4"	16"	
Refrigerators and Freezers	3/8"	16"	1/4"	16"	1/4"	16"	
Machine Sheds			3/8"	24"	3/8"	24"	
Septic Tank Forms			3/8"	24"			
Chutes and Air Ducts			1/4"				
Doors			1/2"	5/8"			

*Design of these structures depends on capacity and dimensions. Check with existing plans, especially for adequate nailing and bracing.

NAILING—For most buildings listed above, general plywood nailing recommendations are as follows: Use 6d common nails for panels less than 1/2", 8d common otherwise. Space nails 3/4" in from edge and 4" on centers at panel edges, 12" on inner bearings.

WHEN JOINTS are recognized as such and made a part of the architectural design they are usually easier to treat. Above are shown eight popular treatments for plywood siding joints



SUGGESTED joint treatments for interior plywood walls. Wood or metal moldings may be utilized

feathered out several inches on each side. The joint is sanded smooth before painting or papering. For greatest joint smoothness, panel edges which are to be joined may be beveled slightly, starting two or three inches from the edge, before installation. Other methods of obtaining flush joints include glued shims at panel edges or the gluing of plywood to furring strips nailed to the framework.

(Continued on page 228)

VARIETY TO SUIT EVERY BUILDING NEED...

Roddiscraft PLYWOODS

Roddiscraft DOUGLAS FIR



THE PLYWOOD
"JACK OF ALL TRADES"

PLYANEL: for a wide range of installations where appearance counts. When manufactured with waterproof glue it is known as PLYSHIELD and can be used for all exterior applications.

PLYSCORD SHEATHING: for walls, roofs, subflooring. Available in interior and exterior types.

PLYFORM: for constant use and re-use for concrete forms — sanded both sides — mill-oiled and edge sealed at the factory.

EXTERIOR GRADE FIR PLYWOOD: made with completely waterproof phenolic resin adhesives. For siding, liners, barns, silos, and a wide range of other exterior applications.

Roddiscraft HARDWOODS and SOFTWOODS



"THE ARISTOCRATS
OF MODERN PLYWOODS"

BIRCH MAHOGANY BLONDE LIMBA
MAPLE PRIMA VERA AVODIRE
OAK WALNUT KNOTTY PINE
GUM CHEN CHEN VERTICAL GRAIN FIR

These are top quality plywoods — all materials are carefully processed — bonded with the best adhesives in hot plate presses — sanded to satin smoothness — and carefully stored under proper conditions. You can sell Roddiscraft quality with confidence.

AVAILABLE WHEN YOU WANT IT: A nation-wide warehouse service makes delivery of Roddiscraft Plywood fast and reliable. For complete information — sizes, thickness — prices — and prompt service get in touch with your nearest Roddiscraft dealer.

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RODDIS PLYWOOD CORPORATION
Marshfield, Wisconsin

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Detroit 14, Mich. 11855 E. Jefferson St.	Philadelphia 34, Pa., Richmond & Tioga Sts.
Houston 10, Texas 2403 Sabine St.	St. Louis 16, Mo., 3244 Morganford Road
Kansas City 3, Kan., 23 Southwest Blvd.	San Antonio 6, Texas 727 N. Cherry St.
Los Angeles 58, Calif. 2620 E. Vannoy Ave.	San Francisco 24, Cal., 245 Williams Ave.
	New Hyde Park, L. I., N. Y. Plaza Ave. & S. 18th St.



Beauty, Adaptability, Economy— Get All 3 With Plywood Siding*

OF ALL SIDING MATERIALS, Exterior plywood is the most adaptable to various design treatments. It can be used to create board and batten siding . . . flush surface . . . or cut in third or half panel widths and applied as extra-wide lapped siding. It can be used in combination with other materials such as brick or masonry to achieve interesting texture contrasts.

And of all quality siding materials, Exterior plywood is least expensive. Least expensive in two ways: first, Exterior plywood actually costs the same or less per square foot than other quality materials; second, plywood's large size and easy workability speed work, cut labor and application time and costs up to one-third!

Exterior plywood siding is durable, too. It won't shatter, split, or puncture. And the completely waterproof adhesives used between plies are more durable than the wood itself!



Douglas Fir
Plywood

AMERICA'S BUSIEST BUILDING MATERIAL



*PlyShield® is the siding grade of waterproof-bond Exterior-type plywood. One side is of highest appearance; for economy, limited defects are permitted in back. For use as siding, gable ends, etc. Other Exterior grades with 2 faces of highest appearance are available for single wall partitions, fences, etc.

PANEL DISCUSSION

FHA Accepts 3/8" Plywood Over Rafters 24" O. C.



On the basis of recent tests and experience data, Federal Housing Administration now accepts plywood 3/8"-thick as roof decking over rafters spaced 24" on centers, according to a letter from Curt Mack, assistant commissioner of the FHA underwriting office, to Douglas Fir Plywood Association.

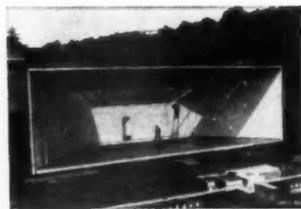
A revision of FHA Minimum Property Requirements is planned; meanwhile, FHA at Washington (Underwriting Office) will advise any insuring office upon inquiry that 3/8" plywood over rafters 24" on centers will be accepted. Plywood roof deck thicknesses now accepted by FHA are shown below in tabular form.

Roofing Material	Max. Rafter Spacing	Min. Plywood Thickness
Wood, Asphalt Shingles	16"	5/16"
	24"	3/8"
	24"	1/2"
Slate, Tile, Asbestos-Cement	16"	1/2"
	20"	3/4"
	24"	5/8"
Flat Roofs	16"	3/8"
	20"	1/2"
	24"	5/8"

*Under wood shingles: If plywood is less than 1/2" thick, apply 1" x 2" nailing strips.

A folder giving information regarding use and acceptance of fir plywood in homes built under FHA financing may be had free of charge from Douglas Fir Plywood Association, Tacoma 2, Wash.

Plywood Builds Band Shell



The problem was to design a symphonic band shell for the University of Virginia that would be, as nearly as possible, acoustically perfect, light and easily erected, yet amply strong and rigid. To meet these requirements, Architect Floyd E. Johnson, Charlottesville, Va., chose Exterior fir plywood framed with lumber, fir and light steel bow string trusses.

Floor of the structure is 3/4" Exterior plywood, supported by 2x10 joists over

ADV

AMERICAN BUILDER

large oak timbers. Wall sections are of $\frac{3}{4}$ " plywood framed on all four sides by 2x4s. Roof panels are $\frac{3}{4}$ " plywood secured to 2x6 framing members. Wall and ceiling panels are bolted together. Self-opening plywood blow panels, 4'x4', relieve air pressure. Acoustical qualities of the shell have been favorably commented upon by performers and audience alike.

Plywood Catalog Available



The 1952 Basic Plywood Construction Catalog, a reprint of the 20-page insert for Sweets File, Architectural, is now available free of charge to architects, engineers, builders and dealers. It contains plywood grade-use data, finishing information, suggested details and plywood construction techniques. Order from Douglas Fir Plywood Association, Tacoma 2, Washington.

Garden-Room Addition Uses Single Wall Construction



Faced with the problem of creating extra living space to accommodate the needs of his growing family, Architect Whitney R. Smith combined Douglas fir plywood, plate glass and considerable skill to add this large multi-purpose garden-living room to his Los Angeles country home.

Situated in an April-like garden planted 40 years ago, the striking plywood addition creates an intimate link between indoors and out. Physically, this is accomplished by having the floor of the room at the same level as the garden which surrounds the room on four sides. Visually, the slender supports combine with high ceiling windows to permit a smooth, unbroken flow of plywood ceiling paneling outward into the broad plywood soffits.

Architect Smith used a single thickness of $\frac{3}{8}$ " Exterior plywood secured to the inside of 4"x4" posts, 4' o.c. Interior ceiling paneling is $\frac{3}{8}$ " Interior plywood; soffits are $\frac{3}{8}$ " Exterior. Both interior and exterior walls are painted a pleasing grey-green; ceiling and soffit are light-stained.

ADV.

APRIL 1952



Plywood Built-Ins Often Mean The Difference Between and

No DOUBT about it, plywood built-ins have buy-appeal. Space-thrifty plywood storage wall, built-in dining bar or crisp kitchen cabinets can often mean the difference between a house that's snapped up the minute it's offered and one that's a drug on the market—an important fact to consider as selling becomes more and more competitive.

And it's so easy to add client and customer-winning distinction to your homes with plywood built-ins. For no other material is so adaptable to specific design and space requirements. With plywood, you can make the built-in fit the house—*exactly*. No bothersome juggling of "stock size" units. No limit to size, design, finish or color. Plywood works quickly, easily with ordinary tools. It is equally adaptable for construction of shop-fabricated units. Plywood won't split, chip or puncture. *It's the logical material for every built-in.*

Douglas Fir
Plywood

AMERICA'S BUSIEST BUILDING MATERIAL



Portfolio of Prize-Winning Built-Ins. Valuable collection of designs that will serve as a springboard for your own imagination. Contains over 50 designs judged best in the national "Better Living Home" architectural contest. For your free copy write Douglas Fir Plywood Association, Tacoma 2, Washington.



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(Continued from page 224)

HARDWOOD PLYWOOD

The application measure set down for fir plywood can generally be followed for hardwood plywoods used on interiors with a few additional cautions. To achieve the best results, furring strips of 1/4-inch plywood, cut two inches wide with the grain running the short way, should be nailed to the studding and blocking. By use of the furring strips, individual panels are practically united into a single unit of wall which swelling or shrinking of the building will not affect.

CONCRETE FORMS

Two standard grades of fir plywood are especially produced for concrete form use: (1) Plyform, for multiple re-use, made with highly water-resistant but not waterproof adhesives; (2) exterior-type fir plywood, grade-marked EXT-DFPA-Concrete Form, with a completely waterproof bond between the plies. Plastic-surfaced plywood is available for constructions requiring the best possible appearance of the concrete surface.

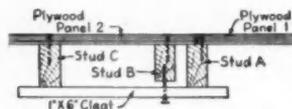
The thickness of plywood to use in

concrete forms depends on the loads, permissible deflection, and spacing of studs, joints or stiffeners. The 5/8-inch and 3/4-inch are the most popular thicknesses. It is axiomatic that the supporting framework, studs, wales, posts and joists must be constructed for deflection, bending strength and shear in studs and joints and for column action in posts. Plywood requires proper support from studs or joists. The height and rate of pour as well as fluidity affect pressures against the forms and spacing of supports. Values are calculated on panels placed with face grain across the studs:

Thickness	Stud Spacing	Limiting Deflection	Maximum Load
5/8"	12"	1/270 of Span	880 lbs. sq. ft.
3/4"	12"	1/270 of Span	1,330 lbs. sq. ft.
3/4"	16"	1/270 of Span	560 lbs. sq. ft.
5/8"	12"	1/360 of Span	660 lbs. sq. ft.
5/8"	12"	1/360 of Span	1,000 lbs. sq. ft.
5/8"	16"	1/360 of Span	420 lbs. sq. ft.

In building up concrete form panels, a simple jig for ready spacing of studs and stiffeners is a great time- and labor-saver.

Nails for forms should be as small



A METHOD of detailing panel forms is shown here. First set in position is Panel 1; Stud A is the edge stud. The plywood sheathing of Panel 1 laps over Stud A only to the center. This leaves the other half to receive the edge of the sheathing of Panel 2. Stud B, which is the edge stud of Panel 2, is 1/4-inch to 1/2-inch less in depth than studs A and C, the 1 by 6-inch cleat bears against studs A and C and is nailed with a double-headed nail to Stud B. This draws the sheathing of Panel 2 snugly against Stud A, making an inconspicuous joint. The sheathing of Panel 2 is not nailed to Stud A. Thus the panels can be stripped easily by removing the wales and the 1 by 6-inch cleats

and as few as practicable. For nailing plywood to studs, use nothing larger than a 5d nail in panels up to 5/8-inch-thick and 6d nails for 3/4-inch panels. Lining plywood, 1/4-inch-thick, is applied with 2d nails. When panels lap at corners and, in fact, wherever possible in assembling forms, the use of double-headed nails will facilitate stripping and minimize destruction of lumber.

Plyform panels are edge-sealed at the mill and also are oiled unless otherwise specified. Some builders are having success with special lacquer as a first coat instead of oil. This gives better protection to the plywood and results in a smoother wall. If this system is used, the plywood should be ordered from the mill "not oiled." Where oil is used all panels should receive a uniform coating of a good grade of form oil before each pouring. Too much oil will stain the concrete. A thin film that makes the surface feel greasy to the touch is sufficient. All saw cuts or other workings should be treated with lead and oil, aluminum primer, shellac, or similar material as the job progresses. Any open cracks in joints should be pointed up or calked with lead, putty or plaster-of-Paris filler. The calked joints, after drying, should be care-

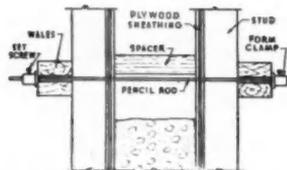
POPULAR HARDWOODS USED IN PLYWOODS

NAME	COLOR	FIGURE
Avodire	White	Mild
Ash	Light Tan to Brown	Mild
Birch	White or Red	Mild
Butternut	Light	Mild to Medium
Cherry	Reddish	Normal
Duali	Light Tan	Medium
Elm	Light	Mild
Magnolia	Light	Mild
Mahogany	Red	Stripe, broken stripe plain and crossfire
Maple	White	Birdseye, curly and plain white
Oak	White-Red	Quartered large flake or mild figure, plain sawn and rotary cut
Orientalwood	Light Brown	Highly figured, stripe or crossfire
Satinwood	Golden	Exotic firing
Walnut (American Black)	Light to Dark Brown	Stripe heart, stripe or crossfire
Walnut (Circassian)	Light Brown and Black	Highly figured

With few exceptions, the above hardwood plywood panels can be obtained in the following sizes:

5/8- and 3/4-inch, Three-Ply	Width	24 inches	30 inches	36 inches	48 inches
	Length	48 inches	60 inches	84 inches	96 inches
3/8-inch, Five-Ply	Width	24 inches	30 inches	36 inches	48 inches
	Length	60 inches	72 inches	84 inches	96 inches
1/2-inch, Five-Ply	Width	24 inches	30 inches	36 inches	48 inches
	Length	72 inches			
3/4-inch, Five-Ply	Width	24 inches	30 inches	36 inches	48 inches
	Length	60 inches	72 inches	84 inches	96 inches

Nearly all hardwood standard plywood panels are available in 48- by 96-inch sheets. A number of the above-named hardwood plywood panels are available in a wider range of sizes and thicknesses.



A TIE for architectural concrete in which minimum-sized holes from ties are desired. The set screw grips the rod to prevent slipping. Oiling or coating with paraffin will ease removal of rods from concrete

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of **MASONITE PRESWOOD**
to do a thousand jobs better!

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Newest members of the
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Tempered DUOLUX



- each in 1/8" and 3/8" thicknesses
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 - Both sides take beautiful, lasting finishes!
- Use Duolux for every job
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PRESWOOD®



The original hardboard. Denser than most woods. Hard, smooth surface on one side, screen impression on other. For interior walls, ceilings, etc. In 1/8", 3/8", 1/4" and 3/8" thicknesses.



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PRESWOOD

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Offers the luxury and rich appearance of Spanish-grain leather in rigid panel form. Unlimited design possibilities in homes, schools, stores, offices, etc. 1/4" thick.



MASONITE
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Tempered for durability and moisture resistance. Score lines in large panels form attractive 4" tile pattern. 1/8" thick.

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Panelwood®



Low-cost panel material for walls and ceilings. Ideal for converting unfinished space into attractive rooms. 3/8" and 1/4" thicknesses.

MASONITE
Underlayment



Levels the ridges over sub-floors or old wood floors. Improves wearability when used under linoleum, asphalt tile, rubber tile, cork tile or carpeting. 3x4-ft. and 4x4-ft. panels, 1/4" thick.

MASONITE
Concrete Form
PRESWOOD



A special Tempered Preswood, insuring smooth concrete surfaces, virtually eliminating costly hand finishing. 3/8" and 1/4" thicknesses.

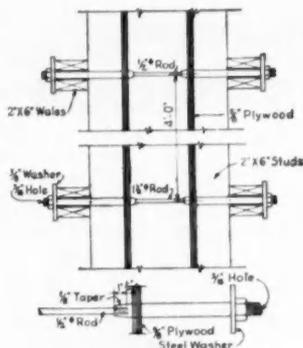
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MASONITE® CORPORATION

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DETAIL OF FORM BOLT

ON panels for high walls, the selection of an efficient tie between form walls is important. This detail illustrates a practical tie known as a "She-Bolt," suitable for use in most structural concrete work

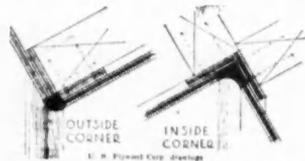
fully sanded and given an added coat of form oil.

For architectural concrete and smooth surfaces, all joints in forms should be pointed with water putty, patching plaster, or a mixture of equal parts of tallow and Portland cement.

For sharply curved concrete surfaces, with a radius of not less than 15 inches, 1/4-inch plywood panels make form construction easy. For minimum radius plywood is bent across the grain. For moderate curves thicker Plyform may be used. The 1/2-inch panels may be bent to an 8-foot radius crosswise or 10-foot lengthwise.

No metal wedges or tools should be placed against freshly set concrete to pry the forms loose. If wedges are necessary, they should be of wood. The wedging should be done carefully and by degrees with light rapping on the strip to break adhesion.

After stripping, the panels should be immediately and thoroughly cleaned of any concrete particles. A wide blunt blade should be used for this purpose. Projecting nails should be drawn to prevent scarring panels in stacking the sections. If the sections are to be completely dismantled, the plywood panels should be stacked



TWO suggested treatments for joining plywood at interior paneling corners

evenly on a dry and level platform and protected from the sun and rain.

MINIMUM BENDING RADI

	Heated Equipment Bending Forms Heated to 300°-450°F		Cold Moist Bends		Cold Dry Bends		
	Smooth Side Out	Smooth Side In	Smooth Side Out	Smooth Side In	Smooth Side Out	Smooth Side In	
Standard Hardboard	1/8"	2 1/2"	2"	8"	4"	12"	10"
	3/16"	3 1/2"	2 1/2"	12"	6"	18"	12"
	1/4"	5"	4"	18"	14"	26"	22"
	5/16"	6"	5"	28"	16"	40"	28"
Tempered Hardboard	1/8"	2 1/2"	2"	4"	3 1/2"	9"	6"
	3/16"	3"	2 1/2"	8"	5 1/2"	13"	10"
	1/4"	4"	3"	16"	10"	24"	18"
	5/16"	6"	5"	24"	14"	36"	24"
Leather textured Hardboard	1/8"	3"		10"		14"	

TABLE showing minimum bending radii for hardboards by thickness and type

PLYWOOD ON THE FARM

Because plywood used in farm service structures is constantly or repeatedly exposed to weather, to wetting during cleaning, or to high humidities (as in dairy barns), only the exterior grades with waterproof adhesive bond should be used.

Plywood is especially valuable for use in portable farm buildings such as poultry brooder houses, hog houses, turkey shelters, and range sheds. The portability factor is of prime importance. By using recommended grades and thicknesses of plywood for such structures, weight can be reduced as much as one-half and their useful life extended immeasurably. Plans may be obtained by builders and dealers either from their own state agricultural institutions or from the Douglas Fir Plywood Association.

HARDBOARDS

Types and Uses

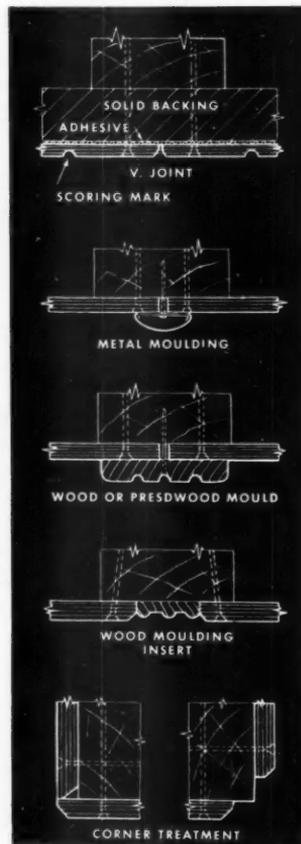
Hardboards are panels processed from ligno-cellulose fibers which are the result of exploding wood chips under high-pressure steam. The fibers are then compressed into the desired panel thickness and density in thermal hydraulic presses. A quick reference chart shown on these pages gives the physical properties and panel sizes available for the seven basic types of structural and surface-finishing hardboards.

Hardboard is known as "the wonder wood of 1,000 uses." It is extensively used as a material for modernizing commercial interiors and exteriors, for cabinets and other built-in features in houses, and for bevel siding in home building. It is flexible and can be applied in curved designs. The surface is hard and resistant to dents and wear, and is an excellent base for any kind of finish.

Preliminary Conditioning

All hardboards should be pre-expanded before application. When

using tempered hardboard for interior use the panels should be pre-expanded by applying cold water to the reverse (screen) side, at the same time scrubbing with a broom or brush. No water should be left standing on the



SUGGESTED joint treatments for hardboard interior paneling. A slight space between panels is recommended

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Super-Harbord, the original Exterior-type plywood, is better for marine uses



Harborite, the original abrasion-resistant, plastic-faced plywood panel

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Durable, rugged SUPER-Harbord Exterior-type panels—with tough, hard, smooth faces of resin-impregnated plastic (fiber permanently fused to the plywood core); that's Harborite. It brings you all the strength and structural values of exterior plywood, plus the appearance value, check-free qualities and extra durability of a superior plastic overlay. Harborite is a construction, industrial and utility panel for siding, soffits, cabinet work, signs, toys

... for siding and lining railroad cars, trucks, trailers, etc.

HARBORITE GIANT PANELS

Giant panels of Harborite plastic-faced plywood are manufactured to order for special jobs requiring the advantages of an "extra-size" overlay panel. Harbor's 1 to 12 scarf ratio produces a superior joint. Standard overlay weight is 65/lb. Additional plastic facing on order.

SUPER-Harbord

THE ORIGINAL EXTERIOR-TYPE DOUGLAS FIR PLYWOOD

FOR YEARS the preferred panel for all outdoor and marine uses, SUPER-Harbord exceeds Commercial Standard specifications in four important respects: 1. Heartwood only is used throughout; 2. Core veneers are precision jointed to minimize voids; 3. Inner plys are B grade, with defects repaired to produce a "solid" panel face to back; 4. After hot-pressing, panels are tempered to restore proper moisture content. The result is a uniform, extra-strong Exterior panel of double dependability—the accepted standard for superior performance.



Precision-jointed cross bonding

SUPER-Harbord PLYCRETE

Recognized for more than a decade as the finest fir panel for multiple-use concrete form work demanding relatively high architectural finish. Superior core gives it stamina to withstand rugged service.

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Produced to order by joining standard SUPER-Harbord panels with a 1 to 12 scarf joint. Any length, with a maximum width of 9' unsanded (8'6" sanded). Any width, with a maximum length of 9' unsanded (8'6" sanded).

Harbord INTERIOR-TYPE PLYWOOD

A quality moisture-resistant panel in all standard industry appearance grades—for interior real wood paneling, cabinets, sheathing, subflooring, built ins, indoor furniture, displays and interior industrial applications.

Harbord PLYCRETE

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smooth surface or boards will not retain their original color. After the surface has turned a dark brown color, stack screen side to screen side and allow the board to stand for 12 to 16 hours. Then apply in this damp condition.

When using tempered hardboard for exterior finish, follow the same pre-expansion process as above, but let the board stand for 24 hours before applying.

Hardboards with tile face or leather finish have a lower rate of water absorption. To pre-expand such hardboards, it is necessary to stack, screen side to screen side, with wet cloths or newspapers between the panels, and allow to stand for 12 to 16 hours. Cover stacks to reduce evaporation.

Working with Hardboards

Use typical woodworking procedures and ordinary carpenter's tools when building with hardboards. Panels can be sawed, planed, routed, drilled, punched, shaped or bent into simple curves. Just observe these three "don'ts": Don't toenail; don't drive nails in the edges; don't nail moulding, etc., onto hardboards without any backing, for the hardboard will not hold the shank firmly.

The cross-cut saw with 8 to 12 points per inch and a No. 6 set should be used for straight cutting. Pressure should be little more than the weight of the saw. Power saws save time and may be used. Use a coping or compass saw for cutting irregular, curved and inside edges. Turn the intended exposed surface up when cutting. This procedure will leave a sharper corner on the face edge in addition to helping protect the face side of the panel.

Inch Thick	HARDBOARDS—THICKNESSES, SIZES, WEIGHTS										Lbs. per Sq. Ft.
	Dimensions in Feet										
Standard											
1/8	4x12	4x10	4x9	4x8	4x7	4x6	4x5	4x4	4x3		0.76
3/16	4x12	4x10	4x9	4x8	4x7	4x6	4x5	4x4*	4x3*		1.01
1/4	4x12	4x10*	4x9	4x8*		4x6*		4x4*	4x3*		1.36
5/16	4x12	4x10*	4x9	4x8*		4x6*		4x4*	4x3*		1.72
Panelwood											
3/16	4x12	4x10		4x8				4x4	4x3		0.90
Tempered											
1/8	4x12	4x10	4x9	4x8	4x7	4x6	4x5	4x4	4x3		0.79
3/16	4x12	4x10	4x9	4x8	4x7	4x6	4x5	4x4*	4x3*		1.10
1/4	4x12	4x10*	4x9*	4x8*		4x6*		4x4*	4x3*		1.42
5/16	4x12	4x10*	4x9*	4x8*		4x6*		4x4*	4x3*		1.76
Black Tempered											
1/8	4x12	4x10*	4x8*	4x6*	4x4*	4x3*					0.79
3/16	4x12	4x10*	4x8*	4x6*	4x4*	4x3*					1.10
1/4	4x12	4x10*	4x8*	4x6*	4x4*	4x3*					1.42
5/16	4x12	4x10*	4x8*	4x6*	4x4*	4x3*					1.76
Concrete Form											
3/16	4x12	4x10*	4x8*								1.13
1/4	4x12	4x10*	4x8*								1.46
Tile Finish											
1/8	4x12	4x10*	4x8	4x6*	4x5*	4x4	4x3				0.84
Leather Finish											
1/8	4x12	4x10*	4x9*	4x8	4x7*	4x6	4x4*	4x3*			0.84

Items marked (*) are available only when on inventory

Beveled or rounded corners leave an attractive edge treatment and are easily obtained by using an ordinary plane or beveling plane. Keep the blade setting consistent for an edge treatment with continuity of even depth and angle.

Holes should be drilled if screws are to be used as fastenings. Counter-bore holes if the screw head is to be flush or below the surface. For circular holes, a twist drill will work more satisfactorily than an auger bit.

For concealed nail heads, use finishing or casing nails and set with a nail set. Then fill with putty or

plastic wood, over the head, after the prime coat of paint has been applied.

Making Bends

Hardboards can be bent into simple curves by the cold dry, cold moist, or the hot method. The method used depends upon the radius of the curve desired. (See bending radii chart).

The cold dry method consists of bending the panel around the permanent back form or frame with no special preparation. Always start nailing from one end of the panel and continue to attach the panel as it is bent around supporting members.

RECOMMENDED NAILS FOR FASTENING VARIOUS TYPES OF HARDBOARDS

APPLICATION	TYPE OF MASONRY HARDBOARD	Thickness	SPACING		SIZE AND TYPE OF NAIL	Approx. No. of Nails per Sq. Ft.	
			Horizontal on Top	Vertical Edge			
INTERIOR WALLS AND CEILING	Standard Freewood and Tempered Freewood	1/8"	12" thru body*	4"	1 1/2" casing nails	635	
		3/16"	6"	4"	1 1/2" casing nails	805	
	Panelwood	1/8"	6"	4"	1 1/2" finishing nails	479	
		3/16"	6"	4"	1 1/2" casing nails 1 1/2" finishing nails 1 1/2" countersunk nails 2 1/2" box nails	635 805 700 635	
	Leatherwood and Tempting	1/8"	12" thru body*	4"	1 1/2" 18 ga. brads	1650	
UNDESLAYMENT	Underlayment	215"	6" thru body	4"	1 1/2" ring grooved nails, flat head 1 1/2" drive screws, flat head 1 1/2" barbed box nails	535 650 635	
FRESH FLOORING	Tempered Freewood	1/8"	6"	3"	1 1/2" control casing nails	635	
PANEL SIDING	Tempered Freewood (over sheathing)	1/8"	12"	3"	2 1/2" galvanized siding nails	200	
		3/16"	12"	3"	2 1/2" galvanized box nails	200	
	Tempered Freewood (no sheathing—recommended only for form bridge, sheds, garages, etc.)	1/8"	8"	3"	2" galvanized siding nails	225	
		3/16"	8"	3"	2" galvanized box nails	225	
LAP SIDING	Tempered Freewood (over sheathing)	1/8"	16" along bottom edge at stud locations	3"	Plain Lap 2 1/2" galvanized siding nails 2 1/2" galvanized box nails	140 140	
		3/16"	16" along bottom edge at stud locations	3"	Lap with shadow strip 2" galvanized siding nails 3" galvanized box nails	90 90	
	Siding widths: 24" and over	1/8"	8" or 12"	4"	1 1/2" control casing nails	635	
		3/16"	8" or 12"	4"	1 1/2" control casing nails	635	
CONCRETE FORMING	Concrete Form Freewood	1/8"	8" to 12"	4"	1 1/2" control casing nails	635	

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We're light in color. Take paint easily. Cut with sharp, clean edges.

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To meet all your requirements: both Standard and Reztemp Grades of Weldwood Hardboard come in three popular thicknesses: 1/2", 3/16", and 1/4". In sizes: 4'x6', 4'x8', 4'x10', 4'x12' and 4'x16'. Panels up to 4'x12' are wrapped six to a package. Weldwood Reztemp Tile Board is available only in 1/2" thickness and sizes 4'x4', 4'x8', 4'x12'.

Call your Weldwood salesman for Weldwood Hardboard or Tile Board today.

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Patented, other patents pending

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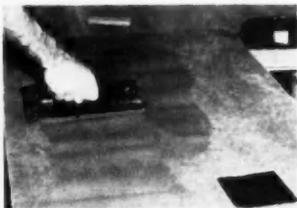
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WORKMAN is shown applying adhesive to a panel of hardboard ready for installation in bathroom

Never nail center portion of panel first.

For cold moist bends, submerge portion to be bent in water not exceeding 100 degrees Fahrenheit for 40 minutes to several hours. If natural finish is to be retained, scrub screen surface with water, stack panels with moist cloths in contact with screen sides only, cover with tarpaulin and let standard hardboard stand for 24 hours; let tempered hardboard stand for 48 hours. Tile-face and leather-finish hardboard should stand for 72 hours. Then attach in usual manner.

For hot bends, panels are to be moistened in the same manner as described above and then bent over a pipe or roll heated to a constant temperature of 300 to 450 degrees Fahr-

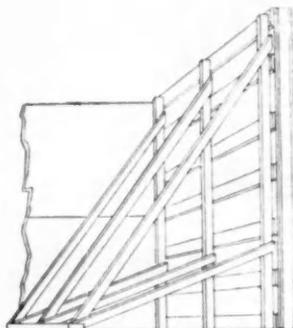
enheit. Allowance should be made for a slight spring back. Panel moisture is converted to steam and when bend is completed panel will be dry.

Installing Hardboards

Hardboards may be applied over solid backing such as wood, gypsum lath, gypsum wallboard and plaster, or directly to studs or furring strips not more than 16 inches on center. Solid, continuous support must be maintained behind both horizontal and vertical joints. When applying directly over studs, hardboards should be at least $\frac{3}{8}$ -inch thick.

When hardboards are to be attached to solid surfaces the panels should first be cut to fit loosely in position on the area to be covered. Never fit panels tightly abutting each other. Then, by using a saw tooth trowel with notches of approximately $\frac{3}{16}$ -inch depth, spread waterproof adhesive over the entire back of the panel. Spread on all edges. Be careful not to get it on the surface which is to be exposed.

Place panel in position immediately after adhesive is applied. Press and tap it to get a firm contact over the entire area. It is then desirable to place braces or supports against the panel to hold it in place. (See diagram). Time required to set is usually overnight. Nails may be used in place of shoring if base surface permits firm anchorage.



A SUGGESTED method to brace interior hardboard panels until adhesive has set. Panels should be left braced from six hours to over-night

strips. A coat of asphalt mastic should then be applied to the reverse sides of panels before application. Then follow usual frame construction application directions.

The final surfaces of all hardboard applications should have the rough edges or irregularities dressed down with No. 00 sandpaper. Surface finishes for preservative or decorative effects may be applied by the same application techniques as used on the average hardwood. Practically any type of finishing material may be used.

Concrete Form Hardboards

Specially tempered hardboards are for concrete form use and should be pre-expanded before being applied to the framework of a concrete form. Scrub water into the screen side and then stack screen side to screen side, covered, and let stand for 24 hours.

Panels are then applied to the form construction in the moist condition with the smooth side against the concrete and nailed securely. Screen side of panel may be used against the concrete if rubbing is required to produce a uniform surface color on concrete.

Necessary bevels can be formed of smooth, straight-grained wood and nailed through the fiber board and into the backing. Before first use or re-use the panel surface which bears against the concrete should be wiped with waste saturated with grease having a calcium soap or aluminum stearate base, or with waste dipped in paraffin base oil having a viscosity of not less than 250 seconds at 100 degrees Fahrenheit (Saybolt) and free from volatile constituents.

All other basic principles of proper concrete form fabrication should be followed.

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Nailing

Nails or screws should be used if panels are applied directly to studs. Nails should be long enough to penetrate the nailing base at least one inch. For interior work, space the nails six inches apart in the central areas of the panel and four inches apart approximately $\frac{1}{4}$ -inch from the edges. For exterior application space the nails somewhat closer together. Always nail center of panel before the edges. On exterior work use copper-coated, galvanized, or cadmium-plated casing head nails.

Lap Siding

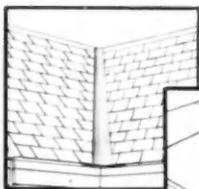
Hardboards may be applied as lap siding in strips 8, 12 or 16 inches wide, of either $\frac{1}{4}$ - or $\frac{3}{8}$ -inch thickness. Apply directly over sheathing and building paper, using a 2-inch lap. For applying on the exterior of a masonry structure, wood furring strips spaced 12 to 16 inches on center should be used. Shim furring strips to a true plane level. Fill the space between furring strips with cement plaster flush with surface of furring

FOLLANSBEE STEEL CORPORATION

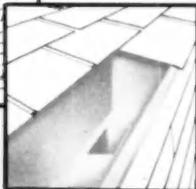
PITTSBURGH 30, PA.



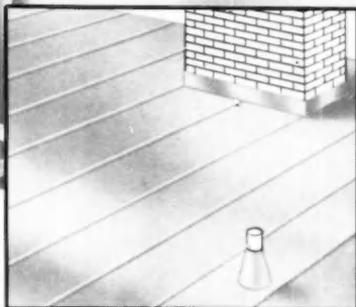
FOLLANSBEE TERNE METAL ROOFING In 50-Foot Seamless Rolls



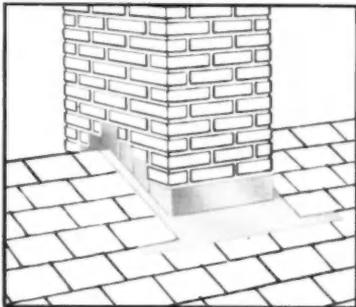
Terne metal valley applied to asphalt shingle roof.



Built-in terne metal gutter on home with shingle roof.



Flat roof deck—vertical seams are flat locked.



Terne step flashing applied to chimney on slate roof.



Porch roof—vertical and horizontal seams are flat locked.

Terne, or more accurately terne plate, is the correct name for the material often called "roofer's tin." The old name persists, even though a plating of tin alone has not been used for roofing for more than a century.

Modern terne plate consists of copper-bearing steel strip, cold reduced to the proper thickness, heat treated to provide the best balance between malleability and toughness, and hot-dipped to give it a heavy coating of terne metal—an alloy of lead and tin. The lead provides protection against the weather, and the tin bonds the alloys to the steel base with greater adherence than is possible with lead alone.

Follansbee Steel Corporation has been making the highest quality Terne Metal for more than half a century. First, as "box ternes"—hand-dipped rectangular sheets 14' x 20' and 20' x 28"—which were seamed and soldered together when they were laid. Later, we offered "long roofing ternes"—sheets 8 feet long—then originated the exclusive Follansbee 50-foot seamless roll.

Its durability, malleability and toughness make terne the ideal weather-sealing material. It is used for valleys, gutters, flashings, etc., on built-up, composition, asphalt or asbestos shingle, slate and tile roofs. A wide range of widths—4", 6", 7", 8", 10", 12", 14", 20", 24" and 28"—is provided for any weathersealing need.

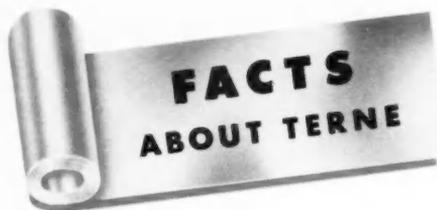
Weatherseal strips of Terne Metal may be painted immediately after installation. Terne is supplied unpainted, or painted one side, or painted two sides at the mill, as ordered. If received unpainted, the underside must be painted before the weatherseal is installed. If received painted one side, the weatherseal is installed painted side down, and the exposed side should be painted as soon as possible after installation. If installed painted two sides, the mill paint coat is adequate primer on the terne, and it is necessary to apply only the finish coat, or coats, as desired.

Weathersealing may be painted to match or harmonize with any roof, from slate to bright asphalt shingles, or tiles of any color. A list of 37 major paint manufacturers and their recommendations is included in the bulletin "How to Paint Follansbee Terne Metal Roofs." A good paint job is obtained when the suggestions included in this booklet are closely followed.

Follansbee Terne Metal is flexible in application—it may be used for any weathersealing application. It comes in a wide variety of widths; it has a low expansion and contraction rate; it has rugged strength—tensile strength is 45,000 lbs. per square inch; it resists tearing—the base metal is steel; it is fire-resistant—all metal, with nothing to burn; and it has a low maintenance cost—only an occasional painting. All these features add up to a completely satisfactory weathersealing material.

Box ternes are still available, but with comparatively fewer applications, especially since roofers and builders have come to realize that the idea that cross seams allow for expansion and contraction is erroneous—the metal can only expand and contract by breaking open the solder in the seams. With continuous rolls of Terne Metal, this factor is so negligible that it need not even be considered.

Pre-cut flashing shingles, 5" x 7", IC gage, painted two sides, can be supplied in packages of 100.



FACTS ABOUT TERNE

BASE METAL FOR TERNE: Two thicknesses of base metal are available—standard IC gage (approximately 0.0122" thick), and IX gage (approximately 0.0155" thick). IC gage is most widely used on all domestic and most industrial and commercial weathersealing applications. IX gage is made only on special order for extremely wide gutters and some industrial service, where extra heavy base metal is required.

COATING GRADES: Coating grades are expressed in terms of total weight of coating on a given area. This area, by old trade custom, is the total covered by a box—112 sheets—of 20" x 28" terne plates, and amounts to 436 square feet.

We recommend 40 lb. coating (available when not restricted by government order), because the extra thick coating provides an additional safety margin for satisfactory, trouble-free service, with only an occasional painting, for the life of the building. However, we also recommend 20 lb. coating, which is adequate for good service, when repainted as the rest of the structure is refinished. Some 8 lb. terne is available, but it is not recommended except for special or temporary applications.



EXPANSION AND CONTRACTION: When weathersealing with Terne Metal, there is no need for expansion allowances or joints, for terne expands and contracts only 0.2195" per 30 lineal feet for a 100° F temperature change. Terne Metal is tough enough to absorb these slight changes, therefore the expansion and contraction features may be completely ignored.

TABLE: Expansion per 30 feet of Metals per 100° F. Temperature Rise

Terne Metal	0.2195 inch
Copper	0.3192 inch
Aluminum	0.4608 inch
Lead	0.5724 inch
Zinc	0.6228 inch

TABLE: Tensile Strength of Metal Weathersealing Materials

Terne Metal	45,000 lbs. per sq. inch
Zinc—Across Grain	36,000 lbs. per sq. inch
Copper	32,000 lbs. per sq. inch
Zinc—With Grain	27,000 lbs. per sq. inch
Lead	1,780 lbs. per sq. inch

THESE BULLETINS WILL BE OF INTEREST TO YOU:

- "How to Weatherseal with Follansbee Terne Metal"
- "How to Install Follansbee Terne Metal Roofs"
- "How to Paint Follansbee Terne Metal Roofs"



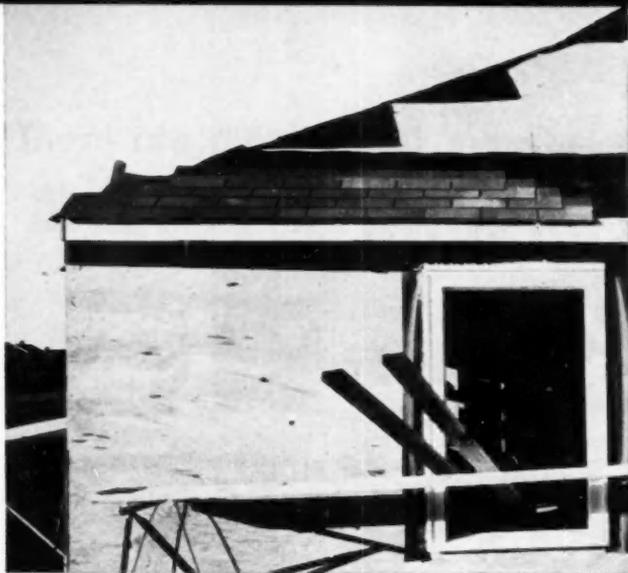
COMPLETE ROOFS OF TERNE

The properties of Follansbee Seamless Terne Metal roofing that make it desirable for Weathersealing also make it the best material for complete roofs. The architect and the man of the house like the good design features and the fine service it renders; the woman of the house likes its beauty of design and the color range it makes possible by the use of paint; and the builder, in addition to liking all these qualities, knows that he can build a house with a Terne Metal roof

incorporating lighter structural design, because he is free of concern for the weight of the roof.

A terne roof is easy to install, for there are no cross seams in Follansbee Seamless roofing to plague the roofer. It is easy to maintain, simply by painting the roof—to match or harmonize—each time the sides and trim of the house are painted.

FOLLANSBEE STEEL CORPORATION
PITTSBURGH 30, PA.



ROOFs must meet two major requirements . . . they must be in harmony with the architectural pattern of the house and must provide sufficient strength to resist winds, sustain snow loads, keep out heavy wind and rain.

Basic roof types commonly used are the gable, hip, hip and valley or intersecting gable, gambrel, and flat roof. The weight of the roof covering is supported by roof sheathing which provides a nailing surface for the roofing material, braces the rafters, and also helps to keep the interior of the building warm.

ROOF SHEATHING

Roof sheathing can consist of boards laid squarely across the rafters in varying widths with edges tightly butted or matched. Where rigid roof structure for good wind resistance is desired, diagonal treatment just as for wall sheathing results in greater strength.

Roof boards or slats under wood shingles should be not less than 3 inches wide by $\frac{3}{4}$ inches thick. The placing of roof slats should begin at the eaves, spacing them the same distance on centers as shingles are exposed to the weather.

Where asphalt or asbestos roofing is used, the deck should be carefully matched or shiplapped from the eaves to the ridge. All boards should be nailed twice at every support with 8d nails. Joints must be over rafters in all cases except where end-matched sheathing is used.

Plywood Roof Sheathing

Plywood can be used for roof deck-

ing in thicknesses varying with roof loads and rafter spacing. FHA accepts 5/16-inch plywood roof sheathing over rafters 16 inches on center under both wood and asphalt shingles. However, unless $\frac{1}{2}$ -inch plywood is used, wood shingles must be applied with nailing strips. If $\frac{1}{2}$ -inch thickness is used, the rafters may be spaced 24 inches on center under certain conditions.

Correct nailing techniques must be followed for fastening the plywood and other components of the roof. For thickness of $\frac{5}{16}$, $\frac{3}{8}$ and $\frac{1}{2}$ -inch, 6d common nails should be used and nails should be spaced not more than 6 inches apart at the edges and not more than 12 inches apart elsewhere.

Edges should be protected from the weather along cornices and rakes by a lumber strip, by flashing or by a strip of exterior waterproof plywood.

Insulating Sheathing

Some roof sheathing materials which also combine insulating qualities are available in panels up to 8 by 14 feet. These require fewer handlings and fewer nailings than with materials of smaller size. Asphalt or asbestos roof shingles can be applied directly to such sheathing by applying furring strips 12 inch on centers to the rafters and nailing the sheathing to the furring strips. When wood shingles are used, furring strips are applied to the sheathing and nailed into the rafters at whatever centers the shingle size demands. The resulting air space between the shingles and the sheathing further increases insulation value and helps prevent rotting of the shingles.

ROOFING SHEATHING SIDING

Roof Sheathing

Plywood Sheathing

Insulating Sheathing

Roofing

Wood Shingles
Asphalt Flingles and Shingles
Roofing
Asbestos-Cement Shingles
Flattings, Roof Valleys
Corrugated Sheet
Steel Roll Roofing
Copper Roofing
Built-up Roofing
Slate and Tile Roofing
Cedar Shakes

Sidewall Sheathing

Wood
Plywood
Gypsum
Insulating Board

Building Papers

Asphalt
Kraft
Laminated
Machine-Finished

Siding

Plywood
Wood Siding
Cedar Shakes
Asbestos-Cement Siding
Shingles
Aluminum Siding
Insulated Siding

Write for other types of siding and sheathing such as brick and tile see the columns on "Brick and Tile Products," and "Concrete, Gypsum, Masonry, and Related Products."



ROOF DECKING goes on faster when plywood sheets are used

ROOFING

Shingles made of wood or of a mixture of felt and asphalt covered with crushed slate, or of combinations of asbestos and cement are the most common type of roofing. It is always important that manufacturer's specifications be followed in installing any roofing.

Wood Shingles

Wood shingles may be nailed over 1 by 3-inch or 1 by 4-inch strips, spaced the same distance apart on centers as the shingles are exposed to the weather; or the shingles may be nailed on a tight deck of square-edge or matched boards. Joints between shingles in any one course should be at least 1/4 inches from joints in the course next below so that driving rains will not work across underneath the shingles and penetrate the roof. Shingles in each course should be spaced not less than 1/8-inch apart.

The type of nail used with wood shingles is important because ordinary iron shingle nails will rust and loosen the shingle long before the shingle itself is in need of replacement. Therefore, hot-dipped, galvanized or copper or bronze nails

should be used. A round nail with blunted three-cornered point is ideally suited for putting on shingles as it is less likely to split the wood.

Asphalt Roofing

The importance of proper application of asphalt roofing is indicated by the fact that about 85 per cent of current roofing requirements is met by this type of material. When old roofing remains in place, removal of old wood shingles, old asphalt shingles, or old roll roofing generally is not necessary if: (1) the deck and framing are strong enough to support workers and new roofing, as well as snow and wind loads; (2) the deck is sound and will give good anchorage for nails.

When the building is situated in a high wind area, shingles at eaves and rakes should be cut back far enough to allow application of 1-inch wood strips four to six inches wide.

To prepare old asphalt shingles for new asphalt roofing, nail down or cut away loose, curled or lifted shingles; remove loose and protruding nails, and remove badly worn edging strips and replace with new ones.

To prepare old roll roofing, slit

buckled sections and nail the segments down smoothly, and remove loose and protruding nails. If some of the old roofing has been torn away, leaving parts of the deck exposed, examine these exposed areas for loose or pitchy knots and excessively resinous areas. Cover these defects with sheet metal.

If old roofing has to be taken off, repair the framing where necessary to make it level and strong; remove all rotted or warped sheathing (delaminated units in the case of plywood) and replace it with new material, and pull out all protruding nails and re-nail the sheathing firmly.

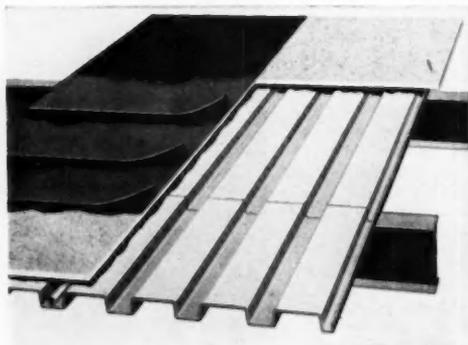
If the old deck is a slotted deck, fill in all spaces between boards with securely nailed wood strips of the same thickness as the original boards; or move the existing boards together and then sheath the remainder of the deck as if a new deck were being built. Patch defects with sheet metal.

The last deck preparation detail is to sweep the surface thoroughly.

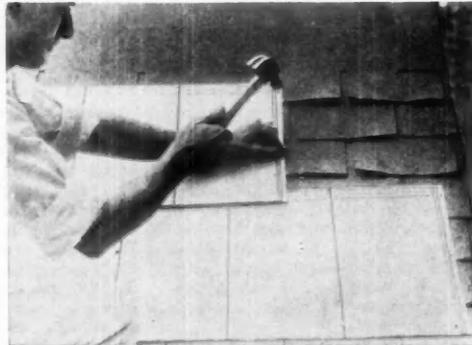
Metal Drip Edge and Eaves Flashing Strip

Before actually laying asphalt shingles of any type, a metal drip

(Continued on page 240)



THE SUCCESSIVE LAYERS of tar or pitch insulation and roofing paper are clearly illustrated in this built-up roof on metal deck



ALUMINUM ROOFING SHINGLES are here shown being applied as replacement directly over old roofing material

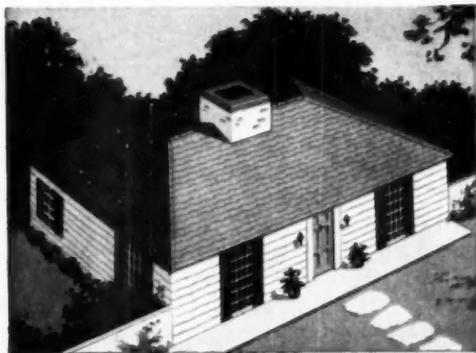
These are the features that make

ASBESTONE SIDING SHINGLES

sell quicker for you!



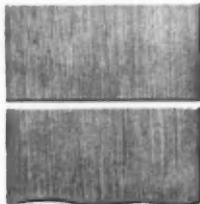
- ✓ Beautiful—adds distinction and value to any building
- ✓ Durable—lasts a lifetime
- ✓ Economical—moderate initial cost—practically no upkeep
- ✓ Fireproof—absolutely incombustible
- ✓ Weatherproof—does not rot, rust or corrode
- ✓ Termiteproof—no organic matter for termites to eat
- ✓ Insulating—homes are snug in winter, cooler in summer
- ✓ Easy to apply—on new houses or over old siding



COLORS AND DESIGNS THAT SELL ON SIGHT!

- Deep woodgrain texture
- Straight or wavy edge

4 Popular home Colors—
Gray, Greentone Blend,
Bufftone Blend, White.



More and more Beautiful Homes have ASBESTONE Roofing Shingles

DESIGNS AND FINISHES YOUR CUSTOMERS WANT!
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Hexagonal—Smooth finish
Early American Strip—Traditional wood-texture finish

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Asbestone also manufactures the famous Corrugated Asbestone Roofing and Siding in two weights — Corrugated Standard "400" and Economy "250".

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Fig. 1—Wood deck for asphalt roofing. Plywood decks should be at least $\frac{1}{2}$ -inch thick and of either 3-ply or 5-ply plywood. Maximum center spacing between supporting members should be 24 inches. After the deck is completed it should be protected by an underlayment of asphalt saturated felt not heavier than 15 pounds to the square

(Continued from page 238) edge and an eaves flashing strip should be applied.

A metal drip edge (see Figs. 2 and 3) is a strip of corrosion-resistant 26-gauge sheet metal laid along the eaves and the rakes. Galvanized steel, painted on both sides, is customarily

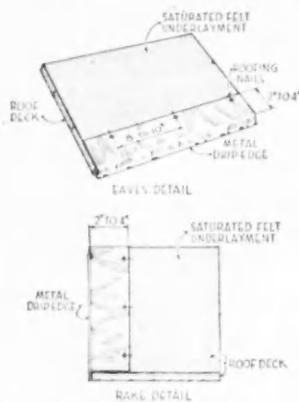


Fig. 2—Metal drip edge

used. Secure the strip with roofing nails spaced 8 to 10 inches apart along the inner edge of the strip. Bend the strip down along rake and eaves lines. The metal should extend two to four inches back from the edge of the deck. Prefabricated metal drip edges made especially for the purpose can be used.

The eaves flashing strip (see Fig. 3) is made of 90-pound mineral-surfaced

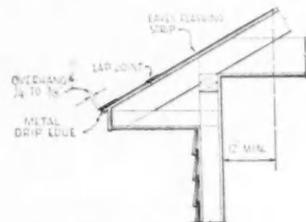
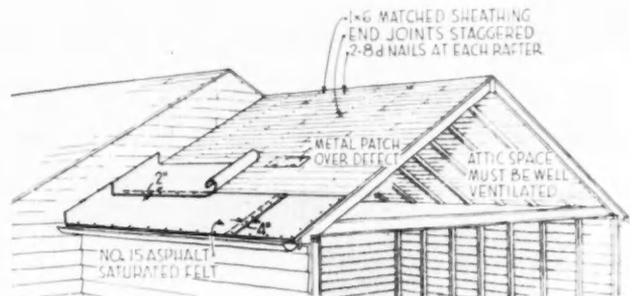


Fig. 3—Eaves flashing strip



or 65-pound smooth roll asphalt roofing. It overhangs the lower edge of the drip edge from $\frac{1}{4}$ - to $\frac{3}{8}$ -inch and extends up the roof to a line at least 12 inches inside the inside wall line of the building; the flashing strip should never be narrower than 36 inches.

Asphalt Strip Shingles

On top of the eaves flashing strip and flush with its lower edge, a starter course is laid with shingle tabs facing up the roof. About three inches is cut off the end of the first strip so that cutouts in the starter course will be covered by the first regular course. With hex strips, the

first strip is not cut.

Application of three-tab square butt strips is shown in Fig. 4. Fig. 5 shows two-tab hex strips, and Fig. 6 shows three-tab hex strips.

The manufacturer's instructions should be followed for nailing. Galvanized roofing nails with heads at least $\frac{3}{8}$ -inch in diameter and shanks long enough to penetrate to, but not through the bottom of the roof deck should be used.

Individual Asphalt Shingles

Application of giant individual shingles also calls for metal drip edges and eaves flashing strips, and

(Continued on page 242)

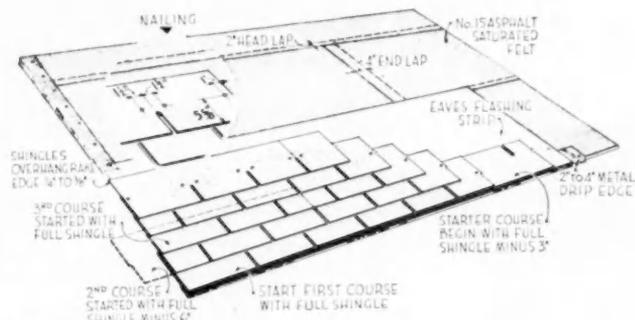


Fig. 4—Three-tab, square butt, asphalt strip shingles, with cutouts centered over tabs of shingles in preceding courses

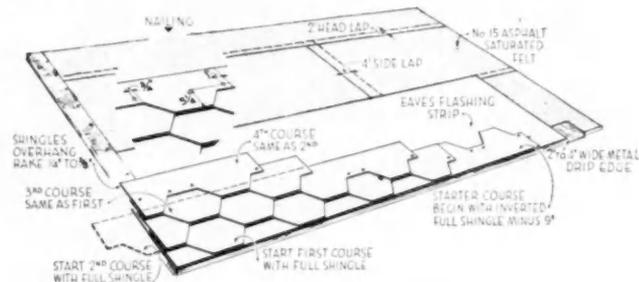


Fig. 5—Two-tab, hex strip shingles

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COLOR VARIETY

You can make every house in the block look different—at no extra cost. Buy shakes in a variety of colors. Mix 'em and match 'em to take the "sameness" out of your project of homes.

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Ask any builder who has spotted "some shake houses among the others." The shake homes will sell faster every time. Try it and see. Your customers want real wood, quality walls, and you can give them what they want—at no additional cost.

Compare and you'll

BUILD WITH CEDAR SHAKES

The phenomenal increase in the use of pre-stained cedar shakes by the cost-conscious big builders of America is no accident! They are calling this color-ful wood wall "the only luxury siding in the low-cost field."

Try cedar shakes on your next job. Cost-compare them with the material you've been using. Check on their sales appeal. You'll be convinced!

STAINED SHINGLE & SHAKE ASSOCIATION
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is shown in Figs. 8 and 9. Over old asphalt roofing, nails should be $1\frac{1}{2}$ inches long. Over old wood shingles, they should be $1\frac{3}{4}$ inches long.

Each shingle in the Dutch lap method is secured with two nails and one fastener. When application is from left to right, there is one nail in the upper left corner and one in the lower right corner. The lower left corner is secured with a galvanized wire staple or copper clip. This corner should not be nailed down.

Locked-Down Individual Shingles

Individual hex shingles are of two types—those that fasten with staples at the bottom corners, and those with locking tabs. Figs. 10 and 11 show application of these two types. Application can start at either side of the roof or at the center. If it is desired that both rakes present the same appearance, the center-starting method must be followed.

Interlocking Shingles

Interlocking shingles can be classified in four groups according to the locking method used (Fig. 12). Except for the Dutch lap type (No. 4 in Fig. 12), they can be laid from left to right, right to left, or each way from the center. Fig. 13 shows how the locking devices of the four categories of interlocking shingles work.

In applying types 1, 2, and 3 in the center-starting method, a center chalk line should be placed on the deck halfway between the rakes. The first course starts with a shingle centered on this line, and application proceeds in both directions to the rakes; end units are trimmed flush with rake edges. Otherwise, instructions for cutting and placing shingles are similar to those for end-starting application.

Asphalt Roll Roofing Application

It is preferable not to apply roll roofing at a temperature below 45 degrees Fahrenheit. When it is necessary to handle roofing at a temperature below this, the roofing should be warmed before it is unrolled. Roofing should be cut into 12- to 18-foot lengths, which should then be spread on a smooth surface until they flatten.

Either lap cement or special quick-setting cement, as recommended by the manufacturer, should be used. Cement should be kept in a warm place before using. If cement must be warmed quickly, place the unopened container in hot water. Never heat any kind of asphalt cement directly over fire.

Nails for roll roofing applied directly to a wood deck should be galvanized roofing nails with heads at least $\frac{3}{8}$ -inch in diameter and shanks $\frac{7}{8}$ -inch or 1-inch long. Over old roofing, use nails long enough to penetrate the worn material and to go into the sheathing at least $\frac{1}{2}$ -inch.

The exposed nail and concealed nail methods are shown in Figs. 14, 15, and 16.

Nineteen-Inch Selvage, Double Coverage Roll Roofing

For this type, some manufacturers direct that cold asphalt adhesives be used and others specify hot asphalt. It is important to follow the manufacturer's directions exactly. Fig. 7 shows application parallel to eaves. Application parallel to rakes is generally similar to application parallel to the eaves. The starter strip is laid along the rake instead of the eaves. For hips and ridges (Fig. 18) 12-inch-wide shingles are cut from the roll and are bent lengthwise through their centers. Beginning at the lower end of a hip or at either end of a ridge, each unit is lapped 19 inches over the previous one.

(Continued on page 248)

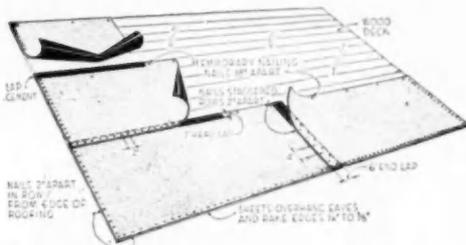


Fig. 14—Asphalt roll roofing, exposed nail method, parallel to eaves

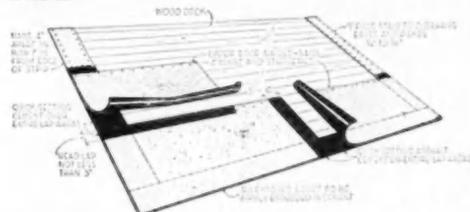


Fig. 15—Asphalt roll roofing, concealed nail method, parallel to eaves

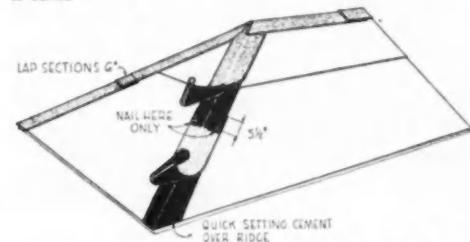


Fig. 16—Hip and ridge roofing, concealed nail roll roofing

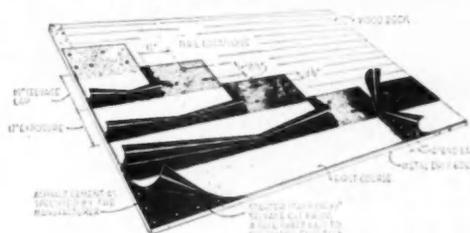


Fig. 17—19-inch selvage, double coverage asphalt roll roofing, parallel to eaves

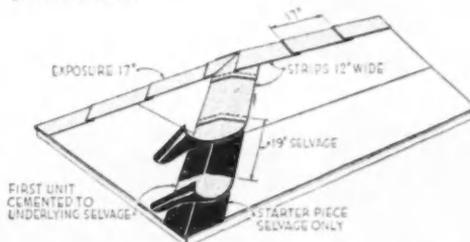


Fig. 18—Hip and ridge roofing, 19-inch selvage, double coverage roll roofing

YOU NAME IT... TEX-LOK covers it handsomely & ruggedly!



**NO BETTER SHINGLE
VALUE ON THE
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TEX-LOK *IT'S HEAVY DUTY! IT'S DOUBLE COVERAGE! IT'S INTERLOCKING!*

TEX-LOK shingles stay put! Concealed nailing at four points plus interlocking keeps 'em down—come high winds and heavy weather. They're heavy duty and double coverage—providing more than two layers of asphalt shingles over the entire roof area. *Fire-resistant*, of course—and mighty attractive in either plain or textured surface and beautiful colors. And—TEX-LOK shingles carry a name that millions know and trust—Texaco.



TEX-LOK shingles are available in the areas currently served from roofing plants located at Lockport, Illinois; Port Neches, Texas and Port Wentworth, Georgia.

◆ **In the Northeast, it's TEX-LATCH**

Tex-Latch is similar to Tex-Lok except in method of locking tabs. Tex-Latch shingles are available from the Edge Moor, Delaware roofing plant.



MEMBER OF THE
ASPHALT ROOFING INDUSTRY BUREAU
AMERICAN BUILDER

STRI-COLOR...A SIDING WITH A New Kind of Beauty!

It Has Durable Beauty! Lovely Colors! Embossed Striated Surface Texture!
...and it's Protected with the Flintkote **DURA-SHIELD* FINISH!**

You never *saw* such beauty in a siding! You never *had* such a value to sell!

Wait until you *see* this FLINTKOTE STRI-COLOR* ASBESTOS-CEMENT SIDING!



In handsome gray, brown or green, STRI-COLOR Siding compares in warmth and richness with the most expensive of sidewall materials.

It is deeply striated by *embossing* . . . smart and distinctive.

And it sports that wonderful new finish you've been hearing about. The water-repellent, stain-resistant finish that's *exclusive* with Flintkote: DURA-SHIELD!

You can dramatically and convincingly demonstrate the advantages of DURA-SHIELD . . . *in two minutes flat!*

Alone . . . or in *combination* with other materials such as stone, stucco, brick, etc. . . . these sidings create unusual and delightful effects.

STRI-COLOR Sidings last a lifetime. They are made of materials that are *permanent* . . . materials that won't rot, won't burn, won't deteriorate.

And they will *outsell* ANY Asbestos-Cement sidings . . . both for new construction and for re-siding applications.

Get your order in today.

THE FLINTKOTE COMPANY, Building Materials Division, 30 Rockefeller Plaza, New York 20, N. Y.

*A Trademark of The Flintkote Company

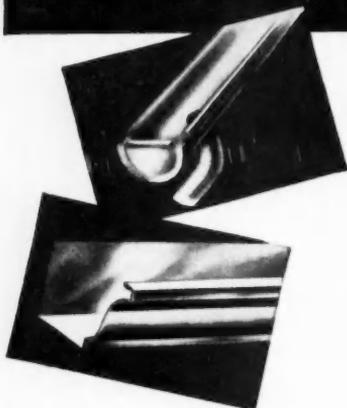
FLINTKOTE

...the extra years of service cost no more!



**Note these deep, beautiful striations, reproduced in actual size. Besides the gray siding shown here, STRI-COLOR is presently available in lustrous brown and green.*

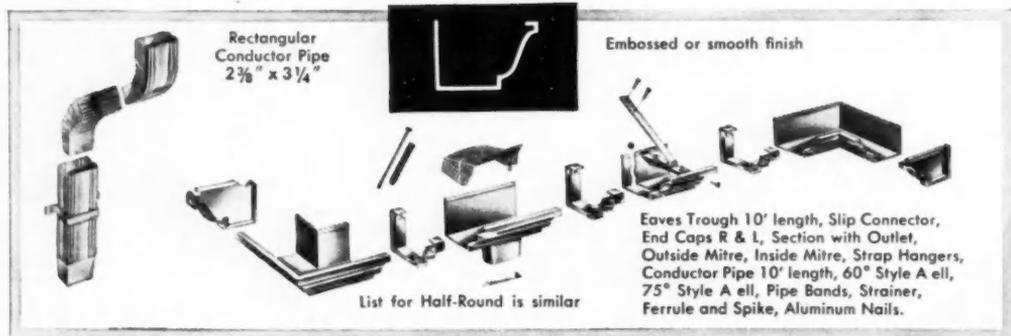
Gives you a selling edge on
competition . . . AT LOWER COST



5" Ogee and Half-Round Gutters
in smooth and stippled finish.
Also 6" Industrial Half-Round.

REYNOLDS *Lifetime* ALUMINUM GUTTERS AND DOWNSPOUTS

That bright edge around the house advertises you as a *modern builder*. And the figures show you're a *smart builder* . . . when you buy rustproof permanence at lowest cost, and save still further by easy slip-joint application without soldering. You do better for yourself and for your customer with the permanent, non-staining beauty of Reynolds Lifetime Aluminum Gutters and Downspouts. Military needs for aluminum limit supply, but Reynolds is rapidly expanding primary capacity. Write for literature. Reynolds Metals Company, Building Products Division, 2003 South Ninth Street, Louisville 1, Kentucky.



Rectangular
Conductor Pipe
2 3/8" x 3 1/4"

Embossed or smooth finish

List for Half-Round is similar

Eaves Trough 10' length, Slip Connector,
End Caps R & L, Section with Outlet,
Outside Mitre, Inside Mitre, Strap Hangers,
Conductor Pipe 10' length, 60° Style A ell,
75° Style A ell, Pipe Bands, Strainer,
Ferrule and Spike, Aluminum Nails.



REYNOLDS ALUMINUM

The Rustproof Flashing
That Costs Less, Works
Easiest, Looks Best . . .



REYNOLDS *Lifetime* ALUMINUM FLASHING



Aluminum costs much less than any other rustproof flashing . . . but that's just the first advantage. It's also easiest to handle, form, cut. It looks best. And it cannot cause stains.

Check your supplier for types of Reynolds *Lifetime* Aluminum Flashing listed below. Military needs for aluminum limit present supply, but Reynolds is rapidly expanding primary capacity. Write for literature. Reynolds Metals Company, Building Products Division, 2003 South Ninth Street, Louisville 1, Kentucky.

IN 50-FOOT ROLLS—14", 20" and 28" wide, .019" thickness (26 U. S. Std. Gauge).

IN FLAT SHEETS—28" wide, 6', 8', 10' and 12' lengths. Also all-purpose display carton of ten 18" x 48" sheets. All in .019" thickness.

No Rust, No Stain, No Deep Setting
or Puttying . . . when you use

REYNOLDS *Lifetime* ALUMINUM NAILS

Roofing nails, wood siding nails, common nails, aluminum siding nails, cedar shake nails, wall-board nails, gypsum nails, asbestos shingle nails.



REYNOLDS ALUMINUM

STRENGTH AND RIGIDITY OF FRAME WALLS (From U.S. Forest Products Laboratory Tests, Wall with Openings)		
Sheathing Material	Relative Rigidity	Relative Strength
 1x8" DIAGONAL SHEATHING	1.0	1.3
 29/32" FIBERBOARD (8d nails, spaced 3' at all vertical edges, 5 1/2' to 6' elsewhere)	1.6	2.1
 HORIZONTAL SHEATHING (11d sheathing; 1x4" let in braces; 8d nails, 2 per stud division)	1.5	2.2
 1/4" PLYWOOD NAILED (6d nails spaced 5' at edges, 10' elsewhere)	2.0	2.8
 1/4" PLYWOOD GLUED TO FRAME	3.7	4.0

COMPARISON of strength and rigidity of various sheathing materials

(Continued from page 243)

Asbestos-Cement Shingles

An outstanding feature of the modern asbestos-cement shingles is the interlocking design which permits firm anchorage with concealed nailing, each shingle being locked fast to the adjacent shingle. These shingles come in strips, are self-aligning and self-spacing; they are easy to apply and since each strip covers a large area, they speed application. Accessories such as eave starters, hip and ridge shingles and ridge rolls which are purchased separately, are available for all types of asbestos-cement shingle roofs.

Installation should be made in dry weather and care should be taken not

to allow roof decks to warp because a clean, level roof deck is a prerequisite to maximum serviceability of these shingles. The minimum roof pitch usually specified is five inches per foot. Roof boards are covered with one layer of asphalt-saturated felt (not less than 15 pounds weight), with a 2-inch horizontal lap, a 6-inch end lap and a 12-inch lap at hips and ridges.

Application of a wood cant strip along the eaves, flush with the lower edge, gives a proper pitch to the shingles. Starter courses are placed under the felt; the first course is laid on the felt.

Flashings, Roof Valley

In localities subject to extreme

winter weather, eave flashing is recommended. This should extend back at least 12 inches up under the roof beyond the inside wall surface and downward to the edge of the deck.

Nail holes are punched in the shingles at the factory. Special galvanized needlepoint nails 1 1/4 inches long are used. Shingles can be scored and broken or cut with a cross-cut saw or coarse hack saw. Most dealers' offices will have portable shingle cutters for the use of customers.

It is important that tight nailing (which may cause cracks or cocking) and loose nailing (which results in rattling) both be avoided. To allow for thermal dimensional changes, shingles should be spaced not less than 1/16-inch apart at end joints.

Valleys, flashings, hips and ridges must be pointed up with plastic cement. Valleys, gutters and crickets can be leveled out with lath and roof cement to eliminate sharp corners and to make sure that a smooth, even base is provided for laying felt. Continuous felt strips should be used wherever possible, laid so that the water runs over laps, and never against exposed edges. The use of copper or other non-corrosive metal for the lining of valleys and for flashing is recommended.

The use of specially made hip and ridge shingles, cut to a taper or flair, saves much time. To provide a nailing base, it is necessary to nail a furring strip along each side of hips and ridges, butting the strips at the apex of the ridge.

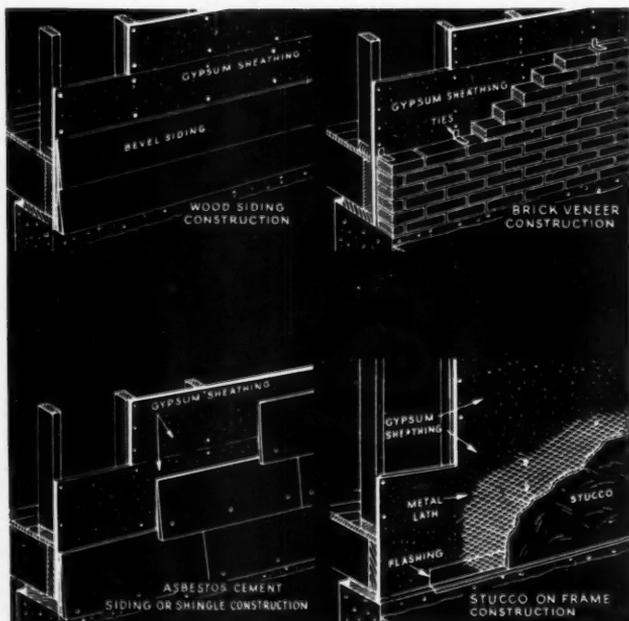
Asbestos-Cement Corrugated Sheets

This material is incombustible, non-corrosive, weatherproof, and attractive; it is most useful for roofing farm buildings, garages and hangars, and light industrial buildings. It is especially economical for industrial buildings because it contains nothing that can rust or rot and its manufacturers claim that it gives permanent service without maintenance since it requires no paint or protective coating of any kind. Therefore all maintenance costs are eliminated and the first cost is the last cost.

The material is drilled with twist drills and fastened with screws or bolts, and can be sawed either with a hand saw or a portable power saw having an abrasive wheel.

Corrugated sheets are 42 inches wide and come in lengths ranging from 3 to 12 feet long, in 6-inch multiples, and have an average thickness of 3/8-inch. Some manufacturers make an over-all depth of 1 1/2 inches and 4:2 pitch (center to center), with

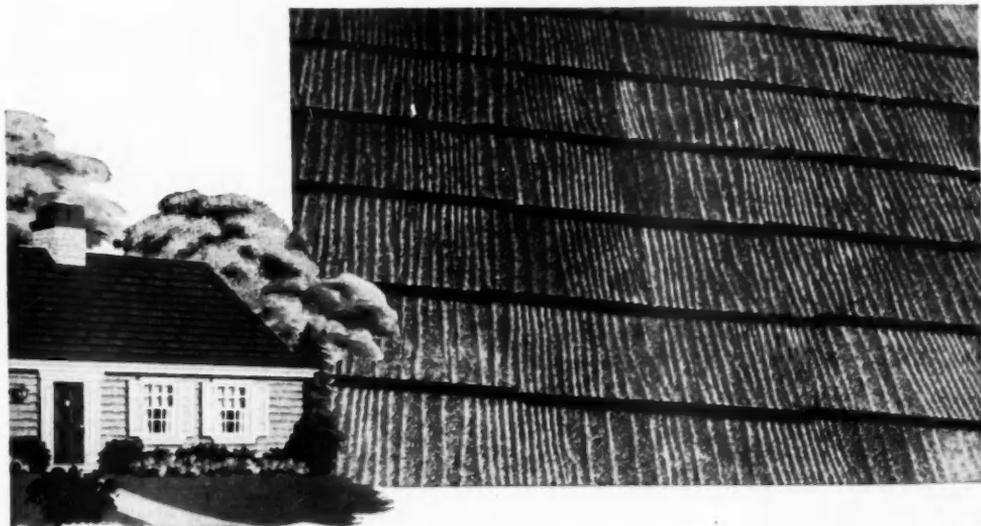
(Continued on page 254)



HOW SIDING, brick veneer, asbestos-cement and stucco are applied to gypsum sheathing

American Colonial

The most beautiful popular-priced
Asbestos Roof ever developed by Johns-Manville



In pleasing colors...with rich texture...

J-M Asbestos Shingles are fireproof, rotproof and weatherproof

American Colonials are rigid shingles made of asbestos and cement—two practically indestructible minerals. They have the same sturdy qualities that have proved themselves over the past 40 years in all J-M Asbestos Shingles, but in addition they have a new styling, new striking beauty of design and a new note of architectural simplicity and distinction.

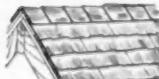
Johns-Manville developed the American Colonial Shingle so that the beauty, permanence and fireproof qualities of an asbestos shingle roof could be enjoyed by the owner of even a modestly priced home. They are economical in cost, economical to apply.



Each shingle is designed as a rigid asbestos-cement strip—covers as much area as 5 ordinary shingles.



The shingles are self-aligning. This speeds application. Larger size means fewer pieces to handle.



The finished roof has a pleasing horizontal shadow line. Matching shingles come for hips and ridges.

For full details and a free brochure showing the full color range of American Colonial Shingles, write Johns-Manville, Box 290, New York 16, N. Y. In Canada write 199 Bay Street, Toronto 1, Ontario.

Johns-Manville



Beauty, Quality, Economy

specify these famous Ruberoid products for extra sales appeal



Tite-On Shingles . . . the ingenious interlocking shingles that provide real wind insurance. They're locked together and held in place by four concealed nails. Fire-resistant, easy to apply.



Thick Butts . . . extra thick, extra rugged where protection counts. In rich colors and blends . . . smooth or textured. Thick Butts are built on heavy felt, saturated with heavy-duty asphalt.



Cold Method Built-Up Roofs . . . the perfect answer for the small roof job too flat in slope for shingles or roll roofing. Simple, economical to apply without expensive melting kettles.



Vitramic Asbestos Siding . . . the permanent beauty treatment for old homes or new. Vitramic's hard, ceramic-like surface stays cleaner, brighter, lastingly beautiful. White, Cream, or Gray.



Mount Vernon Asbestos Roof Shingles . . . offer lifetime beauty, fireproof protection and economy. Staggered butt lines produce deep, irregular shadows. Weather-aged cypress texture.



You'd have to see this house in color to appreciate what Color-Grained Siding means in bringing custom-styled beauty to high or low budget homes. Inset shows ShadoWedge, just introduced by Ruberoid to provide the perfect combination with Color-Grained Siding.



Color-Grained Siding . . . Ruberoid's new decorator-designed asbestos siding, which is creating a sensation in the siding market. It's an unprecedented advance in sidewall beauty, accomplished through a unique process of blending color and texture.

ShadoWedge . . . Ruberoid's new beauty aid for builders, is a tapered asphalt undercoursing strip. It's a brand new product designed to add sales appeal to new homes or remodeling jobs. ShadoWedge creates deep shadow-lines . . . is fast and simple to apply . . . no sheathing or joint strips needed.

These are Ruberoid's most recent asphalt and asbestos product improvements that mean more color, beauty and better building at lower costs. See your Ruberoid dealer today.

The **RUBEROID** Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS



Ruberoid Roll Roofing . . . the original and still the best after 60 years of proved performance. Smooth-surfaced, Mineral-surfaced and Dobl-Coverage, which offers virtually a built-up roof.



Shake-Design Roll Siding . . . gives old homes new life and saves money too! Shake-textured beauty, lasting fire and weather protection open the door to low-cost modernization jobs.



Stonewall Board . . . the asbestos-cement building board of 1901 uses. Ideal for soffits, partitions, garages, closet linings, etc. Fireproof, rat-proof, rot-proof, rust-proof, rugged, yet easy to work.



HERE ARE A FEW OF THE
MANY USES OF RUGGED, WATERPROOF

SISALKRAFT PRODUCTS



ASSURE LIFELONG PROTECTION AGAINST WATER, MOISTURE, WIND AND DUST



As Sheathing
Paper



For Curing and
Protecting Concrete



For Use Over Subfill
under concrete slabs



Under All
Finished Flooring



THE BEST VALUE IN REFLECTIVE INSULATION AND VAPOR-BARRIER COMBINED



SISALATION for SIDEWALLS

Costs 50% less than "bulk" or "blanket" types of insulation. Bowed in between studs, SISALATION provides essential air spaces and two reflective surfaces to repel escape of radiant heat from inside the house in winter, and to repel entry of greatest percentage of summer's strong radiant sun-heat from outside. Also costs far less to apply!



SISALATION plus SISALKRAFT for Insulated Dry Walls

The use of SISALATION and SISALKRAFT together, as shown above, assures economical, effective insulation, plus dry walls. This combination costs less for materials and application-costs than other insulating methods that do not provide dry walls. Keeps homes warmer in winter, cooler in summer, moisture-vapor protected all year 'round. Application details and free samples on request.



SISALATION for CEILINGS

Applied underneath or between ceiling joists, SISALATION provides both insulation and vapor-barrier protection... at a single, low application-cost. Applied under roof rafters, SISALATION keeps attics brighter, more attractive, cleaner, remarkably cooler in summer and noticeably warmer in winter. For old or new homes.

AVAILABLE AT LUMBER AND BUILDING SUPPLY DEALERS EVERYWHERE

SISALKRAFT STOCK SIZES: 36"-225 sq. ft.; 36"-500 sq. ft.; 48"-666 sq. ft.; 60"-1000 sq. ft.; 60"-1500 sq. ft.; 72"-1000 sq. ft.; 72"-1800 sq. ft.; 84"-1000 sq. ft.; 84"-2100 sq. ft.; 96"-1200 sq. ft.; 96"-2400 sq. ft.

SISALKRAFT "BLANKETS": In widths from 8'6" to 26'6"; lengths up to 100'.

BUILD *Lasting Quality* IN HOMES... *At Low Cost*... WITH SISALKRAFT PRODUCTS



Fine for Remodeling and Modernizing Jobs

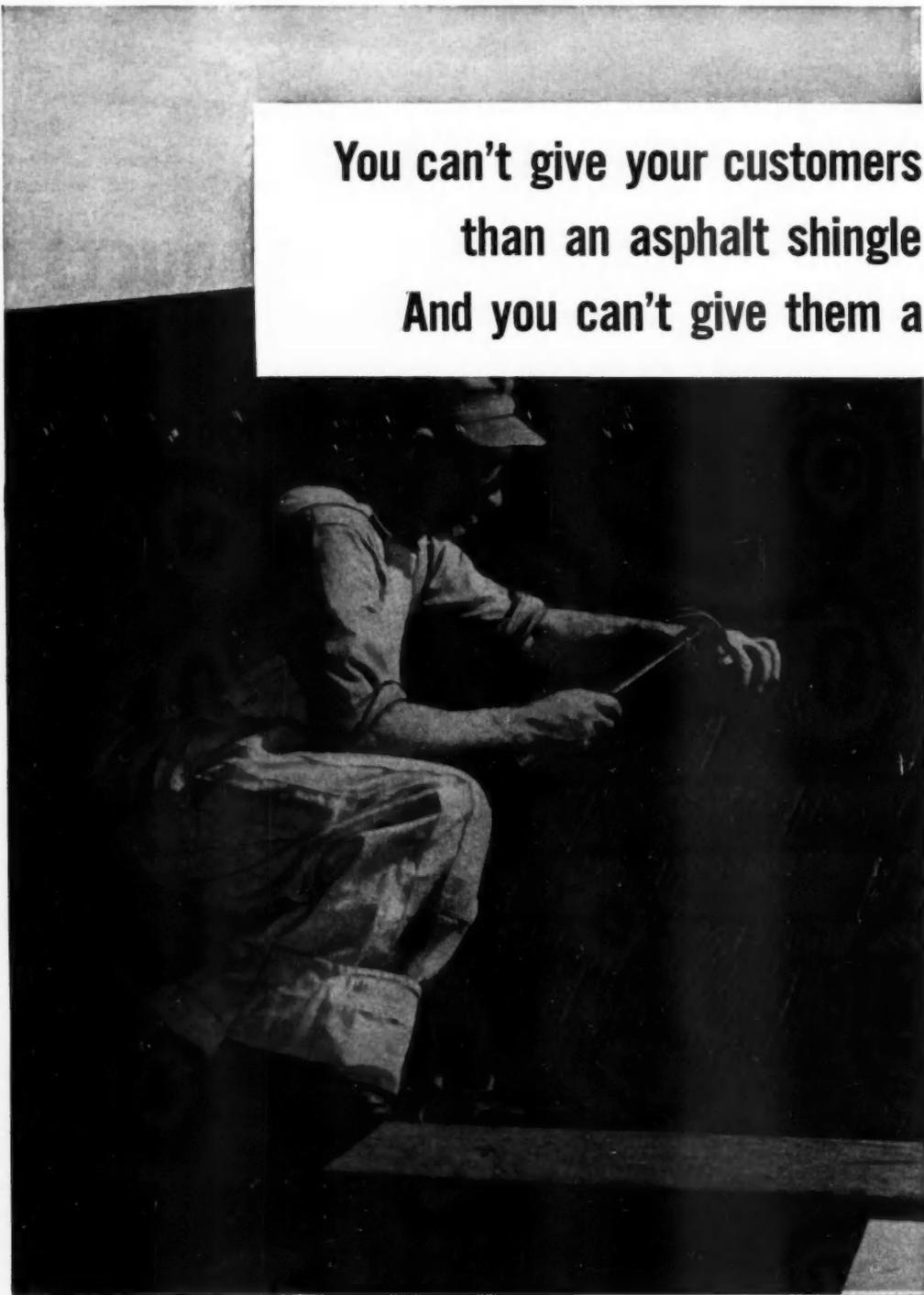
To do better remodeling and modernizing work at less cost, use SISALKRAFT and SISALATION. Protective covers of SISALKRAFT over construction materials will save you money. Before re-surfacing floors, it pays to lay SISALKRAFT over rough

flooring. During construction or decorating, use SISALKRAFT as protective covers or drop-cloths. Unfinished attics and other rooms, lined with SISALATION, become bright, pleasing in appearance, most livable. Economical, easy to apply, top quality... ideal for remodeling.

Write NOW for free set of Builders' Data and Architects' Specifications Folder.

The SISALKRAFT CO., Dept. AB4, 205 W. Wacker Drive, Chicago 6, Ill., New York 17, N. Y., San Francisco 5, Calif.

**You can't give your customers
than an asphalt shingle
And you can't give them a**





a better shingle value

...

better asphalt shingle than Barrett*!



1. **Priced right for you!** Superior value at a competitive price. Profit-maker!
2. **Every Barrett shingle is made right!** Only Barrett gives such *uniform* high quality because only Barrett has such complete control of raw materials.
3. **All the newest colors your customers want!** See the revolutionary new range of pastels!
4. **A type of shingle for every need!** The right shingle for every job, every climate, every kind of roof.
5. **Long wear!** Durable and fire-resistant. Roof with Barrett, and you and your customers haven't a shingle worry in the world!

BARRETT'S BUSINESS
IS BUILDING YOUR BUSINESS!

For the *newest*
in roofing, look to

BARRETT

the greatest name in roofing

THE BARRETT DIVISION

ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR STREET, NEW YORK 6, N. Y.

205 W. Wacker Drive, Chicago 6, Ill.
1327 Erie St., Birmingham 8, Ala.
36th & Grays Ferry Ave., Philadelphia 46, Pa.

In Canada: The Barrett Company, Ltd.
3551 St. Hubert Street, Montreal, Quebec

(Continued from page 248)

10 corrugations to the sheet, and others make a 2½-inch pitch with 16 corrugations to the sheet. Special fasteners are supplied for uses over various types of frameworks. Detailed information on installation is readily available from the manufacturers.

The minimum pitch advised for corrugated asbestos-cement roofs is three inches to the foot, and an overhang at the eaves of six to nine inches from the outside of the lower roof purlin is recommended. At the gables, sheets should not overhang ends of purlins more than two corrugations.

The weight of the sheets in place is four to five pounds per square foot.

Steel Roll Roofing

Made of prime steel strip uniformly coated with a mixture of lead and tin, seamless steel roofing is available in rolls of 50-foot and 100-foot lengths in widths of 14, 20, 24 and 28 inches. It offers maximum strength without excessive weight, fire-retarding properties, and protection against weather. Manufacturers say that on large roof areas, use of this steel roofing results in substantial savings because of ease of installation and minimum waste. The rolls can be cut to any desired length; edges are uniformly straight and there are no buckles; field trimming is unnecessary to correct for camber.

This type of roofing should be laid on selected waterproof paper (tar paper and other types containing acids should not be used). Nails should not be driven through the strips. All solder used should be strictly half-and-half. Rosin only should be used as a flux for soldering and all rosin must be removed from seams before painting. No acid flux should be used. Roofers must wear rubber shoes and all unnecessary walking over the roof or using it for storage of other material should be eliminated.

Copper Roofing

This is one of the oldest types of roofing and needs no introduction. The required thickness of copper roofing will depend upon the type of construction being covered, and the location of the building. For sloping roofs of residences, 10-oz. copper has been found satisfactory; heavy industrial building construction may require weights up to 32 oz. per square foot although 16-oz. copper is considered standard for general sheet metal work in building construction. Lead-coated copper can also be obtained.

Before applying copper roofing, all

roof surfaces should be covered with roofing felt over which rosin-sized paper is laid.

Built-Up Roofing

The built-up roof is a seamless piece of flexible waterproofed material, custom-built to fit the roof and to protect all the angles formed by the roof deck and any projecting surfaces. It can be applied either hot or cold and is fabricated from felt, pitch, asphalt and gravel. The so-called "tar roofing" refers to a roof applied with hot asphalt or pitch. Insulation is required because a major problem with built-up roofing is that of moisture at the underside due to condensation. It is also recommended that the insulation be protected by installing at least one ply of roofing felt under the insulation to act as a seal course.

There are distinct advantages in the use of pitch and slag or gravel surfacing. The oils in pitch are its weatherproofing elements and they are protected by the very dampness and moisture which rot ordinary materials. Pitch also has the ability to "heal" itself. Small cracks caused by heavy traffic or accidental damage to the roof will fuse together by themselves and disappear. This mobility also allows the membrane to conform to slight irregularities in the roof deck.

In the hot process of application, a first layer of sheathing paper or unsaturated felt is laid down, over which is laid tarred felt, then a coating of pitch is applied at between 350 and 375 degrees F. If asphalt with gravel surfacing is used, felt is first laid down, then mopped with asphalt in which additional felt is embedded; the surface is then coated with hot

asphalt into which gravel or slag is embedded.

In the cold process, felt is laid down on the roof deck according to manufacturer's specifications and asphalt is brushed or sprayed on the surface and in some cases must be allowed to set for a period of 24 hours.

Slate and Tile Roofing

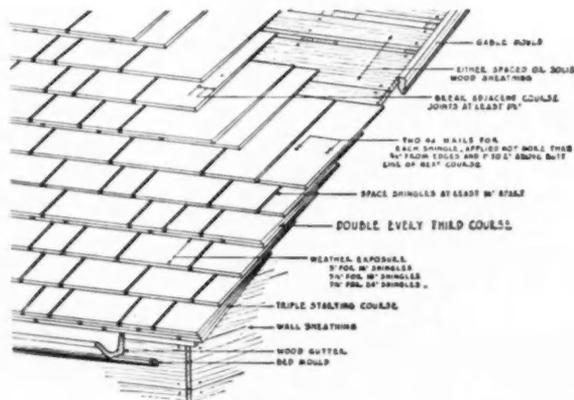
Slate, which is a hard, dense stone, is water-tight, weatherproof, fireproof and storm-proof; it rarely requires maintenance, is highly decorative in color tones, and can be applied directly over asphalt or wood shingles if necessary. On new roofing it is laid over asphalt-saturated felt and fastened with solid copper nails. Exposed nails are covered with elastic roofing cement colored to match the general color of the slate. Surface texture is smooth or rough as desired, and comes in average thicknesses of ⅜-inch to ⅝-inch, in lengths of 10 to 24 inches.

Tile made from fine shale is also attractive, has the same qualities as slate, and is adaptable to various architectural designs. The shingles are produced in squares which permit quick and easy placement.

Cedar Shakes

Long used for sidewalls, pre-stained red cedar shakes and shingles are suitable for roofs that have sufficient pitch to insure good drainage. They show excellent performance where exposure to weather is greatest. Light in weight and having a low rate of expansion and contraction with changes of moisture content, they offer sturdiness along with economy in installation. They may be

(Continued on page 256)



RED CEDAR SHINGLE FOUR-PLY ROOF, double courses producing deep shadow lines

AMERICAN BUILDER



**Sure—CEDAR SHINGLES
can cut sheathing
costs in half! . . .**



You may be paying more than you think, for "inexpensive" roofing. Don't fail to figure the cost of sheathing when estimating roofing expense. Certi-grade cedar shingles, because of their great strength and rigidity, require only half the sheathing that you must use on ordinary roofing.

Yes, spaced sheathing costs about half as much as solid sheathing, and it also costs much less to apply! You can count on saving about \$200 on sheathing and its application when you roof the

typical 1952 house with cedar shingles. Normally, you will find that this saving more than makes up for the difference in cost of genuine cedar over substitute roofing.

Sharpen your pencil. Figure it out for yourself. Figure the comparative costs of *cedar shingles with spaced sheathing* as against *substitute roofing with solid sheathing*. We'll be glad to send you a handy estimating form which includes all of the cost factors in building a new roof.

FAST-SELLING CEDAR ROOFS COST FAR LESS THAN YOU'D GUESS

RED CEDAR SHINGLE BUREAU
5510 WHITE BUILDING
SEATTLE 1, WASHINGTON
METROPOLITAN BUILDING
VANCOUVER, B. C., CANADA

**CERTIGRADE
RED CEDAR SHINGLES**



(Continued from page 254)

laid with standard exposure on roofs of not less than one-quarter pitch.

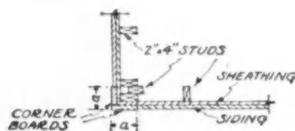
Hand-hewn shakes, rough textured on the surface side and smooth and flat on the underside, have a rugged, rustic appearance. The so-called regular stained shakes made by some manufacturers are smooth sawn on both sides. The hand-split type usually comes in 25- to 27-inch lengths, adequate to permit a safe lap on even the maximum exposure and butt thicknesses of $\frac{3}{4}$ -inch to $1\frac{1}{4}$ inches. They should be laid not less than $\frac{1}{4}$ -inch apart and may be placed on the conventional 1 by 2-inch or 1 by 3-inch shingle strip, or on solid sheathing covered with waterproof building paper. Hot-dipped zinc coated or copper shingle nails should be used; and when possible, all cutting and trimming should be done with a hatchet rather than a saw. It is advisable also to lay shingles just as they come from the bundles.

SIDEWALL SHEATHING

Sometimes called sub-siding, sidewall sheathing is nailed directly on the frame work and forms a base upon which finish siding may be nailed. It stiffens and strengthens the building and prevents passage of cold or heat.

Wood Sheathing

Sheathing ties the framework firmly together as a unit and imparts some insulation and weather-tightening qualities to the exterior walls. Therefore when boards are used, they must be of adequate quality, properly fitted and nailed. Unless end-matched



HOW TO CUT SIDING to come up against corner boards. The corner boards should be different in width by the thickness of one piece to make them appear the same on both faces. Sheathing beneath the siding is illustrated above

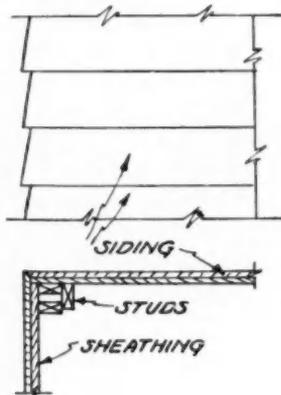
lumber is used, joints should come only on the studs and each board up to eight inches wide should be face-nailed at each stud with two 8d nails. Wider boards should be fastened with three nails.

Experience and tests by the U. S. Forest Products Laboratory show that a wall with diagonal wood sheathing, two nails at each stud in each board, is four times as strong as a similar wall with horizontal

sheathing. Furthermore, diagonal sheathing on a two-story platform-framed structure ties all elements of the first and second floors together much more efficiently than the horizontal sheathing. It also provides a better surface for nailing the finish.

Plywood Sheathing

Manufacturers claim that plywood imparts more than double the rigidity and strength of diagonal wood sheathing. They advise, however, that it is important that the correct grade and



SIDING OVER SHEATHING. Mitered at corners is illustrated above

thickness be used for maximum economy and structural strength. The minimum thicknesses for wall sheathing are $\frac{3}{16}$ -inch for 16-inch stud spacing and $\frac{1}{4}$ -inch for 24-inch stud spacing. FHA minimum property requirements specify corner braces in house framing may be eliminated when 4 by 8-foot sheets of plywood are nailed with 6d nails, 6 inches on center on all edges and 12 inches on center at intermediate bearings.

When 5/16-inch plywood is applied as wall sheathing, wood shingles may be fastened directly with ring-barbed nails. Nailing strips must be used if barbed nails are not employed; likewise, ring-barbed nails must be used for applying asbestos-cement shingles or siding to 5/16-inch plywood-wall sheathing.

Gypsum Sheathing

Gypsum sheathing is manufactured in panels 2 feet wide, 8 feet long and $\frac{1}{2}$ -inch thick. Each panel covers 16 square feet of side wall area; and a panel weight of less than 35 pounds permits easy handling by one man. It fits standard stud spacing of 16 or 24 inches which reduces waste to minimum. In fact, manufacturers say normal wastage is about 3 per cent.

Edges provide snug and continuous contact between adjoining sheets.

Except where local building regulations require it, building paper is not needed. Gypsum sheathing may be used with wood siding, masonry veneer, wood shingles, stucco and stone or brick veneer.

Insulating Board Sheathing

This type of sheathing is a structural board which is usually heavier in weight than building board and is made of cane or wood fibres. All of the standard brands today are waterproofed either with an asphalt coating or with an integral asphalt treatment.

Two main size groups are made. One group comes in thicknesses of $\frac{1}{2}$ -inch and 25/32-inch, and dimensions of 4 by 8 feet or 4 by 12 feet. The other group comes also in $\frac{1}{2}$ -inch and 25/32-inch thicknesses and dimensions of 2 by 8 feet. One man can easily handle the panels without use of ladders or scaffolding; and some manufacturers also mark the board to show proper nail spacing and alignment.

Insulating board sheathing can be used as regular sheathing in frame construction with various exterior finishes such as wood siding, shingles, stucco or brick veneer. Building paper is generally specified only where insulating board is used under stucco or masonry veneer.

The 4-foot wide sheathing is applied vertically and nailed at the intermediate studs first with large headed roofing nails spaced six inches apart. Around the edges, nails are spaced three inches apart.

The 2 by 8-foot sheathing with interlocking horizontal joints is applied horizontally, nailed to the intermediate studs first with the same nails and same spacing used on the large sheets. This method of application of sheathing is about the same as with regular wood sheathing except that the units handled are much larger. Where rigid shingles are used as exterior finish, furring strips must be applied over the insulating board sheathing unless special patented self-clenching nails are used.

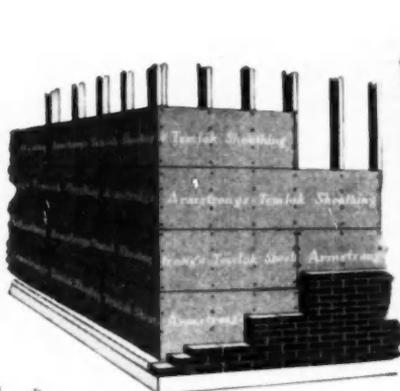
Asbestos siding shingles may be applied directly to this sheathing by using self-locking nails which the manufacturer can supply; clapboard exterior and ties for brick veneer are easily nailed through the sheathing and into the studding.

Some manufacturers claim 122 to 300 per cent more insulating value for this type as compared with ordinary wood sheathing. Furthermore, the 4-foot widths provide more than

(Continued on page 260)

With any exterior...

**TEMLOK MEANS STRONGER,
LOWER COST CONSTRUCTION**



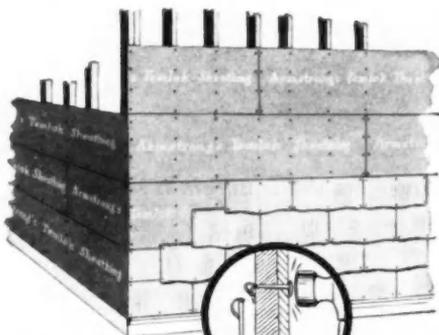
MASONRY VENEER
(2' x 8' Temlok Sheathing)



WOOD SIDING
(4' x 8' Temlok Sheathing)



STUCCO
(4' x 8' Temlok Sheathing)



SHINGLE
(2' x 8' Temlok Sheathing)

Loc-Nail

No matter how you finish your house on the outside, Armstrong's Temlok® Sheathing will make the structure stronger . . . tighter . . . and cut your costs in the bargain.

How Temlok adds strength. Temlok is made of tough pine fibers, mixed with asphalt and formed into strong boards (2' x 8' and 4' x 8' sizes). Because of these large sizes, Armstrong's Temlok can give the frame much greater rigidity than horizontal wood sheathing. Due to its great built-in strength, Temlok in the 4' x 8' x 25' 32" size has been accepted by FHA field offices for use without corner bracing.

How Temlok cuts costs. When used without corner bracing, Armstrong's Temlok Sheathing will cut building costs an average of \$25-\$35 on a medium-size home. Because Temlok is so much easier to handle than lumber, many builders have found they save over 20% on labor time. There's practically no waste in cutting. You also save the cost of using building paper because it's not needed for most exteriors. You get Temlok Sheathing packaged for faster, easier handling.

For complete details on Armstrong's Temlok Sheathing, see your lumber dealer or write Armstrong Cork Company, 1604 Ross Street, Lancaster, Pennsylvania.



**ARMSTRONG'S
TEMLOK**

Many extra benefits

Let It Pour! Moisture Won't Hurt It

Even with cut edges, Celotex Insulating Sheathing has almost **NINE TIMES THE MOISTURE RESISTANCE** required by Federal Specifications, according to tests made by an independent laboratory. Sheds moisture. Won't warp or buckle.

Celotex Insulating Sheathing is double-water-proofed—inside by integral treatment that coats every fibre; outside by a "raincoat" of asphalt on both surfaces and all edges. Yet it has over **TWICE THE VAPOR PERMEABILITY** required by Government agencies.



Celotex National Advertising Puts the Spotlight on YOU

"See your builder!" All through 1952, as in years past, that's what Celotex will be telling prospective home buyers—in big, colorful, hard-selling ads in THE SATURDAY EVENING POST, BETTER HOMES & GARDENS, AMERICAN HOME, SMALL HOMES GUIDE.

These impressive, full-page Celotex ads are de-

signed to build business for you. Tie in with them by emphasizing to every prospect that your homes are built with *genuine* Celotex Products. You'll find this makes your selling job far easier. For over a quarter century of resultful national advertising has created unsurpassed *public acceptance* for the brand name Celotex!

...yet no extra cost!

Celotex Insulating Sheathing does far more than ordinary sheathing yet costs no more, applied!

If you are using ordinary sheathing, you pay at least as much and USUALLY MORE than the cost of Celotex Insulating Sheathing, applied. Yet you get far less! For at no extra cost, Celotex Insulating Sheathing gives you all these *extra* advantages...

- 1 INSULATES AND WEATHERPROOFS** as it builds. All at *one* cost. No building paper needed. Saves labor, materials.
- 2 GREATER BRACING STRENGTH**, about 30% greater than ordinary sheathing. *No corner bracing* needed to meet FHA requirements, with 4' wide, $\frac{5}{16}$ " thick Celotex Insulating Sheathing.
- 3 GOES UP 30% FASTER.** Easier to cut and fit. Up to 15% less waste. Siding or shingles can

easily, quickly be applied *direct*.

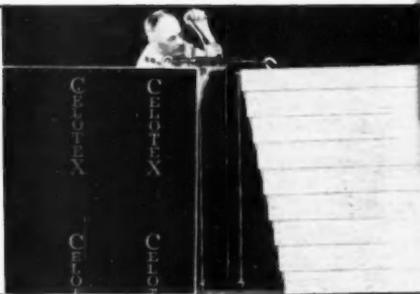
- 4 DOUBLE-WATERPROOFED.** Stack it in the open, moisture won't hurt it. Won't warp or buckle. Lets you resume work sooner after rain, cutting costly delays.
- 5 IT'S THE ONLY SHEATHING** made of tougher, stronger, long Louisiana cane fibres—and protected by the patented Ferox® Process from dry rot and termite attack.

So follow the lead of value-minded builders in every part of the country. Switch to Celotex Insulating Sheathing, best sheathing buy of them all. Build more comfortable, more durable, more salable homes... at lower cost. Free booklet gives complete information. Mail coupon today.

Superior Bracing Strength Proved by "Tug of War" Test

On the left, Celotex Insulating Sheathing. On the right, ordinary sheathing. The test panels, nailed to 2" x 4" framing, were bolted to a common sill and connected by a turnbuckle.

As the turnbuckle was tightened, note how the Celotex Insulating Sheathing panel remained plumb—while the panel of ordinary sheathing was distorted. Visible proof of the superior bracing strength of Celotex Insulating Sheathing!



Build better... Build with
CELOTEX
REG. U. S. PAT. OFF.

Double-Waterproofed INSULATING SHEATHING

THE CELOTEX CORPORATION, 120 S. LA SALLE ST., CHICAGO 3, ILL.

MAIL TODAY

The Celotex Corporation, Dept. AB-42
120 S. LaSalle St., Chicago 3, Illinois

Please send me a free copy of the Celotex booklet, "How You Can Build Better Homes at Lower Cost."

Name

Address

City Zone State

(Continued from page 256)

twice the bracing strength of wood sheathing horizontally applied.

BUILDING PAPER

Building paper should be introduced between sub-siding and outside finish to prevent passage of air through the walls. It should be tough enough to withstand rough handling while putting it on, retain its strength after becoming wet, and prevent passage of moisture. It must lie smoothly and care must be taken to close all cracks around window and door openings.

A vapor barrier on the warm inside wall is considered essential when insulation is placed against sheathing. This is necessary to prevent moisture condensation within the wall. The vapor barrier is a paper which prevents vapor from entering the wall from the inside of the house. The building sheathing paper which insulates the outside wall should not only be wind and rainproof, but in contrast to the vapor barrier, should allow vapor to pass through it, and should be five times as vapor-permeable as the vapor barrier.

Four main types of building paper are: (1) papers impregnated with asphalt; (2) kraft paper impregnated with paraffin; (3) laminated building papers of two or more layers cemented together with asphalt; and (4) machine-finished papers.

SIDING

Plywood

Wherever plywood is intended for permanent outdoor exposure, only the exterior type with waterproof adhesive bond can be used. The architectural design of a structure will determine largely whether it is applied vertically or horizontally in the originally furnished sizes, or, if they are to be cut, what shape the pieces must be. Plywood may be applied with molded battens, V-grooves or flush joints. It makes excellent wide siding when applied in half-panel or third-panel widths. For economy of construction, $\frac{1}{4}$ -inch panels are used successfully. For construction of single-wall structures, $\frac{1}{2}$ -inch or thicker has been used satisfactorily.

Non-corrosive nails such as the common hot-dipped galvanized type should be used. Nailing should be with 6d common or 6d box nails for $\frac{3}{8}$ -inch siding and 8d for thicker siding. When full-size 4 by 8-foot or longer panels are used, fastenings should be spaced not more than six inches on center at panel edges and 12 inches elsewhere.

There are several simple and easily

adapted methods for handling joints between the panels in using exterior plywood for siding. Some suggested treatments for both horizontal and vertical joints are shown in the section on "Plywoods and Hardboards."

All edges of plywood siding, whether covered, veed, exposed or butted, should be bedded in a thick lead-and-oil paste or other suitable compound, knifed on as the panels are applied. Following are the specifications which have been approved by FHA for filler or bedding: 100 pounds of paste white lead, $1\frac{1}{4}$ gallons of raw linseed oil and one pint of dryer. The dryer may be reduced to one-half pint if boiled linseed oil is used.

FHA minimum requirements specify that plywood used as siding must have minimum thickness of $\frac{3}{8}$ -inch with studs 16 inches on center. If sheathing is used, plywood siding may be $\frac{1}{4}$ -inch thick.

Wood Siding

Wood siding is variously known as drop or rabbeted, rustic and beveled, or bungalow siding. But except where heating conditions are not a consideration, or in the extreme south, sheathing is a "must" to reinforce wood siding.

When drop or rabbeted siding is used, the lap of each board over the next below is determined by the depth of the rabbeting; with beveled siding the lap can be varied as the builder desires. It is always desirable to "lay out" the siding before it is applied, so that the bottom edge of some strake will occur at the bottom edges of the window sills and that of another strake will run neatly over the top on the frame or drip mold. This avoids the necessity of cutting or notching around openings.

For beveled siding a nail should be driven at every stud and located so that it will pass through both the outside piece and the top edge of the piece immediately under it; thus every piece will have two nails to secure it in place. Galvanized nails should be used to avoid rust. The nail is best driven flush and not set (unless also puttied) so that no place is left for water to lodge and work into the wood.

Wherever two pieces of siding meet or butt, the joints should be square. Corners can be finished as follows:

(1) *Against corner boards:* In selecting size of corner boards, one piece should be wider than the other so that when in place the corner board will have the same appearance from either side; and the size should provide nailing on the corner posts for the ends of the siding. Also, corner boards should have slightly

greater thickness than the ends of the siding. The minimum thickness for 6-inch siding is $\frac{3}{4}$ -inch. For heavier sidings, heavier corner boards are required.

(2) *Mitered corners:* These are more troublesome than corner boards but more pleasing in appearance. Corner board methods are more airtight and water-tight and less likely to open up.

Bevel Siding

The bevel siding so common today is almost like the early clapboards which were sawed with one edge thicker than the other so that they would fit more snugly against the framing. Bevel siding is customarily made in 4, 5, 6, 8, 10 and 12-inch widths and usually $\frac{1}{8}$ -inch thick on the thin edge and $\frac{1}{2}$ -inch to $\frac{3}{4}$ -inch thick on the other edge. Bevel siding 8 inches and wider is often called "bungalow" or "wide Colonial" siding, and often has shiplapped or rabbeted joints so that the siding lies flat against the studding instead of touching it only near the joints as ordinary bevel siding does. This reduces the apparent thickness of siding by $\frac{1}{4}$ -inch but permits use of extra nails and reduces the chance of warping. It is also economical, as rabbeted joints require less lumber than lap joints used with plain bevel siding. Rabbeted joints are not necessary for the 4-inch and 6-inch widths of bevel siding as these widths are usually $\frac{1}{2}$ -inch thick and rabbeting would make them too thin.

"Rustic" and "drop" siding is usually $\frac{3}{4}$ -inch thick, 6 inches wide and is in a wide variety of patterns. Drop siding has tongued and grooved joints while rustic siding has shiplapped joints. Drop siding is heavier, has more structural strength and because of its design has tighter joints than bevel siding; therefore it is often used on garages and barns, where there is no sheathing as well as on homes.

Cedar Shakes

Prestained cedar shakes have insulating qualities which make them resistant to heat transmission. They are commonly made in four basic grades—A, B, C and D—and are marked as to grade. For permanent and high grade construction, grades A and B are recommended. Edge-grain shingles are more resistant to weathering and are much less likely to cup or warp on the wall than shingles cut flatwise of the grain.

There are several types of cedar shakes for siding: processed shakes with parallel sides and square butts;

(Continued on page 262)

how the NEW — *Weatherbest* **OPTIONAL KOLOR PLAN**

Assures Construction Economy

+ plus Greater Home Buyer Appeal

The Weatherbest Optional Kolor Plan for stained red cedar shake sidewalls is based on the use of Weatherbest Pryme-Shakes factory stained in one specially formulated prime color. Weatherbest Fynal-Kolor, available in twenty modern pastel and deep-tone shades, is supplied for a finish coat on the job. Pryme-Shakes and Fynal-Kolor are sold as a unit at no more than the cost of conventional stained shakes. But by use of a unique certificate ordering system, Fynal-Kolor can be requisitioned independently of the Pryme-Shakes.

BUILDING WITH PRYME-SHAKES REDUCES LABOR TIME FOR SHAKE APPLICATION AND TRIM PAINTING ... ELIMINATES WASTE AND DELAYS

Pryme-Shakes need no special care or protection since the Fynal-Kolor coat will cover all construction blemishes. Available in local stocks for immediate delivery. No waiting for special colors, no color match problems on the job. Shakes left from one house can be used on the next without regard to finish color.

CONVENIENT FYNAL-KOLOR CERTIFICATE SYSTEM PERMITS CUSTOMER CHOICE OF TWENTY GORGEOUS FINISH COLORS

For each square of Pryme-Shakes purchased you receive a certificate in lieu of Fynal-Kolor. Free color charts are furnished you for customer color selection. When Fynal-Kolor is wanted, you send in the necessary certificates and shipment is made at once direct to job site.

SCIENTIFICALLY FORMULATED FYNAL-KOLOR IS EASY TO APPLY... ASSURES A UNIFORM AND PERFECT JOB

Made especially for use with Pryme-Shakes only, Fynal-Kolor may be brushed or sprayed just as it comes from the can. One coat produces an even color tone, eliminating color variation complaints and assuring complete customer satisfaction.



SEE YOUR NEAREST WEATHERBEST SUPPLIER OR MAIL COUPON TODAY

WEATHERBEST CORP. — Dept. AB-42
North Tonawanda, New York

Gentlemen:

Please send me full information including data sheet and sample color chart folder for the new Weatherbest Optional Kolor Plan.

NAME _____

ADDRESS _____

CITY _____

ZONE _____

STATE _____

(Continued from page 260)

the simulated hand-split shake with face side grooved, "invisible" joints, and underside smooth sawn; and the hand-hewn type with face side smooth, visible joints, random thickness, and rugged rustic appearance. In the processed shakes, the machine squares up normally irregular shingle butts so that true horizontal course lines are assured and vertical edges of shakes are machined parallel.

Lengths of 16, 18, and 24 inches provide wide choice of weather exposures and permit variety in appearance. Usually they are designated as 4/2-inch or 5/2-inch depending on whether they measure four or five shingles to a 2-inch thickness.

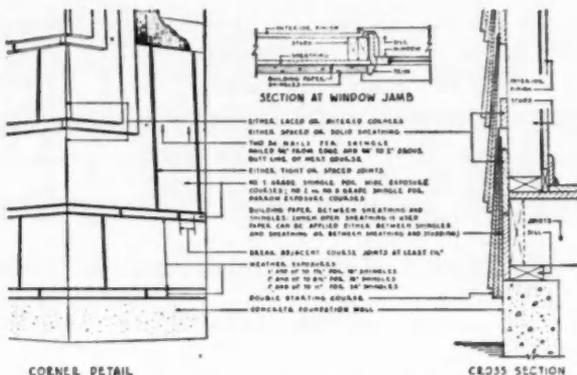
Installation can be made either over tight or spaced sheathing, although tight sheathing is more widely accepted. However, a very satisfactory and inexpensively constructed wall can be made from sheathing spaced apart on centers equal to the shingle exposure. Building paper should be used with such construction, either between the shingles and sheathing or between the sheathing and studding.

Cedar siding shakes may be exposed to the weather more than shingles on the roof because the sun's heat does not reach them so directly and water runs off more quickly. They should be spaced not less than 1/4-inch apart; two or more nails, one near each edge, should be used in each shingle. Nails should be hot-dipped, zinc-coated, or preferably of copper or aluminum, and should be driven so that they are completely covered by the next course above; however, nail heads should not be driven into the shingles. Shingle courses should be so laid that the shadow lines fall in with upper and lower lines of window openings.

A new application tool that eliminates picking up and nailing shakes one at a time enables two inexperienced men to apply an average of six squares a day. This is a 4-foot strip of light gauge steel with half-inch deep U-shaped channel top to hold the butt ends of the shakes or shingles, and is run end to end as far along the course as desired. Several of these 4-foot units are mounted on a 1 by 2-inch or 1 by 3-inch strip 16 or 20 feet long. After insulating backing board or undercourse shingles have been installed, shakes are then inserted behind a cord or snap line and into the U-shaped channel, and the workman can go right down the line and nail them in place without stopping.

Asbestos-Cement Siding Shingles

These shingles are an economy be-



DETAILS of red cedar shingle ribbon sidewall application

cause they require no maintenance, initial painting or other subsequent treatment for preservation. Manufacturers of some brands claim surface grime can be cleaned off by washing with soap and water. They are also fireproof and unusually weather-resistant. They are available in a variety of colors, surface textures and butt lines. They can be installed directly over wood sheathing or over gypsum or insulating boards with special fasteners. Sold in squares, they are generally packed in three bundles per square with about 57 pieces 12 by 24 inches in size to the square. Manufacturers provide backer strips for use behind vertical joints and corrosion-resistant face nails. Some asbestos-cement plants also make asbestos-cement clapboard.

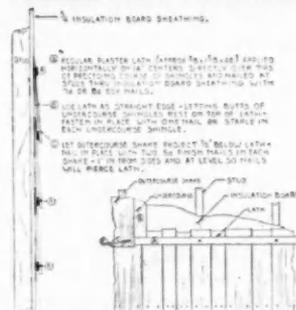
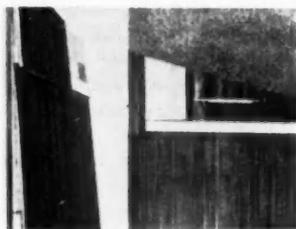
In order to prevent staining, wood trim is given at least a prime coat before installation of siding; and all metal, particularly copper used for flashing, is initially painted with a protective coating. The siding is installed over a layer of waterproof felt or waterproof backing board. Asphalt saturated felt is recommended as underlayment since others, such as tar-saturated felt, may cause staining. Joints in the siding are protected by using the felt backer strips.

Work is started by nailing a 3/4 by 1-inch cant strip to the bottom of the walls to be sided, to give the siding a slight cant and add to the finished appearance. Chalk line marks for the top of each course all around the building help assure accurate meeting and mitering of courses and avoid wedge-shaped courses at the eave lines. The first course, extending 3/8-inch below the cant strip to form a drip edge, is started with a whole shingle. After backer strips are in place, the head nails are driven in, as are the specially-coated face nails. At

least one nail should penetrate each backer strip. A half-shingle is used for starting the second course.

To avoid smearing the face of the siding wherever siding butts against trim, masonry or other materials, asbestos caulking should be applied. All inside and outside corners are protected with vertical 12-inch strips of asphalt felt behind the siding. Special precaution should be taken with corners likely to be subjected to hard knocks by using corner boards and pre-finished metal corners; alternate shingle construction or mitered shingles are also used at corners.

(Continued on page 264)

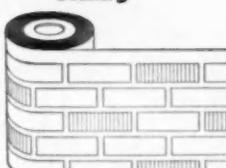
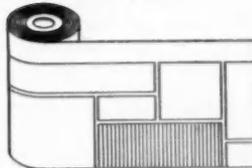
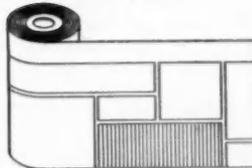


AN ECONOMICAL METHOD of applying double-coursed wood shingles to buildings with insulating board sheathing

AMERICAN BUILDER

ASPHALT Roofings & Sidings

for every new construction and replacement need!

WOODTEX		Specifications			ROLL BRICK-TEX Siding		Specifications		
Grained Surface		Slabs Per Sq.	Bdls. Per Sq.	Wt. Per Sq.			Strip Per Roll	Size Per Strip	Wt. Per Roll
 12" x 36"		80	3	250 lbs.			2	16" x 42"	105 lbs.
THICK BUTT		80	3	215 lbs.			Specifications		
Plain and Grained Surface							Strip Per Roll	Size Per Strip	Wt. Per Roll
 12" x 36"							2	16" x 43" 3"	105 lbs.
THREE TAB Hexagonal		86	2	167 lbs.					
Plain and Grained Surface									
 11 1/2" x 36"					Black Mortar Lines Matching Corner Strips Available				
WAVE LINE Siding Shingle		50	1	105 lbs.	 10 1/2" x 32"				
Grained Surface									
UNIVERSAL		SAF-T-LOK		FRENCH LOCK		Insulating Sidings available at York, Pa. and Chicago, Ill.			
Plain Surface		Grained Surface		Plain Surface					
 16" x 18"—4" sidelap		 18 1/2" x 20 1/2"—2" sidelap		 16" x 16"—2 1/2" sidelap (furnished with staples)		MINERAL SURFACED ROLL ROOFINGS Certain-teed 90 lb. Certain-teed 19 in. Selvage Edge Roofing Certain-teed Blockedge Grained Certain-teed Starter and Valley Strips			
80	2	138 lbs.	96	3	170 lbs.					82	2	140 lbs.
JUMBO DUTCH LAP (plain surface) 12"x16"—3" sidelap		112	2	162 lbs.	SMOOTH SURFACE ROLL ROOFINGS Certain-teed 55 lb., 65 lb. & Guard 45 lb. Black & White Cap Sheet Base Sheet <i>A Complete Line of</i> FELTS, BUILDING PAPERS, ROOF COATINGS and CEMENTS				

NOTE. A complete list of the wide variety of colors available will be sent at your request.



Certain-teed

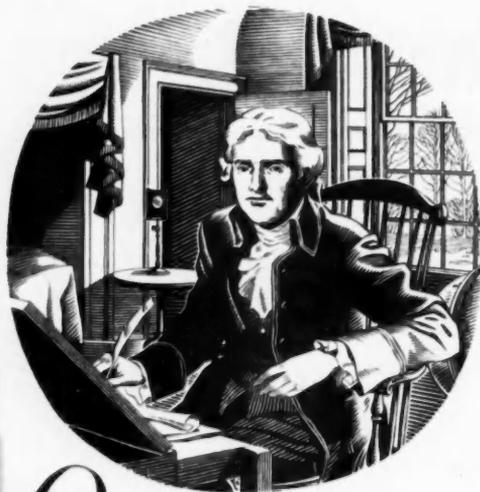
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Quality made Certain... Satisfaction Guaranteed

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 ACOUSTICAL TILE INSULATION FIBERBOARD



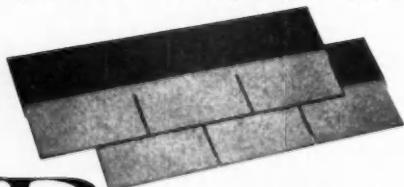
Quality products since 1795

Bird has been making quality products for America and its people ever since Thomas Jefferson contributed his ideas and ideals to our early growth.

Today Bird offers you the greatest achievement in a variety of asphalt shingle values.

- ★ Thick butt construction, with *extra* layers of asphalt and firmly embedded mineral granules give added years of wear where it counts . . . on exposed tabs.
- ★ New pastel colors!
- ★ Fire-resistant, of course — certified by Underwriters' Laboratories.
- ★ 215 lbs. of working weight protect every 100 square feet of roof.

For more information write Bird & Son, inc., Dept. AB-4, East Walpole, Mass.



BIRD



Roofings & Sidings

ASPHALT SHINGLES & INSULATING SIDINGS
WATERPROOF PAPERS • ROLL ROOFINGS

East Walpole, Mass. • New York, N. Y. • Chicago, Ill. • Shreveport, La.



PHOTO ABOVE illustrates the approved method of applying asbestos-cement siding shingles. First, the sheathing or old siding is covered with a felt underlayment. Shingles are then aligned and nailed in position, using non-corrosive nails, with a felt backer strip at each joint. Strips lap lower courses. At least one nail penetrates each strip

(Continued from page 262)

Aluminum Siding

Clapboard siding made of a hard aluminum alloy is manufactured in individual courses, 7 $\frac{3}{8}$ inches and 9 $\frac{1}{2}$ inches wide (6 $\frac{7}{8}$ -in. or 8 $\frac{1}{2}$ -in. weather-exposed), and in standard lengths of 10, 12, 14 and 16 feet.

(Continued on page 266)

Covering Capacities of CERTIGRADE Shingles

Including the Number of Square Feet Covered by Four-Bundle Squares and Single Bundles for Exposures Given.

Exposure Inches	Sixteen-inch Shingles		Eighteen-inch Shingles		Twenty-four-inch Shingles	
	4-Bundle Square	One Bundle	4-Bundle Square	One Bundle	4-Bundle Square	One Bundle
3 $\frac{1}{2}$	70	17 $\frac{1}{2}$	...	...	...	...
4	80	20	70	17 $\frac{1}{2}$	...	...
4 $\frac{1}{2}$	90	22 $\frac{1}{2}$	80	20	...	...
5	100*	25	90	22 $\frac{1}{2}$	...	...
5 $\frac{1}{2}$	110	27 $\frac{1}{2}$	100*	25	...	...
6	120	30	108	27	80	20
6 $\frac{1}{2}$	130	32 $\frac{1}{2}$	117	29	90	22 $\frac{1}{2}$
7	140	35	127	31	95	24
7 $\frac{1}{2}$	145	37 $\frac{1}{2}$	136	34	100*	25
8	160	40	145	36	106	26 $\frac{1}{2}$
8 $\frac{1}{2}$	170	42 $\frac{1}{2}$	154	38	113	28
9	180	45	163	40	120	30
9 $\frac{1}{2}$	190	47 $\frac{1}{2}$	172	43	127	31 $\frac{1}{2}$
10	200	50	181	45	133	33
10 $\frac{1}{2}$	210	52 $\frac{1}{2}$	190	47	140	35
11	220	55	200	50	147	36 $\frac{1}{2}$
11 $\frac{1}{2}$	230	57 $\frac{1}{2}$	209	52	153	38
12	240	60	218	54	160	40
12 $\frac{1}{2}$	...	...	227	57	168	41 $\frac{1}{2}$
13	...	...	236	59	172	43
13 $\frac{1}{2}$	...	...	245	61	180	45
14	...	...	254	63	186	46 $\frac{1}{2}$
14 $\frac{1}{2}$	...	...	...	...	192	48
15	...	...	...	...	200	50
15 $\frac{1}{2}$	...	...	...	...	206	51 $\frac{1}{2}$
16	...	...	...	...	212	53
16 $\frac{1}{2}$	...	...	...	...	...	...
17	...	...	...	...	...	...
18	...	...	...	...	...	...

*Maximum exposure recommended for roofs.

†Maximum exposure recommended for single-coursing on side walls.

‡Maximum exposure recommended for double-coursing on side walls.

New— a colored shingle that will appeal
to both builders and owners!

looks like split wood...
looks like stone!

"Century"
NU-GRAIN

asbestos-cement siding...



"Century" No. 58 NU-GRAIN
Asbestos-Cement Siding Shingles,
in NU-GRAIN Green. Also
available in NU-GRAIN Gray, and
NU-GRAIN Brown. 57 shingles
per square, 1 1/2" head lap.

At last, for re-siding old homes and for new construction you can use a colored shingle that has the architectural appeal of the old-fashioned split wood shingle... but the wearing qualities of stone itself.

For the "Century" NU-GRAIN Asbestos Shingle duplicates exactly—in colored slate granules—the coarse and fine score marks of split wood.

These granules are permanently imbedded under hydraulic pressure, to make shingles in three colors that will not fade... NU-GRAIN Green, NU-GRAIN Gray, and NU-GRAIN Brown. And fire can't burn... rain can't soak... snow can't rot... and termites hate "Century" Asbestos Shingles!

You'll find the texture markings strong and visible with a straight butt shadow line so deep, it seems etched... the kind of texture that speeds sales.

Whether you're siding one home or a thousand, "Century" NU-GRAIN Shingles give you a low initial cost and easy application that increases your profit. Ask your K & M Distributor for details... or write us direct.



America's first maker of Asbestos-Cement Shingles

KEASBEY & MATTISON

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Richkraft

The many uses for reinforced papers, breather sheets and black papers mean a steady outlet that is worth pushing. Recommend them for use as vapor barriers, under siding, under roofing, under wood floors, over sub-floors, wherever it is desirable to keep moisture, wind and dust out. The Richkraft line is complete from the sturdy Skulproof, a reinforced heavy-duty, plasticized, waterproof paper for the toughest jobs to black papers. No other line offers you so much. Roll widths range from 3 ft. to 10 ft.—a size for every customer's needs without waste or cutting.



Richflex

Here is a complete line of reflective insulation that permits you to offer just the right insulation for the problem at the right cost to the customer. Richflex does a 4-way job. It keeps winter heat in—summer heat out—acts as a moisture barrier—acts as a cold air barrier. The special aluminum pigment used in Richflex turns back more than 75% of heat rays striking it.

Richflex comes in three grades:

A—coated both sides, edge string reinforced.

B—coated one side, edge string reinforced.

C—coated both sides but without reinforcement.

Richflex is the real answer to low-cost insulation.



Richbead

Here's the right angle for dry wall construction.

Richbead brings the protection of metal to both exterior and interior corners for new and existing homes. It eliminates chipped up and banded up corners at doorways, arches, reveals and soffits. It covers cracks caused by settling in interior corners and gives them clean lines.

Richbead consists of a metal angle glued to joint tape and it can be installed by anyone.

Richbead means a real saving in time because it does away with factory corners and permits the use of any piece of wall-board. It speeds cutting and fitting and reduces waste to a bare minimum and you can often show big savings by eliminating casings around doors and windows.

Richbead is easy to handle and comes in two sizes— $\frac{1}{2}$ and $\frac{3}{8}$ inches—8 ft. lengths, 25 pieces to the box.



Here is a line that really moves—quality products that meet a big demand—complete for every problem of its kind that your customer may face. Richkraft means bigger profits and bigger volume. Send the coupon and get full details.

The Richkraft Company, 228 North LaSalle Street, Chicago 1, Illinois

Please send me full details on Richflex.

Please send me full details on Richbead.

Please send me full details on your line of reinforced and black sheathing papers.

Company Name _____

Address _____

City _____ Zone _____ State _____

Signed _____

(Continued from page 264)

Recommended features are: a curved or concave face which increases strength, eliminates highlights or wrinkles, and the upper edge may be trimmed to any width; spring-tensioned joint, the result of the concave face, assures weather-tight joint, increases rigidity. One square is sufficient to cover a surface of 100 square feet.

Insulated Siding

Imitation brick and stone siding in appropriate colors, backed with insulating board which adds structural strength and heat-resistance to exterior walls, is recommended as an economical material. It is easy to install and according to manufacturers' claims no painting or repairs are required. The exposed surface is coated with asphalt. Common sizes are $4\frac{3}{8}$ inches by $14\frac{3}{8}$ inches, packed 12 pieces per carton and 2 cartons to a square. Harmonizing insulated siding corner pieces come $3\frac{3}{8}$ inches by $2\frac{3}{8}$ inches by $33\frac{3}{4}$ inches, seven pieces per carton, 19.5 lineal feet per carton.

For other types of exterior wall materials such as brick and stucco, see sections on "Structural Clay Products" and "Cement, Concrete, Mortar and Related Products."

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Where did you get
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THE builder today has at his disposal kitchen and bathroom wall and utility surface materials ranging in composition from clay to laminated vinyl plastic. He may elect to use wood, linoleum, asphalt and rubber, plastic, metal, glass or ceramics. Functional qualities in relation to the job to be performed are of prime importance in governing the final selection.

Surface materials are produced by the manufacturer with four major factors in mind: (1) durability, (2) ease of maintenance, (3) decorative qualities, and (4) easy application. A combination of several surface materials may often be used in the same installation with good results. Materials impervious to water are a necessity around tubs, showers and lavatories. Materials of a softer texture may be preferred for the rest of the wall surface.

Both beauty and practical usage must be considered when selecting materials for surfacing sink, counter and work table tops in the kitchen. The same considerations enter into the selection of materials for dressing table or vanity tops in the bathroom.

Each type of surface material offers specific properties which must be considered in relation to the requirements of the installation. Clay tile and certain other materials offer full waterproof, stain-proof and fireproof features. Each surface material may be one or all of the following: moisture-resistant, moisture-proof, water-resistant, waterproof, heat-resistant, fire-resistant, fireproof and stain-resistant. For certain installations on horizontal surfaces the hardness feature of the material will be of prime concern. In other cases a stain-proof hardness and lasting finish will be the requirement. Or, the decorative qualities of design and color may be of major concern and in some cases will govern the final selection.

CLAY TILE

Clay tile is made from clay and/or other ceramic materials formed to thickness and shape and baked to

produce a durable material. The two general types are "glazed" and "unglazed." Either may be used for wall finish but for most domestic installations the glazed finish is preferred. The glaze may either be clear or opaque. Almost any color or combination of colors is available, in a veined, mottled or rippled effect. Finish of the glaze may be "bright," "semi-matte," or "matte." "Bright" finish has a shiny, reflective surface while the other two finishes do not clearly reflect an image, or may be entirely without sheen.

Some firms produce pictorial and design tiles. Also available are pictorial sets of tiles. When installed, the final result is a large wall design or mosaic picture.

Tile thicknesses, vary with the manufacturer but run approximately $\frac{1}{4}$ - $\frac{3}{8}$ -inch and thicker for normal wall application. Two basic grades of tile are produced: standard grade (blue label) and seconds (yellow label). "Seconds" have slight imperfections which in no way affect the wearing qualities.

LINOLEUM AND RUBBER

Linoleum and rubber types of wall coverings are available in rolls or cut tiles in varying sizes. Thicknesses, tile sizes and roll widths vary with the manufacturers.

Preparing Surfaces

Linoleum or rubber materials may be applied directly to any smooth surface, above grade, provided no seepage occurs on the base surface. This includes such surfaces as one- or two-coat plaster, hardboard, plywood, gypsum lath or dry concrete walls. It is well to note that if the surfaces to be covered are not smooth and level the glossy surface of the material will cause highlighting at random which will result in a warped and wavy appearance of the wall or surface. All unevenness is accentuated after the surface material has been applied.

When old walls are being covered, all previous wall covering must be removed. Wash grease and dirt from

KITCHEN, BATHROOM WALL AND UTILITY SURFACE MATERIALS

Principles of Selection

Clay Tile

How to Set on Vertical Surfaces

Linoleum and Rubber

Preparing Surfaces
Installing Flexible Sheet Materials

Installing Tile Showers

Coated and Uncoated Hardboard

Applying Hardboard
Sheets to Walls

Plastic Surfaces

How to Apply Plastic Wall
Tile

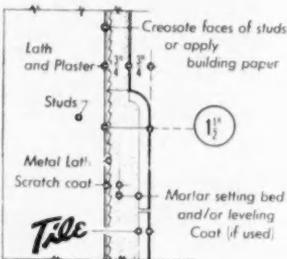
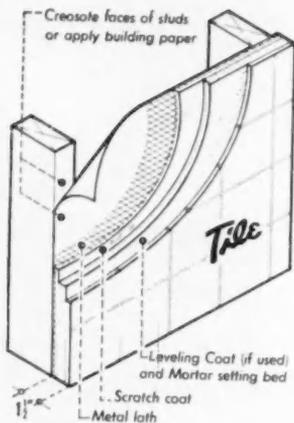
Metal Tile

Setting Porcelain-on-Steel
Tile

Glass Panels

Installing Glass Panels
Around a Bathtub

Utility Surfaces



Tile Council of America

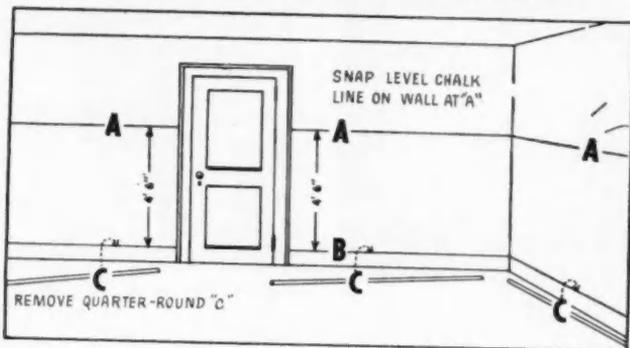
HOW CLAY TILE IS SET ON VERTICAL SURFACES. Dampness protection for wood members that are to receive metal lath and scratch work for tile is provided by building paper or creosote or asphalt paint. If the scratch coat is applied with reasonable care, the mortar setting bed will provide a suitable surface and the "leveling" or "plumb" coat may be omitted. The mortar setting bed is screeded to a properly trued-up plane to receive the tile. It is spread over areas no greater than will be covered with tile while the setting bed remains plastic. Either the floating or the buttering method may be used by the tile contractor in setting the tile. Vertical units must be maintained plumb, level and even. Finished surface must be brought to true and flat planes.



TILES may have either square or cushion edges. The cushion edge has a slight curvature at the facial edge.

surface with washing soda, rinse thoroughly with clear water and wipe dry. Cracks and holes should be filled with non-shrinking fill. Rough spots and trowel marks should be removed with coarse sandpaper. Bring exterior and interior corners to a true plumb and square if the surface is to be in tile shapes. When applying roll-type materials, the interior and ex-

HOW TO INSTALL FLEXIBLE SHEET MATERIAL



Conoleum-Nutra, Inc.

FIG. 1—Strike a level chalk line "A" on the wall completely around the room. Desired height will depend on projection and width of material. Starting at doorway or other projection, measure length of wall area to be covered, then cut material accordingly, using linoleum knife. For ease of handling, cut material into pieces not over 6 feet in length.



FIG. 2—Spread linoleum adhesive on wall area to be covered so that no plaster shows through. Keep below chalk line. Spread just sufficient paste to secure each piece as it is applied. Place first piece of material into position with top edge even with chalk line "A", and butt or fit to door frame or projection. After piece is in place, rub the entire surface thoroughly with a damp cloth to anchor the material into the paste and to remove air blisters.



FIG. 3—Proceed in the same manner with each succeeding piece. Clean any smudges or excess paste from each piece immediately after it is installed. Wipe with a damp cloth.



FIG. 4—If a cap strip is desired, paste the strip after the lower area of the wall has been finished. Apply to upper wall above finished portion. Baseboard may be applied at the same time.

terior corners may be rounded to a 3/4-inch radius.

If gypsum wallboard is the base, the surface should be sealed with one coat of primer; around tubs two coats should be used. Only a non-metallic tape and cement flush-joint system should be used on the gypsum board. An opening of about 3/4-inch should be left between gypsum board

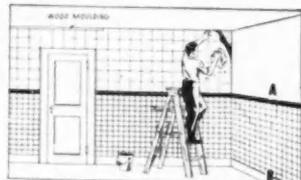


FIG. 5—In applying material to the upper wall, measure upper wall at intervals between top of wainscot and ceiling and cut material to these measurements. Butt tightly against lower wainscot. If pattern or tile surface material is being used, or if the design varies with lower portion of the wall, make sure mortar lines, or other pattern, line up properly. Wood or metal moldings may be used on interior and exterior corners. Remember that interior and exterior receptacle-type moldings must be installed before the surface material is applied.

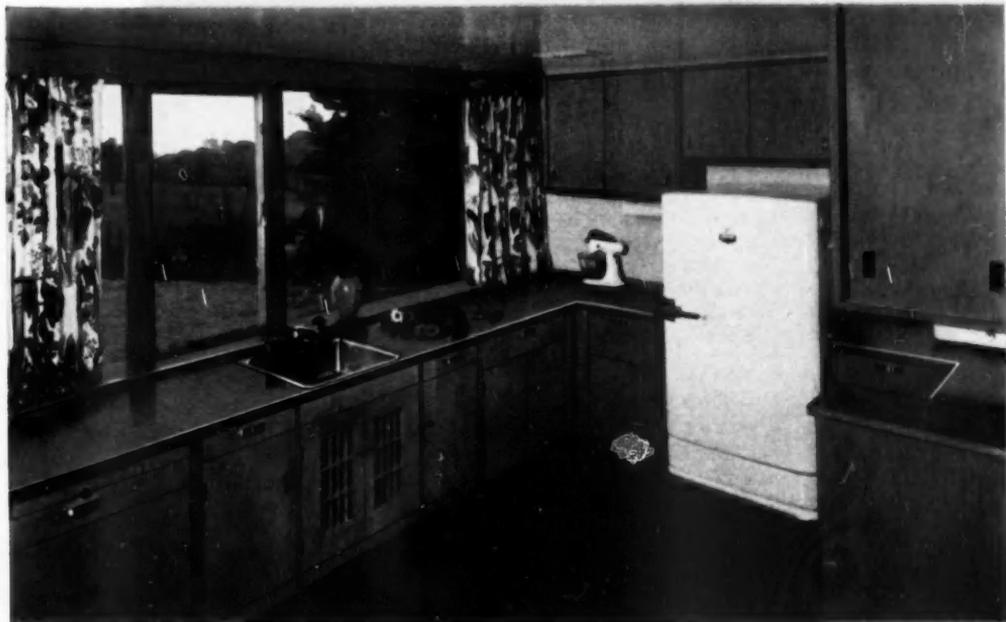
and recessed tubs to permit grouting with a water-resistant, non-shrinking plastic compound at the time the surface material is applied.

Enameled surfaces should be sanded to afford a satisfactory bond.

Figures 1-5 illustrate the procedure for installing linoleum and other flexible material on vertical surfaces.

(Continued on page 272)

Designed WITH A LONG VIEW—INSIDE AND OUT



Albert Kennerly, Architect

The picture windows in this kitchen face on scenic beauty that extends for miles. The specifications, which read "Sinks and Counter Tops $\frac{1}{16}$ " Formica on water-proof plywood," provided the "long view" inside.

That qualifying phrase "or equal" is seldom associated with Beauty Bonded Formica. For beauty, for durability, for range of color and pattern selection, Formica is in a class alone.

If years and years of carefree use with no maintenance cost is the aim—the long view calls for genuine Formica.



For complete FORMICA information see Sweet's $\frac{14A}{FO}$
or write

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In Canada Arnold Bonfield & Co., Ltd., Oakville, Ontario

WHEREVER THERE'S A TOP — THERE'S A USE FOR GENERAL ELECTRIC TEXTOLITE*

General Electric Textolite plastics surfacing comes in dozens of exclusive patterns and colors. Use it wherever a durable surface is needed — tables, counters, work surfaces of all kinds — in homes, stores, restaurants.

A variety of gay patterns and solid colors make General Electric Textolite as pretty as it is practical. Textolite's beauty lasts and lasts. It's scratch and heat resistant, withstands boiling water, scalding greases, even resists burning cigarettes. General Electric Textolite is stain resistant, sheds fruit juices, alcohol, ordinary household chemicals and acids without a trace. It's easy to keep Textolite tops clean. Just a swish with a damp cloth restores the original sparkle and luster.



HOMES

WHERE FOOD AND DRINKS ARE SOLD

For COMMERCIAL INSTALLATIONS, G-E Textolite tops offer many advantages. Their colors blend beautifully with any decorative scheme. Customers like the atmosphere created by G-E Textolite surfacing. And hotel and restaurant managers appreciate the savings in maintenance costs that G-E Textolite tops make possible. For soda fountains, cocktail tables, restaurant counters, and dozens of other applications, G-E Textolite tops offer an unusual combination of utility and beauty. They "wear like iron; clean like glass."



RESTAURANTS - STORES - BARS

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For your added convenience Roddiscraft warehouses have engaged leading fabricators in each warehouse community to bond G-E Textolite to Roddiscraft Plywood. G-E Textolite professionally bonded to Roddiscraft Plywood can be cut and installed by carpenters with ordinary tools. No gluing or clamping necessary. Ask your Roddiscraft dealer about G-E Textolite Ready-Bonded Tops.

AVAILABLE WHEN YOU WANT IT

A nation-wide warehouse service makes delivery of G-E Textolite fast and reliable. For complete information — patterns, prices and prompt service get in touch with your nearest Roddiscraft dealer.



Dealers exhibiting this display can show you a wide selection of G-E Textolite colors and patterns.

*Reg. U. S. Pat. Off.

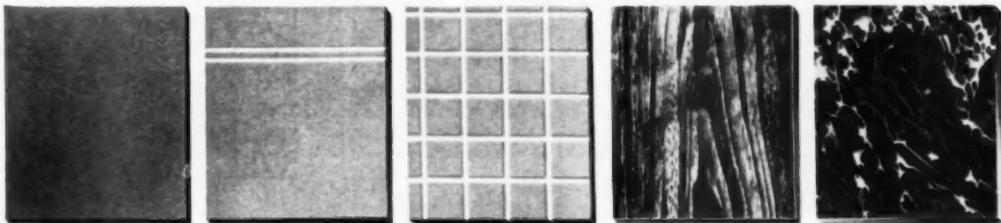
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Marshfield, Wisconsin

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A new line of MARLITE PANELS for creating beautiful, low-cost interiors



... in Homes, Apartment Buildings, Institutions, Churches, Schools, Hotels, Theaters, Clubs, Bars, Stores, and other commercial installations.

Seven beautiful new Wood Panels plus a new Hi-Gloss finish on Marlite Plain-Colors, Horizontaline, and Tile Patterns make the Marlite line the most attractive and complete in the industry.

The exclusive high-heat-bake Marlite finish on every panel permanently fixes the "decorator-correct" colors and seals the surface against dirt, grease, moisture, ordinary acids and household stains.

Flexible, durable, waterproof Marlite, with a strong base of Masonite Duolux, is manufactured to the highest standards by the world's largest exclusive manufacturer of pre-finished wallpanels.

COLORS AND FINISHES

PLAIN-COLORS

Jonquil Yellow
Cream
Mist Blue
Coral
Spring Green
White
Persian Red
Pearl Gray
Royal Blue
Black
Maroon

DELUXE FINISH—A special top-quality wallpanel with a hand-polished finish that adds an extra touch of beauty and sparkle to every installation.

HORIZONTALINE

Jonquil Yellow
Cream
Mist Blue
Coral
Spring Green
White

TILE-PATTERN

Jonquil Yellow
Cream
Mist Blue
Coral
Spring Green
White
Black

HI-GLOSS FINISH—A high-quality, low-cost wallpanel with a high lustre, mirror-like finish. In the same low price range as Marlite Velvetex.

PLAIN-COLORS

Ivory
Pastel Green
Desert Tan
Pastel Blue
Pastel Yellow
Swan White
Dove Gray

HORIZONTALINE

Ivory
Pastel Green
Desert Tan
Pastel Blue
Pastel Yellow
Swan White

TILE-PATTERN

Ivory
Pastel Green
Desert Tan
Pastel Blue
Pastel Yellow
Swan White

MARLITE SIZES AND PATTERNS

ALL PANELS 5/32" THICK

WOOD PANELS: Blond Mahogany, Striped Mahogany, Silver Walnut, Natural Walnut, Light Oak, Gray Prima Vera, Natural Prima Vera in rich patterns that faithfully reproduce the natural grains of selected woods. 48" x 72" and 48" x 96" with grain running in the direction of the second dimension.

MARBLE PATTERN: Rose De Brignoles, Jaune Benou, Black and Gold, Skyros and Verdi Antique in stately, authentic reproductions of rare, imported marble. 32" x 48" and 96" x 48" with grain running in the direction of the second dimension.

HORIZONTALINE: Two pairs of score lines, centered 16" apart, run with the length of the panel. Standard sizes—4' x 4', 4' x 5', 4' x 6', 4' x 8' and 4' x 12'.

PLAIN-COLOR: A wide range of gay, cheerful colors for smart-looking interiors. Standard sizes—4' x 4', 4' x 5', 4' x 6', 4' x 8' and 4' x 12'.

TILE-PATTERN: New striping method adds to beauty of single score lines, spaced 4" apart, vertically and horizontally.

QUICK FACTS ABOUT MARLITE

USES. Walls, ceilings, doors and cupboards in residential bathrooms, kitchens, utility and recreation rooms, dens and powder rooms. And every type of commercial interior, including counters, displays, display window backgrounds, elevator interiors and landing areas.

FOR NEW CONSTRUCTION OR REMODELING. Large, easy-to-handle panels cover old walls or new. Present surface need only be dry, and reasonably smooth and straight.

EASY TO WORK. Marlite is easy to cut and fit with ordinary carpenters' tools. Panels cover wide areas swiftly. During remodeling, busy areas remain in service without interruption.

EASY TO CLEAN AND MAINTAIN. Marlite's lustrous finish is as durable as that on the finest refrigerator or display case, requires only an occasional wiping with a damp cloth to restore all the sparkling beauty. Never requires refinishing, painting or redecorating. Commercial users have cut maintenance costs as much as 75%. During commercial renovating, there is never any paint odors . . . never a need to move out perishables. Business goes on uninterrupted.

WIDE RANGE OF COLORS AND PATTERNS. Among Marlite's 67 color and pattern combinations, builders find a distinctive Marlite color and pattern to suit any decorative theme . . . permitting modern, beautiful interiors that are both pleasing and practical at moderate cost.

MOULDINGS FOR EVERY INTERIOR

Marsh Mouldings for any type wallboard interior bring enduring freshness to renovated rooms or brand-new installations. Aluminum Alloy and Presdwood shapes include matching mouldings for the striking new Marlite Wood Panels and Marble Patterns. In addition, Marsh Color-Matched Aluminum Mouldings match every Marlite panel color, featuring the genuine high-heat-bake Marlite finish.

SPECIFICATION AND INSTALLATION DETAILS

See your local Marlite dealer, or write for free, illustrated folders giving complete information on Marlite, Marsh mouldings for every type installation, Marsh caulking, adhesive and polish. Insist on genuine Marlite, your guarantee of quality.

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exclusively
by



MARSH WALL PRODUCTS, INC., DEPT. 403, DOVER, OHIO
SUBSIDIARY OF MASONITE CORPORATION

(Continued from page 268)

INSTALLING TILE SHAPES

The same basic principles of tile application are used for asphalt, rubber, linoleum, plastic, metal or hardboard tiles. The composition of the tile will govern the specific adhesive compound to be used. Whether the tile is of the square edge or interlocking variety, the procedure is to start at the bottom and build upward on the wall. The fitting of one tile on another makes for self-alignment.

In preparing for the tile job, a line should be drawn at the lowest point of a tub in a bathroom, or of a sink in a kitchen, equivalent to the height of a full tile. Let the bottom tile end where it may, because a Cove base will cover any unevenness between the bottom course and the floor.

Then apply mastic to an area on the wall about 4 by 5-feet in size. Using a notched trowel, first work mastic onto the wall in a vertical pattern. Then work the trowel diagonally over the vertical pattern. This helps to eliminate excess mastic and to make sure the mastic is thoroughly applied to the entire surface.

Start placing the first course of tiles either from right to left or from left to right, whichever is most convenient for the particular job. The important factor is to watch the leveling line. Make sure the tiles are not "floating" on too much mastic. Press each tile firmly against the wall.

When a plumbing fixture or an electric socket is encountered, the tile should be cut and smoothed with a file so that it can be custom-fit to the wall. A coping saw is easily used on hard composition tiles. Tin snips are used for metal tile cutting.

COATED AND UNCOATED HARDBOARD

Wall-size panels with a hardboard base and factory finished by a coating, baked on, in a variety of colors, are applied in the same manner as unfinished hardboard. See the section on "Plywoods and Hardboards" for basic properties and details on how to handle, cut and fabricate hardboard panels.

Hardboard is also available uncoated for interior wall treatment. Two patterns are available—leather and tile-scored.

Factory-finished panels with hardboard base are usually $\frac{1}{2}$ -inch thick. Allowances should be made in construction for this thickness. Standard sizes are usually 4-foot widths and lengths of 4, 6 and 8 feet. Smaller widths are available.

Figures 6-11 describe the procedure for applying hardboard sheets to walls.

HOW TO APPLY HARDBOARD PANELS TO WALLS

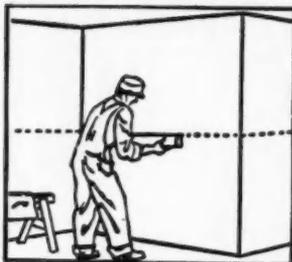


FIG. 6—First remove all high spots on the walls and build up low spots with patching plaster. All corners must be straight and level and all walls thoroughly dry. Wire brush papered or painted surfaces before cementing the panels to walls. Find the lowest point in the floor, allow for the base, and measure up from this to the height of the panel. Establish a level line at that point around the room.

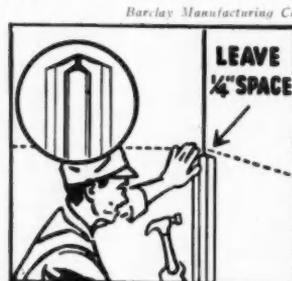


FIG. 7—Install vertical metal mouldings. Keep top end of moulding $\frac{1}{4}$ -inch below level line and allow enough space at bottom of vertical moulding for base moulding to fit neatly below it. Mouldings are nearly always recommended and must be used wherever moisture is present



FIG. 8—Cut the hardboard with a fine tooth crosscut saw and sand edges before fitting and installing. Bevel back edge of board slightly for perfect fit. Scored edges of the board should always be kept to the top and right



FIG. 9—Cover the entire back of the board with cement, spreading it generously with a toothed trowel. Start applying the board in one corner at wainscot level and continue around the room to door opening. Then proceed from the same corner, in opposite direction, to the same door opening. Press the board firmly to the wall, using a few $\frac{1}{4}$ -inch brads to hold it in place until the cement sets

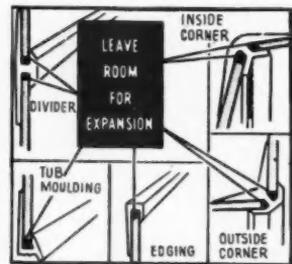


FIG. 10—Fit the panels loosely to allow for expansion. Sheets may be braced until they set



FIG. 11—After wainscot has been installed, apply cap and base mouldings by cementing, by nailing, or by both

PLASTIC SURFACES

Plastic surface panels or tiles for wall treatment consist of laminated plastic material bonded to composition building boards and installed either directly to studding or solid walls in the same manner as plywood

(Continued on page 274)

IT'S HERE!

Amazing new G-E Textolite*
MONOTOP plastics surfacing



**COUNTER, BACKSPLASH,
EDGE-TRIM — IN
ONE MOLDED PIECE!**

Monotop surfacing is the biggest news in kitchen equipment in years! It's a streamlined, super-sanitary beauty for the kitchen—from backsplash to curved front edge—in one molded piece of G-E Textolite plastics surfacing. Monotop is easier to install, too, because there's no fitting of pieces, no metal trim needed. Available in five

beautiful colors in the "Cross Current" pattern (exclusive with General Electric), Monotop surfacing is ideal for bathroom vanities! For full information on Monotop, and the full line of G-E Textolite plastics surfacing, contact your fabricator or write to General Electric Company, Section O-3, Chemical Division, Pittsfield, Mass.

* Reg. U. S. Pat. Off.

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Complete stocks and prompt delivery enable you to fill Prestile orders in every size, pattern and color.

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We are interested in:

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Please send literature and samples.

Your Name

(Continued from page 272)

panel installation. Standard thickness is $\frac{1}{2}$ -inch. Panel sizes vary greatly with manufacturer, starting at about 24-inch widths. Solid walls should be prepared plane-level and panels may be bonded to walls by the use of adhesive cements. Receptacle-type mouldings should be used on wall treatment installations of plastic finished panels. Figures 12-18 describe the application of plastic wall tile.

**HOW TO INSTALL
PLASTIC WALL TILE**



Jones & Brown, Inc.

FIG. 12—First step is to measure off leveling point and to square and plumb all corners



FIG. 13—Mastic is applied to the wall first in a vertical and then in diagonal pattern



FIG. 14—Noting level line, first tile is laid



FIG. 15—First course sets line for rest of wall



FIG. 16—How the tile is set around socket



FIG. 17—When all of the tile is interlocked in position, feature strip is then applied



FIG. 18—Final step is the applying of Cove base

METAL TILE

Metal tiles come with a wide variety of baked enamel finishes and are of a flexible nature permitting the bending of tiles for interior or ex-

(Continued on page 276)

THE HI-BAKED PLASTIC ENAMEL SURFACE WITH THE NEW CONTOUR BEVEL SCORE LINES

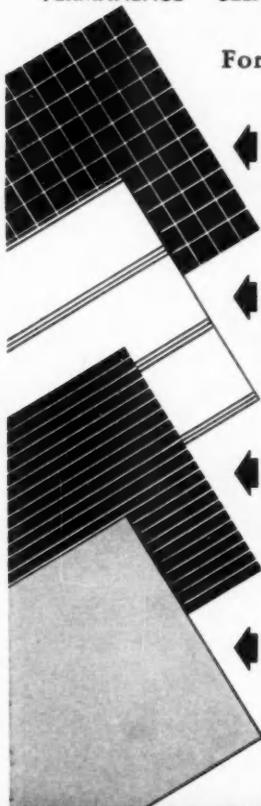


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GREATEST EYE APPEAL
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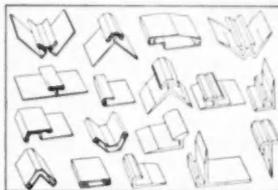
TYLAC . . . Exact $4\frac{1}{4}$ " squares and $\frac{1}{8}$ " mortar joints give ceramic tile effect. Has 2 plain and 2 scored edges. No costly joint mouldings needed.

MURALAC . . . Groups of 3 parallel lines at 16" intervals add distinctive design to a plain mirrored surface. A beautiful modern home wall pattern.

STREAMLINE TYLAC . . . Rhythmic beauty in parallel scorelines spaced $2\frac{3}{16}$ " apart on the center. An interesting border or a modern all-over wall treatment.

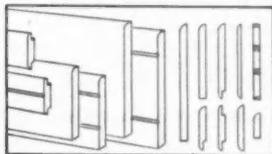
TYLITE . . . Modern trend architecture demands this plain, lustrous surface. Popular for upper-wall areas above wainscot of other colors and designs.

TYLAC METAL MOULDINGS



The 100 Line is Rolled Stainless, laminated steel beading over lead-coated, non-corrosive steel flange. Economical — no "weak spots."
 The 200 Line is Snap-on Stainless steel of excellent quality and design at a highly economical cost.
 The 300 Line is Extruded White Alloy.
 All come in 6'-5" - 6'-8" - 10' - 12' lengths.

TYLAC PRESWOOD MOULDINGS



These Trim mouldings come in designs as illustrated. In 6' lengths only. Muralac Batten, in 4' length only.

COMPLETE COLOR RANGE

- Peach
- Colonial Ivory
- Bridal White
- Burgundy
- Ceramic Blue
- Light Canary
- Turquoise
- Dawn Rose
- Carsage Green
- Horizon Blue
- Hollywood Red
- Coral Blush
- Sun Tan
- Spray Green
- Dove Gray
- Nubian Black
- Devonshire Cream
- Cinnamon Toast

Here are a few of the Superior Features:

- TOUGHER
- HIGHER GLOSS
- BETTER COLOR RETENTION
- MORE RESILIENT
- BETTER ADHESION
- HIGHER RESISTANCE TO MOISTURE
- MORE FLEXIBLE
- LONGER LIFE
- LONGER SERVICEABILITY
- HIGHER RESISTANCE TO HOUSEHOLD ACIDS

Standard Stock Sizes: 48" x 48" - 48" x 60" - 48" x 72" - 48" x 96"

TYLAC COMPANY MONTICELLO, ILLINOIS

PIONEERS IN THE PREFINISHED WALL PANEL INDUSTRY

**You can't
make a profit on
an unsold house**



ARBORITE

*creates the kitchen every
woman wants—helps you
sell your houses faster*

"Let's look at the kitchen." You've heard that phrase countless times from the woman considering making your house her home. And you'll get her name on the dotted line *faster* when you show her just what she wants . . . a pleasant, conveniently arranged kitchen featuring sparkling, easy-to-work-in, and easy-to-clean ARBORITE on counter-tops and walls.

ARBORITE gives YOU trouble-free, labor-saving, on-the-job installation

You get ARBORITE in light, builder size panels 4' x 8' and 2'6" x 8' which are easily applied with little waste. Mastic adhesives and standard trim moldings hold it firmly in place. In fact, with ARBORITE you don't have any of the costly troublesome installation problems common to conventional pre-finished Plastic Surfacing Material. Your own carpenters can easily install it.

Double-thick MELAMINE Surface adds years of wear

ARBORITE'S *double-thick* melamine surface resists abrasive wear, boiling water, acids, alkalis, and moisture, the banging of pots and pans. It's cigarette-proof! The colors stay bright for years.

*available in 30 distinctive
colors and patterns*

**write for FREE four color
folder on Arborite and its uses.**



J. A. DAVIES & COMPANY

314 STRAIGHT AVENUE, S. W.
GRAND RAPIDS 3, MICHIGAN

SALES REPRESENTATIVE OF THE ARBORITE COMPANY, LIMITED • MONTREAL, CANADA

terior corners without damaging the finish. Solid colors, mottled and hammered effects, make available a wide variety of color combinations. Base material of tile may be stainless steel, steel or aluminum. Metal tile installation follows the method outlined for other tiles. They may be applied to almost any solid, clean, level surface.

A special wall tile of porcelain fused on 20-gauge steel is installed by cementing tiles to special foundation board 1/2-inch thick and scored in 1 1/2-inch squares, which align the tiles perfectly and speed installation. Foundation board is cemented or nailed to the structural wall. Installation is described in Figs. 19-21.

**SETTING PORCELAIN-ON-STEEL
WALL TILE**



Armstrong Cork Co.

FIG. 19—Grout-adhesive is applied to the foundation board with a plasterer's trowel. This fills grooves and leaves a thin film on the raised surfaces



FIG. 20—Tiles are pressed into the grooves of the foundation board



FIG. 21—Excess adhesive is removed and the joints are pointed with a finger. The tiles are then cleaned with a sponge dampened with water or mineral spirits

(Continued on page 278)

THE BEAUTY IS Locked-in!
THE TILE IS Locked-on!
THE DIRT IS Locked-out!

PITTSBURGH
INTERLOCK
 PLASTIC WALL TILE

11 OUTSTANDING SALES FEATURES!

1. Winner of 1952 Fashion Academy Gold Medal!
2. The ONLY Patented "Interlocking" Plastic Tile!
3. Foolproof Self-alignment!
4. Lightweight for Quick, Easy Installation!
5. No Grouting . . . No Clean-up!
6. Beautiful Decorators' Colors!
7. Easy to Clean. Damp cloth keeps it sparkling!
8. National Consumer Advertising!
9. Competent Sales and Merchandising Assistance!
10. Backed by Good Housekeeping Guaranty Seal!
11. Accepted by U. S. Bureau of Standards!

DECORATORS' COLORS

- Black
- Western Sage
- White
- French Blue
- Pink
- Dubonnet Marble
- Heather
- Turquoise
- Blue/Green
- Sprout Green
- Primrose Yellow
- French Blue Marble
- Pink Marble
- Sprout Green Marble
- Mist Grey Marble
- Western Sage Marble
- Primrose Yellow Marble

WIDELY USED IN

- | | | | |
|-------------|-----------|---------------|------------------|
| KITCHENS | BATHROOMS | LAUNDRIES | FOOD SHOPS |
| RESTAURANTS | DAIRIES | UTILITY ROOMS | SERVICE STATIONS |

Winner of the 1952 FASHION ACADEMY
GOLD MEDAL AWARD

Awarded the Good Housekeeping Guaranty Seal



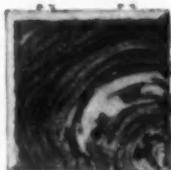
Accepted by the U. S. Dept. of Commerce, Bureau of Standards



The first and only tile to receive the Fashion Academy Gold Medal Award for 1952

JONES & BROWN, INC.
 National Distributors
 439 Sixth Ave. • Pittsburgh 19, Pa.

FULL SIZE TILE
 Size: 4 1/4" x 4 1/4"
 Pieces per Carton:
 200 (25 sq. ft.)
 Weight per Carton:
 11 lbs.



HALF TILE
 Size: 2 1/4" x 4 1/4"
 Pieces per Carton:
 144 (48 lin. ft.)
 Weight per Carton:
 3 lbs.



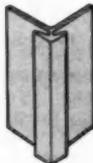
Size: 1/2" x 4 1/4"
 Pieces per Carton:
 396 (132 lin. ft.)
 Weight per Carton:
 3 lbs.

FEATURE STRIP



INSIDE CORNER
 Size: 4 1/2 ft. strip
 Pieces per Carton:
 6 (27 lin. ft.)
 Weight per Carton:
 2 lbs.

OUTSIDE CORNER
 Size: 4 1/2 ft. strip
 Pieces per Carton:
 6 (27 lin. ft.)
 Weight per Carton:
 2 lbs.



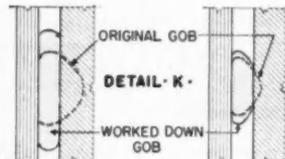
COVE BASE
 Size: 3 1/2" x 4 1/4"
 Pieces per Carton:
 72 (24 lin. ft.)
 Weight per Carton:
 3 1/2 lbs.



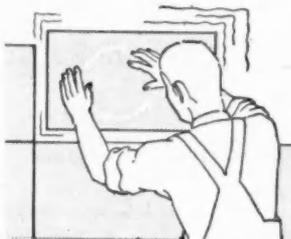
For easy extra sales
 and plus profits . . .
 carry Pittsburgh
**INTERLOCK Plastic
 Wall Tile!**

GLASS PANELS

Recommended thicknesses of glass panels for bathroom and kitchen wall treatment are $\frac{3}{8}$ and $\frac{1}{2}$ inches. Weight is approximately $4\frac{1}{2}$ pounds per square foot of $\frac{3}{8}$ -inch thickness. Glass panels may be installed over any hard, firm wall surface which is of true plane, plumb and straight. A bond coat should be painted on the wall surface to get good mastic adhesion. An allowance of $\frac{3}{8}$ -inch should be allowed for setting behind the glass panel. Mastic is applied in gobs on



MASTIC IS APPLIED IN GOBS on the reverse side of the glass panel used as wall covering. Enough mastic should be used to insure that at least 50 per cent of the total area of the panel is bonded to the backing. Three-eighths of an inch should be allowed for setting behind the glass panel.



Pittsburgh Plate Glass Co.

GLASS PLATES should be worked into position

the reverse side of the panel. Five gobs would be about right for an 8 by 12-inch plate. Sufficient mastic should be used to insure that at least 50 per cent of the total area of the glass panel is bonded to the backing.

Ready-built panels are available for installation in bathtub recesses and as kitchen stove backing. These panels are prefabricated and consist of glass panels mounted on plaster board. On certain edges, the plaster board extends beyond the edge of the panel and thus provides a flange which is nailed directly to the studing.

Glass panels are available in a wide variety of colors for both wall and utility surface treatment. Whenever possible, manufacturers of glass panels prefer to handle the installation to insure complete and lasting satisfaction.

INSTALLING GLASS PANELS AROUND A BATHTUB



FIG. 22—After tub has been leveled, place roll of mastic around rim for waterproofing. Also, butter studs with mastic before setting glass panels



FIG. 23—Set the plate at the back of the tub first. Then merely nail through plasterboard flanges and use the special clips supplied for this type of installation



FIG. 24—Do the same with the end panels. Let plasterboard extend beyond tub to next stud. If wainscot is 48 inches high, follow the same sequence in setting around second course.



FIG. 25—Clean glass and fill joints carefully with compound. This assures a waterproof installation

UTILITY SURFACES

Clay tile, linoleum, hardboard, plastic, stainless steel, and glass form attractive and durable surface treatments for sink tops, table, cabinet and counter surfaces. The success of such installations depends almost entirely upon the quality of workman-



DECORATIVE MOULDING in aluminum fits all sink shapes

ship in making the seams and edges tight and waterproof. Due to the fact that there are so many types of sink pans and metal or plastic trims available, each installation must be considered separately. It is advisable on many sink-top installations to flash the surface material to the wall to form a waterproof backing.

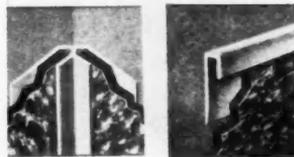


PANEL STRIP

OUTSIDE CORNER



TUB EDGE OR COVE



INSIDE CORNER

CAP STRIP

TYPES OF MOULDING and metal trim styles for use with wall coverings.

AMERICAN BUILDER



Build "Buy Appeal" Into Any Home With

NEVAMAR[®]



THE PRE-FINISHED SURFACING MATERIAL THAT'S DESIGNED FOR LIFE-TIME BEAUTY

If there's anything that makes a woman fall in love with a new home, it's a modern kitchen—a NEVAMAR kitchen. One look at a sparkling NEVAMAR surface tells a story of beauty, color and ease of cleaning that no amount of sales talk can match. NEVAMAR means an easier selling job for you—and a satisfied buyer who will always sing the praises of a far-sighted builder.

NEVAMAR is a hard, pre-finished surfacing material that has

amazing resistance to wear—admits no dirt, grease or other foreign matter. It is designed for a lifetime of dependable service, keeps its beauty thru the years.

NEVAMAR is available now in a wide variety of colors and patterns, including beautiful wood grains. It is perfect for kitchens, bathrooms, clubrooms . . . for built-in fixtures, wall panels. Would you like to see a sample?

This is
NEVAMAR

A high-pressure laminate surface designed for long life and lasting beauty. Nevamar is not affected by grease, dirt, hot and cold liquids. Stains are so easily removed that you can wash with soap and water. Nevamar is resistant to cigarette burns and withstands boiling water. There's no need to be alarmed with soap and water.

To keep your Nevamar surface beautiful, don't use abrasive cleaners. A protective pad should be used beneath hot, heavy objects and under washers. Don't use steel wool. Nevamar surface is a safe and pleasing blend.

MADE IN AMERICA
★
Guaranteed by
Good Housekeeping
MADE IN AMERICA

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QUENTON, MD. NEW YORK N. Y. LOS ANGELES, CALIF.



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 **The NATIONAL Plastic Products Company**

Manufacturers of Nevamar Decorative and Industrial Laminates • SARAN FILAMENTS • Wyenee Molded Products
QUENTON, MARYLAND • NEW YORK (EMPIRE STATE BUILDING) • LOS ANGELES (2232 EAST 37th STREET)

Builders see new sales opportunity in General Electric Light Conditioning!



G-E Light Conditioning recipe for living rooms. The wall-to-wall valance lighting adds a feeling of spaciousness to the room.



Typical Light Conditioning recipe built around a specific seeing task. It shows by actual measurement how to provide the right lighting for sewing.

HOME builders who are Light Conditioning their homes find that it gives them a three-way sales advantage.

First, it offers customers easier, more comfortable seeing, with lighting that's scientifically correct. Second, it shows off every feature of the home to its best advantage—flatters colors, makes the most of design, even makes small rooms seem larger. Third, because a Light Conditioned home looks its best at night, it makes evening sales hours more productive.

Based on scientific lighting recipes

Light conditioning means the right lamp bulbs in the right fixtures in the right locations to give the kind of lighting that experts agree is best. There are G-E Light Conditioning recipes for every room in the house. Two typical examples are shown at left.

Gets favorable comments from builders

Reaction of builders who are using Light Conditioning is enthusiastic.

These comments are typical:

"Light Conditioning brought out the real beauty and individuality . . . especially at night. From now on, I want my houses to be Light Conditioned all the way through. It's a real selling advantage."

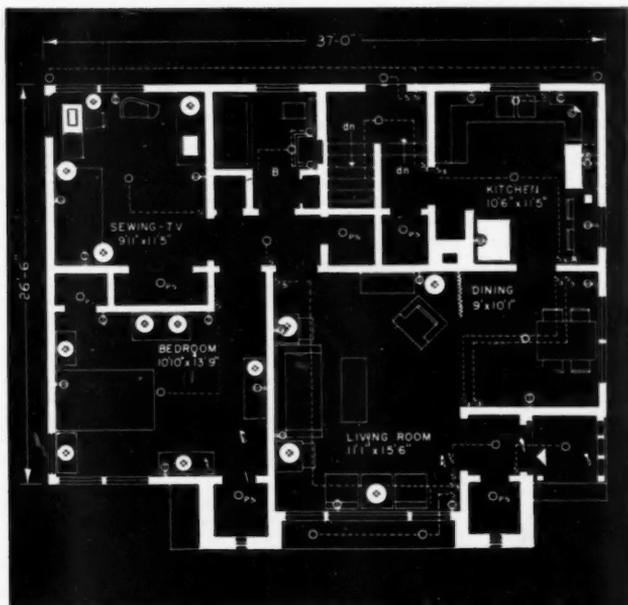
"I noticed that Light Conditioning stopped the visitors to our home. In past years, frankly, nobody even looked at the lighting. Light Conditioning, especially lighted valances, will certainly be in the plans for my future homes."

Free Recipe Booklet

Learn how to Light Condition your homes. Write General Electric for full information and a free copy of the Light Conditioning Recipe Book. Lamp Division, General Electric, Nela Park, Cleveland 12, Ohio.

You can put your confidence in—

GENERAL  ELECTRIC



LIGHTING DETAILS in this house conform to the scientifically planned light condition principles now being adopted by many builders in all sections of the country

WIRING systems must be planned and installed to meet the maximum requirements of combined lighting and appliance operation. The basic objective is to provide an electrical system that insures safe operation, ample capacity and convenient use. The principal parts of the system are: (1) Service entrance; (2) distribution centers; (3) feeders; (4) branch circuits.

Service Entrance

The service entrance is that part of the wiring system that extends from the utility company's service drop, street main, or other source of supply, to the owner's service disconnect service. The disconnect device may be either a fused switch or a circuit breaker. Service entrance cables must be of sufficient size to carry the load connected to them. Codes show only minimum requirements and many well-designed wiring systems will dictate the use of cables larger than specified by code.

Utility Electrical Supply

Most utilities supply single phase current at either 115 volts, two-wire; or 115/230 volts, three-wire service (115 or 230 volts are nominal voltages and it is meant to include voltages of 110 to 120 and 220 to 240). When possible, it is advisable to select a three-wire service. A 115/230 volts, three-

WIRING, LIGHTING AND ELECTRICAL FIXTURES

Service
Entrance

Distribution
Centers

Feeders

Branch Circuits

Outlets
and Switches

Quantity And Quality
Light And Fixtures For
Every Room

DISTRIBUTION CENTER, CIRCUIT RECOMMENDATIONS

Circuit Purpose	Size of Conductor	Capacity in Amperes	Rating of Protective Device		REMARKS
			Fuse	Circuit Brkr.	
Lighting Outlets	#14 Min.	15	15	15	1 circuit for ea. 500 sq. ft. of floor area
Convenience Outlets	#14 Min.	15	15	15	1 circuit for ea. 500 sq. ft. of floor area
Kitchen & Dining Room Outlets	#12	20	20	20	50 per cent of kitchen and dining room outlets to be connected to same circuit
Laundry Range	#12	20	20	20	115/230 v. circuit
	#8	35	35	35	
Water Heater	#12	20	20	20	230 v. circuit
Clothes Dryer	#10	25	25	25	115/230 v. circuit
Heating Unit	#14	15	15	15	
Dishwasher & Waste Disposal	#14	15	15	15	
Home Freezer	#12	20	20	20	115 v. or 230 v.
Work Shop	#12	20	20	20	

Provide special circuits for appliances not listed in above table.

SERVICE ENTRANCE RECOMMENDATIONS

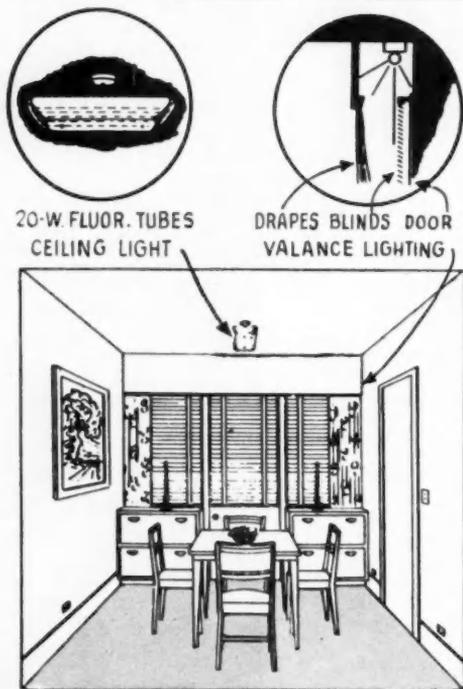
Floor Area Square Feet	Size of Service Conductor	Capacity in Amperes	Rating of Service Equipment in Amperes		
			Circuit Breaker	Fused Switch	Fuse
Up to 1000	6	55	50	60	50
" 1500	6	70	70	100	70
" 3000	2	95	90	100	90
" 4000	1	110	100	100	100

Above recommendations are based on three-wire service voltage with between 110/220 and 120/240 volts.

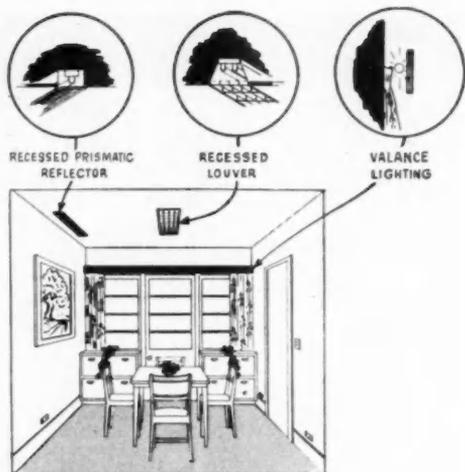
wire service has many advantages over two-wire, 115 volts service. By the addition of one wire to a two-wire entrance, the capacity of the service entrance has been doubled. The 115/230 volts service is a more versatile system since it provides the 115 volts for lighting purposes and the higher voltage for major appliances. The three-phase, four-wire system of 120/208 volts, available in some localities, is convenient for heavy power usages such as air-conditioning. Size of service entrance conductors is governed by the size of the house and the over-all electrical load. Service entrance conductors terminate at the service breaker or fused switch unit.

Distribution Centers

The fuse or circuit breaker provides protection against overloading the conductors. The distribution center contains the fuses or circuit breakers which protect the conductors to the outlets throughout the building. The distribution center should contain sufficient circuits to provide for the foreseeable electrical needs and a number of spare positions (20 per cent of circuits being used). In number, there should be one circuit for each five hundred square feet of usable floor area for lighting purposes, and one



DINING ROOM B (surface unit): The two dining rooms differ in lighting design. Lighted valances above the door opening and windows emphasize window treatment. In each room design, the large luminous area at the end of the dining room creates a balance with the living room. Depth of valance in this design is governed by the height of the space between the top of windows and ceiling. With the valance top closed, the full quantity of light will flood the draperies and be reflected into the room. Fluorescent tubes, one inch or less in diameter, are best since the distance from valance to wall may be kept to 8 inches and still provide an uninterrupted flow of light. Separate switch control of the valance lighting and center luminaire is essential for flexibility. The center luminaire may be either fluorescent or incandescent. The picture is lighted from a surface mounted unit



DINING ROOM A (recessed louver): Two lighting systems for dining room provide a desired balance between general and local lighting. The two systems create extended luminous areas, free of spots or bright light sources, in a manner simulating natural daylight. The narrow dimension of this room eliminates the use of center recessed spots for illuminating an extensible dining table. A general lighting system using an elongated light source, as fluorescent, gives the smoothness of light distribution which is functionally decorative and architecturally appropriate. The carefully engineered design of this installation eliminates unpleasant brightnesses by incorporating direct overhead sources with slender valances extended below the ceiling line low enough to cast some light on the ceiling and to avoid an otherwise dark area on the upper wall and ceiling. A method for lighting pictures or drapery is the use of a directional recessed prismatic reflector

circuit for every 500 square feet of usable floor area for general purpose convenience outlets. Also a circuit for convenience outlets in the laundry; two circuits for kitchen and dining room appliances, and special circuits for attic fan, dishwasher, home freezer and room heater.

It is not a good practice to mix circuit breakers and fuses in the same system. Provisions should be made in the main distribution center for an electric range, a water heater, and a clothes dryer. In small buildings the distribution center is located immediately adjacent to the service entrance. In large homes it may be advisable to put distribution centers in various locations throughout the home. Under this system the main distribution located adjacent to the service entrance would contain feeder protective devices, and feeders would be installed to distribution centers in various sections of the home or building.

Feeders

Feeders are the conductors extending from the service equipment to distribution centers that contain the branch circuit protective devices. Feeder must be large enough to carry the load it supplies and should have additional capacity that will permit the adding of future load without damage to feeder.

Branch Circuits

A branch circuit is that part of the wiring system extending beyond the final overcurrent device protecting the circuit. The number of branch circuits required will vary with the size of the residence and the number of appliances.

Outlets and Switches

The majority of electrical devices used are the "plug-in" type. Therefore, outlets must be convenient. Each room has requirements for convenience outlets. If a convenience outlet is installed for each 12 feet of wall space and a convenience outlet for each section of wall three feet or more long, then a normal seven foot cord will reach a convenience outlet from any point in the room, within four feet of the wall.

In no room should all the convenience outlets be connected to the same circuit. A blown fuse or circuit breaker opening should never leave a room entirely without electrical service.

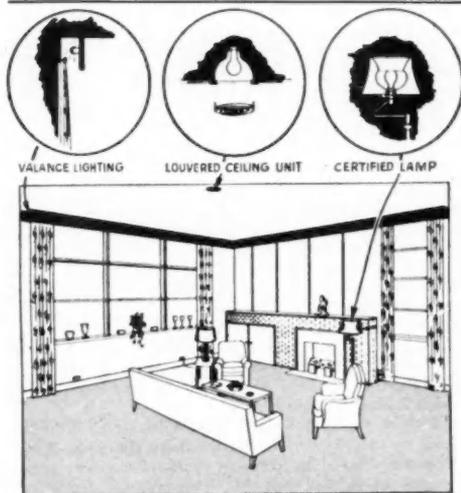
At least one lighting outlet should be installed in each room or accessible enclosed space of the house. This outlet may be a perimeter outlet for valance, cove or strip lighting. It may be a ceiling outlet.

Light and electrical device switches should be sufficient and convenient. Switches should be so located that there is a path of light from room to room. Locate switches on the lock side of the door and if switches are located in such a position that the light cannot be seen, then equip the switch with a pilot light, so that lights will not be left switched on.

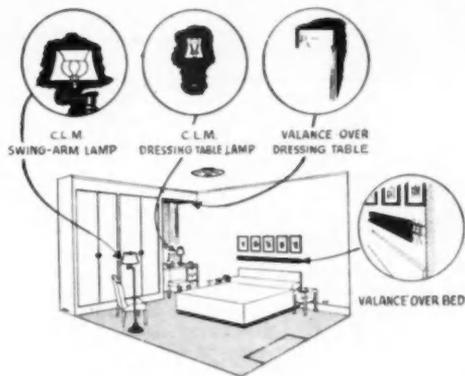
When planning construction of a new building, make provision for telephone raceways and outlets.

Selecting Material

Selection of material will be governed somewhat by the local codes and the type of residence being built. The majority of homes are wired with one of the following types of material and the corresponding fittings: rigid conduit, metallic tubing, armored cable, non-metallic sheathed cable, service entrance cable, concealed knob and tube. Concealed knob and tube wiring is usually confined to small homes and is not permitted at all in many communities.



LIVING ROOM: The manner of lighting will determine how well the room is suited to its uses. Valance lighting makes a room bright and attractive. A valance runs the width of front window, over fireplace and side window, making the area a focal point in this arrangement. The valance is a "closed-top" type due to height of windows. A valance of this type may be made of lightweight wood or wallboard 8 to 10 inches wide, mounted 6 to 8 inches from the wall depending on the drapery arrangement. At night fluorescent tubes behind valance light up drapes and fireplace. This perimeter lighting is supplemented by a recessed down-light.



BEDROOM: A "reading-in-bed" light should not create undue eyestrain. A good reading light can easily be provided by a long fluorescent tube behind a valance or in a reflector mounted on the wall above the headboard. Height of reflector above mattress should be approximately 24 inches. Bed lamps on tables at both sides of bed or a pin-up type lamp over the headboard are other solutions. The valance design will provide soft, pleasant illumination and eliminate the blinding contrast of bright spots in a dark interior. Night lights located in convenient outlets are desirable in nurseries and sickrooms. Recessed dressing table niche lends itself to overhead concealed illumination. A small soft white fluorescent tube is installed behind an overhead cornice. A silver-bowl bulb could also be used for this lighting effect. This lighting is combined with "certified" boudoir lamps for the best results. General illumination for the bedroom is provided by an enlarged "bent" glass ceiling unit. Without this general lighting, the lounge chair lamp, the dressing table lighting combination, and other lamps would stand out as bright areas of light, destroying the effect of a background of soft lighting

Lighting

Lighting is an important consideration while the design of the home is in the blueprint stage. The placement of lighting sources where particular functions are being performed may satisfy a lighting problem in quantity but not quality. Provisions should be made for flexible schemes to prevent excessive contrasts of brightness for good visibility and eye comfort. Architects and designers realize the value of lighting as a medium of design and are using it for decorative purposes as well as utility.

One of the strongest selling features of a new home is often its kitchen. Modern equipment and well planned designs frequently influence the decisions of buyers who are looking for time and effort-saving advantages in their new homes.

Growing public interest in still another modern, energy-saving kitchen aid, Light Conditioning, where lighting equipment is chosen and installed according to new tested recipes, offers the builder new opportunities to increase saleability with a minimum of effort and expense.

Present widespread public interest in Light Conditioning has aroused many builders to include these advantages of modern lighting techniques in their demonstration homes.

In surveys based on visitors' preference, ballots solicited at builders' demonstration showings in both Dayton and Cleveland, Ohio. Light Conditioned kitchens were out-ranked only by lighted valances in living-dining room areas.

As one builder observed, once people have seen and experienced a Light Conditioned kitchen, they realize that this is one of the advantages they can't afford to overlook in choosing a home.

To create a bright, efficient, streamlined Light Conditioned kitchen, lighting must be functionally arranged to assure desirable amounts of light needed for kitchen tasks.

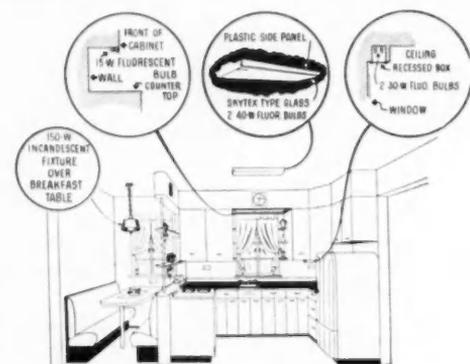
Few aspects of home planning and modern home equipment equal the interest in the function of the modern kitchen, its layout possibilities, and the effectiveness of its equipment.

In the development of the modern kitchen many measurements have been made, and inconsistencies, such as differences in counter and range top heights have been resolved. Step-saving studies have resulted in more efficient kitchen arrangements. Cupboard space over seven feet high seems to be disappearing.

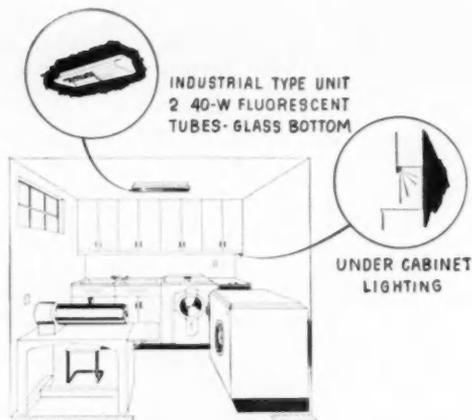
Kitchen lighting, too, can be measured. Such measurements are needed if the true purpose of the lighting, its functional effectiveness, is to be appraised.

To give the builder practical guidance in selection of lighting equipment and its correct placement, a series of new lighting recipes were developed recently in the Lighting Laboratories at Nela Park. Four pretested recipes for the kitchen serve as a guide to the builder in creating a Light Conditioned kitchen.

These four recipes offer a choice of equipment including both filament and the new types of fluorescent units. They are based on various duties which must be performed in the kitchen by the homemaker. Light Conditioning a kitchen must begin with the plans in order to provide light at major work areas—the sink, the range and every important work counter, as well as a ceiling fixture. Either filament or fluorescent may be used, with the following as suggestions for minimum sizes that will give recommended amounts of light for average size rooms.



THE KITCHEN is one of the most important work areas to be lighted in a house. All work surfaces should have a shadow-free high value of illumination. Furthermore, the use of tables in covers, troughs or behind concealed strips injects a newness in workshops of the home that even a coat of paint could not have attained. The central lighting fixture will give general illumination, but additional light is necessary over sink, stove, or work surfaces. In the modern kitchen, as in no other part of the home, is found a variety of electrical appliances, wiring devices and electrical outlets. Consequently, more fluorescent lighting has been used in kitchens than in any other room. Good utilization of the long, slender characteristics of fluorescent lighting is evident in this planned kitchen. According to recent surveys, better than seven per cent of the nation's kitchens are lighted today by fluorescent tubes, and over 65 per cent of the women questioned expressed a preference for this type of lighting. Located over the sink is a recessed fluorescent reflector with glass cover and using two 30-watt fluorescent tubes. Additional fluorescent or lumiline lamps are placed beneath the cabinets, giving high levels of illumination of the working counters. Although the breakfast room is partially separated from the kitchen, a pendant-type incandescent fixture is recommended. The lighting that results is a well-diffused table illumination with softly shaded light in the rest of the area. This room could also have an alternate lighting system consisting of a recessed incandescent spot located directly over the table. Combining the incandescent of the breakfast room with fluorescent in the kitchen will create a relaxed mood



LAUNDRIES can be light, pleasant work areas. Simple lighting units located over working areas for good visibility will appeal to most women. The lighting in this laundry will make tasks easier, increase efficiency and reduce nervous fatigue usually associated with washday. It will also bring out scorch marks so often unseen until the article is used under daylight. Ironing scorches, burns and spots are readily detected under light from the daylight fluorescent lamp. Good lighting, therefore, becomes a gain and an economy when used in laundries. Generous amounts of light are provided by using an industrial type two-lamp fluorescent reflector (two 40-watt daylight tubes) in the ceiling. Additional fluorescent tubes are located under the cabinets for illuminating the tub and washing machine area. Well-planned laundries, such as this one, are important features in the new houses of today.

Central Ceiling Fixture

Fluorescent Ceiling Fixtures—three 20-watt or two 25-watt lamps. Incandescent Ceiling Fixtures—minimum 12-inch glass enclosing globe with 150-watt standard bulb.

In addition to generous ceiling light needed to see into tops of cupboards and bottoms of drawers, Light Conditioning requires special light over the sink to prevent working in one's own shadow.

Sink Lighting

Fluorescent surface units using two 25-watt tubes may be used unshielded in rooms with 8 to 9 foot ceilings if sinks are flanked by cabinets (none above) so that tubes can be concealed from view, as shown here. This unit should be mounted as close to the valance board as possible. Decorative valances between the cabinets to protect eyes from direct glare should extend down at least seven inches, as shown.

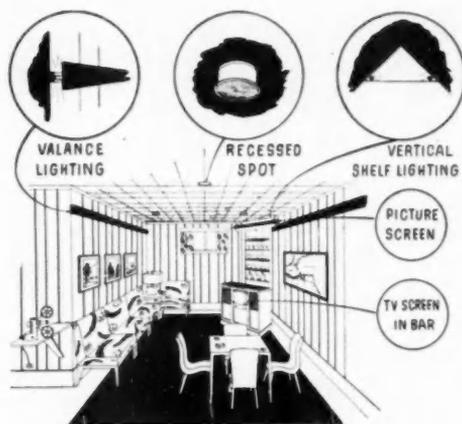
An alternate sink lighting arrangement using filament type fixtures, includes a 75-watt reflector flood bulb in a porcelain socket or a 150-watt standard lamp bulb in a 12-inch enclosing globe.

All three types of fixtures should be attached to the ceiling so that they are centered above the sink. When ranges are flanked by cabinets (with none over range) they may be lighted with this same type of installation.

Range Light

Another requirement of a Light Conditioned kitchen is special lighting at the range to enable homemakers to see into bottoms of pots and pans while cooking. One method of range lighting that has proven popular with builders when cabinets are located above the range is to use a commercially available fluorescent wall fixture.

This shielded fluorescent unit has one 25-watt or 40-



AN APPEALING decorative note in the recreation area is made by underlining the modern lighting with a wise choice of furniture against a background of soft colors. This room suggests the possibilities in lighting effects and usefulness as an informal living area. It can serve as a playground for children with plenty of light for their games. As a playground for adults it is colorful, festive and attractive. The lighting was designed for all activities that reasonably may take place within the recreation area. Simple down-lights flood the bar area, the card table or reading group. Valance lighting serves a dual purpose. It throws an indirect soft light to the ceiling, making it attractive and bright, and also provides well-distributed light over pictures, murals or draperies. It further provides good reading light for those seated on the divan. Ornaments, bottles or knick-knacks located on glass shelves in the back bar take on new life when lighted. Slim tubes of fluorescent or lumiline produce a warm glow emphasizing the color of the objects

watt tube, as pictured above. A shielded unit with two 60-watt lumiline (long filament) tubes end to end; or a shielded unit for two 60-watt frosted bulbs spaced 18 inches apart with lamps mounted parallel to the wall should be used over ranges.

To assure light across the whole range top, wiring outlets for range lights should be located at 51 inches from the floor. When this is not possible, they may be located 2½ inches below bottom edge of upper cabinet. If rectangular outlet boxes are placed horizontally, it will be possible to use narrower fixtures than when they are placed vertically.

Another practical and popular way builders can provide light for the range is by constructing an attractive shelf with fluorescent lighting concealed in it. This shelf light which is equipped with a glass top, lights not only the range top but gives the homemaker a convenient space for cooking and decorative accessories. The shelf uses a 40-watt fluorescent tube. Its design is simple enough so that it can be constructed on the job.

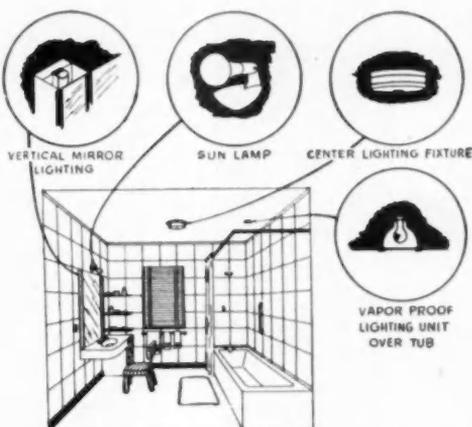
Wall type fixtures may also be used in this same position to light sinks with cabinets located directly above them.

Work Counters

In addition to a central ceiling light, a range light and light over the sink, local light should be provided for each 25 to 30 inch length of work counter.

A 20-watt fluorescent unit may be used unshielded if placed under cabinets. When, however, the unshielded light may be seen when seated in an adjoining breakfast nook or dining area, they must be shielded.

One of the advantages of Light Conditioning that most impresses builders is that Light Conditioning can show up the fine features and detail of the interior.



BATHROOM: Recessed vertical fluorescent units are good in this bathroom because the mirror is mounted flush with the wall. Where cabinets cause the mirror to extend from the wall an inch or more, surface mounted units on each side or around the mirror are more appropriate. An RS sunlamp controlled by a wall switch provides sunrays. Vapor proof ceiling fixtures are installed in tub and shower areas. They may be recessed or surface mounted units matching a larger center ceiling unit. Unless the bathroom is less than 60 square feet, a center ceiling fixture should be used. A night light is an inexpensive safety measure



RIGID CONDUIT



METALLIC TUBING



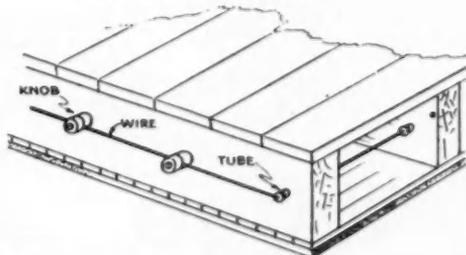
ARMORED CABLE



NON-METALLIC SHEATHED CABLE



SERVICE ENTRANCE CABLE



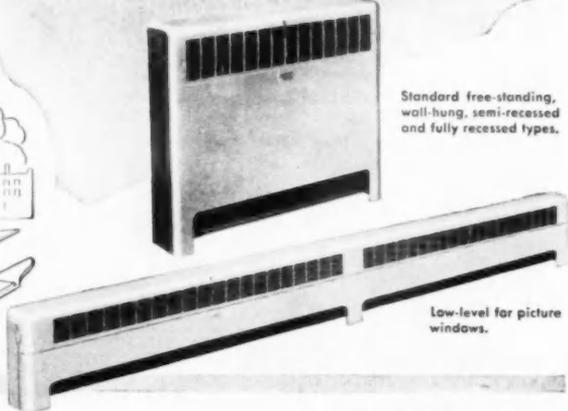
CONCEALED KNOB AND TUBE

THE majority of homes being built are wired with one of the above types of electrical conducting materials. The kind of material used is usually governed by local codes

CONVECTORS



Standard free-standing, wall-hung, semi-recessed and fully recessed types.



Low-level for picture windows.

UNIT HEATERS



Horizontal Type



Vertiflow Type



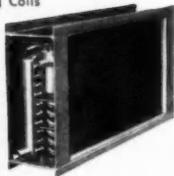
Cabinet Type

COILS



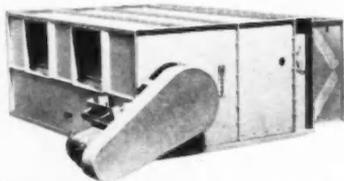
Heating Coils

Cooling Coils

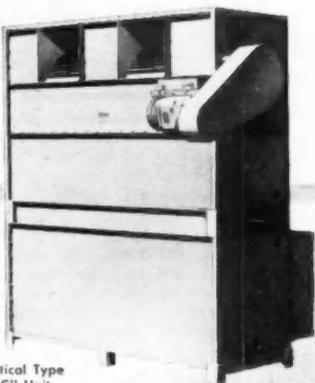


AIR CONDITIONING UNITS

Horizontal Type
"YAC" Unit



Vertical Type
"YAC" Unit



YOUNG
YOUNG RADIATOR COMPANY

DEPT. 702-D, RACINE, WISCONSIN

Factories at Racine, Wisconsin and Mattoon, Illinois
 Sales and Engineering Offices in All Principal Cities

Heating, Cooling, and Air Conditioning Products for Home and Industry.

Heat Transfer Products for Automotive and Industrial Applications.



FUEL bills are an inevitable part of home owning and with oil possibly subject to rationing, coal more and more expensive, and gas in short supply in some areas, some people are wondering about electric heating, heat pumps, and even atomic heating plants. Most of these newer developments are still for the future, and the majority of new homes built in coming years will be heated with the regularly available fuels. There is much that the builder and architect can do, however, to see that fuels are used efficiently.

Heating Principles

The builder and architect should be responsible for providing the following items:

1. A good chimney or vent pipe for the control of combustion and exhaustion of flue gases.
2. A safe structure protected from fire hazards.
3. A tight structure to minimize heat loss.
4. A durable structure protected against moisture condensation.
5. A comfortable building with a minimum of drafts and cold surfaces.
6. An economical building for winter heating and a comfortable structure for summer coolness.

Research work has indicated conclusively that emphasis on heating

equipment alone is not enough—more attention must be paid to the structure itself to insure comfort.

Good Chimney Is Mandatory

The first point to consider in chimney construction is adequate flue area. The quantity of smoke and gas to be removed will depend on (a) the kind of fuel and (b) the amount of fuel needed to heat the house. Flues built for oil and gas burners will not need as large flue dimensions as those which serve furnaces that burn coal. In an area where hand-fired bituminous coal may be burned in a central heating plant, the nominal chimney flue dimensions should never be less than 8 inches by 12 inches.

The height of the furnace flue is also important, and for some furnaces must provide strong enough suction to draw air into the combustion space and up through the bed of ash and fuel; for others, the chimney will only need to supply necessary draft to remove the flue gases from the furnace.

The preferred location for chimneys is in the interior of the house. Inside chimneys are not so subject to backdrafts, to moisture condensation, or to smoke backing into the house. The preferred height is not less than 8 feet from the top of the smoke

A HEATING SYSTEM IS MORE THAN A PACKAGED UNIT . . .

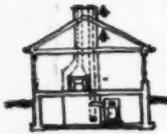


(Courtesy of Small Homes Council, University of Illinois).

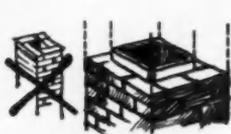
A GOOD CHIMNEY IS NECESSARY FOR ANY SYSTEM . . .



Top of chimney at least 2 1/2 feet above ridge.



Flue should be straight, without offsets.



A lined flue of large cross section area is advisable.

(Courtesy of Small Homes Council, University of Illinois).

pipe connection of the furnace. If the flue must be offset, the angle of the offset should never be more than 30 degrees. Flue lining joints must be perfectly smooth and tight.

Prefabricated chimney units are available today which can be used in place of lined brick construction. Light in weight, they save on installation time and labor, claim savings of up to 50 per cent over brick construction. One type has an insulating wall equivalent to 24 inches of brick. Such chimneys are easily installed, are designed for one- or two-story construction and for use with all fuels. They can be suspended from the ceiling, the floor, or installed with pier support. Flue sections are lined with refractory fire clay, come with joint

cement and draw bands for cementing the sections together. Roof housing is easily fitted to exact roof pitches. These packaged chimneys are accepted by FHA and national heating codes and have fire-safe ratings from Underwriters' Laboratories.

Fire Hazards Should Be Eliminated

Some of the more common fire hazards over which the builder has some control (but the heating contractor very little) are:

(1) Chimneys and pipes accumulate soot from soft coal. If chimneys "burn out" and soot catches fire, a danger spot exists if any combustible

material touches the chimney, such as roofing or framing.

(2) Specifications exist for clearance between smoke and vent pipes and adjacent combustibles such as joists or partitions. Protect such surfaces!

(3) Smoke pipes should be short and well supported, so as not to serve as soot collectors. Fit sections together with screws and hang securely. Build to withstand any puffback short of an explosion. If the smoke pipe is



Chimney exposed to cold — insufficient exposure to build.



Chimney protected — gas in efficiency. Cheaper to build.

long and has bends, it needs periodic cleaning.

(4) Thermostatic controls are primarily designed for temperature control for comfort. However, limit-controls exist which can guard against excessively hot temperatures and will stop the stoker or gas burner or oil burner whenever safe tempera-

HOW TO USE THE CONDENSED METHOD HEAT LOSS FACTORS

Quantities of heat are measured in units called British Thermal Units (abbreviated BTU).

Heat is lost from a warm building through all of its surfaces exposed to lower temperature. This is called "transmission losses." Heat is also lost due to wind blowing through cracks around windows and doors. This is called "infiltration losses." Total heat loss of a building is the sum of transmission losses plus infiltration losses.

A The first step is to find how much heat is lost by transmission. Calculate the areas in square feet of all exposed surfaces of the room or building including:

1. Window and outside door area (combined).
2. Net outside wall (gross wall area minus item 1).
3. Ceiling area (below unheated room or attic space). Inside walls adjacent unheated rooms.
4. Floor area (if space below floor is not heated).

Each of the above areas should then be multiplied by the proper factor from one of the Condensed Method tables.

B Next, estimate infiltration losses. This depends on the amount of cold air blown into the house, which is in turn dependent on the size of the window or door and the width of the crack around it. Simply multiply the area of windows and doors already calculated in Step A by the infiltration factor selected from Table 5. Also, since there is more air leakage through door cracks than through window cracks, allow an additional 1000 BTU for each outside door. Add 3000 BTU for each fireplace.

C Add the infiltration losses (Step B) and the transmission losses through the windows, walls, etc. (Step A) all together. The sum is the heat that would be lost from the room or building—if the temperature difference between inside and outside were 100°. In other words, this is the amount of heat it takes to maintain 70° inside when the outside temperature is 30° below zero, which would occur only in the very coldest sections of the United States.

D Heating requirements are naturally less where the weather does not get so cold. The average minimum temperature in Dallas, Texas, for example, is only 10° above zero. The "design temperature difference" between inside and outside would be 70° minus 10° equals 60°. Therefore, the heating requirement is only 60/100 or 60% of the amount based on 100° TD. The map at the right is zoned according to winter design temperatures, and gives percentages by which results from Step C should be multiplied to find actual heating requirements.

"CONDENSED METHOD" HEAT LOSS FACTORS*

1. WINDOWS & DOORS		Multiply sq. ft. by:
a.	Without storm sash	113
b.	With storm sash	75
2. OUTSIDE WALLS (NET)		Multiply sq. ft. by:
a.	SOLID MASONRY — (Brick, stone, etc.) with plaster applied direct to inside surface of masonry wall.	45
b.	AVG. FRAME—Brick Veneer—Wood Siding—Shingles or Stucco—with sheathing, bldg. paper, studs, lath and plaster	30
c.	FURRED MASONRY—(Same as 2a with air space between plaster and masonry wall)	
d.	INSULATED FRAME—Same as 2b—with 1" or less insulation board or blanket	20
e.	HEAVILY INSULATED—Same as 2b—with 2" or more insulation	10
3. CEILINGS & INSIDE WALLS		Multiply sq. ft. by:
a.	CEILING—Plaster on lath or wall-board, No floor above—Attic not vented	31
b.	Same as 3a—with 2" or more insulation	12
c.	CEILING of first floor room below unheated room on second floor	17
d.	INSIDE WALL adjacent unheated room	
4. FLOORS		Multiply sq. ft. by:
a.	Double wood floor—over cool basement or other enclosed space	15
b.	Same as 4a—but open space below floor exposed to outside	32
5. INFILTRATION (AIR LEAKAGE)		Multiply each sq. ft. of window and door area by:
a.	WINDOWS AND DOORS Average fit—Not weatherstripped	50
b.	Average fit—weatherstripped (or equipped with storm sash)	30
c.	Poor fit—not weatherstripped	140
d.	Poor fit—Weatherstripped (or equipped with storm sash)	43
e.	EXTRA FOR EACH OUTSIDE DOOR	1000
f.	EXTRA for air lost up fireplace flue	3000

*Above factors are approximate heat loss through each sq. ft. of surface with 70° inside and -30° outside.

tures for furnace or boiler are exceeded. Safety should always precede comfort!

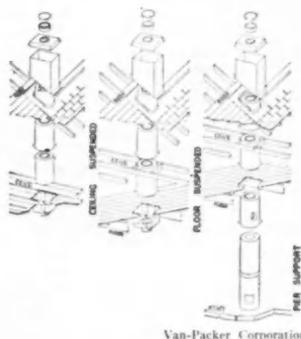
Weatherproofing Saves Fuel

In remodeling an existing house, the following weatherproofing steps should be taken: (1) installation of storm doors and weatherstripping outside doors; (2) installation of storm sash, especially living room, dining room and sunroom areas; (3) insulation of ceilings; (4) insulation of sidewalls. (Listed last because most expensive.)

With new house construction, these steps are taken in reverse order. The minimum requirements for FHA-mortgaged homes list the minimum values for transmission of heat for walls and ceilings. These are bare minimums and should not be considered desirable. In any case check over your plans with the heating contractor and let him specify allowable heat loss from each room so that provision can be made for necessary weatherproofing to provide comfort without putting unnecessary strains on the heating system.

Protect Against Condensation

Vapor barriers are available which will eliminate the possibility of moisture condensation in the walls. These



PREFABRICATED CHIMNEY units can be used in place of lined brick construction. They can be suspended from the ceiling, the floor, or installed with pier support

should be applied to the warm side of the studding. Batt blanket and rigid board insulating materials are available with vapor barriers attached.

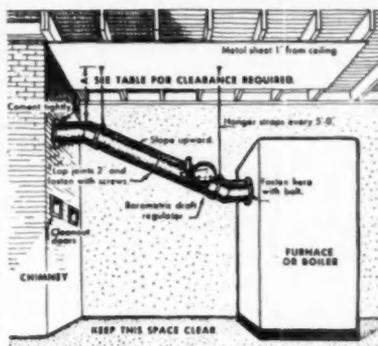
Drafts Can Be Minimized

Good construction is more effective than extra heat in overcoming cold and drafts. Watch for these:

- (1) Drafts near outside doors.

SMOKE PIPE OR VENT PIPE CONNECTIONS

to the chimney should conform to the standards shown on this page. They are minimum standards for safe and efficient operation of fuel-burning equipment and are based on the requirements of the National Fire Protection Association and the National Board of Fire Underwriters.



SMOKE AND VENT PIPE CLEARANCES REQUIRED FOR SAFETY
(See "A" in drawing above.)

TYPE OF SURFACE	COAL OR OIL		GAS			
	With Metal Shield 1' from Ceiling	Without Metal Shield	Furnace or Boiler Metal Vent	Water Heater, Space Heater, Floor Furnaces Type B Vent	Metal Vent	Type B Vent
Exposed Woodwork	12	24	6	1	9	3
Wood Lath & Plaster	9	18	6	1	9	3
Incombustible Lath & Plaster	6	9	1	1	1	1
Masonry or Concrete	1	1	1	1	1	1

(Courtesy of Small Homes Council, University of Illinois).

Weatherstrip. Heat vestibules above normal room temperatures.

(2) Window frame leaks. Weatherstrip. Use storm sash. Caulk outside joints. Apply wool insulation around frame in construction.

(3) Baseboard drafts. Fill stud spaces in attic with insulation to prevent cold air coming down.

(4) Basements—leaky sills, leak-

1. Combustible material must be kept away from the smoke pipe. Do not store things near it.

2. The smoke or vent pipe may be sheet metal, enamel-coated, or porcelain enameled pipe. If sheet metal is used, it should be 24 gauge or heavier. (24 gauge is almost 1/32 inch.) The other materials should be listed by the Underwriters' Laboratories, Inc.

3. The size of the smoke or vent pipe should be equal to the size of the connection at the fuel-burning equipment.

4. The connection to the chimney should be as short and straight as possible.

5. All joints and seams should be fastened securely, so any expansion or "puffs" will not loosen the pipe.

6. A draft hood is required as standard equipment for gas-fired devices.

7. Automatic or barometric dampers are recommended for use with stokers and oil burners and have been successfully used in installations where coal is hand-fired.

8. A cross damper should not be used with a draft hood or a barometric damper. If it is used (usually only on hand-fired coal installations), it must be between the heater and the check damper.

ing windows. Weatherstrip and caulk tightly. Cold basements make cool floors overhead.

(5) Drafts down stairways. Weatherproof second-story rooms.

(6) Drafts due to cold room surfaces, especially large window areas. Insulate cold walls and apply storm sash to windows.

Some Modern Types

Gravity Warm Air Heating

Gravity warm air heating is usually the cheapest to install, although the addition of controls can raise the initial cost. The best place for chimneys with this system is near the center of the building to avoid long smoke pipes subject to soot.

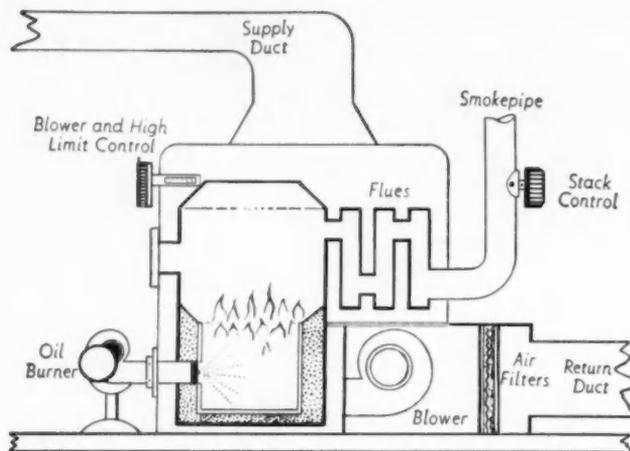
The chimney should be of proper size and height, extending at least two feet above the ridge of the roof, and lined with fireclay or tile. Furnace may be either cast iron or steel of a good commercial type.

Leaders or pipes from the furnace should be taken from the casing hood or bonnet so that tops of leaders are all at same level. Size of leaders depends upon length, air temperature entering rooms, and heat required. Each leader should be given a uniform upward grade of one inch per foot of run.

Keep fittings to a minimum. Use bright tin without insulation unless corrugated asbestos paper is used. A lock-type damper should be installed in each leader. Use double wall stacks and fittings to minimize fire hazards. Install wall stacks and boots during construction to avoid having to cut into load-bearing structural members. Offsets in second floor stack should be of same material as stack and given upward grade of one inch per lineal foot.

Horizontal cold air return ducts should point downward at least 1/2 inch per lineal foot. They should have free air area as least equal to return air grilles used.

Automatic stokers for coal, as well as many oil and gas burners, are used in gravity warm air furnaces with good results.



BASIC PRINCIPLES of forced warm air heating systems are illustrated in this schematic drawing. Blower draws air through heating chamber from where it is distributed to rooms in structure

Forced Warm Air Heating

The forced warm air heating system is a warm air heating system in which air circulation is effected by means of a motor-driven fan rather than by the difference in weight between heated air leaving the bonnet and cool air entering the bottom of the furnace, as is the case with gravity warm air installations. One great advantage of forced warm air is the possibility of locating the furnace in attics, utility rooms, or other out-of-the-way spots.

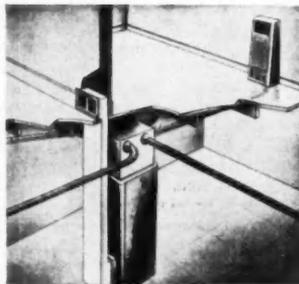
Furnaces for forced warm air systems vary in construction with the fuel selected. Bituminous coal requires a large combustion chamber. In burning oil, the correct size of combustion space is necessary with a long fire travel and extensive heating surface. Gas-burning units should have low flue resistance so that non-combustible gases will vent off readily. Select a unit which will have readily available spare parts and repair service.

A good humidifier is essential to maintain sufficient moisture in the air for comfort. Automatic humidifiers are usually supplied as standard equipment.

Filters in warm air heating are also essential to remove lint and dust which would otherwise be deposited on walls and furnishings. Air distribution in a room greatly affects comfort. The type of register used, its location, type and location of return grilles must all be considered. Baseboard registers can be used with recommended maximum velocity of 300 feet per minute, while wall regis-

ters 18 inches below ceiling should have 500 feet per minute velocity minimum except in bathrooms. Where distance from register to opposite wall is over 15 feet, higher velocities are recommended.

Automatic controls are essential for proper operation of forced warm air systems. Without them, air stratification, high bonnet temperatures, heat overrun or lag or excessive temperatures will usually result. Tests indicate that continuous fan operation provides the best operating results. Controls for most units should include a thermostat located in a room where maximum temperature fluctuation exists, an adjustable furnace switch if desired to start and stop fan, an ignition control, and safety devices to prevent overheating and operate any necessary vents. Zone control on large installations is advisable.



SMALL DIAMETER round 3 1/2-inch supply ducts of new type forced warm air heating system. Several manufacturers are now marketing these units

One-Pipe Steam Heating

Many changes have taken place in the one-pipe steam heating system. It has been streamlined and redesigned to use modern boilers with impact convectors and accessories.

A modern boiler is specifically designed for the type of fuel which is to be burned.

Modern radiator design of the thin tube type is a free standing unit and may be enclosed or recessed. The sun-type of cast iron radiator is enclosed within itself and produces a fair amount of radiant heat as well as heat by convection. Convector radiators are the most popular, and can be equipped with dampers in their enclosures to regulate the flow of warm air from the unit. Note that the only way to regulate heat from individual radiators in one-pipe steam is either with dampers and convector type radiators, or to have radiators either fully on or off to prevent pounding or filling up with water.

Automatic air valves and quick vents are probably the most essential equipment used with one-pipe steam systems, particularly the vacuum types which prevent the return of air to the heating system once it is expelled.

Insulating covers should be applied to all piping so that heat will be retained in the pipes and hold heat loss to a minimum.

Owners are advised to heat their boilers all the year round to avoid boiler deterioration, and also to heat hot water economically by using an indirect water heater installed below the boiler water line.

When properly engineered, one-pipe steam systems will operate efficiently and provide suitable room comfort.

One-Pipe Hot Water Heating

One of the best systems in use, hot water heating has always cost more to install than most other types, but makes up for it in long life and few repairs. In the long run it is economical. The old bulky systems have been replaced with streamlined versions, with efficient boilers, small radiators and convectors, small pipes, and a circulator or booster pump to force circulation and provide heat.

With hot water, it is possible to control the heat in each individual room. In addition, the advent of forced circulation, using electrically-powered pumps to force the flow rather than burning extra fuel, has made possible very economical operation.

While each room can be controlled individually, it is necessary for the

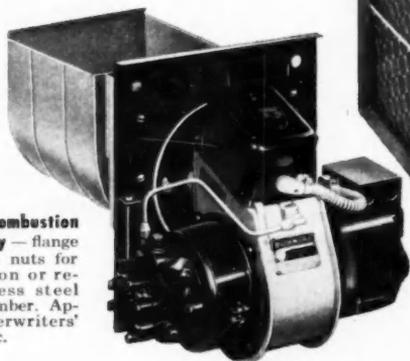
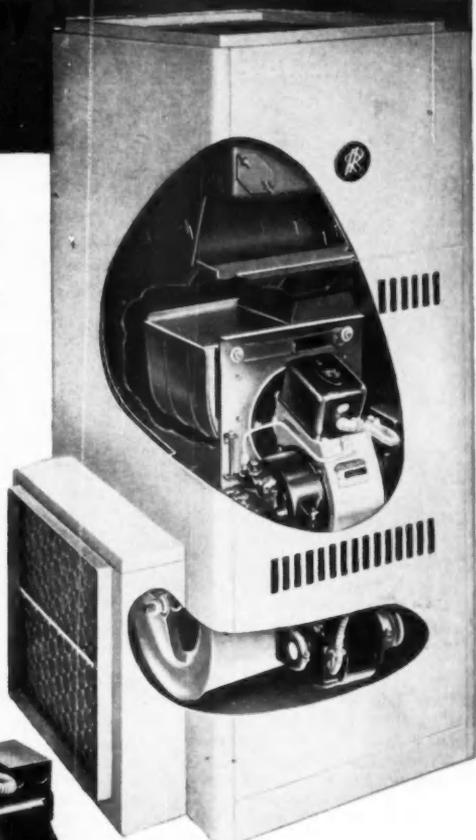
(Continued on page 292)

Here's a new and wanted addition to Richmond's line of winter air conditioners... giving you a still wider selection of quality heating units.

Here's a unit built to fit easily into homes where space is tight... ideal for restricted space use in utility closet installations.

Here's a competitively priced, thrifty-to-run unit that more than meets today's demand for low-cost heating... without sacrificing quality.

Here's the new SU-P in its handsome jacket... made of sturdy steel, finished in light green Hammertone baked enamel. Note the heat exchanger... made of 12 gauge steel... welded for durability and efficiency. Use the handy coupon to get full information—fast. Remember—when quality and economy count, count on Richmond.



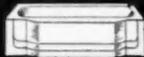
Oil Burner and Combustion Chamber Assembly — flange mounted with 4 nuts for easy installation or removal. Stainless steel combustion chamber. Approved by Underwriters' Laboratories, Inc.

Type SU-P
Steel Oil-Fired Winter Air Conditioner. Two sizes—85,000 BTU and 106,000 BTU output at Bonnet.



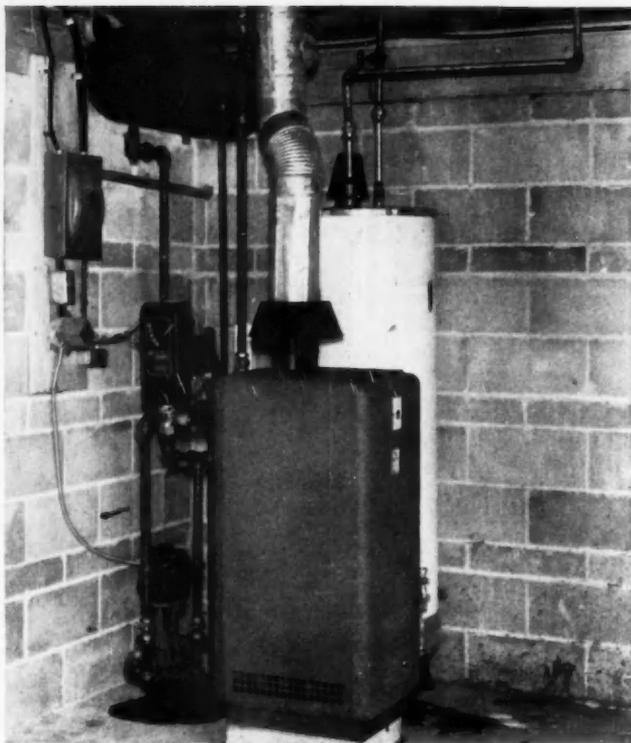
RICHMOND

RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METALS CO.



Richmond Radiator Company
19 East 47th Street, New York 17, N. Y. AE/4
Please send me information and literature on Richmond heating equipment and plumbing fixtures.

NAME
COMPANY
ADDRESS



ONE-PIPE HOT WATER SYSTEM operates with thermostat which activates small motor-driven booster pump to force water from boiler to room radiators

(Continued from page 290)

same type of radiation to be used throughout either the building or a single zone. Cast iron tube radiators do not heat up as rapidly as convector types and the two will not work well in the same system.

The one-pipe hot water system is cheaper and easier to install, and neater in appearance than the two-pipe system. It must be engineered for the correct elimination of air from the system to insure efficient operation. Given a good chimney, an airtrol to eliminate the air problem, and a relief valve to relieve the pressure when it becomes too great, the one-pipe hot water system will perform admirably. If the system is made fully automatic, there should be an automatic pressure reducing valve as well, set at minimum pressure to assure the system's being full at all times.

As with the one-pipe steam systems, better results can be obtained through year-round operation of the boiler, and hot water for domestic use can be obtained economically with an indirect water heater attached to the system.

Floor Furnaces

The simplicity of floor furnaces has many virtues, chief of which is low installation cost. No ducts are required. The furnace needs no basement, uses no living space in any



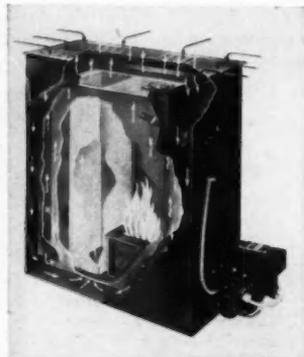
DUAL-WALL TYPE FLOOR FURNACE designed to be set under the wall between two rooms where there are no interconnecting openings

room. It requires very little skilled labor to install. Single units usually have sufficient capacity to heat four or five rooms in a small house.

Two-story buildings usually cannot utilize a floor furnace system because the furnace is hung below the floor, and homes with basements will need an additional heater for the basement, as only the cold air returning to the furnace touches the unit's outer jacket.

A good floor furnace will circulate all the air in the heated space three to five times an hour without excessive velocities or drafts. The unit itself usually consists of a combustion chamber together with interior radiator sections to provide maximum heat transfer surface, all enclosed in a metal inner liner. Space between inner liner and outer jacket provides for cold air return to bottom of the unit.

Gas is the most popular fuel, although oil is used successfully, and bottled gas in locations where gas cannot be piped into the building. Floor furnaces are usually equipped with automatic controls and safety devices to shut off fuel, should the pilot burner on gas units fail. All



COOL AIR flows from floor into separate chamber to come up through heating element of a floor furnace

units should be located as closely as possible to the chimney to provide short ventpipes and adequate drafts for combustion.

Floor furnaces can be made automatic, are efficient, and will provide clean and economical heat at a satisfactory degree of comfort. Low initial cost adds to the desirability of the system.

Radiant Heating

Radiant heat rays move from a warmer to a cooler object, and upon coming in contact with a solid surface are either absorbed or reflected. Absorbed heat rays heat the solid

(Continued on page 294)



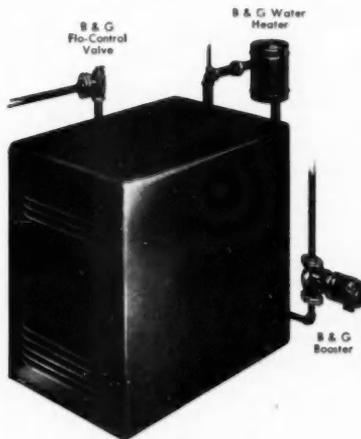
Hydro-Flo Heating, of course

with modern baseboard heating panels

For comfort, the areas around large, low windows must be adequately heated . . . and a B & G Hydro-Flo Forced Hot Water System with baseboard heating panels is an ideal way to do the job. Baseboard panels fit neatly under low windows . . . raise a blanket of warmth against incoming cold . . . keep room temperature virtually uniform from floor to ceiling.

Heated water circulated through the baseboards by a B & G Booster is automatically controlled so that the heat supply is always *matched to the weather!* No wasteful overheating—even in spring and fall, when only a little heat is needed.

Plenty of hot water, too, for automatic washers, baths and showers. The Water Heater of a B & G Hydro-Flo System furnishes an ample volume, winter and summer. Send for catalog of B & G Hydro-Flo Heating Products.



B & G Hydro-Flo Heating equipment can be installed on any hot water heating boiler, new or old

*Reg. U. S. Pat. Off.



Warm draftless floors

Inconspicuous heating units

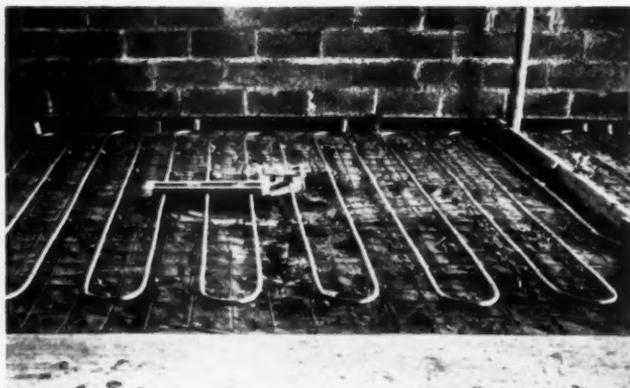
All year 'round hot water

BELL & GOSSETT

C O M P A N Y

Dept. CL-11, Morton Grove, Illinois

Canadian License: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto, Canada



A TYPICAL sinuous radiant heating coil of 3/4-inch copper tube on 9-inch centers

(Continued from page 292)

object and cause it to re-radiate heat. Radiant heat is important because the problem of comfort is not one of room temperature, but rather of body heat and how it is lost and at what rate. Thus, if the surrounding surfaces in a building are heated, radiant heat loss from the human body will be controlled, and it is possible to set up conditions of comfort with temperatures as low as 60 degrees F. The result is more efficient heating at lower fuel cost.

Radiant Heating With Hot Water

Radiant heating with hot water can be accomplished with either floor or ceiling panels. "Panel" refers to the heated portion of room surface that serves as a heat source; "coil" refers to the piping embedded in the panel to convey the hot water.

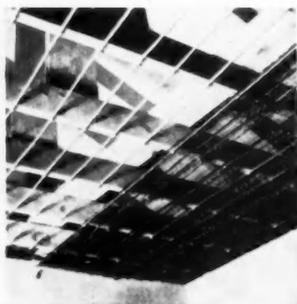
The system is similar to closed hot water systems in that it requires a boiler, combustion chamber for coal, oil, or gas, compression tank to take care of the expansion of the water when it is heated, an airtight to elim-

inate unwanted air in the system, a pressure-reducing valve, a relief valve, and a booster pump.

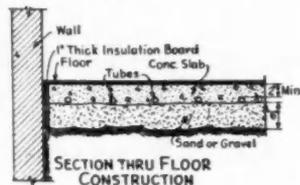
Radiant heating with hot water, however, keeps the panel at a relatively low temperature with a low rate of heat transfer and saving in fuel. The lower boiler temperatures required mean lower chimney and stack temperatures and fuel saved. Dollar for dollar, installation costs of most radiant hot water heating systems are competitive with other types, the only added cost coming from the additional automatic controls usually needed to realize to the full the added benefits from radiant heating. These costs are absorbed in reduced operating costs in a few years.

An indoor-outdoor bulb-type of control system, plus room thermostat, has been found effective in maintaining comfort. In conventional heating systems, warmed air moves about the room, tending to rise towards ceilings, with a differential in temperature between ceilings and floors; but with radiant heating, ceiling to floor variance is often as little as 2 degrees F.

Usually no additional provision for humidification of air is necessary, bathroom and cooking steam vapors sufficing. However, the radiant heating system itself cannot humidify or dehumidify the air.



3/8-INCH COPPER TUBE on 6-inch centers attached to bottom of ceiling joists with expanded metal lath below coil



DETAIL ABOVE shows method for building up base, placement of insulation strip around slab, and concrete slab

Where coils go into ceilings, expanded metal lath is preferred for the plaster base, with the coil above the lath and attached to the joists. Where coils are below the plaster base, plastering time is usually tripled and much more plaster is required. Acoustical or other insulating tile should not be used for ceilings in which the coil is to be located. Panels installed in dead air space between floors are ineffective.

Insulation should be used to reduce heat flow in reverse direction to that desired. Where reflective insulation is used, the reflective surface should face the warm side but not be in contact with it; there should be an air space on both sides of the insulating material of at least 3/4-inch. Vapor barriers under floor panels are essential.

Leaks and corrosion of pipes present no greater problem than in other "closed systems." The choice of piping is unimportant from the standpoint of heat output, but per foot cost, plus installation cost, and labor must be considered. Size of pipe has little to do with heat output either, but definitely determines booster pump capacity required.

Radiant Heating With Warm Air

Radiant heating with warm air is accomplished with a closed system utilizing air instead of water but channeling it through ducts from furnace-heating chamber and returning cooler air to the furnace, much as hot water is carried through the closed hot water systems.

It is assumed that air and water flow in much the same manner; consequently, with the first duct or tile channel supplied with warm air being the last to return to the furnace, grids or ducts are laid out to insure uniform air flow.

Most standard forced warm air furnaces can be used, except that filters and automatic humidifiers are unnecessary. Floor ducts can be tile, brick baffles, or other inexpensive materials. For economical and comfortable operation, systems should be designed for floor temperatures of 85 degrees F. maximum.

One important consideration is heat loss off the end of the slab. Insulation should be provided here as well as below the floor ducts to prevent heat loss and moisture and vapor accumulation.

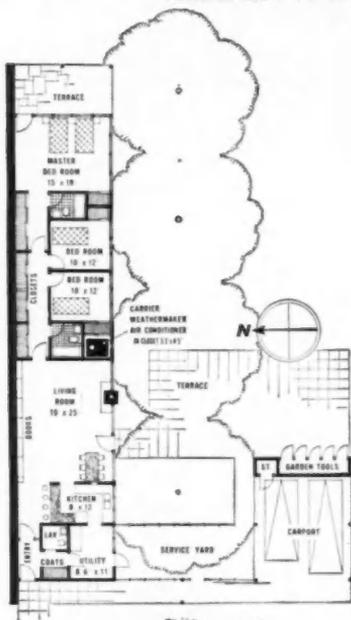
Calculations necessary to install such a system include heat loss, furnace bonnet temperature and entering air temperature at channels, C.F.M. of blower and static head against which it is to discharge.

(Continued on page 296)

This house should give you ideas

This is a Carrier Weathermaker Home created by Roy Carroll.

It shows you a number of ways in which Carrier Weathermaker Air Conditioning contributed to better house design.



The architects—Carroll, Grisdale & Van Alen is a well known Philadelphia firm whose recent work includes the Youth Study Center on Benjamin Franklin Parkway and the Terminal Building, Philadelphia International Airport (now in progress).



The Carrier Weathermaker

is designed for a duct system like that used for forced warm air heating. The Weathermaker cools and heats. It burns gas for heating... uses a sealed electric refrigerating unit for cooling. It is only a little larger than an ordinary furnace.

It influenced the design

This Weathermaker Home contains more usable space per building dollar. That's possible because it makes functional use of its air conditioning. Because the new Weathermaker is specially designed for homes, it insures that the air you live in is healthful and comfortable, so the rooms have only one exposure. Only a few movable sash are required. The floor is a simple rectangle. Baths are placed in the interior.

It helped pay for itself

This Weathermaker Home makes air conditioning economical. The design makes the house less expensive to build. The design reduces the first cost of the air conditioning. An overhang over the south windows... trees shading the roof... help to reduce the cost of summer cooling. A solid wall to the north helps reduce the cost of winter heating.

It made a better home

This Weathermaker Home is a more convenient home. A windowless wall gains space for storage. Windows, doors and closets are placed to allow the greatest freedom in furniture arrangement. The living and dining areas are completely open and interlacing, while the sleeping areas are completely private. And, of course, the Weathermaker keeps the house far cleaner, far more quiet, and infinitely more comfortable. Of course, this is just one approach. There are many more. How would you do it?

Carrier

AIR CONDITIONING • REFRIGERATION

For 50 years—the people who know air conditioning best

CARRIER CORPORATION

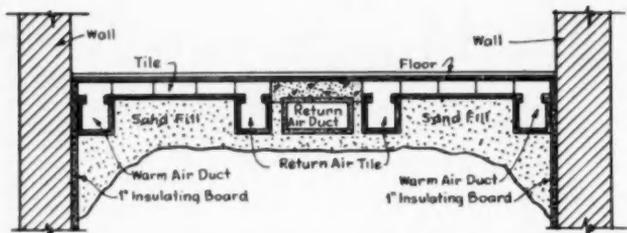
314 South Geddes Street, Syracuse, N. Y.

Please send me the story on the Weathermaker Air Conditioner and the Weathermaker Home.

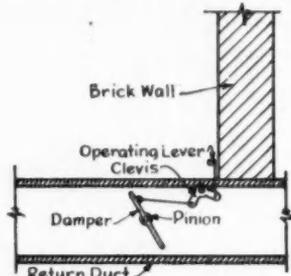
Name _____

Street _____

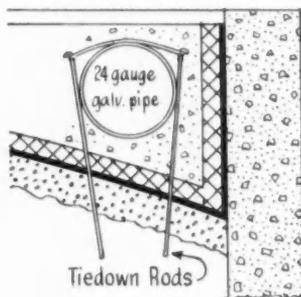
City _____ State _____



SECTION DRAWING showing detail of floor construction and tile duct system. Although this floor is designed for tile, there are other common materials that may be used



DETAIL OF PANEL BALANCING DAMPERS



SUGGESTED METHOD of holding pipe in place when it is used to form duct in slab

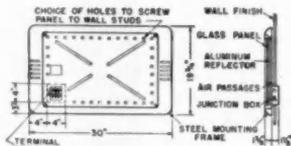
(Continued from page 294)

Glass Wall Panels

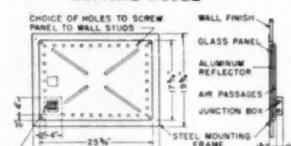
One of the newer developments in radiant heating has been the use of glass wall panels. The units consist of rectangular glass panels $\frac{1}{4}$ inches thick with an aluminum grid fused to the back of the glass. The glass is almost impossible to break. An aluminum reflector is placed between the glass panel and the back of the mounting frame. Electricity passing through the grid raises the temperature of grid and glass panel to as high as 340 degrees F. Temperature differentials cause air to circulate through vents at the top and bottom

of the panel, thus heating by a combination of convection and radiation. Thermostats provide automatic operation.

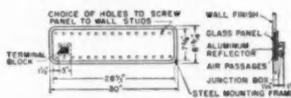
Tests indicate that such units, properly installed, will operate efficiently, and can be used economically where the kilowatt rate is two cents or less. In houses heated by other means, individual panels can be useful for spot-heating of bathrooms and similar locations. They are also useful in commercial installations.



SURFACE MODEL



RECESSED MODEL



BASEBOARD MODEL

ABOVE THREE TYPES of electrical radiant glass panels with details of construction and insulation

Perimeter Warm Air Heating

Perimeter warm air systems heat homes comfortably by adding enough warmth to replace the heat which is lost at the points where it is lost. The heat is directed particularly at outer wall areas which, with windows and doors, are responsible for most heat loss. In fact, outside walls in the typical one-story house account for 30 per cent of heat loss, doors for 16.4 per cent and windows for 32.6 per cent making a total of 79 per cent at these three points.

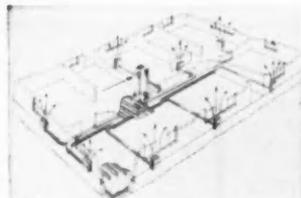
Perimeter heating provides heat at

the sources of heat loss in the following manner:

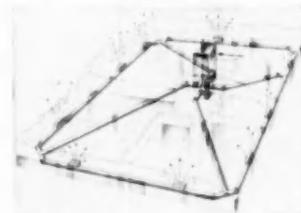
(1) Warm air rising from lower room levels nullifies the effect of ceiling loss.

(2) The floor is warmed by ducts installed below the surface.

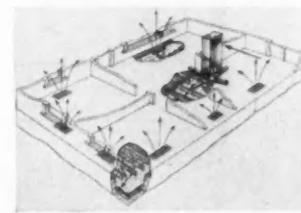
(Continued on page 298)



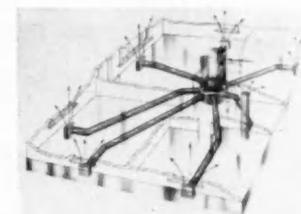
Warm Air Perimeter Crawl Space Duct System



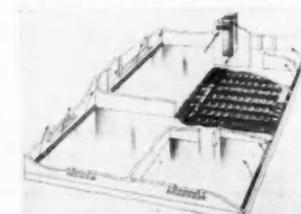
Warm Air Perimeter Loop System



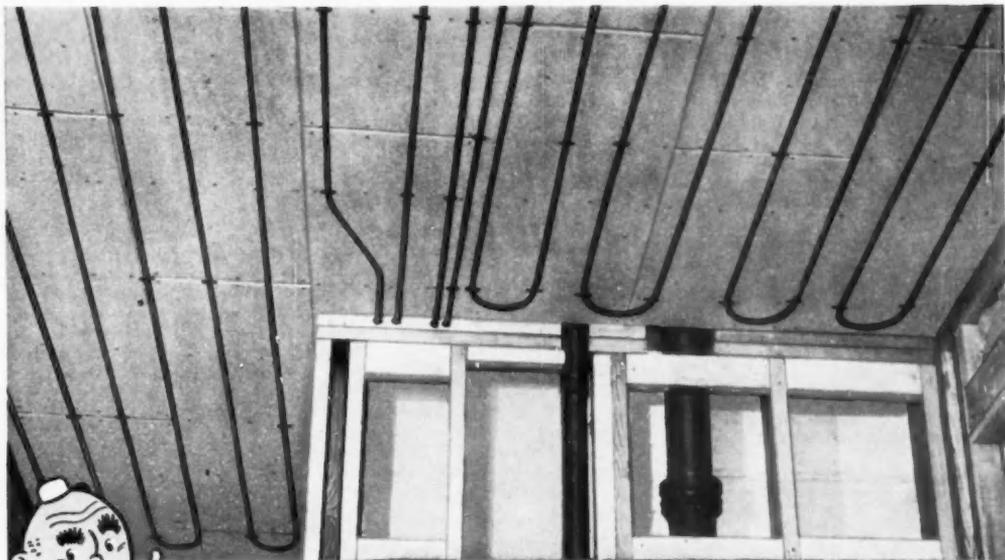
Warm Air Perimeter Crawl Space Plenum System



Warm Air Perimeter Radial System



Warm Air Perimeter Lateral System



Your houses, regardless of style or cost, can offer Bundyweld ceiling radiant heating

One of the most exciting, sales-producing features you can put into your houses. Today's finest heating — and tomorrow's; low in cost, easy to install.

Sales points for your houses

With Bundyweld ceiling radiant heating, your houses feature the most even, clean, economical, and convenient heating of all. It cuts housekeeping chores by hours; cuts fuel bills to pieces; postpones wall washing, redecorating, and cleaning of furnishings for years.

Here's heating that *truly* radiates — evenly, swiftly downward from the invisible ceiling system. Here's

heating that feels natural, fresh, invigorating — as thousands of home owners will tell you.

Easy, low-cost installation

With Bundyweld Tubing, a ceiling radiant heating system is a cinch to install at low cost. Standard 24' lengths of lightweight, ductile Bundyweld (one end expanded when specified) are easily handled; quickly bent, joined, and mounted onto the ceiling; then easily plastered over. Low-cost Bundyweld saves you time and money on the job, gives finest radiant heating performance, too. Send coupon below for full details.

Bundyweld Tubing

DOUBLE-WALLED FROM A SINGLE STRIP

© B.T.C.

WHY BUNDYWELD IS BETTER TUBING



Bundyweld starts as a single strip of copper-coated steel. Then it's . . . continu-



easily rolled twice around laterally into a tube of uniform thickness, and passed



through a furnace. Copper coating fuses with steel. Result . . . Bundyweld



steel tubing, double-walled, and brazed through 360° of wall contact.

Send for your copy of handsome 20-page brochure that gives you meaty facts on Bundyweld ceiling radiant heating. (Bundy also offers this brochure to future home buyers via full-page, 4-color ads in *Better Homes and Gardens* and *American Home*.)

Bundy Tubing Company
Radiant Heating Division, Dept. AB 452
Detroit 14, Michigan

Yes! Rush me 20-page consumer brochure giving inside story of Bundyweld ceiling radiant heating . I would also like a copy of Bundy trade brochure .

Name _____

Position _____

Company _____

Address _____

City _____ Zone _____ State _____



Waterproof membrane covers the area within foundations and extends on side to slab top



All joints of waterproof membrane should be lapped and sealed with waterproof sealer



Perimeter system with loop distribution. Feeder duct runs to "T" connection



Reinforcing mesh in slab and over ducts adds strength to thin part of slab



Concrete mix poured over membrane should be dry. Planking protects ducts when pouring

(3) Warmth from mildly radiant floors and circulation of warm room air offsets loss of heat through outside walls and doors.

(4) A current of warm air rising vertically at window surfaces from grilles below them prevents normal downdraft of cold air (usually occurring at windows) from spreading across the room.

The National Warm Air Heating and Air Conditioning Association has prepared a series of definitions and

descriptions of various types of perimeter warm air heating. These include:

Crawl Space Duct System. With a home built over a crawl space, the system is suspended from floor joists. Branches from furnace plenum or extended plenum end in registers placed below windows and along outside walls.

Loop System. For homes built on concrete slab set directly on the ground, warm air ducts embedded in the slab follow the outer wall of the building in a continuous loop supplied by feeders from the furnace plenum chamber. Registers are below windows. Floor surfaces radiate some heat also.

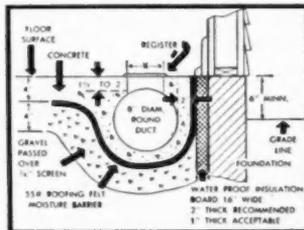
Crawl Space Plenum System. The entire crawl space is used as a warm air supply plenum. Stub ducts from furnace plenum chamber direct air currents to window registers.

Radial System. Houses with either crawl space or slab construction can use this system, which has individual ducts from furnace chamber reaching each window or wall register.

Lateral System. This layout places the furnace at one end of the building, in the center, with an extended main channel or duct running the length of the building down the middle. Every few feet, tile ducts branch off at right angles to both sides and conduct air to wall registers running the length of the building on both sides.

Careful slab floor construction is an integral part of the heating system. The site should be well drained. The finished slab surface should be not less than 6 inches from grade. Fill should be coarse material four inches deep, with waterproof membrane between fill and slab bottom and covering edges of slab. Two inches of insulation around the slab and between it and the foundation, are recommended. 14 inches deep, waterproofed and termite-proofed.

Conventional forced warm air furnaces and controls may be used.



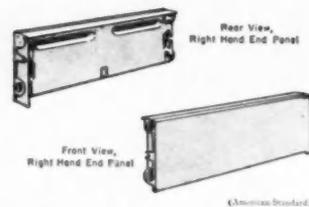
Cross section details of construction units for properly installed perimeter duct

although basementless homes usually find the downflow type most satisfactory. Thermostat, limit control, fan switch, and burner control are necessary. Balancing the system is accomplished by means of sleeves inside ducts below registers at windows and walls. Baseboard and wall registers may also be controlled by friction dampers in the stackheads.

Baseboard Heating

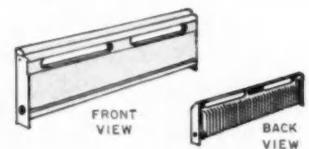
Baseboard heating, which furnishes heat both by radiation and convection, can be installed as a complete system or as an adjunct to other heating devices. A high percentage of heat from baseboard panels is distributed by radiation, which reduces rising warm air currents and the wall-streaking common with ordinary radiators.

Baseboard panels can be used effectively with one-pipe hot water



(American Standard)

Above: Type "R" cast iron baseboard panel. Below: Type "RC" cast iron baseboard panel with fins at back to increase heat transmission



(Blenkin Corp.)

systems, two-pipe forced hot water, two-pipe gravity hot water, and two-pipe steam systems. They cannot be used with one-pipe steam systems because of venting and condensation problems.

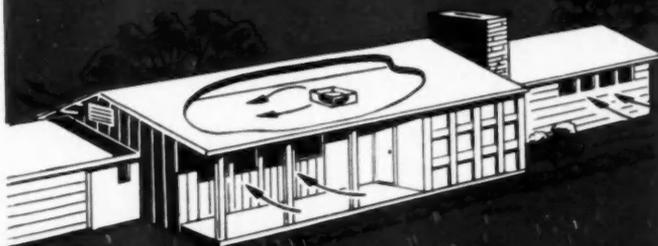
One-pipe hot water systems using baseboard panels either use a conventional basement main or a series-loop system with the baseboards being part of the main. Control systems are the same as those for other hot water systems of heating.

Baseboard panels come in three basic types, each of which requires that substantial wall areas be well insulated wherever the panels are placed. Convector types consist of finned tubing or pipe within a baseboard style metal shell. These may

(Continued on page 300)

LAU

It's Good Business

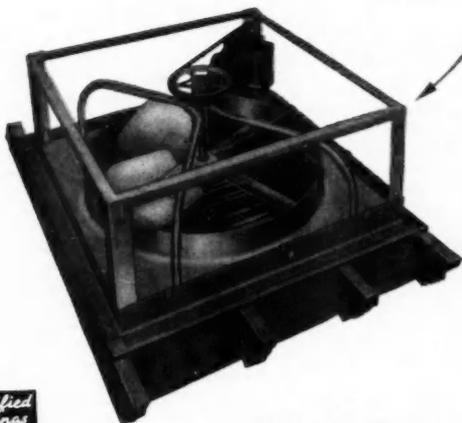


to install a
"Niteair" Fan
in every home
You Build!

and here's why:

1. "Niteair" Fans help you sell better than quickly and more profitably!
2. "Niteair" Fans give you a substantial return on your investment investment!
3. "Niteair" Fans give you more business for a leading leading, alert builder!
4. "Niteair" Fans add the "Niteair-Approved" that means fast marketing for you!

This "Niteair" Rancher Fan



appeals to home buyers!

quick to install!

fully guaranteed!

- The Complete, efficient "Package" unit.
- Four sizes: 24" - 30" - 36" and 42"
- Sealed Ball Bearings never need oiling
- Rubber-cushion mounted; quiet, vibration-free
- Designed for homes with Low-Pitched Roofs
- Inexpensive, simple and easy to install

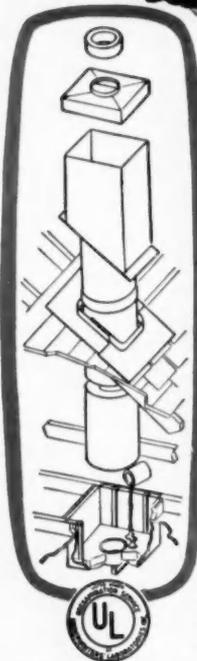
Write today!



Ask for specification sheets #629 and #630 and Manual #601. Local LAU representatives can engineer fans to the specifications of homes you are building. Two-speed motors available on all residential fans.

THE LAU BLOWER COMPANY • 2023 Home Avenue, Dayton 7, Ohio

How You Install a Complete Chimney In 97 Minutes



Van-Packer is tested and approved fire-safe by Underwriters' Laboratories for all fuels. Also F.H.A. accepted, housing vermiculite concrete wall and fire-clay tile liner equal in insulating value to 24" of brick or 70" of ordinary concrete. Approved for zero clearance of floor, ceiling and roof of house.

WITH

VAN-PACKER PACKAGED MASONRY CHIMNEY

A complete Van-Packer Chimney can be installed by one man and a helper in 97 minutes. Here's how: 1. Nail chimney support in place. 2. Set each Van-Packer section and cement with prepared acid-proof cement furnished. 3. Nail flashing to roof, slide housing over sections, and cement rain cap in place. It's as easy to build as that. Everything furnished—nothing else to buy. Nationally distributed so you can get immediate delivery. Write for free folder and name of nearest dealer or jobber.

Van-Packer CORPORATION
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Van-Packer Corporation
Dept. 1204, 209 S. LaSalle St.
Chicago 4, Illinois

Please send me additional information, free literature and the name of my local stocking dealer or jobber.

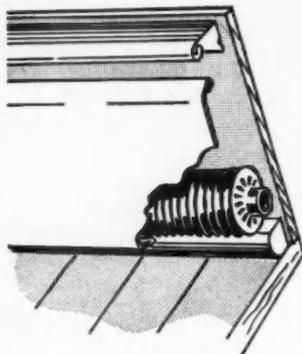
Name _____

Firm _____

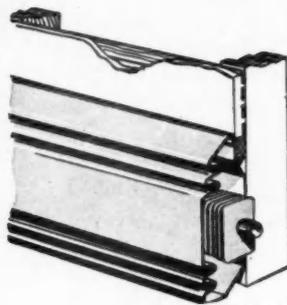
Address _____

City _____ State _____

Also Manufactured and Distributed in Canada by
C. A. McRobert and Son, Ltd., St. Laurent, Quebec.



Convactor type baseboard panel with circular fins



Convactor type baseboard panel with rectangular fins and 1-inch pipe located off center

(C. A. Dunham Co.)

(Continued from page 298)

either be single or double core and the shell may have dampers built into it at grill or openings. Type R panels are cast iron, water backed, without fins. Type RC is cast iron but has fins attached to the back and slots at the top to aid in convection.

Some of the advantages of baseboard heating include fuel economy, lower temperature differentials, cleanliness, fitting into decorative schemes easily, added floor space, lower maintenance costs, fittings and piping easily accessible, and satisfactory comfort.

Control Systems

It is fully as important to have a good control system as to have a good heating system, for without it the heating system will not function at maximum efficiency. The following control set-ups are basic and will be used depending upon the heating system selected and the degree of automatic control desired:

Hand-fired coal, gravity warm air. A room thermostat governs operation of damper motor, which is connected to both draft and check doors on

(Continued on page 304)

new in '32

still better today

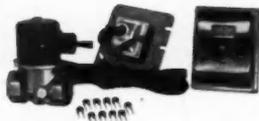


Improved K3-A Solenoid Gas Valve...

Quiet—Dependable—Hi-Capacity—

Soft Seat—For All Gases—

Way back in 1932, the forbear of the present K3-A was originated, developed and pioneered by General Controls. It became the first in a long series of quiet, dependable, two-wire solenoid magnetic gas valves that today are standard equipment at home and in industry for controlling gas to warm air furnaces, gas-fired boilers, conversion burners and similar applications. Closing with the gas flow, in the K3-A the pressure is on the top of the soft seat assuring indefinitely tight valve shut-off. Closing is automatic in case of power failure, and the K3-A, like all other General Controls solenoids, is absolutely humless when energized. Current consumption is low and the extremely compact valve easily meets high flow capacities and operating pressure requirements. In the K3-A you find just one more sound reason why the leaders everywhere declare that for the best in automatic controls, it's General Controls!



T-30 PACKAGE SET

For automatic heat at home, the General Controls T-30 Package Set is a sure short cut to economical and trouble-free comfort. Included with the graceful T-70 Timer Thermostat, is the long-proved, Type K3 Magnetic Gas Valve, Transformer and Thermostat Cable. Optional Timer Thermostat is furnished in two models, either for internal night setting (T-70-T) or with both day and night temperature selection at your finger tip (T-70-X) on the face of the sleek and satin-finished cover.

GENERAL CONTROLS

901 ALLEN AVENUE GLENDALE 1, CALIFORNIA

Manufacturers of Automatic Pressure, Temperature, Level and Flow Controls

FACTORY BRANCHES: Baltimore 5, Birmingham 3, Boston 16, Buffalo 3, Chicago 5, Cleveland 15, Columbus 15, Dallas 2, Denver 4, Detroit 21, El Paso, Glendale 1, Houston 6, Indianapolis 4, Kansas City 2, Milwaukee 3, Minneapolis 2, Newark 6, New Orleans, New York 17, Omaha 2, Philadelphia 23, Pittsburgh 22, St. Louis 3, San Francisco 7, Seattle 1, Tulsa 6, Washington 6, D. C.

DISTRIBUTORS IN PRINCIPAL CITIES



Blo-Fan[®]

ELECTRIC EXHAUST VENTILATORS

Pry-Lite

RECESSED LIGHTING FIXTURES



• Regardless of architecture, color motifs or styling, there is a Pry-Lite for every room in the home. New, attractive finishes of chrome, copper, brass and painted hammerstone gray blend with any furnishings or interior decoration. Beautifully patterned glass gives clear, full illumination without glare or dark spots. Snap-on fronts make Pry-Lites easier to clean or relamp—there are no screws, no hinges, no nuts, and no tools needed.

And, more important, Pry-Lites (1000 series) cut costs because they have . . . (1) A pre-wired, built-in pull box; (2) adjustable mounting straps that eliminate framing-in time; (3) a plaster flange which fits any finish; (4) and they are U. L. approved for any standard building wire.

• A Blo-Fan electric exhaust ventilator makes the kitchen complete and modern. Its patented blade combines the volume of a breeze fan with the power of a blower. Its attractive grille is removable without tools and the motor assembly merely lifts out for easy cleaning. Pry-Lite modern recessed lighting fixtures complete the picture.



9-SPEED SWITCH

This exclusive Blo-Fan feature makes it as easy to control the rate of ventilation as it is to control the speed of a car. Standard equipment on De Luxe Model 210 Blo-Fan only.

Blo-Fan America's Most Imitated Home Ventilator

Pry-Lites The Original Recessed Lights with Snap-on Fronts

*TRADE MARK REG.

Make Buyers Out of Shoppers With

Value... Quality

Survey after survey has shown that there is a market for approximately 1,000,000 houses a year for the next several years... BUT, all building trades are faced with keener competition than ever before.

Because... People who buy, build or remodel are more discerning—they are demanding VALUE and QUALITY when they invest, *even before price*. That is when the reputation of Blo-Fan electric exhaust ventilators and Pry-Lite recessed lighting fixtures is an important factor for architects, builders, and electricians to consider. The reputation of Blo-Fan and Pry-Lite names is built on value and quality. Skilled craftsmanship plus quality material from reputable sources have been important in building the Blo-Fan and Pry-Lite names and what they stand for—just as your name and reputation are made and recognized through the products you use and the way you use them.



Remember the old adage, "Quality is remembered long after price is forgotten." Remember, too, that when you specify or install Blo-Fan electric exhaust ventilators and Pry-Lite recessed lighting fixtures...

"their reputation will guard yours"

PRYNE AND COMPANY
BOX B-42, POMONA, CALIFORNIA

EASTERN FACTORY: 124 Adams Street, Newark, New Jersey

Warehouses: Los Angeles, San Francisco, Chicago, Atlanta

Stocked by more than 700 wholesalers in over 350 cities.

APRIL 1952

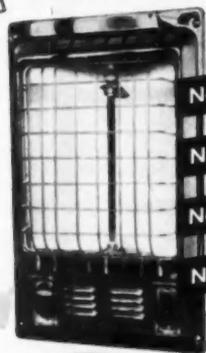
"The hottest news
in heater history!"

THE NEW PRYNE

Glomaster

INFRA-
RED

RECESSED WALL HEATER



No Smoke

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No Draft

It's

Safe!

EASY TO INSTALL

In new or old construction. On remodel jobs, merely cut a hole between studs... There's no plastering to do... The attractive heater front covers the rough plaster edges... "Rough-in" box mounts flush with flanges against the wall, has two knock-outs in bottom, and no extra pull box is required... Heater assembly is secured to "rough-in" box with four machine screws, thus eliminating the need for drilling extra holes in finished walls.

MORE HEAT WITH LESS CURRENT

Real economy is provided by the Glomaster auxiliary heater... Uses no more electricity than an iron... Radiates heat from floor to head with absolute safety... There are no flames to ignite clothing or towels... Modern wire grille remains at safe temperature—will not burn the skin if touched... Heating element is non-metallic—will not transmit shock... Choice of chrome or baked white enamel finishes... U. L. APPROVED!

AMAZING HEAT ELEMENT NEVER BURNS OUT!

Sintered carbide compound heating element is not affected by splashed water and will not corrode.

If local stocks are not available, ask your Blo-Fan or Pry-Lite distributor to order Glomaster for you.

PRYNE AND COMPANY

Pomona, California

Newark, New Jersey

303

THERE'S AN AUTOMATIC

JOHNSON Oil BURNER

FOR EVERY HEATING NEED!

Famous for
high efficiency
since 1903



PRIVATE HOMES



HOSPITALS



HOTELS



PUBLIC BLDGS.



SCHOOLS



FACTORIES

For Steam, Hot Water, Hot Air Systems. Engineered and built to produce a maximum of usable heat from minimum fuel consumption. Johnson Oil Burners are known and respected the world over. There's a Johnson Burner dealer near you.



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940 Arlington Ave. • Oakland 8, Calif.
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VULCAN

FIN-TUBE RADIATION

is MODERN in DESIGN

Vulcan combines a smart, modern-looking, comfort assuring heating design with easy installation. For either

hot water or two-pipe steam systems.



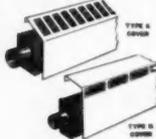
Residential Installation



Commercial Installation

LINOVECTOR — Vulcan radiation for commercial installations. Bul. #125, #60.

RADI-VECTOR — BASEBOARD RADIATION for homes and apartment housing. See Bulletin #53A



Representatives in principal cities.



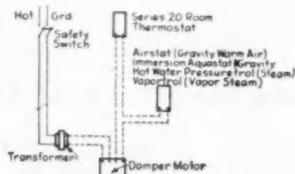
Over Twenty-Five Years
A Leader in
Fin-Tube Radiation



The **VULCAN**
RADIATOR
COMPANY

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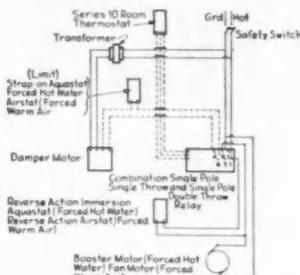
HARTFORD, CONNECTICUT



HAND FIRED COAL GRAVITY CIRCULATION

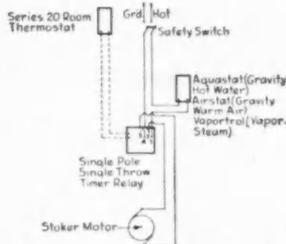
(Continued from page 300)

furnace or boiler by a chain arrangement. Limit control closes draft door and opens check door if the furnace overheats.



HAND FIRED COAL FORCED CIRCULATION

Hand-fired coal, forced circulation. This system has a thermostat, damper motor, transformer, limit control, and in addition, a relay to start and stop blower motor or booster pump motor. There is also a reverse-acting control in the voltage power circuit for starting the booster pump or fan motor in case the room thermostat is not calling for heat. This takes care of any override in temperature within the heating unit itself so that no injury will result from overheating.



STOKER FIRED COAL GRAVITY CIRCULATION

Stoker-fired coal, gravity circulation. Almost identical to system No. 1 above, these controls differ in the use of a timer relay rather than a damper motor and transformer. The relay provides for regular minimum feeding of coal to maintain the fire in the heating unit during the long intervals when room thermostat does not call for heat.

(Continued on page 306)

*Getting to be
a habit—*



Gas Suspended
3 Models 50-100 Btu/hr.



Gas Le-Buy
7 Models 50-100 Btu/hr.



Oil Le-Buy
7 Models 50-100 Btu/hr.



Oil Suspended
3 Models 50-100 Btu/hr.

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good
thing



Gas Le-Buy
3 Models 50.5-100 Btu/hr.



Oil Hi-Buy
3 Models 50-100 Btu/hr.



Oil and Gas Square Boilers
12 Models to 100 Sq. Ft.

leads to
another



Gas Gravity
3 Models 50-100 Btu/hr.



Oil Gravity
4 Models 50-100 Btu/hr.



Oil and Gas Round Boilers
12 Models to 200 Sq. Ft.

when
Norge-
Heat



Cast Gravity and W.A.S.
12 Models 50-200 Btu/hr.



Conversion Gas Burners
7 Models 50-200 Btu/hr.

Over 135
different
domestic
heating units
to meet the
needs of
the most
discriminating...



Gas and Oil Water Heaters
12 Models to 50 Gal.

leads
the way!



Conversion Oil Burners
3 Models .3-0.4 gph.

NORGE HEAT

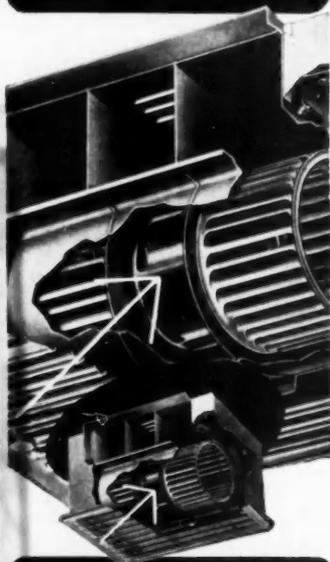
Division of Borg-Warner Corporation

Living's a treat with Norge Heat



The Best IN KITCHEN VENTILATION

EXCLUSIVE IN
**TRADE-WIND
VENTILATORS**



ISOLATED MOTOR
Keeps clean • lasts longer

Look at the location of the motor in every **TRADE-WIND** Ventilator—in a separate, isolated compartment. This extra construction is another exclusive **TRADE-WIND** advantage. The motor is completely protected from the hot, greasy air. No dust or steam or grease are blasted at the motor. It always stays clean and cool in its own compartment—needs less frequent oiling—lasts years longer. You can count on **TRADE-WIND** for quality performance.

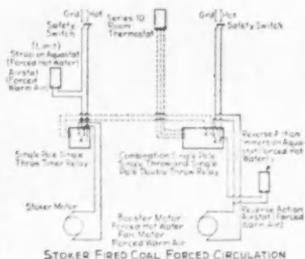
The only ventilator that gives you

- Centrifugal Blowers
- Isolated Motor
- Dripless Grille
- Easier Installation
- Interchangeable Horizontal and Vertical Discharge
- Five-year Guarantee

PRICE OFFERS AN INDUCEMENT
BUT QUALITY OFFERS A REASON

TRADE-WIND
MOTORFANS, INC.

5705 So. Main St., Los Angeles 37, Calif.



(Continued from page 304)

Stoker-fired coal with forced circulation. These controls are the same as system No. 2, except that a timer relay is used in place of damper motor and transformer. In some hook-ups a stack control is used instead of relay for the hold-fire. This, however, has a tendency to corrode and deteriorate. Timer relay is preferred.

Oil-fired forced warm air. This is similar to oil-fired gravity circulation, with the exception of a limit control. Instead, a combination fan and safety switch is installed. This starts the fan motor when the bonnet of the furnace has sufficient heat. It will also stop the oil burner in case of excessive bonnet temperature. This hook-up delays the starting fan until heat is

(Continued on page 308)

MERCROID



THEY ARE USED FOR THE CONTROL OF TEMPERATURE, PRESSURE, LIQUID LEVEL, AND MECHANICAL OPERATIONS. THE MERCURY SWITCH IS A FEATURE IN MERCROID CONTROLS. THE REASON FOR THE MERCURY SWITCH IS THE ADDED SAFETY, BETTER PERFORMANCE AND LONGER CONTROL LIFE—ALL OF WHICH ARE IMPORTANT WHEREVER CONTROLS ARE REQUIRED. WHY CONSIDER LESS WHEN YOU CAN GET SO MUCH MORE.

WRITE FOR COMPLETE CATALOG

THE MERCROID CORPORATION
4201 BELMONT AVE. CHICAGO 41, ILL.



For beauty, comfort, appeal and getting the job done—nothing sells like Murray window and ventilating fans. Be prepared for the summer boom in ventilation. See your Murray distributor today. See below.



EASY TO INSTALL

JUST DROP IN PLACE

Nothing to nail or screw down. Murray's flat-as-a-flounder attic fan rides free and whips-in-place in a cushion of foam rubber.

Any one can install. It's simplicity makes Murray the fastest selling, most demanded package and vent. Using fan available.

Shutters are fully automatic. No pull cords, no adjusting—means more sales.



DISTRIBUTORS

IT'S IMPOSSIBLE TO LOSE MONEY ON A **Murray** FRANCHISE

GUARANTEED PROFITS

Report would be necessary to Murray after \$1,000.00 CASH CREDIT. No actual tie-up of hard capital. What you sell, you profit on—what you don't sell, empty profit and receipt check. You can't lose.

NO LOSS

The Inventory Carry Over!



WRITE FOR PRICES, INFORMATION OR CATALOG

Murray COMPANY OF TEXAS
VENTILATING & WINDOW FANS

H. C. BIGLIN CO. INC.
175 HARRIS ST. N.W. ATLANTA, GA.



"More living room
is no problem with
this hideaway furnace"

says Phil Hedback,

Bryant-Hedback Co., Indianapolis, Ind.

With useable space at a premium, it is little wonder that the Bryant *Hideaway* Gas Furnace is proving so popular.

Architects and builders say it not only saves valuable space, but the furnace, itself, is a real selling feature.

Tucked away in the attic—or suspended from the ceiling or under the floor—this dependable forced-air furnace provides a world of comfort for householders while releasing *extra space* for storage, utility purposes or plain *living*.

The *Hideaway* is a true Bryant product—long on dependability and gas economy, and with positive automatic control. Naturally, the casing temperatures are low. You'll also like the way it goes in—structural steel mounting channels come with it and can be used to suspend the unit when it is so installed.

Yes, you'll like this Bryant *Hideaway* Forced-Air Furnace that gives you both added living space and better heating.

Why not ask your Bryant Distributor for full details? Or write Bryant Heater Division, Dept. 173, Affiliated Gas Equipment, Inc., 17825 St. Clair Ave., Cleveland 10, Ohio.



**Bryant Model 324
Hide-away Gas Furnace**

Can be tucked away in the attic, or suspended from ceiling or under the floor. Fully automatic, forced-air unit with Navigage heat exchanger. Available for all gases. AGA inputs: 65, 85, 100 and 125 thousand Btu per hour.

bryant *best buy*

IN HEATING,

AIR CONDITIONING,

WATER HEATING

Choose...

WILLIAMSON

WARM AIR FURNACES

for quality low cost homes



WILLIAMSON GAS FORCED AIR



GAS



OIL



COAL



PIPE & FITTINGS

"Name" home equipment which reflects built-in quality and performance and does not add to construction costs always adds "eye" and "buy" appeal to any home.

WILLIAMSON Warm Air Furnaces are modern in design, made of top quality materials and have built-in craftsmanship of over 60 years of furnace design and manufacturing experience. There are WILLIAMSON Warm Air Gravity and Forced Air Furnaces for any type fuel and any size home with basement or utility room. WILLIAMSON'S complete line of Pipe and Fittings round out the full package of equipment required to heat any home comfortably and economically.

Write for details.



Williamson Furnaces are nationally advertised and have over 60 years of home owner acceptance.

THE WILLIAMSON HEATER COMPANY

4565-B Marburg Ave.
Cincinnati 9, Ohio

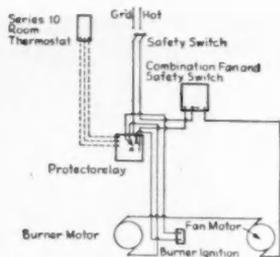
Have an authorized Williamson Representative give me information on:

- Gas Oil Coal LP Gas Pipe and Fittings
 Basement installation Utility Room installation

Name _____

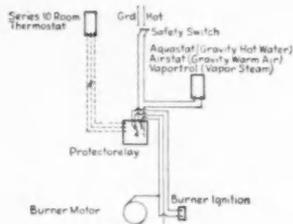
Street _____

City _____ Zone _____ State _____



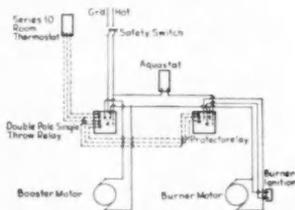
OIL FIRED FORCED WARM AIR

(Continued from page 306)
built up, thus warming instead of cooling rooms when the unit starts up.



OIL FIRED GRAVITY CIRCULATION

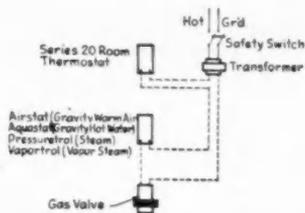
Oil-fired gravity circulation. This system is identical with hand-fired and stoker-fired coal hook-ups except that the protectorelay replaces timer relay or damper motor. This protectorelay is for the intermittent burner ignition, probably the most essential control in any oil burner installation. It stops the burner if there is a stoppage in oil flow, and also stops ignition motor if ignition fails.



OIL FIRED FORCED HOT WATER

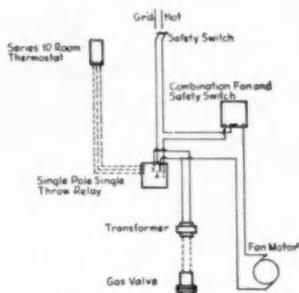
Oil-fired forced hot water. When the room thermostats call for heat, the relay closes the power circuit and starts the booster motor. This also energizes the protectorelay, which starts the oil burner. The aquastat will stop the oil burner if water temperature becomes too great, while the booster pump will continue to run until the room thermostat is satisfied.

Gas-fired gravity circulation. The line voltage power circuit is reduced in voltage for operation of a solenoid gas valve installed in the gas supply pipe. The valve operates from a low-voltage thermostat, through the limit



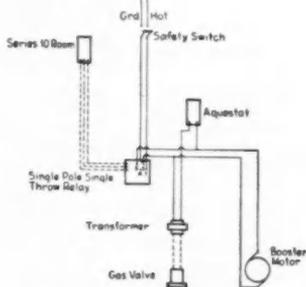
GAS FIRED GRAVITY CIRCULATION

control, which prevents overheating of the unit.



GAS FIRED FORCED WARM AIR

Gas-fired forced warm air. This is the same as the oil-fired forced warm air except that a single-pole, single-throw relay is used instead of the protecto-relay. The room thermostat calls for heat, closes the relay, and causes the gas supply valve to open. Bonnet temperature activates the fan which will run as long as bonnet temperature stays high enough. Fan and safety switch prevents bonnet from overheating.



GAS FIRED FORCED HOT WATER

Gas-fired forced hot water. This is similar to the gas-fired warm air system except that an aquastat is used in place of combination fan and safety switch. Booster pump operates directly off room thermostat, runs as long as it calls for heat. The aquastat is strictly limit control.

(Continued on page 310)

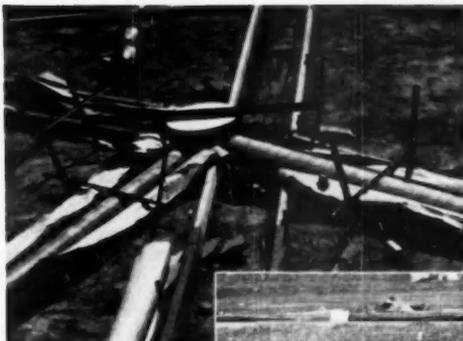
Keep jobs moving and save money

with **SONOAIRODUCT.**

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**FOR
WARM AIR
PERIMETER
HEATING LINES**

**Loop
Radial
Lateral**



**Laminated
Fibre Duct
Tested and
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**Lightweight
Long lengths
Easy to fit and level**

SONOAIRODUCT fits all metal bends, elbows, "T"s and registers.

Especially made and treated for the purpose, Sonoairduct helps keep the job moving when installing heating lines for slab-on-ground construction. Sizes 2" to 24" I. D., up to 25' long. Easily cut by hand saw to any desired length.

Write for complete information and prices.



SONOCO PRODUCTS COMPANY

MYSTIC, CONN. HARTSVILLE, S. C. BRANTFORD, ONT.

FOR YOURSELF,
YOU'D CHOOSE

WEIR-MEYER
FURNACES • AIR CONDITIONERS

When you know the facts about WEIR-MEYER steel warm air heating equipment, we believe you'll see why you'd choose it for your own home. Of course, we don't know how many builders and contractors own WEIR-MEYER, but we do know that many continue to install our equipment year after year in the homes they are building. And we believe that the reason is this: *WEIR-MEYER performance pleases home owners.* After all, isn't that what you want?



Gas



Oil



Coal

Whatever the fuel — gas, oil or coal — there is a WEIR-MEYER warm air steel unit to fit your job. Outputs range from 35,000 Btu/hr through capacities of 1,000,000 Btu/hr and greater for schools, churches, factories and other large installations.

WEIR-MEYER MEANS
Modern HEAT

THE MEYER FURNACE CO.
Peoria 2, Ill.

Manufacturers of Weir & Meyer Furnaces
Air Conditioners for Gas — Oil — Coal
Factories: Peoria and Peru, Illinois

Keep WEIR-MEYER data on hand for reference. Send for complete File Catalog on WEIR-MEYER Equipment.

The Meyer Furnace Co.
Builders Service Division
Peoria 2, Illinois

Please send File Catalog on the complete WEIR-MEYER line.

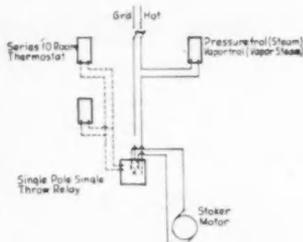
Name _____

Street _____

City _____

State _____

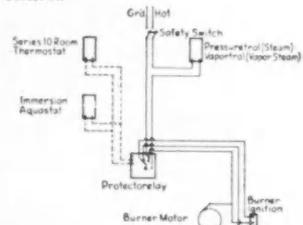
FILL OUT OR CLIP COUPON
TO YOUR LETTERHEAD



STOKER FIRED STEAM WITH YEAR ROUND DOMESTIC HOT WATER

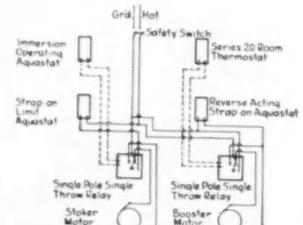
(Continued from page 309)

Stoker-fired steam system with year-round domestic hot water. This has the same controls as for stoker-fired steam with gravity circulation, except that a single-pole, single-throw relay is used instead of a timer relay. An immersion aquastat connected in parallel with the thermostat causes the stoker to run enough to maintain heat within the unit and heat domestic water. This also acts as a hold-fire control.



OIL FIRED STEAM WITH YEAR ROUND DOMESTIC HOT WATER

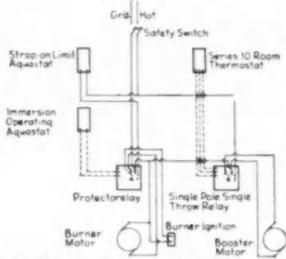
Oil-fired steam with year-round domestic hot water. Identical to the stoker-fired steam control except that a protecto-relay is used in place of the single-pole, single-throw relay. Immersion aquastat and room thermostat start the oil burner, while limit control prevents overheating and damage.



STOKER FIRED HOT WATER WITH YEAR ROUND DOMESTIC HOT WATER

Stoker-fired hot water with year-round domestic hot water. Immersion aquastat causes stoker to maintain boiler temperature. In addition, a strap-on limit aquastat should be installed to prevent injury to the heat-

ing system should the operating aquastat fail. The thermostat operates the relay to booster pump, controlling the flow of hot water to the rooms. A reverse-action, strap-on aquastat starts booster pump as a safety measure to take care of water temperature override.



OIL FIRED HOT WATER WITH YEAR ROUND DOMESTIC HOT WATER

Oil-fired hot water with domestic hot water the year around. This is the same as the stoker-fired, except that the protecto-relay is used instead of a single-pole, single-throw relay, and reverse-action aquastat is eliminated.

Other Controls. In addition to the basic control hook-ups outlined above, there are zone controls for close local control of heating, indoor-outdoor systems which control temperature by a bulb outside the building connected with another located in the stream of the heating medium, and both connected to a temperature controller. There are also pneumatic control systems and electronic set-ups which replace the low-voltage electric systems outlined above in some situations.

Heating Commercial Buildings

Heating commercial buildings requires consideration of the size and type of building, its functions, space requirements and limitations, installation costs and maintenance costs, as well as operating problems. For any small commercial structure, the heating plant should be calculated to cost roughly 10 per cent of the total cost of the building; otherwise, heating may prove inadequate.

The simplest structure to be heated is the small monitor building occupied by a neighborhood service business. Floor space is usually at a premium, and heating must be economical and not take up space. For this purpose, floor furnaces, unit heaters, or radiant panel constructions have proved desirable.

Another type of one-story commercial building has its space divided typically into showrooms, offices, and

(Continued on page 312)

"the Pioneer
prefabricated
Chimney"

VITROLINER

for
ALL FUELS

All Types of Buildings

Here's your opportunity to install America's finest prefabricated packaged chimney. Functions as a complete chimney for ALL heating equipment.

LIGHTWEIGHT—only 10 to 15 lbs. per ft. installs easily and quickly in less than an hour. The chimney is mounted between ceiling joists, directly over heating unit, saving valuable floor space.

Vitroliner is designed for 1 or 2 story construction to fit the individual roof pitch, with a **TAILOR-MADE** roof flashing and flue housing—no cutting or fitting is required on the job! The chimney is built around a vitreous enameled metal flue liner—encased in a seamless tube of high temperature—resistant insulation—with an outside metal covering.

In two-story construction (Type "L") the flue can be boxed in a corner of a room, closet or bath room as illustrated.

Quality-built for long life—time tested for over 10 years and proven successful. Nationally accepted by large project home builders and single contractors. Accepted by F.M.A. and listed by Underwriters Laboratories for ALL fuels.

FEATURES

- SAVES VALUABLE FLOOR SPACE
- INSTALLED IN LESS THAN 1 HOUR
- HIGHEST QUALITY AT LOWEST PRICE
- HIGHEST HEATING EQUIPMENT EFFICIENCY
- PROVIDES ATTIC VENTILATION
- ELIMINATES CONDENSATION
- MFD. IN 6", 7", 8" and 10" DIA.
- DIRECT FACTORY SHIPMENTS
- AVAILABLE IN ANY QUANTITY

Investigate this fast-selling modern low-cost chimney today. Write for illustrated circular or phone ARmitage 6-5070 for quotations.

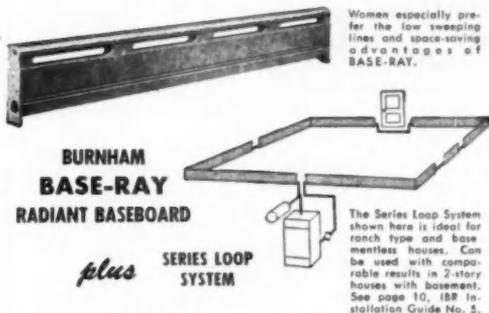
FOR FURTHER INFORMATION WRITE TO
CONDENSATION ENGINEERING CORPORATION
3511 W. POTOMAC AVE., CHICAGO 51, ILL.

APRIL 1952



When you can save precious pipe today, it's news, and a saving of 40% is BIG news! Hundreds of Burnham **BASE-RAY**® Radiant Baseboard installations, made with the Series Loop System, (See diagram) have proven that with this system you'll not only save pipe, but fittings will be 49% less... installation labor 54% less! And remember... with **BASE-RAY** you'll be giving your customers the most efficient, space-saving radiant baseboard heating available!

*Reg. U. S. Pat. Off.



Women especially prefer the low sweeping lines and space-saving advantages of **BASE-RAY**.

The Series Loop System shown here is ideal for ranch type and basement houses. Can be used with comparable results in 2-story houses with basement. See page 10, IBF Installation Guide No. 5.

BASE-RAY WEARS LIKE IRON... FOR IT IS MADE OF IRON

Burnham Corporation

FIRST IN THE MANUFACTURE OF BASEBOARD HEATING
BOILER DIVISION . . . IRVINGTON, NEW YORK

Irvington, N. Y.

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City State

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FUEL SAVER
Modern design and
selected controls

SPACE SAVER
Compact
rugged-beautiful

**ECONOMICAL HEAT
AND HOT WATER**
Two sensitive
aquastats

BUILT TO FIT
THE BURNER HOLES



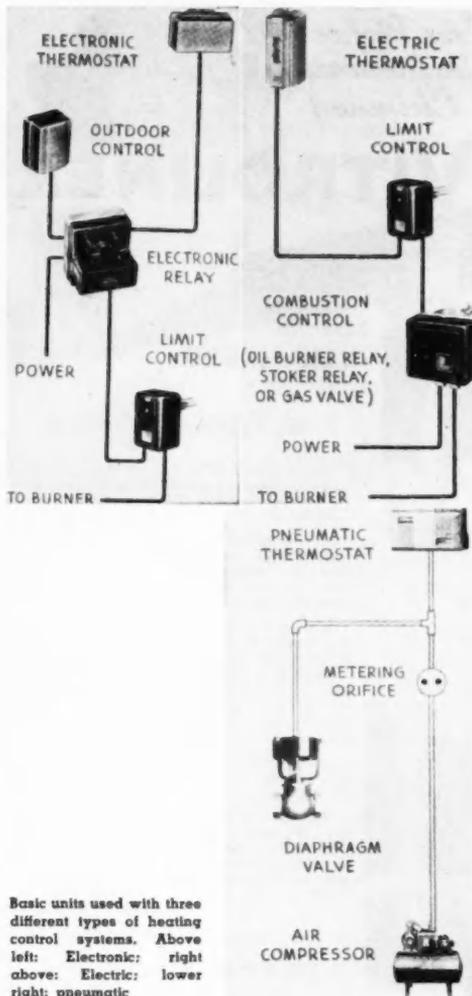
Like a sale the year 'round—it's the kind of savings the Venko Packaged Unit by KOVEN nets your customers. Yes—modern design and selected controls mark down fuel bills. Two sensitive aquastats assure abundant heat and hot water—dollars worth of trouble-free service for a few cents a day. On your side of the balance sheet—Venko is a short cut to tall savings because it comes completely equipped for speediest installation. All wiring in place. All parts properly installed. All controls thoroughly tested. No costly waiting for missing parts. No expensive service calls. More and speedier installations...

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Plants: Jersey City, N. J. • Dover, N. J.



Basic units used with three different types of heating control systems. Above left: Electronic; right above: Electric; lower right: pneumatic

(Continued from page 310)

workshops—for example, commercial garages. Direct-fired unit heaters, or combinations of unit heaters with self-fired radiators can be used. Forced air heating will give satisfactory results, as will central steam and hot water systems with radiators or convectors. Radiant panels installed in the floors will also give good service.

The third main type of small commercial building is the multi-story multiple purpose building with first floor used for offices or warehouse space, with offices or living quarters above. This type often encounters the problem of different tenants trying to regulate heat in their own quarters by turning off radiators, partially closing them, opening windows and wasting heat. Two-pipe steam and both one and two-pipe hot water systems usually prove most effective.

Air Conditioning

Air conditioning is the control of temperature and humidity; it also includes the control of air motion

(Continued on page 318)

Norman SOUTHERNER

horizontal gas furnace

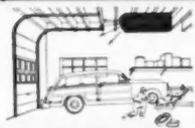
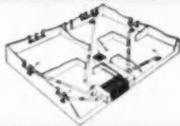


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mixed or LP gas



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more home for the money

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Unit Type Gas Heater



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APRIL 1952

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Install

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GAS FIRED

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The "little extra" that
clinched a sale . . .



HASN'T IT HAPPENED TO YOU?

You sensed that your prospects *liked* your house, but apparently had seen several they liked equally well.

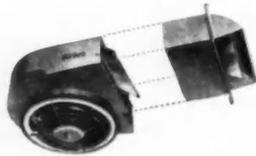
So you turned on the "And look at this special feature" sales talk. Colored bathroom fixtures, maybe—or easy-open windows—or tricky hardware—or perhaps a *built-in kitchen ventilator*. And the lady succumbed—didn't she?

FASCO ventilators are this kind of "little extra" that clinches sales. And the wonderful thing is not only that they help close deals and pay you extra profit—but you can point to the brand name with special pride—because no ventilators in America are better made or better values.

Write for illustrated literature.



FASCO Wall Ventilators—
for outside walls



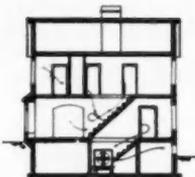
FASCO "Ceil-N-Wall"—
for ceilings or inside walls

FASCO Industries, Inc.

209 AUGUSTA STREET, ROCHESTER 2, NEW YORK

BELT DRIVE FAN INSTALLATIONS

Basement



If basement windows are large enough to provide ample exhaust, this location is sometimes preferred. Enclose stairwell and locate fan under stairs (removing risers) or on one side.

Gable Installation



When the attic is finished, making it airtight, the fan is often installed behind a manual shutter or metal louvre in the gable. Entire attic serves as a suction box for opening in attic floor.

Attic Stairway



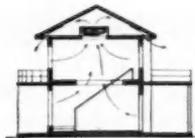
Fan is connected with an enclosed portion of the stairwell. No ceiling grille is required, attic door is opened when fan is operating. Valuable attic floor space is saved.

Suction Box



Because many attics are not sealed, it is necessary to use an airtight suction box over a centrally located ceiling grille to assure the full effect of the fan in the rooms below.

Vertical Discharge



All Hunter belted units can operate in a horizontal position, discharging vertically. This solves installation problems in many modern homes having limited attic clearances.

Attic Wall



In homes where main portion of attic space is finished, unit may be mounted in partition wall, discharging into unfinished attic space. Fan is installed in the shipping crate.

Hunter Fan Data

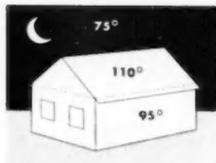
PRESSURE OF ATMOSPHERE FOR VARIOUS READINGS OF BAROMETER

Barometer	Pounds per	Barometer	Pounds per
Inches	Sq. Inch	Inches	Sq. Inch
28.00	13.75	29.75	14.61
28.25	13.87	30.00	14.73
28.50	13.99	30.25	14.85
28.75	14.12	30.50	14.98
29.00	14.24	30.75	15.10
29.25	14.36	31.00	15.22
29.50	14.48	31.25	15.34

A 3-Minute Course on Low-Cost Home Cooling

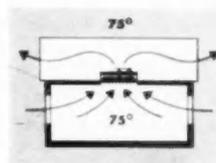
HOW ATTIC VENTILATION COOLS A HOME

It's cooler outside at night



All day long a home absorbs heat from the summer sun. At night when outside temperatures have fallen to 75°, for example, the dead hot air in the attic may remain as high as 110°. This keeps the rooms below at an unbearable temperature up to 95° or more. Nobody can sleep.

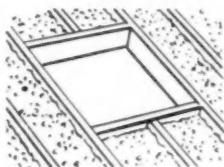
Attic fan pulls the cool air inside



A Hunter Attic Fan pulls the cool, refreshing outside air into house, driving out the oven-like heat from the attic and every room. A few minutes after the fan is started, room temperatures drop 10° to 20°. An automatic time switch can be used to switch off the fan while occupants sleep.

HOW TO MAKE PROVISION FOR ATTIC FANS IN YOUR HOMES

Step 1. Frame for ceiling opening



By framing and installing fan when home is built, no extra construction expense is involved. If installation is to be made later, framed opening can be temporarily plastered over or closed with plywood.

Step 2. Provide adequate louvers in proper location



On new construction it costs little to include exhaust openings to handle attic ventilation. These may be gable louvers or porch, soffit or basement exhausts, depending on the design of the house.

NEW HUNTER PACKAGE FAN IS INEXPENSIVE AND EASY TO INSTALL



A Hunter Package Fan is the most practical and least expensive method of keeping a home comfortable on hot nights. This compact unit is easily installed in any new or old home. Furnished complete with ceiling shutter and trim—no extras to buy or build. Choice of four sizes, to fit any home and climate.

This efficient attic fan is quiet and powerful, requires little or no maintenance. It costs only a few cents a night to operate and will last for many, many years. Backed by Hunter, exclusive fan makers since 1886.



Hunter ATTIC FANS

See our section in Sweet's



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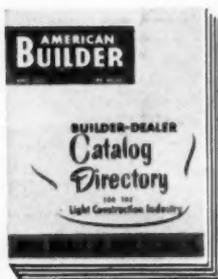
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26

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The most complete and useful Buying and Selling Guide ever offered to Builders and Dealers printed on colored stock.

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- 2 List of Brand Names
- 3 Names and Addresses of Manufacturers
- 4 List of industry and allied professional trade associations
- 5 List of participating communities in 1951 National Home Week

AMERICAN BUILDER

79 WEST MONROE STREET, CHICAGO 3, ILLINOIS



Overhead panel radiant heating fits many types of small businesses

(Continued from page 312)
and distribution, and cleans the air. The simpler type of air conditioning for homes involves the use of attic fans of various types, including home cooling fans with plenum chamber (suction box), which cool the house in summer by providing proper ventilation. Ceiling ventilators are also in this class.

Winter air conditioners are furnaces which send forced air, heated, humidified and filtered clean to each room.

Year-round air conditioners for homes are units which provide: (1) summer cooling; (2) dehumidification for summer temperatures; (3) winter heating; (4) humidification for winter temperatures; (5) air cleaning—a filtering out of dust, pollen, soot, and lint the year 'round; and (6) air circulation with ventilation—a draft-free flow of clean air, providing uniform temperatures.

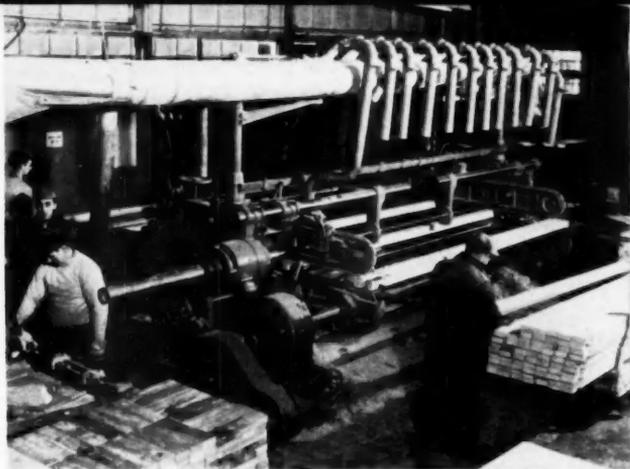
Self-contained air conditioners are package units which give summer cooling, dehumidification, filtering (also air circulation and ventilation when installed with an outside connection). They are designed for individual rooms and can be used with duct work or installed directly in the space to be served. Self-contained units are also available which give year-round air conditioning for individual room areas, heating as well as cooling.

Several manufacturers now have available small capacity air conditioning units adaptable for installation in small, low-priced houses.



Radiant floor panel installation going into small office area

AMERICAN BUILDER



SEASONED LUMBER starts on its way through a prefab house factory. This huge machine makes as many as 23 cuts in one operation

PREFABRICATION offers today's builders a choice between construction of "complete" homes pre-built in the factory and the use of prefabricated structural members to be assembled on the site in conjunction with conventional building methods.

Under the first plan the contractor or builder buys a basic dwelling largely complete, generally including all services and materials except masonry, plumbing, electrical items and finish painting. Some manufacturers even include electrical ranges and refrigerators.

Opportunities for Profit

For the individual contractor or builder with minimum capital to invest, "complete" prefabricated homes offer unique opportunities for profit. Financial risk is reduced because of greater assurance of delivery, quality control of materials and finishes, low overhead for the builder, and minimum investment.

Field erection is fast and easy due to accuracy of dimensions and fit, and the use of standardized sizes of structural members. Houses can be placed under roof in one day with the consequent advantage of sheltered construction for the rest of the work. Erection costs are thereby reduced and volume construction made possible.

The builder also benefits from the sales promotion and advertising aids of the manufacturer, as well as from the research and advisory services of the manufacturer's organization. Even financing is offered by some manufacturers.

The usual working arrangement between builder and manufacturer is in the form of an exclusive franchise for a given area. The builder is responsible for all arrangements for

procurement of land, building permits, and other local details, and handles sales and servicing of completed homes.

Salability

Manufacturers' attention to design, which now ranges from the traditional to contemporary styles, with the inclusion of personalized features, has gained increasing acceptance and popularity for the prefabricated house.

Individual taste preferences are satisfied in a wide range of interior finishes—plaster, gypsum board, or almost any other type of wall covering—and in flexibility of room arrangements. Variation in elevations, ornamental exterior details and floor plans removes the element of sameness which formerly marked many low-cost homes.

The assurance of delivery to the customer, the reputation of quality materials and construction, and the low-cost feature make these prefabricated models particularly attractive for FHA and GI financing. They carry a high rating for such government approval, and are therefore easily marketable.

Combination of Prefabrication, Conventional Building Methods

For those who find it more practical to combine conventional on-site methods with prefabrication, there is an opportunity for profit in cooperation with an important member of the building industry—the lumber dealer. Without going into "complete" prefabricated construction, the builder can still take advantage of some of the money-saving features of prefabrication.

Prefabrication by definition requires the use of factory production methods, and individual builders may

PREFABRICATED STRUCTURES AND STRUCTURAL MEMBERS

Use of Prefabrication

Opportunities for Profit
Salability

Combination of Prefabrication and Conventional Building Methods

Prefabrication Construction Methods

Field Erection

Quality Control
Assurance of Delivery

Design and Working Plans
Standardization

Transportation

Storage

Financing

Insurance

Quality Control

Assurance of Delivery

Design and Working Plans

Standardization

Transportation

Storage



JIG AND FLOW LINE for interior wall partitions. "Starting" jig is in foreground, and subsequent stations complete the panel assembly

have neither the equipment nor the storage space to develop these methods. By arranging to serve an individual builder, or group of builders, the lumber dealer may use his facilities to prefabricate on a profitable scale.

Factory-production methods require stock-piling of materials such as lumber, plywood, wallboard, insulation and framing members; the use of power machines and materials handling equipment. Ordinarily, the lumber dealer will have hand trucks and dollies, woodworking machinery and similar equipment. The addition of jigs to insure accurate assembly of parts, assembly tables for ease of operation, fork-lift trucks, painting equipment and transportation facilities provide the basic means for

larger scale operations than the individual builder would normally find convenient.

Applications of Prefabrication

Prefabrication is not limited to the construction of private homes for sale only. It is ideally suited to the development of low-cost rental units such as defense area housing and as such is particularly attractive to government financing.

Its uses for non-dwelling structures are increasingly recognized. Portable and knock-down farm buildings such as corn cribs, sheds, hog houses and chicken houses can be constructed in 12 to 14 hours. With the use of corrugated steel and aluminum, light industrial buildings can be erected successfully by prefabricated methods.



PRODUCTION LINE for roof panels. Plywood sheathing covers the rafters and serves as the base for roofing paper and asphalt shingles which will be applied at the site

Construction Methods

Basically, the manner in which prefabrication differs from conventional building procedures is in producing standardized parts, such as a series of room-size sections, which will permit assembly at the site without the need for cutting and shaping operations characteristic of on-site construction. This, of course, requires that the houses must be reduced to a minimum number of different parts, so design is highly important. Each and any part should be adapted for interchanging with others of its particular size and construction so that it will fit into its proper place in any house of like design.

Design systems most commonly used in prefabrication are based on one or more standardized parts of fixed dimensions such as a fixed-width panel or a series of wall, roof and ceiling sections. The basic unit of most systems is the panel, which consists of both load-bearing and covering materials. It usually also contains insulation and vapor barrier. Provision can be made for the insertion or attachment of windows, doors, electrical conduit, pipe and other accessories at the building site; or else they are installed at the shop. Interior panels if non-load bearing can contain built-in features such as bookcases and cabinets.

Roof Design

Some units such as roofs are less adaptable to shop prefabrication in the form of panels than others and therefore rafters and roof boards may be pre-cut for site fabrication. The flat roof and simple gable roof are the most common prefabricated types. Pitched roofs can be designed for partial or complete prefabrication. Usually gable ends are prefabricated in sections for quick assembly at the site.

Design of gable ends is generally a simple matter of plywood or other sheathing fastened to studding with nails or glue. The roof is often of stressed-cover construction. Plywood or other coverage is often fastened to rafters on one side only, and the roofing is applied on the site.

Joint Design

Joint design is especially important in prefabrication because it not only affects the strength of such structures but also governs to such extent the degree to which parts are interchangeable and the ease with which the structure can be erected. Three types of joints are discussed here: (1) those between panels; (2) those connecting the walls and floors to foundations; and (3) those attaching roofs to walls.

(Continued on page 324)

The Most Complete Prefab Package on the market!



\$2,750

f.o.b. Port Washington, Wis.

PH1-EA228S-52 Enterprise

NOW you can crack the big, profitable low-cost housing market. You'll be able to sell ruggedly-built, handsomely styled homes in the \$7,000 range, *practically anywhere* with the \$2,750 P & H Enterprise Home.

This 2-bedroom home (PH1-EA228S-52)—the most complete prefab package on the market—is just one model in the new low-cost Enterprise Line. This line offers you 2 or 3 bedroom models, 672 to 864 square feet, in 18 different exterior designs.

All the Enterprise models have the same quality construction and floor plans as the luxury P & H Capitaline homes. All offer you the advantages of P & H prefabrication — *volume sales, project savings, minimum risk, prompt delivery* and *financing*.

Take advantage of the booming low-cost market now. Sell P & H. Write for details today.

HERE'S WHAT YOU GET in the \$2,750 Package

A Real Home Value
at Any Price

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- rugged room-size wall panels
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- predecorated gypsum board ceilings
- side wall and roof shingles
- felt building paper, cornice, trim lumber
- all hardware
- Van Packer chimney
- shipped on one trailer truckload

P & H CAPITALINE HOMES . . . for luxury living

Architect-designed, these P & H Homes have all the styling, construction and convenience features that buyers look for. And they have all the features that mean higher sales and lower costs for you. 44 elevations, 6 floor plans, all reversible. Basement or utility room models, 2 or 3 bedrooms. Write for free booklet today.



PH4-B336-52—Capitaline

P & H

HOMES

DIVISION

HARNISCHFEGER CORPORATION



14 Spring Street
Port Washington, Wis.

*Distinctive
Shadow-lines*

...with

**SHAKERTOWN
SIDEWALLS**



● **makes selling easier for GUNNISON Homes!**

Here's the sidewall that puts "sex appeal" in home exteriors! Colorful, rich and attractive, Shakertown Sidewalls combine the advantages of distinguished beauty with the economy of double-coursed cedar shingles.

There's no secret about the phenomenal demand for factory-stained Shakertowns. They mean lower construction cost, even lower cost

per year of service — with better insulation, less upkeep and added property value. They're architecturally *right*, too.

Whether you're building one home or one thousand, if it's good profit you want, you'll be ahead with Shakertown Sidewalls. It pays to stock and sell them!



Get the facts! Find out why shake homes, in project after project, have sold far ahead of any other homes built of standard materials. Write today for prices and architect-selected color samples.

West Coast Plant at Chehalis, Wash.

The **PERMA**
PRODUCTS Company



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Gunnison Catalina**

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Low cost
Livable features
Luxurious details
Last word in
convenience

L-Shaped homes . . . ranch type homes . . . individually styled homes, so desirable for project building . . . in the price range that attracts the vast majority of home buyers. You can offer wide variety of designs . . . low first cost and quick occupancy for your customer. And assured final cost and profit for you.

Find out for yourself why so many have switched to Gunnison. Write Dept. A-24, Gunnison Homes, Inc., New Albany, Indiana, for interesting details.



Gunnison Homes INC.

UNITED STATES STEEL  CORPORATION SUBSIDIARY

NEW ALBANY, INDIANA

(Continued from page 320)

(1) *Panel Joints*—A major problem of joint design is that of concealing the joint lines. This is in no way connected with the strength or durability of the structure but is of great importance from the standpoint of consumer preferences.

Exterior joints can be entirely concealed by attaching finish siding or some other coverage to the plywood or other sheathing at the site, but this increases cost. One treatment is to emphasize the joints with covering strips. A common practice with houses of modern design is to bevel the edges of abutting panels, which results in a V-joint. Interior joints may be similarly treated or covered with wallpaper, or accenting moldings, or insert strips.

The problem of seam treatment at joints is eliminated when roomsize sheets of wallboard are used and rooms are so planned that joints between sections of walls are concealed by intersecting partitions. Conventional moldings are then used to cover corner joints at walls, ceilings and partitions.

The principal problem, however, is to obtain an effective linkage of the component parts of the walls, partitions, floor, ceiling and roof. Methods include bolted joints between panels and at corners; joint between panels utilizing male and female studs; corner joint with cover of one panel overlapping edge of other; mullion joint; corner joint with mullion; joint consisting of plywood tongue fitted into groove between a pair of studs of opposite panel; spline joint in floor panels.

(2) *Joints Between Foundation, Floor and Walls*—Joints between roof and walls must of course anchor the entire building. A general practice is to join the floor to the foundation sill, which has been fastened to the foundation and the walls to the floor.

Other techniques used are: recessed foundation sill with wall panel overlap; sill plate bolted to foundation, conventional joist and floor construction, and prefabricated wall panel with base opening for electric wiring; and floor and wall panels clipped to foundation by means of channel fitted with flange for wall support.

(3) *Joints Between Roofs and Walls*—Joints between roofs and walls must function to resist both lateral and lifting forces such as high winds, and to resist outward thrust. A joint similar to that in the conventional pitched roof framed with rafters and joist can be applied to a prefabricated house. The roof rafters are pre-assembled with plywood coverage



THE SLAB FLOOR FOUNDATION is the prevailing type for prefabricated houses in the lower price brackets, but full basements are often used. The builder prepares the foundation in advance of delivery of the packaged house from the factory

in sections and nailed to the ceiling joists at the building site.

Other methods are: pitched rafter seated in joist and assembly fastened with a single lag screw to panel plate; block joint with lateral thrust exerted against block attached to second-floor panel, which is in turn fastened to top wall plate; truss-type roof; rafter firmly held to joist or lower chord of truss with nail-glued gusset plates and truss fastened to wall plate; and flat roofs consisting of stressed-cover panels which act as box beams.

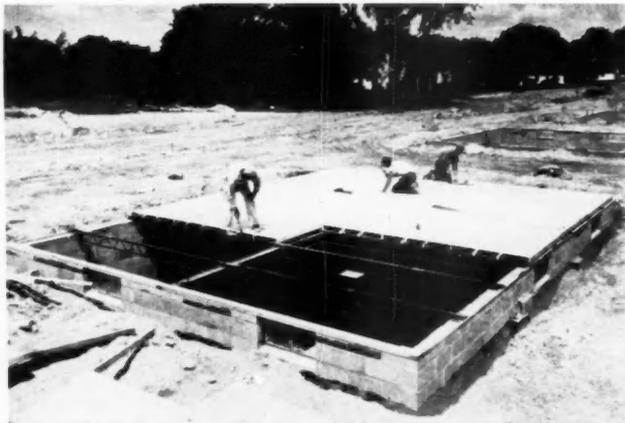
Protection of Exposed Joints—Faulty or insufficiently protected joints at eaves and foundations, around windows and doors, and at other exposed points in the house can cause serious difficulties from moisture entering the structure through them. The use of drip caps, metal

flashing and sloping window sills in window construction is widespread. Millwork with these factors provided for can be purchased ready for installation. Such critical points as the joints at the eaves and the foundations are usually protected with cover boards, flashing, molding, or water tables.

Shop Assembly Operations

The basic assembly operations involved in production of panelized construction usually comprise (1) assembly of framework; (2) installation of necessary wiring, framing for fixtures, duct work, water pipes, and similar equipment; (3) attachment of the framing of window and door openings; (4) fixing insulation and

(Continued on page 326)



FINISHING WORK is scheduled as best suits the individual builder's program. This may take as short a time as three weeks



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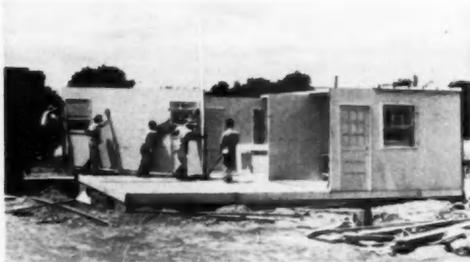


National Homes prefabricated panels and structural parts are commended by Parents' Magazine as advertised therein.





THE MANUFACTURER'S TRUCK arrives at the foundation at the start of a working day. The first panels are unloaded



CENTER BEARING WALL is in position. First ceiling sections are temporarily located

(Continued from page 324)
vapor barriers in place; (5) attachment of cover materials and window and door trim; and (6) painting and other finishing.

Assembly of Framework—Nearly all prefabricators assemble panel frameworks on jigs. The principal factor involved is to match all framing joints as precisely as possible, so that the surfaces to which covers will be attached are in a single plane at all joints. The need for precision varies somewhat with the type of construction. Nailed panelized construction of conventional framing, sheathing, and siding is less critical than, for example, glued stressed-cover construction.

Framing may be assembled with

nails, with corrugated fasteners of the type used in box manufacture, or some other mechanical fastening. Framing joints are rarely glued. For large frameworks of stressed-cover type, nailed joints are advisable to secure adequate strength for handling in further assembly operations.

Installation of Equipment

Unless otherwise provided for, all necessary electric wiring, backup plates for switches and other electrical fixtures, furnace ducts, framing for heat registers, water and plumbing pipes, gas lines and similar household equipment must be installed before the covers are attached to the panels. Some prefabricators design their panels so that some of these ap-

purtenances can be installed on the site; for example, using a wall panel with the inner face open at the bottom and with studs bored for electrical conduit so that a baseboard conceals the opening in the finished house.

Installation of Doors & Windows

Generally speaking it is a simple matter to attach door and window framing or the complete unit in place in a properly framed panel. A separate jig may be used for each combination of doors and windows, although frequently a single large adjustable jig may be used to assemble sections of various lengths. The guide blocks of the jig automatically position the door or window framing as

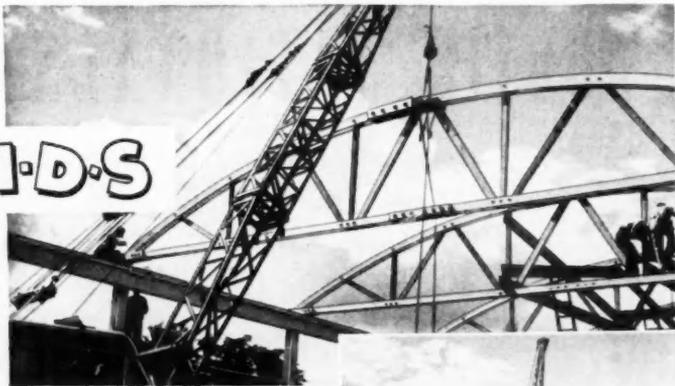
(Continued on page 328)

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without special equipment or labor, 4. Fire resistance, 5. Dependable Rilco engineering to solve problems of unusual loading conditions.

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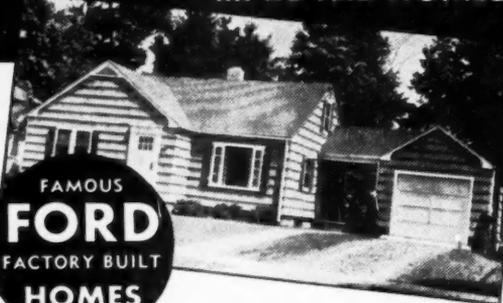
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(Continued from page 326)

well as the main studs and plates. To this rough framing the finished door and window framing is then attached as in conventional housing; trim, however, generally cannot be installed until the wall covering has been attached.

Insulation

Blanket-type insulation is usually installed between studs and joists by stapling with a hand stapler of the type operated with a hammer. The principal precaution necessary is to see that the insulation fits tightly to the frame to prevent heat loss through this seam. Stapling must be secure enough also to prevent sagging of the insulation during the life of the house. Some prefabricators fasten the insulation with wood or heavy fiberboard nailing strips to make a tight joint between insulation and framing.

Rigid fiberboard insulation can be tacked to base strips nailed to studding or inserted in pre-cut grooves in the studding. The latter method is the simpler from the standpoint of assembly.

Siding

Siding in prefabrication is attached largely by the same nailing techniques as are followed in conventional site construction. One method combines plywood nail-glued to the framework in the shop with siding applied at the site. This permits use of any exterior coverage by conventional methods, thus effectively concealing panel joints. Interior wall partitions are assembled with nail-glued plywood on both sides of framework; floor and ceiling panels may be covered with nail-glued plywood on one side.

Attachment of Trim

The final assembly operation preceding application of finishes is usually the application of door, window and other trim. In general this is a simple carpentry operation, and includes puttying and caulking to assure weather-tight joints around wall openings.

Painting Operations

Finish painting is done at the site after erection has been completed; the priming coat is applied in the shop.

Rollers suitable for manual operation are faster than brushes but a brush must still be used for trim, sash, doors and moldings. Dipping by dip tank and drain rack for applying wood sealer to prefabricated panels is widely practiced. But since interior and exterior surfaces require different kinds of coatings generally, the

(Continued on page 330)



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material specifications

WALLS—Studs, plates, 2x4 16" o.c., single plate bottom, double plate top. Insulation, 1/2" enclosed Rock Wool, vapor barrier. Wall panels sheathed with 1/2" Insulite. Siding paper, 15# asphalted felt; siding 8" bevel red cedar or equal. Corner braces, let-in, FHA approved.

WINDOWS—Jamb, 2x6 fir. Double hung, installed in wall panels, glazed, weather-stripped. Weatherstripping, zinc or aluminum. Overhead sash balances.

PARTITIONS—Precut 2x4 studding, fir, 16" o.c. Non-bearing, for rock lath or drywall. Random 2x4 and 4x4 supplied for double plate and door headers.

ROOF—Trussed-roof construction. Fir 2x4 with 1/2" plywood gussets nailed over joints. Easy cornice installation. Sheathing, 1x6 boards. Underlay, felt 15# asphalt impregnated. Shingles, 210; Gables, prefabricated V-joint T&G panels, screened f&v's. Ceiling insulation, 24" blanket with vapor barrier.

DOORS—Interior, 1 3/4" birch, flush. Exterior, r&ar, 1 3/4" sash type, glazed; front, 1 3/4" birch flush type. Front and rear doors equipped with hardware. Frames, 2x6 rabbeted fir or pine, precut, packaged.

FLOORS—Material supplied, 1x6 boards. Precut bridging, 2x8 or 2x10 joists, 2x8 or 2x10 material for box sill, 1x10 or 1x12 pine apron material, drip cap, beam material, nails.

INTERIOR TRIM—Each window, precut and bundled; each door, precut and bundled. Base and shoe or combination base and shoe, pine.

CABINETS AND ACCESSORIES—"Youngstown" Kitchen and Medicine cabinets, all steel, baked white enamel. Cabinet sinks, single or double drainboard, single or twin bowl sinks; chrome plated faucet and strainer, provided with or without spray attachments. Dishwasher and garbage disposal units if desired. Bread boxes, vegetable boxes, mats, flour bins, furnished.

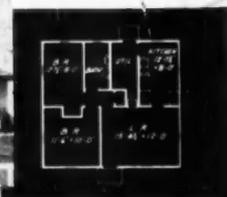
INTERIOR WALL FINISH—For plastering, 3/8" or 1/2" rock lath, for drywall, 1/2" gypsum board, 4x8' up to 4x12' sizes. Joint tape, compound, 5 D cement coated nails with gypsum board.

HARDWARE—Furnished complete, including interior and exterior door and cabinet hardware, door stops, drawer pulls, bath hardware, nails for siding, framing, roofing and drywall.

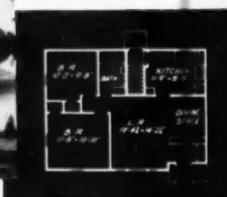
For full details, prices and delivery, write on your letterhead.



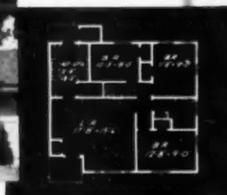
The HARMONY
28' x 25'9" — 2 bedrooms



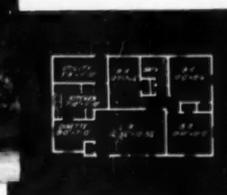
The MELODY
32' x 24' — 2 bedrooms
(with basement)



The HOLIDAY
31'6" x 28' — 3 bedrooms



The GENTRY
38' x 24' — 3 bedrooms



l u m b e r e n g i n e e r i n g c o m p a n y

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DEARBORN, MICHIGAN

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ALL EXTERIOR WALLS and ceiling sections have now been placed and work begins on the roof.



RAISING THE ROOF. Peak formed by two sections placed together. Gable ends are then hoisted into place



BY THE END of the first day, the house is roughed in and under roof

(Continued from page 328)
usefulness of dip tanks for prefabrication is limited.

Spraying is a most versatile high-speed method of applying coatings. It requires skilled workmen who can gauge the amount of paint applied and also equipment and working conditions must comply with various State Industrial Commission rules to safeguard against hazards of fire and health.

Transportation to Site

Prefabricated house parts are commonly transported to the site by trucks which are designed and fitted for safe loading of large structural units. Two types of loading are used: racking and stacking.

Racking consists of loading panels vertically, bottom edges seated between blocks fixed to the truck floor. Stacking consists of flat piling. Both trucking and storage require that adequate safeguards be employed to prevent deforming panel edges by rough treatment or exposure and damage to joints.

Storage

Planning to deliver parts at the building site the morning that the shell is to be erected usually eliminates the need for site storage facilities since millwork and other interior parts can be stored in the house itself.

For large volume construction, schedules should be planned well in advance so that as parts for a house arrive, its foundation and sub-floor are in place and walls and roof can be erected during a single workday.

Site Assembly

This has been preceded by preparation of the foundation, and generally consists of erection of wall, ceiling and roof panels, together with interior partitions; all interior and exterior finish; application of roofing; installation of electrical, plumbing, heating and other fixtures; painting and other finishing.

Foundation construction for prefabricated house differs in no important respect from that for comparable conventional houses. The materials and building methods are the same, and design dimensions, such as thickness of walls and width of footings, are frequently prescribed by local building codes.

Erection Procedures

Most prefabricators plan their assembly operations to get the outer shell under roof in a day or less. Everything that will contribute to speedy shell assembly, including the laying of base plates for wall panels, should be done beforehand to help speed shell erection. All equipment needed to move and lift panels into

place and fasten them together should be at the site, ready for use. Careful planning of details, from the loading of the truck at the shop so as to permit unloading of panels in the order needed, to an orderly plan of erection of panels in sequence is strongly advised by experienced builders.

All parts can be numbered in sequence of erection and such numbers clearly stenciled before leaving the shop so that loading will follow an orderly pattern and confusion on the site be avoided.

Sequence of Operations

This will depend somewhat on the type of house. A typical system, however, is to back up the truck-load of "packaged" materials to one corner of the building foundation. Erection of corner wall panels may begin at the diagonally opposite corner. Interior partition panels are set up as erection of the outer walls reaches the point at which these panels are connected to them. When all wall and partition panels are in place except those at the corner where the truck stands, ceiling panels are next unloaded and attached to the walls and partitions.

Again, when the laying of ceiling panels has reached the corner of the building where the truck stands, roof panels are unloaded and laid on top of the ceiling panels in the order in which they will be erected. The gable end on the far side of the building may then be lifted in place, and the process of assembling roof panels begins, once more moving toward the end of the building where the truck stands.

The final wall panels in the unenclosed corner of the building are not erected until all ceiling and roof panels have been at least laid in place; in the meantime, flooring, trim and other finishing materials have been moved into the house and piled where they will be conveniently available and out of the way of other erection steps.

This sequence is, of course, varied



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to fit particular requirements of building design. It may be that the gable ends are so prefabricated that their installation logically follows that of the roof panels; and if in the interest of greater variety of house design some combination of prefabricated sections and conventional construction is adopted, the builder may use conventional construction for roofs. Then the erection of prefabricated walls and ceilings for each house is carried out much as described above.

With some types of panelized construction, builders find it convenient to position wall and partition panels temporarily with bracing until the entire shell can be permanently tied together. This method permits adjusting wall and ceiling panels more readily for exact fit at joints with roof sections, trusses, or rafters. Bracing may also be necessary to hold the first panels in place when shell erection begins, at least until enough wall and ceiling panels are up to afford the necessary rigidity without bracing.

Assembling of Panels

The ease with which panels are jointed together at the building site, assuming that they are initially properly designed, will depend principally upon the care exercised in handling and shipping. Panel joints of the tongue-and-groove type are especially susceptible to damage by rough handling and exposure to moisture for prolonged periods of time.

On the other hand, if well designed with beveled edges and proper tolerances, and protected with skid strips against damage in handling, assembly is simple. Various devices can be used—interior partitions, for example, can be moved into position on a dolly. Joints between panels are usually caulked either before or after assembly.

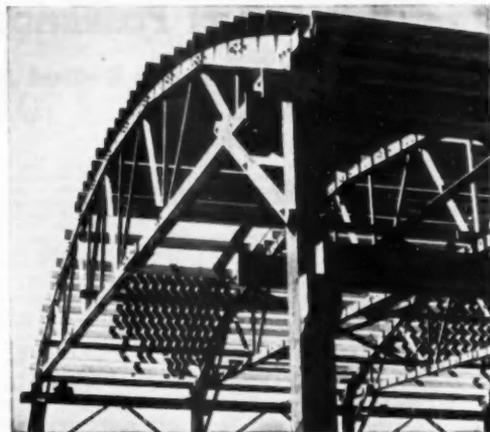
Metal Prefabrication

While wood frame and plywood are perhaps the most commonly used materials in prefabricated houses, aluminum, steel and concrete are also adaptable. Strip steel framing members of about 12 to 16-gauge are increasing in use. Light in weight, easy to handle, they do not require any special tools and are often designed for the attachment of other materials by means of nails. In lower-cost basementless construction, provision can be made when pouring first floor slab and foundation walls for anchoring steel plate by means of anchor bolts placed in the concrete or masonry. Holes are factory-punched in the steel plate to receive anchor bolts.

Strip steel frames used in wall construction consist of framing and bracing members welded together to form rectangular sections, which, when bolted together at the site, act as a complete wall frame.

Frameless steel construction consists of panels fabricated of a series of cells or large sheets. These cellular panels have long been used for sub-floors but now have been adapted for bearing wall construction and for floors so that framing is not required. These panels are used either as exterior or interior surfaces, finished except for painting.

Steel walls and roofs require backing with insulating materials to retard heat conduction and also air space between the metal and insulation to take care of possible condensation within the wall.



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Plants: Bakersfield, Oxnard, San Jose, Chico, El Monte, San Diego, Modesto, Phoenix, Amarillo, Spokane, Minneapolis, Gary, Milwaukee, Sacramento.

Modername Homes, Inc.
619 Insurance Bldg., Denver 2, Colo.
Distribution Area: Colorado and east there of.

National Homes Corp.
Lafayette, Ind.
Plants: Lafayette, Ind.; Horseheads, N. Y.
Distribution Area: National.

National Log Construction Company of Montana
Box 462, Thompson Falls, Mont.
Distribution Area: Montana, Idaho, Washington, Oregon, Wyoming.

New Century Homes, Inc.
Clinton, Ind.
Distribution Area: Indiana, Ohio, Michigan, Illinois, Kentucky.

New Mexico Housing Co.
2003 Denton Dr., Dallas, Texas.
Distribution Area: National.

Nicoll Lumber Co.
2602 Middlefield Rd., Redwood City, Calif.
Distribution Area: San Francisco Bay area.

Norge Cottages, Inc.
30 Broad St., New York 4, N. Y.
Plant: Yonkers, N. Y.; Kristiansand S., Norway.
Distribution Area: National.

Northern Homes, Inc.
20 Ridge St., Glens Falls, N. Y.
Plant: Hudson Falls, N. Y.
Distribution Area: New York, New Jersey, Massachusetts, Connecticut, Pennsylvania, Vermont, New Hampshire.

Page & Hill Homes, Inc.
Shakopee, Minn.
Distribution Area: Minnesota, North Dakota, South Dakota, Iowa, Wisconsin, Illinois, Kansas, Nebraska, Wyoming, Montana, Colorado.

Pace Woodwork Co.
Blue Rock & Turill Sts., Cincinnati 23, Ohio.
Plant: Hamilton, Ohio.
Distribution Area: All states east of the Rockies.

Plymouth Bldg. Corp.
395 Long Ave., Hillside, N. J.
Plant: Linden, N. J.
Distribution Area: New Jersey.

Prairie Construction Co., The
117 North Second Ave., Arcadia, Calif.
Distribution Area: California, Nevada, Arizona.

Precision-Panel Homes, Inc.
1701 Harbor St., Stockton 92, Calif.
Distribution Area: California.

Richmond Builders, Inc.
425 N. W. "E" St., Richmond, Ind.
Distribution Area: Indiana, Ohio, Illinois, Kentucky, Michigan.

L. H. Biedel Lumber Co.
Marlette, Mich.
Distribution Area: Mich.; Northern Ohio, Ind.

Scott Lumber Co., The
1112 Chapline St., Wheeling, W. Va.
Distribution Area: Ohio, West Virginia, Pennsylvania; any place within 200 mi. of Wheeling.

Semco, Inc.
Seney, Mich.
Distribution Area: Michigan, Ohio, Indiana, Illinois, Wisconsin, Minnesota.

SOD Corporation
928 First National Bank Bldg., Springfield, Ohio.
Distribution Area: Ohio.

Southern Mill & Manufacturing Co.
P.O. Box 1087, Tulsa 1, Oklahoma.
Distribution Area: Mid-Continent states.

Southwest American Homes
Box 16, Houston 1, Texas.
Distribution Area: 300-mile radius of Houston.

Swift Homes, Inc.
615 State St., Clairton, Pa.
Plant: Clairton, Pa., and Elizabeth, Pa.
Distribution Area: Mich., Ohio, W. Va., Pa., N. Y., N. J., Md., Wis., Iowa, Ky., Tenn., Ala., Ill., Ind., Va.

Thyer Manufacturing Corp.
2857 Wayne St., Toledo 9, Ohio.
Plants: Toledo, Ohio, Collins, Miss.
Distribution Area: All states east of Mississippi River, except New England.

Timber Structures, Inc.
N. W. Yeon Ave., at 29 St., Portland 8, Ore.
Distribution: National.

Unit Structures, Inc.
Peshigo, Wis.
Distribution Area: Midwest and East Coast.

Virginia Lee Homes, Inc.
Dexter Horton Bldg., Seattle, Wash.
Distribution Area: Western half of Washington.

Weakley Lumber Co., Inc.
Buckeye and 26th, Newark, Ohio.
Distribution Area: Ohio.

West Coast Mills
555 State St., Chehalis, Wash.
Distribution Area: West Coast and as far east as Mississippi River, also Mich., Ill., Ohio, Ind.

Western-Built Homes
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Winner Manufacturing Co., Inc.
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Distribution Area: 300 miles of West Trenton.

Yetter Homes, Inc.
P.O. Box 505, Savannah, Ga.
Distribution Area: Alabama, Florida, Georgia, Louisiana, Mississippi, N. C., and S. C.

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Engineered Buildings (Alberta) Ltd.
515-51th Ave., East, Calgary, Alberta.
Distribution Area: Alberta.

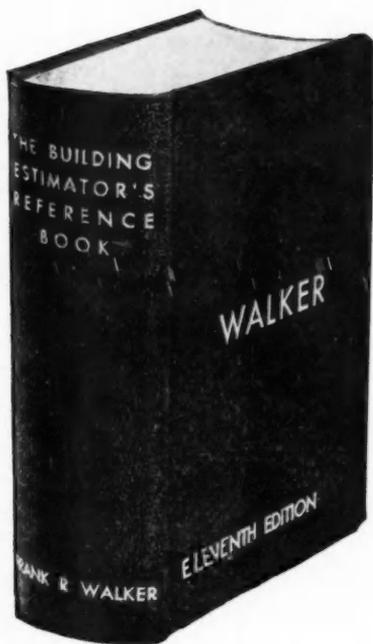
The Holliday Co. Ltd.
Burlington, Ontario.
Plant: Hamilton, Ontario.
Distribution Area: Ontario.

Linwood Manufacturing Ltd.
Box 40, Station "H", Toronto 13, Ontario.
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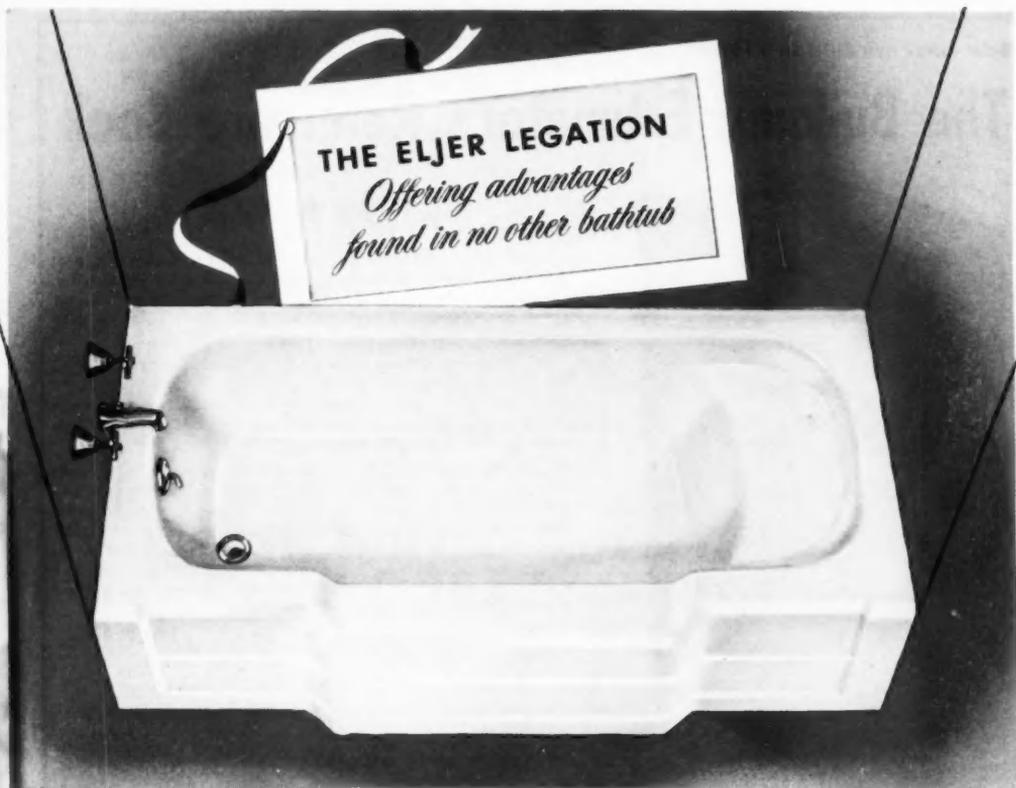
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THE requirements for adequate plumbing in a house will vary. A two or three person family can get along very well with one bathroom. Larger families, or people who do much entertaining, will find that two baths, or a bath and powder room combination are not merely desirable but necessary.

Minimum needs require a bathroom with tub and shower facilities, a kitchen sink, laundry facilities, and at least one outside hose connection. Only in the lowest-cost homes should the kitchen sink and laundry facilities be combined, or should the tub and shower combination be replaced by a shower only.

If there is one bathroom in the house, it should be placed so as to be accessible but not conspicuous. It should be possible to get to the bath without going through other rooms such as a bedroom. Avoid placing the bathroom door so there is a direct view from the living area into the bath.

In one-bathroom houses, a good arrangement is to place the tub in one compartment and the toilet and lavatory in an adjoining one, thus permitting double use of the room.

Installation Economies

For most economical installation, rooms having plumbing should be placed close together to avoid long runs of pipe. In a one-story house, the bathroom can be placed next to the kitchen or utility room. In a two-story house, the bath can be placed over the powder room, and the kitchen over the laundry and basement toilet.

The popular ranch-type of house

commonly has the kitchen and utility room at one end or at the center of the house, and the bath at the other end. In such cases, kitchen and utility room should have a common wall, as should the bath and powder room.

Provision for Future Changes or Additions

In many instances, owners will feel that powder rooms, basement toilets, or even additional baths may be added later. If such future fixtures are "roughed in"—drain and water piping installed in the walls—the only future cost will be for fixtures and setting, and the expense of tearing out walls will be avoided.

Water Supplies

The water-supply system should deliver water to the fixtures at the rate it is needed. Water pressure, pipe size, the number of fixtures in use at any one time—all are factors in determining the water needed.

Water is brought into the house from the city main or well, in underground pipes, to prevent freezing and to protect the pipes. A 1-inch galvanized or lead pipe, or 3/4-inch to 1-inch copper tubing will usually provide adequate water under normal city pressure of 30-50 lbs. In cities, a "roundway" will be provided at the property line, at which the water may be shut off by a key passing down through a metal or fibre tube extending up to ground level. A shut-off valve must also be provided inside the foundation wall or in the utility room. The meter, if used, is installed at this point.

Water-supply piping inside the house may be of galvanized iron,

PLUMBERS, FIXTURES and ACCESSORIES

Plumbing and the Home

*Adequate Plumbing
Installments
Layout for Comfort and
Inexpensive Installation
Future Changes or
Additions*

Water Supplies

*Materials, Underground
and Interior
Arrangement for Best
Use and Performance*

Drainage

*Materials, Cast Iron, Clay
Tile, etc.
Arrangement—Important
Points of Drainage*

Bathroom Fixtures

*Tubs
Lavatories
Sinks
Shower
Cabinets and Accessories
Good Design*

Kitchen and Utility Room Fixtures

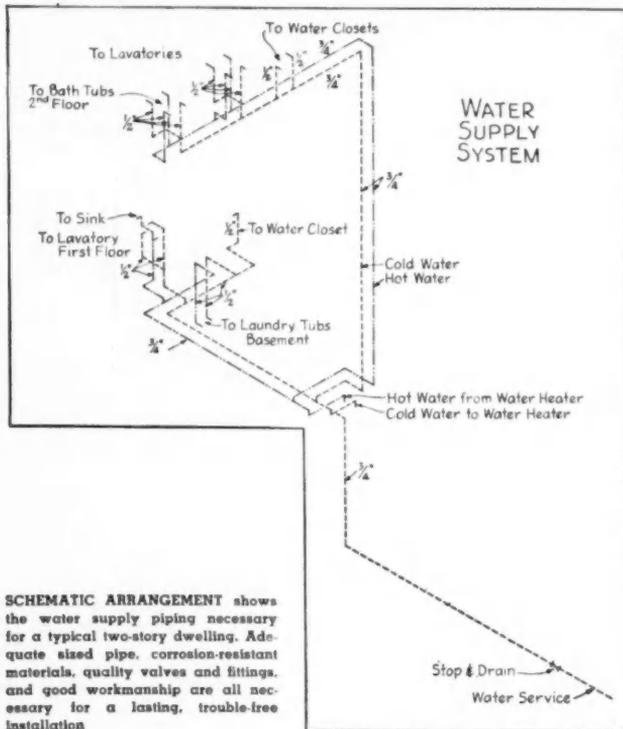
*Sinks
Water Heaters
Water Softeners
Laundry Trays*

Good Installation Practices

*Workmanship
Plumbing Codes
Testing
Maintenance*



WATER SUPPLY PIPING for tub and shower, lavatory, and closet are shown "roughed in" in the partition. Copper tubing is used for water supply, waste and vent lines



SCHEMATIC ARRANGEMENT shows the water supply piping necessary for a typical two-story dwelling. Adequate sized pipe, corrosion-resistant materials, quality valves and fittings, and good workmanship are all necessary for a lasting, trouble-free installation

copper tubing, or brass pipe. Galvanized pipe is the most common; connections are made with standard tapered threads and fittings. Certain types of water may attack galvanized pipe over a period of years. Brass pipe, which is resistant to corrosion, is installed with screw threads and fittings. This makes an excellent installation but is expensive. Copper tubing is increasing in popularity for water supplies. Connections to fittings are made with swaged or soldered joints, with screw-type fittings for connections to fixtures.

Access panels should be provided at the supply end of bathtubs, and other valves should be located in relatively accessible locations in case repairs are necessary. Air chambers should be provided for all fixtures to prevent "water hammer" when valves are suddenly closed. All piping should be at a slight pitch to permit draining down of the system to a low point if ever necessary.

Drainage System

Water is forced through the supply pipes by pressure, but drainage of wastes is by gravity. Therefore, all drainage lines must have a pitch to insure proper flow so that wastes are carried out to the street or septic tank. Traps must be provided at all fixtures to prevent sewer gases from getting into the house. These should be accessible for cleaning if necessary. Waste lines must be vented to equalize air pressure throughout the system to avoid siphonage of traps. In climates subject to freezing, the vent stack or stacks extending through the roof must be increased to prevent hoar frost from stopping the vent, which could permit siphonage of traps.

Some plumbing codes require that kitchen and laundry wastes be passed through a grease interceptor or catch basin to separate out grease and oil. If this is required, separate waste lines must be provided.

Downspouts may be connected to the city sewer, or to a separate storm sewer, which reduces the possibility of water backing up in periods of heavy rainfall. If a common sewer is used for wastes and rain water, the connection of the downspouts to the city sewer should be made beyond the catch basin, and beyond a back-water valve, if this is used to keep water out of the basement. In extreme cases, it may be necessary to install a sump and sump pump to handle the problem of water backing up to basements because the sewers are too high in the street, or because of insufficient capacity.

Clean-out plugs should be provided at proper points in the system. Special

drainage-type fittings should be used throughout to prevent waste material from accumulating.

Materials for the drainage system are often specified by local plumbing codes. The commonly used materials for house sewers outside the house are clay tile, fibre or concrete pipe, and cast iron. Tile is cheapest and most easily installed, but may crack with settling of the ground, permitting roots to get in the pipe and obstruct the flow. Cast iron is most expensive, but is permanent and trouble free.

Inside the house, piping for drainage may be of cast iron, clay tile, or fibre pipe for subfloor sewers, and of cast iron, galvanized steel or wrought iron, or copper, brass, or lead for above-ground piping. Cast iron is most commonly used for 3-inch and 4-inch lines handling toilet wastes, while smaller sizes are galvanized pipe or cast iron.

Bathroom Fixtures

Bathtubs are made either of cast iron or pressed steel, having a hard coating of porcelain enamel which is resistant to abrasion and corrosion. Present style is for an apron tub, having a skirt extending to the floor on all exposed sides and end. A roll rim, single-shell type of tub is made for economy installations, and is a great improvement over the old footed tubs. A great variety of styles are made; corner, recess, square, with or without seats, and either white or numerous colors. The 5-foot length of



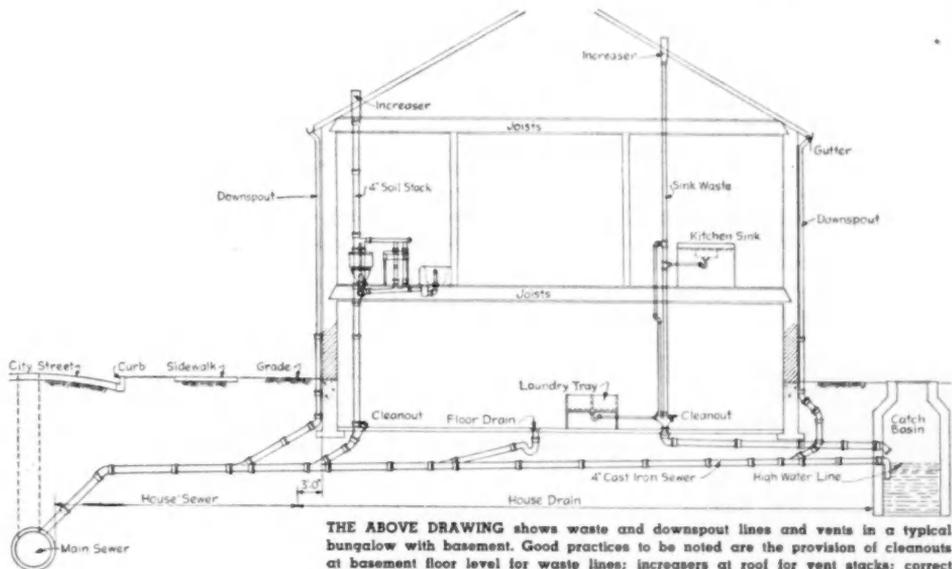
VITRIFIED CLAY TILE is extensively used for underground sewage lines. Connections are shown leading from both the house sewer and a catch basin to a septic tank

tub is usual, although 4½- and 5½-foot tubs are made. The square tubs occupy a 4-foot square space, and solve many otherwise difficult space problems. A special receptor type of tub permits either showers or sit-down baths and occupies a space only 42 by 31 inches. When used with a corner lavatory, bathrooms can be fitted into a space as small as 6 by 5 feet. However, most building codes specify

minimum room areas, including bathrooms.

Cast iron tubs are supported at the back of the tub by 2 by 4's nailed to the studs, or by special hangers. The tub apron supports the front, and wedges are placed under the tub body to keep it from shifting. Pressed steel tubs must be set in sand or grout or supported otherwise.

Designs of modern bathtubs reflect



THE ABOVE DRAWING shows waste and downspout lines and vents in a typical bungalow with basement. Good practices to be noted are the provision of cleanouts at basement floor level for waste lines; increasers at roof for vent stacks; correct venting of all fixtures

STYLE

Style has a definite place in today's bathroom design—for the bathroom accessories you choose today will do much to determine the appearance and convenience of your bathroom for years to come.

This new Crystalcrome towel ring is the latest addition to Hall-Mack's Crystalcrome line of bathroom accessories—and it combines sparkling beauty and sensible utility in a new styling that adds a dramatic touch to bathrooms.

The large stirrup-type towel ring is made of solid, crystal clear Lucite which will not break or discolor—and has a chrome plated base. Two rings—fastened to the wall or door—a "Mr." and "Mrs." pair—will add beauty and convenience to any bathroom.

This is but another example of Hall-Mack quality—expressed "STYLE"—another reason why Hall-Mack is the only answer to Quality Bathroom Accessories.



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the constant striving of the industry for the last word in safety, durability, and appearance. Today's tubs have broad, low, flat rims, so that toilet articles may be placed on the rim near the wall. Bathers may sit or dress on the wide outer rim of the tub. Flat, non-skid bottoms prevent falls while bathing.

Lavatories

Lavatories are of two general types: the flat-top style, having the faucets on the same level as the rim of the fixture; and the shelf-back model, having the supply valves on an inclined or vertical ledge. The flat-top style is most economical. Set about two inches away from the wall, it permits cleaning behind it, but the wall should be waterproofed against plaster damage. A variation has the faucets at rim level, but a straight back fitting against the wall for protection.

Ledge or shelf lavatories have space for toilet articles. This style lends itself well to a mirror installation which comes down flush with the back of the fixture.

Lavatories may either be wall hung or supported on legs. In either case, blocking must be built into the wall to anchor the unit. Special brackets give support to wall-hung fixtures, while chrome-plated legs combined with towel bars give graceful support at the front for other styles.

A new development in bathroom styling is the countertop lavatory. These are designed to fit into a counter top of linoleum, glass, laminated plastic, or other materials. Such an installation makes possible combining two lavatories in one counter top for greater utility; also, a dressing table may be added. Extra storage space or hampers below the counter are also a possibility.

Size of lavatories range from 18 by



GRACEFUL CHROME LEGS and wide shelf spaces are featured in this lavatory. Trap is of type readily disassembled



TWO LAVATORIES are set into the continuous curved shelf which also serves as a vanity table. Door at right leads to separate compartment for shower and toilet. Glass panels and fluorescent lighting provide correct illumination and point up modern decor

15 inches up to 28 by 22 inches and larger. Corner lavatories save space in small bathrooms. Small dental lavatories, set a little higher than the regular basin, are recommended by health authorities, and reduce bathroom congestion while taking little additional space.

Faucets are usually supplied with the lavatory. The discharge spout should be at least one inch above the rim to prevent back siphonage. The center discharge type of spout is preferred so that water of the correct temperature may be run for washing. A stop or shut-off valve at the wall under the lavatory regulates the maximum stream, and permits replacement of faucet washers without shutting off the water for the rest of the house. All good quality faucets have heavy chrome plate over brass bodies. Only faucets which permit replacement of all wearing parts should be installed.

Standard 1/4-inch "P" traps connect the lavatory to the wall. New designs minimize stoppages, and permit easy removal and replacement for cleaning. Polished or satin chrome plating adds to the appearance of the unit.

Toilets

Three major types of water closets are in common use; the siphon jet, the reverse trap, and the washdown. The washdown costs the least and the siphon jet is the most expensive. The latter is preferred because it has a deeper water seal, a larger trapway, a more positive flushing action, and a much larger water area. The modern styling of siphon jet bowls adds to the appearance of the bathroom in which they are installed.

The reverse trap bowl, considered

a "best buy" in the trade, is the largest selling closet. It has a minimum water seal of 2 1/2 inches, rim and jet flushing action, but is not so positive or quiet as the siphon jet.

Any of these types of closet bowls may be used with any type of tank; one-piece, close coupled, or regular wall-hung tanks. The washdown closet, for economy, is made only with wall-hung tanks, but the siphon jet and reverse flush bowls may be made also with close coupled or integral tanks. The close coupled tank generally sets away from the wall and is bolted to the bowl. The integral tank is cast in one piece with the bowl. Both of these are very popular; it is estimated that 70 to 80 per cent of the closets sold today are of the close coupled design.

Flush valves differ from water closet tanks in that the water for flushing is supplied directly from the main, no storage tank being necessary. The flushing action is positive and direct. The flush valve may be adjusted for the volume of water supplied and the duration of the flushing flow. Since no tank is needed, installation is more compact, and these valves are reliable and efficient in operation. Because of the fact that a one-inch supply pipe and good pressure are required for operation, this type of valve is not ordinarily used in home construction.

Closet seats are usually of plastic or plastic coated wood. Painted wood can be used for low-cost installations.

Showers

An overhead shower will almost always be installed over the tub. The water and drain are there, and the additional cost of a diverter tub filler and shower head are negligible compared to the convenience of a built-in shower.

Separate shower units may also be installed in a second bathroom, or in the basement powder room. Built-in shower cabinets are available in a



THE ONE-PIECE CLOSET and tank unit above requires no wall support. This siphon jet model is quiet in operation

CRANE'S FAMILY "T"

*A practical idea for bathrooms
that can be adapted in many ways*



The "T" Bathroom features decorative woods, cork floors and grass-cloth wall in the dressing-table area, with bathing and toilet fixtures from Crane's Criterion group.

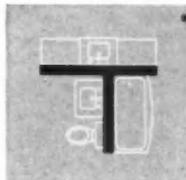
Here is an example of another Crane service to home builders.

A simple "T" shape partition turns the trick—divides this bathroom into three sections to give 3 bathrooms in 1! All the facilities of the bathroom may be used simultaneously by different members of the family, because sliding doors provide privacy for each section.

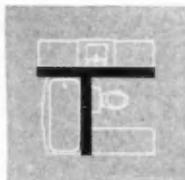
The flexible Family "T" bathroom is one of forty-eight rooms in the new Crane "Sketch Book of Ideas," an important part of Crane's new service to builders. This remarkable book can be used to help prospective home owners visualize and select new arrangements for bathrooms, kitchens and utility rooms.

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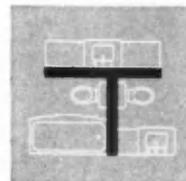
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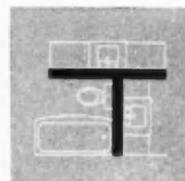
Another variation separates the lavatories.



The "T" plan with a single lavatory.



Two compartments with closets in this "T" plan.



Another way to provide separate lavatories.

COME TO CRANE FOR IDEAS



PREFABRICATED SHOWER STALL and receptor units may be shipped cheaply in knocked-down form and easily assembled on the job

variety of sizes from as small as 32 by 32 inches. Prefabricated shower units consist of a concrete or metal receptor which is waterproof and does not require a lead pan or membrane, and metal enameled walls. These are shipped knocked down and may be assembled and waterproofed on the job.

Built-on-the-job showers may be of ceramic or other tile, and require lead pans and waterproofing of walls. Additional support is also necessary to handle the extra weight imposed by these materials.

Shower valves may be part of the tub installation, where the diverter mixer faucet also controls the shower; a simple two-valve set-up leading to the shower head; a mixing valve, where one valve controls both the hot and cold water, or a thermostatic unit incorporating a mixing valve plus automatic temperature adjustment when the flow of either hot or cold water is changed by water demand elsewhere in the house.

Shower doors, both for privacy and keeping the bathroom floor dry, are available in a wide range of styles, degrees of ornamentation, and prices. Stainless steel and etched or frosted glass are typical materials, and an attractive shower door can contribute much to the beauty of a bathroom.



A DECORATIVE CAST TERRAZZO RECEPTOR and glass door are features of this shower unit for corner installations

Cabinets and Accessories

The medicine cabinet over the lavatory, standard for years, has developed into a wide variety of bathroom storage units. Cabinets for toilet articles are larger, have bigger and better mirrors, and are also usually fitted with lights for shaving or make-up. Both wood and metal constructions are used. Built-in holders for



FLUORESCENT LIGHTS at the sides, an interior light with door-operated switch, toothbrush rack and razor blade disposal slot are features of the modern medicine chest in metal

tooth brushes, shaving accessories and razor-blade disposers are common, and one unit even features a locked compartment for dangerous medicines in households having small children.

Additional storage space for towels, linens, cleaning articles, etc., is provided by built-in and under-the-lavatory cabinets. An interesting arrangement is the installation of doors on both bedroom and bathroom sides of the cabinet, permitting access from either room.

Bathroom cabinets and storage units other than medicine cabinets are available in wood and metal units for custom installations. Basic units may be combined according to space requirements. Built-to-order drawer and cabinet facilities are combined with counter-type lavatories and laminated plastic tops to combine space saving, smartness and luxury limited only by the owner's purse and the architect's imagination.

Towel racks, soap dishes, paper holders and other accessories are occasionally of ceramic tile but more commonly are chrome-plated brass. Recessing of such units into the walls adds smartness.

Separate bathroom heating units may be installed for taking the chill off the room on cold mornings. A recent development is the use of electrically heated radiant glass panels, which are decorative as well as practical.

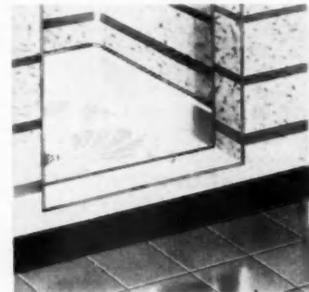
Reduction of bathroom noise should



THE POLISHED CHROME HOLDER shown above combines toilet paper holder, magazine rack, ash tray, and shelves for other articles to provide the ultimate in convenience

be given consideration. The sound of the bathtub baritone, the flushing toilet, and the gurgling faucet may be minimized in a number of ways. Quiet-flush closets of the siphon jet type are more efficient than others, and cost only slightly more. The bathroom may be flanked by closets to provide dead-air space. Acoustical tile may be applied to the ceiling for sound absorption. The bathroom or powder room should open onto a hallway, rather than a room for use, and this will help in minimizing sounds. Air chambers should be installed in all fixtures to eliminate water hammer, and all piping should be of correct size, properly supported to prevent noises from the water supply.

Good bathroom design will naturally indicate the use of materials for floor and wall coverings suitable to the location. Floors and wall coverings adjoining lavatories, tubs, and showers should be resistant to water and steam. Asphalt, rubber, ceramic, and metal tile all add beauty and durability while providing protection. All surfaces should be easily cleaned. Modern design favors the liberal use of glass and glass products such as structural glass and glass block.



FOR DE LUXE INSTALLATIONS, cast terrazzo receptors may be combined with plastic or clay tile in built-in showers



AllianceWare
NOW FEATURES COMPLETE
BATHROOM ENSEMBLES

in Color!

Shelf-back lavatory, porcelain-on-steel Model L-2018 has a bowl of generous capacity with a deep apron at front and sides that creates an unusual smartness in style. May be wall-hung or installed with legs as illustrated.

AllianceWare porcelain-on-steel BA5 bathtub combines three important selling features—(1) an attractive panelled front (2) a wide seat with roll-rim and (3) a convenient height of 15 ½ inches.

For details of these AllianceWare units, write for complete specification sheets.



Close coupled reverse trap closet combination in a smartly-styled unit. The design incorporates quiet, efficient, whirlpool jet flushing.

WITH the recent addition of vitreous china closet combinations of recognized quality to the AllianceWare line, you can now install a complete AllianceWare bathroom in any of four decorator color selections—blue, pink, green, and suntan—as well as white.

With stainproof surfaces, modern styling and choice of units matched in color, AllianceWare also possesses practical details of construction and ease of installation that win the praise of architects and builders everywhere. Builders who plan quality homes of long-lasting attractiveness find AllianceWare fixtures offer both *builder* satisfaction and *owner* satisfaction.

AllianceWare
PORCELAIN ON STEEL

ALLIANCEWARE, INC. • Alliance, Ohio
Bathtubs • Lavatories • Toilet Combinations • Sinks



KNOW WHAT

THEY'RE

SAYING

ABOUT

BERMICO®

The Root-Proof Pipe For Outdoor, Underground, Non-Pressure Use

"In Big Demand!"

Bermico is a real money-maker. It is easy to stock and stack. Its fibrous, pitch-impregnated construction enables it to absorb jars and jolts without damage. It is a profitable, fast-selling pipe that turns over quickly.

"Handles Like A Dream!"

Bermico pipe is a cinch to install. Its convenient, 8-foot lengths, complete line of bends and couplings, and simplicity of assembly, make installation quick and easy. A few hammer taps seal joints tight—no joining compound is needed.

"No More Pipe Troubles!"

Users are delighted with Bermico's dependable, trouble-free service. It is corrosion-proof, unaffected by soil settlement, and is ideal for house-to-sewer connections, septic tank disposal units, downspouting and farm drainage.

Write Dept. HB-4 at our Boston office for information

BROWN

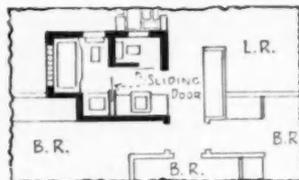


COMPANY, Berlin, New Hampshire
CORPORATION, La Tuque, Quebec

General Sales Offices: 150 Causeway Street, Boston 14, Mass.
Dominion Square Building, Montreal, Quebec

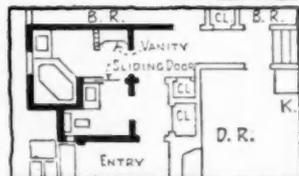
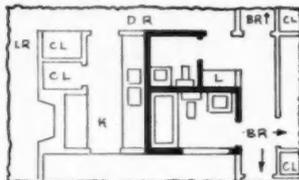
BOLKA & CELLULOSE PULPS • BOLKA-FLOC • NIBROC PAPERS • NIBROC TOWELS • NIBROC KNOTTOWLS • BERMICO SEWER PIPE, CONDUIT & CABLES • ONCO INSOLES • CHEMICALS

(Continued from page 342)

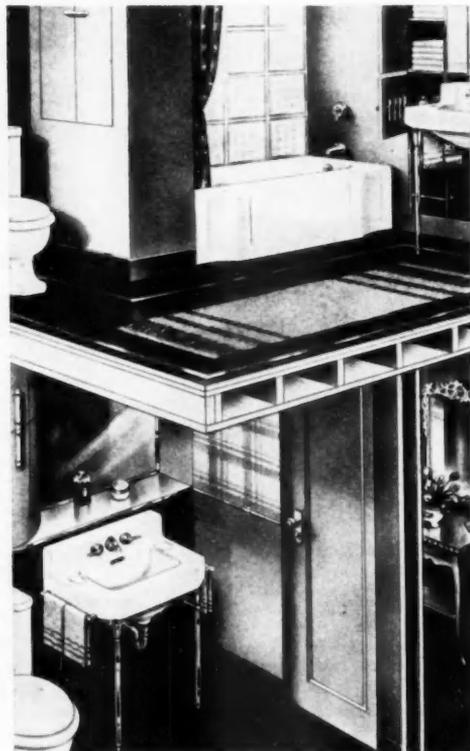


THREE PERSONS can use this five-fixture bathroom at the same time because of partitions and sliding doors. Under-vanity area provides in-bathroom storage

ALL PLUMBING FOR BATHROOM, powder room and kitchen is concentrated back-to-back for economy. Net result here is bath-and-a-half at small extra cost



DIVISION OF THIS BATHROOM with a sliding door and installation of two lavatories provides a separate powder room. Glass block separates vanity, tub



LOCATION OF THE POWDER ROOM directly below the bath economically permits both closets to use one stack

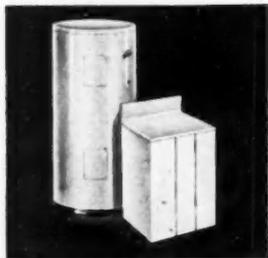
(Plumbing Fixtures, etc. Continue on Page 348)

"Luxury homes need electric water heaters,"



These rambling, farmhouse-style homes, built by Mr. Robert Stewart in Encino, California, are in the \$35,000 to \$50,000 price class. To shorten hot water lines, one of the two Electric Water Heaters is located in a corner of the garage.

SAYS CALIFORNIA BUILDER ROBERT STEWERT



"The people who buy my homes want luxurious but informal living," says Mr. Stewart. "That's why I usually include *two* Electric Water Heaters in each house. They not only provide automatic hot water and plenty of it—but I can install them efficiently, to avoid long pipe runs and insure economical operation. I'm able to do this because the *Electric Water Heater* has no flue or vent, and can be installed anywhere. Other features which customers like are the cleanness and long life of the Electric Water Heater. It provides the kind of service demanded today not only in upper-bracket homes, but in *every* type of home."

Equip Your Homes with
electric water heaters

THEY'RE WHAT
PEOPLE WANT!

ELECTRIC WATER HEATER SECTION
National Electrical Manufacturers Association
155 East 44th Street, New York 17, N. Y.

ALLCRAFT • BAUER • BRADFORD • CRANE-LINE SELECTRIC • CROSLY • DEEPFREEZE
FAIRBANKS-MORSE • FOWLER • FRIGIDAIRE • GENERAL ELECTRIC • HOTPOINT • HOTSTREAM
JOHN WOOD • KELVINATOR • LAWSON • MERTLAND • MONARCH • NORGE • PEMCO • BEX
RHEEM • SEPCCO • A. O. SMITH • THERMOGRAY • TOASTMASTER • UNIVERSAL • WESK • WESTINGHOUSE

RHEEM

PRESSURE-
PROVED!*

**The inner tank of every Rheem Water Heater is fully tested at a water pressure twice as great as ever needed for normal use. It has to be perfect before it leaves the factory!*



RHEEM Standard
SERIES 21, GAS



RHEEM Imperial
SERIES 47, GAS



RHEEM Custom
SERIES 31, GAS



offers You...

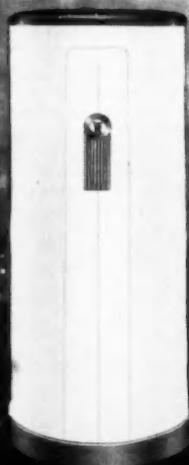
A COMPLETE SELECTION OF WATER HEATERS FOR THE HOMES YOU ARE BUILDING

What type of water heaters do you want for the homes you are building? Gas, electric or oil? What capacities? 20, 30, 40 or 100 gallons? An upright or a table-top electric? The finest quality Rheem Imperial with a 10-year warranty, a Rheem Standard or the Rheem Custom with a five-year warranty? *Rheem has them all!*

And Rheem has the national sales and service organization to make Rheem warranties mean everything they say! Rheem is in business to stay.

No other manufacturer offers such a wide selection of models. No other manufacturer offers such high quality at such low prices. And Rheem's large-scale, hard-hitting national advertising—built around the Pressure-Proved theme—makes Rheem a name that is highly acceptable to new home prospects. Rheem represents a plus value that will help make your homes easier to sell. See your Rheem Contractor NOW! Get the complete story on why Rheem is the best buy for builders!

RHEEM MANUFACTURING COMPANY, General Sales Offices, 570 LEXINGTON AVENUE, N. Y. 22, N. Y.
Manufacturing Plants in 22 Cities Around the World



RHEEM Imperial
SERIES 81, ELECTRIC



RHEEM Imperial
TABLE TOP SERIES 81, ELECTRIC



RHEEM Standard
SERIES 71, OIL



RHEEM Booster
SERIES 51, GAS



RHEEM Large Capacity
SERIES 41, GAS

You can rely on

Rheem

World's Largest Manufacturer of Automatic Water Heaters

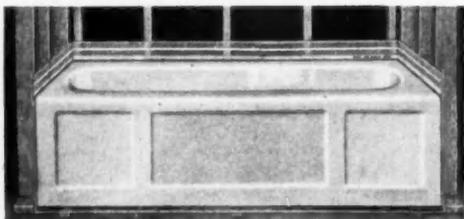
LUCKE LEAK-PROOF BATH-TUB HANGER

*For Housing
For Hospitals
For Homes*

**Specify
LUCKE**

Leak-Proof Bath-Tub Hangers

No Leaks • No Cracks • No Repair Expenses



Outstanding Features

- 1—Bolts in hanger where necessary.
- 2—Filler to seal joints against leaks.
- 3—Two nails, screws or bolts at every stud.
- 4—Filler in groove between tub and hanger.
- 5—Perforations as a base for wall materials.

The Modern Way To Prevent Leaks

For Trouble-Free Bath Tub Edges

There is no excuse for cracks or leaks or repair expense in good building. LUCKE Bath-Tub Hangers are specified and used by leading architects and build-

ers to overcome this problem. Lucke Hangers build tubs into walls. Tub rests securely in hanger along each wall.

Sold by Leading Plumbing Supply Houses

Manufactured by

W. B. LUCKE, Inc.

Wilmette, Illinois



Kitchen and Utility Fixtures— Sinks

Modern sinks range in size generally from 42 to 96 inches in length, and have more than ample workroom if their size is chosen according to the family's needs. It is desirable to install the two-drainboard sink if space permits. The double bowl sink, having separate compartments for dishwashing and rinsing is preferred by housewives.



DOUBLE COMPARTMENT SINK makes for efficiency in dishwashing. Spray attachment shown in use facilitates removal of food wastes from plates and rinsing after washing

Sinks are typically of porcelain enameled steel or cast iron, but may also be of stainless steel. Stainless steel is more subject to scratching by abrasive cleaners than is porcelain, but makes a beautiful appearance if properly cared for and will not chip from impact.

Drainboard sinks may be obtained in widths of 42, 48, 54, 60, and 66 inches. For sinks built into a counter top, a 24 by 21-inch bowl is about minimum, while a 30 by 21-inch size gives better work room. Double-compartment sinks for counter top installation are in 32 by 21-inch and 42 by 21-inch sizes. Cabinet bases of wood or metal can be had for sink installations in lengths of from 42 up to 144 inches. Longer units include cupboards or drawers in addition to under-sink compartments. Special brackets and drip mouldings are available for mounting sink bowl units in any type of custom-built counter top.

Individual sink cabinets are supplied by manufacturers in both single and double drainboard, single and double bowl styles, to match and harmonize with other cabinet and counter installations.

Sinks which do not have garbage

(Continued on page 350)

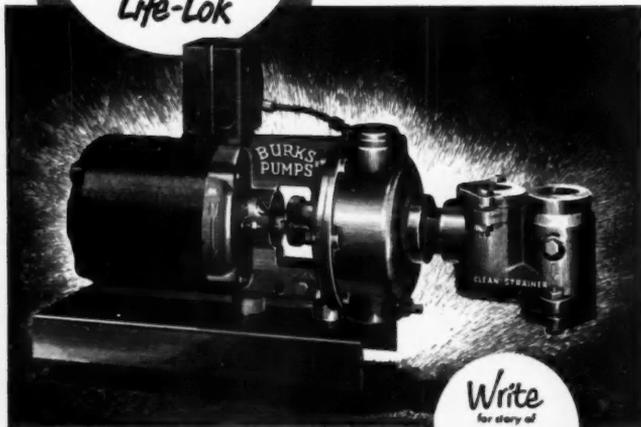
**Only
BURKS**

WATER SYSTEMS
HAVE

Life-Lok

they last years longer

You never have a disappointed customer when you install a BURKS. It's the finest engineered water system built.



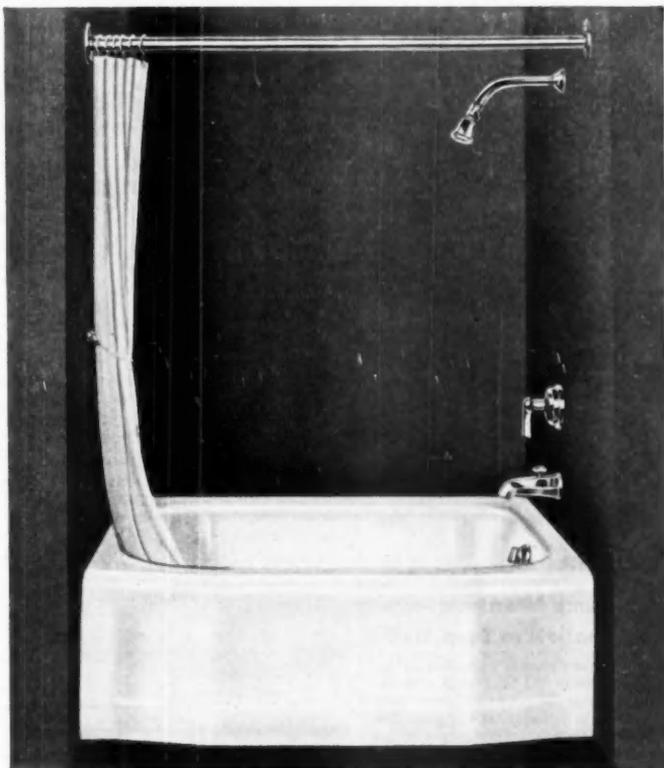
DECATUR PUMP COMPANY

78 Elk Street, Decatur 70, Illinois

Write
for story of
BURKS

NEW STANDISH SHOWER BATH

42" x 36"



Kohler Standish enameled iron recess shower bath, K-306-F.

for homes, apartments, hotels, motor courts



Here is a space-conserving bath, practical for the needs of an entire family. Wider than the average bath, with flat bottom, it is roomy for showering and suitable for adult tub bathing. The low front makes it especially useful as a child's bath.

The Standish is 42" long, 36" wide at the center, 34" wide at the ends, 14" high. Standing area at the bottom is approximately 35" x 26". The bench rim is 5" wide.

The Standish matches the popular Kohler Cosmopolitan. The lustrous enamel is fused to non-flexing iron cast for strength and rigidity. The combination fitting with Niedecken Mixer is chromium-plated, affords easy control of water temperature.

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

for suburban homes
beyond the
water mains



Versatile

**F & W Pump Interchangeable
from Shallow to Deep Well**

● If falling water level is a problem for any of your customers you can protect them dependably, and at the same time assure them outstanding performance at low cost! The F & W Multi-Purpose Jet Pump (above) can be changed from shallow to deep-well operation simply by moving the jet off the pump down into the well. And there are *no extra packages or parts to buy*. Whatever your customers' needs there's an F & W Pump to meet them exactly, offering important advantages in long-life, reliable service, and minimum maintenance. Remember . . .

F & W Means Flowing Water by
FLINT & WALLING MANUFACTURING CO., INC.
466 Oak Street, Kendallville, Indiana



**F & W MULTI-STAGE
Deep-Well Jet**
Delivers extra capacity.
New automatic control
valve assures extra per-
formance.



**F & W VARIJET
Shallow Well Pump**
Pumps 40 to 70% more
water, yet reduces power
consumption. An exclu-
sive F & W patent!

Send for F & W Data
Book No. 200 for your files



Farm-Used, Farm-Proved for 86 Years

(Continued from page 348)

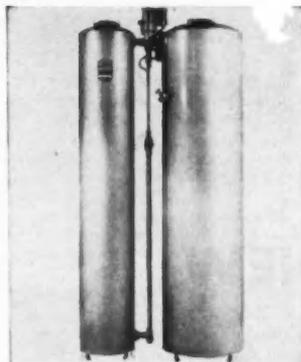
disposal units built in should have drain openings of a size which will permit later installation of disposal unit. Minimum opening is 3½ inches, with a 4-inch opening more generally used. Some disposal units require a 5½-inch opening. Electrical roughing-in should be provided initially for future garbage and dishwasher installations.

Additional material on sinks is contained in the section on "Kitchen Equipment and Home Appliances."

Laundry Trays

Although there are available combination sink and laundry tray units which have two compartments, one for dishwashing and a larger one for laundry use, these are recommended only for reasons of greatest economy or space saving. Typically, a laundry tray will be provided in the basement or utility room, together with water heater and water softener in localities having hard water conditions.

Laundry trays are made of enameled cast iron, earthenware, or cement composition. One, two, or three compartments are supplied, with single compartment units being especially suited to installations in conjunction with automatic units.



WATER SOFTENERS soon pay for their initial costs in savings on soap and clothes. The unit above is completely automatic, and requires only a few minutes for regeneration

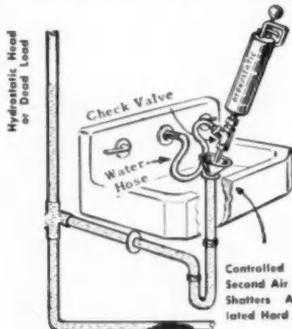
Water Softeners

Water softener units are a necessity in many areas. Any water having more than three grains of mineral salts per gallon is considered hard enough to require softening. A softener is an added sales feature for a home, and will soon pay for itself in savings. It is estimated that clothes

(Continued on page 354)

Cleans Pipes, Drains, Sewers Simply

HYDRAULIC WATER RAM



Good news for every maintenance man and operator. Positive sanitary maintenance with this modern plumbing tool. No rods, no electric cables, no chemicals. Cleans the toughest sewer, hardest sticky sink line, toilet. Clears them *CLEAN IN MINUTES*. Eliminates rust, corrosion in hot water faucets, coils, etc. Restores pressure without disturbing faucets or risers. **GET THE FACTS** concerning this simple, scientific principle of hydro statics.

THE HYDRAULIC MFG. CO.
KIEL, WISCONSIN

EASTERN SALES OFFICE: 616 W. TAFT AVE., BRIDGEPORT, CONN.

Build lasting value into your homes with **BRIGGS**

Beautyware

in color

STAIN-PROOF!

DURABLE!

NON-FADING!



It's the "something extra" in Briggs Beautyware formed steel plumbing fixtures that means *plus value* to home buyers! They'll be impressed, of course, by the striking modern lines and stunning decorator colors of this superb plumbing ware when first they see it. But there's *extra* quality in Briggs Beautyware that isn't visible at a glance—extra quality that assures modern home owners of beauty and satisfaction that won't wear off.

For Briggs gives them a special acid-resistant layer of finest quality porcelain enamel which fuses with the layers beneath, forming a solid, durable mass with a permanent luster. That's why Briggs Beautyware *retains* its "just like new" look through the years. And that's why so many thousands of American home owners are sold on Briggs Beautyware right now—and on the builders who have had the foresight to install it in their homes!

All Briggs Beautyware is stain-proof—and the rigid formed steel construction eliminates all unnecessary dead weight. Remember this when specifying bathroom fixtures for your homes. Give your customers a bathroom they'll be proud of—with Briggs Beautyware fixtures that *always look like new!*

BRIGGS MANUFACTURING COMPANY • 3001 MILLER AVENUE • DETROIT 11, MICHIGAN

© 1952

BRIGGS VITREOUS CHINA FIXTURES ARE TOPS FOR QUALITY, TOO!



Like the famous formed steel fixtures, Briggs Beautyware vitreous china lavatories and closets are products of the finest craftsmanship and designing skill to be found in the plumbing ware industry. The permanent luster and attractive pastel colors of sparkling Briggs Beautyware are well known among builders alert to the advantages of modern materials and methods.



EVERYONE LIKES BRIGGS COLOR!

The four famous Briggs Beautyware colors are truly beautiful—non-fading and so reasonable! Colored fixtures in complete sets cost only a very little more than plain white. They save you money—*increase your profit!*



Build lasting value into your homes with BRIGGS

Beautyware

in color

STAIN-PROOF!

DURABLE!

NON-FADING!



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© 1952



EVERYONE LIKES BRIGGS COLOR!

The four famous Briggs Beautyware colors are truly beautiful—non-fading and so reasonable! Colored fixtures in complete sets cost only a very little more than plain white. They save you money—*increase your profit!*



FOR ABOVE...

Present government regulations still allow you to install copper water tube for hot and cold water lines.

Chase Copper Water Tube's resistance to corrosion makes it the number one choice for domestic water lines.



OR DOWN UNDER

Underground piping of Type K Chase Copper Water Tube resists the double corrosive action of earth on the outside and water inside.

The easy-to-install coiled lengths of 40, 60 and 100 feet require fewer fittings... and its soft temper permits bending around obstructions.

...it's Chase Copper Water Tube

Since government regulations do not prohibit the use of copper for domestic hot and cold water lines, or underground service lines, it's wise to plan the use of Chase Copper Water Tube for these two important types of installation.

Chase Copper Water Tube is made

in hard and soft tempers for use with both solder-joint and flared fittings.

Rustproof, corrosion resistant, easily worked, smooth interior for better flow—these are some of the reasons why Chase Copper Water Tube is ideal for long life, fine service.

Chase  **BRASS & COPPER**

WATERBURY 20, CONNECTICUT • SUBSIDIARY OF KENNECOTT COPPER CORPORATION

• The Nation's Headquarters for Brass & Copper

Albany†	Cleveland	Kansas City, Mo.	New York	San Francisco
Atlanta	Dallas	Los Angeles	Philadelphia	Seattle
Baltimore	Denver†	Minneapolis	Pittsburgh	Waterbury
Boston	Detroit	Mississippi	Providence	(Teles office only)
Chicago	Houston†	Newark	Rochester†	
Cincinnati	Indianapolis	New Orleans	St. Louis	

Look to Universal★Rundle

for the latest in style and performance



For 51 years, Universal-Rundle has searched for and found better ways to make bathroom fixtures more beautiful, more efficient, more lasting.

Today, you can look to Universal-Rundle for the newest in smart, modern design that will sell your customers. And you can look to Universal-Rundle for long-lasting, unobtrusive performance that will build good-will for you.

To help you sell, there are full-color Universal-Rundle advertisements in leading magazines such as *The Saturday Evening Post* and *Better Homes & Gardens*. These advertisements are telling your customers about these U/R features:

Whitest white—by actual scientific tests!

Matched colors—by U/R, first maker of colored fixtures. Lovely colors, matched closer than the human eye can see!

Strongest bond between surface glaze and body gives highest resistance to chipping!

"Harder than steel" surfaces that are easy to keep clean, scratch-free, sparkling bright!

Write today for the new U/R catalog, showing the complete line of bathroom and kitchen fixtures—plus plans, drawings, specifications and helpful information. (See the U/R line in Sweet's Builders File, also.)

FAMOUS "FIRSTS" From UNIVERSAL-RUNDLE!

FIRST—with colored fixtures!

FIRST—with the one-fire Hi-fired process which gives harder-than-steel surfaces and lifetime bond between surface glaze and body!

FIRST—with the patented Rim-Jet flushing principle!

FIRST—with concealed front overflow!



Universal★Rundle

The World's Finest Bathroom Fixtures

UNIVERSAL-RUNDLE CORPORATION, DEPT. 33, NEW CASTLE, PENNSYLVANIA
Plants in Camden, N. J.; Milwaukee, Wisconsin; New Castle, Pennsylvania; Redlands, California; Hondo and San Antonio, Texas

**IN LOW-COST
HOUSING, TOO...**



No. 4132

LAWSON
BATHROOM CABINETS
help the sale!

Few other conveniences in the home are used more or afford the architect, builder or contractor greater reward than when Lawson cabinets of adequate size are installed.

Suggested specifications

Lawson 4132 Bathroom Cabinet or equal/or—

- ONE-PIECE DRAWN SEAMLESS STEEL BODY —BONDERIZED AFTER FORMING for rough opening 14 x 18 x 3 1/2".
- Mirror shall be 16 x 22" Plate Glass conforming to National Bureau of Standards Specification CS27-36, with Polished Stainless Steel Frame.
- Door shall be supported by full length White Enamel Piano Hinge.
- Cabinet shall be supplied with 2 Glass Shelves and Stainless Steel removable and adjustable Shelf Supports. Bar Type Door Stop. Razor Blade Disposal Slot.
- Finish—Baked White Enamel.

Write for catalog of Lawson Bathroom Cabinets, Lavatory Mirrors and Chrome Accessories.

THE F. H. LAWSON CO.

801 Evans Street
Cincinnati 4, Ohio
Est. 1816

**WORLD'S LARGEST BUILDERS
OF BATHROOM CABINETS**



Plumbing Fixtures, cont'd

Standard Weight Pipe

Nominal Size, in.	Weights per Foot			Diameters			Couplings			Test Pressure, psi
	Nom. Thk. & Cplg., lb.	Calculated Plain Ends, lb.	Wall Thickness, in.	Outside, in.	Inside, in.	Threads per Inch, No.	Length, in.	Outside Diameter, in.	Calculated Weight, lb.		Butt Welded or Grade A
1/8	.24	.24	.068	.405	.269	27	13/16	.563	.08	700 700
1/4	.42	.42	.088	.540	.364	18	1 3/16	.719	.07	700 700
3/8	.57	.57	.091	.675	.493	18	1 3/16	.875	.09	700 700
1/2	.85	.85	.109	.840	.622	14	1 9/16	1.063	.17	700 700
3/4	1.13	1.13	.113	1.050	.824	14	1 5/8	1.313	.26	700 ^a 700
1	1.68	1.68	.133	1.315	1.049	11 1/2	2	1.576	.40	700 700
1 1/4	2.28	2.27	.140	1.660	1.380	11 1/2	2 1/16	1.900	.48	800 1000
1 1/2	2.73	2.72	.145	1.900	1.610	11 1/2	2 1/16	2.200	.67	800 1000
2	3.68	3.65	.154	2.375	2.067	11 1/2	2 1/8	2.750	1.05	800 1000
2 1/2	5.82	5.79	.203	2.875	2.469	8	3 1/8	3.250	2.09	800 1000
3	7.62	7.58	.216	3.500	3.068	8	3 1/4	4.000	3.35	800 1000
3 1/2	9.20	9.11	.226	4.000	3.548	8	3 3/8	4.625	4.82	1200 1200
4	10.89	10.79	.237	4.500	4.026	8	3 1/2	5.000	4.61	1200 1200
5	14.81	14.62	.258	5.563	5.047	8	3 3/4	6.296	8.52	— 1200
6	19.18	18.97	.280	6.625	6.065	8	4	7.390	11.27	— 1200

(a) The permissible variation in weight is 5 per cent above and 5 per cent below

Republic Steel Corporation Chart

(Continued from page 350)

washed in hard water last 20 to 40 per cent less. More soap is used with hard water, and minerals will encrust pipes, fixtures, and faucets, cutting down on available water supply and often resulting in large repair bills.

Most water softeners use the Zeolite process, in which the calcium and magnesium salts that make water "hard" are absorbed as the water passes through a zeolite-filled tank. When the zeolite is saturated with minerals, it is regenerated by flushing with a solution of common salt and water, and is then again ready for use. Softeners may be installed permanently, or may be obtained on a service basis, in which a portable unit is installed in the line, and exchanged at periodic intervals by a service man. Installations should be made so that water for lawns, cooling units or other uses which do not require soft water should be taken from supply lines ahead of the softener.

Hot Water Heaters

Domestic hot water may be heated either by units built into the house heating system, or by separate gas, electric, coal, or oil heating units.

Electric heaters have a relatively large storage capacity. The operating cycle assumes that water will be heated in the storage tank at night, during the time of low power demand on the utility company's facilities. The hot water is then held in storage in a well-insulated tank for the next

**NEWEST
IDEA IN
HOME
HEATING**

Vitrified
CLAY
WARM-AIR
HEATING
DUCTS

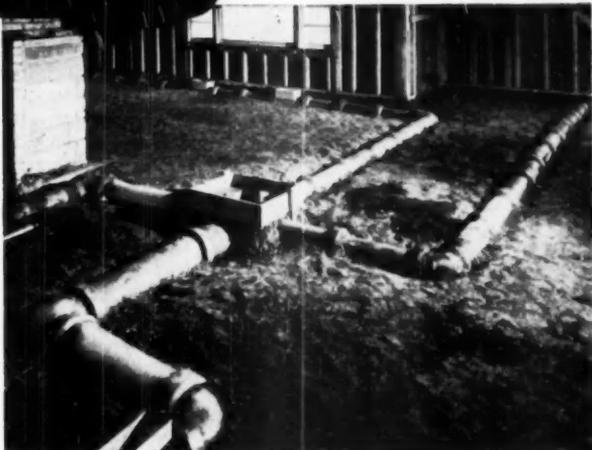


It's the talk of the home construction field — new low-cost Vitrified Clay Bell and Spigot Pipe heating ducts for the new basementless homes. Clay is the *only* duct material that will last *forever*. It's chemically inert — unaffected by lime in the concrete, or by acid soil conditions or furnace gases.

Clay Pipe heating ducts go down to stay . . . the floor-slab need *never* be torn up for costly, inconvenient repairs. And its low original price makes Vitrified Clay Bell and Spigot Pipe ideal for the small builder — especially in these days of high costs and heavy competition.

The Clay Pipe duct system combines all the advantages of direct and radiant heating . . . delivers warm air to registers at the same time as it radiates heat through the concrete slab. It's been proven in literally hundreds of successful home installations.

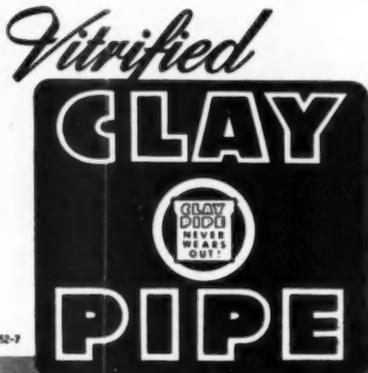
Convenient lengths are easily handled . . . quickly laid in place by low-cost labor . . . and a complete assortment of fittings prevents on-the-job delays. You'll want to investigate all the amazing advantages of this new, low-cost home-heating system. Write for details today!



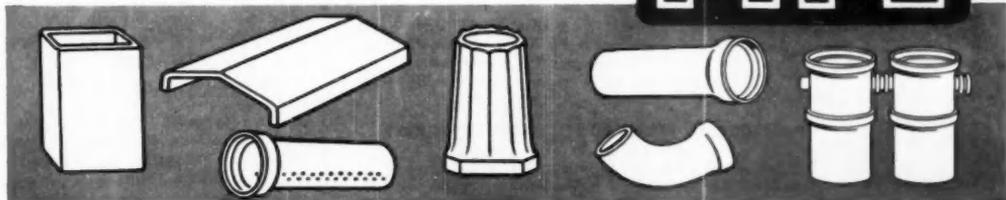
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THE REGIONAL OFFICE NEAREST YOU

NATIONAL CLAY PIPE MANUFACTURERS, INC.

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C-352-7



*Say goodbye to the
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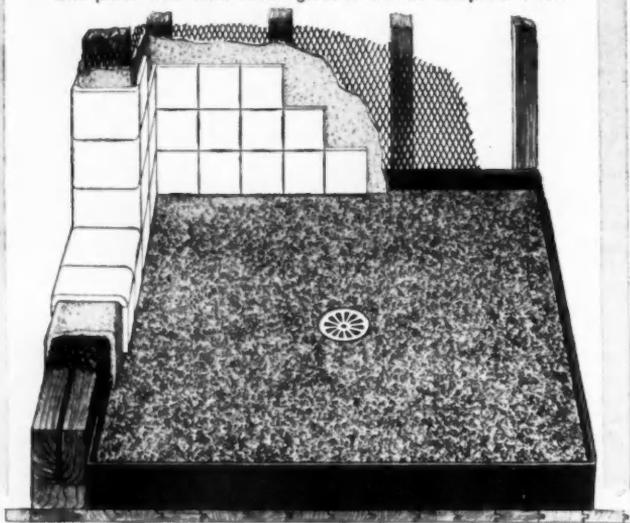
FIAT PRECAST TERRAZZO RECEPTORS



*1 End Fiat precast receptors
make a definite saving
in building tile showers.*

**Save money . . . Save time . . .
Make a better tile shower floor**

One piece slab construction gives a lifetime leakproof floor.



**Available for prompt delivery
See your plumbing contractor**

STANDARD SIZES:

Square type 32" x 32" — 36" x 36" — 40" x 40"

Corner type 36" x 36" — 40" x 40"

The Fiat one piece precast receptor slab will not be affected by settlement of the building as would the old-fashioned "multi-

layer" construction of fill, lead pan, grout and tile. The rustproof metal receptor flange encases the tile walls making a leakproof connection.



FIAT METAL MANUFACTURING COMPANY

Three Complete Plants
(Chicago area plant) Franklin Park, Ill.
Long Island City 1, N. Y. Los Angeles 33, Calif.

In Canada—Fiat showers are made by Porcelain and Metal Products, Ltd., Orillia, Ontario

(Continued from page 354)

day's use, and enables an attractive rate to be offered for the electricity used. Such units should be of ample capacity, so that more than average use of hot water will not require the use of electricity during the day at higher rates.

Gas hot-water heaters are supplied in sizes to handle the needs of all sizes of families, and with different tank and insulating materials. A 30-40 gallon storage capacity is suitable for



AUTOMATIC LAUNDRY UNIT and hot water heater are here shown located on the service porch of a ranch type house

the average family of three or four. Tanks are of galvanized steel, porcelain-lined steel, or monel metal, and are priced according to greatest durability in that order. Insulating material is generally glass wool or fiberglass. Automatic thermostat valves turn the gas on and off to keep water at a constant temperature, usually 140 degrees, for most efficient use. An adjustment is available so that the user may set the water temperature according to individual preferences. Safety valves are necessary to eliminate hazards in the event of failure of gas pressure in the city mains. Heaters for use with liquid petroleum gas such as butane or propane must be fitted with valves giving a complete shut-off in case the pilot light fails. Acceptable units are approved by the American Gas Association and are so marked.

Good Installation Practices

The plumbing installation will customarily be made by the plumbing contractor, who will be a licensed master plumber. While it is his responsibility to see that the installation

is properly made, in accord with local codes and requirements and in a workmanlike manner, the builder should also see that the specifications for plumbing meet these requirements and that the work is installed in line with the specifications. The cutting of corners, such as installing used pipe or fittings, using standard instead of extra heavy soil pipe, supplying valves or faucets of lower quality than specified, etc., should be guarded against. The best insurance for a good installation is the reputation of the plumber doing the work.

Plumbing Codes

Because of the importance of good plumbing to good health, it is probable that no other phase of building construction is so rigidly controlled by code requirements. Variations, both minor and wide, will be found throughout the country, but the following provisions, in one form or another, may be considered typical of the requirements for good plumbing installations:

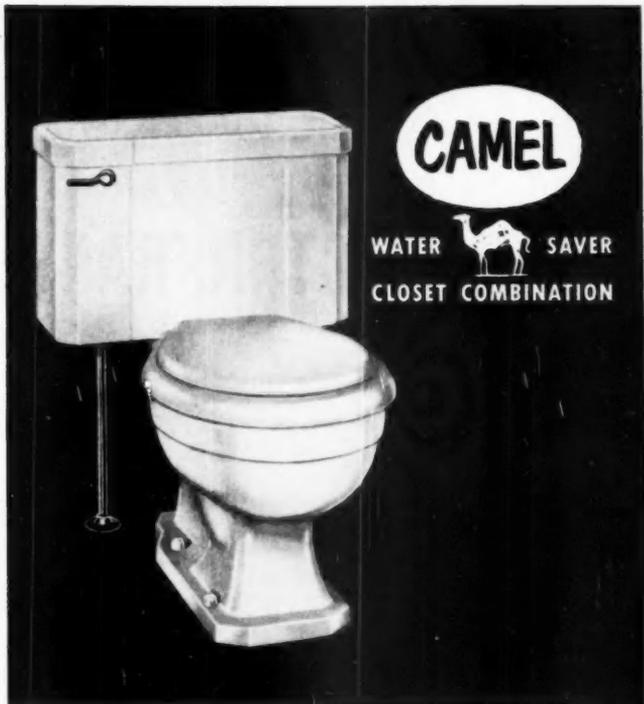
Adequate supply of pure water; adequate piping of suitable materials; fixtures of suitable materials and correct design; drainage system of good materials and design, properly installed to prevent clogging; provision for cleaning drainage system when needed; proper traps and venting of system; adequate sewers or sewage disposal system; proper inspection and testing of new installations; protection against contamination by back siphonage and against back flow of sewage; and adequate light, ventilation and space in rooms having plumbing fixtures.

The adjoining check list will enable the reader to evaluate his own local code in terms of accepted standards.

After installation, the plumbing system should be tested under city pressure or greater, and any required local inspections should be made. No leaks of any sort should be permitted in either the water supply or drainage systems, with the assumption that "they will tighten up or rust up in a couple of days."

Maintenance and Repair

The owner should be instructed as to the location of shut-off valves for the main coming in from the street, and riser valves for kitchen and bath if these are installed, so that he may shut off the water if necessary. He should be cautioned against letting any objects get into the waste lines which might cause clogging or stoppage. The owner should also be provided with manufacturers' instructions for hot water heaters, dishwashers, automatic laundry units and dryers.



Features in favor start with LOW COST

A dozen features approved by builders and buyers make the Case Camel* the perfect closet for low-cost and medium-priced construction. First, its surprisingly modest price. This closet of

Case quality vitreous china is famous for low water consumption, an increasingly important factor of economy these days. It flushes powerfully yet quietly. Special reverse trap bowl with large opening and water surface make for dependable action and cleanliness. Tank bolts directly to bowl with one bolt connection, stands free from wall. High grade trim of special design and chrome plated exposed fittings add to the sales appeal of your bathrooms equipped with the Camel. In 26 colors, and white. See the complete line of Case closets and lavatories.

● Consult Classified Telephone Directory for nearest distributor, or write W. A. Case & Son Mfg. Co., 33 Main St. Buffalo 3, N. Y. Founded 1853.

Made by the
originators of the
ONE-PIECE
Water Closet

Case Fine Vitreous China

I fell in love with the house

when I saw the

ELECTRIC RANGE!



Of course, the range was just *one* of the things I liked—but I realized it would give me more time to enjoy my home, because I'd spend less time in the kitchen. That's how the Electric Range helped me fall in love with the house.

"We've found that potential home buyers are interested in electrical equipment," says **MR. OSCAR DREISEN**, of Dreisen & Freedman, Silver Spring, Maryland. "We know that because there were traffic jams when we opened our model house, and fifty houses were quickly sold.

"Naturally we include *Electric Ranges* in the kitchen, because this is an electric home. The *Electric Range* gives the home buyer cool, automatic cooking—the kind that's fast, economical and clean. *All our kitchens are electric!*"

- Kitchen equipment in the Dreisen & Freedman homes includes electric refrigerator, electric dishwasher-sink with food waste disposer, and ventilating fan. And the range? Like all the other equipment—of course, it's **ELECTRIC!**

- Prices of these all-electric homes range from \$12,750 to \$14,250, depending on whether or not they have basements. They are three-bedroom ranch-type, with five different exterior designs to choose from.

EQUIP
YOUR HOUSES WITH
ELECTRIC RANGES



ELECTRIC RANGE SECTION
National Electrical Manufacturers Association
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ADMIRAL • COOLERATOR • CROSLY • DEEPFREEZE • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON
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AMERICAN BUILDER



FOR years the kitchen has been recognized as the focal point of interest for women considering the purchase of a home or thinking about modernizing an existing structure. Public interest is particularly high in the latest types of dishwashers, garbage disposal units, automatic laundries, integrated ranges, ventilating fans and other devices. Successful home builders learned years ago that a satisfactory kitchen in a house offered for sale not only does a great deal to reduce sales cost, but serves to make the ultimate purchaser happier and better satisfied.

Planned Efficiency

Time and motion studies of kitchen efficiency have developed new concepts of kitchen planning. Work and storage space for each of the main functional areas in the kitchen have been determined as being a minimum of 36 inches of work and storage space by the refrigerator, 18 inches by the range, and 36 inches by the sink, with 18 inches on either side of

the sink bowl. These figures are based upon studies showing where food and utensils should be kept at point of first use. During a test preparation of 84 meals, one study revealed that food and tools were used first at the sink 1,057 times, at the range 801 times, and at refrigerator 2,806 times!

Half the walking involved in preparing the meal is between range and refrigerator. Because more trips are made from dining area to kitchen during clean-up than in serving, the door to dining area should be between sink and refrigerator, or at least closest to sink.

Estimating Kitchen Storage Space

The basis for determining the correct amount of storage space necessary in a kitchen is the number of bedrooms in the house. One person per bedroom, plus an additional person for the master bedroom is considered normal occupancy.

Studies have proved that six square

KITCHEN EQUIPMENT HOME APPLIANCES and BUILT-INS

Planning Kitchens

Efficiency
Arrangements
Modernization
Specialties

Kitchen Equipment

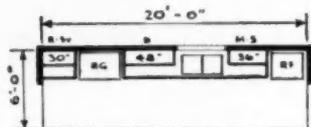
Fixtures and Built-ins
Cabinets and Sinks
Ranges
Refrigerators and Freezers
Counters and Tops
Fans and Ventilating
Dishwashers
Disposers
Built Kitchens

Laundry Equipment

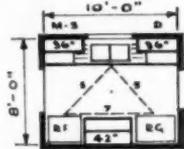
Washers
Dryers
Ironers



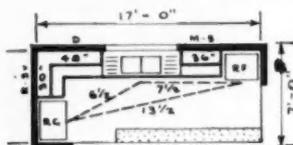
CABINETS SUSPENDED FROM CEILING make an interesting eye-level break between dining and work areas of kitchen



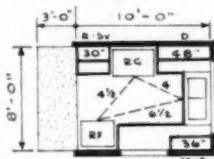
ONE-WALL TYPE



CORRIDOR TYPE



L-TYPE



U-TYPE

CABINET KITCHENS offer sliding glass doors, pull-out shelves, cutting blocks, and fluorescent lighted interiors



KNEE-HOLE CUPBOARD with telephone serves as desk for menu planning

feet of storage space in wall cabinets is required for each permanent resident of a house. To this must be added twelve square feet for entertaining and accumulating.

Base cabinet storage is measured on a lineal foot basis. As a general rule, base cabinets should occupy all space beneath the wall cabinets not already occupied by the range, sink, refrigerator or dishwasher.

If there is sufficient wall storage space, there will usually be adequate base storage. Thus, in a two-bedroom house there would be six square feet of wall cabinet space for each person or 18 square feet. This, plus the 12 feet for entertaining and accumulation, totals 30 square feet of wall cabinet storage space.

In some cases window locations limit the amount of wall space available, although there would be plenty of base cabinet space. In such cases the difference should be made up by installing another wall cabinet, a tall shelf cabinet or a storage closet elsewhere in the room, without a base cabinet to correspond with such a unit.

Lengths for Counter Areas

Actual practice and research studies have revealed there are definite maximum and minimum lengths for all counter areas. There should be not less than four and a half nor more than five and a half lineal feet of counter space between the refrigerator and sink. There should be no less than three, nor more than four lineal feet between the sink and range.

There are variations and additions to these basic principles. Snack bars are frequently extended out from the wall into the kitchen or at the end of the installation. In large kitchens, islands are sometimes used to save steps.

Clearance Dimensions

A clearance of 18 inches is considered desirable between the counter surface and bottom of wall cabinets. Wall cabinets located over the range should have a clearance of 22 inches above that unit for best results.

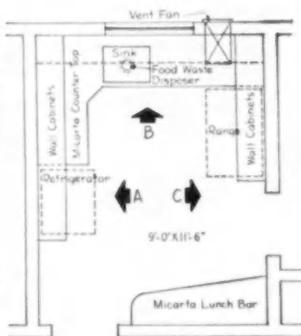
Major appliances and cabinets are from 24 inches to 28 inches in depth. To clear such equipment, a door opening should be not less than 30 inches from the corner. In cases where a range is adjacent to a door, a clearance of 48 inches is desirable. The distance between a window opening and a corner should be a minimum of 15 inches because standard flat wall cabinets are about 13 inches in depth. The underside of window sills should be not less than



THREE BASIC KITCHEN ARRANGEMENTS commonly used today offer many variations in providing for efficient food handling and serving. A breakfast bar is located in the utility room immediately behind the kitchen sink and counter in this plan. Direct serving is permitted by opening in wall below ceiling-hung cabinets. Folding door separates kitchen from dining room. Laundry is a compact arrangement with tray, washer, and dryer in sequence for easy operation



This U-shaped kitchen permits easy serving to lunch bar while keeping traffic path open from utility room to dining-living room. Refrigerator at (A) lines up in sequence with food preparation counter area and sink at (B), more counter space and range at (C). Vent fan is provided to remove cooking odors, steam, and excess heat



With a garden on the inside as well as outside the house, the combination kitchen and dining area of this house is designed to combine beauty with efficiency. Kitchen and laundry are combined in one room, but with refrigerator, sink, and range lined up in sequence in one "L"; and washer, sink, and dryer in sequence in another "L" in opposite corners of the room. Range has extended counter area all around for easy serving and collecting of dishes



44 inches from the floor to provide enough space for backsplashes.

Arrangements

There are four basic types of modern kitchen arrangement: the U-shaped, the L-shaped, the one-wall type, and the corridor type. The orthodox "U" layout is usually found to be the most efficient. By placing the sink on the center wall, preferably under a window, steps are saved in working from one area to the other. This layout also lends itself to plans which call for breakfast nook, meal planning centers, and highly desirable extra cabinet and counter space.

The "L" shape is compact and efficient when storage, preparation and cooking centers are in correct sequence. The opposite two walls in such kitchens are open for other purposes—built-in breakfast nooks or laundry set-ups being most common.

Lighting for kitchens is receiving more consideration, with the trend towards fluorescent fixtures located above sink and under wall cabinets, with indirect ceiling light, and ceiling flush-hung spots to provide light for special areas. Provision should be made for wiring sufficient to accommodate the host of modern electrical appliances including toasters, grills,

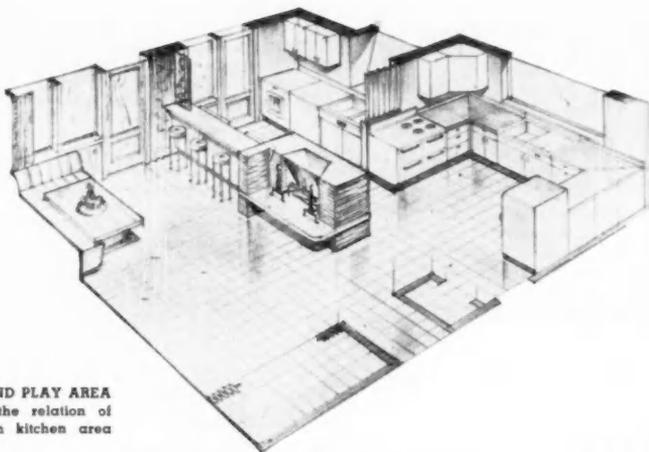
irons, and similar units. Line capacity is important, as a breakfast involving toaster, grill for eggs and bacon, and electric coffee pot may use as much as 4,000 watts.

Floor and wall coverings should be selected which are durable, attractive, and easily cleaned. Seek advice of experts before determining color. Follow manufacturer's directions in all installations.

Most important in kitchen planning is the determination of the *exact* inside dimensions of the kitchen and standard equipment in relation to proper location of equipment, to avoid odd spaces or corners which



COMBINING KITCHEN WITH LAUNDRY AND PLAY AREA for children. this layout shows clearly the relation of service units. separation of laundry from kitchen area proper, and easy access to lunch bar



A KITCHEN conveniently arranged to fit into harmonious relationship with other living area of the house. Snack bar is of wood, as are kitchen cabinets which harmonize with dining area furnishings. Inlaid linoleum floor carries motif of modernism and efficiency into dining area. while L-layout of kitchen allows plenty of space for traffic through kitchen to rear door and utility room



call for filler units, or end up as dirt-catchers.

Getting Into Remodeling

Modernization or remodeling of old kitchens offers attractive sales opportunities for dealer-contractors. Alert builders have long recognized that remodeling service enables them to contact new clients, keep in touch with established customers, and maintain sales promotion for their own business.

Some builders have hesitated about going into kitchen remodeling because they felt that kitchen appliances were too technical. However, new planning aids such as miniature appliance kits and manuals containing standard specifications and procedures have been developed by manufacturers. These take the guesswork out of design and layout, and the whole plan may be discussed with the customer and changes made with models before any work is begun.

Prepare a sketch of the existing kitchen, showing the location of the windows and doors. Start at one corner and continue around the walls, giving the location of all the openings. Show the dimensions from corners to door or window casing, as well as over-all width of doors and windows including trim. As a check for these figures, measure the entire length of each wall from plaster to plaster. Height of window sill from floor, height of window including trim, width of trim around doors and windows, and the over-all height from floor to ceiling are essential. Of extreme importance is the direction of the swing door. The nature of the room accessible from the door should be noted, as this information

(Continued on page 364)

Cabinet manufacturers from coast to coast are adapting their specifications to the installation of Chambers waist-hi GAS Built-Ins. The typical arrangement shown here is by Belwood Kitchens.



A Fresh Approach To
KITCHEN DESIGN
With Built-Ins By

Chambers

COOKS WITH THE GAS TURNED off [®]

It's no mystery why women go for the principle of Chambers waist-hi GAS Built-Ins. They are keen for this most modern development in automatic cooking. They enjoy the freedom from stooping, bending, and lifting. They like these units because they can be installed anywhere in the kitchen.

Leading kitchen-cabinet companies have been quick to recognize this new kitchen trend. They now provide base and wall cabinets to fit in with Chambers Built-Ins. (We'll send you their names and specifications, on request.) Modern streamlined kitchen cabinets together with Chambers waist-hi GAS Built-Ins transform workshop drudgery into a modern dream of efficiency.

Here is a vast opportunity for alert designers and builders. Women prefer Chambers Built-Ins not only because they represent a new trend in kitchen design. They also represent a new way of cooking that saves food, flavor, time, fuel and labor. Only Chambers "In-A-Wall Oven" *Cooks with the Gas Turned off*. Only Chambers offers a choice of oven doors in stainless steel or seven decorator colors. No other line of cooking equipment offers you such flexibility in kitchen design, or provides your clients with this World Famous Cooking Performance.



"IN-A-WALL" Oven is heavily insulated—top, bottom, all sides—utilizing retained heat to "cook with the gas turned off." Its huge, family-size capacity accommodates up to 40 lbs. of roast. Beautifully finished in stainless steel, or stainless with oven doors in choice of seven beautiful decorator colors.



"IN A TOP" 3 Burner Drop-In with plated surface fits into counter top by providing opening of 18 1/2" x 33 3/4". Individual drip rings may be removed easily for quick cleaning. 4 burner top also available.



25 Year Guarantee on burners and cast oven bottom



Originator and Master Builder of Insulated Ranges since 1910

ACCEPTED by FHA for Underwriting Loan

Send for A.I.A. Specification Sheet NOW!

Chambers Corp., Dept. ABT-452, Shelbyville, Ind.

Gentlemen:

Please send me at once A.I.A. Specification Sheet and name of local distributor.

I am an Architect () Builder-Contractor () Dealer ()

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FIRM NAME _____

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THIS KITCHEN provided little storage space, leaving utensils out in the open to gather dust. Unnecessary time was spent in cleaning, and dishwashing was difficult and tedious



REMODELED, there is abundant convenient storage space. Clean-up and dishwashing have been simplified, and sequence arrangement of refrigerator, food preparation area and stove simplify other tasks

(Continued from page 362)
is pertinent to the kitchen planner. Location of the water source, radiators or registers (over-all size) is also of importance. Any unusual conditions should be noted.

If the present appliances are to be retained, list the dimensions of range and refrigerator. The planner will also need to know the number of children and adults in the family, the amount of entertaining to be done, and the direction the kitchen faces. Before working on this information, or before sending it to the manufacturer's planner, a re-check on notes and measurements should be made.

Specialties

The installation of specialties or features is part of the basic arrangement of the kitchen. These features are designed with both practical and ornamental functions in view; thus ornamental shelving over the range

with curving valance may also be practical with concealed lighting and space for seldom-used utensils.

In many modern kitchens the distance between work-counter top and the underside of wall-hung cabinets has been increased. This reduces head bumping and permits installation of small intermediate shelves for condiments or other small articles.

Some kitchens feature a built-in desk or knee-hole space for the housewife to use in planning menus, letter writing, and telephoning. Window sills may be extended beyond normal depth to provide for potted plants, and glass shelving may be built into windows for the same purpose.

Ranges and sinks which are used in a peninsula arrangement frequently have built-in cabinets in back of them with shelves facing a dining or living area immediately adjacent.

Special attention may be paid to backsplash around work areas, with

tile or plastic material affixed to walls to the height of a foot or more. Sliding door cabinets and vertical storage compartments for trays and pot lids are other desirable features of cabinet construction which call for special planning in advance.

Home builders find there should be no skimping on kitchen equipment in figuring costs. An over-all increase of ten per cent in the cost of kitchen units would add only a small amount to the total cost of the house, and the sales appeal of a well-equipped kitchen cannot be overlooked.

Built-Ins and Fixtures

The snack-bar and breakfast nook have established themselves as almost standard items. The choice between a snack-bar or built-in seat will be dictated by the space allotted to the kitchen, owner preferences, size of the family, and the type of family activities to be considered.

The snack-bar may be combined



SMALL KITCHENS properly organized can be ingenious workshops for the homemaker. Handy drop leaf table folds into neat cabinet



WITH OR WITHOUT A WINDOW, GOOD LIGHTING over the sink is very necessary. may be an incandescent bulb in enclosing globe, fluorescent fixtures, or a valance-type lighting arrangement



DECORATIVE SHELVES AND VALANCE placed over range utilize wall space and add note of color to kitchen



SNACK BAR built in close to range for convenience in serving.



BUILT-IN LOUNGE-TYPE SEAT covered with leather-like plastic material is washable



THIS SNACK BAR is built onto back of sink cabinet, makes serving and collecting dishes easy

with ceiling-hung cabinet units to form a pass-through between kitchen and dining room, giving the illusion of more space. It is usually more economical than the built-in seat unit. Families with several children find it ideal for quick breakfasts and after-school snacks.

The built-in breakfast nook is more expensive. Although there are some units available on already-made basis, it is more common to have the breakfast nook built to order if the contractor does not wish to do the work himself. More space is needed, but the comfort of upholstered seats and the conviviality of facing people across the table have a wide appeal.

Table tops for both types are usually of laminated plastic, but may also be of asphalt tile or linoleum; stainless steel is sometimes used for snack bars doubling as a pass-through unit.

Cabinets and Sinks

Modern kitchen cabinets of wood or metal are designed as integrated units which harmonize with sink, range, dishwasher, and refrigerator. They are available in a great variety of sizes, and will fit practically any space. Filler blocks space out odd dimensions, and the "custom look" may be had at low cost. Cabinet units may be shipped either knocked down or pre-assembled, unfinished, or already painted.

Special units for corners, under and over sink spaces, and projecting ends make installation problems simple. Ready-made cabinet units are often combined with a made-to-fit counter. Three-quarter inch plywood is covered with laminated plastic or linoleum to provide an uninterrupted work space over the whole cabinet and sink area. The kitchen sink is the basic unit around which the rest of the equipment is planned and built. Its size will depend on the over-all

size of the kitchen, its proportions, and plan for equipment arrangement.

The present trend is for the sink built-in as an integral part of the kitchen cabinet work. Cabinet sinks are made by manufacturers in a full range of sizes and styles, and sink bowl units are also available in a complete range for installations into built-in cabinets. Faucets are of the mixing type, having a swinging spout for directing the water for washing or rinsing (double compartment sinks may require a longer than standard spout). In all except the most economical installations, a spray for rinsing is a part of the faucet assemble, with a built-in diverter valve supplying water to the spray whenever used. A faucet having provision for introducing a detergent into the spray for washing has met with some popularity.

Ranges

Both electric and gas ranges have kept step with the advances in design and construction of kitchen fixtures and appliances. Modern units harmonize with other appliances. Finishes are heat resistant and easily cleaned. Improved insulating materials make cooking cool work even on the hottest days.

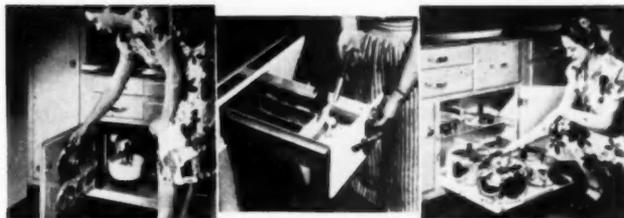
In many sections of the country,

the kitchen range is being considered as built-in equipment, which will permit its inclusion in the mortgage—a valuable sales aid.

Sizes range from small four-burner units with underneath oven, for minimum space and cost, up to six- and eight-burner models with two ovens and broilers. A recent innovation is the built-in-the-top griddle for frying eggs, bacon, pancakes, etc. Built-in lights are often desirable and many units feature timing units that will turn the heat off at the end of a given time, or even start and stop the stove at specified times.

A new design feature is the construction of both electric and gas stoves in modular units which may be arranged in any desired combination of units. Burner units may be installed into counter tops. If desired, two four-burner units may be placed with counter space between. Oven units may be combined with drawers to set the oven at any desired height. If desired, the oven may be located away from the cooking surface top. Greater freedom in kitchen planning is thus possible, as designers are no longer limited by the package size of the conventional range.

Wiring for electric ranges must be strictly in accordance with code re-



CABINETS WITH SPECIAL FEATURES such as pot lid holder at left, cutlery drawer and slide-out shelves for heavy utensils. Door knobs and drawer pulls should be large with room behind them to make cleaning easy



TWO OF MANY DIFFERENT MODELS of gas and electric ranges available. Range (A) has 23-inch oven, is a 30-inch unit. The heat-treated glass broiler is said to be smokeless. Range (B) has porthole windows in both baking oven and broiler, color top in a variety of pastel shades with standard white sides, and concealed griddle. Automatic controls are available



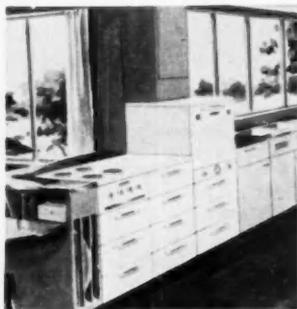
requirements. Special circuits are necessary, as an electric range may draw as much as 10,000 watts at one time.

Refrigerators and Freezers

More efficient insulating materials and smaller power packages have increased capacities of refrigerators without adding to over-all dimensions. Freezer compartments are now standard. It is sound practice to provide as large a refrigerator as space and costs will permit. Freezers for kitchen installation may be obtained in either upright or counter-top styles.

Counters and Tops

Materials for counters and cabinet tops are of a great variety. Laminated plastic, linoleum, stainless steel or monel-metal, and tile all have their particular appeal. Good fit and careful installation are necessary to secure counter tops that will not leak, pull away from walls or cabinets, or separate at joints. Poor workmanship will show like the proverbial sore thumb, and soon reflect on the reputation of the builder.



PICTURE WINDOW over sink, plus recessed spots in ceiling, provide efficient lighting for this kitchen

Fans and Ventilators

Many different fans and ventilator units are made for through-the-wall installation over the range. Where the range is located on an outside wall, the solution is easy. Ranges against interior walls may be ventilated by exhaust fans having ducts concealed in a soffit or in the ceiling between joists. If the ventilating unit exhausts through a duct, it is desirable to include a cleanable or replaceable filter to prevent the duct from becoming grease laden, creating a fire hazard.

Various specialized units are available. Some are made for glass-block installation. One unit, installed in the ceiling and attic, serves to ventilate both at the same time with one blower. Another, installed in a hood over the range, draws both cooking odors from the range and hot air off the ceiling, keeping kitchen temperatures down. A unit which may be mounted close to the top of the range permits the installation of cabinets above, otherwise impractical because of the heat from cooking.



THIS 8 CUBIC-FOOT HOME FREEZER has storage baskets mounted on slide rails. Lid is counterbalanced for easy handling. Automatic alarm sounds when temperature is above control point



RETRACTABLE SPRAY IN STAINLESS STEEL SINK UNIT (A) is useful for rinsing dishes, cleaning vegetables. Model (B) has porcelain top and is available as a single unit or to be built-in with other cabinets and units



The ventilating fan selected should be of a size adequate for the kitchen. Recommendations are for an 8-inch fan (minimum) for small kitchens, 10-inch for medium size kitchens, and 12-inch for large kitchens.

Dishwashers

In houses above the lowest price class, the automatic dishwasher is often one of the "extra" features that sells the house. Dishwashers are either built in as a part of sink cabinets by the manufacturer; are available as separate units; or may be obtained without cabinets for custom installations. Top and front loading models perform with equal efficiency and ease in loading, and selection should be made on the basis of space needs.

Where dishwashers are installed, the builder will have to take the hot water factor into consideration. For proper sterilization of dishes, a temperature of 180 degrees is necessary. Most water heaters are not designed to supply water of this temperature, and there is danger of scalding if the water in the hot water pipes throughout the house is of this temperature. Many units have booster heaters to raise the temperature of water for dishwashing—a desirable feature.

Dishwashers are usually motor driven, and provision for electrical connection should be made if dish-

(Continued on page 370)

LICK COMPETITION

**SELL
HOMES FASTER!**

American Kitchens

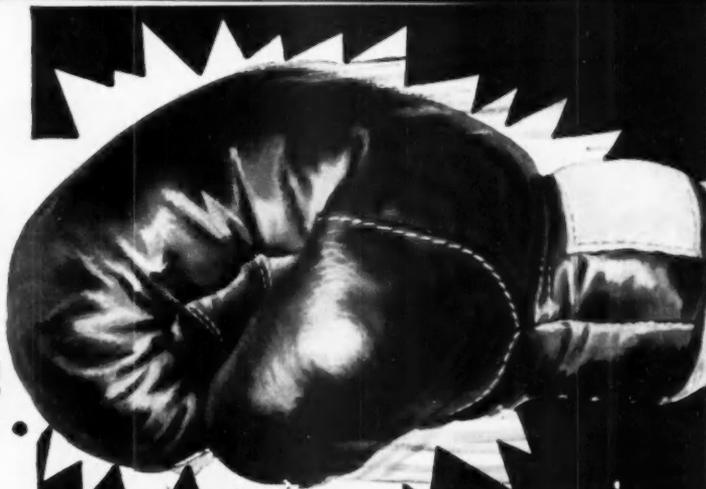
Offers More Quality Features than any Other Brand

Let American Kitchens prove the top quality construction of the houses you sell—let the quality features of American Kitchens reveal the quality features of the whole house! For customers look for quality in things they know. And they know that American Kitchens are not only beautifully designed—but exceedingly well built.

When you show them, feature by feature, how American Kitchens by its very construction must use superior steel—how it uses the finest insulation materials, the most expensive door hinges and nylon drawer slides—how it is designed by a famous designer to make working easier—then, at the same time you are proving that yours is a house that gives attention to superior materials and workmanship.

It pays to feature American Kitchens. And you will discover that they are more economical besides, because they give you more sales return per dollar, sell houses faster than any other brand.

AMERICAN KITCHENS DIVISION  CONNSVILLE INDIANA



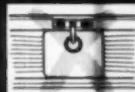
American Kitchens' one-piece rounded drawers—dye-formed, no seams.



Other kitchens have cheap brake-formed construction—square corners.



American Kitchens' 15% larger sink bowl than other make sinks.



Other kitchen sinks have old-fashioned ledges that use up bowl space.



American Kitchens' nylon slides, drawers pull out noiselessly.



Other kitchens' metal or soft brass drawer guides that screech, bend.



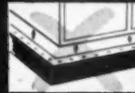
American Kitchens' concealed door and drawer pulls eliminate handles.



Other kitchens, with handles, catch dirt, make cleaning difficult.



American Kitchens' one-piece sink base, arrives ready for installation.



Other kitchens' sink base panels must be screwed or bolted on in the field.



American Kitchens' rounded contours, extra knee and toe room.



Other kitchens have square or jutting cabinet lines, square corners.

**American
KITCHENS**

SELL HOMES FASTER

American Kitchens Division
AVCO Manufacturing Corp., Dept. AB-3
Connsville, Ind.

Please send me your new Architects' and Builders' File.

Name _____
Address _____
City _____ Zone _____ State _____



**"Sold 125 G-E houses—each with
G-E Kitchen-Laundry!"**

Here's Mr. Arthur Oman of Weymouth Heights, Mass. who sold 125 houses within 10 days. He says: "I'm sold on the G-E Kitchen-Laundry in new homes just as Mrs. Duffy is!" Mrs. Duffy (also above) says: "All my friends wish they had a G-E Kitchen-Laundry for just that extra \$3.50 a month!"



**His General Electric equipped projects
won an N.A.H.B. award!**

Mr. Herbert Tandy (above) and his associates, Messrs. Norman Tandy and Alan D. Allen, are builders of the Saddle-Wood Hills Development in Hillsdale, New Jersey. N.A.H.B. stated: "The projects presented were a great credit; sound planning, ingenuity, and market-appeal were *all* in evidence."

Again in 1952, successful builders will

pre-sell houses by featuring the G-E Kitchen-Laundry!

Your houses will sell much faster when women see all the wonderful, timesaving equipment and learn that it adds as little as \$3.50 a month extra to regular monthly mortgage payments!

Here you see photographs of six successful builders from various sections of the country calling back on women who purchased houses from them months previously.

"Call-backs" convinced these builders—*more than ever*—that it pays to feature the G-E Kitchen-Laundry in the houses they build.

Isn't it time you, too, took a good look at these facts? We sincerely believe that if you do something about them, you will sell your houses faster.

1. You know that most women want—and expect—convenient, timesaving kitchen and laundry appliances in their new homes.

2. When these appliances bear the General Electric

nameplate, prospects become *more quickly* sold on the house because they're well-acquainted with General Electric products. They know they are the very finest appliances available. They associate the *quality* of the appliances with the entire construction of your houses.

3. Even families with \$50-a-week income are enjoying the comfort of a G-E equipped Kitchen-Laundry! That's because . . .

4. The buyer pays as little as \$3.50 a month more on his regular monthly mortgage payments.

Whether you sell 10 or 1000 houses . . .

. . . you can sell them faster if they're equipped with *matched* General Electric Appliances.

Why not start selling your houses faster, just as the builders on these pages are?

See your local G-E distributor, or write to the Home Bureau, General Electric Co., Louisville 2, Kentucky.



"G-E equipment gives us a distinct advantage over competition!"

Here's Mr. Clarence M. Lemon, builder of Wichita, Kansas homes who says: "We sold our entire project of 49 houses the very first day. We included the General Electric Kitchen-Laundry because we felt it gave our homes a distinct advantage over others selling in about the same price range."



"It's the clincher that helped us close 156 contracts!"

Mr. Edwin I. Abbott of Lyons, Illinois says: "The complete G-E Kitchen-Laundry in our 'House of Charm' homes was the clincher that helped us close 156 contracts in one week end. A woman is really sold when she sees General Electric Appliances included as a part of the complete house package."



"Sold 100 G-E houses—mostly to people with \$50 to \$70 incomes!"

Here's Carl B. Anderson of Virginia, Minn. who sold 100 houses with G-E Kitchen-Laundry during the past three years. He says: "It was the kitchen-planning service offered by the local G-E distributor that first interested me in including the G-E Kitchen-Laundry in my houses."



"57 sold the first day ... rest sold themselves!"

Here's Mr. Chas. A. Mohr, president of the Builders Assn. of Maryland. He says: "No matter what the price range may be, women *do* expect to see General Electric equipment in the kitchen, or else they're not keenly interested. It's no secret: G-E Kitchens sell my houses!"

GENERAL  **ELECTRIC**



OVERHEAD FAN set in ceiling near range removes cooking odors, steam, smoke. Also contains concealed spotlight



COMBINATION SINK AND DISHWASHER UNIT. Dishwashers have either raised top or pull-out front depending upon kitchen layout and space available



VENTILATING HOOD OVER RANGE is a popular feature. Hood is connected to chimney or vent pipe

(Continued from page 366)

washer installation is contemplated at a later date.

Garbage Disposers

Waste disposal units—electrically-operated grinders, shredders, or pulverizers mounted in the sink drain—are the modern method of handling food wastes. Kitchen odors are minimized. The unsightly outside garbage can, greatest single factor of rat infestation in cities, is eliminated. These advantages, plus added sales appeal, more than outweigh the initial cost of such units.

Table scraps, food wastes, even bones, are all shredded by hardened steel grinders, and flushed down the drain. Modern units are quiet, dependable, and safe in operation. Interlock devices prevent operation unless water for carrying away wastes is flowing. These units may be built-in as a part of new sinks, or may be obtained to mount on any modern sink already in place. Plumbing and electrical connections should



BASE CABINETS are available in both wood and metal which can be selected in a wide range of sizes to create almost any combination of storage and work space. Cabinets have drawers and compartments with slide-out shelves

be made as the manufacturer directs, and in accordance with local codes.

Local codes should be checked for installation requirements. Some require a minimum of a 2-inch waste line. Others will not permit disposal units to be used in conjunction with a grease trap.

The individual incinerator type of disposal unit may be used in locations having plumbing code restrictions. Waste material is placed in a metal container which is fired by gas. The residual ash is removed at periodic intervals, and safe, odor-free operation is assured.

Unit Kitchens

Builders of minimum-space units



TWO TYPES OF INCINERATOR UNITS for the home. Model (A) is off the floor at convenient height, has an automatic gas burner, burns trash. Ashes drop into removable tray at bottom. Model (B) has two compartments, one for drying, the other for burning trash, is gas-burning



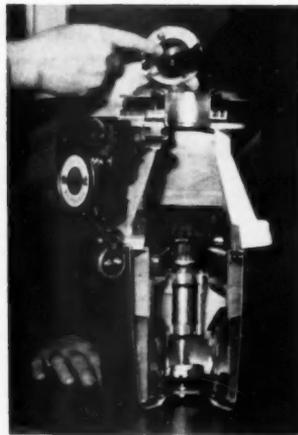
COMPACT UNIT-KITCHEN has sink, range, refrigerator, and storage cabinets combined into one space-saving unit

such as motels and kitchenette apartments have prompted the development of unit kitchens, in which range, oven, sink, and refrigerator are assembled into one or two compact units taking as little as 48 inches of floor space. While such compactness is not advisable for general use, these units will solve problems encountered in creating attic or basement flats, making rooming-house conversions, and the like.

Laundry Equipment

Surveys show that women prefer a first-floor laundry or utility room adjacent to the kitchen, rather than having the laundry part of the kitchen, or in the basement. With numerous compact laundry units available, an efficient laundry can be installed in a small space. Arrangement should follow the work se-

(Continued on page 372)



CUT-AWAY MODEL OF NON-CLOGGING DISPOSAL UNIT with shredding mechanism which reduces refuse to small particles. Sink cover can be used to start mechanism, or used as sink stopper or strainer

Alert!



is the word for

Tracy Kitchens DISTRIBUTORS

TRACY Kitchen Distributors are established, respected and capable concerns. Their most important characteristic, measured by **TRACY** standards, is the quality of keen alertness to the interests of their dealer customers.

Thorough-going experience in the kitchen business, and an open attitude toward progress and development, fit perfectly with the **TRACY** policy of volume-building with a top quality line of products.

TRACY Distributors, strategically located, responsible, service-minded, offer the best possible cooperation to retailers interested in kitchen profits. And we'll be glad to put any interested dealer in touch with HIS **TRACY** Distributor.

Smart- is the word for
Tracy **KITCHENS**
Major Stores
Program

Since this unusual program was released, some months ago, big-name and big-volume stores have been going to town for extra profitable kitchen volume. Tremendous promotional power—values that mark the participating stores as true leaders in sharp, effective merchandising. Complete details available through **TRACY** Distributors, whose names are furnished gladly on request.

THE
QUALITY-
VOLUME
LINE

Tracy KITCHENS



TRACY MANUFACTURING CO., Division of Edgewater Steel Co., Pittsburgh 33, Pa.



TYPICAL AUTOMATIC HOME WASHER—compact, portable unit which automatically fills itself with water, washes, rinses, spin-dries, drains, cleans itself and shuts off

(Continued from page 370)

quence—washer, dryer, ironer. If space permits, counters should be provided for sorting and piling work. A ventilated receptacle for dirty clothes is desirable. Cabinets for soaps may be a part of mop-and-broom storage facilities.

Washers

The automatic laundry machine is the basic unit. Generally speaking, the automatic washer does not take any more hot water than other laundering methods. Correct water temperature for operation is essential, however, and water heaters should be adequate for laundry requirements.

Plumbing should be roughed in to provide water and drainage lines for automatic washing units. Codes should be checked to determine requirements; some codes will not permit direct connection to waste lines, but require discharge of waste water through a floor drain, or other separately trapped discharge.



THIS IRONER folds up for storage in small space, features sleeve roller and detachable shelves for holding work



THIS KITCHEN-LAUNDRY has glass sliding doors between laundry area and kitchen area, making communication easy between the two. Tray with cover, washer, and dryer are arranged in sequence for easy handling of laundry operations



AUTOMATIC ELECTRIC DRYER dries clothes completely in 15 to 25 minutes by means of circulating hot air. Viewing door and interior illumination are included in the unit

The non-automatic type of washing machine is still in regular use in countless families. If this type of machine is to be installed in the home, a double compartment laundry tray will be needed, whereas single tub trays are adequate for occasional hand laundering jobs where the machine is of the automatic type.

For plumbing economy, the automatic washer is located adjacent to either the kitchen or bathroom, or in the basement below one of these rooms

Dryers

While dryers of the large capacity type have been in use in commercial laundries for years, the small, cabinet-type of forced air dryer for the home is a recent development. Heat is either gas or electric, and a fan forces a current of warm air through the clothes in a revolving drum. Dryer cabinets are matched to washers by manufacturers, and are suitable in appearance for kitchen

installation if desired.

Electrical and gas connections should be provided as required. All dryers made by reputable manufacturers have proper safety provisions and normally present no hazards.

Ironers

The addition of an ironer to the automatic washer and dryer rounds out the full complement of laundry equipment for the modern housewife. Ironers may be of the rotary or flat press type, and while the ironer may be included as a part of the laundry package in the sale of the house, the buyer's choice should be the only factor considered.

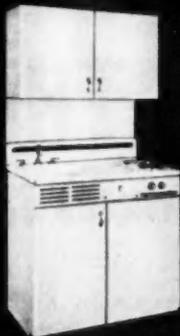
Electric ironers are thermostatically controlled for even heating, and should in addition include a heat adjustment for different fabrics. Small units are made to fold up and slide in or out of a cabinet, while larger models have a cabinet-type lid which uncovers to provide shelf space for receiving of finished work.



AUTOMATIC ELECTRIC WASHER, automatic electric dryer, and electric ironer all fit into compact arrangements for modern kitchen-laundries and increasingly popular utility rooms



IRONER conveniently located next to dryer and washer. Model has shelf in front for holding work, and lid folds back to hold finished work



EASY TO INSTALL!
APPEALING TO TENANTS!
PORCELAIN FOR PERMANENCE!

DWYER KITCHENS

39 to 69 inches wide

Complete kitchen facilities . . . range (gas or electric), refrigerator, sink and storage space . . . streamlined into compact units 30 to 69 inches wide.

Proven products of an organization with over a quarter century record of proven success in specialized production of compact kitchens.

Vitreous porcelain fronts never require repainting . . . brilliant, white porcelain that stays forever clean with soap and water.

Negligible maintenance costs *proven* in a quarter-century record of Dwyer Kitchens . . . largely in the hard usage of rental properties. Electrical and mechanical equipment of finest quality . . . every detail accessible for service from the front without disturbing the assembly.

If you seek tenant appeal, freedom from maintenance problems and low operating costs . . . investigate Dwyer Kitchens.



gas or electric range



modern refrigerators

convenient broiler



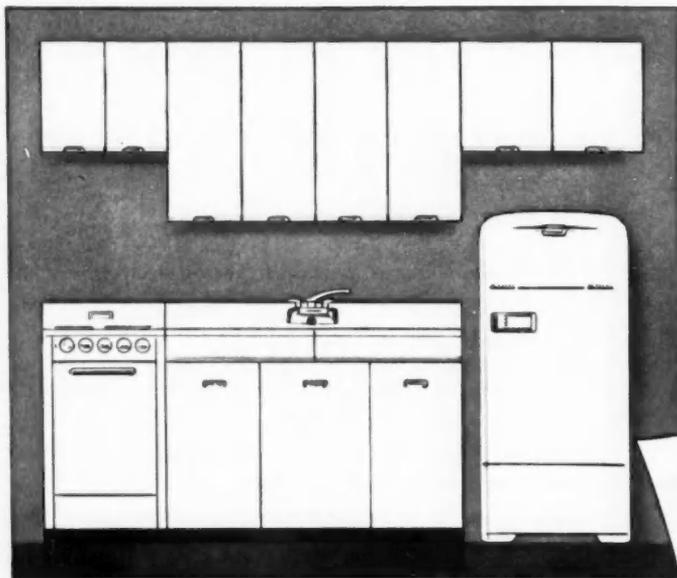
Manufactured by
DWYER PRODUCTS CORPORATION
 Dept. AB 5, Michigan City, Indiana

DWYER PRODUCTS CORP.
 Dept. AB 552
 Michigan City, Indiana

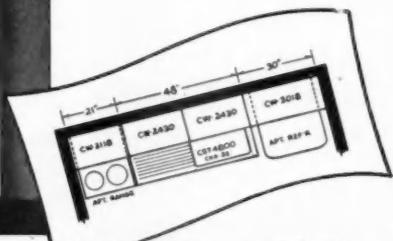
Send me illustrated bulletin
 on Dwyer Kitchens.

CROSLEY GIVES YOU THE

The Best New Convenience Features...



• Complete Crosley Kitchens can be selected to fit the size and shape of floor plans you lay out. Beautifully styled Crosley products are precision-engineered to fit perfectly, to harmonize with each other. Easy installation features simplify your planning—compact design conserves floor space.



LIMITED SPACE is no problem when you choose Crosley. Special models are available—designed to occupy a minimum of space, yet offering many of the big Crosley features that housewives want.

MODEL UD-7. You have several compact Shelvador® Refrigerators to choose from with widths as narrow as 24¼ inches. Each has many Crosley selling features. In addition, you have a wide selection of compact Crosley Electric Ranges, Shelvador® Freezers, Wall and Base Cabinets, Sinks, Food Waste Disposers, Electric Water Heaters, and other beautifully styled kitchen products.



Shelvador®
Refrigerators

Shelvador®
Freezers

Electric
Ranges

Sinks and Food
Waste Disposers

Steel
Kitchen Cabinets

Electric
Water Heaters

Radio
Receivers

Television
Receivers

Room
Air Conditioners

BEST THINGS FIRST...

the Best New Installation Features



DE LUXE KITCHENS

with a custom look can be designed from the standard Crosley Units. The corner pantry, silent server and range and refrigerator pantries lend individuality to any kitchen! Here's an example of what can be done when your plans call for a full range of fine kitchen facilities.

MODEL T-CAD-12. The latest Crosley convenience features make this Shelvador Refrigerator the center of attraction in any kitchen. It's so good that it's America's most copied refrigerator. Automatic Defrosting . . . shelves IN, not on, the door . . . ButterSafe automatically keeps butter spreadable...matchless "SOFT-GLO" Interior Styling.

For further information, write us for the name of your nearest Crosley distributor:

CROSLEY DIVISION 
1329 Arlington Street, Cincinnati 25, Ohio



CROSLEY... Better Products for Happier Living

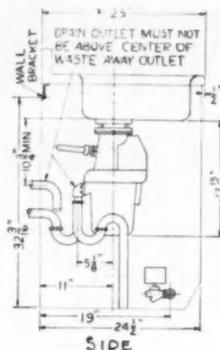
Working Dimensions for Sink and Dishwasher Installations

BUYERS today are seeking homes that feature kitchens that are complete in all details, including mechanical equipment and appliances. Builders, likewise, are taking note of the trend, and it is predicted that the day is not too far off when appliances such as automatic dishwashers and garbage disposer units will be recognized as standard equipment for modern living.

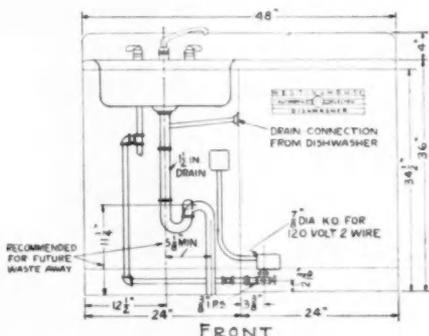
Manufacturers have standardized the height of appliance counter work as 36 inches above the floor. This was adopted as the height most convenient for the average housewife. Sinks, dishwashers and base cabinets are designed to be placed under a continuous counter top for a custom installation, or can be located side by side with matching tops. However, the majority of consumers buy appliances individually, and the height of the backsplash on the dishwasher-sink will affect installation beneath a window.

One manufacturer recently introduced its latest combination sink model with a six-inch high backsplash, paralleling the trend in higher backsplashes on electric ranges. This new model has a single control faucet located on the backsplash, as well as storage compartments for soap, brushes and other articles used at the sink. They assert that this arrangement gives uninterrupted work surface on the sink top and simplifies cleaning. While automatic dishwashers are in use in less than two per cent of the nation's wired homes, yet it has been tagged by manufacturers as an appliance with an excellent potential market.

The majority of manufacturers of dishwasher-sinks have followed the practice of mounting the faucets on the deck of sink and provide for a four-inch high backsplash. This method conforms to the present trend in backsplashes used in conjunction with manufactured kitchen cabinets and counters.

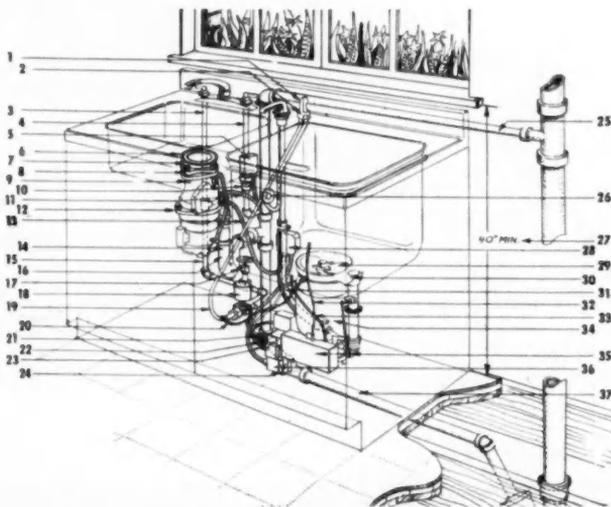


OUTLINE drawing of front and side view of Weatinghouse electric dishwasher and sink, indicating the position of basic component to establish roughing-in dimensions for installation. Over-all height to backsplash is 40 inches. Plumbing and wiring may be brought through floor or side cabinet as shown.

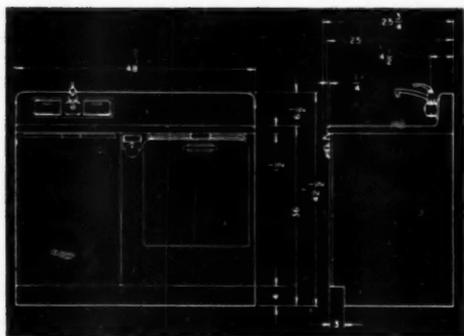


Kitchen Equipment Specifications

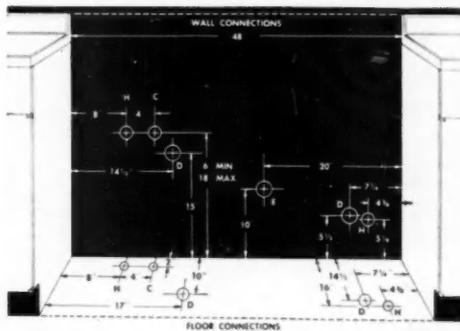
DESCRIPTION of the numbered parts are as follows: 1—Vacume breaker cover. 2—Vacume breaker assembly. 3—Hot water line. 4—Cold water line. 5—Flow interlock switch. 6—Clamping ring. 7—Supporting ring. 8—Mounting gasket. 9—Mounting studs-ribber washer. 10—Flow interlock, strainer. 11—Connection to flow interlock switch. 12—FA3JR Disposall. 13—Disposall power supply. 14—Tailpiece assembly. 15—Hot water line to dishwasher. 16—1 1/2 inch "P" trap minimum. 17—Hand valve. 18—Solenoid operated water inlet valve and strainer. Note: Standard equipment with dishwashers. All pipe and fittings to be purchased locally. 19—Water inlet to dishwasher. 20—Ground wire to motor. 21—Water inlet valve plug. 22—Heater plug. 23—Motor plug. 24—Soil pipe cleanout. 25—Vent. 26—Water inlet to dishwasher. 27—40 inches from floor to underside of window stool. 28—Electric outlet box for Disposall and dishwasher—Maximum load 1500W. 29—Impeller. 30—Drain Opening. 31—Pump drain hose. 32—Dispenser cup release cable. 33—Main switch and cover lock cable. 34—1/4 H.P., 1725 r.p.m., 115 volts A.C., 60 cycle, 4.8 AMP. motor. 35—Control. 36—Power supply terminal block (use EX cable). 37—Not more than 15 feet long 2 inch minimum pipe size slope 1/4 inch per foot minimum



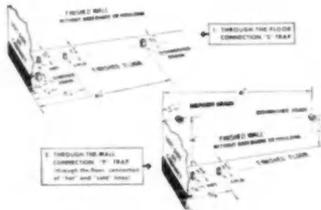
DIAGRAMMATIC drawing showing General Electric Company's sink, Disposall and pump model dishwasher for installation under kitchen window. Connections to basic soil and vent pipes indicated



OUTLINE drawing of front and side view of Hotpoint sink and dishwasher, indicating detailed and over-all dimensions of unit including backsplash, to assure proper installation in kitchen



ROUGHING-IN dimensions for installation of Hotpoint sink, dishwasher and Disposal shown at left. H & C— $\frac{1}{2}$ inch sink hot and cold water line openings. D— $1\frac{1}{2}$ inch sink drain line opening. E—Standard electrical connection box. H—Dishwasher hot water line opening; must be reduced to $\frac{3}{8}$ inch before entering dishwasher. D— $1\frac{1}{2}$ inch dishwasher drain line opening



PARTIAL drawings showing dimensions of through-the-floor or wall roughing-in connections for dishwasher, sink, and disposer. All dimensions are taken to the center line. Pipe sizes: trap and drain, $1\frac{1}{2}$ inch I.D.; "hot" line $\frac{1}{2}$ inch I.D. Plumbing and electrical connections must conform to local codes. Run a separate circuit with separate fuse box and 20-ampere fuses to junction box provided in cabinet. Use only an 60-cycle 115-volt alternating current

APRIL 1952

Mr. Architect—Mr. Builder
...for the new trend in kitchens!



GREATER BEAUTY
COMPLETE ADAPTABILITY

Presteline

The Built-In Electric Range
You Can Put in Any Kitchen!

Costs NO MORE than an ordinary range!

More and more home-buyers and home-builders today are demanding the advantages of built-in cooking units.

Presteline meets this demand with a new built-in electric range that offers every luxury feature at a moderate price. Low in initial cost, Presteline ranges are also easy and inexpensive to install... skillfully designed to fit standard

cabinetry... so compact and space-saving that surface cooking elements can be installed even on a 15" counter with only 4" depth clearance required. Presteline Built-In Units offer new ease and flexibility in kitchen planning.

They create new kitchen beauty through exclusive decorator colors and new non-tarnish metal finishes.

Here's what makes Presteline DIFFERENT

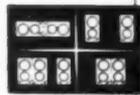


Eye-level
AUTOMATIC OVENS
Largest on the market
Fit standard 24" cabinets.

Individualized

COOKING TOPS

Fit standard cabinet units (15" and larger)
Versatile—adaptable to any kitchen plan.



years-ahead
luxury features

- Fastest Pre-heat
- 3-Position Oven Rack
- Automatic Oven Control
- "Minute Minder" Signal Bell
- Fire-proof Asbestos Construction
- Non-tarnish Anodized Aluminum and High-backed Lifetime Porcelain Finishes
- Choice of Top Arrangement including SAFETY TOP
- Remote Control Switch (Optional)

Take the TIME-See...

Presteline

For Full Information
MAIL THIS COUPON

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Appliance Division
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Chicago 11, Illinois

Please rush us complete information about the new Presteline Built-In Range Units.

NAME _____
ADDRESS _____
CITY _____ STATE _____

AM-4

377

Cool, Odorless Kitchens Catch the Buyer's Eye

IN THESE days of air conditioning, a well-ventilated kitchen in a new house is a definite selling advantage. Today's housewife responds to the suggestion that she need not have cooking odors carried all over the house, and that kitchen ventilation saves cleaning effort and frequent re-decorating.

For this reason, many builders are installing built-in ventilating fans in the kitchens of their new units. There are definite rules governing these installations, however. The mere presence of a ventilating fan in the kitchen does not mean that it will do an adequate job of changing the air and removing objectionable odors and grime.

The best location for the kitchen ventilating fan is directly over the range. This is the point at which cooking odors, steam, grease globules and so on are emitted. If carried away from as close to their point of origin as possible, the ventilation will be the most satisfactory. If the range is against an outside wall, it is relatively easy to build in a fan above it, discharging the air directly to the outside.

If the range cannot be against an outside wall, it should be close to one so that the fan can be mounted only a short distance from it. Often, a soffit above the range can be used as a conduit to the outside wall, the fan being installed in the soffit just over the range.

It is preferable not to install cabinets over the range because their interiors become too hot. There are some types of kitchen ventilators, however, that can be concealed in cabinets, the lower part of the cabinet acting as a hood which catches virtually all fumes. Fans mounted through the walls have adjustable sleeves to accommodate various wall thicknesses. Suggested sizes are an 8-inch fan for small kitchens, 10-inch for medium size and 12-inch for very large kitchens.

Hot Water Supply Must be Adequate

BUILDERS are changing their ideas of hot water installation capacities. The increasing use of automatic laundries, automatic dishwash-

ers, and the more frequent bathing made convenient by multiple baths, has changed previous conceptions about the size of storage tank and heating capacities necessary for today's new homes.

A 20-gallon storage unit no longer is recommended, even for a small home, because it is inadequate if an automatic laundry is installed. The house cannot have adequate hot water supply while the washing is being done. These smaller capacity units now usually are used only where there are two heaters instead of one—a practice growing among builders of the rambling, ranch style dwelling where long pipe runs are necessary if only a single heater is used.

There is a rough formula for determining the size water heater needed in a home. Tank size, plus rate of recovery, equals peak demand.

One variable in this equation is the "peak demand." How can it be determined?

The automatic laundry requires from 30 to 40 gallons of hot water per hour. An automatic dishwasher will use about 10 gallons per load. A tub bath requires from 15 to 20 gallons. A shower takes from 10 to 15 gallons.

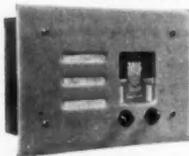
Non-automatic washing uses from 12 to 16 gallons of hot water per wash, and an additional 6 to 8 gallons if warm water is used for rinsing, as it usually is. Manual dishwashing takes about 3 gallons for an average family, or you can figure a gallon per person. Rinsing dishes under the hot water faucet will take another 6 gallons.

Recovery rate can be determined roughly by taking the B.T.U. input of the heater and dividing by 1,000. Thus, a heater with input of 25,000 B.T.U.'s will have a recovery rate of 25 gallons per hour. In winter, when incoming water may be colder, a higher degree rise in temperature is, of course, necessary.

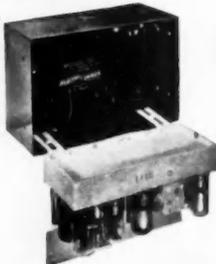
In general, rough guides to the size water heater needed are: for houses with one bath and one or two bedrooms, a 30-gallon capacity; one bath and three or four bedrooms, or two baths and one or two bedrooms, 40 gallons capacity; two baths and four or five bedrooms, or three baths and three bedrooms, a 50 gallon capacity.

ECONOMICAL ACHIEVEMENT of beauty combined with efficiency in a modern kitchen is essential. It is essential because national publicity and advertising in consumer publications have educated housewives on the basic principles of the compact, scientifically-planned women's work centers now available.

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General Contractors

R. E. Finnman
Designer

J. L. Brandeis Company
Interior Decorators and Furnishers

THE Omaha Hotpoint House of the 50's is the latest in a series of electrified houses being erected in strategic cities throughout the country to demonstrate how builders and manufacturers of home equipment can team up in a practical promotion to reach prospective home buyers.

Thousands of visitors inspected the home during "open-house." A completely coordinated advertising program, which received excellent cooperation from the newspaper, radio and television stations, and civic interests, gave the house maximum exposure. And, of course, Finnman-Dillon Company, the builders, came in for a full share of this favorable publicity.

The most modern of electrical appliances and equipment is incorporated in this Hotpoint House to make living easier and more pleasant. Approximately 30 Omaha supply outlets, many of them handling nationally advertised equipment, tied in with this highly successful promotion.

The national activity is being sponsored by Hotpoint Inc., and activated locally by distributors, builders, the utility company, and suppliers. More and more Hotpoint Houses of the 50's will be built across the nation. Their object is to set the pace for better living in the communities in which they are built, and to influence the public to buy or to build better homes completely equipped and completely electrified. For more information concerning a Hotpoint House of the 50's in your city, write the Builders Division, Hotpoint Inc., 5600 West Taylor Street, Chicago 44, Illinois.



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LUMBER is graded according to established grading rules and each piece usually carries a grade mark designating the species and the grade quality. These standardized and recognized grading practices make it possible for the lumber buyer to specify grade desired and be assured of uniformity in his lumber purchases.

No definite degree of hardness divides the hardwoods and softwoods. Many hardwoods are actually softer than the average softwood because the division reference is based upon a botanical classification. The general botanical classification designates that hardwoods come from broad-leaved trees, which shed their foliage annually, while softwoods come from needle bearers, which retain their foliage for more than a year. Practically all construction lumber is softwood.

Establishing Standards

The fact that no two trees are identical necessitates the grading of each piece of lumber that comes from each log. Specific grade and size standards have long been established by the American Lumber Standards, formulated after consultation between officials of the U. S. Department of Commerce and representatives of lumber manufacturers, distributors, wholesalers, retailers, engineers, architects and builders.

Softwood lumber is divided into three main groups on the basis of the uses to which it is to be put. These groups are (1) yard lumber; (2) factory, shop and box lumber; and (3) structural timbers. Yard lumber

is less than five inches in thickness and is intended for general purpose building. Factory or shop lumber is selected for further manufacture. Structural timbers are five inches or more in thickness and width. General grading classification table is shown on page 384.

Select and Common

Ordinary construction lumber is graded on the basis of quality into two main classes—select lumber and common lumber. Select lumber has but very few minor objectionable characteristics, is smoothly finished and can be used as a whole for finishing purposes or where large, clear pieces are required. The selects are divided into two main groups: A and B grades, suitable for natural finishing, and C and D grades, which have blemishes somewhat greater than those in the first class, but blemishes which can be covered with paint.

Common lumber may contain numerous characteristics which do not permit its use for finishing purposes but which still permit its use for general utility and construction purposes. The two principle classifications here are boards and dimension. Boards are graded as No. 1, No. 2, No. 3, No. 4 or No. 5. These grades are not equivalent in all species. Dimension is graded as No. 1, No. 2 or No. 3. The characteristics of these various grades are described briefly in the table on yard lumber.

Size Standard

Lumber sizes are based on its rough, green dimensions. For example, although described as 4 inch by 4 inch, which is the "nominal" size,

LUMBER, MILLWORK and RELATED PRODUCTS

Types of Lumber

Standards

Grades

Plans

Types of House Framing

Good Framing Practices

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Millwork

ALLOWABLE SPANS FOR DOUGLAS FIR AND SOUTHERN YELLOW PINE FLOOR JOISTS

Douglas Fir

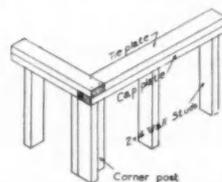
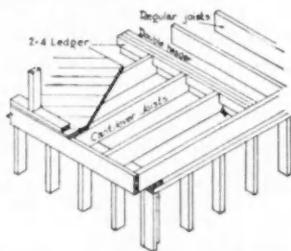
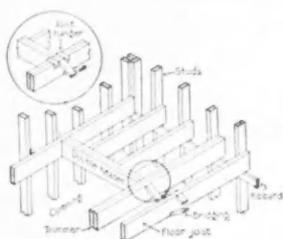
DRESSED LUMBER, Includes S4S and S2E

Nominal size (inches)	Spacing c. to c.	1900-1 Select Structural Framing etc.		No. 1 Framing, Joists, Plank		No. 2 Framing, Joists, Plank		No. 3 Framing, Joists, Plank	
		In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
2 x 6	12	11	3	11	3	11	3	7	7
	16	10	2	10	2	10	2	6	7
	20	9	6	9	6	9	2	5	10
	24	8	11	8	11	8	4	5	4
2 x 8	12	15	0	15	0	15	0	11	8
	16	13	8	13	8	13	8	10	1
	20	12	8	12	8	12	2	9	0
	24	11	11	11	11	11	2	8	3
3 x 8	12	17	8	17	8	17	8	14	10
	16	16	0	16	0	16	0	12	10
	20	14	11	14	11	14	11	11	6
	24	14	0	14	0	14	0	10	6
2 x 10	12	19	0	19	0	19	0	15	11
	16	17	3	17	3	17	3	13	9
	20	16	1	16	1	15	5	12	4
	24	15	1	15	1	14	1	11	3
3 x 10	12	22	4	22	4	22	4	20	1
	16	20	3	20	3	20	3	17	6
	20	18	10	18	10	18	10	15	8
	24	17	9	17	9	17	9	14	4
2 x 12	12	23	0	23	0	23	0	18	7
	16	20	10	20	10	20	10	16	1
	20	19	5	19	5	18	8	14	5
	24	18	3	18	3	17	1	13	2

Southern Pine

DRESSED LUMBER, Includes S4S and S2E

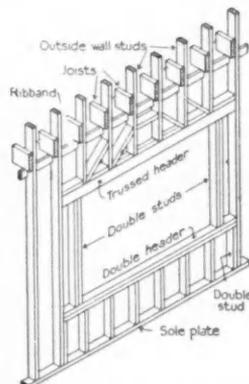
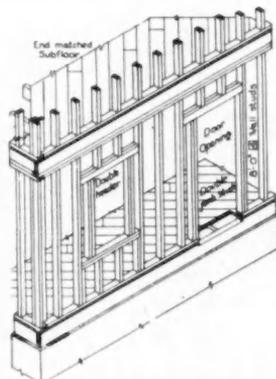
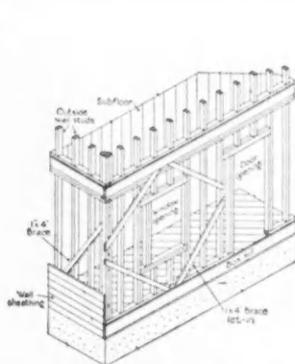
Nominal size (inches)	Spacing c. to c.	No. 1 dense 2-inch dimension		No. 1 2-inch dimension		No. 2 dense 2-inch dimension		No. 2 2-inch dimension	
		In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
2 x 6	12	11	3	11	3	11	3	11	3
	16	10	2	10	2	10	2	10	2
	20	9	6	9	6	9	6	9	2
	24	8	11	8	11	8	11	8	4
2 x 8	12	15	0	15	0	15	0	15	0
	16	13	8	13	8	13	8	13	8
	20	12	8	12	8	12	8	12	2
	24	11	11	11	11	11	11	11	2
3 x 8	12	17	8	17	8	17	8	17	8
	16	16	0	16	0	16	0	16	0
	20	14	11	14	11	14	11	14	6
	24	14	0	14	0	14	0	14	6
2 x 10	12	19	0	19	0	19	0	19	0
	16	17	3	17	3	17	3	17	3
	20	16	1	16	1	16	1	15	5
	24	15	1	15	1	15	1	14	1
3 x 10	12	22	4	22	4	22	4	22	4
	16	20	3	20	3	20	3	17	6
	20	18	10	18	10	18	10	15	8
	24	17	9	17	9	17	9	14	4
2 x 12	12	23	0	23	0	23	0	23	0
	16	20	10	20	10	20	10	20	10
	20	19	5	19	5	19	5	18	8
	24	18	3	18	3	18	3	17	1



WHERE EXTRA LOADS ARE PLACED ON JOISTS (left above) double headers and trimmers must be accurately fitted and nailed in place. When framing for a second-story overhang (right, above) a 2x4 ledger should be securely nailed to the double joist to receive notches in cantilevered joists used to support the overhang. Where overhang is at the end of joists, they extend beyond the wall the required distance

CAP AND TIE PLATES should be used for all exterior walls and the corners lapped and nailed with three 16 penny nails

Lumber, Millwork and Related Products continues on pages 389-92-93-94-95-96-97



CUT-IN OR LET-IN BRACING around openings or at corners should be as close to a 45-degree angle as possible. Adequate corner bracing or diagonal sheathing are prerequisites of good construction and are stressed by meticulous builders

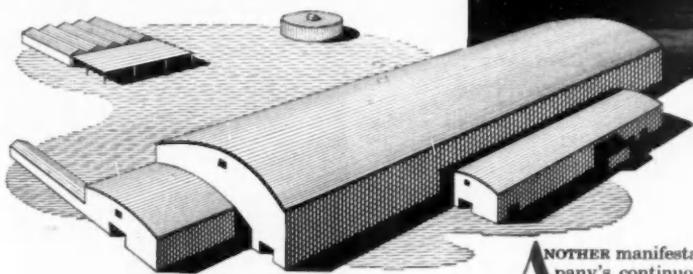
ACCURATELY FITTED DOOR AND WINDOW FRAMING is an indication of careful building for permanent stability. Where wide openings occur in the framing, extreme care should be taken in header construction because so much of the load above must be carried on these members. The illustration above at right shows one good method. Note that the diagonal members are carefully fitted and placed for rigidity

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REDWOOD



Left: Sketch of Simpson's new large redwood storage and processing plant, Arcata, California. Above: Redwood stacked in Simpson's 15-acre drying yard.

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From our forests and mills all grades and sizes of old-growth green Douglas Fir and Western Hemlock lumber is available, especially to the water-borne markets on the Atlantic and Gulf coasts.

REDWOOD LUMBER

Dry finished redwood lumber is cut and manufactured in all standard patterns for national distribution. Green redwood lumber is available for limited distribution.

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For maximum utilization of our timber resources, we convert small, sound wood pieces from our mills into Insulating Board Products including Interior Finish Board, Plank and Tileboard, Sheathing and Lath, Roof and Cold Storage Insulation and Acoustical Tile.

ANOTHER manifestation of Simpson Logging Company's continuous growth and progress is the completion of a modern new drying, storage and processing plant for redwood lumber at Arcata, California. Here, redwood from Simpson's timber holdings and sawmill at Klamath, California, is prepared for shipment.

This expansion is part of a steady growth which started in 1895, the year the company was founded. Simpson's logging, milling and manufacturing activities contribute to the stability of a large segment of the Pacific Northwest and Northern California which depend upon forest products for survival.

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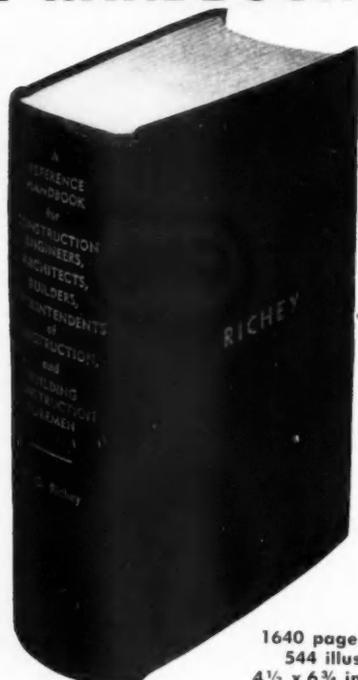
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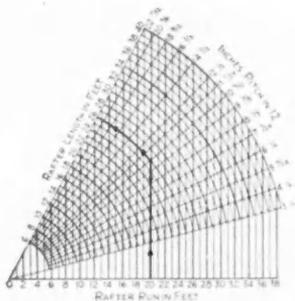
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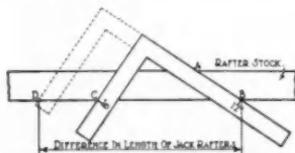
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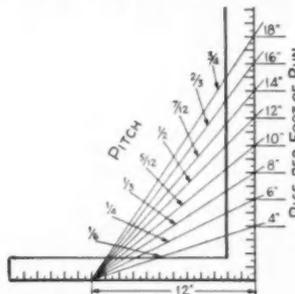
Redwood in the News



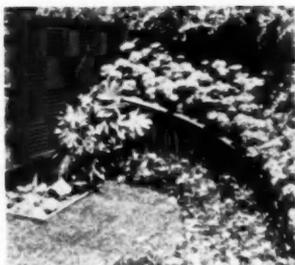
TO FIND THE RAFTER LENGTH when its run and pitch are known, follow the vertical line from the run to its intersection with the radial line of the pitch. From the intersection follow the curved line to the length. The diagram also may be used to determine the run when the length and pitch are known, or to determine the pitch when the length and run are known. Example: For a run of 20 feet and a pitch of 10 in 12, the length of the rafter is read directly from the diagram as 26 feet



THE LENGTH OF JACK RAFTERS, regardless of their spacing, can also be determined by using the steel square. Hold the square to the stock with 12 inches, the unit of run, on the blade and the rise per foot on the tongue, as shown in the drawing. Mark along the line A-B. Then slide the square on the stock until the figure representing the spacing of the jack rafter touches the point B. The distance D to B will be the difference in length of the jack rafters



"PITCH" is the amount of slope of a roof. "Rise" is the vertical distance the ridge is above the plate. The unit of measurement is one foot or 12 inches. To find the pitch, divide the rise by the span of the building. Rafter run is one-half the width of the building. The drawing above shows a number of rafter pitches in relation to the steel square



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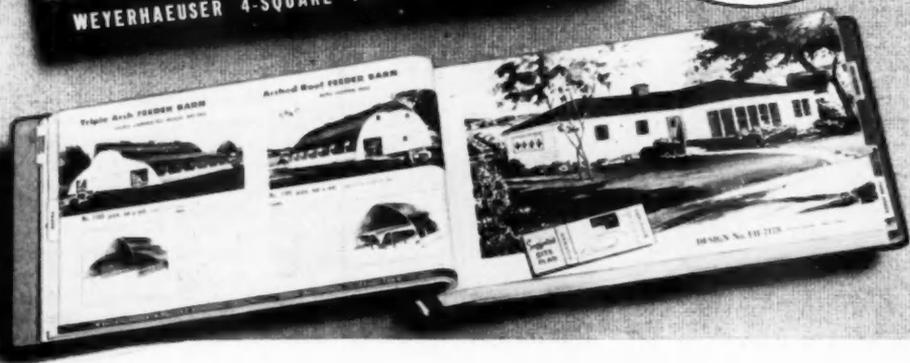
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the farm market...

Your Weyerhaeuser 4-Square Lumber Dealer CAN HELP YOU OBTAIN MORE BUSINESS

WEYERHAEUSER is helping to develop more profitable business in the farm market with a powerful selling program . . . and if you build for that market you will want to talk to your dealer about it.

This selling program is built around the 4-Square Farm Building Service which contains designs, blueprints, and material lists for 16 modern farm homes . . . and 171 service buildings and equipment items. It is available for your use, without charge, at the office of your 4-Square Lumber Dealer.

As a part of this program, Weyerhaeuser is running a series of page dominating advertisements in your state farm papers. This advertising is designed to create active interest in modern homes and efficient farm buildings.

The second part of this program is a strong merchandising promotion designed

for local dealer use . . . and there's material in it for your use also . . . plan books and folders on homes . . . buildings . . . and equipment. Material that enables you to show your farm customers the newest and best in modern shelters.

Your 4-Square Dealer can supply you with quality lumber products . . . efficiently manufactured, properly seasoned, carefully graded, accurately cut . . . and trademarked "Weyerhaeuser 4-Square". Dependable lumber is an important factor in fast, profitable construction.

See your Weyerhaeuser 4-Square Lumber Dealer soon. Go over this program with him. It means more profitable farm business for you . . . month after month.

WEYERHAEUSER SALES COMPANY

ST. PAUL 1, MINNESOTA



Farm Building Service

Rise in Inches per Foot of Run	Equivalent Pitch	Common Rafter	Hip or Valley Rafter
3"	1/8	.515	.719
4"	1/6	.527	.728
5"	5/24	.542	.738
6"	1/4	.559	.751
7"	7/24	.579	.766
8"	1/3	.601	.783
9"	3/8	.625	.801
10"	5/12	.651	.822
11"	11/24	.678	.844
12"	1/2	.707	.867
13"	13/24	.737	.892
14"	7/12	.768	.918
15"	5/8	.8	.945
16"	2/3	.833	.973
17"	17/24	.867	1.
18"	3/4	.901	1.03
19"	19/24	.936	1.06
20"	5/6	.972	1.09
21"	7/8	1.01	1.13
22"	11/12	1.04	1.16
23"	23/24	1.08	1.19
24"	Fall	1.12	1.23

TO FIND THE LENGTH OF A RAFTER for any roof pitch, multiply the span by the factor on the same horizontal line in the column marked "Common Rafter" or "Hip or Valley Rafter," as the case may be. The lengths obtained by this table do not include a projection over the plates. If rafters are to be continued over the plate, add twice the horizontal cornice projection to the span before multiplying by the factor above. If the rise per foot of run contains a fractional part of an inch, use the next larger number of inches

—Courtesy National Handbook

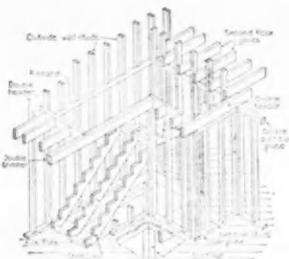
ALLOWABLE SPANS FOR YELLOW PINE AND DOUGLAS FIR RAFTERS

(First table below is for Yellow Pine and the second is for Douglas Fir)

[Roof slopes greater than 3 in 12. Span is the actual length of the rafter between the plate and the ridge or an intermediate support]

Nominal size (inches)	Spacing c. to c.	1600-l Select Structural Framing, etc.		No. 1 Framing, Joists, Plank, etc.		No. 2 Framing, Joists, Plank, etc.		No. 3 Framing, Joists, Plank, etc.	
		Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing
2 x 4"	In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
	12	14	1	12	6	9	8	8	7
	16	12	3	10	11	8	5	7	6
	20	10	11	9	9	7	6	6	6
2 x 6	12	21	11	10	6	20	10	18	7
	16	18	11	16	11	18	1	15	9
	20	17	1	15	0	16	2	14	5
	24	15	6	13	9	14	9	13	2
2 x 8	12	29	3	26	1	27	10	24	3
	16	25	3	22	7	24	2	21	5
	20	22	7	20	2	21	7	19	2
	24	20	8	18	4	19	8	17	6
2 x 10	12	37	1	33	0	35	3	31	5
	16	32	0	28	6	30	6	27	2
	20	28	8	25	7	27	3	24	4
	24	26	2	23	5	24	11	22	2

Nominal size (inches)	Spacing c. to c.	1900-l Select Structural Framing, etc.		No. 1 Framing, Joists, Plank, etc.		No. 2 Framing, Joists, Plank, etc.		No. 3 Framing, Joists, Plank, etc.	
		Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing
2 x 4"	In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.
	12	15	4	13	8	10	4	9	2
	16	13	4	11	11	8	11	7	11
	20	11	11	10	8	7	1	6	2
2 x 6	12	23	10	21	3	20	10	18	7
	16	20	7	18	5	18	1	15	9
	20	18	7	16	4	16	2	14	5
	24	16	11	15	0	14	9	13	2
2 x 8	12	31	11	28	5	27	10	24	3
	16	27	7	24	7	24	2	21	5
	20	24	7	22	8	21	7	19	2
	24	22	6	20	0	19	8	17	6
2 x 10	12	40	5	35	11	35	3	31	5
	16	34	10	31	1	30	6	27	2
	20	31	3	27	10	27	3	24	4
	24	28	6	25	5	24	11	22	2



STAIRWAYS SHOULD BE FRAMED with not less than three horses and of stock wide enough to leave 3 1/2 inches of material behind each cut. Landing must be carefully supported and the stair braced against thrust. Accurately cut horses or stringers are important

(Continued from page 385)

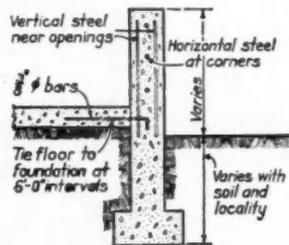
main stairs and 6 feet, 4 inches for basement and service stairs.

For complete information on all stairway millwork, including all stairway parts factory completed, see windows, doors, frames, and stairs section of this directory issue.

Framing Farm Buildings

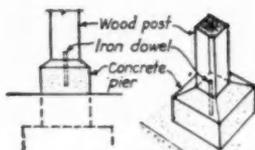
Regardless of the size, type or architectural style of modern frame farm service structures, they must be erected to meet three major requisites: (1) to stand permanently plumb; (2) to withstand maximum wind pressures ordinarily experienced in the area, and (3) to retain an attractive appearance.

The size and depth of footings depend on soil conditions and the loads to be carried. In many cases it is not the vertical compression loads which put the biggest strains on barn foundations, but the pressure from



IN ALL TYPES OF BUILDINGS, including farm buildings, it is essential that the foundation be extended below possible frost penetration, even though firm bearing soil is found at a shallow depth. This will prevent upheaving by freezing temperatures

← No. 1 and 2 studding and blocking grades. Light Roofing: Material weighing, in place, 5 pounds or less per square foot. Heavy Roofing: Material weighing, in place, over 5 pounds per square foot.



Method of fixing wood post to concrete

the outside pushing in or from the inside pushing out. Earth or manure is often piled against a wall in a spot where such pressure can cause a failure. A shallow footing can fail because of excessive moisture or be weakened by consistent stamping and tramping of animals.

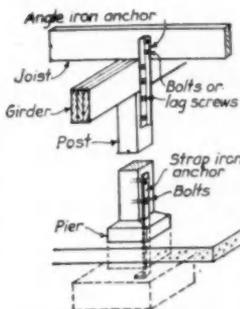
Every permanent farm structure must be anchored solidly to its foundation. Barns do not blow down—they blow up. They are lifted off foundations, or roofs and sides blow off and out. The most common reasons for barn failures are (1) the nature of wind pressures; (2) the method used in making joints; (3) improperly laid masonry block foundations which fail; (4) failures at points of anchorage. Drawings on these pages show some recommended anchoring methods.

Gambrel roof failures occur primarily at sill, plate and ridge—wherever toenailing is usually used. It is safer to lap members past one another and put nails, bolts or fastenings in shear. The ridge point can be further reinforced by a light strap iron over the rafter junction.

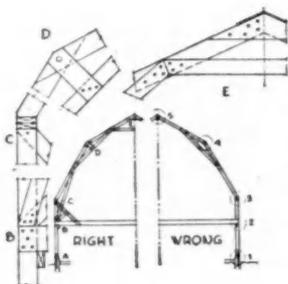
Good Joints

Good joints are so important in farm buildings that every builder should know the relative merits and strength of the principal methods of making wood joints. See diagrams on these pages which show the relative strength of joining methods. Further information regarding Correct Frame Nailing will be found elsewhere in this issue.

TIEING ALL FRAMING MEMBERS TOGETHER securely is essential in farm structures. Where a load-bearing post supports a girder on which either joists or rafters rest, an angle iron or similar device should be used to tie the post, girder and members



SOME SUGGESTIONS for improving stud and joist framing are shown at the left. To eliminate toenailing at the common points of failure at sill, plate and ridge, it is always wise to lap members past one another and put nails, bolts or fastenings in shear. The ridge joint may be further reinforced by a light strap iron over the rafter junction, shown in Section E above



DOUGLAS FIR

one of **10** woods

from the
**WESTERN
PINE
REGION**



This strong, tough, straight-grained softwood is a first choice for any lumber use where unusual strength, stiffness, load-bearing capacity and nail-holding power are important. Popular, too, for paneling and interior trim and cabinetwork.

One of ten fine softwoods from member mills of the Western Pine Association. All are manufactured, seasoned and graded to exacting Association standards. Lumber dealers, builders, architects and wood users have found them dependable and best for many construction uses.



THESE ARE THE WESTERN PINES

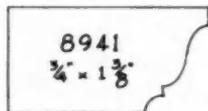
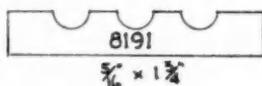
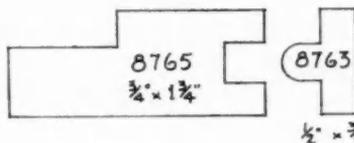
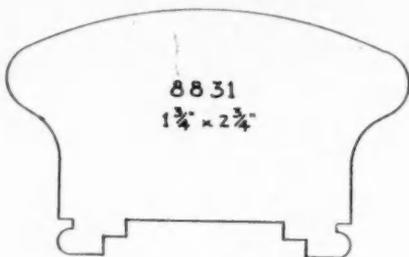
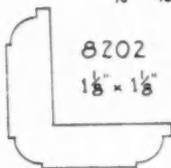
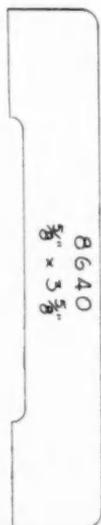
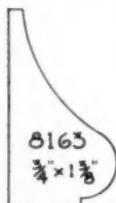
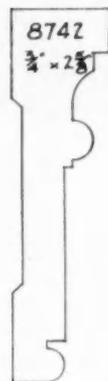
IDAHO WHITE PINE
PONDEROSA PINE • SUGAR PINE

THESE ARE THE ASSOCIATED WOODS

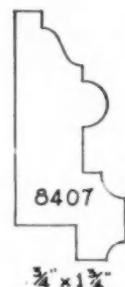
LARCH • DOUGLAS FIR
WHITE FIR • ENGELMANN SPRUCE
INCENSE CEDAR • RED CEDAR
LOGSPOLE PINE



Write for free illustrated book about Douglas Fir.
Address:
Western Pine Association,
Yeon Building,
Portland 4, Oregon.



$\frac{3}{8} \times \frac{3}{8}$
 $\frac{3}{8} \times 1\frac{1}{8}$
 $\frac{3}{8} \times 1\frac{3}{8}$
 $\frac{3}{8} \times 1\frac{3}{8}$
 $\frac{3}{8} \times 2\frac{3}{4}$



EXAMPLES OF STOCK MOULDING FROM THE "8000" SERIES OF STANDARDS

Millwork

Millwork consists of building items which are fabricated at the factory by the use of some type of machinery. For specific information on millwork relative to doors, windows and stairs refer to directory section titled *windows, doors, frames, and stairs*.

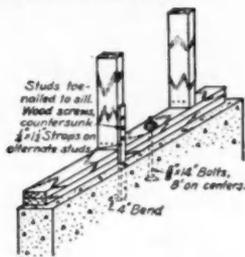
Millwork may be either assembled at the factory or delivered to the builder knock-down. Included in the many items referred to as millwork are balustrades, scroll work, bent work, casework, cupboards, mantels, mantel shelves, columns, colonnades and a wide variety of mouldings. While some standardization of size exists, designs may be unique with each manufacturer.

Mouldings, however, can be purchased by reference to a standard numbering system, generally adopted by moulding manufacturers, which indicates the size and design of the specific type of moulding. In addition to this accepted standard system of identification, certain stock mouldings have become standard within certain sections of the country. For example

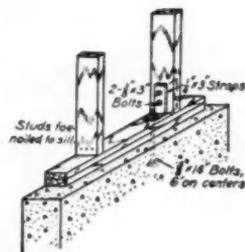
one might purchase a NY 116 in New York City or a DC 98 moulding in Washington, D. C.

Shown on these pages are some accepted standard stock mouldings from the "8000" series standard.

Methods for Anchoring Frames to Foundations In Farm Buildings



Here, a $\frac{1}{2} \times 1\frac{1}{2}$ -inch strap iron is bent to form an L shape. The foot of the L and part of the leg are imbedded in the concrete at the time the foundation is poured. The upper part of the leg, which has been previously drilled with holes, is fastened securely to the stud with large wood screws or lag screws. The double sill is anchored to the foundation in the usual manner and all the studs are toenailed to the sill. The steel straps must be carefully lined up and properly spaced



Above, anchor bolts are placed at six-foot intervals in the foundation wall as it is poured. A 12-inch length of $\frac{1}{2} \times 3$ -inch strap iron is bent to form an L-shape bracket 4 inches long in one direction and 8 inches in the other. The 4-inch leg is drilled to fit over the anchor bolt and the 8-inch leg is drilled for two $\frac{3}{8}$ -inch bolts by which it is fastened securely to a stud. Every third stud is held down in this manner and the others are toenailed to the sill in the conventional manner. Existing buildings can be anchored in this manner by using lag screws to fasten the straps to the sill, provided the sill is well anchored to the foundation. In place of the L-shape bracket shown, a T-strap might be screwed to the inside of the studs and sill

(Continued on page 396)

YOUR BEST BUY IN BLOCK FLOORS



READ THESE FACTS ABOUT DELFAIR OAKBLOK

DELFAIR OAKBLOK offers to builders a truly distinctive floor, one that is equally suitable for small or large homes, commercial structures, housing projects, schools and institutions. It is especially adaptable to economical installation over concrete.

DELFAIR OAKBLOK is available in all standard strip flooring grades and also in the following special grades: Prime, Standard and Better, Standard, Tavern and Better and Tavern.

DELFAIR OAKBLOK is made of either Red Oak or White Oak, and is available either unfinished or prefinished.

DELFAIR OAKBLOK comes in the following sizes: $25\frac{1}{32}'' \times 6\frac{3}{4}'' \times 6\frac{3}{4}''$, $25\frac{1}{32}'' \times 7\frac{1}{2}'' \times 7\frac{1}{2}''$, $25\frac{1}{32}'' \times 9'' \times 9''$, $\frac{1}{2}'' \times 8'' \times 8''$ and $\frac{1}{2}'' \times 10'' \times 10''$. All blocks are steel spline joined.

DELFAIR OAKBLOK'S milling characteristics: tongue and groove end-matched—slight vee-edge on prefinished blocks—cross-wise grooves spaced to insure better mastic adhesion.

DELFAIR OAKBLOK can be a money-maker for you in 1952. Write today for complete information.

Quality Oak Flooring

- STANDARD STRIP
- PREFINISHED
- OAKBLOK
- PLANK
- SQUARE EDGE STRIP

D. L. FAIR
LUMBER
COMPANY

LOUISVILLE, MISSISSIPPI

Member N.O.F.M.A.

A NEW Service to Your Industry

- PRESSURE CREOSOTED TREATMENT
- PRESSURE PENTACHLOROPHENOL TREATMENT

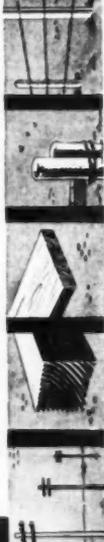
Pressure TREATED MATERIALS

- Treated in our modern, new treating plant at Diboll, Texas. Write or wire for full information.

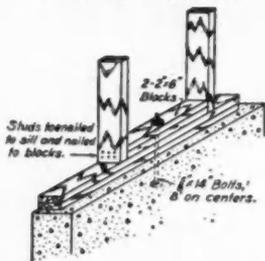
SOUTHERN PINE LUMBER CO.

MILLS: DIBOLL and PINELAND, TEXAS
SALES OFFICE: TEXARKANA, TEXAS

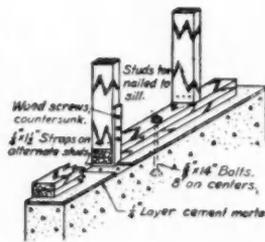
POLES
TIMBER
LUMBER
PILENG
FENCE POSTS



(Continued from page 395)

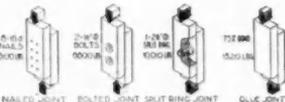


Headers of the same size as used for the studs 8 feet apart along the foundation. Anchor bolts are placed in the foundation 8 feet on centers and anchor the headers as well as the wall securely to the foundation. The studs are toenailed to the sill and spiked to the ends of the header. The header should be separated from the sill by blocks spaced widely enough to prevent splitting the ends of the studs when spiking them to the headers. By using lag screws to fasten the headers to the sill, this method can be used to strengthen buildings already built if the sill is well anchored to the foundation.



Here, $1/2 \times 1/2$ -inch iron straps are bent in an L-shape to extend across the underside of the sill and up the side of the stud far enough to permit fastening them to the stud with large wood screws or lag screws. The sill is laid on a bed of cement mortar and secured to the foundation with anchor bolts spaced eight feet apart along the wall. The iron straps are inserted at four-foot intervals when the sill is laid.

Drawings and data courtesy Kansas State College.



VARIOUS TYPES OF JOINTS discussed in text on page 393. At left are 2x4's fastened with the common nailed joint; next are 2x4's fastened with two $1/2$ -inch bolts; the third illustrates a timber connected joint with one $2 1/2$ -inch ring imbedded between two 2x4's. The fourth illustration shows a glued joint with two 2x4's lapped eight inches. This latter joint tested by far the strongest.

WHY PUT UP WITH THIS



WHEN YOU CAN OPEN DRAWERS LIKE THIS

Fingertip drawer operation—so easy to achieve on built-ins with...



MAKES HOMES SELL FASTER!



No tugging, no straining to open a drawer equipped with Roll-eez. Roll-eez prevent wooden drawers from sticking and binding—provide a smooth, quiet, effortless drawer operation—by eliminating wood-to-wood contact and maintaining perfect drawer alignment. Easy to install, they allow a simplified drawer construction and faster fitting of drawers, generally save enough in time, labor, and materials to make up their small cost. Durable, long-lasting, Roll-eez increase the value of your homes.

Five styles. Roll-ees consist of durable plastic rollers mounted on steel pins and frames.

Write for Literature Today!

JUNIOR-PRO PRODUCTS CO.

3206 Morganford Rd., St. Louis 16, Mo.

SUPERCEDAR

Brown's RED CEDAR CLOSET LINING

Guaranteed 90% RED HEART 100% OIL CONTENT

NATIONALLY ADVERTISED

Brown's SUPERCEDAR is nationally advertised in House and Garden, House Beautiful and Small Homes Guide. Cedar closets help sell homes—help rent apartments.

PACKAGED SEALED



ALL WIDTHS 49 TO PKG.

Brown's sealed package protects the aroma and makes it easy to stock and sell at a good profit. Ready for use—dressed, tongue and grooved and end matched. Write for builders folder and consumer booklet.

Product of **GEO. C. BROWN & CO., Inc.**
GREENSBORO, N. C. Established 1896

Largest Manufacturers of Aromatic Red Cedar in the world

SPIREX SASH BALANCES

Quiet

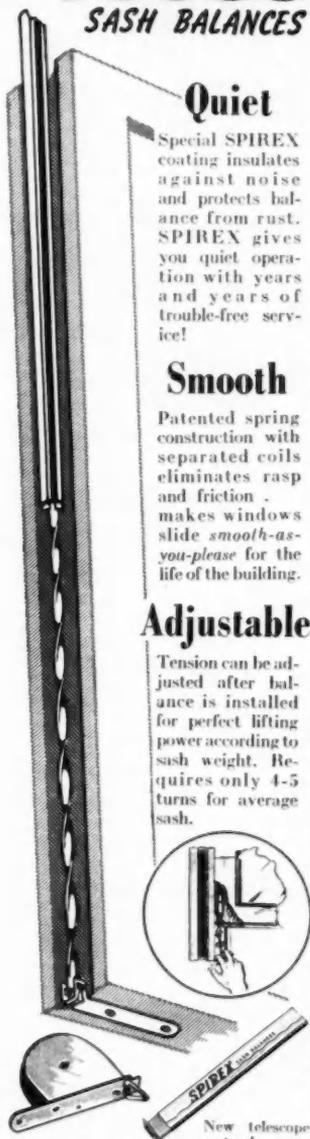
Special SPIREX coating insulates against noise and protects balance from rust. SPIREX gives you quiet operation with years and years of trouble-free service!

Smooth

Patented spring construction with separated coils eliminates rasp and friction. makes windows slide *smooth-as-you-please* for the life of the building.

Adjustable

Tension can be adjusted after balance is installed for perfect lifting power according to sash weight. Requires only 4-5 turns for average sash.



Manufacturers of precise clock spring balances since 1888.

New telescope carton has complete unit and accessories for the job.

Send free window unit booklet on Spirex and Caldwell tape balances.

NAME _____

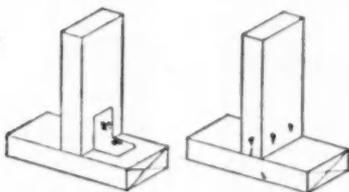
COMPANY _____

ADDRESS _____

CALDWELL MANUFACTURING CO.
68 COMMERCIAL ST. ROCHESTER 14, N.Y.

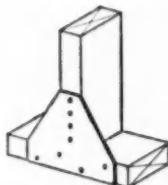


FOUR METHODS OF IMPROVING TOENAILED JOINTS

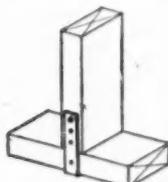


CLIP ANGLES

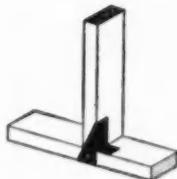
TOE NAILING



GUSSET PLATE



STRAP IRON



Conventional toenailed joint is on the right, top line. The Timber Engineering Company's Trip-L-Grip anchor, made in six different shapes, is at the right in bottom row



Quality Millwork

COLONIAL CORNER CABINETS

KITCHEN UNITS

Base and Wall Cabinets

FIREPLACE MANTELS

COLONIAL DOOR ENTRANCES

DOOR BLINDS WINDOW BLINDS

WOOD LOUVRES

GABLE SASH GABLE LOUVRES

BASEMENT WINDOW UNITS



To top grade materials and superior workmanship, GREGG adds sturdy packaging for easy storage and handling and to assure that every piece reaches the job undamaged, ready for installation.

Packaged
FOR YOUR
CONVENIENCE and PROFIT



GREGG & SON, INC.

Framingham, Mass.

MILLWORK OF QUALITY SINCE 1719

**TWO NEW REASONS
FOR SPECIFYING**



RO-WAY GARAGE DOORS

for your Residential, Commercial and Industrial Jobs

Again Ro-Way sets the pace in garage door improvements. Ro-Way engineers believe that along with the great strides made by the Automotive Industry there should also be constant advances in the Doors for buildings that house automobiles, trucks and buses. So in addition to Power-Metered springs, Double-Thick Tread track rollers, Crow's Foot outer bearing supports and many other exclusive Ro-Way developments you are now offered—

- 1** TAPER-TITE CLOSURE—Vertical tracks taper away from jambs at a pitch of $\frac{1}{4}$ " per door section; this "taper", or angle, is the foundation of the Ro-Way Taper-Tite Closure.
- 2** SEAL-A-MATIC HINGES—of graduated height guide the closing door tightly against side and head jambs; these same hinges immediately free the opening door from jambs to provide easy, frictionless operation.

You will find it well worth while to contact your nearby Ro-Way distributor. Look in the yellow pages of your telephone directory or write us.

For time-saving, intelligent, cooperative service on all garage door jobs, you'll find the Ro-Way distributor a good man to know. Remember he is one of a national network of hand picked distributors giving dependable satisfactory sales and installation service.

ROWE MANUFACTURING CO., 701 Holton St., Galesburg, Ill.

there's a Ro-Way for every Doorway!





DETACHED GARAGE of this one-story ranch-type house is made a part of the over-all arrangement by a connecting breezeway. The garage doors are placed off-center of front wall to provide for workbench on side wall. Roof ridge is centered on door, thus extending the roof line on one side and purposely establishing a lower eave line

UNDER present conditions of high-cost construction, garages have come in for a certain amount of neglect. Roughly 50 per cent of houses built for sale over the past five years have been built without garage. For low-priced homes built for sale the garage has almost entirely disappeared; and for the medium-priced house the builder will often include a carport, a skeleton shelter which the owner in a cold-weather area can later fill in for more adequate protection.

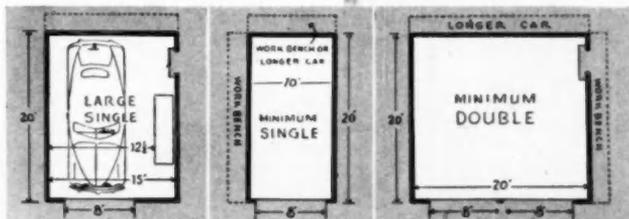
When a garage is included as part of the job, special care should be taken with its planning. Garages should be thought of not only in terms of car protection and storage, but as utility space where equipment used in maintaining grounds and building may be stored, where extra-storage of all kinds may be accommodated, and as a potential workshop space for the man of the house.

Planning and Design

First of all, space for the car must be at least wide enough to permit car

doors to be opened so individuals may get in and out comfortably when the car is in the garage. Ten feet is about the minimum width for this. It must be at least long enough so a person can get around the car with the garage door closed. That means at least six inches in front and about 18 inches clearance in the rear. With the exception of about three of the largest American passenger cars made, 20 feet is adequate for this. The ceiling or deck above the car should be at least seven feet six inches above the floor. These figures approximate the minimum requirements for housing the family car. FHA requirements in many areas specify minimum inside width of 9 feet 6 inches and length of 19 feet.

Size of the lot and location of the garage determine largely where additional space can be provided in the unit so it can properly fulfill its function as a utility building. If it must be single-car width then the extra space should be added lengthwise. Even though the family may never intend to have two cars, a double-car 20-foot wide unit is desirable where space



A **LARGE** single garage should be at least 14 or 15 feet wide. This permits doors on both sides of the car to be opened comfortably and still allow about two feet for storage or a work bench along one side. The recommended minimum size for a single garage is 10x20 feet. If it must be

kept to this width and if storage space is desired, the extra area can in most cases, be added to the length of the narrow structure. The recommended minimum size for a double garage is 20x20 feet. With two cars this leaves an inadequate amount of storage space but ample room for the cars

GARAGES GARAGE DOORS, HARDWARE, and AUTOMATIC Operators

Garages

Multiple Purpose
Planning and Design
Construction

Doors

Hardware

Automatic Operators

Driveways

SEE ALSO:

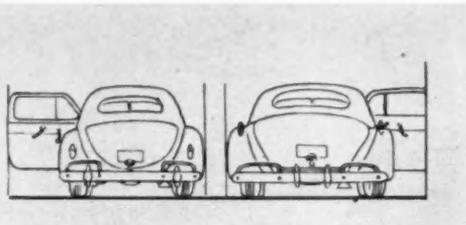
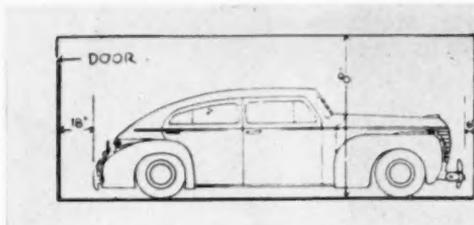
Lally columns, metal shutters and louvers, other metal products—Chapter 3

Roofing, sheathing, siding—Chapter 12

Insulating boards—Chapter 10

Cement, mortar, and related products—Chapter 20

Flywood—Chapter 2



IN PLANNING for space to be occupied by the automobile in a garage where space is also allocated to storage of tools, toys and equipment, these diagrams illustrate the points on the car to be measured. In figuring length, allow at least six inches in front of the car and 18 inches at the rear. A clear ceiling 7 feet and 6 inches in height is adequate. The diagrams above show a medium-sized and a large car with one door on each completely

open. The width should permit car doors to open fully without banging the garage wall, a work bench, bicycles or other stored items. If a work bench is desired, 2 feet is about minimum width. In general planning for storage space and driveways the following figures can be used as standards: longest car over-all, 238³/₈ inches; longest wheelbase, 146³/₈ inches; widest car, 80¹/₈ inches; highest, 72¹/₈ inches; minimum road clearance, 6¹/₂ inches

permits. Variations in providing extra storage and recreational space in garages can take an infinite number of steps in different directions from these two standard setups.

The Urban Land Institute in its "Community Builders Handbook" says: "It is recommended that storage space be provided in garages even where houses contain basements. Provision of storage space in the garage for tools, garden furniture, and similar articles is desirable. For single car garages, it has been found feasible to add five to six feet to the length of the garage for this purpose. This is preferable to widening the garage as this may require a greater lot width."

Home buyers definitely prefer the attached garage with direct access to the street. Garages on the rear of the lot are unpopular because of the great amount of paving required and their interference with the use of yards.

When planning the garage, consider traffic between garage and house, garage and rear yard. Consider the housewife shopper with a load of bundles to carry from car to kitchen. A large door opening directly to the rear or side of the garage is usually preferred. When single garages are built wider than the 10-foot minimum inside but less than two-car width, the 8- or 9-foot entrance door for the car should be

placed off-center so that maximum storage or work space is allowed at one side.

In addition to considering size of lot, building codes, climate, street traffic, and parking space for visitors, plan for adequate wiring, good lighting, and suitable ventilation to remove gasoline fumes and other odors from attached garages. There should be provision for running water as well as window area for light over work space.

Construction

No matter how well designed the garage is, it can soon start to fall

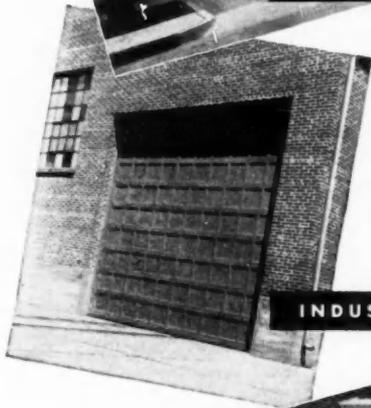
(Continued on page 402)



WIDE OVERHANG gives protection from the weather while small windows set into upward-acting doors add note of interest



COMMERCIAL



INDUSTRIAL



MUNICIPAL



RESIDENCE



Barcol OVERdoors

**LOOK WELL...
WORK WELL**

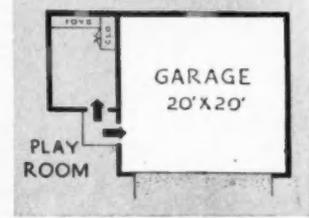
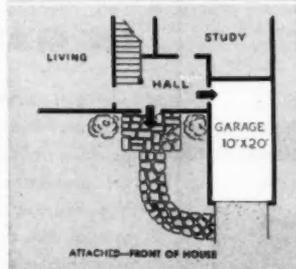
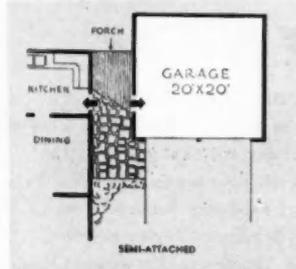
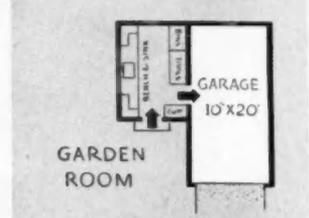
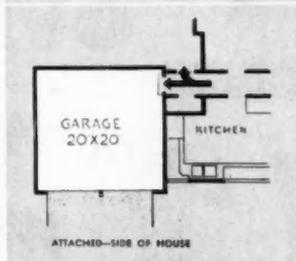
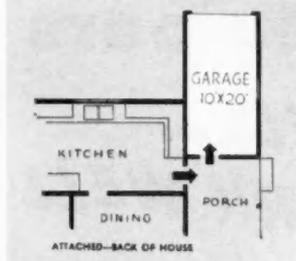
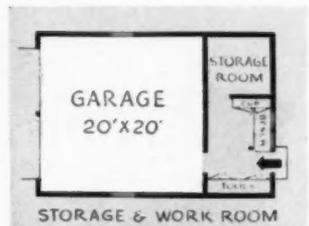
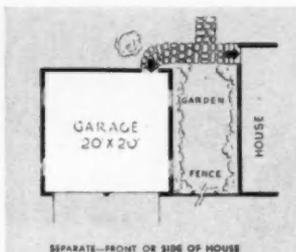
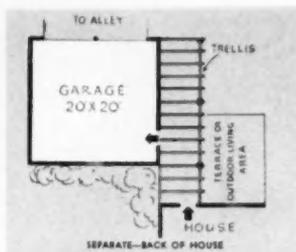
IN MANY PLACES

The best feature of Barcol OVERdoors is that they can be used in so many different ways. They can be made to fit almost any size opening. You can get special design sections to match decorative ideas. You can get special hardware arrangements to take care of low headroom, high headroom, all-vertical and other situations. Yet you get the *same distinctive and outstanding features* for all these conditions. You get a cam closing action that insures weathertight closing *without sticking*. You get *easy working* doors, due to anti-friction rollers, tailored twin coil springs, straight-line cable connections. You get long life and low maintenance costs, due to good engineering and quality construction all the way through. You get, in the Barcol OVERdoor — and at reasonable cost — practically all the value you could hope for; and you get it in any size door for any type of building. *Standardize on Barcol OVERdoors* — others are doing it, with great satisfaction.

SALES AND SERVICE REPRESENTATIVES
IN PRINCIPAL CITIES

BARBER-COLMAN COMPANY

104 MILL STREET • ROCKFORD, ILLINOIS



Drawings Courtesy Fir Door Institute

IMPORTANCE of the location of the garage on the home site should never be underestimated. Easy and preferably protected access to the basement or service portions of the house adds immeasurably to the full use of the garage as a utility building. The driveway should always be planned at the same time the garage is planned. Tricky turns, bad grades and obstructed views of danger spots are

some of the results of poor driveway planning. A one-car driveway should be at least eight feet wide on straight stretches and 11 feet wide on the curves. Regardless of grade there should always be a level area at least 15 feet long in front of the garage to facilitate parking without the danger of the car moving because brakes are not set or because of tampering

THREE suggestions for providing extra space to help the garage fulfill its function as a utility building. In the interest of neatness, it is advisable to set up partitions or install cabinets to close off storage areas which frequently become cluttered

(Continued from page 400)

apart without a good foundation. Footings and foundations should always be put down according to local code requirements and climatic needs. Recommended floor for the modern garage is concrete slab at least four inches thick and equipped with drain. Unless the slab is reinforced, the underlying bed should be cinders, gravel, or crushed rock at least four inches deep. Earth should be level and tamped. The concrete slab should be at least two feet in front of the garage to form an apron sloping to the driveway. An expansion joint should be provided between apron and driveway. One popular

floor with slab and foundation in one unit is the thick-edge reinforced slab. These are 18 to 24 inches thick at the outside edges with the underside arched to a minimum of four inches at the center.

Fire guards. All attached garages should be separated from the house by a fire-wall and fire-resistant doors which conform to local codes and underwriter specifications. If the house heating unit is installed in the garage, it should be partitioned off to prevent loss of heat. Where door openings occur between garage and house, the garage floor should be lower than the adjoining floor, or the door saddle should be raised a few inches.

Framing. The one-story detached garage may be framed with 2 by 4's 24 inches on center. Studs do not have to be doubled around openings less than 3 to 3½ feet in width. Corner posts can be 2 by 4's or 4 by 4's and single top plates can be used but should be lapped or tied at corners. The rafter ties can be 2 by 4's but should be spaced no farther than 6 feet on center. Corners should be braced, and these pieces can be fastened on the inside surface of the studs. Sheathing and building paper can be omitted, although these will help the home-owner avoid much hard starting in cold weather. In extremely cold climates, insulation is desirable. In temperate climates, open carports have proved popular, affording merely a roof and possibly one side wall for protection.

(Continued on page 404)

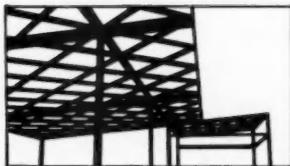
The New BERRY DOOR

Sets the



Berry 8' x 7' Door with Lights

Diagonal Grid Clear Span Roof Design



Inside of New 16' Berry Door showing Diagonal Grid Design

Standard of the Industry

With the Strongest, Easiest Operating Garage Door Built

Here's why residential contractors—owners, too—want the garage door that's setting new standards throughout the industry. Only the new Berry Door gives them beauty, the durability of welded steel construction, the easiest operation known and a choice from a complete line of models for all requirements. And all these features mean continued owner satisfaction.

- The strength and light weight of Diagonal Grid Design
- Rugged hardware, oversized bearings—continued easy operation
- Horizontal grooves blending with contemporary home design
- Durable zinc plating, plus bonderizing and a beautiful gray paint job
- Lights with "snap-in" rubber mouldings available for all models
- Half-hour installation of canopy type by one professional
- Latches on both sides—metal seals on both sides, replaceable rubber on bottom
- Prices which reflect the engineering and production methods of the automotive industry and years of garage door experience

The new Berry Door Line includes 8' x 7' and 9' x 7' canopy and track types and a rigid 16' x 7' track type—all available with owner-replaceable rubber mounted lights in two-piece mouldings used by bus and truck manufacturers for years. All hardware is packaged, complete with fastenings. Canopy extends 72"; track type disappears entirely within garage, requires 2 1/2" headroom. Easy-Guide Track eliminates "pin point" hanging. Balance and load requirements easily adjustable by owner. Opening dimensions are standard, exactly 8' x 7', 9' x 7' and 16' x 7', plumb and square, measured inside of trim.

Attach coupon to your letterhead for details and name of dealer in your area.

STEEL DOOR CORPORATION

364 S. Jessie Street

Pontiac, Mich.

Please send details of Berry Door Line

Name _____

Company _____

Address _____

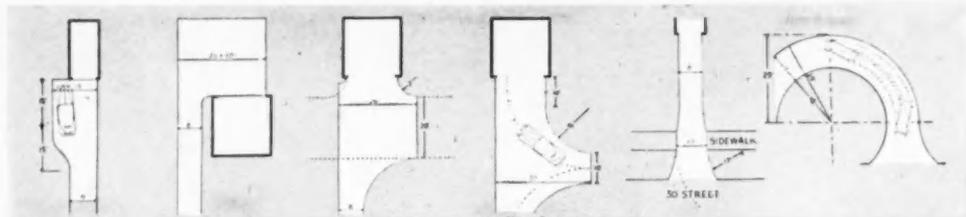
City _____ Zone _____ State _____

STEEL DOOR CORP.

PONTIAC

MICHIGAN





THE first four designs above suggest various types of parking areas and turn-arounds that can be incorporated as part of the garage driveway where they are necessary or desirable. Where these large

areas are concrete they are also ideal for children's play or game courts. Dimensions shown are minimum. Where the driveway crosses the street curb, it must be flared at a three to five-foot radius.

The smallest outside radius to a circular turn-around or curved driveway is 29 feet and the smallest inside radius is 13 feet

Drawings Courtesy Fir Door Institute

(Continued from page 402)

Garage Doors

The garage door is usually the biggest single unit of movable equipment built in as part of the housing establishment. It is also one of the largest and most conspicuous features of the average home. Designers and builders who desire to please their clients therefore accord the garage door problem much thought and consideration.

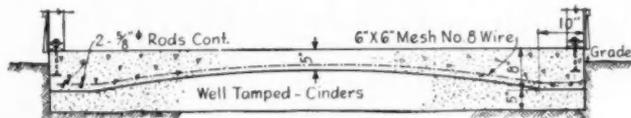
A large group of ingenious manufacturers, fully recognizing the problems of garage closures, have developed a host of excellent doors to meet

an infinite variety of problems and tastes. There should be no valid reason why any modern garage door should not operate as easily as the front door of the home, and look just as attractive.

There are about six major types of garage doors on the market in a wide

range of prices. These can be roughly classified as the roll-up or sectional door; the swing-up or panel type; sliding door; hinged doors; accordion doors and the two section upward-folding door. Upward-acting doors of one type or another are far

(Continued on page 406)



CROSS-SECTION of a thick-edge slab, reinforced to form foundation and floor of garage

Builders are Wise—

.....who take advantage of the appeal and satisfaction found in the Raynor complete line of Wood Sectional Overhead Doors. Features such as Patented Graduated Seal, co-ordinated construction,—built complete in the Raynor plant,—and many other outstanding features are your assurance that every installation equipped with a Raynor door will enjoy lasting dependable service.

Illustrated above is one of the exclusive Raynor Carved Raised Panel designs. Raynor Mfg. Co. builds a door for every size residential, commercial and industrial door opening. Contact the nearest Raynor representative or write direct for detailed information and illustrations on the Raynor line.



RAYNOR MANUFACTURING CO.

River St., Dixon, Ill.

SEE OUR CATALOG IN SWEETS

USE THIS GARAGE DOOR SELECTOR

FOR ORDERING

FRANTZ

GARAGE DOORS AND HARDWARE

OVERHEAD GARAGE DOORS

Door and Hardware Complete



One-piece, single-width doors; easy to install, no maintenance.

Sectional, single-width doors offer many exclusive features.



One-piece double-width door has two full-length adjustable trusses.

Sectional, double-width doors have two adjustable trusses.



Frantz, one of the largest manufacturers of overhead garage doors and hardware, offers a choice of one-piece or sectional-type doors for most openings. For further details please see your Frantz Dealer or write for Catalog No. 301.

OPENING		DOOR TYPE (WOOD)	UNIT NO.
WIDTH	HEIGHT		
8'	6'6"	One Piece	7
		Sectional	286
8'	6'8"	One Piece	77
8'	7'	One Piece	10
		One Piece	20
		Sectional	200
9'	6'6"	Sectional	279
9'	7'	One Piece	19
		Sectional	219
15'	7'	Sectional	235
16'	7'	One Piece	21
		Sectional	226

OVERHEAD DOOR HARDWARE

For Custom and Mill-Made Doors



Popular-priced hardware for light-weight custom or mill doors.

Heavier sets adjustable for commercial doors up to 10' high.



Medium-weight, built-up doors can be designed to harmonize with house.

Heaviest industrial doors up to 12' high handled quickly, effortlessly.



Frantz Overhead Door Hardware can be used with any carpenter-built or mill-made door, single or double-width, in heights to 12'. Proved and improved for more than 20 years. For further details see your nearest Frantz Dealer or write for Catalog No. 107.

FRANTZ MANUFACTURING COMPANY
STERLING, ILLINOIS

OPENING		WEIGHT OF DOOR HANDLED	SET NO.
WIDTH	HEIGHT		
7'6" to 8'4"	6'2" to 6'7"	100-150 lbs.	83
	6'6" to 7'0"	50-95 lbs.	82
	6'8" to 7'0"	100-150 lbs.	80
	6'6" to 7'3"	100-150 lbs.	74
	7'4" to 8'0"	100-150 lbs.	75
	6'8" to 7'3"	150-250 lbs.	178
	7'4" to 8'0"	150-250 lbs.	78
8'5" to 9'4"	7'4" to 8'0"	200-300 lbs.	781
	6'2" to 6'7"	100-150 lbs.	839
	6'8" to 7'0"	100-150 lbs.	809
	6'6" to 7'3"	100-150 lbs.	749
	6'8" to 7'3"	150-250 lbs.	179
8' to 14'	7'4" to 8'0"	150-250 lbs.	789
	9'7" to 10'0"	100-200 lbs.	810
	9'1" to 9'6"	125-225 lbs.	
	8'7" to 9'0"	150-250 lbs.	
8'0" to 8'6"	175-275 lbs.		
9' to 14'	6'8" to 7'3"	150-250 lbs.	93
	7'4" to 8'0"	150-250 lbs.	94
8' to 16'	9'1" to 10'0"	150-250 lbs.	716
	8'1" to 9'0"	175-275 lbs.	
	7'0" to 8'0"	200-300 lbs.	
9' to 16'	6'8" to 7'3"	200-300 lbs.	782
	7'4" to 8'0"	200-300 lbs.	783
8' to 18'	9'1" to 10'0"	180-375 lbs.	718
	8'1" to 9'0"	210-425 lbs.	
	7'0" to 8'0"	240-475 lbs.	
9' to 18'	11'1" to 12'0"	300-600 lbs.	912
	10'1" to 11'0"	335-650 lbs.	
	9'0" to 10'0"	375-720 lbs.	



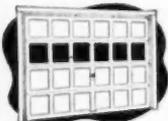
**A PACKAGE DEAL
FOR
THE LUMBER DEALER
3 DOORS
TO GREATER PROFITS**

CAPITOL PRODUCTS now offers you 3 fine garage doors that enable you to reach every market — to help you sell profitably, confidently and competitively.

**CAPITOL
FLUSH
PANEL**



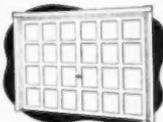
Beauty and utility plus Taper Seal. Panels electronically banded (not nailed) to frame — insures rigidity — prevents warping — stronger, lasts longer. Sizes: 8' x 7'; 8' x 7'6"; 8' x 8'; 9' x 7'; 9' x 8'. Thickness: 1 3/4".



**CAPITOL
TAPER
SEAL**

The door for your average customer. Beauty with long, trouble-free life at reasonable cost — means faster sales for you — greater profits. Sizes: 8 x 6'6"; 8' x 7'; 8' x 7'6"; 8' x 8'; 9' x 7'; 9' x 8'; 10' x 7'; 10' x 8'; 10' x 9'; and 10' x 10'.

**CAPITOL
EASY
LIFT**



An attractive, competitively priced door with great appeal. "Timber Tax" treated — termite and rot proofed. Balanced, leather touch operation — long life. Sizes: 8' x 6'6"; 8' x 7'; and 9' x 7'.

Doors are pre-drilled for lock hinges and handles — stop is also furnished.

CAPITOL PRODUCTS

P.O. Box 1240 Springfield, Illinois



AUTOMOBILE bumpers and tail pipes scrape the driveway unless careful calculation is made on grade variations. A change of not more than one inch per foot within any 10 feet of distance will usually allow adequate clearance

(Continued from page 404)

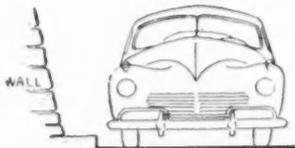
in the lead in popularity with builders and home purchasers.

Prime consideration in planning any garage for the installation of an upward-acting door is provision for head room for the type of door to be installed. There are doors available to take care of all kinds of head room situations, with a number on the market which require no head room, some only two or three inches, on up the scale to others which require 15 to 16 inches. Stock sizes range from the smallest listed, which is 8 feet wide by 6 feet 6 inches high, on up to the large full double garage width of 14, 15 and 16 feet. There are sectional roll-up doors available with removable center posts. Thus two or more doors can be installed to close a large opening and if found desirable, the center posts between the doors can be raised up and taken out of the way to provide a clear opening of any width structurally sound.

Manufacturers are bringing remote control by electricity or sound activation to garage doors at prices that often make it practical to install these units.

Their desirability and convenience to the home owner stem from the fact that the garage door can be opened or closed by merely pushing a button on the instrument panel or floor of the car. With garages fronting on the streets and being used more extensively as utility and storage structures, the need for keeping the door closed at all times is obvious. It not

(Continued on page 408)



IF THERE is a retaining wall parallel to the driveway, it is desirable to install a low curb at the base to guide automobile wheels so fenders will not scrape the wall

Don't Get Out of Your Car!



ROBOT OPERATOR

Unlocks and Opens Garage Door and Turns On the Lights

Touch another magic button in garage or home — your ROBOT Operator electronically closes and locks garage door, and turns off the lights. When leaving, the procedure reverses

Exclusive ROBOT Features

SAFE FRICTION DRIVE—Maximum protection to persons and property.

FULLY AUTOMATIC—Merely touch button in car, house or garage to operate.

POSITIVE REMOTE CONTROL—Weatherproof, fool-proof, wear proof.

DOES NOT VIOLATE Federal Communications regulations.

UNDERWRITERS APPROVED—Meets all specifications and electrical codes.

QUIET & DEPENDABLE—Many thousands in use, some over 20 years.

LOWEST COST of all automatic operators to buy, install, operate and maintain.

OPERATES ALL DOORS—single or double, overhead, tilting, swinging, sliding, folding.

WRITTEN GUARANTEE covering ROBOT Operator and installation for one year.

FREE CATALOG—Write Dept. AB

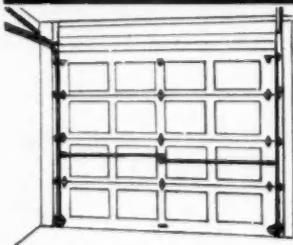
NATION-WIDE SALES, INSTALLATION & SERVICE

Write for Complete Catalog Manufactured by

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**WAGNER
GARAGE DOORS
AND
Electric OPERATORS**



"ROLLEZY" AND

"GLIDEOVER"—A wide range of overhead models and sizes from 8' x 6'6" to 24' x 24' to meet all residential and commercial requirements.

"AUTOMATIC ELECTRIC DOORMAN"—Push-button operator for opening and closing ANY make of sectional overhead and most one-piece doors.

WAGNER ALSO MAKES—Saw horse trestles, scaffold, roof, and folding ladder brackets and hardware specialties. Ask for Bulletins.

WAGNER MANUFACTURING CO.
BOX AB-52 Cedar Falls, Iowa

AMERICAN BUILDER

**Jobbers
Dealers
Builders—here is good news!**

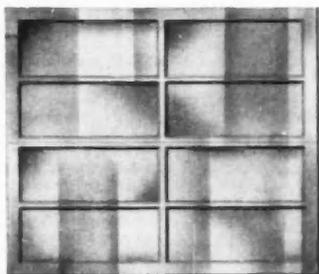


THE RELIABLE

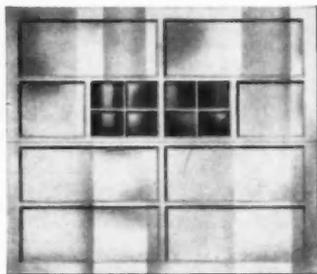
Craw-Fir-Dor

OVERHEAD-TYPE GARAGE DOOR

is available again in quantity



Craw-Fir-Door No. 44



Craw-Fir-Door No. 45



Easy-to-use, automobile
type lock is furnished with
Craw-Fir-Door hardware.

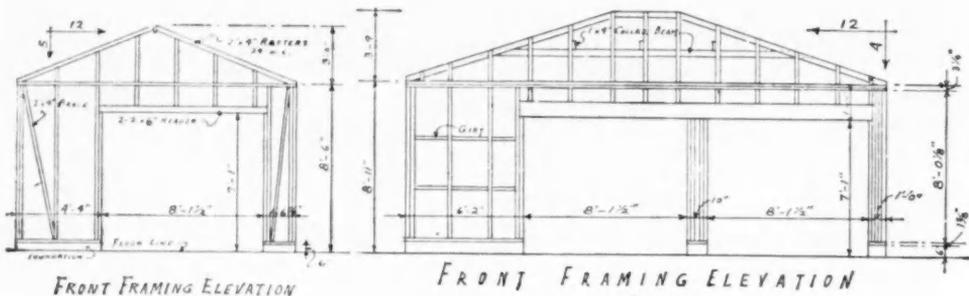
This time-tested favorite is now available in any quantity you need. Immediate delivery is assured for popular Craw-Fir-Dors. Stocks of the easy-working Crawford hardware are now adequate to supply all demands for these units.

And the same outstanding Craw-Fir-Dor features are also back . . . attractive appearance in 2 styles; Douglas Fir durability, strength and weatherproof panels; automobile-type lock and keys . . . and low cost!

Pre-assembled Crawford hardware requires a minimum of handling and provides quick, easy installation and operation. Only 2" headroom is needed.

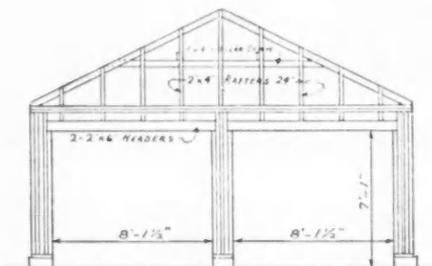
Sold only through lumber dealers, Craw-Fir-Dor is a fast-moving, profit building item . . . profitable for dealer, jobber and builder.

**Be sure to include Craw-Fir-Dors in your
next order of doors from mills of the
Pacific Northwest door manufacturers!**

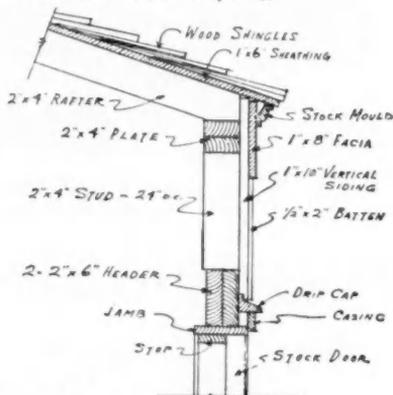


FRONT FRAMING ELEVATION

FRONT FRAMING ELEVATION



FRONT FRAMING ELEVATION



SECTION THRU DOOR HEAD & EAVE

SEVERAL examples of garage framing showing practices which conform to common situations. Where there are storage rooms or living quarters above the garage, framing of course, is done to accommodate the extra loads. Exterior garage architecture and finish should closely match the house even though the garage is detached

(Continued from page 406)

only obviates the danger of theft but also closes off from public view whatever weaknesses the home owner may have as a neat housekeeper where the garage is concerned. Because houses are designed to look their best with the garage doors closed, it is desirable that they be closed most of the time, whether the garage is attached or detached.

There are several different models of automatic door operators, but basically they consist of a simple sending unit mounted in the owner's car with an individual wave length set to activate the door operator mounted in his garage. His car unit will not open any other doors and no other owner of an automatic set of

(Continued on page 410)

ALLITH
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GARAGE
DOOR
HARDWARE

Combine the expertly-designed Allith garage door hardware with your own or any standard door. Result . . . a rugged, easily-operated overhead door that gives full and lasting customer satisfaction.

Quickly installed, standard set fits any opening up to 9' wide x 7' 6" high when doors do not exceed 275 lbs. Other sets available for openings up to 10' wide x 10' high.

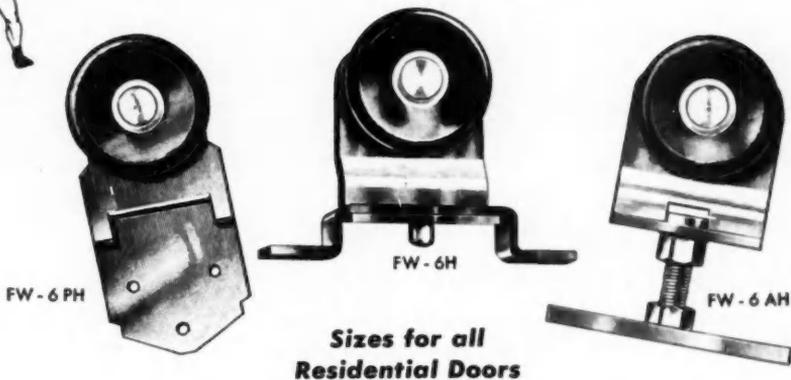
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CHAMPION QUALITY

HAR-VEY ROLLING DOOR HARDWARE



Sizes for all Residential Doors

The Plywood Hanger (FW-6PH) is designed for plywood doors used on cabinets, closets, and similar installations. The Non-Adjustable Hanger (FW-6H) is designed for standard doors up to 100 lbs. The Adjust-

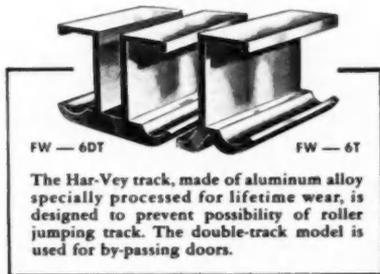
able Hanger (FW-6AH) is also for doors up to 100 lbs. and permits a 1" vertical adjustment of the door. In addition, Har-Vey Hardware is available for light wardrobe doors as well as for extra-heavy interior doors.

★ **COMPLETELY RUSTPROOF** — The durable, high-quality materials used for Har-Vey Hardware are completely rustproof — there's no corrosion to cause replacement or repairs.

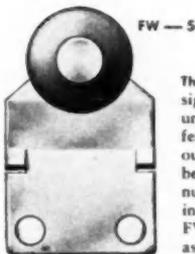
★ **SMOOTH AND SILENT** — Doors glide easily and softly on Har-Vey's new oil-cushioned Oilite bearings. These remarkable bearings are self lubricating, provide perpetual smooth rolling with no maintenance.

★ **POSITIVE LOCKING** — A new engineering feature insures positive locking of the hanger to the door, for both the adjustable and non-adjustable models — hanger and door cannot become disengaged.

★ **SIMPLE TO INSTALL** — There's no trick to installation — any workman can handle details quickly and easily, with no special tools necessary.



The Har-Vey track, made of aluminum alloy specially processed for lifetime wear, is designed to prevent possibility of roller jumping track. The double-track model is used for by-passing doors.



The **WARDROBE HANGER FW-5** is designed for wardrobe and cabinet doors under 35 lbs., offers several exclusive features: Doors can be hung from the outside (in a minimum of time), space between doors can be varied and any number of doors can be used in an installation.

FW-5 Hanger and track are supplied as a package — details upon request.

Write for full details — Address Hardware Division "Q"
METAL PRODUCTS CORPORATION

807 N. W. 20th Street Miami, Florida

Western Division: Calmetco, Inc. 609 S. Anderson, Los Angeles, California

Please send me your free folder on rolling doors & Har-Vey Hardware

NAME _____

COMPANY _____

STREET _____

CITY _____ STATE _____

MODERN TECHNIQUES in design and manufacture of automatic door operators make them efficient and trouble-free when properly installed according to manufacturer's specifications. A push button installed somewhere on the instrument panel of the car or on the floor is used to activate the mechanism from the car

Photo & drawing courtesy Barber-Colman Co.

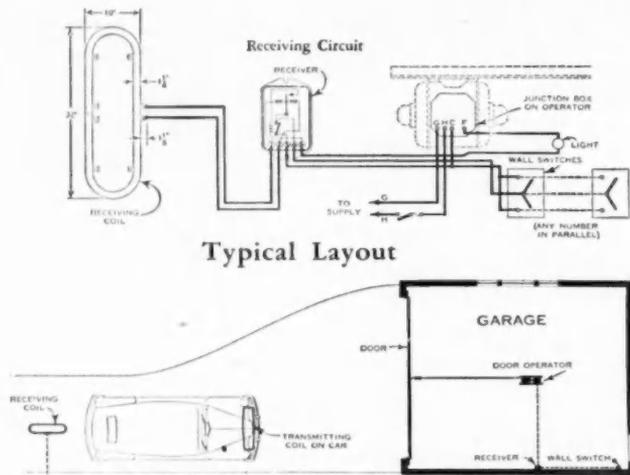


DIAGRAM showing one type of automatic garage door operator installation. This particular unit utilizes a receiving coil inbedded in the driveway. There are others which make direct remote control contact with the operator. All units are on individual wave lengths so that the sending unit in a car will open only the door to which it is synchronized. Wall switches can be used to open the door also and should electric power fail the door can always be opened manually

(Continued from page 408)

his type can open his door. These units make contact with a coil inbedded in the driveway or directly with the operating mechanism. There are units that activate the door operators with inaudible sound vibrations and function in the standard manner. Electrical switches inside the garage can be used to open or close the door and, should electric power fail, the door can be opened manually.

Hardware

Proper installation is essential to good hardware and fittings. Follow strictly the manufacturer's specifications and directions on garage door and hardware installation, particularly on upward-acting types. Decide on the particular door to be installed before the rough opening is made so that it will fit the finished job, and so that any necessary headers and jamb framing members can be built in

originally to keep the door plumb and rigid. Hardware of many types is available for the contractor who wishes to fabricate his garage door on the site. Follow manufacturer's instructions and avoid overloading or misuse of fittings and parts.

The renovation of old garages with new doors or with new hardware is an important aspect of remodeling work. Some companies offer hardware which will convert swinging or accordion doors to the upward-acting type.

Driveways

Poor driveway planning results in tricky turns, bad grades, obstructed views, accidents, and grief for the home owner. A one-car driveway should be at least eight feet wide on the straight and 11 feet wide on curves. The minimum width for 2-car drives is 15 feet, and wider is better. If the driveway slopes, there should be a level area the length of the car

in front of the garage to prevent rolling if brakes are not set.

With modern automobiles, the smallest outside radius for a curve is 29 feet, and the smallest inside radius 18 feet. Curb returns at the roadway should be three to five feet in radius.

Sharp dips and sudden changes in grade are other faults to avoid. A change in grade of not over one inch per foot in any ten-foot stretch will allow adequate clearance for car overhangs. Slope the drive slightly to the sides for drainage.

Visitors and guests commonly park near the owner's driveway, and the garage and drive are frequently his first view of the place. This makes it essential that the driveway be in good order and the garage door attractive. Thanks to the ingenuity of designers and manufacturers, owners and builders can now obtain garage doors and fittings which are in excellent taste and make a handsome and inviting appearance.

STRAND

ALL-STEEL
GALVANNEALED
OVERHEAD

GARAGE DOORS



9' x 7' RECEDING TRACK TYPE AND CANOPY

Extra width gives *extra* clearance. No more banged-up fenders from too-narrow garage openings. Horizontal-line styling provides that wide, spacious look—new beauty for the garage. Swings open easily at a turn of the handle. Rugged, new "X-type" steel bracing adds to the great strength and rigidity of the one-piece, all-steel door leaf. Deeper, stronger, steel frame. One-piece door leaf eliminates field assembly of separate sections; packaged hardware is factory-assembled. Installation is simple and easy. Requires less than 2" of headroom. Weatherstrip at bottom seals opening against drafts and snow.



8' x 7' RECEDING TRACK TYPE AND CANOPY

New horizontal-line styling adds new beauty to this standard-width STRAND Door, and harmonizes with today's architecture. STRAND'S 8' x 7' Door is available in both Receding (Track) and Canopy Types. Wider, deeper frame gives greater strength. Ball-bearing rollers and strong adjustable springs assure easy, quiet and smooth operation of Receding Type. Strong adjustable springs do the lifting and permit easy opening and closing of Canopy Type. Requires less than 2" of headroom . . . no interference with overhead ties or storage space. Heavy rubber weatherstrip at bottom of all-steel panel seals doors against drafts and snow. Can be trimmed to fit uneven floors. Factory-assembled hardware comes ready to install. Saves valuable installation time.



16' x 7' RECEDING TRACK TYPE

The STRAND All-Steel, Horizontal-Line, Track-Type Door for double garages is shipped in two sections (each 8' x 7'), complete with necessary joining material and packaged, factory-assembled hardware. This beautiful double-width door assures the same easy, low-cost installation, and the same sturdy strength, ease of operation, and other advantages of STRAND Single Doors. STRAND Double-Garage Door eliminates the cost of building a center post—ensures an unobstructed opening 16' wide—and costs less than two Single Doors.

RECEDING (track) TYPE

CANOPY TYPE

Swings open easily on ball-bearing rollers and disappears completely inside the garage, when open.

Provides shelter from sun and rain when open, without the only 18" inside garage.

STRAND GARAGE DOOR DIVISION
Detroit Steel Products Company
Dept. AB-4 2242 E. Grand Blvd.
Detroit 11, Michigan

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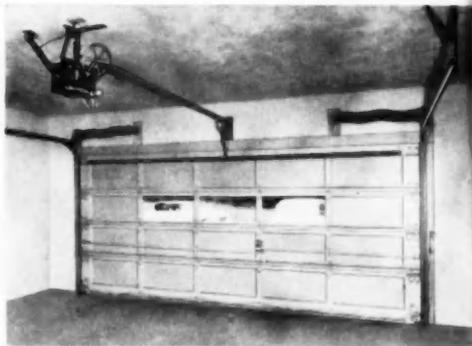
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 AND TWIN TORSION SPRINGS

* patented



McKee's patented Twin Rollors are furnished on all 1 $\frac{3}{4}$ " overdoors. Each door section can be fitted snugly against the jamb by means of the twin adjustable Rollors. With twice as many rollers at each section joint, the door moves easier and reduces the wear on the rollers. The inclined track gives a weather-tight seal.

ELECTRONIC SERVICEMAN

Electric Serviceman is McKee's radio controlled residential electric operator. No coils to bury in the driveway. Just press the button in the car—the door opens automatically, the garage light turns on automatically!

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► It isn't necessary to tell you about the difficulties involved in obtaining certain building materials these days—because of short supply, or slow delivery. So, it's big news—and reassuring to know—that such an important building material as PC Glass Blocks is *immediately available* and in *ample supply!* Also important to you is the fact that PC Glass Blocks involve no metal when used in small panels, and very little is required in large panels. In fact you can put in small panels of PC Glass Blocks—up to an area of 25 sq. ft.—without using wall ties, wall anchors or expansion strips. This adds up to a big saving in time, labor and material.

More and more builders are taking advantage of the immediate availability of PC Glass Blocks to speed up their work on new homes and on renovating jobs. They are using these glass blocks extensively around entrances, for cellar and other windows—as well as for bath stalls, room partitions and at stairwells. You'll find it profitable to give more thought to the inclusion of PC Glass Blocks in all your work.

Other Facts: PC Glass Blocks admit adequate daylight and assure privacy; they have high insulating value, are easily cleaned, deaden outside noises, stop infiltration of dust and grit; rarely need repairs; never require painting.

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THE WALL OF GLASS and "picture window," are characteristic of modern design for increasing livability in both lower-priced and more expensive homes

FROM the time that glass was first discovered or invented by some ancient Egyptian, it has been used by men for ornamental purposes. However, with the exception of the homes of the rich, glass played very little part in the lives of every-day people due to the crude and cumbersome methods of manufacture. The old method of making crown glass used by the Romans continued in use until after 1800 A.D. when the hand cylinder process was developed. Not until 1903 was glass-making mechanized by the machine cylinder method, and improved in 1917 by the sheet-drawing method, which is used to make most window glass today. Modern tech-

nology has made phenomenal advances in both process and product in glass manufacture, by far the greater part of it in the last 30 years, with improvements coming faster and product applications multiplying every year.

MODERN USES OF GLASS

Continuous window glass manufacture by the sheet-drawing method now makes it possible to produce the complete piece of glass, ready to ship, 10 hours after the raw materials reach the factory. Seventy-five per cent of all window glass is used in single strength thickness, the remainder being either double strength or greater.

HOW TO LAY GLASS BLOCK



(1) BRUSH HEAVY COAT of asphalt on



(2) APPLY MORTAR joints 1/4-inch thick

FOR SIMPLIFIED INSTALLATION of 6 inch and 8 inch glass block in residential construction: (1) Make panels not in excess of 25 square feet, with maximum width of 5 feet and maximum height of 7 feet. Larger sizes require standard installation including expansion joints, and wall ties. (2) Panels are not load bearing, must be framed with lintel support at head. (3) Recommended mortar mix is one part portland cement, one part hydrated lime, 4 to 6 parts plastering sand. (4) Brush heavy coat of asphalt 3 1/2 inches wide on sills and jambs; lay block using mortar joints 1/4-inch thick. Tool joints to smooth finish and clean panel; caulk with waterproof mastic compound



(3) LAY BLOCKS with full mortar joints sills and jambs



(4) CLEAN OFF loose mortar. Caulk with mastic

APRIL 1952

GLASS GLASS BLOCK GLAZING & CAULKING

Modern Uses of Glass

Residential

- Windows
- Walls of glass—entirely
- Solar heating
- Partitions and walls—
- interior
- Screens
- Corridors, alcoves, trim
- Loaves and ventilators

Light Commercial and Industrial

- Show windows and
- entrances
- Store fronts
- Air conditioning
- Skylights
- Cabins and displays
- Stalls and decorations
- Sound and humidity
- control
- Lighting

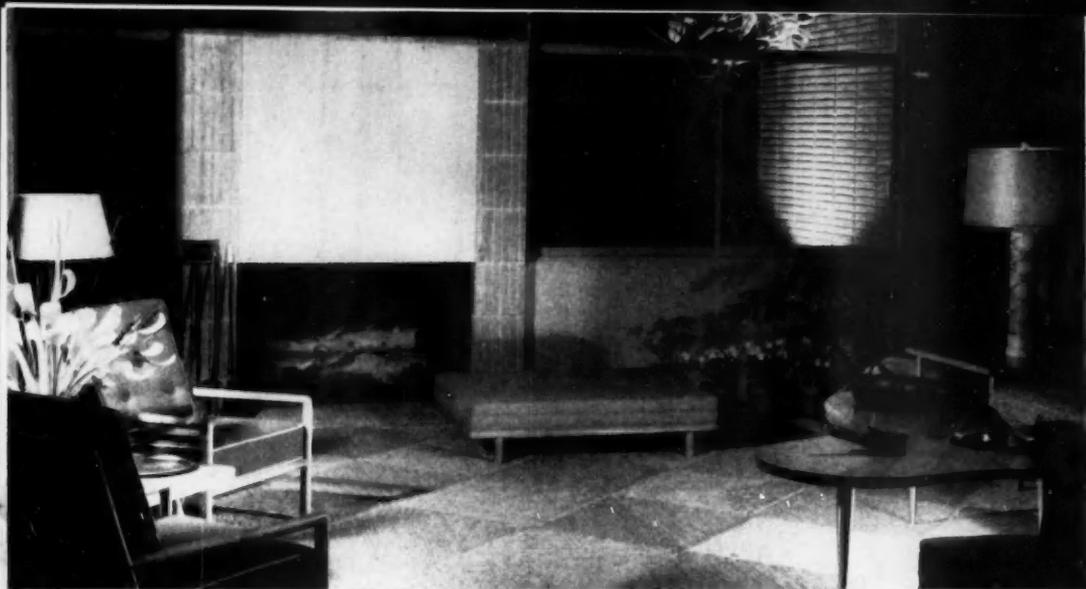
Types of Glass

- Sheet glass
- Plate glass
- Leaded glass
- Heat absorbing
- Tinted plate glass
- Patterned glass
- Double and triple glazing
- Structural
- Corrugated
- Colored
- Architectural glass
- Glass block
- Screens
- Partitions

Glazing and Caulking

- Putty
- Caulking compounds

Installation Procedures



LIVING ROOM with fireplace set in end wall of glass

Sheets measure up to 100 by 120 inches. Coloring and tinting for special purposes is also provided, to reduce glare, permit more sunlight to enter, and for other purposes.

In modern design the "wall of glass" has been much used. It permits a greater illusion of space in homes built with minimum floor space, a terrace or garden becoming a logical continuation of a room. Solar orientation of homes, using generous glass areas has been widely touted as making for better lighting and more enjoyable living.

Solar heating, considered by many as still being in the developmental stage, depends for its effectiveness upon the use of large areas of glass

to receive the sun's rays and transmit them to the heat transfer and heat storage equipment involved in the system. Glass pipe is being used in some installations for soil pipe and other purposes, and in other ways glass products are finding increasing application in modern design for comfortable living.

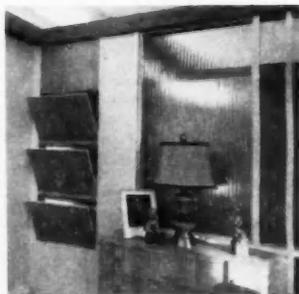
Interior Walls and Partitions

"Open design" in modern living has meant the disappearance of traditional walls and partitions in many structures, so that the economical use of floor space might still permit a sense of spaciousness in the dwelling. With the virtual elimination of the dining room in favor of a dining nook or

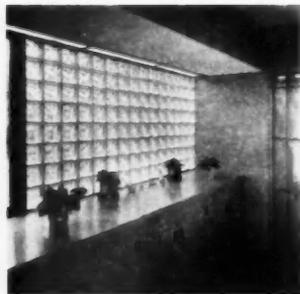
dining space at one end of the living room, plus the open kitchen feature, many designers have found that glass partitions, or partial partitions, add a sense of privacy and separation to the functional areas of the floor plan without destroying the over-all sense of spaciousness desired. These partitions may be glass block, or corrugated and patterned glass available in a wide range of patterns. In many instances, structural glass panels or architectural glass "tile" are utilized in producing both attractive and extremely serviceable walls for kitchens, bathrooms, utility rooms, and other spots where a bright, shiny surface is desired and where ease in cleaning is essential.



WALLS OF GLASS, fixed as well as movable are becoming increasingly popular in houses in all price ranges



SEALED WINDOWS of fluted opaque glass admit light and maintain privacy. Wood louvres ventilate



HALLWAY is transformed to attractive, light area with glass block wall treatment. Casement window at left



HEAVY PLATE GLASS is used for effective sliding panel treatment between kitchen and laundry



PATTERNED SHEET GLASS adds privacy to dining alcove while admitting light from other rooms



GLASS BLOCK forms non load-bearing partition to screen entrance from living room

Glass for Decoration

Large mirror areas are much used both for the beauty of the surface and for the additional sense of depth and space which they give. Mirrors today are backed with silver, gold, or gun metal, and may be made of ordinary window glass, water-white plate glass, or of blue or flesh-tinted plate. Some are as large as 14 by 7 feet. Many charming possibilities exist, ranging from lining one entire wall of a room with mirrors to the mirror over the fireplace flanked by glass block. Some designers also consider the seeing-around-corners angle, so that many parts of the house are visible from

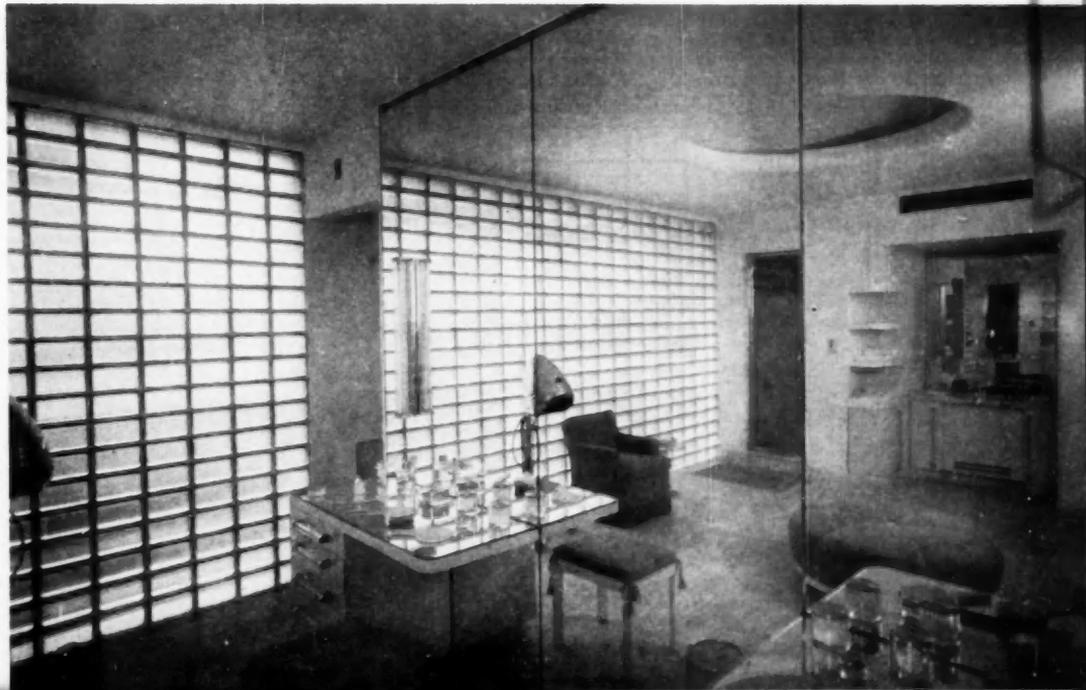
almost any spot within the house.

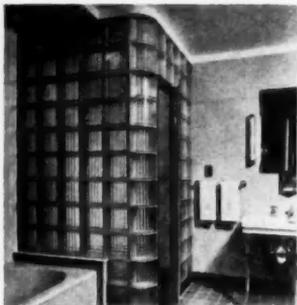
Alcoves with glass panels or complete glass walls are added as attractive features in some designs, and both bent glass and plate glass are frequently used in decorative cornices, shelving, counter tops, and trim. Special effects can be achieved with color, mural designs by etching or sandblasting and other means. Glass for louvres in doors between rooms and in ventilators, both glass block and in connection with picture windows, has been found convenient and practicable. Some manufacturers produce a louvre-type window with movable glass louvres.

Light Commercial and Industrial Uses of Glass

Glass plays a prominent part in modern store design. The old-fashioned store window, if not eliminated in the trend towards putting the whole store in the window, is at least modernized with larger glass areas, glass back panels, and architectural colored glass surfacing on the store front. Tempered plate glass doors and windows reaching from floor to ceiling combined with modern fluorescent lighting make for dramatic entrances and displays for commercial buildings of many types. The perpetually shining, clean, and colorful appearance

PLENTY of light without sacrifice of privacy achieved in powder room treatment: sense of spaciousness is gained through use of mirror-wall





GLASS BLOCK custom-built shower stall keynotes bathroom with walls of structural glass "tile"

of a building faced with architectural glass gives impetus to the store's merchandising activities, and offers builders numerous opportunities for remodeling and store modernization. Glass block, both for lighting and decorative effects, has an equally important place.

Interior walls of architectural glass add not only beauty but additional light by reflection and this increases the impact of the merchandising design and display. Small office buildings find that glass block and structural or patterned glass panels provide privacy, some measure of sound control, and at the same time increase the admitted sunlight to the point where foot-candles delivered to each desk are at a comfortable level.

Air Conditioning

There is an increasing demand on the part of tenants of office buildings and commercial structures for more or less complete air conditioning. The



FLOOR TO CEILING PARTITION of glass block carries no load but attractively separates kitchen from other area

double-pane window with insulative dead air space, and the glass block composed of two lenses with entrapped air both provide a measure of insulation and facilitate temperature and humidity control. Small industries such as dairies, candy manufacturers and bakeries, have found that glass block walls not only provide more light without glare but also reduce condensation on interior wall surfaces, as compared to ordinary glass; and by maintaining relatively higher temperatures on inside surfaces in winter and cooler temperatures in summer such walls reduce the load on the heating and air conditioning units installed in the building.

Skylights and Roof Hatches

The old glass skylight is being replaced with modern plastic-glass or wire-glass, in some cases colored or tinted. Roof hatches of plastic and plastic glass are also available, so that interior rooms and areaways may re-



BATHROOM WALLS combine glass with structural glass; the polished plate glass mirrors are moisture resistant

ceive additional light, weather protection, and provide security. In some instances, where an industrial building is roofed, for example, with corrugated metal sheets, some of the roofing sheets may be replaced with structural corrugated glass or plastic glass materials; this increases available light and does not increase heat loss from the building.

Cabinets, Displays, Decoration

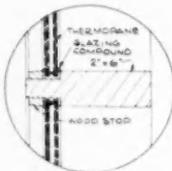
In addition to factory-built glass cabinets and display counters, there are many opportunities in store modernization for the builder to profit by the installation of attractive displays utilizing glass panels, sliding glass doors, and similar materials.

Glass on the Farm

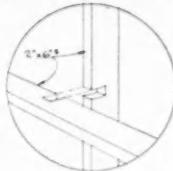
Glass block in particular is finding increasing use in farm buildings, and is being installed in both new and old structures to provide light and maintain the insulating quality of masonry

(Continued on page 420)

SUGGESTED DETAILS FOR WINDOW-WALL CONSTRUCTION



ELEVATION OF WINDOW WALL

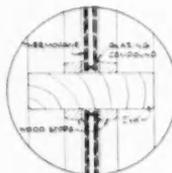


HALVED JOINT

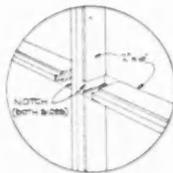
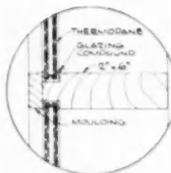


ELEVATION OF WINDOW WALL

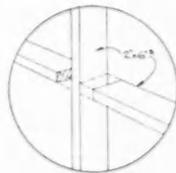
THE EXPLODED DETAILS SHOW THREE SUGGESTED METHODS OF FRAMING A FIXED WINDOW WALL.



ALTERNATE METHODS used in framing window-wall



NOTCH JOINT

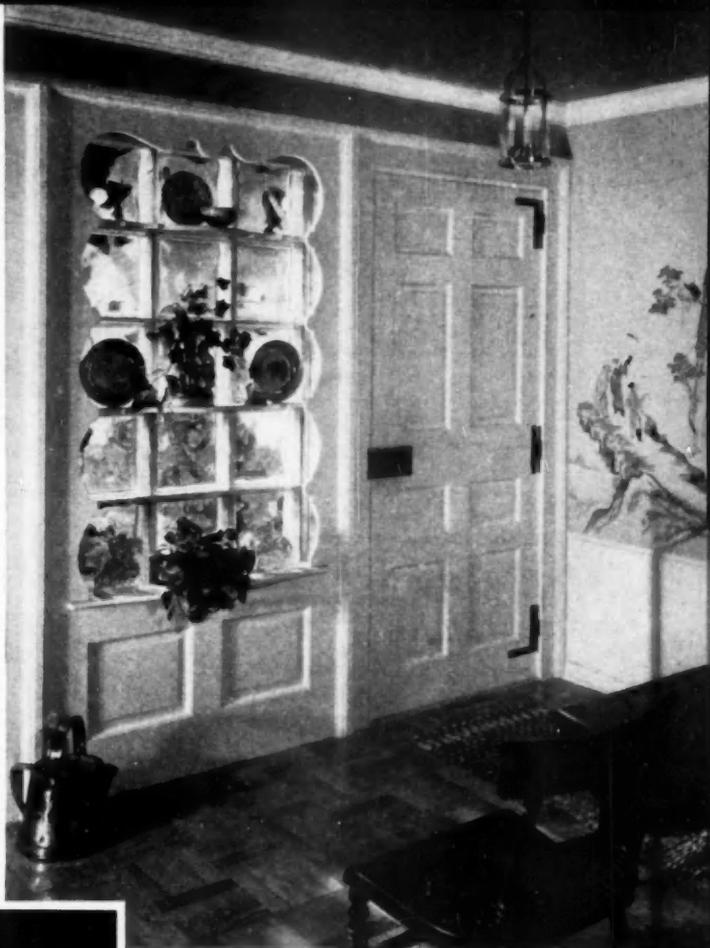


BUTT JOINT

ALTERNATE POSITION of glass and stops in intermediate frames



Here is the doorway opposite but with a panel of regular single glaze glass. With a random clear glass block panel, prying eyes cannot see inside.



By night, the entranceway glows with a light that radiates welcome to friends. By day, inside rooms are flooded with natural daylight.

This random clear panel retains all of the doorway's colonial charm. The subtle variation in the block face is reminiscent of old handmade glass.



GLASS BLOCK "GOES" WITH ANY ARCHITECTURE

WHETHER A HOME is traditional or modern, it can have the advantages of Insulux Glass Block®. Block patterns are available in a wide variety of face designs that "go" with any architectural design.

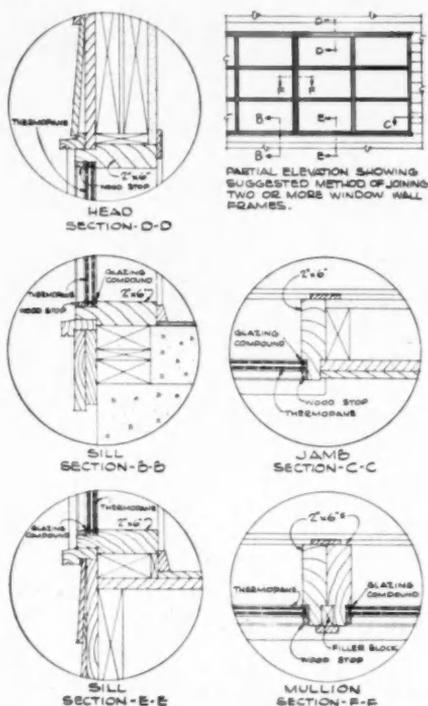
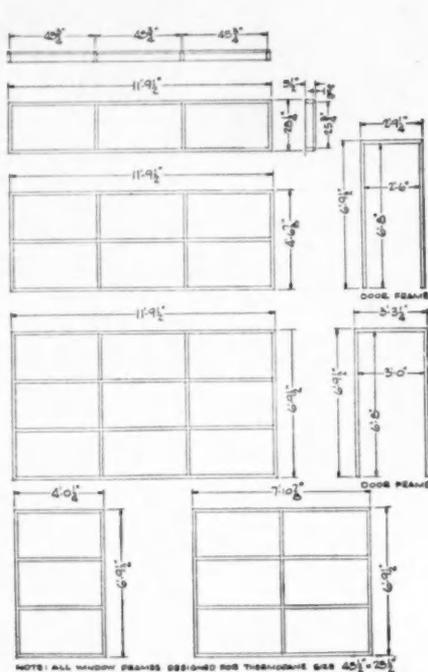
What other material offers you the opportunities to create such interesting, new architectural effects that are so decorative . . . so useful . . . yet so practical?

For information, write to Insulux Division, American Structural Products Company, Box 1035, Toledo 1, Ohio.

INSULUX CLASS BLOCK



A product of the Owens-Illinois Glass Company



AT LEFT: typical units are built in combinations of one or nine. Right: sections through window wall using 2 by 6 members for frame

(Continued from page 418)
 or wood walls. Farm homes, of course, offer the same opportunities for modernization and application of all types of glass for windows and ornamentation as do other residences.

TYPES OF GLASS

There are many types of flat glass available to the builder today which were unheard of 30 years ago. In ad-

dition to the centuries-old spun glass or crown glass and blown glass, there are heavy drawn and fluted drawn sheet glass, polished plate, rough plate, rolled sheet, fluted rolled, rough cast, figure rolled, tempered plate, opal and colored opal, safety glass, pressed glass, ultra-violet glass, heat-resisting glass, and a host of others including corrugated, glass block, and architectural glass.

Sheet Glass

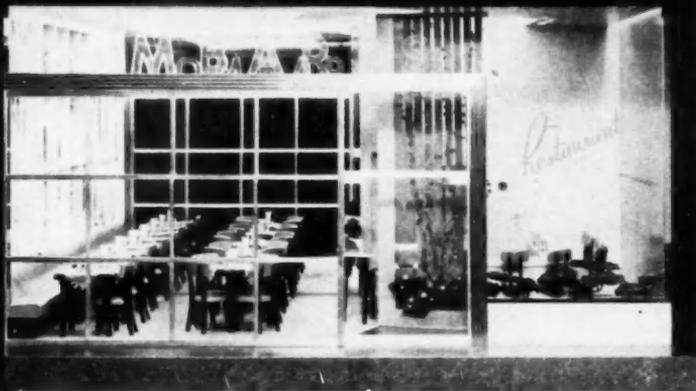
Sheet glass used for windows is commonly single strength. The safe glazing size must always be considered so that the glazed area will have sufficient strength to withstand wind stresses. The table below summarizes this information and indicates some of the basic sizes of window glass available.



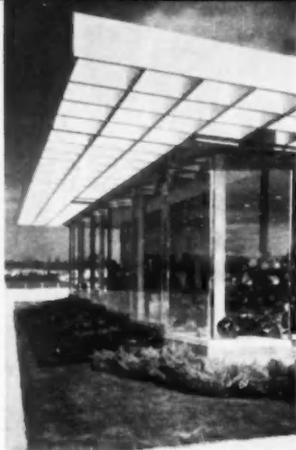
PLEXIGLAS blister skylights throw direct sunlight into rooms



PLASTIC MATERIALS permit curved contours that are smooth, shining, sanitary, permit use of colors, may be transparent or opaque



STORE FRONTS can be modernized with tempered plate glass, with doors and windows designed for maximum visibility and ability to withstand heavy use



ATTRACTIVE plate glass displays can be site-built with glass pre-cut by maker

Weight per sq. ft.	Thickness	Manufactured Sizes	Safe Glazing Size
15 oz.	$\frac{2}{25}$ "	60 x 40"	24 x 24"
21 oz.	$\frac{1}{10}$ "	81 x 42" or 68 x 50"	30 x 30"
26 oz.	$\frac{1}{8}$ "	81 x 45" or 70 x 51"	35 x 35"
32 oz.	$\frac{3}{25}$ "	74 x 39" or 58 x 50"	40 x 40"

Sheet glass is made in various qualities: "firsts" for cabinet work; "seconds" for picture framing and glazing; "thirds" for houses, schools, and offices; "fourths" for general glazing; and "horticultural" for greenhouses. Heavy drawn sheet glass is used as a substitute for plate in cheaper construction.

Plate Glass

Plate glass contains more lime and less soda and magnesia than sheet glass, and is made by the semi-continuous method of rolling, while sheet glass is made by the fully continuous method of drawing. Prior to 1923 plate glass was made by pouring molten glass onto a casting table. Plate glass is ground and polished, which may remove as much as half of its original thickness, leaving a smooth, glossy, and optically true glass, structurally sound and highly attractive. Thicknesses range from $\frac{1}{8}$ inch to $1\frac{1}{4}$ inches and sheet sizes are available up to 127 by 286 inches.

Heat-absorbing plate glass excludes much of the heat in the sun's rays

while transmitting most of the light. It is especially useful in industry where it is desirable to reduce interior temperatures which would otherwise be raised by the sun's heat. Exclusion of this solar heat means substantial savings of cooling costs in air-conditioned buildings. Such glass may be plain, corrugated, or wire-meshed.

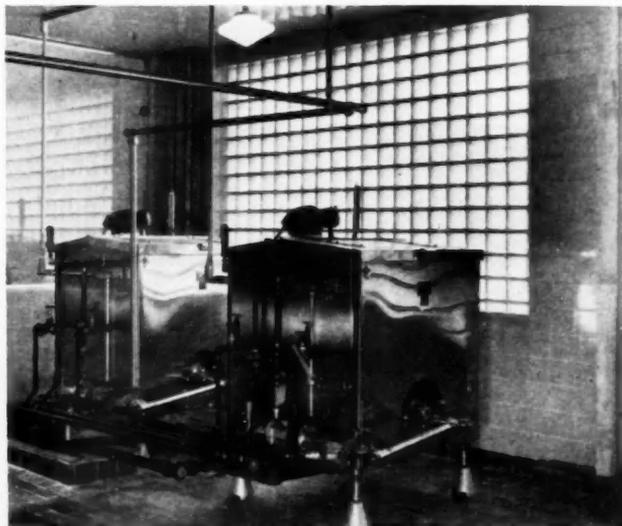
Tempered Plate Glass

Tempered plate glass is made by re-heating a piece of plate glass and then rapidly cooling the surface with air jets. This sets up a system of balanced stresses and strains in the material which makes it many times as strong as ordinary plate glass. It cannot be cut once it has cooled, for this would shatter the balance of strain and stress and reduce the whole piece to fragments. Consequently, it must be cut to exact size before it is tempered.

Widely used in modern store fronts and entrances, as well as in display cases and some shower stalls, tempered plate glass is available in a wide range of colors, and may also be colored on one side for use in signs and lighted displays.

Patterned and Diffusing Glass

The use of obscure glass to prevent vision while admitting light is not new, but in recent years manufacturers of glass have come up with a wide range of attractive designs worked into the surface of both sheet and plate glass, either by pressing, etching, or sandblasting. The size of the individual pane of glass and the amount of vibration which it will receive from walking or street traffic will govern the thickness of the glass to be used. If protection against breakage and fire, as well as privacy, are desired, a figured wire glass may be installed. Glare reduction and heat reduction are also built into various types of



THE ST. LOUIS Dairy Company finds that glass block is helpful in temperature control and provides more light, with reduced maintenance



PLAIN SHEET GLASS windows form sound-control interior panels in well-lighted architect's office

obscure glass for industrial and commercial purposes.

Double Glazing

Few modern homes are being built today without at least one large double-glazed picture window. A double-glazed unit is composed of two lights of glass held in place with a metallic spacer and rubber bond, making an hermetically sealed air space. In some instances, windows may be similarly triple glazed, and a few cases have had as many as five lights of glass separated by sealed air spaces.

Double-glazed units are available in approximately 50 standard sizes ranging from 35½ by 36 inches to 72 by 96 inches. When needed, special sizes may be obtained. Installation can best be accomplished by following closely manufacturer's instructions, which include roughly the following data:

- (1) Openings must be square, free of twists or glazing obstructions. Units should not be set in poorly constructed frames, inadequate to bear the weight of the sash (6 lbs. per sq. ft.).



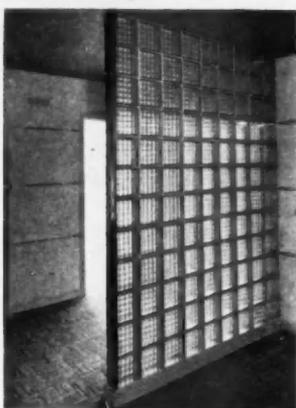
WHITE CORRUGATED plastic panels mesh with galvanized iron sheet siding, provide light with privacy

nor be of unseasoned lumber which might warp.

- (2) Sash must literally float in the opening.
- (3) Use of elastic glazing compound is recommended. Do not use putty.
- (4) Two lead or treated wood setting blocks as wide as the thickness of the unit are to be placed one-fourth of the opening width from each end of the unit.
- (5) Place sufficient glazing compound on the back of glazing rabbet. This allows unit to be positioned, filling voids behind edge of glass.

Structural Glass

Structural glass was originally developed for sanitary purposes for washroom partitions and walls, but is now widely used also for store fronts and similar installations. Stronger and cheaper than either marble or tile, it is uniform in size, available in many different colors, and provides a permanent exterior surface of durability and beauty. It is not tempered, and may be cut, laminated, or otherwise worked in process of construction. It



"PRIVACY" panel carries light from one room to another or from corridor to an adjoining room

is also popular for bathrooms and kitchens.

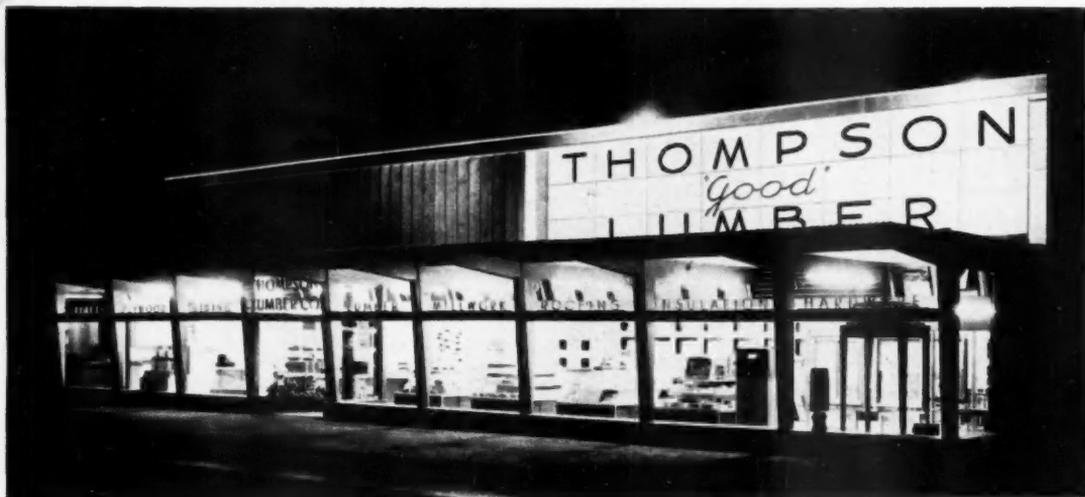
Corrugated structural glass, a heavy cast or rolled glass, is available either clear or sandblasted, and may be obtained in two corrugations, one with waves one inch deep on 2½-inch centers, and the other ½ inch deep on 2½ inch centers. The former meshes with structural steel corrugated siding and may be installed along with corrugated steel in industrial buildings.

Architectural Glass

Architectural glass, as a special classification, is similar to obscure or patterned glass, but it includes as a group those sheets or panels which have very deep corrugations or patterns and are frequently patterned on one side and flat on the other. Surface finishes may be clear, fire-polished, matte, mirrored, sand-fused; actual

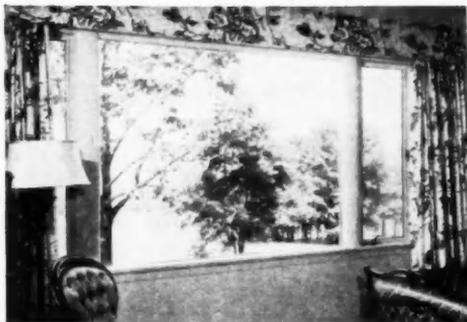
(Continued on page 427)

MODERN LUMBER SHOWROOM and yard achieves dramatic lighting effect with use of large glass areas



PUT EXTRA APPEAL INTO YOUR HOMES WITH PLENTY OF

Pittsburgh Glass



POLISHED PLATE GLASS

All types of homes, even in the low-price class, can make efficient use of this aristocrat of flat glass products. In picture windows, shelves, furniture and cabinet tops, shower doors, bar and table tops, sill covers and push plates, it lends smartness and appeal. It is brilliant and accurately reflective of surface; it permits clear, undistorted vision at any angle. Thicknesses from $\frac{3}{8}$ " to $1\frac{1}{4}$ ".

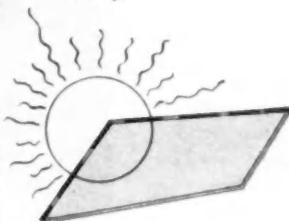


PENNVERNON WINDOW GLASS

Pennvernon is window glass at its best. You'll find it ideal for windows, French doors, shelves, corner windows, sun porches, skylights, and the like. It has excellent visual properties and a high degree of transparency, flatness and freedom from defects. Its dense surface structure permits easy cleaning. May be glazed either side out. Available in thicknesses from picture grade to $7/32$ ".

● Looking for that extra measure of value that catches the eye of prospective home buyers and helps turn them into actual customers? You'll find valuable help on this and the following three pages.

Here you'll find the complete line of Pittsburgh Glass Products for residential construction. They cost so little yet add so much to the charm and utility of a modern residence. And every one of these Pittsburgh Products is a readily apparent value . . . buyers can see they're getting more for their money.



SOLEX HEAT-ABSORBING PLATE GLASS

Solex Heat-Absorbing Plate Glass provides the ultimate in comfort for rooms exposed to the direct rays of the sun. While transmitting 70% to 75% of the sun's total light, the soft, greenish tint of Solex absorbs solar radiation and keeps the interior 10 to 20 degrees cooler than outside temperature. Glare is reduced and fabrics and carpets are protected against bleaching action of the sun's rays. "The best glass under the sun" is available in $\frac{1}{4}$ " thicknesses.



FOR YOUR COMMERCIAL JOBS, TOO

You'll find all the products you need for store modernization in the complete line of Pittsburgh Store Front Materials. These include Plate Glass, Carrara Structural Glass, Twindow Insulating Units, Pittsburgh Mirrors, PC Glass Blocks, Pittsburgh Doorways, Herculite Doors, Pittsburgh Paints and Pittco Store Front Metal. Free, illustrated literature, showing how you can use glass effectively in store modernization jobs, will be sent to you on request.

PITTSBURGH PLATE GLASS COMPANY

TWINDOW[®] has the edge!

TWINDOW, Pittsburgh's window with built-in insulation, is as simple to install as a single pane of glass. Completely prefabricated, it consists of two or more pieces of glass enclosing a small hermetically sealed air space.

The entire edge of each Twindow Insulating Unit is encased in a stainless steel channel. This channel protects the seal as well as the edges of the glass during handling and provides a firm and even edge for installing.

Twindow adds an exceptional amount of "buy-appeal" to any home. It admits an abundance of daylight, frames a striking view. It cuts heat loss and eliminates drafts. Under normal conditions, it reduces the tendency for condensation to form.

For the ultimate in comfort, install Solex Twindow. The inside light is regular plate glass, but the outside light is green tint Solex Heat-Absorbing Glass that keeps out heat and glare while admitting plenty of useful light.



HOW TO GLAZE

1. Openings must be square, free of twists and glazing obstructions. Units should not be set in flimsily constructed frames, inadequate to bear the weight of Twindow, or frames of green wood which will warp later in drying out, thus introducing a strain in the Twindow setting.
2. To avoid glass breakage, Twindow, especially in large units must literally float in the opening, as shown in the diagram below.
3. Place only a small amount of glazing compound at the back of the glazing rabbet. This will permit the unit to be positioned more easily than if glazing rabbet is full. Fill the void behind the edges of the Twindow unit and apply face glazing compound before the stop is set.
4. If Twindow units are to be installed in the standard steel sash, special Twindow unit wire glazing clips are available, bent to accommodate the additional thickness of Twindow.

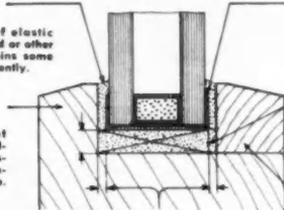
PICTURE WINDOW GLAZING

GLAZING COMPOUND

Exclusive use of elastic glazing compound or other material that retains some resilience permanently.

EDGE CLEARANCE

$\frac{1}{8}$ " - $\frac{3}{16}$ " - $\frac{1}{4}$ " at all edges, depending upon size. Distribute proportionately. Do not force.



LATERAL CLEARANCE
At least $\frac{1}{8}$ " for glazing compound.

EDGE COVERAGE

Stainless steel channel-covered for uniform appearance and maximum edge insulation.

SETTING BLOCKS

Two, lead or treated wood, 3" to 4" long, located $\frac{1}{4}$ of the width in from each end of the unit on all units wider than 26" or heavier than 50 lbs. Shims equally helpful in spacing smaller, lighter units.

STOP

Glass stop does not bear on unit.



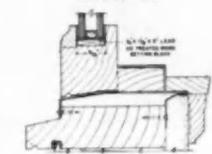
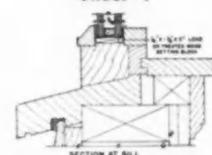
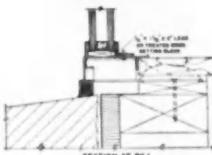
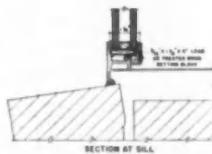
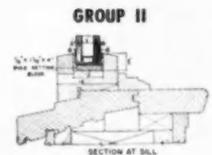
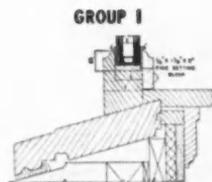
PITTSBURGH PLATE GLASS COMPANY

TWINDOW Standard Sizes for Picture Windows

Twindow Insulating Units Composed of 2 Pieces of Polished Plate Glass with 1/2" Air Space

STANDARD SIZES

GLASS WIDTH HEIGHT		SASH WIDTH HEIGHT		SASH MANUFACTURER
				[Other sash manufacturers not listed may be able to supply equally satisfactory sash in these or modified designs.]
GROUP I				
48 1/2 x 46		4'4" x 4'2"		Anson & Gilkey, Merrill, Wis. Curtis Companies, Inc., Clinton, Iowa & Wausau, Wisc. Farley & Loetscher Mfg. Co., Dubuque, Iowa Huttig Mfg. Co., Muscatine, Iowa Morgan Co., Oshkosh, Wisc. Rock Island Millwork Co., Rock Island, Ill. Semling-Menke Co., Merrill, Wis. *Anderson Corporation Pressure Seal Picture Window Sash differing only slightly from the design shown will take the three 1" sizes, also 48 1/2" x 46"; 56 1/2" x 46 1/2"; 64 1/2" x 58"; 48 1/2" x 50"; 64 1/2" x 50"; 56 1/2" x 50". Brown-Greaves Co., Akron, Ohio, do not manufacture wood sash in this design but their sash will take sizes 48 1/2" x 46"; 72 1/2" x 46"; 48 1/2" x 50"; 64 1/2" x 50"; 72 1/2" x 50". Copples Products Co., St. Louis, Missouri, manufacture aluminum sash to take sizes 48 1/2" x 50"; 56 1/2" x 50"; 64 1/2" x 50"; 72 1/2" x 50"; 80 1/2" x 50"; 64 1/2" x 58"; 72 1/2" x 58"; and 80 1/2" x 58". Weather-Seal Corp., Barberton, Ohio. Weather-Seal sash, outside glazed, will take sizes 48 1/2" x 50"; 56 1/2" x 50"; 64 1/2" x 50"; 72 1/2" x 50"; 64 1/2" x 58"; 72 1/2" x 58". Curtis regular picture window sash modified to take sizes 56 1/2" x 50"; 64 1/2" x 50"; 72 1/2" x 50" only. Sash and frames also available without flanking double hung windows.
56 1/2 x 46 1/2		5'0" x 4'2"		
72 1/2 x 46		6'4" x 4'2"		
48 1/2 x 50		4'4" x 4'6"		
56 1/2 x 50		5'0" x 4'6"		
64 1/2 x 50		5'8" x 4'6"		
72 1/2 x 50		6'4" x 4'6"		
80 1/2 x 50		7'0" x 4'6"		
96 1/2 x 50		8'4" x 4'6"		
64 1/2 x 58		5'8" x 5'2"		
72 1/2 x 58		6'4" x 5'2"		
80 1/2 x 58		7'0" x 5'2"		
96 1/2 x 58		8'4" x 5'2"		
116 1/2 x 58		10'0" x 5'2"		
GROUP I*				
64 1/2 x 46		5'8" x 4'2"		
48 1/2 x 58		4'4" x 5'2"		
56 1/2 x 58 1/2		5'0" x 5'2"		
GROUP II				
35 1/2 x 36		3'1 1/2" x 3'2 1/4"		Anderson Corporation, Bayport, Minnesota Sash and frames also available without flanking casement windows.
35 1/2 x 36		4'9 1/2" x 3'2 1/4"		
75 x 36		6'5 1/4" x 3'2 1/4"		
35 1/2 x 48 1/2		3'1 1/2" x 4'2 1/2"		
35 1/2 x 48 1/2		4'9 1/2" x 4'2 1/2"		
75 x 48 1/2		6'5 1/4" x 4'2 1/2"		
35 1/2 x 60 1/2		3'1 1/2" x 5'2 1/2"		
35 1/2 x 60 1/2		4'9 1/2" x 5'2 1/2"		
75 x 60 1/2		6'5 1/4" x 5'2 1/2"		
GROUP III				
30 1/2 x 47 1/2		4'5 1/2" x 4'2 1/4"		Coco Steel Products Co., Chicago, Ill. Hopes Windows, Inc., Jamestown, N. Y. Masker Brothers Iron Co., St. Louis, Mo. J. S. Thern Co., Philadelphia, Pa. Truscon Steel Co., Youngstown, Ohio The sizes included were developed in cooperation with the Metal Window Institute, an association of steel sash manufacturers, to be used as picture windows in steel sash, with or without flanking casement windows. Sash and frames also available without flanking casement windows.
66 1/2 x 47 1/2		5'9 1/2" x 4'2 1/4"		
50 1/2 x 60 1/2		4'5 1/2" x 5'3"		
66 1/2 x 60 1/2		5'9 1/2" x 5'3"		
GROUP IV				
46 1/2 x 52 1/2		4'0" x 4'8"		Aluminum Window Corp., Garden City, L. I. Sash and frames also available without flanking double hung windows.
38 1/2 x 52 1/2		5'0" x 4'8"		
70 1/2 x 52 1/2		6'0" x 4'8"		
46 1/2 x 56 1/2		4'0" x 5'0"		
58 1/2 x 56 1/2		5'0" x 5'0"		
70 1/2 x 56 1/2		6'0" x 5'0"		
GROUP V				
56 1/2 x 66		8'7 1/2" x 5'7 1/4"		Farley & Loetscher Mfg. Co., Dubuque, Iowa ("UNIPAK" PICTURE WINDOW GROUPS) Sash and frames available only with flanking casement windows.
64 1/2 x 66		9'3 1/2" x 5'7 1/4"		
72 1/2 x 66		9'11 1/2" x 5'7 1/4"		
GROUP VI				
48 x 48		4'3" x 4'4"		Ralscreen Co., Pella, Iowa Sash and frames also available without flanking casement windows.
72 x 48		6'3" x 4'4"		
48 x 60		4'3" x 5'4"		
72 x 60		6'3" x 5'4"		
GROUP VII				
42 x 66				Six miscellaneous even inch sizes have been added for simplicity. These sizes are not intended for any specific type of sash.
84 x 66				
96 x 66				
42 x 72				
84 x 72				
96 x 72				



Twindow units in all groups may be stop glazed in structural wood members without using sash as such. Extreme caution should be taken that any built-up wood members are true, structurally sufficient to support the weight of Twindow, and constructed from well-seasoned wood. Twindow sizes in all groups may be reversed, width and height, making, in effect, 94 sizes.

PITTSBURGH PLATE GLASS COMPANY

CARRARA STRUCTURAL GLASS



FOR BATHROOMS.

When you use Carrara Glass on bathroom walls, you give buyers a plus value they can readily see. Carrara is so attractive in appearance . . . so easy to keep clean and sparkling at all times.

• For truly distinctive, easily-sold homes, give people the added beauty and advantages of Carrara Structural Glass. Like fine Plate Glass, Carrara is mechanically ground and polished to a flawless, brilliant surface. It is unmatched in color, richness and elegance. It lasts indefinitely and is easily kept clean and sparkling with a damp cloth. 10 colors to choose from.



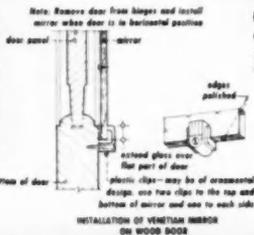
FOR TUB SURROUNDS. Prefabricated Carrara units are available for use in bathroom recesses. Panels are shipped to your job ready to install with all cut-outs made and holes drilled to your specifications. No cutting is necessary on the job. You have a variety of colors and a choice of 24- or 28-inch panels.

FOR SILLS. Waterproof Carrara sills are the kind of added feature that makes your house stand out above all others on the market. They are both attractive and highly practical.

PITTSBURGH MIRRORS



PITTSBURGH DOOR MIRRORS. Several full-length door mirrors made of Pittsburgh Plate Glass — installed in bedrooms and entrance halls, for example — give your homes that "extra-value" look. The additional cost is slight and well worth while. Five standard sizes—16, 18, 20, 22, 24" wide x 68" high—fit 90% of all interior millwork doors.



PITTSBURGH STRUCTURAL MIRRORS. To make rooms look larger, dark corners brighter, nothing can equal well-placed Pittsburgh Structural Mirrors. They are made from genuine Pittsburgh Plate Glass and offer superior reflectivity.



PITTSBURGH PLATE GLASS COMPANY



PANELS OF GLASS BLOCK admit flood of daylight that is softened and diffused throughout entire office

(Continued from page 422)
materials may be those of ordinary glass, Pyrex chemical-resistant glass, or colored in various hues.

Glass Block

Glass blocks are made of two sections, or lenses, fused together with a hollow, moisture-free chamber between. This dead air space makes an effective temperature barrier. Mortar edges are coated with a grit-bearing plastic coating to insure adherence to the mortar. Masons with ordinary tools can lay glass block without difficulty. In most installations it is necessary to use an expansion strip at jambs and heads of panels, plus a good gun-grade non-hardening caulking compound around all joints. Wall ties and panel anchors may be used to tie the panel to the masonry wall and to anchor the panel to the jamb.

Glass blocks have a compressive strength of between 400 and 600 pounds per square inch. However, glass block construction should never be used for load-bearing walls, and adequate provision must be made for support of construction above glass block panels.

Blocks are available in a wide range of patterns and several standard sizes, including radial blocks and curved corner blocks. Some manufacturers are offering "prefabricated" panels of glass block, and one at least is marketing a complete window unit in steel frame with sliding vision strip at the bottom. Ventilator blocks with stainless steel or glass louvers are also available to provide ventilation in situations where a solid glass block wall panel is not desirable.

Mirrors

Mirrors are sometimes made of ordinary drawn sheet glass, but better

grades utilize polished plate glass, with highly polished surfaces and backs of either silver, gold, or casting bronze. Maximum sizes of mirrors are governed by maximum sizes of plate glass. Copper back mirrors are made up to 86 by 168 inches.

Mirrors may be fabricated with beveled edges $\frac{1}{2}$ inch to 2 inches in width; the edges may be ground or polished and also mitred where mirrors butt together at an angle. Mirrors may also have surface-mitred lines where decorative effects are desired, or may be etched or sandblasted with decorative patterns. They are also obtainable in a wide range of color.

PLASTIC GLASS PRODUCTS

There are two main types of plastic glass products; those which are "pure" plastic, and those which are a combination of glass and plastic. The well-known "plexiglas" bombardier's lookout in military aircraft finds its civilian counterparts in roof hatches and skylights, in "blisters" which admit sunlight into modern ranch-type homes, in shower screen installations, decorative interior panels and partitions of many kinds.

Among plastic and glass combinations are the familiar types of safety glass and more recent types developed to reduce shattering of glass. One popular plastic and glass material comes in a number of attractive colors, is frequently corrugated to correspond with the corrugations in metal sheet, and is used extensively in roof panels, siding, as awnings over doors and entrances, and on edge as interior partitions. It may be cut, sawed, and nailed and otherwise worked very much like wood. It does not shatter like glass, but has all of glass's normal



GLASS BLOCK on the farm serves dual purpose of light admittance and insulation from frost and drafts



PANELS OF GLASS BLOCK used to replace windows on sun porch of a modern farm home. Glass blocks were also used in openings on each side of the chimney

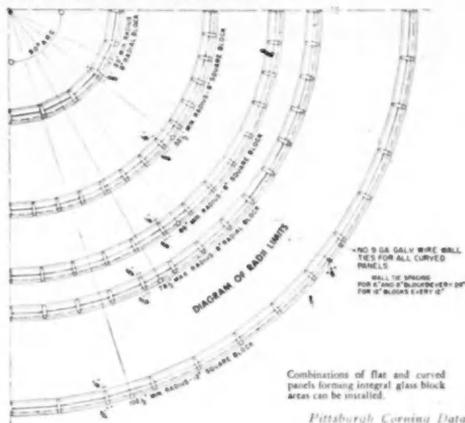


GLAZING compound being applied



VOIDS being filled when glass is set

Details on Curved Glass Block Panel Construction



Sealed Double-Glazed Windows Available in 45 Standard Sizes

PICTURE WINDOW STANDARD SIZES—The 45 standard sizes below apply only to a construction of 2 pieces of 3/4" Polished Plate Glass with a 1/2" air space.

35 1/2" x 36"	48" x 72"	56 1/2" x 70 1/8"
35 1/2" x 48 1/8"	48 1/8" x 55 1/4"	58" x 64 1/2"
35 1/2" x 60 1/8"	48 1/8" x 75"	58" x 72 1/2"
36" x 55 1/4"	48 1/2" x 50"	58" x 80 1/2"
36" x 75"	50" x 56 1/2"	58" x 96 1/2"
42" x 66"	50" x 64 1/2"	58" x 116 1/2"
42" x 72"	50" x 72 1/2"	60" x 72"
46" x 48 1/2"	50" x 80 1/2"	60 1/4" x 66 1/8"
46" x 72 1/2"	50" x 96 1/2"	60 1/8" x 75"
46 1/8" x 52 1/2"	50 1/8" x 60 1/4"	64 1/2" x 66"
46 1/8" x 56 1/2"	52 1/2" x 58 1/8"	66" x 72 1/2"
47 1/8" x 50 1/8"	52 1/2" x 70 1/8"	66" x 84"
47 1/8" x 66 1/8"	55 1/4" x 60 1/8"	66" x 96"
48" x 48"	56 1/2" x 58 1/8"	72" x 84"
48" x 60"	56 1/2" x 66"	72" x 96"

Glazing Details for Double-Glazed Sealed Insulating Glass Units

It is extremely important to remember that double-glazed sealed insulating glass units are factory-fabricated and, once made to specifications, their dimensions cannot be changed at point of use. Proper glazing clearances must be allowed on all units, as well as sufficient rabbet depth, so that the seal does not show. The chart below gives recommended data:

Symbol and Explanation	Glass Thickness				
	D S A Plate 1/4" Patterned	1/4" Sheet Glass	from 80-120 united inches	under 80 united inches	over 80 united inches
Glass Sizes	under 80 united inches	under 80 united inches	from 80-120 united inches	under 80 united inches	over 80 united inches
A - Glazing compound Bed - Width	3/8" - 1/2"	3/8" - 1/2"	1/2"	3/4"	1/2"
B - Glazing Clearance (all edges)	1/4"	1/4"	1/4"	3/8"	1/2"
C - Metalized Edge - Depth	1/8"	1/8"	1/8"	1/8"	1/2"
D - Total Rabbet Depth B+C	5/8"	5/8"	5/8"	11/8"	7/8"

* Allowance made for dimensional tolerance. (Sum of length plus width)

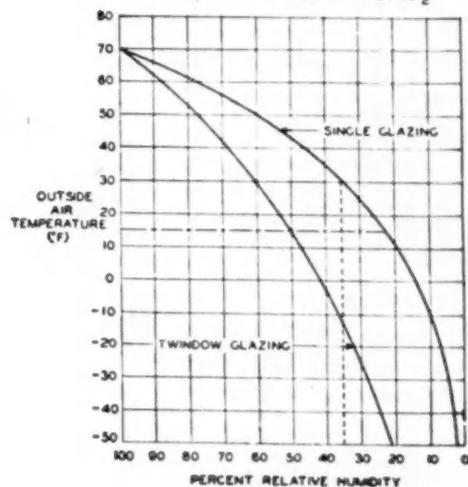
Heat Transmission Table on Double-Glazed Sealed Units

Number of Panes	Glass Thickness	U Value	
		Air Space	
		None	1/4" 1/2"
Single Glass	1/8"	1.16	
	1/4"	1.15	
Double Thermopane (one air space)	1/8" or 1/4"	.65	.58
Triple Thermopane (two air spaces)	1/4"	.47	

Libbey-Owens-Ford Glass Co. Data

Outside Temperature Required to Produce Condensation in Room Side Glass Surface

ROOM TEMPERATURE 70°F
OUTSIDE WIND VELOCITY IS MPH.
ALL GLASS 3/4" THICK
TWINDOW AIR SPACE 1/2"



Pittsburgh Plate Glass Co. Data

LIGHT REFLECTION VALUES OF COLORS

Black	2%	Pink, Shell	55%	Orchid	67%
Brown	16%	Green, Pale	59%	Caen Stone	76%
Green, Forest	22%	Buff	63%	Cream	77%
Tan, Olive	43%	Blue, Sky	65%	Yel., Canary	77%
Gray, Silver	46%	Tan, Ivory	66%	Ivory	82%
Sage, Bright	52%	Gray, Cream	66%	White	89%

Layout Tables For Glass Block Panels

Using $\frac{3}{8}$ inch mortar joints in face brick

These tables show masonry opening sizes required when shape of glass block panel and number of blocks to be inserted have been determined.

5" SQUARE BLOCKS $\frac{1}{4}$ " MORTAR JOINTS

NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
1	5 1/4"	2 1/2"	7"	6 1/2"	7"
2	1 1/4"	8 1/2"	1 1/4"	1 1/4"	1 1/4"
3	1 5/8"	1 1/2"	1 1/2"	1 5/8"	1 1/2"
4	1 1/8"	1 3/4"	2 1/4"	2 1/8"	2 1/4"
5	2 5/8"	2 1/2"	2 1/2"	2 5/8"	2 1/2"
6	2 1/4"	2 3/4"	3 1/4"	3 1/8"	3 1/4"
7	3 5/8"	3 1/2"	3 1/2"	3 5/8"	3 1/2"
8	3 1/8"	3 3/4"	4 1/4"	4 1/8"	4 1/4"
9	4 5/8"	4 1/2"	4 1/2"	4 5/8"	4 1/2"
10	4 1/4"	4 3/4"	5 1/4"	5 1/8"	5 1/4"
11	5 5/8"	5 1/2"	5 1/2"	5 5/8"	5 1/2"
12	5 1/8"	5 3/4"	6 1/4"	6 1/8"	6 1/4"
13	6 5/8"	6 1/2"	6 1/2"	6 5/8"	6 1/2"
14	6 1/4"	6 3/4"	7 1/4"	7 1/8"	7 1/4"
15	7 5/8"	7 1/2"	7 1/2"	7 5/8"	7 1/2"
16	7 1/4"	7 3/4"	8 1/4"	8 1/8"	8 1/4"
17	8 5/8"	8 1/2"	8 1/2"	8 5/8"	8 1/2"
18	8 1/8"	8 3/4"	9 1/4"	9 1/8"	9 1/4"
19	9 5/8"	9 1/2"	9 1/2"	9 5/8"	9 1/2"
20	9 1/4"	9 3/4"	10 1/4"	10 1/8"	10 1/4"
21	10 5/8"	10 1/2"	10 1/2"	10 5/8"	10 1/2"
22	10 1/4"	10 3/4"	11 1/4"	11 1/8"	11 1/4"
23	11 5/8"	11 1/2"	11 1/2"	11 5/8"	11 1/2"
24	11 1/8"	11 3/4"	12 1/4"	12 1/8"	12 1/4"
25	12 5/8"	12 1/2"	12 1/2"	12 5/8"	12 1/2"
26	12 1/4"	12 3/4"	13 1/4"	13 1/8"	13 1/4"
27	13 5/8"	13 1/2"	13 1/2"	13 5/8"	13 1/2"
28	13 1/8"	13 3/4"	14 1/4"	14 1/8"	14 1/4"
29	14 5/8"	14 1/2"	14 1/2"	14 5/8"	14 1/2"
30	14 1/4"	14 3/4"	15 1/4"	15 1/8"	15 1/4"
31	15 5/8"	15 1/2"	15 1/2"	15 5/8"	15 1/2"
32	15 1/8"	15 3/4"	16 1/4"	16 1/8"	16 1/4"
33	16 5/8"	16 1/2"	16 1/2"	16 5/8"	16 1/2"
34	16 1/4"	16 3/4"	17 1/4"	17 1/8"	17 1/4"
35	17 5/8"	17 1/2"	17 1/2"	17 5/8"	17 1/2"
36	17 1/4"	17 3/4"	18 1/4"	18 1/8"	18 1/4"
37	18 5/8"	18 1/2"	18 1/2"	18 5/8"	18 1/2"
38	18 1/8"	18 3/4"	19 1/4"	19 1/8"	19 1/4"
39	19 5/8"	19 1/2"	19 1/2"	19 5/8"	19 1/2"
40	19 1/4"	19 3/4"	20 1/4"	20 1/8"	20 1/4"
41	20 5/8"	20 1/2"	20 1/2"	20 5/8"	20 1/2"
42	20 1/4"	20 3/4"	21 1/4"	21 1/8"	21 1/4"
43	21 5/8"	21 1/2"	21 1/2"	21 5/8"	21 1/2"
44	21 1/8"	21 3/4"	22 1/4"	22 1/8"	22 1/4"
45	22 5/8"	22 1/2"	22 1/2"	22 5/8"	22 1/2"
46	22 1/4"	22 3/4"	23 1/4"	23 1/8"	23 1/4"
47	23 5/8"	23 1/2"	23 1/2"	23 5/8"	23 1/2"
48	23 1/8"	23 3/4"	24 1/4"	24 1/8"	24 1/4"
49	24 5/8"	24 1/2"	24 1/2"	24 5/8"	24 1/2"
50	24 1/4"	24 3/4"	25 1/4"	25 1/8"	25 1/4"

7" SQUARE BLOCKS $\frac{1}{4}$ " MORTAR JOINTS

NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
1	7 1/4"	4 1/2"	9"	8 1/2"	9"
2	1 5/8"	1 1/4"	1 1/4"	1 5/8"	1 1/4"
3	1 1/8"	1 3/4"	2 1/4"	2 1/8"	2 1/4"
4	2 5/8"	2 1/2"	2 1/2"	2 5/8"	2 1/2"
5	3 5/8"	3 1/2"	3 1/2"	3 5/8"	3 1/2"
6	3 1/4"	3 3/4"	4 1/4"	4 1/8"	4 1/4"
7	4 5/8"	4 1/2"	4 1/2"	4 5/8"	4 1/2"
8	4 1/8"	4 3/4"	5 1/4"	5 1/8"	5 1/4"
9	5 5/8"	5 1/2"	5 1/2"	5 5/8"	5 1/2"
10	6 5/8"	6 1/2"	6 1/2"	6 5/8"	6 1/2"
11	7 5/8"	7 1/2"	7 1/2"	7 5/8"	7 1/2"

Pittsburgh Corning Data

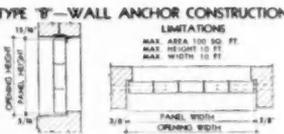
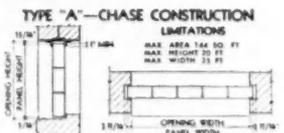
7" SQUARE BLOCKS $\frac{1}{4}$ " MORTAR JOINTS

NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
12	7 1/4"	7 1/4"	8 1/4"	8 1/4"	8 1/4"
13	8 1/4"	8 1/4"	8 3/4"	8 3/4"	8 3/4"
14	9 3/4"	9 1/4"	9 5/8"	9 5/8"	9 5/8"
15	9 1/4"	9 3/4"	10 1/4"	10 1/4"	10 1/4"
16	10 3/4"	10 1/4"	10 5/8"	10 5/8"	10 5/8"
17	11 3/4"	11 1/4"	11 5/8"	11 5/8"	11 5/8"
18	11 1/4"	11 3/4"	12 1/4"	12 1/4"	12 1/4"
19	12 3/4"	12 1/4"	12 5/8"	12 5/8"	12 5/8"
20	13 3/4"	13 1/4"	13 5/8"	13 5/8"	13 5/8"
21	13 1/4"	13 3/4"	14 1/4"	14 1/4"	14 1/4"
22	14 3/4"	14 1/4"	14 5/8"	14 5/8"	14 5/8"
23	15 3/4"	15 1/4"	15 5/8"	15 5/8"	15 5/8"
24	15 1/4"	15 3/4"	16 1/4"	16 1/4"	16 1/4"
25	16 3/4"	16 1/4"	16 5/8"	16 5/8"	16 5/8"
26	17 3/4"	17 1/4"	17 5/8"	17 5/8"	17 5/8"
27	17 1/4"	17 3/4"	18 1/4"	18 1/4"	18 1/4"
28	18 3/4"	18 1/4"	18 5/8"	18 5/8"	18 5/8"
29	19 3/4"	19 1/4"	19 5/8"	19 5/8"	19 5/8"
30	19 1/4"	19 3/4"	20 1/4"	20 1/4"	20 1/4"
31	20 3/4"	20 1/4"	20 5/8"	20 5/8"	20 5/8"
32	21 3/4"	21 1/4"	21 5/8"	21 5/8"	21 5/8"
33	21 1/4"	21 3/4"	22 1/4"	22 1/4"	22 1/4"
34	22 3/4"	22 1/4"	22 5/8"	22 5/8"	22 5/8"
35	23 3/4"	23 1/4"	23 5/8"	23 5/8"	23 5/8"
36	23 1/4"	23 3/4"	24 1/4"	24 1/4"	24 1/4"
37	24 3/4"	24 1/4"	24 5/8"	24 5/8"	24 5/8"
38	25 3/4"	25 1/4"	25 5/8"	25 5/8"	25 5/8"

11" SQUARE BLOCKS $\frac{1}{4}$ " MORTAR JOINTS

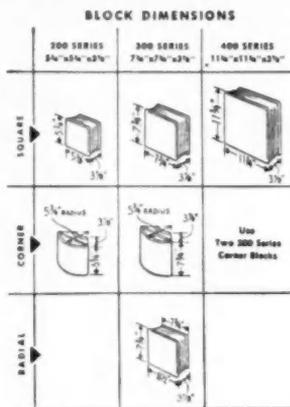
NO. OF UNITS	PANEL WIDTH OR HEIGHT	TYPE "A"		TYPE "B"	
		MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT	MASONRY OPENING WIDTH	MASONRY OPENING HEIGHT
1	11 1/4"	8 1/2"	1 1/4"	1 1/4"	1 1/4"
2	1 1/4"	1 1/4"	2 1/4"	2 1/8"	2 1/4"
3	2 1/4"	2 1/4"	3 1/4"	3 1/8"	3 1/4"
4	3 1/4"	3 1/4"	4 1/4"	4 1/8"	4 1/4"
5	4 1/4"	4 1/4"	5 1/4"	5 1/8"	5 1/4"
6	5 1/4"	5 1/4"	6 1/4"	6 1/8"	6 1/4"
7	6 1/4"	6 1/4"	7 1/4"	7 1/8"	7 1/4"
8	7 1/4"	7 1/4"	8 1/4"	8 1/8"	8 1/4"
9	8 1/4"	8 1/4"	9 1/4"	9 1/8"	9 1/4"
10	9 1/4"	9 1/4"	10 1/4"	10 1/8"	10 1/4"
11	10 1/4"	10 1/4"	11 1/4"	11 1/8"	11 1/4"
12	11 1/4"	11 1/4"	12 1/4"	12 1/8"	12 1/4"
13	12 1/4"	12 1/4"	13 1/4"	13 1/8"	13 1/4"
14	13 1/4"	13 1/4"	14 1/4"	14 1/8"	14 1/4"
15	14 1/4"	14 1/4"	15 1/4"	15 1/8"	15 1/4"
16	15 1/4"	15 1/4"	16 1/4"	16 1/8"	16 1/4"
17	16 1/4"	16 1/4"	17 1/4"	17 1/8"	17 1/4"
18	17 1/4"	17 1/4"	18 1/4"	18 1/8"	18 1/4"
19	18 1/4"	18 1/4"	19 1/4"	19 1/8"	19 1/4"
20	19 1/4"	19 1/4"	20 1/4"	20 1/8"	20 1/4"
21	20 1/4"	20 1/4"	21 1/4"	21 1/8"	21 1/4"
22	21 1/4"	21 1/4"	22 1/4"	22 1/8"	22 1/4"
23	22 1/4"	22 1/4"	23 1/4"	23 1/8"	23 1/4"
24	23 1/4"	23 1/4"	24 1/4"	24 1/8"	24 1/4"
25	24 1/4"	24 1/4"	25 1/4"	25 1/8"	25 1/4"

Details on Chase Construction



Pittsburgh Corning Data

Dimensions for Five Types of Glass Block



American Structural Products Co. Data

Table Showing Radii Limits for Curved Glass Block Panels

Outside Radius Inches	Number of Block in 90° Circular Arc	Joint Thickness in Inches		Remarks	
		Inside	Outside		
6" SQUARE BLOCK					
52 1/2	13	1/8	3/8	Minimum	
56 1/4	14	3/16	3/8		
56 3/4	14	3/16	3/8		
60	15	3/16	3/8		
61	15	3/16	3/8		
63 1/2	16	1/4	3/8		
65	16	1/4	3/8		
67 1/2	17	1/4	3/8		
69	17	1/4	3/8		
71 1/4	18	1/4	3/8		
73	18	1/4	3/8		
73 1/2	18	1/4	3/8		
No Maximum Limitations.					
8" SQUARE BLOCK					
69	13	1/8	3/8	Minimum	
74	14	3/16	3/8		
74 1/2	14	3/16	3/8		
79	15	3/16	3/8		
80	15	3/16	3/8		
84	16	1/4	3/8		
85 1/2	16	1/4	3/8		
No Maximum Limitations.					
8" RADIAL BLOCK					
29	5	1/8	3/8		Minimum
34	6	3/16	3/8		
34 1/2	6	3/16	3/8		
39	7	3/16	3/8		
40 1/2	7	3/16	3/8		
44	8	3/16	3/8		
46 1/2	8	3/16	3/8		
49	9	3/16	3/8		
51 1/2	9	3/16	3/8		
55	10	3/16	3/8		
57 1/2	10	3/16	3/8		
60 1/2	11	3/16	3/8		
62 1/2	11	3/16	3/8		
66	12	3/16	3/8		
67 1/2	12	3/16	3/8		
71 1/2	13	3/16	3/8		
73 1/2	14	3/16	3/8		
76 1/2	14	3/16	3/8		
78 1/2	14	3/16	3/8		
Use Square Block for larger radii					
12" SQUARE BLOCK					
102 1/2	13	3/8	3/8	Minimum	

No Maximum Limitations.
NOTE: Radii given to closest quarter inch; joint thickness to closest sixteenth inch.

Pittsburgh Corning Data

AMERICAN BUILDER

REVOLUTION IN BUILDING



Gypsum Sheathing replacing old style sheathing just as Gypsum Lath replaced old wood lath!

★ **SAVES TIME.** Gold Bond Gypsum Sheathing comes in one easy-to-handle size, 2' x 8'. Workman can place these in position in one-fourth the time required to handle four 6' x 8' wood boards. One man can do an average size small house in a single day!

★ **SAVES LABOR AND NAILS.** One panel of Gold Bond Gypsum Sheathing requires only 28 nails compared with 56 for wood sheathing covering the same area. This means 50% less time needed to drive half

as many nails. Up to 60% fewer man hours than needed for wood sheathing.

★ **LESS WASTE.** No random lengths, no lap loss...each panel 2' x 8'. 1000 sq. ft. of Gold Bond Gypsum Sheathing covers 1000 sq. ft. of area.

★ **PERMANENT FIRE PROTECTION.** The gypsum center of Gold Bond gypsum Sheathing is fireproof. It can't burn.

★ **GREATER STRUCTURAL STRENGTH.** Rock-like panels of Gold Bond Gypsum

Sheathing add greater structural strength to houses by actual test...they can't buckle, warp, contract, expand or twist.

Today when every nickel counts, Gold Bond Gypsum Sheathing is one sure answer to real savings for yourself and your customers, plus extra benefits for both of you. See your local Gold Bond Lumber and Building Materials Dealer today!

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Fireproof Wallboards, Decorative Insulation Boards, Lath, Plaster, Lime, Sheathing, Gypsum Roof Decks, Wall Paint, Textures, Rock Wool Insulation, Metal Lath and Sound Control Products.

You'll build or
remodel better with

Gold Bond

AMERICAN BUILDER



INSULATING boards made from wood fibers are waterproofed or otherwise treated with preservatives to make them resistant to moisture, rot, drastic changes in dimension, and fire. They combine insulation against heat and sound with structural strength and interior finish. They are a practical material for covering big areas quickly and economically. As a base for plaster, their insulating value is combined with high bonding strength.

Decorative insulating boards include sheets, plank and tile boards which are well standardized. Sheets are made in standard 4-foot widths, 8, 10, and 12 feet long. Plank is manufactured in 8, 10, 12, and 16-inch widths and lengths of 8, 10 and 12 feet. Tile is generally made in 12 by 12, 12 by 24, 16 by 16 and 16 by 32 inch sizes. They are prefinished in a variety of plain and colored surfaces and are as adaptable for remodeling and re-decoration as for new construction.

Planks feature long edges which are beveled, with interlocking joints for which some manufacturers have also developed special clip systems for fastening to eliminate exposed nailing. Board plank may be put on either vertically or horizontally and in either uniform or random widths. When applied vertically, a single board will provide floor-to-ceiling coverage. Applied horizontally, one sheet will span

up to 12 feet of wall area. When plank which varies in width is applied, furring strips must be at right angles to length of plank and preferably on 9- or 12-inch centers.

Sealing Joints

Either vertically or horizontally, there will be joints to be treated. The simplest joint treatment is to bevel board edges and bring butts into moderate contact. Joints are then concealed with cement and special tape. Paneled effects may be obtained by covering joints with batten strips or moldings which may be of wood, metal or insulating board. Joints can be accented in other ways for unusual decorative effects. One method is to insert a wood molding between boards, or insert molding strips into joints; or an open joint can be achieved by leaving a space of about $\frac{3}{4}$ inch between units and painting the space a contrasting color.

Installation

Ease of handling and speed of application have popularized insulating board. However, it is important that manufacturers' recommendations be followed as to specifications and procedures. When nails or clips are used, framing members or furring to which board is to be attached must conform to the size of the units used, in order

INTERIOR WALL AND CEILING BOARD AND TILE

Insulating Boards

Wood Fibre Plank
and Tile
Sealing Joints
Installation
Cane Fibre Board

Gypsum Boards

Preparing the
Framework
Double Wall System
Nailing Is Important
Concealing the Joints
Special Problems

Asbestos-Cement Flat Boards

Boards are Easily
Handled
Scoring and Breaking
Boards
Barbed Nails
Recommended
Painting

Wallboard and Tile

Installation
Procedures
Decorative
Wallboards
Decorative Tile, and
Tileboard

Acoustical Materials

Perforated Tile
Glass Fiber Tile
Mineral Fiber Tile

Mechanical Suspension Methods

Partition Systems

Steel and Glass
Panels
Movable Asbestos
Walls
Insulating Board
Partitions



BEFORE



AFTER

Attic has been insulated and crudely partitioned before contractor was called in

to avoid use of extra materials. If the board is fastened with adhesives to continuous, solid, sound backing, there is no problem, but attention should be given to the kind of adhesive recommended by the manufacturer.

Where nails are exposed, 1 1/4-inch finishing nails or brads should be employed. Nails should be driven at an angle, set below surface, and loose fiber tapped over the surface. Where beads and grooves permit, nails can be driven there to make them less noticeable. If nails are to be covered by moldings or battens, 1 1/4-inch box, common or galvanized nails can be used with the regular 1/2-inch boards.

GYPSUM BOARD

There are three thicknesses of gypsum wallboard—1/4, 3/8, and 1/2 inch. The length varies from 4 to 12 feet. The 1/4-inch board is made with square edges only. It is a lower-priced product designed to serve specific purposes, such as (1) temporary repairs and alteration work; (2) as a covering over old wall surfaces, and (3) for ceiling repairs where light weight is needed.

The 3/8-inch standard gypsum board and 1/2-inch wall board is available with square, beveled and recessed edges.

Insulating gypsum wallboard is made with all types of edges and thicknesses. Aluminum foil is firmly attached to the back surface of this board to provide reflective insulation and act as a vapor barrier.

Gypsum tile board is made in 3/8-inch thickness only, and from 6 to 10-foot lengths. These boards have a square edge and an ivory surface but with tile indentations 4 1/2 inches square.

Wood-grained gypsum board is

made in 3/8-inch thickness and from 6 to 12-foot lengths. Edges are square or beveled. A paper having a photographic reproduction of knotty pine, bleached or ribbon mahogany, walnut, or figured aspen is used.

Preparing the Framework

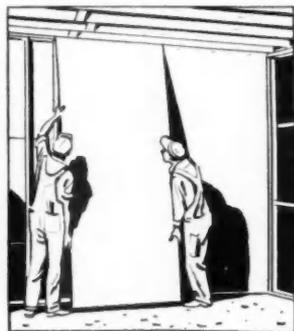
Gypsum wallboard, like any other wall or ceiling finish, requires level and true framework. The wood supports should be properly spaced and leveled in a workmanlike manner. Faces of studs should be lined up with the face of plates at top and bottom. Studs and joists should not exceed 16 inches on centers, except that their spacing may be increased to 24 inches when 1/2-inch wallboard is used. Substantial nailing surfaces should be supplied at all interior and exterior corners so that the ends of boards forming the corners may be securely nailed.

Window and door frames should be ordered for 3/8 or 1/2-inch grounds, depending upon the wallboard used.

Double Wall System

The gypsum double wallboard sys-

tem calls for two layers of gypsum wallboard, each 3/8-inch thick. The base layer is nailed vertically to the studs, and the face layer is applied horizontally over the base layer with



Vertical application of wallboard sheets is first step in double-wall construction. Single-wall may be either vertical or horizontal; if horizontal, first sheet goes on at top of wall



Gypsum board can be cut easily without sawing. Score with sharp knife against



sharp-edge and break off as shown above



BEFORE



AFTER

Gypsum wallboard, easily cut to fit around windows and into odd shapes under eaves, converted barren attic into attractive apartment. Wallboard takes casein or oil-base paint, wallpaper or other decorative materials

a special adhesive. Joints are sealed with a reinforcing tape and a special cement. The finished result is a smooth wall that meets exacting requirements.

The base wallboard is first nailed to the ceiling, parallel to the joists with long edge joints occurring on the joists. Board is then applied to side-wall framing members with joints on the studs.

After the board is measured to proper dimension, it is scored along the dimension line with a knife and bent at right angles, then scored on the under-side of the fold. The board then breaks with a clean, straight edge. It may be sawed, also.

A special cement is mixed using two quarts of clean lukewarm water per five pounds of adhesive. Adhesive is stirred into the water and mixed to a creamy consistency. It is then "battered" on the back of the face layer of gypsum wallboard with a notched trowel.

The "battered" side is placed against the base layer and the face board is nailed, using only a few nails, the wallboard surface, or, if not so

which merely hold the face board against the base layer until the cement sets. The nails are driven so that the nailheads are slightly below



Second stage in double-wall construction with wallboard in horizontal application as finish layer

dimpled, they can be subsequently countersunk. The ceiling is applied first.

The first, finish layers are attached

to the upper section of the sidewalls in a horizontal position. The face layer is nailed here also to afford temporary fixation until the cement sets.

After the face layer has been in place long enough for setting and drying of the adhesive, usually about 24 hours, all temporary nails in the face layer are countersunk, unless they were dimpled when originally driven.

The horizontal application of the face layers to the walls makes for fewer joints, and less ladder climbing or scaffold erecting. The "cross application" of the face and base layers of the gypsum wallboard add strength to the wall, which, with the two layers of $\frac{3}{8}$ -inch wallboard, is $\frac{3}{4}$ -inch thick.

Nailing is Important

Proper nailing for single and double wallboard application is highly important to achieve maximum strength and durability of the wall. Use only 5-penny cement-coated nails $1\frac{1}{2}$ inches long (13 ga., $\frac{1}{16}$ head). Start nailing at center of the board and work outward, spacing nails 5 to 7 inches apart, but not closer than $\frac{3}{8}$ -inch to edges or ends of board.

Area of the board immediately surrounding each nail must be held tightly against the framing while the nail is being driven. A crown headed hammer should be used. Each nail should be driven until the head rests in a slight depression in the board so the head can be concealed by cement. Surface of the paper must not be broken by the nailhead or hammer.

Concealing the Joints

Gypsum wallboard joints can be so effectively concealed that it is im-

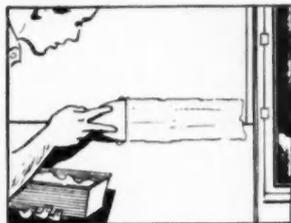


Wallboard fits well into odd-shaped wall or ceiling areas, stands up when used around coves and for valances

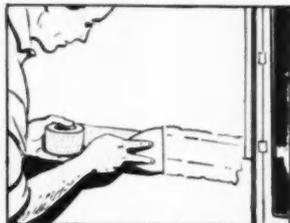


Showing application of wood-grained gypsum wallboard around window frame. Accurate fit is possible

HOW TO CONCEAL CRACKS AND NAIL HOLES



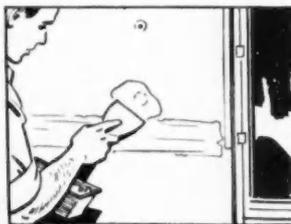
1 Apply cement to channel of joint



2 Reinforcing tape is embedded in cement, and excess cement removed. Tape is covered with cement



3 Second coat of cement applied over tape and edges is feathered out evenly



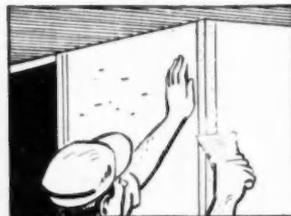
4 Nail holes are first "dimpled" gently so as not to break surface of the board. Dimples are then filled with cement



5 Sandpaper surface lightly after cement has dried to remove any rough spots



6 Corner joints are finished similarly to flat-wall joints. Tape is creased down the middle before applying



7 Tape is folded over corner and cemented as in flat-wall joints to cover outside corners



8 Outside angles of curves are taped with tape cut as shown to allow for bend. Board is scored on back to follow curve



9 Each board must be tight against furring before concealing nail heads. Care must be taken to avoid breaking surface of board when nailing or dimpling

possible to see them once the walls are decorated. In concealing a joint, a special cement is first applied (see illustrations). Only joint cement recommended by the gypsum manufacturer should be used. This is mixed to a putty-like consistency. It is applied by a broad knife into the channel formed by recessed edges of adjoining boards. Moderate pressure is used, making sure that the channel is filled evenly.

A perforated reinforcing tape is

then applied over the cement to the full length of each joint. Tape is imbedded in the cement. Excess cement is removed, then the tape is covered with a thin layer. At this time, all nailheads should be concealed by "spotting" with cement.

A second coat of cement is applied over the joint area, and feathered out as far as necessary to obtain a smooth, even surface. Cement is applied to end joints in this manner, but feathered out a few inches farther than

recessed joints. A third coat is recommended and the surface should be left as smooth as possible.

Before concealing nailheads, it should be made certain that each board is tight against the framing and will not move on shanks of the nails. Depressions should be filled surrounding the nailheads, with the first coat of cement. After drying, a second coat is applied. For better concealment, a third coat is recommended, left as smooth as possible.

If necessary, the last coat can be sanded lightly with fine sandpaper.

There is little difference between finishing corners (both inside and outside) and flat wall joints. The exception is that the tape is folded lengthwise down the center to fit the corner. These joints are also treated with at least three coats of cement, feathered out and left as smooth as possible.

Special Problems

Gypsum wallboard is quickly made to conform to curved surfaces. It is done by scoring the back paper of the board at intervals and breaking the core beneath each cut. The board is then nailed to the curved contour and corners are treated with the reinforcing system described previously, except that the tape is snipped at intervals along one side and applied so that it conforms to the arch.

Gypsum wallboard may be painted, calcimined or wallpapered. A varnish size should be applied to the surface of the board before papering or applying calcimine. This size will permit ready removal of paper or calcimine when redecorating. A primer should be applied to the surface of the board when paint is used.

ASBESTOS-CEMENT FLAT BOARDS

An attractive stone gray in color, asbestos boards are hard and smooth on one side and slightly textured on the other. They are a practical material for structural wallboard use and are highly serviceable for exterior surfaces as well as interior walls.

Made in sheets $\frac{1}{8}$ to $\frac{3}{8}$ -inches thick, four feet wide and eight feet long, the boards are light enough to be handled easily. Nailing is the usual method of application, although they can be put on with a special adhesive, supplemented by nails, mouldings or other overlapping devices. As an alternate to nails, wood screws may be used.

The boards may be cut by sawing, shearing, or by scoring and breaking. Special cutting jigs also are available. When cutting, the finish side is placed up so that any roughness will be on the underside. A carpenter's 10-point saw with little set will cut satisfactorily. Mechanical saws with abrasive blades also are used effectively.

Scoring and Breaking Boards

Scoring and breaking is one of the simplest ways to cut the thinner boards. The sheet is scored against a straight edge, deeply on both sides, with a tool such as a knife, ice pick

or awl. A scoring tool can be made from a 12 to 14-inch flat smooth file set into a heavy wooden handle. Shape it like a wood chisel, then "relieve" the back of the point by grinding the long face edge of the file at about 30 degrees so that a face about $\frac{1}{16}$ inch wide is produced across the back of the cutting edge. Improvised "C" clamps hold the sheet in place on a cutting table while it is snapped across the scored line.

All $\frac{1}{8}$ -inch thick boards may be nailed directly. Other thicknesses may require drilling or punching of holes to receive nails. Manufacturers vary in their recommendations as to the maximum thickness that can be nailed directly. Nails are driven in straight, snug against the board, but are not sunk into the surfaces. Nail spacing recommendations vary somewhat with different makes of boards and manufacturers' instructions should be obtained on that point. The same applies to spacing of nails away from the edges. Nails first are driven near the starting edges of the sheets, working toward the opposite edges.

Barbed Nails Recommended

Barbed or ring-shanked nails having sharp needle points are recommended. They should be long enough to penetrate well into good sound wood. For inconspicuous interior work, small countersunk head nails may be used. For ordinary interior work, and for nailing against wood sheathing or studding, use a hot dipped galvanized asbestos shingle nail. Galvanized lead-headed nails are employed for exterior work. Large headed nails should be used for ceiling work.

Any punch used for steel or metal work having a female die and male punching bit will work with asbestos-cement sheets provided the "hold-down" is not tight. Cold or drift punches that do not taper at the end are satisfactory. Holes also can be drilled with standard twist bits in hand or electrical drills. The holes are formed slightly larger ($\frac{1}{2}$ inch) than the nail or screw to allow for expansion, except when using countersunk fasteners, in which case the hole is countersunk slightly smaller than the head of the fastener to assure a neat, tight job.

Painting

For interior work, painting systems which are suitable for application over plaster walls are satisfactory, but call for a special primer. The primer should be applied according to the paint manufacturer's directions.

WALLBOARD AND TILE

Wallboard and ceiling tile made of layers of wood or fiber or paper bonded with resins are available. Wallboard panels are waterproofed and measure up to 8 feet wide and 18 feet long. Panels $\frac{3}{8}$ -inch thick with pebbled surface are ideal for either painting or papering.

Dry-built, full-wall construction is economical with the use of these laminated fiber panels, waterproofed and with strong insulation value. The wall panels come in standard sizes 4 feet wide by 6, 8, 10, 12 and 16 feet long, and full-wall sizes 8 feet by 12,



Application of cement to back of tile is first step in this method of applying tile to ceiling



Tile is applied to ceiling, starting at center with temporary straight-edge nailed up for a guide

14, 16, and 18 feet long. Surfaces are pressed to provide a perfect painting surface. Ceiling tiles of similar material are cut to 12-inch squares, with edges moderately beveled. Manufacturers claim they are so completely waterproofed that they can withstand even unusual moisture conditions. Their natural finish is decorative, washable, and will take oil-base paints.

Installation Procedures

This type of board has its own "floating" fastener which makes face nailing unnecessary and eliminates visible nails and nail holes. It is ap-

(Continued on page 440)

**Speed completions...
with *INSULITE***



..cut the dead load ceilings like these!

Save man-hours, expedite the job! Whether your next ceiling job is new construction, remodeling or repair, Insulite tileboard can save you important time! Insulite, you see, goes up quickly and easily in just *one simple operation*...goes up in a fraction of the time required for heavy plaster ceilings!

Reduce dead load, save steel! With present limitations on the use of steel, dead load can often mean the difference between a new building and no building at all. Lightweight Insulite tileboards cut your dead load to the bone...often eliminate the need for steel beams entirely!

For complete facts on the complete line of Insulite ceiling and acoustical tileboards, contact your Insulite dealer, or drop us a card today!

Picture at left: Insulite Lusterlite Tileboard, available in both square and rectangular shapes with a smooth, durable factory-painted finish. Easy to clean or repaint. Has high light-reflection. Goes on quickly, easily and securely with staples, nails or adhesive.



INSULITE, ACOUSTILITE, FIBERLITE, AND LUSTERLITE ARE REG. T.M., U.S. PAT. OFF.

For low-cost acoustical treatment, ask your dealer for Fiberlite. It's a double-duty acoustical tileboard that *insulates as it hushes sound!* Has a rich, travertine texture and adds beauty to any interior. Made from tough, natural wood fibers. Easy to clean. Can be repainted.

Want a perforated tileboard? Get Acoustilite from your Insulite dealer. This new perforated tileboard is available with Insulite's heavy-duty flanged tongue-and-groove joint for application over furring strips or the butt-edge joint for adhesive application. Both are extra-easy to apply, clean and repaint!

Build and insulate with double-duty

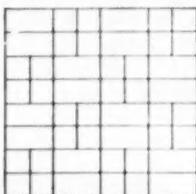
INSULITE

Made of hardy Northern wood

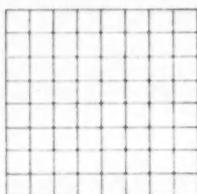


INSULITE DIVISION MINNESOTA AND ONTARIO PAPER COMPANY, MINNEAPOLIS 2, MINNESOTA

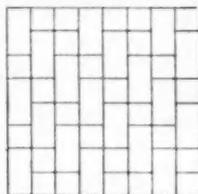
Common Patterns Used in Application of Ceiling Tile



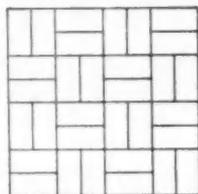
CEILING PATTERNS: This design utilizes units 12x12 inches and 12x24 inches or 16x16 inches and 16x32



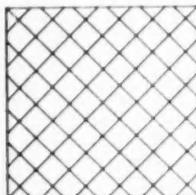
THIS simple square pattern is easy to apply with either 12x12-inch or 16x16-inch tileboards for a trim effect



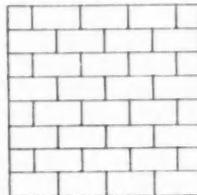
HERE square and rectangular units are combined. Large units are best for big area installations



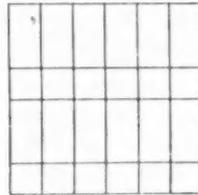
THIS loose basket weave pattern results from combining squares and rectangles in manner shown



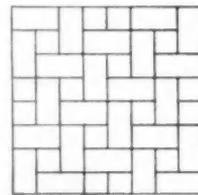
HERE 12x12-inch or 16x16-inch units are applied diagonally to achieve an attractive diamond pattern



ESPECIALLY good for large rooms, ashlar patterns may be obtained by the staggering of joints



IN THIS pattern squares and rectangles are alternated. Suitable for uniform or varied colored ceilings



A VARIATION of the basket weave pattern, this design is most effective when used in large interiors

(Continued from page 437)

plied directly to studding or furring, which anchors panels securely from the back. The fastener is so constructed as to permit movement of the panel, due to normal structural settlement, both vertically and horizontally.

These wall panels are easy to handle; even a large 8 by 18-foot panel can be handled by two men using wooden "U" clamps. Panels come with vapor barrier applied if desired. Moldings for cornice, panel, inside corner and outside corner are also furnished by the manufacturer and are commonly stocked by lumber dealers; when used, panels should be painted before moldings are installed.

Decorative Wallboards

Also available are 7-ply laminated fiber panels in striated design, guaranteed to be permanently crackproof and possessing effective insulating qualities. They are compressed to 3/4-inch thickness, and are available in sizes 4 by 8 feet or on special order in larger sizes. They are applied directly to studs with the same type of fasteners previously mentioned. For baths and kitchens a pre-finished fiber board is available in giant size panels 8 feet wide by 12 feet long, as well as standard 4 by 8-foot size with the glossy tile-like surface embossed in various colors in squares.

One manufacturer offers a wallboard which comes in a rich simulated leather finish closely resembling fine split cowhide, which is recommended for wainscoting, decorative panels or over-all wall treatments. Panels are 8 feet long in 3-foot and 4-foot widths, available in colors and textured designs. No further treatment is required after installing.

Board, tile board, finish plank, and beveled interior board are also available in new colors and a variety of textures and sizes which do not require painting or papering and can be put up with nails or staples.

Decorative Tile and Tileboard

Decorative tileboard is used almost exclusively on ceilings. These boards have interlocking tongue-and-groove joints with extra-wide nailing flange so that adjoining units fit together firmly and smoothly, and allow concealed fastening. They can be applied with stapling gun, without use of special clips. Many attractive patterns may be worked out with ceiling tile, used with or without color variations and combinations. Intricate patterns, however, require extra care in installation. They start from the center of the ceiling, and care must be taken to insure adequate furring where tiles of varying sizes and shapes are used.

ACOUSTICAL MATERIALS

Perforated acoustical fiberboard tile are particularly desirable because of their comparatively low cost and ease of maintenance. Most are factory painted and require no finishing treatment on the job but may be painted without losing acoustical qualities. The beveled units may be cemented to plaster, concrete, plasterboard ceilings, or mechanically fastened to wood furring or directly to plasterboard. The manufacturer provides a special self-clinching nail for attaching directly to plasterboard.

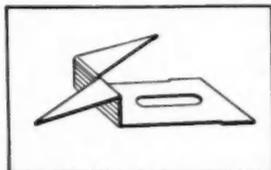
Other acoustical units consist of panels with perforated asbestos-cement facing 3/8 inch thick, used in conjunction with sound-absorbing elements. Popular sizes are 24 by 24-inches and facing is installed with square edges and butt joints which minimize or eliminate all tile lines.

Glass Fiber Tile

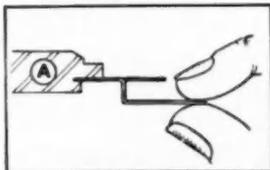
Acoustical boards and tile made of glass fiber are well suited to suspended ceiling constructions because of their low weight and dimensionally stable characteristics. Standard acoustical adhesives may be used. However, they are not recommended for use on surfaces which are subject to frequent condensation or under conditions where the tiles will remain wet, as water-staining may result.

HOW TO USE CLIPS IN THE APPLICATION OF CEILING TILE BOARD AND PLANKS

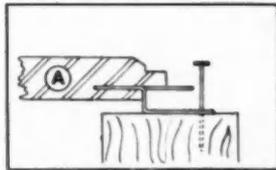
Application of T & G TileBoard and Plank



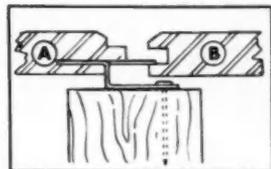
1. Insulite Clip, double pronged. Slot for adjustable nailing.



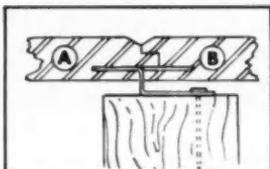
2. First, insert clip by sliding prong along lower surface of tongue of Unit A as indicated.



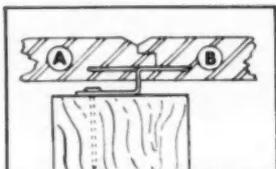
3. Push the prong into the board until the clip is firmly against the edge of the joint and using a 2d (1") box nail, secure clip and board in desired position. Drive nail flush with clip.



4. Now, slide Unit B onto the protruding prong of the clip. Keep prong flush with lower lip of groove.



5. Bring units together gently so that the tongue of Unit A is properly seated in groove of Unit B.



6. In working from the groove side of tileboard, the clip is first inserted into the groove with the nailing slot extending outward.

Application of Lok-Grip Joint TileBoard and Plank

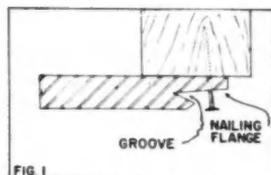


FIG 1

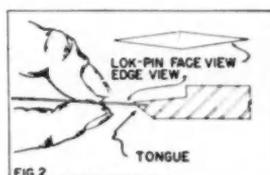


FIG 2

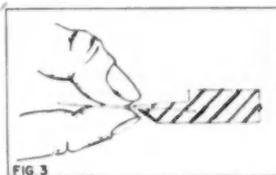


FIG 3

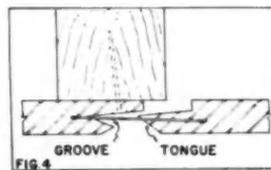


FIG 4

1. Nail through nailing range of first unit (Fig. 1).
2. Start Lok-Pins just below tip of tongue of second unit (Fig. 2).
3. Push Lok-Pins half way into tileboard and at a slight angle with the surface (Fig. 3).
4. Place this second unit so that Lok-Pins enter groove behind nailing range of first unit (Fig. 4).
5. Firmly press second unit into position, engaging the interlocking joint and firmly anchoring Lok-Pins into both units (Fig. 5).
6. Secure opposite edge of second unit by nailing through range.
7. Continue in same manner with succeeding units.

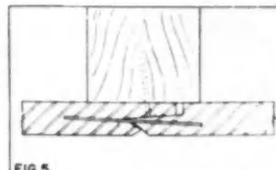


FIG 5

Data from the Insulite Div., M&O Paper Co.

Common sizes in glass fiber tile are 12 by 12 by $\frac{3}{4}$ -inch and 1-inch beveled; 12 by 24 by $\frac{3}{4}$ -inch and 1-inch beveled, and cross-grooved to simulate 12 by 12-inch; and bevels of $\frac{1}{2}$ -inch. Either plain or perforated types are available. Both are factory deco-

rated with a white water-base paint and may be repainted with water-base paint, although oil-base paint is recommended if repeated washing is necessary.

The glass fiber board is manufactured in four sizes: 25 $\frac{5}{8}$ by 48 by

1-inch beveled, cross-grooved to represent 12 by 12-inch; 24 by 48 by 1-inch beveled, cross-grooved to represent 12 by 12-inch; 24 by 37 $\frac{1}{8}$ by 1-inch beveled on two length edges, cross-grooved at 12-inch intervals

(Continued on page 445)

NOW *this* Nu-Wood

Double Feature!



Exclusive TONGUE AND GROOVE Nu-Wood Tile for Clip Application!

New WIDE FLANGE Nu-Wood Tile for Staple Application!



A Nu-Wood exclusive—the Nu-Wood Clip System that assures beautiful wall and ceiling surfaces for years to come. The clips are reversible, fitting either the tongue or groove joint of tile. "Center of ceiling" starting is made possible with the Nu-Wood Clip System, for easier and fool-proof application.



Sturdy, thicker flange for better staple application—staples hold securely with less chance for "pull through" in the Nu-Wood Wide Flange Tile.



Complete wrap-around support—the Nu-Wood Clip completely "wraps" tile tongue and groove edges with metal—supporting both tiles. Thus, ceiling tiles stay in place when applied with Nu-Wood Clips, assuring a level surface.



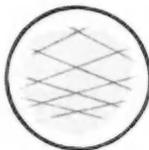
Nu-Wood Wide Flange Tile is available with the famous Sta-Lite light-reflecting surface, which actually grows lighter with age . . . reflecting 76% of light directed to surface without harsh glare.



Self-aligning—the Nu-Wood Clip invisible nailing "floats" the tile in perfect alignment, compensating for slight irregularities in the nailing surface. Also, minor adjustments in tiles may be made to true up joint lines, even after clip is fastened in place.

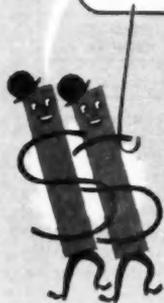


Shadow-Line Bevel—just as with Nu-Wood Tongue and Groove Tile, the Wide Flange Tile has the distinctive Shadow-Line Bevel . . . providing "pencil-thin" joinings, preferred for beauty.



Tighter joints with Nu-Wood Clips—surfaces stay cleaner because air movement through tile joints is reduced, thus minimizing collection of surface dirt. Insulation value of tile is improved because of tongue and groove joint.

*No other manufacturer offers you this
Complete line of insulation board products*



A superior interior finish line—including tile, plank, board and Lok-Panels; also in thin board. Predecorated—Sto-Lite, Kolor-Fast or Variegated finishes provide special wall and ceiling decorative effects.

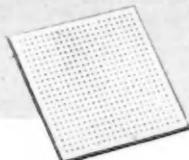
Famous Nu-Wood Shadow-Line Bevel gives "pencil line" joint lines to suit the modern trend toward simplicity in interior decoration. Elimination of bead on Nu-Wood Plank also gives modern, streamlined appearance.

Nu-Wood sturdy structural insulation board products

Supplementing the Nu-Wood interior finish line is a complete line of Nu-Wood structural products, including extra strong Nu-Wood impregnated insulating sheathing, Nu-Wood insulating lath, Nu-Wood roof insulation, Nu-Wood shingle underliner and Arrowhead board.

Plus Nu-Wood acoustical tile

Provides modern sound correction—better looking application because of the famous Nu-Wood Tongue and Groove Joint and Clip System application for self-aligning tiles. Distinctive Shadow-Line Bevel for new beauty.



Nu-Wood Insulating Sheathing—exceptionally strong nail-holding sheathing impregnated with asphalt waterproofing agent for maximum weather protection. 25/32" and 1/2" thicknesses.



Nu-Wood Shingle Underliner—provides popular deep shadow lines when used as first course—gives added insulation when shingles are applied—cushions shingle nailing shock—saves time, eliminates waste.



Nu-Wood Insulating Lath—easy-to-handle units—V-type tongue and groove joints provide interlocking long edges—square cut ends—low thermal conductivity for maximum insulation.



Arrowhead Board—a utility-grade insulation board fulfills a multitude of uses—predecorated for low-cost interior finish for farm buildings, summer and lake cottages, homes.



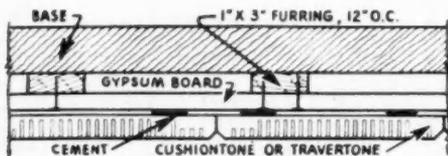
Nu-Wood Shadow-Line Board—distinctive, pencil-thin shadow-line bevel, at no extra cost, eliminates need for batten strips or other special joint treatments—provides pleasing wall appearance.

Wood Conversion Company
Dept. 119-42, First National Bank Bldg.
St. Paul 1, Minnesota

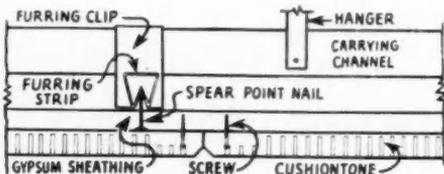
Makers of Nu-Wood[®] Insulation Board Products
and Balsam-Wool[®] Sealed Insulation

Sold by Lumber Dealers only

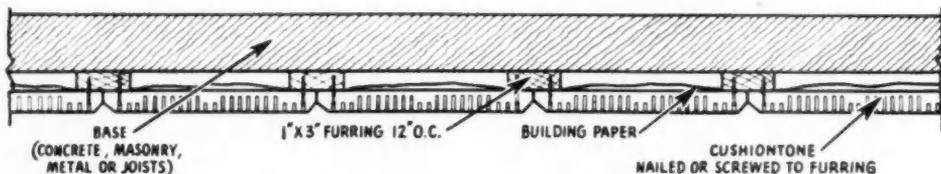
CEILING TILE BOARD INSTALLATION DETAIL



Cement application over furring. When the base surface (masonry, rough plaster, rough concrete, or open joists) does not provide a satisfactory base for cement application, a recommended method is to install 1x3-inch cross furring, 12 inches on center and cover with gypsum board or lath. This provides a sound base for cementing.

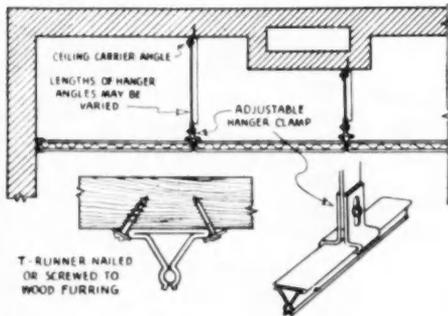


Mechanical installation of acoustical tile. There are several mechanical suspension systems which can be used for application of acoustical tile. The diagram above shows one recommended method. Metal carrying channels and furring strips support a surface of gypsum sheathing. Ceiling tile is screwed to this surface.

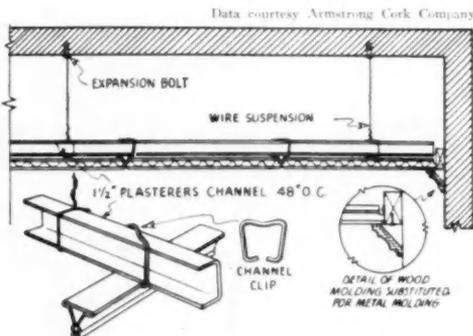


Application of acoustical tile to wood furring by nails or screws. By the use of cross furring 12 inches on center, acoustical tile may be applied by nailing or screw-

ing, in spite of an unsatisfactory base surface. When this method is used it is important to cover the furring with a layer of building paper to prevent "breathing" at the joints.



Mechanical suspension of ceiling tile. The metal T-runners, to which the ceiling tile metal pans are clamped, may be nailed or screwed directly to wood, or suspended



from metal hanger angles, as shown above at left. Another method, shown at right, calls for wire suspension of channels, to which T-runners are clipped 24 inches o.c.

(Continued from page 441)

1/4-inch from selvage on width; and 24 by 36 by 1-inch beveled on all four edges. Boards will span 24 inches without sag and without cross support. Longer spans need stiffening with simple members inserted into the long edges of the board during application.

Mineral Fiber Tile

Another type of acoustical tile is made from mineral fibers. It is designed in both a marble pattern and etched surface. The various methods of installation with adhesives, mechanical erection, or nailing direct to wood strips according to manufacturers' specific recommendations all have advantages depending upon the specific type of construction, but adhesive application is the most widely used method and is recommended where a suitable base exists.

MECHANICAL SUSPENSION METHODS

Cold-rolled, 16-gauge steel channels are wired in some installations to furring channels for suspended ceilings or fastened directly to ceiling or wall construction for directly applied acoustical finish. Channels are set at approximately the center line of the ceiling tiles, eliminating the lining-up with the joints. Combination "clip-snap-on" metal acoustical wall trim composed of extruded aluminum or rolled 22-gauge galvanized iron is angle punched to receive the clips which not only hold the tile in place but also receive the finished trim after the job is completed. After the ceiling is laid, Cove molding is snapped into place, using the clips already set to hold the tile.

One method of suspended ceiling construction which manufacturers claim requires only three operations for installation permits tile to be either mechanically fastened or cemented to solid backing. A nailing channel is attached to carrying members by use of a spring lock clip; a solid backing of gypsum board is nailed to the channel with a special type of nail which forms a locking loop around the rod; ceiling tile or acoustical tile is then either cemented to the solid backing or fastened to the backing by means of small wood screws.

Another system for fastening building materials used for ceiling and wall construction is an all-metal system which has the following basic

(Continued on page 446)

APRIL 1952

do you want the **BEAUTY,**
the maintenance-free **DURABILITY**
of a genuine plastic laminate

FOR YOUR WALLS?

NOW you
can afford them with . . .

LAMIDALL[®]
DECORATIVE PLASTIC LAMINATE

Because

IT COSTS SO LITTLE: The low per-square-foot initial cost of Lamidall plus the low on-the-job application cost makes it the best wall value for you today . . . in institutional, commercial and residential building.

Because

IT APPLIES SO EASILY: So easy to put up right-on-the-job because of its unusual structural strength and rigidity. Large, easy-to-handle panels of 1/4" thickness are quick and simple to cement to walls and top surfaces with adhesive . . . can be cut, trimmed and shaped with ordinary carpenter tools.

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Where you want beauty plus structural strength plus economy, you'll want to use Lamidall . . . and you can in hundreds of applications for institutional, commercial and residential building.

MATCHING MOULDINGS! Easy-to-use, matching plastic laminated mouldings of exact Lamidall patterns and colors, make possible the greater beauty of continuous wall decoration.

PERFECT FOR TOP SURFACES! Lamidall is so easy to apply . . . so beautiful . . . so durable.

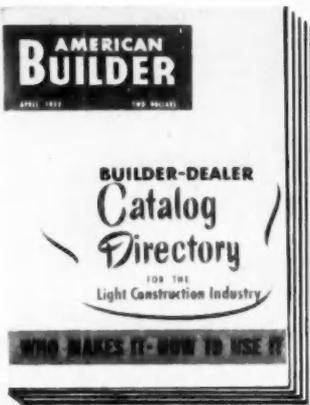
Send for Free Samples! Prove it to yourself . . . see the beauty . . . test the durability. Write also for complete details in new full-color folder.

Lamidall Plastic Laminate is a product of
WOODALL INDUSTRIES INC.
3304 OAKTON ST., SKOKIE, ILL.

Other Plants in Cleveland • Detroit • Laurel, Miss. • Minnola, N.Y. • Monroe, Mich. • San Francisco

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Rough surfaced acoustical tile material has decorative as well as acoustical function. Material may be treated with paint without impairing its sound-absorbing qualities.

devices: a continuous rigid and light-weight furring member of zinc-coated steel and an annular nail, various clips and splines. The dovetail profile of the furring member incorporates an inverted V-shaped nailing groove through its length. The nail is forced into the nailing groove of the metal furring member and locked in place by its shoulders.

For further discussion of suspension systems see the section on "Lath, Plaster and Aggregates."

Movable Asbestos Walls

Asbestos panels which are integrally colored at the factory are now available for industrial and commercial office installations where light weight and fireproof qualities are important. The panels may be installed in either vertical or horizontal position for design effects. They look and function like permanent walls, but are easily taken down and re-assembled.

Panels are hung on standard steel studs to form a rigid double-faced 4-inch thick partition having great strength and rigidity. For schools, blackboards and chalk rails can be incorporated as part of the partition, and panels are equally useful in laboratory installations. Steel studs which carry the panels are set at top and bottom in steel channel which is fastened to floor and ceiling, easily removed and relocated.

PARTITION SYSTEMS

Of particular interest to the builder who has occasion to erect small offices or light commercial and industrial structures, office partition systems are available in various combinations of wood and steel, pre-finished boards, insulating boards and other combination materials.

Steel and Glass Panels

Several types of steel and glass panels are available, most of which offer interchangeable panel and door sections, universal doors, reversible hardware, identical fittings between panels and linking panels to posts, and other conveniences of erection. Provision is made within the panels for wiring and similar facilities. Installation is by simple channels set in floor and ceiling, with the panel fastened quickly in place; removing it to another location at a later date is easily accomplished.

Insulating Board Partitions

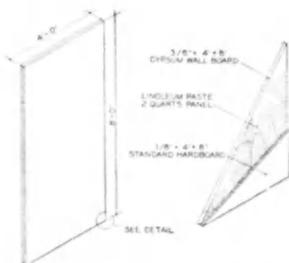
Partitions are also made of laminated cane fiber insulation board, surfaced on both sides with asbestos-cement board and bonded with a moisture-proof highly vapor-resistant bituminous adhesive. Result is a strong, insulating, and maintenance-free exterior and interior finish in a single-thickness material. These panels are used in industrial and commercial buildings as partition walls, as well as in home construction.

Readily workable with regular

carpenter tools, panels may be sawed, drilled and nailed. Partitions are available in three types: (1) splined non-bearing partition grooved on long edges to receive a $\frac{3}{16}$ -inch by $1\frac{1}{2}$ -inch wood spline. This type of construction eliminates need of framing members or battens at the joints. (2) Load-bearing partition-panels are framed between 2 by 4 or 4 by 4 inch studs set approximately 4 feet 2 inches on center and held in place with wood stops nailed to studs around all edges on both sides of panels. Studs are tied together by a suitable top plate of proper size to carry required loading. (3) Battened non-bearing partitions are similar to splined non-bearing partitions except that the spline is omitted and 1 by 3 inch or heavier wood battens or equivalent metal battens are placed on opposite sides of all vertical joints and fastened together by nailing or bolting through batten on one side and through panel into batten on other side. Top and bottom plates are rabbeted to receive panels and batten stop at plates.

Research Proves Value of Thin Wall Closets

Closets, designed with full-access fronts and engineered so they can be built with studless walls, were recommended by the Small Homes Council to the assembled builders and contractors that attended the seventh

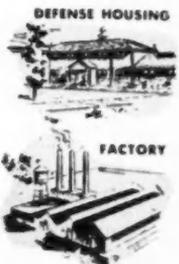
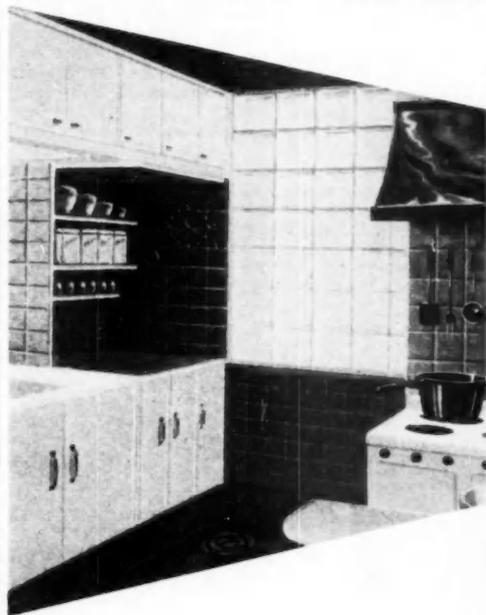


THIN WALL PANEL showing double lamination. $\frac{3}{16}$ " x 4' x 8' sheet of hardboard is placed on $\frac{3}{8}$ " x 4' x 8' gypsum board. These two boards are secured together with linoleum paste applied with a notched cement spreader. Allow paste to set under pressure for 24 hours

annual short course in residential construction, conducted recently at the University of Illinois. The design of the closets was the result of a

(Continued on page 448)

TILE WALLS... THE MODERN WAY



In every field of building and renovating activity, ALTICO "WALLUMINUM" is setting new records for production, utility and savings on costs. Simply beautiful . . . and beautifully simple to handle, install, maintain, "WALLUMINUM" gives greater freedom in planning to the architect, problem-free labor to the builder and overall savings to the contractor of as much as 50%!

ALTICO "WALLUMINUM" comes in 20 distinctive colors that maintain their sunny-bright gloss indefinitely. Applies to any wall, painted or raw, weighs only 14 oz with mastic and makes them waterproof, vermin-proof and fire-resistant.

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BELLEVILLE, NEW JERSEY



WHEN FINISH FLOORING 1/2 by 2-inch or 1/2 by 1 1/2-inch is used, 6d bright wire casing nails are best—one nail every 10 inches. Flooring 3/4-inch thick takes 4d nails spaced 8 inches apart.

ALL types of flooring materials fall under one of three general categories: wood floors, resilient floors, or non-resilient floors. The majority of wood floors are made from woods botanically classed as hardwoods. Several excellent flooring woods fall into the classification of softwoods, but are from the harder species. For reference purposes, composition flooring materials are considered resilient flooring while those floors composed of concrete and stone products make up the non-resilient category.

Medium and light duty hardwood floors are used in business offices, hospitals, institutions and residences; structures where less rigorous wear is to be expected. Today there are three basic types of wood flooring: Strip, parquet or pattern, and plank. Reference is sometimes made to a type of block flooring. This is simply flooring blocks, pre-assembled at the factory, for parquet installation.

Five species of wood make up the vast majority of all types of floors: oak, maple, birch, beech and pecan. Other species used, which are limited because of economy and scarcity reasons, are hickory, teak, cherry, ash and walnut. The last mentioned species are also very durable and their grain patterns afford outstanding and distinctive floors. Generally, only wood flooring producers specializing in these distinctive species make an attempt to classify and grade their output.

Flooring Types

Strip flooring consists of pieces, available in varying thicknesses, cut

in narrow strips and of uniform widths. Pieces are tongued and grooved at the factory.

Parquet or pattern flooring consists of equal short lengths, generally governed by multiples of the width, which is installed in geometric patterns such as herringbone, squares, and rectangles. A parquetry flooring is also available which consists of factory assembled blocks; sometimes referred to as block flooring.

Plank flooring consists of boards milled in random widths to produce the effect of early American heavy plank floors. Plank flooring is available with or without beveled edges; beveled edges being used when a more authentic early hand-hewn treatment is wanted. The Colonial wood peg fastening effect is simulated by wood plugs glued in holes on top of the counter sunk screws which fasten the planks.

Standard size, count and weight charts are shown elsewhere on these pages.

Pre-Finished Hardwood Flooring

Some manufacturers produce flooring which is completely pre-finished at the factory. It is ready for use immediately after being laid. All species and types of hardwood flooring may not be readily available in this form; however, a producer equipped to make factory finished flooring can usually furnish it in any species and type he ordinarily produces unfinished.

Delivery and Storage Care

Factory kiln-dried hardwood flooring has a moisture content of five to

FLOORS and FLOOR COVERINGS

Wood Floors

Light-Duty
Medium And
Heavy-Duty

Resilient Floors

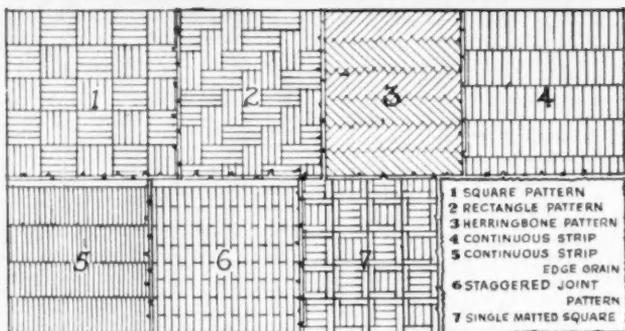
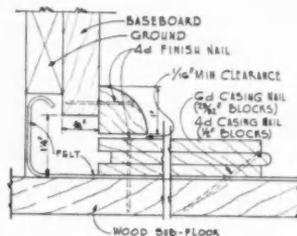
Asphalt Tile
Cork
Linoleum
Rubber

Non-Resilient Floors

Cement
Magnesite
Terrazzo
Magnesite-Terrazzo



PARQUET FLOORING may be nailed to a wood subfloor or an old finish floor in the same manner as strip flooring. Proper construction of the subfloor is essential. Floor joists must be on 16-inch centers and covered solid with 25/32 by 4-inch or 6-inch subflooring thoroughly dried and nailed securely. The surface must be even-bearing.



PATTERN FLOORING material is installed in herringbones, squares, rectangles

six per cent. Care must go into handling and storing of flooring to help maintain this low moisture content. It should not be unloaded, trucked or transferred in rain or snow and must be covered with tarpaulin if the atmosphere is foggy or damp. Storage areas in colder climates in cold weather should be heated and maintained at 10 degrees above the outside temperature. Good ventilation is a must. Storage floors should be 18 inches or more above the ground. Store flooring on the job only after plaster and cement work have thoroughly dried. During winter construction keep building heated to 70 degrees and leave flooring piled loosely four or five days before laying.

Subfloor Requirements

Hardwood strip flooring should be laid on a soundly constructed subfloor. Subfloor boards should be between six and eight inches wide. Face nail them solidly at every bearing point with two or three 10-penny nails. All butt joints should rest on bearings. Use adequate nailing to avoid squeaky floors. Subfloors laid diagonally afford additional bracing strength for the building. Bracing strength will be further improved if diagonal direction is reversed on alternate floors. Before laying finish flooring, be sure subflooring is dry and clean, with all bits of plaster or other dirt scraped off.

Strip Floor Application

When possible lay strip floors lengthwise of the building. When applying over old finish floors, apply at right angles with the old floors. Thresholds are omitted in the modern home. Flooring should run continuously through doorways. Care should be exercised to stagger end joints to avoid grouping them closely together.

On Joists and Concrete

If necessary for economy measures, strip flooring may be laid directly on joists. Such floor strips should be at least 25/32-inch thick. Joists should be spaced no wider than 16 inches on center.

Strip floors may be installed over basement or other concrete floors by laying the strips directly on wooden sleepers properly secured to the concrete. Conditions cited in the previous paragraph apply.

In cases where strip flooring is to be laid over concrete and heavy traffic is anticipated, a wooden subfloor often is recommended as a base. The subfloor should be nailed to wooden sleepers installed in the concrete. Spaced at no more than 16 inches, the sleepers should be securely attached to the concrete.

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... BUT HOW TO ACHIEVE IT?

... and so, too, with your clients when they place their problem in your hands. They depend on YOU — on your experience and knowledge to take advantage of specific material and methods to achieve the end result they have in mind.

For that reason, you'll want to know about Flexi-Flo and Wall-Flex, so that you can make use of these new RUBBER materials to your best advantage and to the complete satisfaction of your client.

You have many specifications where the cushion resilience, the exceptional color and design range, the low maintenance and lifetime durability of Flexi-Flo and Wall-Flex can make an installation outstanding. We'd like to be sure you have all the details on R.C.A. — the only line for COMPLETE rubber installations.

WALL-FLEX

walls of rubber. New — exclusive — flexible $\frac{1}{8}$ " gauge fabric-back rubber in 28 colors. Simple, quick, one-man installation with the advantages of continuous corners and curved surfaces, sanitation, low maintenance and economy. You'll want to include the versatility and colorful beauty of Wall-Flex in your plans.

FLEXI-FLO

Floors of rubber. Available in 28 colors. Available in $\frac{1}{8}$ " and $\frac{1}{4}$ " thickness. Complete range of uses in addition to — counter tops, display tables, pinboards, desk tops, mousepads, etc.

ACCESSORIES

Designed to complete the entire installation — feature strips — borders — base — corners — and tread — all in the same 28 colors, stair treads for residential and commercial — all of the same dependable R.C.A. rubber. Everything you need for complete planning.



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OFFICES
APARTMENTS
HOTELS
BANKS
SCHOOLS
STORES
CHURCHES
RESTAURANTS
RESIDENCES

RUBBER

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FLOORS of RUBBER

WALL-FLEX

WALLS of RUBBER



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THE R. C. A. RUBBER COMPANY 1843 E. MARKET STREET
AKRON 5, OHIO

THICKNESSES AND WIDTHS, NORTHERN HARD MAPLE, BEECH AND BIRCH FLOORINGS; ALL GRADES STRIP FLOORING •

Standard Thicknesses		Face Widths		
TONGUED AND GROOVED				
$23/32"$	$23/32"$	$1\ 1/2"$	$2"$	$2\ 1/4"$ $3\ 1/4"$
$3/8"$	$1/2"$	$1\ 1/2"$	$2"$	$2\ 1/4"$
$41/32"$	$52/32"$	....	..	$2\ 1/4"$ $3\ 1/4"$
JOINTED FLOORING				
All Thicknesses		$2\ 1/2"$	$3\ 1/4"$	
Special Widths		$2\ 1/4"$	$3\ 1/4"$	$3\ 1/2"$

USES OF DIFFERENT THICKNESSES
 The $23/32$ -inch thickness is the most commonly used for general purposes. The $23/32$, $41/32$ and $52/32$ -inch thicknesses, with their additional wearing surfaces and load-carrying ability, are recommended where floors are subjected to extraordinary strain and wear. The $3/8$, $1/2$ and $3/4$ -inch thicknesses are satisfactory for light service. A dry, sound and even underfloor is required. Jointed, also called Square-Edge flooring, has the advantage of easy replacement in industrial floors.

NORTHERN HARD MAPLE FLOORING BLOCKS, TO BE LAID IN MASTIC OVER CONCRETE (OR WOOD) SUBFLOORS IN HERRINGBONE PATTERN, IN SQUARES, CONTINUOUS STRIP OR OTHER PATTERN

SINGLE PIECE BLOCKS	
$23/32$ and $23/32$ -inch thicknesses in face widths of $1\ 1/2$, 2 , $2\ 1/4$ and $3\ 1/4$ -inch and proportionate face lengths, as desired, from $8\ 3/4$ to $15\ 3/4$ inches. Also edge-grain stock in $1\ 1/2$ -inch face widths and in thicknesses from 1 to $2\ 3/8$ -inch. Lengths principally 12 inches.	
FABRICATED BLOCKS	
Squares of $23/32$ -inch thickness (strips of $1\ 1/2$, 2 and $2\ 1/4$ -inch face width), $6\ 3/4$ x $6\ 3/4$ inches to $11\ 3/4$ x $11\ 3/4$ inches. Rectangles of $23/32$ -inch thickness, 6 x 12 inches ($1\ 1/2$ -inch or 2 -inch strips), $6\ 3/4$ x $13\ 1/2$ inches ($2\ 1/4$ -inch strips), $6\ 3/4$ x 13 inches ($3\ 1/4$ -inch strips). Squares of $23/32$ -inch thickness (strips of $1\ 1/2$, 2 and $2\ 1/4$ -inch face width), $6\ 3/4$ x $6\ 3/4$ inches to $11\ 3/4$ x $11\ 3/4$ inches.	
CONTINUOUS STRIP BLOCKS	
$23/32$, $33/32$, $41/32$ and $52/32$ -inch thicknesses—face widths $1\ 1/2$, 2 , $2\ 1/4$ and $3\ 1/4$ inches; face lengths 8 to 16 inches, but principally 12 inches.	
Some of above sizes are also available in Birch and Beech.	
Write for list of manufacturers producing block and patterned flooring and information on installation procedure.	

Preventing Dampness

A good quality building paper, such as 15 pound asphalt saturated felt, should be laid between the subfloor and the finish floor. Besides resisting moisture, the building paper prevents dust from seeping through the floor seams. In basement installations the building paper should also be used. It is advisable to place double weight building paper or standard insulating board in rooms directly over heating plants. Apply either on the basement ceiling or between floor joists to provide protection against heat which might cause the floor to shrink excessively.

Ventilation should be provided beneath buildings without basements. Vents or openings in the foundation walls should be at least $1\ 1/2$ per cent of the first floor area.

At least $1/2$ -inch expansion space should be allowed between flooring and framing.

Nails and Nailing

The use of proper nails (see Nail Schedule) and careful nailing holds

the flooring in place, makes the floor rigid, and prevents squeaks. Start the nails through the strip where the tongue leaves the shoulder and drive inwardly at an angle of 45 to 55 degrees to the floor. Countersink all nail heads by use of a steel set or use a nail for setting.

Do not try to hammer each piece of tongued and grooved strip flooring into its final position as soon as it is nailed. After laying three or four pieces, place a short piece of straight-edge hardwood against the tongue of the outside piece and drive the pieces up snugly, taking care not to break the tongue. Repeat this after every three or four pieces have been laid.

Parquet Flooring

Parquet flooring, including pre-fabricated blocks, may be nailed over a wood subfloor or old finish floor, or may be laid in mastic over concrete. The subfloor should cross the joists at right angles rather than on a diagonal.

Parquetry Over Concrete

When parquetry is to be laid in

mastic directly over concrete, extreme care must be taken that the concrete surface is perfectly clean, dry and level. Brushing the surface with a hair broom is recommended for ridding the concrete of loose dirt. A heavy coat of asphalt primer should then be applied evenly, brushed in well, and allowed to dry for 24 hours before the mastic is applied and the finish floor laid. Mastic usually is spread to a minimum average thickness of $3/8$ -inch.

When parquetry is to be laid over concrete directly on the ground or over unventilated spaces, and there is a consequent danger of floor dampness, the concrete floor should be waterproofed. This may be done by applying a coat of hot asphalt and covering it with asphalt rolled smoothly on each layer. If there is danger of water seepage, use five layers.

Finishing Suggestions

Unfinished hardwood flooring is smoothly surfaced at the factory.

STANDARD SIZES, COUNTS and WEIGHTS

"Nominal" is the size designation used by the trade, but it is not always the actual size. Sometimes the actual thickness of hardwood flooring is $1/32$ -inch less than the so-called nominal size. "Actual" is the mill size for thickness and face width, excluding tongue width. "Counted" size determines the board feet in a shipment. Pieces less than 1 inch in thickness are considered to be 1 inch.

OAK			
Nominal	Actual	Counted	Weights M. Ft.
TONGUED AND GROOVED-END MATCHED			
$23/32$ x $2\ 1/4$ in.	$23/32$ x $2\ 1/4$ in.	1 x 4 in.	2250 lbs.
$23/32$ x $2\ 1/4$ in.	$23/32$ x $2\ 1/4$ in.	1 x 3 in.	2000 lbs.
$23/32$ x 2 in.	$23/32$ x 2 in.	1 x $2\ 3/4$ in.	2000 lbs.
$23/32$ x $1\ 1/2$ in.	$23/32$ x $1\ 1/2$ in.	1 x $2\ 1/4$ in.	2000 lbs.
$3/8$ x 2 in.	$11/32$ x 2 in.	1 x $2\ 1/2$ in.	1000 lbs.
$3/8$ x $1\ 1/2$ in.	$11/32$ x $1\ 1/2$ in.	1 x 2 in.	1000 lbs.
$1/2$ x 2 in.	$13/32$ x 2 in.	1 x $2\ 1/2$ in.	1300 lbs.
$1/2$ x $1\ 1/2$ in.	$13/32$ x $1\ 1/2$ in.	1 x 2 in.	1300 lbs.
SQUARE EDGE			
$1\ 1/2$ x 2 in.	$1\ 1/2$ x 2 in.	face count	1200 lbs.
$1\ 1/2$ x $1\ 1/2$ in.	$1\ 1/2$ x $1\ 1/2$ in.	face count	1200 lbs.
BEECH, BIRCH, HARD MAPLE AND PECAN			
Nominal	Actual	Counted	Weights M. Ft.
TONGUED AND GROOVED-END MATCHED			
$23/32$ x $3\ 1/4$ in.	$23/32$ x $3\ 1/4$ in.	1 x 4 in.	2250 lbs.
$23/32$ x $2\ 1/4$ in.	$23/32$ x $2\ 1/4$ in.	1 x 3 in.	2000 lbs.
$23/32$ x 2 in.	$23/32$ x 2 in.	1 x $2\ 3/4$ in.	2000 lbs.
$23/32$ x $1\ 1/2$ in.	$23/32$ x $1\ 1/2$ in.	1 x $2\ 1/4$ in.	2000 lbs.
$3/8$ x 2 in.	$11/32$ x 2 in.	1 x $2\ 1/2$ in.	1000 lbs.
$3/8$ x $1\ 1/2$ in.	$11/32$ x $1\ 1/2$ in.	1 x 2 in.	1000 lbs.
$1/2$ x 2 in.	$13/32$ x 2 in.	1 x $2\ 1/2$ in.	1300 lbs.
$1/2$ x $1\ 1/2$ in.	$13/32$ x $1\ 1/2$ in.	1 x 2 in.	1300 lbs.
SPECIAL THICKNESSES (T and G, End Matched)			
$11/16$ x $3\ 1/4$ in.	$23/32$ x $3\ 1/4$ in.	$1/4$ x 4 in.	2400 lbs.
$11/16$ x $2\ 1/4$ in.	$23/32$ x $2\ 1/4$ in.	$1/4$ x 3 in.	2250 lbs.
$11/16$ x 2 in.	$23/32$ x 2 in.	$1/4$ x $2\ 3/4$ in.	2250 lbs.
JOINTED FLOORING—i.e., SQUARE EDGE			
$23/32$ x $2\ 1/2$ in.	$23/32$ x $2\ 1/2$ in.	1 x $3\ 1/4$ in.	2250 lbs.
$23/32$ x $2\ 1/4$ in.	$23/32$ x $2\ 1/4$ in.	1 x 4 in.	2400 lbs.
$11/16$ x $2\ 1/2$ in.	$23/32$ x $2\ 1/2$ in.	$1/4$ x $3\ 1/4$ in.	2500 lbs.
$11/16$ x $3\ 1/2$ in.	$23/32$ x $3\ 1/2$ in.	$1/4$ x $2\ 1/4$ in.	2600 lbs.

NOTE: Oak, Beech, Birch, Hard Maple and Pecan Flooring are bundled by averaging the lengths. A bundle may include pieces from 6 in. under to 6 in. over the nominal length of the bundle. No piece shorter than 9 in. admitted.
 The percentages under 4 ft. referred to in the grading rules on this page apply on total footage in any one shipment of the item.
 1/4-in. allowance shall be added to the face length when measuring the length of each piece.
 Flooring shall not be considered of standard grade unless the lumber from which the flooring is manufactured has been properly kiln-dried.

OAK FLOORING HELPS GIVE LOW-COST HOMES ALL BASIC FUNDAMENTALS

Laying oak over concrete adds beauty, durability and "healthfulness" to every home.



All the basic fundamentals are provided by oak flooring. And, with new methods of laying oak over concrete, low-cost homes need not forego the benefits of oak. Oak can now be nailed to screeds set in mastic*. And, there are grades of oak priced for even the lowest-cost homes.

*SEND TO NATIONAL OAK FLOORING MFRS. ASS'N., STERICK BLDG., MEMPHIS 3, TENN., FOR FREE, FHA-APPROVED INSTRUCTIONS FOR LAYING OAK OVER CONCRETE

APRIL 1952

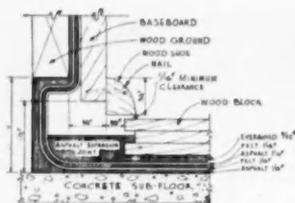


Builders who include *all* the basic fundamentals such as "healthfulness", durability, economy and beauty—in the low-cost homes they build will find them easier to sell. Cost cutting should be confined to "frills" and size.



Housewives know that oak flooring will have that "just-installed" look for a lifetime—with a minimum of care. That's one reason 85% of all prospective homeowners want oak in their next home. The clean, sanitary appearance of oak makes it the "healthiest" flooring on the market.

453



IN LAYING PARQUET FLOORING in mastic over concrete, be sure the slab is perfectly level. Surface must be thoroughly dry and swept free of dust and trash. Mastic is usually spread to a minimum average thickness of 3/32-inch.

Scratches and other slight marks caused by handling may be removed by sanding or scraping. An electrically operated sanding machine is used for this work. For fine floors most manufacturers advise at least four sandings, starting with No. 2 sandpaper and graduating down to No. 1/2, No. 0 and No. 00. A final buffing with No. 000 assures an even smoother surface. Authorities recommend that final traverse be made by hand.

Stain and Filler

Apply first coat of stain or other finish the same day as the last sanding. This is important. Otherwise the wood grain will have risen and the finish consequently will be slightly rough. Stain is not used if the natural color of the wood is desired for the final finish. When used it is applied first. It should be put on evenly with a 3- or 4-inch brush.

Paste wood filler is used to fill the minute surface crevices in oak and other hardwoods having large pores. Filler is applied after stains and sometimes after floor seals but always before other finishing materials. It should be allowed to dry 24 hours before the next operation is begun. Wood filler may be colorless or may contain pigment to bring out the grain of the wood.

Heavy Duty Wood Floors

Floors laid in mills, factories, retail stores, gymnasiums, schools and other heavy traffic locations are heavy-duty floors. Such floors often call for the heavier grades of floor materials and are installed with more

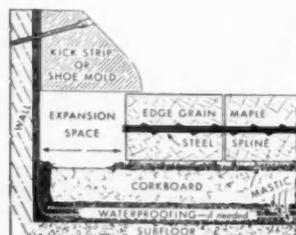
consideration given the floor base. Close attention is also paid to the expansion factor since such areas are more often much larger per unit area.

Edge-grain Flooring is pretty well confined to the heavy-duty installation. Method of installation usually includes the use of mastic. Pieces approximately 12 inches in length are placed with what would normally be considered the edge of the board being used as the floor surface. Thicknesses run from 33/32 to 2 1/2 inches while face surface is about 1 1/4 to 1 1/2 inches wide. Northern Rock Maple is usually used.

Corkboard may be used between the subfloor and the edge-grain flooring, particularly on such installations where resiliency is a factor, such as gym floors. An additional method of binding has been developed which involves the driving of lengths of saw-toothed, steel splines along the edge of the flooring as each section is laid.

End Grain Floors. Grooved or lug type, creosote treated, blocks made of yellow pine or oak and installed with the end grain as the floor surface, are widely used for heavy-duty factory floors. Blocks are creosote treated at the factory by pressure methods which leave about 6 pounds of creosote in each cubic foot of timber. Blocks are available with 2-, 2 1/2- or 3-inch depth, approximately 2 3/4 to 4-inches wide and may vary from four to 8 1/2 inches in length. It is recommended they be installed on a smooth, level, seasoned concrete base. After a priming oil coat has been applied and dried on the concrete, a coating of hot pitch is applied, not over 1/8-inch thick, and the blocks laid with the grain vertical, after this pitch coat has hardened. Joints should be broken by a lap of at least one inch. Whenever possible, blocks should be laid with their length at right angles to the prevailing line of heaviest traffic; across aisles, for example. Leave a bituminous expansion joint of at least one inch against walls and around columns and obstructions. A pitch filler compound is used for the final finish. Make sure all joints are filled within 1/4-inch of the surface.

Transverse Expansion Joints. Try



CORKBOARD may be used between the subfloor and edge-grain flooring. An additional method of binding involves driving lengths of saw-toothed steel splines along the edge of the flooring

to avoid transverse expansion joints in the concrete base. If they do exist, the joints must be far enough below the surface of the concrete to eliminate the possibility of expansion material being forced out and bulging the blocks above the floor surface during expansion of the concrete base floor.

Strip End Grain Floors. Flexible strip end grain blocks are installed in factories, gymnasiums, drill halls, schools and such heavy duty locations. Blocks of kiln-dried yellow pine are held together by wire trusses in strips from two to eight feet. Blocks are factory-impregnated with a colorless, odorless preservative which does not stain the wood. Strips of blocks are cemented to the concrete floor with bituminous cement applied at approximately 275° F. Cork board base may be preferred, depending on floor use. For factory floors, a seal coat is applied with a squeegee after floors have been laid. For installations necessitating a finer surface, floors are sanded and then a paste filler is squeegeed over the surface and rubbed in. Additional finish coats, depending upon surface desired, may then be added.

Other Heavy Duty Floors

Strip and parquet floors are also extensively used in both medium and heavy duty installations. The heavier weight sizes used are governed by the extent and type of traffic to which the floor will be subjected. Of primary concern, for heavy duty and medium duty installation, is the floor base. In the majority of cases a

(Continued on page 458)

NAIL SCHEDULE—Tongue-and-Groove Flooring Must Be Blind Nailed

Flooring Dimension, in.	Size of Nails	Spacing of Nails	Following flooring must always be laid on a sub-floor, blind nailed:
1 1/2 x 3 1/4	6d light flooring nail—wire nail or steel cut casing nail—(use cut nails when possible)	10 in. apart	1/2 x 2 or 1/2 x 1 1/2 6d bright wire casing nails 10 in. apart
1 1/2 x 2 1/4	Same nails as above	10 in. apart	3/4 x 2 or 3/4 x 1 1/2 6d bright wire casing nails 8 in. apart
1 1/2 x 1 1/2	Same nails as above	12 in. apart	Square-edge flooring, as follows, face-nailed—through top face 1/2 x 2 or 1/2 x 1 1/2 1 1/4-in. barbed wire flooring brad No. 16 heads countersunk and puttied 2 nails every 7 in.

MATICO's new MULTI-PURPOSE FLOORING

simplifies planning . . . cuts holding and remodeling costs

LOW-COST, STANDARD-GAUGE



ARISTOFLEX

VINYL-ASBESTOS TILE FLOORING

- Resistance to acid, grease, and alkali make it ideal for such installations as laboratories, cafeterias, hospitals.
- Durability is outstanding. It's vinyl-asbestos through and through—no felt backing.
- Sparkling colors and easy-to-clean surface make it perfect for all installations.
- Recommended for installation ON, ABOVE, or BELOW GRADE.
- May be laid direct on concrete, terrazzo or ceramic.
- Can be installed on wood over 15-lb. saturated felt . . . over gypsum, plank or unfinished concrete slab with suitable underlayment . . . and over magnesite, above grade.
- LOW COST is comparable to grease-proof asphalt tile.

Now the problem of selecting the right flooring is simplified. New MATICO ARISTOFLEX does the jobs of many floorings . . . its modern, vinyl-asbestos qualities meet the requirements of practically all installations.

And the low price of standard-gauge ARISTOFLEX—comparable to that of grease-proof asphalt tile—meets thrifty budgets. Installation is easy and economical. No special cements are required, ordinary asphalt tile adhesive does the job. ARISTOFLEX lays in tightly, immediately, due to square corners and clean edges . . . cuts clean without use of a torch.

ARISTOFLEX is vinyl-asbestos from top to bottom—no felt backing. It resists household acids, alkalis, petroleum solvents, oils, greases, turpentine, and fire . . . is tough and flexible . . . and has excellent indentation recovery. Vivid colors and marbleization go clear through each tile. As a result, ARISTOFLEX is one of the most durable of floorings. It wears for years and years . . . and steadfastly maintains its sparkling beauty. The smooth surface sheds dirt . . . wipes clean with a damp mop. Maintenance costs are low. Available in 9" x 9" standard gauge and 1/8" tiles.

For vinyl-asbestos flooring quality with economy, look to ARISTOFLEX.

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QUALITY CONTROLLED

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Send specification data and complete details about low-cost MATICO ARISTOFLEX vinyl-asbestos tile flooring.

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ZONE _____ STATE _____

Grading of Hardwood Floors

The principal American producers of hardwood strip flooring have, through two major trade associations, adopted uniform grading rules and regulations for commercial practice. Approved by the Bureau of Standards of the U.S. Department of Commerce, these rules and regulations are enforced rigidly, in part by the organizations themselves. As a result dealers and consumers are assured of high standard merchandise and the industry is protected against sharp practices. The two organizations are the National Oak Flooring Manufacturers' Association, with headquarters at Memphis, Tenn., and the Maple Flooring Manufacturers' Association, Oshkosh, Wis.

Every bundle of flooring produced by a member of either association is identified as to grade, and is guaranteed to meet all established specifications. Often the manufacturer's name and a mill mark of identification are stated on each bundle.

There are no official grading rules for plank, parquet and block flooring, but generally the different grades correspond to those of strip flooring.

Hardwood flooring grades are based principally on appearance. All regular grades possess adequate strength, durability and resistance to wear, hence these qualities are not factors. Chiefly considered are such imperfections as knots, streaks, pin worm holes and in some cases sap-

wood and variations in color. Imperfections in processing also are factors.

OAK—In Clear Grade Oak the amount of sapwood is limited. Otherwise, variations in color are disregarded in grading. Red and White Oak ordinarily are separated, but that does not affect their grading. In most cases the average length of strip flooring pieces is greater in the higher grades. Oak is classified into three grades of quarter-sawed stock and four of plain-sawed. In descending order the quarter-sawed grades are: Clear, Sap Clear and Select. Plain-sawed grades are: Clear, Select. No. 1 Common and No. 2 Common. (See Table below).

MAPLE, BEECH, BIRCH—Rules governing the grading of Maple, Beech and Birch are virtually identical for all three species. Neither sapwood nor varying natural color is considered a defect in standard grades. These species are produced in three standard grades—First, Second and Third, with First being the highest. Each also is available in a special grade selected for uniformity of color.

PECAN—Pecan is processed in seven standard grades, two of which specify all heartwood, and one bright sapwood. Otherwise color variation is not considered.

STANDARD OAK FLOORING GRADES

Quarter Sawed

Clear—The face shall be practically free of defects except $\frac{3}{8}$ of an inch of bright sap. The question of color shall not be considered.

Bundles to be 2 ft. and up, not to exceed 25% under 4 ft. Average length $4\frac{1}{2}$ ft.

Sap Clear—The face shall be practically free from defects but will admit unlimited bright sap. The question of color shall not be considered.

Bundles to be 2 ft. and up, not to exceed 25% under 4 ft. Average length $4\frac{1}{2}$ ft.

Select—The face may contain sap, and will admit pin worm holes, streaks, slight imperfections in working or small, tight knots, not to exceed one to every 3 ft. in length.

Bundles to be 2 ft. and up. Average length 4 ft.

Plain Sawed

Clear—The face shall be practically free of defects except $\frac{3}{8}$ of an inch of bright sap. The question of color shall not be considered.

Bundles to be 2 ft. and up, not to exceed 25% under 4 ft. Average length $4\frac{1}{2}$ ft.

Select—The face may contain sap, and will admit pin worm holes, streaks, slight imperfections in working or small, tight knots, not to exceed one to every 3 ft. in length.

Bundles to be 2 ft. and up. Average length 4 ft.

No. 1 Common—Shall be of such nature as will make and lay a sound flooring without cutting.

Bundles to be 2 ft. and up. Average length 3 ft.

No. 2 Common—May contain defects of all characters, but will lay a serviceable floor.

Bundles to be $1\frac{1}{4}$ ft. and up. Average length $2\frac{1}{2}$ ft.

Square-edge strip flooring is graded as above, but the Clear is bundled 2 ft. and up, average length $5\frac{1}{2}$ ft.; Select bundled 2 ft. and up, average length $4\frac{1}{2}$ ft.; No. 1 Common bundled 2 ft. and up, average length $3\frac{1}{2}$ ft.

BEECH, BIRCH AND HARD MAPLE

First Grade—Shall have the face practically free of all defects, but the varying natural color of the wood shall not be considered a defect. Bundles shall be 2 to 16 ft., as the stock will produce; the proportion of 2 and 3 ft. bundles shall be what the stock will produce up to 25%.

Second Grade—Will admit of tight, sound knots and slight imperfections in dressing, but must lay without waste. Bundles shall be $1\frac{1}{4}$ to 16 ft., as the stock will produce; the proportions of $1\frac{1}{4}$ to 3 ft. bundles, shall be what the stock will produce up to 40%.

Third Grade—Must be of such character as will lay and give a good serviceable floor. Bundles shall be $1\frac{1}{4}$

to 16 ft., as the stock will produce; the proportion of $1\frac{1}{4}$ to 3 ft. bundles shall be what the stock will produce up to 60%.

Special Grades—First Grade White NOFMA Hard Maple is special stock, selected for uniformity of color. It is almost ivory white and is the finest grade of NOFMA Hard Maple Flooring produced.

First Grade Red NOFMA Beech and NOFMA Birch are special grades produced from all redfaced stock and are specially selected for color. The color is rich, being a soft tint which lends distinctiveness to these two woods.



THESE

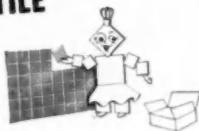
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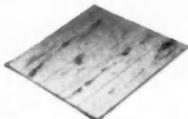
Coronet
PLASTIC WALL TILE

America's most beautiful walls are an inexpensive luxury with CORONET Plastic Wall Tile. Bevel edged for body and accurately sized for perfect installation, it is durable, sturdy and easy to wash down. Available in sixteen soft colors and bright decorator-approved pastels in plain or marble-tones. Coronet Plastic Wall Tile is resistant to common household acids and greases. It is customer-tested as the most profitable plastic wall tile you can sell.



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Recommend PARQUETRY where hardwood effect is desired! Adaptable to any architectural plan, its true Natural Oak appearance enhances the beauty of modern or period furniture. Recommend PARQUETRY — for any room.



Asphalt Tile FLOORING

HAKO Asphalt Tile Flooring is a double-profit companion for CORONET Plastic Wall Tile. Each precision-cut square has the self-decorating features of style, design and lasting beauty. Its wide variety of rich warm solid or marbled tones will delight any customer. Factory waxed and conditioned for heavy wear, it resists stains and indentations. A HAKO Asphalt Tile Flooring customer is a happy and satisfied one.



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Gentlemen:

Please send more information on how I can double my profits with HAKO Coronet Plastic Wall Tile and HAKO Asphalt Tile Flooring.

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Hachmeister Products of Merit

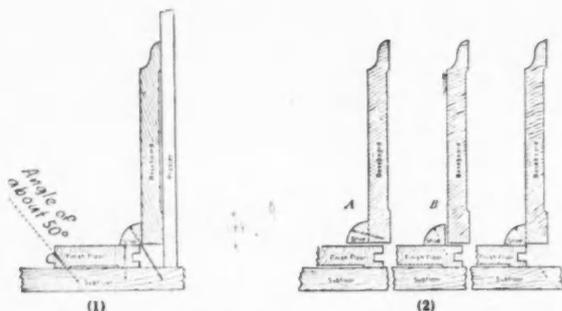


FIGURE 1 shows laying the first strip of finish flooring. The finish moulding usually is not put in place until all the flooring pieces have been installed. It is shown here to indicate its position in relation to the first piece of flooring. **FIGURE 2** shows three methods of placing the first strip of finish flooring and nailing the shoe moulding: (A) Shoe moulding nailed to base-board; (B) shoe moulding nailed to finish floor; (C) shoe moulding nailed to subfloor. The latter method is generally recommended. The danger in (A) is that a crack might develop between the shoe moulding and the finish floor. In (B) a crack may occur between the shoe moulding and the base-board. Method (C) virtually eliminates these dangers

(Continued from page 454)
mastic cushion is preferred.

Resilient Floors. The major types of resilient floors are asphalt tile, cork, linoleum, rubber, and felt base with baked enamel surface. The use of a felt underlayment between the subfloor and resilient floor material is optional if the subfloor is of plywood or hardboard. In every other case, however, a felt underlayment is recommended if the long life and full benefit is to be expected of the resilient flooring. Subflooring must always be reasonably smooth and solid.

Resilient flooring should never be installed on wet or damp subfloors or on wood floors in contact with the ground. For full satisfaction it is recommended that at least 18 inches of air space and free circulation exist between subfloor and earth. Asphalt tile may be installed on concrete which is in contact with the ground if the concrete is fully treated with sealer. In every case, a dry condition must exist on the surface receiving the resilient flooring and underlayment.

Handling Resilient Flooring. A 70-degree room temperature is required for storing, handling and installing resilient type of flooring. Adhesives are customarily of combustible nature and should not be stored near or exposed to open flames or steam coils. Keep adhesive containers tightly sealed when not in use. If any trades are still working in the building after resilient flooring has been installed, cover flooring with builders felt to fully protect from possible surface damage.

Underlayment. The use of felt underlayment under resilient flooring

serves three purposes: Takes up slight irregularities, permits shearing action between subfloor and floor covering, and lends added resiliency to the entire surface. An excellent type felt underlayment is semi-saturated, weighing about one pound per square yard. Felt should be laid at right angles to floor boards. All seams should be butted and bonded to the floor by the application of felt adhesive compound. Cut felt and fit on the entire floor before starting to paste down. After first strip has been bonded to the floor, roll with floor roller, always starting from the

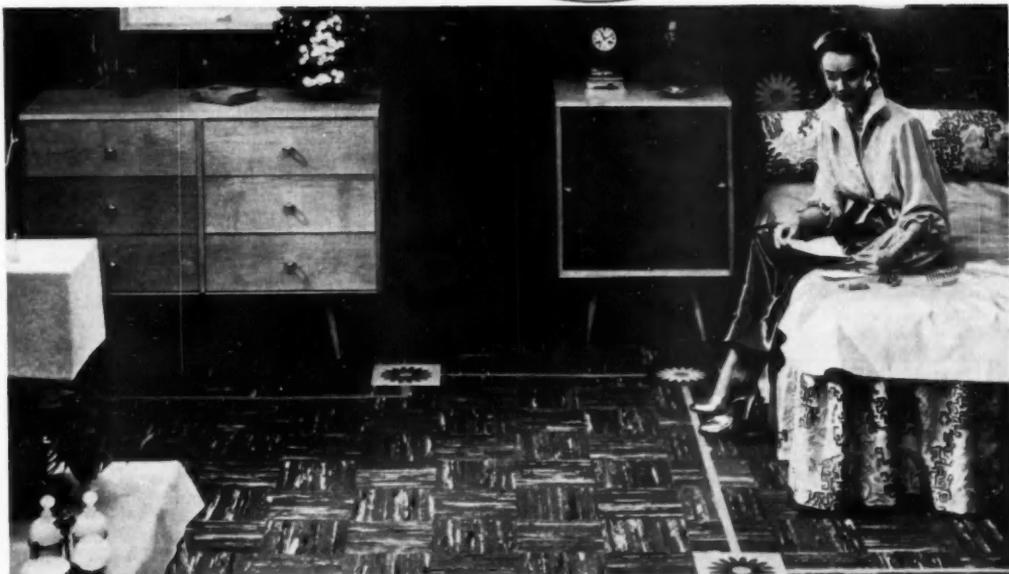
center of each strip of felt and working toward the ends. Roll well to remove all air bubbles and assure a good bond. Some linoleum flooring is produced with a felt back and no felt underlayment is necessary.

Flooring in Rolls. Cut resilient flooring to fit accurately at all points with a minimum of cross seams. A thin, even coat of paste is spread on the floor and the covering is pressed into place. Then roll well with a roller to remove air pockets and insure adhesion. Except for pattern goods, all resilient flooring should be overlapped slightly at the seams and cut through both thicknesses to insure a tight finished seam joint. Pattern goods must be carefully butted without further cutting to retain symmetry of design.

Tile Flooring. Determine the exact center of the area to be covered with tile flooring. Do this as shown in diagram shown elsewhere in these pages. Starting at the center line, spread adhesive in a thin even coat with a notched trowel. Cover enough area for several tiles and apply at once. Start laying tiles from the center point and work toward the walls so that last tile is set on perimeter or border of the room. Cut and fit tiles carefully around all projections and fixtures. When laying tiles, butt firmly against each other but do not slide into position as this may force adhesive up between the seam joints. Borders should follow the line of permanent fixtures and border



LAYING LINOLEUM ON A PLYWOOD SUBFLOOR. The plywood subfloor saves time and labor in this operation, since each panel covers 32 square feet. Large size means minimum linear footage of joints, producing superior base for wood finish flooring as well as for tile or linoleum



Long-lasting Kentile adds colorful beauty to any room... offers low-cost sales appeal by giving prospects a quality brand they know and trust

Lower building costs and raise quality with Kentile Floors

PROGRESSIVE BUILDERS and architects know that a house has to be built to sell... and they know that the nationally-advertised quality of Kentile provides them with a plus feature that home buyers recognize and appreciate... a brand name that stands for low-cost quality and industry leadership.

Kentile can be speedily and economically installed any place... over any smooth, firm, interior surface... even below grade over concrete in direct contact

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SAFETY-CUTS used to prevent damage when laying linoleum. (A) Corner safety-cut is used to relieve strain on material. This allows the goods to be shoved closely into a corner and also flash slightly up both walls so that knifing the linoleum to the wall is easy. (B) This sidewall safety-cut relieves buckling. The cut is never made deeper than the width of the trim to be removed when the material is cut to fit the wall. (C) An outside corner safety-cut allows for fitting around projections. This cut frees one section of the goods so that it falls to the floor. The other section can be trimmed off at the floor line of the projection.

width can be varied to accommodate any dimensional variations.

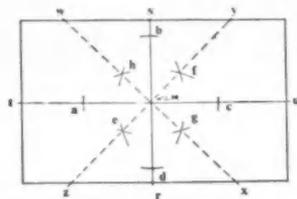
Linoleum tile should be thoroughly rolled and adhesive stains removed with a dampened cloth. Asphalt tile need not be rolled. Ordinary traffic, immediately after laying, is not objectional. Such nominal pressure will aid the bonding action. Asphalt tile should be heated before cutting for fitting around fixtures. Remove excess adhesive immediately by using light steel wool and warm soap suds.

Regular or cove base or moulding, can be installed after entire application of resilient flooring is finished. Mouldings are available of wood, metal or resilient composition. Such resilient cove bases may be used in colors to match the flooring or lend attractive color complement.

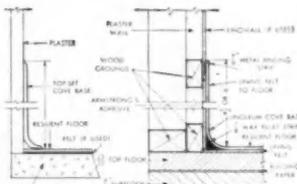
Non-Resilient Floors

Installation of non-resilient floors is handled nearly exclusively by installation contractors specializing in such types. Concrete falls in the non-resilient classification and consists of portland cement, sand, gravel and water, in varying amounts upon which, in great measure, the smoothness of the finished floor depends. Skillful troweling combined with use of final sealing compounds result in a smooth surface of durable hardness. Such floors must be applied over a strong, rigid subfloor.

To create a terrazzo floor, marble chips are added to a matrix of portland cement. When the floor has thoroughly hardened, the entire floor is honed to a smooth, almost glass-like surface by use of a wet grinding machine. Metal dividers are used to sectionalize the floor. Pre-formed metal designs and pictures are often used to place trade-marks, names and decorative treatment to the floor.



THIS DIAGRAM shows the steps taken to determine direction for diagonal installation of tile. (1) With point M as center and using any convenient radius, mark A, B, C, and D on lines SR and TU. (2) With B and C as centers and using a radius greater than the distance between points C and M mark intersecting arcs at E. (3) With A and D as centers, mark intersecting arcs at F. (4) Strike a chalk line using points E and F through M to establish points Y and Z. (5) Use centers A and B to find point G. (6) Use centers C and D to find point H. (7) Strike chalk line using points G and H through M to establish points W and X.



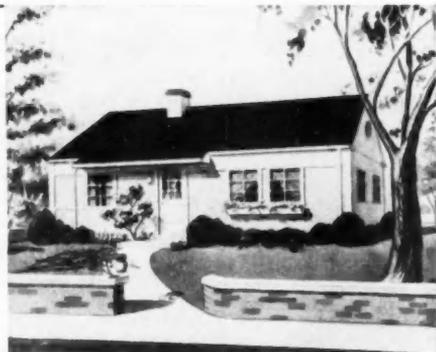
• TOP-SET COVE BASE •

• FLASH TYPE COVE BASE •

REGULAR OR COVE BASE OR MouldING can be installed after application of a resilient flooring has been completed

Oxychloride cement, magnesium oxychloride cement or magnesite floors are the same. Oxychloride cement hardens to form a dense, stone-like material of fine, smooth texture. It is made up of both organic and inert materials which gives it a resiliency not found in other floors falling in the non-resilient classification.

You can
NOW
lay resilient or wood flooring directly on on-grade concrete slabs.



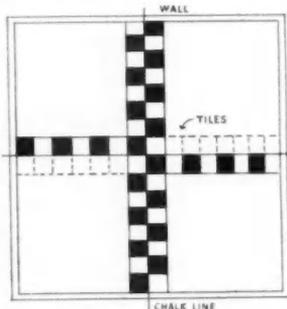
Gunnison Homes specify and use "Stafco" ON-GRADE Sealer to seal the concrete slab before the finished Parkway floor is installed.

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STAFCO makes possible the installation of linoleum, rubber tile, carpet, wood, or similar type of flooring on concrete which is in contact with the ground. Stafco is easily applied and forms a membrane through which capillary moisture or alkali cannot penetrate.

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PATTERN FOR LAYING TILE FLOORING. Determine the exact center of the area and proceed as indicated, working toward the walls

While portland cement floors need be applied in thicknesses of two inches and more on a rigid, sound base, oxychloride cement can be installed over most any type of structurally sound subfloor in a ¼- to ¾-inch thickness. Over wood floors, a felt underlayment is first applied, then a welded mesh or "chicken wire," and then the magnesite floor applied. Magnesite also has the advantage of being available in almost any color. A magnesite floor is troweled to a fine finish. Marble chips may be added to form a magnesite-terrazzo floor. Such terrazzo floors are honed with a wet grinder after cement has set hard for the final finish. Unique and attractive effects can be secured by combining a colored magnesite with selected marble chip colors and/or cork chips.

Clay tile, marble and slate floors are installed by the mortar embedded method. Details of installation are extensive in each case and such work is necessarily performed by specialists in each field. Clay tile and marble are fabricated to accurate size specifications while slate of a specified 1-inch thickness would vary from 7/8- to 1 1/8 inch thickness.

Clay tile sizes range from small dots 11 3/32-inch square to nine inches square. Thicknesses vary from 3/4- to 1 1/2-inch. The most common sizes bear a geometric relationship to a 6-inch square. A wide variety of trim shapes are available for finishing.

How to Estimate the Amount of Hardwood Flooring Required for a Given Space

Strip Flooring

To determine the board feet of flooring needed to cover a given space, first find the area in square feet, then add to it the percentage of that figure which applies to the size flooring to be used, as indicated below:

50% for	25 32" x 1 1/2"
37 1/2% for	25 32" x 2"
33 1/3% for	25 32" x 2 1/4"
24% for	25 32" x 3 1/4"
33 1/3% for	3 3/8" x 1 1/2"
25% for	3 3/8" x 2"
33 1/3% for	1/2" x 1 1/2"
25% for	1/2" x 2"

The above figures are based on laying flooring straight across the room. Where there are bay windows or other projections, allowance should be made for additional flooring. It is always well to order 5% additional flooring to take care of floor layers' cutting and possible damage.

Block and Plank Flooring

These are sold on the basis of floor coverage. It is necessary to provide only an additional 5% to floor area to compensate for floor layers' waste and possible damage.

Rules Governing Re-Inspection

In the manufacture and grading of oak flooring the very best types of machinery, equipment and workmen are employed, but occasionally some pieces get into wrong grades by error.

Therefore, if the re-inspection results in a difference in favor of the purchaser of more than five (5) per cent in feet, as shown in the invoice, then the shipper will be considered as being in the wrong and shall issue a corrected invoice in accordance with the re-inspection, and pay all the expenses of the re-inspection.

If on the other hand, the difference is only five (5) per cent or less in feet, then the party making the complaint shall not be entitled to any reduction from the invoice and shall furthermore, be charged with all the expenses of the re-inspection.

The quality and condition of the oak flooring when it leaves the manufacturer is held to govern the re-inspection.

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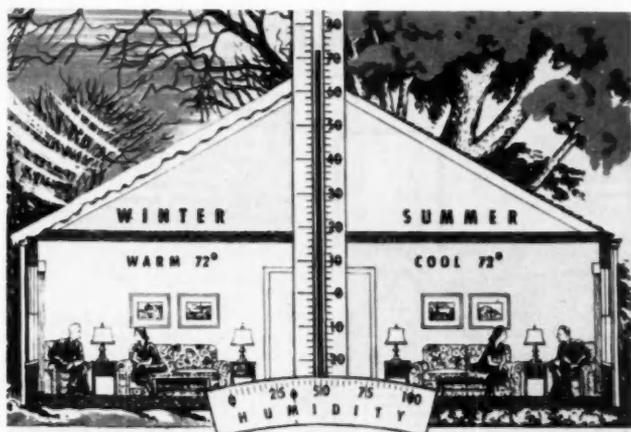


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KNOWLEDGE of the fundamentals of how insulation works is essential to any intelligent discussion of the subject with the public. It is also essential to any understanding of the correct choice of the type of insulation to be used, how much to use and its proper installation. The primary purpose of insulation is to retard the passage of heat, either from the inside out or from the outside into a structure.

Heat is a form of energy. It always travels from a warm surface to a cooler one. Heat travels in three ways:

1. *By conduction.* Heat passing through solid materials, as through steel or dense concrete, travels by conduction. Dense materials conduct heat more rapidly than materials in which particles are separated by tiny air cells.

2. *By convection.* When heat travels via currents of air, it travels by convection. Air on contact with the cold side of a wall or a cold window tends to settle as it cools. Air in contact with a warm wall or unit rises. These reactions of air to cold and warm walls and objects set up a continuous circulation which moves heat across air spaces.

3. *By radiation.* Radiated heat

moves at high speed through air without heating the air and flows in direct lines from a warm surface to a cooler surface. Sun heat is radiated heat. Heat moving from a human body to a nearby colder surface, such as a wall or ceiling, is radiated heat. Radiated heat is absorbed by the object or wall which it reaches in proportion to that object's affinity to absorb heat.

All building materials such as wood, masonry, and even wide air spaces permit the passage of heat from the interior to the exterior in winter or from the exterior to the interior in summer. This rule also applies to insulation. Insulation never completely stops the passage of heat, but it is manufactured for the express purpose of retarding the greatest possible amount in areas insulated.

Insulation's function then is simple—to keep walls, ceilings and floors resistant to the escape of heat from indoors and to keep the indoor surfaces of rooms at a temperature close to the temperature of the air in the rooms. In summer outdoor heat is held within the walls, maintaining lower interior surface temperatures than would be possible without insulation.

ABBREVIATIONS AND TERMS

B.T.U.—British Thermal Unit. The amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.

"k"—This represents conductivity. It is used to show the amount of heat (B.T.U.'s) which will pass through one square foot of a specified material one inch thick for a temperature differential of one degree F between the two surfaces per hour.

"C"—Used to designate conductance of a material or combination of materials to show the amount of heat (B.T.U.'s) that will pass through for the thickness or type under consideration per hour, per square foot, per degree F temperature difference between the two surfaces. The "C" value of an 8-inch hollow concrete block is 1.00.

"U"—Designates the total or over-all trans-

mission of heat (B.T.U.'s) from air on one side to air on the other side of a wall, roof, ceiling or floor per hour, per square foot, per degree temperature difference between the air on the two sides of the section or combination of materials. The "U" value of an uninsulated frame wall consisting of wood siding, wood sheathing, 2x4 studs, gypsum lath and plaster is .26. If insulated with two inches of typical mass insulation, the "U" factor becomes .095. The three measurements, "k," "C" and "U," as defined above are basic and should be understood by anyone discussing insulations so that they may be interpreted in an intelligent manner when dealing with the public on insulation matters. The lower the figure used, the greater is the resistance to the flow of heat.

INSULATION

How It Works

Where to Insulate

How to Install

Types of Insulation

Loose Fill

Blanket

Mat

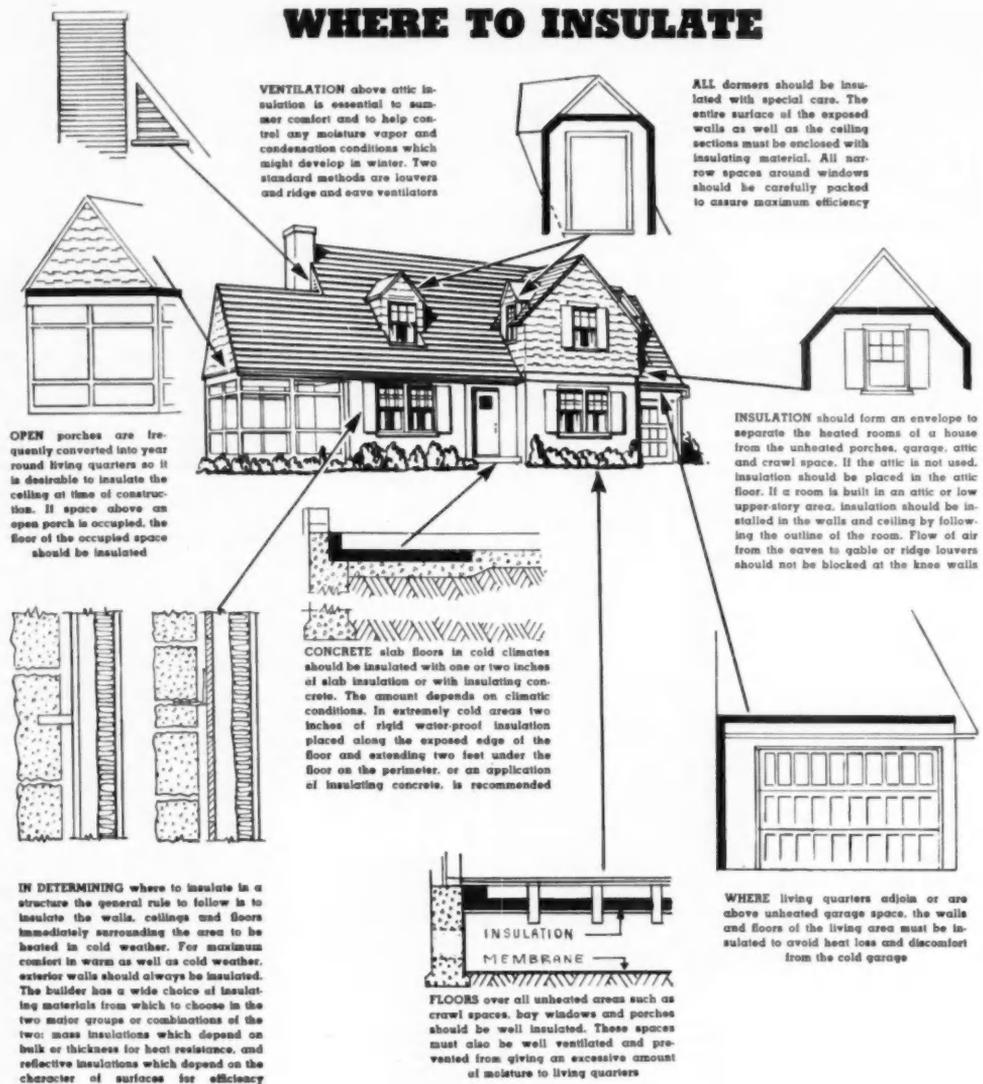
Board

Reflective

Slab

Vapor Control

WHERE TO INSULATE



VENTILATION above attic insulation is essential to help control any moisture vapor and condensation conditions which might develop in winter. Two standard methods are louvers and ridge and eave ventilators

All dormers should be insulated with special care. The entire surface of the exposed walls as well as the ceiling sections must be enclosed with insulating material. All narrow spaces around windows should be carefully packed to assure maximum efficiency

OPEN porches are frequently converted into year round living quarters so it is desirable to insulate the ceiling at time of construction. If space above an open porch is occupied, the floor of the occupied space should be insulated

INSULATION should form an envelope to separate the heated rooms of a house from the unheated porches, garage, attic and crawl space. If the attic is not used, insulation should be placed in the attic floor. If a room is built in an attic or low upper-story area, insulation should be installed in the walls and ceiling by following the outline of the room. Flow of air from the eaves to gable or ridge louvers should not be blocked at the knee walls

CONCRETE slab floors in cold climates should be insulated with one or two inches of slab insulation or with insulating concrete. The amount depends on climatic conditions. In extremely cold areas two inches of rigid water-proof insulation placed along the exposed edge of the floor and extending two feet under the floor on the perimeter, or an application of insulating concrete, is recommended

IN DETERMINING where to insulate in a structure the general rule to follow is to insulate the walls, ceilings and floors immediately surrounding the area to be heated in cold weather. For maximum comfort in warm as well as cold weather, exterior walls should always be insulated. The builder has a wide choice of insulating materials from which to choose in the two major groups or combinations of the two: mass insulations which depend on bulk or thickness for heat resistance, and reflective insulations which depend on the character of surfaces for efficiency

WHERE living quarters adjoin or are above unheated garage space, the walls and floors of the living area must be insulated to avoid heat loss and discomfort from the cold garage

FLOORS over all unheated areas such as crawl spaces, bay windows and porches should be well insulated. These spaces must also be well ventilated and prevented from giving an excessive amount of moisture to living quarters

WHERE HEAT IS LOST OR GAINED IN A BUILDING

Studies of typical buildings as to relative heat loss and gain through various parts or sections are given below. These values are not for the same structure and are typical enough to be indicative of heat transmissions:

Heat Loss in Winter		Heat Gain in Summer	
Walls	32.9%	Walls	33.6%
Ceilings and roof	22.2%	Ceilings	24.2%
Floors	.3%	Floors	3.7%
Glass and doors	29.9%	Glass and doors	26.4%
Infiltration	14.7%	Infiltration	12.1%
	100.0%		100.0%

The above figures were assembled from studies of typical two-story houses. The percentages would vary somewhat on one-story houses because the ceiling area would be proportionately greater and the wall area less.

INSTALLATION TIPS

The efficiency and economy of any installation can be largely nullified if the products are not properly applied. Insulation products must be used in places and conditions for which they were intended. If special problems or unusual conditions develop, manufacturers are always ready to lend assistance to assure maximum satisfaction from the product.

Insulated walls should be so constructed to avoid high heat conductance through the insulation. Fill materials must be installed so that they will not settle and leave vacant spaces in the insulated areas.

INSULATION VALUE

When air spaces within walls constitute a part of the insulating value, the material must be installed so that the air spaces are sealed and prevent interchange of air between warm and cold air areas. If reflective insulating materials are used they must be so installed that the reflective surface will be protected from any foreign materials which would increase the emissivity coefficients and should not be laid in contact with other materials.

The insulating value of many materials is affected by moisture. It is now common practice to protect these materials by applying some moisture-resistant membrane as near as possible to the warm surface of walls where moisture-producing conditions exist.

Install materials in such a manner as to avoid air circulation between hot and cold spaces. For instance, a wood frame wall of standard type, with a 1/2-inch blanket insulation well installed in the central vertical plane of the stud section, gave a test coefficient of .12. This same wall, with 1/2-inch cut off, from the top and bottom of the blanket, so as to allow air circulation between the two air spaces, gave a test coefficient of .18. Similar reduction in the insulating value of a reflective material may be expected if it is not properly sealed to prevent air circulation between the hot and cold air spaces.

A similar condition may exist in masonry walls with vertical air spaces, when the mortar between the joints is buttered only around the edges, as is common practice. The webs, or partitions, between the air spaces are not sealed in the central part of the block, and there is direct communication between the air spaces on the cold and warm side of the wall.

Permanent ventilation in attics above insulation is essential to good performance. In summer it permits the escape of sun heat and in winter

it carries off vapor that passes from the house into the attic. Any arrangement that permits free circulation between the insulation and roof is suitable. Two standard methods are louvres, and ridge and eave ventilators. Louvres should be placed as high as possible at the peak of the gables. Ridge and eave ventilators must be constructed to allow circulation in at the eaves and out at the ridge. If knee walls are constructed, they must not block this circulation. To insure adequate ventilation, there should be at least one-quarter square inch of free opening in each of two permanently open vents for each square foot of insulated attic area.

LOOSE FILL

Various types may be packed, poured or blown into the spaces formed by framing members or masonry. Normally, they are used for insulating existing buildings.

Mineral Wool includes three types of noncombustible insulation known as rock wool, slag wool or glass wool. They may be fabricated into nodules, into batts or blankets. Mineral-wool filled partitions have been accorded a one-hour fire rating when faced with wood lath, or equivalent, and plaster. When faced with metal lath and plaster the fire rating is 1 1/2 hours.

Wood fiber wool fill includes several insulations made from wood fiber to produce a lightweight fleecy material. These are generally treated to render them flame resistant, vermin repellent and moisture resistant.

Permiculite is an inert, lightweight, granular insulating material manufactured by exploding an aluminum magnesium silicate mineral, which is a form of mica.

The final product is graded into different sizes for various uses, including building insulation, lightweight insulating concrete aggregate and aggregate for insulating plaster.

Application

Loose fill insulation of the granular or fibrous types may be poured from bags into the spaces between the ceiling joists to the desired depth, usually four inches. It may be poured in place as soon as the plaster base or interior finish is applied, except where open lath are used. In these cases, it is necessary to wait until the plaster has been applied and has thoroughly dried. This is true whether the insulation is used in sidewalls or ceilings. If a vapor barrier is to be installed in the ceiling it should be put in place on the under side of the joists before the interior finish is applied.



BLANKET INSULATION wrapped in paper with vapor barrier on side



WOOD FIBER BLANKET with nailing flanges which fasten to framing members



LOOSE FILL insulation being blown in



GRANULAR FILL insulation being poured



(3) Multiple layers of treated wood fibers attached to heavy creped paper with a reflective aluminum foil cover on one side



(4) Cotton Blanket lined on one side



(5) Wool bats with vapor barrier and nailing flange

When granular or fiber insulation is applied to existing structures in the side walls, a plumb bob should be dropped into each stud space to check for fire stops or headers which might obstruct the insulation flow. When vermiculite fill insulation is installed in sidewalls of existing structures it is well to vibrate the walls slightly with a rubber mallet or short 2 x 4 as the insulation is

poured to insure a complete fill below plaster clinches and around other obstructions such as conduit or pipes.

Double (cavity) masonry walls can be satisfactorily insulated with fill insulations. Variation in materials used and in construction methods make it advisable to follow the manufacturer's recommendations closely when this is done. Concrete block walls are sometimes insulated during construction by filling cores of blocks with insulation. Because of the conductance through the solid portion of the block, such a wall does not provide as much insulation as the insulated double or cavity wall but it does provide more insulation than the wall would with the cores left open. *Extreme care must be taken under these conditions to make sure insulation will always remain dry.*

In insulating existing structures with fill insulation, either poured or blown in, the use of a vapor barrier is not mandatory, but it is good insurance against condensation troubles as a result of house-keeping methods which produce high humidities.

BLANKETS

Blanket insulations are flexible units more than 48 inches in length and wide enough to fit between studs on conventional 16 or 24-inch centers. This material is manufactured to control thicknesses and either folded in cartons or packed in rolls. It is made of mineral wool, wood fiber, cotton and animal hair. The fibers are either naturally fire resistant, moisture and vermin resistant or are treated to make them so.

Because of the variety of material used for blanket insulations, the manufacturing processes vary a great deal. The felted or wool-like matings, however, are of three general types: 1—Those having the fibers completely encased on all sides with kraft or other paper, one side of which is a vapor barrier; 2—Those which have a vapor barrier on one side only and are not completely encased; 3—Those which have no paper covering. These depend on the inter-laced fibers for sufficient strength, with or without stitching, to hold the material into a compact matting or blanket.

Blankets in the first two classifications are usually provided with a nailing flange to conform to standard spacings in wood framing. Those in the second classification are usually made sufficiently wider than the standard framing spaces to permit edge fastening through the material.

Blanket insulations are generally produced in one, two, three and 3½ inch thicknesses. The thicknesses in



(8) Insulating Board sheathing



(9) Decorative insulating board as an interior finish



(10) Reflective insulation

inches are not always specified, but are assigned various names by competing manufacturers, such as full-thick, double thick, standard, commercial and similar designations. Generally speaking, their efficiency depends on their thickness.

Application

The two popular and efficient methods of applying blanket insulation in frame construction are: 1—Between the framing members held in place by friction; 2—Between

(Continued on page 468)

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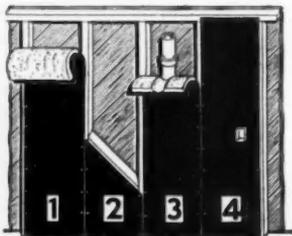
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BLANKETS are cut in continuous strips to required length for each stud space. In installing batts or blankets, large pipes in walls may require removal of part of the wool, but the vapor barrier is always retained. To protect water pipes from freezing, insulation should be on the cold side whenever possible and none on the warm side, but keep vapor barrier intact. Vapor barrier must fit snugly around outlets

(Continued from page 466)
the framing members with nailing flanges or edges of the paper or vapor barrier backing nailed to the inside edges of the studs or other framing members. When blanket insulation which is thinner than the depth of the framing members is applied entirely between the framing members, it should be installed so that two air spaces are formed. The blankets should always be cut slightly longer than the opening to be filled and the ends secured to the plates in the same manner that the edges are fastened.

One type of blanket insulation is installed between studs by first securing the upper end with a lath strip, stretching the blanket to the desired length and attaching the other end to the sill in the same manner. After this is done the edges of the blanket are fastened along the sides of the studs by stapling at regular intervals of about 18 inches.

There are a number of thin flexible insulations that can be applied directly to the studs, either on the inside or outside edges, and the interior or exterior finish applied directly.

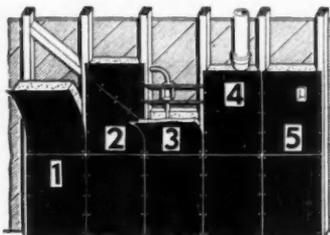
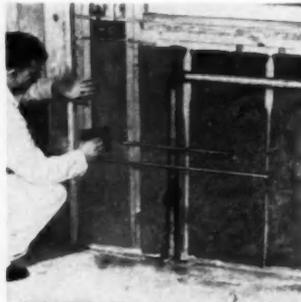
Blanket insulations may be applied to masonry walls if the furring strips are thick enough to prevent close contact of the insulation with any rain borne moisture which might be conducted through to the inside of the masonry.

Wherever insulating blankets or batts are used with new masonry, an effective vapor barrier should be installed on the warm side of the insulation.

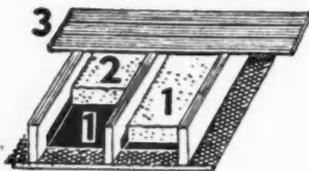
Some compressible types of blanket insulations can be run over the furring strips and compressed over them by the lath or other interior finish which is applied. This method is common with builders who pre-fabricate houses or wall panels.



BATTS OR BLANKETS should always be worked carefully around pipes and conduits. Water pipes should be protected from freezing with insulation on the cold side but the vapor barrier retained on the warm side.



IN INSTALLING batts start at the bottom of the stud space and completely insulate by snugly butting successive batts together. Where there is a flange on the vapor barrier, it should be stapled to the studs. At sills, plates and in odd-shaped places, the vapor barrier is cut a little larger than the opening, the insulation tucked back and the barrier stapled to members. Same rule applies to blankets



INSTALLATION of batts or blankets in top floor ceilings or attic floors over heated spaces with the room ceiling finish in place is a simple operation. Working from above the joists, the insulation is laid between them with the vapor barrier down, against the warm ceiling. Batts should be fitted closely together and worked carefully around all bridging, pipes, conduits, etc., which may be in the joist spaces. Blankets should be cut to the required length with allowance for attachment of vapor barrier at the ends. When working from below with an attic floor in place or under sloping roofs, the same basic principles apply, with the vapor barrier always on the warm side

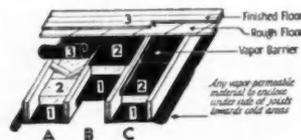
BATTS

A number of manufacturers who produce blanket insulations also make batts, using the same raw materials. Batts are 48 inches or less in length and the same widths as the blankets—15 inches to fit between studs 16 inches on center and 23 inches for the 24-inch O. C. studs. The most common thickness for batts is three inches, although they are also produced in one and two-inch thicknesses. They may be obtained with the insulation completely encased in paper, one side of which is a vapor barrier; with the vapor barrier only on the one side; or without the integral vapor barrier. Some manufacturers provide a nailing flange as part of the vapor barrier.

Application

Work should always be started at the bottom with batts, and each stud space completely filled by snugly butting each batt against the other. Where there are pipes, conduits or other obstructions to work around,

(Continued on page 470)



IN FLOORS over crawl spaces batts can be installed in several ways. A suitable supporting material, vapor permeable, is first installed, shown as (1) in the drawing. Each joist space is completely insulated with all batts butted snugly together, worked around bridging and fitted snugly at ends of joist runs. Vapor barriers are always up, next to the floor. Flanges are stapled in positions shown in the three drawings, depending on which method is adopted. If flooring is already installed, the insulation can be applied from below with the vapor barrier up, and supported with a suitable vapor permeable material attached to the bottoms of the joists. When insulation is installed in a floor over a cold area or crawl space, good vapor barriers plus adequate ventilation will add to the efficiency of insulation and comfort

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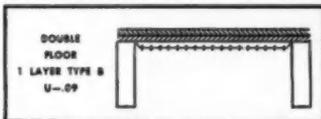
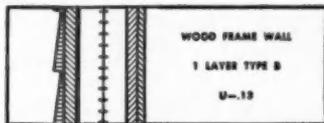
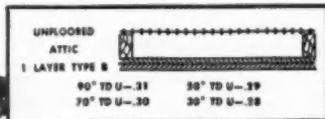


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IN CEILINGS



IN WALLS



IN FLOORS



IN ATTICS



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REYNOLDS ALUMINUM

(Continued from page 468)

the wool should be split and part of the material placed behind the obstructions if there is room. To protect water pipes in outside walls from freezing in cold climates, it is advisable to place insulation on the cold side only.

Where batts do not have an integral vapor barrier, it is recommended that a vapor barrier be applied on the warm side of the wall as soon as the batts are in place.

INSULATING BOARD

Common insulating board products used in light construction are known as building board, sheathing, lath, tile board, plank and roof insulation.

Building board is a product for general usage produced in four-foot widths and in lengths from six to 12 feet. Popular thickness is 1/2-inch, although it is available in thicker grades. It can be used satisfactorily with the natural finish but a number of manufacturers apply various colors to the surface at the factory. When applied, insulating board is usually the finish wall. Various decorative effects can be achieved by cutting V-joints, grooves and designs with special cutting tools.



INSULATING BOARD SHEATHING is applied by nailing to intermediate studs first with the nails about six inches apart. Nails around the edges are then spaced three inches apart.

Applications

The board can be nailed directly to studs or any solid backing. Where nailing is exposed, 1/2-inch board should be fastened with 1 1/4-inch galvanized finishing nails, cadmium plated needle point No. 17 gauge with 3/8-inch flat heads or No. 16 gauge brads. The finishing nails or brads should be driven at an angle and heads set flush with a nail set to avoid hammer marks. No type of nail should be set below the surface of the board. Concealed nailing can be done with 1 1/2-inch galvanized shingle nails, galvanized roofing nails or box nails. The flat-headed nails, where

Commercial Building Insulations

- I. Loose Fill Insulations
 - A. Fibrous
 1. Mineral wool
 - a. Rock wool
 - b. Glass wool
 - c. Slag wool
 2. Vegetable Fiber (wood)
 - B. Granular
 1. Mineral (vermiculite)
 2. Vegetable (granulated cork)
- II. Blanket Insulations
 - A. Wood fiber or mineral fiber wrapped one or both sides with paper, one side usually a vapor barrier
 - B. Multiple layers of treated wood fibers stitched to creped paper with a reflected aluminum foil cover on one side, compressed for shipment
 - C. Cotton fiber lined or wrapped one or both sides with paper
- III. Batt Insulation
 - A. Plain (no vapor barrier)
 - B. Vapor barrier on one side, plain on other
 - C. Vapor barrier one side, retainer paper on the other
- IV. Structural Insulating Board
 - A. Building board
 - B. Sheathing
 - C. Lath
 - D. Tileboard
 - E. Plank
 - F. Roof insulation board
- V. Slab (or block) Insulations
 - A. Corboard
 - B. Wood fiber and cement
 - C. Mineral wool with binder
 - D. Insulating board slabs
 - E. Asphalt-vermiculite slabs
 - F. Hard rubber
 - G. Cellular glass
- VI. Reflective Insulations
 - A. Aluminum foil
 1. Plain (no paper backing)
 2. Paper backed foil
 3. One or more layers of folded aluminum foil, with the folds and paper separators joining air spaces when installed
 - B. Aluminum foil-surfaced plaster board
 - C. Dull sheet steel
- VII. Miscellaneous
 - A. Confetti-like material sprayed on with adhesive
 - B. Combinations of aluminum foil with other types of insulation such as blankets and structural insulation board
 - C. Insulating board core surfaced on one or both sides with asbestos-cement board, metal or other material
 - D. Multiple layers of corrugated paper
 - E. Cellular mass made from liquid resin

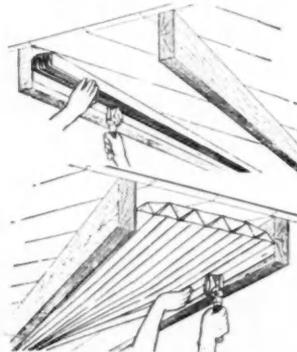
the sheathings on the market today are waterproofed either with an asphalt coating or with an integral asphalt treatment. Insulating board sheathing is supplied in two main size groups—1/2 or 3/4-inch thick, four feet



INSULATING BOARD LATH is applied with the long edges at right angles to framing or furring. When small areas are to be filled out insulating lath must be used; not wood.

wide, in lengths from eight to 12 feet with square edges, two by eight-foot sheets, 3/4-inch thick, usually with some kind of tongue and groove or fitted edge joint on the long edges.

This type of insulating board can be used as regular sheathing in frame construction with the various types of exterior finishes such as wood siding, shingles, stucco or brick veneer. FHA minimum requirements do not specify building paper where insulating board sheathing is used except under stucco or masonry veneer.



ONE type of reflective insulation is folded in manufacture and expands in two layers with supporting paper between to form two air spaces when stapled to the inside of framing members. It is used in ceilings, sidewalls and over unheated crawl spaces

REFLECTIVE

Reflective insulations, with their bright metallic reflective surfaces, differ from other types of insulation

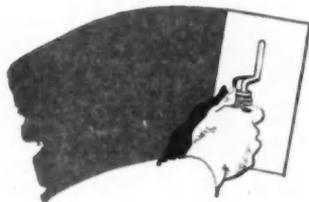
(Continued on page 472)

Build in quality 2 easy ways

FOR A *double feature* THAT SELLS

PLASTER with PERMALITE

Base coat plaster with lightweight Permalite aggregate adds built-in insulation . . . fireproofing . . . crack resistance . . . and saves up to 4 tons dead-weight in an average 5 room house. Its use means less settling and minimum maintenance, plus important fuel savings and added Winter and Summer comfort. It's the finest wall finish you can use. These important factors make a big impression on home buyers . . . make them want to buy!



CONCRETE with PERMALITE

Concrete with Permalite aggregate gives up to 20 times more heat insulation than ordinary concrete. Use it for floor fill insulation. It screeds smooth in one operation, forms a hard surface free from flaking and provides adequate structural strength. It's a superior base for floor radiant heating system. Permalite adds much to building quality . . . little to building cost.

Permalite lightweight aggregates, rigidly controlled for uniform quality, are packed in 4 cu. ft. bags. They're convenient to store indoors, easy to handle, to mix. Meet all building code requirements. Get the full story on Permalite aggregates and how they're being used with outstanding success in houses of all sizes. Send in the coupon today.



A Building Product of
Great Lakes Carbon Corporation
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Great Lakes Carbon Corporation, Dept. 204
18 East 48th Street, New York 17, N. Y.

Without obligation please send complete information on Permalite. Have representative call.

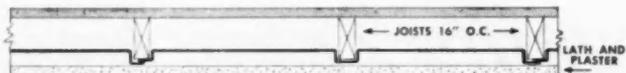
NAME _____

COMPANY _____

ADDRESS _____

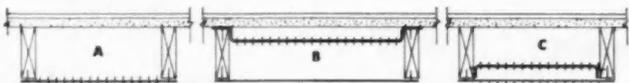
CITY _____

STATE _____



THIS shows the recommended method of installing foil reflective insulation in a ceiling below an unheated attic space when the attic is floored. If the attic is not floored, foil may be placed on the

upper edges of the joists. Note that it is indented beside the joists to provide at least a 3/4-inch air space. Both sides have reflective surfaces



THREE different methods of installing typical foil reflective insulation in floors above unheated spaces. (A) shows it on the bottoms of the joists; in (B) it is on top of the joists, indented to form an air space at least 3/4-inch deep; (C) shows two layers of this foil, one of which has

reflective surfaces on both sides, installed at the bottoms of the joists. Reflective insulation is unique because it depends on its surface characteristics for insulating quality and also forms an efficient vapor barrier

Reynolds Metals Co. Drawings

(Continued from page 470)

because they depend entirely on their surface characteristics for insulating value. Insulation value is achieved with reflective insulations only when they face a 3/4-inch or larger air space.

Application

Reflective insulations are manufactured to be installed either between framing members or with nailing surfaces brought over the inside edges of the framing members and the reflective surface set in between the members. This type of insulation can also be installed on furring strips on masonry walls.

When foil-backed gypsum board is installed, the conventional application techniques for gypsum board are used, except that the side of the board with the foil on it must always be nailed to face the framing members or furring strips.

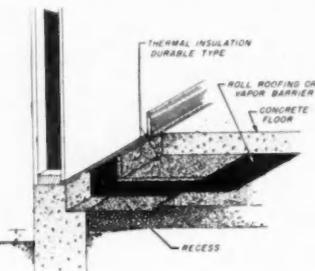
SLAB

Slab insulations are made of a number of materials in small, rigid units usually one inch or thicker in sizes up to 24x48 or 36x36 inches square. The general kinds are: 1—corkboard; 2—wood fiber and cement; 3—mineral wool; 4—cellular glass; 5—vegetable or wood fiber board.

In home building and light construction the slab insulations are being used at an increasing rate to retard heat loss from concrete slab floors laid directly in contact with the ground. In cold climates it is essential that the perimeter of concrete slab floors in structures designed for human occupancy, particularly houses, have adequate insulation from the foundation and from the ground, not only to avoid heat loss but to add to the comfort and health of the occupants.

VAPOR CONTROL

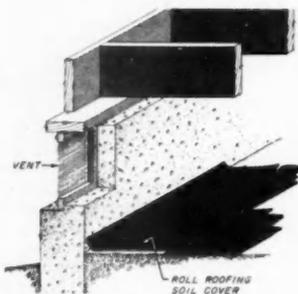
Two reasons why excessive moisture vapor is more prevalent in present day houses than in those erected a few years ago are (1) a greater



CONDENSATION may occur winter or summer on concrete slab floors laid on the ground without adequate insulation. The perimeter insulation under and on the edge of the slab as shown above should be waterproof or thoroughly covered with asphalt and should have a resistance value (R) of at least 2.0. A recess is provided along the wall and in the floor in which to lay the insulation. The use of low density concrete with vermiculite as part of the aggregate or the use of thermal insulation below the floor would reduce the possibility of summer condensation

number of small, basementless-type houses are being built, and (2) improvements in materials along with caulking, weather stripping, storm windows and storm doors make houses more nearly air tight. The use of thermal insulation, more widespread than ever, increases the inside surface temperatures of exposed walls, floors and ceilings, providing added physical comfort with savings in fuel. This also effectively minimizes the possibility of condensation

forming on the room surfaces of exposed walls, floors and ceilings. Because the insulated areas, however, make the outside surfacing materials colder than those of uninsulated construction, it is especially important that the insulation be properly in-



IN CRAWL spaces under basementless houses condensation control can be assisted by laying roll roofing weighing at least 55 pounds per 108 square feet on the surface of the soil with edges lapped at least two inches. Covers of this kind greatly restrict the evaporation of water and somewhat less ventilation is required than when no covers are used. Crawl space ventilation should be placed in the corners and as high as possible in the walls or foundation. The minimum number of ventilators recommended is four with one near each of the corners

stalled, along with whatever collateral materials or means which will prevent the passage of excessive moisture vapor to these cold exterior surfaces.

Moisture vapor in a house is beneficial and necessary, but it must be controlled through proper application of moisture barriers and ventilation.

Moisture sources may be many and will vary with types of construction, climate, weather changes and living habits of occupants of the house. Usually moisture sources come under these three classifications: (1) Moisture due to soil or structural conditions; (2) Moisture-creating equipment and living habits in the home; (3) Tightness of construction, without allowance for the escape of excess moisture vapor.

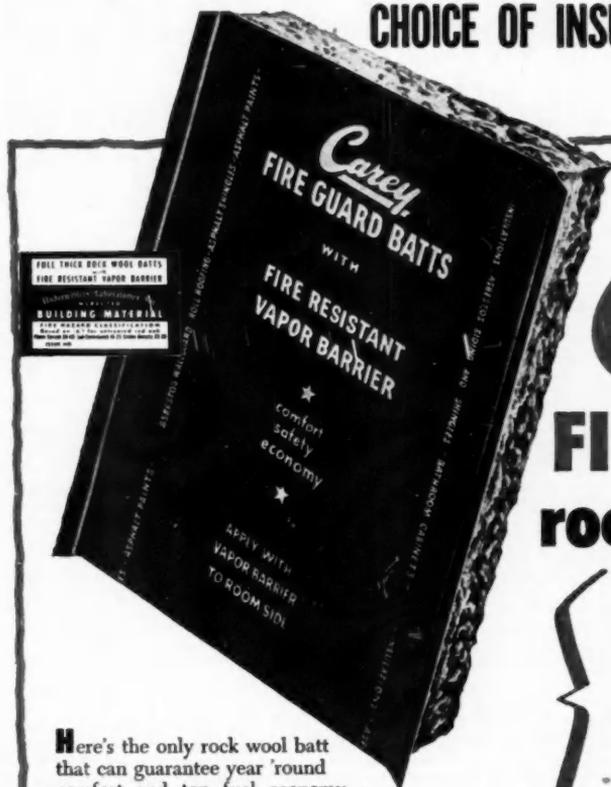
Application

Basement moisture sources can be minimized by the following corrective measures:

1. Install adequate drainage tile at the foundation footings, with drain into dry well.
2. Waterproof foundation walls and concrete floor according to recommendations of the Portland Cement Association.

(Continued on page 474)

LET THIS PLAIN, HARD FACT GUIDE YOUR
CHOICE OF INSULATION



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keep comfort high
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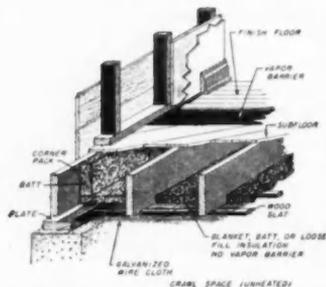
473

(Continued from page 472)

3. Install bituminous joints between the concrete floor and the foundation with a waterproof membrane under the concrete floor.

4. Install a drain in the concrete floor, sloping the floor to the drain.

5. Install adequate gutters and down spouts that drain to storm sewers or well away from the foundation.



IN THIS method of construction a vapor barrier is recommended between the subflooring and the finish floor, with cold or lower side of the floor left permeable. Blanket, batt or loose fill insulation is shown supported on wire cloth and wood slats nailed to the joists. Note the corner pack. This must be installed so it will remain permanently in place. Where these corner packs are used it is especially important that the crawl space be well ventilated and that soil covers as shown at the left be used in damp locations to prevent condensation on the sill

6. Make certain the chimney is of adequate size.

7. Ventilate the basement in dry weather.

Moisture from crawl spaces under first floors usually amounts to more than that from any other source. Good practice in condensation control in crawl spaces includes the following:

1. At least four ventilating openings, with one near each corner of the building. Placed high.

2. Do not close ventilation any time during the year.

3. Stopping the moisture from the ground from entering the air in the confined space by covering the ground with a vapor-resistant durable material. A good water-proofed concrete slab or heavy roll roofing has been shown to be effective. A roll roofing, either mineral surfaced or plain, weighing at least 55 pounds per 100 square feet, laid with 2-inch lapped joints over a rough-graded surface, may be expected to serve satisfactorily for many years.

The fault lies in lack of control of moisture vapor, lack of good ventilating practices, and failure to eliminate stubborn sources of moisture.



FIGURE 6.—Condensation zones.—Zone I roughly includes the areas with design temperatures -20° F. and colder; zone II 0° to -10° F.; and zone III areas warmer than 0° F.

Type of roof and occupancy	Condensation zone		
	I	II	III
(a) Flat roof. Slope less than 3 inches in 12 inches. No occupancy contemplated.	Total net area of ventilation should be 1500^2 distributed uniformly at the eaves plus a vapor barrier in the top story ceiling. Free circulation must be provided through all spaces.	Same as for zone I.....	Same as for zone I.
(b) Gable roof. Slope over 3 inches in 12 inches. No occupancy contemplated.	Total net area of at least 2 louvers on opposite sides located near the ridge to be 1500^2 plus a vapor barrier in the top story ceiling.	Same ventilation as for zone I. A vapor barrier is not considered necessary.	Same as for zone II.
(c) Hip roof. No occupancy contemplated.	Total net area of ventilation should be 1500^2 with 1500^2 distributed uniformly at the eaves and 1500^2 located at the ridge with all spaces interconnected. A vapor barrier should also be used in the top story ceiling.	Same ventilation as for zone I. A vapor barrier is not considered necessary.	Same as for zone II.
(d) Gable or hip roof. With occupancy contemplated.	Total net area of ventilation should be 1500^2 with 1500^2 distributed uniformly at the eaves and 1500^2 located at the ridge with all spaces interconnected. A vapor barrier should also be used on the warm side of the top full story ceiling, the dwarf walls, the sloping part of the roof, and the attic story ceiling.	Same as for zone I.....	Same as for zone I except that a vapor barrier is not considered necessary if insulation is omitted.

¹ It is recognized that in many areas increased ventilation may be desirable for summer comfort.
² Refers to area enclosed within the building lines at the eave level.

THE CONDENSATION zone map above can be used with the table below as a guide in determining the potential moisture vapor condensation situations which should be considered in normally tight, well-insulated structures in various parts of the United States. Zone I roughly includes the areas with design temperatures—20 degrees F. and colder; zone II—0 to 10 degrees F.; and zone III areas warmer than zero degree F. The table is keyed to the map and contains recommended good practice for loft and attic ventilation

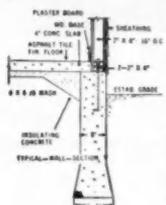
INDIVIDUAL SOURCES OF MOISTURE IN HOUSES (Family of Four)			Pounds of Vapor Produced per Operation
Operation			
Floor mopping (per sq. ft.)			0.03
Clothes drying (per week, when drying is done indoors)			26.40
Clothes washing (per week)			4.33
Cooking			
Breakfast	From food	From gas	0.90
Lunch	0.31	0.66	1.17
Dinner	1.17	1.52	2.69
Bathing—Shower			0.50
tub			0.12
Dish washing			
Breakfast			0.20
Lunch			0.15
Dinner			0.65
Human contribution (per hour)			0.46
Gas refrigeration (per hour)			0.12
House plants (per hour, average)			0.04

Courtesy Heating and Ventilating's Reference Data

BUILDERS REVEAL SECRETS of New Ways to Insulate and Plaster, Get Better Results, Cut Time and Cost

RADIANT HEATING SPECIALIST FINDS INSULATING CONCRETE INCREASES EFFICIENCY!

CRYSTAL LAKE, ILL., Nov. 5, 1950—More than 300 floor panel radiant heating installations have taught Miles Westbrook, local heating contractor, some interesting facts about insulation. As a result of his experience, he specifies that a layer of Zonolite Insulating Concrete must be laid over the levelled ground before radiant heating coils are installed. Says Mr. Westbrook, "Heat loss to the earth from a floor slab without insulating concrete is usually high. Zonolite Insulating Concrete keeps heat from going downward and, over a period of time, saves a good deal of fuel."



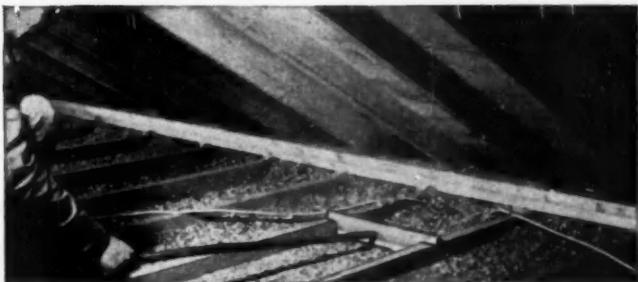
Also . . . panels without a Zonolite insulating base needed much higher water temperatures to maintain comfort."

Veteran Contractor Tells How He Does Better Plastering with Zonolite!

CINCINNATI, OHIO, Nov. 15, 1950—C. W. Sittason, local contractor who has been in the plastering business for over 29 years, has found that he can eliminate many plastering difficulties by using Zonolite Plaster Aggregate. After using Zonolite plaster on a large Cincinnati ceiling job he said, "Zonolite plaster adhered to the base coat better . . . drop-outs and over-night laps gave no trouble . . . screeding alone produced a finish that looked like troweling!" He also found his men showed great enthusiasm in working with Zonolite.

Mr. Sittason himself enthusiastically states, "I heartily recommend Zonolite Plaster Aggregate and Zonolite Acoustical Plastic to improve the quality of any plastering job!"

House completely insulated in 2 hours!



SIoux FALLS, SOUTH DAKOTA, Oct. 10—Robert Stoneall, local building contractor, reveals his unique use of Zonolite Vermiculite Insulation to completely insulate a home in only 2 hours with just 2 men—including time spent unloading bags and cleaning up after the job is finished! His time and money-saving method enables him to complete side-wall and attic insulation in a 24' x 30' house in a fraction of the normal time. Mr. Stoneall says,

"You can't beat ZONOLITE for insulation and ease of installation."

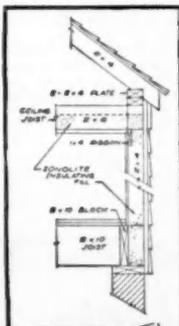
This is Stone-

all's method: By putting the 2 x 4 plates on top of the ceiling joists, he leaves access in the attic so that ZONOLITE may be poured down the sidewalls from the top.

Sidewalls are poured first. The light granular nature of the material permits it to run freely between the studding, all the way to the foundation, filling the space to a uniform thickness. The wall is vibrated lightly with a rubber mallet to produce settlement. Spaces under window openings are filled as the lath is installed.

When sidewalls are full, the remaining bags of ZONOLITE are dumped in the center of the attic, then raked and leveled between the joists to a 3 $\frac{3}{4}$ in. thickness.

ZONOLITE COMPANY, 135 S. LaSalle St., Chicago 3, Ill., Dept. AB-42



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TONS of THORO System Materials used by George Sheaf & Co.



Birdseye view of Franklin County Children's Home, in Columbus, Ohio. All exterior foundation walls given two coats of THOROSEAL. All interior foundation walls given one coat of THOROSEAL and one coat of QUICKSEAL. Specified by Inscho, Brand, & Inscho, Columbus, Ohio.

40 Years of service

This year marks our 40th year in the manufacturing of high quality masonry materials. Today, from coast to coast, the name "THORO System products" is high on the list of specified materials by leading architects, engineers and contractors who, themselves, have achieved fame by recognition of good products.

Wilberforce State College, Wilberforce, Ohio. All interior exposed block walls and ceilings received one coat of THOROSEAL (Base Coat).



QUICKSEAL (Finish Coat) was used to provide final protection and beauty, with the wide variety of colors meeting all decorative requirements.

Get our 20 page brochure pictorially described in detail, "How to Do it."



Standard Dry Wall Products
NEW EAGLE, PENNSYLVANIA

AMERICAN BUILDER

GEORGE SHEAF & CO.
General Contractors

September 6th, 1932

Mr. Robert C. Saunders
Standard Dry Wall Products, Inc.
Box 1
New Eagle, Pennsylvania

Dear Mr. Saunders:

For several years now, we have been using your THORO SYSTEM Products, THOROSEAL, THOROSEAL, and QUICKSEAL, and thought you would be interested in the results we have obtained with them.

We have used THOROSEAL, applied in two brush coats as per your specifications, as an exterior foundation coating and have found this method of waterproofing foundations not only to be highly effective but economical as well as easy to apply.

We have used THOROSEAL and QUICKSEAL, above grade on masonry walls, both exterior and interior, and are very well satisfied with the results, having obtained completely sealed walls as well as decorative finishes that have proven as durable as your literature indicates.

We have also enjoyed excellent relations with your distributor in Columbus, The Columbus Builders Supply Company, and found Mr. Ben of that company very cooperative and helpful whenever we have had reason to call on him.

In the past we have used many kinds of THOROSEAL and QUICKSEAL under most every condition and find your claims for their permanence and effectiveness to be entirely justified. Please be assured we would not hesitate to recommend their use where a good waterproofing and beautifying job is required.

Sincerely,

Geo. Sheaf & Company

Geo. Sheaf

Geo. Sheaf
Owner

GS/aa



The durability, economy, versatility and great strength of concrete make it one of the builder's most useful materials

CONCRETE—made by mixing cement with water and coarse or fine aggregates—has taken its place today as one of the most widely used materials in house construction. Although concrete is used in some way in every house, a concrete house is considered one which has concrete foundations, floors, walls, and a fire-safe roof. A concrete house will either be of poured reinforced concrete or of concrete masonry. The uses of concrete and concrete masonry for foundations, floors, decks, and walls are part of the fundamental techniques of every builder. New applications for existing products, new materials, and new methods are extending the uses of concrete in the small homes and light construction field.

CEMENT PRODUCTION

Portland cement consists of limestone, clay or shale, gypsum, iron oxide, and other possible admixtures. The basic ingredients are quarried, crushed, dried, blended, and ground to a fine powder called "raw mix." This mix is further blended for complete uniformity of product, and carried to a kiln. In the cement kiln, which is a long rotating cylinder blower fired at one end, the mix is burned to a partial fusion at about 2700 degrees F. It emerges and is cooled, forming a glasshard clinker resembling pebbles.

About 3 per cent gypsum is added to the clinker, to control the rate of hardening of the cement, and the mixture is finish ground to cement in tube mills. The result is a powder so fine that it will pass through sieves which will hold water. The finished cement is conveyed to silo-like storage tanks.

From storage, the finished cement is either loaded into bulk cars or packed into bags. It is of interest to

note that the bags are filled after being sewn shut; the cement is put in the bags by a fine nozzle which is automatically shut off when the correct weight is reached. Although the standard unit for cement is the barrel, this type of container is obsolete and no longer in use. The standard bag of cement contains 94 pounds, which approximates one cubic foot.

SPECIAL TYPES OF CEMENT

In addition to the basic portland cement which serves most of the needs of the construction industry, there are many special types for applications where specific properties are needed. High early strength cement permits concrete to be placed in service and forms stripped more quickly. High sulfate-resisting cement is used widely in the West where excessive sulfate chemicals are present in the air and soil.

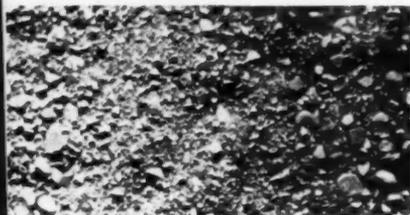
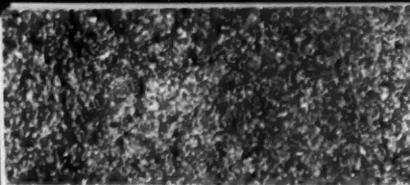
Air-Entraining Cements

Air-entraining cements contain small amounts of soap-like or fatty ingredients ground up with the normal clinker. Concrete made with these cements, or with other air-entraining agents introduced on the job under careful control, contains billions of microscopic air cells throughout each cubic foot of concrete. These relieve internal pressure on the concrete by providing tiny chambers for the expansion of water when it freezes.

Air-entraining cements were first developed for highway concrete to combat the scaling action of the calcium and sodium chlorides which are used to melt ice. The microscopic air cells produce a concrete which is highly resistant to cycles of freezing and thawing, wetting and drying, and frost action, and also has a remarkably high degree of durability and

CEMENT, CONCRETE MORTAR and Related Products

- Cement
- Cement Production
- Storage
- Special Types of Cement
- Aggregates
- Gravel and Stone
- Special Types of Aggregates
- Structural Concrete
- Design of Concrete Structures
- Planning, Installation, Mixing, Handling, Transporting
- Shoring Concrete
- Wholesale of Concrete
- Construction Terms
- Testing and Inspection
- Standard of Practice
- Pre-treated Concrete
- Pre-mixed Applied Concrete
- Stucco and Concrete Coatings
- Special Concrete
- Ready-Mix Concrete Units
- Job Mix, Ready-Mix
- Terrazzo and Decorative Concrete
- Waterproof Concrete
- Waterproof Concrete
- Waterproofing and Sealing Compounds
- Mortar for Masonry Units
- Types of Mortar
- Mortar in Use



Above, from top to bottom, are shown portions of well-graded sand, gravel, and coarse aggregates. The lower photograph is a cross-section of quality concrete, marked by the absence of voids

workability. Air-entrained concrete with normal aggregates is from three to six per cent lighter in weight than otherwise. There may be some loss in strength with normal cement-water ratios, which require slightly more aggregate. This may be offset by increasing the amount of cement per cubic yard. Air-entrained concrete has less slump than regular concrete. Because there is no difference in price between regular and air-entraining cement, the latter is steadily advancing in popularity with builders.

Other special types of cement are white cement, which is a portland cement made of selected raw materials and by processes which will introduce no color, staining, or darkening of the finished product. Waterproof portland cement is made by grinding water-repellent materials with the clinker from which it is made.

Refractory Cement

Refractory cement is not a true portland cement, but is a calcium-aluminate hydraulic cement having many properties unlike portland cement. Refractory cement make possible the use of concrete for many purposes and conditions where ordinary concrete is unsuitable, such as for furnace and kiln linings and chimneys. Refractory aggregates, such as crushed salvage firebrick, must be used in such mixtures.

The cement used by the Romans in ancient times was a volcanic rock of alkaline silico-aluminate composition, called pozzolana. This cement formed a very stable concrete due to a chemical reaction between the free lime and the pozzolana. Similar characteristics are found in fly ash, and research is under way at the present time to determine the effects of the addition of fly ash to cement. Fly ash, suitably treated with alkalines and combined with portland cement produces a concrete of greater compressive strength and sulfate resistance

than is obtained by other cements, on the basis of present tests.

AGGREGATES

The inert materials such as sand, pebbles, or crushed stone that are mixed with cement and water to make concrete are known as aggregates. Although they are usually considered as inert materials acting as fillers, the aggregates compose some 66 to 78 per cent of the concrete by volume. Aggregates must be clean, free of clay, dirt, coal, silt or other matter which would inhibit proper coating by and bonding with the cement paste.

Both fine aggregates, such as sand, and coarse aggregates, like gravel, should meet the requirements of "Standard Specifications for Concrete Aggregates," ASTM Designation C33. Generally speaking, sand and gravel supplied to the builder by local materials dealers are of good quality. Bank run gravel, the mixture of sand and pebbles taken from the bank or pit without screening, usually has a higher percentage of sand than is required for a correct mix, and the proportion may vary greatly throughout different parts of the bank. If it is desired to use bank run gravel because of its ready availability, it should be screened through a ¼-inch mesh, and the sand and pebbles thus separated combined in correct amounts in the concrete.

The size of the aggregates depends upon the thickness of the section to be poured. All sand should pass through a ¼-inch mesh. The maximum diameter of coarse aggregates should not be greater than one-fifth of the narrowest dimension of the concrete member in which it is being used.

Other Aggregates

In addition to sand and gravel, other materials used as aggregates in concrete include cinders, blast fur-

SUGGESTED PROPORTIONS OF WATER TO CEMENT

Kind of Work	U. S. gallons of water to add to each 1-sack batch			Trial mixture for first batch			
	Damp sand	Wet sand	Very wet sand	Cement, sacks	Sand, cu.ft.	Gravel or crushed stone, cu.ft.	Maximum aggregate size, inches
Foundation walls which need not be watertight; footings for walls, columns and chimneys; retaining walls, garden walls.	6 ¼	(Average sand) 5 ½	4 ¼	1	2 ¾	4	1 ½
Watertight basement walls, walls above ground, driveways, walks, floors on ground, basement floors, porch floors, paved terraces, concrete steps.	5 ½	(Average sand) 5	4 ¼	1	2 ¾	3	1 to 1 ½
Suspended reinforced concrete floors of all types; reinforced concrete posts and columns, sills, lintels.	5 ½	(Average sand) 5	4 ¼	1	2 ¾	3	¾



nace slag, burnt clay, pumice, and expanded vermiculite. Cinder concrete is made of cinders, cement, and water; or cinders, sand, cement, and water. In order to be suitable for concrete, cinders should be hard-burned boiler cinders, free from fine ash, and with a combustible content of not more than 35 per cent by weight. Household ashes are too fine and powdery and should never be used.

Cinder concrete is used for certain classes of work such as roof saddles, floors not designed for carrying heavy loads, and the manufacture of cinder blocks. The value of cinder concrete is chiefly in its light weight.

Blast furnace slag has found an increasing use as a coarse aggregate for concrete. The slag particles are extremely hard, and because of their pitted surfaces are firmly held in the matrix of cement and sand. Generally, blast furnace slag for concrete work should have a weight of 65 pounds per cubic foot or more, depending on the abrasion to which the concrete is subjected.

Lightweight Aggregates

Concrete made with the usual types of aggregates weighs on the average about 150 pounds per cubic foot. Concrete of a lighter weight can be

produced by the use of an admixture which causes swelling of the mix, or by the use of lightweight aggregates. The admixture has been used chiefly for floor and roof fills, giving a concrete weighing about 50 pound per cubic foot. The strength of such concrete is less than that of normal concrete, but in such uses strength is not an important factor. With admixtures, the swelling occurs after the concrete is placed, so that allowance must be made for the increase in volume.

Lightweight aggregates are used in some structural concrete and in precast units such as concrete masonry, floor joists, and precast roof slabs. Burnt clay, expanded blast furnace slag, pumice, and expanded vermiculite are some of the materials used. Sand is often added as a fine aggregate to improve the workability of the mix. Concrete weights of from 40 to 110 pounds per cubic foot are obtained, depending on the type of aggregate and the use for the concrete. Higher cement factors are required for given consistency and strength with lightweight aggregates than for concrete using ordinary aggregates.

Lightweight aggregates are porous and must be wet thoroughly before being used. A larger proportion of



Five Different Ways for Placing Concrete

On this page are five approved methods for placing concrete, each the best one available for a particular job. Clockwise, from top to bottom: the hand-mixed, shoveled-in-place technique is still best and most economical for small placements. The wheelbarrow carries most of the poured concrete to its final place, although the convenience of ready-mix trucks shown in the next photo has taken over much of the wheelbarrow's work. Hoists and chutes are economical for larger jobs; the adjoining photo shows concrete being pumped at a large Indiana housing project.





Heating of materials is necessary for cold-weather mixing and pouring of concrete. A fire in a large pipe keeps aggregates heated

fine aggregates is generally required, because of the rough surfaces and irregular shapes of light aggregate particles.

Lightweight aggregates should be obtained from reliable dealers and producers equipped to supply a uniform, dependable product. Since there is a considerable variation between the different types of lightweight aggregates, the user must rely on the data supplied by the producer for his product only, and should also follow manufacturer's recommendations carefully for best results.



Prefabricated forms save the builder time and money. The units shown above are of rigidly braced metal panels

Type of aggregate	Wt. of aggregate per cu. ft. (lb.)	Wt. per cu. ft. of concrete using aggregate (lb.)
Burned clay or shale	40-60	100-120
Expanded slag	40-60	90-100
Cinders	40-50	110-115
	(plus sand)	
Pumice	30-60	60-90
Diatomite	28-40	55-70
Perlite	6-16	40-45
Vermiculite	6-10	25-50

of the total concrete by volume, of which 7 to 14 per cent is cement and 15 to 20 per cent water. Aggregates take from 66 to 68 per cent of volume.

Water used for mixing concrete should be free of acids, alkalis, or oils. Any water which is suitable for drinking may be used for concrete mixing unless abnormal quantities of sulphates are present.

Design of Concrete Mixtures

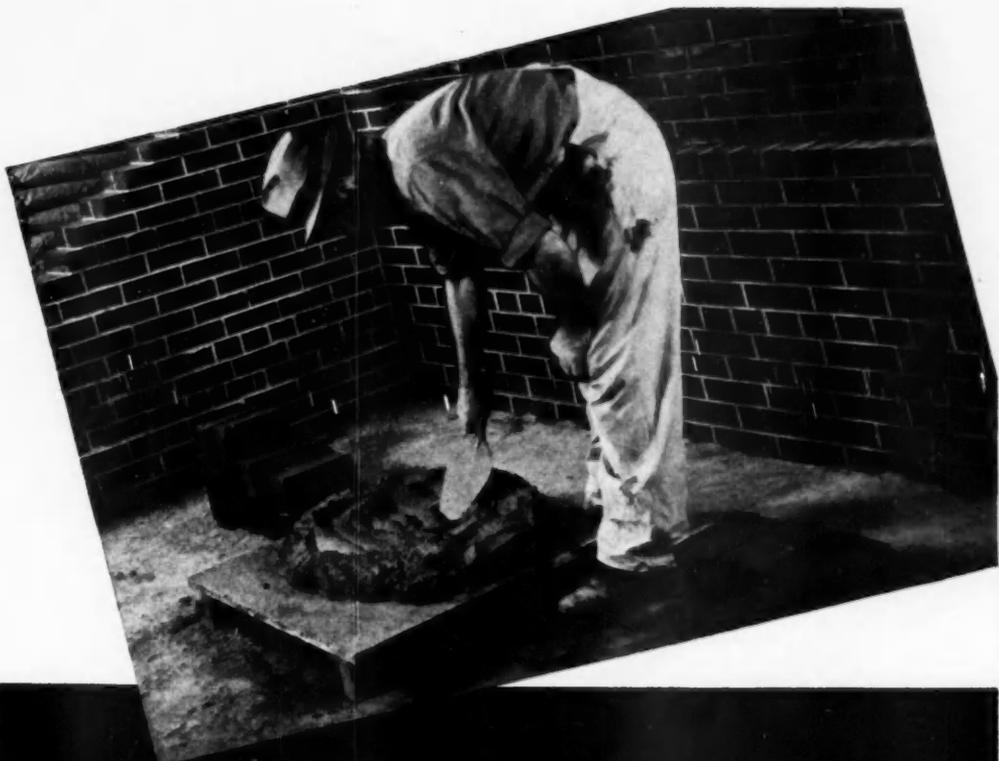
Concrete mixtures should be designed to give the most economical and practical combination of materials which will produce the necessary workability in the fresh concrete, and the required qualities in the hardened concrete. The different factors entering into the precise calculation of optimum amounts of cement, water, and aggregates are too detailed to enter into here; a comprehensive outline is given in the booklet "Design and Control of Concrete Mixtures," available from The Portland Cement Association, 33 W. Grand Ave., Chicago, 10, Illinois. Suggested concrete mixes for different types of home construction are shown in the adjoining table as a guide, which may be modified as local conditions and experience dictate.

Measuring Aggregates

Quality concrete begins with the accurate measurement of the ingredients. Haphazard division of sacks is an inadequate method for measuring cement, and batches of at least one-bag size should be mixed if practical. On small jobs, weighing may be efficiently accomplished on a platform scales set on the ground with runways at either side so that wheelbarrows may be run on and off. When several wheelbarrows are used on the same scales, they should be weighted so that they all have the same tare. The men soon become skilled at filling the wheelbarrows so that very little need be added or taken off to give the correct weight.

Measuring Cement

If bagged cement is used, mix in full bag units. On jobs requiring less than full bag mixes, it is better to weigh the cement rather than divide a bag by volume. On large-scale proj-



BRIXMENT

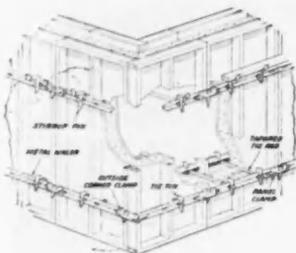
is more plastic!

ONE of the most outstanding characteristics of Brixment is its plasticity. Its working qualities are comparable to those of lime putty. Because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand, and still make good workable mortar. . . .

This exceptional workability makes it easy for the bricklayer to secure neat, clean brickwork, with the brick properly bedded and the joints well filled. The final result is a better job, at lower cost.



LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY
APRIL 1952



ects where bulk cement is used, a springless scale for weighing cement is the most accurate and efficient method.

Measuring Water

Because of the importance of the correct amount of water, accurate and dependable means for measuring the mixing water are essential. Portable mixers are generally equipped with water tanks and measuring devices that are reasonably accurate when properly used. The horizontal tanks used on mixers some years ago cannot be depended on for accuracy; the vertical ones on newer mixers are more accurate. For small projects, a bucket may be calibrated and marked.

Mixing the Concrete

In mixing, it is important to get all the particles of the aggregate thoroughly coated with the cement paste. The time required for thorough mixing depends on several factors. Specifications usually require a minimum of one-minute mixing for mixers up to a one-yard capacity, with an increase of 15 seconds mixing time for each additional half-yard or part thereof. The mixing period should be measured from the time all the solid materials are in the mixing drum, provided all the water has been added before one-fourth the mixing time has elapsed. The steps for most efficient charging of the concrete mixer are as follows:

1. Add about 10 per cent of the water to be used.
2. While allowing the water to run, add the aggregate.
3. Add the cement.
4. Add the last 10 per cent of the water.

After mixing for the correct time on the basis of the size of the mixer, the concrete must be discharged and placed promptly. One and a half hours is the maximum time that may elapse before pouring, without seriously affecting the characteristics of the finished concrete. The initial set takes place within two or three hours,



Slabs of prestressed concrete make the 8-foot overhang of the eaves possible here

and water should not be added to re-work mixtures.

Mixer Operation

Mixers should not be loaded above their rated capacity, nor at greater than recommended speeds. If additional output is needed, it should be obtained with additional or larger mixers, not by overloading or speeding up the equipment on hand. If the blades of the mixer become worn or coated with concrete, the mixing action will be less efficient. Badly worn blades should be replaced, and the mixer cleaned after each day's work. Any hardened concrete should be removed before proceeding with fresh mixing.

Handling and Transporting Concrete

Each step in handling, transporting, and placing concrete should be carefully controlled to maintain uniformity through the batch and from one batch to another, so that the completed structure will be of uni-

form quality throughout. It is essential to avoid separation of the coarse aggregates from the cement-water-fine aggregates paste, or separation of the water from the other ingredients. Segregation at the point of discharge from the mixer can be avoided by providing a down pipe at the end of the chute so that the concrete will drop vertically into the receiving hopper, buggy, or wheelbarrow.

All hoppers and mixers should have a vertical drop at the discharge gate. If the concrete is discharged at an angle, the heavy aggregates are thrown to the far side of the buggy or barrow, and the cement and fine aggregates are dropped at the near side, resulting in a segregation that may not be corrected by further handling of the concrete.

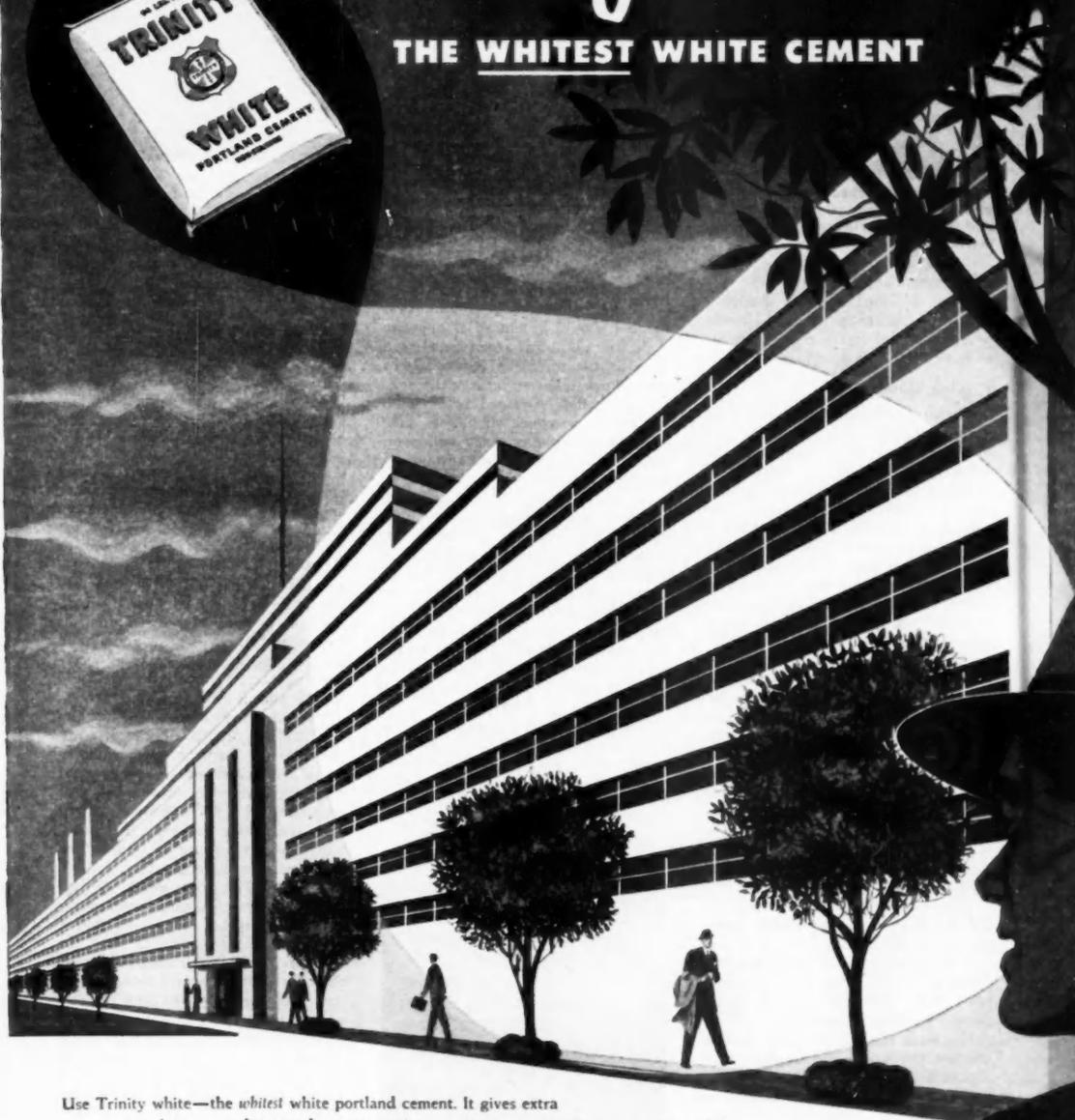
The home builder uses either wheelbarrows or concrete buggies for transporting concrete from the mixer to the forms. Buggies made in sizes from 6 to 11 cubic feet relieve the laborer of the weight of the load,



Stucco permits flexibility in design. Is well adapted to contemporary architecture

Trinity White

THE WHITEST WHITE CEMENT



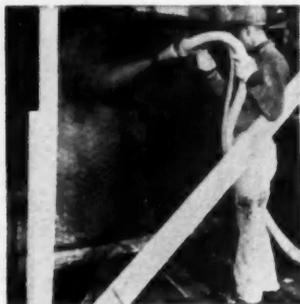
Use Trinity white—the *whitest* white portland cement. It gives extra eye-appeal to . . . architectural concrete units . . . stucco . . . terrazzo . . . cement paint.

Trinity has many special uses because of its beauty and light-reflective properties. Trinity white is a true portland cement that meets all Federal and ASTM specifications.

General Portland Cement Co., 111 W. Monroe St., Chicago; Republic Bank Bldg., Dallas; 816 W. 5th St., Los Angeles; 305 Morgan St., Tampa; Volunteer Bldg., Chattanooga.

a true portland cement

As white  as snow
... plain or waterproofed



Pneumatically applied concrete is successfully used both on new construction and for repairing old concrete which has deteriorated

(Continued from page 482)

and are designed for easy dumping and rapid discharge. Runways should be smooth and fairly rigid to minimize any tendency to segregate.

Placing Concrete

The first essential in the placing of the mixed concrete is the preparation of the forms, exposed surfaces, and sub-grade. Sub-grade should be trimmed to the required level. Low spots should be filled and tamped. The sub-grade should be moistened to minimize extraction of the water from the concrete. This is especially important in pouring pavements, floors, and other slab work in hot weather. All loose material should be cleaned out.

Forms should be well braced, tight, clean, and of a material suitable for the texture of the finished concrete. Nails, sawdust, and other debris should be cleaned out. Forms should either be oiled or saturated with water to reduce water absorption and facilitate removal after the concrete has set. Plywood forms are frequently lacquered instead of being wetted or oiled. Reinforcing steel should be clean and free of loose rust or mill scale.

When placing new concrete against old or hardened concrete, it is necessary to secure both a good bond and a watertight joint. The hardened concrete should be clean, rough, and moistened. Some of the aggregate particles should be exposed.

On floor slabs to be built in two courses, the top of the lower surface should be brushed, just before it sets, with a stiff fibre or steel broom. It must then be protected and thoroughly cleaned before the second course is placed. Old concrete that is to be bonded to new concrete in patch or alteration work must be thoroughly roughened and cleaned. In most cases it is necessary to chip

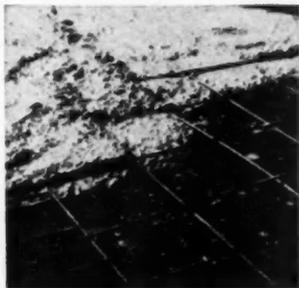
off the entire old surface to get a satisfactory bond.

When pouring the second course of a two-course floor, a coat of cement and water paste of the consistency of thick paint should be brushed on before the second course is placed. New concrete poured on rock or hardened concrete should be preceded by a cushion of cement mortar to prevent stone pockets and to secure a tight joint. Surfaces on which fresh concrete is placed should be thoroughly wet, but there should not be any pools of water.

In slab construction, placing should start at the far end, against concrete already in place. The mixture should not be dumped in separate piles, but should be placed as nearly as possible in final position. If the coarse aggregate has settled out, it should be redistributed. In walls, the first batches should be placed at opposite ends and additional concrete worked towards the middle of the wall. In large open slabs or areas, the perimeter should be placed first. In all cases the procedure should be such as to prevent water from collecting at the corners and ends of forms, and along form faces.

In pouring high walls or columns, the forms should be filled to within a foot of the top, at intervals of not more than six feet and in layers of about a foot thickness. The placed concrete is allowed to settle for one or two hours before the final foot is placed. When it is placed, it should be spaded, compacted, and straight-edged. Steel troweling should be delayed as much as possible and held to a minimum.

Because there is a measurable expansion of concrete with increases in temperature, it is necessary to provide expansion joints in some structures. Butt strips, metal, asphalt-treated felt, and other devices are used for this purpose.



Steel reinforcing rods are used to increase the tensile strength of concrete. Note how the concrete is placed under the rods so that the reinforcing is imbedded in the concrete. Rods should be at least 3/4-inch from the surface



Precast joists offer the advantages of strength, economy, and fire resistance

Concrete Vibration

Vibration does not make concrete stronger, more water-tight, or more resistant to deleterious forces. It does, however, permit the use of stiffer, harsher mixes. Thus, either mixes of a lower water content or leaner mixes can be used. If less water is used, the concrete will be of better quality; if a leaner mix is used, the concrete will be more economical. Vibration is also of assistance in avoiding the difficulties from mixes that are too wet and tend to bleed and segregate. Thus better surfaces and better construction joints are produced.

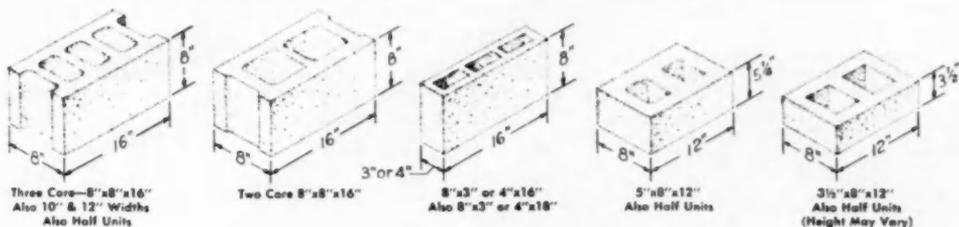
Vibrators should not be used to move concrete long distances horizontally in the form. The concrete should be deposited as near the final location as possible, distributed in layers, and then vibrated. Some hand spading and puddling may be necessary to secure smooth finishes and reduce pitting on formed surfaces.

Vibrators may be powered by electric motor, gasoline engine, or compressed air. Both internal and external vibrators are used; the most common type is an internal vibrator consisting of a driving motor or engine and a long flexible shaft terminated by a vibrating element which is thrust into the concrete.

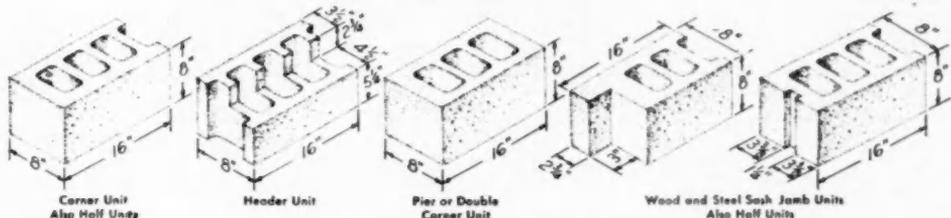
Internal vibrators should be inserted in a vertical position at intervals of 18 inches or so, depending on the type of equipment and the character of the mixed concrete. Spacing should be such that there is some overlapping of the area vibrated at each insertion. The vibrator should fully penetrate the concrete being placed, and may go into the layer below if the previously placed concrete becomes plastic under vibratory action. However, if the lower layer has stood for some time, penetration of this layer by the vibrator may cause a wavy line on the exposed surface at the junction of the two layers; this may be undesirable from the standpoint of appearance.

Typical Hollow Concrete Masonry Units

The nominal face size of units shown below and the nominal thickness of units are 3, 4, 6, 8, 10 and 12 in. Units are manufactured to allow for 1/2, 3/4 or 1 in. mortar joints. In some areas the nominal face size units are 6"x8"x16". Designers should contact local sources of supply to determine dimensions of units available.



Types of Concrete Wall Units—Stretchers



Standard Specials for 8" Units Also Made in Two Types

Similar Specials Are Regularly Furnished For 10" & 12" Units

National Concrete Masonry Association Data

Suggested Proportions of Water to Cement for Various Kinds of Concrete Work and Trial Mixes

KINDS OF WORK	Add U.S. gal. of water to each sack * batch if sand is:			Trial mixture			Materials per cu. yd. of Concrete*		
	Very wet	Wet	Damp	Cement sacks	Aggregates		Cement sacks	Aggregates	
					Fine, cu. ft.	Coarse, cu. ft.		Fine, cu. ft.	Coarse, cu. ft.
5-GAL. PASTE FOR CONCRETE SUBJECTED TO SEVERE WEAR, WEATHER OR WEAK ACID AND ALKALI SOLUTIONS									
Tappings for two-course work. One-course industrial, creamery and dairy plant floors. Thin sections of dense, strong concrete.	3 3/4	4	4 1/2	1	1 3/4	3	7 1/4	13	22
	3 1/2	4	4 1/2	1	2	2 1/2	8	16	18
	3 1/2	4	4 1/2	1	2	1 3/4	9	18	16
6-GAL. PASTE FOR CONCRETE TO BE WATERTIGHT OR SUBJECTED TO MODERATE WEAR AND WEATHER									
Watertight floors such as industrial plant, dairy barn, basement, etc. Watertight basement walls. All watertight concrete for storage tanks, septic tanks, swimming pools, etc. Concrete subjected to moderate wear or frost action such as walks, driveways, tennis courts, etc. Reinforced structural beams, columns, slabs, etc.	4 3/4	5	5 1/2	1	2 1/4	3 1/2	6	13 1/2	21
	4	4 3/4	5 1/2	1	2 1/2	2 1/2	6 1/2	16 1/2	16 1/2
	4	4 3/4	5 1/2	1	2 1/2	2	7 1/2	18 3/4	15
7-GAL. PASTE FOR CONCRETE NOT SUBJECTED TO WEAR, WEATHER OR WATER									
Foundation walls, footings, mass concrete, etc.	5	5 1/2	6 1/4	1	2 3/4	4	5 1/4	14 1/2	21
	4 1/2	5 1/2	6 1/4	1	3 1/4	3	5 1/2	18	16 1/2
	4 1/2	5 1/2	6 1/4	1	3 1/4	2 1/4	6 1/2	21	14 3/4

*Quantities are estimated on wet aggregates, using trial mixes and medium consistencies (5-in. slump). Quantities will vary according to grading of aggregate and consistency of mix. Change proportions of fine and coarse aggregate slightly if necessary to get a workable mix. Quantities are approximate. No allowance has been made for waste.

NOTE: If concrete aggregates are sold in your locality by weight, you may assume for estimating purposes that a ton contains approximately 22 cu. ft. of sand or crushed stone; or about 20 cu. ft. of gravel. For information on local aggregates consult your building material dealer.

Portland Cement Association Data

SUMMARY: Physical Requirements For Various Types of Concrete Masonry Units

Specification, serial designation, and latest revised date	Minimum face-shell thickness, in.	Compressive strength, minimum, psi, average gross area		Water absorption, maximum, lb. per cu. ft. of concrete, average of 5 units	Moisture content, maximum, per cent of total absorption, average of 5 units
		Average of 5 units	Individual unit		
Hollow load-bearing concrete masonry units ASTM C90, 1944†	1 1/4 or over:				
	Grade A*	1000	800	15	40
	Grade B**	700	600	—	40
	Under 1 1/4 and over 3/4	1000	800	15	40
Hollow non-load-bearing concrete masonry units ASTM C129, 1939†	Not less than 1/2	350	300	—	40
Solid load-bearing concrete masonry units ASTM C145, 1940***†	Grade A	1800	1600	15	40
	Grade B	1200	1000	15	40
Concrete units, masonry, hollow Federal 55-C-621, 1935				Average of 3 units	Average of 3 units
Load-bearing units	1 1/4 or more	700	600	16	40
	3/4 to 1 1/4	1000	800	16	40
Non-load-bearing units	Not less than 3/4	350	—	—	40

		Compressive strength, minimum, psi, average gross area (brick flatwise)		Modulus of rupture, minimum, psi, (brick flatwise)	
		Average of 5 brick	Individual	Average of 5 brick	Individual
Concrete building brick ASTM C55, 1937†	Grade A	2500	2000	450	300
	Grade B	1250	1000	300	200

†For use in exterior walls below grade, and for unprotected exterior walls above grade.

**For general use above grade where protected from the weather with two coats of portland cement paint or other satisfactory waterproofing treatment approved by the purchaser.

***Units with 75 per cent or more net area. The classification is based on strength and does not necessarily measure weather resistance.

Portland Cement Association Data

Precautions should be taken not to vibrate so much that segregation of the aggregates takes place. This may happen especially with concrete that is wetter than is necessary. Correct operation of the vibrator requires judgment by the operator to be sure that complete consolidation of the concrete is effected, and that no areas are missed, without causing any segregation. Sufficient vibration is usually indicated by submerging of the coarse aggregate particles, and the appearance of a line of mortar along the forms.

Concrete Forms

The general requirements for concrete forms are that they be strong, well braced, have little leakage, and be easily removed. The choice of form materials depends on the surface of exposed concrete desired. Wood forms are readily and cheaply made of tongue and groove sheathing, with 2 by 4's for studs and stringers.

Forms are more readily handled and removed when constructed in sections. Oiling the forms prevents adhesion of the concrete and makes removal easier. If the concrete surface is to be painted, paint and oil for the form must be selected that are suitable for such work. Paraffin oil diluted with kerosene or benzene is a generally satisfactory oil for surfaces of forms which will later be painted.

Special grades of plywood for form use in one-half and three-quarter inch thicknesses are available for builders, in sizes up to 4 by 8 feet. There is also a special plastic surfaced plywood which reduces absorption, and provides a very smooth finish. Plywood forms can be re-used many times, and are especially adapted to projects where many buildings of the same style are erected.

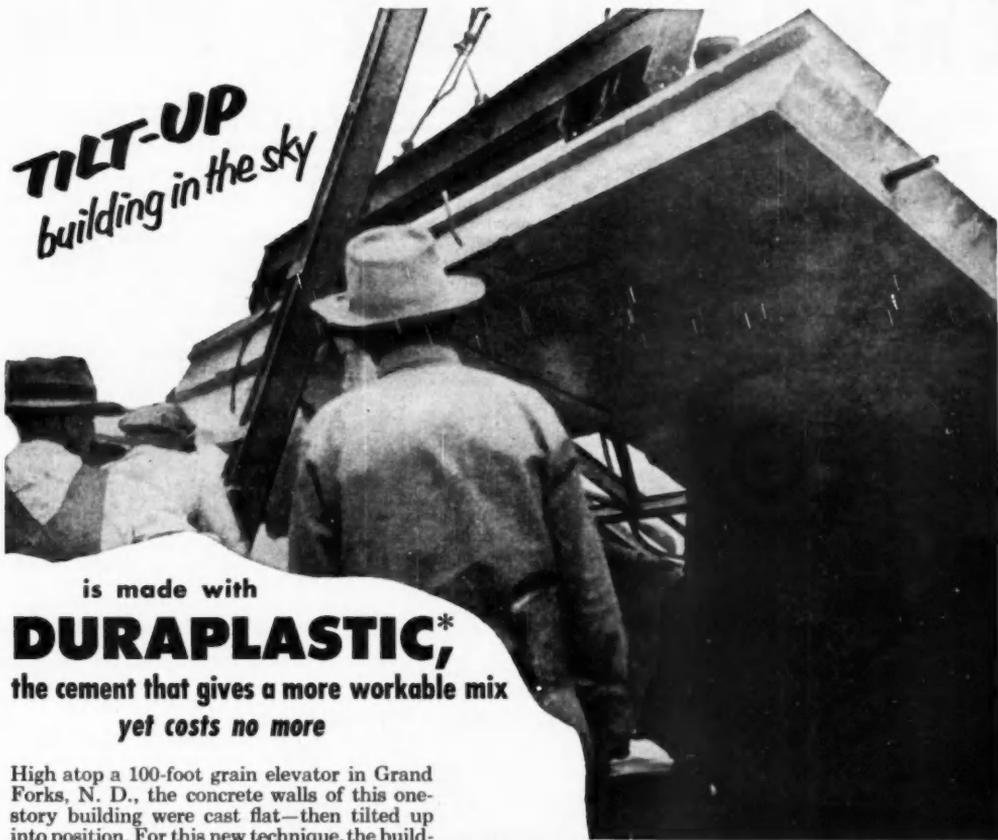
Manufactured form panels, form ties, and form-clamping devices offer time-and-labor-saving advantages to

to the builder. Form panels are available in sizes from about 2 by 4 feet up to 4 by 8 feet. These are used in conjunction with a variety of connecting bolts, tie holders, etc. Both plywood and metal ready-made forms are available. Aluminum and magnesium form panels are light in weight, and because of their precision construction leave smooth surfaces requiring little or no rubbing or finishing. Plywood forms having a magnesium strip around the edges do not chip in use or handling.

Wood, plywood, pressed wood fibre or other forms which are absorbent should be thoroughly wet before using so that water will not be absorbed from the concrete. This will also apply to earth footing sub-grade, or to earth used as a form wall. It is practical to use earth as a form wall provided there is no danger of the dirt being mixed into the concrete. If it is used, spading should be done carefully.

(Continued on page 488)

TILT-UP
building in the sky



is made with
DURAPLASTIC*
the cement that gives a more workable mix
yet costs no more

High atop a 100-foot grain elevator in Grand Forks, N. D., the concrete walls of this one-story building were cast flat—then tilted up into position. For this new technique, the builders specified a *time-tested* material—Atlas Duraplastic air-entraining portland cement.

They already had proof of Duraplastic's performance—because the elevator below was also Duraplastic-made! The increased plasticity and cohesiveness of Duraplastic concrete, which aids proper placement and helps to improve surface appearance, resulted in this neat slip-form job.

For more than a decade, Duraplastic has made better concrete for all types of structural jobs. Yet it sells at the same price as regular cement and requires no unusual changes in procedure. Complies with ASTM and Federal Specifications. For descriptive booklet, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), 100 Park Avenue, New York 17, N. Y.

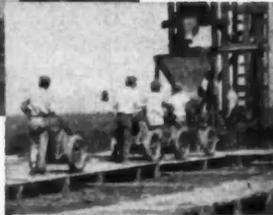
*"Duraplastic" is the registered trade mark of the air-entraining portland cement manufactured by Universal Atlas Cement Company

ATLAS
DURAPLASTIC
AIR-ENTRAINING PORTLAND CEMENT

Makes Better Concrete at No Extra Cost



DURABLE JOB—Water gain and segregation are minimized by Duraplastic's air-entrainment feature, and resulting concrete is fortified against the effects of freezing-thawing weather.



THE MIX SHOWS—There's an important difference when the mix is made with Duraplastic cement. Less mixing water is required for a given slump, yet the concrete is more plastic, more uniform and easy to place.

OFFICES:

Albany, Birmingham, Boston, Chicago, Dayton, Kansas City, Minneapolis, New York, Philadelphia, Pittsburgh, St. Louis, Waco.

AN D 130

"THEATRE GUILD ON THE AIR"—Sponsored by U. S. Steel Subsidiaries—Sunday Evenings—NBC Network

APRIL 1952

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(Continued from page 486)

Cylindrical forms of compressed impregnated fibre for columns are available, offering a substantial saving over the labor of constructing this type of form on the job.

Concrete Curing and Protection

After the concrete has been placed, the chemical process of hydration of the cement occurs. The initial curing reaction occurs quickly, but the secondary processes take place more slowly. The quality of the finished concrete is controlled to a considerable degree by moisture and temperature factors. Continued hydration of the cement in the concrete takes place ideally between 60 and 80 degrees F., and moisture in the concrete is necessary. No additional curing will take place after the concrete has dried out.

To promote curing, the placed concrete should be kept moist for a period sufficient to hydrate the cement adequately. This will depend on the thickness of the sections. There are many techniques for providing this continued moisture. Forms may be left in place for moisture retention. Slabs may be sprinkled or flooded by means of a dam around the periphery of the slab. Moisture-retaining covers such as burlap may be applied to walls and columns, and water-tight paper used on floors or slabs.

In all methods of keeping concrete moist after removal of forms, the moistening should be continuous. Alternate wetting and drying will not be effective, and may promote crazing or cracking of the surface.

Sealing compounds are available for improved curing. These are available in black, white, and colorless coatings, and should be applied as soon as possible after the surface has been finished. If there is any delay, the slab should be kept moist until the curing compound is applied. On formed surfaces, the forms are removed, the surface lightly sprayed with water, and the sealing compound then applied. Surfaces which should be protected against traffic should have an inch or more of sand or earth cover. This should not be put on sooner than 24 hours after the sealing compound.

The hydration reaction will not take place below freezing temperatures. To have effective hardening in cold weather, the temperature of the concrete must be kept at 50 degrees or more for at least five days. Some heat is generated in the concrete by the hydration. In cold weather it is necessary to provide additional heat from salamanders, oil heaters, etc., and protect the concrete with tarpaulins, straw, or a weather-tight en-

closure. If an enclosure is built, the warmed air must circulate around the outer members of the structure.

Cold weather concrete work may require that the water and aggregates be heated before mixing. In relatively mild temperatures, it will be sufficient to heat the water only; this is easiest and most efficient. Water should not be heated to over 175 degrees, when mixed with cement, as a flash set would otherwise occur. Hotter water may be added to the aggregates, which will cool it, before cement is added. Water is readily heated on the job by portable heaters having steam coils passing through a water tank, or even by placing water drums around a coke salamander, for small work.

In extremely cold weather, heating of both the water and aggregates is required. Aggregates may be heated on large projects by steam pipes in storage bins or piles, but it is more usual on small jobs to pile the sand and gravel over a section of culvert steel pipe in which a fire is built.

Calcium chloride may be used in cold weather to accelerate curing, provided the specifications do not prohibit its use. No more than two pounds of chloride per bag of cement should be used. This does not act to reduce the freezing point of the concrete; the optimum curing temperatures should still be maintained as closely as possible, and any concrete permitted to freeze within 24 hours after being placed will be permanently reduced in strength.

Removal of Forms

The advantage of leaving the forms in place for an extended period as an aid in the curing of concrete has been mentioned. However, there are reasons why it is desirable to remove the forms as soon as possible. For instance, patching of formed surfaces should be done as soon as possible, and this requires removal of the forms. If a rubbed finish is specified, the forms should be removed to permit rubbing before the concrete has become too hard. Also, it is often necessary to remove the forms to permit their immediate re-use.

Forms should not be removed under any conditions until the concrete is strong enough to carry its own weight and any construction loads it may be called upon to handle. Also, the concrete should be hardened so that it will not be damaged by the removal of the forms.

Care should be used in removing forms not to damage the concrete. Pinch bars should not be placed against the concrete surface, but should have a wedge or block inter-

posed for protection. Recessed forms should be left in place as long as possible so as to shrink away from the concrete. Only wooden wedges should be used in loosening forms, and jerking loose should be avoided, as this will chip or break the edges.

Prestressed Concrete

In conventional reinforced concrete, the compressive strength of concrete is combined with the tensile strength of steel. This combination places definite limitations on the thickness and weight of unsupported spans, the size of columns required, and the weight of beams.

The basic theory of prestressed concrete is to eliminate or reduce the tensile stresses to which unsupported areas such as roofs, floors, and the walls of tanks and pipe are subjected. This is done by stretching the reinforcing steel so as to superimpose compressive stresses in the concrete.

A comparison may be made with a row of books. If the two end volumes of a row are merely lifted, the center books will remain in place. However, if the row is squeezed together with the hands at the ends, and then lifted, the whole row picks up as a unit. In the same way, tension applied to reinforcing rods or wire, sets up compressive strains in the concrete which greatly increases its strength.

These strengthening compressive stresses are induced in prestressed concrete in either one of two major ways; by pre-tensioning or by post-tensioning of the steel reinforcement. In the pre-tensioning process, the steel is stretched *before* the concrete is placed or has set, and is anchored by bond within the concrete. After the concrete has hardened around the tensioned reinforcement, the jacks or stretching forces are released. As the steel seeks to shrink back to its original length, the tensile stresses are converted into compressive stresses in the concrete.

In post-tensioning, the steel is stretched *after* the concrete is hardened, and is anchored externally by means of plates or other gripping devices. In this process, the steel is tensioned against the concrete so that the greater the tension on the steel, the greater the compression in the concrete.

Because of the stresses involved, high tensile strength wire is necessary in prestressed concrete.

Pneumatically Applied Concrete

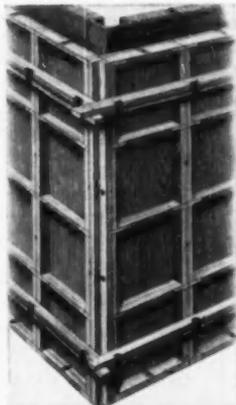
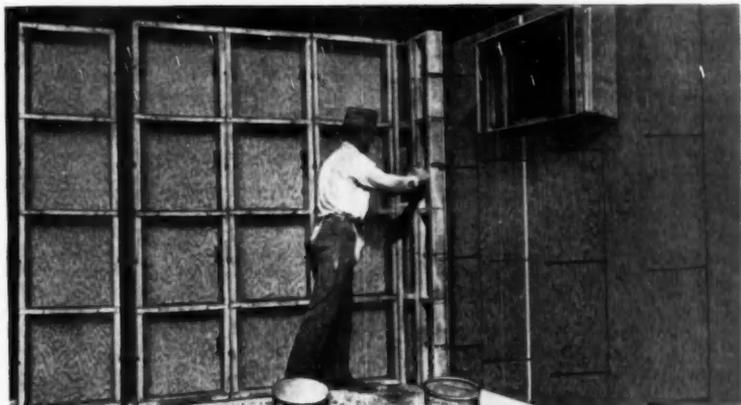
Concrete may successfully be applied by pneumatic pressure. Graded aggregate, less than 1/4-inch in size, is mixed with portland cement and

(Continued on page 490)

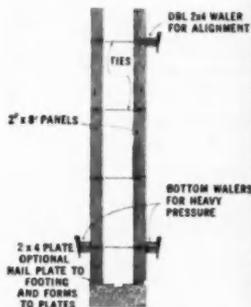
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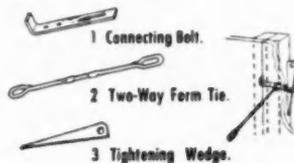


1 Starting at a corner, panels of the outside form are erected. Spreader ties are placed in position and anchored on the same connecting bolt, locking panels together. **2** Inside panels join projecting ties. Forms are aligned and braced with walers.



3 Section showing inside and outside forms ready to pour. **4** To strip wall remove locking wedges and connecting bolts. Pull panels back easily. Break off tie loops with a ½ twist. Wall is smooth, strong and waterproof.

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(Continued from page 488)

placed in a pumping machine from which it is fed into a hose at about 35 to 55 pounds pressure. Water is fed to the nozzle at a pressure about 15 pounds higher than that of the dry mix, and is sprayed on to form a homogeneous concrete. Less water is used with this process — about 3½ gallons per bag of cement — because the impact force expels excess moisture, air, and uncoated cement.

This concrete may be shot against any appropriate sturdy surface, including earth, to a width of several inches without slumping. This method may be used for building swimming pools, for repairing, waterproofing, fireproofing, and for protecting steel. Concrete blocks laid up without mortar or reinforcing, and shot with ¾-inch covering of pneumatic concrete have developed over three times the tensile strength of conventionally laid blocks.

The pneumatic application can be used for applying against a hydrostatic head, and the machine may also be used for applying plaster.

STUCCO AND CONCRETE COATINGS

Portland cement stucco is typically composed of one part of cement and three to five parts of damp, loose, well-graded aggregate. Hydrated lime up to 10 per cent by weight of the portland cement may be added as a plasticizing agent for better workability. Proportions should be accurately measured and thoroughly mixed. From three to five minutes of mixing time in a drum mixer is about normal.

Frame buildings to be stuccoed should have sheathing more than eight inches wide. This is covered with a 15-pound building paper, lapped three inches at joints and flashings. A steel reinforcing mesh is applied with furring nails that space out the mesh ¼ to ⅜ inches. Reinforcing joints should lap an inch and be staggered and lapped three inches at flashings. The building is then ready for stucco application.

Another point to consider in the preparation of the structure is the avoidance of concentrated water flows, through the use of overhangs and downspouts. Hangers, fasteners, and other trim should be in place before the stucco is applied. Flashings should be installed around the tops and sides of all openings, particularly around chimneys that are to be stuccoed. Although stucco is occasionally run to the ground level, it is better to stop about six inches above ground to prevent moisture seeping and staining.

Stucco will bond readily to masonry and concrete walls. Concrete walls

should be cleaned with a weak acid solution and rinsed to insure a clean bonding surface.

Stucco goes on in three coats, each being applied in one direction so that the mortar does not harden at the edges. Stops should be made only at natural divisions in the work. The first or scratch coat is applied about ⅜ of an inch thick, and allowed to set for 48 hours. A fog spray is applied, and the second, or brown coat, about ⅜-inch thick, is applied. Both of these coats are scratched to provide bonding for succeeding coats. The brown coat is permitted to moist cure for 48 hours, and should be air dried for about seven days before the final coat is applied. The finish coat should be not less than ⅜-inch thick, and is applied after the surface of the brown coat has been moistened.

A number of techniques and a variety of special equipment have been developed for treating finish coats of stucco to make it resemble stonework. When properly done, strikingly attractive results may be obtained. In some applications, after the stucco is scored to resemble mortar joints, the panels resembling stonework are individually colored in a non-uniform pattern. Much of the success of this type of work depends on the skill of the workmen and should not be undertaken unless experienced help is available.

PRECAST CONCRETE

Precast concrete is used mostly in the form of masonry units — concrete block, sill, slabs, etc. The development of the low-cost concrete block has been made possible largely by automatic concrete block-making machines, in which cement, water, aggregate and coloring are all mixed, formed, compacted and delivered for curing. Many of these machines are capable of producing as many as 10,000 units a day. At the other extreme, there are block machines operated by hand for farmers who have the time and suitable aggregates available for casting their own block. Many contractors find that a small concrete block plant is a profitable side-line, in addition to being a dependable source of quality block.

The wide variety of uses of concrete block include both load-bearing and non load-bearing functions. Foundation walls, piers, partitions, party walls, chimneys, back-up walls, sills, lintels and the like are all readily erected with concrete masonry units. The following is a partial list of the masonry unit forms now being made by manufacturers in a variety of sizes:

Slabs	Sash block
Cap Block	Header block

Coping block	Chimney block
Floor filler block	Bull nose block
Siding block	Grade block
Ashlar block	Corner block
Pilaster block	Sill block
Steel sash block	Beam lintel block
Catch basin block	Wall block
Brick	Roof tile
Drain Tile	Concrete pipe

Although these units are made in various sizes, their dimensions are usually modularly co-ordinated to simplify building problems. Actual dimensions are short ¼-inch or ⅜-inch of normal sizes to allow for mortar joints. Thus, the standard 8 by 8 by 16-inch unit actually measures 7⅝ by 7⅝ by 15⅝ inches. Concrete block are an economical masonry unit for houses because they are relatively large, more quickly set than brick, relatively true to size, and more economical of mortar.

Concrete masonry units may be made to have excellent fire-retarding and acoustical properties. Aggregates may be selected to give light weight or extreme density. In addition to sand and fine gravel, aggregates may include expanded slag, pumice, vermiculite, and other materials.

Structural Units

In addition to all of the different types of masonry units, a wide variety of structural units such as joists, slab sections, and wall sections are precast. Many of these sections are of pre-stressed construction, giving strength with light weight and permitting many new architectural applications and design treatments.

TERRAZZO AND DECORATIVE CONCRETE

Terrazzo, made with marble chips, cement, and water, is a decorative concrete floor material combining beauty, flexibility of design, permanence, and ease of maintenance. Terrazzo is usually placed in a layer two to three inches thick on a concrete base. It may be either bonded to the concrete or be an independent slab. The design may range from simple geometric patterns to intricately detailed pictorial panels. Outlines of differently colored areas are obtained by the careful setting of brass, white metal, or plastic strips. Both colored marble chips and color added to the cement are used to provide various tints and hues.

Terrazzo is also used as a service floor where appearance is not a factor, but durability, sanitation, and ease of maintenance are desired. Regular gray portland cement may be used, and aggregates selected on a basis of durability.

Colored concrete for decorative walks, driveways, and similar uses is

most readily produced by the addition of color to the concrete after it has been placed. The coloring is mixed with approximately equal parts of cement and sand and dusted on the surface of the concrete after it has just started to set. The pigment-cement-sand mix is troweled into the surface, and provides a durable finish, while paints would soon wear off.

—Recommended MORTAR Mixes Proportions by Volume

Type of service	Cement	Hydrated lime or lime putty	Mortar sand in damp, loose condition
For ordinary service	1-masonry cement or 1-partland cement	—	2 to 3 4 to 6
Subject to extremely heavy loads, violent winds, earthquakes or severe frost action isolated parts.	1-masonry cement plus 1-partland cement	—	4 to 6
	or 1-partland cement	0 to 1/2	2 to 3

*Federal specifications 20-C-1814, Type II.

—Quantities of Concrete Block and Mortar

Wall thickness in.	For 100 sq. ft. of wall		For 100 concrete block
	Number of block*	Mortar** Cu. Ft.	Mortar** Cu. Ft.
8	112.5	2.6	2.3
12	112.5	2.6	2.3

*Based on block having an exposed face of 7 1/2 x 15 1/2 in. and laid up with 3/4 in. mortar joints.

**With face shell mortar bedding—10 per cent wastage included.

—Quantities of Materials Per Cubic Foot of Mortar

Mortar mix (volume)		Quantities			
Cement Sack	Hydrated lime or lime putty Cu. Ft.	Sand in damp, loose condition Cu. Ft.	Masonry cement Sack	Hydrated lime or lime putty Cu. Ft.	Sand in damp, loose condition Cu. Ft.
1 Masonry cement	—	3	0.31	—	0.6
1 Portland cement	1	6	—	0.31	0.6
1 Masonry cement plus 1 Portland cement	—	6	0.31	0.31	—
1 Portland cement	1/2	3	—	0.29	0.67

1 sack masonry cement or portland cement = 1 Cu. Ft.

Color in concrete can be obtained by any one of three methods: colored cement topping, dusting with pigments and cement, and applying acid stains.

Coloring Pigments

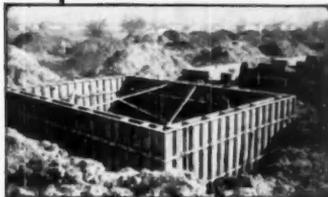
Pigment suitable for coloring concrete must fulfill the following requirements: (1) it must be durable under exposure to sunlight and weather, (2) must produce intense color, (3) must not react chemically in such a way as to harm the cement or color.

The best coloring agents are mineral oxides pigments. Others, such as organic dyes, have a tendency to fade and reduce the strength of the concrete. The natural oxides come directly from the mine and are satisfactory where dull colors can be used. Manufactured oxides are prepared for concrete work and produce

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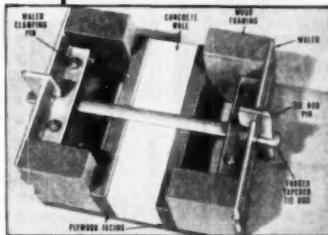
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bright colors. These are more expensive than natural oxides but many times their use is cheaper as less pigment is needed to produce certain shades.

Rules for coloring with the oxides are:

For blues use cobalt oxide.

For browns use brown oxide of iron.

For buffs use synthetic yellow oxide of iron.

For greens use chromium oxide.

For reds use red oxide of iron.

For greys or slate effects use black iron oxide or germantown lamp black, preferably black oxide. Common lamp black should not be used.

For tempering of shades these pigments can be mixed.

Amounts of Color for Colored Topping

Color is produced by weight proportion between color and cement and not by the cubic feet of the concrete used. Manufacturers suggest that the coloring material be used by weight for each bag of cement. A rule of the thumb is that pigment weights up to 10 per cent of the weight of cement may be used. Therefore 9 pounds of color can be used for each 94-pound bag of cement. However, the manufacturer's directions should be followed.

Aggregates used in colored cement should be as near the color of the concrete as possible. If these are not available the use of light colored semi-transparent aggregates should be used.

Mixing Colored Concrete Topping

For uniform coloring the pigment and the cement should be mixed together before being delivered to the job. Many times factory prepared colored cement is often economical to use. However, small batches can be mixed satisfactorily by sifting the two materials through a fine screen. For larger quantities the materials can be mixed in a dry concrete mixer. Recommended proportion for mixing the colored concrete on the job is 1:1:1 $\frac{3}{4}$. For example—one sack of colored cement, one cubic foot of sand, and 1 $\frac{3}{4}$ cubic feet of coarse aggregate. These ingredients are dry mixed until a uniform color is obtained, then water is added.

Colored cement can be placed by any one of three methods: The two-course integral, regular two-course, or the one-course method.

The two-course integral method is one in which the colored topping is placed before the base course hardens. It is used where the colored concrete can be placed and finished immediately.

In the regular two-course method, the colored topping is placed after the base course hardens. The surface of the base course is left rough to secure a good bond. This method is generally used for floors. Before placing the colored topping the base course should be cleaned and clamped. The under layer should be grouted a short distance ahead of the colored topping. Colored toppings need to be at least one-inch thick.

In the one-course method a full thickness of colored concrete is poured. This method is seldom economical except in thin slabs or in light tints of color.

Dusted-on-Color

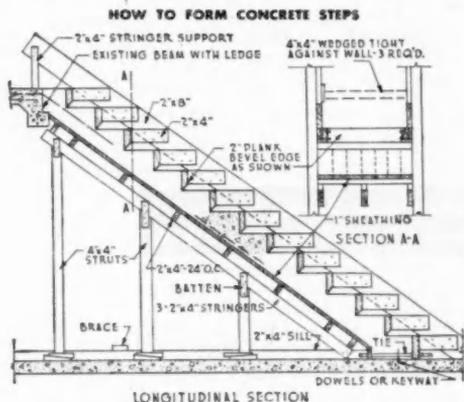
For floors subjected to light traffic, dusted-on-color can be used. A one-inch wearing surface is placed, and after screeding and leveling, the dusted mixture is applied immediately. The mixture is made with one part of cement, 1 to 1 $\frac{1}{2}$ parts of sand, and the required amount of pigment. The sand should be well graded so that 80 per cent will pass through a No. 8 sieve, while not more than 3 per cent passes through a No. 30 sieve. The mixture should be applied uniformly at the rate of 125 pounds per 100 square feet. After spreading the color mixture it

should be floated and worked into the slab. Floating should be discontinued as soon as the surface becomes wet, and resumed when the surface moisture has disappeared. After testing with a straight edge it should be troweled to a smooth finish.

Curing Colored Concrete— Scoring and Division Strips

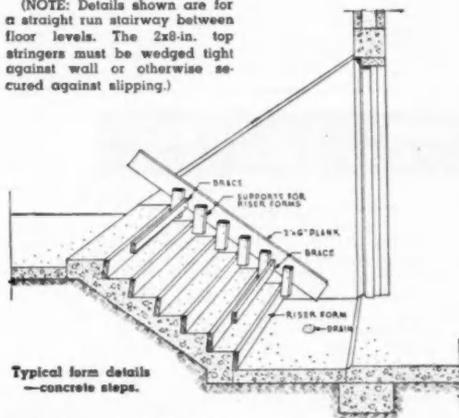
As soon as the colored concrete has hardened it can be covered with a one-inch layer of wet sand or other covering and kept wet for five days.

Concrete floors may be marked off into patterns by the use of an ordinary scoring tool on the fresh concrete. Scoring can also be accomplished by a power-driven car-



Typical forming details.

(NOTE: Details shown are for a straight run stairway between floor levels. The 2x8-in. top stringers must be wedged tight against wall or otherwise secured against slipping.)



Portland Cement Association Data

borundum disk cutting the hardened concrete. Difficulty in keeping the grooves clean is the main objection to grooving. Metal strips like those used in terrazzo floors can be used as division strips. They must be set at the finished concrete level if hand troweling is to be the only finishing.

Acid Stain Colors

Various tones of brown, buff, and green can be produced by inorganic acid stains. The chemical compound is applied to the concrete after it hardens.

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STUCCO APPLICATION DATA

Amounts of Cement and Sand Required

NOTE—The areas covered by one barrel of cement or one cubic yard of sand, as given below, are calculated for an average sand and without allowance for waste. In estimating, allowance must be made for waste. Openings are not deducted. When figuring for stucco, the loss of mortar, forming the keys for the first coat, should be taken into account.

**Area Covered by 1 Barrel of Cement
in Various Mixes**

Mixture		Thickness of Mortar Coat				
Parts by Volume		¼ Inch	⅜ Inch	½ Inch	¾ Inch	1 Inch
Cement	Sand	Sq. Ft.	Sq. Ft.	Sq. Ft.	Sq. Ft.	Sq. Ft.
1	1½	336	226	168	112	84
1	2	404	270	202	135	101
1	2½	472	314	236	157	118
1	3	542	362	271	181	136

**Quantities of Stucco Material
Required Per 100 Sq. Ft. of Wall**

Thick- ness	Cu. Ft.	1.2½ Mix		1.3 Mix		1.3½ Mix	
		Ce- ment sacks	Sand cu. ft.	Ce- ment sacks	Sand cu. ft.	Ce- ment sacks	Sand cu. ft.
¼"	2.08	.79	1.96	.68	2.06	.60	2.10
⅜"	3.13	1.19	2.95	1.03	3.10	.90	3.16
½"	4.17	1.58	3.94	1.37	4.12	1.20	4.22
⅝"	5.21	1.98	4.92	1.71	5.15	1.50	5.27
¾"	6.25	2.37	5.90	2.06	6.18	1.80	6.32
1"	8.33	3.16	7.86	2.74	8.24	2.40	8.42

**Area Covered by 1 Cubic Yard of Sand
in Various Mixes**

Mixture		Thickness of Mortar Coat				
Parts by Volume		¼ Inch	⅜ Inch	½ Inch	¾ Inch	1 Inch
Cement	Sand	Sq. Ft.	Sq. Ft.	Sq. Ft.	Sq. Ft.	Sq. Ft.
1	1½	1508	1006	754	503	377
1	2	1364	910	682	455	341
1	2½	1282	855	641	427	321
1	3	1222	815	611	407	306

Keystone Steel and Wire Data

WATERPROOF CONCRETE

Water-tight concrete may be readily obtained through the use of waterproofed cement now widely available. Also, waterproofing powders may be added in the mix to regular cements. Concrete made with these types of cement should be carefully cured, for once dry, the concrete cannot be wetted for additional curing.

Concrete made with regular port-

land cement is water-tight if properly designed, mixed, and placed. Leakage in concrete structures occurs through minute cracks and at construction joints.

A wide variety of materials is available for preventing and stopping leaks and moisture penetration in concrete. Broadly, these products are either silicones, silicone resins, or asphaltic and mineral gum com-

pounds. When manufacturers' directions are carefully followed for application, usually by brush or spray, the leakage of water and penetration of moisture can be stopped if construction is good.

MORTAR FOR MASONRY UNITS

Mortar for bedding masonry units, brick, stone and the like must have several essential characteristics. The material must be plastic and "hang" well to the brick, but must not be too fat, so as to be sticky. Low shrinkage and high strength are necessary; the mortar should also have good yield; that is, it should carry an adequate volume of sand in relation to the cement and/or lime.

The traditional method of making mortar by air-slaking quicklime with water to form a hydrated lime for the cementing agent, has been almost completely supplanted by the use of prepared mortar cements and lime-cement mixtures. Mortar made with commercial cements requires only the addition of sand and water to be mixed and used immediately. Mortar may either be mixed wholly with mortar cement or may have regular portland cement added for additional strength, greater water-resistance when cured, and slightly better handling and setting characteristics. Exact compositions should be based on the type of masonry units used, manufacturers' recommendations and the experience of the contractor and masons.

Mortar sand should be finer than sand used as a fine aggregate in concrete. Particles should be uniform in size, sharp and clean. Mortar-mixing is usually with a power mixer which gives uniform mortar, efficiently and economically. The mortar box and hoe are, however, still standard equipment for small masonry jobs such as chimneys, fireplaces, and small brick and stone veneer jobs.

Mortar in Use

Proper application of the mortar to the masonry units is as essential as good quality mortar to a strong, durable job. The units should be soaked with water to reduce absorption from the mortar. Full mortar beds and complete filling of spaces at ends of units are essential. In hollow wall construction, the inner faces should be parged to prevent moisture entrance.

Nominal Height of Concrete Masonry Walls by Courses

For concrete masonry units 7 7/8" and 3 1/2" in height laid with 3/8" mortar joints. Height is measured from center to center of mortar joints.

No. of courses	Nominal height of concrete masonry walls	
	Units 7 7/8" high and 3/8" thick bed joint	Units 3 1/2" high and 3/8" thick bed joint
1	8"	4"
2	1' 4"	8"
3	2' 0"	1' 0"
4	2' 8"	1' 4"
5	3' 4"	1' 8"
6	4' 0"	2' 0"
7	4' 8"	2' 4"
8	5' 4"	2' 8"
9	6' 0"	3' 0"
10	6' 8"	3' 4"
15	10' 0"	5' 0"
20	13' 4"	6' 8"
25	16' 8"	8' 4"
30	20' 0"	10' 0"
35	23' 4"	11' 8"
40	26' 8"	13' 4"
45	30' 0"	15' 0"
50	33' 4"	16' 8"

Portland Cement Association Data

GET THESE ADVANTAGES BY ADDING SOLVAY CALCIUM CHLORIDE TO YOUR CONCRETE

- Cuts setting time in half; permits quicker finishing.
- Reduces curing period; permits quicker use.
- Increases both early and ultimate strength.
- Increases rate of flow and workability; permits reduction in water-cement ratio.
- Offsets effects of low temperatures; gives added protection and safety.
- Can be used with regular, air entrained, high early, colored or low heat cement.
- Reduces volume change and surface wear.

SOLVAY
Calcium Chloride

- ✓ Cuts Delays
- ✓ Speeds Operations
- ✓ Adds Extra Strength

Free Book Gives Full Details

"The Effects of Calcium Chloride on Portland Cement" is a 40-page semi-technical book that is being offered by Solvay to architects, engineers, contractors, plant operators or anyone else who works with concrete. It is filled with authentic information—including tables, charts, graphs—and answers all your questions about the use of Calcium Chloride in concrete. Included are results of carefully controlled tests conducted in the field, and in the laboratory by leading authorities. For your free copy of "The Effects of Calcium Chloride on Portland Cement," write today on your business letterhead.



SOLVAY SALES DIVISION

Allied Chemical & Dye Corporation
Dept. 34-4, 40 RECTOR STREET, NEW YORK 6, N. Y.

Suggested Concrete Mixes

Kind of Work	U. S. gallons of water to add to each 1-sack batch			Trial mixture for first batch			Maximum aggregate size, inches
	Damp sand	Wet sand	Very wet sand	Cement, sacks	Sand, cu. ft.	Gravel or crushed stone, cu. ft.	
Foundation walls which need not be watertight, footings for walls, columns and chimneys, retaining walls, garden walls.	6¼	(Average sand) 5½	4¾	1	2¾	4	1½
Watertight basement walls, walls above ground, driveways, walks, floors on ground, basement floors, porch floors, paved terraces, concrete steps.	5½	(Average sand) 5	4¾	1	2¾	3	1 to 1½
Suspended reinforced concrete floors of all types, reinforced concrete posts and columns, sills, lintels.	5½	(Average sand) 5	4¾	1	2¾	3	¾

Portland Cement Association Data

How to Select the Proper Mix

Kinds of work	Recommended proportions of water to cement and suggested trial mixes								
	Gallons of water to add to each sack batch if sand is			Suggested mixture for trial batch			Materials per cu. yd. of concrete		
	Very wet	Wet (average sand)	Damp	Cement, sacks	Fine, cu. ft.	Coarse, cu. ft.	Cement, sacks	Fine, cu. ft.	Coarse, cu. ft.
5-gallon paste for concrete subjected to severe wear, weather, or weak acid and alkali solutions									
One-course industrial, creamery and dairy plant floors, etc.	3¾	4	4½	1	1¾	2	3	11	16
6-gallon paste for concrete to be watertight or subjected to moderate wear and weather									
Watertight floors, such as industrial plant, basement, dairy barn; watertight foundations; driveways, walks, tennis courts, swimming and wading pools, septic tanks, storage tanks, structural beams, columns, slabs, residence floors, etc.	4¼	5	5½	1	2¼	3	6¼	14	19
7-gallon paste for concrete not subjected to wear, weather, or water									
Foundation walls, footings, mass concrete, etc.	4¾	5½	6¼	1	2¾	4	5	11	20

Portland Cement Association Data

Proportions By Volume

Type of wall	Cement	Hydrated lime or lime putty	Mortar sand in damp, loose condition
Ordinary	1 masonry cement* or 1 portland cement	.....	2 to 3
	.....	1 to 1¼	4 to 6
Subject to extremely heavy loads, violent winds, earthquakes or severe frost action. Isolated piers	1 masonry cement* plus 1 portland cement or 1 portland cement	.....	4 to 6
	.....	0 to ¼	2 to 3

*Federal Specifications SS-C-131-b Type II.

Portland Cement Association Data

Approximate Amounts of Material Required Per Cubic Yard of Concrete

Type of concrete	Sacks of cement	Sand cu. yd.	Gravel cu. yd.	Maximum size of gravel
All concrete 4 in. to 8 in. thick 1:2¼:3 mix	6¼	¾	¾	1½ in.
All concrete 2 in. to 4 in. thick 1:2¼:2½ mix	6½	¾	¾	¾ in.

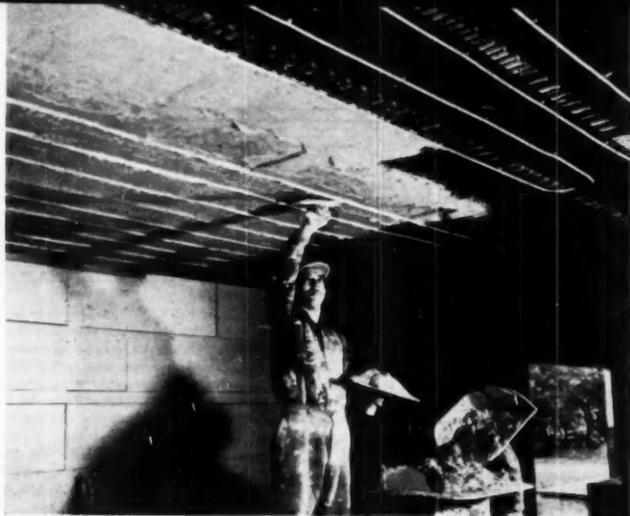
requires approximately 6¼ sacks of cement, ¾ cu. yd. of sand and ¾ cu. yd. of gravel. Then for the 3 cu. yd. of concrete needed for the septic tank one would need:

3 x 6¼ sacks cement = 18¾ (19) sacks of cement

3 x ¾ cu. yd. sand = 2 cu. yd. sand

3 x ¾ cu. yd. gravel = 2¼ cu. yd. gravel

Portland Cement Association Data



PROPER use and application of plaster bases is important in the construction of strong and durable finished walls and ceilings. A secure bond between the plaster base and the plaster is essential to develop strength and resistance to abuse, bumps, and cracking.

Gypsum plaster adheres to a plaster base because a bond is developed which virtually makes the two materials a solid unit. A "mechanical" bond is formed when plaster is pressed through the mesh or holes of the lath, forming keys on the other side. The keys actually rivet the lath and plaster together. This mechanical bond results when plaster is applied over metal lath or perforated gypsum or fiber insulating lath.

A "suction" bond is formed when gypsum plaster is applied over gypsum lath, sheet fiber insulation lath and masonry bases. In these cases the tiny needle-like crystals of the plaster penetrate into the surface pores of the base material by suction. When the plaster sets, the base material becomes "welded" to the plaster. When perforated gypsum lath is used, both suction and mechanical bonds are developed.

PLASTER BASES

Metal Lath

According to the Metal Lath Manufacturers Association, there are ten basic features of metal lath which make it effective when used with plaster:

(1) *Impact resistance.* This type of construction is said to offer maximum resistance to accidental blows and impacts and destructive forces of all kinds;

(2) *Adaptability.* It is easily cut for fitting, easily bent without breaking to follow curves and form strong

angles, and facilitates the plaster enclosure of light fixtures and heating units as well as plumbing and other installations.

(3) *Crack Resistance.* The tensile strength of the metal lath resists any tendency the plaster may have to crack when the structure moves or vibrates, as the metal lath forms a continuous two-way reinforcement.

(4) *Rigidity.* With as many as 1,000 mechanical keys holding the plaster positively in place per square foot, the entire construction develops a high ability to withstand the ravages of fire, hose stream, earthquake, or explosion.

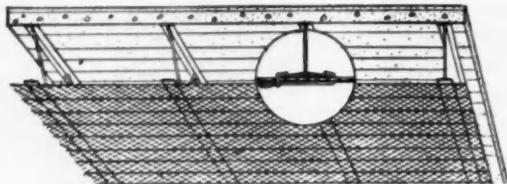
(5) *Sanitation.* Where steel reinforcing combines with plaster to form a hard, crack-free surface, the walls naturally receive a high rating from a sanitary standpoint as they provide little or no hiding place for germs.

(6) *Fire Resistance.* Exhaustive tests have demonstrated the high fire-resisting qualities of this type of construction, especially in halls and stairwells.

(7) *Sound Control.* Acoustical plaster over metal lath absorbs sound waves within a room, and both normal 2-inch solid and 4-inch hollow wall partition systems of ordinary plaster with metal lath have sound insulation values, the latter providing a reduction in sound of up to 55 decibels.

(8) *Light Weight.* Light-weight aggregates used with metal lath and gypsum plaster permit great savings without in any way reducing fire resistance or strength of wall.

(9) *Foolproof.* Metal lath is attached to supports in a variety of standardized ways so that it is usually easier and faster to apply the



METAL LATH SECURED TO STEEL JOISTS should be secured to the lower chord of steel joists with two strands of 16 gauge tie wire or four strands of 18 gauge wire at intervals of six inches, or with special clips. Free ends of tie wire should have at least three twists for security



METAL LATH ATTACHED TO CONCRETE JOISTS. Hangers for attaching metal lath directly to the underside of concrete ribs approximately 25 inches on center should be placed in ribs before concrete is poured. They should be hook, loop or hairpin type, not less than 14 gauge galvanized annealed wire when twisted as in tie wire and not less than 10 gauge galvanized wire when struck over to support the lath. Space not more than five inches apart

full thickness of plaster and do a good job, than it is to follow any other practices.

(10) *Economy.* Numerous economies in construction costs come from ease of handling, ease of installation, versatility, durability, and other qualities.

Types of Metal Lath and Accessories

Metal lath is of three basic types: diamond mesh (also called flat-expanded), rib, and sheet. Diamond mesh is metal lath slit and expanded from metal sheets into such a form that there is no rib in the lath. Rib metal lath has either a separately attached stiffening member or an unexpanded portion which leaves the plane of the lath at an angle and returns at the same angle, imparting a certain rigidity. Sheet lath is simply slit or punched from metal sheets, usually galvanized.

Accessories used include a wide variety of small nose and bull-nose corner beads, base screed, concealed picture molding, and metal casings of various sorts. Special channels, hangers, and metal studs are properly considered as framing members rather than lathing accessories.

Fiber and Insulation Lath

A number of manufacturers who produce insulating boards, sheathing, and wallboards of a fiber base also manufacture these materials as plaster bases. One fiber insulating plaster base is manufactured in a size $\frac{1}{2}$ by 48 inches from wood fibers felted together. It is easily applied to studs or joists not over 16 inches apart. It bonds satisfactorily with gypsum plaster but not with plaster containing vermiculite aggregate. A full $\frac{1}{2}$ -inch of plaster is required, and it should not be used where the surface will be exposed to excessive moisture or humidity.

This lath should be applied with the long dimension at right angles to the framing members, butted with staggered vertical joints. Regular $1\frac{1}{8}$ -inch blued lath nails should be used approximately four inches apart. Center end joints on framing members. Cut accurately to fit lath around electrical fixtures, etc., and reinforce all interior angles with cornerite. Corner bead should be applied to all exterior angles by nailing through to framing.

Another type of insulating lath is one which has aluminum foil or other vapor barrier applied to one side by

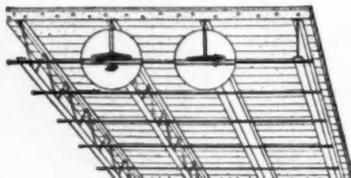
the manufacturer. Such lath is usually gypsum, although fiber lath in some instances has the same type of foil attached.

Wire and Paper Combinations

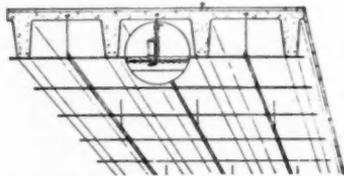
One familiar paper-wire combination is simply standard metal lath with paper backing applied by the manufacturer. Such paper backing frequently has a foil layer which serves as vapor barrier. Other types include coarsely woven wire with paper backing, and wire woven into and around paper strips.

Manufacturers claim for these products the advantages of automatic back-plastering without plaster keys (as all of the reinforcement is embedded in the first coat of plaster), no lath or stud marks, all angles and laps reinforced, instant bonding action due to the fibrous character of the paper used, and ease of handling and cutting.

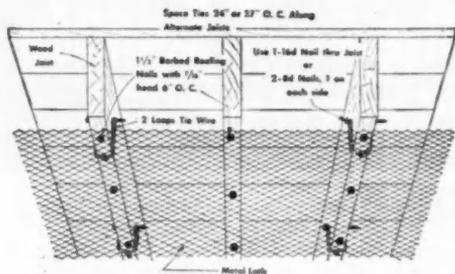
At least one group of plasterers has found that such lath may be plastered by spraying, speeding construction and cutting costs while providing good quality work. First and second coats are sprayed on while finish coat is applied by hand in regular manner. One man operates the spray



FURRED CEILING ON STEEL JOISTS. Furring members should be $\frac{3}{4}$ -inch cold rolled channels and should be erected at right angles to the joists. They should be securely attached to the bottom chords with 2 strands of 16 gauge or 4 strands of 18 gauge galvanized wire or other approved attachment of equal strength. Metal lath should be attached to furring with wire ties not more than 6 inches apart



FURRED CEILING ON RIB CONCRETE CONSTRUCTION. For concrete ribs centered approximately 25 inches, channel runners should be supported against bottom of ribs by hangers of two 14 gauge galvanized wires or similar strength with loops embedded 2 inches in the concrete. Hangers should be placed before concrete is poured and spaced 36 inches on center to engage $\frac{3}{4}$ -inch channels running parallel to the ribs. Hangers should be securely saddle-tied or wrapped around the cross channels. Cross furring members should be saddle-tied to channel runners at each intersection



METAL LATH TIED AND NAILED TO WOOD JOISTS (Contact Ceiling). For structures of greater than ordinary vibration, or where normal holding power of nails cannot obtain, metal lath should be attached to the wood with 1 1/2-inch No. 11 gauge roofing nails. For tying: 16d common nails are driven in a horizontal position clear through joists 2 inches above bottom edge of joists; metal lath is then secured to these nails by at least 2 strands of 18 gauge tie wire

gun while three work at rodding and darbying. Plasterers like it also because of the saving in physical effort.

Gypsum Lath

Gypsum lath made in sheet form in thickness of 3/8 and 1/2 inches consists of a core of gypsum pressed and rolled between two layers of special absorptive paper. It not only provides a perfect bond with gypsum plaster but adds bracing to the framing, lowers transmitted noise from room to room and is economical to apply. It is not harmfully affected by decay, dry rot or normal moisture, will not attract vermin, and is of fireproof core as well as being highly resistant to warping or buckling and cracking.

Gypsum lath, 3/8-inches thick, is designed for supports not over 16

inches on centers; where wider framing supports are used, 1/2-inch lath is required, but joists or studs should still be not over 24 inches on center. With 1/2-inch gypsum lath on framing members over 16 inches on center, plastering should be done by the three-coat method. This type of lath should be used with gypsum plaster only, as a bond with lime or portland cement plaster is inadequate. It should not be used in areas exposed to excessive moisture for long periods, and where one-hour fire resistance ratings are required, perforated gypsum lath should be used. The perforated gypsum lath is identical with the standard except that at 4-inch intervals holes approximately 3/8-inches in diameter have been punched through, allowing plaster to key mechanically to the back of the lath, thus providing both mechanical and suction

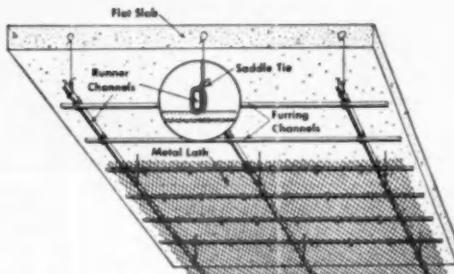
bond.

Perforated gypsum lath should not be used on ceilings with resilient clips or other side suspension clip systems; its other limitations are the same as those for regular gypsum sheet lath.

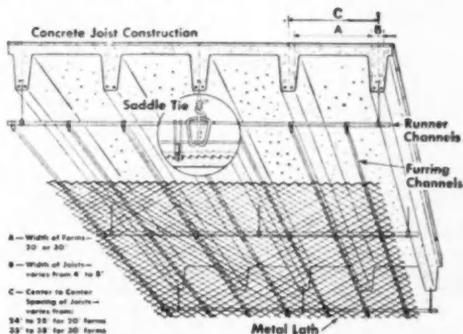
Application of Gypsum Lath

For 3/8-inch gypsum lath, use 1 1/2 inch 13 gauge blued smooth diamond point nails; for 1/2-inch lath use 1 3/4-inch length. For nailable steel framing use nails of proper gauge with not less than 3/8-inch heads and long enough to develop the proper nail holding of the framing. Steel framing should not be over 24 inches on center.

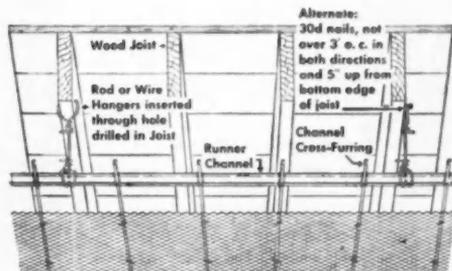
Space nails approximately 3/8-inches from the edges and ends, approximately five inches apart, using 4 nails per lath support. For 1/2-inch



SUSPENDED CEILINGS OF METAL LATH BELOW CONCRETE FLAT SLAB CONSTRUCTION. Hangers should be secured to steel reinforcement in concrete with cinder aggregate and may be secured to steel reinforcement or looped or embedded in the concrete with other aggregates. Special inserts to which hangers may later be attached may be inserted through or attached to the top of the forms in lieu of anchoring hangers directly in the concrete



SUSPENDED CEILING OF METAL LATH BELOW CONCRETE JOIST CONSTRUCTION. Hangers should be inserted through the centering at the bottom of joists, and should be provided with a loop or other deformation to positively enter the concrete or be secured to the reinforcing steel. In 20-inch wide form construction, hangers should be spaced 48 inches on center longitudinally in alternate rows of concrete joists. In 30-inch form construction hangers should be placed in each row of joists



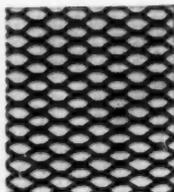
SUSPENDED CEILINGS OF METAL LATH BELOW WOOD CONSTRUCTION. Wire hangers may be inserted in holes drilled a minimum of 3 inches above the bottom of joists, or hangers may be attached to 30d nails driven on a downward slant into sides of joists with at least 3-inch penetration into the wood, with the wire of the hanger twisted around the nail at least three times. Each hanger will support a maximum of 16 square feet of ceiling area, hangers to be 4 feet on center and of No. 8 gauge galvanized wire.

MILCOR

 50th Anniversary

Metal Lath

and accessories

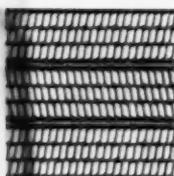


Smalmesh Metal Lath

A general utility lath. Can be readily bent or formed for furred or ornamental members. Due to the small, rigid mesh a minimum of plaster is required to produce a perfect key.

SHEET SIZE: 27" x 96", packed 10 sheets (20 sq. yds.) per bundle. All sheets squared on both ends.

MATERIALS AND WEIGHTS (lb. per sq. yd.):
Copper Alloy Steel, Painted—2.50 lb., 3.40 lb.
Galv. Sheet Steel 3.40 lb.

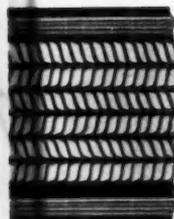


Specialmesh Metal Lath

A rib lath for walls and ceilings. Saves plaster; provides excellent bond. Ribs $\frac{3}{8}$ " wide; $1\frac{3}{8}$ " on centers. Cross strands at $\frac{1}{4}$ " intervals, reinforced by stiffening members (two between each pair of ribs). Sheets squared on ends. Well suited to "two coat work" or "back plastering."

SHEET SIZE: 24" x 96", packed 9 sheets (16 sq. yds.) per bundle. 27" x 96", packed 10 sheets (20 sq. yds.) per bundle.

MATERIALS AND WEIGHTS (per sq. yd.):
Copper Alloy Steel, Ptd.—2.75 lb., 3.40 lb.

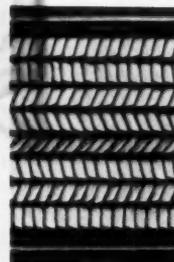


$\frac{3}{8}$ " Stay-Rib Metal Lath No. 2

Ideal self-furring lath for wide ceiling spans and for floor reinforcing over steel joists. $\frac{3}{8}$ " heavy ribs spaced 4.8" on centers. Five stiffening members between ribs. Connecting strands at $\frac{1}{4}$ " intervals. Rigidity of ribs saves labor and material when supports are widely spaced.

SHEET SIZE: 24" x 96", packed 9 sheets (16 sq. yds.) per bundle.

MATERIALS AND WEIGHTS (per sq. yd.):
Copper Alloy Steel, Ptd.—3.40 lb., 4.00 lb.



$\frac{3}{4}$ " Stay-Rib Metal Lath No. 3

Reinforcement for concrete floors and roofs. Serves as a form for wet concrete. Adaptable to pitched roofs, saw-tooth and monitor-type roofs. Also for reinforcing concrete base for tile, terrazzo, or composition flooring. Five $\frac{3}{4}$ " ribs spaced 6" on centers. Seven stiffening members between ribs.

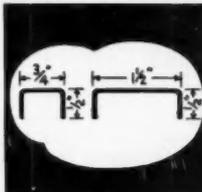
SHEET SIZE: 24" wide, 8, 10 and 12 ft. long. 6 sheets to a bundle.

MATERIALS AND WEIGHTS (per sq. ft.):
Copper Alloy Steel, Ptd.—.60 lb., .75 lb.
CROSS SECTIONAL AREAS (sq. in. per ft. width) .60 lb.—.1482; .75 lb.—.1977.

Milcor Corner-Ex

Finished edges. Center rib guides Corner-Ex accurately into corner. Design and contour eliminate any projections interfering with plastering. Wired together in sub-bundles of 25 pcs. each. Packed three sub-bundles (75 pcs.—600 ft.) per ctn.

SIZES: 2"x2"x96", 3"x3"x96".
WEIGHTS (lb. per 1,000 lin. ft.): 2"—100 lb.; 3"—140 lb.

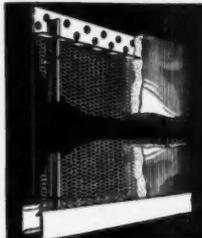


Milcor Cold Rolled Channels

Accurately formed with true right angles; uniform and straight their entire length. Regularly used with metal lath for suspended ceilings, furring and solid and hollow partitions.

SIZES: $\frac{1}{2}$ " and $1\frac{1}{2}$ ". Lengths 16 and 20 ft.
PACKING (per bundle): $\frac{1}{2}$ "—20 pieces; $1\frac{1}{2}$ "—10 pieces.

WEIGHTS (lb. per 1,000 lin. ft.): $\frac{1}{2}$ "—300 lb.; $1\frac{1}{2}$ "—475 lb.
MATERIAL: 16 gauge Steel, Painted.



Milcor Solid Partitions and Furring System

Simplifies erection of partitions. Runners have openings for $\frac{3}{4}$ " Channel Studs. "L" Type Runner for partitions constructed along beams. Metal Base used by employing clips in place of floor runner.

MATERIAL: 28 Ga. Galv. Steel. Stock lengths: 10 ft.

WEIGHTS (per 1,000 lin. ft.): "L" Type Ceiling Runner—222 lb.; "L" Type Beam Runner—274 lb.; "Z" Type Floor Runner—136 lb.

PACKING (per carton): Ceiling Runner—50 pcs.; Floor Runner—100 pcs.; Beam Runner—50 pcs.



Milcor One Piece Steel Stud and Track

LARGE UNIFORM OPENINGS: Spaced 6" on centers. Pre-determined location for conduits or pipe lines.

REINFORCED X-SHAPED MEMBERS: Short-span, X-shaped framing reinforced by an embossed corrugation.

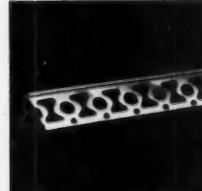
MATERIAL: 16 gauge Steel, Painted.

LENGTHS: 6, 7, 8, 9, 10, 12, 14, 16, 18 and 20 ft. Intermediate lengths on request.

WEIGHTS (lb. per 1,000 lin. ft.): $3\frac{1}{2}$ "—720 lb.; 4"—700 lb.; 6"—880 lb.

RUNNER TRACKS: Same design as studs. Standard 10 ft. lengths. Punched for attaching to floor.

EXTERNAL TYPE STUD SHOES: 20 ga. steel. 5 ft. and 7 ft. lengths. 7 ft. shoes used for ceiling attachments when variations in ceiling height call for extra length. Weight: 100 lb. per 1,000 pcs.



Milcor Arch Bead

Used straight or curved. Snip one or both flanges with tin snips. Bead can then be formed easily into a smooth arc, without kinks or breaks in the nose, by applying slight pressure with the hands. Minimum of metal cutting required.

MATERIAL: 26 gauge Sheet Steel, Galv.

LENGTHS: 7, 8, 9, 10 and 12 ft.

WEIGHT (lb. per 1,000 lin. ft.): 175 lb.

PACKING (per carton): 7 ft.—80 pcs.; 8 ft.—70 pcs.; 9 ft.—60 pcs.; 10 and 12 ft.—50 pcs.



Super-Ex Corner Bead

Combines advantages of Expansion and Solid Wing corner beads. Strong, straight nose reinforced by two solid flange sections, strengthened by corrugations. Integral expansion flange makes excellent plaster bond, simplifies erection.

MATERIAL: 26 ga. Sheet Steel, Galvanized.

LENGTHS: 7, 8, 9, 10 and 12 ft.

WEIGHT (lb. per 1,000 lin. ft.): 270 lb.

PACKING (per carton): 7 ft.—80 pcs.; 8 ft.—70 pcs.; 9 ft.—60 pcs.; 10 and 12 ft.—50 pcs.

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Manufacturers of over 2,500 products for farm, home, and industry.

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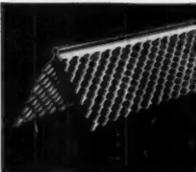
Metal Lath

and accessories

No. 1 Expansion Corner Bead

Wide expanded metal wing integral with nose of the bead—plaster keys right up to nose; effective plaster reinforcement exactly where needed.

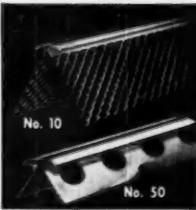
MATERIAL: 26 gauge Sheet Steel, Galv.
LENGTHS: 7, 8, 9, 10 and 12 ft.
WEIGHT (lb. per 1,000 lin. ft.): 210 lb.
PACKING (per carton): 7 ft.—80 pcs.; 8 ft.—70 pcs.; 9 ft.—60 pcs.; 10 and 12 ft.—50 pcs.



Nos. 10 Expansion & 50 Solid Wing Bull Nose Corner Beads

For broad, rounded corners, with extra resistance to damage from moving carts, wheelchairs, etc. Face of bead 1" wide, radius 3/4".

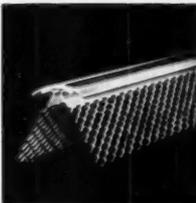
MATERIAL: 26 gauge Sheet Steel, Galv.
LENGTHS: 7, 8, 9, 10 and 12 ft.
WEIGHT (lb. per 1,000 lin. ft.): No. 10—240 lb. No. 50—230 lb.
PACKING (per carton): No. 10: 7', 8', 9'—25 pcs.; 10', 12'—15 pcs. No. 50: 7'—80 pcs.; 8'—70 pcs.; 9'—60 pcs.; 10', 12'—50 pcs.



No. 8 and No. 9 Bull Nose Expansion Corner Beads

For extra broad, heavy duty rounded corners. Heavy gauge steel face: No. 8—2" wide, curved to 1 1/2" radius; No. 9—2 1/4" wide, curved to 2" radius. Expansion wings spot-welded to nose.

MATERIAL: Expansion Wing—26 ga. Sheet Steel, Galv. Nose—16 ga., Galv.
LENGTHS: 7, 8, 9, 10 and 12 ft.
WEIGHT (lb. per 1,000 lin. ft.): No. 8—815 lb. No. 9—860 lb.
PACKING (per carton): 15 pcs.

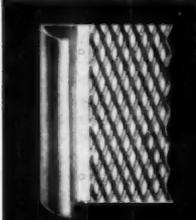


No. 4 Expansion Casing Bead

(Also available with short, solid flange—24 ga.)

For doors, windows and other openings. Applied before plastering. Provides scribed to which plasterer can work. Only smooth, quarter round nose of casing bead, exposed after plastering. Integral Expansion Wing reinforces plaster. Ridged flange insures tight fit to jamb.

MATERIAL: 24 ga. Tight Coat Galv. Steel.
LENGTHS: 7 ft. and 10 ft.
GROUNDS: 1/2 in. and 3/4 in.
WEIGHT (lb. per 1,000 lin. ft.): 315 lb.
PACKING (per carton): 7 ft.—80 pcs.; 10 ft.—50 pcs.

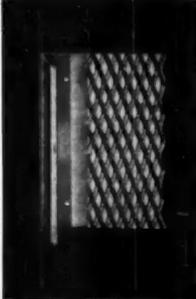


No. 60 Expansion Casing Bead

(Also available with short, solid flange—22 ga.)

Similar to the No. 4 Casing bead except that the face is flat and has a beveled edge. Slight ridge in the nailing flange of Milcor Casing Beads creates a pressure that holds the nose of the casing bead tightly against the jamb.

MATERIAL: 24 ga. Tight Coat Galv. Steel
LENGTHS: 7 ft. and 10 ft.
GROUNDS: 1/2 in. and 3/4 in.
WEIGHT (lb. per 1,000 lin. ft.): 250 lb.
PACKING (per carton): 7 ft.—80 pcs.; 10 ft.—50 pcs.



No. 66 Expansion Casing Bead

(Also available with short, solid flange—22 ga.)

Square design with 3/16" return. Expansion Wing feature affords excellent plaster bond and reinforcement; minimizes plaster cracking. Ridge in nailing flange insures tight fit.

MATERIAL: 24 ga. Tight Coat Galv. Steel.
LENGTHS: 7 ft. and 10 ft.
GROUNDS: 1/2 in. and 3/4 in.
WEIGHT (lb. per 1,000 lin. ft.): 260 lb.
PACKING (per carton): 7 ft.—80 pcs.; 10 ft.—50 pcs.



No. 77 Flush Base Screenshot

A strong, straight dividing strip for use between plaster and flush concrete or tarrazzo base. Key holes for plaster and concrete in top and bottom flanges. Made in 1/2" grounds only.

MATERIAL: 26 gauge Tight Coat Galvanized Steel.
LENGTHS: 10 ft.
WEIGHT (lb. per 1,000 lin. ft.): 150 lb.
PACKING (per carton): 50 pcs.



Milcor Clean Out Doors

Convenient for removing accumulations of chimney debris. New door catch provides positive lock; prevents door from being blown open. New hinge design permits lasting freedom of operation. Wide flanges on frame simplify installation. Stamped from high grade, 16 ga. copper alloy. Finished painted. Size 8" x 8". Packed six doors per carton—shipping weight: 19 lbs.



Milcor Metal Access Doors

For easy access to utility systems without damage to walls. New spring hinge allows opening to 175°. Number of hinges varies with size of door. Doors removable.

STYLES: For plastered walls: Style "K" with expansion wing. Style "L" with solid flange. Style "M" for non-plastered walls.

SIZES: 8" x 8" to 24" x 36".
MATERIALS: Door 14 Ga. steel; housing 16 Ga. steel. Gray primer painted.

LOCKS: Flush cam type; number varies with size of door. Cylinder lock with key furnished at extra charge.

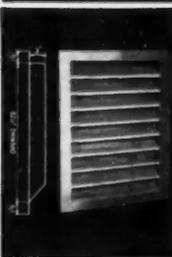
PACKING: One per carton.



Milcor Louver Ventilators

Patent Nos. 2,309,717 and 2,340,576

Relief from summer heat; wintertime protection against condensation damage. Made of heavy Galvanized Sheet Steel. Aluminum painted. Welded construction. Generously fitted corners and overlaps. Reinforced louver blades. Carefully framed removable insect screen. No. 100 Series—self casing style. No. 220—for use with masonry—fits opening left by removal of one concrete block. No. 300 Series—flush type flange. Opening sizes from 8" x 8" to 24" x 30".

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NU-WALL PERMANENT Bonding Plaster



a PERFECT Plaster Bond

for glazed tile—concrete—drywall
brick—oil base painted interior
surfaces.

Nu-Wall receives any conventional
plaster finishes.

Above is a section of the glazed tile wall showing easily applied NU-WALL used as the permanent bonding plaster in the 17-story Fort Worth National Bank Building. NU-WALL was roughly troweled directly on the fire-proof glazed tile. A brown coat of one inch, or more, was applied to the NU-WALL and redded, using a perlite aggregate. NU-WALL proved perfect, together with great savings in time, money, labor, and eliminated the need for furred mesh or metal lath.

A. E. Ritchey, regional NU-WALL representative, reports—NU-WALL, after many tests, was given the O.K. by all concerned, with a notable savings as well.

General Contractor: Thomas S. Byrne, Inc.
Plaster Contractor: J. R. Condon.
Architect: Preston M. Geren, all of Fort Worth, Texas;
Consulting Architects: Messrs. Shreve, Lamb & Harmon Associates of New York City, N. Y.

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NU-WALL MFG. CO.

923 North 19th Street,
Milwaukee 3, Wisc.
(Dept. A.B.)

(Continued from page 499)

lath on supports over 16 inches on center use 5 nails per support, 4 inches apart. For one-hour fire rating when using sand as an aggregate, use 5 nails per support plus strip lath on joints.

Gypsum lath should always be applied face out with the long dimension at right angles to framing members. On walls, end joints should be made to fall on different supports in alternate courses. On ceilings, end joints are staggered as for side walls. All joints should be butted together.

All inside corners should be reinforced with cornerite. Staple or nail cornerite to retain position until secured by the plaster. Apply corner bead to all exterior corners by nailing through to the framing.

Masonry Plaster Bases

Gypsum partition tile, a precast gypsum tile for building non-load-bearing fireproof partitions, has a strong natural bond with base coat plaster. Three inch hollow gypsum tile plastered on two sides has a 3-hour fire rating, and the 4-inch tile a 4-hour rating. It should not be used for load-bearing partitions, nor with portland cement or lime plasters. Do not use as a base or starter course where there will be excessive moisture.

Clay tile, usually 12 by 12 inches and from two to six inches thick, with scored faces, serves as a good plaster base, as does concrete block with a rough porous face. Concrete block must be cured to minimize volume changes during and after plastering. Portland cement lime sand mortar is generally used for laying up these load-bearing partitions. Gypsum plaster may be applied directly to these constructions providing the surface is porous to develop proper suction or scored to develop adequate mechanical bond.

BASE COAT PLASTERS

Gypsum Cement Base Coat Plasters

Gypsum base coat plasters are relatively uniform; setting time is stabilized, and hazards due to job conditions and variables in water and aggregates is minimized. Controlled set assures maximum hardness and tensile strength. "Neat" plasters constitute the bulk of tonnage of all types of gypsum plasters used. Gypsum is incombustible, will not transmit high temperatures until completely calcined, actually fights fire by retarding flame.

Aggregates must be added strictly according to specifications. Use of too much aggregate reduces the strength of the plaster slab. "Neat" gypsum plasters, sanded, or wood fiber plasters should never be applied to concrete.

Bituminous compounds do not provide a good base for gypsum plaster base coats. Do not apply such plasters to masonry walls that have been treated with these compounds. Because of possible moisture seepage or condensation, do not plaster directly to the inside of exterior masonry walls. Such walls should be furred. If used in conjunction with radiant heating systems, the temperature at the surface of the plaster should not exceed 115° F., nor should the water in the pipes exceed 125° F.

Sanded Plasters

This material is the same as neat gypsum plaster except that a properly graded sand has been added at the mill in the proper amount for best plastering results. This is particularly suited to areas where good plastering sand is not readily available; it avoids the possibility of oversanding or improper gradation of the aggregate, thus assuring proper strength for the plaster. It also eliminates the problem of frozen sand in winter.

Wood Fiber Plaster

This type of plaster contains a finely shredded wood fiber and is made primarily for use with addition of water on the job. In some cases, a small amount of sand, never more than one part by weight, is added on the job. This addition of sand is said by manufacturers to minimize shrinkage cracks. This type of plaster is recommended for use where excessive strength, toughness, or a higher fire rating is required. It has three times the compressive and tensile strength of plaster sanded 1:3, approximately 50 per cent greater surface hardness, and 50 to 100 per cent greater fire rating than plasters containing sand. It is also desirable for patch and repair work.

Concrete Bonding Gypsum Plaster

This is a specially formulated gypsum base coat requiring only the addition of water on the job. It is the only recommended type of gypsum plaster for direct application to properly prepared and roughened concrete surfaces. Unlike ordinary gypsum plaster, this type has the same thermal expansion as concrete, which

APPROXIMATE YARD COVERAGES PER TON ON VARIOUS PLASTER BASES

PLASTER	GYPSUM LATH	GYPSUM INSULATING LATH	PAINTED METAL LATH	WOOD LATH	GYPSUM TILE	BRICK AND CLAY TILE CINDER BLOCK	CONCRETE SURFACES	BAGS, TYPE WEIGHT
Gypsum **	225-240	225-240	105-135	180-210	235-255	165-200	Use Concrete Bonding Pl.	Paper 100 Lbs.
Neat Plaster	Sanded 1:2	Sanded 1:2	Sanded 1:2	Sanded 1:2	Sanded 1:3	Sanded 1:3		Paper 100 Lbs.
Sanded	75-80	75-80	35-45	60-70	45-55	45-55	Use Concrete Bonding Pl.	Paper 100 Lbs.
Wood Fibered	115-120 Water only no sand	115-120 Water only no sand	55-65 Water only no sand	90-100 Water only no sand			Use-Concrete Bonding Pl.	Paper 100 Lbs.
Concrete Bonding	90 to 120 square yards depending on smoothness of concrete surface							Paper 100 Lbs.
Gauging Plaster	1600 square yards with 2 tons of hydrated lime							Paper 100 Lbs.
Prepared Sandfloat Finish	250-275 square yards							Paper 100 Lbs.
Prepared Trowel Finish	300-400 square yards							Paper 100 Lbs.
Keene's Cement	400-500 square yards							Paper 100 Lbs.

**Sanded 1:2 equals 1 part plaster 2 parts sand by weight. Sanded 1:3 equals 1 part plaster 3 parts sand by weight.

Courtesy National Gypsum Company

makes possible a continuous bond to concrete surfaces. This plaster should only be used on rough concrete that is properly prepared. It should never be applied to smooth concrete. Maximum thickness including finish coat should not exceed $\frac{3}{8}$ -inch on ceilings and $\frac{5}{8}$ -inch on walls. If additional thickness is required, metal lath must be properly secured to the rough surface before plastering.

Monolithic concrete surfaces should be brushed clean of all dust, loose particles and foreign matter. Any laitance or efflorescence should be removed by washing with 10 per cent solution of muriatic acid and water. Grease or form oil should be removed with naphtha spirits. If surfaces are not rough enough to provide necessary mechanical bond, they should be hacked or bush-hammered, or a dash coat of Portland cement grout composed of 1 part of cement and $1\frac{1}{2}$ parts of fine sand, mixed to a mushy consistency, may be applied. Keep this coat damp for at least two days immediately following application and then allow to dry. Before applying plaster, the surface should be evenly dampened to aid proper suction.

Portland Cement Base Coat Plaster

Portland cement, with the addition of lime to provide working qualities and water resistance, is frequently mixed with sand and water to form a plaster mortar. It is chiefly used as a base coat for exterior stucco and in places subject to excessive moisture, such as swimming pools, showers, and steam rooms. It is also used where an extra hard base coat is de-

sirable and as a back-up material for ceramic tile.

Such plaster is relatively unplastic and hard to apply, is consequently costly. It must be kept damp to assure proper cure and prevent drying out and cracking. Several days' delay between coats is necessary to insure curing.

FINISH PLASTERS

Finish coat plasters applied to base coats provide the surface for final wall or ceiling decoration. They are either factory-prepared, requiring only the addition of water on the job, or they may be job-mixed by blending lime-putty and gauging plaster or lime putty and Keene's Cement.

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again

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wings

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They are normally applied in thicknesses of 1/16 to 1/4 inch. They are selected by the builder according to job requirements—texture, color, hardness, sound absorption and type of basecoat used.

White Coat

Finish lime putty into which is blended gauging plaster (gypsum) is known as "white coat." This is the most widely used finish coat because of its good working qualities, whiteness, economy, and ability to take any form of decoration. Usually it is troweled to a smooth, hard finish over a gypsum base coat. With the addition of sand, it is suitable for sand-float finishes.

Finishing limes are of three types—quicklime, normal hydrated lime, and double hydrate. Each requires specific handling in slaking or soaking to produce a good finishing lime putty.

Gauging plasters are carefully ground and screened to just the right sizes of particles to make this plaster quick soaking and easy to blend with lime putty. They are available in either "slow set" or "quick set" types, making it possible for the workman to use whatever material best suits him. Both white and gray gauging are available in both the slow and quick set types.

Gauging plaster is added to the lime putty in proportion of one part of dry gauging to not more than three parts of lime putty by volume, or one part of dry gauging to not more than two parts of dry hydrated lime by weight. After the gauging plaster is sifted into the lime putty ring and allowed to soak for a few minutes, the materials are thoroughly blended to avoid gauging streaks and to provide uniform density in the finish coat.

Keene's Cement

Keene's Cement is a high strength, white gypsum plaster used with finish lime putty for extremely hard, dense surfaces. The material is slow-setting, can be retroweled, and requires more troweling than normal gypsum plaster.

It is used for imitation tile finishes in bathrooms and kitchens or other spots where walls will be subjected to unusual abuse. It is also used as a finish coat for runs and moldings, backing up artificial marble, facing artificial marble, and other ornamental plaster effects.

Keene's Cement is similar in many respects to a lime-gauging plaster, and should be used wherever greater resistance to moisture, greater sur-

face hardness and greater resistance to abrasion are desired. For medium hard finish, mix in proportions of 50 lbs. of dry hydrated lime (100 lbs. lime putty) to 100 lbs. Keene's Cement.

Prepared Trowel Finishing Plaster

This is mill prepared and requires only the addition of water on the job. It is recommended for use over gypsum base coats where extreme hardness and immediate decoration are required. Rated the hardest of all finish plasters, it provides protection against the most severe wear. It has roughly twice the strength of ordinary lime-gauging finishes. Non-alkaline, it will not injure paint or decoration, and may be decorated as soon as it has set and dried.

For application, allow to soak for 10 or 15 minutes and then mix to a smooth, lumpfree mortar of desired consistency. Apply over a gypsum base coat which has set but is not bone dry. If the base coat has dried out, spray lightly before finish coat is applied. Scratch in thoroughly, double back and fill out to true, even surface. Finish should not exceed 1/8-inch thickness. Trowel the surfaces free of blemishes, using water sparingly. Troweling must be complete before final set occurs. Work from unset edges to avoid joining marks.

Sand-Float Finishes

These are also mill-prepared gypsum finishes, with the addition of fine sand, for use over gypsum base coats. They are used where the semi-rough surface of a sand-float is desired. As the name implies, this material is "floated," not trowel-finished. It comes in its natural gray color, which requires painting or other final decoration. The final coat is finished with a wood, carpet, cork, rubber, or other float depending upon the finish desired.

Colored Finish Plasters

Colored gypsum finish plasters are frequently used to produce a pre-decorated finish of either a floated or textured surface. Use of colored gypsum plasters eliminates the need for further decoration. This speeds the plastering job and results in lower costs.

Colored gypsum plasters are available in either factory-prepared colors or can be produced on the job by the addition of pigments to the mix. The lime-proof color should be thoroughly blended and mixed with the plaster to prevent streaking and color varia-

tions. It is also necessary to mix job-prepared colors in sufficient quantities to complete a job to eliminate the color variations which would otherwise occur.

Acoustical Plasters

Acoustical plasters are highly sound-absorbent, paintable, and are applied easily over a properly prepared gypsum base coat. Manufactured only in an oyster white color, the finish may be either stippled or stipple-perforated. Applied in two successive coats 16 to 24 hours apart, it eliminates re-scaffolding and saves labor. Mixing and applying directions must be adhered to rigidly.

AGGREGATES

Aggregates in the form of sand—and, more recently, perlite and vermiculite—are added to gypsum cement plasters to extend coverage and reduce cost. They also act as a gauging agent to minimize shrinking of gypsum in setting.

Vermiculite

This material is mined as mica rock, ground and expanded under heat to lightweight granules for use as a plaster aggregate. It should weigh between 7½ and 10 pounds per cubic foot and comply in gradation with ASTM specification for sand. Walls plastered with gypsum plaster containing vermiculite as an aggregate have lower strength and require a longer period for drying than walls of sanded plaster, but are lighter in weight and have greater fire resistance.

Where hard finish coats such as Keene's Cement are to be used, reduce the proportion of vermiculite to gypsum plaster in the base coat. Vermiculite is proportioned with gypsum plaster on a volume of aggregate to weight basis.

Perlite

Perlite is a relatively new lightweight plaster aggregate derived from a volcanic rock. The perlite ore is ground and screened to proper size, then expanded to produce a light gray or white colored aggregate. Perlite aggregate for plastering should weigh between 7½ and 15 pounds per cubic foot, and should meet ASTM C35-39 gradation requirements except that the minimum percentage retained on a No. 100 sieve shall be reduced from 95 to 90 per cent. It has excellent fire-resisting qualities and when mixed with gypsum plaster produces a higher strength wall than does vermiculite.

STRUCTURAL clay products are the oldest manufactured building products in existence. The versatility of these products has kept them prominent in construction throughout the centuries. Brick and tile, in their convenient and adaptable sizes, have fitted into every building innovation.

Generally speaking, a structural clay product is a piece of clay which has been cleaned, screened, dried, and burned with intense heat. This treatment gives the unit the strength not only to support its own weight in a wall, but also to support heavy additional loads of roofs, joists, and floors.

Types of Structural Clay Products

There are three general types of structural clay masonry units: solid masonry units, hollow masonry units, and architectural terra cotta.

Solid Masonry Units

Solid masonry units are those whose volume of cores, cells, or hollow spaces does not exceed 25 per cent of the total for the unit. Brick is included in this classification, and most solid masonry units produced commercially are marketed as a type of brick. Brick falls into two general groups—building brick and facing brick. Building brick (or common brick) is used primarily as a structural material where appearance is not a factor. Facing brick is used both as a structural material and for decorative purposes, where color, texture, and freedom from defects which would detract from appearance must be considered.

Building brick is graded by Specification 62 of the American Society for Testing Materials, which covers three grades based on resistance to weathering. Facing brick is graded by ASTM Specification 216. This specification covers two grades of brick based on resistance to weathering and three types of brick based on factors affecting the appearance of the finished wall.

Hollow Masonry Units

Hollow masonry units are those whose volume of cores, cells, or hollow spaces exceeds 25 per cent of the total volume of the unit. Structural clay tile is included in this classification, and covers such types as load-bearing tile, non-load-bearing tile, facing tile, floor tile and others.

Load-bearing tile is used in walls designed to carry superimposed loads and is graded by ASTM Specification C34, which covers two grades based on resistance to weathering.

Non-load-bearing tile is used in

walls which support only their own weight, such as interior partitions carrying no superimposed load. Non-load-bearing tile is covered by ASTM Specification C56, which includes only one grade, since such units are intended for use where they will not be subject to weathering.

Facing tile may be either in load-bearing or non-load-bearing units designed to be left exposed where surface appearance is of great importance. Therefore, this tile must combine physical properties such as strength and durability with appearance characteristics such as color, texture, small dimensional variations and freedom from surface defects which would detract from the appearance of the finished wall. Facing tile finishes include ceramic color glaze, ceramic clear glaze, salt glaze, and unglazed, the last available in both smooth and rough textured surfaces.

Structural clay facing tile is graded by two specifications, those of the Facing Tile Institute and by ASTM Specification C212. These tiles are produced in two general types—side construction tile designed to be laid with cells in a horizontal position, and end-construction tile designed to be laid with cells in a vertical position.

Architectural Terra Cotta

Architectural terra cotta is a custom-made product and is hand made by molding or pressing, and also made by machine. The latter type, shaped by extruding the plastic clay through a die, is often referred to as ceramic veneer, and is available in large sizes up to 48 inches in one dimension. Terra cotta is used extensively in veneering and ornamentation and is available in an almost unlimited variety of colors, both glazed and unglazed.

Use the Proper Mortar For Structural Masonry

In selecting mortar, evaluate its properties in terms of the situation where it will be used. Properties to be considered include: workability and water retentivity, bond, durability, strength, volume change, and efflorescence. Desirable mortar properties may be found in mortars consisting of a wide variety of ingredients.

Recommended Mortars

TYPE A: one part of portland cement, ¼-part hydrated lime or lime putty, and not more than three parts sand by volume. This is a high strength mortar suitable for general use and recommended specifically for reinforced brick or tile masonry and

STRUCTURAL CLAY PRODUCTS

Building and Facing

Tile, Glazed, and Unglazed

Load-bearing

Non-load-bearing

Architectural Terra Cotta

Ceramic Veneer

Specifications

Brick, Face Layer

Common, Roof Tile

Applications and Use of
Structural Clay Products

Mortar Recommended

Masonry Walls - Types, Uses

Solid Masonry Wall

Hollow Masonry Wall

Cavity Walls

Faced or Composite Walls

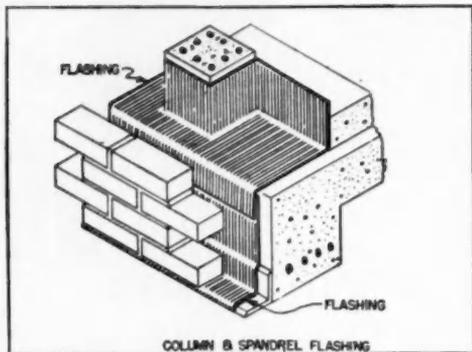
Veneered Walls

Tile Partitions

Facing Tile Partitions

Finishing

Efflorescence



SPANDRELS in skeleton-framed structures should be flashed continuously at beams except when cavity curtain walls are used. In conventional curtain wall construction, flashing should start under exterior facing wythe, extend upward behind facing and over top of spandrel beam, and be turned up 1-inch at face of wall.

plain masonry below grade and in contact with earth.

TYPE B: one part of portland cement, one part hydrated lime or lime putty, and not more than six parts sand by volume. Type B mortar is a medium strength mortar suitable for general use in exposed masonry above grade and recommended specifically for parapet walls, chimneys, exterior walls subjected to severe exposures, and also for load-bearing structural clay tile construction.

TYPE C: one part of portland cement, two parts hydrated lime or lime putty, and not more than six parts sand by volume. This is a low strength mortar suitable for non-load-bearing walls of solid masonry units, for interior non-load-bearing partitions of structural clay tile, and for load-bearing walls of solid units in which the loads developed do not exceed 100 *psi* and where exposures are not severe.

Structural Clay Masonry Walls Types and Uses

Structural clay masonry walls are usually classified according to types of construction, such as solid masonry walls, hollow walls, cavity walls, faced or composite walls, or veneered walls.

Solid Masonry Walls

These consist of masonry units laid with the joints between units filled with mortar. They may be built either of solid or hollow masonry units in any required thickness for load-bearing or non-load-bearing construction. Solid brick walls are one of the oldest types of masonry construction known to man. Such walls are highly fire-resistant and are

capable of carrying extremely heavy loads—both compressive and lateral.

Hollow Masonry Walls

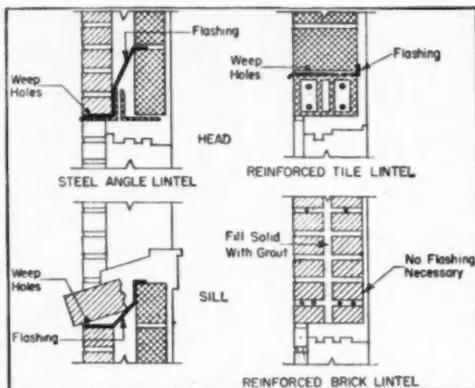
Hollow masonry walls are built of masonry units so arranged as to provide air spaces in the wall, and in which the facing and backing are bonded together with masonry units. Such walls are usually constructed with solid units, although hollow masonry units may be used. So-called "Rolo-k-bak" and "All-Rolo-k" walls are examples. Their advantages are that they are relatively light weight, highly fire-resistant, and yet present much the same exterior appearance as do solid masonry walls.

Cavity Walls

Cavity walls are built of either solid or hollow masonry units arranged to provide a continuous air space within the wall. This air space should not be less than two inches nor more than three inches in width. The facing and backing are tied together with rigid corrosion-resistant metal ties. The continuous cavity reduces the heat transmission of the wall below that of solid masonry walls and provides an effective barrier against moisture penetration. This type of wall is becoming increasingly popular in residential, light commercial, and frame building construction, particularly in areas where resistance to rain penetration is a severe problem.

Faced or Composite Walls

Faced or composite walls are walls in which the masonry facing and backing is of two different types, but bonded so as to exert common action under a load. In other words, the facing material is considered as part of the structural wall in determining



UNLESS SILLS are made of impervious material, in one piece, through flashing should be placed under and behind them.

the wall thickness. This is perhaps the most common type of wall construction in use at the present time. It is usually built with the exterior facing of brick and the backup of hollow masonry units.

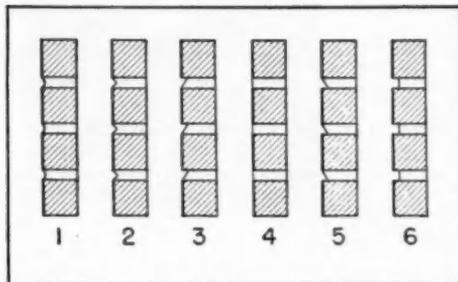
Veneered Walls

Veneered walls are walls having a masonry facing which is attached to the backing but not so bonded as to exert common action under loads. The facing in veneered walls is not considered as being part of the structural walls. Masonry veneering may be brick, facing the architectural terra cotta. Masonry veneer may be attached to walls of masonry, reinforced concrete, or to frame construction.

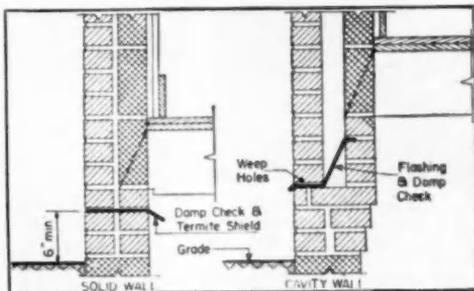
Tile Partitions

In addition to exterior walls, structural clay products are also used extensively for interior load-bearing and interior non-load-bearing partitions. In addition to their fire-resistant qualities, non-load-bearing partitions of structural clay tile are light, strong, durable, and economical to erect. Partition tile, unless otherwise specified, is furnished with a plaster base finish which may be smooth, scored, combed, or wire cut. The finish will be in accordance with the manufacturer's standard.

Partition tile is available in thicknesses from 4 to 12 inches. Nominal face dimensions are 12 by 12 inches. It is not generally practicable to use 2-inch tile for partitions except for closets, shafts and similar locations, provided these do not exceed a height of nine feet and an unsupported length of six feet. Partitions of 3-inch thickness can safely be used up to 12 feet in height, and corresponding



TOOLED JOINTS shown 1 and 2 above, produce best resistance to water penetration. No. 3 is "weathered joint" and is satisfactory. No. 4 is the "flush" or "plain cut" joint and is not so desirable. Nos. 5 and 6 are not recommended



ALL FLASHING should be drained to outside. One method is by "weep holes" 2 feet O. C. in mortar joint where flashing is placed

increases in permissible height can be obtained with greater thicknesses.

Double partition walls are used extensively where it is necessary to provide space for soil pipes and other utilities. In such cases, the partition walls are constructed with a 4-inch cavity.

Facing Tile Partitions

Structural clay facing tile is used widely in interior partitions or as load-bearing exposed facing material to back up exterior walls. While smooth or textured unglazed facing tile is used in both exterior and interior work, glazed units are used primarily for interiors where color, sanitary finishes, and low maintenance are required. Facing tile manufacturers produce standard fittings and special shapes to meet the requirements of practically all job conditions.

Most of the high-grade, *lightburning* fire clay facing tile units are furnished in the nominal 4-inch thickness, while the nominal 2-inch thicknesses are used principally for lining or veneering. However, the furring units are particularly adaptable for jobs located at great distances from the plant, where it is usually more economical to use local backing materials rather than facing tile in the full load-bearing capacity as a portion of the structural wall as ordinarily recommended.

Structural Clay Specialties

Manufacturers of structural clay products have also turned their ingenuity to the production of a number of special purpose clay products including flue liners, clay conduit, copings and roof tile, clay pipe, chimney tops, and shingle-like roofing tile. Applications for and installation of these materials have been clearly detailed by manufacturers so that their use is generally fully as satisfactory

as that of other structural clay products.

How To Use Flashing

There are two general types of flashing used with structural clay masonry, external and internal. Both types are usually formed of sheet metal or of bituminous membrane materials or combinations of both. Because of its high relative permanence, 16 to 20 ounce sheet copper is usually preferred for the best work, although lead, zinc, and aluminum are suitable if they are protected from corrosion with a coating of bituminous material or lacquer.

External flashing is used to prevent the absorption of water which accumulates on relatively flat intersecting surfaces. This type of flashing usually consists of two members—the base, which forms a part of the covering of a flat surface and turns up against the intersecting vertical surface; and the cap, which is built onto the vertical surface and turns down over the base.

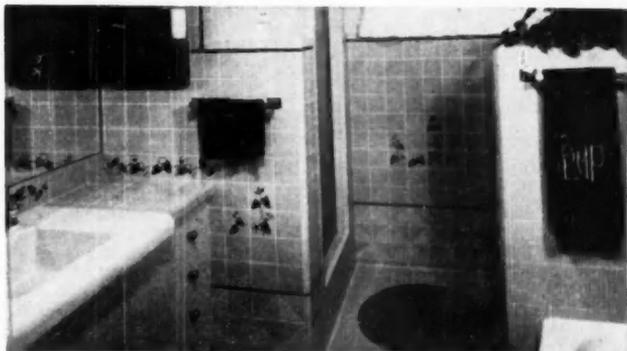
Internal flashing is built into and usually concealed within the masonry

to control the travel of moisture and direct it to the exterior surface of the structure.

Where to use either internal or external flashing depends upon where points vulnerable to moisture appear in the structure. Damp checks should be placed about six inches above grade to prevent moisture absorbed from the ground by exterior foundations from traveling upward by capillary action into the wall above. If a termite shield is required to protect floor joists, the damp check can serve as the shield, and should project past the inside face of the wall at least two inches and be bent down at an angle.

Through flashing should be placed under and behind both masonry and wood sills. Ends of sill-flashing should extend beyond the jamb line on both sides and be turned up at least one inch into the wall. The ends of flashing under cast stone sills should be turned up the full height of the sill.

For steel lintels, flashing should be placed under and behind the facing material and over the top of the angle. The outer edge of the flashing should be bent down over the edge of



DECORATIVE ceramic tile offers opportunities for unusual and beautiful design along with advantages of easy maintenance and cleaning in kitchens, bath and utility rooms



HERE is good workmanship. Bed joint is spread to uniform thickness. Mortar is only slightly furrowed. Head joints are completely filled by buttering end of brick before shoving into place. Slushing partly filled head joints does not do the job!

the steel angle to form a drip. For reinforced tile lintels, the flashing is placed above the lintel.

Spandrels in skeleton-framed structures should be flashed continuously at the beams except when cavity curtain walls are used. In conventional curtain wall construction, flashing should start under the exterior facing wythe, extend upward behind the facing and over the top of the spandrel beam (which is usually the rough floor level) and be turned up one inch at the inside face of the wall. Where columns occur above the beam, flashing should be turned up about six inches around the columns, allowing 1/4-inch clearance between column and flashing, with tight bottom joints and the top sealed with mastic.

Efflorescence Can Be Prevented

Efflorescence is an indication of excess moisture present in the wall, and if permitted to collect, may eventually contribute to the deterioration of the masonry. There are two general conditions necessary to produce efflorescence, which is recognized by a white, powdery substance

that often appears on the surface of walls: (1) soluble salts present in the materials used to construct the wall; (2) moisture in sufficient quantities to carry these salts to the surface.

Though tests prove that 90 per cent or so of all structural clay products are free from soluble salts in sufficient quantities to cause efflorescence, the safest procedure is to keep moisture out of masonry by the best construction methods possible.

If efflorescence is discovered, the first procedure is to examine the structure for possible places where moisture has access to the masonry. Often, defective flashings or the lack of flashings at vulnerable points, defective gutters or downspouts, faulty copings, or improperly filled mortar joints cause wet walls and contribute to efflorescence. The appearance of efflorescence under windows is evidence that sills or caulking around the window frame may be defective. A single patch of efflorescence on a wall, with no apparent relation to anything else, may mean a defective mortar joint or a projecting course of masonry forming a water table.

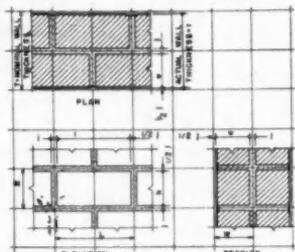
To remove the white powdery efflorescence, after the walls have been made watertight with good flashing installations, a stiff scrub-



PARGING between brick and backing offers high resistance to water penetration

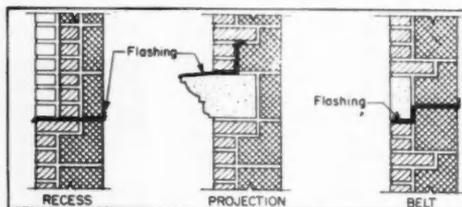
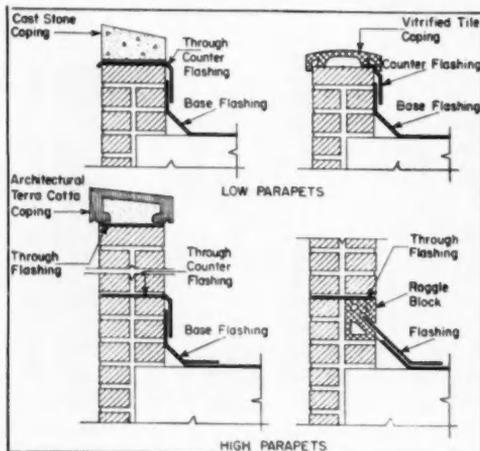


POOR WORKMANSHIP—likely to leak. Deeply furrowed bed joints and only partly filled head joints with no mortar in vertical or collar joints allows water to seep in and damage structure



NOMINAL DIMENSION of masonry unit is equal to standard dimension plus thickness of mortar joint, as shown above. If nominal length of unit is 12 inches, actual length would be 11 1/2 inches if unit is laid with 1/2-inch mortar joint

bing brush with plain water can be used. Sometimes the efflorescence will disappear after several rains. If neither rain nor plain water removes it, the wall should be well wetted and then scrubbed with water containing not more than one part of muriatic acid to nine parts of water. All frames, trim, and other wood should be protected from contact with the acid solution.



PROJECTIONS and recesses from exposed face of a wall tend to hold rain water and snow. Recommended flashing is shown above

NOTE: For additional information on mortar, see Section 20, Cement, Concrete, Mortar, and Related Products; for detailed studies of masonry operations in cold weather, see *American Builder* for May and for October, 1951.

ROOF FLASHING occurs at highly vulnerable places from a standpoint of watertightness, should be installed with care as shown at left



IN SAVING LABOR AND COSTS, modern equipment does much for the builder. Power shovel and truck dig and move earth quickly and efficiently

IN ORDER to compete successfully in today's market and meet rising costs, the builder must make the most of the labor-saving and money-saving potentialities of modern power equipment and machinery. Costs may be reduced by mass handling of materials, mass production design, fabrication and assembly, and multiple-unit rather than one-at-a-time building operations. Most cost-reducing techniques are possible only with modern machinery—for instance, the precutting of wood structural members, packaging them, and delivering the unit quantities to each job site.

In many instances, special equipment has been designed and built to make particular cost-reducing techniques possible. The economy of mixing concrete at a centralized point for delivery to various jobs throughout a service area prompted the design and development of "transit mix" concrete carriers and mixers mounted on truck bodies. Straddle carriers, fork lifts, and many other equipment units are representative of machines specially built to reduce costs and provide greater efficiency.

The increased speed of present-day building operations is made possible by the use of power equipment and tools. Foundations are dug in hours instead of days. Ready-mixed concrete lets the builder pour as much as can be framed. Power buggies, hoists, and elevators speed materials handling.

POWER SUPPLY EQUIPMENT

Power supply equipment — engines, compressors, generators, and other units which furnish power to operate other tools — is essential to the builder operating in sections away from existing power lines.

Many equipment units such as mixers, hoists, vibrators and the like

are operated by built-in gasoline engines. Separate gasoline and Diesel engines which may be used to supply power to various units as needed will find use in many locations. Saws, light mixers, generators, and other tools which do not have built-in engines may be efficiently powered by a separate engine.

The recent development of the small, light, air-cooled, one- or two-cylinder gasoline engine has opened up new applications of this source of power. It frees vibrators, surfacers, flexible shafts, and other tools from the expense of running wiring. Operation is reliable and simple, and repairs are easily made on the job. In sizes from $\frac{1}{2}$ up to six or eight h.p., this type of engine does many jobs at low cost.

Four and six cylinder gasoline and Diesel engines are the general "work horses" of the builder. Compressors, saws, hoists and cranes will use this type of power. The gasoline engine gives high horsepower for its weight, while the Diesel may be preferred for less temporary locations because of its lower operating cost.

Portable electric generators permit the operation of all types of electric tools away from power lines. Sizes run all the way from 500 or 1000 watts up to heavy-duty 10 to 50 KW units for complete lighting and powering of large projects. Generators may be used to power radial saws, drills, and other power tools, and are easily moved around as needed. In many instances, it is cheaper to provide a separate generator than to incur the expense of having the power company provide service, and then run wiring around the job. By making electric power available anywhere, when it is needed without delay, the portable generator saves the builder time and cuts costs.

CONSTRUCTION MACHINERY AND EQUIPMENT MATERIALS HANDLING EQUIPMENT AND TRUCKS

Power Supplies

Engines, Generators
Compressors, Transformers

Site Preparation Equipment

Earth-Movers, Graders
Trackers, Bulldozers

Concrete Equipment

Mixers, Carriers
Vibrators

Lumber, Heavy Materials and Units Handling Equipment

Fork Trucks, Straddle
Carriers
Cranes, Ladders

Lifting Equipment

Powerful Elevators
Hoists, Winches

Trucks

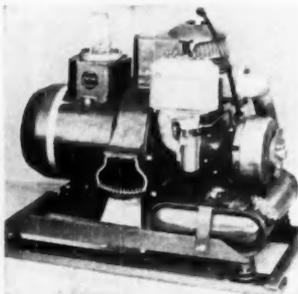
Special Bodies
Power Take-Offs

Scaffolding, Forms, Ladders

Gunlocks, Shoring
Formers, Hoists

Selecting Equipment

Maintenance



PORTABLE ELECTRIC GENERATORS provide power for saws, drills, and other tools on the job. Unit shown can be carried by one man, is spring mounted to reduce vibration

The familiar air compressor powers the jackhammer for breaking out concrete, opening up pavements, digging in hard or frozen ground. Many other tools may be used when compressed air is available—caulking and chipping hammers, nut runners, and, of course, spraying equipment. Compressors are made in many sizes and include large units capable of handling many jackhammers at one time, two-wheel trailer-mounted types for one gun or hammer, and portable electric motor-operated models for spray work.

Transformers are a power supply equipment unit that may be required by the builder who must provide 110-volt current from lines having 220 or 440 volts; occasionally, a transformer will be needed to operate a 220-volt motor from 110 volt lines. If this is done, precautions should be taken against overloading the existing wiring.

SITE-PREPARATION EQUIPMENT

The vast array of site-preparing equipment—bulldozers, graders, shovels, trenchers—offered to builders



TRAILER-MOUNTED COMPRESSORS are readily moved from job to job. The portable unit above will operate chipping hammers, spray guns, and light paving breakers

is one of the outstanding examples of the creative ability and engineering skill of equipment manufacturers. No matter what the problem of earth digging, moving, or handling, there is a machine that will do it quickly and cheaply.

The basic unit around which many types of earth-moving equipment are built, is the crawler tractor, either gasoline or Diesel powered. Forty to 175 h.p. ranges give ample power. With the addition of a front-mounted blade, the unit becomes the bulldozer, most efficient in clearing underbrush, small trees, and in leveling ground preliminary to construction. The same machine returns to the job site to do final grading work.

A scoop bucket mounted at the front of the tractor gives the front-loader or "high lift." This versatile combination will dig shallow foundations, either carrying the spoil to the side for later use as back-fill, or loading it into trucks for removal. It can also be a versatile materials handler. Aggregates, common brick, cement, roofing materials and other bulky products are picked up, lifted, moved, and dumped quickly and cheaply. The front-loader tractor can work in limited space, and turn around in its own length. An idea of the usefulness of these machines may be seen in the experience of one contractor who used his high-lift 4,000 hours in one year—double the normal year's working time.

Large-scale housing projects may often require moving of great quantities of earth for grading and leveling. The scraper earth-mover, mounted on rubber tires and drawn by a tractor, both digs the dirt and hauls it away. Two- and four-wheel models match the power capacities of the tractors and the job requirements.

The power shovel digs foundations, trenches for sewer and water piping, loads the dirt for removal or back-fills, and doubles as a bulldozer, crane, and tractor. Typical sizes used in building construction have ½-yd. and ¾-yd. capacities. Larger sizes up to three-yard capacities may be used in heavy construction excavating. The "back hoe" type of bucket is now most generally used for foundation work. Clamshell buckets may be used or a crane boom may be mounted so that the same unit may do many different types of work at varying stages of construction.

The power shovel is generally mounted on crawler-type tractor treads. However, truck-mounted units are becoming popular because of the speed with which they may be moved from one job to another. Stability for truck shovels and cranes is

attained with outriggers which are swung out or extended and supported by jacks, taking the strain off the truck tires. A variation on the usual drum and winch style of operation is the hydraulic type in which digging, lifting and dumping are actuated by hydraulic cylinders.

The long wheelbase grader is most commonly thought of as a road builder's tool. However, the contractor who undertakes large-scale housing developments finds use for these not only for road construction and maintenance but also for general grading and leveling of ground.

Many different types of machines are available for trenching and footing digging. Caterpillar treads or rubber-tired wheels permit use in all types of ground. Different widths of blades and shapes of digging points handle soft or hard soils, rocky or frozen ground. Digging attachments are available for jeeps, tractors, and crawler-type machines. Self-contained and powered machines may dig either from the end or side. Special pipe-trenching machines also may have a boom for lowering the pipe into the ground as the trenching progresses. Earth-boring machinery for digging test holes, footings, and shallow wells is made both as attachments for machines and as self-operating units.

Rollers and tampers for final grading of the site after construction is completed may be required in large-scale work. They may also be needed for site preparation of loose soils for slab floors in ranch-type houses.

CONCRETE EQUIPMENT

The increasing use of concrete and cement products in the building industry and the advances in concrete technology have been accompanied by an equally rapid development of machinery and equipment for mixing, handling, and finishing concrete and cement.

Concrete mixers range in size from three cubic feet up. One- or two-bag models are most popular with builders of small homes, although smaller mixers may be used for footings or other small pours such as sidewalks.

Modern mixers for the small home builder include many refinements and improvements. Roller bearings contribute to longer life. Power-loading hoppers eliminate wheeling barrows up ramps, and make for faster operation. Better gasoline engines minimize delays from power plant failure. Rubber tires make moving from job to job easier.

Special types of mixers are made for paving work, having a traveling discharge bucket on an extended

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There's no doubt about it, long electric cables eat up valuable power . . . which is bad for you and bad for your tools. This loss of power results in loss of tool efficiency . . . loss in production per hour. It puts a strain on the tool's motor; causes quicker dulling of a tool's cutting edge. It results in more down-time for costly repairs to tools.

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boom. Another type of mixer is the transit mix unit, a rotating drum carrier mounted on trucks for transporting concrete from a central mixing plant directly to the job. Transit mixing and carrying equipment saves the contractor time and money. A centralized mixing plant can often purchase sand, gravel, and cement in quantities (saving on hauling costs) and deliver mixed concrete to the job as cheaply as the builder can purchase the unmixed materials. The mix is in many instances poured directly from the truck into the forms by chutes, a further saving in labor costs.

The low price and high structural quality of concrete block are made possible by modern, efficient concrete block machinery. Although the builder will generally buy these blocks, some contractors specializing in this type of construction may find it profitable to operate their own concrete block equipment, deriving additional income from the sale of the material to other builders.

Pneumatic concrete applicators have been developed to a high point of efficiency. Cement coat, stucco, and plaster are interchangeably handled by the same machine.

Concrete buggies having pneumatic tires, with the load balanced over the axle, have replaced the wheelbarrow. For large projects, power-driven buggies handle up to a yard at a load, doing the work faster and cheaper.

Gasoline engine or air compressor vibrators may be used when pouring columns, slabs, or footings. Air pockets are eliminated, a more homogeneous mix is obtained, and a harder, denser concrete is the result.

Troweling machines operated by gasoline engines do the preliminary work of finishing concrete surfaces much faster than by hand, and by giving a more thorough finishing, produce a harder, more wear-resistant surface.



CORRECTLY SIZED EQUIPMENT for the job to which it is assigned is always important. It is costly to use a small unit for a heavy job or a heavy unit on a small job

Recently developed techniques for improving the quality of concrete and extending the application of its uses have been made possible only by the special machinery for their use. Vacuum elimination of excess water from concrete slabs, in which a vacuum blanket is placed on the slab before finishing, and the excess moisture drawn off by a vacuum pump, produces a concrete which is much harder than conventional pours. In addition, it requires less finishing time and may be placed in use sooner.

Prestressed concrete, in which reinforcing rods or wires are placed under tension either after or before pouring, permits the use of much thinner sections without support. Special jacks and other prestressing equipment make such techniques possible.

HEAVY HANDLING EQUIPMENT

The fork lift truck is fast becoming one of the most popular devices for handling materials. Load capacities are from one to ten tons. One fork lift can do as much work unloading, handling, and moving as five to fifteen men can do working by hand, and for less than the day's pay of one man. The variety of materials that can be handled more efficiently by fork lifts is limited only by the ingenuity of the operators in palletizing the loads. Brick, bags of cement and plaster, tile, pipe, mortar and plaster in box carriers, lumber, and practically any building material can be handled efficiently at low cost.

The straddle carrier is a most efficient handling unit for lumber, pipe,
(Continued on page 516)



CRAWLER TRACTOR WITH BULLDOZER BLADE and cleared treads is efficient for heavy scraping and grading, can also dig shallow excavations



THE CRAWLER TRACTOR AND FRONT-LOADING ATTACHMENT are a versatile combination for digging, earth-moving, and many jobs of handling materials on the job

New Ultra-modern Low-Friction truck engines give you

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New LOW-FRICTION design LIBERATES POWER ordinarily held "captive" by engine friction! **IT SAVES GAS!** It saves wear!

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Ford LOW-FRICTION design incorporates new direct-breathing OVERHEAD-VALVES . . . gives you new HIGH-COMPRESSION, for extra wallop to meet today's Speed-Hauling needs. Here's truck engineering that your Ford Dealer will be proud to tell you more about today!

Availability of equipment, accessories and trim as illustrated, is dependent on material supply conditions.



For '52 Ford offers a full line of trucks from half-ton Pickups to 20-ton (G.C.W.) Big Jobs. 5 great engines from 101 h.p. to 155 h.p., V-8 or Six, 3 new LOW-FRICTION engines, plus famed V-8 (now 106 h.p.) and Big Six (now 112 h.p.)!

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APRIL 1952

DYNAMOMETER TESTS like this, over 50,000 hours on one engine model alone, proved new Ford LOW-FRICTION engines develop more power per cubic inch, save up to 14% on gas!



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OVERHEAD VALVES for deeper direct "breathing"!
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SHORT STROKE cuts piston travel up to 20%! ▶▶▶

Friction reduced in many ways: **Autothermic Pistons** have built-in clearance control. **Precision-molded Alloy Crankshaft** cuts friction and wear at journals. **New Full-Flow Oil Filter** screens every drop of oil every time around. **Result:** Up to 30% cut in friction "power-waste" . . . the big reason why Ford can promise gas savings up to 14%!



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CONSTRUCTION EQUIPMENT - CARE AND OPERATION

Are You Getting The Most Out of Your Construction Equipment	yes	more or less	no
1. Do you have and use a regular, systematic schedule for inspection of all equipment, both in the shop and on the job?			
2. Do you consistently use preventive methods of maintenance, and see to it that equipment is repaired before a breakdown occurs, rather than waiting until a machine must be taken out of service?			
3. Do you have a regular procedure for lubricating all equipment at correct intervals, using lubricants as recommended by the manufacturers?			
4. Is equipment properly protected, both at the end of the day's work and when in idle storage, against rain, dirt, snow, freezing.			
5. Do you make sure that each worker using equipment understands the operation, normal care, and maintenance of the machines?			
6. Do you use adequate safety measures at all times for any equipment which is in any way hazardous to the operator?			
7. Do you have full insurance coverage on your equipment against all possible hazards?			
8. Do you guard against over-loading equipment, operating at greater than rated capacities or faster than normal speeds?			
9. Are machines shut off when idle for longer than a few minutes, or unattended for any length of time?			
10. Do you keep replacements such as spark plugs and belts on hand, and have prompt sources of supply for other repair parts which might be needed?			
11. Are foremen and superintendents instructed on the procedure for getting prompt repair parts and service when needed?			
12. Do you carefully plan your work to eliminate moving machinery around too much from one job to another?			
13. Do you select equipment which is adaptable to many operations, as against "one job" machines, all other factors being relatively equal?			
14. Is responsibility for inspection, lubrication, adjustment, and repair of equipment clearly established?			
15. Are you "equipment minded," keeping up with new developments, and seeking new uses and applications of your present equipment to different types of houses, and different construction techniques?			

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No end to the usefulness of the HD-5G Tracto-Shovel and its 13 interchangeable attachments. Ask your Allis-Chalmers dealer to show you a '5G at work — or write us for literature giving complete information.



HD-5G Tractor has 40 hp., weighs 16,200 lb. with 1-yd. standard bucket. There are three other models of A-C tractors with 2-, 3-, and 4-yd. standard buckets for doing more work — faster.

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TRACTOR DIVISION • MILWAUKEE 1, U.S.A.



Digs footings, trenches with trench-hoe attachment. Cuts narrow, flat-bottom ditch to depth of eight feet. Does precision work on footings, any small excavations.



Handles lumber, pipe, etc. — lifts, loads, stacks or skids materials with lift fork. Works anywhere, including muddy or rough ground.



Lifts shingles, brick, other materials to roof height to save major time loss on small-home projects.

Excavates basements with straight sides, level bottoms — moves and loads materials of all kinds with Tracto-Shovel bucket. Ripper on rear of tractor increases digging efficiency up to one third in any kind of soil.



Levels, backfills, does landscaping, using either blade or bucket. Builds driveways — clears out trees, underbrush, big rocks — saves time on all kinds of jobs.

(Continued from page 512)
or other lengthy materials. The load is automatically picked up and lowered, a tremendous saving in manpower and time in handling. Pre-stacked loads can be picked up in the yard, delivered to the job, unloaded, and the carrier arrive back for another trip in less time than it would take for men to load a conventional truck by hand. Straddle carriers handle loads up to twenty tons and five-ton carriers can operate in close quarters with a turning radius of only three feet.

For lifting steel, concrete, and prefabricated sections the crane is indispensable. The small builder will use a combination crane and power shovel. Changing from one operation to the other takes only an hour or so, and idle time is held to a minimum. Heavy cranes are mounted on caterpillar treads, and tractors of this type have a variety of crane attachments. Booms up to 60-foot length may be used.

The wheeled tractor and truck-mounted crane are more versatile units for the builder of small homes where the weight-handling requirements are not so great. A rubber-tired tractor with crane boom may be used with a bulldozer blade for light digging and excavating, and with a front-loading bucket for handling general materials on the job. Truck-mounted cranes move quickly from one job to another, and with the boom removed, the truck may be used for general hauling.

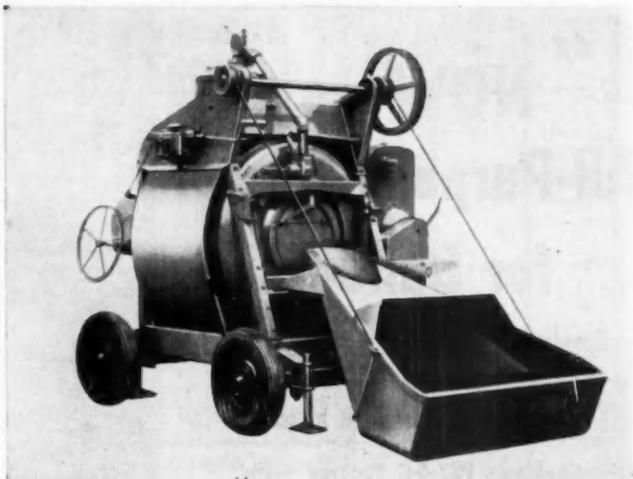
While the typical crane is winch operated, a truck-mounted model using hydraulic cylinders as the power-actuating mechanism is meeting with favor for many operations. Hydraulic control is smooth, and heavy loads are handled with ease.

The front-loader, previously mentioned, is one of the more versatile materials-handling units. Sand, gravel, and other loose materials are picked up, moved, and dumped with minimum time and effort. The front-loader is well adapted to handling common brick, roofing materials, and (with a fork lift) lumber, pipe, and other palletized loads. The relatively low cost of front-loader attachments for tractors or bulldozers makes them an attractive buy.

Many devices have been built or adapted for specialized operations. Concrete block, large concrete pipe and sewer tile, reels of cable, water main, and practically all building components otherwise awkward to move are easily handled with machinery designed "to fit."

LIFTING EQUIPMENT

Hand-carrying of components up



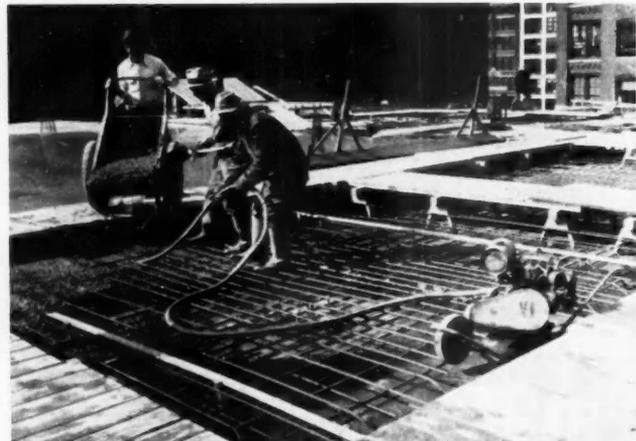
THREE-BAG MIXER shown above has power loader attachment. Rubber-tired wheels facilitate movement from one job to another

the ladder is rapidly vanishing from the building scene. The hod carrier was replaced by a hand-winch which lifted a wheelbarrow at a load. A gas engine or electric motor took the hand labor out, and lifted more per load. The continuous belt elevator lifts more, quicker, and eliminates the weight of the wheelbarrow and the lost time for return trips.

The portable elevator with two cages, an empty going down as a load goes up, is the general work horse for lifting brick, stone, and mortar to the second and third floors. Of either wood or steel, powered either by gasoline engine or electric motor, it is quickly put up and taken down, and readily moved from job to

job. Two buildings may be served by one hoist set up between them. In row-house construction, where buildings are close together, planks may be laid from one to another so that one hoist can handle as many as three or four units. A recent improvement in this type of hoist is a self-contained sixty-one foot hoist that can be moved from job to job without disassembly. An interchangeable wheelbarrow platform and concrete bucket are provided, and one-ton loads are safely handled. The whole assembly is on a skid so that it can be moved from one spot to another on the same job.

An alternate type of general hoist is the gasoline-powered winch which



PORTABLE CONCRETE VIBRATOR, powered by a gasoline engine, eliminates air pockets in concrete, makes a denser pour. Note also balanced-load, rubber-tired concrete buggy



Ditch Work

is one of many

DEARBORN ROAD MAINTAINER

Duties



DEARBORN SCOOP
... Handy on "Cut and Fill"

The stout Dearborn Scoop, with 5.7 cubic foot capacity, teams with the Ford Tractor to do scores of excavating, filling, and material moving jobs. Quick attaching.



DEARBORN SIDE MOUNTED MOWER
... For Fast Highway Mowing

This Dearborn Side Mounted Mower is built to mow highway shoulders, curbs, and rights of way—for fast cutting of big weeds to small brush. Ford Tractor Hydraulic Touch Control lifts and lowers cutter bar. 5' or 6' cut.

Effective ditch work, including cleaning and reshaping, is only one of many key road jobs on the long list of the Dearborn Road Maintainer.

It's built like a motor grader, with a 14-foot wheel base, for good blading performance. Weight concentrated on rear wheels, and the strong frame for firm circle support, contribute to blading without "chatter".

Powered by the Ford Tractor, the Dearborn Road Maintainer proves unusually capable at repairing frost-heaved roads—smoothing rutted or "washboard" surfaces—maintaining berms—helping spread surfacing materials.

Full range vertical blade positioning is under responsive hydraulic control, energized by a pump that takes power directly from the Ford Tractor's crankshaft. This Maintainer, with an approximate weight of 6,900 lbs., can put a pressure of 3,500 lbs. on its 8-foot blade.

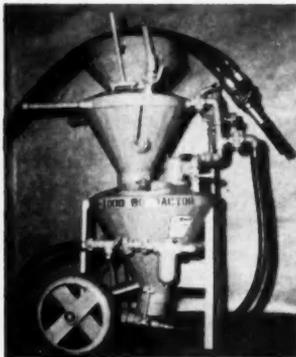
This unit's fitness for maintenance and moderate grading uses, plus its reasonable price, offer some remarkable advantages to users!

For complete information, write Dept. I, Dearborn Motors Corporation, or get in touch with your nearby Ford Tractor dealer.



DEARBORN MOTORS CORPORATION

Birmingham, Michigan



THIS CONCRETE APPLICATOR has a dual-compartment pressurized hopper for continuous operation. Adjustments for air and water pressure can be made while the unit is in operation, and different materials can be handled without changing parts

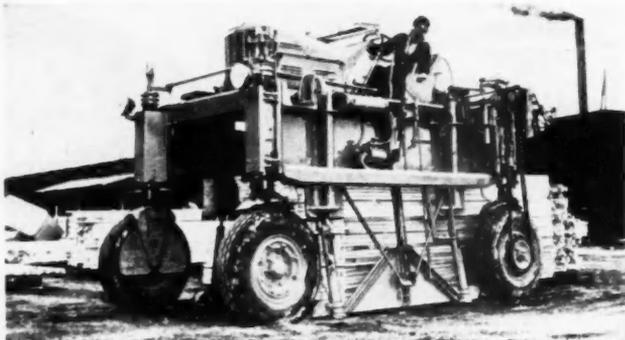
lifts a wheelbarrow by a single cable and grapple hooks. This is useful on small jobs, or for roofers, chimney work, etc. Typically, a 5 h.p. motor and winch form a unit that can be moved about by one man, and will lift up to 750 pounds.

Other types of winches are mounted on trucks, powered either by the engine or a separate unit. The popular jeep winch operates from the front of the vehicle.

With all types of elevators, winches, and other lifting equipment, proper safety precautions must be observed. No load beyond the rated capacity of the hoist should be handled. Hoists and winches must be securely anchored. Cables should be inspected regularly and kept lubricated. Men should not be permitted to ride up or down elevators not approved for passengers, and no passenger hoist should lift by only one cable. Loads should be properly secured. Slings, grapples, and hooks



HOIST ON TRUCK can be used to lighten work and shorten time in a multitude of ways on building jobs



THE STRADDLE CARRIER makes easy work of carrying, loading, and delivering lumber, both in the yard, and to the job. Units are available for loads up to twenty tons

must be adequate, and only workmen properly instructed and authorized should be allowed to operate hoisting equipment. Workmen should be cautioned against walking under a suspended load at any time.

TRUCKS

Trucks play so important a part in the construction industry that a listing of their use would cover every building operation. Trucks, of all sizes, from the half-ton pick-up to the largest trailer assemblies, are used in one way or another in the construction industry. Special body designs, a wide variety of attachments for special work, dual axles and special gear ratios for unusual load and road conditions—all are ways in which the automotive industry has kept pace with the builder in developing equipment to meet specific needs.

Special body designs for hauling materials extend the truck's utility, and permit the handling of all types of materials with greatest efficiency. Dump bodies for hauling earth, sand, gravel, and other bulk loads give

greatest load capacity and eliminate manpower in unloading. Partitioned dump bodies for concrete aggregates let the driver dump a mixer load of sand and gravel at a time, thus letting one larger truck haul three or four unit loads at one trip. Dump bodies for excavating are strongly braced to withstand the abuse of earth being dropped by shovels and buckets and have extensions over the cab for driver protection.

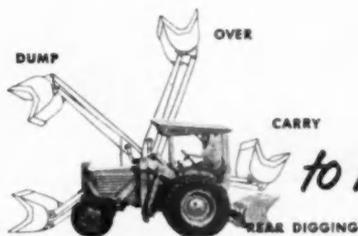
Lumber-handling bodies carry the load on rollers, so that the load may be unrolled from the truck onto the ground as a unit rather than unloading one piece at a time. Framing for a house typically loaded in reverse order, so that the first pieces to go in place are on top of the load, eliminating re-stacking.

Various other special bodies are designed for hauling plate glass, roofing materials, etc. Heavy "goose-neck" trailers are used for moving bulldozers, shovels, and cranes from one location to another. Many bodies are demountable and interchangeable, so that the same truck chassis may



COMBINATION TRENCHER and front end loader. This machine is used for digging foundation walls, footings, sewer, water lines

a **STRAIT-LINE**
is Your Shortest path



to Profits!

Digs in Rear . . . or Digs in Front

AND, IT MULTIPLIES TRACTION . . . SAVES TURNING
MAKES STEERING EASIER . . . INCREASES STABILITY



Push-Tilt assures fuller buckets even in fine plaster sand.



It takes plenty of traction to move from bank to truck in rough going like this. Rear-carried bucket makes it possible. And, in hard banks, the extra traction and Push-Tilt give you the same fast, profitable loading.

But here is its
Biggest Advantage

... ADDED TRACTION FROM REAR-CARRIED BUCKET

An Oliver Industrial Wheel Tractor and Strait-Line Loader is the biggest profit asset for any loading operation. It digs in back . . . or digs in front . . . and loads in front. No time-wasting turning or backing required.

Here's proof. These photos were taken loading out plaster sand, so fine it squirted out through a ten-penny nail hole in the truck body in a stream 4 inches long. Despite this difficult going, the tractor and Strait-Line wheeled its bucket loads *upgrade* without spinning. It

ran back from truck to bank with force. This extra traction for difficult conditions is created by the rear carried bucket.

This is a condition where rear digging solved the problem. In fact, under most conditions, the operator can do *more* with rear digging.

Why not check the Oliver Industrial Wheel Tractor Strait-Line for your loading.

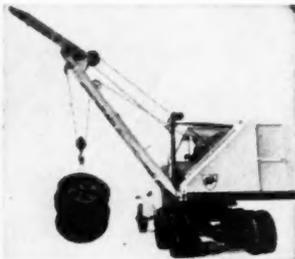
THE OLIVER CORPORATION

A complete line of industrial wheel and crawler tractors.

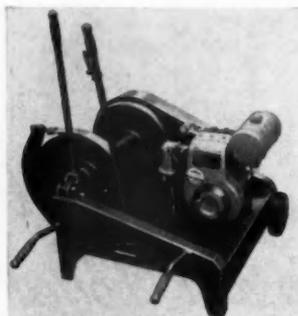




LIGHT MOBILE CRANE is versatile tool for loading and unloading, for erection of steel and panels



THE CRANE ADAPTOR shown above converts back hoe machine to crane in five minutes on the job, is used for lowering pipe or valves into the ditch, and is interchangeable with a fast back-fill blade using same boom and stick



HOISTS such as the above speed lifting of materials, eliminate hand labor, save time

serve for more than one specialized hauling operation.

Power take-off pulleys are supplied as an optional accessory on many light trucks for operating separate saws, pumps, compressors, etc. Hydraulic lift gates take the heavy labor out of unloading bathtubs, heaters, and similar heavy units, and also reduce breakage.

SCAFFOLDING, SHORING, FORMS

The labor and expense of building scaffolding, forms, shoring, ladders, and horses on the job have been greatly reduced by the use of ready-made units.

Steel scaffolds have kept pace with the requirements of modern construction, their use proving advantageous in a variety of jobs. Among advantages pointed out by manufacturers are low erection costs; high degree of safety, permitting fast and efficient work; easy inspection and reconditioning; and complete recovery of materials.

A recent development for scaffolds is the "mason frame," designed to improve bricklaying efficiency. Other innovations are a frame brace lock to reduce erection and dismantling time, and an overhead protection attachment.



POWER-OPERATED CONCRETE BUGGY has large capacity, speeds production, cuts material-handling costs



CHAIN FALLS makes light work of lifting heavy beams or pipe, provides safety by holding load at any point

HOW POWER TRENCHER SAVED FOR ONE BUILDER

The table below contains figures taken from the books of an eastern builder who carefully kept comparative costs between his old hand method and the mechanical system of trenching.

TRENCHER

Original cost	Average life	Cost per Year	No. of houses
\$6,084.54	3 years	\$2,028.18	192
Cost of trencher per house... \$ 10.56			
House Foundation:			
Average three houses per 8 hour day or 2-2/3 hours per house			
Operator and helper average			8.00
\$3.00 per hour by 2-2/3			
Loading fill and cleaning rubble, average 1/3 hour per house		\$3.00	1.00
by 1/3 hour			
Septic tank laterals:			
Average of 3 hours per house			
Operator and helper			9.00
\$3.00 an hour by 3 hours			
Payroll taxes on \$18.00 labor			.86
Gas and oil \$371.00 per year divided by 192 houses			1.93
Repairs, \$604.80 per year divided by 192 houses			3.15
Estimated average cost of trencher per house			\$ 34.50

MANUAL LABOR

Foundations, one house average: 6 men 1 day 48 hours	\$ 67.20
Laterals, average 4 men one day 32 hours	44.80
Loading fill and cleaning rubble, average 2 men 3 hours each 6 hours	8.40
Payroll taxes on \$120.40 labor	5.78
1-1/2 yards more of concrete on account of width of trencher (men cannot dig a 12 inch wide trench) at \$10.75 a yd.	16.13
Total	\$142.31
Savings Per House	\$107.81



How to haul **BIGGER PAYLOADS**

The more you haul per trip, the lower your delivery costs will be—so you're interested, of course.

And the best way to be sure of hauling more lumber and building supplies per trip is to get a truck that fits your job—a Dodge "Job-Rated" truck. There's one factory-engineered to meet your needs . . . save you money . . . last longer.

Thanks to Scientific Weight Distribution, you can carry far bigger loads on your Dodge "Job-Rated" truck—without overloading. What's more, every unit

that carries the load—such as frame, axles, springs, wheels, tires and others—is engineered especially to shoulder your loads with plenty of brawn and muscle!

Start hauling those bigger payloads in a Dodge, and you'll also discover that gas, oil and maintenance costs hold to a low, low level the year 'round!

But this is only part of the story. Why not get the full story on Dodge "Job-Rated" trucks . . . how you can make more trips per day, and save dimes and dollars in the doing? Visit your nearby Dodge dealer.

DODGE "Job-Rated" TRUCKS

Mr. Customer!

Here are 3 important questions to ask yourself when buying sawhorse brackets:

1. Will the sawhorse brackets take dressed, as well as, common lumber? You can be sure if you get Spee-Dee or Dalton brackets.

2. After using the assembled sawhorse, will it fall apart when lifted to be moved? Is it like the chair whose legs drop off when lifted? Both Spee-Dee and Dalton brackets are designed to hold the parts rigidly so they can't slip out of position—no matter how hard you use the assembled horse, or how much you move it around. With all this, sawhorses can be disassembled on the job quickly, easily for storing because of the exclusive, patented features of Spee-Dee and Dalton brackets.

3. Do I have to follow complicated instructions to assemble a sawhorse? Not if you get Spee-Dee or Dalton brackets. The amazing, simplicity, speed and ease of assembling horses with the new, patented Spee-Dee or Dalton brackets make them outstanding in their price class.

NEW Spee-Dee SAWHORSE BRACKETS

A Low-Priced, Quality Bracket
Takes Dressed or Common
2 x 4 Lumber

No Complicated Instructions to Follow

Beats anything in low-priced brackets! Amazingly easy to use. Produces sturdy sawhorses that won't fall apart when lifted by the rail! No complicated instructions to follow. Made like Dalton Mechanical Bracket except employs nails for securing the assembly. Use for ping-pong, picnic and banquet tables, display stands, platforms, carpenter's horses, barricades, etc. Disassemble on the job for storing.



Won't Fall Apart When Lifted by the Rail

— with the Exclusive FLANGED NAIL HOLES for Quick, Easy Disassembling

Pat. Pend.



A — Flanged nail hole. B — Removing nail. Claw hammer slips easily under nail head.

For Heavy-Duty, Construction Service—

DALTON

FULLY-MECHANICAL SAWHORSE BRACKETS

Convert 5 Pieces of Lumber into a Sawhorse WITHOUT NAILS, BOLTS OR MITERING OF LEGS

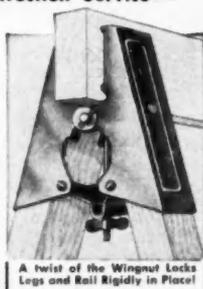
Sizes for 1x4's and 2x4's

- Platforms
- Scaffolding
- Work Benches
- Tables and others

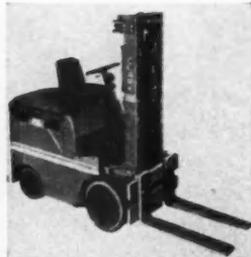
Simply put lumber in jaws and leg sockets — and tighten wingnut! The members are locked rigidly in place — can't slip or work loose. Disassemble on the job for storing. Made of heavy gauge steel, fabricated for strength, have rust resisting finish.

Sold by Hardware and Building Supply Stores. If not Stocked, have Dealer Order for You!

DALTON MFG. CO. 20 S. Central Ave., St. Louis 5, Mo.



A Twist of the Wingnut Locks Legs and Nail Rigidly in Place!



THE FORK LIFT TRUCK handles a wide variety of loads efficiently. In lumber yard, fork lift eliminates hand stacking

(Continued from page 520) also be converted into mobile work stands by adding casters.

In connection with the use of either type of steel scaffolding, manufacturers list the following suggestions as important:

- (1) Do not exceed the maximum load specified by the manufacturer.
- (2) Guard against falling objects by installing suitable overhead protection.
- (3) Use two-inch scaffold grade lumber for all platforms.
- (4) Inspect scaffold carefully when it is erected and continue in-

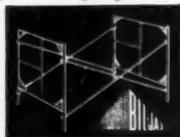


... is PROFITABLE on every building job!

Gets you UP in the world... FASTER SAFER EASIER

OWN or RENT... either way it pays!

Get the most in profit and speed in all your jobs. Bil-Jax Scaffolding is light in weight... is easy and fast to set up and take down... and is SAFE, even with heavy loads. Other Bil-Jax money-makers: swing scaffolds, rolling trestles, sectional and lean-to ladders, ladder jacks, leveling jacks, accessories.



Write for literature... ask for bulletin D-4

BIL · JAX · INC. · ARCHBOLD OHIO



FORK LIFT UNIT with load in elevated position. Loads may be stacked to a height of fifteen feet



POWEROPERATED BUGGIES speed handling of concrete and other materials. The unit shown above has a capacity of 2000 pounds, and can operate at 16 m.p.h. Low center of gravity and short wheelbase provide excellent maneuverability

Time saved is profit made with JAEGER-engineered machines

Mix more concrete in the time you save with a fast-charging, fast-discharging Jaeger:

5 to 7 seconds charging with Jaeger's "Skip Shaker" loader, equally fast discharging with Jaeger's bigger bucket and flight blades, shortens every mixing cycle, gains time for extra batches, bigger yardage every day you work.

No risk of "down time" either, in your busy season. Jaeger mixers roll on chilled Timken bearing rollers and tracks of high carbon steel *machined true on the drum*, with heavy duty automotive transmissions and bigger engines that have power to spare for years of reliable service. Sizes 6S, 11S, 16S. Also 3½S tilter and non-tilt Auto-Loader with automatic shaking batch hopper. Ask for Catalog M-10.



3½S "Auto Loader"



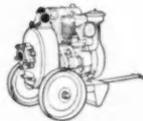
New 3½ft Plaster-Mortar Mixer makes you money in 4 ways:

(1) Bigger capacity—3½ ft. instead of 3 ft. (2) Better mixing—4 blades, instead of 2, mix smoother spreading material, fast. (3) Low for easy shoveling (only 34" high); easy to move (only 29" wide). (4) Heavy duty thruout—Timken bearing drum shaft with leak-proof neoprene seal, extra heavy gauge steel drum, automotive transmission, Wisconsin 3 hp engine. Ideal, not only for the small job but for bigger work where 2 small mixers will often give you more flexibility than one large machine.



**"New Standard"
Compressors**

Jaeger gives you 75 ft. of air instead of 60; 125 ft. instead of 105, to increase work output with same men and tools. Catalog JC-1.



**"Sure Prime"
Pumps**

Heavy duty construction and big capacity in light, portable small units—1½" and 2" sizes in aluminum or semi-steel, 4000 to 10,000 gph. Catalog P-10.

Jaeger Self-Raising Tower speeds placing, saves labor and accidents:

Assembled on ground, raised by its own power and easily moved as needed on its own skid base, this 1-ton Hoister tower eliminates hodders and scaffolding, operates either material cage or 14 ft. bucket. Standard height 37', can be extended to 67'. Automatic safety device positively prevents falling should cable break. Get Bulletin HS-1.



THE JAEGER MACHINE CO., 521 Dublin Avenue, Columbus 16, Ohio,

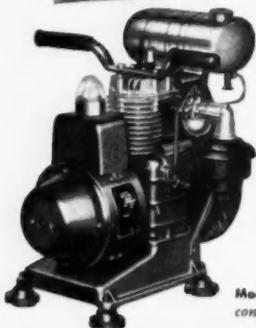
SALES, RENTALS AND SERVICE IN 153 CITIES OF THE U. S. AND CANADA.



KOHLER ELECTRIC PLANTS

*Independent Source
of Electricity*

The job moves faster



Model 1.5MS, 1500 watts, 115 volt DC. Manual control. Length 18", width 14", height 21".

PORTABLE electricity eliminates expense and bother of temporary power line hook-ups. Low cost model operates saws, pipe threaders, cutters, electric drills, other tools having universal (AC-DC) motors. Develops 1500 watts. Compact, weighs only 75 lbs. Handles for carrying. Two-wheel, rubber-tired hand truck available. Other sizes, 350 watts to 15 KW. Write for folder 7-E.

Kohler Co., Kohler, Wisconsin. Established 1873

KOHLER OF KOHLER

PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
AIR-COOLED ENGINES • PRECISION CONTROLS

"TROUBLE SAVERS" for Busy Builders

LADDER JACKS



• **ONE-MAN** Ladder Jacks adjust to any pitch on either side of the ladder. Takes weight on three rungs.



• **RAIL-TYPE** Jacks use side rails of ladder for extra safety.

Used by thousands of builders. Write for literature giving information on all money-saving "Trouble Saver" Scaffolding Accessories.

THESE SAFE, EASY-TO-USE
SCAFFOLDING ACCESSORIES
SPEED WORK AND SAVE MONEY

SCAFFOLD BRACKETS



- Erect and dismantle faster than you can build a make-shift wooden scaffold.
- Nail, studding and bolt-attached types—in 3' and 3½' lengths—rail carbon steel.
- Attachments available to convert any one type to any other type.

Manufacturers of
"Trouble Savers"® since 1912

The Steel Scaffolding Company, Inc.

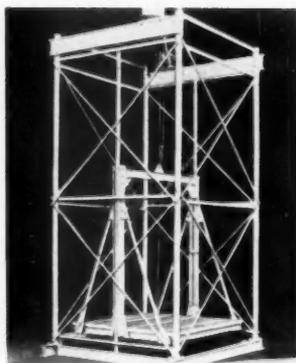
856 Humboldt Street, Dept. AB • Telephone EVergreen 3-5510 • Brooklyn 22, New York



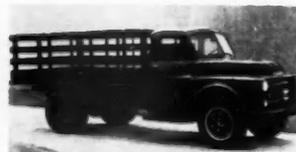
CONVEYORS provide an efficient method of lifting brick, tile, roofing materials to second or third-story level. Extensions are available to adjust the height of the conveyor to the level needed

- specification as long as it is in use.
- (5) Never permit any structural member of the scaffold to be removed while it is in use, without permission from proper authorities.
 - (6) Tie scaffold into the building every twenty feet of height and every twenty-five feet of width.
 - (7) Install guard rails and toe boards.

Adjustable shoring consists of a T- or L-head top section and an extendable leg, with adjustable stop points so that any height within the



TWO-SECTION UNIT shows typical construction of hoisting tower and cage. Such towers may be raised to any height, can also hoist concrete in buckets



THIS STAKE TRUCK is adaptable to a wide variety of hauling work. Model shown above has 1½-ton capacity

AMERICAN BUILDER

RESIDENCES



CHURCHES



PUBLIC BUILDINGS



SCHOOLS



FARM BUILDINGS



"THEN IT'S DECIDED WE WILL BUILD WITH VIBRAPAC CONCRETE BLOCK"



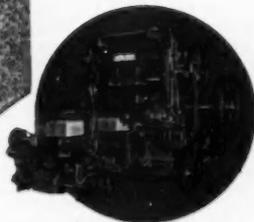
Today — leading architects and discriminating builders use Vibrapac Concrete Masonry for Beauty and Architectural Design. The cozy livability, both summer and winter, plus the economy, lifetime durability, fire safety, insulation value, and low upkeep cost of Vibrapac Concrete Masonry, makes it today's popular building material.

Besser has developed new units, such as floor filler block, pilaster block, window sill block, bond beam block, control joint block and many other accessory units, which have done much to increase the use of concrete masonry construction.

FREE BULLETIN — Soffit Block used as a filler for floors and roof construction has many advantages. Vibrapac plants report greatly increased demand for these units. The fire safety, economy and many other advantages of this type of floor and roof construction are explained in Bulletin No. 77. Write for your copy today.

VIBRAPAC BLOCK

— Specified by Leading Architects — Used by Leading Contractors — Sold by Leading Concrete Products Plants



SUPER VIBRAPAC — The modern high production block machine. Produces high quality units in all styles and sizes on Plain Pallets. Fully automatic — no machine operator required — uninterrupted high production — Front Feeding of Pallets.

BESSER

Complete Equipment for Concrete Products Plants

BESSER MANUFACTURING COMPANY • ALPENA, MICHIGAN, U. S. A.

CONTRACTORS—save money!

Mix plaster and mortar
in a MULLER 3 FOOT MIXER



• An investment that will give you better plaster and mortar at far lower costs than old hand methods. Ideal for both inside and outside use. Holds full bag batch of most mixtures.

PRICE \$312 (with electric motor)

\$330 (with air-cooled engine)

FOS Metuchen, N.J.

Also available in 6, 9 and 12 cubic foot sizes

Write for name of nearest distributor.



**MULLER MACHINERY
COMPANY, Inc.**

Metuchen 4, N.J. Cable Address MULMIX



BELSAW

ONE-MAN LOADER MAKES A ONE-MAN JOB OF FOUR-MAN LOADS

EASILY HANDLES UP TO 1/2 TON!

Belsaw ONE-MAN LOADER requires no installation... One man rolls heavy loads on and off trucks; One man moves it any place in your plant... One man takes it to and from your outside jobs. Easy operating two-speed hand winch with extension handle for loading wide boxes and crates.

Belsaw ONE-MAN LOADER handles up to 1/2 ton, weighs only 150 lbs., 10 ft. long with 16 in. wide ball bearing rollers on 1 ft. centers.

Order today through your equipment dealer or direct. Immediate Shipment.

Money-Back Guarantee if Not Satisfied After 10 Day Trial! **\$99.50**

BELSAW MACHINERY CO.

2001 Field Bldg., 315 Westport Rd., Kansas City, Mo.
Dealer Inquiries Invited

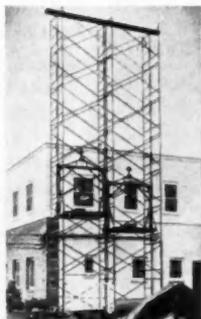


THE TRANSIT MIX CONCRETE CARRIER is only one of many special truck units developed through close co-operation between truck and equipment manufacturers

range of the shore may be obtained. Top sections are generally of wood, with the leg of "T" cross-section steel, combining lightness and strength. This type of shoring is quickly set up and leveled off, and may be removed with more speed and ease than the conventional 4 by 4's and wedges.

Plasterer's and bricklayer's horses of steel are permanent, may be adjusted in height, and are quickly set up and knocked down for moving around on the job or transport to another location. Savings in lumber and labor soon pay for the first cost of this type of equipment.

Prefabricated forms for walls, decks, and columns of both wood and



HOISTING TOWER shown above has two cages for rapid handling of men and materials. Hoists may be either gasoline or electrically operated, have capacities up to 2500 pounds

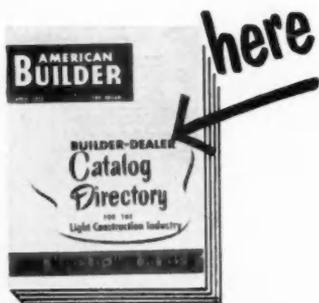


DUMP TRUCK BODIES provide great efficiency in handling sand, gravel, earth, and other loose materials

*I've got to hand
it to you, Jones,
you know more
about the Building
Business than
I thought*



**Jones gets his
information**



It isn't what you know that is so important—it's knowing **WHERE** to go to get the information you need to do a job or solve a problem.

Builders and Dealers keep their **AMERICAN BUILDER CATALOG-DIRECTORY** handy so they can refer to it frequently.

AMERICAN BUILDER

79 W. MONROE ST. CHICAGO 3, ILL.

**Straight-from-the-shoulder facts
show you save in every way with**

CHEVROLET *Advance-Design* TRUCKS

FACT No. 1

COSTS LESS TO BUY

Match a Chevrolet truck against any comparable truck capable of handling the same payloads. You'll find Chevrolet trucks list for less, yet bring you ruggedness, stamina and great features not found in the other truck.

FACT No. 2

SAVES MONEY ON THE JOB

Experienced truck operators know Chevrolet trucks cost least to own and maintain. Valve-in-Head economy, in the Chevrolet Loadmaster or Thriftmaster engines, saves on gas. Four-way engine lubrication reduces wear and oil costs. Rugged construction means long life.

FACT No. 3

RIGHT TRUCK FOR EVERY LOAD

Chevrolet trucks are factory-matched to your payload and service requirements. You don't buy "too much truck" or "too little truck." Frame, axles, springs, body, brakes and power are balanced for the job.

FACT No. 4

KEEPS ITS VALUE LONGER

Records show that Chevrolet trucks traditionally bring more money at resale or trade-in than many other makes. Chevrolet's market value stays up because the value stays in! More proof that Chevrolet is the best truck buy! See your Chevrolet dealer soon.

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

TWO GREAT VALVE-IN-HEAD ENGINES—Loadmaster or the Thriftmaster—to give you greater power per gallon, lower cost per load • **POWER-JET CARBURATOR**—for smooth, quick acceleration response • **DIAPHRAGM SPRING CLUTCH**—for easy-action engagement • **SYNCHROMESH TRANSMISSION**—for fast, smooth

shifting • **HYPOID REAR AXLE**—for dependability and long life • **TORQUE-ACTION BRAKES**—on light-duty models • **PROVED DEPENDABLE DOUBLE-ARTICULATED BRAKES**—on medium-duty models • **TWIN-ACTION REAR BRAKES**—on heavy-duty models • **DUAL-SHOE PARKING BRAKE**—for greater holding ability on heavy-

duty models • **CAB SEAT**—with double-deck springs for complete riding comfort • **VENTILANES**—for improved cab ventilation • **WIDE-BASE WHEELS**—for increased tire mileage • **BALL-TYPE STEERING**—for easier handling • **UNIT-DESIGNED BODIES**—for greater load protection • **ADVANCE-DESIGN STYLING**—for increased comfort and modern appearance.

CHEVROLET DIVISION OF GENERAL MOTORS, DETROIT 2, MICHIGAN



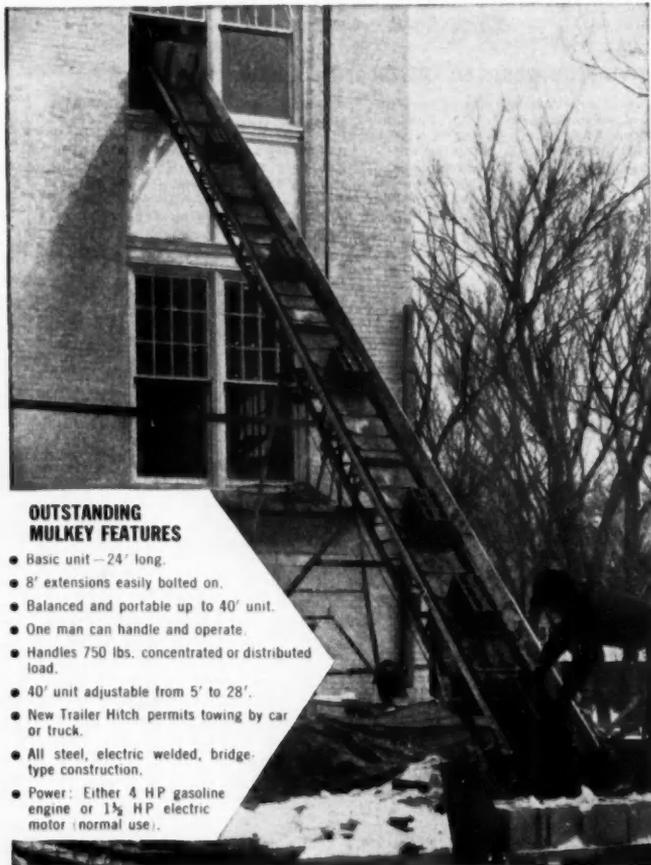
SAVE TIME

LOWER BUILDING COSTS WITH

MULKEY

ALL-STEEL PORTABLE ELEVATOR

Here's one of many examples how THE MULKEY Elevator saves as much as 40% by cutting time and labor on the job. Shown in action below, a MULKEY 40-ft. Elevator moves 16 concrete blocks per minute up to each individual room on second floor level.



OUTSTANDING MULKEY FEATURES

- Basic unit — 24' long.
- 8' extensions easily bolted on.
- Balanced and portable up to 40' unit.
- One man can handle and operate.
- Handles 750 lbs. concentrated or distributed load.
- 40' unit adjustable from 5' to 28'.
- New Trailer Hitch permits towing by car or truck.
- All steel, electric welded, bridge-type construction.
- Power: Either 4 HP gasoline engine or 1½ HP electric motor (normal use).

Write for Prices and FREE Literature today!

SAM MULKEY COMPANY

1621-AB-452 Locust Street

Kansas City 8, Missouri

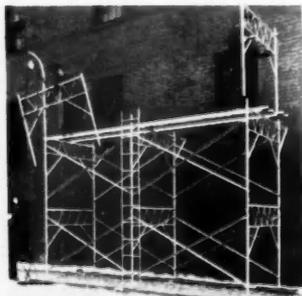


TWO TYPES OF SCAFFOLDING are shown: prefabricated steel units for mason and other construction operations, and hanging scaffold for cleaning and tuck pointing

steel offer the same advantages of low erection and dismantle time, full recovery of materials, and better finish for the work after stripping.

SELECTION

It goes without saying that the builder who is constructing only ten or 12 homes a year will rent rather than buy such heavy equipment as trenchers, concrete mixers, cranes, and the like. Through his local dealer he can obtain, for the specific job in hand, nearly any kind of equipment he needs. Some builders may find it profitable to follow the



PREFABRICATED STEEL SCAFFOLDING is shown in assembly. Note pulley fitting for raising sections and material, and ladder for safety



A TRACTOR AND SEMI-TRAILER for hauling cut stone, which incorporates a derrick for loading and unloading

AMERICAN BUILDER

"TROUBLE SAVER" SCAFFOLDS

Save Time and Man-Power
on Light Construction Jobs

Even on small jobs, "Trouble Saver" Sectional Steel Scaffolds are profit-makers for you.

Prefabricated frames fit into place quickly and securely. This, *strong, safe* scaffold can be erected and dismantled in minimum time. Indoors and out, it is more efficient than old-fashioned built-on-the-job wood scaffold.

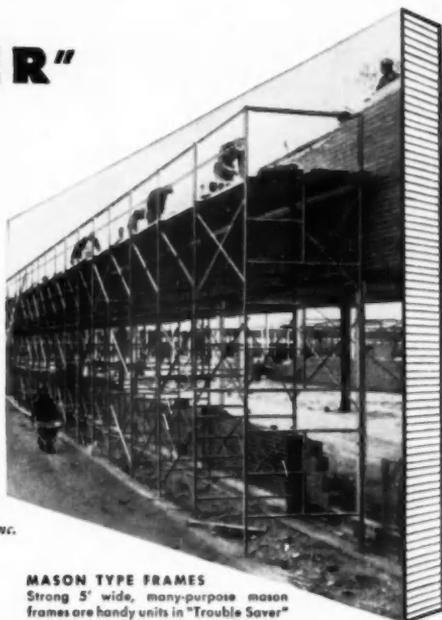
With "Trouble Saver" you erect a scaffold to fit the exact needs of each job. Time-saving and efficiency features include extension legs for levelling and built-in ladders.

Get the facts! Write for Bulletins PSS-15 and PSS-24. See how other contractors use "Trouble Saver".

Distributed by:

- Brick Laying
- Stone Setting
- Chimney Work
- Painting
- Stucco Work
- Sidewall Jobs

Approved by Underwriters' Laboratories, Inc.



MASON TYPE FRAMES

Strong 5' wide, many-purpose mason frames are handy units in "Trouble Saver" assemblies. Separate working and material storage levels are provided for faster, easier work. Rungs may be used as a ladder.



Greater Safety...Efficiency...Economy

THE PATENT SCAFFOLDING CO., Inc.

38-21 12th Street, Dept. AB

Long Island City 1, N. Y.

West Coast Plant: 6931 Stanford Ave., Los Angeles 1, Calif.

HERE'S A *Deluxe* MODEL
THAT'S *Deluxe* FROM STEM
TO STERN!
IT'S *America's Biggest*
HOE TYPE MIXER
VALUE!



Wonder Deluxe

- Triple Hoe Action
- 6 cu. ft. capacity
- 31" width with corner type wheels
- Built-in safety gripping
- Optional air or water-cooled engine



CONSTRUCTION MACHINERY COMPANIES, WATERLOO, IOWA, U. S. A.



POWER POST HOLE AUGER operated by two men does work quickly and neatly



ROTOTILLER used to break ground before seeding



CONCRETE VIBRATOR used around jobs in a great many ways

pattern of the farmer who owns the expensive threshing rig—own the equipment, and rent it out to other builders in the locality. However, any purchase of construction machinery or materials-handling equipment must be predicated upon getting the money back—with a profit—during the estimated useful life of the machine.

Builders who operate on a fairly large scale will frequently find that the convenience and time saved by having the machine at hand when it is needed will offset the added investment by eliminating man hours lost waiting until the equipment is

available under a loan or rental arrangement. The key to making efficient use of such heavy equipment is to co-ordinate its activity with other building activities, so that it stands idle as few days a year as possible.

MAINTENANCE

Improper, inadequate, and irregular machine maintenance is responsible for more machine downtime than any other single cause. This

is particularly true of the piece of equipment which is used only occasionally. Routine maintenance tasks assume a size out of all proportion to the amount the machine is used. Consequently, normal functions of cleaning, lubricating, and adjusting, are let go "until next time," which may be weeks later. In the meantime oil and grease has congealed or dried out, dust and grit have collected on bearings, and in other ways the machine has deteriorated for lack of care. When it is finally operated, it is naturally subject to break down.

The key to having good machine maintenance is the rigid operation of a simple check-list or tickler follow-up system on which each piece of equipment is listed together with a schedule of its routine maintenance and periodic overhaul requirements. Follow-through on this can save hours and days wasted. Manufacturer's recommendations are usually adequate for routine maintenance operations, and can be incorporated into such a follow-up maintenance system. If the builder will add to his system a centralized responsibility for machine maintenance, things will move more smoothly. It is usually found practical to have one man who functions more or less as a maintenance specialist and who will handle all major maintenance operations.

YOU GET A BIG LOAD OF BENEFITS with the powerful PRIME-MOVER!

Building contractors—large and small—use Prime-Movers—simply because P-M's are valuable machines to have on the job. The 10 cu. ft. bucket carries concrete and aggregates, plaster and like materials. The interchangeable platform with stakes handles large bulk items, 5 H.P. engine with forward and reverse climbs steep ramps.

**THE ORIGINAL
POWERED
WHEELBARROW**

Get the facts and helpful information on the benefits Prime-Mover can bring you. Write today.

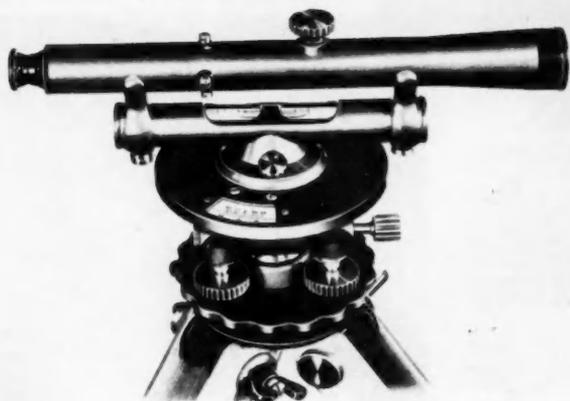


THE PRIME-MOVER CO., Muscatine, Iowa

THE *Bell*
PRIME-MOVER



THIS TRUCK AND TRAILER ASSEMBLY reduced hauling costs to only 31 cents per yard



SMALL builders, looking for ways to make their operations more profitable, can well give some thought to the amount of time and effort devoted to managing their business, keeping office records, and handling routine office procedures, as well as to the engineering equipment with which they work.

Accounting Systems and Record Keeping

Delegates to the 1952 NAHB convention in Chicago listened to the authors of a book on small-builder accounting which has been published by the Housing and Home Finance Agency. This book gives details on simplified small-builder accounting methods, considers building problems and construction methods, costing, job records, payroll and other procedures.

Visible Loose-Leaf Binders

Visible loose-leaf binders have been found practical by many builders for purposes such as recording social security data, keeping customer accounts and prospect lists, purchase records, mortgage data, insurance accounts, bank records, and equipment inventory and depreciation records.

Visible Card Systems

Visible card systems are particularly useful for keeping records to which frequent reference may be made. Mortgage data, materials records, bank records, payroll, sales records, and similar information may be recorded and reviewed rapidly with these systems. Most systems protect the visible margin with transparent plastic material which may be color-keyed to signal basic information without referring to notations on the card, and provide for insertion of existing card records without re-entering information on the new card.

Engineering and Drafting Equipment

Basic drafting and engineering equipment has not changed radically in recent years. Levels and transits of good quality have improved optical systems with coated lenses, internal focusing on dirt and dust-free inside lens surfaces, ball bearings, and rack and pinion operating mechanisms.

Slide rules, scales, drawing instruments, and similar devices have been supplemented with a number of gadgets to facilitate perspective drawing, house plans with template of plastic with useful shapes cut out, and other tools which combine functions of T-square, straight-edge, protractor and parallel rules.

Files and Cabinets

The average person might well think that a file cabinet is just another file cabinet, but this is no more true than to say one house is like another. Primary questions in selecting filing equipment include frequency of reference, permanent or temporary storage, necessity for security against prying or pilferage, need for fire protection, floor and office space available, and investment which the individual builder's operation can justify. Proposals and bids, specifications, contracts, and other valuable papers might well be put in a fireproof file which has passed the underwriters' tests. Ball-bearing, full-suspension files will work easier, and probably stand up longer than the economy models.

Duplicating Equipment

There are three basic types of duplicating equipment commonly available for use in the average small office: stencil, spirit, and offset. Mimeograph has become virtually a generic term, just as "Coke" for

ENGINEERING EQUIPMENT AND OFFICE SUPPLIES

Record Keeping

Engineering
and Drafting
Equipment

Files
and Cabinets

Duplicating
Equipment

Typewriters

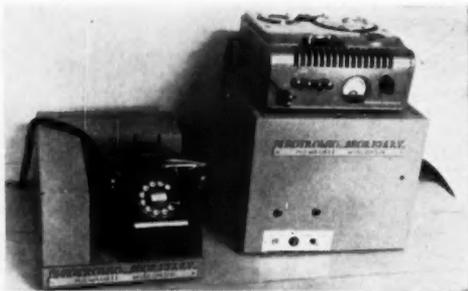
Dictating and
Recording
Equipment

Bookkeeping
Machines

Direct Mail
Equipment

Miscellaneous
Office Aids

Time Savers



GADGETS AID EFFICIENCY

Electronic secretary shown above answers the telephone with recorded greeting, puts information and messages on tape for owner. Owner can call in and machine will deliver messages. Automobile telephone shown at right provides 20 calls a month for base charge of \$28, more than pays for itself in time saved and convenience of being constantly in touch with the home office.



cola beverages. There are, however, many different manufacturers of stencil-type duplicators, most of whom put out models operated both by hand and by electricity. Efficient reproduction of copies with these machines requires clean typewriter keys, an even "touch" in preparing the stencil, and a clean and well-oiled machine with ink pad in good condition for proper distribution of ink.

Spirit duplicators operate by typing a master on a sheet of smooth paper using special carbon paper. The master is inserted in the machine much as a stencil in stencil duplicating, and an alcohol base fluid moistens the master as each sheet passes over it and picks up enough of the carbon to make one impression. These machines are made in both hand and electric-operated models.

Offset equipment is primarily useful to the larger business where longer runs of forms and other papers are required. It operates in many ways similar to spirit duplicators, but actually could be considered "production" printing equipment.

Typewriters

Over the years since the development of the early Oliver typewriters with separate keyboards for capitals and lower case letters, manufacturers have constantly improved their products until today several manufacturers offer electrically-operated machines which do almost everything for the operator but spell correctly. Standard models have a variety of special features including easy ribbon changes, removable platens for cleaning and dressing, automatic margin settings, decimal tabulation for billing and accounting work, touch controls, and similar devices.

Dictating and Recording Equipment

There are four major types of recording and dictating equipment currently available and of use to the small builder. These include disc, tape, wire, and cylinder-ribbon types, all of which have now become electronic in operation.

Small builders will find such equipment very useful as time savers. When routine correspondence, specifications, job changes, and similar matter can be dictated and recorded for transcription later, the typist can be doing something else while the boss is dictating. In addition, the use of such equipment for conferences with clients where terms and specifications are discussed, and as a means of recording vital telephone conversa-

tions so that specifications and details are not lost or misunderstood, has proved practical and profitable.

Most of the equipment manufacturers also provide mailable discs of wire or tape so that dictation may be made in the automobile or in the field wherever there is electric current available.

Bookkeeping Machines and Equipment

Adding machines, calculators, printing calculators, and other bookkeeping machines are designed not only to save time but to increase accuracy. This is of special importance to builders, because in figuring estimates and keeping track of expenses, lack of accuracy can easily cause an operation to show a serious



NEW FILE for plans and drawings has equal capacity to 30 regular drawers in horizontal cabinets, holds up to 5,000 sheets flat in folders by means of spring tension. Folding shelf makes notations easy, and visible index in lid makes finding simple

loss instead of a reasonable profit.

Estimating quantities of lumber and brick, extending invoices, figuring percentages, calculating costs, analyzing sales, computing payroll and social security, preparing financial statements, prorating expenses, discounting, pricing, and other general accounting operations are facilitated with one or more of these machines.

Direct Mail Equipment

Direct mail advertising—the use of letters, postcards, and various special mailing pieces—is salesmanship in print. It multiplies your sales efforts, and by properly qualifying inquiries and prospects, it can save you hours of time for real prospects instead of idle “suspects.”

Thousands of builders have learned by experience that the consistent use of direct mail to keep in contact with old customers who recommend them to friends, and to keep their name before others in the community, will bring in new business and new customers as well as increase remodeling and modernization work.

The labor in folding mailing pieces, addressing, sealing and stamping will frequently run as high as 2¢ per piece for hand operations. Unless there are several thousand pieces being mailed on a list which is used repeatedly to gain the impact of repetitive advertising, the average builder cannot afford an expensive addressing machine or production-type folding equipment; he sends the work to the nearest letter shop. However, there are available a number of economical addressing machines operating on the spirit duplicator principle, in which the list is typed with special carbon on a roll. The roll containing addresses feeds through the machine as postcards or envelopes are inserted by hand, and makes possible addressing 1,000 or so pieces an hour.

Similarly, there are several low-cost folding machines available for small-office use, which will handle sheets of paper from 2½ by 3½ inches to 9 by 14 inches, and perform single folds, parallel letter folds, double parallel folds, accordion or statement folds, French folds, and horizontal with two vertical folds.

Postage meters now are used on over half the outgoing mail in the country, according to manufacturers. For the small office, they have the advantage of speed in sealing and stamping mail, and faster handling in the post office, where metered mail needs no postmarking or cancellation and thus goes out for delivery that much faster. Also, meters imprint an



Proved...with the Printed Tape!

Accurate estimating is the initial step toward a profitable operation. And profitable estimating can only be based on fast, dependable figure work.

The Remington Rand *Printing Calculator* gives you this vital speed and accuracy. In *one machine*, you get short-cut multiplication and automatic division combined with lightning-fast addition and subtraction—plus “first-time proof” of accuracy, *printed on the tape*.

Payrolls, Invoice checking—all your other figuring problems, are handled faster, easier and at a lower cost. Send today for complete details on the Remington Rand *Printing Calculator*—see how it will save for you!

Remington Rand Printing Calculator



Remington Rand

- Room 2008, 315 Fourth Avenue, New York 10, N. Y.
- Please send my FREE copy of “A Blueprint for Figure-Fact Efficiency.”
- No obligation of course.
- Name _____
- Company _____
- Address _____
- City _____ Zone _____ State _____

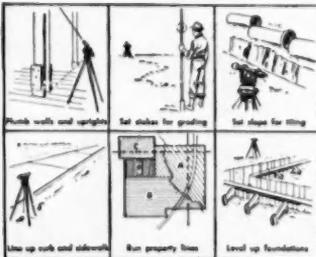
White Universal Level-Transit...



the most versatile instrument you can own!

YES, the White "Universal" Level-Transit is the most practical, complete instrument on the market. Now available in a new improved model — the No. 3000 — with internal focusing, coated optics, guarded vertical arc. In fact, every feature to assure you lifetime durability and accuracy. And the price is *only \$185**, complete with tripod. See your dealer, or write **DAVID WHITE COMPANY, 311 W. Court Street, Milwaukee 12, Wisconsin.**

Indispensable for all these jobs and many more



We offer the most expert REPAIR SERVICE on all makes, all types of instruments.

**Price subject to change without notice.*

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advertising message at the same time, and completely eliminate the stamp pilferage problem.

Miscellaneous

Contractors who wish to make deluxe proposals, binding their specifications and proposal in "book" form with drawings and other data securely bound, may do so with plastic binding equipment now available and suitable for use in the small office.

The common wax marking crayon has been developed still more by manufacturers. Builders may now obtain special crayons for marking lumber that are unaffected by climatic



ELECTRIC TYPEWRITERS such as above are said to increase speed of normal typist 25 per cent or more, provide more legible carbon copies, and less fatigue

conditions; for marking wet or green lumber, metals both hot and cold, glass, rubber and asphalt tile.

Time Savers

The electronic secretary and automobile telephone are time and work savers for a number of builders. The electronic secretary consists of a small phonograph containing an answering record and a standard wire recorder which can record an hour of talk. When the phone rings, the phonograph record requests the caller to leave a message. The wire recorder cuts in and takes down the information inductively. Letters and instructions can be given the recorder over the phone for transcription at a later time. This device is of particular interest to the small office, operating perhaps with only part-time secretarial help.

An important point to bear in mind about most types of office equipment is that while they are useful in any large office, they are particularly useful to the small operator.

The small builder multiplies manpower at his disposal through the use of machines, machines which require no withholding tax, no wages, no social security payments, but only a little oil and reasonable care to give years of profitable operation.

Your best sales tool—the ABC finance plan. Ask us today.

EASURE MORE PROFITS

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MILWAUKEE
MINNEAPOLIS
NEW ORLEANS
NEWARK
OKLAHOMA CITY
OMAHA
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Make it a rule to quote monthly payments . . . not the cost of the whole job. You'll close more sales on the spot . . . for greater profits. And, you don't tie up capital when you finance the easy, ABC way.

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BOSTROM LEVELS FOR HALF A CENTURY.

Have been the most economical precision leveling instruments on the market.

Used and endorsed by contractors and builders everywhere. Sold on guarantee of satisfaction or money back.

No. 5 BOSTROM Convertible Level Detachable Compass when desired

Carried in stock by distributors from coast to coast. Write today for literature, prices, and name of our distributor near you.

Simple, Accurate, Durable, Complete

No. 4 BOSTROM Contractors' Level

Bostrom - Brady Mfg. Co.
535 Stonewall St., S. W. ATLANTA, GA.

AMERICAN BUILDER



This builder uses what he calls an X-Ray house which has sides, sheathing, and other portions cut away to show details of construction, plumbing, heating and wiring installation and other features. Customers like to know what they are buying and appreciate this type of demonstration.

CONTRACTORS and builders who are "merchandising-minded" will retain that attitude even under present restrictions of starts possible for 1952 and curtailments of various types of materials and supplies normally used in former years. With rising costs and rising prices, potential buyers are becoming more choosy, and the builder who is geared to aggressive and effective sales effort will get his share of the business first.

Good Demonstration Pays

Many contractors have geared their selling effort to an effective demonstration, either utilizing a demonstration home after completion, a demonstration of a house under construction, or a cutaway model either on their own premises or on the site where other construction is taking place. When a buyer is putting ten or fifteen thousand dollars or more into a property, he must have confidence in the builder, and this confidence is greatly enhanced with the type of demonstration which explains carefully why certain materials are used, how the features of the building are constructed, and to some extent why new materials are preferred to others.

Quality the Best Salesman

How to sell homes, in the final analysis boils down to a phrase familiar to all builders—simply build a better home and then let the public know about it. How to achieve more quality is a question that can be answered in hard work and close supervision of every phase of the job, in constantly improved design, in keeping in touch with developments in machines, materials and techniques, and in consistent alertness to meet changing tastes and living needs.

Extras Add Sales Appeal

Some builders give extra sales appeal to their homes by lavish use of "extras." Variations from standard designs with different room arrangements are supplemented by installation of electrically operated picture windows, revolving closets in master bedrooms, hamper-utility cabinets in bathroom halls, floor-to-ceiling bookcases, storage or cabinet wall installations, prefabricated chimney or fireplace units, copper plumbing, automatic garage door openers, and plenty of closet and storage space.

Appliances Are Great Sales Aid

Women want labor-saving appliances, and most realize that if they



National Home Week in September, 1952, will offer dealers and builders a cooperative opportunity to display materials and equipment as well as building skills in their salesrooms and in open-house demonstrations.

APRIL 1952

ADVERTISING and MERCHANDISING AIDS

TESTED SELLING, ADVERTISING
AND MERCHANDISING IDEAS

Customer Appeals

- Good demonstrations
- Quality
- Extras
- Appliances
- Use color

How Builders Sell Homes

- 28 Important
- Industry Men Give
- Their Best Ideas

National Home Week 1952

How to Get the Most Out of
Your Advertising Dollar

Rate Your Publicity Program

Do's and Don'ts in
Writing Good Sales Letters

Salesmanship Check-Up for
Builder's Salesmen

Window Display Score Card

Customer Contact Points
That Win or Lose Profits

DO THESE CONSISTENTLY

AVOID THESE

1 Use Newspaper Display

1. When your operation is large enough to justify the budget.
2. Use white space generously.
3. Get a provocative headline.
4. Adopt an attractive format and signature to develop familiarity with repeated use.
5. Use a map or clear instructions for reaching the property to view it.
6. Be consistent, stay with it, repetition pays.

1. Using display space for "prestige" reasons. Classified frequently does as well or better.
2. Don't clutter the ad with too much small print.
3. Avoid vague generalities, overworked words like "beautiful," "bargain."
4. Don't try to "tell it all" by crowding.
5. Don't duck the house's faults. Anything you conceal will come out against you later.
6. Don't fail to mention price in the ad. 50% of adv. readers pass up ads with no price.

2 Use Newspaper Classified

1. Write copy the way you talk. Be brief.
2. Tell your story from the buyer's viewpoint.
3. Use brand names of equipment installed and sold as part of the package.
4. Use several smaller ads scattered thru.
5. Sell value, not bricks and mortar. Use the basic emotional appeals.
6. Use services provided by your local paper. They can help you write good ads, check results.

1. Don't over-abbreviate. The line you save may waste the lines you run.
2. Don't splurge on Sunday and forget weekdays.
3. Don't rush it. Take time to write a good advertisement, or don't run any.
4. Don't say anything you can't prove. Try to build reader confidence always.
5. Avoid negative approaches, "scare" advertising.
6. Don't write it off the cuff. Go look at the place as a buyer would. Then write the ad.

3 Try Direct Mail

1. Use color in letterhead, sign in same color ink.
2. In copy, capitalize on special features such as location, kitchen, landscape, etc.
3. Provide for follow-up. Repeated mailings to the same list pull many times the results of single mailings. The time to buy is NOW, but NOW is different for different people.
4. For emphasis add a handwritten note to typed or printed letters.
5. Build your list constantly. More new names make more possibilities.

1. Don't misspell the man's name! Personalized letters with the name wrong are worse than broadsides with no name.
2. Don't mail to "just anybody." Check the list and qualify names as possible buyers first!
3. Don't make it hard for them to reply. Provide reply card, prominent phone number, etc.
4. Don't overlook your envelope. Make it sell for you with copy on back flap or side.
5. Don't let your list get out-dated. Keep addresses current, and don't forget to keep names of your established customers on the active list. They have friends!

4 Try Radio

1. Try for spot announcement during sports programs—considered the best time.
2. Ask for action. Ask people to come and look!
3. Try tie-ins with manufacturer's promotions when you have packaged kitchens etc.

1. Duck the time and program which has too many other programs competing for your listeners.
2. Keep it simple. A long, involved story loses listeners and makes no sales.
3. Don't try it without a plan, a carefully prepared script, and follow-up ready to go.

5 Signs and Souvenirs

1. Keep signs freshly painted, neat, easily read. Use FOR SALE, and hang on SOLD strip later.
2. Match booklets and advertising pencils make convenient gifts for prospects and visitors.
3. Use some imagination to work out a unique device that fits your own operation particularly.

1. Avoid too large and unsightly signs which stamp you as an obnoxious money-grubber.
2. If you have any expensive gift advertising pieces or premiums, qualify the prospect to avoid wasting too much material.
3. Don't work without a PLAN. Will you get the money back in goodwill and eventual sales?

don't buy them with the house, they may have to wait a long time to get them at all. Where it is possible to buy the appliances right with the house with no increase in down payment and only a slight increase in the monthly installment, the inducement becomes very strong indeed.

Color Helps Sell Homes

Color styling of homes should be undertaken with the same care that is given to design, site planning, landscaping, production, and financing. Integrated color planning, whether for single unit or large developments, adds sales appeal to replace what is frequently monotony in color and lack of individuality in homes. In planning the exterior color scheme, avoid monotony, use colors which combine harmoniously with adjacent structures.

How Builders Sell Homes

Leaders in building and selling homes from all parts of the country have offered their field-tested sales practices to *American Builder* for the benefit of our readers. Ideas and opinions presented here have all been obtained by direct correspondence with builders, and are quoted from their replies.

(1) Consider special features

Such items as double sinks in the kitchen, tile shower stalls in bathrooms, are a great help in making sales. In the higher priced brackets, get away from old basic plan ideas.

(2) Fully furnish demonstrator

Where a builder has a number of homes under construction, the furnishing of one home is a great help in making sales. Have lawns in and yards fully landscaped. This gives the buyer a better chance to visualize what his own home will be like.

(3) Use good design

Use plans that present simple, pure architectural designs. Get your attractiveness from proportion, line, location and type of windows. Use no fake dormers or gingerbread. Interiors should be so pleasing that you would be glad to live there.

(4) Keep competitive price-wise

Keep your sales prices competitive at all times by maintaining a sufficient volume of construction to keep unit overhead at a minimum. Organize your sales force and handle your own sales. Make a name for yourself instead of for the broker.

(5) Prove quality

Prove to the buyer that you are selling quality. Show him that you want him to live in happiness after he buys his home. Cut all fringe operating costs so you can give him more for his money.

RATE YOUR PUBLICITY PROGRAM

How many of these efforts have you made?

1. WHAT'S YOUR STORY? Have you covered these: MADE MISSED

A. Article on new site purchase	<input type="checkbox"/>	<input type="checkbox"/>
B. Reports on progress in plans for new building	<input type="checkbox"/>	<input type="checkbox"/>
C. Construction starting date released	<input type="checkbox"/>	<input type="checkbox"/>
D. Letting of subcontracts announced	<input type="checkbox"/>	<input type="checkbox"/>
E. Ground-breaking ceremonies	<input type="checkbox"/>	<input type="checkbox"/>
F. Naming of new tracts	<input type="checkbox"/>	<input type="checkbox"/>
G. Completion schedule, homes started each day etc.	<input type="checkbox"/>	<input type="checkbox"/>
H. First street in, completion of first street etc.	<input type="checkbox"/>	<input type="checkbox"/>
I. Appointment of sales manager, agent etc.	<input type="checkbox"/>	<input type="checkbox"/>
J. Announcement of terms of purchase	<input type="checkbox"/>	<input type="checkbox"/>

2. HOW ARE YOU SAYING IT?

	YES	NO
A. Do you use a news story peg?	<input type="checkbox"/>	<input type="checkbox"/>
B. Do you avoid duplication in several papers?	<input type="checkbox"/>	<input type="checkbox"/>
C. Do you provide plenty of good pictures?	<input type="checkbox"/>	<input type="checkbox"/>
D. Do you KNOW what sort of story your paper likes?	<input type="checkbox"/>	<input type="checkbox"/>

3. WHAT MEDIA OR APPROACHES ARE YOU USING?

A. Local newspapers, daily and/or weekly	<input type="checkbox"/>
B. Local radio stations with educational program	<input type="checkbox"/>
C. Local radio stations with news program	<input type="checkbox"/>
D. Community organizations, their bulletins etc.	<input type="checkbox"/>
E. Speeches to organizations, church groups etc.	<input type="checkbox"/>

4. PLANNING YOUR PROGRAM:

A. Do you have an over-all PLAN for publicity?	<input type="checkbox"/>
B. Is publicity integrated with advertising?	<input type="checkbox"/>
C. Have you provided check on pulling power?	<input type="checkbox"/>
D. Have you provided follow-up methods?	<input type="checkbox"/>
E. Do you stay with it consistently, every week?	<input type="checkbox"/>

(6) Have something FREE

Try giving the buyer a complete service and check-up on his home after 30 days, FREE. Offer free adjustment on appliances by experts. Tell about free mail delivery and no city taxes on homes being built. Mention free parking, free playground for the children, etc.

(7) Furniture store tie-in

Try contacting a local progressive furniture store and getting them to furnish your demonstration or model home. Contact, also, suppliers of products that go into the home building, and between them and the furniture company's suppliers you can operate some large space cooperative advertising that will really get results.

(8) Try radio—to the housewife

We have a five-minute morning radio program which features a young lady who personalizes the 'home buy' of the day, offering description, location, decorative details, cost, down payment, and monthly payment. We

have been most successful in attracting new clients who have come to us after hearing the radio show.

(9) Salesman should be "sold"

It is most essential that the salesman, himself, should be sold on what he is selling. He should be well versed in its many advantages and features, and confident of his claims in talking about such things as the heating system, weight and durability of castings, capacity of the furnace in B.T.U.'s, plus the fact that it is properly installed; the savings realized because of proper insulation, the weather resistance of the type of roofing used, the compact and convenient arrangement of rooms.

(10) Appliance dealers cooperate

Furnace dealers, appliance dealers, and representatives of stores handling linoleum and tile, for example, are always willing to cooperate in a program involving an open house opening of a development, and we have found it profitable not only in

making immediate sales but also in building up the prestige of our company.

(11) Furnish demonstrator with used furniture

We had our decorating staff furnish one of our model homes in second hand furniture for less than \$1,000. It turned out to be amazingly attractive and we advertised it in the local papers and circularized pamphlets.

(12) Community playhouse

A community playhouse is the greatest sales idea we have used. It can be used with a project of 300 homes or more, and consists of building a club house, swimming pool, baseball diamond, wading pool for youngsters, barbecue, etc., for the exclusive use of the home purchasers. Prorating the cost among all the houses, it amounts to not over \$100 per unit.

(13) Sell saving and satisfaction

I tell purchasers that buying a home gives them and their family security and happiness and a good estate to leave at their death. I ask them why they rent when they can buy at a monthly payment no larger than the rent they are paying. I also tell them they save their earnings and put them in a bank which loans it to other people who are buying homes with it; so why not use their own money and buy a home for themselves.

(14) Use newspaper display

The most successful selling method is newspaper display advertising which displays an illustration of the house with floor plan, with full details as to price, down payment, FHA commitment, etc. Successful selling, however, really starts at the beginning with good site selection, neighborhood, honest quality construction.

(15) Watch the market

One fundamental which goes a long way towards success in this business is judging the market. Although the market for low-priced homes is saturated nationally, it may not be in your location, and vice-versa. Only by watching the market and filling real needs can homes be built and SOLD successfully.

(16) Follow the model!

When you set up a model house in a development or subdivision, have it fully decorated, and then adhere to its specifications and use the same fixtures and features in the rest of the subdivision so as to avoid any misunderstanding with buyers.

(17) Be specific in advertising

Don't be misleading in advertising, either accidentally or on purpose. Items listed in good advertising

should include footage of house; brick or frame; basement or basementless; with or without garage; number of rooms; down payment; monthly payment and complete loan costs. This eliminates many unqualified buyers and ill feeling among people who misunderstand things otherwise.

(18) Personalize the pitch

Meeting personally as many prospective buyers on the subdivision as possible and spending enough time with each to create a feeling of your sincere interest in his housing needs is effective and necessary in modern home selling. By far the best help comes from sending a qualified and definitely interested prospect to a previous customer for verification and confirmation of your claims.

(19) Get everyone into the act

We have had great success by training our regular plumbers, carpenters, masons, and other tradesmen to meet prospective customers who appear on the site and tell them how the construction is being done, explain the quality that is being built into each house. Thus we get the prospects talking with one another and feeling friendly, and we have salesmen at their elbows all the time without their feeling any pressure from a "sales force."

(20) Cater to the children

Catering to children can be both enjoyable and profitable for members of a building firm. Prospective home buyers are impressed, and the youngsters get a great deal of fun out of simple presents of candy or inexpensive toys. We have a minimum of malicious mischief on our jobs.

(21) Signs are important

We believe that good signs are most important. Consequently, we spend a considerable amount building attractive ones. It is also important for signs to be repainted and freshened up frequently.

(22) Personal follow-up helps

Another good feature to use is the sending of flowers, bulbs or a bush to each buyer for a Christmas present. Also, whenever a baby is born, sending flowers to the mother at the hospital is welcomed and remembered. From all this we get many letters and testimonials which are compiled in a very useful scrapbook.

(23) Handling complaints

One of the most important things we have developed is a complaint follow-up system. When a complaint is made, one copy is sent to the craftsman in the field, another kept in the office. When the craftsman takes care of the complaint, or has a reason for not doing so, he writes

it on his slip and returns it, and this is then put in the file. We have found that present and past customers are our best salesmen (over 50 per cent of our sales in the past 20 years).

(24) Handle homes individually

One thing that aids selling homes is handling each house individually. We do not use a model house or show any home before it is completed. This includes all decorating, grading, lawn, sidewalks, etc. We then hold open house for this particular property by using newspaper display ads containing a picture of the house and talk only about this one house to all prospects. By this method we sold all of this year's production, except two, the first day they were offered.

(25) Use personal contact system

As we receive inquiries regarding homes, we get as much information as possible regarding the type of home wanted, which we follow up later as homes are available if we do not have something currently which would look interesting. People appreciate the personal touch of the builder who really tries to fit their specific family needs.

National Home Week

National Home Week plans by builders all over the country call for a more extensive observance of the event than in any prior year. Inaugurated by *American Builder* in 1948, and spearheaded by the National Association of Home Builders and its local chapters, in 1950 the NAHB was joined by the National Retail Lumber Dealers Association in sponsoring observance of the annual demonstration and merchandising promotion.

The open house technique has proved to be successful, even in smaller communities where the builder does not always have a house to show. Builders and dealers have a beautiful opportunity to team up for cooperative demonstrations of homes, materials, and equipment. The basis for successful promotion is an educational theme designed to give prospective home buyers and those considering remodeling an insight into all the materials, equipment, and skilled labor that are involved in completing the home-building job.

Builders and dealers will find the 1952 National Home Week an excellent opportunity to stimulate sales, which they will probably need at that time if present trends continue. It will also give them an opportunity to show the public that the home building and modernization industry has not been stymied by the loss of a few critical materials but will continue to satisfy customers' needs.

Check These CUSTOMER CONTACT POINTS

	INADEQUATE	FAIR	GOOD
1. SIGNS, BILLBOARDS ETC.	Deface landscape. Definitely in the nuisance class. Loud, glaring.	Render extra service such as safety, mileage. Talk policies, service.	Suggest firm stability. Tell specific benefits customers receive from us.
2. DEMONSTRATION OR MODEL HOME FOR INSPECTION	Incomplete, cluttered, shows signs of haste or carelessness.	Well finished, cleaned up for inspection, may have kitchen furnished.	Finished, landscaped, fully furnished with furniture all rooms.
3. OFFICE OR SHOWROOM BUILDING, EXTERIOR	Needs paint, cleaning, tuck-pointing, repairs, looks like a "dump."	Clean, in good general repair, but not at all outstanding.	Distinctive, attractive, suggests prosperity, modern design etc.
4. OFFICE OR SHOWROOM BUILDING, INTERIOR	Dirty, lighting bad, ventilation poor, hot in summer, cold in winter.	Well heated, moderate lighting, clean, generally orderly appearance.	Clean, bright colors in decorative scheme. Air conditioned summer & winter.
5. APPROACHES: DRIVEWAYS, SIDEWALKS	Littered with trash, broken, holes, icy in winter, narrow.	Unencumbered, clean, in good repair, of proper width for traffic.	Ice-free in winter, well drained, good repair, wide. Fits into "landscape."
6. ENTRANCES	Narrow, located in traffic-jam-prone spots. Badly lighted.	Easy of access. Good width. No congestion. Lights all around.	Well designed in harmony with rest of building. Lighting for display as well as protection.
7. INTERIOR FIXTURES, DESKS, CASES ETC.	Look worn, uncared-for. Dirty, cluttered, little or no arrangement.	Clean and shining. Proper height, design. Neat and functional arrangement.	Furniture and cases new, of modern design, attractive as well as functional.
8. FOLLOW-THROUGH	No follow-thru with customers after sale is completed.	Routine check made to see if everything is satisfactory.	Repeated follow-up with information about house, appliances installed etc.
9. CLERICAL PERSONNEL	No smiles. Reluctant to give customer service. Insist on all red tape.	Prompt in serving customer. Courteous. Trained not to give offense.	Friendly, efficient, show they LIKE to give service. Prompt and pleasant.
10. SALES PERSONNEL	Ignorant of properties they sell, untrained in sales techniques.	Know their "merchandise." Have some sales training but can stand more.	Know "wares" very well. Try to bring out features of customer value in houses etc.
11. WORKMEN ON THE JOB	Do their work with no regard for customer's convenience or satisfaction with work done.	We try to keep up schedules to meet completion dates on time.	Workers have attitude: "Build it as though I'm going to live in it myself."
12. PERSONNEL—OFF DUTY RELATIONSHIPS	Personnel ignore or deprecate the fact that they work for us in their off duty contacts.	Most employees seem proud to work here and admit it to their friends.	Most employees seem to promote goodwill actively for our organization in their own contacts.
13. COMPLAINT OR ADJUSTMENT HANDLERS	Employees think customer is always wrong. Slow to service complaints. Would prefer to alibi.	Trained to handle complaints and adjustments promptly, courteously. The customer is right etc.	Careful, courteous treatment at all times. Make real effort to keep customer happy.
14. TELEPHONE CONTACTS	People careless in taking calls, handling messages. Don't get names, poor telephone voices etc.	Trained to get names right. Give pat answers to all of the most common questions etc.	Courteous, friendly, get names right. Cheerful voices. Have detailed instruction for handling most situations.
15. THE BOSS, EXECUTIVES	Too busy being a "boss" to have much time for close customer contact.	Spends more time with customers than watching the rest of the business.	Has a fine happy medium. Keeps enough close customer contacts to have the feel of the thing.

How Do Your Customers Rate You?

Performance CHECK UP for Builders' Salesmen

1

Establishing personal sales quotas: Yes No

- A. Do you use daily and weekly personal sales quotas quotas set up in terms of specific results? _____
- B. Do you make use of a large wall chart or other graphic record of your past sales and future objectives? _____
- C. Do you set yourself a definite quota of "cold turkey" or new-prospect calls for each day, week, month? _____

2

Managing your selling time:

- A. Do you spend a few minutes each evening deciding where your time will be spent the next day? _____
- B. Have you ever stopped to analyze how you spend your time by listing for each day for a week what you did, where and when? _____
- C. Have you ever stopped to figure out in dollars and cents what it costs you to make a single sales presentation? _____

3

Managing your business:

- A. Do you maintain an up-to-the-minute file so you have all essential information about properties ready "on tap"? _____
- B. Do you have your travel organized so that you have eliminated back-tracking and unnecessary running around? _____
- C. Have you developed complete and accurate records, showing complete and accurate records, showing prospects, old customers, past business, needs of each, etc.? _____

4

The ability to think as you talk:

- A. When you are meeting a new prospect for the first time, do you remain confident, say what you want to say easily and freely? _____
- B. Do you have your ideas organized in your mind for making a presentation? Are you so well prepared that you can't get "rattled"? _____
- C. Are you able to converse easily with customers, answering questions, handling objections, and at the same time fitting their ideas into your presentation as you lead them toward the "close"? _____

5

Ability to use words that sell:

- A. The right TONE of voice is often as important as the words. Do you shun monotony and dullness by effective inflections and modulation of your voice? _____
- B. The telephone company says: "The voice with a smile wins!" Is your voice a FRIENDLY voice at all times? _____
- C. WORDPOWER is one of the greatest skills of all salesmen. Are you doing something each day to build up a more effective sales vocabulary? _____

There is no passing score on this "quiz" but any item you cannot answer "yes" may be causing you to lose profitable business.

6

Ability as a teacher:

Yes No

- A. Do you feel that you know your subject, your product and service, well enough to teach a new salesman? _____
- B. When you are making a sales presentation, do you question the buyer carefully from time to time to be sure he understands? _____
- C. When you are "educating" a customer, do you start by finding out what her real problem is and then help her find a solution? _____

7

Ability to sell to groups or meetings:

- A. If you were faced with the problem of making a sale to a group of strange people, could you guide the discussion to the decision you want? _____
- B. Before you enter a meeting at which you intend to present a proposal, how do you find yourself feeling—confident and alert? _____
- C. When the group sets up a cross-fire of questions and arguments between the members, can you CONTROL the talk so that it stays on the track and reaches the decision you want? _____

8

Making the sales presentation:

- A. Except under emergency conditions, are you thoroughly prepared with "presale" information about each buyer? _____
- B. Are you more interested in helping the buyer reach the right decision for him in helping him solve a problem, than you are in making a quick sale? (Be honest on this one!) _____
- C. Do you invariably make a good impression, well groomed, clean, neat, with a smile on your face whether you feel that way or not? _____
- D. Do you have your sales presentation so thoroughly in mind that buyer questions and objections never bother you? _____

9

Closing the sale:

- A. How often can you "pre-arrange the CLOSE by thoroughly qualifying the buyer at the start of your presentation? _____
- B. When you come to the actual close, do you use the "secondary question technique" specifying the details to the solution to the buyer's needs? _____
- C. As you approach the close, do you avoid questions which permit a YES or NO answer, and ask those requiring an explanation or statement of fact? _____

10

Handling the buyer face-to-face:

- A. Do you ever feel at a loss to decide just how to size up a buyer in order to make the most effective appeal to him? _____
- B. Do you enjoy winning an argument just as you might enjoy winning a fight? _____
- C. Can you handle the price resistance problem by telling a full QUALITY story to every buyer? _____
- D. Do you find it easy to make clear to a buyer that his objection to buying is really his main reason for buying? _____

are you selling or just telling?

DESIGN HINTS AND ESTIMATING SHORT CUTS

How Some Builders Create Character in Communities

THE home builder, like the doctor and lawyer, has a large responsibility to society. While he is providing for the physical comfort of his customers today, he must also be looking ahead to the contribution his work is making to the community as a whole.

In the mad scramble to produce houses between 1946-1951, a fair number of unfortunate economies and practices crept in, especially in developments involving a number of houses erected and "planned" together. There was in some cases a tendency to utilize the cheapest land available almost without regard to its actual fitness for housing, and to confine land improvements to a minimum.

The practice of stripping land of trees and grading to plane surface in

order to save a few dollars, and the frequent use of traditional "grid" layout of streets and alleys, have created many communities which are not only unattractive but actually wasteful of land.

Slums of Tomorrow?

Monotony has been intensified through repetitive structural orientations in large project planning; and variation through minor changes in fenestration in many cases has only served to emphasize the basic sameness of the structures. In some instances we have seen faulty structural designs result from attempts to adapt stock plans to the stringent reductions made necessary under government regulations. Along with this, inadequate site preparation has omitted necessary retaining walls and

storm drainage facilities, thus creating serious erosion problems in surrounding land. Such housing projects may well be the slums of twenty years hence.

However, good community planning has been demonstrated in many developments. Since construction costs prohibit the introduction of architectural variety into house design in large-scale developments, the developer and builder must resort to other methods of creating variety.

How to Upgrade Community Planning

Techniques which builders have used to improve the character of moderate and low-cost residential developments include:

1. The employment of curvilinear street layouts to introduce variety and interest and improve structural orientations in relation to light, air, sunshine, privacy and landscape requirements.

2. Conservation and skillful use of natural resources such as interesting topography, trees, and scenic vistas.

3. Keeping any "stock house" unobtrusive by blending it with the landscape through appropriate design, use of subdued colors, and skillful siting and planting plans.

4. Breaking up long, monotonous vistas with curves, slopes, trees.

5. Creating dominant points of interest at the ends of streets or at street junctures to divert attention from the repetitive stock house.

6. Skillful mingling of house types to insure variety and a more efficient use of land.

None of these recommended techniques is expensive when employed by a builder with a thorough knowledge of planning and a genuine desire to create livable housing. The builder's responsibility for long-range community planning can only be met by such constructive planning.

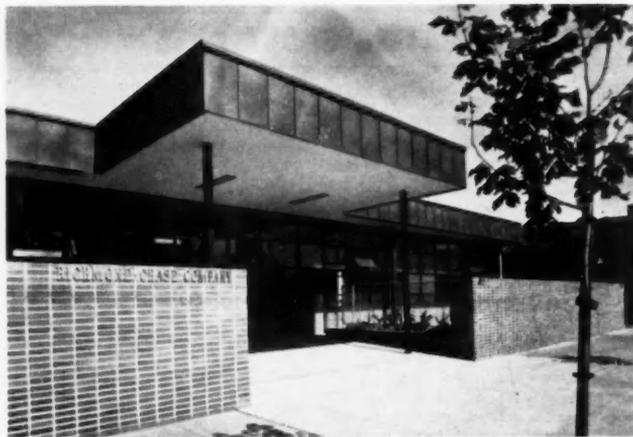
Homes Families Want

Most families want to build a house that looks somewhat like the home they remember, but without the inconveniences or fussy ornamentation of that home. They want simplicity and highly functional efficiency in their home, lower cost and easier upkeep.

The typical house built after World War II was a one-story two- or three-bedroom house with one bath and limited equipment, and costing between \$10,000 and \$13,000. An estimated 20 per cent of postwar homes



PLEASING MODERN ENTRANCE adds charm to house faced with field-stone



FACE BRICK and ornamental metal work combine with functional design to make an attractive entrance to an industrial building

were traditional types, 22 per cent ranch-type, and 13 per cent modern.

Most 1952 buyers will want one-story houses with attached garages, and over half will want three bedrooms. An estimated 11 per cent will insist on separate dining room. Paint rather than wallpaper is the predominant preference for interior finishing.

Planning Commercial Buildings

Once a location has been chosen for a particular type of business, after considering such factors as traffic characteristics, pedestrians, automobile and public transportation, street width, proximity of blighted community areas, and other considerations affecting choice of site, it becomes necessary to plan for external conditions such as parking facilities, delivery lanes, adjoining buildings, storm drainage and street-cleaning facilities.

Light commercial buildings generally fall into three classes: Class "A" which is fire resistant to a 4-hour blaze and constructed of fire-resistant materials; Class "B" in which the framing is a skeleton of beams and columns with walls that are merely partitions, designed to withstand fire for two hours or more; and Class "C" buildings in which the weight is carried on the walls and which are fire resistant for about one hour.

Choice of materials to be used will be influenced not only by their local availability and cost, but also by the time required for construction which they involve. Decorative and easily-maintained store front materials such as terra cotta or architectural glass may take the place of sheet metal under present conditions, even though installation is longer.

Number of entrances and their location must be studied with relation both to street traffic and traffic flow within the store. Exterior windows, except for display, are being omitted in much modern store construction, with consequent gains in ease of controlled interior lighting and air conditioning. Provision for future expansion of the building may be made with the original plans.

Store Fronts

Store fronts may represent from as little as 10 per cent to as high as 50 per cent of the cost of modernization of an existing structure, and may run around 25 per cent of the cost of new building in the case of a small store. Factors to be studied in planning the store front include considering whether the materials chosen reflect the character of the store itself, maintenance and permanence, sufficient depth for facade and entrance, simplicity, and whether the front suggests the quality of merchandise to be found inside.

Materials most commonly used in modern store fronts include marble, granite, terra cotta, pre-cast terrazzo,



REGISTRATION DESK and manager's office in a western motel combine attractive design with easy maintenance

structural or architectural glass, ornamental metal, stone, ceramic tile, porcelain enameled metal, luminous materials such as opal glass, wood, cement stucco and various synthetic materials such as laminated plastics and phenolics.

Store Interiors

Major problems of interior store design include establishing a pleasing sense of proportion between the various elements, providing for dominance of seasonal or special displays, controlling traffic by layout, styling of store fixtures in harmony with the design, providing for loading, unloading and handling stock, and providing some measure of acoustical control to deaden store noises. Only a detailed analysis of the projected store's operations can suggest workable solutions to these questions.

Estimating and Customer Relations

The problem of estimates, involving as it does changes in plan and final costs, is one which often plagues the relationship between builder and client. Mrs. X wants an extra closet. Her husband decides he would like a built-in bar in one corner. But when the bills come in, the builder gets nothing but complaints and abuse. The simplest way to duck all this trouble is to go over the original plans and specifications thoroughly with the client, and then use a written form whenever additional changes are requested, working out at that time the cost of these changes and making the client sign the authorization so that he has no complaint when the added bills arrive. Such a form can be printed in pad form, pocket-size, and can be used on the site when changes are requested. As a means of insuring harmonious customer relations, it works wonders.



HEAVY TEMPERED plate glass doors combine with ornamental metal finish to create a note of severe simplicity in this lobby design

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Republic Steel Corporation	82-83-90-91
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1952 American Builder Directory

THIS, the second issue of the annual directory compiled by the American Builder, gives the latest and most complete product and data information in the building field. Here contractors, builders, architects, and building material retailers will find information as to building products, their manufacturers, and brand names.

New this year are two sections, Industry Associations, and Communities which observed National Home Week in 1951.

Section I—an alphabetical list of building products and equipment and their manufacturers;

Section II—an alphabetical list of brand names identified with names of manufacturers;

Section III—an alphabetical list of manufacturers of

building products and equipment with addresses;

Section IV—an alphabetical list of industry and allied professional associations;

Section V—an alphabetical list of communities which participated in 1951 National Home Week.

In addition, service organizations prepared to render aid to the industry and to furnish helpful information on special problems are listed under appropriate titles.

This year round reference directory is designed to serve the builder, contractor, architect, and dealer. As every effort was made to make it as accurate as possible, the American Builder cannot be responsible for changes in names, addresses and other discrepancies.

The names of manufacturers who advertise in American Builder are printed in boldface here, in the brand names list and in the list of manufacturers' names and addresses starting on page D-76

SECTION I Alphabetical List of Building Products and Equipment Manufacturers

IN THIS SECTION I, building products and equipment, are listed in alphabetical order with the manufacturers of these products and equipment listed under the appropriate titles. No cross references have been used in this section. The editors feel that the readers of the American Builder are well acquainted with the terms employed in the building industry and can lead themselves to the items in this directory. The principal proper nouns of classifications are the key words used in forming the alphabetical lists; for example, wood double hung windows are listed as—

Windows, double hung, wood

This section includes only the names of the manufacturers. The addresses of these manufacturers are listed in alphabetical order in Section III, starting on page D-76.

As an example, suppose that Mr. Jones wants to find the name and address of a manufacturer of ladder accessories. First, he will turn to the heading "Ladder Accessories" in Section I. Here he will find listed the names of eight manufacturers among which he may select the Red Devil Tool Co. Turning to Section III, he will find the address of the company (Coit Street, Irvington 11, New Jersey.) in its alphabetical order under the name Red Devil Tool.

★ ★ ★

▶ ABRASIVE PAPER & CLOTH

Abrasive Products Inc
AMERICAN FLOOR SURFACING MACHINE CO
Armour & Co Sandpaper Div
Atlas Abrasives Corp
BERN-MANNING CORP DIV HORTON CO
Carbonium Corp
Clarke Sanding Machine Co
Clower Mfg Co
Detroit Surfacing Machine Co
Dirata Mfg Co
Mid-West Abrasive Co
MINNESOTA MINING & MFG CO
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS
Sandpaper Inc
Southern Galvanizing Co

▶ ACOUSTICAL MATERIALS

Air-O-Cel Co
American Bldg Co
ARMSTRONG CORR CO
CABOT (SAMUEL) INC
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
DANT & RUSSELL INC
E C BUILDING FASTENERS CORP
Hanson (Kist) Inc
HOWASOTE CO
INSULITE CO DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MANVILLE CORP
Kellay Island Lines & Transport Co
Kimberly-Clark Corp Kinsul Div
LOCKPORT COTTON BATTING CO
Mid-West Acoustical & Supply Co
NATIONAL GYPSUM CO
OWENS-CORNING FIBERGLAS CORP
Porete Mfg Co

REYNOLDS METALS CO
SIMPSON LOGGING CO
Taylor Boding Mfg
U S Dypsum Co
WOOD CONVERSION CO
ZONOLITE CO

▶ ADHESIVES

Alkota Mfg Corp
Acton Plywood & Veneer Co
A & F Tileboard Co
American Asphalt Roof Corp
American Varnish Co
ARMSTRONG CORR CO BUILDING MATERIAL DIV
BARCLAY MFG CO
BIRD & SON INC
Borden Co Chemical Div
BRUCE (E L) CO
B & T METALS CO
CABOT (SAMUEL) INC
Cambridge Tile Mfg Co
Camp Co
CAREY (PHILIP) CO
CELOTEX CORP
Christy Co Inc
Commercial Paste Co
CONGOLUIN-BAIRD INC
Cosmosene Glue Co
Dad & Lad Co
Davis Plywood Corp
DuPont de Nemours (E I) & Co
East Coast Tileboard Corp
Firestone Industrial Products Co
Flexrock Co
FLINTROTE CO
GENERAL ELECTRIC CO CHEMICAL DEPT
Gibbs Boardtile Corp
Goodrich B F Co
Hague Adhesives Co
HIGGINS INC

INSULITE DIV MINNESOTA & ONTARIO

PAPER CO
JOHNS-MANVILLE CORP
Lasko Products Co Inc
Lasko Products Co
Lelton Co
LePage's Inc
Lime-Paste Co
Madison Glue Corp
HARSH WALL PRODUCTS INC
BASTIC TILE CORP OF AMERICA
Metal Trims Inc
Milwaukee Plywood Co
Minnesota Mining & Mfg Co
MIRACLE ADHESIVES CORP
MOORE (GOODLOE E) CO
Morell 12 W Co
National Adhesives Div National Starch Foods Inc
National Casein Sales
Paisley Products Inc
Pabco Products Inc
Patent Corvaco Co
Peoria Paint Co Inc
Perkins Glue Co
PITTSBURGH PLATE GLASS CO
Plare Div Paisley Products Inc
PLASKON DIV LIBBEY-OWENS-FORD GLASS CO
Plastergen Wallboard Co
PRESTILE MFG CO
Reliable Paste Co
Rohm & Haas Co
Superior Cement Co
Schalls Chemical Co
SELCK (WALTER E) & CO
Sheffield Bronze Paint Corp
Sizans-Baldon Corp
Standard Paste & Glue Co
Stunhard Co
Sullivan Co
Superior Wall Products Co

S & W Moulding Co
Tamm Industries Inc
Tile-Tex Div Flintstone Co
Thomas Moulding Floor Mfg Co
TYLAC COMPANY
U S Gypsum Co
U S PLYWOOD CORP
U S Rubber Co
WALLACE MFG CO
Webster (W F) Cement Co
Wingo Waterman's Inc
Youngstown Mfg Co

▶ ADVERTISING NOVELTIES & AIDS

Advertisers Exchange Inc
Advertisers' Mfg Co
Allied Cloth Specialties
American Textile Products Co
Bemis Brothers Bag Co
Berg (F O) Co
Bertram Co
Brown Budget Co
Building Products Merchandising Service
Canton Glass Co Inc
CARLSON & SULLIVAN INC
Clifton Mfg Co
Colonial Knife Co Inc
Cryslon Reeder Co
Eagle Rule Mfg Corp
Economy Novelty & Printing Co
Edwards (Vincent) & Co
EVANS & CO
Fulton Bag & Cotton Mills
Garrison-Wagner Printing Co
Gerson (Louis)
Grammes (L F) & Sons Inc
Holmes Co
Kemper Thomas Co

Lawrence Engineering Service
Luffin Buis Co
Master Buis Mfg Co Inc
May (I L) Company
Meyer-Beth Co
M & H Display
Minnesota Specialty Co
Murphy (Thomas D) Co
National Plan Service Inc
Newman (Rudolph) Lithographing Co
Parison Novelty Co
Pollack (William H) Poster Print
Reuco
Roberson Cutlery Co Inc
Russell Harrington Cutlery Co
Shedd-Brown Mfg Co
Shimo (Columbia)
Standard Awning Co
STANLEY WORKS
Ulster Knife Co Inc
Voon Co Inc
Wagner Awning & Mfg Co
Werner Canvas Products Co

▶ ADVERTISING SERVICES

Advertisers Exchange
AMERICAN TELEPHONE & TELEGRAPH CO
Bradham & Co
Building Products Merchandising Service
ODDGE (F W) CORP
Ford Advertising Agency
Hadley Lindsey Co
LIL-AD FEATURES
Lilly (David) Co
Local Trademarks Inc
Master Dealers Newspaper Mat Service
Meyer-Beth Co
Norm Advertising
Northern Advtg & Merch Service
Stevens Advertising Agency
Worldwide Syndicate Contr Bldg

▶ ADMIXTURES, CONCRETE, AIR ENTRAINING

Autolene Lubricants
Beavy Almy Chemical Co
Master Builders Co
Sotax-O-Bond Co

▶ AGGREGATES, LIGHT WEIGHT

Acme Asbestos Covering & Flooring Co
Alexander Film Co
American Builders Co
American Perlite Corp
American Silica Sand Co
American Vermiculite Co
Black (John H) Co
Covington Perlite Co
CELETEX CORP
Cleveland Gypsum Co
Combined Metals Reduction Co
DANT & RUSSELL INC
GREAT LAKES CARBON CORP
Grogg Lumber Co
HIGGINS INC
Hydraulic Pressed Brick Co
JOHNS-MANVILLE CORP
Johnson Mfg Co
Kelley Island Lime & Transport Co
Landing Products Co
Maguire (Walter E) Co Inc
Mace Perlite Corp
Masonite Refractories Co
McNear Brick Co
Midwestern Perlite Corp
Northwest Insulation Co
Pacific Spulcor Corp
Panacalite Perlite Inc
Perlite Mfg Co
Perlite Products
Prestab Slab & Tile Co
Pumice Aggregate Sales Corp
Reichelder (F E) & Co Inc
Silberberg Corporation
Siaco Mines Ltd
Soo-Lite Products Co
Standard Perlite Co
Sullivan Co
Tammco Industries Inc
U S Gypsum Co
Utah Perlite Products Co
Virginia Perlite Co
Waytite Co
Western Brick Co
Western Perlite Corp
ZONOLITE CO

▶ AGITATORS, PAINT

Arlington Inc
Black Bros Co Inc
Chicago Bronze & Color Works
Day (J H) Co
De Villibus Co
Ewens & Reynolds Inc
Electric Sprayt Co
Fanner Mfg Co
Hartill Mfg Co
Holt Manufacturing Co
Miller Mfg Co
Miracle Paint Rejuvenator Co Inc
Pasco Airbrush Co
RED DEVIL TOOLS
Tammco Industries Inc
Warner Manufacturing Co

▶ AIR COMPRESSORS

ALLIS-CHALMERS MFG CO
Binks Mfg Co
Brusner Mfg Co
Chicago Pneumatic Tool Co
Davy Compressor Co

DeVillibus Co
Electric Sprayt Co
Garner Denver Co
Eugermill-Rand Co
JAEGER MACHINE CO
Johnson (C S) Co
Pasco Airbrush Co
PITTSBURGH PLATE GLASS CO
Plyor Wall Mfg Co
WORTHINGTON PUMP & MACHINERY CORP

▶ AIR CONDITIONERS

Airtemp Div Chrysler Corp
American Blower Corp
AMERICAN RADIATOR & STANDARD SANITARY CORP
Anchor Div Stratton & Terstegge Co Inc
Anomotal Corp of America
Hard Mfg Co
CARRIER CORP
Cleveland Steel Products Co
CONCO ENGINEERING WKS DIV CONKEY H D CO
DELCO APPLIANCE DIV GENERAL MOTORS SALES CORP
Delta Heating Corp
Fairfield Heating & Co
Fluid Heat Div Anchor Post Products Co
Frick Co
Frigidair Div General Motors Corp
GENERAL AIR CONDITIONING CORP
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
Gilbert & Barker Mfg Co
Gillen (J L) Co
Hell Co
Henderson Furnace & Mfg Co
Henry Furnace Co
Homer Furnace & Foundry Corp
Hudson Heater Co
International Heater Co
JOHNSON (S T) CO
Kamion Co
Ko-Z-Air Inc
Lennox Furnace Co
Mario Cool Co
McQuay Inc
Mitchell Mfg Co
MODINE MFG CO
MUELLER (L J) FURNACE CO
NORGE DIV BOGG-WARNER CORP
Northwest Metal Products Inc
Ollux Co
Olson (G A) Mfg Co
Palmer Mfg Co
Pen Boiler & Burner Mfg Corp
Perrin Mfg Corp
Petroleum Heat & Power Co
Philco Corp
Ray Oil Burner Co
SHREVE MFG CO
RICHMOND RADIATOR CO
Rehull Heater Co
SEVEL INC
SURFACE COMBUSTION CORP
Tatcher Furnace Co
Trans Co
T F S Air Conditioning Corp
Viking Mfg Corp
Ward (Edgar T) Industries Inc
Waterman-Waterbury Co
Wayne Home Equipment Co
WESTINGHOUSE ELECTRIC CORP
Williams Oil-O-Matic Div Eureka Williams Corp

Woolf (Gar) Industries Inc
WORTHINGTON PUMP & MACHINERY CORP
York Corp
YOUNG RADIATOR CO

▶ AIR COOLERS

Eschik Mfg Co
Utility Appliance Corp

▶ ALARMS, BURGLAR

Auth Electrical Specialty Co Inc
Brunner (J H) & Co
Burglar Trap Co
Edwards Co Inc
Federal Enterprises Inc
General Burglar Alarm Co Inc
Guardian Electric Mfg Co
Lynn Rural Electric Co

▶ ALARMS, FIRE

Edwards Co Inc
Paraday Electric Corp
Gelbrock Products
General Detroit Corp
Rockwood Sprinkler Co
Sparks-Whitman Co
Sportl Faraday Inc

▶ ALIGNERS, DOOR JAMB

Superform Products Corp

▶ ALUMINUM, ARCHITECTURAL & ORNAMENTAL

Apex Brass & Bronze Works
Badger Wire & Iron Works Inc
Brassco Mfg Co
GENERAL BRONZE CORP
KAWNEER CO
Newman Brothers Inc
PITTSBURGH PLATE GLASS CO

REYNOLDS METALS CO BUILDING PRODUCTS DIV
Weissel Mfg Co

▶ ANCHORS, BUILDING

Ackerman-Johnson Co
Adams Co
Allen Steel Products
Arco Expansion Bolt Co
BILCO MFG CO
Carpenter & Patterson Inc
Cleveland Steel Specialty Co Inc
Consolidated Iron-Steel Mfg Co
Conver Steel & Wire Co
Daxin & Stehl Co
Dayton Saw-Grip & Shure Co
Decatur Iron & Steel Co
Devlen Inc
Diamond Expansion Bolt Co
Donley Bros
HAGER (C) & SON HINGE CO
Holmann & Barnard Inc
Ideal Hanger Co
Illinois Zinc Co
Kew (F D) Mfg Co
LAKESIDE STEEL CO
Lakeside Malleable Casting Co
Lambert Mfg Co
Logan Co
Mastercraft Plastics Co Inc
Merwin Mfg Co
METAL CRAFTERS DIV CASTONE PRODUCTS CO
MIRACLE ADHESIVES CORP
Molly Corp
MOORE (GOODLOE E) CO
National Guard Products
PAINE CO
Polls (J D) Mfg Co
Rawlplug Co Inc Industrial Div
REAR ADAMS & COLLIER CO
Sommer Metalcraft Corp
Southern Wire & Iron Wks
Star Expansion Products Co
Stewart Iron Works
Timber Engineering Co
TRUSCON STEEL CO
U S Expansion Bolt Co
UNIVERSAL FORM CLAMP CO
WAGNER MFG CO
Williams Form Engineering Corp
Winner Industries

▶ APRONS, WORK

American Optical Co
Cliffins Mfg Co
Economy Novelty & Printing Co
Fulton Bag & Cotton Mills
Minnesota Specialty Co
Standard Awning Co
Troy Sunshade Co
Werner Canvas Products Co

▶ ARCHES, LAWN

Anchor Post Fence Co
ARTCRAFT ORNAMENTAL IRON CO
CARR ADAMS & COLLIER CO
CURTIS COMPANIES INC
RLCO LAMINATED PRODUCTS CO
Stewart Iron Works

▶ ARCHES, METAL

Alabama Metal Lath Co
BOSTWICK STEEL LATH CO
CECO STEEL PRODUCTS CO
INLAND STEEL PRODUCTS CO
Marino Lathing Supply Co
NATIONAL GYPSUM CO
Tom Metal Co Inc
TRUSCON STEEL CO
T S Gypsum
Wheeling Corrugating Co

▶ AREAWALLS

Armo Steel Co Inc
BRAINARD STEEL CO
CECO STEEL PRODUCTS CO
Decatur Iron & Steel Co
Donley Brothers
Harris Inc
Holmann & Barnard Inc
Kaptor (Joseph J) Sales Co
KAWNEER MFG CO
MAIESTIC CO
Pum Metal Co Inc
ST PAUL CORRUGATING CO
Sharon Steel Co
Slone Steel Co
UNITED STEEL FABRICATORS INC
Wheeling Corrugating Co

▶ ASBESTOS-CEMENT BOARD

Acme Asbestos Covering & Flooring Co
CAREY (PHILIP) MFG CO
CELOTEX CORP

HOMASOTE CO
JOHNS-MANVILLE CORP
KEASBEY & MATTISON CO
RUBEROID CO

▶ ASBESTOS-CEMENT BOARD, ENCASED INSULATION

CAREY (PHILIP) MFG CO
CELOTEX CORP
JOHNS-MANVILLE CORP
KEASBEY & MATTISON CO
Standard Asbestos Mfg Co

▶ AUGERS, PIPE

American Pipe Tool Co
Durst Mfg Co
Flexicoll Mfg Co
Muelser Co
Waterline Brass Works

▶ AUGERS, SINK

Dorsett Spring Co
Frite Mfg Co
G-W Mfg Co

▶ AWLS

Bridgport Hardware Mfg Corp
Crescent Tool Co
Millers Falls Co
Peck Stow & Wilcox Co
SARGENT & CO
STANLEY TOOLS DIV STANLEY WORKS

▶ AWNINGS, CANVAS

American Tent & Awning Co
Astrup Co
Canvas Products Co
Clifton Mfg Co
Fulton Bag & Cotton Mills
Hetzler (W E) & Son Co
Industriat Awning Co
Tucker Duck & Rubber Co
United Tent & Awning Co
Wagner Awning & Mfg Co

▶ AWNINGS, STORE & RESIDENCE

FAWCO MFG DIV FALLS STAMPING & WELDING CO
KAWNEER CO
KAWNEER (W E) & SONS CO
KAWNEER CO
ORCHARD BROTHERS INC
Ron-Dei Inc
RUSSELL (F C) CO

▶ AWNINGS, WOOD

All-Weather Window Co
Bostwick Goodell Co
Lata Products Co

▶ AWNINGS & CANOPIES, METAL

AIR CONTROL PRODUCTS INC
Aluminum Awning Co Div Orchard Bros Inc
ARTCRAFT ORNAMENTAL IRON CO
Anson Slank Co
Awnite Co
B & B Engineering & Supply Co
Childers Mfg Co
Colgate Mfg Corp
Cool Ray Metal Awning Co
Coyle-McMorris Co Inc
Edwards Mfg Co
FAWCO MFG DIV FALLS STAMPING & WELDING CO
KAWNEER CO
Kool Vent Aluminum Awning Distributors
Maco Corp
McKinley (Norman O) Co
Metal Tile Products Inc
National Ventilated Awning Co
Newman Brothers Inc
ORCHARD BROTHERS INC
Perless Products
Perrus-Steel Corp
Ron-Dei Inc
RUSSELL (F C) CO
Smith (E P) Wire & Iron Works
STANLEY WORKS
Thabet Mfg Co
Troy Sunshade Co
United Metal Products Inc
Wolfe Products Inc
Youngtown Industries Inc

▶ AXLES & DRIVERS, TRUCKS, SPECIAL

Conco Industries Inc
Eaton Mfg Co
Truckstell Mfg Co

▶ BALERS, SHAVINGS & SAWDUST

American Baler Co
Consolidated Baling Machine
Economy Baler Co
Famous Mfg Co
Kline (Lewis T) Co
Stewart Co

Manufacturers' Names and Addresses Start on Page D-76
Suppliers' Brand Name Identifications Start on Page D-64

▶ BARROWS & BUGGIES

American Cement Machinery Co Inc
American Conveyor Co
American Ladder Co
American Steel Scraper & Wheelbarrow Co
Boyle Mfg Co
Buch Manufacturing Co
Case Crane & Kilbourne Jacobs Co
Chattanooga Wheelbarrow Co
CONSTRUCTION MACHINERY CO
GOLDBLATT TOOL CO
Jackson Mfg Co
JAEGER MACHINE CO
KEWAWEE MFG CO
Kwik-Mix Co
Lansing Co
MILLER MACHINERY CO INC
Northwest Metal Products Inc
Seymour Mfg Co
Sterling Wheelbarrow Co
Toledo Wheelbarrow Co
United States Steel Products Co
Western Wheelbarrow Mfg Co
Wolfsman Mfg Co
WORTHINGTON PUMP & WAGON CORP

▶ BARS, CROW & PINCH

American Swiss File & Tool Co
Buralent Tool Mfg Co
Bausman Steel Products Corp
Beavert Steel Products Co
GETTY (H S) & CO INC
Howard & Co
Proto Tool Co
STANLEY TOOLS DIV STANLEY WORKS
Tape Temper Corp
Valley Forging Co
Woodings-Vernon Tool Works

▶ BASE, METAL

B & T METALS CO
BOSTWICK STEEL LATH CO
Decorite
Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
Kinkead Industries
Knapp Bros Mfg Co
NACKLANBURG-DUNCAN CO
NATIONAL GYPSUM CO
Penn Metal Co Inc
REYNOLDS METALS CO BUILDING PRODUCTS DIV
TRUSCON STEEL CO
U S Gypsum Co
Werner (R D) Co Inc
Wheeling Corrugating Co
Wallerstein Steel Corp

▶ BASKETS, COAL

Edgerton Mfg Co
Hooper (William E) & Sons Co
Morris & Co
Sackett (H B) Screen & Chute Co
Steel Basket Co

▶ BASKETS, COUNTER DISPLAY

Marion Basket Co Inc
Peerless Wire Goods Co
United Steel & Wire Co
Washburn Co

▶ BASKETS, TRASH & WASTE

Boyle Mfg Co
Cyclone Fence Div American Steel & Wire Co
Kraus (Walter S) Co
LAWSON (F N) CO
MAJESTIC CO
Meyers (Fred L) Mfg Co
Smith (F F) Wire & Iron Works
Wheeling Corrugating Co

▶ BATCHERS, ADJUSTABLE MEASURING

BESSER MFG CO
Blaw-Knox Co
Bodinson Mfg Co
Butler Bin Co
Chain Belt Co
Concrete Transport Mixer Co
CONSTRUCTION MACHINERY SALES CO
Fleming Mfg Co
Holtzel Steel Form & Iron Co
JAEGER MACHINE CO
Johnson (C S) Co
Martin Steel Products
Soble Co
Sprexmix
Willard Concrete Machinery Co Ltd

▶ BATHROOM ACCESSORIES

Allen Steel Products Co
Approved Products Co
Autocoy Co
Rache (Semon) & Co
Ray Ridge Specialty Co Inc
Camp Mfg & Sales Co
Chrome-Tex Inc
Columbia Metal Box Co
Columbus Plastic Products Inc
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
CRANE CO
Eben Products Co
Farley Mfg Co
Gerity-Michigan Corp
Hallenscheid & McDonald

APRIL 1952

HALL-WACK CO

Handy Things Mfg Co
Homes Economic Corp
HOUSE OF HOSPITALITY
Illinois Porcelain Enamel Co
Kinsal Co
KITCHEN MAID CORP
Knape & Vogt Mfg Co
Kinsal (Walter S) Co
LAWSON (F N) CO
Marchand (A) Inc
MARSHALL WALL PRODUCTS INC
MIAMI CABINET DIV CAREY (PHILIP) CO
MILWAUKEE FLUSH VALVE CO
Morray Corp of America
NATIONAL STEEL CABINET CO
National Tile & Mfg Co
Northern Industries Inc
Parlor (Charles) Co
Farley (S) Hardware Mfg Corp
Pioneer Co
PITTSBURGH PLATE GLASS CO
PRESTILE MFG CO
Sage-Harmon Lock Works
SELCK (WALTER E) & CO
Shower Door Co of America
Skillman Hardware Co
Skyline Industries
Smith (E C) Mfg Corp
Sommer (J L) Mfg Co
Standard Building Products Co
Stylon Corp
Superior Plastics Div Commonwealth Plastics Inc
Tilstone Co
T & S Brass & Bronze Works Inc
TOLEDO DESK & FIXTURE CO
TURNER & SEYMOUR MFG CO
TYLER CO
U S Die Casting Co
U S Lock & Hardware Co
WESTWOOD MFG CO
Youngstown Mfg Co Inc

▶ BATHROOM CABINETS

American Enamelled Products Co
ANGEL ROVELTY CO
Bennett Mfg Co
Camp Mfg & Sales Co
CARR ADAMS & COLLIER CO
Cole Mfg Co
Colgate Mfg Corp
Colotrie Corp Tyle-Bord Inc Div
Columbia Metal Box Co
Conant Bros Co
COPCO STEEL & ENGINEERING CO
CURTIS COMPANIES INC
Dyke Brothers
Evel Metal Cabinet Co Inc
Farley Mfg Co
Farley & Loetinger Mfg Co
Gerity-Michigan Corp
Gold Seal Mfg Co
Goudee (J B) Co
Grote Mfg Co
HALL-WACK CO
Hinsdale Metal Products Co
Harris Inc
Hot Warming & Ventilating Co
Hutley (L E)
Houston Blow Pipe & Sheet Metal Works
IDEAL CABINET CORP DES LAURIERS COL.
UHM MOULD CO
Kinzma Pine Mills Co
Knape & Vogt Mfg Co
Kraus (Walter S) Co
LAWSON (F N) CO
Marchand (A) Inc
Maronart Millwright Co
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
MIRRO-GLD CABINET CO
Morgan Co
Morton Mfg Co
National Metal-Art Mfg Co
National Metal Products Co
National Mirror Works
NATIONAL STEEL CABINET CO
Ohio Window Glass Co
Packard Formsteel Corp
Parlor (Charles) Co
Pioneer Co
Porcelain Metals Corp
Ruch & Moser Mfg Co
Rock Island Millwright Co
Royal Glass Works Corp
Schonck (William) & Co
SELCK (WALTER E) & CO
SHEPLER MFG CO
Smith (E C) Mfg Corp
Standard Building Products Co
Standard Stamping & Perforating Co
Standard Steel Cabinet Co
Stylon Corp
TOLEDO DESK & FIXTURE CO
Toledo Plate & Window Glass Co
United Metal Box Co
Universal Fabricators
Universal Sales Co
Walters Mfg Co
Western Metalcraft Inc

▶ BATHROOM SCALES, BUILT-IN

Fries & Son Steel Construction & Engineering Co
▶ BATHROOM TOILET SEATS
Bemis Mfg Co

▶ BATHROOM TOILET SEATS

Fries & Son Steel Construction & Engineering Co
▶ BATHROOM TOILET SEATS
Bemis Mfg Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Bonke Corp
Brunswick-Balke-Clender Co Inc
Church (C F) Mfg Co
HIGGINS INC
Plumbers Woodwork Co
Swedish Crucible Steel Co
Vogel Mfg Co

▶ BATTERIES

Rund Electric Corp Div Oilin Industries Inc
Bright Star Battery Co
Burgess Battery Co
DELCO APPLIANCE DIV GENERAL MOTORS
SALES CORP
Fairbanks Morse & Co
General Dry Batteries
Magnavac Co Inc
National Carbon Co
Philon Corp
Ray-O-Vac Co
U S Electric Mfg Corp
Universal Battery Co

▶ BATTERY CHARGERS

GENERAL ELECTRIC CO APPARATUS DEPT

▶ BEAD, CORNER METAL

Alabama Metal Lath Co
Rader Corrugating Co
BERGER MFG CO REPUBLIC STEEL CORP
BOSTWICK STEEL LATH CO
B & T METALS CO
Buckner Mfg Co
CCCO STEEL PRODUCTS CO
Continental Steel Corp
Donley Brothers
Edwards Mfg Co
Goldsmith Metal Lath Co
Hocking Paper & Supply
INLAND STEEL PRODUCTS CO
Koop (E D) Mfg Co
Klauer Mfg Co
La Cross Steel Roofing & Corrugating Co
Larson (Clara O) Co
NACKLANBURG-DUNCAN CO
Merwin Mfg Co
Mid States Steel & Wire Co
NATIONAL GYPSUM CO
Penn Metal Co Inc
Penn Supply & Metal Corp
Piper (H K) Mfg Co
ST PAUL CORRUGATING CO
Roux Steel Co
Seale Steel Co
STEELCRAFT MFG CO
TRUSCON STEEL CO
U S Gypsum Co
Wheeling Corrugating Co

▶ BEDS, WALL BUILT-IN

American Bed & Spring Co
Evanville Metal Bed Co
Harris-Bud Bed & Spring Co
Holmes Mfg Co
Holmes Products Co
HURPHY DOOR BED CO
Roll-A-Way Corp
Superior Sloprior Corp

▶ BELLS & CHIMES, DOOR

Auth Electrical Specialty Co
Bevis Gros Mfg Co
Chimes Inc
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Deagan (J C) Inc
Edwards Co Inc
Parady Electric Corp
Liberty Bell Mfg Co
Mell-O-Chime & Signal Co Inc
NATIONAL BRASS CO
RUTONE INC
Penn Hardware Co
Branstine (J Thomas)
RITTENHOUSE CO INC
RUSSELL & ERWIN MFG CO
Sporti Faraday Inc
Starr Brothers Bell Co
Trine Mfg Corp

▶ BELTING, CONVEYOR

Arms Rubber Mfg Co
Boston Woven Hose & Rubber Co
Cincinnati Rubber Mfg Co
Cyclone Fence Div American Steel & Wire Co
Dick (R & J) Co Inc
Parquhar (A B) Co
Goodall Rubber Co
Goodrich (B F) Co
Hais (Geo) Mfg Co Div Pettibone Mulliken Corp
Link-Belt Co
New York Rubber Corp
Bayston-Manhattan Inc Manhattan Rubber Div
Republie Rubber Div Lee Rubber & Tire Corp
U S Rubber Co
Webb Belting Co

▶ BELTING, LEATHER

Cagen Belting & Rubber Co
Chicago Belting Co
Fisher Leather Belting Co
Southern Belting Co
Western Rawhide & Belting Co

▶ BELTING, TRANSMISSION

Arms Rubber Mfg Co
Ray State Belting Co
Cincinnati Rubber Mfg Co
Clark (Victor B) Belting Co
DICK (R & J) CO
Durke-Atwood Co
Goodall Rubber Co
Goodrich (B F) Co
Goodyear Tire & Rubber Co
Graton & Knight Co
Ladew (Edward R) Co
Page Belting Co
Republie-Manhattan Inc
Republie Rubber Div Lee Rubber & Tire Corp
Schieren (Chas A) Co
Union Rubber & Adbestos Co
U S Rubber Co

▶ BELTS, "V"

ALLIS-CHALMERS MFG CO
Broadway Rubber Mfg Co
Chicago Rawhide Mfg Co
Dayton Rubber Mfg Co
Dick (R & J) Co Inc
Durke-Atwood Co
Fiveston Industrial Products Co
Gates Rubber Co
Goodrich (B F) Co
Goodyear Tire & Rubber Co
Manheim Mfg & Belting Co
Republie-Manhattan Inc Manhattan Rubber Div
Republie Rubber Div Lee Rubber & Tire Corp
Rockwood Mfg Co
Schieren (Chas A) Co
Thermoid Co
U S Rubber Co
WALKER TURNER CO INC KEARNEY & TRECKER CORP
Webb Belting & Supply Co

▶ BENCHES, WASH TUB

Berg (John) Mfg Co
Holland Lumber & Mfg Co
Howard Mfg Co
Wells (Frank B) Co
Woodward Products Corp

▶ BEVELS

DISSTON (HENRY) & SONS INC
Lufkin Bulo Co
Southington Lumber Mfg Co
STANLEY TOOLS DIV STANLEY WORKS
Starrett (L S) Co

▶ BINDERS, LOAD

Advance Car Mover Co
American Logging Tool Co
Alkins (E C) Co
Canton Cast Products
Dixie Logging Tool Co
Durbin-Durco
Leath Co
Norris Brothers
Rensy
Reno (Eugene C)

▶ BINDING, LINOLEUM & OIL CLOTH

ALLMETAL WEATHERSTRIP CO
B & T METALS CO
CENTRAL METAL STRIP CO
Decorite Inc
Dennis (W J) & Co
Kinland Industries Inc
NACKLANBURG-DUNCAN CO
Metal Trims Inc
National Metal Products Co
Samson Products Co
Superior Plastics Div Commonwealth Plastics Inc
R & W Moulding Co
Werner (R D) Co Inc
Youngstown Mfg Co

▶ BINS, GRAIN, PORTABLE

Beatrice Steel Tank Mfg Co
Illinois Wire & Mfg Co

▶ BINS, HARDWARE

BERGER MFG CO REPUBLIC STEEL CORP
Belzine Metal Furniture Co
Squidre Div Aurora Equipment Co
Frick-Gallagher Mfg Co
Heller (W C) & Co
Hines (Edward) Lumber Co
Lynn Metal Products Co
Precision Equipment Co
Red Tiger Products Inc
RUSSELL & ERWIN MFG CO
Servico Parts Systems
Stackpole Corp
Universal Steel Equipment Corp
Warren (J D) Mfg Co

▶ BINS, MATERIAL STORAGE, BULK

Arrow Tank Co Inc
Rodger Corrugating Co
Blaw-Knox Co
BRINARD STEEL CO
Brower Mfg Co
Butler Bin Co
Butler Mfg Co
Caldwell (W B) Co

CONSTRUCTION MACHINERY CO

Deatler Iron & Steel Co
Deminger Mill Mfg Co
Edwards Mfg Co
Erie Steel Found Co
Evans Products Co
Fleming Mfg Co
General Conveyor & Mfg Co
Gifford Wood Co
Holston Steel Form & Iron Co
Houston Blow Pipe & Sheet Metal Works
Illinois Wire & Mfg Co
James Mfg Co
Jeffrey Mfg Co
Johnson (C. H.) Co
Kalamazoo Tank & Nite Co
Lyon Metal Products
Madison Steel Products Co
MULLER MACHINERY CO INC
NRF & Fry Co
Noble Co
Red Tiger Products Inc

REYNOLDS METALS CO BUILDING PRODS

DIV
Richmond Engineering Co Inc
Sioux Steel Co
Shannon Steel Co
STEELCRAFT MFG CO
Super Structures Inc

BINS, NAIL

BERGER MFG DIV REPUBLIC STEEL CORP
Inchew Metal Furniture Co
Equipto Div Aurora Equipment Co
Frick-Gallagher Mfg Co
Heller (W. T.) & Co
Johnson Industries
Precision Equipment Co
Red Tiger Products Inc
ST PAUL CORRUGATING CO
Stackbin Corp
Universal Equipment Co
Warren (J. D.) Mfg Co

BITS, AUGER

Clark (Robert H.) Co Bruno Tools Div
Crescent Tool Co
Greiner Tool Co
Irwin Auger Bit Co
Millers Falls Co
Pork Saw & Willow Co
STANLEY TOOLS DIV STANLEY WORKS
Star Bit & Tool Co
Taylor Globe Co

BITS, COUNTERSINK

Damasus Steel Products Corp
Greiner Tool Co
Pugh Job Tl Inc
Star Bit & Tool Co
STANLEY TOOLS DIV STANLEY WORKS
Vaughan & Bushnell Mfg Co

BITS, DRILL

International Twist Drill Corp
New England Carbide Tool Co Inc

BITS, GIMLETS

Dezer (E. W.) Co
Greiner Tool Co Inc Greener Bros & Co
Mapleton Tool Co Inc
Pork Saw & Willow Co
STANLEY WORKS

BITS, SAW

Athlete (E. C.) & Co
Corley Mfg Co
How (R.) & Co Inc
SIMMONS SAW & STEEL CO
Southern Saw Works
Yates-American Machine Co

BLACKBOARD

New York Standard Blackboard Co Inc
No Glass Inc
TYLAC CO

BLADES, SAW, HACK, ETC.

BRADFORD MACHINE TOOL CO
Clinson Bros Inc
Forsberg Mfg Co
International Twist Drill Corp
PTI Inc
Victor Saw Works Inc

BLASTERS, SAND

American Wheelabrator & Equipment Co
Macloed Co
Pascher Airbrast Co

BLINDS, VENETIAN

Agre Venetian Blind Co
Artcraft Venetian Blind Mfg Co
Artes Green Corp
Artistic Venetian Blind Co
Bills Venetian Blind Co
Bostwick Goodell Co
Breeman (Chas. W.) Co
Chicago Venetian Blind Co
Clark & Hammer Inc
Clifton Mfg Co
Clapay Corp
Columbia Mills Inc
Consolidated Venetian Blind Co
Crandford Austin Mfg Co
CURTIS COMPANIES
Eastern Machine Products Co
Eastern Venetian Blind Co

Ellis Venetian Blind Co
Flint Venetian Blind Mfg Co
Herrick (W. E.) & Son Co
HOUGH SWADE CORP
HUNTER DOUGLAS CORP
Ideal Co
Kane Mfg Corp
Lessor Lovetren Inc
Mackin Venetian Blind Co
Mars Venetian Blinds
Maxwell Venetian Blind Co
Modern Venetian Blinds Inc
Murray Venetian Blind Co
National Venetian Blind Co
Rock Island Millwork Co
ROLSGREEN CO
Ron Vertical Blind Co
Universal Venetian Blind Co
Vogue Venetian Blind Co
Volkers (Wm.) & Co
Warren Venetian Blind Co
Yardley Industries
Youngstown Industries Inc

BLINDS, VENETIAN, OUT-DOOR

Charlowe Louver Window Co
Outside Venetian Blind Co Div Tascos Co

BLOCKS, BRICK-FACED

National Brick Block Co

BLOCKS, HEAT INSULATING

OWENS-ILLINOIS GLASS CO KAYLO DIV

BLOCKS, PLASTIC

Biosolite Co of America Div Naclmeister Inc
Columbia Protokastein Co Inc

BLOCKS, STRUCTURAL, INSULATING

OWENS-ILLINOIS GLASS CO KAYLO DIV

BLOCKS, TACKLE

American Hoist & Derrick Co
Cable Iron Works Inc
Lambro Mfg Co Inc
Noy Mfg Co
Fomon-Walton Co
Washington Iron Works
Western Block Co

BLOWERS, AIR

Air Controls Inc
American Foundry & Furnace Co
CHELSEA FAN & BLOWER CO
Dowagler Steel Furnace Co
Hartwell Propeller Fan Co
HOMELETTE CORP
Horn Furnace & Foundry Corp
International Heater Co
Lessor Furnace Co
Nelson (Herman) Corp
Tensar
Uno Ventilator Co
Utility Appliance Corp

BLOWERS, FURNACE

American Blower Co
Autotemp Fan & Blower Co
Clargae Fan Co
Dayton Electric Mfg Co
Emerson Electric Mfg Co
Eg Electric Ventilating Co
LAU BLOWER CO
MAJESTIC CO
Nelson (Herman) Corp
Victor Electric Products Co

BLOWERS, INSULATION

CAREY (PHILIP) CO
CLETEX CORP
General Blower Co
Quality Materials Co
United States Rock Wool Co
Universal Insulating Co

BLOWERS, PORTABLE, ELECTRIC

SKILSAW INC

BLOWERS, SAW & PLANING MILL

Allington & Curtis Mfg Co
Champion Blower & Forge Co
Chase Turbine Mfg Co
Clargae Fan Co
Dependable Machine Co Inc
Houston Blow Pipe & Sheet Metal Works
Howell (R. B.) Co
Jacksonville Blow Pipe
Kirk & Rimm Mfg Co
New York Blower Co
Ohio Blow Pipe Co
St Louis Blow Pipe & Heater Co

BOARDS, BULLETIN

Aero Bulletin & Directory Board Corp

BOARDS, DRAFTING

Hamilton Mfg
KEUFFEL & ESSER CO
WHITE (DAVID) CO

BOARDS, GLASS CUTTING

Barrett (Wm. L.) Co
Fletcher Terry Co
Glaziers Tool Mfg Co
Heller (W. C.) & Co
Larkin Bole Co
Marvel Bark Mfg Co
RED DEVIL TOOLS
Reuss
Sommer & Macs Glass Machinery Co
Warner Mfg Co
Warren (J. D.) Mfg Co

BOATS

Aluma Craft Boat Co
Dillabaugh (C. R.) Boat Co
HIGGINS INC
Kalamazoo Canvas Boat Co
Southwest Mfg Co
Winnier Mfg Co

BOILERS, COPPER RANGE

Wood (John) Manufacturing Co Inc

BOILERS, RANGE, GALVANIZED IRON

CASE (W. A.) & SON MFG CO
Construction Engineering-Superheater Inc
Hedges-Walsh-Weidner Div Combustion Engineering-Superheater Inc
Heller-Alber Co
Neefe Co

BOILERS, STEAM & HOT WATER

ALDRICH CO DIV BREEZE CORP INC
AMERICAN RADIATOR & STANDARD SANITARY CORP
Bronzell Co
BYVAN HEATER CO
BUNNAN CORP
Cleveland Steel Products Co Torridest Div
CBARE CO
DELOE APPLIANCE DIV GENERAL MOTORS CORP

Deary-Shepard Boiler Co
Fitzgibbon Boiler Co
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
General Fittings Co
Gilbert & Barker Mfg Co
Hedges-Walsh-Weidner Co
Heli Company
International Heater Co
Kewanee Boiler Corp Div American Radiator & Standard Sanitary Corp

KOHLER CO
Luskott Boiler & Mfg Co
Mossor & Sons Mfg Corp
NATIONAL RADIATOR CO
Olix Co
Perry Boiler & Burner Mfg Corp
Petroleum Heat & Power Co
Quick Automatic Oil Burner Corp
RICHMOND RADIATOR CO
Seattle Boiler Wks
Smith (A. O.) Corp
Smith (E. B.) Co
Spencer Licensing Div—Aero Mfg Corp

SURFACE COMBUSTION CORP
Tuscher Furnace Co
U. S. Radiator Corp
Ureva Radiator Corp

WATERFIRE BOILERS INC
Wayne Home Equipment Co
Well-Melain Co
York-Stunley Inc

ADAMS-RITE MFG CO
ALLAN-PROUTY INC
Atlas Bolt & Screw Co
Barrows Lock Works
Bethlehem Steel Co
Carpenter & Patterson Inc
CASEMENT HARDWARE CO
Central Screw Co
CHASE BRASS & COPPER CO
Clark Brothers Bolt Co Inc
Columbia Nut & Bolt Co
Columbus Bolt Works Co
Continental Screw Co
CORBIN (F. F.) DIV AMERICAN HARDWARE CORP
Deatler Iron & Steel Co
Eagle Lock Co
Elo Tool & Screw Corp
Furcal Equipment Mfg Co
FRANTZ MFG CO
Genere Tool Div General Steel Warehouse Co
Inc
Griffin Mfg Co
Grip Nut Co
Haskell (Wm. H.) Mfg Co

BOARDS & NUTS
ADAMS-RITE MFG CO
ALLAN-PROUTY INC
Atlas Bolt & Screw Co
Barrows Lock Works
Bethlehem Steel Co
Carpenter & Patterson Inc
CASEMENT HARDWARE CO
Central Screw Co
CHASE BRASS & COPPER CO
Clark Brothers Bolt Co Inc
Columbia Nut & Bolt Co
Columbus Bolt Works Co
Continental Screw Co
CORBIN (F. F.) DIV AMERICAN HARDWARE CORP
Deatler Iron & Steel Co
Eagle Lock Co
Elo Tool & Screw Corp
Furcal Equipment Mfg Co
FRANTZ MFG CO
Genere Tool Div General Steel Warehouse Co
Inc
Griffin Mfg Co
Grip Nut Co
Haskell (Wm. H.) Mfg Co

BOOKS, BUILDING
American Technical Society
BOOK SERVICE DEPT AMERICAN BUILDER
SIMMONS-BOARDMAN PUB CORP
MEREDITH PUBLISHING CORP
Wiley (John) & Sons Inc

BOOKS, ESTIMATING
BOOK SERVICE DEPT AMERICAN BUILDER
SIMMONS-BOARDMAN PUB CORP
Tamblyn System

BOOKS, HOUSE DESIGNS, PLANS
BOOK SERVICE DEPT AMERICAN BUILDER
SIMMONS-BOARDMAN PUB CORP

BOOKS, LANDSCAPING
SCOTT (O. M.) & SONS CO

BOOKS, PRICE
Dealers Price Book
Hoxwood (Chas.) R. A.
National Plan Service

Manufacturers' Names and Addresses Start on Page D-76
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► BOXES, CASH

Durham Mfg Co
Erie Art Metal Co
Hamilton Metal Products Co
Kreamer (A) Inc
Master Metal Products
Merriam Mfg Co
Smith (J B) Mfg Co

► BRACES, BIT & DRILLS, HAND

Economy Mfg Co
Fisale Equipment Mfg Co
Forsberg Mfg Co
Millers Falls Co
Peck Stow & Wilcox Co
Smith (Seymour) & Son
STANLEY TOOLS DIV STANLEY WORKS

► BRACKETS, CURTAIN

Rap Slates Stamping Co
Gould Nevershoe Co Inc
TURNER & SEYMOUR MFG CO

► BRACKETS, HAND RAIL

COBBIN (P & F) DIV AMERICAN HARD-WARE CORP
Ives (H B) Co
LOCKWOOD HARDWARE MFG CO
Frost Hardware Co
SARGENT & CO
Skillman Hardware Co

► BRACKETS, ROOF

American Ladder Co
ARTICRAFT ORNAMENTAL IRON CO
Belton Mfg Co
CINCINNATI IRON FENCE CO INC
CURTIS COMPANIES INC
Flint (A W) Co
Holm's Mfg Co of Ohio
Harvel Equipment Co
Parker (S) Howe Mfg Corp
Pattin (N E) Co
Rugg Mfg Co
STANLEY WORKS
Tilley (John S) Ladders Co Inc
WAGNER MFG CO

► BRACKETS, SAWHORSE

Busch (A G) & Co Inc
Crane Packing Co
DALTON MFG CO
GRAND HAVEN STAMPED PRODUCTS CO
Larson (Charles O) Co
M & M Wire Clam Co
Pamell Displays Inc
Thomas Products Co
Union Mfg & Gauge Co
WAGNER MFG CO
Wilson-Albrecht Co

► BRACKETS, SHELF

American Cabinet Hardware Co
Astroy Co
Busch (A G) & Co Inc
COBBIN (P & F) DIV AMERICAN HARD-WARE CORP
FAWCO MFG DIV FALLS STAMPING & WELDING CO
FRANTZ MFG CO
Garden City Plating & Mfg Co
Genesco Tool Div General Warehouse Co Inc
Griffin Mfg Co
WAGER (C) & SON HINGE CO
Heller (W C) Co
Knappe & Vogt Mfg Co
Larson (Chas O) Co
Locke Mfg Co
BLACKLIND-DRUNGAN CO
McKinney Mfg Co
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL REF CO
Parker (S) Howe Mfg Corp
Sargent Hardware Corp
RUSSELL & ERWIN MFG CO
SARGENT & CO
Slagmaker Lock Co
STANLEY WORKS
Wilmac Metal Products

► BRACKETS, SINK

American Foundry & Mfg Co
Griffin Mfg Co
Modern Iron Works
Penn Hardware Co
Reville Mfg Co
STANLEY WORKS

► BRACKETS, SINK

American Foundry & Mfg Co
Griffin Mfg Co
Modern Iron Works
Penn Hardware Co
Reville Mfg Co
STANLEY WORKS

► BRACKETS, STUD

Fisale Equipment Mfg Co
WAGNER MFG CO

► BRACKETS, WALL

COBBIN (P & F) DIV AMERICAN HARD-WARE CORP
Flint (A W) Co
Heller (W C) & Co
Ives (H B) Co
Harvel Equipment Co
Parker (S) Howe Mfg Corp
Peck & Seymour Inc
Reuco

Standard Brown Co
Superior Plastics Div Commonwealth Plastics Inc
Valley Metal Products
Warren (J D) Mfg Co

► BRASS & COPPER, SHAPES

American Brass Co
Anacosta Sales Co
Bridgport Brass Co
CHASE BRASS & COPPER CO
Chicago Brass Co
Michigan Copper & Brass Co
Revere Copper & Brass Co
Reville Mfg Co
Sherman (H B) Mfg Co
Western Cartridge Co Div Otis Industries

► BRICK, ACID-PROOF

Acme Brick Co
Alliance Clay Products Co
Sauerstein Concrete Co
Stratton Brick Co
SUMMITVILLE FACE BRICK CO
Texas Brick Co
U S Stoneware Co
Washington Brick & Lime Co

► BRICK, COMMON

Abilene Brick Co
Acme Brick Co
Acme Shale Brick Co
Ada Brick Co
Adel Clay Products Co
Alabama Clay Products Co
Alliance Clay Products Co
Allton Brick Co
Alvino Brick Co
Baltimore Brick Co
Beacon Brick Co
Binghamton Brick Co Inc
Black Hills Clay Products Co
Blais Brick Co
Bowman Shale Co
Bridgewater Brick Co
Brickell Brick Co
Bulldozers Brick Co
Bush (W G) & Co
Carey Brick Co
Chesham Brick & Tile Co
Church Brick Co
Claycraft Co
Columbia Brick Works
Dennings Point Brick Works
Denver Sewer Pipe & Clay Co
Dickinson Clay Products Co
Donnelly Brick Co
Drury Brick Co
Elgin-Bulter Brick Co
Eli-Tan Brick Co
Florida Georgia Brick & Tile Co
Fraser Brick Co
Frederick Brick Works
Gaffner Brick Co
General Clay Products Co
General Shale Products Corp
Glen-Gery Brick Co
Goodrich (W S) Inc
Great Falls Brick Co
Guizard Brick Works
Hope Brick Works
Humboldt Brick & Tile Co
Hydraulic Press Brick Co
Illinois Brick Co
Interstate Brick Co
Janssen Brick Co
Jova Brick Works
Kingland Clay Products Co
Las Vegas Brick Co
Lavelle Clay Products Co
Mason City Brick & Tile Co
Metropolitan Paving Brick Co
Milliken Brick Co
National Fireproofing Co
New Mexico Clay Products Co
Red River Valley Brick Corp
Benn Press Brick Co
Richards Brick Co
Richland Shale Products Co
Sacramento Brick Co
Seaton Products Inc
Sheffield Brick & Tile Co
Sheridan Press Brick & Tile Co
Simons Brick Co
Southern Brick & Tile Co
Spring Garden Brick Co
Standard Brick & Tile Corp
Summit Pressed Brick & Tile Co
Texas Brick Co
Valenz Tool Mfg Co
Washington Brick & Lime Co
Western Brick Co
Western Brick & Supply Co
West Virginia Brick Co
Yankee Hill Brick Mfg Co

► BRICK DISPLAY CABINETS

Equipco Div Aurora Equipment Co

► BRICK, ENAMELED

Acme Brick Co
Arctex Ceramic Corp
Claycraft Co
Hanley Co
Hydrant Press Brick Co
National Fireproofing Co
Stark Brick & Lime Co
Washington Brick & Lime Co

► BRICK, FACE

Acme Brick Co
Ada Brick Co
Adel Clay Products Co
Alabama Clay Products Co
Allton Brick Co
Anjar Van Stolk Trading Corp
Ashe Brick Co
Baltimore Brick Co
Binghamton Brick Co Inc
Black Hills Clay Products Co
Bowman Shale Co
Brooks Brick Co
Bulldozers Brick Co
Bush (W G) & Co
Chesham Brick & Tile Co
Chicago Fire Brick Co
Claycraft Co
Colonial Clay Products Co
Columbia Brick Works
Concord Brick Co
Craycroft Brick Co
Denmore Brick Co
Denver Sewer Pipe & Clay Co
Donnelly Brick Co
Drury Brick Co
Elgin-Bulter Brick Co
El Paso Brick Co
Evans Brick Co
Fairfield Brick Co
Fayette Brick & Tile Co
Florida Georgia Brick & Tile Co
Fraser Brick Co
Frederick Brick Works
Gaffner Brick Co
Glen Clay Products Co
General Shale Products Corp
Gladding Bros Mfg Co
Glen-Gery Brick Co
Great Falls Brick Co
Guizard Brick Works
Hanscomb Brick & Tile Co
Hanley Co
Hattiesburg Brick Works
Hocking Valley Brick Co
Hope Brick Works
Humboldt Brick & Tile Co
Hydraulic Press Brick Co
International Brick Co
Interstate Brick Co
Janssen Brick Co
Jova Brick Works
Jenkins Brick Co
Kendrick Brick & Tile Co
Kingland Clay Products Co
Laramie Brick & Tile Co
Laredo Brick Co
Las Vegas Brick Co
Lexington Brick & Tile Co
Lowell Clay Products Co
Metropolitan Paving Brick Co
Managers Clay Products Co
New England Brick Co
Ogden Pressed Brick & Tile Co
Old Virginia Brick Co
Purinton Paving Brick Co
Rehfeld Brick & Tile Co
Roanoke Webster Brick Co Inc
Sealton Products Inc
Sheffield Brick & Tile Co
Sheridan Press Brick & Tile Co
Southern Brick Co
Southern Brick & Tile Co
Standard Brick & Tile Corp
Stone Creek Brick Co
Stratton Brick Co
Summit Pressed Brick & Tile Co
SUMMITVILLE FACE BRICK CO
Texas Brick Co
Twin City Brick Co
Vendrig Valley Vitro-Brick & Tile Co
Washington Brick & Lime Co
West Virginia Brick Co
Western Brick Co
Western Brick & Supply Co
Williams Clay Products Co
Yankee Hill Brick Mfg Co

► BRICK, FIRE

Acme Brick Co
ARMSTRONG CORP CO
Babcock & Wilcox Co
Chicago Fire Brick Co
Clay City Pipe Co
Columbia Brick Works
Commonwealth Plastics Inc
Curtis Mfg & Refractories Co
Denver Fire Clay Co
Dixie Fire Brick Co
General Refractories Co
Green (A P) Fire Brick Co
Harbison-Walker Refractories Co
Idaho Fire Brick & Clay Co
Ironton Fire Brick Co
JOHNS-MANVILLE CORP
Lucille-Chrydy Co
Louisville Fire Brick Works
Mexico Refractories Co
North American Refractories Co
Norton Co
Owensboro Sewer Pipe Co Inc
Pileco Jointless Firebrick Co
Fire Clay Products Co
Quigley Co Inc
Robinson Clay Product Co
Seaboard Refractories Co
Sheffield Brick & Tile Co
Superior Plastics Div Commonwealth Plas-tics Inc
Utah Fire Clay Co
Walsh Refractories Corp
Washington Brick & Lime Co

► BRICK, GLAZED

Acme Brick Co
Arctex Ceramic Corp
Athens Brick & Tile Co
Binghamton Brick Co Inc
Cambria Clay Products Co
Claycraft Co
Denver Sewer Pipe & Clay Co
Elgin-Bulter Brick Co
Hanley Co
Hydraulic Press Brick Co
Metropolitan Paving Brick Co
National Fireproofing Co
Stark Brick Co
Walsh Refractories Corp
Washington Brick & Lime Co

► BRICK, NORMAN & ROMAN

Acme Brick Co
Adel Clay Products Co
Bendon Brick Co
Binghamton Brick Co
Bulldozers Brick Co
Chatham Brick Co
Chesham Brick & Tile Co
Claycraft Co
Columbia Brick Works
Consolidated Brick Co
Hanley Co
Jenshaur (G W) & Sons
Keagler Brick Co
Kendrick Brick & Tile Co
King-and Clay Products Co
Kraft Co
Malvern Clay Co
Metropolitan Brick Paving Co
Midland Brick Co
NATIONAL FIREPROOFING CO
Norridgewood Brick & Tile Co
Standard Clay Mfg Co
Washington Brick & Lime Co
Watsonville Brick Co
Western Clay Mfg Co
Westmore-Grey Fireproofing Co
Yankee Hill Brick Mfg Co

► BRICK, PAVING

Acme Brick Co
Alliance Clay Products Co
Hocking Valley Brick Co
Metropolitan Brick Paving Co
SUMMITVILLE FACE BRICK CO
Washington Brick & Lime Co
Western Brick & Supply Co

► BRICK, SAND LIME

Bakerfield Sandstone Brick Co
Missouri Hardstone Brick Co
Northern Indiana Brick Co
United Cement Products Co
Washington Brick & Lime Co
Wisconsin Brick Corp

► BRICK, VENEER

Alliance Clay Products Co
Binghamton Brick Co Inc
Fretz Co Inc
Howe Brick Works
Mason 2nd Brick Veneer Co
Western Brick & Supply Co

► BRIDGING, STEEL

Bethlehem Steel Co
Cleveland Steel Specialty Co
Daxin & Stahl Co
Dunlop Bros Co
Ewaco Corp
Flash Bridge Co
GLOVER MFG & SALES CO
GREAT LAKES STEEL CORP STEAM-STEEL DIV
INLAND STEEL CO
International Steel Co
JUNIOR PRO PRODUCTS CO
Lanette Mfg Co Inc
Met-Co Association Co
Pioneer Co
REPUBLIC STEEL CORP
Sheffield Steel Corp
Soothe Steel Co
Sta-Tile Inc
Union Metal Mfg Co
Wetco Co

► BRUSH BACKED, SANDER HEADS

Arcade Mfg Div Rockwell Mfg Co
Vonnegut Moulder Corp

► BRUSHES, INDUSTRIAL

Dewar & Reynolds Inc Brush Div
GOLDBLATT TOOL CO
Illinois Duster & Brush Co
Milwaukee Brush Mfg Co
National Brush Co
Osborn Mfg Co
PITTSBURGH PLATE GLASS CO
Bubbarat Co

► BRUSHES, PAINTERS'

American Brush Mfg Co
Baker Brush Co
Berry Brothers Inc
Dewar & Reynolds Inc
DuPont (E I) & Monomers & Co
Fulton Sibley & Co Inc
Glidden Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

MARKWELL MFG CO INC
Newark Brush Co
Osborn Mfg Co
Parter (Ira) & Sons Co
PITTSBURGH PLATE GLASS CO BRUSH DIV
Yanki Kote Co
Pollock Brush Co
Purdy Brush Co
Purdie (J C) & Sons
Robberson Co
Shaw-Williams Co
Star Brush Mfg Co
United Brush Mfgs
Whiting Adams Co
Woolter Brush Co

BRUSHES, PAPERHANGERS'

Baker Brush Co
Dewes & Reynolds Inc
Maulden Brush Mfg Co Inc
Robberson Co
Woolter Brush Co

BRUSHES, ROOFING

Abesta Mfg Corp
Benzinger Bros
Chicago Brush Co
Dewes & Reynolds Inc
Empire Brush Works
Hansen & Goodman Co
Milwaukee Brush Mfg Co
Pittsburgh Plate Glass Co Brush Div
Purdy Brush Co

BRUSHES, WINDOW

American Brush Mfg Co
Chicago Brush Co
Empire Brush Works Inc
Milwaukee Brush Mfg Co
PITTSBURGH PLATE GLASS CO BRUSH DIV

BUCKETS, CLAMSHELL

Blaw-Knox Div Blaw-Knox Co
Hain (George) Mfg Co Inc Div Pettibone
Mulliken Corp
HARNISCHFEGGER CORP
JAEGER MACHINE CO
Jeffrey Mfg Co
Johnson (F S) Co
Link-Belt Co
Morton Crane & Shovel Co
Pettibone Mulliken Corp
Silent Haul & Crane Co

BUCKETS, CONCRETE

Blaw-Knox Div Blaw-Knox Co
Hain (George) Mfg Co Inc Div Pettibone
Mulliken Corp
Johnson (F S) Co
MULLER MACHINERY CO INC
Own Bucket Co
Winning Corrugating Co

BUCKETS, FIRE

Winning Corrugating Co

BUGGIES, LUMBER

Russell Industries
Farley Mfg Co
Cunningham Machinery Corp
Electric Wheel Co
Hamilton Crane & Mfg Co
Nutting Truck & Motor Co

BUILDINGS, METAL

American Bridge Co
Armed Drainage & Metal Products Inc
Blaw-Knox Div Blaw-Knox Co
Bueler Mfg Co
Edwards Mfg Co
General Implement Corp
International Steel Co
Luria Engineering Corp
Maschler Inc
Moser (George L) Steel Corp
New Holland Metals Co
Pinner Co
REYNOLDS METALS CO BUILDING PROD-
UCTS DIV

ST PAUL CORRUGATING CO

Southern States Iron Roofing Co
STEELCRAFT MFG CO
STRANSTEEL DIV GREAT LAKES STEEL
CORP
TUSCON STEEL CO
UNITED STEEL FABRICATORS INC

BULLDOZERS

ALLIS-CHALMERS MFG CO TRACTOR DIV
American Tractor Corporation
BUCHSUS-ERIE CO
Caterpillar Tractor Co
Gough (Frank G) Co
JAEGER MACHINE CO
LeTourneau (B G) Inc
Lull Mfg Co
Miscellaneous Manufacturers
OLIVER CORP
Tracticon Co

BURNERS, COAL

Armstrong Furnace Co
Atlanta Stove Works
Eagle Stove Works
Estate Stove Co Div Noma Electric Co
Excelsior Stove & Mfg Co
General Machine Co Inc
Iron Fireman Mfg Co
Laurelton Foundry Co
Locke Stove Co

MAJESTIC CO
Quincy Stone Mfg Co
Wayne Home Equipment Co

BURNERS, COMB GAS & OIL

National Airoil Burner Co
Ray Oil Burner Co

BURNERS, GAS

ALDRICH CO DIV BREEZE CORP INC
AMERICAN RADIATOR & STANDARD SANI-
TARY CORP
Anchor Div Stratton & Terstege Co Inc
Armstrong Furnace Co
Barber Gas Burner Co
Bark Mfg Co
BRYANT HEATER DIV AFFILIATED GAS
EQUIPMENT INC
Century Engineering Corp
Chatanooga Implement & Mfg Co
Cleveland Steel Products Co Toridheat Div
COLEMAN CO
CONCO ENGINEERING WORKS DIV CONKEY
(H D) CO
Cornaire Heating Corp
CRANE CO
Hasek Mfg Co
Hill Company
Henry Furnace Co
Holland Furnace Co
Imperial Products Div Borg-Warner Corp
INTERNATIONAL OIL BURNER CO
Iron Fireman Co
Jackson & Church Co
Kee-Z-Air Inc
Lennon Furnace Co
LITTLE (H C) BURNER CO
MAJESTIC CO
National Airoil Burner Co
NATIONAL RADIATOR CO
NORGE HEAT DIV BORG-WARNER CORP
NORMAN PRODUCTS CO
OHIO FOUNDRY & MFG CO
Olson Co
Penn Boiler & Burner Mfg Co
QUEEN STOVE WORKS INC
REARNS MFG CO
Reylott Heater Co
Simplex Oil Heating Corp
SURFACE COMBUSTION CORP
TEMCO INC
Thatcher Furnace Co
Wayne Home Equipment Co
Will-Burt Co
Zorn (J A) Mfg Co

BURNERS, OIL
Airoil Products Co Inc
Anchor Div Chrysler Corp
ALDRICH CO DIV BREEZE CORP INC
AMERICAN RADIATOR & STANDARD SANI-
TARY CORP
Anchor Div Stratton & Terstege Co Inc
Armstrong Furnace Co
Barber Mfg Co
Chalmers Oil Burner Co
Chrysler Corp of Airtime Div
Cleveland Steel Products Co
Combustion Div Steel Products Engineering Co
CONCO ENGINEERING WORKS DIV CONKEY
(H D) CO
Cornaire Heating Corp
CRANE CO
DELCO APPLIANCE DIV GENERAL MOTORS
SALES CORP
Dow-Therm Div Motor Wheel Corp
Fairbanks Morse & Co
Fluid Heat Div Anchor Post Products Inc
Franklin Oil Heating Inc
GENERAL ELECTRIC CO AIR CONDITION-
ING DEPT
General Utilities Corp
Gentler May Corp
Gilbert & Barker Mfg Co
Hardinge Co
Harvey Whipple Inc
Hasek Mfg Co
Hill Co
Henry Furnace Co
INTERNATIONAL OIL BURNER CO
Iron Fireman Mfg Co
Jackson & Church Co
LITTLE (H C) BURNER CO
Kaustine Co
Koh Master Corp
Kee-Z-Air Inc
Krosky Mfg Co
Lennon Furnace Co
LITTLE (H C) BURNER CO
MAJESTIC CO
May Oil Burner Corp
National Airoil Burner Co
NORGE HEAT DIV BORG-WARNER CORP
Olson Co
Paragon Utilities Corp
Penn Boiler & Burner Mfg Corp
Perfection Stove Co
Perrine Mfg Corp
Petroleum Heat & Power Co
Quaker Mfg Co
Quiet Automatic Burner Corp
Ray Oil Burner Co
Reylott Heater Co
Silent Automatic Corp
Silent Glow Oil Burner Co
Silent Short Oil Burner Corp
Simplex Oil Heating Corp
TIMKEN SILENT AUTOMATIC DIV TIM-
KEN-DETROIT AXLE CO
Thatcher Furnace Co
U S Machine Corp

Viking Mfg Corp
Wayne Home Equipment Co
Will-Burt Co
Williams Oil-O-Matic Div Eureka-Williams Co
York-Shipley Inc

BURNERS, SAWDUST

Industrial Iron Works
Seattle Boiler Works
Western Foundry Co

BUSINESS SYSTEMS & FORMS

Acme Visible Records Inc
Ajax Time Stamp Co
Barragoss Adding Machine Co
Calculagraph Co
Delbridge Calculating Systems Inc
Dix (A B) Co
Diebold Inc
Egry Register Co
Felt & Tarrant Mfg Co
Friden Calculating Machine Co Inc
Hamilton Autographic Register Co
International Business Machines Corp
Merchant Calculating Machines Co
McCaesky Register Co
Medlicke Systems Inc
Monroe Calculating Machine Co Inc
Moore Business Forms Inc
Moser Safe Co Inc
National Cash Register Co
REMINOTON RAND INC
Serrall (Lion) Co
Standard Register Co
Tallman Robbins & Co
Toll Co Inc
VARCO Inc
Victor Adding Machine Co
Visarecord Inc

CABINETS, FIRE EQUIPMENT

Allen (W D) Mfg Co
Elkhart Brass Mfg Co
Excel Metal Cabinet Co Inc
General Detroit Corp
Kram (Walter S) Co
Safety Fire Extinguisher Co
Standard Fire Hose Co
Wirt & Knox Mfg Co

CABINETS, HOUSEHOLD

AMERICAN CENTRAL DIV AVCO MFG CO
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
BERGER MFG CO DIV REPUBLIC STEEL
CARR ADAMS & COLLIER CO
Cole Mfg Co
Colgate Mfg Corp
CURTIS COMPANIES INC
Excel Metal Cabinet Co Inc
Farley & Loetscher Mfg Co
GENERAL ELECTRIC CO APPLIANCE &
MERCHANDISE DEPT
General Panel Corp
Gold Seal Mfg Co
GREG & SON
Grote Mfg Co Inc
Harrison Steel Cabinet Co
Hobart Brothers Inc
Ideal Co
ITL Furniture Co
J D Products Co
KITCHEN-WAID CORP
Kram (Walter S) Co
LAWSON (F W) CO
LONG-BELL LUMBER CO
Lyon Metal Products Inc
Hermann Millwork Co
Midwest Mfg Co
Morgan Co
MULLINS MFG CORP
Mutschler Bros
Nasco Wood Products Inc
Palley Mfg Co
Paragon Utilities Corp
Royalmaid Kitchen Corp
Sawyer Lumber & Millwork Co
Shirley Corp
Stokane Cash & Door Co
TRACY MFG CO
Washington Steel Products Co
Whitehead Metal Prods Co Inc

CABLE, ELECTRIC SOIL HEAT-

ING
GENERAL ELECTRIC CO APPARATUS DEPT
WESTINGHOUSE ELECTRIC CORP

CABLE, INSULATED

American Conduct Co
AMERICAN STEEL & WIRE CO
Anasoda Wire & Cable Co
Boston Insulated Wire & Cable Co
CHASE BRASS & COPPER CO
GENERAL ELECTRIC CO CONSTRUCTION
MATERIALS DEPT
Dimitic Co
TENNESSEE COAL IRON & RAILROAD CO

CABLES, CRANE

American Cable Die American Chain & Cable Co

AMERICAN STEEL & WIRE CO

Broderick & Bascom Rope Co
Flanier & Hayes Rope & Steel Co
MacWright Co
Roebling's (John A) Sons Co

CALCIMINE

Chicago Bronze & Color Works
Dewes & Reynolds Inc
Fox (M Kwang) Co Inc
Glidden Co
Lousa (John) & Co Inc
Moore (Benjamin) & Co
Carbols Chemical Co
Morris Co Inc

NATIONAL GYPSUM CO

PITTSBURGH PLATE GLASS CO
Bardwin Co
Tamm Industries Inc
U S Kalamonies Co
Wadsworth-Howland & Co
Weeco Waterpaints Inc

CALCIUM CHLORIDE

Allen (W D) Mfg Co
American Cyanamid Co
Camp Chemical Co
Columbia Chemical Division Pittsburgh Plate Glass Co
Dow Chemical Co
DuPont (E I) de Nemours & Co
Gordon (George C) Chemical Co
Horn (A C) Co Inc
Pensylvania Salt Mfg Co
PITTSBURGH PLATE GLASS CO
SOLVAY SALES DIV ALLIED CHEMICAL &
DYE CORP
Tamm Industries Inc
Villa-Var Co
Wyandotte Chemicals Corp

CALCULATOR, MATERIALS & PRICE

Lawrence Engraving Service
Metric Systems Inc
Miller-Fuill Co

CANVAS, CANVAS PROD-

UCTS

American Tent & Awning Co
Astrup Co
Bents Bros Bag Co
Canvas Products Co
Canvas Specialty Co
Clifton Mfg Co
DANIELS (C B) INC
Fulton Bag & Cotton Mills
Johnson (J W) Co
New York Drop Cloth Mfg Co Inc
Standard Awning Co
Stanley (Wm W) Co Inc
Top Sunshade Co
Tucker Duck & Rubber Co
Werper Canvas Products Co

CANVAS, ROOFING

Barrell (William L) Co of N Y
Werper Canvas Products Co

CANVAS, WASHABLE, WALL

Astrup Co
Canvas Specialty Co
Columbus Coated Fabrics Corp
Fulton Bag & Cotton Mills
Standard Coated Products Div Interchemical Corp
Stanley (William W) Co Inc

CARPETING

Biglow-Sanford Carpet Co Inc
Hood Rubber Co Div Goodrich (B F) & Co
Mohawk Carpet Mills Inc

CAR PULLERS

Advance Car Mover Co
American Engineering Co
American Haul & Derrick Co
Clyde Iron Works Inc
Godfrey Conveyor Co
Hyler Co
Jeffrey Mfg Co
KEWANEH MFG CO
Lullitt Iron Works
Link-Belt Co
Moore Dry Kiln Co
Paragon Utilities Corp
Silent Haul & Crane Co
Stimmel Winch Co
Westers Foundry Co
Whiting Corp

CAR PUSHERS

Advance Car Mover Co
Clyde Iron Works Inc
Franklin Equipment Co
HARNISCHFEGGER CORP
Hyler Co
Jeffrey Mfg Co
KEWANEH MFG CO
Link-Belt Co
OLIVER CORP INDUSTRIAL DIV
Bross
Silent Haul & Crane Co
Stephens-Adams Mfg Co
Tallman Mfg Co
Whiting Corp

Manufacturers' Names and Addresses Start on Page D-76
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► CARRIERS, HAND, BRICK, TILE & BLOCK

Adams Co
Block-Lift Co
Builders Material Inc
Dowley Brothers
Fuller Mfg Co
GOLDBLATT TOOL CO
James Mfg Co
KEWANEE MFG CO
Sweet (A L) Iron Works
Votran Tool Mfg Co

► CARRIERS, LUMBER

Druitt Mfg Corp
Foster Carrier Div Standard Forge & Axle Co
Griffinger Carrier Co
Hyder Co
Lull Mfg Co
Milwaukee Power Equipment Co
Ross Carrier Co
Silent Hoist & Crane Co

► CARTS, BARBECUE

Dowley Brothers

► CARTS, FIRE HOSE

Allen (W D) Mfg Co
Safety Fire Extinguisher Co
Wirt & Knux Mfg Co

► CARTS, GARDEN

INLAND STEEL PRODUCTS CO
Masters Plaster Co
National Cart Corp

► CARTS, MATERIAL HANDLING

Basnet Industries
CONSTRUCTION MACHINERY SALES CO
INLAND STEEL PRODUCTS CO
Lansing Co
Nutting Truck & Cater Co Inc
Service Cater & Truck Corp
WORTHINGTON PUMPS & MACHINERY
CORP CONSTRUCTION EQUIP DIV

► CAR UNLOADERS, HOPPER

Atlas Conveyor Co
Barber-Greene Co
Baughaman Mfg Co Inc
Butler Bin Co
Fairfield Engineering Co
Farruhar (A B) Co
Gaffney Conveyor Co
Hais (George) Mfg Co Div Pettibone Mull-
iken Corp
Jeffrey Mfg Co
Johnson (C S) Co
Kewanee Machinery & Conveyor Co
Lake Shore Engineering Co
Link-Belt Co
Marking Co
Silent Hoist & Crane Co

► CASES, BOLT & SCREW

BERG MFG CO DIV REPUBLIC STEEL
CORP
Frich-Gallagher Mfg Co
Heller (W C) & Co
Lyon Metal Products Inc
Warren (J D) Mfg Co

► CASING, METAL

Alabama Metal Lath Co
BESTWICK STEEL LATH CO
Casing Inc
CISCO STEEL PRODUCTS CO
CROFT STEEL PRODUCTS INC
DETROIT STEEL PRODUCTS CO
DRYWALL TRIM INC
FENESTRA BUILDING PRODUCTS
Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
STEELCRAFT MFG CO
Penn Metal Co Inc
TUSCOG STEEL CO
U S Gypsum Co
Wullager Steel Corp Div Acta Steel Prod
Corp

► CASTERS

Adams Co
Branick Co
Colson Corp
Continental Diamond Fibre Co
Darnell Corp Ltd
Evelyn Store & Mfg Co
Fairbairn Co
Fisale Equipment Mfg Co
Hamilton Caster & Mfg Co
Jervis & Jervis Inc
NATIONAL LOCK CO
Nutting Truck & Cater Co Inc
Phoenix Caster Co Inc
Rapido-Standard Co Inc
Rehrer (O F) & Co
Service Cater & Truck Corp
Sterling Wheelbarrow Co

► CAULKING COMPOUNDS

Abesto Mfg Corp
American Asphalt Roof Co
Anti-Hydro Waterproofing Co

Armstrong Co
BALTZ (C W) & CO
Barland Weatherstrip Material Co
Biddle Co
Briggs-Matney Co Inc
CALBAR PAINT & VARNISH CO
CAREY (PHILIP) MFG CO
CENTRAL METAL STRIP CO
Cement Waterproofing Corp
Chemical Supply Co
Christy Co Inc
COLUMBIA CHEMICAL DIV PITTSBURGH
PLATE GLASS CO

Continental Adbestos & Refining Co
Dad & Lad Co
Dennis (W J) & Co
Dewar & Reynolds Inc
Dowley Brothers
Eagle-Fischer Co
Elliott Paint & Varnish Co
Felton Sibley & Co Inc
FLINTKOTTE CO
Fort Pitt Chem Co
Gibson-Homans Co
Glidden Co
GOLDBLATT TOOL CO
Gumpstille Laboratories
Harris Inc
Harpur Chemical Co
Horn (A C) Co Inc

JOHNS-MANVILLE CORP
Keystone Asphalt Products Co
Landon Putty Works
Loring Products Co
MACKLAMBURG-DUNCAN CO
Mar-Kay Mfg Co
MARSH WALL PRODUCTS INC
MINNESOTA MINING & MFG CO
Milwax Co Inc
MIRACLE ADHESIVES CORP
MOORE (GOODLOE E) CO
Mortell (J W) Co
Parker (Ira) & Sons
Peora Paint Co Inc
PITTSBURGH PLATE GLASS CO
Plastic Products Co
Presrite Engineering Co
Quigley Co Inc
Ranette Mfg Co
Robbins Mfg Co
Selbak Chemical Co
Seaboard Plastics Corp
Seal-Rite Caulking Co Inc
Smooth-On Mfg Co
Sonnborn (L) & Sons Inc
Suras-O-Bond Co
Standard Dry Wall Products Inc
Steveste Mfg Co
Sullivan Co
Tamm Industries Inc
Tremco Mfg Co
Trenson Laboratories Div Dewar & Reynolds
Co Inc
Vital Mfg Co

WALLACE MFG CO
Webster (W F) Cement Co
X-Pando Corp
ZEGERS INC

► CAULKING, PRE-MOLDED

FABRICATED PRODUCTS CO INC
Presrite Engineering Co

► CEILING, PRE-MOLDED

FABRICATED PRODUCTS CO INC
Presrite Engineering Co

► CEILINGS, METAL

ARMSTRONG CORK CO
BERG MFG CO DIV REPUBLIC STEEL
CORP
Compo-Miracle Products Co
Continental Steel Corp
Edwards Mfg Co
FENESTRA BUILDING PRODUCTS
Hausman (E F) Co
International Steel Co
Klaser Mfg Co
Mason (R C) Co
REYNOLDS METALS CO BUILDING PRO-
DUCTS DIV
ST PAUL CORRUGATING CO
Wheeling Corrugating Co

► CEILINGS, SUSPENDED

Lak-Fructs Co
Raynmetal Products Inc Nailok Div

► CEMENT, ACIDPROOF

American Flarex Co
JOHNS-MANVILLE CORP
Mexico Refractories Co
Norton Products Corp
Robinson Clay Product Co
Tuffall Inc
UNIVERSAL ATLAS CEMENT CO
North American Cement Corp

► CEMENT, ANTI-BACTERIAL

North American Cement Corp

► CEMENT, ASBESTOS

Abesto Mfg Corp
Acme Asbestos Covering & Flooring Co
American Asphalt Roof Co
Adbestos Asphalt & Insulation Inc
Borden Co Chemical Div
CAREY (PHILIP) MFG CO
Clifton Metallic Paint Co
Curtis Mfg & Asbestos Co
FLINTKOTTE CO

Horn (A C) Co Inc
INLAND STEEL PRODUCTS CO
JOHNS-MANVILLE CORP
KEASBEY & WATTS/SON CO
Lebon Co
MOORE (GOODLOE E) CO
Palco Products Inc
Peora Paint Co Inc
Pibrium Jointless Fibrebrick Co
SUBERLOID CO
Rolland Fire Clay Co
Seaboard Plastics Corp
Standard Adbestos Mfg Co
TEXAS CO

► CEMENT, CANVAS

Borden Co Chemical Div
Christy Co Inc
Mineral Pigments Corp
MIRACLE ADHESIVES CORP
MOORE (GOODLOE E) CO

► CEMENT, HOUSEHOLD RE-PAIR

Borden Co Chemical Div
Burl-Midway Inc
CERTAIN-TEED PRODUCTS CORP
Consumers Gilt Co
Dupont (E I) de Nemours & Co
Horn & French, Inc
Lake Chemical Co
LaPage's Inc
MACKLAMBURG-DUNCAN CO
MIRACLE ADHESIVES CORP
Paisley Products Inc
Peardon Co
Selbak Chemical Co
So-La Works Inc
Tector Chemical Co
Tuttle's Tie-On Cement Co

► CEMENT, IRON

Boyer Chemical Laboratory Co
Crest Waterproofing Corp
Clark Cast Steel Cement Co
Peora Paint Co Inc
Ranette Mfg Co
Smooth-On Mfg Co
Sonnborn (L) Sons Inc
Tilette Cement Co Inc

► CEMENT, KEENE'S

CELESTEX CORP
CERTAIN-TEED PRODUCTS CORP
NATIONAL GYPSUM CO
Globe Hydrate & Supply Co
U S Gypsum Co
Woodville Lime Co

► CEMENT, MASONRY

Alpha Portland Cement Co
Calaveras Cement Co
Carney Co Inc
GENERAL PORTLAND CEMENT CO
Hawley Portland Cement Co
Lehigh Portland Cement Co
LONG STAR CEMENT CORP
LOUISVILLE CEMENT CO
MARQUETTE CEMENT MFG CO
MEDUSA PORTLAND CEMENT CO
Missouri Portland Cement Co
National Mortar and Supply Co
North American Cement Corp
Ohio Hydrate & Supply Co
Peerless Cement Corp
PITTSBURGH PLATE GLASS CO
Riverton Lime & Stone Co Inc
Sakrite Inc
Standard Lime & Stone Co
Southern Cement Co
TRINITY PORTLAND CEMENT DIV GEN-
ERAL PORTLAND CEMENT CO
U S Gypsum Co
UNIVERSAL ATLAS CEMENT CO
Wolverine Portland Cement Co
Woodville Lime Co
X-Pando Corp

► CEMENT, NON-STAINING

Borden Co Chemical Div
LOUISVILLE CEMENT CO
MEDUSA PORTLAND CEMENT CO
PITTSBURGH PLATE GLASS CO
TRINITY PORTLAND CEMENT DIV GEN-
ERAL PORTLAND CEMENT CO
UNIVERSAL ATLAS CEMENT CO

► CEMENT, PIPE MENDING

Lake Chemical Co
Smooth-On Mfg Co
X-Pando Corp

► CEMENT, PORTLAND

Alpha Portland Cement Co
Ash Grove Lime Portland Cement Co
Blue Diamond Corp
Calaveras Cement Co
California Portland Cement Co
Consolidated Cement Corp
Cumberland Portland Cement Co
Dewey Portland Cement Co
Florida Portland Cement Div General Por-
tland Cement Co

GENERAL PORTLAND CEMENT CO
Hawley Portland Cement Co
Hermitage Portland Cement Co
Ideal Cement Co
Kaiser Aluminum & Chemical Sales
INC

Kewanee Portland Cement Co
Lehigh Portland Cement Co
LONG STAR CEMENT CORP
LOUISVILLE CEMENT CO
MARQUETTE CEMENT MFG CO
MEDUSA PORTLAND CEMENT CO
Missouri Portland Cement Co
North American Cement Corp
Pacific Portland Cement Co
Peerless Portland Cement Co
Pennsylvania-Dixie Cement Corp
PITTSBURGH PLATE GLASS CO
Southwestern Portland Cement Co
Standard Lime & Stone Co
TRINITY PORTLAND CEMENT DIV GEN-
ERAL PORTLAND CEMENT CO
UNIVERSAL ATLAS CEMENT CO
Wolverine Portland Cement Co

► CEMENT, PORTLAND, AIR-ENTRAINING

Alpha Portland Cement Co
General Portland Cement Co
LONG STAR CEMENT CORP
LOUISVILLE CEMENT CO
MARQUETTE CEMENT MFG CO
MEDUSA PORTLAND CEMENT CO
North American Cement Corp
TRINITY PORTLAND CEMENT CO DIV GEN-
ERAL PORTLAND CEMENT CO
UNIVERSAL ATLAS CEMENT CO

► CEMENT, PORTLAND, GRAY, WATERPROOF

Calaveras Cement Co
LOUISVILLE CEMENT CO
MEDUSA PORTLAND CEMENT CO
PITTSBURGH PLATE GLASS CO
Standard Lime & Stone Co
Wolverine Portland Cement Co

► CEMENT, PORTLAND, HIGH EARLY STRENGTH

Alpha Portland Cement Co
Calaveras Cement Co
Lehigh Portland Cement Co
LONG STAR CEMENT CORP
LOUISVILLE CEMENT CO
MARQUETTE CEMENT MFG CO
MEDUSA PORTLAND CEMENT CO
Missouri Portland Cement Co
North American Cement Corp
Pacific Portland Cement Co
Peerless Cement Corp
Pennsylvania-Dixie Cement Corp
PITTSBURGH PLATE GLASS CO
Spokane Portland Cement Co
Standard Lime & Stone Co
TRINITY PORTLAND CEMENT DIV GEN-
ERAL PORTLAND CEMENT CO
UNIVERSAL ATLAS CEMENT CO
Wolverine Portland Cement Co

► CEMENT, PORTLAND, WHITE

Calaveras Cement Co
General Portland Cement Co
LOUISVILLE CEMENT CO
Lehigh Portland Cement Co
PITTSBURGH PLATE GLASS CO
TRINITY PORTLAND CEMENT DIV GEN-
ERAL PORTLAND CEMENT CO
UNIVERSAL ATLAS CEMENT CO

► CEMENT, PORTLAND, WHITE WATERPROOF

MEDUSA PORTLAND CEMENT CO
PITTSBURGH PLATE GLASS CO
TRINITY PORTLAND CEMENT DIV GEN-
ERAL PORTLAND CEMENT CO
UNIVERSAL ATLAS CEMENT CO

► CEMENT, PREPARED MIX

Campbell (H T) Sons Corp

► CEMENT, REFRACTORY

Acme Brick Co
ARMSTRONG CORK CO
CAREY (PHILIP) MFG CO
Chicago Fire Brick Co
Christy Co Inc
Clay City Pipe Co
Clifton Metallic Paint Co
Consumers Gilt Co
Curtis Mfg & Asbestos Co
Denver Fire Clay Co
Deary Portland Cement Co
Biron (Joseph) Crucible Div Hite-Rite Mfg Co
Eagle-Pitbar Co
Ehrst Magnesia Mfg Co
Furnace Store & Furnace Lining Co
General Refractories Co
Green (A P) Fire Brick Co
Kaiser-Alumina Refractories Co
JOHNS-MANVILLE CORP
Keystone Refractories Co
Laclede-Christy Co
Mexico Refractories Co
North American Refractories Co
Norton Co
Pacific Clay Products

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Peers Paint Co Inc
Pittsburgh Jointline Firebrick Co
Quiply Co Inc
Robinson Clay Product Co
Routland Fire Clay Co
Sall Mountain Co
Sawreson Cements Co
Seaboard Refractories Co
Standard Asbestos Mfg Co
United Gilsomite Laboratories
UNIVERSAL ATLAS CEMENT CO
Walth Refractories Corp
Wilson (Grants) Inc

CEMENT, ROOFING

Abesto Mfg Corp
Acme Asbestos Covering & Flooring Co
American Asphalt Roof Co
Armstrong Co
COP
BARRETT DIV ALLIED CHEMICAL & DYE CORP

**BIRD & SON INC
CAREY (PHILIP) MFG CO**

CELOTEX CORP
Ceresit Waterproofing Corp
CERTAIN-TEED PRODUCTS CORP
Clinton Metallic Paint Co
Coopers Creek Chemical Corp
Curtis Mfg & Asbestos Co
Dad & Lad Co
Deese & Reynolds Inc
Dunlop Brothers
Elliott Paint & Varnish Co
FLINTKOTE CO
Ford Roofing Products Co
Gibson-Homann Co
Globe Paint Works Inc
Harrison Paint & Varnish Co
Horn (A C) Co Inc
INLAND STEEL PRODUCTS CO
JOHNS-MANVILLE CORP
KEASBY & HATTISON CO
Keystone Asphalt Products Co
Koppers Co
Falcon Products Inc
Peers Paint Co Inc
PITTSBURGH PLATE GLASS CO

RUEBERID CO

Routland Fire Clay Co
Seaboard Plastics Corp
Sevier Products Corp
Sonneborn (L) & Sons Inc
Stevette Mfg Co
Sullivan Co
TEXAS CO
Trucon Laboratories Div Devore & Reynolds Inc
United Gilsomite Laboratories
U S Gypsum Co
Webster (W F) Cement Co

CEMENT, RUBBER

Alabastine Paint Prods Div Chicago Bronze & Color Works
Borden Co Chemical Div
Broadway Rubber Mfg Co
Crescent Products Co
Goodrich (B F) Co
Kuhls (H B) Prod
Lay-Mix Mfg Co
LePage's Inc
Minnesota Mining & Mfg Co
MIRACLE ADHESIVES CORP
MOORE (GOODLOE) CO
National Adhesives Div National Starch Products Inc
Paisley Products Inc
Parler (C) Hotee Mfg Co
Penco Div Paisley Products Inc
Standard Paste & Glue Co
St Louis Rubber Cement Co Inc
Sullivan Co
Union Rubber & Asbestos Co
D S PLYWOOD CORP
U S Rubber Co
Webster (W F) Cement Co
Williams Products Co Inc

CEMENT, TILE

American Glaze Tile Co
ARMSTRONG CORP
Borden Co Chemical Div
Boyle-Miway Inc
Dexin Plywood Corp
Dieks Pontius Co
Hayes Adhesives Co
MARSH WALL PRODUCTS INC
MEDUSA PORTLAND CEMENT CO
Minnesota Mining & Mfg Co
MIRACLE ADHESIVES CORP
MOORE (GOODLOE) CO
Paisley Products Inc
Peers Paint Co Inc
Plastic Products Co
PRESTILE MFG CO
Sardines Co
Selchuk Chemical Co
SELCK (WALTER E) & CO
Standard Paste & Glue Co
Stevette Mfg Co
Superior Plastics Div Commonwealth Plastics Inc
Technical Supply Co
Tietze Cement Co Inc
WALLACE MFG CO
Williams Products Co Inc
X-Panda Corp

CEMENT, WALLBOARD JOINT

CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
MIRACLE ADHESIVES CORP
NATIONAL GYPSUM CO
PITTSBURGH PLATE GLASS CO
Reardon Co

U S Gypsum Co

Wesco Waterpumps Inc

CEMENT, WATERPROOFING

Abesto Mfg Corp
Adhesive Co
American Fluorite Co
Anti-Hydro Waterproofing Co
Armo-Lab Inc
BARRETT DIV ALLIED CHEMICAL & DYE CORP
BIRD & SON INC
CAREY (PHILIP) MFG CO
Ceresit Waterproofing Corp
Chicago Bronze & Color Works
Dix Paint (E J) de Nemours & Co Inc
Firestone Tire & Rubber Co
FLO
GENERAL PORTLAND CEMENT CO
Gibson-Homann Co
Horn (A C) Co Inc
JOHNS-MANVILLE CORP
Koppers Co
Lustik Products Co Inc
Luton Co

LOUISVILLE CEMENT CO

MARSH WALL PRODUCTS INC
MEDUSA PORTLAND CEMENT CO
MIRACLE ADHESIVES CORP
National Guard Products Inc
Peers Paint Co Inc
Rauville Mfg Co
Seaton Products Inc
Smooth-O-Mix Co
Standard Dry Wall Products Inc
Stevette Mfg Co
Sullivan Co
Tamm Industries Inc
TEXAS CO
Teeb Brothers Inc
Trucon Laboratories Div Devore & Reynolds Inc
Wesco Products Co Inc
X-Panda Corp

CESSPOOL PLATES

Vestal Store Co

CHAINS

American Cable Div American Chain & Cable Co
American Logging Tool Co
Bridgeport Chain & Mfg Co
Campbell Chain Co
Chain Belt Co
Cleveland Chain & Mfg Co
Columbus McKinnon Chain Corp
Dixie Logging Tool & Mfg Co
International Chain & Mfg Co
Jeffrey Mfg Co
Mitsuboshi Hay Tool Co
Moline Iron Works
North Chain Forge & Iron Co
Paramount Equipment Co
Perless Chain Co
Riven
Ryerson (Joseph T) & Son
Taylor (S G) Chain Co
Western Chain Co

CHAINS, CONVEYOR

American Chain & Cable Co Inc
Bridgeport Chain & Mfg Co
Campbell Chain Co
Chain Belt Co
Cleveland Chain & Mfg Co
Columbus McKinnon Chain Corp
Diamond Chain Co Inc
Howell (B R) Co
Jeffrey Mfg Co
Link-Belt Co
Taylor (S G) Chain Co
Western Chain Co
Western Foundry Co
Wheland Co

CHAINS, SASH

American Chain & Cable Co Inc
Bridgeport Chain & Mfg Co
Campbell Chain Co
CHASE BRASS & COPPER CO
Cleveland Chain & Mfg Co
GORDIE (P & F) DIV AMERICAN HARDWARE CORP
Esco Chain Works
Hobbs Chain Co
LOCKWOOD HARDWARE MFG CO
Perless Chain Co
Taylor (S G) Chain Co
TUNNER & SEYMOUR MFG CO
Western Chain Co
Western Foundry Co

CHALK LINES

Brownell & Co
Carpenter (George B) & Co
Cocharing Mfg Co
Cleveland Mill & Power Co
Gladding (B F) & Co
GOLDBLATT TOOL CO
Grain (John B) & Co
Puritan Cordage Mills Inc
Rauville Mfg Co
LANSBORN CONDUIT WORKS
Tennessee Line & Twine Co
Turner & Stanton Co
Warner Mfg Co

CHESTS, CLOTHES STORAGE

Elingers

CHIMNEY CAPS

Acme Brick Co
Adams Co
American Vitrified Products Co
Beverston Shale Co
Cassonville Sewer Pipe Co Inc
Cyclone Mfg Co
Dieker (W B) Clay Mfg Co
Evans Pipe Co
Houston Blue Pipe & Sheet Metal Works
INLAND STEEL PRODUCTS CO
Iron Bros Inc
MAJESTIC CO
Maple City Furnace Co
NATIONAL CLAY PIPE MFRS INC
Northwest Metal Products Inc
Northwestern Terra Cotta Co
Pacific Clay Products
Penn Supply & Metal Corp
Perma-Top Co
Quinn Wire & Iron Works
Robinson Clay Product Co
Robinson & Sons Sewer Pipe Co
Rohlfing Foundry Co
Stillwater Clay Products Co
Streator Drain Tile Co
What Cheer Clay Products Co

CHIMNEY CLEANING COMPOUNDS

Coughlan (G N) Co

CHISELS

American Swiss File & Tool Co
Breville Mfg Co
Bridgeport Hardware Mfg Corp
Champion-De Arment Tool Co
Cincinnati Tool Co
Cleveland Steel Tool Co
Damascus Steel Products Corp
Delaware Tool Steel Corp
DISSON (HENRY) & SONS INC
Fairmount Tool & Forging Co
Fuller Tool Co
Grewer Tool Div General Steel Warehouse Co
GOLDBLATT TOOL CO
Greenville Tool Co
Heller Brothers
Hood Brothers
Leontis Tool Co
Mayes Steel Products Inc
Mephito Tool Co Inc
Millers Falls Co
Owensboro Tool Co
P & C Hand Forged Tool Co
Pek Stoe & Wilcox Co
Punch (Paper) R) Inc
Proto Tool Co
Raney Tools
STANLEY WORKS
Union Hardware Co
Virek Tool Co
Valcan Tool Mfg Co
Wildt Drop Forge & Tool Co
Winsted Edge Tool Works
Woodage-Vermont Tool Works

CHUTES, COAL

Adams Co
Allen Steel Products Inc
BOWSTICK STEEL LATH CO
Bready Construction Corp
Chattanooga Implement & Mfg Co
COPCO STEEL & ENGINEERING CO
Dewar Iron & Steel Co
Donley Brothers
Gabriel Steel Co
Harris Inc
Houston Blow Pipe & Sheet Metal Works
Industrial Iron Works
Jeffrey Mfg Co
Johnson Industries Inc
KEWANEE MFG CO
Klauer Mfg Co
Liqueman Engineering Works
MAJESTIC CO
MULLER MACHINERY CO INC
Perless Mfg Co
Richmond Engineering Co
VENTO STEEL PRODUCTS CO INC

CHUTES, DUST

AIR CONTROL PRODUCTS INC
Allen Steel Products
Allington & Curtis Mfg Co
Harris Inc
Klawe (Ernest) & Co

CHUTES, LAUNDRY

COPCO STEEL & ENGINEERING CO
Cot (H F) & Co
Donley Brothers
Gabriel Steel Co
Haskell Chute & Conveyor Co
Klawe (Ernest) & Co
MAJESTIC CO
Miami Cabinet Div Cary (Philip) Mfg Co

CHUTES, RUBBISH, STEEL

Haskell Chute & Conveyor Co

CIRCUIT BREAKERS

Adam (Frank) Electric Co
Arrow Hart & Higginson Electric Co
Baldwin Electric Products Co
Federal Electric Products Co
Hathaway & Co
Trembitt Electric Mfg Co
WESTINGHOUSE ELECTRIC CORP

CIRCULATORS, HOT WATER HEATING SYSTEMS

BELL & GOSSETT CO
Teco Heaters Inc
THRUSH (H A) & CO

CIRCULATORS, VENTED WALL

Pioneer Water Heater Co Pioneer Furnace Div

CLAMPS, "C"

Adjustable Clamp Co
Armstrong Brothers Tool Co
Batavia Clamps Co Inc
Black Brothers Inc
Black Brothers Inc
Borson Clip System Inc
Lansperger & Patterson Inc
Cincinnati Tool Co
Handy Mfg Co
Littleton Hardware & Foundry Co
SARGENT & CO
Syracuse Alloy Metals Corp

CLAMPS, CARPENTER STEEL BAR

Adjustable Clamp Co
Batavia Clamps Co Inc
Black Brothers Inc
Cincinnati Tool Co
Eberhard Mfg Co Div Eastern Malleable Iron Co
Hany Mfg Co
Hartford Clamp Co
Malleable Iron Fittings Co
Phoenix Hardware Mfg Co
Taylor (James L) Mfg Co

CLAMPS, CONCRETE CONSTRUCTION

Adjustable Clamp Co
Batavia Clamps Co Inc
Cincinnati Tool Co
Fischer & Hayes Rope & Steel Co
H & M Wire Clamp Co
Richmond Screw Anchor Co
Star Expansion Products Co Inc
UNIVERSAL FORM CLAMP CO
Williams Form Engineering Corp

CLAMPS, CONDUIT & PIPE HANGING

GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT

CLAMPS, FILING

Adjustable Clamp Co
Alkins (E C) & Co
DISSTON (HENRY) & SONS
Hanchett Mfg Co
ROCKWELL MFG CO DELTA POWER TOOL DIV
SARGENT & CO

CLAMPS, STEEL

BRIGGS MFG CO

CLAMPS, WOODWORKERS'

Adjustable Clamp Co
Armstrong Brothers Tool Co
Batavia Clamps Co Inc
Black Brothers Inc
Cincinnati Tool Co
Eberhard Mfg Co Div Eastern Malleable Iron Co
Grand Specialties Co
Handy Mfg Co
Hartford Clamp Co
Knap & Vogt Mfg Co
Malleable Iron Fittings Co
SARGENT & CO
Starrett (L R) Co
Taylor (James L) Mfg Co
Union Tool Co

CLAY, FIRE

Acme Brick Co
Adeil Clay Products Co
Alliance Clay Products Co
Cassonville Sewer Pipe Co
Chicago Fire Brick Co
Dow Clay Products Co
Deuver Fire Clay Co
Evans Pipe Co
General Refractories Co
Gladding McLean & Co
Green (A P) Fire Brick Co
Harrison-Walker Refractories Co
Ironton Fire Brick Co
JOHNS-MANVILLE CORP
Kool Clay Mfg Co
Laclede-Christy Co
Lehigh Sewer Pipe & Tile Co
Mansfield Refractories Co

Manufacturers' Names and Addresses Start on Page D-76

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Mexico Refractories Co
North American Refractories Co
Overseas Sewer Pipe Co Inc
Pacific Clay Products
Fibron Jointless Fibrebrick Co
Robinson Clay Product Co
Seaboard Refractories Co
Sylvania Drain Tile Co
United Gilsonite Laboratories
Washington Brick & Lime Co

► **CLEANERS, HAND**

CABOT (SAMUEL) & CO INC
Dennis Chemical Co
Glidden Co
MIRACLE ADHESIVES CORP
Fichte Chemical Co
Spero Inc
Technical Development Laboratories

► **CLEANERS, PAINT BRUSH**

Reynold Co
Boston Varnish Co
Roper Chemical Laboratory Co
Royal-Midway Inc
Briggs-Maroney Co Inc
CABOT (SAMUEL) & CO INC
Christy Co Inc
Cleveland Cleanser & Paste Co
Commercial Solvents Corp
Consumers Glee Co
Coughlan (G N) Co
Fuller (H B) Co
Glidden Co
Industrial Chemical Development Corp
Kleen Chemical Co
Minihart (G A) & Co
Minshall Products
Patent Cereals Co
Pentone Co
PITTSBURGH PLATE GLASS CO
Portable Electric Tools Inc
RED DEVIL TOOLS
Savangan Co
Schalk Chemical Co
Sheffield Bronze & Paint Corp
Steelco Mfg Co
Sterling Paint & Varnish Co
Tamm Industries Inc
United Gilsonite Laboratories
Wisconsin Laboratories Inc

► **CLEANERS, PAINT BRUSH, ELECTRIC**

Nashbar Mfg Co
Portable Electric Tools Inc
RED DEVIL TOOLS

► **CLEANERS, PAINT & VARNISH**

Bayle-Midway Inc
Carbons Products Co
Christy Co Inc
DuPont (E I) de Nemours & Co
Economies Laboratory Inc
Elyel Corp
Glidden Co
Low Bros
Miracle Chemical Products Co
Pacific Chemical Co
Patent Cereals Co
PITTSBURGH PLATE GLASS CO
Procter & Gamble Co
Savangan Co
Schalk Chemical Co
Sheffield Bronze & Paint Corp
Socoy-Vacuum Oil Co
Sullivan Co
Tamm Industries Inc
Wesco Waterpaints Inc

► **CLEANERS, SEPTIC TANK, CHEMICAL**

Hygene Products Co
Massachusetts Chemical Co
Thomas Sanitary Products Co

► **CLIPS, BRIDGING & JOISTS, STEEL**

Bethlehem Steel Co
Solel Steel Co
TRUSCON STEEL CO

► **CLIPS, CONCRETE**

American Expansion Bolt & Mfg Co
CECO STEEL PRODUCTS CO
Goldsmith Metal Lath Co
Heckmann Building Products Co
Merwin Mfg Co
PETERSON PRODUCTS CO
Richmond Screw Anchor Co
Sommer Metalcraft Co
Union Steel Products Co
Williams Form Engineering Corp
Winners Industries

► **CLIPS, FLOOR**

Bethlehem Steel Co
Merwin Mfg Co
Penn Metal Co Inc
Sommer Metalcraft Co
STEELCRAFT MFG CO
TRUSCON STEEL CO

► **CLIPS, GLAZING FOR STEEL SASH**

Adams Co
CECO STEEL PRODUCTS CO
CECO STEEL & ENGINEERING CO
Dowley Bros Co
Guthrie Steel Co
Harris Inc
KEWANEE MFG CO
LIBBY-SWENSON-TRUSS GLASS CO
PITTSBURGH PLATE GLASS CO
Sommer Metalcraft Corp
Young (L A) Spring & Wire Corp

► **CLIPS, PLASTER BOARD**

► **LATH, CEILING, ACOUSTICAL TILE**

Bureau Clip System Inc
E G BUILDING FASTENERS CORP
U S Gypsum Co

► **CLIPS, PLASTER LATH, SPRING**

Penn Metal Co Inc
Solel Steel Co
U S Gypsum Co

► **CLIPS, ROOFING**

CECO STEEL PRODUCTS CO
Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
NEVA SALES CO
Olljak Mfg Co
Ryerson (Joseph T) & Son
SEAL-ALL CLIP CO

► **CLIPS, WALLBOARD & CEILING TILE**

E G BUILDING FASTENERS CORP
INSULITE CO DIV MINNESOTA & ONTARIO PAPER CO
WFSR CO
WOOD CONVERSION CO

► **CLIPS, WIRE ROPE**

American Bolt & Derrick Co
AMERICAN STEEL & WIRE CO
Brookings (John A) Sons Co
Tison-Walton Co
Wickwire Spenser Steel Div Colorado Fuel & Iron Corp

► **CLOCKS, TIME RECORDING**

Cincinnati Time Recorder Co
Service Recorder Co

► **CLOCKS, WATCHMEN'S**

Chicago Watchlock Div Great Lakes Industries Inc
Drexel Watchlock Corp

► **CLOSURES, FOR METAL ROOFING & SIDING**

Fabricated Products Co

► **CLOTHES DRYERS**

Apex-Bulmer Corp
BENDIX HOME APPLIANCES INC DIV AVCO MFG CORP
Blackstone Corp
Chicago Dryer Co
Clay Equipment Corp
Colgate Mfg Co
Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO APPLIANCE & MERCHANDISE DEPT
Hamilton Mfg Co
HOTPOINT INC
Howard Mfg Co
Kraus (Walter S) Co
Pressed Steel Co
Rotary Clothes Dryer Co Inc
Scientific Heater Co
Southern Galvanizing Co
TEMCO INC
WESTINGHOUSE ELECTRIC CORP APPLIANCE DIV
Woodward Products Corp

► **CLOTHES LINES HOLDERS, HOOKS & BARS**

Abel (John W)
Acme Metal Goods Mfg Co
Fetecorp Mfg Corp
Champion Hardware Co
Colonial Bronze Co
Jensen (E) Mfg Co
Judd (H L) Co Inc
Lawrence Brothers
Midland Co
New Holland Metals Co
Penn Hardware Co
Rop-Loc Products Co

RUSSELL & ERWIN MFG DIV AMERICAN HARDWARE CORP
SARGENT & CO
Sharon Hardware Mfg Co
Southern Galvanizing Co
Utney Specialty Co

► **CLOTHES-LINE POLES & POSTS, WOOD, STEEL, IRON**

Banks Steel Post Co
Cincinnati Iron Fence Co
Coyle (H B) Co
Dowley Brothers
Hohmann & Barnard Inc
KEWANEE MFG CO
Newark Steel Post Co
Rop-Loc Products Co
Southern Galvanizing Co

► **CLOTHES LINE PULLEYS**

Acme Metal Goods Mfg Co
Berkeley Specialties Co
General Hardware Mfg Co
Penn Hardware Co
SARGENT & CO
S B Mfg Co
STANLEY WORKS

► **CLOTHES LINE REELS**

Columbus Plastic Products Inc
Gehl Brothers Mfg Co
Little Giant Products Inc
Ro-Tit Co
Superior Fastener Corp

► **COATINGS, CONCRETE FLOOR**

Flash-Stone Co Inc
MEDUSA PORTLAND CEMENT CO

► **COATINGS, EMULSIFIED ASPHALT**

American Asphalt Roof Co
ARMSTRONG CORP CO
CAREY (PHILIP) MFG CO
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
Horn (A C) Co Inc
Loose Brothers
Spray-O-Bond Co
Sullivan Co
Tamm Industries Inc
Tuffall Inc

► **COATINGS, LINOLEUM**

Abesto Mfg Corp
Archer-Daniels-Midland Co
ARMSTRONG CORP CO BUILDING MATERIALS DIV
BRUCE (E L) CO
Chapman Chemical Co
Chicago Bronze & Color Works
Horn (A C) Co Inc
Minnesota Lined Oil Paint Co
O'Brien Corp
Pabco Products Inc
PITTSBURGH PLATE GLASS CO
Plasti-Kote Co
Sherwin-Williams Co
Trucon Laboratories Div Devere & Reynolds Inc
Vita-Var Co
Wilbur & Williams Co

► **COATINGS, PLASTIC CORK**

Mortell (J W) Co

► **COATINGS, ROOF, ALUMINUM & ASPHALT**

Abesto Mfg Corp
Aluminum Industries Inc
American Asphalt Roof Co
American-Martin Co
BARETT DIV ALLIED CHEMICAL & DYE CORP
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELTUX CORP
CERTAIN-TEED PRODUCTS CORP
Dowley Brothers
FLINTKOTE CO
Ford Roofing Products Co
Globe Roofing Products Co
Horn (A C) Co
JOHNS-MANVILLE CORP
Keystone Asphalt Products Co
Knoppers Co
Lafon Co
Loose Brothers
Pabco Products Inc
PITTSBURGH PLATE GLASS CO
REYNOLDS METALS CO
ROBERG CO
Seaboard Plastics Corp
Sheffield Bronze & Paint Corp
Sonsoborn (L) & Sons Inc
Spray-O-Bond Co
Sullivan Co
TEXAS CO

Tromm Mfg Co
United Gilsonite Laboratories
U S Gypsum Co
Vita-Var Co
Webster (W F) Cement Co

► **COATINGS, ROOF, ASPBESTOS**

Devere & Reynolds Inc

► **COATINGS, ROOF, ASPHALT**

Acme Asphalt Covering & Finishing Co
Admission Asphalt & Insulation Inc
Breinig Brothers
CALBAR PAINT & VARNISH CO
CELTUX CORP
Crescent Waterproofing Corp
Chemical Supply Co
Dud & Lud Co
Dowdex Mfg Corp
Dowley Brothers Co
Empire Varnish Co
Glidden Co
Globe Roofing Products Co
Gardner (George C) Chemical Co
Lusk Products Co Inc
Mar-Kay Mfg Co
Pabco Products Inc
Peora Paint Co
PITTSBURGH PLATE GLASS CO
Reilly Tar & Chemical Corp
Sonsoborn (L) Sons Inc
United Gilsonite Laboratories

► **COATINGS, ROOF, LIQUID, BLACK**

Devere & Reynolds Inc
Monroe Co Inc

► **COLORS, CONCRETE, MORTAR, PLASTER**

Blue Ridge Talc Co Inc
Crescent Waterproofing Corp
Chicago Bronze & Color Works
Clifton Metallic Paint Co
Colorcrete Industries Inc
Fox (M Irving) Co Inc
Gordon (George C) Chemical Co
Horn (A C) Co Inc
Mineral Pigments Corp
MEDUSA PORTLAND CEMENT CO NATIONAL GYPSUM CO
Peora Paint Co Inc
Ricketson Mineral Color Works
Sealons Products Inc
Smith Chemical & Color Works
Smith (George B) Chemical Works
Smith (J Lee) & Co Inc
Sonsoborn (L) & Sons Inc
Sullivan Co
Tamm Industries Inc
Tock Brothers Inc
Trucon Laboratories Div Devere & Reynolds Co Inc
Vitra Mfg Co
Washington Brick & Lime Co
Wesco Waterpaints Inc
Williams (C K) & Co

► **COLORS, OIL**

Boston Varnish Co
Ch-Named Paint & Varnish Co
Elliott Paint & Varnish Co
Glidden Co
Horn (A C) Co Inc
Keystone Varnish Co
Loose Bros
Martin-Sear Co
Moore (Benjamin) & Co
PITTSBURGH PLATE GLASS CO
Boardon Co
Revall Paint & Varnish Co
Sheffield Bronze & Paint Corp
Stenslie Mfg Co
Trucon Laboratories Div Vita-Var Co

► **COLORS, PAINT**

American Varnish Co
Benzal Co
Boston Varnish Co
CABOT (SAMUEL) & CO INC
Chicago Bronze & Color Works
Devere & Reynolds Inc
DuPont (DeNemours (E I) & Co
Elliott Paint & Varnish Co
Empire Varnish Co
Glidden Co
Horn (A C) Co Inc
Loose Bros
Mineral Pigments Corp
Murphy Paint Div Interchemical Corp
NATIONAL GYPSUM CO
O'Brien Corp
Patterson-Sargent Co
PITTSBURGH PLATE GLASS CO
Fral & Lambert Inc
Sherwin-Williams Co
Smith Chemical & Color Co Inc
Trucon Laboratories Div Devere & Reynolds Co Inc
U S Gypsum Co

► **COLUMNS, METAL**

Alcon Products Co
Alton Steel Products
Bethlehem Steel Co
BRAINARD STEEL CO

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

COFFMAN (R G) CO INC
Insulating Products
FAWCO MFG DIV FALLS STAMPING & WELDING CO
Baltimore Mfg Co
INLAND STEEL PRODUCTS CO
International Steel Co
KEWANEE MFG CO
Lorick Mfg Co
Louden Machinery Co
Modern Welding Co
National Tube Co
Sturon Steel Co
TUSCON STEEL CO DIV REPUBLIC STEEL CORP
Union Metal Mfg Co
Waite Products Inc

► COLUMNS, WOOD

CARR ADAMS & COLLIER CO
Cale Mfg Co
CURTIS COMPANIES INC
Huttig Sash & Door Co
M & M Woodworking Co
Mutual Fir Column Co
Pacific Mutual Door Co
Schwartz (A F) Mfg Co
Sillermagel (George) & Sons Co
TIMBER STRUCTURES INC
Washington Mfg Co

**► COMPOUNDS, AIR EN-
TRAINING**

Autoline Lubricants Co
Spray-O-Bond Co

► COMPOUNDS, ANTI-DRIP

Martell (J W) Co
Sterilite Mfg Co
Tuffall Inc
Wilbur & Williams

**► COMPOUNDS, ANTI-FREEZE,
CONCRETE**

Anti-Hydro Waterproofing Co
Flexrock Co
Fort Pitt Chemical Co
Horn (A C) Co
Sonnensh (L) & Sons Inc
Sullivan Co
Taco Brothers Inc

**► COMPOUNDS, ANTI-TER-
MITE**

Abeles Mfg Corp
BARRETT DIV ALLIED CHEMICAL & DYE CORP
Bayer Chemical Laboratory Co
Broadway Rubber Mfg Co
BRUCE (E L) CO
CABOT (SAMUEL) & CO INC
C.A. Wood Preserver Co
Carbolignum Wood Preserving Co
Coopers Trook Chemical Corp
Cro-O-Tax Chemical Co
DBW CHEMICAL CO
Elroy Naval Stores Co
Esteric Mfg Co
Furnam-Ford Co
Gordon (George C) Chemical Co
Hill Termitic Control Systems
Monsanto Chemical Co
Palesco Products Inc
PROTECTION PRODUCTS MFG CO
Practical Corp
Reilly Tar & Chemical Corp
Repholic Creosoting Co
Roxford Paint Mfg Co
Sullivan Co
Tennessee Eastman Corp
Terralco Co
Vascular Sales Co
Wood Treating Chemical Co

**► COMPOUNDS, LUBRICAT-
ING, DOOR, DRAWER &
WINDOW**

American Grease Block Co
American Oil Co
Dixon (Joseph) Crucible Co
Slipit Products Inc

**► COMPOUNDS, RUST PRE-
VENTING & REMOVING**

American Chemical Paint Co
American Rust Proof Co Inc
CABOT (SAMUEL) & CO INC
Camp Chemical Co
Carbicide Protective Coatings Corp
Continental Asbestos & Refining Corp
Dewar & Reynolds Inc
Du Pont (E I) de Nemours & Co
Firestone Tire & Rubber Co
FLINTKOTE CO
Hollingshead (R M) Corp
Horn (A C) Co
Krypton Asphalite Products Co
Minnesota Mining & Mfg Co
Murphy Paint Div Interchemical Corp
Nulman Chemical Co
Nov-Rust Chemical Corp
Oakite Products Inc
Parker Rustproof Co
Pennsylvania Salt Mfg Co

PITTSBURGH PLATE GLASS CO

Procedic Engineering Co
Protective Coatings Inc
Puritan Chemical Co
Reilly Tar & Chemical Corp
Rusticide Co
Rustolium Corp
Simonsia Co Industrial Div
Smith Oil Refining Co
Sonnensh (L) Sons Inc Bldg Products Div
Spaco Inc
Sterolite Mfg Co
Stop-Rust Co
TEXAS CO
Torch Bros Inc
Trucon Laboratories Div Devco & Reynolds Inc
Vita-Var Corp
Wayne Chemical Products Co
Wilbur & Williams Co
X-Fabco Corp

**► CONCRETE BLOCK CUBING
MACHINES**

BESSER MFG CO

**► CONCRETE BLOCK DRYING
RACKS**

BESSER MFG CO
Colorcrete Industries Inc
Equipment Mfg Inc
Fleming Mfg Co

► CONCRETE BLOCK MACHINES

Air Placement Equipment Co
Anchor Concrete Machinery Co
BESSER MFG CO
Concrete Equipment Co
Concrete Transport Mixer Co
Crawford Industries
Dunn (W E) Co
Equipment Engineering Co
Fleming Mfg Co Inc
Ford Cement Block Machine Co
General Engine Co Inc
George (F C) Machine Co
Holliston Co
Jackson & Church Co
Kest Machine Co
Lith-I-Bar Co
Little Giant Products Inc
Mortarless Tile Machine Co Inc
Multiplex Machinery Corp
Murray (D J) Mfg Co
National Brick Block Inc
Reed (R S) Corp
Stearns Mfg Co Inc
Tyrn (R R) Co
Universal Tampers Inc
Ziedler Concrete Products Machinery Co

**► CONCRETE CURING COM-
POUNDS**

Adensite Co
Aluminum Industries Inc
American Fluorist Co Inc
Anti-Hydro Waterproofing Co
CALBAR PAINT & VARNISH CO
Camp Chemical Co
Ceresit Waterproofing Corp
Devco & Reynolds Inc
Dow Chemical Co
Estercrete Corp
Fleming Mfg Co
Fort Pitt Chemical Co
Glidden Co
Horn (A C) Co
Keystone Asphalt Products Co
Ranette Mfg Co
Sonnensh (L) Sons Inc
SOLVAY SALES DIV ALLIED CHEMICAL & DYE CORP
Sonnensh (L) Sons Inc
Spray-O-Bond Co
Trucon Laboratories Div Devco & Reynolds Inc

► CONCRETE FORMS

ADAPTS CO
Arctic Plywood & Veneer Co
American Steel Works
Art Concrete Works
Bay City Cast Stone Block Co
BESSER MFG CO
Bethlehem Steel Co
Commercial Shearing & Stamping Inc
Des Lauriers Colum Mould Co
Economy Mfg Co
Fir-Tex Insulating Board Co
Fleming Mfg Co
Goldsmith Metal Lath Co
Hetzl Steel Form & Iron Co
Irrigation Form & Tank Co
Keystone Asphalt Products Co
Mach-Pro Products Co
MEDUSA PORTLAND CEMENT CO
Multiplex Concrete Machinery Corp
Quinn Wire & Iron Works
ROCFORM CORP
SONOCS PRODUCTS CO
SYMONS CLAMP & MFG CO
UNIVERSAL FORM CLAMP CO
U S GYPSUM CO
Ziedler Concrete Products Machinery Co

**► CONCRETE FORM, METAL
MATERIALS**

Blaw-Knox Div Blaw-Knox Co
CECA STEEL PRODUCTS CO
ROCFORM CORP
Rayson (Joseph T) & Son
Sonic Steel Co
U S PLYWOOD CORP
Williams Form Engineering Corp

► CONCRETE FORM TIES

Bethlehem Steel Co
Darwin-Sure-Grip & Shore Co
GATES & SON INC
Gerrard (A J) & Co
Goldsmith Metal Lath Co
M & M Wire Clamp Co
Richmond Screw Anchor Co
ROCFORM CORP
Sheffield Steel Corp
Sommer Metalcraft Corp
Siz Expansion Products Inc
SYMONS CLAMP & MFG CO
UNIVERSAL FORM CLAMP CO
Williams Form Engineering Corp
Wissner Industries

► CONCRETE HARDENERS

Adensite Co
American Fluorist Co
Anti-Hydro Waterproofing Co
Armor Laboratories
Belmont Smelting & Refining Works Inc
Blue Ridge Talc Co Inc
Camp Chemical Co
Celadri Corp
Ceresit Waterproofing Corp
Connolly Inc
Devco & Reynolds Inc
Empire Varnish Co
Estercrete Corp
Flexrock Co
Fort Pitt Chemical Co
Harmo Chemical Co
Horn (A C) Co
KAY TITE CO
Smooth-On Mfg Co
Sonnensh (L) & Sons Inc
Spray-O-Bond Co
Standard Dry Wall Products Inc
Sterilite Mfg Co
Stonhard Co
Sullivan Co
Tammus Industries Inc
Trucon Laboratories Div Devco & Reynolds Inc
Tufcrete Co Inc
Vita-Var Co
Wilbur & Williams

► CONCRETE JOIST MACHINES

BESSER MFG CO
Colomere Industries Inc
Lith-I-Bar Co
Stearns Mfg Co Inc

**► CONCRETE MIXERS, MOR-
TAR, ETC.**

Barber Greene Co
BESSER MFG CO
Bluh Mfg Co
Chain Belt Co
Concrete Transport Mixer Co
CONSTRUCTION MACHINERY SALES CO
Dunn (W E) Mfg Co
Esteric Mfg Co
Fleming Mfg Co
GILSON BROTHERS CO
GOLDBLATT TOOL CO
JAEGER MACHINE CO
Johnson (C S) Co
Knickerbocker Mfg Co
Korhine Co
Kwik Mix Concrete Mixer Co
Lansing Co
Little Giant Products Inc
MULLER MACHINERY CO INC
Northwest Metal Products Inc
Pony Mixer Co
Smith (T L) Co
Stearns Mfg Co Inc
WORTHINGTON PUMP & MACHINERY CORP

**► CONCRETE MIXERS, TRAN-
SIT**

Blaw-Knox Div Blaw-Knox Co
Chain Belt Co of Milwaukee
Concrete Transport Mixer Co
JAEGER MACHINE CO
Smith (T L) Co
Willard Concrete Machinery Co Ltd
WORTHINGTON PUMP & MACHINERY CORP

► CONCRETE PIPE MACHINES

BESSER MFG CO

Concrete Pipe Machinery Co
Dunn (W E) Mfg Co
Universal Concrete Pipe Co Inc
Ziedler Concrete Products Machinery Co

**► CONCRETE PLANTS, Cen-
TRAL MIXING**

BESSER MFG CO
Blaw-Knox Div Blaw-Knox Co
Butler Bin Co
Chain Belt Co
Concrete Transport Mixer Co
Hetzl Steel Form & Iron Co
JAEGER MACHINE CO
Johnson (C S) Co
WORTHINGTON PUMP & MACHINERY CORP

► CONCRETE PLASTICIZER

Spray-O-Bond Co

**► CONCRETE PRODUCTS,
PLANT MIXERS**

BESSER MFG CO
Blaw-Knox Div Blaw-Knox Co
Butler Bin Co
Chain Belt Co of Milwaukee
Concrete Transport Mixer Co
CONSTRUCTION MACHINERY SALES CO
Dudson Mfg Co Inc
Dunn (W E) Mfg Co
Erie Steel-Cont Co
Fleming Mfg Co
Foster (J B) Foundry Co
George (F C) Machine Co
GILSON BROTHERS CO
Hetzl Steel Form & Iron Co
JAEGER MACHINE CO
Johnson (C S) Co
Kent Machine Co
Korhine Co
MULLER MACHINERY CO INC
Multiplex Machinery Corp
Noble Co
O K Mfg Co
Smith (T L) Co
Stearns Mfg Co
Supremis
WORTHINGTON PUMP & MACHINERY CORP

**► CONCRETE PRODUCTS
PLANTS**

BESSER MFG CO
Blaw-Knox Div Blaw-Knox Co
Butler Bin Co
Equipment Engineering Co
Fleming Mfg Co
George (F C) Machine Co
Johnson (C S) Co
Stearns Mfg Co Inc

► CONCRETE SEALERS

American Adhesives Products Co
American Crayon Co
AMERICAN FLOOR SURFACING MACHINE CO
American Fluorist Co
Atlas Mineral Products Co
Claxton Products Inc
Ohio Akoma Co
SERVICISED PRODUCTS CORP
Spray-O-Bond Co
Trucon Laboratories Div Devco & Reynolds Co
Weswood Waterpairs Inc
Wilbur & Williams Co

**► CONCRETE SILO STAVE MA-
CHINES**

BESSER MFG CO

**► CONCRETE VIBRATOR, GAS-
OLINE & ELECTRIC**

Dart Mfg & Sales Co
INDEPENDENT PNEUMATIC TOOL CO
Ingersoll-Rand Inc
MULL-TOX COMPANY

► CONDUCTORS, TUBULAR

GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
**► CONDUIT, ASBESTOS, AIR
GAREY (PHILIP) MFG CO**

► CONDUIT, FLEXIBLE

American Flexible Conduit Co
AUSTIN (W B) CO
General Electric Products Co
GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
National Electric Products Corp
Pyle-National Co
Spang-Chaffan Div National Supply Co
Triangle Conduit & Cable Co
Wiremold Co

► CONDUIT, RIGID

American Brass Co
AUSTIN (W B) CO
CHASE BRASS & COPPER CO
Conduit Pipe Products Co
U S Gypsum Co

Manufacturers' Names and Addresses Start on Page D-76
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GENERAL ELECTRIC CO CONSTRUCTION

MATERIALS DEPT
JOHNS-MANVILLE CORP
 National Electric Products Corp
 Orangeburg Mfg Co Inc
 Forter-Hayden Companies
 Pyle-National Co
 Spang-Chalfant Div National Supply Co
 U S Rubber Corp

CONNECTORS, ELECTRIC WIRE, CABLE

GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
 Hubbell (Harvey) Inc

CONNECTORS AMERICAN RADIATOR & STANDARD SANITARY CORP

BURNHAM CORP
CRANE CO
 Folders Oilgan Co
MODINE MFG CO
NATIONAL RADIATOR CO
 Nelson (Herman) Corp
 North (John J) Inc
 Rittling Corp
 Trane Co
 Tuttle & Bailey Inc
 Utica Radiator Corp
VULCAN RADIATOR CO
 Webster (Warren) Corp
YOUNG RADIATOR CO

CONVEYORS, BUCKET & FLIGHT

Aley-Ferguson Co Inc
 American Conveyor Co
 Atlas Conveyor Co
 Barber-Greene Co
 Baughman Mfg Co Inc
 Bosworth Mfg Co
 Fairfield Engineering Co
 Farquhar (A B) Co
 Godfrey Conveyor Co
 Hain (George) Mfg Co Div Pettibone Mul-
 -ihen Corp
 Haislett Clute & Conveyor Co
 Hewitt Rubber Div Hewitt-Robins Inc
 Hoery-Berg Steel & Iron Works
 Jeffrey Mfg Co
 Kewanee Machinery & Conveyor Co
 Lake Shore Engineering Co
 Lamson Corp
 Link-Belt Co
 Lipmann Engineering Works
 Mathews Conveyor Co
MULKEY (SAM) CO
 Northern Conveyor Co
 Power-Pack Conveyors
 Rapids-Standard Co Inc
 Standard Conveyor Co
 Western Foundry Co
 Willard Concrete Machinery Co Ltd

CONVEYORS, CHAIN LINK & CHAIN BELT

Allington & Curtis Mfg Co
 Chain Belt Co
 Cyclone Fence Div American Steel & Wire Co
 Filer & Stowell
 Hain (George) Mfg Co Div Pettibone Mul-
 -ihen Corp
 Jeffrey Mfg Co
 Lamson Corp
 Link-Belt Co
 Mathews Conveyor Co
 Northern Conveyor Co
 Stephens-Adamson Mfg Co

CONVEYORS, COAL TRUCK UNLOADING

American Conveyor Co
 Bosworth Mfg Co
 Fairfield Engineering Co
 Farquhar (A B) Co
 Hain (George) Mfg Co Div Pettibone Mul-
 -ihen Corp
 Hercules Steel Products Corp
 Hewitt Rubber Div Hewitt-Robins Inc
 Kewanee Machinery & Conveyor Co
KEWANEE MFG CO
 Lake Shore Engineering Co
 Morrow Sales Co
 Power-Pack Conveyors

CONVEYORS, GRAVITY ROLLER

Allied Welding & Mfg Co
 Belsaw Machinery Co
BESSER MFG CO
 Blatt (Frank J) Co Inc
 Bonded Scale & Machine Co
 Brady Conveyors Corp
 Butler Bin Co
 Chain Belt Co
 Chase Turbine Mfg Co
 Corley Mfg Co
 Darden (Roy) Industries Inc
 Equipment Engineering Co
 Farquhar (A B) Co
 Fleming Mfg Co
 General Conveyor & Mfg Co
 George (F C) Machine Co
 Gifford-Wood Co

Godfrey Conveyor Co
 Hain (George) Mfg Co
 Haislett Clute & Conveyor Co
 Jeffrey Mfg Co
 Johnson (E S) Co
 Lakeshore Engineering Co
 Lamson Corp
 Link-Belt Co
 Lipmann Engineering Works
 Logan Co
 Lyon Metal Products Inc
 Noble Co
 O K Mfg Co
 Rapids-Standard Co Inc
 Standard Conveyor Co
 Stearns Mfg Co Inc
 Western Foundry Co
 Wilson Saw Div Media Machine Works Inc

CONVEYORS, GRAVITY WHEEL

Farquhar (A B) Co
 Lamson Corp
 Lipmann Engineering Works
 Logan Co
 Mathews Conveyor Co
 Rapids-Standard Co Inc
 Standard Conveyor Co
 Western Foundry Co

CONVEYORS, OVERHEAD

ALLIETH PRODUY CO
 Brady Conveyors Corp
 Cleveland Tramrail Div Cleveland
 Crane & Engineering Co
 Fairfield Engineering Co
 Farquhar (A B) Co
 Gifford-Wood Co
 Godfrey Conveyor Co
 Hain (George) Mfg Co Div Pettibone Mul-
 -ihen Corp
 Hewitt Rubber Div Hewitt-Robins Inc
 Johnson (C B) Co
 Johnson Industries Inc
 Lamson Corp
 Link-Belt Co
 Lipmann Engineering Works
 Louden Machinery Co
 Mathews Conveyor Co
 Meyer (E S) Co
 Northern Conveyor Co
 Rapids-Standard Co Inc
RICHARDS-WILCOX CO
 Starliner, Inc
 Western Foundry Co
 Wichita Spencer Steel Div Colorado Fuel &
 -Iron Corp

CONVEYORS, PORTABLE BELT

Aley-Ferguson Co Inc
 American Conveyor Co
 Atlas Conveyor Co
 Barber-Greene Co
 Baughman Mfg Co Inc
 Bosworth Mfg Co
 Fairfield Engineering Co
 Farquhar (A B) Co
 Godfrey Conveyor Co
 Hain (George) Mfg Co Div Pettibone Mul-
 -ihen Corp
 Haislett Clute & Conveyor Co
 Hewitt Rubber Div Hewitt-Robins Inc
 Hoery-Berg Steel & Iron Works
 Jeffrey Mfg Co
 Kewanee Machinery & Conveyor Co
 Lake Shore Engineering Co
 Lamson Corp
 Link-Belt Co
 Lipmann Engineering Works
 Mar-Ball Conveyor Co
 Mathews Conveyor Co
MULKEY (SAM) CO
 Northern Conveyor Co
 Power-Pack Conveyors
 Rapids-Standard Co Inc
 Standard Conveyor Co
 Western Foundry Co
 Willard Concrete Machinery Co Ltd

CONVEYORS, PORTABLE, GRAVITY

Arrow Products Corp
 Bodinson Mfg Co
 Buschman (E W) Co Inc
 Farquhar (A B) Co
 Ferguson (Alvey) Co
 Ferguson (Harry J) Co
 Hain (George) Mfg Co Div Pettibone Mul-
 -ihen Corp
 Haislett Clute & Conveyor Co
 Hewitt Rubber Div Hewitt-Robins Inc
 Island Equipment Corp
 Lamson Corp
 Logan Co
 Lyon Metal Products Inc
 Magnesia Products Co
 Mathews Conveyor Co
 Metzgar Co
 Northern Conveyor Co
 Paper Machine Co
 Rapids-Standard Co Inc
 Ribes (S) & Sons
 Roll-A-Way Conveyor Co
 Speedways Conveyors Inc
 Standard Conveyor Co
 Webb (Lorris B) Co
 Wilkie Co

CONVEYORS, SLAB

Allington & Curtis Mfg Co
 Bartlett (C O) & Snow Co
 Chain Belt Co
 Corinth Machinery Co
 Corley Mfg Co
 Cunningham Machinery Corp
 Filer & Stowell Co
 Jeffrey Mfg Co
 Link-Belt Co
 Lipmann Engineering Works
 Rapids-Standard Co
 Stephens-Adamson Mfg Co
 Wheland Co

COOLERS, WATER, ELECTRIC

Airtemp Div Chrysler Corp
 Coolstream Corp
 Fluor Mfg Co
 Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
 Haws Drinking Faucet Co
LAWSON (F H) CO
 Sauer Company
 Taylor (Haley W) Co
WESTINGHOUSE ELECTRIC CORP

COPPER STRUCTURAL SHAPES

CHASE BRASS & COPPER CO
 Bevere Copper & Brass Co

CORR. PLASTIC HUNTER DOUGLASS CORP

SAMSON CORDAGE WORKS

CORD, RUBBER

GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT

CORNICES, METAL

Berger Mfg Co Div Republic Steel Corp
 Edwards Mfg Co
 Meyer (F) & Brother Co
ST PAUL CORRUGATING CO
STEELCRAFT MFG CO

CORNERS, SIDING

Allen Steel Products
BARRETT DIV ALLIED CHEMICAL & DYE CORP
BIRD & SON INC
 Bagher Mfg Co
CELOTEX CORP
 Dunley Brothers Co
 Edwards Mfg Co
FLIRTKOTE CO
INLAND STEEL PRODUCTS CO
JONES & BROWN INC
 Kees (F D) Mfg Co
 Klawer Mfg Co
 LaCrosse Steel Roofing & Corrugating Co
 Merwin Mfg Co
 Northwest Metal Products Inc
REYNOLDS METALS CO BLDG PRODUCTS DIV
ST PAUL CORRUGATING CO
 U S Gypsum Co
 Wheeling Corrugating Co

COUNTER DISPLAY CABINETS

Actna Plywood & Veneer Co
 American Plywood Corp
 Colgate Mfg Corp
 Engineers Plywood Products Co
 Equipos Div Amora Equipment Co
 General Wood Works
 Grammes (L F) & Sons Inc
 Grand Rapids Store Equipment Co
 Heller (W C) & Co
 Hines (Edward) Lumber Co
 Kross (Walter S) Co
 Lamson (Chas O) Co
LONG-BELL LUMBER CO
 Lyon Metal Products Inc
 Marvel Rack Mfg Co
MOORE (GOODLOE) E INC
 Precision Equipment Co
 Reflector Hardware Corp
 Rustic Furniture Co Inc
 Schwartz Showell Corp
 Stucklin Corp
 Federal Steel Equipment Corp
 Warren (A D) Mfg Co

COUPLINGS, FLEXIBLE SHAFT

Brad Foote Gear Works
 Chain Belt Co
 Diamond Chain Co Inc
 Falk Corp
 Link-Belt Co
 Lowrey Flexible Coupling Co
 Morse Chain Co

COUPLINGS, HOSE

Allen (W D) Mfg Co

Durst Mfg Co
 Ever-Tite Coupling Co
 How Accessories Co
 Nu-Way Coupling Co
 Surelock Lawn Hose Coupler Co

COUPLINGS, SPLIT

GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT

COVE, MOLDED PLYWOOD

Keller Products Inc
UNITED STATES PLYWOOD CORP

COVERING, FABRIC WALL

Columbus Coated Fabric Corp
 Standard Coated Products Div Interchemical Corp

COVERING, PIPE, ASBESTOS

Acme Asbestos Covering & Flooring Co
 Adonias Asphalt & Insulation Inc
CAREY (PHILIP) MFG CO
 Curtis Mfg & Adonias Co
 Elbert Mearns Mfg Co
JOHNS-MANVILLE CORP
KEASBEY & WATTISON CO
 National Asbestos Mfg Co
 Pabco Products Inc
RUBENBID CO
 Sall Mountain Co
 Smith & Kautzer Co
 Standard Abrasive Mfg Co
 Wilson (Grant) Inc

COVERINGS, PIPE, CLOTH

Mortell (J W) Co

COVERINGS, PIPE, FIBROUS GLASS

OWENS-CORNING FIBERGLAS CORP

COVERINGS, PLASTIC FOR METAL

Krome-Kote Co

COVERINGS, RESILIENT WALL

Sloane-Blaiborn Corp

COVERINGS, WALL, WOOD-ON-CLOTH

Brasso Mfg Co
 U S PLYWOOD CORP

COVERINGS, VINYL PLASTIC FLOOR

GOODYEAR TIRE & RUBBER CO FLOORING DEPT
DELAWARE FLOOR PRODUCTS INC
HACHMEISTER INC
 Sandura Co

COVERS, MANHOLE & CISTERN

Dunley Brothers
 Industrial Iron Works
KEWANEE MFG CO
 Logan Company
MAJESTIC COMPANY

CRANES, OVERHEAD TRAVELING

American Bridge Co Sub of U S Steel Corp
 American Chain & Cable Co Inc
 Bridgeport Chain & Mfg Co
 Chisholm Moore Hoist Corp
 Cleveland Tramrail Div
 Cleveland Crane & Engineering Co
 Detroit Hoist Machine Co
 Electro Lift Inc
 Lane Mfg Co
 Manning Maxwell & Moore Inc
 Reading Chain & Hoist Corp
RICHARDS-WILCOX CO
 Shaw-Box Crane & Hoist Div
 Shepard Niles Crane & Hoist Co

CRANES, POWER INDUSTRIAL

American Hoist & Derrick Co
 Atlantic Transportation Co Div Yale &
 Towne Mfg Co
 Clyde Iron Works Inc
 Edwell-Parker Electric Co
 Hyster Co
 Koehring Co
 Lewis-Shepard Products Inc
 Ross Carrier Co
 Shepard Niles Crane & Hoist Corp
 Silent Hoist & Crane Co

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► CRANES, TRACTOR & TRUCK

Bradley Machine Co
Bridgport Chain & Mfg Co
BUCKRUS-ERIE CO
Clyde Iron Works Inc
Drott Mfg Corp
Hyster Co
Kochring Co
Stimmel Winch Co
Silent Hoist & Crane Co
Taylor Machine Works

► CRANES & SHOVELS, POWERED

ALLIS-CHALMERS MFG CO
Big City Shovel Inc
BUCKRUS-ERIE CO
Chisholm-Moore Hoist Corp Div Columbus-McKinnon Chain Corp
Charles Machine Works
Cleveland Tractor Co
Clyde Iron Works Inc

CONSTRUCTION MACHINERY SALES CO

Day-Smith Hydraulic Corp
HARBISCHFEGER CORP
Hughes-Keehan Co
Hydromatic Div Bucyrus-Erie Co
Hyster Co

JAEGER MACHINE CO

Kochring Co
Link-Belt Spender Co
Lohm (Harry) Co Inc
Leaden Machinery Co
Marion Power Shovel Co
Michigan Power Shovel Co

MILWAUKEE POWER EQUIPMENT CO

Norwalk Engineering Co
Orton Crane & Shovel Co
Osgood Co
Red Tiger Products Inc
Rosa Carrier Co
Scheldt Bartram Co

SLAW-BOK CRANE & HOIST DIV MANNING MAXWELL & MOORE INC

Silent Hoist & Crane Co
Tow Shovel Co
Toit Crane & Shovel Corp

► CRAYONS, LUMBER MARKING

American Crayon Co
Riadabel Penell Co
Dixon (Joseph) Crucible Div Brite-Way Mfg Co
Eagle Penell Co
Faber-Castell (A W) Penell Co
Lufkin Rule Co
Markol Co

MARKWELL MFG CO INC

National Crayon Co
Standard Crayon Mfg Co
Union Crayon Co

► CREOSOTE

American Creosote Works Inc
BARRETT DIV ALLIED CHEMICAL & OYE CORP
CASBT (SAMUEL) & CO INC
C-A Wood Preserver Co
Carbolignum Wood Preserving Co
Koppers Co

PITTSBURGH PLATE GLASS CO BRUSH DIV

Protel Corp
Tully Tar & Chemical Corp

► CREOSOTING PLANTS

American Creosote Works Inc
American Lumber & Treating Corp
Allandale Creosoting Co
Baxter (J B) & Co

CROSSETT LUMBER CO

Ropinger & Russell Co
Frost Lumber Industries
Koppers Co
Lone Star Creosoting Co

LONG-BELL LUMBER CO

Miller (T B) Mill Co
Moore (T J) Tie Co
Pape & Talbot Inc
Protel Corp

BELLY TAR & CHEMICAL CORP

SOUTHERN PINE LUMBER CO
Southern Wood Preserving Co
Taylor-Columbia Co
West Coast Wood Preserving Co
WEYERHAEUSER SALES CO

► CRESTING & FINIALS, ROOF, SHEET METAL

BERGER MFG CO DIV REPUBLIC STEEL CORP

CECO STEEL PRODUCTS CO

Edwards Co Inc
INLAND STEEL PRODUCTS CO
Penn Metal Co Inc
Whelring Corrugating Co

► CRIBBING, WIRE

AMERICAN STEEL & WIRE CO
(Continental Steel Corp)

KEYSTONE STEEL & WIRE CO

Lagan Co
Mid States Steel & Wire Co
Northwestern Steel & Wire Co

► CRIBS, CORN, PORTABLE AMERICAN STEEL & WIRE CO

Beatrice Steel Tank Mfg Co
Biller Mfg Co
Illinois Wire & Mfg Co

KEYSTONE STEEL & WIRE CO

Mid States Steel & Wire Co
Midwest Steel Products Co
Northwestern Steel & Wire Co

BILCO LAMINATED PRODUCTS INC

Security Fence & Mfg Co
Capital Fence Co
Gaynor (E S) Lumber Co
Masterson Wire & Mfg Co Inc

MOORE (GODDLE E) CO

Natraska Bridge Supply & Lumber Co

REYNOLDS METALS CO BUILDING PRODUCTS DIV

Super Structures Inc
Wheeler-Arnold Co

► CRIBS, GRAIN, STEEL

Agrifruit Chemical Corp
Eaton Metal Products Corp
Fretland Sons Co
G F Mfg Co

KEYSTONE STEEL & WIRE CO

Lanrock Products Inc
Martin Steel Products Corp
Roma Equipment Co

► CUTOUTS, TRANSFORMER ELECTRIC

GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT

► CUTTERS, ADJUSTABLE, HOLE

Clark (Robert H) Co Bruno Tools Div

► CUTTERS, ASBESTOS, CEMENT BOARD

Asbestos Service Co
JOHNS-MANVILLE CORP
PEARSON (G) MFG CO

► CUTTERS, BAR BLUM (JULIUS) & CO INC

► CUTTERS, GLASS

Barrett (William L)
Black Panther Tool Co
Fletcher-Terry Co
Gladders' Tool Mfg Co
Heller (W C) & Co
Karslow (E) Inc
Marvel Barbs Mfg Co
Millers Falls Co
National Mirror Works
New England Carbide Tool Co Inc

PITTSBURGH PLATE GLASS CO

RED DEVIL TOOLS
Ridgely Trimmer Co

► CUTTERS, INSULATION BOARD

BIRD & SON INC
Huthar Brothers Saw Mfg Co Inc
Kunshill Mfg Co

STANLEY TOOLS DIV STANLEY WORKS

► CUTTERS, LOCK CORNER

Aikins (E C) Co
Huthar Brothers Saw Mfg Co Inc
Woods (S A) Machine Co

► CUTTERS, MOULDING

BOICE CRANE CO
Estrom Carlson & Co
Huthar Brothers Saw Mfg Co Inc

MARKWELL MFG CO INC

Silvers (Samuel) (J) & Sons Inc

STANLEY ELECTRIC TOOL DIV STANLEY WORKS

Taylor Millers Co
Woods (S A) Machine Co

► CUTTERS, PICKET

Schubert (H A) Co

► CUTTERS, PIPE

American Pipe Tool Co
Hathor Tool Co
Reaver Pipe Tool Inc
International Nutup Tool Corp
Tolado Pipe Threading Machine Co

► CUTTERS, SHINGLE, ASBESTOS-CEMENT

FLINTKOTE CO
Huthar Brothers Saw Mfg Co Inc

JOHNS-MANVILLE CORP

KEASBEY & WATTISON CO
Northwest Standard Products Co
Parsons Iron Slate Co

RUBEROID CO

SPECIALTY TOOL MFRS INC
TRI-STATES BLDG MATERIALS CO INC

► CUTTERS, SIDING, ASPHALT

LaBelle Industries Inc

► CUTTERS, TILE

Fletcher-Terry Co
GOLDBLATT TOOL CO
JMI Products Co

RED DEVIL TOOLS

SELCK (WALTER E) & CO
Williams Products Co Inc

► DAMPERS FOR CEILING DIFFUSER

AIR CONTROL PRODUCTS INC

► DAMPERS, FIREPLACE

Adams Co
Allen Steel Products
BENNETT-INELAND CO
BOSTWICK STEEL LATH CO
Chattanooga Implement & Mfg Co
Colonial Fireplace Co
COPCO STEEL & ENGINEERING CO
Covett (H W) Co
Danley Brothers
Gabriel Steel Co
Harris Inc
Hart Products Inc
H & R Mfg Co
Industrial Iron Works
KEWARREE MFG CO
MAJESTIC CO
Mosler Brothers
Peerslee Mfg Co
Portland Stone Foundry Co
PRICE FIREPLACE HEATER & TANK CORP
SUPERIOR FIREPLACE CO
Sweet (A L) Iron Works
Vestal Stone Co Building Specialties Div

► DAMPROOFERS

CALBAR PAINT & VARNISH CO
Minwax Co Inc

► DAMPROOFING COMPOUNDS

Absent Mfg Corp
Adenite Co
Anti-Hydro Waterproofing Co
BARRETT DIV ALLIED CHEMICAL & OYE CORP
CAREY (PHILIP) MFG CO
Cemix Co
Ceresit Waterproofing Corp
COPROX INC
Dowley Brothers
FLINTKOTE CO
Horn (A C) Co Inc
JOHNS-MANVILLE CORP
MIRACLE ADHESIVES CORP
MOORE (GODDLE E) CO
Pavelo Products Inc
PITTSBURGH PLATE GLASS CO
Reardon Co
Reilly Tar & Chemical Corp
Rubber & Plastics Compound Co Inc
Sonnenshyn (L) & Sons Inc
Soyak-o-Road Co
Sullitran Co
Trucon Laboratories Div Deme & Reynolds Inc
U S Gypsum Co
Vita-Vat Co
Wilbur & Williams

► DASH, STUCCO

Calvin Tomlinson Co
Fuss-Dash Mfg Co
Mission Lime Products Co
Sullitran Co
Tanna Industries Inc

► DECKS, ROOF, METAL

BERGER MFG CO DIV REPUBLIC STEEL CORP

CECO STEEL PRODUCTS CO

FENESTRA BUILDING PRODUCTS

FOLLANSBEE STEEL CORP

Gindimith Metal Lath Co

INLAND STEEL PRODUCTS CO

Maasbecher Inc

ST PAUL CORRUGATING CO

Boyle Steel Co

TENNESSEE COAL IRON & RAILROAD CO

TRUSSCOR DIV REPUBLIC STEEL CORP

U S Gypsum Co

United States Steel Co

Whelring Corrugating Co

► DECKS, ROOF, PRECAST, GYPSUM SLAB

CERTAIN-FEED PRODUCTS CORP

NATIONAL GYPSUM CO

U S Gypsum Co

► DODORANTS, HOUSEHOLD

Air Correctives of Chicago Inc
Carbola Chemical Co
Clorox Chemical Co
Clorox Chemical Co
Clorox Chemical Co
No-Air Chemical Div Olympic Tool & Mfg Co
Ince Sales
Puritan Inc
U S Sanitary Specialties Corp

► DODORANTS, PAINT

Air Correctives of Chicago Inc
Reinig Brothers
Central Paint & Varnish Works
Consumers Glass Co
Hardware Products Co
Holley Chemical Co

► DERRICKS

American Hoist & Derrick Co
Clyde Iron Works Inc
Tobacco Foundry & Machine Co
Downs Crane & Hoist Co
Lane Mfg Co
Saugen Derrick Co

► DESTROYERS, SOOT

Anthracite Boiler Compound Co
Boyer Chemical Laboratory Co
Camp Chemical Co
Coughlin (G S) Co
Saginaw Salt Products Co
So-Lo Works Inc
Tanna Industries Inc
Trim Inc
Triple-X Chemical Laboratories
Wall (P) Mfg Co Engineering Corp
Wayne Chemical Products Co
Weather Seal Co

► DEVICES, MARKING

Elison Tool Co
Heller (W C) & Co
Lowe Bros
Byerson (Joseph T) & Son
STANLEY WORKS
Timely Products Co

► DEVICES, TIMING

GENERAL ELECTRIC CO APPARATUS DEPT

► DEVICES, WIRING

National Electric Products Co
Potterline Products Inc

► DIFFUSERS, AIR

AIR CONTROL PRODUCTS INC
Air Devices, Inc
Aerothermal Corp of America
Conner (W B) Engineering Corp
Pyle-National Co Multi-Vent Div

► DIGGERS, POST HOLE

American Fork & Hoe Co
Ames Baldwin Wyoming Co
B & E Co
Buda Co
Dicke Tools Co
DISSTON (HENRY) & SONS INC
Franklin Equipment Co
Fulton Tool Works Inc
Hobbs & Co
Iwan Brothers Inc
Ka-Mo Tools Inc
Lectonia Tool Co
Star Bit & Tool Co
Sterling Foundry Co
True Temper Corp
Warren Tool Works
Winpower Mfg Co
Woodings-Vernon Tool Works

► DISCS, ABRASIVE

Abrasive Products Inc
Albertson & Co Inc
AMERICAN FLOOR SURFACING MACHINE CO

Armour & Co Sandpaper Div

BEHR-MANNING CORP DIV HORTON CO

BLACK & OCCOR MFG CO

Broday Rubber Mfg Co

Clarke Sanding Machine Co

Mid-West Abrasive Co

PITTSBURGH PLATE GLASS CO BRUSH DIV

Polv Products

Rhodes (James H) & Co

Sandpaper Inc

Standard Bronze Co

► DISHWASHERS

AMERICAN RADIATOR & STANDARD SANITARY CORP

Apex Bolaras Corp

GENERAL ELECTRIC CO APPLIANCES & REFRIGERATION DEPT

Grave Mfg Co

Hobart Mfg Co

HOTPOINT INC

Jackson Dishwasher Co

MULLINS MFG CORP

The Corp

WESTINGHOUSE ELECTRIC CORP APPLIANCE DIV

Manufacturers' Names and Addresses Start on Page D-76
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▶ DISHWASHERS, CLOTHES WASHER & SINK COMBINATION

Thur Corp

▶ DISINFECTANTS

Boyle-Midway Inc
Carbolinum Wood Preserving Co
Crawell Chemical Dept DuPont (E I) Do
Nemours & Co
Hollingshead (E M) Corp
Koppers Co
Pennsylvania Salt Mfg Co
Furtan Sales Co
Sherwin-Williams Co
Sovany-Vacuum Oil Co

▶ DISPENSERS, PAPER

Bennett Mfg Co

▶ DOCKBOARDS

Elizabeth Iron Works Inc
Madline Inc
Magnesium Co of America
Pallet Engineering Co

▶ DOLLIES

Adams Co
Bosnick Co
Eldon Mfg Co
Electric Wheel Co
Fairbanks Co
Facilities Caster Corp
Hamilton Caster & Mfg Co
Howe Scale Co
Johnson Industries Inc
Lewis-Sprague Products Inc
Nutting Truck & Caster Co Inc
Saginaw Blamping & Tool Co
Service Caster & Truck Corp
West Bend Equipment Corp

▶ DOOR BOTTOMS, DRAFT SEAL

Demille Inc
Dennis (W J) & Co
Durbin Metal Strip Mfg Co
Lynch Mfg Co
MackLambert-Duncan Co
MASTER METAL STRIP SERVICE CO
Monarch Metal Weatherstrip Co
National Guard Products Inc
Sentry Stop A Draft Co
Spartan (A J) Co
Thermal Co
Waterloo Sales Co

▶ DOOR MATS, STEEL FLEXIBLE

Cyclone Fence Div American Steel & Wire Co
Kestone Wire Matting Co
LaPorte Mat & Mfg Co

▶ DOOR OPERATORS

Barrows Lock Works
Banner Spring Hinge Co Inc
CASEMENT HARDWARE CO
Chicago Spring Hinge Co
CORBIN (P & F) DIV AMERICAN HARD-WARE CORP
CROFT STEEL PRODUCTS INC
Eagle Lock Co
GETTY (N S) & CO INC
Glynn-Johnson Corp
Hardware Products Inc
Harris Inc
Horton Div Aero Mfg Corp
Ives (H B) Co
Kaplan Joseph JI Sales Co
Kohbas (K) Corp
LEN Chesters Inc
LOCKWOOD HARDWARE MFG CO
Newell Mfg Co
New England Mfg & Supply Corp
Norton Iron Choker Co
Norwalk Lock Co Div Seal Lock & Hard-ware Co
Parber (H) Hardware Mfg Co
Reading Hardware Co
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARD-WARE CORP
Sage-Barrows Lock Works
SARGENT & CO
Seal Lock & Hardware Co Inc
Shelby Spring Hinge Co
See Mfg Co
STANLEY WORKS DOOR CONTROL DIV
STERLING HARDWARE MFG CO
WAGNER MFG CO
VALE & TOWNE MFG CO

▶ DOOR OPERATORS, AUTOMATIC

Automatic Sales Div Vendo Co
BARBER-COLMAN CO
Calder Mfg Co
Cornell Bolting Door Works
Garrett Mfg Co
General Door Mfg Co
GETTY (N S) & CO INC
Kinneer Mfg Co
McKEE DOOR CO
Quincy Mfg Co
RAYBOR MFG CO

RICHARDS-WILCOX CO
ROBOT APPLIANCES
RUSSELL & ERWIN DIV AMERICAN HARD-WARE CORP
ROWE MFG CO
STANLEY WORKS
Vendo Co
WAGNER MFG CO
Wilson (J G) Corp

▶ DOOR OPERATORS, GARAGE

BARBER-COLMAN CO
Calder Mfg Co
Calder (H W) Co
CRAWFORD DOOR CO
FRANTZ MFG CO
Horton Mfg Div Aviation Corp
Howell Co
Kinneer Mfg Co
McKEE DOOR CO
RICHARDS-WILCOX CO
ROBOT APPLIANCES INC
ROWE MFG CO
Vendo Co
WAGNER MFG CO

▶ DOOR SADDLES

Accurate Metal Weatherstrip Co
Chamberlain Co of America
CHASE BRASS & COPPER CO
Columbia Industries
Dewette Inc
Robbins Mfg Co

▶ DOOR SPRINGS

Accurate Spring Mfg Co
AMERICAN STEEL & WIRE CO
Chicago Spring Hinge Co
CORBIN (P & F) DIV AMERICAN HARD-WARE CORP
Flexair Equipment Mfg Co
Hobdard (M D) Spring Co
Milwaukee Stamping Co
Parber (H) Hardware Mfg Co
Sage-Barrows Lock Works
SARGENT & CO
STANLEY WORKS
TENNESSEE COAL IRON & RAILROAD CO
Wright Products Inc

▶ DOORS, ACCESS

Actus Plywood & Veneer Co
CARR ADAMS & COLLIER CO
Cole Mfg Co
Columbia Metal Box Co
Halsstrom Metallic Door Co
Hessler Iron & Steel Co
Hosley Brothers
Farley & Loetcher Mfg Co
Fries & Sun Steel Construction & Engineering
Huttig Mfg Co
Ideal Co
Industrial Iron Works
INLAND STEEL PRODUCTS CO
MAJESTIC CO
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
Morgan Co
Rock Island Millwork Co
SIMPSON LOGGING CO
Standard Steel Cabinet Co
STEELCRAFT MFG CO
UNITED STEEL FABRICATORS INC
Vestal Store Co Building Specialties Div
Western Foundry Co
Winter Quoted Co

▶ DOORS, ASH PIT

Adams Co
BENNETT-IRELAND CO
BOSTWICK STEEL LATH CO
COPCO STEEL & ENGINEERING CO
Covert (H W) Co
Hosley Brothers
Gabriel Steel Co
Harris Inc
HEATILATOR CO
Industrial Iron Works
INLAND STEEL PRODUCTS CO
International Steel Co
KEWANEE MFG CO
MAJESTIC CO
Perkins Mfg Co
Swett (A L) Iron Works
TRUSCON STEEL CO DIV REPUBLIC STEEL CORP
Vestal Store Co Building Specialties Div
Wheeling Corrugating Co
Wilmington Castine Co

▶ DOORS, CABINET & CUPBOARD, WOOD

Actus Plywood & Veneer Co
American Plywood Corp
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
Burling Lumber & Mfg Co
Burlie Millwork Co
CARR ADAMS & COLLIER CO
Caldor Mfg Co
CURTIS COMPANIES INC
Est-Wood Corp
Farley & Loetcher Mfg Co

GREGG & SON
Huttig Mfg Co
Ideal Co
Ishk Plywood Corp
Ishk Furniture Co
Kinross Pine Mills Co
Mangum Millwork Co
WENDEL CO
M & M Woodworking Co
Morgan Co
Northern Door Co
Pacific Mutual Door Co
PAINTE LUMBER CO
Perkins Mfg Co
Roach & Munser Mfg Co
Rock Island Millwork Co
RODDIS PLYWOOD CORP
Seneca Lumber & Millwork Co
Silbernagel (George J) & Sons Co
SIMPSON LOGGING CO
Wisconsin Laminating Co

▶ DOORS, CELLAR, BULKHEAD (METAL)

BLCCO CO

▶ DOORS, CLEANOUT

Adams Co
BENNETT-IRELAND CO
BOSTWICK STEEL LATH CO
COPCO STEEL PRODUCTS CO
Chattanooga Implement & Mfg Co
Columbia Fireplace Co
COPCO STEEL & ENGINEERING CO
Hosley Brothers
Lafayette Steel Co
Harris Inc
HEATILATOR CO
INTERNATIONAL STEEL PRODUCTS CO
International Steel Co
KEWANEE MFG CO
MAJESTIC CO
Moshier Brothers
METAL CHAPTERS
PRICE FIREPLACE HEATER & TANK CORP
Starling Foundry Co
SUPERIOR FIREPLACE CO
T S Hardware & Mfg Co
Vestal Store Co Building Specialties Div
Western Foundry Co
Wheeling Corrugating Co

▶ DOORS, COAL CHUTE

Adams Co
Allen Steel Products
BOSTWICK STEEL LATH CO
COPCO STEEL PRODUCTS CO
COPCO STEEL & ENGINEERING CO
Deator Iron & Steel
Densley Brothers
Gabriel Steel Co
Industrial Iron Works
KEWANEE MFG CO
MAJESTIC CO
Moshier Brothers
NATIONAL GYPSUM CO
Perkins Mfg Co
Swett (A L) Iron Works
T S Gypsum Co
Wheeling Corrugating Co

▶ DOORS, COLD STORAGE

Janison Cold Storage Door Co

▶ DOORS, COMBINATION, ALUMINUM

Alcoa Inc
Alumatic Corp of America
Aluminum Building Products Co
COPCO STEEL PRODUCTS CO
Compo-Miracle Products Co
Eagle Pieter Co
Everscraft Corp
Kaufmann Corp
McKinley (Ormon D) Co
REYNOLDS METALS CO BUILDING PROD-UCTS DIV
RUSSELL (F C) CO
Store Windows of Aluminum Inc
Weather-Proof Co

▶ DOORS, COMBINATION, STEEL

McKinley (Ormon D) Co
RUSSELL (F C) CO
Weather-Seal Inc

▶ DOORS, COMBINATION, WOOD

ANGEL NOVELTY CO
Burling Lumber & Mfg Co
Burlie Millwork Co
CARR ADAMS & COLLIER CO
Chamberlain Co of America
Caldor Mfg Co
Combination Door Co
Continental Screen Co
CURTIS COMPANIES INC
Farley & Loetcher Mfg Co
GATE CITY SASH & DOOR CO
GREGG & SON

Hemphill (A D) Co
Hines (Edward) Lumber Co
Huttig Mfg Co
LONG-BELL LUMBER CO
Manour Millwork Co
M & M Woodworking Co
Morgan Co
National Screen Co Inc
National Screen Door Co
Northern Sash & Door Co
Northern Wood Products Co
Northwest Door Co
Pacific Mutual Door Co
Perkins Mfg Co
Prestite (F W) & Co
Roach & Munser Mfg Co
Robbins Mfg Co
Rock Island Millwork Co
Schumacher (F E) Co
Silbernagel (George J) & Sons Co
SIMPSON LOGGING CO
Weather-Seal Inc
Window Conditioning Co

▶ DOORS, ELEVATOR & DUMBWAITER

St Louis Fire Door Co

▶ DOORS, FIRE

Actus Plywood & Veneer Co
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
Burling Lumber & Mfg Co
Burlie Millwork Co
CROSSER-LANGRISH DOOR CO
Farley & Loetcher Mfg Co
George-Pacific Plywood & Lumber Co
GREGG & SON
HARRISON PLYWOOD CORP
Linden Mfg Co
LONG-BELL LUMBER CO
Milwaukee Plywood Co
M & M Woodworking Co
Monarch Door & Mfg Co
National Guard Products Inc
Johnson Mfg Co
Rock Island Sash & Door Co
Silbernagel (George J) & Sons Co
SIMPSON LOGGING CO
Spokane Sash & Door Co
T S PLYWOOD CORP
Washington Door Co
Western Door & Plywood Corp
Woodward Lumber Co

▶ DOORS, FIRE

AMERICAN WELDING & MFG CO
Cornell Bolting Door Works
Halsstrom Metallic Door Co
Puchold Inc
Edwards Co Inc
FERRESTRA BUILDING PRODUCTS
Fox Bros Mfg Co
Harris Peckle Fire Doors Inc
International Fireproof Door Co
International Steel Co
Kinneer Mfg Co
MAJESTIC CO
WENDEL CO
Moshier Bros
Owen-Hillman Glass Co Kayle Div
Protector Corp
RICHARDS-WILCOX CO
RODDIS PLYWOOD CORP
St Louis Fire Door Co
Suede Steel Co
Sydney Fire Door Corp
UNITED STEEL FABRICATORS INC
U S PLYWOOD CORP
VIRGINIA METAL PRODUCTS CO
Wills Mfg Co Inc
Wilson (J G) Corp

▶ DOORS, FLEXIBLE & FOLDING

Carlisle Co
HOLCOMB & HOKK MFG CO INC
HOUGH SHADE CORP
NEW CASTLE PRODUCTS CO
ORCHARD BROTHERS INC
RICHARDS-WILCOX CO
RHS-CREECH CO
Smith (E F) Wire & Iron Works Inc
TRUSCON STEEL CO DIV REPUBLIC STEEL CORP

▶ DOORS, FLUSH, WOOD

Actus Plywood & Veneer Co
American Plywood Corp
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
Brand (W B) Co
Carahan Mfg Co
CARR-ADAMS & COLLIER CO
Curtis Furniture Co Door Div
CURTIS COMPANIES INC
Davis Plywood Corp
Elliot Bar Mill Co
Est-Wood Corp
Farley & Loetcher Mfg Co
Fisher Door Div Curtis Furniture Co
General Plywood Corp
Georgia Pacific Plywood & Lumber Co
Hardwood Products Co
KASKELTY MFG CORP
RIGGING INC
Huttig Mfg Co
Ishk Plywood Corp

Manufacturers' Names and Addresses Start on Page D-76
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Kennebec Inc
KENNEDY (J G) LUMBER CO
 Ketchikan Plywood & Lumber Co
 LeTraco Building Products
LONG-BELL LUMBER CO
 Lutz (W B) Co
MENDEL CO
 Michigan Door Co
 Midwest Plywood Co
 Milwaukee Plywood Co
 M & M Woodworking Co
 Morgan Co
 Musman & Shafer Inc
 Northern Sash & Door Co
 Northwest Door Co
PAINE LUMBER CO
 Petroleum (J C) Co
 Plywood & Door Sales Corp
 Plywoods-Plastics Corp
 Rock Island Millwork Co
RODDIS PLYWOOD CORP
SIMPSON LOGGING CO
THOMAS PLYWOOD CORP
U S PLYWOOD CORP
 Walled Lake Door Co
 Westberg-Baer Co
 Wisconsin Door Co

► **DOORS, GARAGE, METAL**

Blaw-Knox Div Blaw-Knox Co
 Calder Mfg Co
 Cumco-Miracle Products Co
FRANTZ MFG CO
 Hollister Coil Spring Mfg Co
 International Steel Co
 Kinmar Mfg Co
MAJESTIC CO
MORRISON STEEL PRODUCTS INC
 Pioneer Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
 Silbernagel (George) & Sons Co
STAMPING PRODS & MFG CO STEEL DOOR DIV
 Steel Door Corp
STRAND GARAGE DOOR DIV DETROIT STEEL PRODUCTS
 Taylor (L S) Mfg Co
 Taylor (R L) Inc
 Till-A-Door Corp
UNITED STEEL FABRICATORS INC
 Wilson Foundry & Machine Co

► **DOORS, GARAGE, WOOD**

BARBER-COLMAN CO
 Buffen Lumber & Mfg Co
 Burke Millwork Co
 Calder Mfg Co
CAPITAL PRODUCTS CO
CARR ADAMS & COLLIER CO
 Commander Door Inc
CRAWFORD DOOR CO
CURTIS COMPANIES INC
 Farley & Loetscher Mfg Co
FRANTZ MFG CO
 General Door Mfg Co
 Georgia-Pacific Plywood & Lumber Co
 Hall Enterprises
HARBOR PLYWOOD CORP
 Hutting Mfg Co
 Kaiser Metal Products Co
LONG-BELL LUMBER CO
 Londen Machinery Co
 Marquart Millwork Co
 Maske Seattle Lumber Co
McKEE DOOR CO
 M & M Woodworking Co
 North Plywood Inc
 Northwest Door Co
OVERHEAD DOOR CORP
RAYNOR MFG CO
RICHARDS-WILCOX CO
 Roach & Musser Mfg Co
 Rock Island Millwork Co
RODDIS PLYWOOD CORP
SIMPSON LOGGING CO
STANLEY WORKS GARAGE HARDWARE DEPT
 Starline Inc
U S PLYWOOD CORP

► **DOORS, GARAGE, OVER-HEAD TYPE, METAL**

Aluminum Products Corp
 Calder Mfg Co
 Clark Door Co Inc
FRANTZ MFG CO
 Monarob Door Co
MORRISON STEEL PRODUCTS CO
 Pioneer Co
STAMPING PRODUCTS & MFG CO STEEL DOOR DIV
STRAND GARAGE DOOR DIV DETROIT STEEL PRODUCTS
 Taylor (L S) Mfg Co
 Wilson (J G) Corp

► **DOORS, GARAGE, OVER-HEAD TYPE, WOOD**

Acme Door Co
BARBER-COLMAN CO
 Better-Bilt Door Co
 Buffen Lumber & Mfg Co
 Burke Millwork Co
CAPITAL PRODUCTS CO
CARR ADAMS & COLLIER CO
 Commander Door Inc
CRAWFORD DOOR CO
CURTIS COMPANIES INC
 Davis Plywood Corp
 Essential Products Corp
 Farley & Loetscher Mfg Co
 Georgia-Pacific Plywood & Lumber Co

Hall Enterprises
HARBOR PLYWOOD CORP
 Kerts Inc
 M & M Woodworking Co
 Marquart Millwork Co
NATIONAL MFG CO
 Northwest Door Co
OVERHEAD DOOR CORP
 Overhead Door Div United Products Co
 Pacific Mutual Door Co
 Pacific Co Inc
 Pacific Co Inc
RAYNOR MFG CO
RICHARDS-WILCOX CO
 Roach & Musser Mfg Co
 Rock Island Millwork Co
 Rowe Mfg Co
ROWE MFG CO
SIMPSON LOGGING CO
 Starline Inc
WAGNER MFG CO
 Washington Door Co
 Western Door & Plywood Corp

► **DOORS, GLASS**

ANGEL NOVELTY CO
 Arcadia Metal Products Inc
 Baehle (Simon) & Co
 Hagemann Cos Inc
 Huttig Sash & Door Co
KAWNEER CO
LIBBY-OWENS-FORD GLASS CO
LUDMAN CORP
 National Mirror Works
 Northwest Door Co
PITTSBURGH PLATE GLASS CO
 Safelite Glass Co
 Schacht Associates Inc
 Schaefer & Kohlhaas Co
 Shower Door Co of America

► **DOORS, HARDWOOD**

Actina Plywood & Veneer Co
 American Plywood Corp
 American Sash & Door Co
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
 Brand-Harmon Co
 Brand (W R) Co
 Buffen Lumber & Mfg Co
 Caruban Mfg Co
CARR ADAMS & COLLIER CO
CURTIS COMPANIES INC
 Davis Plywood Corp
 Dyke Brothers
 Eas-Wood Corp
 Farley & Loetscher Mfg Co
 General Plywood Corp
 Georgia-Pacific Plywood & Lumber Co
WASKELTIE MFG CORP
 Huttig Mfg Co
 Huttig-Murphy Co
 Ideal Co
 Inik Plywood Corp
 Kennebec Inc
 LeTraco Building Products
 Marquart Millwork Co
MENDEL CO
 Michigan Door Co
 Morgan Co
 Musman & Shafer Inc
 Northern Sash & Door Co
PAINE LUMBER CO
 Phillips-Ripps Lumber Co
 Rock Island Millwork Co
RODDIS PLYWOOD CORP
THOMAS PLYWOOD CORP
U S PLYWOOD CORP
 Walled Lake Door Co
 Wisconsin Door Co

► **DOORS, LAUNDRY CHUTE**

AIR CONTROL PRODUCTS INC
 Alton Steel Products
CPSCO STEEL & ENGINEERING CO
 Dunley Brothers
 Gabriel Steel Co
IDEAL CABINET CORP DIV OF DES LAURIERS COLUMN MOULD CO INC
 Klumpp (Ernest) & Co
MIAMI CABINET DIV CAREY (PHILIP) CO

► **DOORS, LOUVRE, WOOD**

CARR ADAMS & COLLIER CO
CURTIS COMPANIES INC
 Farley & Loetscher Mfg Co
 Morgan Co
 Pro-Tect-U-Jalousie Corp
DOORS, METAL
 Actina Plywood Products Corp
 American Sheet Metal Works
AMERICAN WELDING & MFG CO
 Rapley (William) Co
BILCO CO
 Robert & Carlough Co
CECO STEEL PRODUCTS CO
CINCINNATI IRON FENCE CO INC
 Cornwell Rolling Door Works
 Crittall Inc
CROFT STEEL PRODUCTS INC
 Dahlstrom Metallic Door Co
 Deakart Iron & Steel Co
 Demayo & Associates
 Diebold Co Inc
 Edwards Co Inc
FENESTRA BUILDING PRODUCTS
 FLYNN (MICHAEL) MFG CO

Harris Preble Fire Doors Inc
HOPE'S WINDOWS INC
 International Fireproof Door Co
 International Steel Co
KAWNEER CO
 Kinmar Mfg Co
 Mahon (R C) Co
 Mosler Bros
METAL BRATTERS
 Milwaukee Stamping Co
 Newman Brothers Inc
 Pacific Co Inc
RICHARDS-WILCOX CO
 Richmond Fireproof Door Co
RUSSELL (F G) CO
 Smith (F P) Wire & Iron Works Inc
 Soule Steel Co
STEELECAST MFG CO
 Stewart Iron Works Inc
 Thurn (J S) Co
TRILINE DEVELOPMENT
TRUSCON STEEL CO DIV REPUBLIC STEEL CORP
UNITED STEEL FABRICATORS
VIRGINIA METAL PRODUCTS CO
 Weather-Proof Co
WEATHER-VARE CORP
 Williamsburg Steel Products Co
 Wilson (J G) Corp

► **DOORS, PLYWOOD**

Actina Plywood & Veneer Co
 American Plywood Corp
AMERICAN WELDING & MFG CO
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
 Brand (W R) Co
 Buffen Lumber & Mfg Co
CARR ADAMS & COLLIER CO
CURTIS COMPANIES INC
 Davis Plywood Corp
HIGGINS INC
 Hutting Mfg Co
 Inik Plywood Corp
LONG-BELL LUMBER CO
 Maske Seattle Lumber Co
MENDEL CO
 Pacific Mutual Door Co
 Plywoods-Plastics Corp
SIMPSON LOGGING CO
 Westberg-Baer Co
U S PLYWOOD CORP

► **DOORS, PONDEROSA PINE**

CARR ADAMS & COLLIER CO
 Cole Mfg Co
CURTIS COMPANIES INC
 Farley & Loetscher Mfg Co
GREGG & SON
 Hines (Edward) Lumber Co
 Hutting Mfg Co
 Ideal Co
LONG-BELL LUMBER CO
 Morgan Co
 Musman & Shafer Inc
 Northern Sash & Door Co
 Rock Island Millwork Co
 Silbernagel (George) & Sons Co
 Spokane Sash & Door Co

► **DOORS, PREFIT**

Buffen Lumber & Mfg Co
LONG-BELL LUMBER CO
METAL PRODUCTS CORP
 Morgan Co
 Nares Wood Products Inc
NATIONAL DOOR CO
RODARL CO
 NOVA SALES CO
 Orchard Mfg Co
 Rock Island Millwork Co
STEELCRAFT MFG CO
TRUSCON STEEL CO
U S SLIDING DOOR CORP
U S PLYWOOD CORP
UNITED STEEL FABRICATORS INC
VIRGINIA METAL PRODUCTS CO
WOODALL INDUSTRIES

► **DOORS, REVOLVING**

General Bronze Corp
 International Steel Co
 Michaels Art Bronze Co
REVLVDOR CORP

► **DOORS, SCREEN, WOOD FRAME**

Alumatic Corp of America
 American Sash & Door Co
ANGEL NOVELTY CO
 Barnhart (A W) Co
 Burke Millwork Co
CARR ADAMS & COLLIER CO
 Chamberlain Co of America Inc
COFFMAN (R G) CO INC
 Cole Mfg Co
 Continental Screen Co
CROSSTED LUMBER CO
 Crown Shade & Screen Co
CURTIS COS INC
 Dennis (W J) & Co
 Farley & Loetscher Mfg Co
 General Trussart Lumber Co
 General Woodcraft Co
GREGG & SON
 Hemphill (A D) Co
 Hollister Coil Spring Mfg Co
 Huttig Mfg Co
 Huttig Sash & Door Co
 Ideal Co
KEYSTONE WIRE CLOTH CO
 Kriemas Pine Mill Co
LONG-BELL LUMBER CO

Marquart Millwork Co
 Morgan Sash & Door Co
 National Screen Co Inc
 National Screen Door Co
NEW YORK WIRE CLOTH CO
 Northern Sash & Door Co
 Northwest Door Co
 Orange Screen Co
 Pacific Mutual Door Co
 Phenix Mfg Co
 Prentice (F W) & Co
 Roach & Musser Co
 Robbins Mfg Co
 Robinson Mfg Co
 Northern Sash & Door Co
RUSSELL (F C) CO
 Ruschmacher (F E) Co
 Sawco Lumber & Millwork Co
 Spokane Sash & Door Co
 Universal Fabricators
 Weather-Proof Co
 West Coast Screen Co
 White Pine Sash Co

► **DOORS, SHOWER**

American Extruded Products Co
 Blumwanger & Co
 California Shower Door Co
FIAT METAL MFG CO
 Shower Door Co
KAWNEER CO
 Lehman Strayfield Co
 Milwaukee Stamping Co
 National Metal-Art Mfg Co
 National Mirror Works
PITTSBURGH PLATE GLASS CO
 Safelite Glass Co
 Shower Door Co of America
 Southern Shower Door & Cabinet Co
 Windsor Shower Door Co

► **DOORS, SIDEWALK**

Adams Co
BILCO CO
CINCINNATI IRON FENCE CO
 Edwards Mfg Co
 Fries & Son Steel Construction & Engineering Co
 Logan Co

► **DOORS, SLIDING, RESIDENTIAL**

Accurate Metal Weatherstrip Co
 Actina Steel Products Corp
 American Steel Door Co
AMERICAN WELDING & MFG CO
 Arcadia Metal Products Co
 Bayler (William) Co
 Better-Bilt Door Co
 Buffen Lumber & Mfg Co
 Cole Mfg Co
CURTIS COMPANIES INC
DOORFLO MFG CO
 Eas-Wood Corp
 Farley & Loetscher Mfg Co
 Ideal Co
 Inik Plywood Co
 Knape & Vogt Mfg Co
LONG-BELL LUMBER CO
METAL PRODUCTS CORP
 M & M Woodworking Co
 Morgan Co
 Nares Wood Products Inc
NATIONAL DOOR CO
RODARL CO
 NOVA SALES CO
 Orchard Mfg Co
 Rock Island Millwork Co
STEELCRAFT MFG CO
TRUSCON STEEL CO
U S SLIDING DOOR CORP
U S PLYWOOD CORP
UNITED STEEL FABRICATORS INC
VIRGINIA METAL PRODUCTS CO
WOODALL INDUSTRIES

► **DOORS, SOFTWOOD**

Actina Plywood & Veneer Co
 American Sash & Door Co
ANGEL NOVELTY CO
ATLAS PLYWOOD CORP
CARR ADAMS & COLLIER CO
 Cole Mfg Co
CURTIS COS INC
 Dyke Brothers
 Farley & Loetscher Mfg Co
HARBOR PLYWOOD CORP
 Hutting Mfg Co
 Huttig Sash & Door Co
LONG-BELL LUMBER CO
 Marquart Millwork Co
 Maske Seattle Lumber Co
MENDEL CO
 Milwaukee Distributors
 M & M Woodworking Co
MORGAN CO
 Northern Sash & Door Co
 Northwest Door Co
 Pacific Mutual Door Co
 Products-From-Sweden Inc
 Roach & Musser Co
 Robinson Mfg Co
 Rock Island Millwork Co
 Silbernagel (George) & Sons Co
 Simpson Industries Inc
U S PLYWOOD CORP

► **DOORS, ROLLING, STEEL**

Cornwell Rolling Door Works
 Kinmar Mfg Co
 Lawrence Steel Co
 Mahon (R C) Co

Manufacturers' Names and Addresses Start on Page D-76
 Manufacturers' Brand Name Identifications Start on Page D-64

▶ DOORS, ROLLING, WOOD

Cornell Rolling Door Works
Kinmar Mfg Co

▶ DOORS, STORM, WOOD & METAL

Alson Inc
Anderson (V E) Mfg Co
ANGEL NOVELTY CO
Buffen Lumber & Mfg Co
Burke Millwork Co
CARR ADAMS & COLLIER CO
CCCO STEEL PRODUCTS CO
Chamberlin Co of America
Cile Mfg Co
Compo Miracle Products Co
CURTIS COMPANIES INC
Eagle Filter Co
Farley & Loetger Mfg Co
GREGG & SON
Hemphill (A D) Co
Hires (Edward) Lumber Co
Holister Coil Spring Mfg Co
Hottig Mfg Co
LONG-BELL LUMBER CO
Marquart Millwork Co
Millwork Distributors
M & M Woodworking Co
Morgan Co
Northwest Door Co
Phenix Mfg Co
Prestite (F W) & Co
Robbins Mfg Co
Rock Island Millwork Co
RUSSELL (F C) CO
Schumacher (F E) Co
Silbernagel (George J) & Sons Co
Spokane Sash & Door Co
Weather-Ford Co
Weather-Seal Inc
Wheeler-Osgood Co
White Pine Sash Co
Window Conditioning Co

▶ DOORS, TIN CLAD

Edwards Mfg Co

▶ DOWELS, WOOD

Ames Mfg Co
BENDIX MFG CO
BRADLEY LUMBER CO OF ARK
Burke Millwork Co
Chicago Wood & Plastic Products
Coke (R F) Mfg Co
Cummings (E R) & Sons Co
CURTIS COS INC
Deeper Dowel Mfg Co
Donley Bros
Dowel House
Elliotters
Englewood Dowel Co
Fordyce-Cossett Lumber Co
Grand Rapids Dowel Works
Holt Hardwood Co
LONG-BELL LUMBER CO
Maine Industries Co
McMinville Handle Co
Mitchell Bros Co
Morgan Lumber Co
Morton Mfg Co
Nashotas Moulding & Mfg Co
Rock Island Millwork Co
Rone (Henry) Mfg Co
Rustic Furniture Co Inc
Saunders Co
Silbernagel (George J) & Sons Co
South Bend Dowel & Mfg Co
Sparta Spoke Factory
Stiles (H A) Co
Stowell McGregor Co
Streck (L W) & Co
Thurston (H T) & Sons
WEYERHAEUSER SALES CO

▶ DRAINBOARDS

Enamel Products Co
Tressner (John) Steam Copper Works
Whitehead Metal Products Co Inc
Woolster Rubber Co

▶ DRAINS, FLOOR

Allen Steel Products
Conert (E W) Co
Donley Brothers
Industrial Iron Works
KEWANEE MFG CO
Louden Machinery Co
MAJESTIC CO
Robinson Clay Product Co
Syracuse Alloy Metals Corp
Vestal Stone Co
Zurn (J A) Mfg Co

▶ DRAINS, ROOF

BARRETT DIV ALLIED CHEMICAL & DYE CORP
Industrial Iron Works
Robinson Clay Product Co
Zurn (J A) Mfg Co

▶ DRAWERS, STORAGE, STEEL

Lion Metal Products Inc
Precision Equipment Co
Red Tiger Products Inc

▶ DRESSERS, GRINDING**WHEEL**

Atlas (E C) Co
BEHR-MANNING CORP DIV NORTON CO
Fager Mfg Co
Ideal Industries Inc

▶ DRILL PRESSES

ATLAS PRESS CO
BOICE CRANE CO
Thompson Blower & Forge Co
ROCKWELL MFG CO DELTA POWER TOOL DIV
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP

▶ DRILLS, BRICK, CONCRETE, TILE

Acherman-Johnson Co
Arvo Expansion Bolt Co
BLACK & DECKER MFG CO
Bucabel Tool Mfg Co
Carboling Inc
Chicago Expansion Bolt Co
Chicago Pneumatic Tool Co
Demaco Steel Products Corp
Gardner-Denver Co
Hobbs Industries Inc
Kensametal Inc
Krausert & Co Inc
MALL TOOL CO
Machinist Tool Co Inc
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
New England Carbide Tool Co
PAINE CO
Proto Tool Co
Raupey Tools
Rawlplug Co Inc Industrial Div
RED DEVIL TOOLS
STANLEY TOOLS DIV STANLEY WORKS
Star Expansion Products Inc
Super Tool Co
SYNTRON CO
Tilden Tool Mfg Co
Vaughan & Bushnell Mfg Co
Vulcan Tool Mfg Co
Warwood Tool Co
Wodack Electric Tool Corp

▶ DRILLS, ELECTRIC, PORTABLE

Alphorson & Co Inc
BLACK & DECKER MFG CO
BRADFORD MACHINE TOOL CO
Chicago Pneumatic Tool Co
Cincinnati Electrical Tool Dir Le Blond (E K) Machine Tool Co
Clarke Handing Machine Co
CUMMINS PORTABLE TOOLS DIV CUMMINS-CHICAGO CORP
Danner Floor & Safety Supply Co
DREMEL MFG CO
FASCO INDUSTRIES INC
INDEPENDENT PNEUMATIC TOOL CO
Kest Tool Co
Knapp-Monarch Co
Lounelle Electric Mfg Co
MALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
Risser Mfg Co Inc
Portable Electric Tool Inc
R C S TOOL SALES CORP
ROCKWELL MFG CO DELTA POWER TOOL DIV
SKILSAW INC
Speedway Mfg Co
STANLEY ELECTRIC TOOLS DIV STANLEY WORKS
SYNTRON CO
Tilden Tool Mfg Co
WALLACE (J D) & CO
Wodack Electric Tool Corp

▶ DRILLS, GLASS

Barrett (William L)
RED DEVIL TOOLS

▶ DRILLS, PUSH

Brush Nail Expansion Bolt Co
Greenlee Tool Co
Millers Falls Co

▶ DRILLS, RIGHT ANGLE, ELECTRIC

MILWAUKEE ELECTRIC TOOL CORP

▶ DRILLS, WELL

UCYRUS-ERIE CO
Consolidated Industries
Ka-Mo Tools Inc

▶ DRILLS, WOOD

Chickland Tool Drill Co
Deuse (E W) Co
Forest City Bit & Tool Co
Garrow (E D) Co Inc
Graham (John H) & Co Inc
Greenfield Tap & Die Corp
Greenlee Tool Co

**INDEPENDENT PNEUMATIC TOOL CO
WALL TOOL CO
MILWAUKEE ELECTRIC TOOL CORP
STANLEY TOOLS DIV THE STANLEY WORKS**

Star Bit & Tool Co
Syracuse Twist Drill Co
Union Twist Drill Co

▶ DRIVERS, & FASTENERS, CARTRIDGE ACTUATED TYPE

Mine Safety Appliances Co
Powder Power Tool Co
RAMSET FASTENERS INC
STANLEY DRIVERS CO INC
STEMCO CORP

▶ DRIVERS, CORRUGATED FASTENER

Saranac Machine Co

▶ DRIVERS, GLAZIER'S POINT

Fletcher Terry Co
Glazier's Tool Mfg Co
RED DEVIL TOOLS
Sommer & Glass Machinery Co

▶ DRIVERS, STEEL POST

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
CCCO STEEL PRODUCTS CO
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co
Northwestern Steel & Wire Co
Sweet's Steel Co

▶ DRIVES, BELT V

ALLIS-CHALMERS MFG CO
Broadway Rubber Mfg Co
Duck (E R) Co Inc
Fairbanks Morse & Co
Gates Rubber Co
Houston Blow Pipe & Sheet Metal Works
Industrial Iron Works
Link-Belt Co
Webb Beltine & Supply Co
Western Foundry Co

▶ DRIVES, CHAIN

Chain Belt Co
Diamond Chain Co Inc
Howell (E R) Co
Industrial Iron Works
Jeffrey Mfg Co
Link-Belt Co
Morse Chain Co
Rama Chain Co
Webb Beltine & Supply Co
Western Foundry Co
Wieland Co

▶ DROP CLOTHS

American Ladder Co
American Tent & Awning Co
Brimm Brothers Bag Co
Clifton Mfg Co
DANIELS (C R) INC
Fallon Bag & Cotton Mills
May (W C) Co
New York Drop Cloth Mfg Co Inc
Standard Awning Co
Textile Industries Inc
Werner Canvas Products Co

▶ DRYERS, AIR

Attapulgus Clay Co
Bailey Lumber Co
Dow Chemical Co
Frigidair Division General Motors Corp
GENERAL AIR CONDITIONING CORP
KELVINATOR DIV HASH-KELVINATOR CO
Lansdowne & Moody
Petrie-Phelps
Puritan Sales Co
Stewart-Watner Corp
SOLVAY SALES DIV ALLIED CHEMICAL & DYE CORP
Tamm Industries Inc
Union Mfg & Gauge Co

▶ DRYERS, CALCIUM CHLORIDE

Columbia Chemical Div Pittsburgh Plate Glass Co
Dow Chemical Co
SOLVAY SALES DIV ALLIED CHEMICAL & DYE CORP
Tamm Industries Inc

▶ DUCTS, ALUMINUM

KAISER ALUMINUM & CHEMICAL SALES INC

▶ DUCTS, HEATING NON-METALLIC

Airstamp Div Chrysler Corp
CAREY (PHILIP) MFG CO

JOHNS-MANVILLE CORP

Universal Concrete Pipe Co Inc

▶ DUCTS, SHEET METAL

Berger Mfg Co Div Republic Steel
Continental Steel Corp
INLAND STEEL PRODUCTS CO
MAJESTIC CO
REYNOLDS METALS CO BUILDING PRODS DIV
▶ DUMPS, ASH, FIREPLACE

Adams Co
Allen Steel Products
BENNETT-IRELAND CO
BOSTWICK STEEL LATH CO
Colonial Fireplace Co
COPCO STEEL & ENGINEERING CO
Conert (E W) Co
Donley Brothers
Gabriel Steel Co
Harris Inc
HEATILATOR CO
Industrial Iron Works
KEWANEE MFG CO
MAJESTIC CO
Peter-Evans Foundry Corp
SUPERIOR FIREPLACE CO
Vestal Stone Co Building Specialties Div

▶ DUST COLLECTION SYSTEMS

Allington & Curtis Mfg Co
American Blower Corp
American Wheelabrator & Equipment Co
Cbaee Turbine Mfg Co
Connecticut Blower Co
Dependable Machine Co Inc
Detroit Sheet Metal Works
Houston Blow Pipe & Sheet Metal Works
Howell (E R) Co
Kirk & Blom Mfg Co
Ohio Blow Pipe Co
Subversing Machinery Co Inc
St. Louis Blow Pipe & Heater Co
Westinghouse Electric Corp Sturtevant Div

▶ DYES, CEMENT

Fletcher Terry Co
Horn (A C) Co
Tamm Industries Inc
Trasson Laboratories Div Duroc & Reynolds Co

▶ EDGES, METAL ROOF

Alabama Metal Lath Co
Allen Steel Products
AMERICAN STEEL & WIRE CO
Berger Mfg Div Republic Steel Corp
CCCO STEEL PRODUCTS CO
Continental Steel Corp
Gary-Flouner Steel Corp
Hilltop Zinc Co
INLAND STEEL PRODUCTS CO
Kinmar Mfg Co
New Holland Metals Co
Potts Farrington Co
ST PAUL CORRUGATING CO
TENNESSEE COAL IRON & RAILROAD CO
United States Steel Co
Wheeling Corrugating Co

▶ EDGERS, FLOOR, SANDING

AMERICAN FLOOR SURFACING MACHINE CO
Clarke (Alex A) Mfg Co
Clarke Sanding Machine Co
Detroit Surfacing Machine Co
Flouner-Habit Co
HOLBLATT TOOL CO
Bliger Co
Lincoln-Schulter Floor Machine Co
PITTSBURGH PLATE GLASS CO
PORTER CABLE MACHINE CO
RED DEVIL TOOLS
SKILSAW INC

▶ ELECTRIC PUSH BUTTONS

CORBIN (P & F) DIV AMERICAN HARD-WARE CORP
HARVEY (C) DIV
LOCKWOOD HARDWARE MFG CO
RUTHER INC
Schloman Hardware Co
STANLEY WORKS

▶ ELEVATORS, BATCH BIN

Baughman Mfg Co Inc
BESSER MFG CO
Blaw-Knox Div Blaw-Knox Co
Butler Bin Co
Chick-Bell Co
Cunhaire Transport Mixer Co
CONSTRUCTION MACHINERY SALES CO
Erie Steel Cast Co
Finning Mfg Co
General Conveyor & Mfg Co
Gifford-Wood Co
Jeffrey Mfg Co
Johnson (C R) Co
Link-Belt Co
Universal Engineering Corp
Universal Mfg Corp

▶ ELEVATORS, GRAIN PORTABLE

Deere & Company
General Implement Corp
Kewanee Machinery & Conveyor Co
Link Mfg Co

Manufacturers' Names and Addresses Start on Page D-76
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▶ ELEVATORS, HAND POWER

Rappei Cranes Co
Energy Elevator Co
Market Forge Co
Sidney Elevator Mfg Co

▶ ELEVATORS, RESIDENCE

Clusia Elevator Co
Inclinator Co of America
Kimball Brothers Co
Sodgewick Machine Works
Stewart Elevator Co
Ola Elevator Co

▶ ELIMINATOR, CONDENSATION, TOILET TANK

Dodgeon Distributing Co

▶ ENAMEL

Acme White Lead & Color Works
Alabaster Paint Products Div Chicago
Breeze & Color Works
American Marietta Co
Berry Brothers Inc
Briggs-Maroney Co Inc
Burdick (A) Co
Central Paint & Varnish Works
Chicago Breeze & Color Works
Chi-Namel Paint & Varnish Co
Commonwealth Varnish Co
Enamel Products Co
Fop Paint Co Inc
General Paint Corp
Globe Paint Works Inc
Grand Rapids Varnish Corp
Lawrence (W W) & Co
Lucas Johnson & Co Inc
Massey (John W) & Sons Inc
Moore (Benjamin) & Co
Murphy Paint Div Intercontinental Corp
Pentra Paint Co Inc
Rogers Paint Products Inc
Sheffield Bronze Paint Corp
St Louis Surface & Paint Co
Suniform (L) Sons Inc
Manard Industrial Products Inc
United Lacquer Mfg Corp
U S Gotta Porch Paint Co
U S Gypsum Co
Valentine & Co
Vite Var Co
Wadsworth Howard & Co

▶ ENAMEL, FLOOR

Boston Varnish Co
Besse & Reynolds Inc
DuPont (E I) de Nemours & Co
Kilbott Paint & Varnish Co
Gibbons Co
Hoboken White Lead & Color Works Inc
Horn (A C) Co
Kerstone Varnish Co
Lithogen Corp
Loew Brothers
MOORE (GODDLE E) CO
O'Brien Corp
Palen Products Inc
Patterson-Sargent Co
PITTSBURGH PLATE GLASS CO
Pratt & Lambert Inc
Sargent-Gorka Co
Selditta Paint & Varnish Co
Sherwin-Williams Co
Standard Varnish Works
Stevens Mfg Co
Trucon Laboratories Div Devoe & Reynolds Inc
Vortic Co
Wilbur & Williams

▶ ENCLOSURES, UNIT KITCHEN, METAL, FOLDING

ORCHARD BROTHERS INC

▶ ENGINES, DIESEL

ALLIS-CHALMERS MFG CO
Buda Co
Caterpillar Tractor Co
Cleveland Diesel Engine Div General Motors Corp
Cummins Engine Co
Fairbanks Morse Co
GMC Truck & Coach Div General Motors Corp
Hill Diesel Engine Co
International Harvester Co
Nordberg Mfg Co
Waukesha Motor Co
White Engine Works Div Oil-Well Supply Co
WORTHINGTON PUMP & MACHINERY CORP

▶ ENGINES, GASOLINE

ALLIS-CHALMERS MFG CO
Briggs & Stratton Corp
Buda Co
CONSTRUCTION MACHINERY SALES CO
Fairbanks Morse & Co
Fulmer & Johnson Mfg Co
HOMELITE CORP
International Harvester Co
KUBLER Co
New Engine Co
Ready-Power Co
Raleigh Motors Div Wayne Mfg Co
Universal Motor Co
Waukesha Motor Co
WESTINGHOUSE ELECTRIC CORP
White Engine Works Div Oil-Well Supply Co

▶ ENTRANCES, DOOR

Burke Millwork Co
Cameron (Wm) & Co Inc
CARR ADAMS & COLLIER CO
CURTIS COS INC
Farley & Loebster Mfg Co
GREGG SON
Hittig Mfg Co
Ideal Co
KAWNEER CO
LONG-BELL LBB CO
M & M Mfg Co
Morgan Co
Rosen & Mosser Mfg Co
Rock Island Millwork Co
Silberberg (George) & Sons Co
SIMPSON LOGGING CO
Spokane Sash & Door Co

▶ ENTRANCES, STONE, PACKAGED

Conco Building Products Inc

▶ ENTRANCES, STORE, METAL

Apex Brass & Bronze Works
Badger Wire & Iron Works Inc
Balsstrom Metallic Door Co
International Steel Co
KAWNEER CO
Newman Brass Inc

▶ EQUIPMENT, BARBEQUE

Adelphian Mill
BENNETT-IRELAND CO
Dunbar Bros Co
Industrial Iron Works
Ironcraft Inc
MAJESTIC CO
Master Metal Prods Inc
Ohio Stone Co
Southern Barbeque Grill Co
Wiemann (Ernest) Iron Works

▶ EQUIPMENT, BARN

Advance Car Mover Co
Badger Corrugating Co
BENNETT-IRELAND CO
Berg Equip Corp
Butler Mfg Co
Clay Equipment Corp
Colburn Mfg Co
Franklin Equipment Co
Gardner Mfg Co
General Implement Corp
Goshen Mfg Co
Green Mfg Co
Hudson (H D) Mfg Co
Hummer Mfg Co
James Mfg Co
Logan Co
Louden Machinery Co
Milwaukee Hay Tool Co
Mitchell Mfg Co
NATIONAL MFG CO
Meyers (F E) & Brother Co
Noy Mfg Co
Olson Mfg Co
Sison Steel Co
Starline Inc

▶ EQUIPMENT, FARM

Advance Car Mover Co
Aerocast Fan Co
Air Division Inc
ALLIS-CHALMERS MFG CO
American Blower Co
American Larson Ventilating Co
Appleton Mfg Co
Aret Co
Badger Corrugating Co
Bastian-Blossing Co
Beatrice Steel Tank Mfg Co
Bell (C S) Co
BENNETT-IRELAND CO
Beyer Bros Whiting & Co
Brower Mfg Co
Buffalo Forge Co
Butler Mfg Co
Case (J I) Co
Celina Mfg Co
Century Electric Co
Clay Equipment Co
Colburn Mfg Co
Cohn (E) & Sons
Columbian Steel Tank Co
Continental Steel Corp
Deere & Co
Dempsler Mill Mfg Co
Des Moines Steel Tank Co
Diehl Mfg Co Electrical Div Singer Mfg Co
Edwards Mfg Co
Electric Welding Co
EMERSON ELECTRIC MFG CO
Fairbanks Morse & Co
Farley & Loebster Mfg Co
Farquhar (A B) Co
Gehl Bros Mfg Co
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
General Implement Corp
Goshen Mfg Co
Guard-HI Mfg Co
Hargrove Co
Harvey Mfg Co
Hastings Equity Grain Bin Mfg Co
Hemphill (A D) Co

Hudson (H D) Mfg Co
Hig Electric Ventilating Co
INLAND STEEL PRODUCTS CO
International Harvester Co
James Mfg Co
Kalamazoo Tank & Silo Co
King Company
Klauer Mfg Co
La-Crosse Steel Roofing & Corrugating Co
Lockport Wood Prods Co
Louden Machinery Co
Lyon Conklin & Co
Massey Harris Co Inc
Michigan Bay Tool Co
Moline Iron Works
Mundie Mfg Co
Myers (F E) & Bro Co
Noy Mfg Co
NU TONE INC
Olson Mfg Co
Papez Machine Co
Patel (A H) Inc
Perkins Electric Co
PITTSBURGH PLATE GLASS CO
QUEEN STOVE WORKS
Rapid Machinery Co
RILCO LAMINATED PRODS INC
Robinson Clay Product Co
Robinson Ventilating Co
Ruben (N B) Co
ST PAUL CORRUGATING CO
Sargent-Bronny Corp
Shaw (H C) Co
SHEPLER MFG CO
Sison Steel Co
Starline Inc
Super-Structures Inc
Sweet (A L) Iron Works
Swift Mfg Co
Trumbull Electric Mfg Co
U S Challenge Co
Universal Blower Co
Universal Hoist & Mfg Co
Vander Edger Tool Co
WESTINGHOUSE ELECTRIC CORP ELECTRIC APPLIANCE DIV
Whitler (S E) Sons Inc
Williams Mill Co Inc
Willis Steel Corp

▶ EQUIPMENT, FIREPLACE

Adams Co
Atlanta Stone Works
Barthart (A W) Co
BENNETT-IRELAND CO
Builder's Fireplace & Supply Co
Chamberlin Co of America Inc
Chattanooga Implement & Mfg Co
Colonial Brass Co
Colonial Fireplace Co
Covert (H W) Co
Cutter Mfg Co
Dunley Bros
Fox Valley Forge
General Foundry Co
HEATILATOR CO
Homes (S M) Inc
Industrial Iron Works
Lieber (Chas A)
Logan Co
MAJESTIC CO
METAL CRAFTERS
Meyers (Fred L) Mfg Co
SHAW FOUNDRY MFG CO
Perless Manufacturing Co
Pinner Co
READYBUILT PRODUCTS CO
Screencraft Co
Sheffield Manufacturing Co
Smith (F F) Wire & Iron Works
Smith (John P) Co
SUPERIOR FIREPLACE CO
Thermo-Rite Manufacturing Co
Vestal Stone Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

▶ EQUIPMENT, HOG

Beatrice Steel Tank Mfg Co
Bernard (Phillip) Co
Brower Mfg Co
Celina Manufacturing Co
Clay Equipment Corp
Clearwater Tank Co
Franklin Equipment Co
Hargrove Company
Hastings Equity Grain Bin Manufacturing Co
Hudson (H D) Manufacturing Co
James Manufacturing Co
Kees (F D) Mfg Co
Louden Machinery Co
Martin Steel Prods Co
Noy Manufacturing Co
Olson Manufacturing Co
Red Cross Manufacturing Co
ST PAUL CORRUGATING CO
Sweet Falls Metal Culvert Co
Starline Inc

▶ EQUIPMENT, POULTRY

Adams-Thuma Co
Aeroll Products Co, Inc
Advance Manufacturing Co
American Insulators Inc
American Line
Anderson Box Co
Baltimore Paper Box Co
Beatrice Steel Tank Manufacturing Co
Bromwell Wire Goods Co
Brower Manufacturing Co
Buckeye Incubator Co

Close-To-Nature Co
Cyclone Manufacturing Co
Des Moines Incubator Co
Esterl Metal Cabinet Co Inc
Excelsior Stone Manufacturing Co
GB-WAY HOMES INC
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
General Implement Corp
Green Lumbar Co
Harder Siro Co
Heiler-Aller Co
Hogson (W C) Co
Hudson (H D) Manufacturing Co
James Manufacturing Co
JOHNS-MANVILLE CORP
Keen Equipment Co Inc
Kleinfont Co
Klirin Manufacturing Co
Lancaster Mfg Co
Leahy Mfg Co
Lyon Rural Electric Co
Mamm Steel Products Co
Miller (J W) Co
National Ideal Co
National Mfg & Stamping Co
New Era Equipment Co
Olson Mfg Co
Ohio Stone Co
Paragon Utilities Corp
Perfection Stone Co
Petalsuma Electric Incubator Co
Purifog Products Inc
Queen Incubator Co
Quinn Wire & Iron Works
Reliable Incubator & Brooder Co
RILCO LAMINATED PRODUCTS INC
Royal Manufacturing Co
ST PAUL CORRUGATING CO
Sheer (H M) Co
Simpler Brooder House Co
Starline Inc
Sun-Hatch Incubator Co
TIMBER STRUCTURES INC
Trumbull Electric Mfg Co
United Steel & Wire Co
Unit Structures Inc
Walsh Paper Box Co
Western Stoneware Co
White Manufacturing Co

▶ ESCAPES, FIRE

ARCTIC DRUMMETAL IRON CO
Badger Wire & Iron Works Inc
Belton Mfg Co
Ely Automatic Fire Escape Co
General Detroit Corp
Grand Rapids Wire Products Co
Logan Co
Moser (George L) Steel Corp
METAL CRAFTERS
St Paul Foundry & Manufacturing Co
Smith (F F) Wire & Iron Works

▶ ESTIMATING SERVICES

Miller-Piehl Co
REMINOTON RAND INC
Tamblyn Systems
Underwood Corp

▶ EXTINGUISHERS, FIRE

Allen (W D) Mfg Co
American-La France Foamite Corp
Autodyst Co
Bostwick Laboratories
Elkhart Brass Manufacturing Co
Eye-Flyer Co
General Detroit Corp
Grinnell Co
Hutchins (E H) Co
International Fire Equipment Corp
Kiddo (Walter) & Co
Pyrene Manufacturing Co
Red Tiger Products Inc
Safety Fire Extinguisher Co
Smith (D B) Inc

▶ FABRICATORS, LUMBER

Cooperative Industries
Hardboard Fabricators
Pacific Board Fabricators
Timber Engineers Inc
WOODALL INDUSTRIES INC

▶ FABRIC, REINFORCING

Forbes Steel Corp
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
TRUSCON STEEL CO DIV REPUBLIC STEEL CORP

▶ FANS, EXHAUST, WALL & CEILING, ATTIC & KITCHEN

Acme Equipment Co
Aerocast Fan Co
AIR CONTROL PRODUCTS INC
Airmaster Corp
Air Temperature Inc
American Blower Corp
AMERICAN CENTRAL DIVISION AVCO MFG CO
American Conlar Corp
Aret Co
Autocast Fan & Blower Co
Bar Brook Mfg Co
Berna Mfg Co
Bran Mfg Co Inc
Buffalo Forge Co
C & H Air Conditioning Fan Co
CAREY (PHILIP) MFG CO
Champion Blower & Forge Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

CHELSEA FAN & BLOWER CO
Circulators & Devices Mfg Co
Chicago Fan Co

COLMAN CO
Dayton Electric Mfg Co
De Rotholz Fans Div American Machine & Metals Inc

DELCO APPLIANCE DIV GENERAL MOTORS CORP
Diehl Mfg Co Electrical Div Singer Mfg Co
Eagle Pieper Co

EMERSON ELECTRIC MFG CO
FASCO INDUSTRIES INC
General Blower Co
GENERAL ELECTRIC CO APPARATUS DEPT
Hartzell Fan & Ventilating Co Inc
HOLCOMB & HONE MFG CO
Hudson (H D) Mfg Co
HUNTER FAN & VENTILATING CO
Hig Electric Ventilating Co
Industries Inc
International Engineering Inc
James Mfg Co
Kaiser Co Inc
LAU BLOWER CO
Lonsgran Mfg Co
MacLeod Co
MAESTIC CO
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
National Appliance Co
National Gas Equipment Co Inc
Nelso (Herman) Corp
New Mfg Co
NUTONE INC
Perkins Electric Co
Propliner Inc
PYVNE & CO INC
Reed Unit-Fans Inc
Robbins & Myers Inc
Russell Electric Co
Samson-United Corp
Schwitzer-Cummins Co
Sheet Metal Products Co
SHEPLER MFG CO
Shreveport Engineering Co
Signal Electric Co
Spartan Electric Co
Standard Electric Mfg Co
Stanton Inc
STEWART MFG CO
Sutton (H A) Corp
Tarrington Mfg Co
TRADE-WIND MOTORFANS INC
Trade Co
Universal Blower Co
Uno Ventilator Co
Utility Appliances Corp
Victor Electric Products Co
Viking Air Conditioning Corp
Wagner Electric Corp
WESTINGHOUSE ELECTRIC CORP ELECTRIC APPLIANCE DIV
West Wind Corp
Winn Ventilator Co

FANS, DRY KILN
American Blower Corp
Bar-Brook Mfg Co
Champion Blower & Forge Co
Clarge Fan Co
Colloid Equipment Co Inc
International Engineering Inc
Moore Dry Kiln Co
Standard Dry Kiln Co
Trane Company
Westinghouse Electric Corp Sturtevant Div

FANS, PORTABLE, WINDOW VENTILATING
Air Controls Inc
Bar-Brook Mfg Co
CHELSEA FAN & BLOWER CO
Diehl Mfg Co Electrical Div Singer Mfg Co
EMERSON ELECTRIC MFG CO
FASCO INDUSTRIES INC
General Blower Co
GENERAL ELECTRIC CO APPARATUS DEPT
Hartzell Propeller Fan Co Div Castle Hills Corp
Hig Electric Ventilating Co
James Mfg Co
LAU BLOWER CO
London Machinery Co
MFG CO
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
NUTONE INC
Perkins Electric Co
Perma-Jack Corp
Reed Unit-Fans Inc
Robbins & Myers Inc
Signal Electric Co
WESTINGHOUSE ELECTRIC CORP ELECTRIC APPLIANCE DIV
Winn Ventilator Co

FANS, VENTILATING, BARN, ELECTRIC
Allen Steel Products
EMERSON ELECTRIC MFG CO
GENERAL ELECTRIC CO APPARATUS DEPT
Hig Electric Ventilating Co
James Mfg Co
LAU BLOWER CO
Ward (Edgar T) Co Inc
WESTINGHOUSE ELECTRIC CORP

FASTENERS, ASBESTOS, CEMENT, SIDING
E & G BUILDING FASTENERS CORP
ELASTIC STOP NUT CORP OF AMERICA
Finnik Equipment Mfg Co

JOHNS-MANVILLE CORP
Timnerman Products Inc
United States Gypsum Co

FASTENERS, CONCRETE FORM
GETTY (H S) & CO INC
Sommer Metallcraft Corp
Starline Inc
Williams Form Engineering Corp

FASTENERS, FIBER, WALLBOARD
Brush Nail Expansion Bolt Co
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
Timmerman Products Inc
UPSON COMPANY
U S Expansion Bolt Co
WOOD CONVERSION CO

FASTENERS, LATH, METAL
Burger Mfg Div Republic Steel Corp
BOGWITH STEEL LATH CO
CECO STEEL PRODUCTS CO
Goldsmith Metal Lath Co
INLAND STEEL INDUSTRIES CO
NATIONAL GYPSUM CO
Penn Metal Co Inc
Soule Steel Co
TAUSCHER STEEL CO
United States Gypsum Co

FASTENERS, STEEL, CORRUGATED
Arnie Steel Co
Independent Metal Strip Co
Larson (Charles O) Co
Parkard (E B) Co
Farker-Kaloum Corp
Signode Steel Strapping Co
STANLEY WORKS

FASTENERS, WOOD JOINT
Arnie Steel Co
Arton Fastener Co
Burger Mfg Div Republic Steel Corp
COLUMBIA-STEEL CO
Dunley Brothers
Knapp & Vogt Mfg Co
LOCKWOOD HARDWARE MFG CO
Parkard (E B) Co
RODDIS PLYWOOD CORP
STANLEY WORKS
Superior Fastener Corp
Timber Engineering Co
Wright Products Co

FEEDERS, SAW, LUMBER
Chase Turbine Mfg Co
Corinth Machinery Co
Corley Mfg Co
Crombush Machy Corp
Lane Mfg Co
Power Development Co Inc
Wheland Co
Yates-American Machine Co

FELT, ROOFING
Ronsdale Genaro Inc
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Globe Roofing Products Co Inc
Logan-Lane Co
Nyloim (E F) Mfg Co
PROTECTIVE PAPERS

FELT, ROOFING, ASPHALT IMPREGNATED
American Asphalt Roof Co
BARRETT DIV ALLIED CHEMICAL & DYE CORP
BIRD & SON INC
CAREY (PHILIP) MFG CO
FLINTRITE CO
Ford Roofing Products Co
JOHNS-MANVILLE CORP
Koppers Co
Lohm Co
Rohlfy Tar & Chemical Corp
RICKKRAFT CO
RUBEROID CO
TEXAS CO
United States Gypsum Co

FENCE, BARBED WIRE
AMERICAN STEEL & WIRE CO
Atlas Fence Co
Lanour Corrugating Co
Continental Steel Corp
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
Rehfeld Steel Corp
Stewart Iron Works Co

TENNESSEE COAL IRON & RAILROAD CO
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

FENCE, CHAIN LINK
American Chain Link Fence Co
Anchor Post Products Inc
Atlas Fence Co
Century Fence Co
Chain Link Fence Corp
CINCINNATI IRON FENCE CO
Colorado Fuel & Iron Corp
Continental Steel Corp
COPPERWELL STEEL CO
Cyclone Fence Div American Steel & Wire Co
Grand Rapids Wire Products Co
Logan Co Inc
Mid-States Steel & Wire Co
NICHOLS WIRE & ALUMINUM CO
Page Steel & Wire Div American Chain & Cable Co Inc
PITTSBURGH STEEL PRODUCTS CO
Southern Wire & Iron Works
Stewart Iron Works
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

FENCE, ELECTRICALLY CHARGED
General Implement Corp
National Metal Products Co
RED DEVIL TOOLS
Sampal Time Control Inc

FENCE & GATES, LAWN, ORNAMENTAL
American Chain Link Fence Co
AMERICAN STEEL & WIRE CO
Anchor Post Fence Div Anchor Post Products Inc
Arnold-Dain Corp
ARTCRAFT ORNAMENTAL IRON CO
Atlas Fence Co
Belton Mfg Co
Burger Mfg Co Div Republic Steel Corp
Bethlehem Steel Co
Bunch (A G) & Co Inc
CEC STEEL PRODUCTS CO
Chain-Link Fence Co
CINCINNATI IRON FENCE CO
Clay Monument Co
COFFMAN (B C) CO INC
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Continental Steel Corp
Cyclone Fence Div American Steel & Wire Co
Davis & Stahl Co
Decorat Iron & Steel Co
Des Moines Ornamental Iron Co
FANSCO MFG DIV FALLS STAMPING & WELDING CO
Forber Steel Corp
Franklin Monument Co
GENERAL BRONZE CORP
General Implement Corp
Hawkins Iron Co Inc
Illinois Wire & Mfg Co
International Steel Co
KEYSTONE STEEL & WIRE CO
Logan Co
METAL CRAFTERS
Meyer (Fred L) Mfg Co
Mid-States Steel & Wire Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
Page Steel & Wire Div American Chain & Cable Co Inc
PITTSBURGH STEEL PRODUCTS CO
Redwood Garden Materials Co
REPUBLIC STEEL CORP
Sawtoe Ornamental Iron Co
Smith (F P) Wire & Iron Works Inc
Standard Mfg Co
Stewart Iron Works Co Inc
TENNESSEE COAL IRON & RAILROAD CO
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

FENCE, RUSTIC
Anchor Post Fence Div Anchor Post Products Inc
Arnold-Dain Corp
Century Fence Co
Eldridge Co
Fence Company of America
Linscraft Inc
MacNeill & Gibbs Co
Whiting Fence Co
Wolfe (Harry M) Wood Products Co

FENCE, SNOW
Capital Fence Co
Gagner (E S) Lumber Co
Humboldt Fence & Supply Co
Illinois Wire & Mfg Co
Klamath Pine Mills Co
Linscraft Inc
Matton Wire & Mfg Co
Nebraska Bridge Supply & Lumber Co
ROWE MFG CO
Security Fence & Mfg Co
Wheeler-Arnold Co

FENCE, WIRE
AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
Colorado Fuel & Iron Co
COLUMBIA STEEL CO
Continental Steel Corp
COPPERWELL STEEL CO
Forbes Steel Corp
Jones & Laughlin Steel Co
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

FENCE, WOOD
Adelphian Mill
Arnold-Dain Corp
Atlas Fence Co
BRADLEY LUMBER CO OF ARK
Capital Fence Co
Concord Woodworking Co
CONNOR LUMBER & LARD CO
CROSSETT LUMBER CO
Davis & Stahl Co
Eldridge Company
Fordyce-Cumsett Lumber Co
Front Lumber Industries Inc
Gagner (E S) Lumber Co
Georgia-Pacific Plywood & Lumber Co
Hines (Edward) Lumber Co
Illinois Wire & Mfg Co
Linscraft Inc
LONG-BELL LUMBER CO
MacNeill & Gibbs Co
Matton Wire & Mfg Co
Nebraska Bridge Supply & Lumber Co
Redwood Garden Materials Co
ROWE MFG CO
Silberpage (George) & Sons Co
Southern Lumber Co
SOUTHWEST VIRGE LUMBER CO
Texas Fence Co
WEYERHAEUSER SALES CO
Whiting Fence Co
Willamette Valley Lumber Co
Wilson (A K) Lumber Co
Wolfe (Harry M) Wood Products Co

FERTILIZER, LAWN
Armour & Co Fertilizer Works Div
Midwest Beverage Commission
Smith & Company
Walker-Gordon Laboratory Co

FILERS, SAW, BAND, CIRCULAR, ETC
Atkins (E C) Co
BOICE CRANE CO
Chattanooga Saw Works
Corley Mfg Co
DISSTON (HENRY) & SONS INC
FOLLEY MFG CO
Hancher Mfg Co
Nutter Brothers Saw Mfg Co

FILES & RASPS
American Swin File & Tool Co
Atkins (E C) Company
Chelsea File Works
Delta File Works Inc
DISSTON (HENRY) & SONS INC
Heller Brothers
Hoe (R) & Company Inc
Hunk Hooper Mfg Co
International Twist Drill Corp
Nicholson File Co
Plymth (Patterson E) Inc
Proto Tool Co
RED DEVIL TOOLS
SIBMONS SAW & STEEL CO

FILLERS, CRACK & JOINT
Acme White Lead & Color Works
Alabastine Paint Products Div Chicago
Browne & Color Works
American Varnish Co
ARMSTRONG CORK CO
Blue Ridge Talc Co
Boston Varnish Co
Boyer Chemical Laboratory Co
Boyle-Midway Inc
Central Paint & Varnish Works
Chicago Brown & Color Works
Consumers Glue Co
Durham (Donald) Company
Elliott Paint & Varnish Co
FABRICATED PRODUCTS CO
Fenton Sinker Co Inc
Gidden Co
Gumpstien Laboratories
JOHNS-MANVILLE CORP
Johnston (E F) Paint Co
Lanning Products Co
Lone Brothers
NATIONAL GYPSUM CO
Paisley Products
Patterson-Sargent Co
Perora Paint Co Inc
PITTSBURGH PLATE GLASS CO
Precision Engineering Co
Reardon Co
Rohlfy Tar & Chemical Corp
Sawyer Co
Rehalk Chemical Co
SERVICISED PRODUCTS CORP
Shaffner Bros & Co Paint Corp
Smooth-On Mfg Co

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Stevelite Mfg Co
Stonhard Co
Tanna Industries Inc
Technical Supply Co
Tilette Cement Co Inc
United Glassite Laboratories
U S Gypsum Co
Webb Products Co
Wesco Waterpains
X-Pando Corp

► FILLERS, JOINT, SEWER PIPE

CAREY (PHILIP) MFG CO
JOHNS-MANVILLE CORP
Kaul Clay Mfg Co
Keystone Asphalt Products Co
NATIONAL CLAY PIPE MFGS INC
Rohlfman Clay Product Co
SERVICISED PRODUCTS CORP

► FILLERS, WOOD

Acme White Lead & Color Works
Alabantine Paint Products Div Chicago
Brouse & Color Works
American Varnish Co
Berry Brothers Inc
Boyle-Midway Inc
Bradley & Vrooman Co
Brening Brothers
BRUCE (E L) COMPANY
Chicago Bronze & Color Works
Devoe & Raynolds Inc
Du Pont (E I) de Nemours & Co
Elliott Paint & Varnish Co
Feltan Nitely & Co Inc
Fuller (W F) & Company
Gildren Company
Keystone Varnish Co
Lowe Brothers
O'Brien Corp
Parler (Gra) & Sons
Patterson-Jargent Co
Peaslee-Gaubert Paint & Varnish Co
PITTSBURGH PLATE GLASS CO
Pratt & Lambert
Boardman Co
Savogran Co
Schalk Chemical Co
Schalk Paint & Varnish Co
Sheffield Bronze Paint Corp
Shawin-Williams Co
Stevelite Mfg Co
U.S. Gypsum Laboratories
U S FLYWOOD CORP
Webb Products Co
Wilbur & Williams Co

► FILTERS, AIR

Albion Supply Co
AIR RECTIFIERS INC
Frigidaire Division General Motors Corp
OWENS-CORNING FIBERGLAS CORP
Research Products Co
Trane Co
Trion Inc

► FINANCING SERVICES

ALLIED BUILDING CREDITS INC
Commercial Credit Corp
Douglas-Guardian Warehouse Corp
Investors Syndicate
Lawrence Warehouse Co
NATIONAL LIFE INSURANCE CO
St Louis Terminal Warehouse Co
U S Savings & Loan League

► FINISHER, CONCRETE FLOOR

JAEGER MACHINE CO
Whitman Mfg Co

► FINISHERS, WALLBOARD JOINT

CELATYX
CERTAIN-TEED PRODUCTS CORP
Durham (Dowdell) Co
JOHNS-MANVILLE CORP
MARSH WALL PRODUCTS INC
NATIONAL GYPSUM CO
Boardman Co
Schalk Chemical Co
U S Gypsum Co
UPSON CO
Wesco Waterpains Inc

► FINISHES, WATERPROOF, ASPHALT

Dowtex Mfg Corp

► FINISHES & SEALER, FLOOR

Abateco Mfg Corp
Alabantine Paint Products Div Chicago
Brouse & Color Works
AMERICAN FLOOR SURFACING MACHINE CO
American Floor Co Inc
American Marietta Co
American Varnish Co
Bendon Varnish Co
BRUCE (E L) COMPANY
Camp Chemical Co Inc
Ceracon Chemical Corp
Chapman Chemical Co
Chicago Bronze & Color Works
Chi-Namel Paint & Varnish Co
Clarke Sanding Machine Co
Continental Abrasives & Refining Corp
Cromar Co
Devoe & Raynolds Co Inc

Du Pont (E I) de Nemours & Co Inc
FLINTKOTE CO INC
Franklin Research Co
Glidden Co
Hilger Co
Huron (A C) Company Inc
International Chemical Co
Johnson (H C) & Co Inc
Lowe Bros Co
Minnesota Mining & Mfg Co
Minnesota Platon Corp
Monometa Chemical Co
No Surfas Corporation
O'Brien Corp
Patterson-Jargent Co
Pierce & Stevens Inc
PITTSBURGH PLATE GLASS CO
Flact-Koto Co
Sealson Products Inc
Seidilla Paint & Varnish Co
Sinnobers (L) Sons
Standard Floor Co
Stevelite Mfg Co
Tanna Industries Inc
Technical Supply Co
Tremco Mfg Co
Tutomete Co Inc
U S FLYWOOD CORP
Vita-Var Corp
Waterloo Div Empire Varnish Co
Wesco Waterpains Inc
Wettrill (Geo D) & Co
X-Pando Corp

► FIREPLACE, OUTDOOR & EQUIPMENT

BENNETT-IRELAND INC
Builder's Fireplace & Supply Co
Chattanooga Implement & Mfg Co
Colonial Brn Co
Dunley Brothers Co
Grill-Craft Co
Hart Products Inc
HEATILATOR INC
Industrial Iron Works
KEWAWEE MFG CO
Lewco Co
MAJESTIC CO
Mexico Refrigerators Co
Ohio Stove Co
Outdoor Oven Fireplace Co
Purdon Mfg Co
PRICE FIREPLACE HEATER & TANK CORP
SNEPLER MFG CO
Silent Glow Oil Burner Corp
Smith (F F) Wire & Iron Works
Southern Barbeque Grill
SUPERIOR FIREPLACE CO
Tostal Stove Co
Western Foundry Co
Wiemann (Ernest) Iron Works

► FIREPLACES, UNITS, METAL

American Stove Co Inc
BENNETT-IRELAND CO
Builders Fireplace & Supply Co
Cary Industries
Conert (H W) Co
Dunley Bros
Gabriel Steel Co
Heartlake Conditioning Co
Heartlake-Tripoli Fireplace Co
HEATILATOR CO
MAJESTIC CO
Northwest Metal Products Inc
PRICE FIREPLACE HEATER & TANK CORP
READYBUILT PRODUCTS CO
SNEPLER MFG CO
SUPERIOR FIREPLACE CO

► FIREPROOFING COMPOUNDS, WOOD

Acme Flame Control Corp
Albi Chemical Corp
American Lumber & Treating Co
Borer Chemical Laboratory Co
Camp Chemical Co Inc
Dow Chemical Co
DuPont (E I) de Nemours & Co
Koppers Co Inc
McKeown Brothers
Monsanto Chemical Co
Prie Fire & Water Proofing Co
Protexal Corp
Sulfinax Co
Wayne Chemical Products Co
Wilbur & Williams Co

► FITTINGS, ELECTRIC

Amplion Electric Co
Arrow Hart & Hresman Electric Co
Bryant Electric Co
GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
Gits Molding Corp
Hill Engineering Co
Hombell (Harvey) Inc
Laminated Metals Products Corp

► FITTINGS, PLUMBING & HEATING

American Copper & Brass Works
AMERICAN RADIATOR & STANDARD SANI-TARY CORP

American Sanitary Mfg Co
Astrope Co
Barrow Mfg Co
BELL & GOSSETT CO
BRIGGS MFG CO
Burr (A M) Co
CASE (W A) & SON MFG CO
Central Brass Mfg Co
CHASE BRASS & COPPER CO
Chicago Faucet Co
Cundick Pipe Products Co
CRANE COMPANY
Dart (E M) Mfg Co
Detroit Brass & Malleable Works
Dick Brothers Inc
Durd Mfg Co
ELIER CO
Firestone Tire & Rubber Co
General Fittings Co
Glasher Brass
Graham Mfg Co
Harvey Machine Co Inc
James Mfg Co
Keystone Brass & Rubber Co
Knights (James) Company
KOHLER CO
McDonald (A Y) Mfg Co
McDonnell & Miller Inc
Moeller Brass Co
National Tube Co
Penberthy Injector Co
Powell (William) Co
Price-Prater Brass Mfg Co
Republic Brass Co
REYNOLDS METALS CO
Richfield Brass Works
Schalk Co
Seovill Mfg Co
Sherman (H B) Mfg Co
Speakman Co
TRUSH (H A) CO
Trane Company
Trenon Pipe Nipple Corp
UNIVERSAL-BUNDLE CORP
Walworth Co
Wolf Mfg Co
Youngstown Steel Products Co

► FIXTURES, BLACKBOARD

Amtral Sales Corp

► FIXTURES, ELECTRIC INCANDESCENT LIGHT

Bell Electric Company
Benjamin Electric Mfg Co
Bryant Electric Co
Curtis Lighting Inc
Farnes Mfg Co
Frink Corp
Glaszler Co
Globe Lighting Products Inc
Guth (Edwin F) Co
Holophane Co Inc
Home-Craft Electronic Products
Kees (F D) Mfg Co
Kirtlin Co
Kramm (Walter S) Co
La Salle Products
Lightoller Co
MARKEL ELECTRIC PRODUCTS CO
Metallic Arts of New England Inc
Miller Co
Moe Brothers Mfg Co
Neo-Ray Products Inc
Old Guilford Forge
Pan & Seymour Inc
PRYME & CO INC
Pyle-National Co
Silver-Lighting Inc
Smooth-Holman Co
Stober Mfg Co
Superior Plastics Div Commonwealth Plastic Inc
Swain & Bridge Savelier Co
Sylvania Electric Products Inc
TECHNICAL GLASS CO INC
Tuttle & Bailey
Virden & Co
WESTINGHOUSE ELECTRIC CORP

► FIXTURES, FLOUORESCENT

Alcco Mfg Co
Benjamin Electric Co
Cupples Co
Curtis Lighting Inc
Day-Brite Lighting Inc
Eagle Electric Mfg Co Inc
Flex-O-Lite Co
Fluorescent Fabricators Div Easy-Eye Light-ing Inc
Fluorescent Lighting Co
Frink Corp
GENERAL ELECTRIC CO APPARATUS DEPT
Guth (Edwin F) Co
Ingram-Richardson Mfg Co
International Lighting Co
Lightoller Co
Long (W B) Co
Metalfact Serron Co
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
Mern Light & Equipment Co
Neo-Ray Products Inc
Smithcraft Lighting Div
Superior Plastics Div Commonwealth Plastic Inc
Sylvania Electric Products Inc
Virden Co
WESTINGHOUSE ELECTRIC CORP
Wheeler Reflector Co
Wiley (H & W) Corp

► FIXTURES, PLUMBING

Abbington Pottery
ALLIANCEWARE INC
AMERICAN RADIATOR & STANDARD SANI-TARY CORP
American Sanitary Mfg Co
Berger (Thomas W) Inc
Bowers Pottery Co
BRIGGS MFG CO
Camden Pottery Div Universal-Bundle Corp
CASE (W A) & SON MFG CO
Chicago Pottery Co
Clow (James B) & Sons
CRANE COMPANY
Dowdell (John) Co
ELIER CO
General Ceramics & Steatite Corp Sanitary Ware Div
Haljoca Corp
Harvey Machine Co Inc
Homolux Mfg Co
KOHLER CO
Kokomo Sanitary Pottery Co
Mansfield Sanitary Pottery Co
Maydon (David) Tool Corp
McDonald (A Y) Mfg Co
MILWAUKEE FLUSH VALVE CO
MULLINS MFG CO
Murphy Corp of America
National Plumbing Fixture Corp
Pioneer Co
Price-Prater Brass Mfg Co
Reveal Brass Mfg Co
RICHMOND RADIATOR CO
Robinson Clay Product Co
Sealsale Co
Sherman (H B) Mfg Co
Shobe & Co Inc
Speakman Co
Streamstar Shower Corp
Trenon Pottery Co
U S Sanitary Mfg Co
UNIVERSAL-BUNDLE CORP
Universal Sanitary Mfg Co
Wilmington Castings Co
Zurn (J A) Mfg Co

► FIXTURES, SHARPENING

Trayco Products

► FIXTURES, SHOWER

American Brass Mfg Co
AMERICAN RADIATOR & STANDARD SANI-TARY CORP
Central Brass Mfg Co
CRANE COMPANY
ELIER CO
FIAT METAL MFG CO
MILWAUKEE FLUSH VALVE CO
Moeller Co
Price-Prater Brass Mfg Co
Ravena Metal Products Co
Sanitary-Bath Co
Seovill Mfg Co
Speakman Co
Streamstar Shower Corp

► FIXTURES, STORE LIGHTING

Garden City Plating & Mfg Co
GENERAL ELECTRIC COMPANY APPARATUS DEPT
Mitsell Mfg Co
Savelier Co
Sylvania Electric Products Inc
WESTINGHOUSE ELECTRIC CORP

► FIXTURES & MATERIALS, STORE DISPLAY

About Displays
A B C Cabinet Fixture Works
Adler-Jones Co
Allied Display Materials
American Fixture & Mfg Company
American Plywood Corp
Amen (W E) Company
Barrow Mfg Co
Berger Mfg Co Div Republic Steel Corp
BIL-JAX CO
Brewer-Titchener Corp
Chicago Card Holder Co
Colgate Mfg Corp
Columbus Show Case Co
Commonwealth Plastics Inc Superior Plastics Div
Detroit Show Case Co
Dimplax Craft
FORMICA CO
Eustopie Div Aurora Equipment Co
Fuller Displays Inc
Fulton Glass Co
Garden City Fixing & Mfg Company
Garrison-Wagner Printing Co
General Die & Stamping Co
Grand Rapids Store Equipment Co
Hampton Mfg Co Inc
Heller (W C) & Co
Hirsch (S A) Mfg Co
Interlock Metal Units Inc
Johnston Glass Co
Keo-Ro-Bill Corp
Knappe & Vogt Mfg Co
Lithographers Inc
LONG-BELL LUMBER CO
Lyon Metal Products Co
May-Bitt Inc
Metal Decorating & Mfg Co
Multiplex Display Fixture Co
National Sawdust Co
Reardon Co
RED DEVIL TOOLS
Reeves (Huron E) Co
Reक्टर Fixture Corp
Reischer Creations Inc

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Schwartz Showell Corp
Simplex Store Equipment Inc
Wilks Spruce Lumber & Mfg Co
Stanford Wood Products Co
Stensgaard (W L) & Associates Inc
Stillwater Mfg Co
Sior Engineering Co
Stora Kraft Mfg Co
TECHNICAL GLASS CO
Timberstone Decorative Co
Universal Equipment Co
Waddell Company Inc
Warner Mfg Co
Warren (J D) Mfg Co

▶ FLAGSTONES

Caroline Flagstone Co
Evergreen Slate Co Inc
Landscape Slate & Roofing Co Inc
Tennessee Stone Company Inc

▶ FLAMEPROOFING COMPOUNDS

Astrup Co
Classics Products Corp
Diversey Corp
Flame-Shell Corp
Fox Brothers Mfg Co
Kuhls (H B Prod)
Per-Mix Motherrock Co
Reardon Co
Trojan Products & Mfg Co
Wayne Chemical Products Co

▶ FLANGES, FLUE

Adams Co
Chatanooga Implement & Mfg Co
Columbia Pipe Co
Evans Pipe Co
Kees (F D) Mfg Co

▶ FLASHING, ALUMINUM

Central Products Co
New Holland Metal Co
NICKOLS WIRE & ALUMINUM CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV

▶ FLASHING, COPPER

American Brass Co
Angier Corp
BARRETT DIV ALLIED CHEMICAL & BYE CORP
CECO STEEL PRODUCTS CO
Central Products Co
CHASE BRASS & COPPER CO
Hussey (C C) Co
INLAND STEEL PRODUCTS CO
Bessemer Copper & Wire Co
ST PAUL CORRUGATING CO
SISKRAFFT CO
Waco Flashing Co

▶ FLASHING, LEAD

Division Lead Co
National Lead Co
Rochester Lead Works

▶ FLASHING, METAL, GALVANIZED

Allen Steel Products
AMERICAN STEEL & WIRE CO
Borger Mfg Div Republic Steel Corp
CECO STEEL PRODUCTS CO
Central Products Co
Cheney Industries
Continental Steel Corp
Edwards Mfg Co
FLINTKOTE CO INC
Gary-Pioneer Steel Corp
Illinois Zinc Co
INLAND STEEL PRODUCTS CO
LaCrosse Steel Roofing & Corrugating Co
Metal Tile Products Inc
Mid-States Steel & Wire Co
Northwest Metal Products Inc
Penn Supply & Metal Corp
REPUBLIC STEEL CORP
ST PAUL CORRUGATING CO
Sealton Products Inc
United States Steel Co
Wheeling Corrugating Co

▶ FLASHING, PAPER TREATED

Angier Corporation
CARY (PHILIP) MFG CO
JONES-NAVILLE CORP
Lohm Co
PROTECTIVE PAPERS INC
SISKRAFFT CO
SUBEROID CO
ST PAUL CORRUGATING CO
SISKRAFFT CO

▶ FLASHING, RUBBER

Rubber & Plastic Coated Products Co Inc

▶ FLOATS, CONCRETE

VIBRATING
SYNTRON CO

▶ FLOATS, TANK

American Sanitary Mfg Co

Arling & Belcher Co
Detroit Finat & Stamping Corp
Serrill Mfg Co
Williams-Bowman Rubber Co

▶ FLOORING, BASEWOOD LAMINATED

Woodcraft Industries Inc

▶ FLOORING, BLOCK

BRADLEY LUMBER CO
BRUCE (E L) CO
Cincinnati Floor Co
CONNOR LUMBER AND LAND CO
Cromar Co
Evans Hardwood Flooring Co
FAIR (D L) LBR CO
Farrin (M B) Lbr Co
Georgia-Pacific Plywood Co
Harris Mfg Co
WIGGINS INC
Holt Hardwood Co
Hurtshero Oak Flooring Co Inc
Memphis Hardwood Flooring Co
Miller Bros Co Inc
Nicker Bros Inc
North Branch Flooring Co
Paxton (Frank) Lbr Co
Robbins Flooring Co
Stuart Lumber Corp
Virginia Oak Flooring Co

▶ FLOORING, CORK

ARMSTRONG CORK CO
Cork Insulation Co Inc
Dodge Cork Co Inc
KENTILE INC

▶ FLOORING, FIR

Glantina Bros Lumber Co
Hines (Edward) Lumber Co
Johnson (C D) Lumber Corp
LONG-BELL LUMBER CO
Oregon-American Lumber Corp
Robinson Mfg Co
Robinson Plywood & Timber Co
Silbernagel (George J) & Sons Co
WERNERHAUSER SALES CO

▶ FLOORING, HARDWOOD, BEECH

Anderson-Tully Co
Arkansas Oak Flooring Co
Atlanta Oak Flooring Co
Babeoek Lumber Co
BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
Central Oak Products Co
Clarke County Lumber Mills
Colonial Hardwood Flooring Co
Cook (F C) & Co
Cotton & Hanlon
CROSSETT LUMBER CO
Dalley Flooring Corp
Emporium Forestry Co
Evans Hardwood Flooring Co
FAIR (D L) LUMBER CO
Farrin (M B) Lumber Co
Fordyce-Crossett Lumber Co
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
Holt Hardwood Co
Kenosha Hardwood Flooring Co
Kerry & Hanson Flooring Co
Leathers (A B) Mfg Co
LONG-BELL LUMBER CO
Marsh Lumber Corp
McMinville Mfg Co
Meadow River Lumber Co
Memphis Hardwood Flooring Co
Merill Oak Flooring Co
Miller Brothers Co
Mobile River Saw Mill Co
Monterey Hardwood Flooring Co
Mower Lumber Co
Nicker Brothers Inc
Owen (B C) Co
Farnell Lumber Co
Paxton (Frank) Lumber Co
Phillips-Rhyne Lumber Co
Robbins Flooring Co
Rose (D M) & Co
Silbernagel (Geo J)
Southern Lumber Co
SOUTHERN PINE & LUMBER CO
Stuart Lumber Corp
Texark Flooring Co
Tibbals Flooring Co
Virginia Oak Flooring Co
Webster (H E) Lumber Co
Wells (J W) Lumber Co
Williams & Voris Lumber Co
Wood-Mosaic Co Inc
Yawkey-Bassett Lumber Corp

▶ FLOORING, HARDWOOD, BIRCH

Atlanta Oak Flooring Co
Babeoek Lumber Co
Clarke County Lumber Mills
CONNOR LUMBER & LAND CO
Cotton & Hanlon

Dalley Flooring Corp
Emporium Forestry Co
Farrin (M B) Lumber Co
Georgia-Pacific Plywood & Lumber Co
Holt Hardwood Co
Meadow River Lumber Co
Miller Brothers Co
Mower Lumber Co
Nicker Brothers Inc
Paxton (Frank) Lumber Co
Phillips-Rhyne Lumber Co
Robbins Flooring Co
Schreiber (William C) Lumber Co
Silbernagel (Geo J)
Virginia Oak Flooring Co
Wells (J W) Lumber Co
Wood-Mosaic Company Inc

▶ FLOORING, HARDWOOD, FIBER

See Wood Flooring Inc

▶ FLOORING, HARDWOOD, MAPLE

Atlanta Oak Flooring Co
Babeoek Lumber Co
Barger (P M) Lumber Co
BRUCE (E L) CO
Carr Lumber Co
Central Oak Products Co
Clarke County Lumber Mills
Colonial Hardwood Flooring Co
CONNOR LUMBER & LAND CO
Cook (F C) & Co
Cotton & Hanlon
Cromar Co
Dalley Flooring Corp
Emporium Forestry Co
Evans Hardwood Flooring Co
Farrin (H B) Co
Ferguson (W T) Lumber Co
Georgia-Pacific Plywood & Lumber Co
Harris Mfg Co
Hines (Edward) Lumber Co
Holt Hardwood Co
Horner Flooring Co
Kerry & Hanson Flooring Co
Lightsey Brothers
Marsh Lumber Co
McMinville Mfg Co
Meadow River Lumber Co
Miller Brothers Co
Monterey Hardwood Flooring Co
Mower Lumber Co
Nichols & Cox Lumber Co
North Branch Flooring Co
Owen (B C) Co
Paxton (Frank) Lumber Co
Phillips-Rhyne Lumber Co
Robbins Flooring Co
Rose (D M) & Co
Schreiber (William C) Lumber Co
Scottdale Wood Products Inc
Silbernagel (George J) & Sons Co
Stuart Lumber Corp
Tibbals Flooring Co
Twin City Hardwood Lumber Co
Virginia Oak Flooring Co
Webster (H E) Lumber Co
Wells (J W) Lumber Co
Wells (J W) Lumber Co of Ala
Williams & Voris Lumber Co
Wood-Mosaic Co Inc

▶ FLOORING, HARDWOOD, OAK

Anderson-Tully Co
Arkansas Oak Flooring Co
Atlanta Oak Flooring Co
Atlantic Lumber Co
Babeoek Lumber Co
Barger (P M) Lumber Co
Barrow Lumber Corp
Borston Mfg Co
BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
Carolin Lumber Co
Carpenter Oak Flooring Co
Carr Lumber Co
Central Oak Products Co
Chapman & Beery Lumber Co
Clarke County Lumber Mills
Cloud Oak Flooring Co
Colonial Hardwood Flooring Co
CONNOR LUMBER & LAND CO
Cook (A B) Co
Cook (F C) & Co
Cotton & Hanlon
Cromar Co
CROSSETT LUMBER CO
Dalley Flooring Corp
De Soto Hardwood Flooring Co
Dierks Lumber & Coal Co
Emporium Forestry Co
Evans Hardwood Flooring Co
Exchange Sawmills Sales Co
FAIR (D L) LUMBER CO
Farrin (M B) Lumber Co
Ferguson (W T) Lumber Co
Fordyce-Crossett Lumber Co
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
Green Lumber Co
Hallitt Mfg Co
Hurtshero Oak Flooring Co Inc
Kirby Lumber Corp
Lightsey Brothers
LONG-BELL LUMBER CO
Miller & Co Inc
Phillips-Rhyne Lumber Co
Scottch Lumber Co
Silbernagel (George J) & Sons Co
Southern Lumber Co
SOUTHERN PINE LUMBER CO

Holt Hardwood Co
Hurtshero Oak Flooring Co Inc
Industrial Lumber Co
Kirby Lumber Corp
Lancaster Corp
Lanham Hardwood Flooring Co
Leathers (A B) Mfg Co
Lightsey Brothers
LONG-BELL LUMBER CO
Marsh Lumber Co
McMinville Mfg Co
Meadow River Lumber Co
Monterey Hardwood Flooring Co
Merill Oak Flooring Co
Miller & Co Inc
Miller Brothers Co
Mobile River Saw Mill Co
Monterey Hardwood Flooring Co
Mower Lumber Co

▶ FLOORING, HARDWOOD, FIBER

See Wood Flooring Inc

▶ FLOORING, HARDWOOD, MAPLE

Atlanta Oak Flooring Co
Babeoek Lumber Co
Barger (P M) Lumber Co
BRUCE (E L) CO
Carr Lumber Co
Central Oak Products Co
Clarke County Lumber Mills
Colonial Hardwood Flooring Co
CONNOR LUMBER & LAND CO
Cook (F C) & Co
Cotton & Hanlon
Cromar Co
Dalley Flooring Corp
Emporium Forestry Co
Evans Hardwood Flooring Co
Farrin (H B) Co
Ferguson (W T) Lumber Co
Georgia-Pacific Plywood & Lumber Co
Harris Mfg Co
Hines (Edward) Lumber Co
Holt Hardwood Co
Horner Flooring Co
Kerry & Hanson Flooring Co
Lightsey Brothers
Marsh Lumber Co
McMinville Mfg Co
Meadow River Lumber Co
Miller Brothers Co
Monterey Hardwood Flooring Co
Mower Lumber Co
Nichols & Cox Lumber Co
North Branch Flooring Co
Owen (B C) Co
Ozark Oak Flooring Co
Rose (D M) & Co
Schreiber (William C) Lumber Co
Scottch Lumber Co
Scottdale Wood Products Inc
Silbernagel (George J) & Sons Co
Southern Lumber Co
SOUTHERN PINE LUMBER CO
Stewart (E A) Lumber Co
Stowers Lumber & Mfg Co
Stuart Lumber Corp
Texark Flooring Co
Tibbals Flooring Co
Twin City Hardwood Lumber Co
Virginia Oak Flooring Co
Webster (H E) Lumber Co
Wells (J W) Lumber Co
Wells (J W) Lumber Co of Ala
Westcott (J D) & Son
Williams & Voris Lumber Co
Wood-Mosaic Co Inc

▶ FLOORING, HARDWOOD, PECAN

Anderson-Tully Co
Arkansas Oak Flooring Co
BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
Clarke County Lumber Mills
FAIR (D L) LBR CO
Fordyce-Crossett Lumber Co
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
Hallitt Mfg Co
Industrial Lumber Co
LONG-BELL LBR CO
Meadow River Lumber Co
Memphis Hardwood Flooring Co
Miller & Co Inc
Mobile River Saw Mill Co
Nicker Brothers Inc
Owen (B C) Co
Phillips-Rhyne Lumber Co
Silbernagel (George J) & Sons Co
Southern Lumber Co
SOUTHERN PINE LUMBER CO
Texark Flooring Co
Twin City Hardwood Lumber Co

▶ FLOORING, PINE

Anderson-Tully Co
Babeoek Lumber Co
Barger Lumber Corp
Barger (P M) Lumber Co
BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
Clarke County Lumber Mills
Colonial Hardwood Flooring Co
Cotton & Hanlon
CROSSETT LUMBER CO
Dargen Lumber Mfg Co
Dierks Lumber & Coal Co
Emporium Forestry Co
Exchange Sawmills Sales Co
FAIR (D L) LUMBER CO
Ferguson (W T) Lumber Co
Fordyce-Crossett Lumber Co
Frost Hardwood Floors Inc
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
Green Lumber Co
Hallitt Mfg Co
Hurtshero Oak Flooring Co Inc
Kirby Lumber Corp
Lightsey Brothers
LONG-BELL LUMBER CO
Miller & Co Inc
Phillips-Rhyne Lumber Co
Scottch Lumber Co
Silbernagel (George J) & Sons Co
Southern Lumber Co
SOUTHERN PINE LUMBER CO

▶ FLOORING, HARDWOOD, PRE-FINISHED

BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
Cincinnati Floor Co
Cromar Co
FAIR (D L) LUMBER CO
WIGGINS INC
Memphis Oak Flooring Co
Southern Lumber Co

▶ FLOORING, MARBLE

Vermont Marble Co

Manufacturers' Names and Addresses Start on Page D-76

Manufacturers' Brand Name Identifications Start on Page D-64

FLOORING, PARQUETRY

Anchor Lumber Co
Bayer (F M B) Lumber Co
BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
CROWNE LUMBER & LAND CO
Cramer Co
FAIR (B L) LUMBER CO
Farris (M B) Lumber Co
Georgia-Pacific Plywood & Lumber Co
Harris Mfg Co
KASKELITE MFG CORP
Newcastle Industries Inc
PARKAY INC
Paxton (Frank) Lumber Co
Pearson Hardwood Flooring Co
Robling Flooring Co
Silbermagn (George J) & Sons Co
Stuart Lumber Corp
Texaco Flooring Co
Twin City Hardwood Lumber Co
Virginia Oak Flooring Co

FLOORING, PLANK

Anderson-Tully Co
Arkansas Oak Flooring Co
Atlanta Oak Flooring Co
BRADLEY LUMBER CO
BRUCE (E L) CO
Central Oak Products Co
Cincinnati Floor Co
Cloud Oak Flooring Co
Cotton & Ream
De Soto Hardwood Flooring Co
Evans Hardwood Flooring Co
FAIR (E L) CO
Farris (M B) Lumber Co
Front Lumber Industries Inc
Georgia-Pacific Plywood Co
Harris Mfg Co
Holt Hardwood Co
LONG-BELL LUMBER CO
Marsh Lumber Co Inc
McMinville Mfg Co
Meadow River Lumber Co
Memphis Hardwood Flooring Co
Miller Bros Co Inc
Nicker Brothers Inc
North Branch Flooring Co
Owen (E C) Co
PARKAY INC
Paxton (Frank) Lumber Co
Phillips-Royce Lumber Co
Boer (D M) & Co
Seaside Wood Products Inc
Texaco Flooring Co
Virginia Oak Flooring Co
Wells (J W) Lumber Co

FLOORING, RUBBER

ARMSTRONG CORP CO
Flash Stone Company Inc
Fremont Rubber Co
Goodrich (R F) Co
Johnson Industries Inc
RCA RUBBER CO
Robbins Floor Products
Roxdale Building Products Corp
SERVICISED PRODUCTS CORP
U S Rubber Co

FLOORING, STEEL

Armed Drainage & Metal Products Inc
Blaw-Knox Div Blaw-Knox Co
FENESTRA BUILDING PRODUCTS
Inland Steel Co
International Steel Co
Jones & Laughlin Steel Co
Mason (E C) Co
Owens Steel Flooring Institute Inc
United States Steel Co
Wheeling Corrugating Co
WRIGHT MFG CO

FLOORING, SUB-COMPOSITE

BARRETT DIV ALLIED CHEMICAL & DYE CORP

FLOORING UNDERLAYMENT

ARMSTRONG CORP CO BUILDING MATERIALS DIV
Ronafile Genasco Inc
CORCO CO
CROWNE LUMBER & LAND CO
Consumers Fibre Co
FLINTKOTE CO
Keystone Asphalt Products Co
MAGNITE CORP
MIRACLE ADHESIVES CORP
Pioneer Latex & Chemical Co Inc
Plumwood Corp
PROTECTIVE PAPERS INC
Selly Battersby & Co
SERVICISED PRODUCTS CORP
Simon Blanton Corp
Tammis Industries Inc
Tile-Tex Div Flintkote Co

FLOOR POLISHERS

BLACK & BECKER MFG CO
BRADFORD MACHINE TOOL CO
BRUCE (E L) CO
Dumore Co
BALL TOOL CO
MILWAUKEE ELECTRIC TOOL CORP
PITTSBURGH PLATE GLASS CO

FLOOR RESURFACERS

Acme Adhesives Covering & Flooring Co
Adhesive Co

American Fluorite Co Inc
Anti-Hydro Waterproofing Co
Camp Company
CERESIT
WADLEY LUMBER CO OF ARK
Coddington (E D) Mfg Co
Consumers Fibre Co
Curtis Mfg & Ashton Co
Everette Corp
Flash-Stone Company Inc
Flexrock Co
Glidden Co
Horn (A C) Co
Jurefite Co Inc
Keystone Asphalt Products Co
Master Builders Co
MIRACLE ADHESIVES CORP
Monroe Co Inc
MOORE (GOODLOE E) CO
Reardon Co
Roe-Wood Flooring Inc
Rutland Pipe Clay Co
Schalk Chemical Co
Selly Battersby & Co
Smooth-On Mfg Co
Somersby, L J, Sons Inc
Spray-O-Bond Co
Steinleite Mfg Co
Stonhard Co
Tammis Industries Inc
Tuscon Laboratories Div Derrin & Reynolds Inc
Tufrolite Co Inc
United Gilsolite Laboratories
United Laboratories Inc
Vita-Var Corp

FLOORS, GRANULITHIC CEMENT

Kalman Floor Co Inc

FLOORS & CEILINGS, PRE-CAST, CONCRETE UNIT

Alabama Cement Tile Co
Flexcrete Co Inc
Pernacrete Products Corp
Price Brothers Co
Purite Mfg Co

FLOOR WAXES, ELECTRIC

Aluma Mfg Co
AMERICAN FLOOR SURFACING MACHINE CO
Atlas Floor Surfacing Machinery Corp
BRUCE (E L) CO
Clarke Sanding Machine Co
Fay Floor Machine Co
General Floorcraft Inc
Hild Floor Machine Co
Hilger Co
Holt Mfg Co
Johnson (S C) & Son Inc
Kent Co
Lundens Fruyt & Clark
Lincoln-Seibusher Floor Machine Co
O'Vear Corp
Twin-Bush Corp

FLOWER BOXES

AIR CONTROL PRODUCTS INC
Arterite Products Co
FAWCO MFG DIV FALLS STAMPING & WELDING CO
Metal Products Co
Powell Precast Steel Co
Rostie Crafts Co Inc

FLUE BASES

Chattanooga Implement & Mfg Co
Evans Pipe Co
Gedder Iron Steel Roofing Co
Industrial Iron Works
Streater Drain Tile Co
Wayne Agricultural Works Inc
Wheeling Corrugating Co

FLUE RINGS

Adams Co
Allen Steel Products
Camerton Sewer Pipe Co Inc
Chattanooga Implement & Mfg Co
Clay City Pipe Co
Columbia Pipe Co
Dow Clay Products Inc
Dickey (W S) Clay Mfg Co
Donley Brothers
Evans Pipe Co
MAJESTIC CO
Sterling Foundry Co Inc
Streater Drain Tile Co
Swett (A L) Iron Works

FLUES, ASBESTOS-CEMENT

CAREY (PHILIP) MFG CO
JOHNS-MANVILLE CORP

FLUES & CHIMNEYS PREFABRICATED

American Vitrited Products Co
Chimney Sales Co
CONDENSATION ENGINEERING CORP
GEM-WAY HOMES INC

Houston Blow Pipe & Sheet Metal Works
MAJESTIC CO
Southern States Iron Roofing Co
YAN PACKER CORP
Williams-Wallace Co

FLUX, SOLDERING

American Varnish Co
Belmont Smelting & Refining Works
Boyer Chemical Laboratories Co
Du Pont (E I) de Nemours & Co
Eagle-Picher Co
Lake Chemical Co
National Lead Co
Wall (F) Mfg Co
Wayne Chemical Products Co

FORMS, KEY

Buffalo Products Inc

FORMS, SILO

UNIVERSAL FORM CLAMP CO

FOUNTAINS, DRINKING

AMERICAN RADIATOR & STANDARD SANITARY CORP
Hose Drinking Faucet Co
Taylor (Halsey W) Co

FRAMES, DOOR & WINDOW, METAL

Actua Steel Products Corp
Aluminum Window Corp
American Steel Door Co
AMERICAN WELDING & MFG CO
Bayley (William) Co
Brasco Mfg Co
CECO STEEL PRODUCTS CO
Clark-Babbitt Industries Inc
Compo-Miracle Products Co
COPCO STEEL & ENGINEERING CO
Crutall Inc
Dalestrom Metallic Door Co
Deccatur Iron & Steel Co
Derolds Co Inc
FENESTRA BUILDING PRODUCTS
HOPE'S WINDOWS
International Steel Co
KEWANE MFG CO
Knapp Brothers Mfg Co
Meador Brothers Iron Co
METAL CRAFTERS
National Kalamite Co Inc
ONE-DEER FRAME CORP
PITTSBURGH PLATE GLASS CO
Richmond Fireproof Co
RICHARDS-WILCOX MFG CO
Royle Steel Co
Southern Wire & Iron Works
STEELCRAFT MFG CO
Sterling Windows Inc
TRULINE DEVELOPMENTS
TRUSCON STEEL CO
UNITED STEEL FABRICATORS INC
VIRGINIA METAL PRODUCTS CO
V-Steel Corp
Wesport Mfg Co
Wollanger Steel Corp
Woodward Lumber Co

FRAMES, DOOR, WOOD

American Sash & Door Co
ANDERSEN CORP
Bliss-Coleman Lumber Co Inc
BRADLEY LUMBER CO OF ARK
Burke Millwork Co
CARR ADAMS & COLLIER CO
Cole Mfg Co
CROSSETT LUMBER CO
CURTIS COS INC
Deer Park Pine Industry Inc
Dierks Lumber & Coal Co
Farley & Lottelner Mfg Co
Fardye-Crossett Lumber Co
General Panel Corp
GREGG & SON INC
Huntig Mfg Co
Hutter Sash & Door Co
Hyde-Murphy Co
Ideal Co
KAWNEER CO
Keystone Frame & Mfg Co
Kinna Pine Mills Co
LONG-BELL LUMBER CO
Malta Mfg Co
Margaret Millwork Co
Millwork Distributors
Morgan Co
Morgan Sash & Door Co
National Serran Door Co
Pacific Metal Door Co
Beach & Mosser Mfg Co
Rock Island Millwork Co
Seneca Lumber & Millwork Co
Silbermagn (George J) & Sons Co
Southern Lumber Co
Spokane Pine Products Co
Walled Lake Door Co
Washington Mfg Co
WEYERHAEUSER SALES CO
Wisconsin Floor Door Co

FRAMES, METAL FOR STRUCTURAL GLASS

Branno Mfg Co
Dunlap & Hunt Inc
KAWNEER CO
PITTSBURGH PLATE GLASS CO
Sterling Windows Inc

FRAMES, SINK WELL

BRIGGS MFG CO
B & T METALS CO
Decorite Inc
National Guard Products
SELICK (WALTER E) & CO
Trimidge Inc
Werner (R D) Co
Youngstown Mfg Inc

FRAMES, WINDOW, WOOD

American Sash & Door Co
ANDERSEN CORP
Bliss-Coleman Lumber Co Inc
Bradley Miller & Co
BROWN-GRAVES CO
Buff Millwork Co
Cameron (Wm) & Co Inc
CARR ADAMS & COLLIER CO
Clay Equipment Corp
Cole Mfg Co
CURTIS COS INC
Farley & Lottelner Mfg Co
Front Lumber Industries Inc
General Woodcraft Co
GREGG & SON INC
Hisco (Edward) Lumber Co
Huttig Mfg Co
Huttig Sash & Door Co
Hyde-Murphy Co
Ideal Co
Keystone Frame & Mfg Co
Kinna Pine Mills Co
Lockwood Wood Products
LONG-BELL LUMBER CO
Malta Mfg Co
Margaret Millwork Co
Mason (E C) Co
Morgan Sash & Door Co
Pacific Metal Door Co
Beach & Mosser Co
Rock Island Millwork Co
Segerlie & Kohnman Co
Seneca Lumber & Millwork Co
Silbermagn (George J) & Sons Co
Nardaber (Frank C) & Co Inc
Spokane Pine Products Co
Spokane Sash & Door Co
WEYERHAEUSER SALES CO
White Pine Sash Co

FRAMING, STEEL

Alabama Metal Lath Co
American Bridge Co
Bethlehem Steel Co
Brasco Mfg Co
Deccatur Iron & Steel Co
Fries & Son
GREAT LAKES STEEL CORP
INLAND STEEL PRODUCTS CO
International Steel Co
Jones & Laughlin Steel Corp
LACLEDE STEEL CO
Macomber Inc
Meador (George L) Steel Corp
NATIONAL GYPSUM CO
Penn Metal Co Inc
REPUBLIC STEEL CORP
Royle Steel Co
Southern Wire & Iron Works
STAN STEEL DIV GREAT LAKES STEEL CORP
TENNESSEE COAL IRON & RR CO
TRUSCON STEEL CO
Instrut Products Co
UNITED STEEL FABRICATORS INC
Wheeling Corrugating Co

FRONTS, STORE

Hinswanger & Co
Brasco Mfg Co
Compo-Miracle Products Co
Fountain Steel Works Inc
GENERAL BROWNE CORP
General Porcelain Enameling & Mfg Co
Ingram-Richardson Mfg Co
KAWNEER CO
LIBBEY-OWENS FLOOR GLASS CO
Nator Inc
Newman Brothers Inc
Parker (S) Hardware Mfg Co
Pennsylvania Wire Glass Co
PITTSBURGH PLATE GLASS CO
Separeol Porcelain Metals Inc
Robm & Haas Co
Waterloo Porcelain Enameling Co

FUNGICIDES

American Cyanamid Co
California Spray-Chemical Corp
Central Chemical Corp
Dow Chemical Co
General Chemical Div Allied Chemical & Dye Corp
Grasselli Chemical Dept Du Pont (E I) de Nemours & Co Inc
Hammond Paint & Chemical Co
Monsanto Chemical Co
PITTSBURGH PLATE GLASS CO
Rohm & Haas Co Inc
Sherwin-Williams Co
Wood-Treating Chemicals Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

► FURNACE PIPE & FITTINGS

Badger Corrugating Co
Hessan (W C) Co
INLAND STEEL PRODUCTS CO
Kramer-Burd Inc
La Crease Steel Roofing & Corrugating Co
Lambert (R B)
MAJESTIC CO
Northwest Metal Products Inc
Pum Supply & Metal Corp
Reese Steel & Mfg Co
REYNOLDS METALS CO
Sioux Steel Co
Waterman-Waterbury Co
Wheeling Corrugating Co
Williams-Walace Co

► FURNACES, CHIMNEY

Airtemp Div Chrysler Corp
MAJESTIC CO

► FURNACES, COAL

Airtemp Div Chrysler Corp
American Foundry & Furnace Co
AMERICAN RADIATOR & STANDARD SANITARY CORP
Anchor Div Stratton & Terstege Co Inc
Armstrong Furnace Co
Clayton & Lambert Mfg Co
CONCO ENGINEERING WORKS DIV CONKEY (N D) CO
CRANE COMPANY
Dowagiac Steel Furnace Co
Excelsior Stove & Mfg Co
Henry Furnace Co
Holland Furnace Co
Homer Furnace & Foundry Corp
Ingersoll Steel Div Borg-Warner Corp
International Heater Co
Iron Freeman Co
Kramer-Burd Inc
Lennox Furnace Co
Locke Stove Co
MAJESTIC CO
MUELLER (L J) FURNACE CO
MEYER FURNACE CO
NORGE HEAT DIV BORG-WARNER CORP
Oiler Co
Glen (C A) Mfg Co
Pioneer Co
Reybolt Heater Co
Thatcher Furnace Co
Waterman-Waterbury Co
Wayne Home Equipment Co
Wheeling Furnace Corp

► FURNACES, CONVERTIBLE, COAL, OIL, OR GAS

American Foundry & Furnace Co
International Heater Co
NORMAN PRODUCTS CO

► FURNACES, COUNTERFLOW UNITS

International Heater Co
INTERNATIONAL OIL BURNER CO
Lennox Furnace Co

► FURNACES, FLOOR

Airtemp Div Chrysler Corp
AMERICAN RADIATOR & STANDARD SANITARY CORP
Armstrong Furnace Co
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
Cole Heat Heat Mfg Co
COLEMAN CO INC
COBRAHE HEATER CORP
Empire Stove Co
Estate Stove Co Div Noma Electric Co
Excelsior Stove & Mfg Co
Evans Products Co
Gillen (J L) Co
Horn Warming & Ventilating Co
HOLLY MFG CO
Hottel Heater Co
INTERNATIONAL OIL BURNER CO
Jetronaire Inc
Kessette Co
KRESNO STAMM MFG CORP
Lennox Furnace Co
LITTLE (W C) BURNER CO
Lorraine Mfg Co
MAJESTIC CO
Motor Wheel Corp Duo Therm Div
NORGE HEAT DIV BORG-WARNER CORP
NORMAN PRODUCTS
Northwest Metal Products Inc
OHIO FOUNDRY & MFG CO
Oiler Co
Payne Furnace Co
Perfection Stove Co
Pioneer Co
Premier Furnace Co
Preston-Waters-Waterbury Co
QUEEN STOVE WORKS
Beliance Mfg Co
RHEEM MFG CO
Sody Furnace Co
SURFACE COMBUSTION CORP
TEMCO INC
Tennessee Enamel Mfg Co
TIMKEN SILENT AUTOMATIC DIV TIKEN-DETROIT AXLE CO
U S Machine Corp

Utility Appliance Corp
Viking Mfg Corp
Wayne Home Equipment Co

► FURNACES, FORCED AIR

Bard Mfg Co
Cleveland Steel Products Co Turbifold Div
CONCO ENGINEERING WORKS DIV CONKEY (N D) CO
COBRAHE HEATER CORP
Evans Products Co
Henderson Furnace & Mfg Co
Homer Furnace & Foundry Corp
International Heater Co
INTERNATIONAL OIL BURNER CO
Lennox Furnace Co
Glen (C A) Mfg Co
RICHMOND RADIATOR CO
Reybolt Heater Co
Utility Appliance Corp

► FURNACES, GAS FIRED

Airtemp Div Chrysler Corp
American Foundry & Furnace Co
American Gas Machine Co
AMERICAN RADIATOR & STANDARD SANITARY CORP
Bard Mfg Co
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
Century Engineering Corp
Clayton & Lambert Mfg Co
Cleveland Steel Products Co Turbifold Div
COLEMAN CO INC
CONCO ENGINEERING WORKS DIV CONKEY (N D) CO
COBRAHE HEATER CORP
DELCO APPLIANCE DIVISION GENERAL MOTORS CORP
Dowagiac Steel Furnace Co
Duo-Therm Div Motor Wheel Corp
Excelsior Stove & Mfg Co
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
Heil Company
Henderson Furnace & Mfg Co
Henry Furnace Co
Hook & Ackerman Inc
Holland Furnace Co
Homer Furnace & Foundry Corp
INTERNATIONAL OIL BURNER CO
International Oil Burner Co
K-Z-Air Inc
Kresky Mfg Co
MAJESTIC CO
MORRISON STEEL PRODUCTS INC
MUELLER (L J) FURNACE CO
NORGE HEAT DIV BORG-WARNER CORP
NORMAN PRODUCTS CO
Payne Furnace Co
Perfection Stove Co
QUEEN STOVE WORKS
RHEEM MFG CO
Reese Steel Div Burner Corp
Steel City Furnace Co
SURFACE COMBUSTION CORP
Thatcher Furnace Co
Waterman-Waterbury Co
Wayne Home Equipment Co
WILLIAMSON HEATER CO

► FURNACES, OIL FIRED

Aeroll Products Inc
American Foundry & Furnace Co
American Gas Machine Co
AMERICAN RADIATOR & STANDARD SANITARY CORP
Armstrong Furnace Co
Bard Mfg Co
Century Engineering Corp
COLEMAN CO
CONCO ENGINEERING WORKS DIV CONKEY (N D) CO
DELCO APPLIANCE DIV GENERAL MOTORS CORP
Devita Heating Corp
Dowagiac Steel Furnace Co
Evan's Products Co
Field Heat Div Anchor Post Products Inc
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
Gilbert & Barber Mfg Co
Gillen (J L) Co
Hart Oil Burner Div Avery Farm Machinery Co
Heil Company
Henry Furnace Co
Homer Furnace & Foundry Corp
International Heater Co
INTERNATIONAL OIL BURNER CO
K-Z-Air Inc
Kresky Mfg Co
KRESNO STAMM MFG CO
Little (W C) Burner Co
MAJESTIC CO
MORRISON STEEL PRODUCTS INC
MUELLER (L J) FURNACE CO
National Airlift Burner Co
NORGE HEAT DIV BORG-WARNER CORP
Northwest Metal Products Inc
Perfection Stove Co
Petroleum Heat & Power Co
Pioneer Co
Reynolds Mfg Co
Silent Steam Oil Burner Corp
Thatcher Furnace Co
Waterman-Waterbury Co
Wayne Home Equipment Co
York-Shilpy Inc

► FURNACES, PLUMBERS' & TINNERS

Aeroll Products Co Inc
Anchor Div Stratton & Terstege Co Inc
Berus (Otto) Co Inc
Columbia Mfg Co
Hauke Mfg Co
Wall (F) Mfg Co

► FURNACE & STOVE LINING, PLASTIC

ARMSTRONG CORX CO BUILDING MATERIALS DIV
Fireproof Stone & Furnace Lining Co
Peera Paint Co
Rustland Fire Clay Co
Williams Stove Lining Co

► FURNACES, SUSPENDED

Cox Mfg Co
Gilbert & Barber Mfg Co
Jackson & Church
MUELLER (L J) FURNACE CO
NORGE HEAT DIV BORG-WARNER CORP
NORMAN PRODUCTS CO
Perfection Stove Co

► FURNACES, WALL

Empire Stove Co
Kresky Mfg Co
Northwest Metal Products Inc
Royal Heater Inc
TEMCO INC
U S Machine Corp

► FURNITURE, BUILT-IN

BIANCO MFG CO
Ideal Co
Morgan Co

► FURNITURE, OUTDOOR

Adriaphian Mill
Adirondack Log Cabin Co
American-Arme Co
Amen Harris Neville Co
Appleton Top & Furniture Co
Bandy & Yeoman Inc
Beh & Co Inc
Biss-Coleman Lumber Co
Bunting Glider Co
Davis & Shiell Co
Durbush Mfg Corp
Everwear Mfg Co
Framstrand Furniture Mfg Co
General Wood Works
Gold Metal Folding Furniture Co
Goshen Mfg Co
Graham (Thomas) & Co Inc
Habitant Shops Inc
Hoyer Sales Co
Heywood-Walshfield Co
Hines (Edward) Lumber Co
Howell Co
Ideal Mfg Co
Indiana Desk Co
Indiana Hickory Furniture Co
Ionia Furniture Co
Klam Graber
Kram (Walter B) Co
Leishan Co of America
Malouney Chair Co
Michigan Van Goods Co
Murray Lumber Co
Napagane Lumber & Mfg Co
Nashville Moulding & Mfg Co
Nobility-Squire Industries Inc
Northern Furniture Products Inc
Old Hickory Furniture Co
Paris Mfg Co
Rastetter (Louis) & Sons
Rustle Furniture Co Inc
Rustle Hickory Furniture Co
Shobagan Chair Co
Stewart Iron Works Co Inc
Sweet (A L) Iron Works
Fruer Lumber & Box Co
Truy Bushnabe Co
Utility Cabinet Co
Weyman (Ernest) Iron Works
Wolfe (Harry M)
Woodware Products Corp

► FUSE BOXES, ELECTRIC SERVICE

Adam (Frank) Electric Co
All-Steel Equipment Co Inc
Arrow Hart & Hagenman Elec Co
Cole Electric Products Div Federal Electric Products Co
Columbia Metal Box Co
Electrical Engineers Equipment Co
Federal Electric Products Co
GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
Hodge-Walsh-Weldner Div Combustion Engineering-Superheaters Inc
Koss (F D) Mfg Co
Leonard Electric Mfg Co
Parselatin Products Inc
WESTINGHOUSE ELECTRIC CORP
Wurdack (Wm) Electric Div Federal Electric Prods Co

► FUSES, ELECTRIC, ALL TYPES

Allen (W D) Mfg Co
Bryant Electric Co
Easman Mfg Co
Chase-Shawmut Co
Commercial Enclosed Fuse Co
Eagle Electric Mfg Co Inc
Economy Fuse & Mfg Co
GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
Jefferson Electric Co
Kirkman Engineering Corp
Metropolitan Electric Mfg Co
Noma Electric Co
Pennsylvania Illuminating Corp
Royal Electric Co Inc
Star Fuse Co Inc
Trico Fuse Mfg Co
Union Insulating Co

► GARBAGE DISPOSERS

AMERICAN CENTRAL DIV AVCO MFG CORP
Apex-Rotolux Corp
Burger (Thomas W) Inc
GENERAL ELECTRIC CO APPLIANCE & MERCHANDISE DEPT
MEYER MFG CO
HOTPOINT INC
IN-SINK-ERATOR CO
Inland Furniture Co
MUELLER (L J) FURNACE CO
National Buffer Machinery Co
Valley Welding & Repair Co
WESTINGHOUSE ELECTRIC CORP
Williams Oil-0-Matic Div Koro-Ka-Williams Corp

► GAS BOTTLED

American Liquid Gas Corp
Biothane Corp
Carbide & Carbon Chemicals Div Union Carbide & Carbon Corp
Delta Tank Mfg Co Inc
Dri-Gas Corp
Horns Oil Co
Natrigan Inc
Omaha Blaugas Co
Phillips Petroleum Co
Propane Corp
PROBAX GAS DIV UNION CARBIDE & CARBON CORP
Shell Oil Co Inc
Sheigan Div Shell Oil Co
Standard Oil Co
Universal Bottle Gas Co

► GASKETS, SEWER PIPE

American Vitrited Products Co
CRANE COMPANY
Evans Pipe Co
JONES-MANVILLE CORP
NATIONAL CLAY PIPE WORKS INC
Robinson Clay Product Co
Universal Concrete Pipe Co Inc
Universal Sewer Pipe Corp
Zorn (J A) Mfg Co

► GATES, FARM

AMERICAN STEEL & WIRE CO
CECC STEEL PRODUCTS CORP
Clay Equipment Corp
Coburn Mfg Co
Colorado Fuel & Iron Corp
Continental Steel Corp
Cyclone Fence Div American Steel & Wire Co
Dura Products Inc
Franklin Equipment Co
General Improvement Corp
Hicks Gate Co
Illinois Wire & Wire Co
Indiana Steel & Wire Co
James Mfg Co
Johnson Industries Inc
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
Purifying Products Co
PUBLIC STEEL CORP
ROWE MFG CO
Sheffield Steel Corp
Standard Mfg Co
TENNESSEE COAL IRON & RAILROAD CO
Vaccinoli Products Corp
Wickwire Superior Steel Div Colorado Fuel & Iron Corp

► GATES, FOLDING

AMERICAN STEEL & WIRE CO
Cyclone Fence Div American Steel & Wire Co
Hopewell Mfg Co
Meyers (Fred L) Mfg Co
Stewart Iron Works Co Inc

► GATES, WROUGHT IRON

Anchor Post Fence Div Anchor Post Products Inc
Biothane Wire & Iron Works Inc
CINCINNATI IRON FENCE CO INC
COFFMAN (R G) CO INC
Cyclone Fence Div American Steel & Wire Co
Edwards Mfg Co
GENERAL WOODRICE CORP
KEYSTONE STEEL & WIRE CO
Locke Mfg Co
Stewart Iron Works Co Inc

► GAUGES, CRAFTSMAN

Altman (E C) & Co
Bache (Samson) & Co

Manufacturers' Names and Addresses Start on Page D-76

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CONSOLIDATED MACHINERY & SUPPLY CO LTD
DISSTON (HENRY) & SONS INC
Lufkin Rule Co
Millers Falls Co
Starrett (L S) Co
Tannerite Works
Union Tool Co

► **GAUGES, DOOR BUTT**
E-Z Mark Tool Co

► **GAUGES, MOISTURE**
American Instrument Co Inc
Bradley (L B) & Co
Colloid Equipment Co Inc
Deimhard Instrument Co
Hart Moisture Gauges Inc
Kaydel Moisture Gauges
Measurements Corp
Moisture Register Co
Moore Dry Kiln Co
Tagliabue (C J) Mfg Co
Taylor Instrument Co
Western Electrical Instrument Corp

► **GAUGES, SAW**
Aktion (E C) & Son
DISSTON (HENRY) & SONS
PTI Incorporated
Sandvik Saw & Tool Corp
SIMMONS SAW & STEEL CO
Terrill (D D) Saw Co

► **GIRDERS, WOOD**
LONG-BELL LUMBER CO
RILCO LAMINATED PRODUCTS CO
Timbeam
Timberjoints Inc
WEYERHAEUSER SALES CO

► **GLASS, ARCHITECTURAL & ORNAMENTAL**

AMERICAN STRUCTURAL PRODUCTS CO
Bache (Simon) & Co
Dearborn Glass Co
Hagemann Cos Inc
LIBBEY-OWENS-FORD GLASS CO
Nurre Cos Inc
Pennsylvania Wire Glass Co
PITTSBURGH PLATE GLASS CO
RESOLITE CORP
Royal Glass Works Corp
Safelite Glass Co
Shower Door Co of America
TECHNICAL GLASS CO INC
U S Glass Co
U S PLYWOOD CORP

► **GLASS BLOCK**

AMERICAN STRUCTURAL PRODUCTS CO
Hagemann Companies Inc
INSULUX PRODUCTS DIV OWENS-ILLINOIS GLASS CO
Lustine Products Co
PITTSBURGH CORNING CORP DIV PITTSBURGH PLATE GLASS CO

► **GLASS, COLORED**

Canton Glass Co Inc
Franklin Glass Corp
LIBBEY-OWENS-FORD GLASS CO
PITTSBURGH PLATE GLASS CO

► **GLASS, CORRUGATED WIRE**

Pennsylvania Wire Glass Co

► **GLASS CUTTER'S RULES**

Barnett (William L)
Lufkin Rule Co
PITTSBURGH PLATE GLASS CO

► **GLASS CUTTING MACHINES**

CUMMINS PORTABLE TOOLS DIV CUMMINS-CHICAGO CORP
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS

► **GLASS DOUBLE PANE**

American Window Glass Co
LIBBEY-OWENS-FORD GLASS CO
PITTSBURGH PLATE GLASS CO

► **GLASS HOLDER, AUTOMATIC MEASURING**

Heller (W C) & Co
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS

► **GLASS, PLATE**

Bache (Simon) & Co
Franklin Glass Corp
Glaziers' Tool Mfg Co
Hagemann Cos Inc
LIBBEY-OWENS-FORD GLASS CO
Mississippi Glass Co
National Mirror Works
Nurre Cos Inc
PITTSBURGH PLATE GLASS CO
Royal Glass Works Corp
Safelite Glass Co

► **GLASS, PLATE, HEAT ABSORBING**

LIBBEY-OWENS-FORD GLASS CO
Pennsylvania Wire Glass Co
PITTSBURGH PLATE GLASS CO

► **GLASS, PLATE, INSULATING**

LIBBEY-OWENS-FORD GLASS CO
PITTSBURGH PLATE GLASS CO

► **GLASS SETTINGS, STRUCTURAL**

Bravo Mfg Co
PITTSBURGH PLATE GLASS CO

► **GLASS, STRUCTURAL**

Bache (Simon) & Co
BLUE RIDGE DIV LIBBEY-OWENS FORD GLASS CO
Bravo Mfg Co
Cunroy Prough Glass Co
Franklin Glass Corp
Hagemann Cos Inc
LIBBEY-OWENS-FORD GLASS CO
Mississippi Glass Co
National Mirror Works
Nurre Cos Inc
Pennsylvania Wire Glass Co
PITTSBURGH PLATE GLASS CO
Royal Glass Works Corp

► **GLASS SUBSTITUTE**

Ace Window Screen Co of America
Allen Brothers Inc
Avery Corp
Clanahan Corp of America Plastics Div
Clark Wire & Supply Co
Du Pont (E I) de Nemours & Co
Glassweave Mfg Co
Hennrich (C B) Mfg Co
RESOLITE CORP
RICKKRAFT CO
Sol-4-Lite Mfg Co
Turner Brothers
Warp Brothers

► **GLASS, WINDOW**

American Window Glass Co
Bache (Simon) & Co
Cunroy Prough Glass Co
Dearborn Glass Co
Foster Glass Co
Hagemann Cos Inc
Harding Glass Co
LIBBEY-OWENS-FORD GLASS CO
Nurre Cos Inc
PITTSBURGH PLATE GLASS CO
Rock Island Millwork Co
Royal Glass Works Corp

► **GLASS, WINDOW, WIRE**

Bache (Simon) & Co
Blue Ridge Glass Corp
Clark-Rabbit Industries Inc
Cunroy Prough Glass Co
Dearborn Glass Co
Hagemann Cos Inc
Harding Glass Co
Hosner Sash & Door Co
LIBBEY-OWENS-FORD GLASS CO
Mississippi Glass Co
National Mirror Works
Nurre Cos Inc
Pennsylvania Wire Glass Co
PITTSBURGH PLATE GLASS CO
Royal Glass Works Corp

► **GLAZIERS' POINTS**

Barnett (W L) Co
Black Panther Tool Co
Fletcher-Terry Co
Glaziers' Tool Mfg Co
Holland Mfg Co
MARKWELL MFG CO INC
Mason (W H) Co
National Sheet Metal Co
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS
York Tack & Nail Works

► **GLAZING COMPOUNDS**

Abesto Mfg Corp
Armstrong Corp
Biddle Co
Briggs-Maroney Co Inc
CALBAR PAINT & VARNISH CO
Christy Co Inc
Dad & Lad Co
Devoe & Reynolds Co Inc
Dieksa Penton Co
Donley Brothers
Elliott Paint & Varnish Co
Furr Pitt Chemical Co
Gibson-Homans Co
Goodrich (B F) Co
Harris Inc
Horn (A C) Co
Keystone Asphalt Products Co
King (H F) & Co Inc
Landon Putty Works
Lasting Products Co

Low Brothers
MACKLANBURG-DUNCAN CO
Mar-Kap Mfg Co
McGuffe (W W) & Co
Minnesota Mining & Mfg Co
Mortell (J W) Co
Parler Ins & Sums Co
Peora Paint Co Inc
PITTSBURGH PLATE GLASS CO
Prestite Products Co
Presstite Engineering Co
Somersboro (L) Sums Inc
Stovaine Mfg Co
Sullivan Corp
Tamma Industries Inc
Tremco Mfg Co
Trucon Laboratories Div Devoe & Reynolds Inc
United Glimonite Laboratories

► **GLAZING, TRANSPARENT PLASTIC**

Arvey Corp
Celanese Corp of America Plastics Div
Inelchem Co
RICKKRAFT CO
Rohm & Haas Co
Sol-4-Lite Mfg Co
Warp Brothers

► **GLOVES, INDUSTRIAL**

Advance Glove Mfg Co
American Optical Co Safety Div
Boss Mfg Co
Broadway Rubber Mfg Co
Chippewa Falls Woolen Mill Co
Cupples Co
Des Moines Glove & Mfg Co
George Glove Co
Goodrich (B F) Co
Green Mountain Glove Co
Industrial Glove Co
Olympic Glove Co
Perless Glove Co
Pioneer Rubber Co
Schelling Latex Products Co
Spartan Glove Co
U S Rubber Co

► **GRINDING COMPOUNDS**

Claver Mfg Co
Hanchett Mfg Co
Okrite Products Inc
Wayne Chemical Products Co
Zip Abrasive Co

► **GLUE, ANIMAL**

Armour & Co
Commercial Paste Co
Consumers Glue Co
Crescent Products Co
Franklin Glue Co
Fuller (H B) Co
Hewitt (C B) & Brothers Inc
Keystone Glue Co Inc
Le Page's Inc
Madison Glue Corp
Monite Waterproof Glue Co
Faldley Products Inc
Perkins Glue Co
Standard Paste & Glue Co
Tamma Industries Inc
Webb Products Co

► **GLUE, ANIMAL, DRY**

Armour Glue Works
Consumers Glue Co
Cudahy Packing Co
Keystone Glue Co
LePage's Inc
Nicholson & Co
Standard Paste & Glue Co Inc
Tamma Industries Inc

GLUE, ANIMAL HIDE, LIQUID

Franklin Glue Co
LePage's Inc

► **GLUE, CASEIN**

Actna Plywood & Veneer Co
American Cyanamid Co
Borden Co Chemical Div
Consumers Glue Co
Davis Plywood Corp
Franklin Glue Co
Hayes Adhesives Co
Hewitt (C B) & Brothers Inc
Lacton Glue Mfg Co
LePage's Inc
MENGEL CO INC
Monite Waterproof Glue Co
National Chemical Co
National Casein Sales
Paisley Products Inc
Perkins Glue Co
SLAY-TITE PRODUCTS CO
Tamma Industries Inc
U S PLYWOOD CORP

► **GLUE, COLD WATER**

Actna Plywood & Veneer
Armour & Co Fertilizer Works Div

Borden Co Chemical Div
Consumers Glue Co
Crescent Products Co
Franklin Glue Co
Fuller (H B) Co
Hewitt (C B) & Brothers Inc
Lacton Glue Mfg Co
LePage's Inc
MENGEL COMPANY INC
Monite Waterproof Glue Co
Monsanto Chemical Co
National Casein Sales
Paisley Products Inc
Perkins Glue Co
RODDIS PLYWOOD CORP
Tamma Industries Inc
Thorton (L M) Mfg Co Inc
U S PLYWOOD CORP

► **GLUE, FISH**

Commercial Paste Co
Consumers Glue Co
Crescent Products Co
Fix-All Products
Fuller (H B) Co
Hewitt (C B) & Brothers Inc
Lacton Glue Mfg Co
LePage's Inc
National Adhesive Div National Starch Products Inc
Paisley Products Inc
Placo Div Paisley Products Inc
Rogers Insulglass & Glue Co
Standard Paste & Glue Co Inc
Thorton (L M) Mfg Co

► **GLUE, LIQUID**

Borden Co Chemical Div
Carters Ink Co
Franklin Glue Co
International Glue Co
Keystone Glue Co
LePage's Inc
National Adhesive Div National Starch Products Inc
PITTSBURGH PLATE GLASS CO
Rogers Insulglass & Glue Co
Standard Paste & Glue Co Inc
Toscor Chemical Co
U S PLYWOOD CORP

► **GLUE, RESIN**

Actna Plywood & Veneer Co
American Cyanamid Co
Borden Co Chemical Div
Catalin Corp of America
Davis Plywood Corp
DuPont (E I) de Nemours & Co Inc
Franklin Glue Co
Fuller (H B) Co
Hayes Adhesives Co
Hewitt (C B) & Brothers Inc
LePage's Inc
MENGEL CO INC
Mitsubishi Plywood Co
MIRACLE ADHESIVES CORP
Monite Waterproof Glue Co
Monsanto Chemical Co
Monsanto Casein Sales
National Casein Sales
Paisley Products Inc
Perkins Glue Co
Resin Products & Chemical Co Inc
RODDIS PLYWOOD CORP
Rohm & Haas Co
Standard Paste & Glue Co Inc
U S MENGEL PLYWOODS INC
U S PLYWOOD CORP
Wellman Products Co

► **GLUE, WATERPROOF**

Actna Plywood & Veneer Co
American Cyanamid Co
Borden Co Chemical Div
Christy Co Inc
Consumers Glue Co
DuPont (E I) de Nemours & Co Inc
Franklin Glue Co
Hewitt (C B) & Brothers Inc
LePage's Inc
MENGEL CO INC
Minnesota Mining & Mfg Co
MIRACLE ADHESIVE CORP
Monite Waterproof Glue Co
Monsanto Chemical Co
National Casein Sales
Nicholson & Co
Paisley Products Inc
Perkins Glue Co
Placo Div Paisley Products Inc
Plaston Div Libbey-Owens-Ford Glass Co
Resin Products & Chemical Co Inc
RODDIS PLYWOOD CORP
Rohm & Haas Co
Standard Paste & Glue Co Inc
Stay-Tite Products Co
Technical Supply Co
U S MENGEL PLYWOODS INC
U S PLYWOOD CORP

► **GRATES, BOILER**

Adams Company
Cunningham Machinery Corp
Industrial Iron Works
Marion Machine Foundry & Supply Co
ST PAUL CORRUGATING CO

► **GRATES CERAMIC, FIREPLACE**

Appelman Art Glass Works
Comer Building Products
Gen Clay Fostering Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

National Tile & Mfg Co
Ohio Valley Clay Co

▶ GRATES, VENTILATORS KEWABEE MFG CO

▶ GRATINGS

Adams Co
AIR CONTROL PRODUCTS INC
Allen Steel Products
Chaumont Implement & Mfg Co
Donley Brothers Co
Hendrick Mfg Co
Industrial Iron Works
Locke Mfg Co
Logan Co
Marion Machine Foundry & Supply Co
Murray (D J) Mfg Co
ST PAUL CORRUGATING CO
TRUSCON STEEL CO
U. S. Gypsum Co
Western Foundry Co
Wheeling Corrugating Co
Zorn (J A) Mfg Co

▶ GRATINGS, AREAWALL

ARTCRAFT ORNAMENTAL IRON CO
Belton Mfg Co
CINCINNATI IRON FENCE CO INC
Donley Brothers Co
Harris Inc
Industrial Iron Works
MAJESTIC CO
Smith (F P) Wire & Iron Works
ST PAUL CORRUGATING CO
SUPERIOR FIREPLACE CO
Sewell Iron Works

▶ GRILLES, FIREPLACE

BENNETT-TRELAND INC
Brewer-Titchener Corp
CINCINNATI IRON FENCE CO INC
Donley Brothers Co
HEATILATOR INC
Industrial Iron Works
KEWABEE MFG CO
MAJESTIC CO
Master Metal Products Co
Meyers (Fred) Mfg Co
Ohio Stone Co
Price Fireplaces Co
Silent Glow Oil Burner Corp
Southern Baroque-Grill Co
SUPERIOR FIREPLACE CO
U. S. Register Co

▶ GRILLES, METAL

ARTCRAFT ORNAMENTAL IRON CO
Belthool Co
Belton Mfg Co
CINCINNATI IRON FENCE CO INC
Colorado Fuel & Iron Corp
Cornell Rolling Door Works
Deaton Iron & Steel Co
Donley Brothers Co
Harris Inc
Hart & Cooley Mfg Co
HEATILATOR INC
Hendrick Mfg Co
Industrial Iron Works
Kentucky Metal Frods Co
Krauser-Boyd Inc
Loshkutin Wood Products Co
Logan Co Inc
MACKLANBURG-DUNCAN CO
MAJESTIC CO
Newman Brothers Inc
Smith (F P) Wire & Iron Works
Southern Wire & Iron Works
Stewart Iron Works Co Inc
Trane Company
U. S. Register Co
Wellman Products Co

▶ GRILLES, OUTDOOR COOKING

BENNETT-TRELAND INC
CINCINNATI IRON FENCE CO INC
Donley Bros Co
Homer Furnace & Foundry Corp
MAJESTIC CO
Master Metal Products Co
Price Fireplaces Co
Silent Glow Oil Burner Corp

▶ GRILLES, RADIATOR
**AMERICAN RADIATOR & STANDARD SANI-
TARY CORP**
Auer Register Co
Braum (J G) Co
Columbia Metal Box Co
Garden City Plating & Mfg Co
Meyers (Fred L) Mfg Co
Parler (S) Hardware Mfg Corp
U. S. Register Co
Wickwire Spencer Steel Div Colorado Fuel &
Iron Corp

▶ GRILLES, SCREEN DOOR

AIR CONTROL PRODUCTS INC
Allen Steel Products
ARTCRAFT ORNAMENTAL IRON CO
Belthool Co
Chamberlain Co of America Inc
COFFMAN (R G) CO INC
Deaton Iron & Steel Co
Demko (W J) & Co
Eveready Co
Hawkins Iron Co

Hutchinson Co
Kentucky Metal Products Co
Logan Co
MACKLANBURG-DUNCAN CO
METAL CRAFTERS
Meyers (Fred L) Mfg Co
National Guard Products Inc
Ornamental Metal Works
Parler (S) Hardware Mfg Co
Protex Weatherstrip Mfg Co
Robbins Mfg Co
Sawney (W J) Iron Co
Smith (F P) Wire & Iron Works
Southern Wire & Iron Works

▶ GRILLES, STEEL, ROLLING

Cornell Rolling Door Works

▶ GRILLES, WINDOW

AIR CONTROL PRODUCTS
Aluminum Window Corp
Chamberlain Co of America Inc
Cyclone Fence Div American Steel & Wire Co
Fwale Equipment Mfg Co
Logan Co

METAL CRAFTERS
Meyers (Fred L) Mfg Co
National Guard Products Inc
Newman Brothers Inc
Robbins Mfg Co

▶ GRINDERS, BAND, WHEEL

Bridport Safety Emery Wheel Co
Fliter & Stowell Co
Hatchett Mfg Co
Prescott Co

▶ GRINDERS, BENCH & FLOOR

Albertson & Co Inc
Albin Press Co
BLACK & DECKER MFG CO
BRADFORD MACHINE TOOL CO
Bridport Safety Emery Wheel Co
Dampson Blower & Forge Co
Cincinnati Electrical Tool Co
Edwards Mfg Co
Diehl Mfg Co Div Electrical Div Singer
Mfg Co
Dumore Co
Hatchett Mfg Co
INDEPENDENT PNEUMATIC TOOL CO
Lippmann Engineering Works
Luther Grinder & Tool Co
MALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
Newman Machine Co
Poly Products Co
PORTER-CABLE MACHINE CO
ROCKWELL MFG CO DELTA POWER TOOL
WIV
SKILSAW INC
Speed Way Mfg Co
Standard Electrical Tool Co
**STANLEY ELECTRIC TOOLS DIV STANLEY
WORKS**
U. S. Electrical Tool Co
Vonnegut Moulder Corp
**WALKER-TURNER DIV KEARNEY TRUCKER
CORP**
Wisconsin Abrasive Mfg Co

▶ GRINDERS, CUTTER HEAD

C. K. L. Machinery Co
Dependable Machine Co
Hermance Machine Co
Newman Machine Co
Shimer (Samuel J) & Sons Inc
Stetson-Ross Machinery Co
Woods (R A) Machine Co

▶ GRINDERS, ELECTRIC PORTABLE

BLACK & DECKER MFG CO
Chicago Pneumatic Tool Co
Chicago Wheel & Mfg Co
Colind Engineering Co Inc
Diehl Mfg Co Electrical Div Singer Mfg Co
DREMEL MFG CO
Dependable Machine Co
INDEPENDENT PNEUMATIC TOOL CO
Lima Electric Motor Co
Luther Grinder & Tool Co
MALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
Newman Machine Co
PORTER-CABLE MACHINE CO
Portable Electric Tools Inc
SKILSAW INC
Speedway Mfg Co
STANLEY WORKS
SYNTRON CO
U. S. Electric Tool Co

▶ GROOVERS

Atkins (E C) & Co
Electron Carlson & Co
GOLDBLATT TOOL CO
Hutter Brothers Saw Mfg Co Inc
MACKLANBURG-DUNCAN CO
Meyers Brothers Tool Mfg Co
Wilson Saw Div Medis Machine Works Inc

▶ GUARDS, AREAWALL

AIR CONTROL PRODUCTS
BRAINARD STEEL CO
ST PAUL CORRUGATING CO
Suzara Steel Co
UNITED STEEL FABRICATORS

▶ GUARDS, ROOF & SNOW

CHASE BRASS & COPPER CO
INLAND STEEL PRODUCTS CO

▶ GUARDS, SAW

Atkins (E C) & Co
Beach Mfg Co
BOICE CRANE CO
Egry (J A) & Egry Co
Hutter Brothers Saw Mfg Co Inc
Logan Co Inc
Oliver Machinery Co
**ROCKWELL MFG CO DELTA POWER TOOL
DIV**
Yates-American Machine Co

▶ GUARDS, WHEEL

Adams Co
Donley Brothers Co
Fiske (J W) Iron Works
Hawkins Iron Co Inc
Industrial Iron Works
International Steel Co
Logan Co
MAJESTIC CO
Moser Brothers
Sewell (J A) Iron Works
Western Foundry Co
Wheeling Corrugating Co

▶ GUARDS, WINDOW

**AIR CONTROL PRODUCTS INC LEIGH
BUILDING PRODUCTS DIV**
ARTCRAFT ORNAMENTAL IRON CO
Brewer Wire & Iron Works Inc
Clay Equipment Corp
Cyclone Fence Div American Steel & Wire Co
Edwards Mfg Co
Grand Rapids Wire Products Co
Hawkins Iron Co
Hesswell Mfg Co
Kentucky Metal Products Co
Lester Mfg Co
LOCKWARD HARDWARE MFG CO
Logan Co
MACKLANBURG-DUNCAN CO
Meyers Brothers
Moshier (George L) Steel Corp
Meyers (Fred L) Mfg Co
NATIONAL BRASS CO
National Guard Products
Noy Mfg Co
**RUSSELL & ERWIN DIV AMERICAN HARD-
WARE CORP**
Slaymaker Locks Co
Smith (F P) Wire & Iron Works
Southern Wire & Iron Works
Standard Bronze Co
Starline Inc
Stewart Iron Works Co Inc
Wheeling Corrugating Co

▶ GUMMERS, SAW

Atkins (E C) & Co
Champion Blower & Forge Co
Chicago Wheel & Mfg Co
FOLEY MFG CO
General Hardware Corp
Hatchett Mfg Co
Luther Grinder & Tool Co
Macklin Co
Mid-West Abrasive Co
Norton Co
Rogers (Samuel C) & Co
Wisconsin Abrasive Mfg Co

▶ GUNS, CAULKING & GLAZING

Abledo Mfg Co
Riddle Co
CALBAR PAINT & VARNISH CO
CENTRAL METAL STRIP CO
Dennis (W J) & Co
Devoe & Reynolds Co Inc
Donley Brothers Co
Electric Sprays Co
Fulton Sibley & Co Inc
Ford Roofing Products Co
Fort Pitt Chemical Co
Gibson-Homans Co
Glaston Tool Mfg Co
GOLDBLATT TOOL CO
Harris Inc
Horn (A C) Co Inc
JOHNS-MARVILLE CORP
Kenmar Mfg Co
Lastic Products Co Inc
MACKLANBURG-DUNCAN CO
National Guard Products Inc
Peoria Paint Co
PITTSBURGH PLATE GLASS CO
Plastic Products Co
Proter Weatherstrip Mfg Co
Robbins Mfg Co
Seal Rite Caulking Co
Sibelto Mfg Co
Stewart-Warner Corp

Tamme Industries Inc
Trombs Mfg Co
Vital Products Mfg Co
Webster (W F) Cement Co
Western Reserve Mfg Co

▶ GUNS, PNEUMATIC CONCRETE APPLICATION

Colchester Industries Inc
CONSTRUCTION MACHINERY SALES CO
Guntle Construction Corp
MacLeod Co

▶ GUTTERS, METAL

Alabama Metal Lath Co
American Brass Co
Anonada Sales Co
Arnold Steel Corp
Baeger Corrugating Co
Berger Mfg Div Republic Steel Corp
CEG STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Cincinnati Sheet Metal & Roofing Co
Edwards Mfg Co
Harrison Steel Cabinet Co
Illinois Zinc Co
INLAND STEEL PRODUCTS CO
Kliner Mfg Co
Krauser-Boyd Inc
Lafayette Steel Roofing & Corrugating Co
Lynn Conklin & Co Inc
Mid-State Metals & Wire Co
New Holland Metal Co
RICKELMS WIRE & ALUMINUM CO
Northwest Metal Products Inc
Perry Supply & Metal Corp
Revere Steel & Metal
Revere Copper & Brass Inc
**REYNOLDS METALS CO BLDG PRODUCTS
DIV**
ST PAUL CORRUGATING CO
Suzara Steel Co
Wheeling Corrugating Co
Willis Steel Corp

▶ GUTTERS, WOOD

Albia Lumber Co
American Lumber & Treating Co
Arrow Tank Co Inc
Bulboer & Caran Lumber Co
Duncan Fir Gutter Co Inc
Fordyce-Trossell Lumber Co
Hammond Lumber Co
Holmes-Karaka Lumber Co
Hubert (William) Mill Co
LONG-BELL LUMBER CO
Long Fir Gutter Co
Mutual Fir Column Co
Sillermagel (George J) & Sons Co
Wilson Lumber Co
Washington Mfg Co
Weyerhaeuser Valley Lumber Co
WEYERHAEUSER SALES CO

▶ GYPSUM

NATIONAL GYPSUM CO
U. S. Gypsum Co

▶ HAMMERS, HAND, ALL TYPES

Arrow Fastener Co
Barnes Mfg Co
BOGITCH INC
Billings & Spencer Co
Burgess Fastening Co
Capwell Mfg Co
Champion-Darrest Tool Co
Cheney (Henry) Hammer Corp
David-Mardell Tool Corp
Estwing Mfg Co
Fairmount Tool & Forging Co
FASTENER CORP
GOLDBLATT TOOL CO
Grabham John H & Co
Halter Brothers Co
Hortchick (E H) Co
Hubbard & Co
Lentonia Tool Co
Marion Tool Corp
MARKWELL MFG CO INC
Majors Steel Products Inc
Mephisto Tool Co Inc
Fox-Wall Tool Co
P. & C. Hand Forged Tool Co
Peck Stone & Wilcox Co
Phoenix Hardware Mfg Co
Phoenix Mfg Co
Plumb (Fayette R) Inc
Proto Tool Co
RED DEVIL TOOLS
SELCK (WALTER E) & CO
STANLEY WORKS
STANLEY TOOLS DIV STANLEY WORKS
The Tempur Corp
Vaughan & Busnell Mfg Co
Vielck Tool Co

▶ HAMMERS, MAGNET

PITTSBURGH PLATE GLASS CO

▶ HAMMERS, PNEUMATIC

Anor Products
Ingemold-Rend Co
SYNTRON CO
WORTHINGTON PUMP & MACHINERY CORP

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▶ HAMMERS, PORTABLE ELECTRIC

Allied Tools Inc
BLACK & DECKER MFG CO
Chicago Pneumatic Tool Co
GOLDBLATT TOOL CO
HOMELITE CORP
INDEPENDENT PNEUMATIC TOOL CO
WALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
SKILAW INC
STANLEY ELECTRIC TOOLS DIV STANLEY WORKS
SYNTRON CO
Van Dorn Electric Tool Co
Wadock Electric Tool Corp

▶ HAMPERS, BUILT-IN CLOTHES

Standard Steel Cabinet Co

▶ HANDLES FOR AXE, PICK, SLEDGE, HATCHET

Amos (Charles H) Handle Co
Bruner Ivory Handle Co
Buckley Handle Works Co
Cheshborough (Thos E)
Chicago Wood & Plastic Products
Crosby (F F) Mfg Co
DISTON (HENRY) & SONS INC
Dowel Home
Eaton (E B) & Sons Inc
Gallon Handle & Mfg Co
Greenwald Mfg Co
Hartwell Bros
Imperial Handle Mfg Co
Madden Handle Co
Marion Handle Mills Inc
National Aluminum Co
North-Rishop Mfg Co
Profa Tool Co
O'Brien Bond Dovel & Mfg Co
Riles (H A) Co
Strook (L W) & Co
Swan Handle Corp
Syracuse Alloy Metals Corp
Tear Temper Corp
Union Fork & Hoe Co
Union Hardware Co

▶ HANGARS, AIRPLANE

Blaw-Knox Div Blaw-Knox Co
Butler Mfg Co
International Steel Co
Mehler (George L) Steel Corp
WILCO LAMINATED PRODUCTS CO
STRAN-STEEL DIV GREAT LAKES STEEL CORP
STEELCRAFT MFG CO
TIMBER STRUCTURES INC
TRUSCON STEEL CO
Tru-Structures Inc
UNITED STEEL FABRICATORS INC

▶ HANGERS, BATHTUB

AMERICAN RADIATOR & STANDARD SANITARY CORP
KOLLER CO
LUCKE (WILLIAM B) INC
Titewall Hanger Co
Zorn 12 A1 Mfg Co

▶ HANGERS, EAVE TROUGH & CONDUCTOR PIPE

Radger Corrugating Co
Rarger Mfg Div Reubille Steel Corp
CECO STEEL PRODUCTS CORP
CHARE BRASS & COPPER CO
Hudson (W F) Co
INLAND STEEL PRODUCTS CO
Mid-States Steel & Wire Co
New Holland Metals Co
Ohio Corrugating Co
Penn Supply & Metal Corp
REYNOLDS METALS CO BUILDING PRODUCTS DIV
United States Steel Co
Wheeling Corrugating Co

▶ HANGERS, INSULATION

Berlin Inc
JOHN-MANVILLE CORP
MIRACLE ADHESIVES CORP
MOORE (GOODLOE E) CO

▶ HANGERS, JOIST & LUMBER

Adams Co
Allen Steel Products Co
Cleveland Steel Specialty Co Inc
Consolidated Iron-Steel Mfg Co
Cusner Steel & Wire Co
COPCO STEEL & ENGINEERING CO
Drechter Iron & Steel Co
Dunley Brothers Co
Duplex Hanger Co
Gabriel Steel Co
Hohmann & Barnard Inc
Hosking Paper & Supply
Ideal Hanger Co
Lamborn Mfg Co
Noble Steel Co
Timber Engineering Co
WAGNER MFG CO

▶ HANGERS, METAL LATH

Barger Mfg Div Reubille Steel Corp
BOSTWICK STEEL LATH CO
CECO STEEL PRODUCTS CORP
Columbith Metal Lath Co
INLAND STEEL PRODUCTS CO
Penn Metal Co Inc
Soudle Steel Co
TRUSCON STEEL CO
U S Gypsum Co

▶ HANGERS, PIPE & CONDUIT

Acme Pipe Strap Co
Carpeting & Extrusion Inc
COPPERWELD STEEL CO
Diamond Expansion Bolt Co
General Fittings Co
Hubbard & Co
Illinois Malleable Iron Co
Malleable Iron Fittings Co
PAINE COMPANY
Signode Steel Strapping Co
Victor Specialties
Youngstown Mfg Inc

▶ HARDBOARD, ASPHALT

Meadows (W B) Inc

▶ HARDBOARD, COMPOSITION & FIBROUS, DECORATIVE

Actva Plywood & Veneer Co
ARMSTRONG CORK CO BUILDING MATERIALS DIV
CELOTX CORP
Chapco Sales
CURTIS COMPANIES INC
DART & RUSSELL
Fib-Tex Insulating Board Co
FLINTKOTE CO
Forest Fiber Products Co
HOMASOTE CO
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
JOHN-MANVILLE CORP
KEASBY & HATTISON CO
Kilbuck-Carl Corp
LONG BELL LUMBER CO
Lustwood Process Co
MASONITE CORP
Meadows (W B) Inc
Monsman & Shaffer Inc
NATIONAL GYPSUM CO
OREGON LUMBER CO
Pacific Veneer & Plywood Corp
Plywood Corp
PROTECTIVE PAPERS INC
Rock Island Millwork Co
RODUS PLYWOOD CORP
SIMPSON LOGGING CO
U S Gypsum Co
U S PLYWOOD CORP
WOODALL INDUSTRIES INC

▶ HARDBOARD, EMBOSSED

CELOTX CORP
DART & RUSSELL
MASONITE CORP

▶ HARDBOARD, PACKAGED, SMALL SIZES

MASONITE CORP

▶ HARDWARE, AWNING

Astrup Co
Avening Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Fanner Mfg Co
Goss 12 C1 Co
PITTSBURGH PLATE GLASS CO
Reading Hardware Corp
SARGENT & CO

▶ HARDWARE, AWNING WINDOW

CORBIN (P & F) DIV AMERICAN HARDWARE CORP
GATE CITY SASH & DOOR CO
Jaren (Chas O) Co
LEADING CORP
Reading Hardware Corp
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Stimulator Lock Co
STERLING HARDWARE MFG CO
Super Vent Co
Whitney (Vincent) Co

▶ HARDWARE, BARN

ALLITT-PRUTY INC
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
WABE CORP
FRANTZ MFG CO
NAGER (C) & SONS HINGE MFG CO
Hudson (H D) Mfg Co
Ideal Bram Works Inc
Jones Mfg Co
Lawrence Bros
Louden Machinery Co
McKinney Mfg Co

Myers (F E) & Brother Co
NATIONAL MFG CO
RICHARDS-WILOX MFG CO
STANLEY WORKS
Starline Inc
WAGNER MFG CO

▶ HARDWARE, BOAT DOCK

Central Machine Works Co
Fireale Equipment Co
Slaymaker Lock Co

▶ HARDWARE, CABINET

Acorn Mfg Co
ADAMS-RITE MFG CO
Ajax Hardware Mfg Corp
American Brass Goods Co
AMERICAN CABINET HARDWARE CORP
Austin & Eddy Inc
Barrows Lock Works
CASEMENT HARDWARE CO
Champion Hardware Co
Chicago Spring Hinge Co
Cipco Corp
Cleveland Lock Works
Clinton Lock Co
Consolidated Iron-Steel Mfg Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
CURTIS COMPANIES INC
Dedson Machine Works
Eagle Lock Co
Engineered Products Co
Extension Tramer Support Co
Fireale Equipment Mfg Co
FRANTZ MFG CO
Garden City Plating & Mfg Co
General Steel Warehouse Co Genaco Tool Div
Gitts Molding Corp
Grand Rapids Hardware Co
GRANT PULLEY & HARDWARE CO
GREGG & SON
Griffin Mfg Co
NAGER (C) & SONS HINGE MFG CO
Harris Inc
Harvard Lock Co
Heller (W C) & Co
Hollymade Hardware Mfg Co
Ideal Bram Works Inc
Independent Lock Co
Ives (H B) Co
Kees (F D) Mfg Co
Knappe & Vogt Mfg Co
KWINKST LOCKS INC
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
MACLANGLISH-DUNCAN CO
McKinney Mfg Co
Modern Plastics Co
NATIONAL BRASS CO
National Hardware Co
NATIONAL LOCK CO
NATIONAL MFG CO
Noy Mfg Co
RODDAN CO
Norwalk Lock Co Div Steel Lock & Hardware Co
Parke (S) Hardware Mfg Co
Parly Co
Penobscot Co Inc
Penn Hardware Co
Pekin Industries
Phoenix Lock Co
Reading Hardware Corp
Reese Padlock Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlocks & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
SELICK (WALTER E) & CO
Sharon Hardware Mfg Co
Shelby Spring Hinge Co
Slaymaker Lock Co
Soss Mfg Co
Standard Bronze Co
STANLEY WORKS
Star Metal Products Inc
STERLING HARDWARE MFG CO
TECHNICAL GLASS CO INC
Vimcar Sales Co
Weber-Knapp Co
VALE & TOWNE MFG CO

▶ HARDWARE, CASEMENT WINDOW

American Brass Goods Co
AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrow Lock Works
Baylor Lock Works
Baylor (William) Co
Casement Hardware Co
Champion Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
WABE CORP
CROFT STEEL PRODUCTS INC
CURTIS COMPANIES INC
FENESTRA BUILDING PRODUCTS
Fireale Equipment Mfg Co
FRANTZ MFG CO
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
NAGER (C) & SONS HINGE MFG CO
Ideal Bram Works
Independent Lock Co
Ives (H B) Co
Kees (F D) Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO

▶ HARDWARE, CASEMENT WINDOW

American Brass Goods Co
AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrow Lock Works
Baylor (William) Co
Casement Hardware Co
Champion Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
WABE CORP
CROFT STEEL PRODUCTS INC
CURTIS COMPANIES INC
FENESTRA BUILDING PRODUCTS
Fireale Equipment Mfg Co
FRANTZ MFG CO
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
NAGER (C) & SONS HINGE MFG CO
Ideal Bram Works
Independent Lock Co
Ives (H B) Co
Kees (F D) Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO

▶ HARDWARE, CASEMENT WINDOW

American Brass Goods Co
AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrow Lock Works
Baylor (William) Co
Casement Hardware Co
Champion Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
WABE CORP
CROFT STEEL PRODUCTS INC
CURTIS COMPANIES INC
FENESTRA BUILDING PRODUCTS
Fireale Equipment Mfg Co
FRANTZ MFG CO
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
NAGER (C) & SONS HINGE MFG CO
Ideal Bram Works
Independent Lock Co
Ives (H B) Co
Kees (F D) Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO

▶ HARDWARE, CASEMENT WINDOW

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AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrow Lock Works
Baylor (William) Co
Casement Hardware Co
Champion Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
WABE CORP
CROFT STEEL PRODUCTS INC
CURTIS COMPANIES INC
FENESTRA BUILDING PRODUCTS
Fireale Equipment Mfg Co
FRANTZ MFG CO
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
NAGER (C) & SONS HINGE MFG CO
Ideal Bram Works
Independent Lock Co
Ives (H B) Co
Kees (F D) Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO

▶ HARDWARE, CASEMENT WINDOW

American Brass Goods Co
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CORBIN (P & F) DIV AMERICAN HARDWARE CORP
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CURTIS COMPANIES INC
FENESTRA BUILDING PRODUCTS
Fireale Equipment Mfg Co
FRANTZ MFG CO
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
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Ideal Bram Works
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Kees (F D) Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO

▶ HARDWARE, CASEMENT WINDOW

American Brass Goods Co
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Casement Hardware Co
Champion Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
WABE CORP
CROFT STEEL PRODUCTS INC
CURTIS COMPANIES INC
FENESTRA BUILDING PRODUCTS
Fireale Equipment Mfg Co
FRANTZ MFG CO
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
NAGER (C) & SONS HINGE MFG CO
Ideal Bram Works
Independent Lock Co
Ives (H B) Co
Kees (F D) Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO

McKinney Mfg Co
NATIONAL BRASS CO
Peabody Co Inc
Penn Hardware Co
Phoenix Mfg Co Inc
Reading Hardware Corp
RICHARDS-WILOX MFG CO
Wilson (Oscar C) Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
Shelby Spring Hinge Co
Slaymaker Lock Co
STANLEY WORKS
STERLING HARDWARE MFG CO
Wright Products Co
VALE & TOWNE MFG CO

▶ HARDWARE, CLOTHES CLOSET

Acme Metal Goods Mfg Co
Ajax Hardware Mfg Corp
Amorline Inc
Arrow Lock Corp
Atkinson Mfg Co
Autogy Co
Barrows Lock Works
Bommer Spring Hinge Co Inc
Champion Hardware Co
Chicago Curtain Stretcher Co
Clark (J B) Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Duncan Shaw Corp
Ezee Mfg Co
FAWCO MFG DIV FALLS STAMPING & WELDING CO
Fireale Equipment Mfg Co
FRANTZ MFG CO
Garden City Plating & Mfg Co
Goss Mfg Co
GETTY (N S) & CO INC
GRANT PULLEY & HARDWARE CO
NAGER (C) & SONS HINGE MFG CO
Hartco Products Corp
Handy Things Mfg Co
Illinois Porcelain Enamel Co
Ives (H B) Co
Judd (H L) Co Inc
S D K Upret Forging Co
Kennedy Co
Ken-Bo-Bil Co
Knappe & Vogt Mfg Co
Kraus (Walter S) Co
Larson (Charles O) Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
Marvel Back Mfg Co
McKinney Mfg Co
Modern Plastic Co
Moulton Ladder Mfg Co
NATIONAL MFG CO
RODDAN CO
Parke (S) Hardware Mfg Corp
Peabody Co Inc
Penn Hardware Co
Reading Hardware Corp
Reese Padlock Co
Ron-Lee Products Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
WABE CORP
Sager-Barrows Lock Works
SARGENT & CO
Shelby Spring Hinge Co
Skillman Hardware Co
Slaymaker Lock Co
Southern Galvanizing Co
Standard Bronze Co
STANLEY WORKS
Stevenson Mfg Co
Universal Steel Equipment Corp
Vimcar Sales Co
Washington Steel Products Inc
VALE & TOWNE MFG CO

▶ HARDWARE, CLOTHES CLOSET

Acme Metal Goods Mfg Co
Ajax Hardware Mfg Corp
Amorline Inc
Arrow Lock Corp
Atkinson Mfg Co
Autogy Co
Barrows Lock Works
Bommer Spring Hinge Co Inc
Champion Hardware Co
Chicago Curtain Stretcher Co
Clark (J B) Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Duncan Shaw Corp
Ezee Mfg Co
FAWCO MFG DIV FALLS STAMPING & WELDING CO
Fireale Equipment Mfg Co
FRANTZ MFG CO
Garden City Plating & Mfg Co
Goss Mfg Co
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Skillman Hardware Co
Slaymaker Lock Co
Southern Galvanizing Co
Standard Bronze Co
STANLEY WORKS
Stevenson Mfg Co
Universal Steel Equipment Corp
Vimcar Sales Co
Washington Steel Products Inc
VALE & TOWNE MFG CO

▶ HARDWARE, DOOR

Ajax Hardware Mfg Corp
AMERICAN SLIDING DOOR HARDWARE CORP
Champion Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Ives (H B) Co
LOCKWOOD HARDWARE MFG CO
NATIONAL MFG CO
Penn Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
Skillman Hardware Co
Wickwire & Co
Skillman Hardware Co
Siskewitz Spencer Steel Dit Colorado Fuel & Iron Corp

▶ HARDWARE, DOOR ACCESSORY

Acorn Mfg Co
ADAMS RITE MFG CO
AIR CONTROL PRODUCTS
Ajax Hardware Mfg Corp
ALLITT-PRUTY INC
ALLMETAL WEATHERSTRIP CO
American Brass Goods Co
AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrows Lock Works
Bridgport Chain & Mfg Co
Buech (A G) Co Inc
Chamberlin Co of America
Champion Hardware Co
CHASE BRASS & COPPER CO
Chester (J J) & Sons
Cipco Corp

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Clinton Lock Co
Colonial Brass Co
Columbian Brass Mfg Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP

Dorville Inc
Durbin Metal Strip Mfg Co
Eagle Lock Co
Engineered Products Co
Eroo Mfg Co
Fisher (J W) Iron Works
Fiscale Equipment Mfg Co
FRANTZ MFG CO
General Steel Warehouse Co Genesee Tool Div
Gins Molding Corp
Grand Rapids Wire Products Co
Grand Specialties Co
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co

HAGER (C) & SONS HINGE CO
Harlow Products Corp
Harris Inc
Harvard Lock Co
Hollymade Hardware Mfg Co
Ideal Brass Works
Ives (H B) Co
Kant Slam Door Check Co
Keen (F D) Mfg Co
Kensington Metal Products Co
KWISNET LOCKS INC
LABORATORY EQUIPMENT CORP
LOCKWOOD HARDWARE MFG CO
Legan Co Inc
MACKLANBURG-DUNCAN CO
Majors Tool Corp
McKinsey Mfg Co
Merkler (George L) Steel Corp
Milwaukee Stamping Co
Modern Plastic Co
Monarch Metal Workstrip Co
NATIONAL BRASS CO
National Guard Products
NATIONAL LOCK CO
NATIONAL MFG CO
Newell Mfg Co
Newman Brothers
Noy Mfg Co
Northern Industries Inc
Norton Door Closer Co
Norwalk Lock Co Div Segal Lock & Hardware Co

BITONE INC
Pacific Plastic & Mfg Co
Parker (S) Hardware Mfg Co
Parlyo Ltd
Peabody Co Inc
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Phoenix Hardware Mfg Co
PITTSBURGH PLATE GLASS CO
Reading Hardware Corp
Reese Padlock Co
RICHARDS-WILCOX MFG CO
Rittenhouse Mfg Co
Robbins Mfg Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
SCHLAGE LOCK CO
Seagrass Lock & Hardware Co Inc
Seetry Shop-A-Ret Co
Sharon Hardware Mfg Co
Shelby Metal Products Co
Shelby Spring Hinge Co
Skillman Hardware Mfg Co
Slaymaker Lock Co
Smith (F P) Wire & Iron Works
Sons Mfg Co
Southern Wire & Iron Works
Spanners (A J) Co
Standard Bronze Co
Standard Mirror Co
STANLEY WORKS
Starline Inc
STERLING HARDWARE MFG CO
Sulfon Bros
Superior Accessory Co
Superior Plastics Div Commonwealth Plastics Inc

TECHNICAL GLASS CO INC
Thermal Co
Tropo Industries
Turner Brass Works
WAGNER MFG CO
Washington Steel Products Inc
Waterloo Sales Co
Wellman Products Co
Westwood Mfg Co
Woodmark Industries Inc
YALE & TOWNE MFG CO

► HARDWARE, DRAWER, KNOBS & PULLS
ADAMS-RITE MFG CO
Ajax Hardware Mfg Corp
AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrows Lock Works
Bentley Mfg Co
Champion Hardware Co
Chesler (J) & Sons Inc
Chicago Wood & Plastic Products Co
City Plating & Mfg Co
Coker (R F) Mfg Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Dedoes Machine Works
Engineered Products Co
Eroo Mfg Co
Fiscale Equipment Mfg Co
FRANTZ MFG CO
General Steel Warehouse Co Genesee Tool Div
GRANT PULLEY & HARDWARE CO
HAGER (C) & SONS HINGE MFG CO

► HARDWARE, GARAGE DOOR
ALLITH-PROUTY INC
BARBER-COLMAN CO
CRANE (H W) CO
CRAWFORD DOOR CO
Fiscale Equipment Mfg Co
FRANTZ MFG CO
General Steel Warehouse Co Inc Genesee Tool Div
Grand Specialties Co
HAGER (C) & SONS HINGE MFG CO
Lansom & Sessions Co
Larson (Chas O) Co
Lawrence Brothers
Louden Machinery Co
McKinsey Mfg Co
NATIONAL MFG CO
Parker (S) Hardware Mfg Corp
Penn Hardware Co
Phenix Mfg Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Bolt Co
Sager-Barrows Lock Works
SARGENT & CO
Sharon Hardware Mfg Co
Shelby Spring Hinge Co
Slaymaker Lock Co
STANLEY WORKS GARAGE HARDWARE DEPT
STANLEY WORKS
Starline Inc
STERLING HARDWARE MFG CO
Stingwood Screw Products Inc
Tarrant Co Ltd
WAGNER MFG CO
Western Products Inc

► HARDWARE, GARAGE, FOLDING DOOR
Bunch (A G) Co Inc
Clinton Lock Co
Colorado Fuel & Iron Corp Wickwire Spencer Steel Div
Kastors Malleable Iron Co Eberhard Mfg Co Div
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
LOCKWOOD HARDWARE MFG CO
MACKLANBURG-DUNCAN CO
Noy Mfg Co
Peabody Co Inc
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Sharon Hardware Mfg Co

► HARDWARE, GARAGE, UPWARD-ACTING
ALLITH-PROUTY INC
Armstrong Tool & Die Co
BARBER-COLMAN CO
Beter-Bill Door Co
Fisher Mfg Co Inc
Clay Equipment Corp

Colorado Fuel & Iron Corp Wickwire Spencer Steel Div
CURTIS COMPANIES INC
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GRANT PULLEY & HARDWARE CO
Hollens Mfg Co
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Phenix Mfg Co
RICHARDS-WILCOX MFG CO
Standard Bronze Co
STANLEY WORKS
Starline Inc
Tarrant Co Ltd
Vincor Sales Co
WAGNER MFG CO

Harlow Products Corp
Hollymade Hardware Mfg Co
Ives (H B) Co
Keuze & Vogt Mfg Co
KWISNET LOCKS INC
LABORATORY EQUIPMENT CORP
LOCKWOOD HARDWARE MFG CO
McDonald Mfg Co
McKinsey Mfg Co
Modern Plastics Co
NATIONAL BRASS CO
National Hardware Co
NATIONAL LOCK CO
NATIONAL MFG CO
Norwalk Lock Co Div Segal Lock & Hardware Co
Pacific Plastic & Mfg Co
Parker (S) Hardware Mfg Corp
Peabody Co Inc
Penn Hardware Co
Petko Industries
Reading Hardware Corp
Republic Hardware & Distributing Corp
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
SCHLAGE LOCK CO
Segal Lock & Hardware Co Inc
SELCK (WALTER E) & CO
Skillman Hardware Co
Slaymaker Lock Co
Standard Bronze Co
STANLEY WORKS
Stiles (H A) Co
Superior Plastic Div Commonwealth Plastics Inc

► HARDWARE, LADDER
Ajax Building Bracket Co
ALLITH-PROUTY INC
Babcock (W W) Co
Cater Mold & Machine Co
Davenport Ladder Co
Heider Mfg Co
Larson Ladder Co
Michigan Ladder Co
Newark Ladder & Bracket Co
Robt Ladder & Mfg Co
STANLEY WORKS

► HARDWARE, SCREEN & STORM SASH
Aron Mfg Co
Air-Tite Window Stay Co
Ajax Hardware Mfg Corp
Alden Mfg Co
AMERICAN CABINET HARDWARE CORP
Arcade Mfg Div Rockwell Mfg Co
Barber Mfg Co Inc
Busch (G) Co Inc
CASEMENT HARDWARE CO
CECO STEEL PRODUCTS CORP
Champion Hardware Co
Chicago Spring Hinge Co
Clinton Lock Co
Consolidated Iron-Steel Mfg Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Curtis Companies Inc
Demis (W J) & Co
Engineered Products Co
FRANTZ MFG CO
FRANTZ MFG CO
HAGER (C) & SONS HINGE MFG CO
Ideal Brass Works
Kant-Slam Door Check Co
Keen (F D) Mfg Co
King-Chippewa Co
Knupe & Vogt Mfg Co
KWISNET LOCKS INC
Larson (Charles O) Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Ludwig Mfg Co Inc
MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norton Door Closer Co
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Pionnet Hardware Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sof-N-Eze Hanger Co
Sager-Barrows Lock Works
Sharon Hardware Mfg Co
Shelby Spring Hinge Co
Slaymaker Lock Co
STANLEY WORKS
STERLING HARDWARE MFG CO
Wagner Mfg Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp
Wright Products Inc
YALE & TOWNE MFG CO

► HARDWARE, VENETIAN BLIND
Brad Chain Mfg Co
Blind Window Blind Co
Cary-McFall Co
Fiscale Equipment Mfg Co
Garraute Sprockel & Co
HUNTER DOUGLAS MFG CORP
Lorenzani Hardware Mfg Corp
REYNOLDS METALS CO BUILDING PRODUCTS DIV
VENETIAN WORKS
Venetian Blind Corp

► HARDWARE, WINDOW
Aron Mfg Co
ADAMS RITE MFG CO
Ajax Hardware Mfg Corp
Arrow Lock Corp
AMERICAN CABINET HARDWARE CORP
A R B Window Co
Arrow Lock Corp
Austral Sales Corp
Barrows Lock Works
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Champion Hardware Co
Cippen Corp
Clinton Lock Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Dennis (W J) & Co
Detroit Hardware Mfg Co
Eroo Mfg Co
FENESTRA BUILDING PRODUCTS
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GATE CITY SASH & DOOR CO
GETTY (H S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Harvard Lock Co
Ideal Brass Works
Independent Lock Co
Ives (H B) Co
Knupe & Vogt Mfg Co
KWISNET LOCKS INC
Larson (Charles O) Co
Litch Lock Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Parlyo Ltd
Peabody Co Inc
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Reading Hardware Corp
Reese Padlock Co
RICHARDS-WILCOX MFG CO
Riesford Brass Works
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
Sharon Hardware Mfg Co
Shelby Metal Products Co
Skillman Hardware Co
Slaymaker Lock Co
STANLEY WORKS
Steel Window Products Co

Colorado Fuel & Iron Corp Wickwire Spencer Steel Div
CURTIS COMPANIES INC
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GRANT PULLEY & HARDWARE CO
HAGER (C) & SONS HINGE MFG CO
Hollens Mfg Co
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Phenix Mfg Co
RICHARDS-WILCOX MFG CO
Standard Bronze Co
STANLEY WORKS
Starline Inc
Tarrant Co Ltd
Vincor Sales Co
WAGNER MFG CO

► HARDWARE, LADDER
Ajax Building Bracket Co
ALLITH-PROUTY INC
Babcock (W W) Co
Cater Mold & Machine Co
Davenport Ladder Co
Heider Mfg Co
Larson Ladder Co
Michigan Ladder Co
Newark Ladder & Bracket Co
Robt Ladder & Mfg Co
STANLEY WORKS

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Air-Tite Window Stay Co
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Alden Mfg Co
AMERICAN CABINET HARDWARE CORP
Arcade Mfg Div Rockwell Mfg Co
Barber Mfg Co Inc
Busch (G) Co Inc
CASEMENT HARDWARE CO
CECO STEEL PRODUCTS CORP
Champion Hardware Co
Chicago Spring Hinge Co
Clinton Lock Co
Consolidated Iron-Steel Mfg Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Curtis Companies Inc
Demis (W J) & Co
Engineered Products Co
FRANTZ MFG CO
FRANTZ MFG CO
HAGER (C) & SONS HINGE MFG CO
Ideal Brass Works
Kant-Slam Door Check Co
Keen (F D) Mfg Co
King-Chippewa Co
Knupe & Vogt Mfg Co
KWISNET LOCKS INC
Larson (Charles O) Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Ludwig Mfg Co Inc
MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norton Door Closer Co
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Pionnet Hardware Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sof-N-Eze Hanger Co
Sager-Barrows Lock Works
Sharon Hardware Mfg Co
Shelby Spring Hinge Co
Slaymaker Lock Co
STANLEY WORKS
STERLING HARDWARE MFG CO
Wagner Mfg Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp
Wright Products Inc
YALE & TOWNE MFG CO

► HARDWARE, VENETIAN BLIND
Brad Chain Mfg Co
Blind Window Blind Co
Cary-McFall Co
Fiscale Equipment Mfg Co
Garraute Sprockel & Co
HUNTER DOUGLAS MFG CORP
Lorenzani Hardware Mfg Corp
REYNOLDS METALS CO BUILDING PRODUCTS DIV
VENETIAN WORKS
Venetian Blind Corp

► HARDWARE, WINDOW
Aron Mfg Co
ADAMS RITE MFG CO
Ajax Hardware Mfg Corp
Arrow Lock Corp
AMERICAN CABINET HARDWARE CORP
A R B Window Co
Arrow Lock Corp
Austral Sales Corp
Barrows Lock Works
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Champion Hardware Co
Cippen Corp
Clinton Lock Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Dennis (W J) & Co
Detroit Hardware Mfg Co
Eroo Mfg Co
FENESTRA BUILDING PRODUCTS
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GATE CITY SASH & DOOR CO
GETTY (H S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Harvard Lock Co
Ideal Brass Works
Independent Lock Co
Ives (H B) Co
Knupe & Vogt Mfg Co
KWISNET LOCKS INC
Larson (Charles O) Co
Litch Lock Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Parlyo Ltd
Peabody Co Inc
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Reading Hardware Corp
Reese Padlock Co
RICHARDS-WILCOX MFG CO
Riesford Brass Works
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
Sharon Hardware Mfg Co
Shelby Metal Products Co
Skillman Hardware Co
Slaymaker Lock Co
STANLEY WORKS
Steel Window Products Co

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Aron Mfg Co
ADAMS RITE MFG CO
Ajax Hardware Mfg Corp
Arrow Lock Corp
AMERICAN CABINET HARDWARE CORP
A R B Window Co
Arrow Lock Corp
Austral Sales Corp
Barrows Lock Works
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Champion Hardware Co
Cippen Corp
Clinton Lock Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Dennis (W J) & Co
Detroit Hardware Mfg Co
Eroo Mfg Co
FENESTRA BUILDING PRODUCTS
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GATE CITY SASH & DOOR CO
GETTY (H S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Harvard Lock Co
Ideal Brass Works
Independent Lock Co
Ives (H B) Co
Knupe & Vogt Mfg Co
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MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Parlyo Ltd
Peabody Co Inc
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Reading Hardware Corp
Reese Padlock Co
RICHARDS-WILCOX MFG CO
Riesford Brass Works
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager-Barrows Lock Works
SARGENT & CO
Sharon Hardware Mfg Co
Shelby Metal Products Co
Skillman Hardware Co
Slaymaker Lock Co
STANLEY WORKS
Steel Window Products Co

► HARDWARE, SILO & TANK
Arrow Tank Co Inc
DeMuth Steel Products Co

► HARDWARE, SLIDING DOORS
ACME APPLIANCE MFG CO
Concrete Metal Weather Strip Co Inc
ADAMS-RITE MFG CO
ALLITH-PROUTY INC
AMERICAN SLIDING DOOR HARDWARE CORP
Barrows Lock Works
Calder Mfg Co
Clay Equipment Corp
Clinton Lock Co

Colorado Fuel & Iron Corp Wickwire Spencer Steel Div
CURTIS COMPANIES INC
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GRANT PULLEY & HARDWARE CO
Hollens Mfg Co
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Phenix Mfg Co
RICHARDS-WILCOX MFG CO
Standard Bronze Co
STANLEY WORKS
Starline Inc
Tarrant Co Ltd
Vincor Sales Co
WAGNER MFG CO

Colorado Fuel & Iron Corp Wickwire Spencer Steel Div
CURTIS COMPANIES INC
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GRANT PULLEY & HARDWARE CO
Hollens Mfg Co
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Phenix Mfg Co
RICHARDS-WILCOX MFG CO
Standard Bronze Co
STANLEY WORKS
Starline Inc
Tarrant Co Ltd
Vincor Sales Co
WAGNER MFG CO

Colorado Fuel & Iron Corp Wickwire Spencer Steel Div
CURTIS COMPANIES INC
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Louden Machinery Co
Phenix Mfg Co
RICHARDS-WILCOX MFG CO
Standard Bronze Co
STANLEY WORKS
Starline Inc
Tarrant Co Ltd
Vincor Sales Co
WAGNER MFG CO

► HARDWARE, LADDER
Ajax Building Bracket Co
ALLITH-PROUTY INC
Babcock (W W) Co
Cater Mold & Machine Co
Davenport Ladder Co
Heider Mfg Co
Larson Ladder Co
Michigan Ladder Co
Newark Ladder & Bracket Co
Robt Ladder & Mfg Co
STANLEY WORKS

► HARDWARE, SCREEN & STORM SASH
Aron Mfg Co
Air-Tite Window Stay Co
Ajax Hardware Mfg Corp
Alden Mfg Co
AMERICAN CABINET HARDWARE CORP
Arcade Mfg Div Rockwell Mfg Co
Barber Mfg Co Inc
Busch (G) Co Inc
CASEMENT HARDWARE CO
CECO STEEL PRODUCTS CORP
Champion Hardware Co
Chicago Spring Hinge Co
Clinton Lock Co
Consolidated Iron-Steel Mfg Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Curtis Companies Inc
Demis (W J) & Co
Engineered Products Co
FRANTZ MFG CO
FRANTZ MFG CO
HAGER (C) & SONS HINGE MFG CO
Ideal Brass Works
Kant-Slam Door Check Co
Keen (F D) Mfg Co
King-Chippewa Co
Knupe & Vogt Mfg Co
KWISNET LOCKS INC
Larson (Charles O) Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
Louden Machinery Co
Ludwig Mfg Co Inc
MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norton Door Closer Co
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Pionnet Hardware Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sof-N-Eze Hanger Co
Sager-Barrows Lock Works
Sharon Hardware Mfg Co
Shelby Spring Hinge Co
Slaymaker Lock Co
STANLEY WORKS
STERLING HARDWARE MFG CO
Wagner Mfg Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp
Wright Products Inc
YALE & TOWNE MFG CO

► HARDWARE, VENETIAN BLIND
Brad Chain Mfg Co
Blind Window Blind Co
Cary-McFall Co
Fiscale Equipment Mfg Co
Garraute Sprockel & Co
HUNTER DOUGLAS MFG CORP
Lorenzani Hardware Mfg Corp
REYNOLDS METALS CO BUILDING PRODUCTS DIV
VENETIAN WORKS
Venetian Blind Corp

► HARDWARE, WINDOW
Aron Mfg Co
ADAMS RITE MFG CO
Ajax Hardware Mfg Corp
Arrow Lock Corp
AMERICAN CABINET HARDWARE CORP
A R B Window Co
Arrow Lock Corp
Austral Sales Corp
Barrows Lock Works
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Champion Hardware Co
Cippen Corp
Clinton Lock Co
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
Dennis (W J) & Co
Detroit Hardware Mfg Co
Eroo Mfg Co
FENESTRA BUILDING PRODUCTS
Fiscale Equipment Mfg Co
FRANTZ MFG CO
GATE CITY SASH & DOOR CO
GETTY (H S) & CO INC
GRANT PULLEY & HARDWARE CO
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Harvard Lock Co
Ideal Brass Works
Independent Lock Co
Ives (H B) Co
Knupe & Vogt Mfg Co
KWISNET LOCKS INC
Larson (Charles O) Co
Litch Lock Mfg Co
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
MACKLANBURG-DUNCAN CO
McKinsey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Norwalk Lock Co Div Segal Lock & Hardware Co
Parker (S) Hardware Mfg Corp
Parlyo Ltd
Peabody Co Inc
Penn Hardware Co
Petko Industries
Phenix Mfg Co Inc
Reading Hardware Corp
Reese Padlock Co
RICHARDS-WILCOX MFG CO
Riesford Brass Works
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
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SARGENT & CO
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Shelby Metal Products Co
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Steel Window Products Co

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McKinsey Mfg Co
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DeMuth Steel Products Co

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Concrete Metal Weather Strip Co Inc
ADAMS-RITE MFG CO
ALLITH-PROUTY INC
AMERICAN SLIDING DOOR HARDWARE CORP
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Louden Machinery Co
Phenix Mfg Co
RICHARDS-WILCOX MFG CO
Standard Bronze Co
STANLEY WORKS
Starline Inc
Tarrant Co Ltd
Vincor Sales Co
WAGNER MFG CO

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Sterling-Freedland Industries Inc
STEELE HARDWARE MFG CO
Sun Metal Products Co
Vinegar Sales Co
Whitney (Vernon) Co
VALE & TOWNE MFG CO

▶ HASPS, HINGE

ALITH-PROUTY INC
American Hinge Co
Chamisso Hardware Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Finnair Equipment Mfg Co
FRANZ MFG CO
General Steel Warehouse Co
Genco Tool Div
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Master Lock Co
McKissey Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Parker (S) Hardware Mfg Co
RICHARDS-WILCOX MFG CO
RUSSELL-ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Spartan Hardware Mfg Co
Slamdam Lock Co
STANLEY WORKS
Wagner Mfg Co

▶ HATCHETS

Bridgport Hardware Mfg Corp
Colts Company
Edging Mfg Co
COLDBLATT TOOL CO
MARKWELL MFG CO INC
Pock Saw & Wrench Co
Pittsford (Fayette) B Co
STANLEY TOOLS DIV STANLEY WORKS
True Temper Corp
Vaughan & Bushnell Mfg Co

▶ HEADS, BRUSH BACKED SANDER

Arcade Mfg Div Rockwell Mfg Co
Vonnegut Moulder Corp

▶ HEADS, CUTTER

Ekstorn Carlson & Co
Hather Brothers Saw Mfg Co
Shimer (Samuel J) & Sons Inc
Wilson Saw Div Media Machine Works

▶ HEADS, DADO

American Saw Mill Machinery Co
Aixins (E F) Co
CONSOLIDATED MACHINERY & SUPPLY CO
DISSTON (HENRY) & SONS INC
Olsen-Bishop Co
ROCKWELL MFG CO
Tushnet Corp
Western Saw Works

▶ HEADS, SPRINKLER

Allen (W D) Mfg Co
Dutton Irrigation Co
Ross Sprinkler Co
Shinner Irrigation Co

▶ HEARTH, CANTILEVER

Donley Brothers

▶ HEATERS, BATHROOM

Adam (Frank) Electric Co
Day & Night Mfg Div Affiliated Gas Equipment Inc
Electromode Mfg Corp
EMERSON ELECTRIC MFG CO
Galbraith (C C) & Sons
La Salle Lighting Products Inc
MARKEL ELECTRIC PRODUCTS INC
MIRAL CABINET DIV CAREY (PHILIP) MFG CO
Ohio Stone Co
Powers Mfg Co
SHEPLER MFG CO
Thermador Electrical Mfg Co
WESTINGHOUSE ELECTRIC CORP

▶ HEATERS, COAL

Alvins Stone Works
AMERICAN RADIATOR & STANDARD SANITARY CORP
Anchor Div Stratton & Terstegen Co Inc
Donley Brothers
Excelsior Stone & Mfg Co
Gray & Dudley Co
Hart Mfg Co
International Heater Co
King Stone & Range Co
Kraus (Walter S) Co
Loche Stone Co
Malleable Iron Range Co
NORGE HEAT DIV BORG-WARNER CORP
Red Jacket Coal Sales Co
Washington Stone Works

▶ HEATERS, CONCRETE

Aerul Products Co Inc
American Steel Works
Hank Mfg Co
Unique Mfg Co Inc

▶ HEATERS, ELECTRIC

Adam (Frank) Electric Co
Armstrong Products Corp
Calsium Mfg Co
Colloid Equipment Co Inc
Eagle Electric Mfg Co Inc
Excelsior Stone & Mfg Co
Fluorac Co
Wayne Home Equipment Co

▶ HEATERS, GAS

American Gas Machine Co
AMERICAN RADIATOR & STANDARD SANITARY CORP
Armstrong Products Corp
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
Combustion Engineering Superheater Inc
CORDAIRE HEATER CORP
Duo-Therm Div Motor Wheel Corp
Empire Stone Co
Excelsior Stone & Mfg Co
Fluorac Co
Furnace Products Div
Gray & Dudley Co
Harrison Steel Cabinet Co
Inland Steel Container Co
INLAND STEEL PRODUCTS CO
King Stone & Range Co
Loche Stone Co
NORGE HEAT DIV BORG-WARNER CORP
PORTABLE HEATER CO
Quaker Mfg Co
REZNER MFG CO
Royal Heaters Inc
Rund Mfg Co
SHREPLER MFG CO
SURFACE COMBUSTION CORP
Trane Co
Tri-Therm Heater Co
Wayne Home Equipment Co
Zink (John) Co

▶ HEATERS, OIL

Aerul Products Co Inc
American Gas Machine Co
COLEMAN COMPANY
Dravo Corp
Estate Stone Co Div Noma Electric Co
Excelsior Stone & Mfg Co
Fluorac Stone Co
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
Gray & Dudley Co
International Heater Co
Kresky Mfg Co
KRESNO-STAMM MFG CORP
Lindemann (A J) & Hoverson Co
LITTLE (H C) BURNER CO
Loche Stone Co
Lorenzini Mfg Co
Machord Company
Malleable Iron Range Co
National Armco Burner Co
NORGE HEAT DIV BORG-WARNER CORP
Northwest Metal Products Inc
Perfection Stone Co
Frontier Valves Products Co
Quaker Mfg Co
Silent Sixty Oil Burner Corp
U S Machine Corp
Washington Stone Works
Wayne Home Equipment Co
York-Shelley Inc

▶ HEATERS, PORTABLE, ELECTRIC

Appliance Mfg Co
Birtman Electric Co
CONCO ENGINEERING WORKS CONKEY (H C) CO
CONTINENTAL RADIANT GLASS HEATING CORP
Dartford Electric Mfg Co
Dry (Clamp) Corp
Economad Products Co Inc
EMERSON ELECTRIC MFG CO
Galbraith (C C) & Sons
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
Gilbert (A C) Co
G-M Laboratories Inc
Imperial Motor Corp
Justice Mfg Co
Knapp-Monarch Co
Landers Pray & Clark
La Salle Lighting Products Inc
Lawson Mfg Co
MARKEL ELECTRIC PRODUCTS INC
Metal Products Mfg Co
Miller-Somes Inc
National Die Casting Co
National Ideal Co
No-Bull-Spark Industries Inc
Noma Electric Co
Radiant Heater Corp
Rebinder Electric Co Inc
SHEPLER MFG CO
Spartan Electric Co
Superior Electric Products Corp
Swarthzough Mfg Co
Tennessee Valley Associated Markets
Teppor Appliance Co Inc
Toso Inc
Thermador Electric Mfg Co
Wells Lamp Corp
WESTINGHOUSE ELECTRIC CO
Wittie Mfg & Sales Co

▶ HEATERS, ROOM

Adam (Frank) Electric Co
Armstrong Products Corp
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
Calorie Gas Stove Works
Chattanooga Implement & Mfg Co
Cole Hot Blast Mfg Co
COLEMAN CO INC
David-Majohle Tool Corp
Duo-Therm Div Motor Wheel Corp
Electromode Corp
Evans Products Co
Excelsior Stone & Mfg Co
Fluorac Stone Co
Galbraith (C C) & Son
Honor Furnace & Foundry Corp
INLAND STEEL PRODUCTS CO
Kalamazoo Stone & Furnace Co
LITTLE (H C) BURNER CO INC
LA SALLE LIGHTING PRODUCTS INC
MARKEL ELECTRIC PRODUCTS INC
National Enameling & Stamping Co
NATIONAL RADIATOR CO
Newco
Payne Furnace Co
Perlon Mfg Corp
Perfection Stone Co
Prentiss-Wabers Products Co
Quaker Mfg Co
QUEEN STOVE WORKS
REZNER MFG CO
SHEPLER MFG CO
Silent Sixty Oil Burner Corp
U S Machine Corp
Viking Mfg Corp
WESTINGHOUSE ELECTRIC CORP

▶ HEATERS, TANK

Brower Mfg Co
Butler Company
Colloid Equipment Co Inc
Demotter Mill Mfg Co
Excelsior Stone & Mfg Co
Farwell-Osmun Kirt & Co
National Armco Burner Co
QUEEN STOVE WORKS
Sierling Mfg Co
Trent Inc
Tri-Therm Heater Co

▶ HEATERS, TANKLESS WATER

BELL & GOSSETT CO
General Fittings Co
Mikard Heater & Specialty Co
Red Spot Electric Co
Taco Heaters Inc
TRUBUSH (W A) CO
Triplex Heating Specialties Co

▶ HEATERS, UNIT

American Gas Machine Co
Automatic Gas Equipment Co
Bresau Mfg Co Inc
Day & Night Mfg Div Affiliated Gas Equipment Inc
Electromode Mfg Corp
Hartzell Propeller Fan Co Div Castle Hills Corp
Kresky Mfg Co
LITTLE (H C) BURNER CO
Nelson (Herman) Corp
Perlon Mfg Co
SURFACE COMBUSTION CORP
Temo Inc
Trane Company
Utility Appliance Corp
Weiss Electric Heater Co
YOUNG RADIATOR CO

▶ HEATERS, WALL

Adam (Frank) Electric Co
Adams Brothers Mfg Co
COLEMAN CO INC
CORDAIRE HEATER CORP
Electromode Corp
Galbraith (C C) & Son
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
HOLLY MFG CO
Kresky Mfg Co Inc
Landers Pray & Clark
La Salle Lighting Products Inc
MARKEL ELECTRIC PRODUCTS
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
OHIO FOUNDRY & MFG CO
Ohio Stone Co
Powers Mfg Corp
SHEPLER MFG CO
Thermador Electrical Mfg Co
Titani Mfg Co
Weiss Electric Heater Co
WESTINGHOUSE ELECTRIC CORP

▶ HEATERS, WATER

Airtopp Div Chrysler Corp
ALDRICH CO DIV BREEZE CORP INC
American Gas Machine Co
AMERICAN RADIATOR & STANDARD SANITARY CORP
American & Southern Corp
Automatic Electric Co Inc

Bard Mfg Co
BELL & GOSSETT CO
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC

Chattanooga Implement & Mfg Co
Cleveland Heater Co
Cleveland Steel Products Co
Torridont Div
COLEMAN COMPANY
Colloid Equipment Co Inc
Combustion Engineering Superheater Inc
CONCO ENGINEERING WORKS DIV CONKEY (H C) CO
CRANE COMPANY

Crane Electric Industries
Day & Night Mfg Div Affiliated Gas Equipment Inc
DELCO APPLIANCE DIV GENERAL MOTORS CORP
Dowagiac Steel Furnace Co
Duo-Therm Div Motor Wheel Corp
Electromaster
Evans Products Co
Excelsior Stone & Mfg Co
Fairbanks Morse & Co
Farrbanks Stone Co
Foster Mfg Co
Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO APPLIANCES & REFRIGERATION DEPT
General Implement Corp
General Water Heater Corp
Gibben (J L) Co
Hedges (M M) Co
HOPTON INC
Hottelmann Heater Co
Hynes & Cox Electric Co
International Heater Co
JOHNSON (S T) CO
KELVINATOR DIV NASH-KELVINATOR CO
Kewanee Boiler Corp
King Stone & Range Co
KOVEN (L B) & BROTHER INC
Kresky Mfg Co
KRESNO-STAMM MFG CORP
Landers Pray & Clark
Lawson Mfg Co
Lawson Steel Products Inc
Lindemann (A J) & Hoverson Co
LITTLE (H C) BURNER CO
McLaren Electric Co
NORGE HEAT DIV BORG-WARNER CORP
Olibx Company
Polynorth Injector Co
Perfection Stone Co
Petroleum Heat & Power Co
Philo Corporation
Pioneer Water Heater Corp
Pittsburgh Water Heater Co
Quaker Mfg Co
Ray Oil Burner Co
Republic Heater Corp
REEM MFG CO
Rund Mfg Co
Sav-T-Time Devices Inc
Seneca Corporation
Sered Inc
Smith (A B) Corp
Standard Gas Equipment Corp
Swarthzough Mfg Co
Taco Heaters Inc
Thermador Electrical Mfg Co
TIMBER SILENT AUTOMATIC DIV TIM-KEN DETROIT AXLE CO
Tri-Therm Heater Co
Vestal Stone Co
Viking Mfg Corp
Waldorf Heater Co
Wayne Home Equipment Co
Weiss Electric Heater Co
WESTINGHOUSE ELECTRIC CORP
White Products Corp
Whitehead (Jud) Heater Co
Williams Oil-G-Matic Div Eureka-Williams Co

WESTINGHOUSE ELECTRIC CORP
Yonkers (S T) Co
KOVEN (L B) & BROTHER INC
Kresky Mfg Co
KRESNO-STAMM MFG CORP
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Waldorf Heater Co
Wayne Home Equipment Co
Weiss Electric Heater Co
WESTINGHOUSE ELECTRIC CORP
White Products Corp
Whitehead (Jud) Heater Co
Williams Oil-G-Matic Div Eureka-Williams Co

WESTINGHOUSE ELECTRIC CORP
Yonkers (S T) Co
KOVEN (L B) & BROTHER INC
Kresky Mfg Co
KRESNO-STAMM MFG CORP
Landers Pray & Clark
Lawson Mfg Co
Lawson Steel Products Inc
Lindemann (A J) & Hoverson Co
LITTLE (H C) BURNER CO
McLaren Electric Co
NORGE HEAT DIV BORG-WARNER CORP
Olibx Company
Polynorth Injector Co
Perfection Stone Co
Petroleum Heat & Power Co
Philo Corporation
Pioneer Water Heater Corp
Pittsburgh Water Heater Co
Quaker Mfg Co
Ray Oil Burner Co
Republic Heater Corp
REEM MFG CO
Rund Mfg Co
Sav-T-Time Devices Inc
Seneca Corporation
Sered Inc
Smith (A B) Corp
Standard Gas Equipment Corp
Swarthzough Mfg Co
Taco Heaters Inc
Thermador Electrical Mfg Co
TIMBER SILENT AUTOMATIC DIV TIM-KEN DETROIT AXLE CO
Tri-Therm Heater Co
Vestal Stone Co
Viking Mfg Corp
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AMERICAN BUILDER

Ultra Radiator Corp
VULCAN RADIATOR CO
Webster (Warren) & Co

▶ HEATING, SYSTEMS, HOT WATER OR STEAM

Airtemp Div Chrysler Corp
ALDRICH CO
AMERICAN RADIATOR & STANDARD SANITARY CORP
BELL & GOSSETT CO
Brewer Mfg Co
Bromwell Co
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
BURMAN CO BOILER DIV
Century Engineering Co
Cleveland Steel Products Co
CRANE COMPANY
DELCO APPLIANCE DIV GENERAL MOTORS CORP
Fairbanks Morse & Co
Felders Quigan
Fitzgibbon Boiler Co
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
General Filings Co
Gilbert & Barker Mfg Co
Hodge-Walsh-Webster Div Combustion Engineering Superheater Inc
Heli Company
Heston Heater Co
Institute of Boiler & Radiator Mfrs
International Heater Co
JOHNSON (H S) & CO
Kausline Co Inc
Kewanee Boiler & Mfg Co
KOHLER CO
KRESNO STAMM MFG CORP
LITTLE (H C) BURNER CO
Lohmeyer Boiler & Mfg Co
McArd Corp
MODINE MFG CO
MUELLER (L J) FURNACE CO
Munroe (R) & Sons Mfg Corp
Murray (D J) Mfg Co
NATIONAL RADIATOR CO
NORGE HEAT DIV BORG-WARNER CORP
Oltch Co
Penn Boiler & Burner Mfg Corp
Perino Mfg Corp
RICHMOND RADIATOR CO
Seattle Boiler Works
Spencer Looming Div Aeco Mfg Corp
SURFACE COMBUSTION CORP
Taco Heaters Inc
THRUSH (H A) & CO
TINKEN SILENT AUTOMATIC DIV TINKER DETROIT AXLE CO
Trane Company
Triplex Heating Specialties Co
U S Radiator Corp
Ullica Radiator Corp
WATERFIELD BOILERS INC
Wayne Home Equipment Co
Webster (Warren) & Co
Will-Burt Co
Williams Oil-O-Matic Div Eureka-Williams Co
York-Shipley Inc

▶ HEATING SYSTEMS, RADIANT

BELL & GOSSETT CO
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
BUNDT TUBING CO
Cannon Sewer Pipe Co
CHASE BRASS & COPPER CO
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
Muelter Brass Co
Revere Copper & Brass Co
Rohrborn Products Div G M
SURFACE COMBUSTION CORP
Taco Heaters Inc
THRUSH (H A) & CO
Ullica Radiator Corp

▶ HEATING SYSTEMS, RADIANT PANELS

Apploman Art Glass Works Inc
Continental Radiant Glass Heating Corp
Muelter Brass Co
Radiant Radiator Panels Inc
U S Rubber Co

▶ HEATING SYSTEMS, WARM AIR

Airtemp Div Chrysler Corp
American Gas Machine Co
AMERICAN RADIATOR & STANDARD SANITARY CORP
Anchor Div Stratton & Tertogge Co Inc
Aurore Furnace Co
BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC
CARRIER CORP
Chicago Down Draft Furnace Co
COLEMAN CO INC
CONCO ENGINEERING WORKS DIV CONKEY (H D) CO
CORBAIRE HEATER CORP
CRANE COMPANY
Detroit-Michigan Store Co
Dun-Therm Div Motor Wheel Corp
Eclair Store Co Div Noma Electric Co
Erga Products Co
Ezra Products Co
Ezra Products Co
Fairbanks Morse & Co
Felders Quigan Co

Fluid Heat Div Anchor Post Products Inc
Fox Furnace Co
GENERAL ELECTRIC CO AIR CONDITIONING DEPT
GETTY (H S) & CO
Gilbert & Barker Mfg Co
Henry Furnace Co
Hoffman Specialty Co
Holland Furnace Co
HOLLY MFG CO
Ingraham Steel Div Borg-Warner Corp
International Heater Co
Iron Fireman Mfg Co
Jackson & Church Co
Kausline Co
Kresky Mfg Co Inc
KRESNO STAMM MFG CORP
Lennox Furnace Co
LITTLE (H C) BURNER CO
Loche Stone Co
MAESTIC CO
MORRISON STEEL PRODUCTS INC
MUELLER (L J) FURNACE CO
Murray (D J) Mfg Co
National Warm Air Heating & Air Conditioning Association
NORGE HEAT DIV BORG-WARNER CORP
NORMAN PRODUCTS CO
Northwest Metal Products Inc
Oakland Foundry Co
Payne Furnace & Supply Co
Penn Boiler & Burner Mfg Co
Perfection Store Co
Perino Mfg Corp
Quiet Automatic Burner Corp
REINER MFG CO
RICHMOND RADIATOR CO
Silent Steam Oil Burner Corp
SURFACE COMBUSTION CORP
Viking Mfg Corp
Wayne Home Equipment Co
Wholesaling Furnace Corp
Will-Burt Co
Williams Oil-O-Matic Div Eureka-Williams Corp
WILLIAMSON HEATER CO
York-Shipley Inc

▶ HINGES, BALL BEARING

ALLITT-PROUTY MFG CO
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Fwale Equipment Mfg Co
HAGER (C) & SONS HINGE MFG CO
LOCKWOOD HARDWARE MFG CO
McKinney Mfg Co
RICHARDS-WILCOX MFG CO
Rixon (beard) Co
STANLEY WORKS
YALE & TOWNE MFG CO

▶ HINGES, BUTT

Aeco Mfg Co
Alan Hardware Mfg Corp
AMERICAN CABINET HARDWARE CORP
Champion Hardware Co
Clinton Lock Co
Consolidated Iron Steel Mfg Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Earle Hardware Mfg Co
Fwale Equipment Mfg Co
FRANTZ MFG CO
Garden City Plating & Mfg Co
Genson Tool Div General Steel Warehouse Co
GETTY (H S) & CO INC
Grand Rapids Mfg Co
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Hammade Hardware Mfg Co
Ideal Brass Works
KWIKSET LOCKS INC
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
McKinney Mfg Co
NATIONAL LOCK CO
NATIONAL MFG CO
Norwalk Lock Co Div Regal Lock & Hardware Co
Parish Brass & Hardware Mfg Co
Parker (S) Hardware Mfg Co
Penn Hardware Co
Petko Industries
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sauer Hardware Lock Works
SARGENT & CO
Sharon Hardware Mfg Co
Skillman Hardware Mfg Co
Slaymaker Lock Co
STANLEY WORKS
WAGNER MFG CO
YALE & TOWNE MFG CO

▶ HINGES, CONTINUOUS

HAGER (C) & SONS HINGE MFG CO
Knapp & Vogt Mfg Co
NATIONAL LOCK CO
STANLEY WORKS

▶ HINGES, FLOOR

Bommer Spring Hinge Co
Chicago Spring Hinge Co
Clinton Lock Co
FRANTZ MFG CO
HAGER (C) & SONS HINGE MFG CO
NATIONAL MFG CO
PITTSBURGH PLATE GLASS CO

RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Shelby Spring Hinge Co
STANLEY WORKS

▶ HINGES, GATE

Aeco Mfg Co
Chicago Spring Hinge Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Clyden Furnace Div American Steel & Wire Co
FRANTZ MFG CO
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Ideal Brass Works Inc
KEYSTONE STEEL & WIRE CO
Lawrence Brothers
McKinney Mfg Co
Milwaukee Stamping Co
NATIONAL MFG CO
Penn Hardware Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Standard Bronze Co
STANLEY WORKS
WAGNER MFG CO

▶ HINGES, INVISIBLE

AMERICAN CABINET HARDWARE CORP
NATIONAL LOCK CO
Parker (S) Hardware Mfg Co
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Saw Mfg Co
STANLEY WORKS

▶ HINGESS, IRON RECESS

American Hinge Co
AMERICAN CABINET HARDWARE CORP

▶ HINGES, SPRING, DOOR

Bommer Spring Hinge Co
Chicago Spring Hinge Co
Cleveland Lock Works
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Fwale Equipment Mfg Co
FRANTZ MFG CO
Genson Tool Div General Steel Warehouse Co
Inc
HAGER (C) & SONS HINGE MFG CO
Harris Inc
Lawrence Brothers
Milwaukee Stamping Co
Sharon Hardware Mfg Co
Shelby Spring Hinge Co
STANLEY WORKS

▶ HINGES, STRAP

Aeco Mfg Co
Bainbridge Mfg Co
Champion Hardware Co
Cleveland Lock Works
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Eros Mfg Co
Fwale Equipment Mfg Co
FRANTZ MFG CO
Genson Tool Div General Steel Warehouse Co
Griffin Mfg Co
HAGER (C) & SONS HINGE MFG CO
Johnson Industries Inc
Knapp & Vogt Mfg Co
McKinney Mfg Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Parker (S) Hardware Mfg Corp
Peterson (James) & Son
Rebeto Letters
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Sharon Hardware Co
Slaymaker Lock Co
Standard Bronze Co
STANLEY WORKS
WAGNER MFG CO

▶ HOES, MORTAR

Ames Baldwin Wyoming Co
Boyle Mfg Co
True Temper Corp
Union Fork & Hoe Co

▶ HOISTS, CHAIN

American Chain Div of American Chain & Cable Co
Chisholm Moore Hoist Corp Div Columbus McKinnon Chain Corp
Cleveland Tramrail Div Cleveland Crane & Engineering Co
Coffey Hoist Co
Ford Chain Block Div American Chain & Cable Co Inc
Moore Div Acin Co
Norberg Mfg Co
Reading Chain & Block Corp
Western Foundry Co
Wright Hoist Div American Chain & Cable Co Inc
YALE & TOWNE MFG CO

▶ HOISTS, CONCRETE BLOCK

Stearns Mfg Co Inc

▶ HOISTS, ELECTRIC

KING MFG CO

▶ HOISTS, MECHANICAL POWERED

ALLIS CHALMERS MFG CO
American Engineering Co
American Hoist & Derrick Co
BENNETT-IRELAND INC
Bridgport Chain & Mfg Co
C H & E Mfg Co
Chisholm-Moore Hoist Corp Div Columbus McKinnon Chain Corp
Cleveland Tramrail Div Cleveland Crane & Engineering Co
Clyde Iron Works Inc
Coffey Hoist Co
CONSTRUCTION MACHINERY SALES CO
Detroit Hoist & Machine Co
Erie Hoist Co
ESSICK MFG CO
Fairbanks Morse & Co
Gifford-Wood Co
HARNISCHFEGGER CORPORATION
Hyster Company
JAEGER MACHINE CO
KEWANEE MFG CO
KING MFG CO
Levin-Shepard Products Inc
Linton Hoist & Crane Co
London Machinery Co
Master Electric Co
National Screw & Mfg Co
Novo Engine Co
Reading Chain & Block Corp
Robbins & Myers Inc
Shaw Box Crane & Hoist Div Manning Maxwell & Moore Inc
Shepard-Niles Crane & Hoist Corp
Silent Hoist & Crane Co
SMITH'S HOIST & MANUFACTURING CO
Starline Inc
Stimmler Works Co
Vulcan Iron Works Co
Washington Iron Works
Whiting Corp
Wright Hoist Div American Chain & Cable Co Inc
YALE & TOWNE MFG CO

▶ HOISTS, PORTABLE

CLIPPER MFG CO
CONSTRUCTION MACHINERY SALES CO
JAEGER MACHINE CO
KING MFG CO

▶ HOISTS, ROPE

American Engineering Co
C H & E Mfg Co
Clyde Iron Works Inc
Columb Mfg Co
Detroit Hoist & Machine Co
Franklin Equipment Co
Lansboro Mfg Co Inc
Lonsdale Manufacturing Co
Noy Mfg Co
Original Enduras Co
Shepard-Niles Crane & Hoist Corp
Starline Inc

▶ HOISTS, SKIP

ALLIS-CHALMERS MFG CO
American Hoist & Derrick Co
BESSER MFG CO
Brady Concrete Corp
Concrete Transport Mixer Co
Fairbanks Morse & Co
Fairfield Engineering Co
Fleming Mfg Co Inc
Gifford-Wood Co
Honey Converter Co
Hyster Company
JAEGER MACHINE CO
Jeffrey Manufacturing Co
Link-Belt Co
Little Giant Products Inc
Neff & Fry Co
Shaw Box Crane & Hoist Div Manning Maxwell & Moore Inc
Silent Hoist & Crane Co

▶ HOISTS, TRUCK

Ashokan Company
Colum Industries Inc
Gallon Allied Body Co
GETTY (H S) & CO INC
Heli Company
Heresite Steel Products Corp
Hyster Company
KEWANEE MFG CO
Little Giant Products Inc
Marion Metal Products Co
Perfection Steel Body Co
St. Paul Hydraulic Hoist Div Wood (Gar) Industries Inc
Shaw Box Crane & Hoist Div Manning Maxwell & Moore Inc
Silent Hoist & Crane Co
Stimmler Works Co
Wood (Gar) Industries Inc
YALE & TOWNE MFG CO

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► **HOLDERS, PORTABLE RECORD FORMS**

Ferris Business Equip Inc
National Cash Register Co

► **HOLDERS, SAND PAPER REB DEVIL TOOLS**

► **HOME FREEZERS**

Admiral Corp
Amasa Society
AMERICAN CENTRAL DIV AVCO MFG CORP

American Refrigerator & Machine Co
Bon-Hur Mfg Co
Brewer-Titchener Corp
Clayton & Lambert Mfg Co
Cooler Corp

CROSLBY DIV AVCO MFG CO
Deepfreeze Div Motor Products Corp
DeLaval Separator Co
Esco Cabinet Co
Fapet Refrigerator Co
Frigidaire Div General Motors Corp

GENERAL ELECTRIC CO APPLIANCE & REFRIGERATION DEPT

General Implement Corp
General Refrigerator Corp
Gibson Refrigerator Co
Giffilan Bros Inc

HOTPOINT INC
International Refrigerator Co
Jewett Refrigerator Co

KELVINATOR DIV BASH-KELVINATOR CO
Kennedy Co
Lindemann (A J) & Hoover Co
Martin-Farr Corp
Masterfreeze Corp
Maytag Co
Meters-Gear Co

NORGE DIV BORG-WARNER CORP (APPLIANCE DIV)

Philco Corp
Portable Elevator Mfg Co
Pressed Steel Co
Refrigeration Corp of America
Robbins & Burke Inc
Sanitary Refrigeration Co
Savage Arms Corp
Secheln Bros
Seeger-Sunbeam Corp
Sub-Zero Freezer Co
Tyler Fixtures Co
Victor Products Corp
Ward Refrigerator & Mfg Co
Water Showcase & Fixture Co

WESTINGHOUSE ELECTRIC CORP APPLIANCE DIV

Wilson Cabinet Co
Winpower Mfg Co

► **HONES**

BERN-MANNING CORP DIV BORTON CO
Carborundum Company
GETTY (N S) & CO INC

► **HOOKS, CHAIN**

American Logging Tool Co
Brewer-Titchener Corp
Diamond Calk & Borschore Co
Giant Grip Mfg Co
Peavy Mfg Co

► **HOOKS, CUP AND SHOULDER**

Larson (Charles O) Co

► **HOOKS, PLASTIC**

Columbia Plastic Products Inc
Fswale Equipment Mfg Co
GETTY (N S) & CO INC

► **HOOKS AND EYES, GATE**

Larson (Charles O) Co
SARGENT & CO

► **HOOKS AND EYES, SCREW**

Astruc Company
Grand Rapids Brass Co
HAGER (C) & SON HINGE MFG CO
Judd (H L) Co Inc
Larson (Charles O) Co
Lawrence Brothers
NATIONAL LOCK CO
SARGENT & CO
Washburn Company

► **HOPPERS, AUTOMATIC WEIGHING**

BESSER MFG CO
Bulter Rin Co
CONSTRUCTION MACHINERY SALES CO
Johnson (C B) Co
Toledo Scale Co
WORTHINGTON PUMP & MACHINERY CO

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Bulter Rin Co
CONSTRUCTION MACHINERY SALES CO
Johnson (C B) Co
Toledo Scale Co
WORTHINGTON PUMP & MACHINERY CO

Toledo Pressed Steel Co
Trestle Mfg Co

► **HOSE, AIR COMPRESSOR**

Acme Rubber Mfg Co
Boston Woven Hose & Rubber Co
Broadway Rubber Mfg Co
Cincinnati Rubber Mfg Co
Continental Rubber Works
De Villiers Company
Electric Sprayer Co
Gates Rubber Co
Goodall Rubber Co
Goodrich (B F) Co
Raybestos-Manhattan Inc
Manhattan Rubber Div
Republic Rubber Div Lee Rubber & Tire Corp
Sta-Warm Electric Co
Thermoid Company
Union Rubber & Asbestos Co
U S Rubber Co
WORTHINGTON PUMP & MACHINERY CO

► **HOSE, GARDEN**

Acme Rubber Mfg Co
Boston Woven Hose & Rubber Co
Broadway Rubber Mfg Co
Cincinnati Rubber Mfg Co
Continental Rubber Works
Diamond Rubber Div Goodrich (B F) Co
Franklin Rubber Corp
Gates Rubber Co
Goodall Rubber Co
Goodrich (B F) Co
Goodrich (T & H) Rubber Co
Hewitt Rubber Div Hewitt Robins Inc
Keystone Brass & Rubber Co
Owen Rubber Products
Plymouth Rubber Co Inc
Quaker Rubber Corp
Raybestos-Manhattan Inc
Manhattan Rubber Div
Republic Rubber Div Lee Rubber & Tire Corp
Sayline Industries
Thermoid Co
Trenton Rubber Mfg Co
Union Rubber & Asbestos Co
U S Rubber Co
Woven Steel Hose & Rubber Co

► **HOSE, INDUSTRIAL**

Goodrich (B F) Co

► **HOSE, LINEN FIRE**

Allen (W D) Mfg Co
Boston Woven Hose & Rubber Co
Broadway Rubber Mfg Co
Continental Rubber Works
Elkhart Brass Mfg Co
General Detroit Corp
Goodall Rubber Co
Raybestos-Manhattan Inc
Manhattan Rubber Div
Union Rubber & Asbestos Co
U S Rubber Co
Wirt & Knox Mfg Co

► **HYDRANTS**

American Foundry & Mfg Co
Columbian Pump Co
CRANE COMPANY
Eddy Valve Co
Knights (James) Co
Murdoch Mfg & Supply Co
Woodford Hydrant Co

► **HYDRAULIC TAIL GATES**

Anthony Co Inc
Caven Industries Inc
Day Company
Friedhauf Trailer Co
Hill Co
Hercules Steel Products Corp
Perfection Steel Body Co

► **INCINERATORS**

American Incinerator Corp
BOWSER INC
Brule Incinerators
Clarf Incinerators
Colloid Equipment Co Inc
Detroit Michigan Slave Co
Donley Brothers
Ewing Incinerator Co
Fiske (J W) Iron Works
Gosler (Joseph) Incinerators
Houston Blow Pipe & Sheet Metal Works
Incinerator Products Co
Industrial Iron Works
Kerue Incinerator Div Morse-Boniger De-structer Co
MAJESTIC COMPANY
Morse Boulder Destructor Co
Ohio Slave Co
Pittsburgh Incinerator Co
Seattle Boiler Works
Syracuse Alloy Metals Corp
Valley Welding & Boiler Corp
Watson Sales Mfg Co
Wheeling Corrugating Co

Manufacturers' Names and Addresses Start on Page D-76
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► **INDICATORS, BUTTON LOCKWOOD HARDWARE MFG CO**

► **INKS, LUMBER MARKING**

MARKWELL MFG CO INC
Matthew (James H) & Co
Speedy Products Inc

► **INSECTICIDES**

Alento Mfg Corp
Aldro Inc
Aglava Inc
American Agricultural Chemical Co
American Cyanamid Co
American Oil Co
BARBETT DIV ALLIED CHEMICAL & DYE CORP
Beugal Company
Benthide Chemical Co
Boyer Chemical Laboratory Co
Boyle Midway Inc
Camp Chemical Co Inc
Carbola Chemical Co Inc
Carbolinum Wood Preserving Co
Celcostrite Mfg Co
Chapman Chemical Co
Chemical Supply Co
Coopers Creek Chemical Corp
Crescent Products Co
Dow Chemical Co
DuPont (E I) & Nemours & Co
Glidden Company
Gordon (Frank C) Chemical Co
Gulf Oil Corp
Harris Products Co Inc
Hawthorne Chemical Co
Hollingshead (B M) Corp
Koppers Co Inc
Lilly Products Co
Linc (O E) Co Inc
Meinhardt (J A) & Co
Monsanto Chemical Co
Nourse Oil Co
O'Vear Corporation
One-Spot Co
Pennsylvania Salt Mfg Co
PITTSBURGH PLATE GLASS CO
Plunkett Chemical Co
PROTECTION PRODUCTS MFG CO
Puritan Chemical Co
Ral-Biscuit Co
Refronox Products Co Inc
Schutte Laboratories
Sherwin-Williams Co
Sinclear Refining Co
Socomey-Vacuum Oil Co Inc
SOLVAY SALES DIV ALLIED CHEMICAL & DYE CORP
Standard Oil Co of Ind
Stark (N H) & Co
Suffit & Co
Tanglefoot Company
U S Rubber Co
Vaporize Company
Wood-Treating Chemicals Co

► **INSECTICIDES**

Alento Mfg Corp
Aldro Inc
Aglava Inc
American Agricultural Chemical Co
American Cyanamid Co
American Oil Co
BARBETT DIV ALLIED CHEMICAL & DYE CORP
Beugal Company
Benthide Chemical Co
Boyer Chemical Laboratory Co
Boyle Midway Inc
Camp Chemical Co Inc
Carbola Chemical Co Inc
Carbolinum Wood Preserving Co
Celcostrite Mfg Co
Chapman Chemical Co
Chemical Supply Co
Coopers Creek Chemical Corp
Crescent Products Co
Dow Chemical Co
DuPont (E I) & Nemours & Co
Glidden Company
Gordon (Frank C) Chemical Co
Gulf Oil Corp
Harris Products Co Inc
Hawthorne Chemical Co
Hollingshead (B M) Corp
Koppers Co Inc
Lilly Products Co
Linc (O E) Co Inc
Meinhardt (J A) & Co
Monsanto Chemical Co
Nourse Oil Co
O'Vear Corporation
One-Spot Co
Pennsylvania Salt Mfg Co
PITTSBURGH PLATE GLASS CO
Plunkett Chemical Co
PROTECTION PRODUCTS MFG CO
Puritan Chemical Co
Ral-Biscuit Co
Refronox Products Co Inc
Schutte Laboratories
Sherwin-Williams Co
Sinclear Refining Co
Socomey-Vacuum Oil Co Inc
SOLVAY SALES DIV ALLIED CHEMICAL & DYE CORP
Standard Oil Co of Ind
Stark (N H) & Co
Suffit & Co
Tanglefoot Company
U S Rubber Co
Vaporize Company
Wood-Treating Chemicals Co

► **INSTRUMENTS, DRAFTING**

Dietzgen (Eugene) Co
Eberhard Faber Penell Co
Higgins (Charles M) Co
KEUFFEL & ESSER CO
Loomis Industries
Pickett & Krelle Inc
Post (Frederick) Co
Smith (H E) Co
Stiles (H A) Co
Universal Drafting Machine Corp
WARREN-KNIGHT CO
WHITE (DAVID) CO
Woodrow Engineering Co

► **INSTRUMENTS, INDICATING, RECORDING AND CONTROLLING**

Bradley (L B) Co
Colloid Equipment Co Inc
Foshers Company
GENERAL ELECTRIC CO APPARATUS DEPT
MINNEAPOLIS HONEYWELL REGULATOR CO
Moore Dry Kiln Co
Newark Boiler Regulator Corp
Tagliabue (C J) Corp
Taylor Instrument Co
Weston Electrical Instrument Corp
Wheeler Instruments Co

► **INSTRUMENTS, SURVEYING**

Argyle Manufacturing Co
BOSTON-BRADY MFG CO
Chicago Steel Tape
Dietzgen (Eugene) Co
GOLDBLATT TOOL CO
KEUFFEL & ESSER CO
Krydonite Asphalt Products Co
Post (Frederick) Co
Royal Oak Industries
Starrett (L S) Co
WARREN-KNIGHT CO
WHITE (DAVID) CO

► **INSULATION, ALUMINUM FOIL**

Barnhardt Mfg Co
CERTAIN-TEED PRODUCTS CORP
INFRA INSULATION INC
Insul-Cotton Div Taylor Boding Mfg Co
NATIONAL GYPSUM CO
Holland Metals Co
PROTECTIVE PAPERS CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV
U S Gypsum Co

► **INSULATION, BATT OR BLANKET, COTTON FIBER**

Barnhardt Mfg Co
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Gilman Brothers Co
Insul-Cotton Div Taylor Boding Mfg Co
Insulation Industries Inc
Jansville Cotton Mills Co
LOCKPORT COTTON BATTING CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Standard Cotton Products Co
Taylor Boding Mfg Co
U S Rubber Co

► **INSULATION, BATT OR BLANKET, COTTON FIBER, ALUMINUM FOIL**

Insul-Cotton Div Taylor Boding Mfg Co
Insulation Industries Inc
LOCKPORT COTTON BATTING CO
Standard Cotton Products Co

► **INSULATION, BATT OR BLANKET, FIBROUS GLASS**

OWENS-CORNING FIBERGLAS CORP

► **INSULATION, BATT OR BLANKET, MINERAL WOOL**

Arma Asbestos Covering & Flooring Co
ARMSTRONG CORK CO
Baldwin-Hill Co
BARBETT DIV ALLIED CHEMICAL & DYE CO
CAREY (PHILIP) MFG CO
Carney Co Inc
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Cons Insulating Products
Corson (G & W) Inc
Eagle-Picher Co
FLINTKOTE COMPANY
Ford Insulating Products Co
Forty-Eight Insulations Inc
GREAT LAKES CARBON CORP BUILDING PRODUCTS DIV
Industrial Products Co
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
Insul-Wool Insulation Corp
JOHNS-MANVILLE CORP
Kelley Island Line & Transport Co
Kimberly Clark Corp
Kinsul Div
Lahon Company
MASONITE CORPORATION
Mineral Insulation Co
NATIONAL GYPSUM CO
National Rock Wool Sales Inc
Plastering Wall Board Co
Riverton Lime & Stone Co Inc
RODDIS PLYWOOD CORP
RUBEROID COMPANY
Sealite Insulation Mfg Corp
Trussore Products & Chemical Corp
U S Gypsum Co
U S Mineral Wool Co
Western Mineral Products Co

► **INSULATION, BATT OR BLANKET, WOOD FIBER**

CABOT (SAMUEL) INC
Kimberly Clark Corp
MASONITE CORPORATION
PACIFIC LUMBER CO
RODDIS PLYWOOD CORP
SIMPSON LOGGING CO
WOOD CONVERSION CO

► **INSULATION, BLOWING WOOL**

Asbestos Asphalt & Insulation Inc
BARBETT DIV ALLIED CHEMICAL & DYE CORP
Barn (S T) Co
CAREY (PHILIP) MFG CO
Carney Co Inc
CELOTEX CORP
Eagle-Picher Co
Forty-Eight Insulations Inc
Insul-Wool Insulation Corp
JOHNS-MANVILLE CORP
NATIONAL GYPSUM CO
Pal-o-Pak Insulation Co
Sealite Insulation Mfg Co
U S Gypsum Co
U S Mineral Wool Co
WOOD CONVERSION CO

► **INSULATION, BOARD, CORK**
ARMSTRONG CORK CO BUILDING MATERIALS DIV

► **INSULATION, BOARD, FIBER**

Air-O-Cel Co
ARMSTRONG CORK CO
BIRD & SON INC
CELOTEX CORPORATION
CERTAIN-TEED PRODUCTS CORP
DART & RUSSELL
Fib-Tex Insulating Board Co
FLINTKOTE COMPANY
HERASOTE COMPANY
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MANVILLE CORP
KEASBY & MATTISON CO
Kimberly-Clark Corp
NATIONAL GYPSUM CO
Plasteron Wall Board Co
Robatec Div Great American Industries
SIMPSON LOGGING CO
U S Gypsum Co
WOOD CONVERSION CO

► **INSULATION, BOARD, MINERAL WOOL**

Acme Asbestos Covering & Flooring Co
ARMSTRONG CORK CO BUILDING MATERIALS DIV
Baldwin Hill Co
CAREY (PHILIP) MFG CO
Chicago Fire Brick Co
Coast Insulating Products
Corson (G & W H) Inc
Green (A P) Fire Brick Co
JOHNS-MANVILLE CORP
Logan-Long Co
OWENS-CORNING FIBERGLAS CORP
Standard Asbestos Mfg Co

► **INSULATION, BOARD, REFLECTIVE**

Air-O-Cel Co
U S Gypsum Co

► **INSULATION, CORK**

Cork Import Corp

► **INSULATION, GLASS, CELLULAR**

PITTSBURGH CORNING CORP

► **INSULATION, GLASS FOAM**

ARMSTRONG CORK CO
PITTSBURGH CORNING CORP
Standard Asbestos Mfg Co

► **INSULATION, GRANULAR FILL, EXPANDED, VERMICULITE, ETC.**

Alexander Film Co Alexite Engineering Co Div
American Birlork Co
American Vermiculite Co Inc
Asbestos Supply Co
Empire Roofing & Insulation Co
Gladding McLean & Co
GREAT LAKES CARBON CORP
Insulation Service Co
Intermountain Insulation Co
Mineral Products
Munn & Steele Inc
Northwest Insulation Co
Pyramid Co
Robinson Insulation Co
Schundler (F E) & Co Inc
Sillitree Corp
Vermiculite Products Corp
Western Mineral Products Co
ZONOLITE CO

► **INSULATION, LOOSE FILL, GLASS**

ARMSTRONG CORK CO BUILDING MATERIALS DIV
Carmy Co Inc
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
Keller Island Lime & Transport Co
OWENS-CORNING FIBERGLAS CORP

► **INSULATION, LOOSE FILL, MINERAL WOOL**

Acme Asbestos Covering & Flooring Co
Alton Mineral Wool Co
American Book Wool Co
Asbestos Anhydrite Insulation Inc
Baldwin-Hill Co
BARRETT DIV ALLIED CHEMICAL & DYE CORP
Broadway Rubber Mfg Co
Burton (S T) Co
CAREY (PHILIP) MFG CO
Carmy Co Inc
CELOTEX CORP

CERTAIN-TEED PRODUCTS CORP
(Chamberlin Co of America Inc
Chicago Fire Brick Co
Coast Insulating Products
Corson (G & W H) Inc
Eagle-Flake Co
FLINTKOTE CO
GREAT LAKES CARBON CORP BUILDING PRODUCTS DIV

Insul-Wool Insulation Corp
JOHNS-MANVILLE CORP
Keller Island Lime & Transport Co
Lehigh Co
Mineral Insulation Co
NATIONAL GYPSUM CO
National Rock Wool Sales Inc
OWENS-CORNING FIBERGLAS CORP
Plasteron Wall Board Co
Riverton Lime & Stone Co Inc
Sealite Insulation Mfg Corp
Standard Asbestos Mfg Co
Tennessee Products & Chemical Corp
U S Gypsum Co
U S Mineral Wool Co

► **INSULATION, LOOSE FILL, WOOL CELLULOSE**

FLINTKOTE CO
Horn (Edward) Lumber Co
PACIFIC LUMBER CO
Pal-O-Pak Insulation Co Inc

► **INSULATION, PLASTIC**

Acme Asbestos Covering & Flooring Co
Acme Brick Co
American Phenolic Corp
Borden Co Chemical Div
CAREY (PHILIP) MFG CO
Chicago Fire Brick Co
Dow Chemical Co
Mexico Refractories Co
Quigley Co
Standard Asbestos Mfg Co
Superior Plastics Div Commonwealth Plastics Inc

► **INSULATION, PIPE**

Owens-Illinois Glass Co Karlo Div

► **INSULATION, REFLECTIVE**

Alfco Insulation Co
American Flange & Mfg Co Inc
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Gilman Brothers
INFRA INSULATION INC
Kimberly-Clark Corp
LOCKPORT COTTON HATTING CO
MASONITE CORP
NATIONAL GYPSUM CO
PROTECTIVE PAPERS INC
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RICKHRAF CO
RODDIE PLYWOOD CORP
Sealite Insulation Mfg Corp
Silverite Products Inc
SISALKRAFT CO
Taylor Roofing Mfg Co
U S Gypsum Co

► **INSULATION, ROOF, DECK**

Parvic Mfg Co
SIMPSON LOGGING CO

► **INSULATION, SPRAY-ON**

Green (A P) Fire Brick Co
Mexico Refractories Co
Minnesota Mining & Mfg Co
Sealite Insulation Mfg Corp
Spray-Flake Insulation Co
U S Mineral Wool Co

► **INTER-COMMUNICATING SYSTEMS**

Auth Electrical Specialty Co
Bell Sound Systems
Connecticut Telephone & Electric Div Great American Industries
Cough (S H) Co Inc
Edwards Co
Executione Inc
Faraday Electric Corp
Sellingas Metallurgical & Supply Co
Operadio Mfg Co
Phileo Corp
Phone Craft Co
Rauland Corp
Select-O-Phone Co Div Screw Machine Products Co
Sperli Faraday Inc
Talk-A-Phone Mfg Co
T S Instrument Corp
Webster Electric Co

► **IRONERS**

Alturor Bros Co
American Ironing Machine Co
Aper-Botava Corp
Armstrong Products Corp
Automatic Washer Co
Barlow & Seelig Mfg Co

BENDIX HOME APPLIANCES INC DIV
AVCO MFG CORP
Blackstone Corp
Coolson Bros Mfg Co
Conlon Moore Corp
CRSLEY DIV AVCO MFG CORP
Eaton Washing Machine Corp
Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO APPLIANCES & MERCHANDISE DEPT
Hortan Mfg Div Aviation Corp
HGTPRINT INC
Institute Iron Co
Lauders Fray & Clark
Maytag Co
Midwest Metal Stamping Co
Nineteen Hundred Corp
NORGE DIV BOBC-WARNER CORP (APPLIANCE DIV)
Thur Corp
Victor Electric Products Co
Voss Brothers Mfg Co
WESTINGHOUSE ELECTRIC CORP

► **IRON, ORNAMENTAL**

ARTCRAFT ORNAMENTAL IRON CO
Badger Wire & Iron Works Inc
Bevan Art Crafts
Belknap Co
Belton Mfg Co
Birmingham Ornamental Iron Co
CINCINNATI IRON FENCE CO
COFFMAN (R G) CO
Delta Iron & Wire Works
Davis & Siehl Co
FAWCO MFG DIV FALLS STAMPING & WELDING CO
Florida Metalcrafters
Hutchinson Co
Johnson Industries Inc
Loke Mfg Co
Logan Co
Lorio Iron Works
METAL CRAFTERS INC
Meyers (Fred L) Mfg Co
Newman Brothers Inc
Rock Island Millwork Co
Ramsco Ornamental Iron Co
Southern Wire & Iron Works
Stewart Iron Works Co Inc
Wiemann (Ernest) Iron Works

► **IRONS, SOLDERING**

Barrett (William L) Co
Berna (Otto) Co Inc
Caldwell Equipment Co Inc
Eagle Electric Mfg Co
Electric Soldering Iron Co
Hexaron Electric Co
Loak Mfg Co
STANLEY TOOLS DIV STANLEY WORKS
Turner Brass Works
Wage Electric Inc
Wall (P F) Mfg Co

► **IRONS, SOLDERING, ELECTRIC**

Everhot Mfg Co
GENERAL ELECTRIC CO APPLIANCE & MERCHANDISE DEPT
Ideal Industries Inc
Loak Mfg Co
STANLEY TOOLS DIV STANLEY WORKS

► **IRRIGATORS, SOIL**

Allen (W D) Mfg Co
Dunnro Bros
Hastings Canvas & Mfg Co
Iri-gator Mfg Co
Keston Bros
Mousser Bram Co
Sebaton Iron Products Co
Wagner Ammings & Mfg Co
Wenzel (H) Tent & Duck Co

► **JACKS ADJUSTABLE, WOOD-STEEL**

Brayer Brothers Whiting & Co
Clay Equipment Corp
Flint (A W) Co
Hain's Mfg Co of Ohio
M & M Wire Clamp Co
Newark Ladder & Bracket Co Inc
PATENT SCAFFOLDING CO INC
Sourpous (S P) Co
STEEL SCAFFOLDING CO INC
Templeton Kenly & Co
United Metal Products Inc

► **JACKS, HOUSE**

American Scale Co
American Shilo & Foundry Co
Berg (John) Mfg Co
Ruda Company
Duff-Norton Mfg Co
Jayer-Criddleton Co
Sourpous (S P) Co
Stimmel Winch Co
Sweet (A L) Iron Works
Templeton Kenly & Co

► **JACKS, LADDER**

American Ladder Co
Rabeck (W W) Co Inc

Rauer Mfg Co
Reyer Brothers Whiting & Co
Davensport Ladder Co
Flint (A W) Co
Goshen Mfg Co
G & G Stamping Co
Heider Mfg Co
Holland Ladder & Mfg Co
John's Mfg Co
Howard Mfg Co
Hyde Mfg Co
Mention Ladder Mfg Co
RICELEY MFG CO
Ridgely Trimmer Co
Sabin Machine Co
Tilly (John S) Ladders Co Inc
Tololo Interlocking Products
Wilson-Albrecht Co

► **JACKS, SLIP-FORM RAISING**

Duff-Norton Mfg Co

► **JALOUSIES**

Cammett Hardware Co
Fwale Equip Mfg Co
GATE CITY SASH & DOOR CO
GILBERT CORP
Pro-Tect-U Jalousie Corp
RUSSELL (F C) CO
Thorn (J S) Co

► **JAMBS, PACKAGED DOOR**

LONG-BELL LUMBER CO
Rock Island Millwork Co

► **JIGS, BORING**

CORBIN (P & F) DIV AMERICAN HARDWARE CORP
LOCKWOOD HARDWARE MFG CO

► **JIGS, LOCK MORTISING**

KWIKSET LOCKS INC
NATIONAL BRASS CO
Polio Industries
Vimcar Sales Co
WESTWOOD MFG CO

► **JOINTERS**

ATLAS PRESS CO
ROCKWELL MFG CO DELTA POWER TOOL DIV
WALKER-TURNER DIV KEARNEY & TRECKER CORP

► **JOINTERS, MASON'S**

Adams (E F) Inc
DISSTON (HENRY) & SONS INC
Economy Mfg Co
GOLDBLATT TOOL CO
Marshalltown Trowel Co
Palme (Benjamin G)

► **JOINTERS, SAW**

Adams (E F) Inc
BOICE CRANE CO
DISSTON (HENRY) & SONS INC
Horton & Anderson Div St Paul Foundry & Mfg Co
Oliver Machinery Co
Power (L) & Co
Powermatic Machine Co
Pronoil Co
ROCKWELL MFG CO DELTA POWER TOOL DIV
Stetson Bros Machine Co
WALLACE (J D) & CO
Vater-American Machine Co

► **JOINTS, EXPANSION**

CAREY (PHILIP) MFG CO
CECO STEEL PRODUCTS CO
CELOTEX CORP
FLINTKOTE CO
Horn (A C) Co
JOHNS-MANVILLE CORP
Robinson Asphalt Products Co
Measday (W B) Inc
PITTSBURGH CARBON CORP
Protective Engineering Co
PROTECTIVE PAPERS INC
ST PAUL CORRUGATING CO
SPECIALIZED PRODUCTS CORP
Tuffall Inc

► **JOINTS, METAL**

Brasen Mfg Co
New Holland Metals Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Boale Steel Co

► **JOISTS, CONCRETE, PRECAST**

Lih-I Bar Co
Prior Brothers

► **JOISTS, STEEL**

American Bridge Co
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Gabeler Steel Co
Haven Steel Co
International Steel Co
Jones & Laughlin Steel Co
LACLEDE STEEL CO

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Macomber Inc
Sousle Steel Co
STRAN-STEEL DIV GREAT LAKES STEEL CORP
TRUSCON STEEL CO
United States Steel Co

► KEYS, BLANK

Atlas-Anonika Co
Barrows Lock Works
Clinton Lock Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
LOCKWOOD HARDWARE MFG CO
Master Lock Co
Newark Lock Co
Pouss Hardware Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Sager-Barrows Lock Works
Skillman Hardware Co
Slymshaker Lock Co
TECHNICAL GLASS CO INC
YALE & TOWNE MFG CO

► KITCHEN ACCESSORIES

ALLIANCEWARE INC
AMERICAN CABINET HARDWARE CORP
AMERICAN CENTRAL DIV AVCO MFG CORP
Autogre Co
Baecher (Simon) & Co
Bay Ridge Specialty Co Inc
Columbia Metal Box Co
Columbus Plastic Products Inc
Eben Products Co
Hallenecheid & McDonald
Hassly Things Mfg Co
Illinois Porcelain Enamel Co
IXL Furniture Co Inc
Jamestown Metal Products Co
KITCHEN MAID CORP
Knappe & Vogt Mfg Co
Ludemann (A J) & Heisteron Co
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
Midwest Mfg Co
MULLINS MFG CORP
PITTSBURGH PLATE GLASS CO
St Charles Mfg Co
Superior Household Mfg Co
TOLEDO DESK & FIXTURE CO
TRACY MFG CO
U S Lock & Hardware Co

► KITCHEN CABINET ACCESSORIES

ALLIANCEWARE INC
AMERICAN CABINET HARDWARE CO
AMERICAN CENTRAL DIV AVCO MFG CORP
Borger Mfg Co Republic Steel Corp
Debes Machine Wis
Edson Mfg Co
Engineered Products Co
Excel Metal Cabinet Co Inc
Finkle Equipment Mfg Co
GETTY (H S) & CO INC
IXL Furniture Co
Jamestown Metal Products Co
KITCHEN MAID CORP
Knappe & Vogt Mfg Co
Lyon Metal Products Inc
Midwest Mfg Co
Morgan Co
Morton Kitchen Cabinet Div Morton Mfg Co
MULLINS MFG CO
NATIONAL BRASS CO
Paragon Utilities Corp
SARGENT & CO
TOLEDO DESK & FIXTURE CO
TRACY MFG CO
Washington Steel Products
YALE & TOWNE MFG CO

► KITCHEN CABINETS, METAL

Acme Metal Products Corp
AMERICAN CENTRAL DIV AVCO MFG CORP
ANGEL NOVELTY CO
Borger Mfg Div Republic Steel Corp
DWYER PRODUCTS CORP
Edco Stone & Oven Div Acme Yielche Records Inc
Elkay Mfg Co
Excel Metal Cabinet Co
Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO APPLIANCE & MERCHANDISE DEPT
Genova Modern Kitchens Inc
Gold Seal Mfg Co
Harrison Steel Cabinet Co
HOTPOINT INC
Hobey Bros Inc
Humphreys Mfg Co
Jamestown Metal Products Co
KELVINATOR DIV NASH-KELVINATOR CORP
Lyon Metal Products Co
MARVEL METAL PRODUCTS CO
Midwest Mfg Co
Miller Metal Products Inc
Morton Mfg Co
MULLINS MFG CORP
MURPHY DOOR BED CO INC
Murray Corp of America
Paley Mfg Co
Paragon Utilities Corp
Pinner Co
Royalmaid Kitchen Inc
St Charles Mfg Co
Sibley Corp
TOLEDO DESK & FIXTURE CO
TRACY MFG CO

United Metal Box Co
UNIVERSAL-RUMBLE CORP
Whiteland Metal Prods Co Inc

► KITCHEN CABINETS, WOOD

Ahlstrand (A H) Co
ANGEL NOVELTY CO
Bel-Wood Mfg Co
Bona Wood Co
Boro Wood Products Co Inc
Burke Millwork Co
Cameron (Wm) & Co Inc
CARR ADAMS & COLLIER CO
Cole Mfg Co
CURTIS COMPANIES INC
Davis Plywood Corp
Del-Mar Cabinet Co Inc
Elyse Brothers
Farley & Loetscher Mfg Co
Gannon Mfg Co
General Wood Works
GREGG & SON
Hines (Edward) Lumber Co
Huttig Mfg Co
Huttig Sash & Door Co
Hyde Park Lumber Co
Ideal
IXL Furniture Co
J-D Products Co
Kissam Pine Mills Co
KITCHEN MAID CORP
Kraus (Walter S) Co
L & M Mfg Co
LONG-BELL LUMBER CO
Marquart Millwork Co
MENDEL CO INC
Morgan Co
Morgan Sash & Door Co
Mutachler Brothers
Panner Co
Rock Island Millwork Co
Sloanside Inc
Spokane Sash & Door Co
Sterling Freelead Industries Inc

► KITCHENS, UNIT

Douglas Distributor Co
DWYER PRODUCTS CO
Excel Kitchen Unit Co
Food Service Sales Co
GENERAL AIR CONDITIONING CORP
GENERAL ELECTRIC CO
HOTPOINT INC
Hobey Brothers Inc
MURPHY DOOR BED CO
Woodmetal Industries Inc

► KITCHEN VENTILATING HOODS

Badger Corrugating Co
FAWCO MFG DIV FALL STAMPING & WELDING CO
ROBERTS MFG CO
St Anthony Corp
Universal Blower Co
Vank-A-Hood Co

► KITS, HOME PLANNING

Hom-O-gram Planner Inc
Planitect Co
AMERICAN MODEL RAILROAD CO INC
Berkaly Models Inc
Harcourt Co
Lionel Corp
Ross Chemical & Mfg Co
Scale Models
Scientific Model Airplane Co

► KNIVES, FIBER BOARD

BLACK & DECKER MFG CO
Kimball Mfg Co Inc
SELCK (WALTER E) & CO
STANLEY WORKS

► KNIVES, HIGH SPEED

Atkins (E C) & Co
DISSTON (HENRY) & SONS INC
Elstrom Carbon & Co
Glover Machinery Co
Hoe (R) & Co Inc
Hutter Brothers Saw Mfg Co Inc
Oliver Machinery Co
Taylor-Stiles & Co
Woods (S A) Machine Co

► KNIVES, MACHINE

American Knife Co
Atkins (E C) & Co
DISSTON (HENRY) & SONS INC
Hoe (R) & Co Inc
Holmes (E & B) Machinery Co
Hutter Brothers Saw Mfg Co Inc
Mitts & Merrill
Oliver Machinery Co
SIMONDS SAW & STEEL CO
Taylor Stiles & Co
Woods (S A) Machine Co

► KNIVES, PUTTY, ROOFING, LINOLEUM

Barrett (W L) Co
Black Panther Tool Co
Bridgman Hardware Mfg Corp
B & T METALS CO
Clyde Cutlery Co
Edwards Mfg Co
FASTENER CORP
GETTY (H S) & CO INC
Glacier Tool Mfg Co
GOLDBLATT TOOL CO
Handy Things Mfg Co
Hyde Mfg Co
Kier-Vue Knife Rack Co Inc
Jamson & Goodson Mfg Co
Lansden Fray & Clark
Lehon Co
WACKLANBURG-DUNCAN CO
Metal Trimm Inc
Modern Specialties Co
Murray-Black Co
National Guard Products
Parler (Ira) & Sons Co
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS
Ridgely Trimmer Co
Robeson Cutlery Co Inc
Russell Harrington Cutlery Co
Sandvik Saw & Tool Corp
Seal Co
Sealing (George)
Steel Bile Controlling Co Inc
SELCK (WALTER E) & CO
Southington Hardware Mfg Co
S & W Mounting Co
Taylor-Stiles & Co
Tuck Mfg Co
Warner Mfg Co
Williams Products Co Inc
Youngtown Mfg Inc

► KNIVES, VENEER

Atkins (E C) & Co
DISSTON (HENRY) & SONS INC
Hoe (R) & Co
SIMONDS SAW & STEEL CO

► LACERS, BELT

Chicago Belting Co
Clippel Belt Lacer Co
Flexible Steel Lacing Co
Hais (Geo) Mfg Co Div Pettibone Mulliken Corp
Schwaben (Chas A) Co
Union Rubber & Asbestos Co
Web Belting Co

► LACING, BELT

Armstrong-Brag & Co
Bristol Co
Caldwell Lace Leather Co
Flexible Steel Lacing Co

► LACQUER

Acme White Lac & Color Works
Alabastine Paint Products Div Chicago
Bronze & Color Works
American Maritica Co
American Varnish Co
Berry Brothers Inc
Breinig Brothers Inc
Chicago Bronze & Color Works
Denne & Reynolds Co Inc
Du Pont (E I) de Nemours & Co Inc
Eaton Varnish Co
Felton Sibley & Co Inc
Gibbons Co
Grand Rapids Varnish Corp
Horn (A C) Co Inc
Lowe Brothers Co
Luzas (John) & Co
Martin-Benour Co
MENDEL CO INC
Murphy Paint Div Interchemical Corp
O'Brien Corp
Patterson Sargent Co
PITTSBURGH PLATE GLASS CO
Fruit & Lambert Inc
Stevens-Williams Co
Standard Industrial Products Inc
Standard Varnish Works
Steelcoats Mfg Co
U S PLYWOOD CORP
Valentine & Co Inc
Woodfinishing Products Co

► LACQUER

Acme White Lac & Color Works
Alabastine Paint Products Div Chicago
Bronze & Color Works
American Maritica Co
American Varnish Co
Berry Brothers Inc
Breinig Brothers Inc
Chicago Bronze & Color Works
Denne & Reynolds Co Inc
Du Pont (E I) de Nemours & Co Inc
Eaton Varnish Co
Felton Sibley & Co Inc
Gibbons Co
Grand Rapids Varnish Corp
Horn (A C) Co Inc
Lowe Brothers Co
Luzas (John) & Co
Martin-Benour Co
MENDEL CO INC
Murphy Paint Div Interchemical Corp
O'Brien Corp
Patterson Sargent Co
PITTSBURGH PLATE GLASS CO
Fruit & Lambert Inc
Stevens-Williams Co
Standard Industrial Products Inc
Standard Varnish Works
Steelcoats Mfg Co
U S PLYWOOD CORP
Valentine & Co Inc
Woodfinishing Products Co

► LADDER ACCESSORIES

Breyer Bros Whiting & Co
Dayton Safety Ladder Co
Duo-Safety Ladder Corp
Holmes Mfg Co of Ohio
Michigan Ladder Co
PATENT SCAFFOLDING CO INC
RED DEVIL TOOLS
Safety Equipment Service Co
STEEL SCAFFOLDING CO INC
WAGNER MFG CO

► LADDER, STEPS, SAFETY

Campbell (A S) Co Inc
O'Neil (Carl W) Associates Inc

► LADDERS, ALUMINUM

Aluminum Ladder Co
American Ladder Co
Chasley Industries Inc
Werner (R D) Co
Wilson-Albrecht Co

► LADDERS, STEEL

Avis Mfg Co
Ballymer Co
Chasley Industries Inc
Ewale Equipment Mfg Co
International Steel Co
Legan Co
Newark Ladder and Bracket Co Inc
PATENT SCAFFOLDING CO INC
Precision Equipment Co
Werner (R D) Co

► LADDERS, WOOD, ALL TYPES

American Ladder Co
Babcock (W W) Co
Bauer Mfg Co
Beh & Company Inc
Berg (John) Mfg Co
Breyer Brothers Whiting Co
Clark (J B) Co
Craft-Bilt Products Inc
Davenport Ladder Co
EZ-WAY SALES INC DIV MINNESOTA WOOD SPECIALTIES
Flint (A W) Co
Frisell Ladder Co
Goshen Churn & Ladder Co
Goshen Mfg Co
Green (Harry A) & Son
Hilder Mfg Co
Heller (W C) Co
Holland Ladder & Mfg Co
Hopson (W C) Co
Howard Mfg Co
Inland Mfg Co
Los Angeles Ladder Co
Michigan Ladder & Mfg Co
Meyer (W F) & Sons Inc
Minnesota Wood Specialties Inc
Norton Ladder & Mfg Co
Newark Ladder & Bracket Co Inc
PATENT SCAFFOLDING CO INC
Woria Training Board & Specialty
PITTSBURGH PLATE GLASS CO
Rich (Howard B)
Rich Ladder & Mfg Co
RICHARDS-WILCOX MFG CO
RUWE MFG CO
Smith (E A) Mfg Co
Tacoma Metal Fabricating Co
Tilley (John S) Ladders Co
Topping Ladder Co
Warren (J D) Mfg Co
White Wood Products Co
Williamette Valley Lumber Co
Woodenware Products Corp
Young (J O) Co
Zoss Ladder & Mfg Co

► LAMPS, BACTERICIDAL

GENERAL ELECTRIC CO LAMP DEPT
Sylvania Electric Products Inc
WESTINGHOUSE ELECTRIC CORP LAMP DIV

► LAMPS, FLUORESCENT

GENERAL ELECTRIC CO LAMP DEPT
Sylvania Electric Products Inc
WESTINGHOUSE ELECTRIC CORP LAMP DIV

► LAMPS, INCANDESCENT

GENERAL ELECTRIC CO LAMP DEPT
Lightmore Appliance Corp
Pennsylvania Illuminating Corp
Safety Electric Co
Silvray Lighting Inc
Sylvania Electric Products Inc
Vard-A-Ray Corp
WESTINGHOUSE ELECTRIC CORP LAMP DIV

► LAMPS & LANTERNS, CAMP

COLEMAN CO INC
Cupples Co
Devar Mfg Co
Diez (E E) Co
Eero Mfg Co
Faries Mfg Co
Guth (Edwin F) Co
Justite Mfg Co
Mantic Lamp Co of America
Miller (Robert D) & Co Inc
National Stamping & Electric Works
Owen-Perran Glass Co
Parker (Charles)
Samcon (Wm J) Iron Co
Stewart Iron Works Co Inc
Swain & Bridge

► LANTERNS, ORNAMENTAL IRON

Stewart Iron Works Co Inc

► LATCHES

Champion Hardware Co
Clinton Lock Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Duncan Blaw Corp
HAGER (C) & SON HINGE CO

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Ideal Brass Works
Knap & Vogt Mfg Co
LOCKWOOD HARDWARE MFG CO
NATIONAL LOCK CO
Parlin Ltd
Penn Hardware Co
Rapp-Barrows Lock Works
Skillman Hardware Co
TECHNICAL GLASS CO INC
WAGNER MFG CO

▶ LATCHES, GATE

Barrows Lock Works
Clinton Lock Co
COBBIN (F & F) DIV AMERICAN HARDWARE CORP
Fench Equipment Mfg Co
FRANTZ MFG CO
HAGER (C) & SONS HINGE MFG CO
Ideal Brass Works Inc
New (F) Div Mfg Co
LOCKWOOD HARDWARE MFG CO
McKinney Mfg Co
NATIONAL BRASS CO
NATIONAL MFG CO
Norwalk Lock Co
Reading Hardware Corp
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
WARE CORP
SARGENT & CO
Sharon Hardware Mfg Co
Slaymaker Lock Co
Standard Bronze Co
STANLEY WORKS
Starline Inc
Wrightsville Hardware Co

▶ LATCHES, MAGNETIC FOR CUPBOARD DOORS

LABORATORY EQUIPMENT CORP

▶ LATH, COMPOSITION OR KEY

JOHNS-MANVILLE CORP
Sommer Metallcraft Corp

▶ LATH, GYPSUM

CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
Schumacher Wall Board Corp
U S Gypsum Co

▶ LATH, INSULATING

ARMSTRONG CORK CO BUILDING MATERIALS DIV
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Fire-Tex Insulating Board Co
FLINTKOTE CO
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MANVILLE CORP
Keystone Asphalt Products Co
NATIONAL GYPSUM CO
Pinstering Wall Board Co
SIMPSON LOGGING CO
U S Gypsum Co
WOOD CONVERSION CO

▶ LATH, METAL

Alabama Metal Lath Co
Allen Steel Products
Aluminex Inc
Beger Mfg Div Republic Steel Corp
BOSTWICK STEEL LATH CO
CEGO STEEL PRODUCTS CORP
Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
KETSTONE STEEL & WIRE CO
NATIONAL GYPSUM CO
Penn Metal Co Inc
PITTSBURGH STEEL PRODUCTS CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV
ST PAUL CORRUGATING CO
Sealco Products Inc
Soule Steel Co
TRUSCON STEEL CO
U S Gypsum Co
Wheeling Corrugating Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

▶ LATH, WOOD

Anacosta Copper Mining Co
Angelina County Lumber Co
Brooks-Scanlon Inc
Casside Lumber Co
CONNOR LUMBER & LAND CO
CROSSETT LUMBER CO
Diamond Match Co
Drums Lumber & Coal Co
Fishel Lumber Co
Fryder Lumber Co
Hines (Edward) Lumber Co
Niagara Pine Mills Co
LONG-BELL LUMBER CO
Musk Seattle Lumber Co
McLeod Lumber Co
Neils (J) Lumber Co
Ohio Match Co
Raley Lake Lumber Co Ltd
ROBBIS PLYWOOD CRIP
ST. Paul & Tacoma Lumber Co
WEYERHAEUSER SALES CO

▶ LATHES

ATLAS PRESS CO
Dura Metal Products Co
ROCKWELL MFG CO DELTA POWER TOOL DIV
WALLACE (J D) & CO
WHITNEY (BAXTER D) & SON INC

▶ LATHES, HOME WORKSHOP

Arcade Mfg Co Div Rockwell Mfg Co
Blount (J) G Co
BOICE-CRANE CO
Heston & Anderson Div St Paul Engineering & Mfg Co
Power King Tool Corp
ROCKWELL MFG CO DELTA POWER TOOL DIV
South Bend Lathes Works
Twifalcraft Corp
WALKER-TURNER DIV KEARNEY-TRECKER INC
WALLACE (J D) & CO
Yates-American Machine Co

▶ LATHING, SUSPENDED CEILING SYSTEMS

ARMSTRONG CORK CO BUILDING MATERIALS DIV
PITTSBURGH STEEL PRODUCTS CO
U S Gypsum Co

▶ LAVATORIES, CABINETS

Bennett Mfg Co
FORMICA CO
IDEAL CABINET CO
Standard Steel Cabinet Co
TOLEDO DESK & FIXTURE CO

▶ LEAD, RED

American Varnish Co
Berry Brothers Inc
Reving Brothers Inc
Burdal (A) Co
Bevee & Reynolds Co Inc
Eagle-Picher Co
General Paint Corp
Gilliden Co
Hammond Lead Products Inc
National Lead Co
Preston-Gambert Paint & Varnish Co
Sherwin-Williams Co
Twentieth Century Paint & Varnish Corp
Vita-Var Corp

▶ LEAD, WHITE

Ame White Lead & Color Works
American Varnish Co
Anacosta Sales Co
Burdal (A) Co
Bevee & Reynolds Co Inc
De Pont (E J) de Nemours & Co Inc
Eagle-Picher Co
Felton Sibley & Co Inc
Fuller (W F) & Co Inc
Gibbsville Varnish Co
Gilliden Co
Holobok White Lead & Color Works
Inland White Lead Co
National Lead Co
PITTSBURGH PLATE GLASS CO
Sherwin-Williams Co
Stevellite Mfg Co
Twentieth Century Paint & Varnish Corp

▶ LEVELING, WALL, MATERIALS FOR

Beardon Co
Tanna Industries Inc

▶ LEVELS, CARPENTER'S MASON'S

BOSTROM BRADY MFG CO
Brunson Instrument Co
BUSHNET (HENRY) & SONS INC
Empire Level Mfg Co
GOLDBLATT TOOL CO
Grisham (John H) & Co Inc
Hall Level & Mfg Works
Hydrolevel
International Mfg Co
Mayer Brothers Tool Mfg Co
Millers Falls Co
Ox-Wall Tool Co
Peerless Level & Tool Co
Sands Level & Tool Co
Schuff (J H) Mfg Co
Rehulite Level Inc
SIMPLEX LEVEL CO
Singer-Kennedy Corp
STANLEY TOOL DIV STANLEY WORKS
Starrett (L S) Co
Sturson (E A) Level Co
WARREN-KNIGHT CO
▶ LIFTS, LUMBER
Drott Mfg Corp
Hyster Co
Lottell Iron Works
Moore Dry Kiln Co

Rotary Lift Co
Silent Hoist & Crane Co Inc
Standard Dry Kiln Co

▶ LIGHTING, PLANTS

ALLIS-CHALMERS MFG CO
Benjamin Electric Mfg Co
Briggs & Stratton Corp
Buda Co
CONSTRUCTION MACHINERY SALES CO
Continental Motors
DELCO APPLIANCE DIV GENERAL MOTORS SALES CORP
Eagle Electric Mfg Co Inc
Fairbanks Morse & Co
GENERAL ELECTRIC CO APPARATUS DEPT
Guth (Edwin F) Co
HOMELITE CORP
Johnson Motors Div Outboard Marine & Mfg Co
Kato Engineering Co
KOHLEN CO
Guth (Edwin F) & Sons
Phelps Power & Light Co
Pioneer Gen-E-Motor Corp
Brady-Power Co
Universal Motor Co
WESTINGHOUSE ELECTRIC CORP
Wingener Corp
Wind (Jacob) Electric Co Inc
Winpower Mfg Co

▶ LIGHTS, FLOUORESCENT

Bryant Electric Co
Candless Co
Curtis Lighting Inc
Eagle Electric Mfg Co Inc
GENERAL ELECTRIC CO
Guth (Edwin F) Co
Long (W H) Co
Metalscraft Screen Co
MIAMI CABINET DIV PHILIP CAREY MFG CO
Superior Plastics Div Commonwealth Plastics Inc
WESTINGHOUSE ELECTRIC CORP

▶ LIGHTS, NIGHT

Chicago Fire Brick Co Div Roskill Mfg Co

▶ LIGHTS, SPOT & FLOOD

GENERAL ELECTRIC CO APPARATUS DEPT
Halsdy Electronics Co
Pyle-National Co
WESTINGHOUSE ELECTRIC CORP

▶ LIME, FINISHING

CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Fairmont Wall Plaster Co
Gibbsburg Lime Products Co
Kelley Island Lime & Transport Co
Keystone Lime Works Inc
LOUISVILLE CEMENT CO INC
Marblehead Lime Co
Mission Lime Products Corp
NATIONAL GYPSUM CO
National Lime & Stone Co
National Mortar & Supply Co
Ohio Hydrate & Supply Co
Standard Lime & Stone Co
U S Gypsum Co
Washington Brick & Lime Co
Western Lime & Cement Co
Woodville Lime Co

▶ LIME, HYDRATED

CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Chicago Fire Brick Co
Carson (G & W H) Inc
Gibbsburg Lime Products Co
Kelley Island Lime & Transport Co
Keystone Lime Works Inc
LOUISVILLE CEMENT CO INC
Marblehead Lime Co
Mission Lime Products Corp
NATIONAL GYPSUM CO
National Lime & Stone Co
National Mortar & Supply Co
Ohio Hydrate & Supply Co
Riverton Lime & Stone Co Inc
Standard Lime & Stone Co
U S Gypsum Co
Warner Co
Washington Brick & Lime Co
Woodville Lime Co

▶ LIME, MASON'S

Carney Co Inc
CERTAIN-TEED PRODUCTS CORP
Gibbsburg Lime Products Co
Kelley Island Lime & Transport Co
Keystone Lime Works Inc
LOUISVILLE CEMENT CO INC
Marblehead Lime Co
NATIONAL GYPSUM CO
National Mortar & Supply Co
North American Cement Corp
Ohio Hydrate & Supply Co
Riverton Lime & Stone Co Inc
Standard Lime & Stone Co
U S Gypsum Co
Warner Co
Woodville Lime Co

▶ LIME, PEBBLE

Kelley Island Lime & Transport Co
LOUISVILLE CEMENT CO INC
Marblehead Lime Co
Mission Lime Products Corp
NATIONAL GYPSUM CO
U S Gypsum Co

▶ LIME, QUICK

Carson (G & W H) Inc
Gibbsburg Lime Products Co
Kelley Island Lime & Transport Co
LOUISVILLE CEMENT CO INC
Marblehead Lime Co
Mission Lime Products Corp
NATIONAL GYPSUM CO
National Lime & Stone Co
National Mortar & Supply Co
Ohio Hydrate & Supply Co
Standard Lime & Stone Co
U S Gypsum Co
Warner Co
Western Lime & Cement Co
Woodville Lime Co

▶ LINING, CLOSET, CEDAR

Jetco Plywood & Veneer Co
BRADLEY LUMBER CO OF ARK
BRUBER (GEORGE C) & CO INC
BRUCE (E L) Co
CEDAR-LUX PRODUCTS CO INC
Coddington (E D) Mfg Co
Forty-Crossitt Lumber Co
Front Lumber Industries Inc
Osage Products Co
Rustic Furniture Co Inc
Trona Co Inc
Twin City Hardwood Lumber Co
WEYERHAEUSER SALES CO

▶ LINING, FLUE

Acma Brick Co
Allstate Clay Products Co
American Vitrefired Products Co
Bowerston Shale
Cannelton, Sewer Pipe Co
Chicago Fire Brick Co
Clay City Pipe Co
Columbia Pipe Co
CONDENSATION ENGINEERING CORP
Deer Clay Products Co
Denver Sewer Pipe & Clay Co
Dieckel (W B) Clay Mfg Co
Evans Pipe Co
Green (A F) Fire Brick Co
Hocking Valley Brick Co
Kast Clay Mfg Co
Kingland Clay Products Co
Lehigh Sewer Pipe & Tile Co
Mexico Refractories Co

▶ NATIONAL CLAY PIPE MFRS INC

National Pipefiring Co
Newburgh Sewer Pipe Co Inc
Pacific Clay Products Co
Patton Clay Mfg Co
Robinson Clay Product Co
Sillwater Clay Products Co
Streator Drain Tile Co
Superior Clay Corp
Tulsa Clay Mfg Corp
Universal Sewer Pipe Corp
Washington Brick & Lime Co
West Chester Clay Products Co
Williams-Wallace Co

▶ LINOLEUM

ARMSTRONG CORK CO
BIRD & SON INC
CONGOLEUM-MAIRIN INC
Consolidated Iron-Steel Mfg Co
Kinsane-Bishop Corp

▶ LINTELS, STEEL

BENNETT-IRELAND INC
Beger Mfg Div Republic Steel Corp
Consolidated Iron-Steel Mfg Co
Dunley Brothers Co
Gastrius Steel Co
KEWANE MFG CO
MAESTICO CO
PRICE FIREPLACE HEATER & TANK CORP
Southern Wire & Iron Works
STEEPCRAFT MFG CO
SUPERIOR FIREPLACE CO
TRUSCON STEEL CO
VENTO STEEL PRODUCTS CO INC

▶ LOADERS, BUCKET

Barber-Greene Co
Brady Concrete Corp
Fairfield Engineering Co
Haise (George) Mfg Co Div Pettibone Machine Corp
Hyster Co
JAEGER MACHINE CO
Link-Belt Co
Little Giant Products Inc
Markroy Co
Neison (H F) Iron Works

▶ LOADERS, COAL

Barber-Greene Co
Brady Concrete Corp
Fairfield Engineering Co
Farquhar (A B) Co
Haise (George) Mfg Co Div Pettibone Machine Corp
Hyster Co

Manufacturers' Names and Addresses Start on Page D-76

Manufacturers' Brand Name Identifications Start on Page D-64

JAEGER MACHINE CO
Lull Mfg Co**▶ LOCK MORTISING MACHINES**

BOICE-CRANE CO
Greenlee Brothers & Co
HALL TOOL CO
Oliver Machinery Co
PORTER-CABLE MACHINE CO
STANLEY ELECTRIC TOOL DIV STANLEY WORKS
WALLACE (J D) & CO

▶ LOCKERS, STEEL

All-Steel Equipment Co
Bergey Mfg Div Republic Steel Corp
CURTIS COS INC
Lyon Metal Products Inc
Precision Equipment Co
Red Tiger Products Inc
Smith (F P) Wire & Iron Works Inc
Standard Equipment Co
Universal Steel Equipment Corp

▶ LOCKERS, WOOD

Cals Mfg Co
CURTIS COS INC
Heiler (W C) & Co

▶ LOCKS, DOOR

ADAMS-BITE MFG CO
ALLTR-PROUDY INC
AMERICAN CABINET HARDWARE CORP
Arrow Lock Corp
Barrows Lock Works
Bemis & Call Co
Best Universal Lock Co Inc
Champion Hardware Co
Chester (J) & Sons
Clinton Lock Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Detroit Hardware Mfg Co
DEXTER LOCK CO
Dixon Machine Tool Co
Duncan Slaw Corp
Eagle Lock Co
Earle Hardware Mfg Co
Engineered Products Co
Finsale Equipment Mfg Co
FRANTZ MFG CO
Geneco Tool Div General Steel Warehouse Co
Harris Products Corp
Harris Inc
Hartard Lock Co
Hollymade Hardware Mfg Co
Hosner Tool Co
Ideal Brass Works Inc
Independent Lock Co
Ives (H B) Co
WIKSET LOCKS INC
La Belle Industries Inc
Lawrence Brothers
LOCKWOOD HARDWARE MFG CO
McKinney Mfg Co
Milwaukee Stamping Co
NATIONAL BRASS CO
NATIONAL LOCK CO
NATIONAL MFG CO
Newell Mfg Co
Ney Mfg Co
Norwalk Lock Co Div Regal Lock & Hardware Co
Pacific Plastic & Hardware Co
Parlier (S) Hardware Mfg Corp
Parlyn Ltd
Peabody Co Inc
Penn Hardware Co
Peto Industries
Reading Hardware Corp
Reese Padlock Co
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Sage Padlock & Hardware Co
Sager Barrows Lock Works
SARGENT & CO
SCHLAGE LOCK CO
Regal Lock & Hardware Co Inc
Slagmaker Lock Co
Standard Brass Co
STANLEY WORKS
STERLING HARDWARE MFG CO
Superior Plastics Div Commonwealth Plastics Inc
Taylor Lock Co
TECHNICAL GLASS CO INC
Vimer Sales Co
WESTWOOD MFG CO
VALE & TOWNE MFG CO

▶ LOCKS, PADLOCK

Bemis & Call
Best Universal Lock Co
Chicago Lock Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Diebold Inc
Dudley Lock Corp
Eagle Lock Co
Finsale Equipment Mfg Co
Gongler (C L) Co Lock Div
Illinois Lock Co
Independent Lock Co
Johnson Park Box Co
LOCKWOOD HARDWARE MFG CO
Master Lock Co
Norwalk Lock Co Div Regal Lock & Hardware Co
Parlier (S) Hardware Co
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP

Reese Padlock Co
Reese Padlock & Hardware Co
Sager Barrows Lock Works
SARGENT & CO
Regal Lock & Hardware Co Inc
Slagmaker Lock Co
VALE & TOWNE MFG CO

▶ LOCKS, TUBULAR

Arrow Lock Corp
Barrows Lock Works
Best Universal Lock Co
Chester (J) & Sons Inc
Clinton Lock Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
DEXTER LOCK CO
FRANTZ MFG CO
Harlow Products Corp
Hollymade Hardware Mfg Co
WIKSET LOCK INC
LOCKWOOD HARDWARE MFG CO
NATIONAL BRASS CO
National Hardware Co
Norwalk Lock Co
Parlier (S) Hardware Mfg Corp
Penn Hardware Co
Reading Hardware Corp
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Safe Padlock & Hardware Co
Sager Barrows Lock Works
SARGENT & CO
SCHLAGE LOCK CO
Slagmaker Lock Co
TECHNICAL GLASS CO INC
WESTWOOD MFG CO
VALE & TOWNE MFG CO HARDWARE DIV
▶ LOG CABINS
Rustic Furniture Co Inc

▶ LOGS, FIREPLACE, GAS & ELECTRIC

HEATLATOR INC
SHEPLER MFG CO
▶ LOUVRES
CHELSEA FAB & BLOWER CO
Kramer-Bord Inc
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
Miguel Lumber Co
Roid Units Fans Inc

▶ LOUVRES, ATTIC VENTILATING

AIR CORTECAL PRODUCTS INC
Alion Steel Products
American Sheet Metal Works
ANGEL ROVELTY CO
Aves Co
Badger Corrugating Co
BOSTWICK STEEL LATH CO
MIR ADAMS & COLLIER CO
CECO STEEL PRODUCTS CORP
City Equipment Corp
Compo Miracle Products
CURTIS COS INC
Dunley Brothers
Eagle-Fisher Co
Edwards Mfg Corp
Fenwick-Crossett Lumber Co
GREG & SON INC
Harris Inc
Hempill (A D) Co
Hain's Mfg Co of Ohio
Home Comfort Mfg Co
HOUGH SHADE CORP
Ideal Co
Illinois Zinc Co
INLAND STEEL PRODUCTS CO
KEWAWEE MFG CO
Klauer Mfg Co
Kool Air Engineering Co
Krauser-Road Inc
Leslie Welding Co
Lockjain Wood Products Co
Lovering Mfg & Supply
MAJESTIC CO
Marquart Millwork Co
Metal Arts Mfg Co
Midget Lumber Co
Morgan Sash & Door Co
NICHOLS WIRE & ALUMINUM CO
Parlier (S) Hardware Mfg Corp
Roach & Muser Co
Rudson (N H) Co
SNEPLER MFG CO
Standard Steel Cabinet Co
Sears-Roebuck Co
E S Graysun Co
Vincer Sales Co
Webb Mfg Co
Wellinger Steel Corp

▶ LOUVRES, ROUND

Midget Lumber Co
Book Illinois Millwork Co
Webb Mfg Co

▶ LUMBER, BEECH

Adams (S B) Lumber Co Inc
Adirondack Core & Plug Co

Ahnon Lumber Co
Arkansas Lumber Co
Atlanta Oak Flooring Co
Atlantic Lumber Co
Babcock Lumber Co
Bagnall (L N)
Baley Lumber Co
Barger (P M) Lumber Co
Barnaby (Charles H)
Bay de Noquet Co
Beard (E N) Lumber Co
Belcher (J E)
Bemis Hardwood Lumber Co
Berry (Paul B)
Blount Lumber Co
Boomer (H M)
Bowers (A M) Lumber Co
Bowler Lumber Co
BRADLEY LUMBER CO OF ARK
Bristol Lumber & Lumber Co
Bruen (D D)
BRUCE (E L) CO
Cadillac-Saw Lumber Co
Callahan (C K) & Sons Lumber Co
Camp Mfg Co
Carter (W T) & Brother
Cathy Lumber Co
Chaffee Brothers Co
Chapman & Dever Lumber Co
Cherry River Boom & Lumber Co
Clarke County Lumber Mills
Cossanaga River Lumber Co
Cousler Lumber Mills
Conkling (Frank A) Co
Cook (F C) & Co
Cousner-Smith Lumber Co
Copeland Lumber Co
Cotton & Hanlon
Crisp (M E) Lumber Co
CROSSETT LUMBER CO
Davis Brothers Lumber Co Ltd
Dickerson (Clark) Lumber Co
Edens-Birch Lumber Co
Elk River Coal & Lumber Co
Elliott Hardwood Co
Ely-Thomas Lumber Co
Emporium Forestry Co
Endeavor Lumber Co
Everett Hardwood Lumber Co
FAIR (D L) LUMBER CO
Farrell Lumber Co
Farrin (M B) Lumber Co
Farris Lumber Co
Ferguson Lumber Co
Fisher Brothers Lumber Co
Fisher & Young
Forsberg Lumber Co
Frost Lumber Industries
Fry-Fulton Lumber Co
Fulton Band Mill Co Inc
Gaines Hardwood Lumber Co
Genovet Lumber Co
Georgia-Pacific Plywood & Lumber Co
Giddens-Anderson Lumber Co
Gosh Brothers Lumber Co
Goodman Lumber Co
Graham Lumber Co
Gray Chemical Co
Greene Lumber Co
Griffin Lumber Co
Hall (D B) Lumber Co
Hallitt Mfg Co Inc
Hall-Inner Lumber Co
Hall & Neely
Hamer (J P) Lumber Co
Hardwood Corp of America
Hart-Thompson Lumber Co
Henderson-Molpus Co
Holt Hardwood Co
Houston Brothers
Inlet-Mountain Coal & Lumber Co
Jackson Sawmill Co
Jeffries (W J) Lumber Co
Jones (J M) Lumber Co
Kellugg Lumber Co
Kern (Paul B) Lumber Co
King Lumber Industries Inc
Kings Lumber Corp
Kitchan Lumber Co
Knoke Lumber Co
Leauge (G F) Lumber Co
Leard (R S) & Son
Leming (M E) Lumber Co
Leuk-Severson Mill & Lumber Co
LONG-BELL LUMBER CO
Louisiana Central Lumber Co
Mansfield Hardwood Lumber Co
Marshall Lumber Co
Martin (Roy O) Lumber Co
May Brothers
McCarroll Lumber Co
McCraeken & McCall Inc
McCullough Lumber Co
McCurran Lumber Co
Meadow River Lumber Co
MENDEL CO
Mesumine-Indian Mills
Michigan Maple Block Co
Michigan Pole & Tie Co
Midland Valley Lumber Co
Miller Brothers Co
Miller & Co Inc
Minton (T W) & Co
Mississippi-Valley Hardwood Co
Mobile River Sawmill Co
Montreal (J B) Co
Morrison Groun & Co
Muehrbach & Robinson Lumber Co
Muser Lumber Co
Nisley Brothers Inc
Northwest Lumber Sales Corp
Oak Wood Dish Corp
PARMAY INC
Parlier & Stearns

Parroll Lumber Co
Paxon (Frank) Lumber Co
Phillips-Rhyme Lumber Co Inc
Pine Plains Lumber Co
Rand & Griffith Lumber Co
Plumly (P W) Lumber Corp
Plunkett-Webster Lumber Co Inc
Powers Lumber Co
Pratt (E W)
Ransom (W A) Lumber Co
Reynolds Brothers Lumber Co
Reynolds-Gammill Lumber Co
Ritter (W M) Lumber Co
Rose (D M) & Lumber Co
Roos (Warren) Lumber Co
Scharfer Lumber Co Inc
Schilling Lumber Co
Schneider Brothers Lumber Co
Scribner (Wm C) Lumber Co
Seely Lumber Co
Shannon Brothers Lumber Co
Smith Lumber Co
Smith (W T) Lumber Co
Southwestern Industries Co
SOUTHERN PINE LUMBER CO
Southern Star Lumber Co
Sparman Hardwood Lumber Co
Stark (James E) Lumber Co
Stearns Coal & Lumber Co
Stinson Lumber Co
Stones (J E) Lumber Co
Stuart Lumber Corp
Sturtis Lumber Co Inc
Stuttis Sawmill Co Inc
Sullivan Lumber Co
Taylor & Newcomb Inc
Temple Lumber Co
Texas Longleaf Lumber Co
Thistlethwaite Lumber Co
Thomas & Prott Lumber Co
Triplet Lumber Co Inc
United Timber & Lumber Co
Tranala Lumber Co
Vostal Lumber & Mfg Co
Vinton (E A) Lumber Co
Vinson (Joe) Lumber Co Inc
Vredenburg Saw Co
Walker & Smith Lumber Co
Wallrich (M J) Land & Lumber Co
Ward Lumber Co
Warner Lumber Co
Way Lumber Co
Webster (H B) Lumber Co
Wells (J W) Lumber Co of Ala
Welsh Lumber Co
West Virginia Lumber Co
Wheeler Lumber Co
Williams-Brownell Inc
Williams & McKellett Lumber Co
Williams & Voris Hardwood Co
Williams & Voris Lumber Co
Williams & Voris Saw Mill Co
Wistar-Underhill & Co
Woods Lumber Co Inc
Woodward-Walker-Bowen Inc
Woody (W W) Lumber Co
Wright (J Walter) Lumber Co
Youngerman-Reynolds Lumber Co

▶ LUMBER, BIRCH

Adirondack Core & Plug Co
Ahnon Lumber Co
Atlanta Oak Flooring Co
Atlantic Lumber Co
Babcock Lumber Co
Bagnall (L N)
Bay de Noquet Co
Belcher (J E)
Bemis Hardwood Lumber Co
Berry (Paul B)
Blount Lumber Co
Boomer (H M) Lumber Co
Bowers (A M) Lumber Co
Bowler Lumber Co
Brand-Harman Co
Braund (W R) Co
Brown (D D)
Burt (C E & F O) Co
Cadillac-Saw Lumber Co
Chaffee Brothers Co
Cherry River Boom & Lumber Co
Christmann (C M) Co
Cossanaga River Lumber Co
Cousler Lumber Mills
CONNOR LUMBER & LAND CO
Cousner-Smith Lumber Co
Copeland Lumber Co
Cotton & Hanlon
Crisp (M E) Lumber Co
Dickerson (Clark) Lumber Co
Elliott Hardwood Co
Ely-Thomas Lumber Co
Emporium Forestry Co
Endeavor Lumber Co
Everett Hardwood Lumber Co
Farrell Lumber Co
Farrin (M B) Lumber Co
Fink Lakin E L Lumber Co
Fox (Abbott) Lumber Co
Fry-Fulton Lumber Co
Genett Lumber Co
Georgia-Pacific Plywood Co
Goodman Lumber Co
Griffin Lumber Co
Hamer (J P) Lumber Co
Hardwood Corp of America
Hartley Lumber Co
Holt Hardwood Co
Horner Flooring Co
Inlet-Mountain Coal & Lumber Co
Janquet Lumber Co
Johnson Lumber Co Inc
Knoke Lumber Co
Marshall Lumber Co
Mason (A) & Sons Inc

Manufacturers' Names and Addresses Start on Page D-76

Suppliers' Brand Name Identifications Start on Page D-64

McColloch Lumber Co
 Meadow River Lumber Co
 Mesoniere Indian Mills
 Mesonier Lumber & Supply Co
 Michigan Maple Block Co
 Michigan Pine & Tie Co
 Miller Brothers Co
 Minicault (J H) Co
 Morrison Gross & Co
 Mowbray & Robinson Lumber Co
 Oiler Lumber Co
 Oshkosh Wood Products Corp
 Oval Wood Dish Corp
PARKAY INC
 Parbet & Securus
 Paxton (Frank) Lumber Co
 Plant & Griffith Lumber Co
 Plumly (P W) Lumber Corp
 Plunkett-Webster Lumber Co Inc
 Polmett Lumber & Mfg Co
 Ritter (W M) Lumber Co
RODDIS PLYWOOD CORP
 Ross (Warren) Lumber Co
 Saco Lumber Co Inc
 Schneider Brothers Lumber Co
 Schreiber (Wm C) Lumber Co
 Searns Coal & Lumber Co
 Stuart Lumber Corp
 Sunquahanna Chemical Corp
 Underwood Veneer Co
 Vestal Lumber & Mfg Co
 Virgison (Joe) Lumber Co Inc
 Wallrich (W J) Land & Lumber Co
 Ward Lumber Co
 Warner Lumber Co
 West Virginia Lumber Co
 White River Timber Co
WILLIAMS-BROWNE INC
 Wistar Underhill & Co
 Wright (J Walter) Lumber Co
 Yawkey-Bissell Corp

► **LUMBER, CEDAR, RED, WESTERN**

Adair (Joe A) Lumber Co
 Angela Box & Lumber Co
 Astoria Spruce & Lumber Export Co
 Atlantic Lumber Co
 Benson Lumber Co
 British Columbia Forest Products Ltd
 Calder Lumber Co
 Canadian Forest Products Ltd
 Canadian Western Lumber Co Ltd
 Colby & Mitchell Co
 Contact Lumber Co
 Cooper (W E) Wholesale Lumber Co
 Curtis Lumber Co
 Davis Sales Agency
 Duncan Lumber Co Inc
 Dwyer Lumber Co
 Eclipse Lumber Co
 Engle & Worth Lumber Co
 Exchange Sawmills Sales Co
 Ferguson (W T) Lumber Co
 Firpine Products Co
 Fishman Lumber Co
 Foley Lumber Industries
 Georgia-Pacific Plywood & Lumber Co
 Giustina Brothers Lumber Co
 Goodwin Johnson Ltd
 Graham Lumber Co
 Gray Lumber & Shingle Co
 Gray (Robert) Shingle Co
 Griswold Lumber Co
 Heider & Co
 Hill-Behan Lumber Co
 Hines (Edward) Lumber Co
 Hulbert (William) Mill Co
 International Timber Products Inc
 Jaymer Wholesale Lumber Co
 Karlen-Davis Co
 Kennedy (J G) Lumber Co
 Klement Timber Co
 Mack Seattle Lumber Co
 McClintock (D M) Lumber Co
 Metropolitan Lumber Co
 Miller & Co
 Miller (E C) Cedar Lumber Co
 Miller (Geo E) Lumber Co
 Morrison & Sturgeon Lumber Co
 Morrison Mill Co
 Nettleton Timber Co
 Niskey Brothers Inc
 North-Bolton Plywood Inc
 Osage Products Co
 Owen (R C) Co
 Pacific National Lumber Co
 Robertson-McIntosh Lumber Co
 Patrick Lumber Co
 Patterson & Hackett Sawmill Co
 Rogue Lumber Sales Co
 Rosboro Lumber Co
 St Paul & Tacoma Lumber Co
 Seidl Lumber Co Inc
 Seattle Cedar Lumber Mfg Co
 Shaw Lumber Co
 Silbertrage (George J)
 Smith Lumber Co
 Simmon Mill Co
 Sullivan Lumber Co
 Tacoma Export Lumber Co
 Thurston-Flavelle Ltd
 Thurston Lumber Co
 Twin Harbors Lumber Co
 Van Deine Lumber Sales Corp
 Vestal Lumber & Mfg Co
 Walker Lumber Co
 Walton Lumber Co
 Washington Veneer Co
 Webster (H E) Lumber Co
 Wendling-Nathan Co
 West Side Lumber Co
 West Waterway Lumber Co
WEYENHAUSER SALES CO
 Willamette Valley Lumber Co
 Willapa Harbor Lumber Mills
 Williams & Vuris Lumber Co

Wilson (David) Lumber Co
 Winton Lumber Sales Co
 Woodward Lumber Co

► **LUMBER, CYPRESS**

Adams (S B) Lumber Co Inc
 Altman (W B) Lumber Co Inc
 Anderson-Tully Co
 Angeline Hardware Sales Co
 Argent Lumber Co
 Arkansas Lumber Co
 Atlanta Oak Finishing Co
 Atlantic Lumber Co
 Augusta Hardwood Co
 Babcock Lumber Co
 Bagal (L N)
 Bailey Lumber Co
 Ranger (P M) Lumber Co
 Beard (E N) Lumber Co
 Bowen (A M) Lumber Co
BRADLEY LUMBER CO OF ARK
 Brooks-White Mfg Co
 Brooklyn Cooprage Co
 Brown Lumber Co
BRUCE (E L) CO
 Callahan (C K) & Sons Lumber Co
 Camp Mfg Co
 Canbuck Lumber Co
 Caronius Lumber Co
 Carter (W T) & Brothers
 Cately Lumber Co
 Chapman & Dewey Lumber Co
 Chesland-Downer Lumber Co
 Clinton Band Mill Inc
 Coastal Lumber Co
 Conkling (Frank L) Co
 Conway Lumber Co
CROSSKEY LUMBER CO
 Cummer Sons Cypress Co
 Dacus Lumber Co
 Edna-Birch Lumber Co
 Elrod (J E) Lumber Co
 Exchange Sawmills Sales Co
 Ferguson (W T) Lumber Co
 Fisher Brothers Lumber Co
 Fishel Lumber Co
 Foley Lumber Industries
 Fordyce-Crosett Lumber Co
 Frost Lumber Industries Inc
 Fry-Fry, Jr Lumber Co
 Fulton (Edo) Mill
 Georgia Hardwood Lumber Co
 Georgia-Pacific Plywood & Lumber Co
 Green-Anderson Lumber Co
 Gooch Brothers Lumber Co
 Graham Lumber Co
 Greer Brothers Lumber Co
 Gordon Lumber Co
 Hall (D H) Lumber Co
 Ballett Mfg Co
 Hall-Inner Lumber Co
 Hall & Newby
 Hilper-Deutch Edwards Inc
 Hines (Edward) Lumber Co
 Hobas Veneer & Lumber Co
 Holly Hill Lumber Co
 Houston Brothers
 Jackson Sawmill Co
 Jeffries (J W) Lumber Co
 Jones (C J) Lumber Co
 Jones (J M) Lumber Co
 Kellogg Lumber Co
 Kern (Paul B) Lumber Co
 King Lumber Industries
 King Lumber Industries Inc
 King Lumber Corp
 Korn Industries Inc
 LeRaine Lumber Co
 Leitch Brothers
 Link-Newcomb Mill & Lumber Co
LONG-BELL LUMBER CO
 Louisiana Central Lumber Co
 Louisiana Cypress Lumber Co
 Mansfield Hardwood Lumber Co
 Martin (R B) Lumber Co
 May Brothers
 McCann Lumber Co
 McArnold Lumber Co
 McCall Lumber Co
 McLean-Curran Lumber Co
 McLean-Arkansas Lumber Co
MENDEL CO
 Midland Valley Lumber Co
 Miller & Co
 Mississippi-Valley Hardwood Co
 Mobile River Sawmill Co
 Collins Lumber Co
 Newellton Hardwood Co
 Niskey Brothers
 Northwest Lumber Sales Corp
 Northern Ohio Co
 Ozan Lumber Co
 Parsons Lumber Co
 Paterson-McIntosh Lumber Co
 Paxton (Frank) Lumber Co
 Peavy-Wilson Lumber Co
 Phillips-Wayne Lumber Co
 Pine Plume Lumber Co
 Putnam Lumber & Export Co
 Ransom (W A) Lumber Co
 Reynolds Brothers Lumber Co
 Reynolds-Gummler Lumber Co
 Reynolds & Manley Lumber Co
 Richmond Cedar Works
 Risher Lumber Co
 St Joe Lumber & Export Co
 Santee River Hardwood Co
 Seutch Lumber Co
 Shanton Brothers Lumber Co
 Shepherd (John C) Lumber Corp

Sinclair Lumber Co Inc
 Smith Lumber Co
 Smith (W T) Lumber Co
 Southbrier (E) Co
 South Atlantic Lumber Co
 Southeastern Industries Inc
 Southern Lumber Co
SOUTHERN PINE LUMBER CO
 Sparkman Hardwood Lumber Co
 Stark James E) Co
 Starr (J W) & Sons Lumber Co
 Steel City Lumber Co
 Stewart (E A) Lumber Co
 Steuts Lumber Co
 Stotts Sawmill Co Inc
 Swainshore Lumber Co
 Temple Lumber Co
 Texas Longleaf Lumber Co
 Thistlethwaite Lumber Co
 Triplet Lumber Co Inc
 Turner Lumber Co
 United Timber & Lumber Co
 Vans (J F) Lumber Co
 Vestal Lumber & Mfg Co
 Vinton (E A) Lumber Co
 Voss (J F) Lumber Co
 Vredenburg Saw Mill Co
 Wallis Lumber Co
 Wallis Lumber Co
 Welcher (H E) Lumber Co
 Weller (J W) Lumber Co of Ala
 Welsh Lumber Co
 Wheeler Lumber Co
 Williams & Vuris Hardwood Co
 Wistar Underhill & Co
 Woods Lumber Co
 Woods Lumber Co Inc
 Woodward-Walker Brown Inc
 Woody (W W) Lumber Co
 Youngerman-Reynolds Lumber Co

► **LUMBER, FIR, DOUGLAS**

Adair (Joe A) Lumber Co
 Air-King Mfg Corp
 Alexander-Lewley Lumber Co
 Anacosta Copper Mining Co
 Babcock Lumber Co
 Bate (J Herbert) Co
 Benson Lumber Co
 Bliss-Coleman Lumber Co
 Blue Mountain Mills
 Bookner Lumber Co
 Bockley Lumber Co
 Bridge Lumber Co
 Calder Lumber Co
 California Door Co
 California Sugar & West Pine Agency
 Canadian Forest Products Ltd
 Canadian Western Lumber Co Ltd
 Canbuck Lumber Co
 Canyon Lumber Corp
 Carston Mfg Co
 Carratman Lumber Co
 Cascade Pacific Lumber Co
 Chelan Box & Mfg Co
 Clements (Al) Lumber Co
 Clover Valley Lumber Co
 Colby & Mitchell Co
 Collins Foundry Lumber Co
 Columbia River Paper Mills Co
 Comfort (George N) Lumber Co
 Contact Lumber Co
 Cook County Lumber Co
 Cooper (W E) Wholesale Lumber Co
 Coon Bay Logging & Lumber Co
 Corvallis Lumber Co
 Craig Mountain Lumber Co
 Curtis Lumber Co
 Davis Sales Agency
 Deer Park Pine Industry Inc
 DeLuzar Lumber Co
 Diamond Match Co
 Dollar (Robert) Co
 Draper (Fred) Lumber Co
 Dubois Lumber Co
 Dunran Lumber Co Inc
 Dwyer Lumber Co
 Eatonville Lumber Co
 Eclipse Lumber Co Inc
 Engle & Worth Lumber Co
 Exchange Sawmills Sales Co
 Ferguson (W T) Lumber Co
 Firpine Products Co
 Fisher Lumber Co
 Fishman Lumber Co
 Foster Mills Inc
 Gardiner Lumber Co
 Georgia-Pacific Plywood & Lumber Co
 Giustina Brothers Lumber Co
 Goodwin Johnson Ltd
 Gram Mfg Co
 Gray Lumber & Shingle Co
 Gray (Robert) Shingle Co
 Griswold Lumber Co
 Hallock & Howard Lumber Co
HARBOR PLYWOOD CORP
 Heider & Co
 Hill-Behan Lumber Co
 Hines (Edward) Lumber Co
 Hughes Brothers
 Hulbert (William) Mill Co
 Independence Lumber & Mfg Co
 Inter Lakes-Gulf Lumber Co
 International Timber Products Inc
 Interstate Lumber Sales
 Jaymer Co
 Johnson (C B) Lumber Corp
 Killebrew Lumber Co
 Kanikou Forest Products Inc
 Kappeler Lumber Co
 Karlen-Davis Co
 Kennedy (J G) Lumber Co
 Kent Lumber Co

Kingley Lumber Co
 Kinross Pine Mills Co
 Klamath Basin Pine Mills Corp
 Klement Timber Co
 London & Meyer Lumber Co
 Rogap Lumber Industries
 Leumann Lumber Co
 L. J. Lumber Corp
LONG-BELL LUMBER CO
 Long Lake Lumber Co
 Mack Seattle Lumber Co
 McClintock (D M) Lumber Co
 McLeod River Lumber Co
 McFarland-Brown Lumber Co
 Medford Corp
 Metropolitan Lumber Co
 Michigan-California Lumber Co
 Mill City Mfg Co
 Miller (George E) Lumber Co
 Moore Mill & Lumber Co
 Morrill & Sturgeon Lumber Co
 Morrison Mill Co
 Mt Emily Lumber Co
 Multiple Lumber Co
 Multnomah Lumber & Box Sales Co
 Neils (J) Lumber Co
 Nettleton Timber Co
 New Grand Ronde Lumber Co
 New Mexico Timber Co
 Northern Redwood Lumber Co
 North-Bolton Plywood Inc
 Northwest Timber Co
 Osborn Lumber Co
 Ohio Match Co
 Olympia Harbor Lumber Co
 Oregon-American Lumber Corp
 Oregon Pulp & Paper Co
 Oregon Trail Lumber Co
 Pacific National Lumber Co
 Pack River Sales Co
 Patrick Lumber Co
 Paxton (Frank) Lumber Co
 Peabshatin Lumber & Box Co
 Placerville Lumber Co
 Page & Talbot Inc Lumber Div
 Portland Lumber Mills
 Prestridge (M E) Lumber Co
 Frost Lumber & Co
 Quincy Lumber Co Inc
 Raymer Inc Lumber Div
 Redwood Mfg Co
 Robertson & Hackett Sawmill Co
 Robinson Mfg Co
 Rogue Lumber Sales Co
 Rosboro Lumber Co
 Russell & Pugh Lumber Co
 Sacramento Box & Lumber Co
 St Marie Lumber Co
 St Paul & Tacoma Lumber Co
 Santiam Lumber Co
 Schmitt Brothers Lumber Co
 Schmitt Lumber Co
 Schreiber (Wm C) Lumber Co
 Schulte (Wm) Co
 Scott Lumber Co Inc
 Shaw Lumber Co
 Shepard & Morse Lumber Co
 Sherman (Edw J) Lumber Sales
 Shively-McIntosh Lumber Co
 Silbertrage (George J) & Sons Co
SIMPSON LOGGING CO
 Smith (Ralph L) Lumber Co
 Snoqualmie Falls Lumber Co
 Soberberg (Carl) Lumber Co
 Somers Lumber Co
 Southern Oregon Sugar Pine Co
 Southwest Lumber Co
 Southwest Lumber Mills Inc
 Spaulding & Son Inc
 Stanton (E J) & Son
 Stinson Lumber Co
 Simmon Mill Co
 Siskins Lumber Co
 Roltze (F H) Land & Lumber Co
 Sullivan Lumber Co
 Superior Timber Products Inc
 Sweede Basin Lumber Co
 Tacoma Export Lumber Co
 Tartar Webster & Johnson Inc
 Thurston Lumber Co
 Timber Products Co
 Trade Lumber Co
 Trio Lumber Co
 Twin Feather Mills Inc
 Twin Harbors Lumber Co
 Union Lumber Co
U S PLYWOOD CORP
 Van Deine Lumber Sales Corp
 Van Vleet Lumber Co
 Wales Lumber Co
 Walton Lumber Co
 Washington Mfg Co
 Washington Veneer Co
 Wama Lumber Co
 Wendling-Nathan Co
 West Oregon Lumber Co
 West Waterway Lumber Co
 Western Pine Mfg Co
 West Side Lumber Co
WEYENHAUSER SALES CO
 Wheeler-Gugel Lumber Co
 White Horse Mill Co Inc
 White Pine Lumber Co
 White Star Lumber Co
 White River Lumber Co
 Willamette Valley Lumber Co
 Willamina Lumber Co
 Willapa Harbor Lumber Mills
 Wilson (A K) Lumber Co
 Wilson (David) Lumber Co
 Winger Brothers Lumber Products Inc
 Winton Lumber Sales Co
 Wood (E K) Lumber Co
 Woodward Lumber Co
 Wulstet Lumber Co
 Youngs Bay Lumber Co
 Zost Lumber Co

Manufacturers' Names and Addresses Start on Page D-76
 Manufacturers' Brand Name Identifications Start on Page D-64

► LUMBER, GUM

Adams (S B) Lumber Co Inc
Anderson-Tully Co
Angeline Sawwood Co
Argent Lumber Co
Arkansas Lumber Co
Atlantic Lumber Co
Augusta Hardwood Co
Baley Lumber Co
Barger (P M) Lumber Co
Beard (E N) Lumber Co
Black (J W) Lumber Co
Boven (A M) Lumber Co
BRADLEY LUMBER CO OF ARK
Breece-White Mfg Co
Brookings Cooper Co
BRUCE (E L) CO
Callahan (C K) & Sons Lumber Co
Camp Mfg Co Inc
Cantook Lumber Co
Carter (W T) & Brothers
Cathey Lumber Co
Chapman & Dewey Lumber Co
Charney (Arthur V) & Son
Chattahoochee Valley Lumber Co
Clarke County Lumber Mills
Cleveland-Groene Lumber Co
Coastal Lumber Co
Conkling (Frank A) Co
Conway Lumber Co
Corinth Planing Mill Co
CROSSETT LUMBER CO
Dacus Lumber Co
Davis Brothers Lumber Co Ltd
De Woose (A) Lumber Co
Dieks Lumber & Coal Co
Edson-Hirsch Lumber Co
Elrod (J E) Lumber Co
Exchange Sawmills Sales Co
FAIR (D L) LUMBER CO
Farris Lumber Co
Ferguson (W T) Lumber Co
Fisher Brothers Lumber Co
Foley Lumber Industries
Foyder-Crossett Lumber Co
Frost Lumber Industries Inc
Fry-Fulton Lumber Co
Fulton Band Mill
Georgia-Pacific Plywood & Lumber Co
Gibson-Anderson Lumber Co
Gosh Brothers Lumber Co
Grasham Lumber Co
Greene Brothers Lumber Co
Gordon Lumber Co
Hall (D H) Lumber Co
Hallett Mfg Co Inc
Hall Jones Lumber Co
Hall & Neely
Henderson-Majum Co
HIGGINS INC
Hilary-Douglas-Edwards Inc
Hobac Veneer & Lumber Co
Hoffman Lumber Co
Holly Hill Typset Co
Holly Hill Lumber Co
Houston Brothers
Hunt (J S) Lumber Co
Hunt (Lacy H) Lumber Co
Industrial Lumber Co
Jackson Sawmill Co
Jeffrey-McCrath Mfg Co
Jeffries (J W) Lumber Co
Jones (J M) Lumber Co
Kelloug Lumber Co
Kern (Paul B) Lumber Co
Kerstine Lumber Co
King Lumber Industries
King Lumber Industries Inc
Kirkly Lumber Corp
Kern Industries Inc
League (G F) Lumber Co
Learned (R S) & Son
LeBlanc Lumber Co
Lexington Lumber Co
Lightsey Brothers
Link-Newcomb Mill & Lumber Co
LONG-BELL LUMBER CO
Martin (Roy O) Lumber Co
Mag Brothers
McCann Lumber Co
McCarroll Lumber Co
McCrackan-Curtis Lumber Co
McLean-Arkansas Lumber Co
MENDEL CO
Midland Valley Lumber Co
Miller & Co
Miller & Co Inc
Mississippi-Valley Hardwood Co
Mobile River Sawmill Co
Newellton Hardwood Co
Nichey Brothers Inc
Northcut Lumber Sales Corp
Northern Ohio Co
Owen (E C) Co
Osan Lumber Co
Parrell Lumber Co
Patterson-McIntosh Lumber Co
Phillips-Rhyne Lumber Co Inc
Pine Flume Lumber Co
Pratt (E W)
Pratt Lumber Co
Ransom (W A) Lumber Co
Reynolds Brothers Lumber Co
Reynolds-Glammill Lumber Co
Richmond Cedar Works
Rush Lumber Co
St Joe Lumber & Export Co
Santee River Hardwood Co
Scharfer Lumber Co
Schwing Lumber & Shingle Co
Scott Lumber Co
Sears Lumber Co
Shannon Brothers Lumber Co
Smith Lumber Co
Smith (W T) Lumber Co
Sondheimer (E) Co
Southeastern Industries Inc
Southern Lumber Co
SOUTHERN PINE LUMBER CO

Southern Star Lumber Co
Sparman Hardwood Lumber Co
Stark (James E) Co
Starr (J W) & Sons Lumber Co
Stewart (E A) Lumber Co
Stinson Lumber Co
Stone (J E) Lumber Co
Storoy (W M) Lumber Co
Stotts Lumber Co Inc
Stotts Sawmill Co Inc
Sullivan Lumber Co
Swainson Lumber Co
Taylor & Newtons Inc
Temple Lumber Co
Texas Longleaf Lumber Co
Thielchwalke Lumber Co
Thomas Lumber & Mfg Co
Thomas & Frost Lumber Co
Toward Brothers
Triplet Lumber Co Inc
Turner Lumber Co
United Timber & Lumber Co
Urbis Lumber Co
Vestal Lumber & Mfg Co
Vinton (R A) Lumber Co
Vreeland Saw Mill Co
Walker & Smith Lumber Co
Wax Lumber Co
Webster (H E) Lumber Co
Wells (J W) Lumber Co of Ala
Wells Lumber Co
Whelan Lumber Co
Williams (J L) & Sons
Williams & McKelthan Lumber Co
Williams & Voria Lumber Co
Williams & Voria Lumber Co
Williams & Voria Saw Mill Co
Woods Lumber Co
Woodward-Walker-Bowen Inc
Woody (W W) Lumber Co
Youngman-Beyolds Lumber Co

► LUMBER, HEMLOCK, WESTERN

Adair (Jos A) Lumber Co
Ray-City Lumber Co
Benson Lumber Co
Roeth-Kelly Lumber Co
BRADLEY LUMBER CO
Canadian Forest Products Ltd
Canadian Western Lumber Co Ltd
Merritt Shingle Div
Cantook Lumber Co
Carlson Mfg Co
Cascade Pacific Lumber Co
Cobbs & Mitchell Co
Columbia River Paper Mills
Contact Lumber Co
Cooper (W E) Lumber Co
Coon Bay Logging Co
Curtis Lumber Co
Davis Sales Agency
Duncan Lumber Co Inc
Dwyer Lumber Co
Eclyps Lumber Co Inc
Ferguson (W T) Lumber Co
Firpine Products Co
Fleishman Lumber Co
Foster Mills Co
Georgia-Pacific Plywood & Lumber Co
Glasco Brothers Lumber Co
Goodwin Johnson Ltd
Gram Mfg Co
Gray Lumber & Shingle Co
Gray (Robert) Shingle Co
Grinstead Lumber Co
Heidner & Co
Hill-Behan Lumber Co
Hines (Edward) Lumber Co
International Timber Products Inc
Jagner Co
Johnson (C D) Lumber Corp
Karlson-Davis Co
Kennedy (J G) Lumber Co
Kingsley Lumber Co
Kinnert Lumber Co
Kogap Lumber Industries
Lansmann Lumber Co
LONG-BELL LUMBER CO
Maak Seattle Lumber Co
McClintock (D M) Lumber Co
Metropolitan Lumber Co
Miller (George) Lumber Co
Morrison Mill Co
Nottleton Lumber Co
North-Bobbins Plywood Inc
Pacific National Lumber Corp
Pacific National Lumber Co
Patrick Lumber Co
Pine & Tallot Inc Lumber Div
Portland Lumber Mills
Raysoner Inc Lumber Div
Roberson & Hackett Sawmill Co
Roberts Lumber Co
Roberts Lumber Co
Rosa Lumber Co
Sandham Lumber Co
Shaw Lumber Co
SILBERMAG (George J) & Sons Co
SIMPSON LOGGING CO
Stinson Lumber Co
Sullivan Lumber Co
Thurston Lumber Co
Trio Lumber Co
Twin Harbors Lumber Co
Van Detone Lumber Sales Corp
Wallton Lumber Co
Washington Veneer Co
West Oregon Lumber Co
West Waterway Lumber Co

WEYERHAEUSER SALES CO

White River Lumber Co
White Star Lumber Co
Williams Valley Lumber Co
Willapa Harbor Lumber Mills
Wilson (A K) Lumber Co
Winton Lumber Sales Co
Wood (E K) Lumber Co
Woodward Lumber Co

► LUMBER, LARCH, WESTERN

Adair (Jos A) Lumber Co
Alexander-Jewley Lumber Co
Anacosta Copper Mining Co
Babcock Lumber Co
Biles-Colomas Lumber Co
Blue Mountain Mills
Bockmier Lumber Co
Collins-Pandosa Lumber Co
Comfort (George N) Lumber Co
Contact Lumber Co
Cook County Lumber Co
Craig Mountain Lumber Co
Curtis Lumber Co
Deer Park Fine Industry Inc
Diamond Match Co
Draper (Fred) Lumber Co
Firpine Products Co
Fleishman Lumber Co
Hallack & Howard Lumber Co
Hesse (Edward) Lumber Co
Inter Lakes-Gulf Lumber Co
Kallspell Lumber Co
Kawana Forest Products Inc
Kennedy (J G) Lumber Co
Kinross Fine Mills Co
Kusdon & Mercer Lumber Co
Kogap Lumber Industries
Long Lake Lumber Co
Maak Seattle Lumber Co
McFarland Brown Lumber Co
Metropolitan Lumber Co
Miller (George E) Lumber Co
Mie Emily Lumber Co
Nells (J) Lumber Co
Ochoco Lumber Co
Oregon Match Co
Oregon Trail Lumber Co
Pack River Sales Co
Patrick Lumber Co
Russell & Pugh Lumber Co
St Maries Lumber Co
Schreiber (Wm C) Lumber Co
Schulte (Wm) Co
Silbermag (Gen J) & Sons Co
Smith (Ralph L) Lumber Co
Soderberg (Carl) Lumber Co
Somers Lumber Co
Stoddard Lumber Co
Stotts (F H) Land & Lumber Co
Twin Harbors Lumber Co
Van Detone Lumber Sales Corp
Wales Lumber Co
Western Pine Mfg Co
WEYERHAEUSER SALES CO
White Pine Lumber Co
Winter Tree Lumber Products Inc
Zevel Lumber Co

► LUMBER, MAPLE

Adams (S B) Lumber Co Inc
Adirondack Core & Plug Co
Albion Lumber Co
Anderson-Tully Co
Argent Lumber Co
Atlanta Oak Flooring Co
Atlantic Lumber Co
Augusta Hardwood Co
Babcock Lumber Co
Barger (E L) Co
Baley Lumber Co
Barger (P M) Lumber Co
Barstady (Charles B)
Ray de Noquet Co
Beard (E N) Lumber Co
Belcher (J B)
Bemis Hardwood Lumber Co
Berry (Paul B)
Black (J W) Lumber Co
Boehm Lumber Co
Boehm-Madden Lumber Co
Bonifat (William) Lumber Co
Boother (B M)
Brewer Lumber Co
Breece-White Mfg Co
Bristol Door & Lumber Co
Brown (D D)
BRUCE (E L) CO
Burt (C E & F) Co
Cadillac-Sou Lumber Co
Callahan (C K) & Sons Lumber Co
Camp Mfg Co
Cantook Lumber Co
Cary Lumber Co
Cathey Lumber Co
Chaffee Brothers Co
Cherry River Boom & Lumber Co
Christiansen (C M) Co
Clarke County Lumber Mills
Cleveland-Groene Lumber Co
Coastal Lumber Co
Conasauga River Lumber Co
Conifer Lumber Mills Co
Conkling (Frank A) Co
CONNOR LUMBER & LAND CO
Conway Lumber Co
Cook (F C) & Co
Cooper-Smith Lumber Co
Copeland Lumber Co
Cotton & Hanlan
Crump (I E) Lumber Co
Decus Lumber Co

Dickerson (Clark) Lumber Co
Elk River Coal & Lumber Co
Elliott Hardwood Co
Ely-Thomas Lumber Co
Emporium Forestry Co
Endsaver Lumber Co
Everett Hardwood Lumber Co
Farrall Lumber Co
Farris (M B) Lumber Co
Ferguson (W T) Lumber Co
Fink (John E) Lumber Co
Fisher & Toussaint
Foley Lumber Industries
Fox (Abbot) Lumber Co
Frost Lumber Industries
Fry-Fulton Lumber Co
Gaines Hardwood Lumber Co
Genesee Lumber Co
Georgia-Pacific Plywood & Lumber Co
Gibson-Anderson Lumber Co
Gosh Brothers Lumber Co
Goodman Lumber Co
Graham Lumber Co
Greene Brothers Lumber Co
Greene Lumber Co
Griffith Lumber Co
Hall (D E) Lumber Co
Hallett Mfg Co Inc
Hall-Inger Lumber Co
Hall & Neely
Hamer (J P) Lumber Co
Hardwood Corp of America
Hart-Thompson Lumber Co
Hawley Lumber Co
Hobac Veneer & Lumber Co
Hoffman Lumber Co
Holly Hill Cypress Co
Holly Hill Lumber Co
Holt Hardwood Co
Houston Brothers
Huntington Hardwood Co
Hutton & Bourbonnais Co
Inter-Mountain Coal & Lumber Co
Jackson Sawmill Co
Jansuet Lumber Co
Jeffries (J W) Lumber Co
Jeffrey-McCrath Mfg Co
Johnson Lumber Co Inc
Jones (J M) Lumber Co
Kelloug Lumber Co
Kern (Paul B) Lumber Co
King Lumber Industries
King Lumber Industries Inc
Kibben Lumber Co
Knoke Lumber Co
Korn Industries Inc
Learned (R S) & Son
Loring (M E) Lumber Co
Lexington Lumber Co
Lightsey Brothers
Link-Newcomb Mill & Lumber Co
LONG-BELL LUMBER CO
Marshall Lumber Co
Martin (Roy O) Lumber Co
Mason (A) & Sons Inc
May Brothers
McAnn Lumber Co
McCrackan & McCall Inc
McClough Lumber Co
McCrackan-Curtis Lumber Co
McLean-Arkansas Lumber Co
Meadow River Lumber Co
MENDEL CO
Menominee Indian Mills
Meunier Lumber & Supply Co
Michigan Maple Block Co
Michigan Pole & Tie Co
Midland Valley Lumber Co
Miller Brothers Co
Miller & Co Inc
Minton (T W) & Co
Mississippi-Valley Lumber Co
Monteath (J H) Co
Morrison Goods Co
Mowbray & Robinson Lumber Co
Mower Lumber Co
Newellton Hardwood Co
Nichey Brothers Inc
Northcut Lumber Sales Corp
Northern Ohio Co
Oshosh Wood Products Corp
Orr Wood Dish Corp
Owen (E C) Co
PARKEY INC
Parker & Stearns
Parrell Lumber Co
Patterson-McIntosh Lumber Co
Paxton (Frank) Lumber Co
Phillips-Rhyne Lumber Co Inc
Pine Flume Lumber Co
Plant & Griffith Lumber Co
Plunkett-Webster Lumber Co Inc
Plumly (F W) Lumber Corp
Polunest Lumber & Mfg Co
Pratt (E W)
Pratt Lumber Co
Reynolds Brothers Lumber Co
Reynolds & Manley Lumber Co
Richmond Cedar Works
Ritter (W M) Lumber Co
RODDIS PLYWOOD CORP
Rosa (D M) & Co
Ruse (Warren) Lumber Co
Rush Lumber Co
Santee River Hardwood Co
Schilling Lumber Co
Seidner Brothers Lumber Co
Schreiber (Wm C) Lumber Co
Shannon Brothers Lumber Co
Smith Lumber Co
Smith (W T) Lumber Co
Southeastern Industries Inc
Southern Star Lumber Co
Stark (James E) Co
Stearns Coal Lumber Co
Stinson Lumber Co
Stuart Lumber Corp
Stutts Lumber Co Inc
Stutts Sawmill Co Inc

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Sullivan Lumber Co
 Susquehanna Chemical Corp
 Swainboro Lumber Co
 Taylor & Newcomb Inc
 Temple Lumber Co
 Texas Longleaf Lumber Co
 Thistlewhite Lumber Co
 Thomas & Proeta Lumber Co
 Triplett Lumber Co Inc
 Underwood Veneer Co
 United Timber & Lumber Co
 Uransia Lumber Co
 Vental Lumber & Mfg Co
 Vinton (H A) Lumber Co
 Virgeon (Joe) Lumber Co Inc
 Wallich (M J) Land & Lumber Co
 Ward Lumber Co
 Warner Lumber Co
 Wax Lumber Co
 Webster (H E) Lumber Co
 Wells (J W) Lumber Co of Ala
 Welsh Lumber Co
 West Virginia Lumber Co
 Wheeler Lumber Co
 White River Timber Co
 Williams-Brownell Inc
 Williams (J L) & Sons
 Williams & McKelthin Lumber Co
 Williams & Voria Hardwood Co
 Williams & Voria Saw Mill Co
 Wistar-Underhill & Co
 Woods Lumber Co & Co
 Woody (W W) Lumber Co
 Wright (J Walter) Lumber Co
 Younger-Russell Corp
 Youngerman-Reynolds Lumber Co

▶ LUMBER, OAK, RED AND WHITE

Adams (S B) Lumber Co Inc
 Adirondack Core & Flot Co
 Anderson-Tully Co
 Angelina Hardwood Sales Co
 Arkansas Lumber Co
 Atlanta Oak Flooring Co
 Atlantic Lumber Co
 Augusta Hardwood Co
 Babcock Lumber Co
 Bagall (L N) Lumber Co
 Bailey Lumber Co
 Barger (F M) Lumber Co
 Beard (E N) Lumber Co
 Belcher (J B)
 Bemis Hardwood Lumber Co
 Black (J W) Lumber Co
 Boline (C R) Lumber Co
 Roeder (H M)
 Bowen (A M) Lumber Co
BRADLEY LUMBER CO OF ARK
 Breese-White Mfg Co
 Bristol Beer & Lumber Co
 Brown (D B)
BRUCE (E L) CO
 Callahan (E K) & Sons Lumber Co
 Camp Mfg Co
 Canhook Lumber Co
 Carr Lumber Co
 Carter (W T) & Brother
 Cately Lumber Co
 Chaffee Brothers Co
 Chapman & Dewey Lumber Co
 Charney (Arthur V.) & Son
 Chestwood Lumber Co
 Chattahoochee Valley Lumber Co
 Cherry River Boom & Lumber Co
 Clarke County Lumber Mills
 Cleveland-Genese Lumber Co
 Cumansaga River Lumber Co
 Cushing (Frank A) Lumber Co
 Cook (F C) & Co
 Cooper-Smith Lumber Co
 Corinth Planing Mill Co
 Cotton & Hanlon
 Crisp (M E) Lumber Co
 Crouse Co
CROSSETT LUMBER CO
 Dacus Lumber Co
 Davis Brothers Lumber Co Ltd
 Deering (J G) & Son
 Dierks Lumber & Coal Co
 Edens-Birch Lumber Co
 Elrod (J E) Lumber Co
 Ely-Thomas Lumber Co
 Endosor Lumber Co
 Everett Hardwood Lumber Co
 Exchange Sawmills Sales Co
FAIR (L) LUMBER CO
 Farris (M B) Lumber Co
 Ferguson (W T) Lumber Co
 Ferguson Co Inc
 Fisher Brothers Lumber Co
 Fisher & Young
 Fishy Lumber Industries
 Fordyce-Crossett Lumber Co
 Frost Lumber Industries Inc
 Fry-Pullon Lumber Co
 Fulton Band Mill
 Gaines Hardwood Lumber Co
 Genott Lumber Co
 Georgia-Pacific Plywood & Lumber Co
 Graham Lumber Co
 Greese Brothers Lumber Co
 Greene Lumber Co
 Griffith Lumber Co
 Hall (D H) Lumber Co
 Hall-Mfg Co Inc
 Hall & Newly
 Hamer (J F) Lumber Co
 Hancock (M B) Inc
 Hardwood Corp of America
 Hart-Thompson Lumber Co
 Henderson-Molpus Co
 Hillier Deutch Edwards Inc
 Hoffman Lumber Co
 Holden & Martin Lumber Co
 Holly Hill Cypress Co
 Holly Hill Lumber Co
 Houston Brothers

Huntingdon Hardwood Co
 Hunt (Lacy H) Lumber Co
 Hutton & Bourbonnais Co
 Industrial Lumber Co
 Inler-Mountain Coal & Lumber Co
 Jackson Sawmill Co
 Jeffrey-McLain Mfg Co
 Jeffries (J W) Lumber Co
 Johnson Lumber Co Inc
 Jones (J M) Lumber Co
 Kellogg Lumber Co
 Kerri Co
 Kern (Paul B) Lumber Co
 Keystone Lumber Co
 King Lumber Industries
 King Lumber Industries Inc
 Kirby Lumber Corp
 Korn Industries Inc
 League (G F) Lumber Co
 Learned (E S) & Son
 LeBlanc Lumber Co
 Leming (M E) Lumber Co
 Lexington Lumber Co
 Lightsey Brothers
 Link-Newcomb Mill & Lumber Co
LONG-BELL LUMBER CO
 Louisiana Central Lumber Co
 Mansfield Hardwood Lumber Co
 Marshall Lumber Co
 Martin (Roy O) Lumber Co
 Mason (A) & Sons Inc
 May Brothers
 McAnn Lumber Co
 McCarroll Lumber Co
 McCracken & McCall Inc
 McVuloh Lumber Co
 McVraw-Curran Lumber Co
 McLean-Arkansas Lumber Co
 Meadow River Lumber Co
MENGL CO
 Miller Brothers Co
 Miller & Co Inc
 Minton (T W) & Co
 Mississippi-Valley Hardwood Co
 Mobile River Sawmill Co
 Monteath (J H) Co
 Morrison Green Co
 Mowbray & Robinson Lumber Co
 Mower Lumber Co
 Newellton Hardwood Lumber Co
 Nickey Brothers Inc
 Northwest Lumber Sales Corp
 Oakboro Lumber Co
 Owen (H C) Co
 Ozan Lumber Co
PARKAY INC
 Farnell Lumber Co
 Paterson-Melinas Lumber Co
 Phillips-Rhays Lumber Co Inc
 Pine Plume Lumber Co
 Plant & Griffin Lumber Co
 Plunk (P W) Lumber Co
 Plunkett-Webster Lumber Co Inc
 Poinsett Lumber & Mfg Co
 Pratt (E W)
 Pratt Lumber Co
 Ransom (W A) Lumber Co
 Reynolds Brothers Lumber Co
 Reynolds-Gammill Lumber Co
 Reynolds & Manley Lumber Co
 Richmond Cedar Works
 Ritter (W M) Lumber Co
RODDIS PLYWOOD CORP
 Rose (D M) & Co
 Ross (Warren) Lumber Co
 Rush Lumber Co
 Santee River Hardwood Co
 Schaefer Lumber Co Inc
 Schilling Lumber Co
 Schreiber (W C) Lumber Co
 Seuth Lumber Co
 Sears Lumber Co
 Shannon Brothers Lumber Co
 Silbernagel (George J) & Sons Co
 Smith Lumber Co
 Smith (W T) Lumber Co
 Sondheimer (E) Co
 Southeastern Industries Inc
 Southern Lumber Co
SOUTHERN PINE LUMBER CO
 Southern Star Lumber Co
 Spargman Hardwood Lumber Co
 Stark (James B) Co
 Starr (J W) & Sons Lumber Co
 Stearns Coal & Lumber Co
 Stewart (E A) Lumber Co
 Stinson Lumber Co
 Stone (J E) Lumber Co
 Stovey (W M) Lumber Co
 Stuart Lumber Corp
 Stuts Lumber Co Inc
 Stuts Sawmill Co Inc
 Sullivan Lumber Co
 Swainboro Lumber Co
 Taylor & Newcomb Inc
 Temple Lumber Co
 Texas Longleaf Lumber Co
 Thistlewhite Lumber Co
 Thomas & Proeta Lumber Co
 Thompson Malnagay Co
 Townsend Brothers
 Triplett Lumber Co Inc
 Trust Lumber Co
 United Timber & Lumber Co
 Uransia Lumber Co
 Vestal Lumber & Mfg Co
 Vinton (H A) Lumber Co
 Virgeon (Joe) Lumber Co Inc
 Vreuburg Saw Mill Co
 Walker & Smith Lumber Co
 Warner Lumber Co
 Wax Lumber Co
 Webster (H E) Lumber Co
 Wells (J W) Lumber Co of Ala
 Welsh Lumber Co

West Virginia Lumber Co
 Westcott (J D) & Son
 Wheeler Lumber Co
 Williams-Brownell Inc
 Williams (J L) & Sons
 Williams & McKelthin Lumber Co
 Williams & Voria Hardwood Co
 Williams & Voria Lumber Co
 Williams & Voria Saw Mill Co
 Wistar-Underhill & Co
 Woods Lumber Co Inc
 Woodward-Walker-Boren Inc
 Woody (W W) Lumber Co
 Wright (J Walter) Lumber Co
 Youngerman-Reynolds Lumber Co
 Zickgraf Hardwood Co

▶ LUMBER, PECAN

Anderson-Tully Co
 Angelina Hardwood Sales Co
 Arkansas Lumber Co
 Atlantic Lumber Co
 Barger (P M) Lumber Co
 Beard (E N) Lumber Co
 Bowen (A M) Lumber Co
BRADLEY LUMBER CO OF ARK
 Breese-White Mfg Co
 Comfort (George N) Lumber Co
 Chapman & Dewey Lumber Co
 Clarke County Lumber Mills
 Cushing (Frank A) Lumber Co
CROSSETT LUMBER CO
 Dacus Lumber Co
 Edens-Birch Lumber Co
 Elrod (J E) Lumber Co
 Fisher Brothers Lumber Co
 Fordyce-Crossett Lumber Co
 Frost Lumber Industries
 Fry-Pullon Lumber Co
 Gaines Hardwood Lumber Co
 Georgia-Pacific Plywood & Lumber Co
 Garden Lumber Co
 Hall (D H) Lumber Co
 Hallett Mfg Co Inc
 Hall-Inner Lumber Co
 Hillier Deutch Edwards Inc
 Houston Brothers
 Industrial Lumber Co
 Jeffries (J W) Lumber Co
 Jones (J M) Lumber Co
 King Lumber Industries Inc
 Kirby Lumber Corp
 Korn Industries Inc
 Learned (E S) & Son
 Leming (M E) Lumber Co
 Link-Newcomb Mill & Lumber Co
 Louisiana Central Lumber Co
 Mansfield Hardwood Lumber Co
 Martin (Roy O) Lumber Co
 May Brothers
 McCarroll Lumber Co
 McVraw-Curran Lumber Co
 McLean-Arkansas Lumber Co
MENGL CO
 Midland Valley Lumber Co
 Mississippi-Valley Lumber Co
 Mobile River Sawmill Co
 Newellton Hardwood Co
 Nickey Brothers Inc
 Northern Ohio Co
 Ozan Lumber Co
 Paterson-Melinas Lumber Co
 Phillips-Rhays Lumber Co Inc
 Ransom (W A) Lumber Co
 Schilling Lumber & Shingle Co
 Shannon Brothers Lumber Co
 Smith (W T) Lumber Co
 Sondheimer (E) Co
 Southeastern Industries Inc
 Southern Lumber Co
SOUTHERN PINE LUMBER CO
 Stark (James B) Co
 Stewart (E A) Co
 Stuts Lumber Co Inc
 Stuts Sawmill Co Inc
 Tangle Lumber Co
 Texas Longleaf Lumber Co
 Thistlewhite Lumber Co
 Townsend Brothers
 Triplett Lumber Co Inc
 Turner Lumber Co
 United Timber & Lumber Co
 Vestal Lumber & Mfg Co
 Vinton (H A) Lumber Co
 Wax Lumber Co
 Webster (H E) Lumber Co
 Wells (J W) Lumber Co of Ala
 Welsh Lumber Co
 Williams & Voria Hardwood Co
 Woods Lumber Co Inc
 Woody (W W) Lumber Co

▶ LUMBER, PINE, NORWAY

Chaffee Brothers Co
 Christiansen (C M) Co
 Creng (George E) & Sons
 Cross Austin & Sons Lumber Co
 Fink (John E) Lumber Co
 Gillies Brothers
 Hancock (M B) Inc
 Jones (R T) Lumber Co
 Kennott Co
 Mason (A) & Sons Inc
 Mathes (John E) & Sons Inc
 Michigan Maple Block Co
 Michigan Pine & Tie Co
 Rainy Lake Lumber Co Ltd
 Ross (Warren) Lumber Co
 Ross Lumber Co Inc
 Timberlands Inc
 Trust Creek Lumber Co
 Wallich (M J) Land & Lumber Co

▶ LUMBER, PINE, PONDEROSA

Adair (Jos A) Lumber Co
 Alexander-Taney Lumber Co
 American Box Corp
 Anconada Copper Mining Co
 Anglin Box & Lumber Co
 Atlas Tie & Lumber Co
 Babcock Lumber Co
 Bernatillo Lumber Co
 Bites Coleman Lumber Co
 Bligen Lumber Co
 Blue Mountain Mills
 Bookman Lumber Co
 Boise Payette Lumber Co
 Brooks-Senton Lumber Co
 Brown's Tie & Lumber Co
 Bunyan (Paul) Lumber Co
 Byers-Jamison Lumber Co
 Calder Lumber Co
 California Door Co
 California Sugar & Western Pine Agency
 Cascade Lumber Co
 Chelan Box & Mfg Co
 Chaloun (H S) Inc
 Clover Valley Lumber Co
 Collins Pine Co
 Collins-Pondosa Lumber Co
 Comfort (George N) Lumber Co
 Contact Lumber Co
 Cook County Lumber Co
 Craig Mountain Lumber Co
 Crane Mills Inc
 Crowley Lumber Co Inc
 Custer Lumber Co
 Deer Park Pine Industry Inc
 Diamond Match Co
 Dyer (Robert) Co
 Draper (Fred) Lumber Co
 Exchange-Sawmills Sales Co
 Ferguson (W T) Lumber Co
 Florida Products Co
 Fishman Lumber Co
 Florida-Pacific Plywood & Lumber Co
 Gilchrist Timber Co
 Gosse Lake Box Co
 Gosh & Howard Lumber Co
 Hopper Lumber Co
 Herman Brothers Lumber Co
 High Sierra Pine Mills Inc
 Hines (Edward) Lumber Co
 Hughes Brothers
 Indian Head Lumber Co
 Inter-Lakes-Gulf Lumber Co
 Interstate Lumber Sales
 Intry Pine Co
 Kallispell Lumber Co
 Kanikon Forest Products Inc
 Kennedy (J G) Lumber Co
 Keut Lumber Co
 Klamath Pine Mills Co
 Klamath Basin Pine Mills Inc
 Knudson & Mercer Lumber Co
 Kogap Lumber Industries
 Lanes Lumber Box Co
LONG-BELL LUMBER CO
 Long Lake Lumber Co
 Mank Seattle Lumber Co
 McLean River Lumber Co
 Medford Corp
 Metropolitan Lumber Co
 Michigan-California Lumber Co
 Midwest Jobbers Inc
 Miller (Gvo E) Lumber Co
 Inder Lumber Co
 Morrison (A) Lumber Co
 Mt Emily Lumber Co
 Nevada Pine Mfg Co
 Mt Whitney Lumber Co
 Navajo Tribal Sawmill
 Neils (J) Lumber Co
 New Mexico Timber Co
 Northwest Timber Co
 Ochsens Lumber Co
 Oregon-American Lumber Co
OREGON LUMBER CO
 Oregon Trail Lumber Co
 Pack River Sales Co
 Patrick Lumber Co
 Paxton (Frank) Lumber Co
 Penberthy Lumber Co
 Peshastin Lumber & Box Co
 Pickering Lumber Co
 Pine Logging Co of Calif
 Placerville Lumber Co
 Pondosa-Koussidze Inc
 Prestridge (M B) Lumber Co
 Quincy Lumber Co Inc
 Rebeck Mfg Co
 Rinn-Scott Lumber Co
 Russell & Hugh Lumber Co
 Sacramento Box & Lumber Co
 Saginaw & Manistee Lumber Co
 St Marier Lumber Co Inc
 Schmidt Brothers Lumber Co
 Schmittens Lumber Co
 Schreiber (Wm C) Lumber Co
 Schmitt (Wm) Co
 Seut Lumber Co
 Sherman (Edward J) Lumber Sales
 Stevins-McLeod Lumber Co
 Stillernagel (George J) & Sons Co
 Smith (Balph L) Lumber Co
 Soderberg (Carl) Lumber Co
 Somers Lumber Co
 Southwest Lumber Co
 Southwest Lumber Mills Inc
 Spaulding & Son Inc
 Stanton (E J) & Son
 Steuber Lumber Co
 Tartar Webster & Johnson Inc
 Terrell Lumber Co
 Timber Products Co
 Tite Knot Pine Mill
 Twin Harbors Lumber Co
 Trigh Valley Lumber Co
 Utah Pine Lumber Co
 Union Lumber Co
 Vandenburg Lumber Sales Corp
 Wales Lumber Co

Manufacturers' Names and Addresses Start on Page D-76
 Manufacturers' Brand Name Identifications Start on Page D-64

Warm Springs Lumber Co
Wendling-Nathan Co
Western Pine Mfg Co
West Side Lumber Co
WEYERHAEUSER SALES CO
White Pine Lumber Co
White Pine South Co
Wilkinson Lumber Co
Wilson (A & K) Lumber Co
Winchester Box Co
Winters Brothers Lumber Products Inc
Winton Lumber Sales Co
Wistar-Underhill & Co
Woodward Lumber Co
Wuester Lumber Co
Zamboni Lumber Co Inc
Zorn Lumber Co

► LUMBER, PINE, SUGAR

Adair (Jos A) Lumber Co
Anglo Box & Lumber Co
Babeck Lumber Co
Byrne-Jamison Lumber Co
Caldor Lumber Co
California Door Co
California Sugar & Western Pine Agency
Cascade Pacific Lumber Co
Chaslin (H R) Inc
Collins Pine Co
Comfort (George N) Lumber Co
Contact Lumber Co
Cook County Lumber Co
Crawley Lumber Co Inc
Diamond Match Co
Dellar (Robert) Co
Frasma Box Co
Exchange Sawmills Sales Co
Ferguson (W T) Lumber Co
Furniture Products Co
Frisman Lumber Co
Herman Brothers Lumber Co
High Sierra Pine Mills Inc
Hines (Edward) Lumber Co
Hughes Brothers
Interstate Lumber Sales
Ivory Pine Co
Kennedy (J G) Lumber Co
Kent Lumber Co
Klamath Basin Pine Mills Inc
Knudsen & Mercer Lumber Co
Knap Lumber Industries
LONG-BELL LUMBER CO
Mank Seattle Lumber Co
McLoud River Lumber Co
Meadow Valley Lumber Co
Medford Corp
Metropolitan Lumber Co
Michigan-California Lumber Co
Miller (George E) Lumber Co
Modac Lumber Co
Mt Shasta Pine Mfg Co
Mt Whitney Lumber Co
Patrick Lumber Co
Paxton (Frank) Lumber Co
Penberth Lumber Co
Pierking Lumber Corp
Pine Logging Co of Calif
Placerville Lumber Co
Quincy Lumber Co Inc
Redwood Mfg Co
Rinn-South Lumber Co
Sacramento Box & Lumber Co
Schmitt Brothers Lumber Co
Schreiber (Wm C) Lumber Co
Schwartz (Wm) Co
Scott Lumber Co Inc
Sherman (Edward J) Lumber Sales
Shively-McCloud Lumber Co
Silbermagl (George J) & Sons Co
Smith (Ralph L) Lumber Co
Soderberg (Carl) Lumber Co
Southern Oregon Sugar Pine Co
Spalding & Son Inc
Stanton (E J) & Son
Stokes Lumber Co
Tartar Webster & Johnson Inc
Timber Products Co
Twin Harbors Lumber Co
Utah Pine Lumber Co
Union Lumber Co
Vanhusen Lumber Sales Corp
Wales Lumber Co
Wendling-Nathan Co
WEYERHAEUSER SALES CO
Wilkinson Lumber Co
Wilson (F A) Lumber Co
Winton Lumber Sales Co
Wistar-Underhill & Co
Woodward Lumber Co
Wuester Lumber Co
Zamboni Lumber Co Inc

► LUMBER, PINE, WHITE, IDAHO

Baird-Namendorf Lumber Co
Beckmier Lumber Co
Cascade Pacific Lumber Co
Deer Park Pine Industry Inc
Diamond Match Co
Exchange Sawmills Sales Co
Georgia-Pacific Plywood & Lumber Co
Kennedy (J G) Lumber Co
Long Lake Lumber Co
Mank Seattle Lumber Co
Miller (Geo E) Lumber Co
Nella (J) Lumber Co
Nottelton Lumber Co
Ohio Match Co
Pack River Sales Co
Pashatjian Lumber & Box Co
Russell & Pugh Lumber Co
Silbermagl (George J) & Sons Co
Soderberg (Carl) Lumber Co
Spokane Pine Products Co
Twin Harbors Lumber Co

Wales Lumber Co
WEYERHAEUSER SALES CO
White Pine South Co
Winton Lumber Sales Co
Woodward Lumber Co

► LUMBER, PINE, WHITE, NORTHERN

Adirondack Cure & Plug Co
Alumnum Lumber Co
Augusta Lumber Co
Babeck Lumber Co
Ray of Nugget Co
Boehm-Madison Lumber Co
Bonifaz (William) Lumber Co
Bowler Lumber Co
Burt (C E & F O) Co
Caddis-Soe Lumber Co
Chaffee Brothers Co
Christiansen (C M) Co
Cleveland Cliffs Iron Co
Comfort (George N) Lumber Co
Confor Lumber Mills
CORNER LUMBER AND LAND CO
Copeland Lumber Co
Cotton & Hanlon
Creser (G O) & Sons
Cross Austin & Ireland Lumber Co
Deering (J G) & Son
Diamond Match Co
Dickerson (Clark) Lumber Co
Emporium Forestry Co
Endeavor Lumber Co
Everett Hardwood Lumber Co
Ferguson (W T) Lumber Co
Fessenden Companies Inc
Fink (John E) Lumber Co
Fisher & Young
Fitzsimons Lumber Co
Fox (Abbot) Lumber Co
Fry Fulton Lumber Co
Georgia-Pacific Plywood & Lumber Co
Gillies Brothers
Goodman Lumber Co
Green Lumber Co
Hancock (M S) Inc
Hawley Lumber Co
Hines (Edward) Lumber Co
Holden & Martin Lumber Co
James (R T) Lumber Co
Johnson Lumber Co Inc
Jones (R T) Lumber Co
Kankian Forest Products Inc
Kennett Co
Kerry & Hanson Flooring Co
Knoke Lumber Co
Knudsen & Mercer Lumber Co
Knap Lumber Industries
Langdell Lumber Co
LONG-BELL LUMBER CO
Mason (A) & Sons Inc
Mather (John R) & Sons Inc
McClulloch Lumber Co
McFarland-Brown Lumber Co
Menominee Indian Mills
Menzner Lumber & Supply Co
Michigan Pole & Tie Co
Michigan Maple Block Co
Miller (George E) Lumber Co
Nella (J) Lumber Co
Oak Wood Dish Corp
Plant & Griffith Lumber Co
Pinker-Webster Lumber Co Inc
Rainy Lake Lumber Co
RODDIS PLYWOOD CORP
Rose (Warren) Lumber Co
Russell & Pugh Lumber Co
Raco Lumber Co Inc
Schwartz (Wm) Co
Smith (Ralph L) Lumber Co
St. Maries Lumber Co
Southern Oregon Sugar Pine Co
Stephenson (I) Co
Stoltz (F B) Land & Lumber Co
Timberlands Inc
Trust-Nantle Co Inc
Trove Creek Lumber Co
Underwood Veneer Co
Vanhusen Lumber Sales Corp
Walrich (M J) Land & Lumber Co
Ward Lumber Co
WEYERHAEUSER SALES CO
White Pine Lumber Co
White River Lumber Co
Winton Lumber Sales Co
Wistar-Underhill & Co

► LUMBER, PINE, YELLOW, SOUTHERN

Alexander Brothers Lumber Co
Alder-Sullivan Lumber Co
Allison Lumber Co
Altman Lumber Co Inc
Anderson Tully Co
Angelina County Lumber Co
Aquila Lumber Co
Arkansas Oak Co
Arkansas Oak Flooring Co
Atlanta Oak Flooring Co
Atlantic Lumber Co
Augusta Hardwood Co
Babeck Lumber Co
Bagnal (I N)
Barger (F M) Lumber Co
Barnes Lumber Co
Beard (E N) Lumber Co
Beatrio Lumber Co
Belcher (W A) Lumber Co
Belcher (W E) Lumber Co

Belmont Lumber Co
Beasley (J A) Lumber Co
Bestcher Lumber Co of Huntsville
Bordford Mfg Co
BRADLEY LUMBER CO OF ARK
Bray (J N) Lumber Co
Brooks-Seaton Inc
Brown Lumber Co
BRUCE (E L) CO
Burdette Lumber Co
Burton Land & Lumber Co
Caddo River Lumber Co
Callahan (C K) & Sons Lumber Co Inc
Campbell Coal Co
Campa Mfg Co
Castlough Lumber Co
Caroline Lumber Co
Carroll (A E) Lumber Co
Carter (W T) & Brothers
Cascade Pacific Lumber Co
Cathy Lumber Co
Central Lumber Co
Chattahoochee Valley Lumber Co
Chatsworth Lumber Co
Clarke County Lumber Mill Co
Cleveland-Deane Lumber Co
Clinton Bond Mill Inc
Coastal Lumber Co
Colfax Lumber & Crossing Co Inc
Colonial Pine Co Lumber Co
Conasauga River Lumber Co
Conkling (Frank A) Co
Conway Lumber Co
Cook (A B) Co
Cotton & Hanlon
Corinth Planing Mill Co
Crosby Lumber & Mfg Co
CROSSIT LUMBER CO
Crownell Long Leaf Lumber Co Inc
Dadeville Lumber Co Inc
Dantzer Lumber Co
Dargen Lumber Mfg Co
Davis Brothers Lumber Co
Deemer Lumber Co
DeWesse (A) Lumber Co
Diets Lumber & Coal Co
Dolan Lumber Co
Downing (F M) Lumber Co
Edson-Hirth Lumber Co
Elrod (J E) Lumber Co
Eureka Lumber Co
Exchange Sawmills Sales Co
FAIR (D L) LUMBER CO
Farris Lumber Co
Ferguson (W T) Lumber Co
Fisher Brothers Lumber Co
Fleibel Lumber Co
Foley Lumber Industries
Foote (H D) Lumber Co
Fordyce-Crossit Lumber Co
Foshee Lumber Co
Frost Lumber Industries Inc
Frost-Sibley Lumber Co
Georgia-Pacific Plywood Lumber Co
Gordon (Mose) Lumber Co
Graham Lumber Co
Gray (C L) Lumber Co
Grazbale (C R) & Sons
Grasson Lumber Co
Greene Brothers Lumber Co
Griffin Lumber Co
Griffith (J M) & Sons
Gulf Lumber Co
Gurdon Lumber Co
Hallitt Mfg Co Inc
Hancock Lumber Co
Hardwood Corp of America
Haslam Lumber Co
Henderson-Melpus Co
Hill-Belcher Lumber Co
Hilman Edward Inc
Hines (Edward) Lumber Co
Holly Hill Cypress Co
Houston Brothers
Hunt (Lacy B) Lumber Co
Hutton & Bourbonnais Co
Jefferson Lumber Co
Jeffrey-McElrath Mfg Co
Jeffrey-Myers Mfg Co
Jeffries (J W) Lumber Co
Jones (C J) Lumber Co
Jones (J M) Lumber Co
Korn (Paul B) Lumber Co
Keystone Lumber Co
King Lumber Industries
King Lumber Industries Inc
Kirby Lumber Corp
Klumb (C E) Lumber Co
Knudsen & Mercer Lumber Co
Knox Industries Inc
Lackey (E E) Lumber Co
League (G F) Lumber Co
LeBlanc Lumber Co
Lexington Lumber Co
Lightsey Brothers
LONG-BELL LUMBER CO
Louisiana Central Lumber Co
Louisiana Long Leaf Lumber Co
Mansfield Hardwood Lumber Co
Martin (Roy O) Lumber Co
May Brothers
McCann Lumber Co
McCarroll Lumber Co
McClulloch Lumber Co
McGowan (W M) Lumber Co
MENDEL CO INC
Midland Valley Lumber Co
Miller & Co Inc
Miller (T R) Mill Co
Mullins Lumber Co
Neal Lumber & Mfg Co
Netles Lumber Co
Northcut Lumber Sales Corp

Oakhorn Lumber Co
Ozan Lumber Co
Palmetto Lumber Sales Co Inc
Pattrell Lumber Co
Paternon-McIntosh Lumber Co
Patton (Frank) Lumber Co
Peary-Wilson Lumber Co
Phillips-Rhyne Lumber Co
Pierce (H M) Lumber Co
Pine Plume Lumber Co
Plumby (F W) Lumber Corp
Ponca Lumber & Mfg Co
Pratt Lumber Co
Putnam Lumber & Export Co
Raynolds Brothers Lumber Co
Reynolds-Gammill Lumber Co
Reynolds & Manly Lumber Co
Richardson (T R) Lumber Co
Richmond Cedar Works
Riggs-Buttram Lumber Co
Ritter (W M) Lumber Co
Rish Lumber Co
Roblin Lumber Co
St. Joe Lumber & Export Co
Santee River Hardwood Co
Schreiber (Wm C) Lumber Co
Seotch Lumber Co
Shepherd Lumber Corp
Silbermagl (George J) & Sons Co
Sinclear Lumber Co Inc
Smith Lumber Co
Smith (M W) Lumber Co Inc
Smith (W C) Lumber Co
Smith (W T) Lumber Co Inc
Snow Lumber Co
South Atlantic Lumber Co
Southeastern Industries Inc
Southern Lumber Co
SOUTHERN PINE LUMBER CO
Starr (J W) & Sons Lumber Co
Stearns Coal & Lumber Co
Stene (J E) Lumber Co
Storey (W M) Lumber Co
Stratford Lumber Co
Stuart Lumber Corp
Stutts Lumber Co Inc
Stutz Sawmill Co
Sullivan Lumber Co
Summers Brothers Lumber Co
Sutton (T B) & Sons Lumber Co
Swainville Lumber Co
Taylor & Newcomb Inc
Temple Lumber Co
Texas Langleaf Lumber Co
Thomas Lumber Co
Thomas Lumber & Mfg Co
Tremont Lumber Co
Triplett Lumber Co Inc
United Lumber & Mfg Co
Uranis Lumber Co Ltd
Vestal Lumber & Mfg Co
Vergason (Joe) Lumber Co Inc
Voss (J F) Co
Vredenburg Saw Mill Co
Wade Hardwood Co
Wallin Lumber Co
Walsh Lumber Co
Wax Lumber Co
Webster (H E) Lumber Co
Wells (T W) Lumber Co of Ala
Williams (J L) & Sons
Williams Mfg Co
Williams & McKeithan Lumber Co
Williams & Voris Saw Mill Co
Wintor Bros Lumber Products Inc
Wistar-Underhill & Co
Wigan-Wilson Land & Lumber Co
Wood Lumber Co
Woodward-Walker-Brown Inc
Youngman-Bryant Lumber Co
Zickgraf Hardwood Co

► LUMBER, POPLAR

Adams (S B) Lumber Co Inc
Anderson-Tully Co
Angier Lumber Co
Atlanta Oak Flooring Co
Atlantic Lumber Co
Augusta Hardwood Co
Babeck Lumber Co
Bagnal (I N)
Barger (F M) Lumber Co
Beard (E N) Lumber Co
Belcher (J B)
Bemis Hardwood Lumber Co
Bowen (A M) Lumber Co
Bristol Bow & Lumber Co
Brooks (H L) & Sons
BRUCE (E L) CO
Burdette Lumber Co
Callahan (C E) & Sons Lumber Co
Campa Mfg Co
Castlough Lumber Co
Carr Lumber Co
Cathy Lumber Co
Chapman & Dewey Lumber Co
Chandler (Arthur V) & Son
Chattahoochee Valley Lumber Co
Chatsworth Lumber Co
Cherry River Boom & Lumber Co
Clarke County Lumber Mills
Cleveland-Deane Lumber Co
Coastal Lumber Co
Conasauga River Lumber Co
Conkling (Frank A) Co
Conway Lumber Co
Cook (E C) & Co
Corinth Planing Mill Co
Crik (M E) Lumber Co
DeWesse Lumber Co
Elk River Coal & Lumber Co
Elrod (J E) Lumber Co
Ely-Thomson Lumber Co
FAIR (D L) LUMBER CO
Farris (M B) Lumber Co
Farris Lumber Co
Foley Lumber Industries
Frost Lumber Industries

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Fry-Fulton Lumber Co
Fulton Band Mill
Galnes Hardwood Lumber Co
Genetti Lumber Co
Georgia-Pacific Plywood & Lumber Co
Geoch Brothers Lumber Co
Graham Lumber Co
Greene Brothers Lumber Co
Griffith Lumber Co
Hall (D H) Lumber Co
Hallitt Mfg Co Inc
Hall-Inner Lumber Co
Hall & Neely
Hamer (J F) Lbr Co
Hardwood Corp of America
Hart-Thompson Lumber Co
Henderson-Moique Co
Hoffman Lumber Co
Holly Hill Lumber Co
Houston Brothers
Huntington Hardwood Co
Hutton & Bourbonnais Co
Inter-Mountain Coal & Lumber Co
Jackson Sawmill Co
Jeffrey-McElrath Mfg Co
Kelluga Lumber Co
Kern (Paul B) Lumber Co
King Lumber Industries
King Lumber Industries Inc
Kitchen Lumber Co
Korn Industries Inc
Lease (G F) Lumber Co
Leard (B B) & Son
Leming (H E) Lumber Co
Lexington Lumber Co
Link-Newcomb Mill & Lumber Co
Louisiana Central Lumber Co
Marshall Lumber Co
May Brothers
McAnn Lumber Co
McCarroll Lumber Co
McCracken & McCall Inc
McClouch Lumber Co
McCrack-Carran Lumber Co
Meadow River Lumber Co
MENGL CO
Midland Valley Lumber Co
Miller & Co
Miller & Co Inc
Minton (T W) & Co
Miss-Valley Hardwood Co
Mobile River Sawmill Co
Morrison Irons & Co
Mortray & Robinson Lumber Co
Moser Lumber Co
Nicksy Brothers Inc
Northcut Lumber Sales Corp
Oakboro Lumber Co
Owen (H C) Co
PARKAV INC
Parnoll Lumber Co
Phillips-Blythe Lumber Co Inc
Pine Plume Lumber Co
Plumly (P W) Lumber Corp
Poinsett Lumber & Mfg Co
Prest (E W)
Pratt Lumber Co
Ransom (W A) Lumber Co
Reynolds Brothers Lumber Co
Reynolds & Manley Lumber Co
Richmond Cedar Works
Ritter (W M) Lumber Co
Rose (D M) & Co
Rush Lumber Co
St Joe Lumber & Export Co
Santee River Hardwood Co
Scheffer Lumber Co Inc
Schilling Lumber Co
Schreiber (Wm C) Lumber Co
Scott Lumber Co
Sears Lumber Co
Smith Lumber Co
Smith (W T) Lumber Co
Southeastern Industries Inc
Southern Star Lumber Co
Stark (James E) Co
Starr (J W) & Sons Lumber Co
Stearns Coal & Lumber Co
Stimmon Lumber Co
Storoy (W M) Lumber Co
Stuart Lumber Corp
Stutts Lumber Co Inc
Stutts Sawmill Co Inc
Swainsboro Lumber Co
Taylor & Newcomb Inc
Thomas Lumber & Mfg Co
Thomas & Preetz Lumber Co
Thompson Mahogany Co
Triplett Lumber Co Inc
United Timber & Lumber Co
Uranis Lumber Co
Vestal Lumber & Mfg Co
Vinton (B A) Lumber Co
Virgreen (Joe) Lumber Co Inc
Vredenburg Sawmill Co
Walker & Smith Lumber Co
Warner Lumber Co
Wat Lumber Co
Webster (H E) Lumber Co
Wells (J W) Lumber Co of Ala
Welsh Lumber Co
West Virginia Lumber Co
Williams-Brownell Inc
Williams & McKelhan Lumber Co
Williams & Voris Lumber Co
Williams & Voris Sawmill Co
Woods Lumber Co Inc
Woody (W W) Lumber Co
Wright (J Walter) Lumber Co
Youngman-Reynolds Lumber Co

▶ LUMBER, REDWOOD

Angelo Box & Lumber Co
Canada Pacific Lumber Co
Dolbeer & Carran Lumber Co
Georgia-Pacific Plywood & Lumber Co
Hammond Lumber Co

Holmes Eureka Lumber Co
Northern Redwood Lumber Co
PACIFIC LUMBER CO
Redwood Mfg Co
Redwood Sales Co
Silbermagl (George J) & Sons Co
SIMPSON LOGGING CO
Simpson Lumber Mills Inc
Stanton (E J) & Son
Stokes Lumber Co
Union Lumber Co
Wallace Mill & Lumber Co
Wendling-Nathan Co
Wilson (A K) Lumber Co

▶ LUMBER, SPRUCE, SITKA

Adair (Joe A) Lumber Co
Astoria Spruce & Lumber Export Co
Canadian Western Lumber Co Ltd
Cantook Lumber Co
Contact Lumber Co
Cooper (W E) Wholesale Lumber Co
Curtis Lumber Co
Davis Sales Agency
Duncan Lumber Co Inc
Ferguson (W T) Lumber Co
Firpin Products Co
Fishman Lumber Co
Foster Mills Inc
Gram Mfg Co
Gray Lumber & Shingle Co
Gray (Bob) Cedar Lumber Co Inc
Heimler & Co
Hill-Belan Lumber Co
International Timber Products Inc
Johnson (C D) Lumber Corp
Kennedy (J G) Lumber Co
Kash Seattle Lumber Co
McClintock (D M) Lumber Co
Metropolitan Lumber Co
Miller (George E) Lumber Co
Morrill & Sturgeon Lumber Co
Morrison Mill Co
Multnomah Lumber & Box Sales Co
North-Bobbins Plywood Inc
Pacific National Lumber Co
Patrick Lumber Co
Paxton (Frank) Lumber Co
Rapagnier Inc Lumber Div
Ranger Lumber Sales Co
Silbermagl (Geo J) & Sons Co
Sullivan Lumber Co
Thurston Lumber Co
Twin Harbors Lumber Co
VanHeine Lumber Sales Corp
Walton Lumber Co
West Waterway Lumber Co
WEYERHAEUSER SALES CO
Willapa Harbor Lumber Mills
Wilson (A K) Lumber Co
Winter Bros Lumber Products Inc
Wood (E K) Lumber Co

▶ LUMBER, CREOSOTED & SALT TREATED

American Lumber & Treating Co
Alastic Creosoting Co
Baxter (J H) & Co
Beal Lumber Co
Brett (B G) Lumber Co
Clear Fir Sales Co
Coney-Davis Lumber Co
Crosby Lumber & Mfg Co
CROSSETT LUMBER CO
Elrod (J E) Lumber Co
Euzinger & Bassett Co
FAIR (D L) LUMBER CO
Fordyce-Crossett Lumber Co
Front Lumber Industries Inc
Gay-Womack Lumber Co
Georgia-Pacific Plywood & Lumber Co
Hammond Lumber Co
Heidrite Lumber Corp
Hines (Edward) Lumber Co
Kash Lumber Co
Kirby Lumber Corp
Loose Star Creosoting Co
LONG-BELL LUMBER CO
Marsh & Trueman Lumber Co
Martin-Diobon Inc
McQuontan (George) Co
Moss (T J) Tie Co
Pope & Talbot Inc
Prentiss Corp
Southern Wood Preserving Co
Taylor-Solomitt Co
TIMBER STRUCTURES INC
Weiner (H C) Lumber Co
West Coast Wood Preserving Co
WEYERHAEUSER SALES CO
Wood (E K) Lumber Co
Yellow Pine Sales Co

▶ LUMBER, FLAMEPROOF

American Lumber & Treating Co
LONG-BELL LUMBER CO
Fordyce-Crossett Lumber Co
Fox Brothers Mfg Co
Prosser Corp

▶ LUMBER, MINIATURE

Miniature Lumbercraft Co

▶ MAIL BOXES & DROPS

AIR CONTROL PRODUCTS INC
Ajax Hardware Mfg Corp
Allen Steel Products

AMERICAN DEVICE MFG CO
Auto Electrical Specialty Co
B & T METALS CO
Champion Hardware Co
Cipco Corp
COFFMAN (R G) CO INC
Collins (George F) & Co
Columbia Metal Box Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Dowley Brothers
Eero Mfg Co
Fradco Equipment Mfg Co
GETTY (H S) & CO INC
Harris Inc
INLAND STEEL PRODUCTS CO
Iron (E) Div
KEWANEE MFG CO
Kokolod Mail Box Co
LOCKWOOD HARDWARE MFG CO
Mail Safe Mfg Co
MAJESTIC CO
McKinnon Mfg Co
METAL PRODUCTS CORP
NATIONAL BRASS CO
Northwestern Products Co
Norwalk Lock Co Div Seal Lock & Hardware
RUTONE INC
Parter (H) Hvac Mfg Corp
Penn-Greg Mfg Co
Perfection Store Device Co
Reading Hardware Corp
Refecto Letters
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
WARE CORP
Rager-Barrows Lock Works
SARGENT & CO
Skillman Hardware Co
Slaymaker Lock Co
Spartan Foraday Inc
Standard Bronze Co
Wilmann (Ernest) Iron Works
VALE & TOWNE MFG CO

▶ MANDRELS, SAW

Borth Mfg Co
Chase Turbine Mfg Co
Clabe Brothers Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO LTD
Corinth Machinery Co
Cunningham Machinery Corp
Fay (J A) & Sgan Co
Filer & Stowell Co
Huller Brothers Saw Mfg Co Inc
Industrial Iron Works
Lano Mfg Co
Prosser Co
Vairo-American Machine Co

▶ MANTELS, FIREPLACE

Burke Millwork Co
CARR ADAMS & COLLIER CO
Cole Mfg Co
Columbia Mantel Co Inc
CURTIS COS INC
Farley & Loehner Mfg Co
GREGG & SON INC
Hurtig Mfg Co
Ideal Co
Margaret Millwork Co
Morgan Co
PRICE FIREPLACE HEATER & TANK CORP
READYBUILT PRODUCTS CO
Bousch & Mawer Co
Silbermagl (George J) & Sons Co
Rundaker (Frank C) & Co Inc

▶ MARKERS, DRIVEWAY

REFLECTING

Auto Sign Display Co
Fox Valley Forge
Modern Metals Co
Refecto Letters Co
MATS, RUBBER
Diamond Rubber Div Goodrich (D E) Co
Hamilton Rubber Mfg Co
Perfo Mat and Rubber Co Inc
T & B Rubber Co
Woolter Rubber Co

▶ MESH, WIRE

AMERICAN STEEL & WIRE CO
CECO STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
CURTIS COS INC
KEYSTONE STEEL & WIRE CO
Logan Co Inc
Northwestern Steel & Wire Co
Pioneer Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
Sheffield Steel Corp
Smith (F P) Wire & Iron Works Inc
Southern Wire & Iron Works
TENNESSEE COAL, IRON & BR CO
TRUSCOR STEEL CO
Wheeling Corrugating Co
Wickwire Products Inc
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

▶ METAL LATH MACHINES, CUTTER

Harvey Mfg Co
Ritchfield Mfg Co

▶ METAL SINK BOWLS

International Nickel Co
Jenstrom Metal Products Co
Leegin Blainin Sink Corp
TRACY MFG CO

▶ METERS, FEED WATER

Noptone Meter Co
Republic Flow Meters Co
Taylor Instrument Co

▶ MICROMETERS

Brown & Sharpe Mfg Co
Lufkin Rule Co
Millers Falls Co
Starrett (L S) Co

▶ MILLING IN TRANSIT

Bradley Miller & Co
Corinth Lumber Mill Co
Foster Lumber Co
Grayson Lumber Co
Hallack & Howard Lumber Co
Kinross Fine Mills Co
Mark (James E) Co
Tacoma Lumber Fabricating Co

▶ MIRRORS, BATHROOM

Baehle (Semon) & Co
Eaton Glass Co
CAREY (PHILIP) MFG CO
Conant Brothers Co
Conroy-Prough Glass Co
COPCO STEEL & ENGINEERING CO
DeSburn Glass Co
Hagmann Co Inc
LIBBEY-OWENS-FORD GLASS CO
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
National Mirror Works
Nurre Co Inc
Parter (Charles) Co
PITTSBURGH PLATE GLASS CO
Safetone Glass Co
Standard Steel Cabinet Co
Toledo Plate & Window Glass Co

▶ MIRRORS, DECORATIVE & HOUSEHOLD

Acme Specialty Mfg Co
Art Mirror & Glass Specialty Co
Baehle (Semon) & Co
Belknap Glass Co
Bennett Mfg Co
Binswanger & Co
Cadillac Glass Co
Century Mirror Company
Conroy-Prough Glass Co
DeSburn Glass Co
Forman & Glass Co
Fuller (W F) & Co
Hagmann Co Inc
Hosler Glass & Paint Mfg Co
LAWSON (F H) CO
LIBBEY-OWENS-FORD GLASS CO
MIAMI CABINET DIV CAREY (PHILIP) MFG CO
Miroflex Products Co Inc
National Metal-Art Mfg Co
National Metal Products Co
National Mirror Works
Nurre Co Inc
Parter (Charles) Co
PITTSBURGH PLATE GLASS CO
Safetone Glass Co
Standard Building Products Co
Toledo Plate & Window Glass Co
Tyler & Hipscox Glass Co
Warren Co

▶ MIRRORS, TRANSPARENT

LIBBEY-OWENS-FORD GLASS CO
PITTSBURGH PLATE GLASS CO

▶ MITER BOXES

American Crazon Co
B & T METALS CO
Eaton Level Mfg Co
BACKLAPPING-DUNCAN CO
McElrath—St Paul Co
Millers Falls Co
National Guard Products
Rockford Miter Box Co
SELICK WALTER E & CO
STANLEY TOOLS DIV STANLEY WORKS
Union Hardware Co
Youngstown Mfg Co

▶ MODEL HOUSES, SCALE

Architectural Model Materials
CURTIS COMPANIES INC
Homo Planner Inc
Homo Center
Jayline Mfg Co Inc
Miniature Lumbercraft Co
Mitchell Models
National Plan Service Inc

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► MOPS, ROOFING APPLICA-TOR

Algonia Mfg Co
Cupples Co
Graham (John H) Co Inc
Kirby Industries

► MORTAR

American Fluvent Co Inc
Huron Portland Cement Co
Leating Products Co
MEDUSA PORTLAND CEMENT CO
National Lime & Stone Co
Washington Brick & Lime Co
What Cheer Clay Products Co

► MORTAR BOXES

All-Steel Equipment Co Inc
American Ladder Co
American Sheet Metal Works
American Steel Works
BOSTWICK STEEL LATH CO
Dunley Brothers
Eonick Mfg Co
GILBLATT TOOL CO
Holtel Steel Form & Iron Co
Jackson Mfg Co
KIEWITSE MFG CO
MAESTIC CO
MULLER MACHINERY CO INC
Pattit (W T) & Sons
PRICE FIREPLACE HEATER & TANK CORP
Richmond Engineering Co Inc
Thermado Metal Products Inc

► MORTAR MIX, GROUND CLAY

Adel Clay Products Co
Barber-Greene Co
Carney Co
Chicago Fire Brick Co
Colorado Industries Inc
Harrison-Walton Refractories Co
National Mortar & Supply Co
Riverton Lime & Stone Co
Robinson Clay Products Co
Rockford Brick & Tile Co
Sakrite
Shelfield Brick & Tile Co
Spray-O-Bond Co
U S Gypsum Co
Vincent Clay Products Co
Washington Brick & Lime Co
What Cheer Clay Products Co

► MORTAR, POINTING

X-Pando Corp

► MORTAR SPREADING MACHINES

Rapid Mfg Co

► MORTISERS, SASH PULLEY

Oliver Machinery Co

► MORTISERS, VIBRATING BIT

WHITNEY (BAXTER D) & SONS INC

► MOTORS, ELECTRIC

Ahart Gear & Machine Co
ALLIS-CHALMERS MFG CO
ATLAS PRESS CO
Beach Mfg Co
BRIDGE-CRANE CO
Century Electric Co
DELCO APPLIANCE DIV GENERAL MOTORS CORP
Dieth Mfg Co Electrical Div Singer Mfg Co
EMERSON ELECTRIC MFG CO
Fathbush-Morse & Co
FASCO INDUSTRIES INC
GENERAL ELECTRIC CO APPARATUS DEPT
Hamilton Beach Co Div Sewall Mfg Co
Kingston-Conley Div Hoover Co
Leland Electric Co
WALL TOOL CO
Peetline Electric Co
Robbins & Myers Co
Russell Electric Co
Signal Electric Mfg Co
Sutton (O A) Corp
Wagner Electric Corp
WESTINGHOUSE ELECTRIC CORP

► MOULDING, CONDUIT BASE

Ames Metal Moulding Co Inc
Knapp Brothers Mfg Co
National Electric Products Corp

► MOULDINGS, HARDBOARD

A, A & F Fibreboard Co
BARCLAY MFG CO INC
Gibbs Boardtile Corp
MARSH WALL PRODUCTS INC
Merritt Mfg Co
PRESTILE MFG CO
Rundale Building Products Corp
TYLAC CO
Wallace Mfg Co

► MOULDINGS, METAL

Actus Steel Products Corp
A & F Fibreboard Co
Alabama Metal Lath Co
ALLMETAL WEATHERSTRIP CO
Alloy Trim Inc
Aluminum Co of America
American Brass Co
Ames Metal Moulding Co
ARMSTRONG CORK CO BUILDING MA-TENTIAL DIV

► MOULDINGS, WOOD

BARCLAY MFG CO INC
BENDIX MFG CO
BLUM (JULIUS) & CO INC
BOSTWICK STEEL LATH CO
Brasco Mfg Co
Brain (J D) Co
B & T METALS CO

► MOULDINGS, WOOD

Casings Inc
CECO STEEL PRODUCTS CORP
CENTRAL METAL STRIP CO
CRANE BRASS & COPPER CO
Chicago Metallic Sash Co
Colonial Baise Corp
Decorite Inc
DETROIT STEEL PRODUCTS CO

► MOULDINGS, WOOD

East Coast Fibreboard Corp
Ford Metal Moulding Corp
Gibbs Boardtile Corp
Goldsmith Metal Lath Co
Greene Mfg Co
Harvey Machine Co Inc
Herron-Zimmers Moulding Co
INLAND STEEL PRODUCTS CO
KAWNEER CO

► MOULDINGS, WOOD

Kinkaid Industries Inc
Knapp Brothers Mfg Co
Landro Plastic Tile Mfg Co
WACKLANBURG-DUNCAN CO
MARSH WALL PRODUCTS INC
VENGEL CO INC

► MOULDINGS, WOOD

Metal Arts Mfg Co
Metal Tile Products Inc
Metal Trim Inc
Merritt Mfg Co
Mouldings Inc
National Aluminum Co
National Guard Products
NATIONAL GYPSUM CO

► MOULDINGS, WOOD

National Metal Products Co
Penn Metal Co Inc
Penn Supply & Metal Corp
PITTSBURGH PLATE GLASS CO
Polis Farrington Co
PRESTILE MFG CO

► MOULDINGS, WOOD

Protex Weatherstrip Mfg Co
Pyramid Metals Co
Pyramid Mouldings Inc
Pyramid Products Co
Revere Copper & Brass Inc
REYNOLDS METALS CO BUILDING PRO-DUCTS DIV

► MOULDINGS, WOOD

Rundale Building Products Corp
ST PAUL CORRUGATING CO
Samson Products Co
SELICK (WALTER E) & CO
Serrick Corp John Lee Div
STEELECRAFT MFG CO
Superior Industries Inc
Superior Wall Products Co
S & W Moulding Co
Timings Inc
TRUSCON STEEL CO

► MOULDINGS, WOOD

TYLAC CO
United Industries Inc
U S Gypsum Co
U S PLYWOOD CORP
Wallace Mfg Co
Werner (R B) Co Inc
Wheeling Corrugating Co
Wollinger Steel Co
WOOSTER PRODUCTS INC
Youngstown Mfg Co Inc

► MOULDINGS, WOOD

BENDIX MFG CO
BLUM (JULIUS) & CO INC
B & T METALS CO
Chicago Wood & Plastic Products
Commonwealth Plastic Inc
Extruded Plastics Inc
Herron-Zimmers Moulding Co
Imperial Moulded Products Co
WACKLANBURG-DUNCAN CO
MARSH WALL PRODUCTS INC

► MOULDINGS, WOOD

National Aluminum Co
Parker (S) Hardware Mfg Corp
Pensite Engineering Co
PRESTILE MFG CO
Sylvine Industries
Superior Plastics Div Commonwealth Plastics Inc
S & W Moulding Co
Wallace Mfg Co
Werner (R B) Co Inc
WOOSTER PRODUCTS INC
Yankee Tile & Fibre Mfg Co
Youngstown Mfg Co Inc

► MOULDINGS, PRICE CARD

BENDIX MFG CO
B & T METALS CO
Decorite Inc
Dunning (H A)
Grammes (L F) & Sons Inc
Heller (W C) & Co
Hines (Edward) Lumber Co
Hupp Press Inc
Johnsoudco
Kinkaid Industries Inc
WACKLANBURG-DUNCAN CO

► MOPS, ROOFING APPLICA-TOR

Marsh Wall Products Inc
Mellicke Systems Inc
National Aluminum Co
National Guard Products
Pyramid Mouldings Inc
Refractor Hardware Corp
Renco
S & W Moulding Co
Timings Inc
Warren (J D) Mfg Co
Zimmerman (F H)

► MOULDINGS, WOOD

Actus Plywood & Veneer Co
Arkansas Oak Flooring Co
BENDIX MFG CO
Bliss-Coleman Lumber Co Inc
BRADLEY LUMBER CO OF ARK
Bradley Miller & Co
BRUCE (E L) CO
Burr Millwork Co
Cameron (Williams) & Co Inc Ideal Div
CARR ADAMS & COLLIER INC
(Chicago Wood & Plastic Products
Cole Mfg Co
Cook County Lumber Co
Cromar Co

► MOULDINGS, WOOD

CROSSETT LUMBER CO
CURTIS COMPANIES INC
Dargan Lumber Co
Farley & Lottschaefer Mfg Co
Ferdyc-Froust Lumber Co
Frost Lumber Industries Inc
General Panel & Lumber Co
Georgia-Pacific Plywood & Lumber Co
GREGG & SON

► MOULDINGS, WOOD

Heller (W C) & Co
Hines (Edward) Lumber Co
Huttig Mfg Co
Ideal Company
Keystone Frame & Mfg Co
Kinman Pine Mills Co
Lohwood Corp
LONG-BELL LUMBER CO

► MOULDINGS, WOOD

Margart Millwork Co
MARSH WALL PRODUCTS INC
Mauk Seattle Lumber Co
MENGEL CO INC
Midwest Joiner Inc
Mitchell Moulding Co
Morgan Sash & Door Co
Northwest Door & Plywood Co
Nisley Brothers Inc
Northern Sash & Door Co

► MOULDINGS, WOOD

Northwest Door & Plywood Co
Oregon-American Lumber Corp
Oshtosh Wood Products Corp
Pacific (David) Moulding Corp
PACIFIC LUMBER CO
Phillips-Bryne Lumber Co
Plebering Lumber Co
Roush & Musser Co
Rock Island Millwork Co
Sengler & Kohlman Co
Seneca Lumber & Millwork Co
Shadwood

► MOULDINGS, WOOD

Silbernagel (George J) & Sons Co
Smith (Ralph L) Lumber Co
Southern Lumber Co
SOUTHEAST PINE LUMBER CO
Spokane Sash & Door Co
Stiles (H A) Co
Tibbals Flooring Co
U S MENDEL PLYWOODS
Washington Mfg Co
Western Pine Mfg Co
WEVERHAUSER SALES CO
White Pine Sash Co
Williamette Valley Lumber Co
Williams-Erwood Inc
Wilson (A K) Lumber Co
Woodward Lumber Co

► MOULDINGS, WOOD

WACKLANBURG-DUNCAN CO
VENEER-ON-METAL
Keller Products Inc
U S PLYWOOD CORP

► MOULDINGS, WOOD

WACKLANBURG-DUNCAN CO
VENEER-ON-METAL
Keller Products Inc
U S PLYWOOD CORP

► MOULDINGS, WOOD

WACKLANBURG-DUNCAN CO
VENEER-ON-METAL
Keller Products Inc
U S PLYWOOD CORP

► MOULDINGS, WOOD

WACKLANBURG-DUNCAN CO
VENEER-ON-METAL
Keller Products Inc
U S PLYWOOD CORP

► MOULDINGS, WOOD

WACKLANBURG-DUNCAN CO
VENEER-ON-METAL
Keller Products Inc
U S PLYWOOD CORP

► MOULDINGS, WOOD

WACKLANBURG-DUNCAN CO
VENEER-ON-METAL
Keller Products Inc
U S PLYWOOD CORP

► NAIL & BOLT ANCHORS

Drevo Inc
MOORE (GOODLOE E) CO

► NAILERS & TACKERS AUTO-MATIC

HANSEN (A L) MFG CO

► NAILING, MACHINES

Doig (W S) Inc
Grammen (L F) & Sons Inc
Holt Mfg Co
Independent Nail & Packing Co
McTrosky Tool Corp
Spotnails Inc

► NAILS, ALUMINUM

HASSALL (JOHN) INC
New Holland Metals Co
NICHOLS WIRE & ALUMINUM CO
Polis Farrington Co
REYNOLDS METALS CO BUILDING PRO-DUCTS DIV

► NAILS, BRAD

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
Continental Steel Corp
Grammen (L F) & Sons Inc
HASSALL (JOHN) INC
Mid-States Steel & Wire Co
Wheeling Steel Corp
Wire Rope Steel Div Colorado Fuel & Iron Corp

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
Angell Nail & Chaplet Co
Atlas Tack Corp
BAMBRICK (RICHARD J)
Beyer Mfg Co Div Republic Steel Corp
Bethlehem Steel Co
BOSTWICK STEEL & WIRE CO
BRASSE BRASS & COPPER CO
COLUMBIA STEEL CO
Continental Steel Corp
COPPERWELD STEEL CO
Crecent Brass & Pin Co
Eastern Nail Co

► NAILS, COMMON

ELASTIC STOP NUT CORP OF AMERICA
HASSALL (JOHN) INC
Hemmer Machine Co
Illinois Nail Co
Independent Nail & Packing Co
Jones & Laughlin Steel Corp
KEYSTONE STEEL & WIRE CO
Mass (W B) Co
Mid-States Steel & Wire Co
New Holland Metals Co

► NAILS, COMMON

NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
REYNOLDS METALS CO BLDG PRODUCTS SECTION
ST PAUL CORRUGATING CO
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO
Valentine Equipment Co
Wash Company Inc
Wheeling Corrugating Co
Wickwire Brothers Inc
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp
Wilson Steel & Wire Co

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
Angell Nail & Chaplet Co
Atlas Tack Corp
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
COPPERWELD STEEL CO
Dickson Rebuilding Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
Eastern Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
Eastern Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
Eastern Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
Eastern Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
Eastern Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

► NAILS, COMMON

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
CRANE BRASS & COPPER CO
COLUMBIA STEEL CORP
Continental Steel Corp
Eastern Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
Steel & Wire Products Co
TENNESSEE COAL IRON & RAILROAD CO
TURNER & SEYMOUR MFG CO

Manufacturers' Names and Addresses Start on Page D-76

Manufacturers' Brand Name Identifications Start on Page D-64

Independent Nail & Packing Co
KEYSTONE STEEL & WIRE CO
Maze (W H) Co
Mid-States Steel & Wire Co
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
Tremont Nail Co
Valentine Equipment Co
Wheeling Corrugating Co
Wickwire Brothers Inc

▶ NAILS, LATH

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
Continental Steel Corp
COPPERWELD STEEL CO
Goldsmith Metal Lath Co
HASSALL (JOHN) INC
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co
Northwestern Steel & Wire Co
Penn Metal Co Inc
TENNESSEE COAL IRON & RAILROAD CO
Valentine Equipment Co
Wickwire Bros Inc

▶ NAILS, LEAD HEAD

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
Continental Steel Corp
Deniston Co
Dickson Weatherproof Nail Co
HASSALL (JOHN) INC
Independent Nail & Packing Co
INLAND STEEL PRODUCTS CO
KEYSTONE STEEL & WIRE CO
Maze (W H) Co
Mid-States Steel & Wire Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
Wheeling Corrugating Co

▶ NAILS, MASONRY

AMERICAN STEEL & WIRE CO
Badger Corrugating Co
Colorado Fuel & Iron Corp
Continental Steel Corp
Dickson Weatherproof Nail Co
HASSALL (JOHN) INC
Hillwood Mfg Co
Independent Nail & Packing Co
MOORE (GOODLOE) CO
Sheffield Steel Corp
Star Expansion Products Co
TENNESSEE COAL IRON & RAILROAD CO
Tremont Nail Co

▶ NAILS, ROOFING

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
Atlas Tack Corp
BAMBRICK (RICHARD J)
Bethlehem Steel Co
CHASE BRASS & COPPER CO
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Continental Steel Corp
COPPERWELD STEEL CO
Cupples Co
Deniston Co
Dickson Weatherproof Nail Co
Edwards Mfg Co
E G BUILDING FASTENERS CORP
HASSALL (JOHN) INC
Independent Nail & Packing Co
INLAND STEEL PRODUCTS CO
Jones & Laughlin Steel Corp
KEYSTONE STEEL & WIRE CO
Maze (W H) Co
Mid-States Steel & Wire Co
New Holland Metals Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
Valentine Equipment Co
Wheeling Corrugating Co
Wickwire Brothers Inc
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp
Wilson Steel & Wire Co

▶ NAILS, SCREW TYPE

AMERICAN STEEL & WIRE CO
COLUMBIA STEEL CO
Continental Steel Corp
Cupples Co
Deniston Co
Dickson Weatherproof Nail Co
E G BUILDING FASTENERS CORP
HASSALL (JOHN) INC
Hillwood Mfg Co
Independent Nail & Packing Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Stronghold Screw Products Inc
TENNESSEE COAL IRON & RAILROAD CO

▶ NAILS, SELFLOCKING

E G BUILDING FASTENERS CORP
ELASTIC STOP NUT CORP OF AMERICA

▶ NAILS, SHINGLE

Alan Wood Steel Co
AMERICAN STEEL & WIRE CO
Atlas Tack Corp
Bethlehem Steel Co
CHASE BRASS & COPPER CO
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Continental Steel Corp
Dickson Weatherproof Nail Co
E G BUILDING FASTENERS CORP
ELASTIC STOP NUT CORP OF AMERICA
Independent Nail & Packing Co
Jones & Laughlin Steel Corp
KEYSTONE STEEL & WIRE CO
Maze (W H) Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Sheffield Steel Corp
TENNESSEE COAL IRON & RAILROAD CO
Wickwire Bros Inc
Wilson Steel & Wire Co

▶ NAILS, WALLBOARD

AMERICAN STEEL & WIRE CO
Anzell Nail & Chaplet Co
COLUMBIA STEEL CO
HASSALL (JOHN) INC
Maze (W H) Co
Northwestern Steel & Wire Co
REPUBLIC STEEL CORP
Valentine Equipment Co
Wickwire Brothers Inc

▶ NAME PLATES

CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Lockwood Hardware Mfg Co
Turbot Brass Works
YALE & TOWNE MFG CO

▶ NETTING, WIRE

AMERICAN STEEL & WIRE CO
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Continental Steel Corp
Cyclone Fence Div American Steel & Wire Co
Gilbert & Bennett Mfg Co
Indiana Steel & Wire Co
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
TRUSCEN STEEL CO
Wickwire Brothers Inc
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

▶ NIPPERS

Champion-De-Arment Tool Co
Dunsmuir Steel Products Corp
Lowe Mfg Co
M & M Wire Clasp Co
Pekel Bros & Wilcox Co
RED DEVIL TOOLS
SARGENT & CO
Sears Brothers Bell Co
Vaughan & Bushnell Mfg Co

▶ NOSINGS, METAL

ALLMETAL WEATHERSTRIP CO
American Mason Safety Tread Co
Ames Metal Moulding Co
ARMSTRONG CORN CO
BLUM (JULIUS) CO INC
Brazon Mfg Co
B & Y METALS CO
CEMETAL STEEL PRODUCTS CORP
CENTRAL METAL STRIP CO
CHASE BRASS & COPPER CO
Deveritt Inc
Ford Metal Moulding Corp
INLAND STEEL PRODUCTS CO
Kinsland Industries Inc
NACKLANBURG-DUNCAN CO
MARSH WALL PRODUCTS INC
Metal Trim
MOORE (GOODLOE) CO
National Aluminum Co
National Board Products
Penn Supply & Metal Corp
Potts-Farrington Co
Proter Weatherstrip Mfg Co
Frymold Moulding Inc
Safe Tread Co
ST PAUL CORRUGATING CO
S & W Moulding Co
Trimedge
Werner (E D) Co Inc
Wheeling Corrugating Co
Wollegger Steel Corp
WOEBSTER PRODUCTS INC
Yountstown Mfg Co Inc

▶ NOZZLES, HOSE

Allen (W D) Mfg Co
Boston Water Hose & Rubber Co
Durst Mfg Co
Elkhart Brass Mfg Co Inc
Farquhar (A B) Co
Keystone Brass & Rubber Co

Kraus (Walter H) Co
Magnum Products Co
Myers (F E) & Brother Co
Fouberling Injector Co
Sewell Mfg Co
Smith (D B) & Co

▶ NUMBERS & LETTERS, LUMINOUS

Ellwood Co
Gretzer (K H) Mfg Co
Luminescent Sign Co
NACKLANBURG-DUNCAN CO
NUSTONE INC
Nu View House Number

▶ NUMBERS & LETTERS, REFLECTING

Auto Sign Display Co
Dunn (B) Reflect Div Clayton Studios
NACKLANBURG-DUNCAN CO
Reflecto Letters Co
Signmaker Lock Co
Thomas & Associates Inc
U S Lite-Ray Co

▶ NUMBERS & LETTERS, TILE

Cambridge Tile Mfg Co

▶ NUMBERS & LETTERS, WOOD & METAL

Alax Hardware Mfg Corp
Champion Hardware Co
Clapton Corp
Clayton Studios
Clinton Lock Co
CORBIN (P & F) DIV AMERICAN HARDWARE CORP
Eron Mfg Co
Givale Equipment Co
Gite Molding Corp
Harris Inc
Heller (W C) & Co
Ideal Brass Works Inc
Ingraham-Richardson Mfg Co
Ives (H B) Company
NACKLANBURG-DUNCAN CO
Mathews (James H) & Co
McKinney Mfg Co
NATIONAL BRASS CO
Nelson-Hartman Industries
Norwalk Lock Co Div Regal Lock & Hardware Co
RUTONE INC
Penn Hardware Company
Premax Products Div Chislin-Byler Co Inc
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
Rustle Furniture Co Inc
Safe Padlock & Hardware Co
Rager-Barrows Lock Works
ST PAUL CORRUGATING CO
SARGENT & CO
Skillman Hardware Co
Signmaker Lock Co
Sloaner Brothers Inc
Standard Bronze Co
STANLEY WORKS
Stelman Products Co
YALE & TOWNE MFG CO

▶ OFFICE MACHINES & EQUIPMENT

Addressograph-Multigraph Corp
Ajax Time Stamp Co
Antigraphic Register Co
Beyer Mfg Co Div Republic Steel Corp
Burgess Co Inc
Burroughs Adding Machine Co
Calcuttograph Co
Clary Multiplier Corp
Davidson Mfg Corp
Dick (A B) Co
Eery Register Co
Elliott Addressing Machine Co
Felt & Tarrant Mfg Co
Fertis Business Equipment Inc
Friden Calculating Machine Co
Hamilton Addressing Register Co
Hersy Corp
International Business Machines Corp
KIR Plastics Co
Lightning Adding Machine Co
Marchant Calculating Machine Co
Master Addresser Co
McCauley Register Co
Metric Systems Inc
Monroe Calculating Machine Co
Moore Business Forms Inc
Mouler Safe Co
National Cash Register Co
Northwest Metal Products Co
Ohrner Register Co
Patent Novelty Co Inc
REWINNING BAND INC SYSTEMS DIV
Robotypor Corp
SMITH (L C) & CORONA TYPEWRITERS INC
Speed-O-Print Corp
Standard Register Co
Thompson (G E) & Sons
Told Co Inc
Turker-Dorsey Mfg Corp

Twentieth Century Products Inc
UARCO Inc
Underwood Corp
Victor Adding Machine Co
Waddell Co Inc

▶ OIL, LEAD MIXING

Brining Brothers Inc
Eagle-Fischer Co
Glidden Co
National Lead Co
Palcro Products Inc
PITTSBURGH PLATE GLASS CO

▶ OIL, LINSEED

Archer-Dantels-Midland Co
Ribber Linseed Co
Chi-Named Paint & Varnish Co
De Mott & Dougherty
Fuller (W F) & Co
Gilliope Varnish Co
Glidden Co
Gordon (George C) Chemical Co
Harrison Paint & Varnish Co
Interstate Oil Co
Kellong (Spencer) & Sons Corp
LINSEED OIL PRODUCTS CO
Minnesota Linseed Oil Plant Co
Mobile Paint Mfg Co
National Lead Co
PITTSBURGH PLATE GLASS CO
Sherrin-Williams Co
Spencer-Kellong & Sons
Tremont Oil Div South Tex Cotton Oil Co

▶ OPENERS, CAR DOOR

Howell (H B) Co
Nolan Co
Rouss

▶ OUTLETS, ELECTRIC

Arner-Hart & Engman Electric Co
Auth Electrical Specialty Co
BARBER-COLMAN CO
Bell Electric Co
Benjamin Electric Mfg Co
BOSTWICK STEEL LATH CO
Bostwick Electric Co
Cutter-Hammer Inc
Donley Brothers
Economy Fuse & Mfg Co
Edwards Co Inc
GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
Gite Molding Corp
Hubbell (Harvey) Inc
Morris Mfg Co
Pam & Seymour
Sommer Metalcraft Corp
Square D Co
Standard Mirror Co
Weber Electric Co
Wheeling Corrugating Co

▶ OVENS, ELECTRIC DRYING

Colloid Equipment Co
Detroit Sheet Metal Works
Grand Rapids Vapor Kiln Inc
Hoyer Van Kiln Co
Trust Inc

▶ OVENS, OUTDOOR & DUTCH

Donley Brothers
Glaucock River & Mfg Co
Glaucock Iron Works
Kraus (Walter H) Co
MAJESTIC CO
Riction Refractor Co
Outdoor Oven Fireplace Co
Fountain & Narden Inc
PRICE FIREPLACE HEATER & TANK CORP
Western Foundry Co

▶ PAIRS

Aluminum Goods Mfg Co
Boller (Peter) Machine Works
Boyle Mfg Co
Cincinnati Galvanizing Co
General Metalware Co
Gender Paschke & Frey Co
Link-Savery Corp
Menasha Wooden Ware Co
New England Wooden Ware Corp
Revere Steel & Mfg Co
Richmond Cedar Works
Reston Can Co Inc
Vollrath Co
Wheeling Corrugating Co
White Mfg Wringer Co

▶ PAINT APPLICATORS, ROLLER, AIR PRESSURE

Brown (W B) Corp
Carlson (A B) & Co
Central States Wallmaster Inc
RED DEVIL TOOLS
Rubbercoo Co

▶ PAINT BRUSH PRESERVERS

Merryweather Products Co
Wisconsin Laboratories Inc

▶ PAINT SPRAY GUNS

Binks Mfg Co
Black Mfg Co
Burgess Viscroasters Inc

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Brown (W R) Corp
Brunner Mfg Co
Dewing Co
DeVilbiss Co
Dewco & Reynolds Inc
Electric Sprays Co
Empire Varnish Co
Hobson (H D) Mfg Co
Lowell Mfg Co
Maclean Co
Metallizing Engineering Co Inc
Pascalis Air Brush Co
PITTSBURGH PLATE GLASS CO
Portable Electric Tools Inc
Sellen Corp
Stewart-Warner Corp
U S Air Compressor Co

▶ PAINT STRIPERS

Nidegr Trimmer Co
Sharpe Mfg Co

▶ PAINT THINNER

Alabastine Paint Products Div Chicago Bronze & Color Works
American Marietta Co
American Varnish Co
Berry Brothers Inc
Breinig Brothers Inc
Chi-Namel Paint & Varnish Co
Colorado Paint Co
Dewco & Reynolds Inc
DuPont deNemours (E I) & Co Inc
Eagle-Picher Co
Elliott Paint & Varnish Co
Elroy Naval Stores Co
Feltan Sibley & Co Inc
Forman-Ford & Co
Gillespie Varnish Co
Glidden Co
Globe Paint Works Inc
Gordon (George C) Chemical Co
Gray (William S) & Co
Harrison Paint & Varnish Co
Horn (A C) Co
Low Brothers Co
Pabel Products Inc
Peebles-Gaultbert Paint & Varnish Co
Plasti-Kote Inc
Resford Paint Mfg Co
Standard Industrial Products Inc
Valentine & Co Inc

▶ PAINT AND VARNISH REMOVERS

Acme White Lead & Color Works
American Marietta Co
American Varnish Co
Bonal Co
Berry Brothers Inc
Boston Varnish Co
Boyer Chemical Laboratory Co
Boyle-Midway Inc
Breinig Brothers Inc
Briggs-Maroney Co Inc
Builders Products
CABOT (SAMUEL) INC
Chemical Supply Co
Chicago Bronze & Color Works
Chi-Namel Paint & Varnish Co
Christy Co Inc
Consumers Glue Co
Cook Paint & Varnish Co
Dewco & Reynolds Inc
Du Pont (E I) de Nemours & Co Inc
Elliott Paint & Varnish Works
Feltan Sibley & Co Inc
Fowler (W F) & Co
Glidden Company
Harrison Paint & Varnish Co
Haynes Products Co
Industrial Chemical Development Corp
Keystone Paint & Varnish Corp
Lowbrock
Low Brothers Co
Martin-Senour Co
Masury (John W) & Son Inc
Minnesota Paints Inc
Murphy Paint Div Interchemical Corp
Oakite Products Co
O'Brien Corp
Patterson-Sargent Co
PITTSBURGH PLATE GLASS CO
Pratt & Lambert Inc
Savagran Co
Sebach Chemical Co
Sedlitz Paint & Varnish Co
Sheffield Bronze Paint Corp
Sherwin-Williams Co
Stanley Chemical Co
Steelco Mfg Co
Tammes Laboratories Inc
Twentieth Century Paint & Varnish Corp
Valentine & Co Inc
Vita-Var Corp
Wadsworth-Howard & Co
Wilson Imperial Co
Woodmishand Products Co

▶ PAINT AND VARNISH REMOVERS, ELECTRIC

Barr (W M) & Co
B & L Tool & Machine Co

▶ PAINTERS, SCREEN

Carlson (A B) & Co

▶ PAINTING MACHINES, WOOD PICKET

Reaco
Schubert (H A) Co
Woodworkers Tool Works

▶ PAINTS, ACIDPROOF

Abesta Mfg Corp
Lewinco Inc
Chicago Bronze & Color Works
Dewco & Reynolds Inc
Du Pont (E I) de Nemours & Co
Elliott Paint & Varnish Co
Glidden Co
Horn (A C) Co Inc
Lithogen Corp
Lowbrock
Low Brothers Co
MOORE (GOODLOE E) CO
Nation Products Corp
O'Brien Corp
Pabel Products Inc
Patterson-Sargent Co
RUBEROID CO
Sapolin Paints Co Inc
Seaboard Plastics Corp
Sherwin-Williams Co
Somersboro (L) Sons Inc
Spray-O-Bond Co
Steelco Mfg Co
Sullivan Co
Trucon Laboratories Div Dewco & Reynolds Inc
Valentini & Co Inc
Vita-Var Corp
Wilbur & Williams Co

▶ PAINTS, ALUMINUM BRONZE & GOLD

Abesta Mfg Corp
Aluminum Co of America
Aluminum Industries Inc
Aron Co
Arneson Paint Co Inc
Boston Varnish Co
Chicago Paints Inc
Cook Paint & Varnish Co
Creighton Bronze Powder Co
Dewco & Reynolds Inc
Eagle-Picher Co
Elliott Paint & Varnish Co
FLINTKOTE CO
Glidden Co
Hoboken White Lead & Color Works Inc
Horn (A C) Co Inc
Illinois Bronze Powder Co Inc
Lockery Co
Low Brothers Co
Martin-Senour Co
Masury (John W) & Son
PITTSBURGH PLATE GLASS CO
Seaboard Plastics Corp
Sedlitz Paint & Varnish Co
Sheffield Bronze Paint Corp
Sherwin-Williams Co
Spec Inc
Steelco Mfg Co
Trucon Laboratories Div Dewco & Reynolds Inc
Wilbur & Williams Co

▶ PAINTS, ASPHALT

Abesta Mfg Corp
Akron Paint & Varnish Co
American Asphalt Paint Co
American Asphalt Roof Corp
American-Marietta Co
American Varnish Co
ARMSTRONG CORK CO BUILDING MATERIALS DIV
BARRETT DIV ALLIED CHEMICAL & DYE CO
Boston Varnish Co
Breinig Brothers Inc
CALBAR PAINT & VARNISH CO
CAREY (PHILIP) MFG CO
Ceresit Waterproofing Corp
Cheeseman-Elliott Inc
Chicago Bronze & Color Works
Dewco & Reynolds Inc
Du Pont (E I) de Nemours & Co
Eagle-Picher Co
Elliott Paint & Varnish Co
Everette Corp
FLINTKOTE CO
Ford Roofing Products Co
Forman-Ford & Co
Fox Paint Co Inc
Gibson-Homans Co
Glidden Co
Harbil Mfg Co Inc
Horn (A C) Co Inc
Illinois Bronze Powder Co
IRVING-MARVILLE CORP
Lehon Co
Murphy Paint Div Interchemical Corp
NATIONAL GYPSUM CO
O'Brien Corp
Pabel Products Inc
Parler (Ira) & Sons Co
Pevers Paint Co Inc
PITTSBURGH PLATE GLASS CO
Quigley Co Inc
Bogers Paint Products Inc
RUBEROID CO
Seaboard Plastics Corp

Sedlitz Paint & Varnish Co
Sicca Rosa Paint Co Inc
Sherwin-Williams Co
Spray-O-Bond Co
Steelco Mfg Co

TEXAS CO
Trucon Laboratories Div Dewco & Reynolds Co
Twentieth Century Paint & Varnish Corp
United Gilsonite Laboratories
U S Gutta Percha Paint Co
Verfing Sales Co Inc
Vita-Var Corp
Wilbur & Williams Co

▶ PAINTS, AWNING

Ardrup Corp
Astrop Co
CUPRINOL DIV DARWORTH INC
Dewco & Reynolds Inc
King (E & F) Co Inc
Pabel Products Inc
PITTSBURGH PLATE GLASS CO
Textile Colors Div Interchemical Corp

▶ PAINTS, CEMENT

Armer Laboratories
Breinig Brothers
Pratt & Lambert Inc
Sommersboro (L) Sons Inc
Spray-O-Bond Co
UNIVERSAL ATLAS CEMENT CO

▶ PAINTS, COLDWATER & CASEIN

Abesta Mfg Corp
Acme White Lead & Color Works
Alabastine Paint Products Div Chicago Bronze & Color Works
Burdall (A) Co
CABOT (SAMUEL) INC
Chi-Namel Paint & Varnish Co
Chicago Bronze & Color Works
Cook Paint & Varnish Co
Dewco & Reynolds Inc
Du Pont (E I) de Nemours & Co Inc
Feltan Sibley & Co Inc
Fox Paint Co Inc
General Paint Corp
Glidden Co
Harbil Mfg Co Inc
Horn (A C) Co Inc
MEBUSA PORTLAND CEMENT CO
Minnesota Paints Inc
Murilo Co Inc
National Chemical & Mfg Co
NATIONAL GYPSUM CO
Parler (Ira) & Sons Co
PITTSBURGH PLATE GLASS CO
Reardon Co
Regatta Paint Products Inc
Sargent-Gerke Co
Sedlitz Paint & Varnish Co
Sherwin-Williams Co
Standard Varnish Works
Tammes Industries Inc
Toch Brothers Inc
U S Gypsum Co
Vita-Var Corp
Waco Waterpaints Inc
Wilbur & Williams Co
Woodville Lime Co

▶ PAINTS, CONCRETE, BRICK, STUCCO

Abesta Mfg Corp
Acme White Lead & Color Works
Akron Paint & Varnish Co
Alabastine Paint Products Div Chicago Bronze & Color Works
American Fluoresc Co Inc
American-Marietta Co
American Varnish Co
Armer Laboratories
Arneson Paint Co Inc
Beauter Plaster Co
Blue Ridge Tale Co Inc
Boston Varnish Co
Briggs-Maroney Co Inc
Builders Products
Burdall (A) Co
CABOT (SAMUEL) INC
CALBAR PAINT & VARNISH CO
Celardi Corp
Cemix Co
Ceresit Chemical Corp
Ceresit Waterproofing Corp
Cheeseman-Elliott Co Inc
Chicago Bronze & Color Works
Coddington (E D) Mfg Co
Coloretre Industries Inc
COPRUX INC
Dewco & Reynolds Inc
Du Pont (E I) de Nemours & Co Inc
Elliott Paint & Varnish Co
Empire Varnish Co
Everette Corp
Feltan Sibley & Co Inc
Flexrook Co
Fox (M Erving) Co Inc
Fox Paint Co Inc
General Paint Corp
Glidden Co
Harbil Mfg Co Inc
Hoboken White Lead & Color Works Inc
Horn (A C) Co Inc
Johnson (B F) Paint Co

KAY-TITE CO
Keystone Paint & Varnish Corp
Landing Products Co
Lithogen Corp
Lowbrock
Low Brothers
Masury (John W) & Son Inc
MEBUSA PORTLAND CEMENT CO
Minnesota Paints Inc
Moore (Benjamin) & Co
MOORE (GOODLOE E) CO
Murilo Co Inc
Murphy Paint Div Interchemical Corp
NATIONAL GYPSUM CO
O'Brien Corp
Ohio Hydraulic & Supply Co
Patterson-Sargent Co
Perkon Cement Corp
Poussin Products Co
Phelan-Faust Paint Mfg Co
PITTSBURGH PLATE GLASS CO
Plasti-Kote Inc
Preservative Paints Co
Prima Products Inc
Reardon Co
Reichard Products Co
Reinhoff & Co
Sedlitz Paint & Varnish Co
Sherwin-Williams Co
Smooth-On Mfg Co
Sommersboro (L) Sons Inc
Spray-O-Bond Co
Standard Dry Wall Products
Steelco Mfg Co
Stonhard Co
Sullivan Co
Surfact Protection Co
Tammes Industries Inc
Tremco Mfg Co

TRINITY PORTLAND CEMENT DIV GENERAL PORTLAND CEMENT CO
Trucon Laboratories Div Dewco & Reynolds

Twentieth Century Paint & Varnish Corp
U S Gutta Percha Paint Co
U S Gypsum Co
Vita-Var Corp
Voric Co
Waterlox Div Empire Varnish Co
Wesco Waterpaints
Wilbur & Williams Co
Woodville Lime Co
WURDACK CHEMICAL CO
X-Pando Corp

▶ PAINTS, CREOSOTE

Dewco & Reynolds Inc

▶ PAINTS, DDT SONOCO PRODUCTS CO

▶ PAINTS, DRY KILN

American Varnish Co
Black Cat Corp
Breinig Brothers Inc
Dewco & Reynolds Inc
Dewatrex Mfg Corp
Harbil Mfg Co Inc
Horn (A C) Co Inc
Mobile Paint Mfg Co
Moore Dry Kiln Co
Murphy Paint Div Interchemical Corp
Parler (Ira) & Sons Co
PITTSBURGH PLATE GLASS CO
Resford Paint Mfg Co
U S Gutta Percha Paint Co
Wilbur & Williams Co

▶ PAINTS, FUNGUS REPELLING

Abesta Mfg Corp
CUPRINOL DIV DARWORTH INC
Dewco & Reynolds Inc
Du Pont (E I) de Nemours & Co Inc
Elliott Paint & Varnish Co
Glidden Co
Horn (A C) Co Inc
Low Brothers Co
Meta-Kote Corp
O'Brien Corp
Patterson-Sargent Co
PITTSBURGH PLATE GLASS CO
Sherwin-Williams Co
Trucon Laboratories Div Dewco & Reynolds Co
Vita-Var Corp
Wilbur & Williams Co
Wood-Treating Chemicals Co
WURDACK CHEMICAL CO

▶ PAINTS, INSECT KILLING

Superior Paint & Varnish Works

▶ PAINTS, LEAD

Acme White Lead & Color Works
Akron Paint & Varnish Co
American Marietta Co
American Varnish Co
Baker Paint & Varnish Co
Breinig Brothers Inc
Briggs-Maroney Co Inc
Cheeseman-Elliott Co Inc
Dewatrex Mfg Corp
Feltan Sibley & Co Inc
Gillespie Varnish Co
Harbil Mfg Co Inc
Inland White Lead Co
Mobile Paint Mfg Co
Murphy Paint Div Interchemical Corp
National Lead Co
O'Brien Corp
Parler (Ira) & Sons Co
Pratt & Lambert Inc
Preservative Paints Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Beckford Paint Mfg Co
Sellers Paint & Varnish Co
Sons (L) & Sons Inc
Twentieth Century Paint & Varnish Corp

▶ PAINTS, LEAD IN OIL

Acme White Lead & Color Works
Aronso Paint Co Inc
Boston Varnish Co
Devoe & Reynolds Inc
Eagle-Fischer Co
Elliott Paint & Varnish Co
Glidden Co
Hobson White Lead & Color Works
Horn (A C) Co Inc
Low Brothers Co
National Lead Co
Pabco Products Inc
PITTSBURGH PLATE GLASS CO
Sediliz Paint & Varnish Co
Sherwin-Williams Co
Valentine & Co Inc
Vita-Var Corp

▶ PAINTS, LUMBER END CHECK DEGRADE

Akron Paint & Varnish Co
Black Cat Corp
Breinig Brothers Inc
Devoe & Reynolds Inc
Hewlett Mfg Corp
Feltan Sibley & Co Inc
Forman-Ford & Co
Harbil Mfg Co
Minnesota Linseed Oil Paint Co
O'Brien Corp
Parler (Ira) & Sons Co
Sellers Paint & Varnish Co
Twentieth Century Paint & Varnish Corp
U S Gotta Percha Paint Co
Vita-Var Corp

▶ PAINTS, MARINE

Acme White Lead & Color Works
Akron Paint & Varnish Co
American Varnish Co
Boston Varnish Co
Breinig Brothers Inc
Cheeseman-Elliott Co Inc
Devoe & Reynolds Inc
Du Pont (E I) de Nemours & Co Inc
Eagle-Fischer Co
Feltan Sibley & Co Inc
Forman-Ford & Co
General Paint Corp
Gillespie Varnish Co
Glidden Co
Harbil Mfg Co Inc
Horn (A C) Co Inc
Low Brothers Co
Lucas (John) & Co Inc
Minnesota Paints Inc
Mehlle Paint Mfg Co
Murphy Paint Div Interchemical Corp
O'Brien Corp
Pabco Products Inc
Parler (Ira) & Sons Co
Patterson-Sargent Co
PITTSBURGH PLATE GLASS CO
Plasti-Kote Inc
Pratt & Lambert Inc
Rargent-Gerke Co
Sediliz Paint & Varnish Co
Sherwin-Williams Co
Steelco Mfg Co
Tremco Mfg Co
Valentine & Co Inc
Vita-Var Corp
Willbur & Williams Co

▶ PAINTS, METALLIC

Akron Paint & Varnish Co
Alabastine Paint Products Div Chicago Bronze
& Color Works
Aluminum Industries Inc
American Varnish Co
Breinig Brothers Inc
CALBAR PAINT & VARNISH CO
Chi-Name Paint & Varnish Co
Chicago Bronze & Color Works
Commonwealth Varnish Co
Devoe & Reynolds Inc
Empire Varnish Co
Eagle-Fischer Co
Elliott Paint & Varnish Co
Empire Varnish Co
Feltan Sibley & Co Inc
Forman-Ford & Co
General Paint Corp
Gillespie Varnish Co
Glidden Co
Harbil Mfg Co
Koppers Co Inc
Low Brothers Co
Minnesota Paints Inc
Mehlle Paint Mfg Co
Murphy Paint Div Interchemical Corp
Pabco Products Inc
Parler (Ira) & Sons Co
Patterson-Sargent Co
Phelan-Paint Paint Mfg Co
PITTSBURGH PLATE GLASS CO
Plasti-Kote Inc
Pratt & Lambert Inc
Bullseye Tar & Chemical Corp
**REYNOLDS METALS CO BUILDING PRO-
DUCTS DIV**
St Louis Surface & Paint Co
Rargent-Gerke Co
Sheffield Bronze Paint Corp
Sherwin-Williams Co
Sicoa Soya Paint Co Inc

Sediliz Paint & Varnish Co
Sons (L) & Sons Inc
Standard Industrial Products Inc
Steelco Mfg Co
Twentieth Century Paint & Varnish Corp
United Gilsonite Laboratories
U S Gotta Percha Paint Co
Valentine & Co Inc
Vita-Var Corp

▶ PAINTS, OIL

Aberts Mfg Corp
Acme Quality Paints
Acme White Lead & Color Works
Akron Paint & Varnish Co
Alabastine Paint Products Div Chicago Bronze
& Color Works
American-Marletta Co
American Varnish Co
Aron Co
Armstrong Paint & Varnish Works
Aronso Paint Co Inc
Berry Brothers
Boston Varnish Co
Bradley & Vroman Co
Breinig Brothers Inc
Burdal (A) Co
CABOT (SAMUEL) INC
Central Paint & Varnish Works
Chicago Paint Inc
Chi-Name Paint & Varnish Co
Coke Paint & Varnish Co
Devoe & Reynolds Inc
Dolphin Paint & Varnish Co
Du Pont (E I) de Nemours & Co Inc
Eagle-Fischer Co
Elliott Paint & Varnish Co
Esterline Paint Mfg Co
Feltan Sibley & Co
Forman-Ford & Co
Fuy Paint Co
Fuller (W F) & Co Inc
General Paint Corp
Gillespie Varnish Co
Glastic Corp
Glidden Co
Grand Rapids Varnish Corp
Haas Paint Mfg Co
Harbil Mfg Co Inc
Harris (J B) Co
Harrison Paint & Varnish Co
Heath & Milligan Mfg Co Div Glidden Co
Hobson White Lead & Color Works Inc
Horn (A C) Co Inc
Indianapolis Paint & Color Co
Jewel Paint & Varnish Co
Johnson (E F) Paint Co
Keystone Varnish Co
King (E F) & Co Inc
Kurfess (J F) Paint Co
Low Brothers Co
Lucas (John) & Co
Marletta Paint & Color Co
Martin-Senour Co
Manny (John W) & Son Inc
McLuskey Varnish Co
McMurtry Mfg Co
Mekin (M J) Paint Co Inc
Minnesota Linseed Oil Paint Co
Mehlle Paint Mfg Co
Moore (Benjamin) & Co
Morale Co Inc
Murphy Paint Div Interchemical Corp
National Lead Co
NATIONAL MFG CO
Nu-Enamel Corp
O'Brien Corp
Pabco Products Inc
Parler (Ira) & Sons
Patterson-Sargent Co
Pentone-Glaubert Paint & Varnish Co Inc
Peora Paint Co Inc
PERMA PRODUCTS CO
Phelan-Paint Paint Mfg Co
PITTSBURGH PLATE GLASS CO
Plasti-Kote Inc
Postle Varnish Co
Pratt & Lambert Inc
St Louis Surface & Paint Co
Sapinla Paints Inc
Rargent-Gerke Co
Seaboard Plastics Corp
Sediliz Paint & Varnish Co
Sewall Paint & Varnish Co
Sherwin-Williams Co
Sicoa Soya Paint Co
Sons (L) Sons Inc
Standard Industrial Products Inc
Standard Varnish Works
Steelco Mfg Co
Sterling Paint & Varnish Co
Sullivan Co
Toch Brothers Inc
Tremco Mfg Co
Trucon Laboratories Div Devoe & Reynolds
Inc
Twentieth Century Paint & Varnish Co
U S Gotta Percha Paint Co
Valentine & Co Inc
Vita-Var Corp
Wadsworth Howland & Co
Willbur & Williams Co
Wilhelm (A) Co

▶ PAINTS, TEXTURE

Lowbro
Reardon Co
Tanna Industries Inc
U S Gypsum Co
Wesco Waterpaints Inc

▶ PANELWORK, HARDWOOD

American Plywood Corp
BRADLEY LUMBER CO OF ARK
CARR ADAMS & COLLIER CO
CURTIS COB INC
FAIR (O L) LUMBER CO
Farley & Loetche Mfg Co
Fordyce-Crosssett Lumber Co
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
MENDEL CO
RODDIS PLYWOOD CORP
Twin City Hardwood Lumber Co

Anton Plywood & Veneer Co
BRADLEY LUMBER CO OF ARK
CARR ADAMS & COLLIER CO
CRUSSETT LUMBER CO
CURTIS COB INC
FAIR (O L) LUMBER CO
Farley & Loetche Mfg Co
Fordyce-Crosssett Lumber Co
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
M & M Woodproducts Co
Southern Lumber Co
WEYERHAEUSER SALES CO

▶ PANELWORK, SOFTWOOD

Acme Asbestos Covering & Flooring Co
CAREY (PHILIP) MFG CO
Curtis Asbestos Co
Eliect Magnesia Mfg Co Inc
JOHNS-MARVILLE CORP
KEASBEY & WATTISON CO
PROTECTIVE PAPERS INC
RUBERDID CO
Sall Mountain Co
Standard Asbestos Mfg Co
Thillmay Pulp & Paper Co

▶ PAPER, ASBESTOS

Acme Asbestos Covering & Flooring Co
CAREY (PHILIP) MFG CO
Curtis Asbestos Co
Eliect Magnesia Mfg Co Inc
JOHNS-MARVILLE CORP
KEASBEY & WATTISON CO
PROTECTIVE PAPERS INC
RUBERDID CO
Sall Mountain Co
Standard Asbestos Mfg Co
Thillmay Pulp & Paper Co

▶ PAPER, BUILDING

American Asphalt Products Co
BARRETT DIV ALLIED CHEMICAL & DYE
CO
BIRD & SON INC
CAREY (PHILIP) MFG CO
CECO STEEL PRODUCTS CO
CERTAIN-TEED PRODUCTS CORP
Consolidated Water Power & Paper Co
Fleming & Sons Inc
FLINTKOTE CO
Globe Roofing Products Co Inc
Hewitt (C B) & Brothers Inc
Hinde & Dauth Paper Co
JOHNS-MARVILLE CORP
Keystone Asphalt Products Co
Pabco Products Inc
Freslett Engineering Co
PROTECTIVE PAPERS INC
Bainston (W) & Co
RICKKRAFT CO
RUBERDID CO
Seaboard Plastics Corp
SISALKRAFT CO
Thillmay Pulp & Paper Co

▶ PAINTS PLASTER

Alton Laboratories
Bro-Ca-De Inc
Esterline Paint Mfg Co
Glastic Corp
Lowbro Inc
NATIONAL GYPSUM CO
Reardon Co

Sicoa Soya Paint Co Inc
Tanna Industries Inc
Wesco Waterpaints

▶ PAINTS, PLASTIC

GENERAL ELECTRIC CO CHEMICAL DEPT
Plasti-Kote Inc
U S Gypsum Co

▶ PAINTS, RUBBER BASE

Trucon Laboratories Div Devoe & Reynolds
Inc

▶ PAINTS, SYNTHETIC RESIN

Aronso Paint Co Inc
Boston Varnish Co
Cello Plastic Chemical Co
Devoe & Reynolds Inc
Du Pont (E I) de Nemours & Co Inc
Elliott Paint & Varnish Co
Glidden Co
Horn (A C) Co Inc
Illinois Bromo Powder Co
Keystone Paint & Varnish Corp
Low Brothers Co
Martin-Senour Co
MIRACLE ADHESIVE CORP
NATIONAL GYPSUM CO
O'Brien Corp
Pabco Products Inc
PITTSBURGH PLATE GLASS CO
Reardon Co
Sherwin-Williams Co
U S Gypsum Co
Valentine & Co Inc
Verhey Sales Co Inc
Vita-Var Corp
Wesco Waterpaints Inc
Willbur & Williams Co

▶ PAINTS, TEXTURE

Lowbro
Reardon Co
Tanna Industries Inc
U S Gypsum Co
Wesco Waterpaints Inc

▶ PANELWORK, HARDWOOD

American Plywood Corp
BRADLEY LUMBER CO OF ARK
CARR ADAMS & COLLIER CO
CURTIS COB INC
FAIR (O L) LUMBER CO
Farley & Loetche Mfg Co
Fordyce-Crosssett Lumber Co
Frost Lumber Industries Inc
Georgia-Pacific Plywood & Lumber Co
MENDEL CO
RODDIS PLYWOOD CORP
Twin City Hardwood Lumber Co

▶ PANELWORK, SOFTWOOD

Acme Asbestos Covering & Flooring Co
CAREY (PHILIP) MFG CO
Curtis Asbestos Co
Eliect Magnesia Mfg Co Inc
JOHNS-MARVILLE CORP
KEASBEY & WATTISON CO
PROTECTIVE PAPERS INC
RUBERDID CO
Sall Mountain Co
Standard Asbestos Mfg Co
Thillmay Pulp & Paper Co

▶ PAPER, ASBESTOS

Acme Asbestos Covering & Flooring Co
CAREY (PHILIP) MFG CO
Curtis Asbestos Co
Eliect Magnesia Mfg Co Inc
JOHNS-MARVILLE CORP
KEASBEY & WATTISON CO
PROTECTIVE PAPERS INC
RUBERDID CO
Sall Mountain Co
Standard Asbestos Mfg Co
Thillmay Pulp & Paper Co

▶ PAPER, BUILDING

American Asphalt Products Co
BARRETT DIV ALLIED CHEMICAL & DYE
CO
BIRD & SON INC
CAREY (PHILIP) MFG CO
CECO STEEL PRODUCTS CO
CERTAIN-TEED PRODUCTS CORP
Consolidated Water Power & Paper Co
Fleming & Sons Inc
FLINTKOTE CO
Globe Roofing Products Co Inc
Hewitt (C B) & Brothers Inc
Hinde & Dauth Paper Co
JOHNS-MARVILLE CORP
Keystone Asphalt Products Co
Pabco Products Inc
Freslett Engineering Co
PROTECTIVE PAPERS INC
Bainston (W) & Co
RICKKRAFT CO
RUBERDID CO
Seaboard Plastics Corp
SISALKRAFT CO
Thillmay Pulp & Paper Co

U S Gypsum Co
Will & Sons Paper Co

▶ PAPER, BUILDING, REIN- FORCED, WATERPROOF

Angier Corp
BIRD & SON INC
Bonsaffe Mills Inc
CERTAIN-TEED PRODUCTS CORP
Ford Roofing Products Inc
Hooking Paper Co
JOHNS-MARVILLE CORP
PROTECTIVE PAPERS INC
RICKKRAFT CO
RUBERDID CO
SISALKRAFT CO

▶ PAPER, CONCRETE CURING

Angier Corp
Hooking Paper Co
Keystone Asphalt Products Co
Freslett Engineering Co
PROTECTIVE PAPERS INC
RICKKRAFT CO
RUBERDID CO
SISALKRAFT CO
Thillmay Pulp & Paper Co
Will & Sons Paper Co

▶ PAPER, COPPER ARMORED

Angier Corp
CRAGE BRASS & COPPER CO
RICKKRAFT CO
SISALKRAFT CO
Wasco Flaming Co

▶ PAPER, SILO LINER

American Asphalt Roof Co
Angier Corp
BARRETT DIV ALLIED CHEMICAL & DYE
CORP
Ford Roofing Products Co
Keystone Asphalt Products Co
Freslett Engineering Co
PROTECTIVE PAPERS INC
RICKKRAFT CO
RUBERDID CO
SISALKRAFT CO
Thillmay Pulp & Paper Co

▶ PAPER, STACK COVER

PROTECTIVE PAPERS INC
RICKKRAFT CO
SISALKRAFT CO
Thillmay Pulp & Paper Co

▶ PARTITIONS, FOLDING

Curtison Co
HOLCOMB & HOKE MFG CO INC
HUGH SHADE CORP
International Steel Co
NEW CASTLE PRODUCTS CO
ORCHARD BROTHERS
RICHARDS-WILCOX MFG CO

▶ PARTITIONS, GLASS, STRUCTURAL

Apex Brass & Bronze Works
LIBBY-BWEN-FORD GLASS CO
Transcontinental Wire Glass Co
PITTSBURGH PLATE GLASS CO

▶ PARTITIONS, OFFICE, HARD- WOOD

U S PLYWOOD CORP

▶ PARTITIONS, SIDE ROLLING

Cornell Rolling Doors Works

▶ PARTITIONS, STEEL

Alabama Metal Lath Co
Armed Drainage & Metal Products Inc
Borger Mfg Co Div Broadline Steel Corp
BOSTWICK STEEL LATH CO
FERRESTA BUILDING PRODUCTS
Goldsomith Metal Lath Co
GREAT LAKES STEEL CORP STRAIN-STEEL
DIV
Hawmann Co
INLAND STEEL PRODUCTS CO
Nacomb Inc
Nelson (E C) Co
Martin-Parry Corp
Mills Co
Milesco Stamping Co
NATIONAL GYPSUM CO
Penn Metal Co Inc
Reynolds Products Inc
Steel Partitions Inc
TRUSCOR STEEL CO
U S Gypsum Co
Weis (Henry) Mfg Co
Wheeling Corrugating Co

▶ PARTITIONS, TOILET

All Metal Partition Co Inc
FIAT METAL MFG CO
Peterson (J C) Co

▶ PARTITIONS, WIRE

Cyclone Fence Div American Steel & Wire Co
Edwards Mfg Co

Manufacturers' Names and Addresses Start on Page D-76

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Logan Co
Meyers (Fred L) Mfg Co
Stewart Iron Works Co Inc

▶ PARTITIONS, WOOD, FIBER, GYPSUM, OTHER COMPOSITIONS, MATERIALS FOR

Bloomfield Co of America Div Hachmeister Inc
CELOTEX CORP
CERTAIN-TIED PRODUCTS CORP
JOHNS-MARVILLE CORP
Masonite Inc
NATIONAL GYPSUM CO
U S Gypsum Co

▶ PATCHING, WALL

Devco & Reynolds Inc

▶ PATTERNS, HOBBYCRAFT

East-Bird Pattern Co
U-Bird Enterprises

▶ PASTE, WALLPAPER

Commercial Paste Co
Consumers Glue Co
Crecent Products Co
Devco & Reynolds Inc
Fuller (H B) Co
Hayes Adhesives Co
Le Page's Inc
Paisley Products Inc
Patent, Corcalo Co
PITTSBURGH PLATE GLASS CO
Stik (W J) Co
Tanna Industries Inc
Wesco Waterplate Inc

▶ PENCILS, CARPENTERS'

Blaindell Pencil Co
Cupples Co
Dieterian (Eugene) Co
Dixon (Joseph) Crucible Co
Eagle Pencil Co
Eberhard-Faber Pencil Co
Economy Novelty & Printing Co
Faber-Castell (A W) Pencil Co
KEUFFEL & ESSER CO
Koh-I-Noor Pencil Co
Linton Pencil Co
Murphy (Thomas D) Co
Reno
Shedd-Brown Mfg Co
WRITE (DAVID) CO

▶ PENCILS, DRAFTING

Eberhard-Faber Pencil Co

▶ PENCILS, PRICE MARKING

American Crayon Co
Blaindell Pencil Co
Dixon (Joseph) Crucible Co
Economy Novelty & Printing Co
Lido Pencil Corp
Markal Co

▶ PERLITE PROCESSING PLANTS

Johnson Mfg Co
Muehleisen Perlite Process Inc
Fugle Converter Co

▶ PILING

Armed Drainage & Metal Products Inc

▶ PIPE, ASBESTOS CEMENT

ARMSTRONG CORK CO BUILDING MATERIALS DIV
JOHNS-MARVILLE CORP
KEASBEY & MATTISON CO
Smith & Kessler Inc
Standard Asbestos Mfg Co
Universal Sewer Pipe Co

▶ PIPE BENDERS

American Pipe Tool Co
Crown Die & Tool Co
Greenlee Tool Co
Martin (H T) & Sons
Skinner (M B) Co

▶ PIPE, CAST IRON, SOIL & FITTINGS

Anderson Bell Pipe Co
Brady Conveyors Corp
Brown (A M) Co
CRANE CO
Eastern Foundry Co
Industrial Iron Works
Machin Iron & Brass Co
Zura (J A) Mfg Co

▶ PIPE, CLAY, SEWER

Acme Brick Co
Agate Sewer Pipe Co
American Vitrited Products Co
Blackmer & Post Pipe Co
Beverston Shale Co
California Pottery Co
Cannellon Sewer Pipe Co

Carry Brick Co
Clark (W) & Sons Div Pacific Clay Products
Clay City Pipe Co
Columbia Pipe Co
Dow Clay Products Co
Dennison Sewer Pipe Corp
Denver Sewer Pipe & Clay Co
Dicker (W B) Clay Mfg Co
East Ohio Sewer Pipe Co
Evans Pipe Co
Gess & Howard Sewer Pipe Co
Gladding-McLean & Co
Iowa Pipe & Tile Co
Jensen Clay Pipe Co
Lehigh Sewer Pipe & Tile Co
Logan Clay Products Co

NATIONAL CLAY PIPE MFGS INC
National Fireproofing Co
Osmose Clay Products Co
Oscurother Sewer Pipe Co
Pacific Clay Products
Patton Clay Mfg Co
Pine Hill Brick & Pipe Co
Pomona Terra-Cotta Co
Red Wing Sewer Pipe Corp
Robinson Clay Product Co
Stillwater Clay Products Co
St Mary's Clay Products Co
Streetor Drain Tile Co
Union Clay Mfg Corp
Universal Sewer Pipe Corp
Washington Brick & Lime Co
What Cheer Clay Products Co
Wholesale Steel Corp
White Hall Sewer Pipe & Stoneware Co

▶ PIPE, CONDUCTOR, EAVES TROUGH

Alabama Metal Lath Co
Ama (W R)
Badger Corrugating Co
Berger Mfg Div Republic Steel Corp
CECO STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Edwards Mfg Co
Hogson (W C) Co
Honey (C O) & Co
Illinois Zinc Co
INLAND STEEL PRODUCTS CO
Kaiser Mfg Co
La Crosse Steel Roofing & Corrugating Co
Lyon Conklin & Co Inc
Martin Metal Mfg Co
Mid-States Steel & Wire Co
New Holland Metals Co
New Orleans Roofing & Metal Co
Newport Steel Corp
NICHOLS WIRE & ALUMINUM CO
Northwest Metal Products Inc
Pena Supply & Metal Corp
Potts-Farrington Co
Revere Steel & Mfg Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
ST PAUL CORRUGATING CO
Tenn Art Metal Co
United States Steel Co
Wholesale Corrugating Co
Williams-Wallice Co
York Corrugating Co

▶ PIPE, CULTURE, IRON & STEEL

American Rolling Mill Co
Armed Drainage & Metal Products Inc
Beall Pipe & Tank Corp
Industrial Iron Works
Newport Steel Corp
REPUBLIC STEEL CORP
ST PAUL CORRUGATING CO
United States Steel Co
UNITED STEEL FABRICATORS INC
Wheeling Corrugating Co

▶ PIPE, FIBER CONDUIT

BROWN CO BERRICO DIV
Fibre Conduit Co
Orangeburg Mfg Co
SONGCO PRODUCTS CO

▶ PIPE JOINT SEALING COMPOUNDS

Anti-Hydro Waterproofing Co
Aren Co
Blue Ridge Talc Co Inc
Bayer Chemical Laboratory Co Inc
CALBAR PAINT & VARNISH CO
CAREY (PHILIP) MFG CO
Curtis Mfg & Jobber Co
Dixon (Joseph) Crucible Co
DuPont DeNemours (E I) & Co
FLINTKOTE CO
Gillette Varnish Co
Gumpert Laboratories
Horn (A C) Co
JOHNS-MARVILLE CORP
Keystone Asphalt Products Co
Koppers Co Inc Tar Products Div
Lake Chemical Co
Peoria Paint Co Inc
Prestite Engineering Co
Rellly Tar & Chemical Corp
Republic Corroting Co
Robinson Clay Product Co
Sauerstein Cements Co

SERVICE PRODUCTS CORP

Smooth-G, Mfg Co
Sullivan Co
T-Fonds Corp

▶ PIPE, SEWER, BITUMINIZED FIBER

BROWN CO BERRICO DIV
Orangeburg Mfg Co Inc
SONGCO PRODUCTS CO

▶ PIPE, SEWER, CONCRETE

American Vitrited Products Co
Universal Concrete Pipe Co Inc

▶ PIPE, STEEL

Allegheny Ludlum Steel Corp
Allgeenor Steel Co
Armed Drainage & Metal Products Inc
Beall Pipe & Tank Corp
Bethlehem Steel Co
Decatur Iron & Steel Co
Dempster Mill Mfg Co
Jones & Laughlin Steel Corp
LACLEDE STEEL CO
National Tube Co
Revere Steel & Mfg Co
REPUBLIC STEEL CORP
Wheeling Steel Corp
Youngstown Steel Products

▶ PIPE, STEEL GALVANIZED

American Rolling Mill Co
BAMBRICK (RICHARD J)
Bethlehem Steel Co
Jones & Laughlin Steel Corp
National Tube Co
REPUBLIC STEEL CORP
UNITED STEEL FABRICATORS INC
Wheeling Steel Corp
Youngstown Sheet & Tube Co

▶ PIPE THREADERS

American Die & Tool Co Inc
Beaver Pipe Tools Inc
Landis Machine Co
Nye Tool Co
Ridge Tool Co
Thread-Eze Mfg Co
Toledo Pipe Threading Machine Co

▶ PIPE WOOD

Arrow Tank Co Inc
Baltimore Cooperage Tank & Tower Co
CALDWELL (W E) CO
Caspas Lumber Co
Johnson & Carlson
M & M Woodworking Co
Pacifi Wood Tank Corp
Redwood Mfg Co
Williamette Valley Lumber Co
Wyckoff (A) & Son Co

▶ PIPE, WROUGHT IRON

Armed Drainage & Metal Products Inc
Beall Pipe & Tank Corp
Byers (A M) CO
CRANE COMPANY
Decatur Iron & Steel Co
Dempster Mill Mfg Co
McDonald (A Y) MFG CO
REPUBLIC STEEL CORP
South Chester Tube Co

▶ PIPE & TUBING, ALUMINUM

Revere Copper & Brass Inc
REYNOLDS METALS CO BUILDING PRODUCTS DIV

▶ PIPE & TUBING, BRASS & COPPER

American Brass Co
Anacosta Sales Co
Briggport Brass Co
CHASE BRASS & COPPER CO
Mueller Brass Co
Revere Copper & Brass Inc
Sevill Mfg Co
Wolverine Tube Div Calumet & Hecla Consolidated Copper Co

▶ PIPE & TUBING, PLASTIC

American Extruded Products Co
Ametline Inc
Carlon Products Corporation
Detroit Mazoid Corp
Extruded Plastics Inc
Goodrich (B F) Co
Hogman Rubber Co
Johnson Plastic Corp
Monsanto Chemical Co
Raybestos-Manhattan Inc
Superior Plastics Div Commonwealth Plastics Inc
Tennessee Eastman Corp
U S Rubber Co
Viking Corp

▶ PLANERS

American Saw Mill Machine Co
BELSAW WAGNINERY CO
BOICE-GRADE CO
Duro Metal Products Co
Greenlee Tool Co
PARKS WOODWORKING MACHINE CO
Power King Tool Corp
ROCKWELL MFG CO DELTA POWER TOOL DIV
STANLEY TOOLS DIV STANLEY WORKS
WALLACE (J B) & CO
WHITNEY (BAKTER D) & SONS INC
Yates-American Machine Co

▶ PLANES

Cannell Mfg Co
MALL TOOL CO
Millers Falls Co
Peck Show & Wilcox Co
PORTER-CABLE MACHINE CO
SARGENT & CO
STANLEY WORKS TOOL DIV
Vaughan & Bushnell Mfg Co

▶ PLANKS, ASPHALT

CAREY (PHILIP) MFG CO
Keystone Asphalt Products Co
PROTECTIVE PAPERS INC
SERVICISED PRODUCTS CORP

▶ PLANKS, EXTENSION

Babcock (W W) Co
Bauer Mill Co
Breyer Brothers Whiting & Co
Clark (J B) Co
FLINTKOTE CO
Goshen Mfg Co
Howard Mfg Co
Plasterguy Wall Board Co
Tilley (John S) Ladders Co
Woodward Products Corp

▶ PLANKS, FIBER, INSULATING

ARMSTRONG CORK CO BUILDING MATERIALS DIV
CELOTEX CORP
Insulation Inc
Fib-Tex Insulating Board Co
FLINTKOTE CO
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MARVILLE CORP
MAYSON GYPSUM CO
Plasterguy Wall Board Co
U S Gypsum Co
WOOD CONVERSION CO

▶ PLANKS, GYPSUM

CELOTEX CORP
CERTAIN-TIED PRODUCTS CORP
NATIONAL GYPSUM CO
U S Gypsum Co

▶ PLAN, SERVICES

All Climates Plan Book Agency
American Plan Service Co
Architectural Plan Service Inc
Brown-Blodgett Co
Building Products Merchandising Service
Continental Steel Corp
East-Bird Pattern Co
GARLINGHOUSE (L F) CO
Home Plan Book Co
Home Planners Inc
Home of the West Plan Service
Lumberman's Plan Service
Martin (S Clyde)
Mature & Co
Model Plan Service
National Plan Service Inc
Nationwide Home Plan Service
Plandrie Homes Inc
SIMMONS-BOARDMAN PUB CORP
Southern Plans Co
Standard Homes Co
U-Build Enterprises
United Home Building Plan Service
Universal Plan Service

▶ PLANS, HOUSE, IN BOOKS

Brown-Blodgett Co
Cleveland Publications
GARLINGHOUSE (L F) CO
Home Building Plan Service
Home Plan Book Co
Housing Plan Service Inc
Martin (S Clyde)
National Plan Service Inc
SIMMONS-BOARDMAN PUB CORP
Standard Homes Co
Universal Plan Service
WEYENHAUSER SALES CO

▶ PLANTS, HOT WATER, MIDGET

Hook & Acherman Inc

▶ PLASTER, ACOUSTICAL

CELOTEX CORP
CERTAIN-TIED PRODUCTS CORP
GREAT LAKES CARBON CORP
KEASBEY & MATTISON CO
Kelsey Island Lime & Transport Co
Mission Lime Products Corp
NATIONAL GYPSUM CO

Manufacturers' Names and Addresses Start on Page D-76

Manufacturers' Brand Name Identifications Start on Page D-64

Nelson (E F) Mfg Co
Schmidler (F E) & Co Inc
Sealcon Products Inc
Silliers Corporation
Roo-Lite Products
Sullivan Co
Tamma Industries Inc
U S Gypsum Co
Western Mineral Products Co
ZONOLITE CO

▶ PLASTER, ASBESTOS KEASBY & MATTHEWSON

▶ PLASTER, BONDING NATIONAL GYPSUM CO NU-WALL MFG CO

▶ PLASTER, CASTING

CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
NATIONAL GYPSUM CO
Sealcon Products Inc
U S Gypsum Co

▶ PLASTER, CEDAR

Coddington (E D) Mfg Co
Mineral Pigments Corp
Tamma Industries Inc

▶ PLASTER, FIBERED

Blue Diamond Corp
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Coddington (E D) Mfg Co
Fairmont Wall Plaster Co
Grand Rapids Plaster Co
Gulf States Gypsum Co
Ideal Cement Co Colorado Portland Div
NATIONAL GYPSUM CO
Ohio Hydrate & Supply Co
Pacific Portland Cement Co
Sealcon Products Inc
U S Gypsum Co
Woodville Lime Co

▶ PLASTER, FINISHING, COLORED

Beauter Plaster Co
Blue Diamond Corp
CELOTEX CORP
Coddington (E D) Mfg Co
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
Ohio Hydrate & Supply Co
Penn Crete Products Co
Sealcon Products Inc
Tamma Industries Inc
U S Gypsum Co
Woodville Lime Co

▶ PLASTER, FINISHING, MOULDING, GAUGING

Blue Diamond Corp
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
National Mortar & Supply Co
NU-WALL MFG CO
Ohio Hydrate & Supply Co
Pacific Portland Cement Co
U S Gypsum Co

▶ PLASTER, GYPSUM

Alabastine Paint Products
Blue Diamond Corp
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
National Mortar & Supply Co
NU-WALL MFG CO
Pacific Portland Cement Co
Sealcon Products Inc
Tamma Industries Inc
U S Gypsum Co

▶ PLASTER, INSULATING

CELOTEX CORP
GREAT LAKES CORP BUILDING
PRODUCTS DIV
Mobile Sales Corp
NATIONAL GYPSUM CO
Schmidler (F E) & Co Inc
Sealcon Products Inc
Roo-Lite Products Co
ZONOLITE CO

▶ PLASTER, LIME

CELOTEX CORP
Grand Rapids Plaster Co
Keller Island Lime & Transport Co
NATIONAL GYPSUM CO
National Mortar & Supply Co
Ohio Hydrate & Supply Co
Sealcon Products Inc
U S Gypsum Co
Woodville Lime Co

▶ PLASTER, PATCHING

Alabastine Paint Products Div Chicago Bronze
& Color Works
American Fluorite Co Inc
CERTAIN-TEED PRODUCTS CORP

Chicago Bronze & Color Works
Coddington (E D) Mfg Co
Consumers Glas Co
Curtis Mfg & Adhesive Co
Durban (Donald) Co
Fuller (H B) Co
Grand Rapids Plaster Co
Hayes Adhesives Co
Ideal Cement Co Colorado Portland Div
Made-Rite Products Inc
Murale Co Inc
NATIONAL GYPSUM CO
NU WALL MFG CO
Reardon Co
Sawgrass Co
Sohack Chemical Co
Sealcon Products Inc
Stonhard Co
Tamma Industries Inc
United Gilsonite Laboratories
U S Gypsum Co
Wesco Waterpumps Inc
X-Fando Corp

▶ PLASTER RETARDERS

CELOTEX CORP
NATIONAL GYPSUM CO
U S Gypsum Co

▶ PLASTERBOARD

ARMSTRONG CORP
BARETTI DIV ALLIED CHEMICAL & DYE
CORP
Blue Diamond Corp
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
Pabco Products Inc
U S Gypsum Co

▶ PLASTER OF PARIS

CERTAIN-TEED PRODUCTS CORP
Fairmont Wall Plaster Co
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
Ohio Hydrate & Supply Co
Tamma Industries Inc
U S Gypsum Co

▶ PLASTIC LAMINATES

Actna Plywood & Veneer Co
ARBORITE CO LTD
Rakelite Corp
Coddington (E D) Mfg Co
Consolidated Water Power & Paper Co
Continental Can Co
DAVIES (J A) & CO
Farley & Loetche Mfg Co
FORMICA CO
GENERAL ELECTRIC CO CHEMICAL DEPT
WASKELITE MFG CO
RODDIS PLYWOOD CORP
OHIO RUBBER CO
Parkwood Corp
RODDIS PLYWOOD CORP
St Paul & Tacoma Lumber Co
St Regis Paper Co
U S PLYWOOD CORP
WESTINGHOUSE ELECTRIC CORP
WOODALL INDUSTRIES INC

▶ PLASTIC, WATERPROOF

Alento Mfg Co
American Fluorite Co
Anti-Hydro Waterproofing Co
BIRD & SON
FLINKSTEAD CO
FORMICA INSULATION CO
Horn (A C) Co Inc
Lehco Co
Nemmers (L) & Sons Inc
Superior Plastics Div Commonwealth Plastics
Inc
Technical Supply Co
X-Fando Corp

▶ PLIERS

Bureau Mfg Co
Bridgeport Hardware Mfg Corp
Crescent Tool Co
Crosby (John H) & Co
International Twist Drill Corp
Klein (Mathias) & Sons
P & C Hand Forged Tool Co
Pock Stone & Wilson Co
RED DEVIL TOOLS
SARGENT & CO

▶ PLUMB BOBS

Brown & Sharpe Mfg Co
Diagnost (Dague) Co
GOLDBLATT TOOL CO
KEUFFEL & ESSER CO
Larkin Rule Co
Millers Falls Co
SARGENT & CO

▶ PLYWOOD, DOUGLAS FIR

Aberdeen Plywood Corp
Actna Plywood & Veneer Co
Albany Plywood Corp

American Plywood Corp
Am-Mex Sales Co
Anacortes Veneer Inc
ASSOCIATED PLYWOOD MILLS INC
Actna's Plywood Corp
ATLAS PLYWOOD CORP
Bellingham Plywood Corp
Black (T C) Plywood Co Inc
Buffalo Lumber & Mfg Co
California Veneer Co
Caljeffe Plywood Co
Capitol Mfg Co
Canadian Plywood Corp
Coastal Plywood & Lumber Co
Cosat Plywood Mfg Co
Cous Ray Lumber Co
Crescent Plywood Co
DANT & BUSSELL INC
Davis Plywood Corp
Dyle Brothers Inc
Elliott Bay Mill Co
Engineered Plywood Products Co
Eugene Plywood Co
Evans Plywood Co
Eureka Products Co
Everett Plywood & Door Corp
Exchange Sawmills Sales Co
Fir Mfg Co
Georgia-Pacific Plywood & Lumber Co
HARBOR PLYWOOD CORP
Harold Plywood Co
Heidner & Co
Hines (Edward) Lumber Co
Humboldt Plywood Corp
Industrial Plywood Corp
Kennecott Inc Trans Door Div
Kochlin Plywood & Veneer Co
Laba Plywood & Door
Leon Plywood & Door
Lyle (Donald W)
Mar-Lin Timber Corp
Martin Bros Box Co
Mask Seattle Lumber Co
Menasha Coos Head Plywood Corp
Miller (Geo E) Lumber Co
Milwaukee Plywood Co
M & M Plywood Corp
M & M Woodworking Co
M. Baker Plywood Inc
McJefferson Box Veneer Co
Multi-Vly Wood Sales Co
Multinomial Plywood Corp
Mutual Plywood Corp
National Plywoods Inc
Niagara Plywood Inc
Nickey Brothers Inc
Niokol Plywood Corp
North Pacific Plywood Inc
North Plywood Co Inc
Northwest Door Co
Olympia Veneer Co
Olympic Plywood Co
Oregon Plywood Corp
Oregon-Washington Plywood Co
Pacific Mutual Door Co
Pacific Plywood Corp
Pacific Veneer & Plywood Corp
Paston (Frank) Lumber Co
Pendulata Plywood Corp
Poma Products Co
Plylock Corp
Plytex Inc
Portland Plywood Corp
Pugot Sound Plywood Inc
Ranter Plywood Co
Robbison Mfg Co
RODDIS PLYWOOD CORP
St Paul & Tacoma Lumber Co
Shadwood
Silbermann (George J) & Sons Co
SIMPSON LOGGING CO
Smith-Wood Products Inc
Springfield Plywood Corp
S W BEGEL PLYWOODS INC
U S PLYWOOD CORP
Vancouver Plywood & Veneer Co
Washington Veneer Co
West Coast Plywood Co
WEYERHAEUSER SALES CO
Wheeler-Gugod Co
Wisconsin Laminating Co
Woodward Lumber Co

ASSOCIATED PLYWOOD MILLS
ATLAS PLYWOOD CORP
Bellingham Plywood Corp
Buffalo Lumber & Mfg Co
Canadian Plywood Corp
Cook County Lumber Co
Cous Ray Lumber Co
DANT & BUSSELL INC
Davis Plywood Corp
Elliott Bay Mill Co
Engineers Plywood Products Co
Eugene Plywood Co
Evans Products Co
Fir Mfg Co
Georgia-Pacific Plywood & Lumber Co
HARBOR PLYWOOD CORP
Heidner & Co
Humboldt Plywood Corp
Ipsik Plywood Co
Kennebec Inc Trans Door Div
Kochlin Plywood & Veneer Co
Martin Brothers Box Co
Mask Seattle Lumber Co
MENDEL CO INC
Midwest Jojoba Inc
Miller (Geo E) Lumber Co
Millwork Distributors Co
Morrow Plywood Co
M & M Woodworking Co
National Plywoods Inc
Niagara Plywood Co
Nickey Brothers Inc
North Plywood Inc
Northwest Door Co
Olympia Veneer Co
Oregon Plywood Corp
Oregon-Washington Plywood Co
Pacific Mutual Door Co
Pendulata Plywood Corp
Plywood Inc
Plywood-Plastics Corp
Pugot Sound Plywood Inc
Ranter Plywood Co
Robbison Mfg Co
RODDIS PLYWOOD CORP
St Paul & Tacoma Lumber Co
Shadwood
Silbermann (George J) & Sons Co
SIMPSON LOGGING CO
Smith-Wood Products Inc
Springfield Plywood Corp
S W BEGEL PLYWOODS INC
U S PLYWOOD CORP
Vancouver Plywood & Veneer Co
Washington Veneer Co
West Coast Plywood Co
WEYERHAEUSER SALES CO
Wheeler-Gugod Co
Wisconsin Laminating Co
Woodward Lumber Co

▶ PLYWOOD, FABRIC COVERED

Davis Plywood Corp
M & M Woodworking Co Bremport Div
Northwest Door Co
St Paul & Tacoma Lumber Co
U S PLYWOOD CORP

▶ PLYWOOD, FLAMEPROOF

Actna Plywood & Veneer Co
Superflex Plywood Corp

▶ PLYWOOD, FLEXIBLE HARD- WOOD

Aberdeen Plywood Corp
Industrial Plywood Corp
Multinomial Plywood Corp
Plywood Inc
St Paul & Tacoma Lumber Co
SIMPSON LOGGING CO
Vancouver Veneer Co

▶ PLYWOOD, HARDWOOD

Actna Plywood & Veneer Co
Albany Plywood Corp
American Plywood Corp
Anderson-Tully Co
ATLAS PLYWOOD CORP
Black (T C) Plywood Co Inc
Bremport (W B)
DANT & BUSSELL INC
Darlington Veneer Co Inc
Desta Plywood Corp
Daystrom Laminates Inc
Dixie Lumber Co Inc
Georgia-Pacific Plywood & Lumber Co
HASKELITE MFG CO
HIGGINS INC
Homer Panel Co
Indiana Veneer & Panel Co
Ipsik Plywood Co
Jannottan Veneer & Plywood Corp
Kennebec Inc
Kochlin Plywood & Veneer Co
MENDEL CO
Milwaukee Plywood Co
M & M Wood Working Co
Stamm & Shaffer Inc
National Plywoods Inc
Niagara Plywood Co
Nickey Brothers Inc
Northern Hardwood Veneers Inc
North Plywood Inc
Northwest Door Co

▶ PLYWOOD, EXTERIOR

Aberdeen Plywood Corp
Actna Plywood & Veneer Co
Albany Plywood Corp
American Plywood Corp
Anacortes Veneer Inc

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Oregon Plywood Corp
 Patton (Frank) Lumber Co
 Pearl City Plywood Co Inc
 Plywood Industries
 Plywood Inc
 Plywoods-Plastics Corp
RODDIS PLYWOOD CORP
SCRIFTER BROTHERS
 Silbermangel (George J) & Sons Co
SIMPSON LOGGING CO
 Superior Plywood Corp
THOMASON PLYWOOD CORP
 Twin City Hardwood Lumber Co
 Underwood Veneer Co
U S MENGEL PLYWOODS INC
U S PLYWOOD CORP
 Weber Veneer & Plywood Co
 Wheeler Osgood Co
 Wisconsin Laminating Co
 Wisconsin Timber Land Co
 Youngstown Plywood Co

▶ PLYWOOD, INLAID
 Actna Plywood & Veneer Co
U S PLYWOOD CORP

▶ PLYWOOD, MARINE

Actna Plywood & Veneer Co
 Albany Plywood Co
 American Plywood Corp
ASSOCIATED PLYWOOD MILLS INC
 Davis Plywood Corp
HARBOR PLYWOOD CORP
HASKELITE MFG CO
INGERS INC
 Inks Plywood Co
MENDEL CO INC
 M & M Woodworking Co
 National Plywoods Inc
 Niagara Plywood Co
 Northwest Door Co
 Oregon Plywood Corp
 Plywood Inc
RODDIS PLYWOOD CORP
U S MENGEL PLYWOODS INC
U S PLYWOOD CORP
 Willamette Valley Lumber Co

▶ PLYWOOD, METAL COVERED

HASKELITE MFG CORP
U S PLYWOOD CORP

▶ PLYWOOD, PINE

Actna Plywood & Veneer Co
 Albany Plywood Co
 ATLAS PLYWOOD CORP
 Calaveras Forest Products Corp
 Cook County Lumber Co
 Davis Plywood Corp
 Fruit Growers Supply Co
HARBOR PLYWOOD CORP
 Kaulfin Plywood Co
 Korhonen Plywood & Veneer Co
LONG-BELL LUMBER CO
 M & M Woodworking Co
MENDEL CO INC
 Mid West Jobbery Inc
 Milwaukee Plywood Co
 National Plywoods Inc
 Pacific Mutual Door Co
 Plywood Inc
RODDIS PLYWOOD CORP
 Shadwood
 Shasta Plywood Co
 Silbermangel (George J) & Sons Co
 Tartar Wheeler & Johnson
 Timber Products Co
U S MENGEL PLYWOODS INC
U S PLYWOOD CORP

▶ PLYWOOD, PLASTIC FACED

Actna Plywood & Veneer Co
 American Plywood Corp
 Anacortes Veneer Inc
 Buffalo Lumber & Mfg Co
 Davis Plywood Corp
 Farley & Lottelater Mfg Co
FORMICA CO
 Georgia-Pacific Plywood & Lumber Co
HARBOR PLYWOOD CORP
RIGGINS INC
 Kimberly-Clark Corp
 Korhonen Plywood & Veneer Co Inc
MENDEL CO INC
 Milwaukee Plywood Co
 M & M Woodworking Co
 National Plywoods Inc
 Northwest Door Co
 Pearl City Plywood Co Inc
 Plywood Inc
RODDIS PLYWOOD CORP
 St Paul & Tacoma Lumber Co
SIMPSON LOGGING CO
U S MENGEL PLYWOODS INC
U S PLYWOOD CORP
 West Coast Plywood Co
WESTINGHOUSE ELECTRIC CORP
 Wheeler-Osgood Co
WOODGALL INDUSTRIES INC

▶ PLYWOOD, RAT REPELLENT
U S PLYWOOD CORP

▶ PLYWOOD, REDWOOD

Actna Plywood & Veneer Co
 ATLAS PLYWOOD CORP
 Buffalo Lumber & Mfg Co
 Europa Plywood Co
 M & M Woodworking Co
 Plytex Corp
 Shadwood

▶ PLYWOOD SEALERS

Actna Plywood & Veneer Co
 American Veneers Co
ATLAS PLYWOOD CORP
 Busing Brothers Inc
 Davis Plywood Corp
MENDEL CO INC
 Milwaukee Plywood Co
 Monsanto Chemical Co
 Oregon Plywood Corp
 Plywood Inc
 Standard Varnish Works
U S PLYWOOD CORP

▶ PLYWOOD, STRIATED
U S PLYWOOD CORP

▶ POLISHING MACHINES

AMERICAN FLOOR SURFACING MACHINE CO
 Atlas Floor Surfacing Machinery Corp
 Bignell Machine Co
 Clarke Sanding Machine Co
 Detroit Surfacing Machine Co
 Fay Floor Machine Co
 Finwell System Inc
 Furuboss-Habit Co
 General Floorcraft Inc
 Hill Floor Machine Co
 Hiler Co
 Holt Mfg Co
 Landers Frary & Clark
 Lincoln-Selinger Floor Machinery Co
PORTER-CABLE MACHINE CO
RED DEVIL TOOLS
SKILLSAW INC
 Tennant (G H) Co

▶ PORCELAIN ENAMEL

Seapored Porcelain Metals, Inc

▶ PORCH ENCLOSURE PANELS

Compo-Miracle Products Co

▶ PORCHES AND CORNICES, MATERIALS FOR

CARR ADAMS & COLLIER CO
 CURTIS CO INC
 Scherer (A F) Mfg Co
 Wheeler Osgood Co

▶ POST CAPS & BASES

BRAINARD STEEL CO
 Cleveland Steel Specialty Co
 Cule Mfg Co
 Consolidated Iron-Steel Mfg Co
 Scherer (A F) Mfg Co
 Sirona Steel Co

▶ POST OR POLE PULLERS

KEYSTONE STEEL & WIRE CO

▶ POSTS, ADJUSTABLE FLOOR LEVELING AND SUPPORTING

Admets Post Mfg Co
 Akron Products Co
 Allen Steel Products
BRAINARD STEEL CO
 Dunley Brothers
 Hill (H H) & Co
 Hain's Mfg Co of Ohio
 Kaptor (Joseph J) Sales Co
 Perma-Jack Corp
 Sharon Steel Co
 Spurgans (N B) Co
 Sawhill Mfg Co
 C. O. Post Inc
 Templeton Kenly & Co
 United Products Inc
 White Products Inc

▶ POSTS, FENCE, STEEL AND IRON

AMERICAN STEEL & WIRE CO
 Anchor Post Fence Div Anchor Post Products Inc
 Bethlehem Steel Co
 Calumet Steel Co Div Borg-Warner Corp
CECO STEEL PRODUCTS CORP
 Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
 Continental Steel Corp
 Cyclone Fence Div American Steel & Wire Co
 Hare Products Inc
KEYSTONE STEEL & WIRE CO
 Mid-States Steel & Wire Co
 Northwestern Steel & Wire Co
 Peitz (W T) & Sons
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
 Wheeler-Spencer Steel Div Colorado Fuel & Iron Corp

▶ POSTS, LANTERN

Daum (Howard A)
 Scherer (A F) Mfg Co
 Swain & Bridge

▶ POSTS, MAIL BOX, RURAL

Locke Mfg Co
 Merryweather Products Co
 Stryker-Master

▶ POSTS AND POLES, CREOSOTED, SALT TREATED

American Lumber & Treating Co
CROSSETT LUMBER CO
 Forby-Crossett Lumber Co
 Frost Lumber Industries Inc
 Georgia-Pacific Plywood & Lumber Co
 Koppers Co Inc
 Miller (T R) Mill Co
 Moss (T J) Tie Co

▶ POSTS AND POLES, WOOD

Abraham Mill
 Arnold-Dain Corp
BRUCE (E L) CO
 Corfax Lumber & Treating Co
CORNER LUMBER & LAND CO
CROSSETT LUMBER CO
 Forby-Crossett Lumber Co
 Frost Lumber Industries Inc
 Georgia-Pacific Plywood & Lumber Co
 Idaho Pole Co
LONG-BELL LUMBER CO
 MacFarlane (L D) Co Ltd
 McGillivray & Gibson Co
 Miller (T R) Mill Co
 Morton Mfg Co
 National Pole & Treating Div Minnesota & Ontario Paper Co
 Nebraska Bridge Supply & Lumber Co
 Republic Treating Co
 Silbermangel (George J) & Sons Co
 Southwestern Treating Co
WEYERHAEUSER SALES CO
 Willamette Valley Lumber Co
 Wood Products Co

▶ POTS, GLUE

Black Brothers Co Inc
BLACK & DECKER MFG CO
 Francis (Charles E) Co
 Sta-Warm Electric Co
 Volcan Electric Co
 Waage Electric Inc

▶ POWER PLANTS

C & H Electric Co
 Filer & Stowell Co
HAMELITE CORP
 International Harvester Co
KOHLER CO
 Lettich Iron Works
 Onan (D W) & Sons Inc
 Ready-Power Co
 Sterling Foundry Co Inc
 Swartwood Co
 Washburn Motor Co
WORTHINGTON PUMP & MACHINERY CORP

▶ PREFABRICATED BUILDINGS, FARM

Butler Mfg Co
 Clayton & Lambert Mfg Co
 Close-To-Nature Co
 Crawford Corp
 Factory Built Homes Inc
FORD (IVON B) INC
GBN-WAY HOMES INC
GREAT LAKES STEEL CORP
 Green-Walby Co
 Hargrove Co
 Hodgson (E F) & Son
 Houston Blow Pipe & Sheet Metal Works
 Houston Ready-Cut House Co
 James Mfg Co
 Johnson Co
 Pioneer Co
 Potter Mfg & Lumber Co
 Precision Built Homes Corp
 Pre-Fab Industries
REYNOLDS METALS CO BUILDING PRDTS DIV
RILCO LAMINATED PRODUCTS INC
 Skatline Inc
STEELCRAFT MFG CO
 Super-Structures Inc
 Texas Home Co Inc
TYMBER STRUCTURES INC
TRUSCON STEEL CO
 U S Challenge Co
 Unit Structures Inc
WEYERHAEUSER SALES CO

▶ PREFABRICATED CLOSETS

MENDEL CO
 Beach & Mosser Mfg Co

▶ PREFABRICATED GARAGES

Adirochack Log Cabin Co Inc
 Beussit Industries Inc
 Brooks-Skinner Co

Crawford Corp
 Davis-Watson Mfg Co
 Dexter Lumber Co
 Factory Built Homes Inc
FORD (IVON B) INC
GBN-WAY HOMES INC
 Green Lumber Co
 Hodgson (E F) & Sons
 Hyde Park Lumber Co
 Johnson Co
 Pre-Fab Industries
 Reliance Steel Products Co
ST PAUL CORRUGATING CO
 Sectional Garage Works
 Smith-Ort Inc
 Soule Steel Co
 Southern Mill & Mfg Co
STEELCRAFT MFG CO
 Super-Structures Inc
 Templeton (Herbert A) Lumber Co
 Texas Housing Co Inc
 Thayer Portable House Co
 U S Challenge Co
 U S Prefab Corp

▶ PREFABRICATED HOUSES

Adirochack Log Cabin Co Inc
 Admiral Homes Inc
 Aladdin Co
 Allied Housing Associates Inc
 American Biltmore Co
 American Homes Inc
 Anchorage Homes Inc
 Bates Prefabricated Structures
 Bennett Lumber Corp
BEST HOMES INC
 Blaw-Knox Div Blaw-Knox Co
 Bralvi Homes Inc
 Bridges (W F) T
 Brown & Johnson Corp
 Burke Millwork Co
 Bush Prefabricated Structures Inc
 Calif Prefab Corp
 Capital Prefab Structures
CELSTEX CORPORATION
 Charlotte Lumber & Mfg Co
 City Lumber Co Inc
 Crawford Corporation
 Currier Lumber Co
 Dade Brothers Inc
 Drysdale Homes Inc
 Durabilt Homes Co
 Economy Housing Co
 Gas-Wood Corp
 Factory Built Homes Inc
FORD (IVON B) INC
 Fox Brothers Mfg Co
GBN-WAY HOMES INC
 General Housing Co
 General Industries Inc
 General Panel Corp
 Green Lumber Co
GUNNISON HOMES INC
HARNISENFFGER CORP HOUSES DIV
 Hayward Lumber & Investment Co
 Hodson (E F) Co
HOWASOTE COMPANY
 Houser Homes Inc
 Housemark
 Houston Ready-Cut House Co
 Illinois Lumber Mfg Co
 Indiana Demountable Housing Inc
 Intermountain Homes
 Johnson Company
 Johnson Quality Homes Inc
 Klingler Div-Bilt Mfg Co
 K & M Corp
 Knox Carpaliban
 Latelute Inc
 Le Touzeux (E G) Inc
 Lewis Mfg Co
LUMBER ENGINEERING CO
 Lumber Fabricators Inc
 Maryland Modern Housing Corp
 Midwest Homes
 Midwest Housing Corp
 Mixer Homes Corp
NATIONAL HOMES CORP
 National Ideal Co
 New Century Homes
 Nichols & Cox Lumber Co
 Page & Hill Homes
 Parkshale American Homes
PEASE WOODWORK CO INC
 Peerless Housing Co
 Plainfield Lumber & Supply Co
 Plywood Structures
 Precision Built Homes Corp
 Precision Homes Co
 Preco Corporation
 Pre-Fab Industries
 Prefab Mfg Co
 Prefabricated Products Co
 Prefabricators Inc
 Quality Homes
REYNOLDS METALS CO BUILDING PRDTS DIV
 Richmond Builders Inc
 Rindel (L H) Lumber Co
RILCO LAMINATED PRODUCTS INC
 Rock Island Lumber Co
 St Elmo Housing Corp
 Soule Lumber Co
 Soule Industries Inc
 Soule Steel Co
 Southern Mill & Mfg Co
 Southern American Homes
 Southwestern Sash & Door Co
 Stoney Prefabricated Building Co
STEELCRAFT MFG CO
 Stout Homes
STEEL-STAR DIV GREAT LAKES STEEL CORP
 Strathmore Company
 Super-Structures Inc
 Texas Prefabricated Housing Co
THAYER MFG CORP POLLMAN HOMES DIV
TIMBER STRUCTURES INC
TRUSCON STEEL CO

Manufacturers' Names and Addresses Start on Page D-76
 Suppliers' Brand Name Identifications Start on Page D-64

1 8 Challenge Co
1 8 Homes Inc
1 8 Prefabricating Corp
UNITED STEEL FABRICATORS INC
Unit Structures Inc
Universal Fabricating & Mfg Co
WARDWORTH HOMES INC
Well Built Mfg Co
WEYENHAUSER SALES CO
Williams (C) Fabricators
Winston (N K) Associates

► PREFABRICATED LOG CABIN PANELS

Fence Co of America
Rustle Furniture Co Inc

► PREFABRICATED WALL PANELS

American Bilbrook Co
Elliott Bay Mill Co
FENESTRA BUILDING PRODUCTS
Malen Co
OWENS-ILLINOIS GLASS CO

► PRESERVATIVES, CANVAS

American Tent & Awning Co
Astrup Co
Ceresal Chemical Corp
CUPRINOL DIV DARWORTH INC
Dewar & Reynolds Inc
Dow Chemical Co
Du Pont (E I) de Nemours Co Inc
Eonig Products Co
Fulton Rag & Cotton Mills
Glidden Co
Grassell Chemical Dept Du Pont (E I) de Nemours Co Inc
Haynes Products Co
Interchemical Corp
Kuls (H B Fred)
Lowe Brothers Co
Materials & Treatment Co Inc
Minnesota Mining & Mfg Co
Mobile Paint Mfg Co
Monanto Chemical Co
Nelsonite Chemical Products Inc
Onose Wood Preserving Co of America Inc
Pennsylvania Salt Mfg Co
PERMA PRODUCTS CO
PITTSBURGH PLATE GLASS CO
PROTECTION PRODUCTS MFG CO
Puritan Sales Co
Standard Industrial Products Inc
Sullivan Company
Unexcelled Chemical Corp
Vita-Var Corp
Weather-Seal Co
Wilbur & Williams Co
Wood-Treating Chemicals Co

► PRESERVATIVES, FIBER BOARD

CELOTEX CORPORATION
Chapman Chemical Co
Dow Chemical Co
Monanto Chemical Co
PROTECTION PRODUCTS MFG CO
Wood Treating Chemical Co

► PRESERVATIVES, MASONRY

Trucon Laboratories Div Dewar & Reynolds Inc

► PRESERVATIVES, WOOD

Abeito Mfg Corp
American Lumber & Treating Co
Barr (W M) & Co
BARRETT DIV ALLIED CHEMICAL & DYE CORP
Boyer Chemical Laboratory Co
Breinig Brothers Inc
BRUCE (E L) CO
CABOT (SAMUEL) INC
C-A Wood Preserver Co
Carbolignum Wood Preserving Co
Crestal Chemical Corp
Chapman Chemical Co
Chemical Research Products Co Inc
Copper Creek Chemical Corp
Cre-O-Tox Chemical Co
CUPRINOL DIV DARWORTH INC
Dewar & Reynolds Inc
Dow Chemical Co
Du Pont (E I) de Nemours & Co Inc
Fox Brothers Mfg Co
General Paint Corp
Glidden Co
Gordon (George C) Chemical Co
Hill Termitic Control Systems
Horn (A C) Co Inc
Kodman Mfg Waterproofing Co Inc
King (E & F) & Co Inc
Koppers Co Inc
Lowe Brothers Co
Materials & Treatment Co Inc
Monanto Chemical Co
Mottell (J W) Co
Nelsonite Chemical Products Inc
Olympic Stained Products Co
Palco Products Inc
Paisley Products Inc
Panther Oil & Grease Mfg Co
Parler (Ira) & Sons
PERMA PRODUCTS CO
PITTSBURGH PLATE GLASS CO
Pratt & Lambert
PROTECTION PRODUCTS MFG CO
Protzol Corp

Purifoy Products Inc
Rellig Tar & Chemical Corp
Resphile Creaming Co
Rockford Paint Mfg Co
Rock Island Millwork Co
RUBENID COMPANY
Sargent-Gerke Co
Somnothern (L) Sons Inc
Spens Inc
Standard Industrial Products Inc
Stevolite Mfg Co
Sullivan Co
Ternitol Co
Tross Chemicals Inc
H S PLYWOOD CORP
Vacuolite Sales Co
Vita-Var Corp
Woods Waterpaints
Wilbur & Williams Co
Wood-Treating Chemical Co

► PREVENTIVES, SAP STAIN

Breinig Brothers Inc
Chapman Chemical Co
Cre-O-Tox Chemical Co
Dow Chemical Co
Du Pont (E I) de Nemours Co Inc
Form-Ford & Co
Monanto Chemical Co
Nelsonite Chemical Products Inc
PROTECTION PRODUCTS MFG CO
Wood Treating Chemicals Co
Wyandotte Chemical Corp

► PUBLICATIONS, CONSUMER, SHELTER

American Home Magazine Corp
BETTER HOMES & GARDENS
Country Gentleman
Farm Journal
GOOD HOUSEKEEPING FORUM
HOUSE BEAUTIFUL
House & Garden
Furniture Magazine

► PULLERS STUMP, TRACTOR AND HORSE DRAWN

Dorsey Trailers
Hyster Co

► PULLEYS, AWNING

Astrup Co
CODDIN (P & F) DIV AMERICAN HARDWARE CORP
Reading Hardware Corp
SARGENT & CO

► PUMP, LEATHERS

Adams (C F) Inc
Chicago Belling Co
Meyers (F E) & Brothers Co
Red Jacket Mfg Co

► PUMPS, BOOSTER

BELL & GOSSETT CO
Taco Heaters Inc
TRUSH (H A) CO

► PUMPS, CENTRIFUGAL

ALLIS-CHALMERS MFG CO
Autora Pump Co
DECATUR PUMP CO
Deming Co
Economy Pumps Inc Div Hamilton Thomas Corp
Ezer Pump & Engine Works
Eskiek Mfg Co
FLINT & WALLING MFG CO INC
HOMELITE CORP
Lancaster Pump & Mfg Co Inc
Marion Pumps
McDonald (A Y) Mfg Co
Meyers (F E) & Brother Co
Red Jacket Mfg Co
Trucon Co
Wayne Home Equipment Co
WORTHINGTON PUMP & MACHINERY CORP

► PUMPS, CONTRACTORS'

Rarnon Mfg Co
Chicago Belling Co
C H & E Mfg Co
CONSTRUCTION MACHINERY SALES CO
DELO APPLIANCE DIV GENERAL MOTORS CORP
HOMELITE CORP
JAEGER MACHINE CO
Marion Pumps
Meyers (F E) & Brother Co
WORTHINGTON PUMP & MACHINERY CORP

► PUMPS, HEAT

General Engineering & Mfg Co
Muncie Gear Works
Roth (Roy) Co

► PUMPS, JET

Oliver Co
Penberthy Injector Co

► PUMPS, STIRRUP

American Lumber & Treating Co
Raker Mfg Co
Butler Co
Deming Co
Dempter Mill Mfg Co
Dubbins Mfg Co
FLINT & WALLING MFG CO INC
Independent Lock Co
Lancaster Pump & Mfg Co Inc
Hudson (H D) Mfg Co
McDonald (A Y) Mfg Co
Meyers (F E) & Brother Co
Oakes Mfg Co
Red Cross Mfg Co
Red Jacket Mfg Co
Smith (D B)
Tennessee Stone Works

► PUMPS, SUCTION

Chicago Pump Co
Dayton Pump & Mfg Co
Deming Co
Erie Pump & Engine Works
Ezerite Pump & Mfg Co Inc
FLINT & WALLING MFG CO INC
Gardner Desser Co
HOMELITE CORPORATION
Lancaster Pump & Mfg Co Inc
McDonald (A Y) Mfg Co
Wayne Home Equipment Co
WORTHINGTON PUMP & MACHINERY CORP

► PUMPS, SUMP

American Well Works
Autora Pump Co
C H & E Mfg Co
Chicago Pump Co
CONSTRUCTION MACHINERY SALES CO
Dayton Pump & Mfg Co
Deming Co
Dempter Mill Mfg Co
Economy Pumps Inc Div Hamilton Thomas Corp
Ezerite Pump & Mfg Co Inc
Fairbanks Morse & Co
FLINT & WALLING MFG CO
Gould Pumps Inc
Jacuzzi Brothers Inc
JAEGER MACHINE CO
KENCO INC
Lancaster Pump & Mfg Co
WALL TOOL CO
McDonald (A Y) Mfg Co
MILWAUKEE FLUSH VALVE CO
Meyers (F E) & Brother Co
Oliver Co
Penberthy Injector Co
Pioppa Machine & Mfg Co
PRECISION PARTS CORP
Red Jacket Mfg Co
Timfrow Mfg Co
Wayne Home Equipment Co Inc
WORTHINGTON PUMP & MACHINERY CORP

► PUMPS, WINDMILL

Armstrong Co
Raker Mfg Co
Butler Co
Deming Co
Dempter Mill Mfg Co
Fairbanks Morse & Co
FLINT & WALLING MFG CO INC
McDonald (A Y) Mfg Co
Meyers (F E) & Brother Co
Red Jacket Mfg Co

► PUNCHES, CENTER

American Swiss File & Tool Co
Baltimore Tool Works
Bridgport Hardware Mfg Corp
Cincinnati Tool Co
Crescent Tool Co
Danaeros Steel Products Corp
Dew (C) & Co Inc
Fairmount Tool & Forging Co
Heller Brothers Co
Krauster & Co Inc
Maplow Steel Products Inc
Mendota Tool Co
Millers Falls Co
Original Swabros Co
P & C Hand Forged Tool Co
Proto Tool Co
Ralston Tools
STANLEY WORKS
Trimble & Plink Mfg Co
Tulco Tool Co
United Wire Goods Mfg Co
Widow Drop Forge & Tool Co

► PURLINE, STEEL

Macomber Inc

► PUTTY, LEAD

Riddle Co
Cook Paint & Varnish Co
Eagle-Fisher Co
Gumputite Laboratories
Kobis (H B Fred)
Peoria Paint Co
PITTSBURGH PLATE GLASS CO
Sullivan Co
Tanna Industries Inc

► PUTTY, METAL SASH

Armstrong Co
Riddle Co
Blue Ridge Tale Co Inc
Briggs-Mannoy Co Inc
Devoe & Reynolds Inc
Dick-Pontius Co
Dunley Brothers
Felton Sibley & Co
Fort Pitt Chemical Co
Gumputite Laboratories
Landon Putty Works
MACLACRURG-DUNCAN CO
Mar-Kay Mfg Co
Parler (Ira) & Sons Inc
Peoria Paint Co
Plastic Products Co
Smooth-On Mfg Co
Stevolite Mfg Co

► PUTTY, OIL

Armstrong Co
Riddle Co
Blue Ridge Tale Co Inc
Boyle-Midway Inc
Briggs-Mannoy Co
Christy Co Inc
Devoe & Reynolds Inc
Dick-Pontius Co
Durban (Donald) Co
Ezer-Plastic Corp
Farwell Oilman Kirk & Co
Felton Sibley & Co
FLITKE CO
Fort Pitt Chemical Co
Fuller (W F) & Co
Glidden Co
Goodrich (B F) Co
Gumputite Laboratories
Harris Inc
Horn (A C) Co
JOHNS-NARVILLE CORP
King (E B Fred)
Landon Putty Works
Loo-Slik Mfg Co
Lubben Co Inc
MACLACRURG-DUNCAN CO
Mar-Kay Mfg Co
Minnesota Lignum Oil Paint Co
Palco Products Inc
Parler (Ira) & Sons Inc
Peoria Paint Co
PITTSBURGH PLATE GLASS CO
Plastic Products Co
Saugan Co
Selkirk Chemical Co
Seal Rite Caulking Co Inc
Stevolite Mfg Co
Sullivan Co
Tanna Industries Inc
Trenon Mfg Co
Trucon Laboratories Div Dewar & Reynolds Inc
Wild Products Co
Wetherill (George D) & Co

► PUTTY, PLASTICIZED, WOOD

Boyle-Midway Inc
Breinig Brothers Inc
Lubben (G W) Mfg Co
Mobile Paint Mfg Co
National Cabin Sales
Selkirk Chemical Co
Stevolite Mfg Co
Technical Supply Co
William Products Co

► PUTTY REMOVERS, ELECTRIC

Fletcher Terry Co

► PUTTY, ROOF

Abeito Mfg Corp
Riddle Co
Blue Ridge Tale Co Inc
Ford Roofing Products Co
JOHNS-NARVILLE CORP
King (E B Fred) & Co Inc
Seal Rite Caulking Co Inc
Smooth-On Mfg Co
Stevolite Co

► PUTTY, WATER

Boyle-Midway Inc
Durban (Donald) Co
Fort Pitt Chemical Co
Fuller (H B) Co
Lubben Co Inc
Saugan Co
Selkirk Chemical Co
Shell-Brown Paint Corp
Stevolite Mfg Co
Sullivan Co
Tanna Industries Inc

► RACEWAYS, WIRE CARRYING

AMERICAN TELEPHONE & TELEGRAPH CO
Knox Brothers Mfg Co
REPUBLIC STEEL CORP

► RACKS, BARREL DRAINING

Netting Truck & Caster Co

► RACKS, FIRE HOSE

Allen (W D) Mfg Co
Brall Fire & Tank Corp
Elkhart Brass Mfg Co
Wirt & Ross Mfg Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

► RACKS, PIPE

Finch & McIlwain
Multi-Products Inc
Precision Equipment Co
Red Tiger Products Inc

► RACKS, REVOLVING, FOR DOORS, PANELS, ETC

Ken-Bo-Bill Corp

► RACKS, SCREEN WIRE

Arvey Corp
Easy Serve Screen Dispenser
Heller (W C) & Co
Marvel Rack Mfg Co
Pocosen Metal Products Co
Brown
Watz Brothers

► RACKS, SHOE

American Metal Specialties Corp
Carlson (A B) & Co
Imperial Metal Mfg Co
Kennedy Co
Knappe & Vogt Mfg Co
Forslen Novelty Co

► RACKS, STORAGE, STORM WINDOWS AND SCREENS

Barber Mfg Co Inc

► RACKS, STORE DISPLAY

American Woodworking Co
Aurora Equipment Co
Rest (John H) & Sons
Equipe Div Aurora Equipment Co Inc
Heller (W C) & Co
Ken-Bo-Bill Corp
Larson (Charles O) Co
Lyon Metal Products Inc
Marvel Rack Mfg Co Inc
Multiplex Concrete Merchants Co
National Guard Products
Precision Equipment Co
Red Tiger Products Inc
Reese (Hiram H) Co
Refecter Hardware Corp
Revo
Universal Equipment Co
Warren (J D) Mfg Co

► RACKS, WINDOW GLASS

Heller (W C) & Co
Marvel Rack Mfg Co Inc
Universal Equipment Co

► RADIATORS

AMERICAN RADIATOR & STANDARD SANITARY CORP
BURNHAM CO BOILER DIV
Heater Radiator Corp
NATIONAL RADIATOR CORP
U S Radiator Corp
Thera Radiator Corp
VULCAN RADIATOR CO
YOUNG RADIATOR CO

► RADIATORS, CONVECTOR

Fedders Quigan Co
Rome-Turney Radiator Co

► RADIATORS, PORTABLE

Acme Electric Heating Co
Electric Steam Radiator Corp
Morton (Henry J) Associates Inc
Rentry Metal Products Div Rentry Control Corp

► RADIOS, FLUSH WALL

Bendix Radio Div Bendix Aviation Corp
FLUSH WALL RADIO CO

► RAFTERS, LAMINATED

AMERICAN ROOF TRUSS CO
INLAND STEEL PRODUCTS CO
Knappe Brothers Mfg Co
BILCO LAMINATED PRODUCTS INC
Super-Structures Inc
Tremco Lumber Fabricating Co
TIMBER STRUCTURES INC
Unit Structures Inc
WEYERHAEUSER SALES CO
Wellington Steel Corp
Eink (Frank J)

► RAILINGS, METAL

Armed Drainage & Metal Products Inc
ARTCRAFT ORNAMENTAL IRON CO
Beilinson Co
Belion Mfg Co
BLUM (JULIUS) CO INC
Buffalo Wire Works Co
Central Products Co
CHASE BRASS & COPPER CO
CINCINNATI IRON FENCE CO
COFFMAN (H C) CO
Columbus Brass Co
Davis & Shiel Co
Dezinger Iron & Steel Co
Des Moines Ornamental Iron Co

FAWCO MFG DIV FALLS STAMPING & WELDING CO

Fisher J W Iron Works
GENERAL BRONZE CORP
Grand Rapids Wire Products Co
Hawkins Iron Co Inc
Hutchinson Co
International Steel Co
Kentucky Metal Products Co
Laska Mfg Co
Logan Co
METAL CRAFTERS
Moyns (Fred J) Mfg Co
Newman Brothers Inc
Pipe Steel & Wire Div American Chain & Cable Co Inc
Samcoe (Wm J) Iron Co
Smith (F P) Wire & Iron Works
Southern Wire & Iron Works
Standard Bronze Co
Stewart Iron Works Co Inc
Valley Metal Products
Vulcan Metal Products Co
Wiemann (Ernest) Iron Works

► RAILINGS, WOOD

ARGL NOVELTY CO
CARR ADAMS & COLLIER CO
Cole Mfg Co
CROSSETT LUMBER CO
CURTIS CO INC
Farley & Loetscher Mfg Co
Fordyce-Creswell Lumber Co
Frost Lumber Industries Inc
Keystone Frame & Mfg Co
Krona Pine Mills Co
LONG-BELL LUMBER CO
Marquart Millwork Co
Morgan Co
Rock Island Millwork Co
Willanette Valley Lumber Co

► RANGES, ELECTRIC, BUILT IN

Thermador Electrical Mfg Co

► RANGES, ELECTRIC

A B Stone Co
Admiral Corp
America & Southern Corp
Benjamin Electric Co
Cavalier Corp
CROSLEY DIV AVCO MFG CORP
Detroit Michigan Stone Co
Detroit Vapor Stone Div Borg-Warner Corp
Estate Stone Co Div Noma Electric Co
Evolution Stone & Mfg Co
Firestone Stone Co
Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO APPLIANCES & MERCHANDISE DEPT
Gibson Electric Refrigerator Corp
Gray & Dudley Co
HOTPOINT INC
Kalamazoo Stone & Furnace Co
KELVINATOR DIV HASH-KELVINATOR CO
Kennedy Co
Lauders Fray & Clark
Ludemann (A J) & Hoover Co
Malleable Iron Range Co
Monitor Equipment Corp
Montag Stone & Furnace Works
Murray Corp of America
NORGE DIV BORG-WARNER CORP (APPLIANCE DIV)
Perfecton Stone Co
Philco Corp
Pentwin Washers Products Co
Prested Steel Co
Roberts & Mander Corp
Rubenzer Electric Co Inc
Thermador Electrical Mfg Co
WESTINGHOUSE ELECTRIC CORP

► RANGES, GAS

A B Stone Co
America & Southern Corp
American Stone Company
Anderson Stone Co Inc
Birmingham Stone & Range Co
Caloric Gas Stone Works
Cavalier Corp
CHAMBERS CORP
Cribben & Sexton Co
CROSLEY DIV AVCO MFG CORP
Crown Stone Works
Detroit Michigan Stone Co
Detroit Vapor Stone Div Borg-Warner Corp
Egton Stone & Oven Co Div Acme Viable Records Inc
Empire Stone Co
Estate Stone Co Div Noma Electric Co
Eureka Products Corp
Evolution Stone & Mfg Co
Lawrence Stone Co
Gem City Stone Mfg Co
GENERAL AIR CONDITIONING CORP
Hardswick Stone Co
Graham (James) Mfg Co
Karr Range Co
Ludemann (A J) & Hoover Co
Majestic Mfg Co
Malleable Iron Range Co
Monitor Equipment Co
Mt Vernon Furnace & Mfg Co
Murray Corp of America
NORGE DIV BORG-WARNER CORP (APPLIANCE DIV)

Orlin Stone Mfg Co
O'Keefe & Merrill Co
Paragon Utilities Corp
Perfecton Stone Co
Prestwin Washers Products Co Inc
Renown Stone Co
Roberts & Mander Corp
Bower (George D) Corp
Sexton (S B) Stone & Mfg Co
Tappan Stone Co
Utility Appliances Corp
Washington Stone Works
Weilbit, Stone Company Inc
Western-Holly Appliances Co
Western Stone Co

► RANGES, GAS & ELECTRICAL REFRIGERATOR COMBINATION

Arm-National Refrigeration Co
GENERAL AIR CONDITIONING CORP

► RANGES, WOOD & COAL

Excelsior Stone & Mfg Co
King Stone & Range Co
Majestic Mfg Co
Malleable Iron Range Co
Washington Stone Works

► RATCHETS, FENCE

Cyclone Fence Div American Steel & Wire Co
Nertling Foundry Co
Wrightsville Hardware Co

► RECEIVERS, GARBAGE

Arvey Corp
BRISTWICK STEEL LATH CO
Dunley Brothers Co
Galriel Steel Co
Gendry Fanshawe & Fry Co
KEWANE MFG CO
Kraus (Walter S) Co
LAWSON (F H) CO
MAJESTIC CO
National Enameling & Stamping Co
Northwest Metal Products Inc
Witt Cornice Co

► RECEIVERS, PACKAGE

AIR CONTROL PRODUCTS INC
Allen Steel Products
BRISTWICK STEEL LATH CO
COPCO STEEL & ENGINEERING CO
CORBIN CABINET LOCK DIV AMERICAN HARDWARE CORP
Dunley Brothers Co
Excel Metal Cabinet Co Inc
Galriel Steel Co
Harris Inc
INLAND STEEL PRODUCTS CO
MAJESTIC CO

► RECEIPTS, GARBAGE, ASH

American Can Co
Boyle Mfg Co
Cincinnati Galvanizing Co
Cupples Co
Dunley Brothers
Gendry Fanshawe & Fry Co
Houston Pipe & Sheet Metal Works
Justice Mfg Co
Madwell Mfg Co
Majestic Can Corp
Master Metal Products Co
Nesco
Northwest Metal Products Inc
Pacira Metal Specialties Co
Precision Equipment Co
Puritan Chemical Co
Reese Steel & Mfg Co
Sanitary Receiver Co Inc
Sexton Can Co
Wheeling Corrugating Co
Witt Cornice Co

► RECEPTACLES, GARBAGE, ASH

American Can Co
Boyle Mfg Co
Cincinnati Galvanizing Co
Cupples Co
Dunley Brothers
Gendry Fanshawe & Fry Co
Houston Pipe & Sheet Metal Works
Justice Mfg Co
Madwell Mfg Co
Majestic Can Corp
Master Metal Products Co
Nesco
Northwest Metal Products Inc
Pacira Metal Specialties Co
Precision Equipment Co
Puritan Chemical Co
Reese Steel & Mfg Co
Sanitary Receiver Co Inc
Sexton Can Co
Wheeling Corrugating Co
Witt Cornice Co

► REELS, GARDEN HOSE

Craze Sales Corp
Lewis Engineering & Mfg Co
True Tempco Corp
Zuerden Mfg Co

► REFRIGERATORS, ELECTRIC

Admiral Corp
Amana Society
Coolerator Corp
Cresland Refrigerators
CROSLEY DIV AVCO MFG CORP
Dunfrees Div Motor Products Corp
Dexter Co
Estate Stone Co Div Noma Electric Co
Friedrich (Ed) Inc
Frigidaire Div General Motors Corp
GENERAL AIR CONDITIONING CORP
GENERAL ELECTRIC CO APPLIANCES & MERCHANDISE DEPT
General Implement Corp
General Refrigerator Corp
Gibson Electric Refrigerator Corp
Gibllian Brothers Inc

HOTPOINT INC
Jordan Refrigerator Co
KELVINATOR DIV HASH-KELVINATOR CO
King Refrigerator Corp
LEESON STEEL FRIGIDS INC
Ludemann (A J) & Hoover Co
Medway Inc
Monitor Equipment Corp
NORGE DIV BORG-WARNER CORP (APPLIANCE DIV)
O'Keefe & Merrill Co
Philco Refrigerator Co
Potter Refrigerator Corp
Prested Steel Co
Refrigeration Sales Co
Seeger Refrigerator Co
Ward Refrigerator & Mfg Co
WESTINGHOUSE ELECTRIC CORP

► REFRIGERATORS, GAS

Serrel Inc

► REGISTERS, HEATING AND VENTILATING

AIR CONTROL PRODUCTS INC
American Foundry & Furnace Co
Auror Register Co
BENNETT-IBELAND INC
Excelsior Stone & Mfg Co
Forest City Foundry Co
Hart & Colley Mfg Co
HEATILATOR CO
INLAND STEEL PRODUCTS CO
Krauser-Boyd Inc
Liberty Foundry Co
MAJESTIC CO
Parlor (S) Hardware Mfg Corp
Philadelphia Hardware & Malleable Iron Works
Standard Steel Cabinet Co
Tuttle & Bailey Inc
U S Register Co

► REPELLENTS, BIRD

Nixalite Co of America

► REPELLENTS, INSECT

All-Nu Products Co
Calomet Bedding Co
Glidden Co
Nosem Oil Co
Socony-Vacuum Oil Co Inc

► REPELLENTS, WATER

American Lumber & Treating Co
Anwar Laboratories
Chapman Chemical Corp
CONCOR PAINT CO
Ives Chemical Co
Du Pont (E I) de Nemours & Co Inc
Flexrock Co
Horn (A C) Co Inc
Mourne Co Inc
Monsanto Chemical Co
PROTECTION PRODUCTS MFG CO
Rock Island Millwork Co
Standard Dry Wall Co
Spray-O-Spray Co
Trueman Laboratories Div Deane & Reynolds Inc
Vita-Vac Co
Wood-Treating Chemicals Co
WURDACK CHEMICAL CO

► RESIN, SYNTHETIC

BARETT DIV ALLIED CHEMICAL & DYE CORP
Borden Co Chemical Div
Deane & Reynolds Inc
Du Pont (E I) de Nemours & Co
Firestone Plastics Co
Fuller (H B) Co
Industrial Chemical Sales Div West Virginia
Pulp & Paper Co
MENGEL CO
Monite Waterproof Gln Co
Monsanto Chemical Co Plastics Div
National Caser Sales
Paisley Products Inc
Perkins Gln Co
PITTSBURGH PLATE GLASS CO
Pico Div Paisley Products Inc
Reilly Tar & Chemical Corp
Resinone Products & Chemical Co
Bolin Har Co
U S PLYWOOD CORP
U S Rubber Co

► RIVETS

CHASE BRASS & COPPER CO
WASSALL (JOHN) INC
Sterling Bolt Co

► RODDING MACHINES

Whitman Mfg Co

► RODS, CURTAIN

Bone (Jacob H) Mfg Co
Kirsch Company
Paramount Pipe Co Inc
Youngstown Mfg Inc

► RODS, LIGHTNING

American Lightning Rod Co Inc
Boston Lightning Rod Co
Brown Lightning Protection System
Burrlet Lightning Rod Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

Dooley Lighting Rod Co
Electra Protection Co Inc
Independent Protection Co Inc
Moore Bros Lighting Rod Co
National Lightning Protection Co
Ohio Lightning Rod Co
Robbins Lightning Protection Co
Strawser & Johnson Inc
Thompson (George E) Co
West Dodd Lightning Conductor Corp

▶ RODS & RINGS, SHOWER CURTAIN

Keystone Bram & Rubber Co
Mueler Co
Sewell Mfg Co
Speasman Co

▶ ROLLERS, LAWN

Boyle Mfg Co
Jackson Mfg Co
Lansing Co
Ohio Machine Products Co
Whitehurst (H W) Mfg Corp

▶ ROLLERS, LINOLEUM

ARMSTRONG COOK CO BUILDING MATERIALS DIV
Lansing Co
SELCK (WALTER E) & CO

▶ ROLLERS, LUMBER, CAR DOOR

American Logging Tool Co
Buck (Frank E) & Co
Leach Co
Nolan Co
Brenco
Schuchardt (Arnold J)

▶ ROLLERS, LUMBER, LIFT, TRUCK

Collins Lorimer Murphy Lumber Co
Myster Co
Rom Carrier Co
Stewart Co

▶ ROLLERS, POWERED

Bush Mfg Co
Essick Mfg Co
Weyer Impactor Inc

▶ ROLLERS, TRUCK BED

Fruehauf Trailer Co
B-B Company
Stimmel Winch Co
Westworth & Irwin Inc

▶ ROLLS, RIDGE, ROOF VENTILATING

Allen Steel Products
INLAND STEEL PRODUCTS CO
Klauer Mfg Co
ST PAUL CORRUGATING CO

▶ ROLLS, ROOF RIDGE

Alabama Metal Lath Co
Allen Steel Products
Badger Corrugating Co
Berger Mfg Div Republic Steel Corp
Bethlehem Steel Co
BIRD & SON
CECO STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Continental Steel Corp
Edwards Mfg Co
FLINTKOTE CO
Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
JOHNS-MANVILLE CORP
KEASBEY & WATTISON CO
Klauer Mfg Co
La Crosse Steel Roofing & Corrugating Co
Mid-States Steel & Wire Co
New Holland Metals Co
NICHOLS WIRE & ALUMINUM CO
Northern Metal Products Inc
Penn Supply & Metal Corp
REPUBLIC STEEL CORP
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUBERDID CO
ST PAUL CORRUGATING CO
Southern States Iron Roofing Co
TENNESSEE COAL IRON & RAILROAD CO
Wheeling Corrugating Co
Williams-Wallace Co

▶ ROOF SADDLES

Hudson (H D) Mfg Co
INLAND STEEL PRODUCTS CO
Macomb Steel Products Co
Meehan Steel & Mfg Co

▶ ROOFING, ALUMINUM

Aluminum Co
Aluminum Co of America
CECO STEEL PRODUCTS CORP
Chemical Supply Co
Cupples Co

KAISER ALUMINUM & CHEMICAL SALES INC
National Aluminum Products Co
New Holland Metals Co
NICHOLS WIRE & ALUMINUM CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Southern States Iron Roofing Co
Tiffin Art Metal Co

▶ ROOFING, ALUMINUM, CORRUGATED

Aluminum Co of America
CECO STEEL PRODUCTS CORP
Cupples Co
New Holland Metals Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Southern States Iron Roofing Co

▶ ROOFING, ASBESTOS CEMENT

CAREY (PHILIP) MFG CO
Elbert Magnesia Mfg Co
FLINTKOTE CO
JOHNS-MANVILLE CORP
KEASBEY & WATTISON CO
Logan-Long Co
Pabco Products Inc
RUBERDID CO
Seaboard Plastics Corp
Superdior Corp

▶ ROOFING, ASBESTOS CORRUGATED

ASBESTONE CORP
CAREY (PHILIP) MFG CO
FLINTKOTE CO
JOHNS-MANVILLE CORP
KEASBEY & WATTISON CO
RUBERDID CO

▶ ROOFING, ASPHALT ROLL

Amalgamated Roofing Co
American Asphalt Roof Corp
BARRETT DIV ALLIED CHEMICAL & DYE CO
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELETEX CORP
CERTAIN-TEED PRODUCTS CO
FLINTKOTE CO
Ford Roofing Products Co
Glenn Roofing Products Co Inc
Gold Seal Roofing Co
JOHNS-MANVILLE CORP
Koppers Co Inc
Lehon Co
Logan-Long Co
NATIONAL MFG CORP
Nelson (S F) Mfg Co
Pabco Products Inc
PROTECTIVE PAPERS INC
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUBERDID CO
Tampo Asphalt Products Inc
TEXAS CO
U S Gypsum Co

▶ ROOFING, BUILT-UP, MATERIALS FOR

Asbesto Mfg Corp
Aluminum Building Products
American Asphalt Roof Corp
BARRETT DIV ALLIED CHEMICAL & DYE CO
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELETEX CORP
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
Ford Roofing Products Co
JOHNS-MANVILLE CORP
Koppers Co Inc
Lehon Co
New Holland Metals Co
OWENS-CORNING FIBERGLAS CORP
Rely-Tar & Chemical Corp
REYNOLDS METALS CO
RUBERDID CO
U S Gypsum Co

▶ ROOFING, CONCRETE SLAB

Cementstone Co
Price Brothers Co

▶ ROOFING, COPPER

American Brass Co
CECO STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Edwards Mfg Co
Honey (C G) & Co
INLAND STEEL PRODUCTS CO
Revere Copper & Brass Inc

▶ ROOFING, SEALERS, CORRUGATED

Fabricated Products Co
SERVICISED PRODUCTS CORP

▶ ROOFING, STEEL

Aluminum Co of America
AMERICAN STEEL & WIRE CO
Armed Steel Corp
Berger Mfg Div Republic Steel Corp
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Chemical Supply Co
Chesney Industries
Childers Mfg Co
Cincinnati Steel Metal & Roofing Co
COLUMBIA STEEL CO
Continental Steel Corp
Cupples Co
Edwards Mfg Co
FENESTRA BUILDING PRODUCTS
FOLLANSBEE STEEL CORP
Gary-Pioneer Steel Corp
Granite City Steel Co
Goldsmith Metal Lath Co
Hopson (W C) Co
Illinois Zinc Co
INLAND STEEL PRODUCTS CO
International Nickel Co
KAISER ALUMINUM & CHEMICAL SALES INC
Klauer Mfg Co
Lynn-Goskins & Co Inc
Mahon (R C) Co
Mid-States Steel & Wire Co
New Holland Metals Co
NICHOLS WIRE & ALUMINUM CO
Revere Steel & Mfg Co
REPUBLIC STEEL CORP
Revere Copper & Brass Inc
REYNOLDS METAL CO BUILDING PRODUCTS SECTION
ST PAUL CORRUGATING CO
Stout Steel Co
Southern States Iron Roofing Co
TENNESSEE COAL IRON & RAILROAD CO
Tiffin Art Metal Co
TRUSCON STEEL CO
United States Steel Co
Wheeling Corrugating Co

▶ ROOFING, STEEL, ASPHALT COATED

AMERICAN STEEL & WIRE CO
Chesney Industries
Flanzer Products Co

▶ ROPE, COTTON

Archer (A W) Co Inc
Astrup Co
Bibb Mfg Co
Fricke (J E) Co
Graham (John H) & Co Inc
Lambeth Rope Corp
Puritan Cordage Mills
Rancher Mfg Co Inc
SAMSUN CORDAGE WORKS
Southern Mills Corp
Turner & Stanton Co
Whittaker (William D)

▶ ROPE, HEMP, MANILA & SISAL

American Ladder Co
American Mfg Co
American Tent & Awning Co
Archer (A W) Co
Astrup Co
Broderick & Bascom Rope Co
Cating Rope Works Inc
Columbian Rope Co
Cupples Co
Filler (Edwin H) Co
Graham (John H) & Co
Hoffman Lion Mills Inc
Hooking Paper Co
Johnson-Pickett Rope Co
New Bedford Cordage Co
Plymouth Cordage Co
Lambeth Rope Corp
Ramschberger (John) Co
St Louis Cordage Mills
SAMSUN CORDAGE WORKS
Tobias Cordage Co
Turner & Stanton Co
Wall Rope Works Inc
Waterbury Rope Co
Whittaker (William B)
Whittaker Cordage Co

▶ ROPE, WIRE

American Cable Div American Chain & Cable Co Inc
AMERICAN STEEL & WIRE CO U S STEEL CORP SUB
Bethlehem Steel Co
Broderick & Bascom Rope Co
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Hazard Wire Rope Div American Chain & Cable Co
MacWhirte Co
Roebbing's (John A) Sons
TENNESSEE COAL IRON & RAILROAD CO
Upson-Walton Co

▶ ROUTERS, ELECTRIC HOME-CRAFT

Chicago Wheel & Mfg Co
CUMMINS PORTABLE TOOL DIV CUMMINS-CHICAGO CORP

Dunmore Co
Duro Metal Products Co
Hurricane Machine Works
PORTER-CABLE MACHINE CO
STANLEY ELECTRIC TOOL DIV STANLEY WORKS
WALKER-TURNER CO DIV KEARNEY & TERCKER CO

▶ RULES, BOARD LUMBER-MEN'S

Buck (Frank E) & Co
Lufkin Rule Co
STANLEY TOOLS DIV STANLEY WORKS

▶ RULES, BOXWOOD

Lufkin Rule Co

▶ RULES, FOLDING

Distagon (Eugene) Co
Eagle Rule Mfg Corp
Economy Novelty & Printing Co
EVANS & ESSER CO
Glaziers' Tool Mfg Co
International Twist Drill Corp
KEUFFEL & ESSER CO
Lufkin Rule Co
Master Rule Mfg Co Inc
STANLEY TOOLS DIV STANLEY WORKS
Starrett (L S) Co
Woodmark Industries Inc

▶ RULES, SLIDE

Academic Slide Rule Co
Distagon (Eugene) Co
KEUFFEL & ESSER CO
Lawrence Engineering Service
Multi-Aid Computer Corp
Pickett & Reel
Union Tool Co

▶ RULES, STEEL

Brown & Sharpe Mfg Co
CARLSON & SULLIVAN
Eagle Rule Mfg Corp
Economy Novelty & Printing Co
EVANS & ESSER CO
KEUFFEL & ESSER CO
Lufkin Rule Co
Master Rule Mfg Co Inc
Millers Falls Co
Ox-Wall Tool Co
RBE (JUSTUS) & SONS
Shed-Brown Mfg Co
STANLEY TOOL DIV STANLEY WORKS
Starrett (L S) Co
Union Tool Co
Woodmark Industries Inc

▶ SAFES

Dierhold Inc
General Fireproofing Co
Herring-Hall Marvin Safe Co
McCracken Register Co
Moser Safe Co
York Safe & Lock Co

▶ SAFES, BUILT-IN WALL

Dierhold Inc
Dudley Lock Corp
Gabriel Steel Co
Hollink Steel Safe Co
Moser Safe Co
REMINGTON BAND INC

▶ SALAMANDERS

Acroll Products Co
American Steel Works
DANIELS (C B) INC
Dinner (George W) Mfg Co
Donley Brothers
Jackson Mfg Co
Mohawk Asphalt Heater Co
Ohio Howe Co
Unico Mfg Co Inc

▶ SAND, SILICA WHITE

Crystal Silica Co
Yuma Industries Inc

▶ SANDERS, BELT, DRUM, SPINDLE & DISC

Bush Mfg Co
BLACK & BECKER MFG CO
BOICE-CRANE CO
Chicago Pneumatic Tool Co
Curtis Machine Corp
Eaton-Carlson & Co
Heis Mfg Co
INDEPENDENT PNEUMATIC TOOL CO
MALL TOOL CO
MILWAUKEE ELECTRIC TOOL CORP
Minnesota Machine & Tool Co
National Air Sander Inc
Newman Brothers Inc
Oliver Machinery Co
PORTER-CABLE MACHINE CO
Red-Way Inc

Manufacturers' Names and Addresses Start on Page D-76
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ROCKWELL MFG CO DELTA POWER TOOL DIV
SKILSAW INC
STANLEY WORKS TOOL DIV STANLEY WORKS
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP
WALLACE (J D) & CO
Yates-American Machinery Co

▶ SANDERS, ELECTRIC, PORTABLE

AMERICAN FLOOR SURFACING MACHINE CO
ATLAS PRESS CO
BLACK & DECKER MFG CO
BRADFORD MACHINE TOOL CO
Chicago Pneumatic Tool Co
Clark Sanding Machine Co
CONSOLIDATED MACHINERY & SUPPLY CO
Detroit Surfacing Machine Co
DREMEL MFG CO
General Floor Craft Inc
Hilger Co
INDEPENDENT PNEUMATIC TOOL CO
Jitterbug Sander Co
Kent Co Inc
MALL TOOL CO
Metric Products Inc
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
PITTSBURGH PLATE GLASS CO
PORTER-CABLE MACHINE CO
Portable Electric Tools Inc
RED DEVIL TOOLS
ROCKWELL MFG CO DELTA POWER TOOL DIV
SKILSAW INC
Speedway Mfg Co
STANLEY TOOLS DIV STANLEY WORKS
Sterling Tool Products Co
SYNTRON CO

▶ SANDERS, FLOOR

Albertson & Co Inc
AMERICAN FLOOR SURFACING MACHINE CO
Atlas Floor Surfacing Machinery Corp
Clark Sanding Machine Co
Detroit Surfacing Machine Co
DREMEL MFG CO
Flintstone Bldg Co
General Floor Craft Inc
Hilger Co
Holt Mfg Co
Lincoln-Schubert Floor Machinery Co Inc
MALL TOOL CO
RED DEVIL TOOLS
Red Way Corp
ROCKWELL MFG CO DELTA POWER TOOL DIV
SKILSAW INC
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP

▶ SASH BALANCES

Arms Sash Balance Co
Air-Tite Window Stay Co
ALMETAL WEATHERSTRIP CO
Aluminum Window Corp
Aron Mfg Co Inc
CALDWELL MFG CO
Indiana Metal Weatherstrip Co
Dorbin Metal Strip Mfg Co
Duplex Inc
Foley (W B) Mfg Co
GENERAL BRONZE CORP
Grand Rapids Hardware Co
Ideal Beam Works Inc
Industrial Iron Works
Leiden Specialty Co
MASTER METAL STRIP SERVICE CO
Milwaukee Stamping Co
NATIONAL LOCK CO
Proter Weatherstrip Mfg Co
Pullman Mfg Co
Robbins Mfg Co
Rock Island Millwork Co
Samson Products Co
Schumacher (F E) Co
Star Sash Balance Corp
TURNER & SEYMOUR MFG CO
UNIQUE BALANCE CO INC
Warrior Products
WEATHERPROOF PRODUCTS CORP
Western Foundry Co
ZEGERS INC

▶ SASH CORD, FIBER

Archer (A W) Co Inc
F-amine Cordage Co
Cleveland Mill & Power Co
Coples Co
Frick (J E) Co
Graham (John H) & Co Inc
Highland Cordage Co
Hoffman Lion Mills Co Inc
Hooper (William E) & Sons Co
Fortran Cordage Mills
Rauscher Mfg Co
Rock Island Millwork Co
Rocky Mount Cord Co
SANSON CORDAGE WKS
Silver Lake Co
Southern Mills Corp
Whittier Mills Co

▶ SASH CORD, WIRE

AMERICAN STEEL & WIRE CO
Baltimore Steel Co
Colorado Fuel & Iron Corp
MacPherson Co
Parker (S) Hardware Mfg Corp

Borthing's (John A) Sons Co
Southern Mills Corp
Upton-Walton Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

▶ SASH & DOOR, CUT STOCK, PONDEROSA

Burke Millwork Co
Blum (Edmund) Lumber Co
Silbernagel (George J) & Sons Co
WEYERHAEUSER SALES CO

▶ SASH, GREENHOUSE

Burke Millwork Co
Cole Mfg Co
Metropolitan Greenhouse Mfg Corp
Morgan Co

▶ SASH HOLDERS

Arms Mfg Co
CORBIN (P & F) DIV AMERICAN HDWE CORP
Ideal Brass Works
Leiden Specialty Co
Rockford Sash Holder Inc
Roger Co Inc
Vicks (J N) Co Inc

▶ SASH WEIGHTS

Belmont Smelting & Refining Works Inc
Drummond Mfg Co
Grey Iron Casting Co
Industrial Iron Works
Janney & Co
Johnson & Jennings Co
National Lead Co
National Sash Weight Corp
Rock Island Millwork Co
Somerville Iron Foundry Co
Western Foundry Co
Western Foundry Co
Yonkers Sash Weight Corp

▶ SAW MILLS, MACHINERY FOR

ALLIS-CHALMERS MFG CO
American Sawmill Machine Co
American Woodworking Machine Co
BENNETT-INLAND INC
Chain Belt Co of Milwaukee
Champion Blower & Forge Co
Chase Turbine Mfg Co
Enterprise Co
Farguhar (A B) Co
Hyster Co
Industrial Iron Works
Mitts & Merrill
Tower (E J) Iron Works
Turner Mfg Co

▶ SAW REPAIRS AND ADJUSTMENTS

Atkins (E C) & Co
Chattanooga Saw Works
Corley Mfg Co
Cummins Machinery Corp
DISSTON (HENRY) & SONS INC
Hoe (R) & Co Inc
Huther Brothers Saw Mfg Co Inc
Lippert (E T) Saw Co
Miner (J H) Saw Mfg Co
Miner & Son Saw Works

▶ SAW SETS

Atkins (E C) & Co
Beaver Mfg Co
Corley Mfg Co
DISSTON (HENRY) & SONS INC
Hanchett Mfg Co
Hoe (R) & Co Inc
DISSTON (HENRY) & SONS INC
Huther Brothers Saw Mfg Co Inc
Millers Falls Co
Sandvik Saw & Tool Corp
SIMONDS SAW & STEEL CO
Smith (Reynour) & Son
STANLEY WORKS
Wardwell Mfg Co
Yates-American Machine Co

▶ SAW SWAGES & SHAPERS

Atkins (E C) & Co
Corley Mfg Co
DISSTON (HENRY) & SONS INC
Hanchett Mfg Co
Huther Brothers Saw Mfg Co Inc
Wardwell Mfg Co

▶ SAWS, BAND

ALLIS-CHALMERS MFG CO
American Woodworking Machine Co
Atkins (E C) & Co
ATLAS PRESS CO
BOICE-CRANE CO
Burton Saw Co
Capwell Mfg Co
Chattanooga Saw Works
C H & E Mfg Co

CONSOLIDATED MACHINERY & SUPPLY CO LTD

DISSTON (HENRY) & SONS INC
Duro Metal Products Co
Fay (J A) & Egan Co
Forsberg Mfg Co
Foster Mfg Co
Graham (John H) & Co Inc
Henton & Anderson Div St Paul Foundry & Mfg Co
Hoe (R) & Co Inc
Huther Brothers Saw Mfg Co Inc
Lippert (E T) Saw Co
Melanoughy Mfg Co
Millers Falls Co
Olsen-Bishop Mfg Co
Oliver Machinery Co
PARKS WOODWORKING MACHINE CO
ROCKWELL MFG CO DELTA POWER TOOL DIV
SIMONDS SAW & STEEL CO
Southern Saw Works
Surrett (L S) Co
Toolcraft Corp
WALKER-TURNER DIV KEARNEY & TRECKER CORP
WALLACE (J D) & CO
Woods (S A) Machine Co
Yates-American Machine Co

▶ SAWS, BENCH

American Woodworking Machine Co
Arcade Mfg Div Rockwell Mfg Co
Atkins (E C) & Co
ATLAS PRESS CO
Beach Mfg Co
BOICE-CRANE CO
C H & E Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO
Henton & Anderson Div St Paul Foundry & Mfg Co
Oliver Machinery Co
PARKS WOODWORKING MACHINE CO
ROCKWELL MFG CO DELTA POWER TOOL DIV
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP
WALLACE (J D) & CO
Wilson Saw Div Media Machine Works
Yates-American Machine Co

▶ SAWS, BUCKING

Atkins (E C) & Co
Cummins Machine Works
DISSTON (HENRY) & SONS INC
General Steel Warehouse Co Inc General Tool Div
HOWELITE CORP
Lewther (Harry A) Co
MALL TOOL CO
Mill & Mine Supply Co
Olsen-Bishop Co
Sandvik Saw & Tool Corp
SIMONDS SAW & STEEL CO

▶ SAWS, CHAIN, TREE FELLING & BUCKING, POWERED

Atkins (E C) & Co
Cummins Machine Works
DISSTON (HENRY) & SONS INC
General Steel Warehouse Co Inc General Tool Div
Hansen Machinery & Supply Co
HOWELITE CORP
Jacobs Power Saw Co
Lombard Governor Corp
Lewther (Harry A) Co
MALL TOOL CO
Mill & Mine Supply Inc
Ollawa Mfg Co
Reed-Prouton Corp
Valcan Iron Works Co
Witte Engine Works Div Oil Well Supply Co

▶ SAWS, CHAMFERING

Atkins (E C) & Co
Huther Brothers Saw Mfg Co
SIMONDS SAW & STEEL CO

▶ SAWS, CIRCULAR DADO

American Saw Mill Machinery Co
American Woodworking Machine Co
Atkins (E C) & Co
BOICE-CRANE CO
Chattanooga Saw Works
DEWALT INC
DISSTON (HENRY) & SONS INC
Fay (J A) & Egan Co
Hoe (R) & Co
Huther Brothers Saw Mfg Co
MALL TOOL CO
Master-Taper Co
MASTER WOODWORKING MFG CO
Media Machine Works Inc
Olsen-Bishop Co
PORTER-CABLE MACHINE CO
St Paul Foundry & Mfg Co
SIMONDS SAW & STEEL CO
Syracuse Alloy Metals Corp
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP
WALLACE (J D) & CO
Wilson Saw Div Media Machine Works
Yates-American Machine Co

▶ SAWS, CIRCULAR, INSERTED TOOTH

American Saw Mill Machinery Co
American Woodworking Machine Co
Atkins (E C) & Co
Chattanooga Saw Works
Corley Mfg Co
DE WALT INC
DISSTON (HENRY) & SONS INC
Hoe (R) & Co
Huther Brothers Saw Mfg Co
Lippert (E T) Saw Co
Miner (J H) Saw Mfg Co
Miner & Son Saw Works
Olsen-Bishop Co
PORTER-CABLE MACHINE CO
SIMONDS SAW & STEEL CO
Wieland Co
Yates-American Machine Co

▶ SAWS, CIRCULAR, SOLID TOOTH

Albertson & Co Inc
American Saw Mill Machinery Co
American Woodworking Machine Co
Atkins (E C) & Co
Beach Mfg Co
BOICE-CRANE CO
Chattanooga Saw Works
C H & E Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO LTD
Corley Mfg Co
DEWALT INC
DISSTON (HENRY) & SONS INC
Filer & Stowell Co
Hoe (R) & Co Inc
Holmes (E & B) Machinery Co Inc
Hutchinson Mfg Co
Huther Brothers Saw Mfg Co
Lippert (E T) Saw Co
Littmann Engineering Works
MALL TOOL CO
MASTER WOODWORKING MFG CO
Media Machine Works Inc
Miner (J H) Saw Mfg Co
Miner & Son Saw Works
Olsen-Bishop Co
PARKS WOODWORKING MACHINE CO
Power (L) & Co
PTI Inc
ROCKWELL MFG CO DELTA POWER TOOL DIV
St Paul Foundry & Mfg Co
Sandvik Saw & Tool Corp
SIMONDS SAW & STEEL CO
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP
WALLACE (J D) & CO
Wieland Co
Wilson Saw Div Media Machine Works
Yates-American Machine Co

▶ SAWS, COPING

Forsberg Mfg Co

▶ SAWS, CUTOFF, POWERED

American Woodworking Machine Co
Atkins (E C) & Co
Beach Mfg Co
BOICE-CRANE CO
Chattanooga Saw Works
C H & E Mfg Co
C H E Machinery Co
CONSOLIDATED MACHINERY & SUPPLY CO
Corinth Machinery Co
Corley Mfg Co
DEWALT INC
DISSTON (HENRY) & SONS INC
ERNIS SUPPLY CO
Fay (J A) & Egan Co
Forsberg Mfg Co
Frick Co
Henton & Anderson Div St Paul Foundry & Mfg Co
Hoe (R) & Co
Holmes (E & B) Machinery Co Inc
Huther Brothers Saw Mfg Co
Lippert (E T) Saw Co
Mattison Machine Works
Media Machine Works Inc
Olsen-Bishop Co
Oliver Machinery Co
PORTER (C O) MACHINERY CO
ROCKWELL MFG CO DELTA POWER TOOL DIV
St Paul Foundry & Mfg Co
Sandvik Saw & Tool Corp
SIMONDS SAW & STEEL CO
Stetson-Rock Machine Co
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP
WALLACE (J D) & CO
Wilson Saw Div Media Machine Works
Woods (S A) Machine Co
Yates-American Machine Co

▶ SAWS, FOLDING

GOLDBLATT TOOL CO

▶ SAWS, GROOVING

American Woodworking Machine Co
Atkins (E C) & Co
Beach Mfg Co
Chattanooga Saw Works
DEWALT INC
DISSTON (HENRY) & SONS INC
Fay (J A) & Egan Co
Hoe (R) & Co
Huther Brothers Saw Mfg Co
Miner Mfg Co

Manufacturers' Names and Addresses Start on Page D-76
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Ohlen-Bishop Co
SIMONDS SAW & STEEL CO
WALKER-TURNER CO DIV KEARNEY &
TRECKER CORP
WALLACE (J D) MFG CO
Wilson Saw Div Media Machine Works
Woods (B A) Machine Co
Yates-American Machine Co

▶ SAWS, HACK

Atkins (E C) Co
Bridgport Hardware Mfg Corp
Clumson Brothers
Consolidated Tool Works
Crescent Tool Co
DISTON (HENRY) & SONS INC
Forsberg Mfg Co
Graham (John H) & Co
K D Mfg Co
Lipe-Hollway Corp
Mephisto Tool Co
Millers Falls Co
Parler Mfg Co
Prota Tool Co
SIMONDS SAW & STEEL CO
Syracuse Alloy Metals Corp
Starratt (L S) Co
Tinton Mfg & Gun Co
United Wire Goods Mfg Co Inc
Victor Saw Works Inc
Wilson Hardware Mfg Co

▶ SAWS, HAND

Allyer Mfg Co
American Saw & Mfg Co
Atkins (E C) & Co
Cawwell Mfg Co
DISTON (HENRY) & SONS INC
GOLDBLATT TOOL CO
Graham (John H) & Co
Ohlen-Bishop Mfg Co
Pennsylvania Saw Corp
Rambold Saw & Tool Corp
SIMONDS SAW & STEEL CO

▶ SAWS, HOLE

BLACK & DECKER MFG CO
Circ Tool Co
DISTON (HENRY) & SONS INC
Millers Falls Co
Mitsner Mfg Co

▶ SAWS, JIG, POWERED

ATLAS PRESS CO
Beach Mfg Co
BAUCE-CRANE CO
DISTON (HENRY) & SONS INC
DREWEL MFG CO
Oliver Machinery Co
WALKER-TURNER CO DIV KEARNEY &
TRECKER CORP

▶ SAWS, MITER

American Woodworking Machine Co
Atkins (E C) & Co
BAUCE-CRANE CO
DEWALT INC
DISTON (HENRY) & SONS INC
Hoe (B) & Co
Huther Brothers Saw Mfg Co
MILWAUKEE ELECTRIC TOOL CORP
Ohlen-Bishop Co
PORTER CABLE MACHINE CO
SIMONDS SAW & STEEL CO
STANLEY TOOLS DIV STANLEY WORKS
WALKER-TURNER CO DIV KEARNEY &
TRECKER CORP
WALLACE (J D) & CO
Wilson Saw Div Media Machine Works

▶ SAWS, MULEY

Atkins (E C) & Co
Ohlen-Bishop Co
SIMONDS SAW & STEEL CO

▶ SAWS, PORTABLE ELECTRIC AMERICAN FLOOR SURFACING MACHINE

American Woodworking Machine Co
Atkins (E C) & Co
Beach Mfg Co
BLACK & DECKER MFG CO
BRADFORD MACHINE TOOL CO
Chicago Pneumatic Tool Co
CONSOLIDATED MACHINERY & SUPPLY CO
LTD
CUMMINS-CHICAGO CORP CUMMINS PORT-
ABLE TOOLS DIV
DEWALT INC
DREWEL MFG CO
Furnberg Mfg Co
Horton & Anderson
INDEPENDENT PNEUMATIC TOOL CO
MALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CO
Portable Electric Tools
PORTER-CABLE MACHINE CO
Reed-Frentice Corp
SKILSAW INC
Speed-Way Mfg Co
STANLEY ELECTRIC TOOLS DIV STANLEY
WORKS
T S Electrical Tool Co
Van Dorn Electric Tool Co
Victor Iron Works Co
WALLACE (J D) & CO

▶ SAWS, RADIAL

American Woodworking Machine Co
Beach Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO
CONSTRUCTION MACHINERY CO
CUMMINS-CHICAGO CORP CUMMINS PORT-
ABLE TOOLS DIV
DEWALT INC
Flex-Arm Mfg Co
Flexman Co
PORTER CABLE MACHINE CO
Red Star Products Inc
ROCKWELL MFG CO DELTA POWER TOOL
DIV
SKILSAW INC
WALKER-TURNER CO DIV KEARNEY &
TRECKER CORP
WALLACE (J D) & CO
Wilson Saw Div Media Machine Works

▶ SAWS, RIP

Atkins (E C) & Co
Beach Mfg Co
Chattanooga Saw Works
C H & E Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO
Cortey Mfg Co
Dependable Machine Co
DEWALT INC
DISTON (HENRY) & SONS INC
Fay (J A) & Egan Co
Furnberg Mfg Co
Greenlee Tool Co
Hoe (B) & Co
Huther Brothers Saw Mfg Co
Newman Machine Co
Oliver Machinery Co
SIMONDS SAW & STEEL CO
WALLACE (J D) & CO
Wilson Saw Div Media Machine Works
Yates-American Machine Co

▶ SAWS, SCROLL

ROCKWELL MFG CO DELTA POWER TOOL
DIV

▶ SAWS, SWING

American Woodworking Machine Co
Beach Mfg Co
C H & E Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO
Corinth Machinery Co
Cortey Mfg Co
DISTON (HENRY) & SONS INC
Fay (J A) & Egan Co
Filer & Stewart Co
Horton & Anderson Div St Paul Foundry &
Mfg Co
Hoe (B) & Co Inc
Holmes (E B) Machinery Co Inc
Lape Mfg Co
Newman Machine Co
Ohlen-Bishop Co
Oliver Machinery Co
ROCKWELL MFG CO DELTA POWER TOOL
DIV
Tanneville Works
Woods (B A) Machine Co
Yates-American Machine Co

▶ SAWS, TILTING ARBOR TABLE

American Woodworking Machine Co
Beach Mfg Co
BAUCE-CRANE CO
C H & E Mfg Co
CONSOLIDATED MACHINERY & SUPPLY CO
CONSTRUCTION MACHINERY SALES CO
DEWALT INC
ENNIS SUPPLY CO
Fay (J A) & Egan Co
Greenlee Tool Co
St Paul Foundry & Mfg Co
WALKER-TURNER CO DIV KEARNEY &
TRECKER CORP
WALLACE (J D) & CO
WHITNEY (BAXTER D) & SON INC
Yates-American Machine Co

▶ SAWS & CUTTING WHEELS

MASONRY

Atkins (E C) & Co
Clumson Mfg Co
CLIPPER MFG CO
ENNIS SUPPLY CO
EVEREADY BRUSHAW CO
Martin Fireproofing Co
Stone Machinery Co Inc
Victor Engineering Corp

▶ SCAFFOLDING, SCAFFOLDS, AND BRACKETS

Acme Scaffold Co Inc
Advance Equipment Mfg Co
Ajax Building Bracket Co
American Ladder Co
Amidon Sales Co
Anderson (John E) Co
Rabeck (W W) Co
Baker-Boss Inc
Bauer Mfg Co
Berg (John) Mfg Co
BLI-JAX CO

Dreyer Brothers Whiting & Co
Caster Mold & Machine Co
Clark (E B) Co
Conner Steel & Wire Co
Du-All Scaffold Bracket Co
Fletcher Bracket Co
Flint (A W) Co
Gabriel Steel Co
GOLDBLATT TOOL CO
Goshen Mfg Co
Holtman (F) Adjustable Scaffold Bracket Co
Holland Ladder & Mfg Co
Marvel Equipment
Michigan Ladder Co
Moulton Ladder Mfg Co
Newark Ladder & Bracket Co
PATENT SCAFFOLDING CO INC
PITTSBURGH PLATE GLASS CO
Pittsburg Mfg Co
Rich Ladder & Mfg Co
SAFWAY STEEL PRODUCTS
STEADFAST EQUIPMENT CO
STEEL SCAFFOLDING CO INC
Tilley (John B) Ladders Co Inc
Universal Manufacturing Corp
WAGNER MFG CO
Wilson-Albrecht Co
Woodenware Products Corp

▶ SCALES, BATCHING

Buffalo Scale Co
Butler Bin Co
Fairbanks Morse & Co
Howe Scale Co
Johnson (C S) Co

▶ SCALES, COUNTER

Barnes Products Inc
Colford Equipment Co
Dutton Scales Co
Deteco Scales Inc
Fairbanks Morse & Co
Hanson Scale Co
Howe Scale Co
Pelouze Mfg Co
Pons, Seale Mfg Co
Toledo Scale Co
Triner Scale & Mfg Co

▶ SCALES, HOPPER

Buffalo Scale Co
Butler Bin Co
Fairbanks Morse & Co
Fanning Mfg Co
Howe Scale Co
Johnson (C S) Co
Louden Machinery Co

▶ SCALES, MOISTURE CON- TENT, LUMBER

Colloid Equipment Co Inc
Detroit Scale Inc
Exact Weight Scale Co
Fairbanks Morse & Co
Grand Rapids Vapor Kiln
Moore Dry Kiln Co
Toledo Scale Co

▶ SCALES, PLATFORM, PORT- ABLE

American Scale Co
Deteco Scales Inc Div Jacobs Brothers Co
Fairbanks Morse & Co
Hanson Scale Co
Howe Scale Co
Johnson (C S) Co
Toledo Scale Co
YALE & TOWNE MFG CO MATERIALS
HANDLING DIV

▶ SCALES, TRUCK

American Scale Co
Rounded Scale & Machine Co
Buffalo Scale Co
Butler Bin Co
Fairbanks Morse & Co
Howe Scale Co

▶ SCRAPERS, FLOOR

Fletcher Terry Co
Heller Brothers Co
Holt Mfg Co
Hook Scraper Mfg Co
Millers Falls Co
RED DEVIL TOOLS
STANLEY TOOLS DIV STANLEY WORKS
Starratt (L S) Co

▶ SCRAPERS, FOOT

Deaton Iron & Steel Co
Eroz Mfg Co
Grey Iron Casting Co
Lawrence Brothers
RICHARDS-WILCOX MFG CO
Standard Brown Co

▶ SCRAPERS, PAINT

Bridgport Hardware Mfg Corp
Clarke Sanding Machine Co
Fletcher Terry Co
Heller Brothers Co

Hook Scraper Mfg Co
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS
STANLEY TOOLS DIV STANLEY WORKS

▶ SCRAPERS, POWERED

ALLIS-CHALMERS MFG CO
BUCYRUS-ERIE CO
Caterpillar Tractor Co
Cummins Engine Co Inc
WHITNEY (BAXTER D) & SONS INC

▶ SCRAPERS, WOOD

Atkins (E C) & Co
Blair's Panther Tool Co
DISTON (HENRY) & SONS INC
Fletcher Terry Co
Glenside Tool Mfg Corp
Heller Brothers Co
Lansom & Goodnow Mfg Co
Millers Falls Co
RED DEVIL TOOLS
Rambold Saw & Tool Corp
Warner Mfg Co

▶ SCREENS, METAL BASE

Alabama Metal Lath Co
Allen Steel Products
BESTWICK STEEL LATH CO
CECO STEEL PRODUCTS CORP
GETTY (H S) & CO INC
INLAND STEEL PRODUCTS CO
Knapp Brothers Mfg Co
NATIONAL GYPSUM CO
Penn Metal Co Inc
Richmond Screen & Filter Co Inc
STANLEY TOOL DIV STANLEY WORKS
TRUSCON STEEL CO
T S Gypsum Co
Wheeling Corrugating Co

▶ SCREEN WIRE STRETCHERS

FASTENER CORP
MARKWELL MFG CO

▶ SCREENING, INSECT WIRE

Arc Window Screen Co of America
Aluminum Co of America
American Brass Co
American Wire Fabrics Corp
Cambridge Wire Cloth Co
CECO STEEL PRODUCTS CORP
CRAGE BRASS & COPPER CO
Clark Wire & Supply Co
Clinton Wire Cloth Co
CURTIS COB INC
Cyclone Screen Div American Steel & Wire Co
Driver-Harris Co
Gibbert & Bennett Mfg Co
Hanover Wire Cloth Div Continental United
Industries Co Inc
Hellig Brothers Co
Jelliff (C O) Mfg Corp
KAISER ALUMINUM & CHEMICAL CORP
KEYSTONE STEEL & WIRE CO
KEYSTONE WIRE CLOTH CO
Metal Window Service Co
Newark Wire Cloth Co
NEW YORK WIRE CLOTH CO
NICHOLS WIRE & ALUMINUM CO
Orang Screen Co
Pacific Wire Products Co
Pennwood Inc
Pequet Wire Cloth Co Inc
Reynolds Wire Co
Roebbling's (John A) Sons Co
Screens and Fabricated Metals Co
Seneca Wire & Mfg Co
Smith (E F) Wire & Iron Works
Spargo Wire Co
Standard Wire Cloth & Screen Co
Valentine Equipment Co
Vincor Sales Co
Warp Brothers
Winwire Brothers Inc
Winwire Sponcer Steel Div Colorado Fuel &
Iron Corp

▶ SCREENING, PLASTIC, WIRE REINFORCED

Callaway Mills Inc
Cellanone Corp of America Plastics Div
CHICOPPE MFG CORP OF GEORGIA
Crown Chemical Co
Firestone Industrial Products Div Firestone
Tire & Rubber Co
KEYSTONE WIRE CLOTH & WIRE CO
LIMITED DIV CHICOPPE MFG CORP
NEW YORK WIRE CLOTH CO
Plastic Wire Products
Seneca Wire & Mfg Co
SUPERIOR FIREPLACE CO
Swift Mfg Co
Warp Brothers

▶ SCREENS, CHIMNEY

Dunlop Brothers

▶ SCREENS, COAL, SAND, GRAVEL, ETC

Atlas Conquest Co
Hain (George) Mfg Co Div Pettibone Mel-
liten Corp
Hendrick, S & Co
Jeffrey Mfg Co
Link-Bell Co
Meyer (Fred L) Mfg Co
Roebbling's (John A) Sons Co

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Rackett (R B) Screen & Chute Co
Universal Engineering Corp
Wickwire Sponnet Steel Div Colorado Post &
Iron Corp

▶ SCREENS, TENSION

Columbia Mills Inc
KEYSTONE WIRE CLOTH CO
K H F Milwaukee Steel Co
Lookhart Mfg Corp
NEW YORK WIRE CLOTH CO
BUDDIGE-LANG CO
Butake Weatherstrip Mfg Co

▶ SCREWDRIVERS

Bercalo Mfg Co
BLACK & DECKER MFG CO
Bridgport Hardware Mfg Corp
Crescent Tool Co
Damasco Steel Products Corp
DISSTON (HENRY) & SONS INC
Fairmount Tool & Forging Co
Forsberg Mfg Co
Fuller Tool Co
Glaziers' Tool Mfg Corp
Greenlee Tool Co
BALL TOOL CO
Mayhew Steel Products Inc
Mephisto Tool Co
Millers Falls Co
North Brothers Mfg Co
Oswatima Tool Co
De Wall Tool Co
Parler Mfg Co
P & C Hand Forged Tool Co
Pork Saw & Wire Co
Proto Tool Co
Rainey Tools
Bevel & Princes Mfg Co
Rogal Co
SKILSAW INC
Starliner Lock Co
STANLEY WORKS
Tuck Mfg Co
Union Hardware Co
United Wire Goods Mfg Co
Vehok Tool Co
Wide Drop Forge & Tool Co

▶ SCREWDRIVERS, PORTABLE, ELECTRIC

BLACK & DECKER MFG CO
Chicago Pneumatic Tool Co
Glaziers' Tool Mfg Corp
INDEPENDENT PNEUMATIC TOOL CO
Ingersoll Rand Co
BALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
STANLEY ELECTRIC TOOLS DIV STANLEY WORKS
U S Electrical Tool Co

▶ SCREWDRIVERS, RATCHET

American Swiss File & Tool Co
Greenlee Tool Co
Klinton Industries
Millers Falls Co
North Brothers Mfg Co Div Stanley Tools
De Wall Tool Co
STANLEY TOOLS DIV STANLEY WORKS
Stretz (L B) Co

▶ SCREWS

Ajax Hardware Mfg Corp
American Screw Co
Atlantic Screw Works
Atlas Bolt & Screw Co
Braun (J G) Co
Bridgport Brass Co
CHASE BRASS & COPPER CO
Clark Brothers Bolt Co
Continental Screw Co
Eagle Lock Co
Elo Tool & Screw Corp
General Steel Warehouse Co Gencon Tool Div
HASSALL (JOHN) INC
Independent Nail & Packing Co
Lanum & Sons Co
National Guard Products Inc
NATIONAL LOCK CO
National Screw & Mfg Co
PAINE COMPANY
Parler (S) Hardware Mfg Corp
Phenol Mfg Co
Rockford Screw Products Co
St Louis Screw & Bolt Co
SOUTHERN SCREW COMPANY
Southington Hardware Mfg Co
Stromberg Screw Products Inc
United Screw & Bolt Corp

▶ SEALERS, SYNTHETIC RESIN

Monsanto Chemical Co Western Div

▶ SEPTIC TANK FERMENTATION COMPOUNDS

Thomas Sanitary Products Co

▶ SEWER JOINT COMPOUNDS

American Vitified Products Co
Anti-Hydro Waterproofer Co
FLINTKOTE CO
JOHNS-MANVILLE CORP
Nelson Products Corp
Belly Tar & Chemical Corp
Robinson Clay Product Co
Universal Sewer Pipe Corp

▶ SHADE ROLLERS & FIXTURES

Bailey & Weston
Curtain (H) Co
Rose (Henry) Mfg Co
Vermont Shade Roller Co

▶ SHADES, PLASTIC FOR STORE WINDOWS

Trans Shade Co

▶ SHADES, PORCH

Aeroblast Co
ROUGH SHADE CORP
Sheddwood Curtains Co
Warren Shade Co

▶ SHADES, WINDOW

Aeroblast Co
Bailey & Weston
Bills Venetian Blind Co
Breneman (Charles W) Co
Clispy Corp
Columbia Mills Inc
Columbus Coated Fabrics Corp
DuPont de Nemours (E I) & Co Inc
Harmon (P S) Co
Hartshorn (Stewart) Co
ROUGH SHADE CORP
Kane Mfg Corp
Volker (William) & Co

▶ SHAFTS, FLEXIBLE

MALL TOOL CO
WALKER TURNER CO DIV KEARNEY &
TRECKER CORP

▶ SHAKES, CEDAR, STAINED

Butler-McDonough Mfg Co Ltd
Canadian Forest Products Ltd Hunting-Mer-
rit Shingle Div
Caplans Shingle Co Ltd
Colonial Cedar Co
CRED-DIPT CO INC
Everett Shingle & Shake Co
Jamison Lumber & Shingle Co
McNair (Robert) Shingle Co Ltd
Olympic Stained Products Co
PERMA-PRODUCTS CO
Portland Shingle Co
Preservative Paint Co
Smith (M B) Lumber & Shingle Co
West Coast Stained Shingle Co
WEYERHAEUSER SALES CO

▶ SHAMPOO, SPRAY

T & S BRASS & BRONZE WORKS INC

▶ SHAPERS

ATLAS PRESS CO
PORTER CABLE MACHINE CO
ROCKWELL MFG CO DELTA POWER TOOL
DIV
WALLACE (J D) & CO
WHITNEY (BAXTER D) & SONS INC

▶ SHARPENERS, KNIFE

Atkins (E C) & Co
BEN-RARNING CORP DIV HORTON CO
Bridgport Safety Emery Wheel Co Inc
Dandy Corp
Dependable Machine Co Inc
Flex Products Co
MALL TOOL CO
National Sewing Machine Co
New England Carbide Tool Co Inc
Rimonda Abrasive Co Div Rimonda Saw &
Steel Co
TURNER & SEYMOUR MFG CO

▶ SHARPENERS, SAW

Atkins (E C) & Co
Beaver Mfg Co
BELSAW MACHINE CO
Chittanong Saw Works
DISSTON (HENRY) & SONS INC
FOLEY MFG CO
Hanchett Mfg Co
Huttler Brothers Saw Mfg Co Inc
MALL TOOL CO
Oliver Machinery Co
Prescott Co
Rood-Prentice Corp
Troyer Products
Wardwell Mfg Co
Yates-American Machine Co

▶ SHEARS, METAL CUTTING, ELECTRIC

BLACK & DECKER MFG CO

▶ SHEATHING, ASBESTOS CEMENT

Asbestos Asphalt & Tonnation Inc
Badger Corrugating Co
CAREY (PHILIP) MFG CO
CELOTEX CORP

Davis Pluroed Corp
FLINTKOTE CO
JOHNS-MANVILLE CORP
KEASKEY & HATTISON CO
NATIONAL GYPSUM CO
RUBEROID CO
Standard Asbestos Mfg Co

▶ SHEATHING, BOARD, ASPHALT, RIGID

Air-O-Cel Co
BIRD & SON
CAREY (PHILIP) MFG CO
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
INSULITE DIV MINNESOTA & ONTARIO
PAPER CO
JOHNS-MANVILLE CORP
Keystone Asphalt Products Co
Logan-Long Co
Meadow (W B)
National Mfg Corp
Nelson (B F) Mfg Co
Plategrom Wall Board Co
PROTECTIVE PAPERS INC
RUBEROID CO
U S Gypsum Co

▶ SHEATHING, BOARD, FIBER

ARMSTRONG CORK CO BUILDING WATER-
ALS DIV
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELOTEX CORP
Vir-Tex Insulating Board Co
FLINTKOTE CO
HOMASOTE CO
INSULITE DIV MINNESOTA & ONTARIO
PAPER CO
JOHNS-MANVILLE CORP
NATIONAL GYPSUM CO
Plategrom Wall Board Co
SIMPSON LOGGING CO
U S Gypsum Co
UPSON CO
WOOD CONVERSION CO

▶ SHEATHING, GYPSUM

Angier Corp
Blue Diamond Corp
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
Pabco Products Inc
Pacific Portland Cement Co
Schumacher Wall Board Corp
U S Gypsum Co

▶ SHEATHING, INSULATING BOARD, TREATED

Air-O-Cel Co
ARMSTRONG CORK CO
BARRETT DIV ALLIED CHEMICAL & DYE
CORP
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELOTEX CORP
CORBON LUMBER & LAND CO
CRED-DIPT CO INC
FLINTKOTE CO
HOMASOTE CO
INSULITE DIV MINNESOTA & ONTARIO
PAPER CO
JOHNS-MANVILLE CORP
Keystone Asphalt Products Co
Meadow (W B) Inc
NATIONAL GYPSUM CO
Plategrom Wall Board Co
PROTECTIVE PAPERS INC
SIMPSON LOGGING CO
U S Gypsum Co
U S MENDEL PLYWOODS INC
U S PLYWOOD CORP
WOOD CONVERSION CO

▶ SHEETS, ALUMINUM, CORRUGATED

Aluminum Co of America
CECO STEEL PRODUCTS CORP
Cupples Co
New Holland Metals Co
REYNOLDS METALS CO
Southern States Iron Roofing Co

▶ SHEETS, ALUMINUM, FLAT

Aluminum Co of America
Brasco Mfg Co
CECO STEEL PRODUCTS CORP
Compo-Miracle Products Co
Cupples Co
KAISER ALUMINUM & CHEMICAL CORP
National Aluminum Products Co
New Holland Metals Co
NICKELS WIRE & ALUMINUM CO
REYNOLDS METALS CO BUILDING PROD-
UCTS DIV
Southern States Iron Roofing Co

▶ SHEETS, BLACK

Alan Wood Steel Co
CECO STEEL PRODUCTS CORP
Continental Steel Corp
INLAND STEEL PRODUCTS CO
REPUBLIC STEEL CORP
TENNESSEE COAL IRON & RAILROAD CO
United States Steel Co
Wheeling Corrugating Co

▶ SHEETS, IRON & STEEL, GALVANIZED

Allegheny Ludlum Steel Co
Armos Drainage & Metal Products Inc
Badger Corrugating Co
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Cincinnati Sheet Metal & Roofing Co
Continental Steel Corp
Deuster Iron & Steel Co
Gary-Flonier Steel Co
INLAND STEEL PRODUCTS CO
Inland Steel Co
International Steel Co
Kluser Mfg Co
Mid-States Steel & Wire Co
New Holland Metals Co
REPUBLIC STEEL CORP
Raycon (Joseph T) Son Inc
ST PAUL CORRUGATING CO
Sheffield Steel Corp
Soothe Steel Co
TENNESSEE COAL IRON & RAILROAD CO
TRUSCON STEEL CO
United States Steel Co
Wheeling Corrugating Co
Youngstown Sheet & Tube Co

▶ SHEETS, PLASTIC

Acton Pluroed & Veneer Co
ARBORITE CO
Consolidated Water Power & Paper Co
Continental Cellulose Co
Dartco (A J) & Co
FORMICA CO
GENERAL ELECTRIC CO
HASKELITE MFG CORP
NATIONAL PLASTIC PRODUCTS CO
OHIO RUBBER CO
Panelite Div St Regis Sales Corp
RODDIS PLYWOOD CORP
Rohm & Haas Co
U S PLYWOOD CORP
WESTINGHOUSE ELECTRIC & MFG CO
WODDALL INDUSTRIES

▶ SHEETS, STEEL, CORRUGATED

Armos Steel Corp
Badger Corrugating Co
BERGER MFG DIV REPUBLIC STEEL CORP
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Cluser Industries Co
Cincinnati Sheet Metal & Roofing Co
Continental Steel Corp
Deuster Iron & Steel Co
Granite City Steel Co
INLAND STEEL PRODUCTS CO
International Steel Co
New Holland Metals Co
REPUBLIC STEEL CORP
Bever Copper & Brass Inc
ST PAUL CORRUGATING CO
Soothe Steel Co
Southern States Iron Roofing Co
TENNESSEE COAL IRON & RAILROAD CO
United States Steel Co
Wheeling Corrugating Co
Youngstown Sheet & Tube Co

▶ SHELF STANDARDS, ADJUSTABLE

Alison Mfg Co
Garden City Plating & Mfg Co
Hirsch (S A) Mfg Co
Krasper & Vogt Mfg Co
Rebtor Hardware Corp
Wilmar Metal Products

▶ SHELLAC

Barrett Varnish Co
Berry Brothers Inc
Central Paint & Varnish Works
Chicago Brush & Varnish Works
Desore & Reynolds Co Inc
DuPont (E I) de Nemours & Co
Gilespie Varnish Co
Glidden Co
Horn (A C) Co
Lowe Brothers Co
Martin-Sensur Co
O'Brien Corp
Patterson-Sargent Co
PITTSBURGH PLATE GLASS CO
Sheffield Bronze Paint Corp
U S Gutta Percha Paint Co
Valentine & Co Inc
Vita-Var Corp
Willman Products Co
Woodfinishing Products Co
Zimmer (William) & Co Inc

▶ SHELVES, REVOLVING CABINET

Ames (W B) Co
Leon Metal Products Inc

Manufacturers' Names and Addresses Start on Page D-76
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MULLINS MFG CO
Washington Steel Products Inc

► **SHELVING, ADJUSTABLE SHELF**

Adams Co
Bunch (A G) & Co Inc
Heller (W C) & Co
Johnson Co
Knappe & Vogel Mfg Co
WACKLARBURG-DUNCAN CO

► **SHELVING, GLASS**

American Window Glass Co
Capilano Glass Co
Columbia Metal Box Co
Heller (W C) & Co
LIBBEY-OWENS-FORD GLASS CO
PITTSBURGH PLATE GLASS CO
Rutland & Sons Inc
Warren (J D) Mfg Co

► **SHELVING, PREFABRICATED**

Amus (W B) Co
Hines (Edward) Lumber Co

► **SHELVING, STEEL**

Adams Co
BERGER MFG CO DIV REPUBLIC STEEL CORP
Deluxe Metal Furniture Co
Equipco Div Aurora Equipment Co
Evel Metal Cabinet Co
Frick-Gallagher Mfg Co
Heller (W C) & Co
Johnson Metal Products Co
Long Metal Products Inc
Precision Equipment Co
Red Tiger Products Inc
Rutland & Sons Inc
Stackliner Corp
Steel Partitions Inc
Trane Co
Tennessee Stone Co Inc
Washington Steel Products Inc
Wollager Steel Corp

► **SHELVING, WOOD**

Adelphian Mill
Carr & Morth Co
Cole Mfg Co
CURTIS COS INC
Engineers Plywood Products Co
Frick-Gallagher Mfg Co
Heller (W C) & Co
Hines (Edward) Lumber Co
Krona Pine Mills Co
LONG-BELL LUMBER CO
Marquart Millwork Co
Mauk-Seattle Lumber Co
Willamette Valley Lumber Co
Wilmax Metal Products

► **SHIELDS, EXPANSION BOLT**

Arro Expansion Bolt Co
Chicago Expansion Bolt Co
CORBIN (F & F) DIV AMERICAN HARDWARE CORP
DIAMOND EXPANSION BOLT CO
Holub Industries Inc
PAINE CO
Pelle (J D) Mfg Co
Star Expansion Products Co Inc

► **SHIELDS, TERMITE**

Illinois Zinc Co
Potts-Farrington Co
SISKRAFT CO
Timber Engineering Co

► **SHINGLES, ASBESTOS-CEMENT**

ASBESTONE CORPORATION
ASBESTOS CO OF TEXAS
BARRETT DIV ALLIED CHEMICAL & DYE CORP
CAREY (PHILIP) MFG CO
CELOTEX CORP
FLINTKOTE CO
JOHNS-MANVILLE CORP
KEASBEY & MATTISON CO
Pabco Products Inc
RUBEROID CO
Smith Asbestos Products Inc
Sprudler Corp
U S Gypsum Co

► **SHINGLES, ASPHALT**

American Asphalt Roof Corp
BARRETT DIV ALLIED CHEMICAL & DYE CO
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
Ford Roofing Products Co Inc
Globe Roofing Products Co Inc
Gold Seal Roofing Co
JOHNS-MANVILLE CORP
Lohm Co
Logan-Long Co
Nelson (E F) Mfg Co
Pabco Products Inc
RUBEROID CO
Tamko Asphalt Products Inc
TEXAS CO
U S Gypsum Co

► **SHINGLES, CEDAR, RED**

Acme Shingle Co Ltd
Agnew Lumber Co
Aloha Lumber Co
American Cedar Shingle Co Ltd
Arch Cape Shingle Co
Agres & Bowen Shingles
Eastwood Cedar Shingle Co Ltd
Bielman-Meeks Shingle Co
Blodell Stewart & Welch Ltd
E L Shingle Co
Bridal Falls Shingle Co
British Columbia Forest Products Ltd
Brown (H C) Shingle Co
Rutler-McDonnell Mfg Co Ltd
Canadian Forest Products Ltd Hunting Mer-
rit Shingle Div
Canadian Western Lumber Co Ltd
Capilano Shingle Co Ltd
Cascade Pacific Lumber Co
Chew (Joseph) Shingle Co Ltd
Clearwater Shingle Co
Coats (A F) Lumber Co
Colonial Cedar Co
Columbia Valley Lumber Co
CORNER LUMBER & LAND CO
Cook County Lumber Co
Corbett Mill Co
CRED-DIPT CO INC
Crescent Shingle Co
Ducker (A B) Shingle Co
DEWITT SHINGLE CO
Douglas Fir Wheelers Inc
Estanville Lumber Co
Far West Shingle Co
Fisher Brothers
Fortis Shingle Co
Fowler Shingle Co
Georgia-Pacific Plywood & Lumber Co
Gilliland Shingle Co
Grandy Lake Shingle Co
Gray Lumber & Shingle Co
Gray (Robert) Cedar Lumber Co Inc
Hagin Shingle Co
Hammerquist Shingle Co
Hammond Cedar Co Ltd
Hardman Mfg Co
Hines (Edward) Lumber Co
Honolulu Logging Co Ltd
Horse Brothers Shingle Co Ltd
Horton Cedar Mfg Co Ltd
Hulbert (William) Mill Co
Huntington Shingle Co
Idanha Shingle Co
Jamson Lumber & Shingle Co
Kirkpatrick (Thomas) Estate
Lafourner Shingle Co
Lake Shannon Timber Co
Levyold-Smith Shingle Co
LONG-BELL LUMBER CO
Longlife Shingle Co
Longview Shingle Co
Mackie Mill Co
Marrona Mill Co
Mauk-Seattle Lumber Co
McArthur Shingle Co Ltd
McNair (Robert) Shingle Co Ltd
Midwest Jobbers Inc
Miller (E C) Cedar Lumber Co
Miller & Sons
Monroe Shingle Co
Mt Pleasant Shingle Co
Mt View Shingle Co
Newberg Shingle Co
Olympic Stained Products Co
Ocean Beach Shingle Mill
O K Shingle Co
Olympia Shingle Co
OLYMPIC STAINED PRODUCTS CO
Pacific Timber Co
Packwood Shingle Co
PERMA PRODUCTS CO
Peters Shingle Co
Phoenix Shingle Co
Portland Shingle Co
Quality Shingle Co
Rainier Mill Co
Randall Shingle Co
Riverside Shingle Mills Ltd
Roseburg Shingle Co
Rover Brothers
Rowe Shingle Co
E & B Shingle Mfg Co
Saginaw Shingle Co
Schafer Brothers Lumber & Shingle Co
Seattle Cedar Lumber Mfg Co
Sibermag (George J) & Sons Co
Skallyer-Stright Shingle Co
Smith (M B) Lumber & Shingle Co
Sound Shingle Co
Standard Shingle Co
Stave Lake Cedar Ltd
Super Shingle Co
Thurston-Plavette Ltd
Toutle River Shingle Co
Twin City Shingle Co
Twin Harbors Lumber Co
Wallace Lumber & Mfg Co
Warestone Shingle Co
Washington Shingle Co
WEYERHAEUSER SALES CO
White Creek Shingle Co
Willapa Shingle Co
Woods Creek Shingle Co

► **SHINGLES, CEDAR, RED, STAINED**

American Stained Shingle Co
Canadian Forest Products Ltd Hunting Mer-
rit Shingle Div

Manufacturers' Names and Addresses Start on Page D-76
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Capilano Shingle Co Ltd
Cedar Mfg Co
CRED-DIPT CO INC
Delta Sales Agency
Dyvis Brothers
Everett Shingle & Shake Co
Georgia-Pacific Plywood & Lumber Co
Jamson Lumber & Shingle Co
Kendall Lumber Corp
Lion Shingle Co
LONG-BELL LUMBER CO
Mauk-Seattle Lumber Co
McNair (Robert) Shingle Co Ltd
Olympic Stained Products Co
PERMA-PRODUCTS CO
Portland Shingle Co
Preservative Paint Co
Sibermag (George J) & Sons Co
Smith (M B) Lumber & Shingle Co
West Coast Stained Shingle Co
WEYERHAEUSER SALES CO
Wood Beautifiers

► **SHINGLES, PORCELAIN ENAMEL**

Wolverine Porcelain Enameling Co

► **SHINGLES, REDWOOD**

Sibermag (George J) & Sons Co
Union Lumber Co

► **SHINGLES, STEEL GALVANIZED**

Rodger Corrugating Co
BERGER MFG CO DIV REPUBLIC STEEL CORP
CECO STEEL PRODUCTS CORP
Cincinnati Sheet Metal & Roofing Co
Clark-Rabbit Industries Inc
Edwards Mfg Co
Gary-Pioneer Steel Corp
INLAND STEEL PRODUCTS CO
La Crosse Steel Roofing & Corrugating Co
Mid-States Steel & Wire Co
Northwest Metal Products Inc
Southern States Iron Roofing Co
Whooling Corrugating Co

► **SHORES, SAFETY**

SYMONS CLAMP & MFG CO

► **SHORING, CONCRETE SOFFIT FLOOR BLOCK**

BESSER MFG CO

► **SHOVELS, ROCKER, POWERED**

Elmes Corp

► **SHOWER BATH, CABINETS**

Allen Steel Products
AMERICAN RADIATOR & STANDARD SANITARY CORP
Blenwanger & Co
Clem James Mfg & Sons
CRANE COMPANY
Durd Mfg Co
ELIOT CO
FIAT METAL MFG CO
Glasber Brass
Harbison Steel Cabinet Co
Ingram-Richardson Mfg Co
Kraus (Walter S) Co
Milwaukee Stamping Co
Northwest Metal Products Inc
O'Morrow (W M) & Co
Proton Steel Equipment Co
Pioneer Co
PITTSBURGH PLATE GLASS CO
Remyth Brass Co
St Charles Mfg Co
Sevill Mfg Co
Shower Door Co of America
Speakman Co
Standard Building Products Co
Standard Steel Cabinet Co
Steel Partitions Inc
Tilstone Co
UNIVERSAL BUNDLE CORP
Wels (Henry) Mfg Co Inc

► **SHUTTERS, METAL**

AIR CONTROL PRODUCTS INC
Allen Steel Products Inc
Astrup Co
FAWCO MFG DIV FALLS STAMPING & WELDING CO
Fries & Son Steel Construction & Engineering Co
Metal Arts Mfg Co
SHEPHERD MFG CO
Trumbull Div Siemens Bros Inc
United Metal Products Inc

► **SHUTTERS, WOOD**

Adelphian Mills
Astrup Co
CARR ADAMS & COLLIER CO

Central Division Co
Cole Mfg Co
CURTIS COMPANIES INC
Farley & Loachler Mfg Co
GREGG & SON
Hinley's Motorable Shutters
Hines (Edward) Lumber Co
Huttig Mfg Co
Huttig Sash & Door Co
Marquart Millwork Co
Morgan Co
Quigley (J B) Co
Roach & Muser Co
Rock Island Millwork Co
SIBERMAG (George J) & Sons Co

► **SIDING, ALUMINUM**

Alcoa Inc
Alside Inc
Aluminum Co of America
Compo-Miracle Products Co
KAISER ALUMINUM & CHEMICAL CORP
SAWKEE CO
Lifetime Industries
Metal Building Products
National Aluminum Products Corp
New Holland Metals Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Southern States Iron Roofing Co

► **SIDING, ALUMINUM CLAP-BOARD**

Childers Mfg Co
KAISER ALUMINUM & CHEMICAL SALES CORP
SAWKEE CO
New Holland Metals Co
Potts-Farrington Co

► **SIDING, ASBESTOS CEMENT**

ASBESTONE CORPORATION
ASBESTOS CO OF TEXAS
BARRETT DIV ALLIED CHEMICAL & DYE CORP
BIRD & SON INC
CAREY (PHILIP) MFG CO
CELOTEX CORP
FLINTKOTE CO
JOHNS-MANVILLE CORP
KEASBEY & MATTISON CO
Pabco Products Inc
RUBEROID CO
Smith Asbestos Products Co Inc
Sprudler Corp
U S Gypsum Co

► **SIDING, ASBESTOS-CEMENT, CORRUGATED**

ASBESTOS CO OF TEXAS
BARRETT DIV ALLIED CHEMICAL & DYE CORP
CAREY (PHILIP) MFG CO
FLINTKOTE CO
JOHNS-MANVILLE CORP
KEASBEY & MATTISON CO
RUBEROID CO

► **SIDING, ASPHALT, LAMINATED RIGID**

BARRETT DIV ALLIED CHEMICAL & DYE CORP
CAREY (PHILIP) MFG CO
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
Globe Roofing Products Co Inc
INSULITE CO DIV MINNESOTA & ONTARIO PAPER CO
Logan-Long Co
RUBEROID CO

► **SIDING, ASPHALT, PAT-TERNERD, INSULATING**

American Asphalt Roof Corp
BARRETT DIV ALLIED CHEMICAL & DYE CORP
BIRD & SON INC
Bristle Mfg Co
CAREY (PHILIP) MFG CO
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
FLINTKOTE CO
Ford Roofing Products Co Inc
INSULITE CO DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MANVILLE CORP
JOHNS & BROWN INC
Krystone Asphalt Products Co
Logan-Long Co
Mastic Asphalt Corp
NATIONAL MFG CORP
Nelson (E F) Mfg Co
Plasterpan Wall Board Co
Proctor Products Co
RUBEROID CO
Tamko Asphalt Products Inc
TEXAS CO
U S Gypsum Co
Weatherpanel Siding Inc

► **SIDING, IRON & STEEL**

AMERICAN STEEL & WIRE CO
Armos Steel Corp

Vader Corrugating Co
BERGER MFG DIV REPUBLIC STEEL CORP
 Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
 Cincinnati Sheet Metal & Roofing Co
COLUMBIA STEEL CO
 Continental Steel Corp
 Edwards Mfg Co
FENESTRA BUILDING PRODUCTS
 Firm & Son Steel Construction & Engineering
 Co
 Granite City Steel Co
 Houston Blow Pipe & Sheet Metal Works
 Illinois Zinc Co
INLAND STEEL PRODUCTS CO
 Kaiser Mfg Co
 Koopers Co Inc Tar Products Div
 La Crosse Steel Roofing & Corrugating Co
 Macomber Inc
NICHOLS WIRE & ALUMINUM CO
 Reeves Steel & Mfg Co
REPUBLIC STEEL CORP
ST PAUL CORRUGATING CO
 Southern States Iron Roofing Co
TENNESSEE COAL IRON & RAILROAD CO
 Tiffin Art Metal Co
 United States Steel Co
UNITED STEEL FABRICATORS INC
 Wheeling Corrugating Co
 Wheeling Steel Corp

▶ SIDING, LOG

Abbot Fox Lumber Co
 Ananoda Copper Mining Co
 Argent Lumber Co
BRADLEY LUMBER CO OF ARK
 Bremer's Tie and Lumber Co
BRUCE (E L) CO
 Canadian Forest Products Ltd
 Canadian Western Lumber Co Ltd
 Christensen (C M)
 Collins Poodosa Lumber Co
 Comfort (George C) Lumber Co
CONNOR LUMBER & LAND CO
 Contact Lumber Co
 Cook County Lumber Co
 Cummer Sons Cypress Co
 Dierks Lumber & Coal Co
 Firplan Products Co
 Fitchell Lumber Co
 Fruit Lumber Industries Inc
 Goodman Lumber Co
 Hill Behan Lumber Co
 Hines (Edward) Lumber Co
 Hultner (Wm) Mill Co
 Interstate Lumber Sales
 Johnson (C D) Lumber Corp
 Kennedy (J G) Lumber Co
 Kent Lumber Co
 Kinross Pine Mills Co
LONG-BELL LUMBER CO
 Mack Seattle Lumber Co
 McCloud Lumber Co
 Madford Corp
 Metropolitan Lumber Co
 Michigan Maple Block Co
 Miller (George E) Lumber Co
 Neils (J) Lumber Co
 New Mexico Timber Co
 Ogan Lumber Co
 Patrick Lumber Co
 Pickering Lumber Corp
 Riley Lake Lumber Co Ltd
 Rutwood Sales Co
 Robertson & Bickert Sawmill Co
RODDIS PLYWOOD CORP
 Saboro Lumber Co
 Sartin Furniture Co Inc
 S. Maries Lumber Co
 St Paul & Tacoma Lumber Co
 Hiltner (George J) & Sons Co
 Soderberg (Earl E) Lumber Co
SOUTHERN PINE LUMBER CO
 Sullivan Lumber Co
 Tison Lumber Co
 Van Deuse Lumber Sales Corp
 Wallace Mill & Lumber Co
 Walton Lumber Co
 Warren Lamb Lumber Co
WEYERHAEUSER SALES CO
 Wilson (A K) Lumber Co
 Winton Lumber Sales Co
 Wood Lumber Co

▶ SIDING, PLYWOOD

Arctic Plywood & Veneer Co
U S PLYWOOD CORP

▶ SIDING, UNDERLINER, INSULATING, BLANKET

RUBERID CO
WOOD CONVERSION CO

▶ SIDING, WOOD FIBER INSULATING

BIRD & SON INC

▶ SIGNS

Active Display Adr
 Allen (W D) Mfg Co
 Auto Sign Displays Co
 Building Products Merchandising Service
 Carter Co
COFFMAN (R C) CO INC
 Enamel Products Co
 Engineered Plywood Products
 Eves Mfg Co
 Fixtures Corp
 Fox Valley Forge
 Household Patent Co
 Imperial Brass Mfg Co

MACKLANBURG-DUNCAN CO
 Mini-Flex Co
 National Advertising Co
 Newman Brothers Inc
 Ready-Made Sign Co
 Refecto Letters Inc
 Roscoe
 Seaport Porcelain Metals Inc
 Stewart Iron Works Co Inc
 Tennessee Enamel Mfg Co
 Thomas & Associates Inc
 Tiffin Art Metal Co
 Turner Brass Works
 Watson Co
 Whitehall Metal Studios

▶ SILICON CARBIDE GRAIN

BEHN-MANNING CORP DIV NORTON CO
 Carteronum Co
 Fort Pitt Chemical Co
 Safe Treat Co Inc

▶ SILOS

Arrow Tank Co Inc
 Caldwell (W E) Inc
 Concrete Transport Mixer Co
 Economy Silo & Mfg Co
 Fleming Mfg Co Inc
 Globe Silos
 Harber Silo Co Inc
 Hubbard & Co
 Illinois Wire & Mfg Co
 Independent Silo Co
 Johnson & Carlson
 Kalamazoo Tank & Silo Co
 Lippman Engineering Works
 M & M Woodworking Co Resurp Div
 Nebraska Bridge Supply & Lumber Co
RDWE MFG CO
 Schlichter (E F) Co Inc
 Twin City Tank Silo & Specialty Co
 Treadilla Silo Co
 Willamette Valley Lumber Co

▶ SILOS, BUILDING MATERIAL GRAIN & COAL STORAGE

Brady Conspors Corp
 Hudson Mfg Co Inc
 Fairfield Engineering Co
 Harder Silo Co Inc
 Johnson (C B) Co
 Jones & Fry Co

▶ SILOS, METAL

James Mfg Co
 Johnson (C B) Co

▶ SILOS, PORTABLE

RICKHRAF CO
SISALKRAFT CO

SINK, RIMS, PREFORMED

BRIGGS MFG CO
R & T METALS CO
 Accortie Inc
 Ford Metal Moulding Corp
 Kitchen Industries Inc
MACKLANBURG-DUNCAN CO
 Metal Trims Inc
 National Aluminum Co
 Pyramid Moulding Co
 S & W Moulding Co
 Trimedge Inc
WUERSTER PRODUCTS INC
 Youngstown Mfg Inc

▶ SINK STOPPERS

Columbus Plastic Products Inc
 Kampa Mfg Co
 No-Bell Plastics Corp Inc
 Rehalite Co
 U S Rubber Co

▶ SINKS, CABINET

ALLIANCEWARE INC
AMERICAN CENTRAL DIV AVCO MFG CORP
AMERICAN RADIATOR & STANDARD SANITARY CORP
BERGER MFG DIV REPUBLIC STEEL CORP
 Born Wood Products Co
BRIGGS MFG CO
 Cramer Inc
CRANE CO
CURTIS COS INC
 Elgin Stove & Oven Div Acme Visible Record
 Inc
ELJER CO
 Elmer Mfg Co
 Enamel Products Co
 Excel Metal Cabinet Co Inc
GENERAL ELECTRIC CO APPLIANCES & MERCHANDISE DEPT
HOPTON INC
 T.Y. Furniture Co
KOHLER CO
 Lyon Metal Products Inc
 Midwest Mfg Co
 Morton Mfg Co Morton Kitchen Cabinet Div
MULLINS MFG CO
MURPHY DOOR BLD CO
 Murray Corp of America
 Mutschler Bros

Palley Mfg Co
 Paragon Utilities
 Pioneer Co
RICHMOND RADIATOR CO
 Roberts & Mander Corp
 Shirley Corp
TRACY MFG CO
UNIVERSAL-RUNDLE CORP

▶ SINKS, MONEL OR STAINLESS STEEL

Douglas Distributor Corp
 Elgin Stove & Oven Div Acme Visible Record
 Inc
 Elmer Mfg Co
 Excel Metal Cabinet Co
 Geneva Modern Kitchens
 Harrison Steel Cabinet Co
 Houston Blow Pipe & Sheet Metal Works
 International Nickel Co
 Just Mfg Co
 Legion Stainless Sink Corp
 Lyon Metal Products Inc
 Midwest Mfg Co
 Palley Mfg Co
 Paragon Utilities Corp
 Products-From-Sweden Inc
REPUBLIC STEEL CORP
 Richmond Engineering Co
 Roberts & Mander Corp
TRACY MFG CO
 Zahner Mfg Co

▶ SINKS, PORCELAIN ENAMEL

Abington Pottery Inc
ALLIANCEWARE INC
AMERICAN CENTRAL DIV AVCO MFG CORP
AMERICAN RADIATOR & STANDARD SANITARY CORP
BRIGGS MFG CO
CRANE CO
 Elgin Stove & Oven Div Acme Visible Record
 Inc
ELJER CO
 Enamel Products Co
 General Ceramics & Stellite Corp Sanitary
 Ware Div
 General Porcelain Enameling & Mfg Co
 Humphreys Mfg Co
 Ingersoll Steel Div Borg-Warner Corp
KOHLER CO
 Lyon Metal Products Inc
 Midwest Mfg Co
 Morton Mfg Co Morton Kitchen Cabinet Div
MULLINS MFG CORP
 Murray Corp of America
 Palley Mfg Co
 Paragon Utilities Corp
 Pioneer Co
RICHMOND RADIATOR CO
 Roberts & Mander Corp
 Shirley Corp
 Thor Corp
TRACY MFG CO
UNIVERSAL RUNDLE CORP

▶ SINKS, VITREOUS CHINA

Abington Pottery Inc
AMERICAN RADIATOR & STANDARD SANITARY CORP
CRANE CO
ELJER CO
KOHLER CO
RICHMOND RADIATOR CO
MULLINS MFG CORP
UNIVERSAL-RUNDLE CORP

▶ SIZE, WALL

ARMSTRONG CORP CO
 Borden Co Chemical Div
 Chl-Name Paint & Varnish Co
 Cleveland Cleaner & Paste Co
 Consumers Glue Co
 Crescent Products Co
 Deane & Reynolds Inc
 Elliott Paint & Varnish Co
 Empire Varnish Co
 Evans Pipe Co
 Farwell Osann Kirk & Co
 Le Page's Inc
 Low Brothers Co
 Minor-Willard Milling Co
 Monsanto Chemical Co Western Div
 Murco Co Inc
 Paisley Products Inc
 Patent Ceramics Co
PITTSBURGH PLATE GLASS CO
 Pyramid Process Co Inc
 Reardon Co
 Reliable Paste & Chemical Co
 Standard Industrial Products Inc
 Tammes Industries Inc
 Trucon Laboratories Div Deane & Reynolds
 Inc
 U S Gypsum Co
 Vite-Vit Corp
 Waco Waterpaints Inc

▶ SKIDS & PALLETS

Air-King Mfg Corp
 Albany Corrugated Container Corp
 Carr & Meehl Co
 Clark Equipment Co Industrial Truck Div
 Evans Products Co
 Gabriel Steel Co

Gary Pioneer Steel Corp
 Georgia-Pacific Plywood & Lumber Co
 Johnson Industries Inc
 Lewis-Shepard Products Inc
 Northwest Door Co
 Notting Truck & Trailer Co
PITTSBURGH STEEL PRODUCTS CO
 Service Carter & Truck Co
TRUSCON STEEL CO PRESSED STEEL DIV
 Union Metal Mfg Co
 West Bend Equipment Corp
VALE & TOWNE MFG CO

▶ SKYLIGHTS

American Sheet Metal Works
 Berger Corrugating Co
 Edwards Mfg Co
 Gliether Inc
 Pennsylvania Wire Glass Co
RESULITE CORP
ST PAUL CORRUGATING CO
 Stewart Iron Works
 Tiffin Art Metal Co
 Waco Fishing Co
 Willis Steel Corp

▶ SLATE

North Bangor Slate Co
 Structural Slate Co

▶ SLATS, VENETIAN BLIND

Acme Steel Co
 American Rule & Block Co
 Delta Venetian Blind Co
 Evans Products Co
 Jefferson Wood Working Co
 Lewis (G B) Co
 Martin Venetian Blind Co
 Oshkosh Wood Products Corp
 Overton (S E) Co

▶ SLIDES, EXTENSION DRAWER

Knappe & Vogt Mfg Co

▶ SNIPS, TINNERS'S

Atlas Shear Co
 Bridgport Hardware Mfg Corp
 Peck Stone & Wilcox Co
SARGENT & CO
 Wies (J) & Sons Co
 Youngstown Mfg Co Inc

▶ SNOW PUSHERS

American Fork & Hoe Co
 American Logging Tool Co
 Ames Baldwin Wyoming Co
 Farwell Osann Kirk & Co
 Iwan Brothers Inc
 Kees (F D) Mfg Co
 Kennebec Box & Lumber Co
 Drouss Mfg Co
 Ruzs Mfg Co
 Seymour Mfg Co Inc
 Starline Inc
 True Tempers Corp
 Wirt & Knox Mfg Co
 Yoeman-Hoag Co

▶ SOCKETS, STUDDING

Sterling Foundry Co
WAGNER MFG CO

▶ SOCKETS, WIRE ROPE

American Cable Div American Chain & Cable
 Co Inc
AMERICAN STEEL & WIRE CO
 Beulings (John A) Sons Co
 Upson-Walton Co

▶ SOFTENERS, PUTTY

Barrett (William L) Co
 Fletcher Terry Co
 Fort Pitt Chemical Co
 Glaziers' Tool Mfg Co
 King (E & F) & Co Inc
 Sta-Warm Electric Co
 Susselstein Mfg Co
 Sullivan Co

▶ SOFTENERS, WATER

American Water Softener Co
 Reed Mfg Co
 Chem-Ton Inc
CRANE CO
 Culligan Zenithe Co
 Duxson Pump & Mfg Co
 Dow Chemical Co
 Elgin Softener Corp
 Myers (F E) & Brothers Co
 Oiler Co
 Pennsylvania Salt Mfg Co
 Permitt Co
 Reynolds-Shaffer Co
RHEEM MFG CO
 Salsolite Chemical Products Inc
WORTHINGTON PUMP & MACHINERY CORP

▶ SOLDER & MATERIALS

Atkins (E C) & Co
 Belmont Smelting & Refining Works
CHASE BRASS & COPPER CO
DISSTON (HENRY) & SONS INC
 Division Lead Co
 Eagle-Fischer Co

Manufacturers' Names and Addresses Start on Page D-76
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Esolign Products Co
Hanzelt Mfg Co
INLAND STEEL PRODUCTS CO
Kester Solder Co
King (E & F) & Co Inc
Lake Chemical Co
Lark Mfg Co
Lux-Viel Inc
National Lead Co
Sheffield Bronze Paint Corp
Wall (P) Mfg Co
Wayne Chemical Products Co

► **SOLVENT, WOOD**

Bryte-Midway Inc

► **SPIKES, CUT**

Alan Wood Steel Co
Bethlehem Steel Co
INLAND STEEL CO
REPUBLIC STEEL CORP
Wheeling Corrugating Co

► **SPLICERS, WIRE & FENCE**

AMERICAN STEEL & WIRE CO
Cement Tool Co
KEYSTONE STEEL & WIRE CO
Klein (Mathias) & Sons
Peck Stow & Wilcox Co

► **SPACKLING COMPOUNDS**

CELOTEX CORP
Celocrete Industries Inc
Consumers Glue Co
MEGUSA PORTLAND CEMENT CO
Mineral Pigments Corp
Muralin Co Inc
NATIONAL GYPSUM CO
PITTSBURGH PLATE GLASS CO
Roxford Co
Roxford Fire Clay Co
Schalk Chemical Co
Tammus Industries Inc
U S Gypsum Co
Wesco Waterpaints Inc

► **SPREADERS, FERTILIZER, LAWN & GARDEN**

Buch Mfg Co
Daggett-Piell Co
German Seed & Plant Co
Masters Plaster Co
Midland Co

► **SPREADERS, GLUE**

Billstrom (Nels J) Inc
Blaw-Knox Co Inc
Perkins Glue Co
Standard Paste & Glue Co Inc
Taylor (James L) Mfg Co

► **SPRINKLERS, AUTOMATIC SYSTEMS**

Blaw-Knox Div Blaw-Knox Co

► **SPRINKLERS, LAWN**

Adel Precision Products Corp
Buffalo Sprinkler Co
Deming Co
Keystone Brass & Rubber Co
National Sprinkler Co
Roll-A-Way Sprinkler Co
Sevill Mfg Co

► **SQUARES, CARPENTER'S**

Brenna & Sharpe Mfg Co
Lofkin Rule Co
Millers Falls Co
SARGENT & CO
STANLEY TOOLS DIV STANLEY WORKS
Starrett (L S) Co
Swanson Tool Co

► **SQUARES, CARPENTER'S, STEEL "T"**

Brown & Sharpe Mfg Co
Dietsgen (Eugene) Co
DISSTON (HENRY) & SONS INC
GOLDBLATT TOOL CO
HEIFFEL & ESTER CO
Peck Stow & Wilcox Co
SARGENT & CO
SELCK (WALTER E) & CO
Sharp's Mfg Co
Southington Hardware Mfg Co
STANLEY TOOLS DIV STANLEY WORKS
Starrett (L S) Co
Union Tool Co
Woodmark Industries

► **SQUARES, COMBINATION**

Lofkin Rule Co
Peck Stow & Wilcox Co
STANLEY TOOLS DIV STANLEY WORKS

► **SQUARES, GLASS CUTTER'S**

Fletcher Terry Co
Glaziers Tool Mfg Co
Lofkin Rule Co
PITTSBURGH PLATE GLASS CO
Sommer & Macs Glass Machinery Co
STANLEY TOOLS DIV STANLEY WORKS

► **STACKERS, LUMBER**

American Mfg Co Inc
Bradley Machine Co
Broadway Machine Co Inc
Clark Equipment Co Industrial Truck Div
Hyster Co
Johanson Mfg Co Inc
Industrial Truck Div Clark Equipment Co
Missaukee Power Equipment Co
Moore Dry Kiln Co
Nora Carrier Co
Stroma Brothers Inc

► **STAIN, CONCRETE FLOOR**

CABOT (SAMUEL) INC
Flexrock Co
Horn (A C) Co Inc
Peoria Paint Co Inc
Smith (J Lee) & Co Inc
Sullivan Co
Tammus Industries Inc
Trucon Laboratories Div Devco & Reynolds Inc
Vita-Var Corp
Wilbur & Williams Co
Williams (C K) & Co

► **STAIN, SHINGLE**

Abeta Mfg Corp
Alabastine Paint Products Div Chicago
Brouse & Color Works
Crescent Shingle Co
American Varnish Co
BARNETT DIV ALLIED CHEMICAL & DYE CO
Berry Brothers Inc
Boston Varnish Co
Breinig Brothers Inc
Briggs-Maroney Co Inc
CABOT (SAMUEL) INC
Ceresal Chemical Corp
Chicago Bronze & Color Works
Ch) Samuel Paint & Varnish Co
Colonial Cedar Co
CREB-DIPT CO INC
CUFIBREL DIV DAIRY WORTH INC
Devoe & Reynolds Inc
Du Pont (E I) de Nemours & Co
Elliott Paint and Varnish Co
Empire Varnish Co
Glidden Co
Horn (A C) Co Inc
Johnston (R F) Paint Co
Low Brothers Co
Minnesota Paints Inc
Murphy Paint Div Interchemical Corp
O'Brien Corp
Olympic Stained Products Co
Parker (Ira) & Sons Co
Patterson-Sargent Co
PERMA PRODUCTS CO
PITTSBURGH PLATE GLASS CO
Portland Shingle Co
Pratt & Lambert Inc
Protzol Corp
Sargent-Gerke Co
Selditsu Paint & Varnish Co
Sherwin-Williams Co
Sonneborn (L) Sons Inc
Standard Industrial Products Inc
Valentine & Co Inc
Vita-Var Corp
Wadsworth Howland & Co
Weatherford Corp
Wetherill (George D) & Co
Wood Preserver Co
Wood Treating Chemicals Co

► **STAIN, VARNISH**

Boston Varnish Co
Devoe & Reynolds Inc
Elliott Paint and Varnish Co
Glidden Co
Horn (A C) Co Inc
Keystone Paint & Varnish Corp
Low Brothers Co
O'Brien Corp
PERMA PRODUCTS CO
Selditsu Paint & Varnish Co
Sherwin-Williams Co
Stedeker Mfg Co
Trucon Laboratories Div Devco & Reynolds Inc
Valentine & Co Inc
Vita-Var Corp

► **STAIN, WOOD, OIL**

Abeta Mfg Corp
BARNETT DIV ALLIED CHEMICAL & DYE CO
Boston Varnish Co
Breinig Brothers Inc
CABOT (SAMUEL) INC
Chicago Bronze & Color Works
Crescent Shingle Co
Devoe & Reynolds Inc
Elliott Paint and Varnish Co
Foy Paint Co Inc
Horn (A C) Co Inc
LINSEED OIL PRODUCTS
Low Brothers Co
Marietta Paint & Color Co
O'Brien Corp
Olympic Stained Products Co
Parker (Ira) & Sons Co
PERMA PRODUCTS CO
PITTSBURGH PLATE GLASS CO
Pratt & Lambert Co

Selditsu Paint & Varnish Co
Sherwin-Williams Co
Standard Varnish Works
Tuch Brothers Inc
Trucon Laboratories Div Devco & Reynolds Co
Vita-Var Corp

► **STAIRS, STEEL**

ARTCRAFT ORNAMENTAL IRON CO
Belmont Co
BILCO CO
Decatur Iron & Steel Co
Fisher (J W) Iron Works
GENERAL BRONZE CORP
Grand Rapids Wire Products Co
Houston Blow Pipe & Sheet Metal Works
International Steel Co
Logan Co
Marco Stairways
Mehler (George L) Steel Corp
METAL CRAFTERS
REPUBLIC STEEL CORP
St Paul Foundry & Mfg Co
Smith (F P) Wire & Iron Works
Stewart Iron Works Co Inc

► **STAIRS, WOOD, MATERIALS FOR**

BRADLEY LUMBER CO OF ANK BRUCE (E L) CO
CARR ADAMS & COLLIER CO
Cole Mfg Co
Corbett Cabinet Co
CURTIS COB INC
Farley & Loetcher Mfg Co
Hottig Mfg Co
Hottig Saw & Door Co
Marquart Millwork Co
Millwork Distributors Co
M & W Woodworking Co
Morgan Co
Morgan Saw & Door Co
Nesley Brothers Inc
Radford Co
Radford & Sanders Inc
Rock Island Millwork Co
Shedaker (Frank C) & Co
Spokane Saw & Door Co
Wheeler Dugood Co

► **STAIRWAY, DISAPPEARING**

American Ladder Co
BESSLER DISAPPEARING STAIRWAY CO
Craig Wood Products Co
EE-WAY SALES INC
Farley & Loetcher Mfg Co
Feldway Stairway Co Inc
HUNTINGTON INDUSTRIES INC
Metro Stairways
Maszchke Co
Minnesota Wood Specialties Inc
Newark Ladder & Bracket Co
PRECISION PARTS CORP
Rough Hammer Co
WEL-BILT PRODUCTS CO

► **STAKES, SURVEYORS**

Lofkin Rule Co

► **STAMPS, TIME**

Pollitt Time Recording Co
Jostin (A D) Mfg Co
Smith (E H) Mfg Co

► **STAPLERS & STAPLES**

Acme Stapler Co
Acme Steel Co
AMERICAN STEEL & WIRE CO
Arrow Fastener Co
Atlas Tack Corp
Bethlehem Steel Co Inc
BOSTITCH INC
Brouse Mfg Co
Burgess Fastening Co
COLUMBIA STEEL CO
Consolidated Wire Products
Continental Steel Corp
COPPERWELD STEEL CO
Crosfoot (E J) Co
FASTENER CORP
Fir-Tex Insulating Board Co
FRANTZ MFG CO
Gerrard (A J) & Co
HANSEN (A L) MFG CO
Hatchings (E H) Co
Jones & Laughlin Steel Corp
KEYSTONE STEEL & WIRE CO
Larson (Charles O) Co
MARKSWELL MFG CO
Mid-States Steel & Wire Co
NATIONAL MFG CO
National Screw & Mfg Co
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
REMININGTON RANG INC
REPUBLIC STEEL CORP
Saracac Machine Co
SARGENT & CO
Shafford Steel Corp
Shelton Tack Co
TENNESSEE COAL IRON & RAILROAD CO
Wheeling Corrugating Co
Wickwire Brothers

► **STAPLES, METAL FURRING OR LATH**

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Continental Steel Corp
KEYSTONE STEEL & WIRE CO
PITTSBURGH STEEL PRODUCTS CO
Wheeling Corrugating Co

► **STAYS, FENCE**

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
KEYSTONE STEEL & WIRE CO
Mid-States Steel & Wire Co

► **STAYS, WINDOW**

Air-Tite Window Stay Co
Hart Sash Holder Co
Ideal Brass Works Inc
Mallard Products Inc
Nobleson Window Sizing Co
Rueford Sash Holder, Inc
SARGENT & CO
Vibr (J N) Co

► **STEEL, CONCRETE REINFORCING**

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Consolidated Iron-Steel Mfg Co
Continental Steel Corp
COPCO STEEL & ENGINEERING CO
INLAND STEEL PRODUCTS CO
International Steel Co
KEYSTONE STEEL & WIRE CO
Northwestern Steel & Wire Co
New Metal Co Inc
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CO
Souda Steel Co
STEELCRAFT MFG CO
TENNESSEE COAL IRON & RAILROAD CO
TRUSCON STEEL CO
U S Gypsum Co
United States Steel Co
Wheeling Corrugating Co
Wickwire Spencer Steel Div Colorado Fuel & Iron Corp

► **STEEL, MASONRY WALL REINFORCING**

CEDAR RAPIDS BLOCK CO DUR-O-WAL DIV

► **STEEL STRAPPING**

Acme Steel Co
BRAINARD STEEL CO
Gerrard (A J) & Co
Gerrard Steel Strapping Co
Independent Metal Strap Co Inc
Met 'Co Specialties Co Inc
PAINE CO
Bushings (John A) Sons Co
Sharon Steel Co
Signaco Steel Strapping Co
STANLEY WORKS
West Leeburg Steel Co

► **STEEL, STRUCTURAL, MISC. SHAPES, ETC.**

Alabama Metal Lath Co
Allen Steel Products
Bethlehem Steel Co Inc
BOSTWICK STEEL LATH CO
Commercial Shearing & Stamping Inc
Consolidated Industrial Mfg Co
COPCO STEEL & ENGINEERING CO
Decatur Iron & Steel Co
Dunbar Brothers Co
GREAT LAKES STEEL CORP STRAN-STEEL DIV
INLAND STEEL PRODUCTS CO
International Steel Co
Jones & Laughlin Steel Corp
Macmillan Inc
Rigidized Metals Corp
St Paul Foundry & Mfg Co
Souda Steel Co
TENNESSEE COAL IRON & RAILROAD CO
TRUSCON STEEL CO
United States Steel Co

► **STEEL WOOL**

American Steel Wool Mfg Co
Brello Mfg Co
Clarke Sanding Machine Co
Eagle Steel Wool Co
International Steel Wool Corp
Rhodes (James H) & Co
Thornton (L M) Mfg Co Inc
Williams Co

► **STOKERS**

Altrimg Die Chrysler Motors
American Engineering Co
Anchor Stove & Range Co
Auburn Foundry Inc
Brewerli Co
Coal-Matic Stoker Co
Combustionair Die Steel Products Engineering Co

Manufacturers' Names and Addresses Start on Page D-76
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CONCO ENGINEERING WORKS DIV CONKEY (H D) CO
CRANE CO
DELCO APPLIANCE DIV GENERAL MOTORS CORP

Dowagiac Steel Furnace Co
Eaton-Cut Stoker Div Cotta Transmission Co
Eddy Stoker Corp
Electric Furnace-Man Inc
Erie City Iron Works
Exceller Stove & Mfg Co
Fairbanks Morse & Co
Fresman Stoker Div Illinois Iron & Bolt Co
Hershey Machine & Foundry Co
Hess Warming & Ventilating Co
MOLCONE & WOLKE MFG CO
Holland Furnace Co
Illinois Iron & Bolt Co
Iron Fireman Mfg Co
Kol-Master Corp
Peelless Mfg Corp
Peschelstas Fuel Co
Red Jacket Coal Sales Co
RHEEM MFG CO
Schwitzer Cummins Co
Sinker-Davis Co
Smith (A O) Corp
Stokermatic Co
Stokol Stoker Co Inc
U S Machine Corp
Viking Mfg Corp
WESTINGHOUSE ELECTRIC CORP
Whiting Corp
Will-Burt Co
Worthington Company Inc

STOKERS, COKE

BRYANT HEATER DIV AFFILIATED GAS EQUIPMENT INC

STONE, CRAB ORCHARD

Crab Orchard Stone Co

STONE, GRANITE

Fletcher (H E) Co
North Carolina Granite Corp
Vermont Marble Co

STONE, LANNON

Tomco Building Products Inc
Brookly Lannon Stone Service
Wisconsin Lannon Stone Corp

STONE, LIMESTONE

Bloomington Limestone Co
Briar Hill Stone Co
C-Fury Co Inc
Conoco Building Products Inc
Euron (G & W H) Inc
Indiana Limestone Co Inc
Meake Stone & Lime Co
Merion Stone Co
National Lime & Stone Co
Rare Hardly Stone Co
Taylor Stone Co
Wisconsin Lannon Stone Corp
Wooley Stone Co Inc

STONE, MARBLE

American Black Granite Co
Bauer (Frank F) Marble Co
Briar Hill Stone Co
Fisale Equipment Mfg Co
Georgia Marble Co
G-Schlicher (P M & W) Inc
UNIVERSAL FORM CLAMP CO
Vermont Marble Co

STONE PATCHING COMPOUNDS

Dugan's Invisible Stone Patch & Stone Stain Products
Beardon Co
Rutland Fire Clay Co

STONE, QUARTZ

Tennessee Stone Co Inc

STONE, SANDSTONE

Cleveland Quarries Co
Taylor Stone Co

STONE, SYNTHETIC

Furnstone Co
Perma Stone Co
Standard Stone & Brick Corp
Stonokote Corp

STONES, RUBBING

American Emery Wheel Works
Mid-West Abrasive Co
Norfin Co
Simonda Abrasive Co Div Simonda Saw & Steel Co
Sterling Grinding Wheel Div Cleveland Quarries Co

STOPS, GALVANIZED

Penn Supply & Metal Corp

STORE LAYOUT SERVICES

Heiler (W C) & Co
Huss & Baird Studio

LONG-BELL LUMBER CO
Silka Spruce Lumber & Mfg Co

STRAIGHTEDGES

Atkins (E C) & Co
Brown & Sharpe Mfg Co
Dietzgen (Eugene) Co
Glaxters Tool Mfg Co
How (H I) & Co Inc
KEUFFEL & ESSER CO
RED DEVIL TOOLS
Ridgely Trimmer Co
SILCKE (WALTER E) & CO
Starrett (L S) Co

STRAINERS, EAVE TROUGH

Alabama Metal Lath Co
Badger Corrugating Co
BARBETT DIV ALLIED CHEMICAL & DYE CORP
BERGER MFG DIV REPUBLIC STEEL CORP
Brown & Sharpe Mfg Co
CECO STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Donley Brothers
Edwards Mfg Co
INLAND STEEL PRODUCTS CO
Mid-States Steel & Wire Co
Northwest Metal Products Inc
Penn Supply & Metal Corp
Rohlok Inc
U S Eastern Filter Mfg Co
Wheeling Corrugating Co
Williams-Walton Co
Zurn (J A) Mfg Co

STRAINERS, SEWER PIPE

American Vitribid Products Co
Donley Brothers
Evans Pipe Co
KEWANEE MFG CO
MAJESTIC CO
Robinson Clay Product Co
Universal Sewer Pipe Corp
Vestal Stone Co
Zurn (J A) Mfg Co

STRAINERS, SINK

AMERICAN RADIATOR & STANDARD SANITARY CORP
American Sanitary Mfg Co
CRANE CO
ELIER CO
Gouder Paschke & Fry Co
International Nickel Co Inc
KOHLER CO
National Enameling & Stamping Co
Newco Corp
Seabell Co
Scovill Mfg Co

STRAPPERS

Acme Steel Co
BRAINARD STEEL CO
Gerrard (A J) & Co
Gerrard Steel Strapping Co
Sharon Steel Co
Signode Steel Strapping Co

STRIPS, CORRUGATED FILLER

Fabricated Products Co
SERVICISED PRODUCTS CORP

STRIPS, DIVIDING

CHASE BRASS & COPPER CO
Manhattan Terrazo Brass Strip Co Inc

STRIPS, FILLER ASPHALT

Fabricated Products Co
SERVICISED PRODUCTS CORP

STRIPS, SEALING

Keller Products

STUCCO

Beantox Plaster Mfg Co
Coddington (E T) Mfg Co
Colorcrete Industries Inc
Ohio Hydrate & Supply Co
Pon Crete Products Co
Sullivan Co

STUCCO, PRE-MIXED

Hiss Diamond Corp
CELOTEX CORP
LOUISVILLE CEMENT CO
National Mortar & Supply Co
Pyramid Co
S S Gypsum Co
Washville Lime Co

STUCCO RETARDERS

Breinig Brothers Inc
Tamm Industries Inc

SUNDIALS, CAST BRONZE

Clinton Lock Co
Colonial Bronze Co
Colorcrete Industries Inc
Ercs Mfg Co
Fiske (J W) Iron Works
Fisale Equipment Mfg Co
Newman Brothers Inc
Standard Bronze Co
Turner Brass Works

SWITCHES, ELECTRIC

Arrow-Hart & Hegeman Electric Co
Bryant Electric Co
Building Electric Products Co
Cutter-Hammer Inc
Federal Electric Products Co
GENERAL ELECTRIC CO CONSTRUCTION MATERIALS DEPT
General Switch Corp
Hibbels (Harvey) Inc
Micro Switch Corp
Pass & Seymour Inc
WESTINGHOUSE ELECTRIC CORP

SWITCHES, MERCURY

MINNEAPOLIS-HONEYWELL REGULATOR CO

SWITCHES, TIME, AUTOMATIC

Paragon Electric Co
Penn Electric Switch Co
Saugus Time Control Inc
Turk Clock Co Inc

SYSTEMS, GARAGE, GAS REMOVAL

National System Garage Ventilation

TABLES, DRAFTING

Emrick Inc
Hamilton Mfg Co
KEUFFEL & ESSER CO
Kingsley Mfg Co
Klump Pine Mills Co
Leon Metal Products Inc
Post (Friedrich) Co
Smith (E E) Co
Southern Wire & Iron Works
Stalwart Equipment Corp
Stalwart Clay Products Co

TABLES, SAW

PORTER CABLE MACHINE CO
Sales Service Machine Tool Co

TABLES, STEEL

Equipto Div Aurora Equipment Co
Heller (W C) & Co
Hoyer Sales Co
Leon Metal Products Inc
Precision Equipment Co
REINTEGRAND INC
Universal Steel Equipment Corp

TACKERS, AUTOMATIC

Acme Staple Co
Acme Steel Co
Arrow Fastener Co
BUSTICH INC
Burgess Fastening Co
Crofoot (J R) Co
FASTENER CORP
HANSEN (A L) MFG CO
Hotchkiss (E H) Co
MARKWELL MFG CO INC
RED DEVIL TOOLS
Saranac Machine Co
Spotnalls Inc

TACKERS, HAMMER

BOSTITCH INC
Hotchkiss (E H) Co
MARKWELL MFG CO

TACKS

AMERICAN STEEL & WIRE CO
Atlas Tack Corp
CHASE BRASS & COPPER CO
COLUMBIA STEEL CO
Hilwood Mfg Co
Independent Nail & Packing Co
Sheffield Steel Corp
Shulton Tack Co
Snell-Jones Tack Corp
TENNESSEE COAL IRON & RAILROAD CO
Wastorey Tack Co

TAMPERS

Dalton Foundries Inc
Storta (John) & Sons
Woodings-Verona Tool Works

TANKS, FUEL OIL & GAS STORAGE

Black Sivalis & Bryson Inc
Modern Welding Co
PRICE FIREPLACE HEATER & TANK CORP
San-Quip Inc

TANKS, HOT WATER, HEATING SYSTEM

BELL & GOSSETT CO

TANKS, SEPTIC, CLAY

American Vitribid Products Co
Cantonian Sewer Pipe Co
Dall Steel Products Co
Denver Sewer Pipe & Clay Co
Dinsley (W S) Clay Mfg Co
Erase Pipe Co
Kaul Clay Mfg Co
Lehigh Sewer Pipe & Tile Co
NATIONAL CLAY PIPE MFGS INC
Robinson Clay Products Co
Seaton Products Inc
Sreuter Drain Tile Co
What Cheer Clay Products Co

TANKS, SEPTIC, STEEL

Armo Drainage & Metal Products Inc
Beall Pipe & Tank Corp
Birmingham Building Products Corp
Butler Mfg Co
Dempsler Mill Mfg Co
Donley Brothers
Ingalls Iron Works Co
Moglin Welding Co
PRICE FIREPLACE HEATER & TANK CORP
Richmond Engineering Co
San-Quip Inc
Sawer Steel Tank & Mfg Co
Uniflow Mfg Co

TANKS, SEPTIC, WOOD

Arrow Tank Co
Butler Mfg Co
Fiechtel Lumber Co
Johnson & Carlson
Uniflow Mfg Co
U S Challenge Co
WEYERHAEUSER SALES CO

TANKS, STEEL, STORAGE

Aermotor Co
American Steel Works
Armo Drainage & Metal Products Inc
Beall Pipe & Tank Corp
Breyer Brothers Whiting & Co
Butler Mfg Co
Dempsler Mill Mfg Co
Edwards Mfg Co
Hartl Company
Hawdon Blow Pipe & Sheet Metal Works
Hudson (H D) Mfg Co
L & C Cross Steel Roofing & Corrugating Co
Manitowoc Ship Building Co
National Tube Co U S Steel Corp Sub
Gales Mfg Co
Richmond Engineering Co
St Paul Foundry & Mfg Co
Schlichter (E F) Co Inc
Seattle Boiler Works
Siebring Mfg Co
Sawer Steel Tank & Mfg Co
Wayne Home Equipment Co

TANKS, WOOD, STORAGE

Aermotor Co
Arrow Tank Co Inc
Atlantic Tank Corp
Atlas Tank Mfg Co
Baltimore Copperage Tank & Tower Co
Dempsler Mill Mfg Co
Economy Silo & Mfg Co
Fiechtel Lumber Co
Johnson & Carlson
New England Tank & Tower Co
Pacific Wood Tank Corp
PRICE FIREPLACE HEATER & TANK CORP
Schlichter (E F) Inc
Union Lumber Co
U S Challenge Co

TAPE, FILTER, DRAIN TILE

Ric-Wil Co

TAPE, INSULATING

RUBEROID CO

TAPE, MASKING

Goodrich (H F) Co
International Plastic Corp
Minnesota Mining & Mfg Co
PITTSBURGH PLATE GLASS CO

TAPE, PIPE, JOINT, ASBESTOS

Sall Mountain Co

TAPE, PLASTIC

Mortell (J W) Co

Manufacturers' Names and Addresses Start on Page D-76
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▶ TAPE REPAIR OUTFIT

Lufkin Rule Co

▶ TAPE RING

Lufkin Rule Co

▶ TAPE, WALLBOARD JOINT

CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
 Economy Glass Binding Co
 Marsan Corp
NATIONAL GYPSUM CO
 Bannour Co Inc
 Beardon Co
 Tamms Industries Inc
 U S Gypsum Co
 Wenz Waterpaints Inc

▶ TAPE, WATERPROOF, WALLBOARD

UPSON CO

▶ TAPES, MEASURING

Chicago Steel Tape Co
 Dietzgen (Eugene) Co
 Economy Novelty & Printing Co
EVANS & CO
 Graham (John H) & Co
KEUFFEL & ESSER CO
 Lufkin Rule Co
 Master Rule Mfg Co Inc
 Partisan Novelty Co
RBE (JUSTUS) & SONS
 Starrett (L R) Co
 Union Tool Co
WHITE (DAVID) CO

▶ TAPES, SURVEYORS

Lufkin Rule Co

▶ TAPES, WOVEN

Lufkin Rule Co

▶ TAPING MACHINES, DRY-WALL

Drywall Taping Co
 Holland-American Co

▶ TAR, LIQUID

BABBETT DIV ALLIED CHEMICAL & DYE CO
 Horn (A C) Co Inc
 Koppers Co Inc
 Kelly Tar & Chemical Corp
 Tuffalt Inc

▶ TAR, PITCH

American Asphalt Roof Co
BABBETT DIV ALLIED CHEMICAL & DYE CO
BIRD & SON INC
CADOT (SAMUEL) INC
FLINTKOTE CO
JOHNS-MANVILLE CORP
 Koppers Co Inc
 Kelly Tar & Chemical Corp
RUBENOID CO

▶ TARPAULINS

American Tent & Awning Co
 Angier Corp
 Astrop Co
 Bemis Brothers Bag Co
 Canvas Products Co
 Canvas Specialty Co
 Clifton Mfg Co
 Conch Brothers Mfg Co
DANIELS (C B) INC
 Fulton Bag & Cotton Mills
 Goodrich (H F) Co
 New York Drop Cloth Mfg Co
RICKENBAFF CO
 Standard Awning Co
 Stanley (William W) Co Inc
 Tucker Duck & Rubber Co
 U S Tent & Awning Co
 Werner Canvas Products Co

▶ TARPAULINS, WATERPROOFED

American Canvas Co
 Astrop Co
 Berg (F O)
 Fulton Bag & Cotton Mills Inc
 Hettrick (W E) & Son Co
 Lyton Sales Corp
 Wenzel (H) Tent & Duck Co

▶ TEMPLATES, ARCHITECTURAL DRAFTING

Timely Products Co

▶ TERNE PLATES

Badger Corrugating Co
 Bethlehem Steel Co
FALLSREEBEE STEEL CO
INLAND STEEL PRODUCTS CO
 Wheeling Corrugating Co

Wheeling Steel Corp
 Youngtown Sheet & Tube

▶ TERRA COTTA, ARCHITECTURAL

American Terra Cotta Corp
 Federal Seaboard Terra Cotta Corp
 Northwest Terra Cotta Corp
 Pacific Clay Products
 Washington Brick & Lime Co

▶ THIMBLES, CHIMNEY & STOVE PIPE

Allen Steel Products
 Cannon Sewer Pipe Co
 Dieck (W S) Clay Mfg Co
 Donley Brothers
 Rose Brick Works
INLAND STEEL PRODUCTS CO
 Kaul Clay Mfg Co
KEWANEE MFG CO
MAJESTIC CO
NATIONAL CLAY PIPE MFGS INC
 Pacific Clay Products
 Robinson Clay Products Co
 Sterling Foundry Co
 Washington Brick & Lime Co

▶ THRESHOLDS, METAL & PLASTIC

Acme Metal Weatherstrip Co
ALLMETAL WEATHERSTRIP CO
 Aluminum Co of America
 American Brass Co
 American Mason Safety Tread Co
 Atkey Mfg Co
 Braun (A D) Co
TY METALS CO
CECO STEEL PRODUCTS CORP
 Chamberlain Co of America Inc
CHASE BRASS & COPPER CO
 Deatur Iron & Steel Co
 Decourte Inc
 Dennis (W J) & Co
 Donley Brothers
 Durbin Metal Strip Mfg Co
 Eroz Mfg Co
KAWNEER CO
 Logan Co
MACKELBURG-DUNCAN CO
MAJESTIC CO
MASTER METAL STRIP SERVICE CO
METAL CRAFTERS
 Monarch Metal Weatherstrip Corp
 National Guard Products Inc
 Newman Brothers Inc
NICHOLS WIRE & ALUMINUM CO
 Proter Weatherstrip Mfg Co
 Ebbison Mfg Co
RUSSELL & ERWIN DIV AMERICAN CABINET HARDWARE CORP
SARGENT & CO
 S & W Moulding Co
WEATHERPROOF PRODUCTS CORP
 Werner (D) Co Inc
WOOSTER PRODUCTS INC
 Youngtown Mfg Inc

▶ THRESHOLDS, WOOD

Acton Plywood & Veneer Co
 Anderson-Fully Co
 Angeline Hardwood Sales Co
BRADLEY LUMBER CO OF ARK BRIDGE (E L) CO
CARR ADAMS & COLLIER CO
 Chapman & Heery Lumber Co
 Clarke County Lumber Mills
 Cole Mfg Co
CROSSETT LUMBER CO
 Diebels Lumber & Coal Co
 Edens-Birch Lumber Co
FAIR (D L) LUMBER CO
 Farley & Lottcher Mfg Co
 Furdge Lumber Co
 Frost Lumber Industries Inc
GREGG & SON INC
 Griffith Lumber Co
 Hallatt Mfg Co Inc
 Harwood Corp of America
 Holly Hill Lumber Co
 Hutton & Bourneham Co
 Industrial Lumber Co
 Kora Industries Inc
LONG-BELL LUMBER CO
 Mansfield Hardwood Lumber Co
 Marshall Lumber Co
 McCracken & McCall Inc
 Meadow River Lumber Co
 Memphis Hardwood Flooring Co
 Miller Brothers Co Inc
 Niskey Brothers Inc
 Owen (R C) Co
 Phillips-Bryce Lumber Co Inc
 Plumly (P W) Lumber Corp
 Polmsted Lumber & Mfg Co
 Reynolds Brothers Lumber Co
 Ritter (W M) Lumber Co
 Rock Island Millwork Co
 Rose (D M) & Co
 Silbermagel (George J) & Sons Co
 Southern Lumber Co
SOUTHERN PINE LUMBER CO
 Stuart Lumber Corp
 Temple Lumber Co
 Southern Lumber Co Inc
 Webster (H E) Lumber Co
 Williams-Brownell Inc
 Williams (J L) & Sons
 Wistar Underhill & Co

▶ TIES, WALL

Allen Steel Products
 Badger Corrugating Co
 Bethlehem Steel
BUSTWICK STEEL LATH CO
CECO STEEL PRODUCTS CORP
CEBAN RAPIDS BLOCK CO SUB-6-WAL DIV
 Central Products Co
CHASE BRASS & COPPER CO
COPPELFIELD STEEL CO
 Conner Steel & Wire Co
 Donley Brothers
 Gary Flower Steel Corp
 Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
 Kemp (F) Mfg Co
KEWANEE MFG CO
 Klauer Mfg Co
 La Trame Steel Roofing & Corrugating Co
 M & M Wire Clamp Co
NICHOLS WIRE & ALUMINUM CO
 Northwest Metal Products Inc
 Reeves Steel & Mfg Co
ST PAUL CORRUGATING CO
 Summer Metalcraft Corp
 Southern States Iron Roofing Co
 Star Expansion Products Co Inc
TRUSCON STEEL CO
 U S Gypsum Co
UNIVERSAL FLOOR CLAMP CO
 Wheeling Corrugating Co

▶ TIES, WALL & COLUMN, WIRE MESH

CECO STEEL PRODUCTS CO
 Goldsmith Metal Lath Co
 Penn Metal Co Inc
 Richmond Screw Anchor Co
 Summer Metalcraft Corp
TRUSCON STEEL CO
UNIVERSAL FLOOR CLAMP CO
 Wheeling Corrugating Co
 Williams Form Engineering Corp
▶ TILE, ACIDPROOF
 Harbison-Walker Refractories Co
 Mexite Refractories Co
 National Tile & Mfg Co
 Nukem Products Corp
 Robinson Clay Product Co
 Slosson-Riabon Corp
 Stark Brick Co
 Tile-Tex Div Flintkote Co

▶ TILE, ASPHALT

ARMSTRONG CORP CO
BIRD & SON
CAREY (PHILIP) MFG CO
CONGOLEUM-NAIRN INC
 Duracraft Co
FLINTKOTE CO
 Fremont Rubber Co
HACHMISTER INC
 Hood Rubber Div Goodrich (B F) Co
JOHNS-MANVILLE CORP
KERTILE INC
MASTIC TILE CORP OF AMERICA
MULTIPLE INC
 Falso Products Inc
 Rordale Building Products Corp
 Slosson-Riabon Corp
 Thomas Moulding Floor Mfg Co
 Tile-Tex Div Flintkote Co
 Uvalde Rock Asphalt Co
 Williams Products Co Inc

▶ TILE, CLAY

Acme Brick Co
 Adel Clay Products Co
 Arhetex Ceramic Corp
 American-Olean Tile Co
 Bescon Brick Co
 Binghamton Brick Co
 Buxtonton Shale Co
 Brazil Hollow Brick Co
CAMBRIDGE TILE MFG CO
 Charleston Clay Products Co
 Chicago Fire Brick Co
 Claycraft Co
 Denver Sewer Pipe & Clay Co
 Elgin-Standard Brick Mfg Co
 General Shale Products Corp
 Hoeking Valley Brick Co
 Hope Brick Works
 Humphrey Brick & Tile Co
 Intermediate Brick Co
 Kalo Brick & Tile Co
 Metropolitan Brick Inc
MOGASIC TILE CO
 National Fireproofing Corp
 National Tile & Mfg Co
 Pacific Clay Products
 Portia Brick & Tile Co
 Red River Valley Brick Corp
ROBERTSON MFG CO
 Rockford Brick & Tile Co
 Sheffield Brick & Tile Co
 Sheridan Press Brick & Tile Co
 South Ceramic Co
 Standard Brick & Tile Co
 Stillwater Clay Products Inc
 Stylen Corp
 Summit Pressed Brick & Tile Co
 Texas Brick Co
 The Council of America
 United Materials & Richmond Brick Co Ltd

U S Quarry Tile Co
 Verdugo Valley Vitrified Brick & Tile Co
 Yankee Hill Brick Mfg Co

▶ TILE, CORK

ARMSTRONG CORP CO
 Dodge-Lark Co Inc
KERTILE INC

▶ TILE, DRAIN

Acme Brick Co
 Abil Clay Products Co
 American Vitrified Products Co
 Bowerton Shale Co
 Cannon Sewer Pipe Co
 Cheshire Brick & Tile Co
 Chicago Fire Brick Co
 Clay Clay Pipe Co
 Columbia Brick Works
 Columbia Pipe Co
 Concrete Products Corp
 Denver Sewer Pipe & Clay Co
 Dieck (W S) Clay Mfg Co
 Evans Pipe Co
 Graystone Concrete Products Co
 Great Falls Brick Co
 Hancock Brick & Tile Co
 Humboldt Brick & Tile Co
 Kalo Brick & Tile Co
 Kingsland Clay Products Co
 Lough Sewer Pipe & Tile Co
NATIONAL CLAY PIPE MFGS INC
 National Fireproofing Corp
 Pacific Clay Products Co
 Robinson Clay Products Co
 Rockford Brick & Tile Co
 Sheridan Press Brick & Tile Co
 Stretator Drain Tile Co
 Texas Brick Co
 Universal Sewer Pipe Co
 What Cheer Clay Products Co
 Yankee Hill Brick Co

▶ TILE, HEARTH

Langmuir Brick & Tile Co
 Murray Tile Co Inc
 Sparta Ceramic Co

▶ TILE, LINOLEUM

ARMSTRONG CORP CO
 Bonafide Mills Inc
 Slosson-Riabon Corp

▶ TILE, PARTITION, CLAY

Acme Brick Co
 Columbia Brick Works
 Denver Sewer Pipe & Clay Co
 Graystone Concrete Products Co
 Great Falls Brick Co
 Hoeking Valley Brick Co
 Hope Brick Works
 Kalo Brick & Tile Co
 National Fireproofing Corp
 St Anne Brick & Tile Co
 Sealton Products Inc
 Sheffield Brick & Tile Co
 Summit Pressed Brick & Tile Co
 Uvalde Rock Asphalt & Lime Co
 Yankee Hill Brick Mfg Co

▶ TILE, PARTITION, GYPSUM

Rhe Diamond Corp
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
NATIONAL GYPSUM CO
 Sealton Products Inc
 U S Gypsum Co

▶ TILE, PAVING, NON-SLIP

American Abrasive Metals Co
 Charleston Clay Products Co
FLINTKOTE CO
 Metropolitan Brick Co
 National Tile & Mfg Co
 Norton Co
 Safe-Tread Co Inc
 Stark Brick Co
 Tile-Tex Div Flintkote Co
 Washington Brick & Lime Co

▶ TILE, PLASTIC

ARMSTRONG CORP CO
 Corvick Tile Co
DELAWARE FLOOR PRODUCTS INC
HACHMEISTER INC
JOHNS-MANVILLE CORP
 Stylen Corp
 Stron Bri-Tile Co of N Y
 U S Stoneware Co

▶ TILE, PLASTIC, ASBESTOS

Acorn Plastic Engineers Inc
JOHNS-MANVILLE CORP

▶ TILE, QUARRY

Adel Clay Products Co
 Arhetex Ceramic Corp
 Brookhaven Pressed Brick & Mfg Co
 Cannon Sewer Pipe Co
 Carlyle Tile Co
 Clark (S) & Sons
 Gladding-McBean & Co
 Hanley Co
 Intermediate Brick Co
 Ludovici-Caldon
 Miffin (B) Hood Co
MOGASIC TILE CO

Manufacturers' Names and Addresses Start on Page D-76

Manufacturers' Brand Name Identifications Start on Page D-64

Murray Tile Co Inc
National Tile & Mfg Co
Pacific Clay Products
Baltimore Clay Products Co
SUMMITVILLE FINE BRICK CO
Coated Materials & Richmond Brick Co Ltd
U S Quarry Tile Co
Utah Fire Clay Co
Washington Brick Lime & Sewer Pipe Co
Washing Tile Co

▶ TILE, ROOFING

California Pottery Co
Clark (N) & Sons Div Pacific Clay Products
Gladding-McBean & Co
Interstate Brick Co
Ludowici-Cladon Co
Miffin (B) Hood Co
Murray Tile Co Inc
National Fireproofing Corp
Owens-Illinois Glass Co Kaylo Div
Pacific Clay Products
Washington Brick & Lime Co
Wolverine Portland Enameling Co
ZONOLITE CO

▶ TILE, ROOFING, INSULATING AMERICAN STRUCTURAL PRODUCTS CO

▶ TILE ROOFING, METAL

CECS STEEL PRODUCTS CORP
Continental Steel Corp
Fowlers Mfg Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV

▶ TILE, RUBBER

American Biltrite Rubber Co
American Rubber Co
American Tile & Rubber Co
ARMSTRONG CORK CO BUILDING MATERIALS DIV
Beatty Wear Rubber Co Int
Danbury Rubber Co
Fremont Rubber Co
Goodrich (B F) Co
Goodyear Tire & Rubber Co Inc
Hood Rubber Div Goodrich (B F) Co
Johnson Industries Inc
KENTILE INC
Lustric Plastic Tile Mfg Co
Mitchell (K L) Rubber Co
Northern Rubber Products Inc
Palco Products Inc
Palladium Products Inc
R C A RUBBER CO
Robbins Tire & Rubber Co
Roxdale Building Products Corp
Shaw-Blaiss Corp
U S Rubber Co
Williams Products Co Inc
WRIGHT MFG CO WRIGHT RUBBER PRODUCTS DIV

▶ TILE, SEWER, SEGMENT

American Vitreous Products Co
Bowerston Shale Co
Dixey (W S) Clay Mfg Co
NATIONAL CLAY PIPE MFRS INC
Pacific Clay Products
Robinson Clay Products Co
Universal Concrete Pipe Co Inc
Universal Sewer Pipe Corp

▶ TILE, SILO

Acme Brick Co
Adel Clay Products Co
Columbia Brick Works
Dixey (W S) Clay Mfg Co
Kato Brick & Tile Co
National Fireproofing Corp
Yankee Hill Brick Co

▶ TILE, STRUCTURAL CLAY

Acme Brick Co
Adel Clay Products Co
Alliance Clay Products Co
Arlotex Ceramic Corp
Bush (W G) & Co
Charleston Clay Products Co
Chabalis Brick & Tile Co
Cherokee Brick Co
Claycraft Co
Columbia Brick Works
Conce Building Products Inc
Denver Sewer Pipe & Clay Co
Diskinson Clay Products Co
Elgin-Butler Brick Co
General Shale Products Corp
Graystone Concrete Products Co
Great Falls Brick Co
Hudson Brick Co
Hoeking Valley Brick Co
Hope Brick Works
Humboldt Brick & Tile Co
Interstate Brick Co
Jenkins Brick Co
Kaino Brick & Tile Co
Laramie Brick & Tile Co
Valiron Clay Co
Metropolitan Paving Brick Co
Moorhead Brick & Tile Co
National Fireproofing Corp
New Bethlehem Tile Co
Pacific Clay Products Co
Prestia Brick & Tile Co
Red River Valley Brick Corp
Rockford Brick & Tile Co
St Anne Brick & Tile Co
Schneider Brick & Tile Co
Sealton Products Inc
Sheffield Brick & Tile Co

Sheridan Press Brick & Tile Co
Standard Brick & Tile Corp
Stratford Drain Tile Co
Summit Pressed Brick & Tile Co
Tenn Brick & Tile Co
United Brick & Tile Co
U S Gypsum Co
Washington Brick & Lime Co
Yankee Hill Brick Mfg Co

▶ TILE, WALL, ALUMINUM, PLASTIC COATED

ALLOY TILE CORP
Bestile Mfg Co
VIKON TILE CO

▶ TILE, WALL, BOARD

Actna Plywood & Veneer Co
A & F Tileboard Co
Alu-Tile Mfg Co
ARMSTRONG CORK CO BUILDING MATERIALS DIV
BARCLAY MFG CO INC
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Codytile Corp Div Tyle-Board Co Inc
Cornell Wood Products
DANT & RUSSELL INC
Davis Plywood Corp
East Coast Tileboard Corp
Fire-Tex of So Cal
FLINTKOTE CO
Gibbs Boardtile Corp
HOMASOTE CO
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MARVILLE CORP
MARSH WALL PRODUCTS INC
MASONITE CORP
Klimowich Plywood Co
Mirafite Mfg Co
Menarch Tile Mfg Corp
National Tileboard Corp
National Tileboard Corp
Plastering Wall Board Co
PRESTILE MFG CO
RODDIS FLYWOOD CORP
Roxdale Building Products Corp
SIMPSON LOGGING CO
Superior Plastics Div Commonwealth Plastic Inc

Superior Wall Products Co
TYLAC CO
U S Gypsum Co
UPSON CO
Wallace Mfg Co
Wall-Tile Mfg Co
Williams Products Co Inc
WOOD CONVERSION CO
Yankee Tile & Fibre Mfg Co

▶ TILE, WALL, BOARD, GYPSUM

NATIONAL GYPSUM CO

▶ TILE, WALL, BOARD, PLASTIC COATED

ARMSTRONG CORK CO BUILDING MATERIALS DIV
BARCLAY MFG CO INC
Bestile Mfg Co
East Coast Tileboard Co
Gibbs Boardtile Corp
MARSH WALL PRODUCTS INC
Mirafite Mfg Co
National Tileboard Corp
PRESTILE MFG CO
Roxdale Building Products Co
Superior Wall Products Co
TYLAC CO
Wallace Mfg Co

▶ TILE, WALL, GLASS

American Beauty Glass Tile Co
Inartform Glass Co

▶ TILE, WALL, MARBLE

Vermont Marble Co

▶ TILE, WALL, METAL

ALLOY TILE CORPORATION
Aliteo Tile Co
Baltimore Porcelain Steel Corp
Bestile Mfg Co
Cermak Tile Co Inc
Chromite Co
Ford Roofing Products Co
Goldsmith Metal Lath Co
INLAND STEEL PRODUCTS CO
Metal Tile Products Inc
Ohio Can & Crown Co
Plastic Products Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Roxdale Building Products Corp
Steel Wall Tile Co
VIKON TILE CORP
Wheeling Corrugating Co

▶ TILE, WALL, PLASTIC

A-1 PLASTIC HOLDERS INC
BARCLAY MFG CO

Bonafide Mills Inc
Cermak Tile Co Inc
Chicago Plastic Products Co Inc
Churot (C F) Mfg Co
East Coast Tileboard Co
Guided Corp
HACHMEISTER INC
IRONS & BROWN INC
Lustric Plastic Tile Co
Meridian Plastics Inc
Metrowood Co
National Tileboard Corp
Pioneer Co
Pittsburgh Plastic Tile Co
Plastic Products Co
Plastic Tile Co of America
PRESTILE MFG CO
Robbins Tire & Rubber Co
S & W Moulding Co
SELEN (WALTER F) & CO
Styon Corp
Styron Bri-Tile Co of N Y
Superior Plastics Div Commonwealth Plastics Inc
Superior Wall Products Co
Thomas Moulding Flour Mfg Co
Tile-Text Div Flintkote Co
Trinledge Inc
United Plastic Tile Co
Williams Products Co Inc
Wilson Plastics Inc

▶ TILE, WALL, PORCELAIN ENAMEL

American & Venetian Tile Co
ARMSTRONG CORK CO BUILDING MATERIALS DIV
Baltimore Porcelain Steel Corp
Clare Porcelain Steel Corp
Davidson Enamel Products Inc
Seaport Porcelain Metals Inc

▶ TILE, WALL, WOOD

Malmtile Co

▶ TILE & TILEBOARD ACOUSTICAL

ARMSTRONG CORK CO BUILDING MATERIALS DIV
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
DANT & RUSSELL INC
Darsel Inc
Hanson (Elof) Inc
INSULITE DIV MINNESOTA & ONTARIO PAPER CO
JOHNS-MARVILLE CORP
Kelley Island Lumber & Transport Co
Kimberly-Clark Corp
LOCKPORT COTTON BATTING CO
OWENS-CORNING FIBERGLAS CORP
PITTSBURGH PLATE GLASS CO
Pureite Mfg Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
SIMPSON LOGGING CO
U S Gypsum Co
WOOD CONVERSION CO

▶ TIMBER CONNECTORS

Cleveland Steel Specialty Co Inc
Metal Industries Inc
Timber Engineering Co
TIMBER STRUCTURES INC

▶ TIRES & TUBES, RUBBER

Dayton Rubber Co
Firestone Industrial Products Co
Firestone Tire & Rubber Co
Fisk Tire Div U S Rubber Co
Gates Rubber Co
General Tire & Rubber Co
Goodrich (B F) Co
Goodyear Tire & Rubber Co
Kelly-Springfield Tire Co
Lee Rubber & Tire Corp
Manfield Tire & Rubber Co
Sears Rubber Co
U S Rubber Co

▶ TOOL BOXES

All-Steel Equipment Co
Equipto Div Aurora Equipment Co
Lufkin Rule Co
Lyon Metal Products Inc
Proto Tool Co
Union Steel Chest Corp

▶ TOOLS, BOARD BENDING

M-M-A Inc

▶ TOOLS, BORING

Armstrong Brothers Tool Co
Ciron Tool Co
Deane (E W) Co
Gisting Tool Co
Graham (John H) & Co Inc
Hobbs Industries Inc
Mephisto Tool Co Inc
MILWAUKEE ELECTRIC TOOL CORP
Pratt & Whitney Div Niles-Bement-Pond Co
Precision Tool Co Inc

STANLEY TOOLS DIV STANLEY WORKS WALLACE (J D) MFG CO

▶ TOOLS, CARPENTER

Atkins (E C) & Co
Black Brothers Tool Inc
Cedarburg Mfg Co
DISSTON (HENRY) & SONS INC
Inew (C) & Co
Eliason Tool Co
Emure Level Mfg Co
Graham (John H) Co Inc
Greenlee Tool Co
Heller Brothers Co
Lestonia Tool Co
Mayhew Steel Products Inc
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
Or Wall Tool Co
Peck Show & Wilcox Co
Plomb Tool Company
Rainer-Tool Co
Sammson Tools Mfg Co
SARGENT & STANLEY TOOL DIV STANLEY WORKS
Starratt (L S) Co
Storta (John) & Son Inc
Union Hardware Co
Vaughan & Bushnell Mfg Co

▶ TOOLS, CARVING, HOMEWORKSHOP

Bow Machine Works
Chicago Wheel & Mfg Co
Clarke Sanding Machine Co
DREML MFG CO
Duro Products Co
Excel Auto Radiator Co
INDEPENDENT PNEUMATIC TOOL CO
North Brothers Mfg Co Div Stanley Tools
Osborne (C S) & Co
PARKS WORKSHOP MACHINE CO
Pratt & Whitney Div Niles-Bement-Pond Co
Speedway Mfg Co
WALKER-TURNER CO DIV KEARNEY & TRECKER CO
Wilson Saw Div Media Machine Works Inc

▶ TOOLS, CAULKING

Barehill Tool Mfg Co
GOLDBLATT TOOL CO
International Nutup Tool Corp
Lestonia Tool Co
Palmer (Benjamin D)
Prote Tool Co
Robbins Mfg Co

▶ TOOLS, CONCRETE FINISHING

Atkins (E C) & Co
DISSTON (HENRY) & SONS INC
GOLDBLATT TOOL CO
INDEPENDENT PNEUMATIC TOOL CO
MALL TOOL CO
Marshalltown Tool Co
Sant's Level & Tool Co
Sterling Wheelbarrow Co
Whitman Mfg Co

▶ TOOLS, ELECTRIC, PORTABLE

Albertson & Co Inc
AMERICAN FLOOR SURFACING MACHINE CO
BLACK & DECKER MFG CO
BRADFORD MACHINES TOOL CO
Burgess Vibromasters Inc
Chicago Pneumatic Tool Co
Clarke Sanding Machine Co
CONSOLIDATED MACHINERY & SUPPLY CO LTD
CUMMINS-CHICAGO CORP CUMMINS PORTABLE TOOLS DIV
Electric Sprays Co
Forsberg Mfg Co
GOLDBLATT TOOL CO
Horton & Anderson Div St Paul Foundry & Mfg Co
INDEPENDENT PNEUMATIC TOOL CO
MALL TOOL CO
Millers Falls Co
MILWAUKEE ELECTRIC TOOL CORP
PORTER-CABLE MACHINE CO
ROCKWELL MFG CO DELTA POWER TOOL DIV
SKILSAW INC
STANLEY ELECTRIC TOOLS DIV STANLEY WORKS
Svrtson Co
U S Electrical Tool Co
WALLACE (J D) & CO
Wright Power Saw & Tool Co

▶ TOOLS, GLAZIERS'

PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS

▶ TOOLS, LINOLEUM-LAYING

ARMSTRONG CORK CO
HACHMEISTER MFG CO
National Gypsum Products
Youngstown Mfg Inc

▶ TOOLS, MASONS, PLASTERERS

Adams (C F) Inc
Adams Co
Atkins (E C) Co

Manufacturers' Names and Addresses Start on Page D-76

Manufacturers' Brand Name Identifications Start on Page D-64

Hanner Mfg Co
Berg (John) Mfg Co
Bridgeport Hardware Mfg Corp
Bucalbe Tool Mfg Co
Cedarburg Mfg Co
DISSTON (HENRY) & SONS
Donley Brothers
Dresden Mfg Co
Drew (C) & Co
Economy Mfg Co
Empire Level Mfg Co
GOLDBLATT TOOL CO
Graham (John H) Co Inc
Griffith Tool Works
Heller Brothers Co
Huber Brothers Saw Mfg Co Inc
Industrial Iron Works
Kabel Company
Lansing Co
Market Products Corp
Marshalltown Tread Co
Massey Tool Mfg Co
Mayer Brothers Tool & Mfg Co Inc
M & M Wire Clamp Co
Nash (J) Mfg Co
NATIONAL GYPSUM CO
Nicholls Mfg Co
Paine (Benjamin O)
Peck Stow & Wilcox Co
Plumb (Fayette B) Inc
REWINNING ARMS CO INC
Sands Level & Tool Co
STANLEY TOOL DIV STANLEY WORKS
Stortz (John) & Son Inc
Tennessee Line & Twine Co
U S Gypsum Co
United Wire Goods Mfg Co
Vaughan & Bushnell Mfg Co
Vermonton Tool Div Metex Corp
Vulcan Tool Mfg Co
Wheeling Corrugating Co

▶ TOOLS, PAINTERS' & PAPERHANGERS'

Atlas-Annomia Co
Brougal Co
Black Panther Tool Co
Carlson (A B) & Co
Clyde Cutlery Co
Collmer Brothers
Colucrete Industries Inc
Devoe & Reynolds Inc
Empire Level Mfg Co
Fellon Shiley & Co Inc
Gifford Co
GOLDBLATT TOOL CO
Harill Mfg Co Inc
Hendel-Clason Co
Holley Chemical Co
Hyde Mfg Co
Lansford Fry & Clark
Modern Specialties Co
Murray-Black Co
Parker (Ira) & Sons Co
Pioneer Tool Co Inc
PITTSBURGH PLATE GLASS CO
RED DEVIL TOOLS
Ridgely Trimmer Co
Rubbernet Co
Savoyan Co
Sedlitz Paint & Varnish Co
SELCK (WALTER E) & CO
Sommers (L) & Sons Inc
Stenell Specialty Co
Stephenson Mfg Co
Stortz (John) & Son Inc
Thomas Products Co
Tri-Ko Mfg Co
Vermonton Tool Div Metex Corp
Warner Mfg Co
Wendell Mfg Co
Wise (J) & Sons Co

▶ TOOLS, PLUMBERS

Armstrong Brothers Tool Co
Armstrong Mfg Co
Baltimore Tool Works
Delaware Tool Steel Corp
Hood Brothers
HYDRAULIC MFG CO
Knight (James) Co
Mophisto Tool Co Inc
MILWAUKEE ELECTRIC TOOL CORP
P & C Hand Forged Tool Co
Peck Stow & Wilcox Co
Presto Tool Co
Rainey-Tool
Stortz (John) & Son Inc
Vaughan & Bushnell Mfg Co
Vermonton Tool Div Metex Corp
Wildie Forge & Tool Co

▶ TOOLS, PNEUMATIC

Chicago Pneumatic Tool Co
Ingersoll Rand Co
SKILSAW INC
WORTHINGTON PUMP & MACHINERY CORP
Wright Power Saw & Tool Co

▶ TOOLS, POWER, HOME WORKSHOP

Arada Mfg Div Rockwell Mfg Co
Akins (E C) & Co
BLACK & DECKER MFG CO
Blue Star Products
BOICE-CRANE CO
Bose Machine Works
CONSOLIDATED MACHINERY & SUPPLY CO LTD
CUMMINS-CHICAGO CORP CUMMINS
PORTABLE TOOLS DIV
DEWALT INC

DREMEL MFG CO
Duro Metal Products Co
Horton & Anderson Div St Paul Engineering & Mfg Co
INDEPENDENT PNEUMATIC TOOL CO
Jet Tool Sales Co
HALL TOOL CO
Millers Falls Co
PARKS WOODWORKING MACHINE CO
PETTER-CABLE MACHINE CO
Power King Tool Corp
Prazz & Whitely Div Niles-Bement-Fond Co
ROCKWELL MFG CO DELTA POWER TOOL DIV
Shupmader Inc
SKILSAW INC
SYNTRON CO
Tomlin Tool & Engineering Co
Toolcraft Corp
WALKER-TURNER CO DIV KEARNEY & TRECKER CORP
WALLACE (J) D & CO
Warren Dado Sawing Washers Co
Wilson Saw Div Media Machine Works Inc
Yale-American Machine Co

▶ TOOLS, ROOFING

Burrill (O P) & Brothers
GOLDBLATT TOOL CO
INLAND STEEL PRODUCTS CO
Peck Stow & Wilcox Co
P & C TOOL SALES CORP
ST PAUL CORRUGATING CO
STANLEY TOOLS DIV STANLEY WORKS
TRI-STATES BLDG MATERIAL CO

▶ TOOLS, SHEET METAL WORKERS

Air Reduction Sales Co
Badger Corrugating Co
Compton (W B) Shear Co
Footstuck Corp

▶ TOOLS, SPLIT RING GROOVING

Timber Engineering Co
Vaughan & Bushnell Mfg Co

▶ TOOLS, WEATHERSTRIP

Barland Weatherstrip Material Co
CCO STEEL PRODUCTS CORP
Monarch Metal Weatherstrip Corp
Proter Weatherstrip Mfg Co
Robins Mfg Co
STANLEY TOOLS DIV STANLEY WORKS

▶ TOPS, CABINET, TABLE, COUNTER

Aetna Plywood & Veneer Co
AMERICAN CENTRAL DIV AVCO MFG CORP
ANGEL NOVELTY CO
ARBORITE CO LTD
ARMSTRONG CORK CO
Boro Wood Co
BRADLEY LUMBER CO OF ARK
Consolidated Water Power & Paper Co
Continental Can Co
CURTIS COMPANIES INC
DAMES (J A) & CO
Dei-Mar Cabinet Co Inc
Douglas Distributors Corp
Eben Mfg Co
Engineered Plywood Products Co
Farley & Lottschner Mfg Co
FORBICA CO
GENERAL ELECTRIC CO SINKS & CABINET DIV
GENERAL ELECTRIC CO CHEMICAL DIV
HASKELITE MFG CORP
Ingram-Richardson Mfg Co
IXL FURNITURE CO
Johnson & Carlson
KITCHEN MAID CORP
Korek Mfg Co
Lezard Stainless Sink Corp
Lyon Metal Products Inc
MARSH WALL PRODUCTS INC
MERCELO CO
Midwest Mill Co
MOORE (GOODLIE) E) INC
Morton Mfg Co
MORTON KITCHEN CABINET DIV
MULLINS MFG CORP
NATIONAL PLASTIC PRODUCTS CO
National Tube & Mfg Co
OHIO RUBBER CO
Palmer Mfg Co
Pascare Div St Regis Sales Corp
Paragon Utilities Corp
Parkwood Corp
PITTSBURGH PLATE GLASS CO
RODDIS PLYWOOD CORP
Technical Appliance Corp
Tennessee Enamel Mfg Co
TRACY MFG CO
Tux Wood Stone Inc
U S MENDEL PLYWOOD INC
U S PLYWOOD CORP
U S Rubber Co
WESTINGHOUSE ELECTRIC CORP
Williams Products Co Inc
WODBALL INDUSTRIES INC
Youngtown Mfg Inc

▶ TOPS, TABLE, PORCELAIN ENAMELED

Enamel Products Co
General Porcelain Enameling & Mfg Co
Ingram-Richardson Mfg Co
Richardson Metals Corp
Tennessee Enamel Mfg Co
Vitroform Steel Products Works

▶ TOPS, TABLE, STAINLESS STEEL

Enamel Products Co
Just Mfg Co
Kuslander & Sons Inc

▶ TORCHES, BLOW

Aerul Products Inc
Badger Corrugating Co
Borns (Otis) Co Inc
Cedarberg Mfg Co
Clayton & Lambert Mfg Co
Detroit Torch & Mfg Co
Everitt Mfg Co
Hassk Mfg Co
Justite Mfg Co
Kinetic Laboratories
Lenk Mfg Co
Marlowe Co
National Airoil Burner Co
PITTSBURGH PLATE GLASS CO
Turner Brass Works
Wall (P) Mfg Co

▶ TOWERS, SELF-RAISING

JAEGER MACHINE CO

▶ TRACTORS

ALLIS-CHALMERS MFG CO
Buda Co
Caterpillar Tractor Co
DEARBORN MOTORS
Detroit Hook & Machine Co
Edwell-Parker Electric Co
GRAND HAVEN STAMPED PRODUCTS CO
Industrial Truck Div Clark Equipment Co
International Harvester Co
Lewis-Shepard Products Inc
Mark-International Motor Truck Corp
Mowbr-Harris Co
OLIVER CORP INDUSTRIAL DIV
TRACTORS, ELECTRIC
Industrial Truck Div Clark Equipment Co

▶ TRAILERS

Case Crane & Kilbourne Jacobs Co
Dixbrock Hydraulic Corp
Dorsey Trailers
Eberhard Mfg Co Div Eastern Metallic Iron Co
Freschall Trailer Co
JAGER MACHINE CO
Kingham Trailer Co
Knox Corporation
Lanning Co
Le Tourneau (E G) Inc
Mustang Trailer Co
National (W P) Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Strick (A) & Brothers Co
Texas Sheet Metal & Mfg Co
Trailmobile Co
Utility Trailer Mfg Co
Westworth & Irwin
Wood (Gar) Industries Inc

▶ TRAILERS, DUMP

Cobby Trailer Co
Purbaugh Trailer Co
Nutting Truck & Caster Co

▶ TRAILERS, PLATFORM INDUSTRIAL

Beall Pipe & Tank Corp
Bridgman Steel Products Inc
Freschall Trailer Co
Hose Scale Co
International Harvester Co
Lewis-Shepard Products Co
Mercury Mfg Co
Palmer-Williams Co
Service Caster & Truck Div Domestic Industries Inc
Strick (A) & Brothers Co
Tucker-Dorsey Mfg Co
Westworth & Irwin Inc
Whitehead & Kales Co

▶ TRAPS, GREASE

CRANE COMPANY
Industrial Iron Works
NATIONAL CLAY PIPE MFGS INC
Vestal Stone Co Building Specialties Div
Zern (J) At Mfg Co

▶ TRAPS, SINK

AMERICAN RADIATOR & STANDARD SANITARY CORP
CRANE COMPANY
ELLER CO
KORLER CO

▶ TRAPS, STEAM

CRANE COMPANY
Dunham (C A) Co
Grinnell Co
Industrial Iron Works
Marsh (James P) Corp
Moore Div Kila Co
Trass Co

▶ TREADS, STAIR, BRASS

CHASE BRASS & COPPER CO

▶ TREADS, STAIR, SAFETY

Alan Wood Steel Co
American Mason Safety Tread Co
BRUCE (E L) CO
CAREY (PHILIP) MFG CO
CHASE ADAMS & COLLIER CO
CHASE BRASS & COPPER CO
CURTIS COS INC
Inverette Inc
Jones & Laughlin Steel Corp
Lagan Co
Morgan Co
Safe Tread Co Inc
SERVICISED PRODUCTS CORP
Wheeling Corrugating Co
WOOSTER PRODUCTS INC
Youngstown Mfg Co

▶ TREADS, STAIR, STEEL

Alan Wood Steel Co
American Alcanite Metals Co
American Mason Safety Tread Co
Blaw Knox Div Blaw Knox Co
Cain Mfg Co
Decatur Iron & Steel Co
Fremont Rubber Co
Industrial Iron Works
Inland Steel Co
International Steel Co
Lagan Co Inc
METAL CRAFTERS
Moore (Goodwin E) Inc
Safe Tread Co Inc
Smith (F P) Wire & Iron Works
U S Rubber Co
Western Foundry Co
Youngstown Mfg Inc

▶ TREADS, STAIR, WOOD

BRADLEY LUMBER CO OF ARK
BRUCE (E L) CO
Burling Millwork Co
CARR ADAMS & COLLIER CO
CURTIS COS INC
FARLEY & LOTSCHNER MFG CO
Farley & Lottschner Mfg Co
Freschall Trailer Co
Harris Mfg Co
Hines (Edward) Lumber Co
Hunting Sash & Lumber Co
Marquet Millwork Co
Memphis Hardwood Flooring Co
Morgan Co
Nisley Brothers Inc
Spokane Sash & Door Co

▶ TRIM, METAL SIDING

INSULITE DIV MINNESOTA & ONTARIO PAPER CO

▶ TRUCK BODIES

Beall Pipe & Tank Corp
Carter Mfg Co
Farmers Lumber & Supply Co
Fordyce-Crosswell Lumber Co
Freschall Trailer Co
Gaynor (E S) Lumber Co
General Implement Corp
Heredes Steel Products Corp
Indiana Body Co
KEWANE MFG CO
MORRISON STEEL PRODUCTS INC
Perfection Steel Body Co
Palmer-Williams Co
REYNOLDS METALS CO BUILDING PRODUCTS DIV
Rehafer Body
Spokane Sash & Door Co
Stoughton Cab & Body Co
Strick (A) & Bros Co
Westworth & Irwin
Wood (Gar) Industries Inc

▶ TRUCK BODIES, CONCRETE, DUMP

Pumpcrete Div Mason Construction Co Inc
Supremix

▶ TRUCK BODIES, DEMOUNTABLE

American Truck & Body Co
General Implement Corp
Perfection Steel Body Co

Manufacturers' Names and Addresses Start on Page D-76
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▶ TRUCK BODIES, DUMP

Anthony Company
Beall Pipe & Tank Corp
Daybrook Hydraulic Corp
Dumperite Div Mason Construction Co Inc
Farmers Lumber & Supply Co
Galton All-Steel Body Co
Heil Co
Hercules Steel Products Corp
Houston Blow Pipe & Sheet Metal Works
KEWANEE MFG CO
Marion Metal Products Co
Perfection Steel Body Co
Pointer-Williams Co
Wood (Gar) Industries Inc

▶ TRUCK BODIES, ROLLOFF

Beall Pipe & Tank Corp
Carter Mfg Co
Frushard Trailer Co
Hammann Mfg Co
R-R Company
Rebaser Body
Slumped Wheel Co
Streich (A) & Brothers Co
Westworth & Irwin Inc

▶ TRUCK CABS

Four Wheel Drive Auto Co
Indiana Body Co
Stoughton Cab & Body Co
Westworth & Irwin Inc

▶ TRUCKS, HAND AND PLATFORM

Anthony Truck Co
Barrett-Cravens Co
Bassett Industries
Buda Co
Case Crane & Kilbourne Jacobs Co
Chattanooga Wheelbarrow Co
Clark Equipment Co
Colson Corp
Electric Wheel Co
Equipco Div Aurora Equipment Co
Erickson Power Lift Trucks Inc
Franklin Co
Fleming Mfg Co Inc
Francis (Charles E) Co
Hamilton Caster & Mfg Co
Handeco Co
Honeyman Mfg Co
Hopkins Lumber Co
Howe Scale Co
Hyler Co
Johnson Industries Inc
Larsing Co
Lewis Shepard Products Inc
Market Forge Co
Masonry Equipment & Engineering Co
Melroe Mfg Co
Nutting Truck & Caster Co
Orangeville Mfg Co
Rapid-Standard Co Inc
Revolator Co
Sabins Machine Co
Service Caster & Truck Corp
Marshall Corp
Streich (A) & Brothers Co
Tucker-Dorsey Mfg Co
Twin-Till Truck Co
West Bend Equipment Corp
VALE & TOWNE MFG CO

▶ TRUCKS, LIFT

Buda Co
Clark Equipment Co
Kutcherhooker Mfg Co
Revolator Co
Ross Carrier Co

▶ TRUCKS, LIFT, ELECTRIC POWERED

Automatic Transportation Co Inc
Baker Industrial Truck Div
Barrett-Cravens Co
Clark Equipment Co Industrial Truck Div
Crescent Truck Co
Electric Products Co
Ewell-Parker Electric Co
Hamilton Caster & Mfg Co
Hertner Electric Co
Kwik Mix Company
Lewis-Shepard Products Co
Market Forge Company
Mercury Mfg Co
Moto-Trac Co
Nutting Truck & Caster Co
Vale & Towne Mfg Co Philadelphia Div

▶ TRUCKS, LIFT, GAS POWERED

Automatic Transportation Co Inc
Buda Co
Clark Equipment Co Industrial Truck Div
Crescent Truck Co
Erickson Power Lift Trucks Inc
Fleming Mfg Co Inc
Goringer Carrier Co
Hyler Co
Kalamazoo Mfg Co
Kwik Mix Co
Lull Mfg Co
Milwaukee Power Equipment Co
Mobilift Corp
Ross Carrier Co
Service Caster & Truck Corp
Silent Hauler & Crane Co

Towmotor Corp
VALE & TOWNE MFG CO

▶ TRUCKS, MOTOR

Auracor Co
Breweray Motor Co Inc
CHEVROLET MOTOR DIV GENERAL MOTORS CORP
CHRYSLER CORP
DIAMOND T MOTOR CAR CO
DOGGIE BROTHERS DIV CHRYSLER CORP
Federal Motor Truck Co
FORD MOTOR CO
Four Wheel Drive Auto Co
GM-C TRUCK COACH DIV GENERAL MOTORS CORP
International Harvester Co
Marmon Motor Truck Corp
Marmon-Herrington Co Inc
Milford Crane & Machine Co
Boo Motors Inc
Sterling Motors Truck Corp
Hewatt Motor Corp
Ruedebaker Corp
Ward La France Truck Corp
White Motor Co
Wilys-Overland Motors Inc

▶ TRUSSES, ROOF, STEEL

Allen Steel Products
American Bridge Co Sub of U S Steel Corp
Bethlehem Steel Co
CECO STEEL PRODUCTS CORP
Eric Steel Construction Co
Galveston Steel Co
Houston Blow Pipe & Sheet Metal Works
Meador (George L) Steel Corp
REPUBLIC STEEL CORP
REYNOLDS METALS CO BUILDING PRODUCTS DIV
St Paul Foundry & Mfg Co
Southern Wire & Iron Works

▶ TRUSSES, ROOF, WOOD

AMERICAN ROOF TRUSS CO
Green Lumber Co
McKewen Brothers Co
ILICO LAMINATED PRODUCTS INC
Roo Structures Inc
Super-Structures Inc
Tacoma Lumber Fabricating Co
TIMBER STRUCTURES INC
Unit Structures Inc
WEYERHAEUSER SALES CO

▶ TUBING, INSULATING

GENERAL ELECTRIC CO CHEMICAL DEPT

▶ TUBS, LAUNDRY

Alberene Stone Corp of Va
AMERICAN RADIATOR & STANDARD SANITARY CORP
Arves Tank Co Inc
CRANE COMPANY
ELIEX CO
General Ceramics & Steeltite Corp Sanitary
Ways Div
Ingram-Richardson Mfg Corp
Johnson & Carlson
KOHLER CO
RICHMOND RADIATOR CO
Ruslander & Sons Inc
Standard-Elmore Granite Co
Treston Pottery Co
UNIVERSAL-RUNDLE CORP
Vermont Soapstone Co
Wireline Corrugating Co

▶ TURNBUCKLES

Arro Expansion Bolt Co
Black Brothers Co Inc
Commercial Shearing & Stamping Inc
Hubbard & Co
Larson (Charles O) Co
Laughlin (Thomas) Co
Littell Iron Works
Matine Steel Products Inc
NATIONAL MFG CO
Northwell Chain Forge & Iron Co
Robling's (John A) Sons Co
RUSSELL-ERWIN DIV AMERICAN HARDWARE CORP
St Louis Screw & Bolt Co
Sheffield Steel Corp
Stoughton Screw Products Inc
U S Expansion Bolt Co
Union-Walton Co
Wilcox Crittenden & Co Inc

▶ TURPETINE

American Turpetine & Tar Co Ltd
Boyle-Midway Inc
Columbia Naval Stores Co
Deese & Reynolds Co Inc
Elroy Naval Stores
Feltton Sibley & Co Inc
Gildred Co
Gray (William S) & Co
Hercules Powder Co Inc
Industrial Chemical Sales Div West Virginia
Pulp & Paper Co
Minnesota Lined Oil Paint Co
Naval Stores Div Glidden Co
Newport Industries Inc
PITTSBURGH PLATE GLASS CO

Babson Preservo Co
Beddite Paint & Varnish Co
Southern Pine Chemical Co Div Glidden Co

▶ TWINE

Columbian Sage Co
Graham (John B) & Co Inc
Hovsen & Allison Co
International Harvester Co Inc
Plymouth Cordage Co
St. Louis Cordage Mills

▶ UNDER-REAMERS

R & H Co

▶ UNITS, UTILITY

DWYER PRODUCTS CORP
Earle Mitchell Unit Co

▶ VALLEYS, METAL ROOF

Alabama Metal Lath Co
Allen Steel Products
American Brass Co
AMERICAN STEEL & WIRE CO
BERGER MFG DIV REPUBLIC STEEL CORP
CECO STEEL PRODUCTS CORP
CHASE BRASS & COPPER CO
Continental Steel Corp
Gary-Floower Steel Corp
Goldsmith Metal Lath Co
Illinois Zinc Co
INLAND STEEL PRODUCTS CO
Mid-State Steel & Wire Co
New Holland Metals Co
RICHMOND WIRE & ALUMINUM CO
Penna Supply & Metal Corp
Potts-Farrington Co
Revere Copper & Brass Inc
REYNOLDS METALS CO BUILDING PRODUCTS DIV
ST PAUL CORRUGATING CO
TENNESSEE COAL IRON & RAILROAD CO
United States Steel Co
Wheeling Corrugating Co

▶ VALVES, PLUMBING, HEATING, ETC.

AMERICAN RADIATOR & STANDARD SANITARY CORP
BELL & GOSSETT CO
Black Sivalis & Bryson Inc
Boston Brass Co
CHASE BRASS & COPPER CO
Corne & Delaney Co
CRANE COMPANY
DOLE VALVE CO
Durst Mfg Co
ELIEX CO
Imperial Brass Mfg Co
Jenkins Brothers
Lowe Regulator Co
McBoswell & Miller Inc
MINNEAPOLIS-HONEYWELL REGULATOR CO
Muehler Brass Co
Muehler Co
Myers (E F) Brother Co
Newford Brass Works
Schable Co
Slam Valve Co
Tees Heaters Inc
TRUSS (H A) CO
Trane Company
Zure (J A) Mfg Co

▶ VANES, WEATHER

Hantam Mfg Co
Burkett Lighting Rod Co
Electra Protection Co
Edwards Mfg Co
Fiske (J W) Iron Works
Independent Protection Co
James Mfg Co
Rand-Williams Mfg Co Inc
Samson (W J) Iron Co
Starline Inc
Whitehall Metal Studios Inc

▶ VAPOR BARRIERS

Air-O-Cel Co
Angier Corp
BIRD & SON INC
CAREY (PHILIP) MFG CO
CERTAIN-TEED PRODUCTS CORP
INFRA INSULATION INC
Keystone Asphalt Products Co
Kimberly-Clark Corp
PROTECTIVE PAPERS INC
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RICKKRAFT CO
SISALKRAFT INC

▶ VARNISHES

Arme White Lead & Color Works
Aluminum Industries Inc
AMERICAN FLOOR SURFACING MACHINE CO
Amson Varnish Co
Baker Paint & Varnish Co
Barrett Varnish Co
Berry Brothers Inc
Boston Varnish Co
Breving Brothers Inc

Briggs-Maroner Co Inc
CABAT (SAMUEL) INC
CALLAB PAINT & VARNISH CO
Central Paint Various Works
Chicago Bronze & Color Works
Cook Paint & Varnish Co
Dever & Raynolds Co Inc
De Pont (E J) de Nemours & Co Inc
Elliott Paint & Varnish Co
Folton Sibley & Co Inc
Foy Paint Co Inc
GENERAL ELECTRIC CO CHEMICAL DEPT
Glidden Co
Grand Rapids Varnish Corp
Harrison Paint & Varnish Co
Hoboken White Lead & Color Works Inc
Horn (A C) Co
Johnston (R F) Paint Co
Kopstone Varnish Co
Loew Brothers Co
Lucas (John) & Co
Moore (Benjamin) & Co
Murphy Paint Div Interchemical Corp
O'Brien Corp
Pabco Products Inc
Patterson-Sargent Co
Peoria Paint Co Inc
Pileco Inc
PITTSBURGH PLATE GLASS CO
Pratt & Lambert Inc
Rogers Paint Products Inc
St. Louis Surface & Paint Co
Sapulin Paints Inc
Seal Rite Caulking Co Inc
Seidell Paint & Varnish Co
Sherwin-Williams Co
Standard Industrial Products Inc
Standard Varnish Works
U S Gypsum Co
Varnish & Co Inc
Verlex Sales Co Inc
Vila-Var Corp
Woodfinishing Products Co

▶ VATS, DIPPING, LUMBER

Arrow Tank Co Inc
Corley Mfg Co
Johnson & Carlson
Richmond Engineering Co Inc

▶ VENEERS, HARDWOOD

Arma Plywood & Veneer Co
Albany Plywood Co
Brand-Harding Co
Brand (W L) Co
HIGGINS INC
KEARN WALL PRODUCTS INC
Nickey Brothers
Pearl City Plywood Co Inc
Weber Veneer & Plywood Co

▶ VENTILATORS, FOUNDATION

AIR CONTROL PRODUCTS INC
Allen Steel Products
Argo Co
BENNETT-IRELAND INC
BRUCE (E L) CO
Dunley Brothers
KEWANEE MFG CO
Leslie Welding Co
London Machinery Co
MAJESTIC CO
Standard Steel Cabinet Co
U S Gypsum Co
Ventel Stone Co

▶ VENTILATORS, GLASS BLOCK, WALL

Almille Co
AIR RECTIFIERS INC
Ari Co
Consumers Co
MOUGH SHADE CORP
Modern Stained Specialties Co
Monarch Metal Weatherstrip Corp
PITTSBURGH PLATE GLASS CO
Winn Ventilator Co

▶ VENTILATORS, PORTABLE

Nelson (Herman) Corp

▶ VENTILATORS, ROOF, REVOLVING

Burt Mfg Co
CECO STEEL PRODUCTS CORP
Clay Equipment Corp
Danzon Metal Works
Eg Electric Ventilating Co
INLAND STEEL PRODUCTS CO
James Mfg Co
Klauer Mfg Co
Penna Supply & Metal Corp
ST PAUL CORRUGATING CO
Stout Steel Co
Starline Inc
Warner Ventilator Co

▶ VENTILATORS, ROOF, WALL, AND WINDOW

Adams Co
AIR CONTROL PRODUCTS INC
Air Devices Inc
Airmaster Corp
Atrilite Co
AIR RECTIFIERS INC
Allen Steel Products Inc

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American Blower Corp
American Sheet Metal Works
ANGEL NOVELTY CO
Ary Co
Rodge Corrugating Co
Brom Mfg Co
BOSTWICK STEEL LATH CO
Brower Mfg Co
Busch (A G) & Co Inc
CAREY (PHILIP) MFG CO
CECO STEEL PRODUCTS CORP
C & H Air Conditioning Fan Co
Chattanooga Implement & Mfg Co
CHELSEA FAN & BLOWER CO
Clay Equipment Co
Comfort Products Corp
BAMP-VENT CO
Dishl Mfg Co Electrical Div Singer Mfg Co
Dunley Brothers
Edwards Mfg Co
EMERSON ELECTRIC MFG CO
Farwell Ironm Work & Co
FASCO INDUSTRIES INC
Franklin Equipment Co
Harris Inc
Hemphill (A D) Co
Holmann & Barnard Inc
HOPPE'S WINDOWS INC
Houston Blow Pipe & Sheet Metal Works
Hudson (H D) Mfg Co
Ideal Ventilator Co
In Electric Ventilating Co
INLAND STEEL PRODUCTS CO
James Mfg Co
JOHN-MANVILLE CORP
Kerchen Co
Krauser-Boyd
La Crosse Steel Roofing & Corrugating Co
Larson (Chas O) Co
LAU BLOWER CO
Leslie Welding Co
Lockport Wood Products Co
London Machine Co
Lynn Conklin & Co
Metalcraft Screen Co
Modern Stainless Specialties Co Div Modern
Electric Laboratory
National Screen Co
Nelson (Herman) Corp
Olson Mfg Co
Paschle Airbrush Co
Perkins Electric Co
Penn Supply & Metal Corp
Pennsylvania Wire Glass Co
Phenix Mfg Co
Plymouth Stamped Metal Co
Protective Ventilator Co
PRYNE & CO INC
Romer Vent Brick Corp
Ruden (N H) Co
St. Louis Blow Pipe & Hoster Co
ST PAUL CORRUGATING CO
Samcoe (W J) Iron Co
Schumacher (F E) Co
Sees Lath Mfg Co
SHEPLER MFG CO
Signal Electric Mfg Co
Smith (F A) Mfg Co
Standard Steel Cabinet Co
Sterline Inc
STEWART MFG CO
Sutton (O A) Corp
Swartwood Co
Trane Company
Uno Ventilator Co
Vestal Stove Co
Viter Electric Products Inc
Ward (Edgar T) Co Inc
Wardlow & Jordan
Wayne Agricultural Works
Wayne Mfg Co
Western Appliance Co Inc
WESTINGHOUSE ELECTRIC CO
Wilcox Steel Corp
Winco Ventilator Co

VERMICULITE
Arnie Asbestos Covering & Flooring Co
Baker-Thomas Lime & Cement Co
California Zeonite Co
CELOTEX CORP
Bosdon Mfg Co
GREAT LAKES CARBON CORP
Insulation Service Co
Intermountain Insulation Co
Milkolite Sales Corp
Moore Dry Kiln Co
Northwest Insulations Co
Robinson Insulation Co
Schneider (F E) & Co Inc
Southern Zeonite Co
Sullivan Co
Tammus Industries Inc
Texas Vermiculite Co
Vermiculite Institute
Vermiculite Products Corp
Vermiculite Products Inc
Western Mineral Products Co
ZONOLITE CO

▶ VISES
American Scale Co
Armstrong Mfg Co
Athal Machine & Foundry Co
Billings & Spencer Co
Champion Hardware Co
Columbian Vice & Mfg Co
Desmond-Stephan Mfg Co
General Hardware Co
Graham (John H) & Co Inc
Grand Specialties Co
Littlering Hardware Co
Millers Falls Co
North Brothers Mfg Co Div Stanley Tools
Parker (Charles) Co
Peck Stow & Wilcox Co
RICHARDS-WILCOX MFG CO
St Paul Foundry & Mfg Co

SARGENT & CO
STANLEY TOOLS DIV STANLEY WORKS
▶ VISES, DOOR HOLDING
Stow Metal Products Co
▶ WAGONS, LUMBER YARD
Copper (V M) & Co
Dintz Mfg Corp
Electric Wheel Co
General Implement Corp
Goringler Carrier Co
Kaiser Corp
Lanning Co
Lindsay Wagon Co
Nutting Trees & Coffer Co
Perfection Steel Body Co
Pointer-Williamette Co
Standard Forge & Axle Co
Stretch (A) & Brothers Co
Super-Structures Inc
Wadsworth & Irwin Inc
Winpower Mfg Co

▶ WALL COPING
Arnie Brick Co
American Vitriol Products Co
Bowerman Shale Co
Cannellon Saw & Pipe Co
Clay City Pipe Co
Denver Sewer Pipe & Clay Co
Dierley (W S) Clay Mfg Co
Evans Pipe Co
Lehigh Sewer Pipe & Tile Co
NATIONAL CLAY PIPE MFGS INC
National Fireproofing Co
Robinson Clay Product Co
Sealon Products Inc
Stillwater Clay Products Co
Union Clay Mfg Corp
Washington Brick & Lime Co
What Cheer Clay Products Co

▶ WALLBOARD, ALUMINUM FOIL COVERED
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
NATIONAL GYPSUM CO
U S Gypsum Co
▶ WALLBOARD, ASBESTOS CEMENT
ASBESTONE CORP CO
CAREY (PHILIP) MFG CO
CELOTEX CORP
JOHN-MANVILLE CORP
KEASBEY & MATTISON CO
RUBEROID CO
▶ WALLBOARD, FIBER CANE
CELOTEX CORP
▶ WALLBOARD, FIBER INSULATING
ARMSTRONG CORK CO
Barley Mfg Co
CELOTEX CORP
Cole Mfg Company
East Coast Fiberglass Corp
FLINTKOTE CO
INSULITE DIV MINNESOTA & ONTARIO
PAPER CO
JOHN-MANVILLE CORP
NATIONAL GYPSUM CO
National Fiberglass Corp
Plastering Wall Board Co
SIMPSON LOGGING CO
DART & RUSSELL INC
U S Gypsum Co
UPSON CO
WOOD CONVERSION COMPANY

▶ WALLBOARD, FIBER, WATERPROOFED
UPSON CO
▶ WALLBOARD, FIBER, WOOD
Actna Plywood & Veneer Co
ARMSTRONG CORK CO BUILDING MATERIAL DIV
CELOTEX CORP
BIRD & SON INC
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Cornell Wood Products Co
DART & RUSSELL INC
East Coast Fiberglass Corp
Fir-Tex Insulating Board Co
FLINTKOTE CO
HMASITE CO
INSULITE DIV MINNESOTA & ONTARIO
PAPER CO
JOHN-MANVILLE CORP
LONG-BELL LUMBER CO
MARSH WALL PRODUCTS INC
NASONITE CORP
NATIONAL GYPSUM CO
National Fiberglass Corp
Plastering Wall Board Co
Roodale Building Products Corp

Service Products Div Woodall Industries Inc
SIMPSON LOGGING CO
Superior Wall Products Co
U S Gypsum Co
U S PLYWOOD CORP
UPSON CO
Wallace Mfg Co
WOOD CONVERSION COMPANY
▶ WALLBOARD, GYPSUM
Actna Plywood & Veneer Co
CELOTEX CORP
CERTAIN-TEED PRODUCT CORP
Grand Rapids Plaster Co
NATIONAL GYPSUM CO
Palow Products Inc
Pacific Portland Cement Co
Schumacher Wall Board Corp
U S Gypsum Co

▶ WALLBOARD, LEATHER FINISH
Actna Plywood & Veneer Co
MASONITE CORP
Merrill Mfg Co
Wallace Mfg Co
▶ WALLBOARD, MARBLE FINISH
ARMSTRONG CORK CO
BARCLAY MFG CO
Gibbs Building Corp
JOHN-MANVILLE CORP
MARSH WALL PRODUCTS INC
Merrill Mfg Co
PRESTILE MFG CO
TYLAC CO
Williams Products Co Inc

▶ WALLBOARD, PAPER FINISH
ARMSTRONG CORK CO BUILDING MATERIAL DIV
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
Flaming & Sons Inc
Plastering Wall Board Co
U S PLYWOOD CORP
UPSON CO
▶ WALLBOARD, WOODGRAIN FINISH
ARMSTRONG CORK CO BUILDING MATERIAL DIV
CELOTEX CORP
CERTAIN-TEED PRODUCTS CORP
HMASITE CO
Gibbs Boarding Corp
HASKELITE MFG CORP
HMASITE CO
MARSH WALL PRODUCTS INC
NATIONAL GYPSUM CO
PRESTILE MFG CO
Service Products Div Woodall Industries Inc
TYLAC CO
U S Gypsum Co
Williams Products Co Inc

▶ WALLPAPER
Birge Co Inc
Buffalo Wallcraft Co Inc
Buffalo Wall Paper Mfg Co
Century Wallpaper Mills
Cook Paint & Varnish Co
Devoe & Reynolds Inc
Di-Noc Co
Glenn Mills Inc
Ideal Co
Imperial Paper & Color Corp
Jellie Wall Paper Mills
Kimberly-Clark Corp
Kimond Div
Lennan Wallpaper Co
Midwest Wall Paper Co
PITTSBURGH PLATE GLASS CO
Plattberg Wallpaper Co
Prage Co
Sandra Co Inc
Shorwin Williams Co
Stanford Wallpaper Corp
Standard Coated Products Div Inter-Chemical Corp
Star-Perkins Wallpaper Mills
Stetter Wallpaper Mills
Trime Co Inc
United Wallpaper Inc
Varlar Inc
Walton (Geo E) Co
York Wall Paper Co

▶ WALLPAPER, READY-PASTED
Trime Co Inc
United Wallpaper Inc
▶ WALLPAPER REMOVERS
Boyer Chemical Laboratory Co
Consumers Glee Co
Devoe & Reynolds Co Inc
Duracel Chemical Co
Faller (H B) Co
Glidden Co
Le Page's Inc

Link (O E) Co Inc
Patent Corals Co
PITTSBURGH PLATE GLASS CO
Pyramid Process Co Inc
RED DEVIL TOOLS
Reliable Paste & Chemical Co
Sethals Chemical Co
Surgem (N B) Co
Tammus Industries Inc
United Gillette Laboratories
Warren Mfg Co
▶ WARDROBES
Antral Sales Corp
BERGER MFG DIV REPUBLIC STEEL CORP
Carnahan Mfg Co
Decorative Cabinet Corp
Lee Metal Products
Lyon Metal Products
MENDEL CO
Miyawaki Mfg Co
RICHARDS-WILCOX MFG CO
Star-Aid Inc
Woodcraft Mfg Co

▶ WAREHOUSING, FIELD
Douglas-Guardian Warehouse Corp
Lawrence Warehouse Co
St Louis Terminal Warehouse Co
▶ WASHERS
COBBIN (P & F) DIV AMERICAN HARDWARE CORP
HAGER (C) & SON HINGE CO
Ives (H B) Co
LOCKWOOD HARDWARE MFG CO
NATIONAL MFG CO
Skillman Hardware Co
▶ WASHERS, CLOTHES
Astor Brothers Co
Ayer-Brosius Corp
Automatic Washer Co
Barlow & Switz Mfg Co
BERNIX HOME APPLIANCES INC DIV AVCO MFG CORP
Blackstone Corp
Coughlin Bros Mfg Co
Union-Monte Corp
CROSLY DIV AVCO MFG CORP
Easy Washing Machine Corp
Fairbanks Morse & Co
Frigidaire Div General Motors Corp
GENERAL ELECTRIC CO APPLIANCES
MERCHANDISE DEPT
General Implement Corp
Hortler Div Avco Mfg Corp
HOTPOINT INC
Lambert Fray & Clark
Mastek Co
Nason Utilities Corp
Nineteen Hundred Corp
NORGE DIV BRIG-WARNER CORP
Preston Steel Co
Thor Corp
WESTINGHOUSE ELECTRIC CORP

▶ WASHERS, FAUCET
Durst Mfg Co
Holland Rubber Co
Plumbers Specialties Mfg Corp
Schacht Rubber Mfg Co
Williams-Roman Rubber Co
▶ WASHERS, LOCK
Active Screw & Mfg Co
Basteler & Hart Mfg Co
CHASE BRASS & COPPER CO
National Lock Washer Co
Positive Lock Washer Co
Sterling Bolt Co
Stronhold Screw Products Inc

▶ WATER CONDITIONERS
Oltus Co
Permutco Co
RHEEM MFG CO
▶ WATER SUPPLY SYSTEMS
Ammator Co
Ammus Pump Co
Baker Mfg Co
Barrow Mfg Co
Chicago Pump Co
CONSTRUCTION MACHINERY SALES CO
CRAME COMPANY
Dyckman Pump Mfg Co
DECAYOR PUMP CO
DELCO APPLIANCE DIV GENERAL MOTORS CORP
Deming Co
Dempster Mill Mfg Co
Edwards Co
Erie Pump & Engine Works
Eschert Pump & Mfg Co Inc
Fairbanks Morse & Co
FLINT & WALLING MFG CO
Gardner-Denver Co
German Pump Co
Goulds Pumps Inc
Heil Company
Hudson (H V) Mfg Co
Hummer Mfg Co
Hygro Engineering Inc
Jacuzzi Brothers Inc
Landscape Pump & Mfg Co
McDonald (A T) Mfg Co
Meyer (F E) & Brother Co
Oltus Co
Pinner Gen-E-Motor Corp
Pomona Pump Co

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Red Jacket Mfg Co
Robbins & Myers Inc
Raco-Lorrell Shops
Shelley (M) & Sons Co
Wayne Home Equipment Co
**WORTHINGTON PUMP & MACHINERY
CORP**

▶ WATERPROOFING COMPOUNDS, BASEMENT CISTERN

Alestin Mfg Corp
Adensite Co
American Fluorite Co
Anti-Hydro Waterproofing Co
**BARNETT DIV ALLIED CHEMICAL & DYE
CORP**
Belmont Smelting & Refining Works
CABOT (SAMUEL) INC
Camp Chemical Co Inc
CAREY (PHILIP) MFG CO
Ceresit Waterproofing Corp
Coddington (E D) Mfg Co
Colorcrete Industries Inc
Continental Asbestos & Refining Corp
Coopers Creek Chemical Corp
COPROX
Devere & Reynolds Inc
FLINTKOTE CO
Forman-Ford & Co
Fort Pitt Chemical Co
Haynes Products Co
Horn (A C) Co
International Aquella Products Inc
KAY-TITE CO
Materials & Treatment Co
Pevers Paint Co Inc
PITTSBURGH PLATE GLASS CO
Prima Products Inc
PROTECTION PRODUCTS MFG CO
Reselite Mfg Co
Rolly Tar & Chemical Corp
Sika Inc
Smooth-on Mfg Co
Somnborn (L) Sons Inc
Standard Dry Wall Products
Sullivan Co
Tamm Industries Inc
Technical Supply Co
Trucon Laboratories
Tufcrete Co
Vita-Var Corp
Waterlox Div Empire Varnish Co
Weather-Seal Co
X-Pando Corp

▶ WATERPROOFING, INTEGRAL

Adensite Co
American Fluorite Co Inc
Anti-Hydro Waterproofing Co
Blue Ridge Tale Co Inc
Ceresit Waterproofing Corp
COPROX INC
Dow Chemical Co
Evercrete Corp
Fort Pitt Chemical Co
Harp Chemical Co
Horn (A C) Co Inc
JOHNS-MANVILLE CORP
KAY-TITE CO
Lelon Co
Linde Air Products Co
MEDUSA PORTLAND CEMENT CO
Mississippi Builders Supply Co
Ohio Hydrate & Supply Co
PITTSBURGH PLATE GLASS CO
Prima Products Inc
PROTECTION PRODUCTS MFG CO
Reselite Mfg Co
Sealcon Products Inc
Somnborn (L) Sons Inc
Spray-O-Bond Co
Standard Dry Wall Products Inc
Stevellite Mfg Co
Stonhard Co
Sullivan Co
Tamm Industries Inc
Tech Brothers Inc
Trucon Laboratories Div Devere & Reynolds
Inc
Tuffall Inc
Vita-Var Corp
Wayne Chemical Products Co
Weather Seal Co

▶ WATERPROOFING, MEMBRANE

American Asphalt Roofing Corp
CABOT (SAMUEL) INC
**BARNETT DIV ALLIED CHEMICAL & DYE
CORP**
CAREY (PHILIP) MFG CO
Celadr Corp
Evercrete Corp
FLINTKOTE CO
Horn (A C) Co Inc
JOHNS-MANVILLE CORP
KAY-TITE CO
Koppers Co Inc
Lelon Co
Minnac Co Inc
PITTSBURGH PLATE GLASS CO
Prestitute Engineering Co
Reselite Mfg Co Inc
Rubber & Plastic Coated Products Co Inc
Sealcon Products Inc
SISKRAFT CO
Somnborn (L) Sons Co
TEXAS CO
Tremco Mfg Co

Trucon Laboratories Div Devere & Reynolds
Co
Vita-Var Corp
Wesco Flating Co

▶ WATERPROOFING, METALLIC

Belmont Smelting & Refining Works Inc
Evercrete Corp
Fort Pitt Chemical Co
Gibson-Homann Co
Horn (A C) Co
Kendmont Mfg Waterproofing Co Inc
Lelon Co
Reselite Mfg Co Inc
RICKKRAFT CO
Sealcon Products Inc
SISKRAFT CO
Somnborn (L) Sons Inc
Tamm Industries Inc
Trucon Laboratories Div Devere & Reynolds
Inc
Weather Seal Co

▶ WATERPROOFING, PREFORMED UNIT

Briak Waterproofing Co Inc

▶ WATERPROOFING, SURFACE TYPE

Alesto Mfg Corp
Adensite Co Inc
American Asphalt Roof Corp
American Fluorite Co Inc
Anti-Hydro Waterproofing Co
Armor Laboratories
**BARNETT DIV ALLIED CHEMICAL & DYE
CORP**
BYRD & SON INC
Reving Brothers Inc
CABOT (SAMUEL) INC
CALBAR PAINT & VARNISH CO
Camp Chemical Co Inc
CAREY (PHILIP) MFG CO
Cemtec Co
Ceresit Chemical Corp
Coopers Creek Chemical Corp
Devere & Reynolds Co Inc
Donley Brothers
Dow Chemical Co
Evercrete Corp
FLINTKOTE CO
Forman-Ford & Co
Fort Pitt Chemical Co
Gibson-Homann Co
Glastic Corp
Glidden Co
Harp Chemical Co
Horn (A C) Co Inc
Hydron Products Inc
JOHNS-MANVILLE CORP
KAYTITE CO
Lastic Products Co Inc
Lasting Products Co
Lelon Co
Linde Air Product Co
Lowelco Inc
Mar-Kay Mfg Co
MEDUSA PORTLAND CEMENT CO
Mississippi Builders Supply Co
Minnac Co Inc
MIRACLE ADHESIVE CORP
Mistite Corp
MOORE (GOODLOE) CO
Nobonite Chemical Products Inc
Pavolunite Inc
Pevera Paint Co
Pinner Mfg Co
PITTSBURGH PLATE GLASS CO
Prestitute Engineering Co
Prima Products Inc
PROTECTION PRODUCTS MFG CO
PROTECTIVE PAPERS INC
Reselite Mfg Co
Rebond Products Co
RUBERID CO
Rust-Oleum Corp
Seaboard Plastics Corp
Sealcon Products Inc
Somnborn (L) Sons Inc
Spray-O-Bond Co
Standard Dry Wall Products Inc
Steelite Mfg Co
Stonhard Co
Stoppall Waterproofing Mfrs Inc
Sullivan Co
Super Concrete Emulsions
Surface Protection Co
Tamm Industries Inc
TEXAS CO
Trucon Laboratories Div Devere & Reynolds
Inc
Tufcrete Co Inc
Tuffall Inc
United Gilmotte Laboratories
Vita-Var Corp
Waterlox Div Empire Varnish Co
Wayne Chemical Products Co
Weather Seal Co
Wesolator (W F) Cement Co
Werner Canvas Products Co
Wesco Waterproofing Inc

Willmor & Williams Co
WURDACK CHEMICAL CO
X-Pando Corp

▶ WATERPROOFING, TRANSPARENT

Adensite Co Inc
American Fluorite Co Inc
Anti-Hydro Waterproofing Co
CABOT (SAMUEL) INC
CALBAR PAINT & VARNISH CO
Celadr Corp
Ceresit Chemical Corp
Ceresit Waterproofing Corp
CON-CO PAINT CO
Continental Asbestos & Refining Corp
Evercrete Corp
Forman-Ford & Co
Fort Pitt Chemical Co
General Paint Corp
Gibson-Homann Co
Glidden Co
Harp Chemical Co
Haynes Products Co
Horn (A C) Co
Linde Air Products Co
Kryptonite Asphalt Products Co
Lumino Co
Mar-Kay Mfg Co
Minnac Co Inc
Mobile Paint Mfg Co
Pevera Paint Co Inc
Prima Products Inc
PROTECTION PRODUCTS MFG CO
Reselite Mfg Co
Sealcon Products Inc
Somnborn (L) Sons Inc
Standard Dry Wall Products Inc
Sullivan Co
Tamm Industries Inc
Trucon Laboratories Div Devere & Reynolds
Inc
Tufcrete Co Inc
Vita-Var Corp
Waterlox Div Empire Varnish Co
WURDACK CHEMICAL CO
X-Pando Corp

▶ WEATHERSTRIPPING

Accurate Metal Weatherstrip Co
ALLMETAL WEATHERSTRIP CO
American Metal Weather Strip Co
Althey Mfg Co
BALZ (R W) & CO
Barland Weatherstrip Material Co
Bridgport Fabrics Inc
CENTRAL METAL STRIP CO
Chamberlin Co of America
Defiance Metal Weatherstrip Co
Deming (W J) & Co
Dorbin Metal Strip Mfg Co
Durker-Atwood Co
E-Z Tight
Gardner Wire Co
Glaziers' Tool Mfg Corp
Handyman Co
Ideal Co
Lock Joint Window Co
MACKLANBURG-DUNCAN CO
MASTER METAL STRIP SERVICE INC
MILWAUKEE STRIP SERVICE INC
Monarch Metal Weatherstrip Corp
Mortell (W J) Co
National Guard Products
National Metal Products Co
Nichols Metal Strip Service
N S W Co
Prestitute Engineering Co
Protex Weatherstrip Mfg Co
Reese Metal Weatherstrip Co
Rhodes (James H) & Co
Robbins Mfg Co
R O W SALES CO
Samson Products Co
Security Co
Southern Metal Products Corp
Stanley (A J) Corp
Van Cliff Brothers Inc
Warrior Products
WEATHERPROOF PRODUCTS CORP
Window Conditioning Co
ZEGERS INC

▶ WEATHERSTRIPPING, COMBINATION SASH BALANCE

ALLMETAL WEATHERSTRIP CO
CENTRAL METAL STRIP CO
MASTER METAL STRIP SERVICE INC
MILWAUKEE STRIP SERVICE INC
WEATHERPROOF PRODUCTS CORP
ZEGERS INC

▶ WEATHERSTRIPPING, DOOR AND DOOR BOTTOM

Accurate Metal Weatherstrip Co
BALZ (R W) & CO
CEGO STEEL PRODUCTS CORP
Colgate Mfg Corp
Deming (W J) & Co
Dorbin Metal Strip Mfg Co
Handyman Co
MACKLANBURG-DUNCAN CO
MASTER METAL STRIP SERVICE INC

Security Co
Sentry Stop-A-Draft Co
Thermal Co
WAGNER MFG CO
Waterloo Sales Co
WEATHERPROOF PRODUCTS CORP
Werner (B D) Co Inc
ZEGERS INC

▶ WHEELBARROWS

American Steel Scraper & Wheelbarrow Co
Atlas Car & Mfg Co
Chattanooga Wheelbarrow Co
French & Hecht Div Kelsey-Hayes Wheel Co
Goodrich (B F) Co
Goodway Tire & Rubber Co
Jackson Mfg Co
WHEELBARROW MFG CO
Lansing Co
Novo Engine Co
PRIME MOVER CO
Seymour Mfg Co Inc
Sterling Wheelbarrow Co
Toledo Wheelbarrow Co
Western Wheelbarrow Mfg Co

▶ WHEELS, GRINDING

Abrasive Products Inc
Albertson & Co Inc
ALLIS-CHALMERS MFG CO
American Emery Wheel Works
Ray State Abrasive Products Co
BLACK & DECKER MFG CO
BOICE-CRANE CO
BRADFORD MACHINE TOOL CO
Bridgport Safety Emery Wheel Co
Carborundum Co
Chicago Wheel & Mfg Co
Continental Grinding Wheels Corp
Deere & Co
DREMEL MFG CO
Eaton & Co
General Hardware Co
Goodrich Grinding Wheel Co
Hastings Mfg Co
INDEPENDENT PNEUMATIC TOOL CO
Luther Grider & Tool Co
Mashkin Co
Mid-West Abrasive Co
Norton Co
Simonds Abrasive Co Div Simonds Saw & Steel
Co
SKILSAW INC
Spartan Grinding Wheel Div Cleveland Quarries
Co
Vitrified Wheel Co

▶ WHEELS, HAND TRUCK

Electric Wheel Co
French & Hecht Div Kelsey-Hayes Wheel Co
General Tire & Rubber Co
Hamilton Caster & Mfg Co
Lansing Co
Nutting Truck & Caster Co
Thomas Truck & Caster Co

▶ WINCHES, HAND

Bridgport Chain & Mfg Co
Type Iron Works Inc
Erie Hoist Co
Stephens-Adamson Mfg Co

▶ WINCHES, TRACTOR AND TRUCK

American Hoist & Derrick Co
Bridgport Chain & Mfg Co
Four Wheel Drive Auto Co
Fruhaufer Trailer Co
Hyster Co
OLIVER CORP INDUSTRIAL DIV
Original Enders Co
Round (David) & Son
Shepard Niles Crane & Hoist Corp
Silent Hoist & Crane Co
Stimmel Winch Co
Wood (G) Industries

▶ WINDMILLS

Aeromotor Co
Baker Mfg Co
Demeter Mill Mfg Co
Fairbanks Morse & Co
FLINT & WALLING MFG CO
New England Tank & Tower Co
Stover Steel Tank & Mfg Co

▶ WINDOW OPERATORS

Barrows Lock Works
Bommer Spring Hinge Co Inc
CASEMENT HARDWARE CO
Chicago Spring Hinge Co
**CORBIN (P & F) DIV AMERICAN HARD-
WARE CORP**
GETTY (W S) & CO INC
Glyn-Johnson Corp
Hardware Products Inc
Harris Inc
Horton Mfg Div Aven Corp
Ives (H B) Co
Kasper (Joseph J) Salski Co
Kolbas (K) Corp
L N Clowers Inc
LOCKWOOD HARDWARE MFG CO
Newell Mfg Co
New England Mfg & Supply Corp
Norton Door Closure Co
Norwalk Lock Co Div Sigal Lock & Hardware
Co
Parker (S) Hardware Mfg Co

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name identifications Start on Page D-64

Reading Hardware Corp
 Rex-Craft Products
RICHARDS-WILCOX MFG CO
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
 Sayer Barrows Lock Works
SARGENT & CO
 Regal Lock & Hardware Co Inc
 Shelby Spring Hinge Co
STANLEY WORKS DOOR CONTROL DIV
STERLING HARDWARE MFG CO
WALKER MFG CO
VALE & TOWNE MFG CO

▶ WINDOW SASH PULLEYS

Arcade Mfg Div Rockwell Mfg Co
 Champion Hardware Co
 Chantrell Hardware & Tool Co
 Cleveland Lock Works
CORBIN (F & F) DIV AMERICAN HARDWARE CORP
GETTY (N S) & CO INC
 Grand Rapids Hardware Co
GRANT PULLEY & HARDWARE CO
HAGER (C) & SONS HINGE MFG CO
 Industrial Iron Works
LOCKWOOD HARDWARE MFG CO
 London Machinery Co
NATIONAL LOCK CO
 Iron Hardware Co
 Phoenix Lock Co
 Proter Westlindstrip Mfg Co
 Prater Hardware Corp
RUSSELL & ERWIN DIV AMERICAN HARDWARE CORP
STANLEY WORKS

▶ WINDOW SCREENS, ALUMINUM FRAME

Alumatic Corp of America
 Aluminum Window Corp
 Barnhart (A W) Co
 Kane Mfg Corp
 Kaufmann Corp
 Metalfraft Screen Co
N Y WIRE CLOTH CO
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUDIGER-LANG CO
 Screens & Fabricated Metals Corp
 Steel Window Products Co
 Winallite Mfg Co

▶ WINDOW SCREENS, ROLLING

Bear American Window Co
 Barnhart (A W) Co
 Kane Mfg Corp
KEYSTONE WIRE CLOTH CO
 Lockhart Mfg Corp
 Metalfraft Screen Co
RUSGREEN CO
RUDIGER-LANG CO
 Rylock Co Ltd
 Steel Window Products Co
 Universal Roller Screen Co

▶ WINDOW SCREENS, STEEL FRAME

A B C Steel Equipment Co
 Alumatic Corp of America
 Barnhart (A W) Co
CECO STEEL PRODUCTS CORP
 Chamberlin Co of America Inc
 Clonational Fly Screen Div Russell (F C) Co
 Compo-Miracle Products Co
 Continental Screen Co
COPCO STEEL & ENGINEERING CO
CROFT STEEL PRODUCTS INC
 Dennis (W J) & Co
 Dunley Brothers
FENESTRA BUILDING PRODUCTS
 Gabriel Steel Co
GENERAL BRONZE CORP
 Goodcraft Metal Products Co
 Hollister Coil Spring Mfg Co
HOPE'S WINDOWS INC
 Ingersoll Steel Div Borg-Warner Corp
 Johnson Metal Products Co
 Kane Mfg Corp
KEWANEE MFG CO
KEYSTONE WIRE CLOTH CO
LUDMAN CORP
 Mosler Brothers
 Metal Arts Mfg Co
 Metalfraft Screen Co
METAL PRODUCTS CORP
 Metal Window Service Co
NEW MONARCH MACHINERY & STAMPING CO
 NEW YORK WIRE CLOTH CO
 Orange Screen Co
REYNOLDS METAL CO BUILDING PRODUCTS SECTION
 Robbins Mfg Co
RUDIGER-LANG CO
RUSSELL (F C) CO
 Screens & Fabricated Metals Corp
 Security Sash & Screen Co
STEELCRAFT MFG CO
TRUSCON STEEL CO
 Universal Fabricators
 Wilson (L S) Mfg Co

▶ WINDOW SCREENS, SUN REFLECTING

Fine-O-Glass Mfg Co
GENERAL BRONZE CORP
 Ingersoll Steel Div Borg-Warner Corp

KAISER ALUMINUM & CHEMICAL CORP
 Ward Brothers

▶ WINDOW SCREENS, WOOD FRAME

Alumatic Corp of America
 American Sash & Door Co
 ANGEL NOVELTY CO
 Barnhart (A W) Co
 Bork Millwork Co
CARR ADAMS & COLLIER CO
COFFMAN (R G) CO
 Cole Mfg Co
 Continental Screen Co
CROSSSETT LUMBER CO
 Crown Sash & Screen Co
CURTIS COS INC
 Dennis (W J) & Co
 Farley & Loetelner Mfg Co
 Fordey-Crosssett Lumber Co
 General Woodcraft Co
GREGG & SON
 Hemphill (A D) Co
 Hollister Coil Spring Mfg Co
 Huttig Mfg Co
 Huttig Sash & Door Co
 Ideal Co
KEYSTONE WIRE CLOTH CO
 Kinross Pine Mills Co
LONG-BELL LUMBER CO
 Margart Millwork Co
 Morgan Sash & Door Co
 National Screen Co Inc
 National Window Co
NEW YORK WIRE CLOTH CO
 Northern Sash & Door Co
 Northwest Door Co
 Orange Screen Co
 Pacific Mutual Door Co
 Phenix Mfg Co Inc
 Prentice (F W) & Co
 Roach & Muser Co
 Robbins Mfg Co
 Robinson Mfg Co
 Rock Island Millwork Co
RUDIGER-LANG CO
RUSSELL (F C) CO
 Schumacher (F E) Co
 Seneca Lumber & Millwork Co
 Spokane Sash & Door Co
 Universal Fabricators
 Vantage Proof Co
 West Coast Screen Co
 Wheeler Goodood Co
 White Pine Sash Co

▶ WINDOW SILLS & STOOLS, METAL

Accurate Metal Weather Strip Co
 Alexander Sill Co
 Aluminum Co of America
 Dunley Brothers
FENESTRA BUILDING PRODUCTS
INLAND STEEL PRODUCTS CO
 Knapp Brothers Mfg Co
 Noble Steel Co
TRUSCON STEEL CO
 Willager Steel Corp

▶ WINDOW STOOLS, LAMINATE COVERING

Kerro Products Co

▶ WINDOW SURROUNDS, STEEL

HOPE'S WINDOWS
INLAND STEEL PRODUCTS CO
TRUSCON STEEL CO

▶ WINDOWS, ALUMINUM, GLASS LOUVRES

Clearview Lower Window Co
 Inland Venetian Blind Co
SOLAR AIR-FLO

▶ WINDOWS, AWNING, METAL

AIR CONTROL PRODUCTS INC
 All-Lite Metal Window Co
 Aluminum Window Corp
 Pre-Vent Aluminum Corp
 Brown & Grid
CROFT STEEL PRODUCTS INC SUB CO
LINDSEY-LOCKBERG MFG CO
FAWCO MFG DIV FALLS STAMPING & WELDING CO
FENESTRA BUILDING PRODUCTS
 Fenstron Steel Works Inc
GENERAL BRONZE CORP ALWINTITE DIV
 Harris Inc
 Industrial Machine Tool Co Inc Window Div
LUDMAN CORP
 Lisle Lumber Corp
 Ron-del Inc
 Stewart Iron Works Co Inc
 Super-Vent Co
 Trim-Set Corp Sub Fenstron Steel Works Inc
TRUSCON STEEL CO
 Valley Metal Products Co

▶ WINDOWS, AWNING, WOOD

Fox Brothers Mfg Co
GATE CITY SASH & DOOR CO
LUDMAN CORP
ROLSCHEN CO

▶ WINDOWS, BARN, STEEL

Adams Co
CECO STEEL PRODUCTS CORP
 Clay Equipment Corp
COPCO STEEL & ENGINEERING CO
 Crittall Inc
CROFT STEEL PRODUCTS INC
 Dunley Brothers
FENESTRA BUILDING PRODUCTS
GENERAL BRONZE CORP ALWINTITE DIV
 Goodcraft Metal Products Co
HOPE'S WINDOWS INC
 H & R Mfg Co
 Hubben (H D) Mfg Co
INLAND STEEL PRODUCTS CO
 James Mfg Co
 Kaptur (Joseph J) Sales Co
KEWANEE MFG CO
 Kaiser Mfg Co
 London Machinery Co
 Mosler Brothers
 Ney Mfg Co
 Olson Mfg Co
 startline
STEELCRAFT MFG CO
TRUSCON STEEL CO
UNION ALUMINUM CO
 Valley Metal Products Co Inc
VENTO STEEL PRODUCTS CO INC

▶ WINDOWS, BARN, WOOD

American Sash & Door Co
ANDERSEN CORP
 Buffelen Lumber & Mfg Co
 Burke Millwork Co
CARR ADAMS & COLLIER CO
 Cole Mfg Co
CURTIS COS INC
 Farley & Loetelner Mfg Co
GREGG & SON INC
 Hines (Edward) Lumber Co
 Huttig Mfg Co
 Ideal Co
LONG-BELL LUMBER CO
 Margart Millwork Co
 Morgan Co
 Morgan Sash & Door Co
 National Screen Door Co
 Northern Sash & Door Co
 Northwest Door Co
 Phenix Mfg Co
 Roach & Muser Co
 Rock Island Millwork Co
 Seggie & Kohlbase Co
 Silberman (George J) & Sons Co
 Spokane Sash & Door Co
 White Pine Sash Co

▶ WINDOWS, BASEMENT, ALUMINUM

ALCACO PRODUCTS INC
 Aluminum Window Corp
CROFT STEEL PRODUCTS INC
FLYNN (MICHAEL) MFG CO
 Kaufmann Corp
KEWANEE MFG CO
UNION ALUMINUM CO
 Valley Metal Products Co

▶ WINDOWS, BASEMENT, STEEL

Adams Co
 Barnhart (A W) Co
 Borgert & Cullough Co
 Deucatur Iron & Steel Co
 Fries & Son
 International Steel Co
 Thurn (J S) Co
 Valley Metal Products Co
VENTO STEEL PRODUCTS CO INC

▶ WINDOWS, BASEMENT, WOOD

ANDERSEN CORP
 Anderson (V F) Mfg Co
ANGEL NOVELTY CO
 Burke Millwork Co
CARR ADAMS & COLLIER CO
 Cole Mfg Co
 Farley & Loetelner Mfg Co
GREGG & SON INC
 Hines (Edward) Lumber Co
 Huttig Mfg Co
 Ideal Co
 Kinross Pine Mills Co
LONG-BELL LUMBER CO
 Long Lisle Lumber Co
 Margart Millwork Co
 Morgan Co
 Morgan Sash & Door Co
 Northwest Door Co
 Pacific Mutual Door Co
 Radford Co
 Roach & Muser Co

Rock Island Millwork Co
ROLSCHEN CO
 Seggie & Kohlbase Co
 Silberman (George J) & Sons Co
WEYERHAEUSER SALES CO
 White Pine Sash Co

▶ WINDOWS, BASEMENT AND UTILITY, STEEL

Adams Co
ALCACO PRODUCTS INC
 Bayley (William) Co
BESTON STEEL LATH CO
CECO STEEL PRODUCTS CORP
 Clay Equipment Corp
COPCO STEEL & ENGINEERING CO
 Crittall Inc
CROFT STEEL PRODUCTS INC
 Dunley Brothers
FENESTRA BUILDING PRODUCTS
FLYNN (MICHAEL) MFG CO
 Gabriel Steel Co
 Goodcraft Metal Products Co
HOPE'S WINDOWS INC
 H & R Mfg Co
INLAND STEEL PRODUCTS CO
 Kaptur (Joseph J) Sales Co
KEWANEE MFG CO
MAJESTIC CO
 Mosler Brothers
 Modern Steamers Specialties Co Div Modern Electric Laboratory
NEW MONARCH MACHINE & STAMPING CO
 Noble Steel Co
STEELCRAFT MFG CO
TRUSCON STEEL CO
 U S Gymsm Co
VENTO STEEL PRODUCTS CO INC

▶ WINDOWS, CASEMENT, ALUMINUM

A B C Steel Equipment Co Inc
ADAMS & WESTLAKE CO
ALCACO PRODUCTS INC
 All-Lite Metal Window Co
 Aluminum Home Products Co
 Aluminum Window Corp
 Bayley (William) Co
 Clark-Babbitt Industries Inc
 Compo-Miracle Products Co
CROFT STEEL PRODUCTS INC
 Cupples Products Corp
 Eagle-Pfeifer Co
 Fenstron Steel Works Inc
FLEET OF AMERICA
 Flour City Ornamental Iron Co
FLYNN (MICHAEL) MFG CO
GENERAL BRONZE CORP
 Harris Inc
HIGGINS INC
 Hollister Coil Spring Mfg Co
HOPE'S WINDOWS INC
 Ingersoll Steel Div Borg-Warner Corp
KEWANEE MFG CO
 Lamond Engineering Co
LUDMAN CORP
 Maco Corp
 Metal Arts Mfg Co
 Metal Window Service Co
 Pennsylvania Wire Glass Co
PETERSON WINDOW CORP
REYNOLDS METALS CO BUILDING PRODUCTS DIV
RUSSELL (F C) CO
 Sterling Windows Inc
 Storm Windows of Aluminum Inc
 Thurn (J S) Co
 Trimm Industries Inc
 Trim-Set Corp Sub Fenstron Steel Works Inc
UNION ALUMINUM CO INC
 Universal Window Co
 V-Seal Corp
 Valley Metal Products Co
 Ware Laboratories Inc
 Water Engineering Inc
 Weather-Proof Co
 Windalume Corp

▶ WINDOWS, CASEMENT, STEEL

A B C Steel Equip Co
 Allen Steel Products
 Barnhart (A W) & Co
 Bayley (William) Co
CECO STEEL PRODUCTS CORP
CECO STEEL PRODUCTS CORP
 Clay Equipment Corp
 Crittall Inc
CROFT STEEL PRODUCTS INC
 Dunstron Iron & Steel Co
FENESTRA BUILDING PRODUCTS
FLYNN (MICHAEL) MFG CO
GENERAL BRONZE CORP ALWINTITE DIV
 Goodcraft Metal Products Co
HOPE'S WINDOWS INC
 International Steel Co
 Kaptur (Joseph J) Sales Co
KEWANEE MFG CO
 Mosler Brothers
 Mosler (George L) Steel Corp
 Metal Window Service Co
 Michel & Pfeiffer Iron Works
NEW MONARCH MACHINE & STAMPING CO
 Potts-Farrington Co
REPUBLIC STEEL CO
RUSSELL (F C) CO
 Screens & Fabricated Metals Corp
 Noble Steel Co
STEELCRAFT MFG CO
 Steel Window Products Co
 Thurn (J S) Co
TRUSCON STEEL CO

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VENTO STEEL PRODUCTS CO INC
Vimar Sales Co
Williams & Williams Products Corp

▶ WINDOWS, CASEMENT, WOOD

American Sash & Door Co
ANDERSEN CORP
Biles-Coleman Lumber Co Inc
BROWN-GRAVES CO
Burtis Millwork Co
CARR ADAMS & COLLIER CO
Cole Mfg Co
CURTIS CBS INC
Farley & Loetscher Mfg Co
GREGG & SON INC
Hines (Edward) Lumber Co
Huttig Mfg Co
Huttig Sash & Door Co
Ideal Co
Krystone Frame & Mfg Co
Kinross Pine Mills Co
LONG-BELL LUMBER CO
Malta Mfg Co
Marquart Millwork Co
Millwork Distributors Co
Morgan Co
Morgan Sash & Door Co
Northern Sash & Door Co
Northwest Door Co
Pacific Mutual Door Co
Pallum Window Corp
Quigley (J. B.) Co
Radford Co
Roach & Musser Co
Rock Island Millwork Co
ROLSCHER CO
Segelke & Kolthaus Co
Silbernagel (George J.) & Sons Co
Soudaker (Frank C.) & Co
Spokane Sash & Door Co
Walworth Co
Weather-Seal Inc
White Pine Sash Co

▶ WINDOWS, COMBINATION SCREEN AND STORM SASH, ALUMINUM

Alcoa Inc
Alomatic Corp of America
Aluminum Window Corp
CECO STEEL PRODUCTS CORP
Compo-Miracle Products Co
GENERAL BRONZE CORP
Eagle-Picher Co
Holister Coil Spring Mfg Co
McKinley (Orman O.) Co
Metal Window Service Co
RUSSELL (F. C.) CO
Steel Window Products Co
Storm Windows of Aluminum Inc
Thorn (J. S.) Co
V-Seal Corp
Water Engineering Inc
Weather-Proof Co
Winstrom Mfg Corp
Winnitite Mfg Co

▶ WINDOWS, COMBINATION SCREEN AND STORM SASH, STEEL

Allied Metal Fabricators Inc
Alomatic Corporation of America
Barthart (A. W.) Co
Bayley (William) Co
CECO STEEL PRODUCTS CO
Chamberlin Co of America Inc
Clay Equipment Corp
COPCO STEEL & ENGINEERING CO
Cory-Jameson Mfg Co
FENESTRA BUILDING PRODUCTS
GENERAL BRONZE CORP ALWINTITE DIV
Ingersoll Steel Div Borg-Warner Corp
Kane Mfg Corp
Kaptor (Joseph J.) Sales Co
Kaufmann Corp
KEWANEÉ MFG CO
Michel & Pfeiffer Iron Works
Robbins Mfg Co
TRUSCON STEEL CO

▶ WINDOWS, COMBINATION SCREEN AND STORM SASH, WOOD

ANDERSEN CORP
Anderson (V. E.) Mfg Co
ANGEL NOVELTY CO
BROWN-GRAVES CO
Burtis Millwork Co
Burmans Corp
CARR ADAMS & COLLIER CO
CURTIS CBS INC
Edward Window Corp
Farley & Loetscher Mfg Co
Feather-Lite Mfg Co
GREGG & SON INC
Hempthill (A. D.) Co
How Mfg Co
HOPES WINDOWS INC
Huttig Mfg Co
Marquart Millwork Co
Northern Sash & Door Co
Northern Wood Products Co
Orange Screen Co

Phenix Mfg Co
Precision (F. W.) & Co
Rock Island Millwork Co
Schmaderer (F. E.) Co
Society Sash & Screen Co
SELF STORING WINDOW CO
Serrano (F. E.) Co
Spokane Sash & Door Co
Walsh Screen Door Co
Weather-Seal Inc
Window Conditioning Co
Wunder Window Co
Yardley Industries

▶ WINDOWS, DOUBLE-GLAZED, HERMETICALLY SEALED

LIBBEY-OWENS FORD GLASS CO
PITTSBURGH PLATE GLASS CO

▶ WINDOWS, DOUBLE-HUNG, ALUMINUM

A. B. C. Steel Equipment Co Inc
ADAMS & WESTLAKE CO
ALCASAR PRODUCTS INC
Alcoa Inc
Aluminum Window Corp
Bayley (William) Co
Clark-Bainhart Industries Inc
Compo-Miracle Products Co
CROFT STEEL PRODUCTS INC
Cropolis Products Corp
Eagle Picher Co
FLEET OF AMERICA INC
Floor City Structural Iron Co
FLYNN (MICHAEL) MFG CO
GENERAL BRONZE CO
Harris Inc
HIGGINS INC
Holister Coil Spring Mfg Co
HOPES WINDOWS INC
Kaufmann Corp
KEWANEÉ MFG CO
LUOMAN CORP
Metal Arts Mfg Co
Metal Window Service Co
No-Erg Window Co Inc
Paramount Casement Window Corp
Pennsylvania Wire Glass Co
PER-FIT PRODUCTS CORP
PETERSON WINDOW CO
REYNOLDS METALS CO BUILDING PRO-UCTS DIV
RUSSELL (F. C.) CO
SOLAR AIR-FLO CO
Sterling Windows Inc
Thorn (J. S.) Co
Timm Industries
Trin-Seal Corp Sash Fenestron Steel Works Inc
UNION ALUMINUM CO INC
V-Seal Corp
Valley Metal Products Co
Ware Laboratories Inc
Water Engineering Inc
Weather-Proof Co
Windlume Corp
Window Corp of America

▶ WINDOWS, DOUBLE HUNG, SAFETY

International Safety Window Corp

▶ WINDOWS, DOUBLE HUNG, STEEL

ADAMS & WESTLAKE CO
American Sash & Door Co
GENERAL BRONZE CORP ALWINTITE DIV
ONE-DEK FRAME CORP
Punnett (S. H.) Co Inc
Purts-Farrington Co
RUSSELL (F. C.) CO
Solel Steel Co
Steel Window Products Co
Thorn (J. S.) Co
TRUSCON STEEL CO

▶ WINDOWS, DOUBLE HUNG, WOOD

Ace Seal-Rite Sales & Window Mfg Co Inc
American Sash & Door Co
ANDERSEN CORP
Anson & Gilley Co
A. R. B. Window Co
Bazile (Glen) & Co
Riles-Coleman Lumber Co Inc
Binowanger & Co
BROWN-GRAVES CO
Buffalon Lumber & Mfg Co
Burtis Millwork Co
CARR ADAMS & COLLIER CO
Cole Mfg Co
CURTIS CBS INC
Dixon Industries Inc
Dixon Industries
Farley & Loetscher Mfg Co
General Woodcraft Co
Goshen Sash & Door Co
GREGG & SON INC
Hines (Edward) Lumber Co
Hutoklas Brothers Co
Hurd Millwork Corp

Huttig Mfg Co
Kaufmann Corp
Krystone Frame & Mfg Co
Kinross Pine Mills Co
Knapton Millwork Co
Lambert Millwork Co
Libbey-Owens-Ford Glass Co
Libbey-Owens-Ford Plate Glass Co
Ludman Corp
Malta Mfg Co
Marquart Millwork Co
Millwork Distributors Co
Morgan Co
Morgan Sash & Door Co
Northern Sash & Door Co
Northwest Door Co
Pacific Mutual Door Co
Pallum Window Corp
Quigley (J. B.) Co
Radford Co
Roach & Musser Co
Rock Island Millwork Co
Rolscher Co
Segelke & Kolthaus Co
Silbernagel (George J.) & Sons Co
Soudaker (Frank C.) & Co
Spokane Sash & Door Co
Walworth Co
Weather-Seal Inc
White Pine Sash Co

Huttig Mfg Co
Huttig Sash & Door Co
Ideal Co
Keystone Frame & Mfg Co
Kinross Pine Mills Co
Letrasco Building Products
Levittown Wood Products
LONG-BELL LUMBER CO
Malta Mfg Co
Marquart Millwork Co
Millwork Distributors Co
Missoula White Pine Sash Co
Morgan Co
Morgan Sash & Door Co
N. R. W. Co
Northwest Sash & Door Co
Northwest Door Co
Pacific Mfg Co
Pacific Mutual Door Co
Phillips-Rhyme Lumber Co
Pallum Window Corp
Quigley (J. B.) Co
Radford Co
Roach & Musser Co
Roberts (A.) & Son Inc
Rock Island Millwork Co
Rockwell Sales Corp
R. O. W. SALES CO
Screen & Fabricated Metals Corp
Segelke & Kolthaus Co
Semling-Merker Co
Silbernagel (George J.) & Sons Co
Soudaker (Frank C.) & Co
Walsh Screen Door Co
Western Pine Mfg Co Ltd
WEYERHAEUSER SALES CO
White Pine Sash Co

▶ WINDOWS, GLASS BLOCK AND SLIDING SASH

AMERICAN STRUCTURAL PRODUCTS CO

▶ WINDOWS, HORIZONTAL GLIDING, METAL

GENERAL BRONZE CORP
NOVA SALES INC
PETERSON WINDOW CO
Vita Automatic Windows Inc

▶ WINDOWS, HORIZONTAL GLIDING, WOOD

ANDERSEN CORP
Anson & Gilley Co
Burtis Millwork Co
Farley & Loetscher Mfg Co
GREGG & SON
Kinross Pine Mills Co
LONG-BELL LUMBER CO
Morgan Co
Northwest Door Co
Rilbernagel (George) & Sons Co
Spokane Sash & Door Co
Western Pine Mfg Co
White Pine Sash Co

▶ WINDOWS, IRON, WROUGHT

Mesker Bros
Newman Brothers Inc

▶ WINDOWS, LOUVRE ALUMINUM

Fenestron Steel Works Inc
LUOMAN CORP
Midwest Louvreite Co
Pro-Tect-U-Jalousie Corp
SOLAR AIR-FLO CO
Trin-Seal Corp Sash Fenestron Steel Works Inc
Ventillite Corp

▶ WINDOWS, LOUVRE, STEEL

Stewart Iron Works Co Inc
SUN SASH CO

▶ WINDOWS, PIVOTED AND PROJECTED ALUMINUM

A. B. C. Steel Equipment Co
Aluminum Window Corp
Barthart (A. W.) Co
Bayley (William) Co
Compo Products Corp
FLYNN (MICHAEL) MFG CO
GENERAL BRONZE CORP
REYNOLDS METALS CO BUILDING PRO-UCTS DIV
Thorn (J. S.) Co
Timm Industries Inc
UNION ALUMINUM CO
Universal Window Co
Valley Metal Products Co
Ware Laboratories Inc

▶ WINDOWS, PIVOTED AND PROJECTED, STEEL

Adams Co
Allen Steel Products
Bayley (William) Co

Boert & Carlsberg Co
CECO STEEL PRODUCTS CORP
COPCO STEEL & ENGINEERING CO
Crittall Inc
Deuster Iron & Steel Co
FENESTRA BUILDING PRODUCTS
FLYNN (MICHAEL) MFG CO
Isoderfart Metal Products
H. & R. Mfg Co
HOPES WINDOWS INC
International Steel Co
Kaptor (Joseph J.) Sales Co
KEWANEÉ MFG CO
Marquart Millwork Co
Messer Brothers
Michel & Pfeiffer Iron Works Inc
REPUBLIC STEEL CORP
Solel Steel Co
Steel Window Products Co
Stewart Iron Works Co
Thorn (J. S.) Co
TRUSCON STEEL CO
VENTO STEEL PRODUCTS CO INC

▶ WINDOWS, PIVOTED AND PROJECTED, WOOD

Farley & Loetscher Mfg Co
Hayman Window Co
Huttig Sash & Door Co
KEWANEÉ MFG CO
Marquart Millwork Co
Morgan Sash & Door Co
Pacific Mutual Door Co
Segelke & Kolthaus Co
Silbernagel (George) & Sons Co

▶ WINDOWS, ROUND, WOOD

CURTIS CBS INC
Webb Mfg Co

▶ WINDOWS, SECURITY, STEEL

Bayley (William) Co
CECO STEEL PRODUCTS CORP
COPCO STEEL & ENGINEERING CO
Crittall Inc
CROFT STEEL PRODUCTS INC
FENESTRA BUILDING PRODUCTS
FLYNN (MICHAEL) MFG CO
HOPES WINDOWS INC
International Steel Co
Kaptor (Joseph J.) Co
Messer Brothers
TRUSCON STEEL CO
VENTO STEEL PRODUCTS CO INC

▶ WINDOWS, STORM, ALUMINUM

Alcoa Inc
Aluminum Window Corp
CECO STEEL PRODUCTS CORP
Eagle-Picher Co
Steel Window Products Co

▶ WINDOWS, STORM, STEEL

Adams Co
Alcoa Inc
Aluminum Window Corp
Barthart (A. W.) & Co
CECO STEEL PRODUCTS CORP
Chamberlin Co of America
CROFT STEEL PRODUCTS INC
Deuster Iron & Steel Co
FENESTRA BUILDING PRODUCTS
Holister Coil Spring Mfg Co
HOPES WINDOWS INC
Ingersoll Steel Div Borg-Warner Corp
Kane Mfg Corp
KEWANEÉ MFG CO
Lockhart Mfg Corp
Messer Brothers
Metal Window Service Co
NEW MONARCH MACHINE & STAMPING CO

▶ WINDOWS, STORM, STEEL

Orange Screen Co
Paramount Casement Window Corp
REYNOLDS METALS CO BUILDING PRO-UCTS DIV
Robbins Mfg Co
RUSSELL (F. C.) CO
Security Sash & Screen Co
Solel Steel Co
Starline Inc
STEELCRAFT MFG CO
Steel Window Products Co
Sterling Windows Inc
Storm Windows of Aluminum
TRUSCON STEEL CO
Universal Fabricators
VENTO STEEL PRODUCTS CO INC
Ware Laboratories Inc
Weather-Proof Co
Williams Oil-O-Matic Div Eureka Williams Corp
Wilson (L. S.) Mfg Co

▶ WINDOWS, STORM, WOOD

ANDERSEN CORP
Anderson (V. E.) Mfg Co
ANGEL NOVELTY CO
Arrow Mfg Co
BROWN-GRAVES CO
Burtis Millwork Co
CARR ADAMS & COLLIER CO
Chamberlin Co of America Inc
Cole Mfg Co
Continental Screen Co
CURTIS CBS INC
Edward Window Corp
Farley & Loetscher Mfg Co
GREGG & SON INC

Manufacturers' Names and Addresses Start on Page D-76
Suppliers' Brand Name Identifications Start on Page D-64

Hemphill (A D) Co
Hines (Edward) Lumber Co
Honsler Sash & Door Co
Huttig Mfg Co
Huttig Sash & Door Co
Kinross Pine Mills Co
LONG-BELL LUMBER CO
Marquart Millworks Co
Metal Window Service Co
Minnesota White Pine Sash Co
Morgan Co
Morgan Sash & Door Co
National Screen Door Co
Northern Sash & Door Co
Northwest Door Co
Parfitt Mutual Door Co
Phenic Mfg Co Inc
Prentice (F W) & Co
Roush & Musser Co
Ruhlin Mfg Co
Rock Island Millwork Co
RUSSELL (F C) CO
Schumacher (F E) Co
Seipke & Kohlhans & Co
Seneca Lumber & Millwork Co
Silbermagel (George J) & Sons Co
Spokane Sash & Door Co
Vimear Sales Co
Weather-Seal Inc
White Pine Sash Co
Window Conditioning Co

**▶ WINDOWS, VERTICAL GLID-
ING, ELECTRICALLY OPER-
ATED**

RUSSELL (F C) CO
Vita Automatic Windows Inc

**▶ WINDOWS, WOOD, WITH
LOURVES BELOW**

SOLAR AIR-FLO CO

▶ WIRE

**BERGER MFG CO DIV REPUBLIC STEEL
CORP**

▶ WIRE, BALING

Wickwire Spencer Steel Div Colorado Fuel
& Iron Corp

▶ WIRE, BARBED

American Chain Link Fence Co
AMERICAN STEEL & WIRE CO
BARBERICK (RICHARD J)
Bethlehem Steel Co
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Continental Steel Corp
COPPERWELD STEEL CO
Jones & Laughlin Corp
KEYSTONE STEEL & WIRE CO
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
Stouffville Steel Corp
**TENNESSEE COAL IRON & BR CO SUB
U S STEEL CORP**

▶ WIRE, ELECTRICAL

AMERICAN STEEL & WIRE CO
Ansonia Wire & Cable Co
CHASE BRASS & COPPER CO
COPPERWELD STEEL CO

Emers Wire Corp Parantite Wire & Cable Div
General Cable Corp Sub Ansonia Copper Co
**GENERAL ELECTRIC CO CONSTRUCTION
MATERIALS DEPT**
Hazard Insulated Wire Works Div Omega Co
National Electric Products Corp
Revere Copper & Brass Inc
Rothing's (John A) Sons Co
U S Rubber Co

▶ WIRE, GALVANIZED STEEL

American Chain Link Fence Co
AMERICAN STEEL & WIRE CO
Armed Steel Corp
Bethlehem Steel Corp
Century Fence Co
Colorado Fuel & Iron Corp
COLUMBIA STEEL CO
Continental Steel Corp
Johns Steel & Wire Co
Jones & Laughlin Steel Corp
KEYSTONE STEEL & WIRE CO
LACLEDE STEEL CO
NICHOLS WIRE & ALUMINUM CO
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
REPUBLIC STEEL CORP
Seneca Wire & Mfg Co
Stouffville Steel Corp
TENNESSEE COAL IRON & RAILROAD CO
Wickwire Spencer Steel Div Colorado Fuel &
Iron Corp
Wilson Steel & Wire Co
Youngstown Sheet & Tube Co

**▶ WIRE PULLERS AND
STRETCHERS**

AMERICAN STEEL & WIRE CO
Bethlehem Steel Co
Century Fence Co
Continental Steel Corp
Durbin-Duro
Franklin Equipment Co
KEYSTONE STEEL & WIRE CO
Louden Machinery Co
Mason Fence Co
Mid-States Steel & Wire Co
Ney Mfg Co
Northwestern Steel & Wire Co
PITTSBURGH STEEL PRODUCTS CO
Sterling Foundry Co
Von Steen (John H) Co

▶ WIRE STRIPPERS

Rockford Wire Stripper Co

▶ WIRE, TIE

Alabama Metal Lath Co
American Brass Co
AMERICAN STEEL & WIRE CO
Bethlehem Steel Corp
BOSTWICK STEEL LATH CO
CCO STEEL PRODUCTS CORP
Continental Steel Corp
COPPERWELD STEEL CO
INLAND STEEL PRODUCTS CO
International Nickel Co Inc
KEYSTONE STEEL & WIRE CO
NATIONAL CYCLING CO
Penn Metal Co Inc
Sommer Metallcraft Corp
SYMONS CLAMP & MFG CO
TENNESSEE COAL IRON & RAILROAD CO
TRUSCON STEEL CO
U S Gypsum Co
Wickwire Spencer Steel Div Colorado Fuel &
Iron Corp

**▶ WIRING, ELECTRICAL,
MULTI-OUTLET
AMERICAN TELEPHONE & TELEGRAPH CO
Wilmington Co**

**▶ WIRING, SYSTEMS, REMOTE
CONTROL
GENERAL ELECTRIC CO CONSTRUCTION
MATERIALS DEPT**

▶ WOOD, BALS

Balsa Ecuador Lumber Corp
Johnson & Carlson
Luthi (F C) & Co

▶ WOOD, COMPREGNATED

Aetna Plywood & Veneer Co
Farley & Lortcher Mfg Co
Parkwood Corp
Plaswood Corp
Plaswood Industries
West Oregon Lumber Co

▶ WOOD, PLASTIC

Borte-Midway Inc
Durham (Donald) Co
PITTSBURGH PLATE GLASS CO
Schalk Chemical Co

▶ WOOD, SEALERS

Aetna Plywood & Veneer Co
Alpine Paint and Varnish Co
**AMERICAN FLOOR SURFACING MACHINE
CO**
BRUCE (E L) CO
Chapman Chemical Co
Deuce & Reynolds Inc
Du Pont (E I) de Nemours Co
Forman-Ford & Co
LINSEED OIL PRODUCTS
Mater Chemical Corp
Pratt & Lambert Inc
Sherwin-Williams Co
U S PLYWOOD CORP

▶ WOOD SEALERS, KNOT

CELOTEX CORP
WOOD CONVERSION CO

▶ WOOD TREATING PLANTS

American Crosscutting Co Inc
Carlislewood Wood Preserving Co
Crosby Lumber & Mfg Co
Fondre-Crommet Lumber Co
Fox Brothers Mfg Co
Forest Lumber Industries Inc
Gifford Crosscutting Co
Gulf States Crosscutting Co
International Crosscutting & Construction Co
Koppers Co Inc
National Pole & Treating Div Minnesota &
Ontario Paper Co
Republic Crosscutting Co
Southwestern Crosscutting Co
Texas Crosscutting Co
Willamette Valley Lumber Co

▶ WOODWORK, FLAMEPROOF

Fox Brothers

▶ WOODWORKING MACHINES

Aladdin Tools
American Woodworking Machine Co
ATLAS PRESS CO
Beach Mfg Co
BLACK & DECKER MFG CO
BOICE-CRANE CO
Buss Machine Works
Chase Turbine Mfg Co
Chattanooga Machinery Co
Clegg Tool Co
C N L Machinery Co
**CUMMINS-CHICAGO CORP CUMMINS
CO LTD**
**CUMMINS-CHICAGO CORP CUMMINS
PORTABLE TOOLS DIV**
Curtis Machine Corp
DeFrance Machine Works
Dyrenbald Machine Co
DEWALT INC
Ekstrom Carlson & Co
Fay (J A) & Egan Co
Forsberg Mfg Co
Foster Mfg Co
Gresvold Tool Co
Hanchett Mfg Co
Handy Mfg Co
Hermann Machine Co
Horton & Anderson Div St Paul Eng & Mfg Co
Haines (E B) Machinery Co
Hatchinson Mfg Co
Jet Tool Sales Co
Jones Superior Machine Co
Mathison Machine Works
McDonough Mfg Co
Melp Machinery Mfg Co
Merritt-Monastio Corp
Mushrook Machine Co
Newman Machine Co
Oliver Machinery Co
Oswald Machine Works Inc
Palmer Machinery Co
PORTER-CABLE MACHINE CO
Power-King Tool Corp
Powermatic Machine Co
Pringle & Brodie Machinery Co
Richardson (J S) Co
**ROCKWELL MFG CO DELTA POWER TOOL
DIV**
SKILSAW INC
**STANLEY ELECTRIC TOOLS DIV STANLEY
WORKS**
Stanton-Ross Machine Co
Tanner Machine Co
Turner Machinery Co
Turner Mfg Co
Vancouver Moulder Corp
**WALKER-TURNER DIV KEARNEY &
TRECKER CORP**
WALLACE (J D) & CO
WHITNEY (BAXTER D) & SON INC
Wilson Saw Div Media Machine Works Inc
Woods (S A) Machine Co
Yates-American Machine Co

▶ WRENCHES

Andrew Wrench Co
Barolo Mfg Co
BLACK & DECKER MFG CO
Bellier Bros Co
Independent Pneumatic Tool Co
International Twist Drill Corp
North Brothers Mfg Co Div Stanley Tools
P & C Hand Forged Tool Co
Peak Heat & Wilson Co
Proto Tool Co
Walworth Co

▶ YARD LAYOUT SERVICES

Aukens (A E)
Huss & Baird Studio
McCallister (B M)
Snyder & Willard

Manufacturers' Names and Addresses Start on Page D-76
Manufacturers' Brand Name Identifications Start on Page D-64

1952 American Builder Directory

SECTION II

Brand Names

Alphabetical List of Building Products and Equipment

The names of manufacturers who are regular advertisers in American Builder appear in bold face here and in the list of manufacturers' names and addresses starting on page D-76

BRAND NAMES used to identify principal building products and equipment of major manufacturers are listed in this section in alphabetical order with the names of manufacturers using the brand names. Trade and brand names popularly used in the building industry are listed irrespective of their registration. This selective list is presented for the convenience of builders,

contractors, architects and retail material dealers who will find it helpful in identifying the manufacturers of certain building products and equipment.

The names of the manufacturers are listed after the brand or trade name. The complete addresses of the manufacturers will be found in Section III beginning on page D-76.



A
A A A—Aldine (C E) & Co
A A QUICKSET PUTTY—King (E & F) & Co Inc
A B—Altafor Brothers Corp
ABC—American Blower Corp
A B C—Altafor Brothers Corp
ABRANOWLED—Lincoln Electric Co
ACCELLO—Anti-Hydro Waterproofing Co
ACE HIGH—Woodville Lime Co
ACEO—American Chain Line Co of American Chain & Cable Co Inc
ACCOTEX—Armstrong Cork Co
ACID-CAUSTIC BOND—Willour & Williams Co
ACIDOL—Sullivan Co
AC ID-PROOF—Guigley Co
ACL—Owens-Illinois Glass Co
ACME RESTABLE—Republic Steel Corp
ACME—Eagle Lock Co
ACME—Goldblatt Tool Co
ACME—Certain-teed Products Corp
ACME—Keystone Steel & Wire Co
ACME—Inland Steel Products Co
ACORN—Hubbell (Harvey) Inc
ACGUSTI-CELOTEX—Celotex Corp
ACGUSTITE—Insulite Div Minnesota & Ontario Paper Co
ACGUSTITE—Coast Insulating Products
ACGUSTIMASTE—Powers Paint Co
ACGUSTOLIGHT—U S Gotta Perela Paint Co
ACRISTONE—U S Gypsum Co
ACRATHERM—Minneapolis-Honeywell Regulator Co
ACROFLAME—American Radiator & Standard Sanitary Corp
ACT EASY—Speakman Co
ACTINO—Protective Coatings Inc
ACTIVE AIR—Hull Co
ACTIVE-FLAME—Hull Co
A-D BOARD—Carey (Philip) Mfg Co
ADDRESSBLETTE—Elliott Addressing Machine Co
ADJUSTA-LITE—Adjusta-Post Mfg Co
ADJUSTO—Milwaukee Flush Valve Co
ADMIRAL—Fiat Metal Mfg Co
ADURO—Flintkote Co
ADVANCE—Lanning Co
AERISWELD—Lincoln Electric Co
AEROFUSE—Tuttle & Bailey Inc
AEROLUX—Johnson (S T) Co
AEROPUL—American Blower Corp
AEROVANE—Tuttle & Bailey Inc
AETNA—Eagle Lock Co

AETNA—Samson Cordage Works
AETNAPLY—Actna Plywood & Veneer Co
AFPCO—American Foundry & Furnace Co
AGATYX—Truscon Laboratories Inc
AGATITE—Certain-teed Products Corp
AGITAIR—Air Devices Inc
AGM—American Gas Machine Co
AGRICO—American Agricultural Chemical Co
AGWI—American Radiator & Standard Sanitary Corp
A H & H—Arrow-Hart & Hegeman Electric Co
AIRACoustic—Johns-Manville Corp
AIR CHANGER—Eagle-Plieber Co
AIR CONTROLS—Plastel Products Co
AIRNETE—Sullivan Co
AIR-DRYETTE JR.—Solvay Sales Div Allied Chemical & Dye Corp
AIR RAY-ATOR—Ray Oil Burner Co
AIR FLO—Lomon, Furnace Co
AIRFLOW—Inland Steel Products Co
AIRFOIL—Aerovent Fan Co
AIRFOIL—Evans Products Co
AIRFOIL—FINVED RADIATION—Radiant-Ray Radiation Inc
AIRLIFTOR—Smartwood Co
AIRLOK—Plastogren Wall Board Co
AIRMOVYER—Smartwood Co
AIR O-FLEX—Aur Register Co
AIR-O-MATE—Williams Oil-O-Matic Div Eureka Williams Corp
AIR-SEAL—Silent Glow Oil Burner Corp
AIRSEAL—Farley & Lovelock Mfg Co
AIRSTAY—Minneapolis-Honeywell Regulator Co
AIRTITE—Inland Steel Products Co
AIRTROL—Air Controls Inc
AIRTROL—Bell & Gossett Co
AIR-TURN—Barber-Colman Co
AIR VALVE—Smartwood Co
AIR-VENT—Ruberoid Co
AIR WAVE—Trade-Wind Motors Inc
AIRWAY—Firecraft Corp
AJAX—Case Crane & Kilbourne Jacobs Co
AJAX—Sherwin-Williams Co
AKOUSTIKOS—Johns-Manville Corp
ALABAMA—"FOUR-A QUALITY"—Alabama Metal Lath Co

ALABAX—Pass & Seymour Inc
ALACRETE—Alabama Cement Tile Co
ALADROME—Macklenburg-Duncan Co
ALBRON—Aluminum Co of America
ALCHEMIK—Truscon Laboratories Div Detco & Reynolds Inc
ALCLAD—Aluminum Co of America
ALCOA—Aluminum Co of America
ALDEN—American Radiator & Standard Sanitary Corp
ALDURA—New York Wire Cloth Co
ALFVO—American-La France-Foamite Corp Co
ALFRENCO—Reynolds Co
ALGOMA—U S Plywood Corp
ALGONITE—U S Plywood Corp
ALING—Clay City Pipe Co
ALKABAR—Truscon Laboratories Div Detco & Reynolds Inc
ALMATE—Protective Coating Inc
ALLAN—Wood (John) Mfg Co Inc
ALLEGHENY METAL—Allegheny Lantham Steel Corp
ALLERTON—American Radiator & Standard Sanitary Corp
ALLIANCE WARE—Alliance Ware Inc
ALLIGATOR—Alith-Prouty Inc
ALLTITE—Coast Insulating Products
ALLOYMENT—Amovent Fan & Blower Div Nelson-Herman Corp
ALLWEATHER—Flintkote Co
ALL-WEATHER—Ford Roofing Products Co
ALODINE—American Chemical Paint Co
ALOXITE—Carborundum Co
ALPINA—Inland Steel Products Co
ALTYCO—Alloy Steel Corporation
ALUMA KOTE—Clark Wire & Supply Co
ALUMALLOY—Research Products Corp
ALUMARBOL—Aluminum Awning Co Div Orchard Brothers Inc
ALUMARBOLL—Wagner Awning & Mfg Co
ALUMEX—Mexico Refractories Co
ALUMIKOTE—Vita-Var Corp
ALUMINOK—Central Paint & Varnish Works
ALUMINUM STRIPE—Keystone Steel & Wire Co
ALUMINUM TOP—Keystone Steel & Wire Co
ALUMINWELD—Lincoln Electric Co
ALUMI ROOF—Sheffield Bronze Paint Corp
ALUMI SHELL—Metal Tile Products Inc
ALUMITILE—Metal Tile Products Inc

ALUMIWALL—Bostle Mfg Co
ALUMINO-DRONE—Reynolds Metals Co
ALUMOGRIT—Weoster Products Inc
ALUNDUM—Armour & Co
ALUSASY PUTTY—King (E & F) & Co Inc
ALWINITITE—Aluminum Window Corp
AMBLEROID—Keesbey & Mattison Co
AMEROCIDE—Chapman Chemical Co
AMERICAN—Hudstream Heater Co
AMERICAN HOME—Mosler Brothers
AMERICAN RENTAL—American Floor Surfacing Machine Co
AMERICAN STANDARD—American Radiator & Standard Sanitary Corp
AMEROCK—American Cabinet Hardware Corp
AMINO—American Instrument Co
AMPREG E—Atlas Mineral Products Co
AMTICO—American Tile & Rubber Co
AMTIBREAL—Anti-Hydro Waterproofing Co
AMWELD—American Welding & Mfg Co
ANACONDA—American Brass Co
ANCHOR—Barrett Div Allied Chemical & Dye Corp
ANCHOR—Besser Mfg Co
ANCHOR—Celotex Corp
ANCHOR—Larkin Bate Co
ANCHORAIR—Anchor Dir Stratton & Terzagge Co
ANCHORFAST—Independent Nail & Packing Co
ANCHORITE—Dickson Weatherproof Nail Co
ANCHOR—Anthony Truck Co
ANCOVER—Angier Corp
ANDAL—Fawcote Mfg Div Falls Stamping & Welding Co
ANDERSON—Mid-States Steel & Wire Co
ANDERSON—Westinghouse Electric Corp Sturtevant Div
ANGELFLOW—Fairbanks Mess & Co
ANGILOP—Pulco Products Inc
ANGILOWOOD—Tech Brothers
A-10 BROWN SKIN GRIZZLY BEAR—Angier Corp
ANKRAFT—Angier Corp
ANSULATE—Angier Corp
ANTHONY—American Steel & Wire Co
ANTI-SLIP—Sullivan Co
ANTOXIDE—Du Pont (E I) de Nemours & Co
ANYSTREAM—Speakman Co
A-O—Oregon-American Lumber Corp
A-1—Cabot (Samuel) Inc

List of Manufacturers' Names With Complete Addresses Starts on Page D-76

APAC—Keeshey & Mattison Co
APARTMENT—Autolite Fan & Blower Div
Nelson (Herman) Corp
AQUADAM—Blue Ridge Talc Co Inc
AQUADAM—Johns-Manville Corp
AQUAPEL—Zenolite Co
AQUA-PROOF—Pure Roofing Products Co
AQUA-SEAL—Sullivan Co
AQUASPEL—Devoe & Reynolds Inc
AQUATHERM—Little (H C) Burner Co Inc
AQUA-TITE—Continental Steel Corp
AQUILUX—Johnson (S T) Co
ARBORITE—U S Gypsum Co
ARCH BEAD—Inland Steel Products Co
ARCHITECT—Bird & Son Inc
ARCO—American Radiator & Standard Sanitary Corp
ARCOFLAME—American Radiator & Standard Sanitary Corp
ARDEX—U S Gypsum Co
ARMORITE—Wood (John) Mfg Co Inc
AREX-ASTROB—Aves Company
ARFLOTE—Flintkote Co
ARHICLEX—Anti-Hydro Waterproofing Co
ARHIZOLE—U S Gypsum Co
ARHIZITE—Anti-Hydro Waterproofing Co
ARIN ACCELERANT—Aves Co
ARIN STATIONARY—Aves Co
ARISTO-BRIG—Ruberoid Co
ARISTOCAT—H & R Mfg Co
ARLINGTON—American Radiator & Standard Sanitary Corp
ARLINGTON SQUARE—American Radiator & Standard Sanitary Corp
ARLON—Armstrong Cork Co
ARMO-LAC—Sonnabend (L) Sons Inc
ARMOLITE—Bird & Son Inc
ARMORPLY—U S Plywood Corp
ARMORVIT—Anti-Hydro Waterproofing Co
ARMSTRONG-STEEDMAN—Armstrong Cork Co
ARRESTONE—Armstrong Cork Co
ARRO-LACK—U S Gypsum Co
ARROW—Keystone Steel & Wire Co
ARROW GAS—Dewarage Steel Furnace Co
ARROWLINE—Hesseltine (A D) Co
ART BRIC—Bird & Son Inc
ART-COTE—Sullivan Co
ART EDGE—Bird & Son Inc
ART IN IRON—Aircraft Ornamental Iron Co
ARTISAN—Lufkin Rule Co
ARTLAC—Devoe & Reynolds Inc
ART-PLY—Vancouver Plywood & Veneer Co
ART-RDC—Trucon Laboratories Div Devoe & Reynolds Inc
ASBESTILE—Johns-Manville Corp
ASBESTOCEL—Johns-Manville Corp
ASBESTO-LITE—Kay-Tite Co
ASEPTICOTE—Trucon Laboratories Div Devoe & Reynolds Inc
ASPHALIC—Plastering Wall Board Co
ASQU—Cary (Philip) Mfg Co
ATLANTIC BREEZE—Pryne & Co Inc
ATLAS—Irvington Form & Tank Corp
ATLAS—Lufkin Rule Co
ATLAS—Universal Atlas Cement Co
ATTICVANE—Westinghouse Electric Corp
A-12—Armstrong Cork Co
AURORA—Barber-Golman Co
AUTOCODAL—Crane Company
AUT-O-DOOR—Richards-Wilcox Mfg Co
AUTO-LOK—Ludman Corp
AUTO MAGIC—Thor Corp
AUTO-THERMIC—Vestco Company
AUTO-THERM—Hosek & Ackerman Inc
AUTO-WEIGHT—Buffalo Scale & Mfg Co
"A W"—Alan Wood Steel Co
AX—Aldrich Co
AXIFLO—Westinghouse Electric Corp
AYR-TRAP—Harsco (A C) Co Inc
AZBROX—Evsale Rock Asphalt Co
AZBROK—Evsale Rock Asphalt Co
AZTEK—Sullivan Co

BALSAM-WOOL—Wood Conversion Co
BANKHEAT—Johnson (S T) Co
BANNER—Chicago Fire Brick Co
BANNER—Tennessee Coal Iron & Railroad Co
BANNER BOND—National Mortar & Supply Co
BANKAM—Schlof Rantam Co
BANZAI—Pittsburgh Plate Glass Co
BARBECART—Donley Bros
BARBER—Chicago Engineering Co
BARCOL—Barber-Golman Co
BARLASTIC—Barland Weatherstrip Co
BARNHIDE—Pittsburgh Plate Glass Co
BAR-OK—Trucon Laboratories Div Devoe & Reynolds Inc
BARRILED SUNLIGHT—U S Gotta Percha Paint Co
BARRETT-HOLT—Barrett Div Allied Chemical & Dye Corp
BARE—Diet (R & J) Co Inc
BAR BEST—Devoe & Reynolds Inc
BAR X—Whelton Corrugating Co
BAR X—Whelton Corrugating Co
BASEAL—Servicized Products Corp
BASOLIT—Nukem Products Corp
BAUGHMAN HI-SPEED—Baughman Mfg Co Inc
BAX BOARD—U S Gypsum Co
BEAR—Samson Cordage Works
BEAU-FOUR—Toledo Plate & Window Glass Co
BEAUTY-CRAFT—Miller Metal Products Inc
BEAUTY QUEEN—Toledo Desk & Fixture Co
BEAUTY-TREAD—Harland Weatherstrip Material Co
BEAUTY WARE—Briggs Mfg Co
BEAVER—Certain-Teed Products Corp
BEAVER—Samson Cordage Works
BECHTEL—Flintkote Co
BECKMAN-DAWSON—Flintkote Co
BED ROCK—Stanley Works
BEE GEE—Brown-Graves Co
BEEHIVE BRAND—Cabot (Samuel) Inc
BELGIAN—Vita-Var Corp
BELL—Keeshey & Mattison Co
BELL-MINE—North American Cement Corp
BELL-TITE—Nukem Products Corp
BELT AIR—Buffalo Forge Co
BELSAS—Equipment Engineering Co
BEND-BOARD—Marsh Wall Products Inc
BEND-EGY—Standard Stamping & Perforating Co
BEN FRANKLIN—U S Gypsum Co
BENTON—Mid-States Steel & Wire Co
BENLOY—Ceresit Mfg Co Div Republic Steel Corp
BERNICO—Brown Company
BERNARD—Sargent & Co
BEST—Sterling Foundry Co
BEST BROS—National Gypsum Co
BESTWALL—Certain-Teed Products Corp
BESTWOODS—M & M Woodworking Co
BEST-CU-LOY—Ballington Steel Co
BETTENDORF—Lemux Furnace Co
BEVIL-DEVIL—Kimball Mfg Co Inc
B-G—Barber-Golman Co
B & G—Bell & Gesselt Co
B-H—Baldwin-Hill Co
BIFURCATOR—DeBortheaux Fans Div American Machine & Metal Inc
BIG CHIEF—Flintkote Co
BIG CHIEF KUTTER—Tri-States Building Materials Co
BIG FOUR—U S Gypsum Co
BIG MAID—Luhon Co
BIGMESH—Inland Steel Products Co
BIGDRITE—Insulite Div Minnesota and Ontario Paper Co
BILLY PENN—Penn Supply & Metal Corp
BILT-WELL—Carr Adams & Collier Co
BIRPAC—Birna Products
BITUMAL—Chascomer Elliot Co Inc
BLACK ASPHALT—Cary (Philip) Mfg Co
BLACK-BIRD—Samson Cordage Works
BLACK DIAMOND—Barrett Div Allied Chemical & Dye Corp
BLACKHAWK—Midwest Mfg Co

BLACK LAP—Cary (Philip) Mfg Co
BLACK MAGIC—Miracle Adhesives Corp
BLACK SHIELD—Barrett Div Allied Chemical & Dye Corp
BLACKSTONE—American Jobath Roof Corp
BLACK TEMPERED PRESWOOD—Masonite Corp
BLAXPHALT—Sherwin-Williams Co
BLAZERETE—Johns-Manville Corp
BLAZE-PROF—SILVER LUMBE—Wilmer & Williams Co
BLENDTEX—U S Gypsum Co
BLOCKEDGE—Certain-Teed Products Corp
BLOCK-MAK—Masonry Equip & Engineering Co
BLO-FAN—Pryne & Co Inc
BLO-POKE—Bennett-Ireland Inc
BLOWETTE—Lau Blower Co
BLOXOLITE—Hachmeister Inc
BLUAC—Wandville Lime Co
BLI BLAZE—Yates Inc
BLUE BAND—American Gypsum Div Celotex Corp
BLUE BONDS—North American Cement Corp
BLUE BOND—Natl. Insulite Trunk & Caster Co
BLUE BRUTE—Worthington Pump & Machinery Corp
BLUE-CENTER—Upson Co
BLUE FLAME—Silent Gas Oil Burner Corp
BLUE RAPIDS—Certain-Teed Products Corp
BLUE RIBBON—Keystone Steel & Wire Co
BLUE RIBBON—Mid-States Steel & Wire Co
BLUE RIDGE—Libby-Owens-Ford Glass Co
BLUE RIDGE HAMMERED—Libby-Owens-Ford Glass Co
BLUE RIDGE LOUVREX—Libby-Owens-Ford Glass Co
BLUE STREAK—North American Cement Corp
BLU VALLEY—U S Gypsum Co
BLU-FLEX—Millers Falls Co
BOB-CAT—Lisbon Hosiery & Crane Co
BOCCA—Roger & Carlson Co
BONDAL—Sealco Products Inc
BONDARETE—U S Gypsum Co
BONDERIZING—Parlor Roof-Proof Co
BONDEX—Borden Co
BONDERIZING—Wilbur & Williams Co
BOND-BEST—Hart (A C) Co
BOND-WELL—Wilbur & Williams Co
BONDWOOD—Franklin Guss Co
BONTITE—Lufkin Co
BONUS-BUILT—Ford Motor Co
BOR-ED-IN—Sargent & Co
BOR-IN—Lockwood Hardware Mfg Co
BOR-LOC—Lockwood Hardware Mfg Co
BOST-RIB—Bostwick Steel Lath Co
BOSTWICK—Bostwick Steel Lath Co
BOYD—Robinson Clay Product Co
BOYER—Chicago Pneumatic Tool Co
BRACE-TITE—U S Gypsum Co
BRADFORD—Malleable Iron Fittings Co
BRAS-BITE—Sherwin-Williams Co
BREEZE-AIR—Buffalo Forge Co
BREEZE-TRILDER—Bar-Brook Mfg Co Inc
BREEZE MASTER—Aero Equipment Co
BREEZO—Buffalo Forge Co
BRIC-FACE—Luhon Co
BRIC-BOLL—Flintkote Co
BRIC-SIDE—Johns-Manville Corp
BRICSLULATE—Cary (Philip) Mfg Co
BRICK-LOCK—Standard Lime & Stone Co
BRICKMASTIC—Seaboard Plastics Corp
BRICK-MIX—Chicago Fire Brick Co
BRICK-TEX—Certain-Teed Products Corp
BRICK-TITE—Mar-Bell Converter Co
BRID-JOINT—U S Gypsum Co
BRICKARIZ—Builders Material Inc
BRICKSET—Chicago Fire Brick Co
BRICKSET—Medusa Portland Cement Co
BRIK-STRIP—Ruberoid Co
BRISULITE—Gold Seal Roofing Co
BRIILLIANT—Calbar Paint & Varnish Co
BRIILLIANT FIRE—Ohio Foundry & Mfg Co

BRINE-PRY—Wilbur & Williams Co
BRITE-LITE—Brainard Steel Co
BRITINGOL—Vita-Var Corp
BRIXMENT—Louisville Cement Co
BROAD SHADOW—Barrett Div Allied Chemical & Dye Corp
BROADWOOD—Continental Floor Co
BROHASTER—Majestic Co
BROWN—Kaiser Corp
BROWN ELECTRONIC—Minneapolis-Honeywell Regulator Co
BROWNSKIN—Angier Corp
BRI-SHAWAY—Merryweather Products Co
B-T-6—General Controls Co
B-T-8—Rover Viscosity Corp
B T U—Cary (Philip) Mfg Co
BUCKEYE—Ohio Hydrate & Supply Co
BUCKRIN—Plastering Wall Board Co
BUCKRIN READY-MIX—Plastering Wall Board Corp
BUDGET—American Radiator & Standard Sanitary Corp
BUFFALO—Plastering Wall Board Co
BUFFALO-KELLY Island Lime & Transport Co
BU-GALASTER—Sherwin-Williams Co
BUDGMORRIS—Morrisonville Manufacturers
BULLWAVE—Frantz Mfg Co
BULLDOG—Wiss (J) & Sons Co
BULTELASTIC—Powers Paint Co
BU-PRO-FIBRE—Tremco Fiberglass Mfg Co
BURKS—Decatur Pump Co
BUR-LA-MAT—Angier Corp
BUR-LA-SKIN—Angier Corp
BUR-LITE—Bauer Mfg Co
BUT-O-SULITAN Co
BUT-N-TITE—St Paul Corrugating Co
BUTRACKIN—Sullivan Co
BUZABEL—Edwards Co Inc
B & W—Rubrock & Wilcox Co
BX—Aldrich Co

C

CABLE KING—Yale & Towne Mfg Co
CADRANSTE—Murphy Deer Bed Co
CALIGEL—Celotex Corp
CALISTONE—Celotex Corp
CALTELASTIC—Powers Paint Co
CALX-O-PAK JB—Seal Rite Caulking Co Inc
CAMASTIC "B"—Cambridge Tile Mfg Co
CAMBRITTE—Cambridge Tile Mfg Co
CANIEF—Masonite Corp
CANNON BALL—Starline Inc
CANYON—Lufkin Co
CAPAROL—American Fluoroc Co
CAPITOLAIRE—U S Radiator Corp
CAPROL—Linsley Brothers Inc
CAPTOL ROCK WOOL—Standard Lime & Stone Co
CARADCO—Carr Adams & Collier Co
CARBOLIC-OL—Sherwin-Williams Co
CARBOSOTA—Barrett Div Allied Chemical & Dye Corp
CAREX-C P 5—Cary (Philip) Mfg Co
CAREYCEL—Cary (Philip) Mfg Co
CAREY COATING—Cary (Philip) Mfg Co
CAREYDUCT—Cary (Philip) Mfg Co
CAREYELAD—Cary (Philip) Mfg Co
CAREYELASTIC—Cary (Philip) Mfg Co
CAREYSTONE—Cary (Philip) Mfg Co
CARTLEY—Dufford Station Steel Corp
CARR-DOOR—Carr Adams & Collier Co
CARRARA—Pittsburgh Plate Glass Co
CABS-OOP—Butler Bin Co
CARSTENITE—Marsh Wall Products Inc
CARTER—National Lead Co
CAS—Sialkraft Co
CASCO—Borden Co Chemical Div
CASCADE—Miami Cabinet Div Cary (Philip) Mfg Co
CASCADITE—U S Gypsum Co
CASCADITE—Borden Co Chemical Div
CASOPHEN—Borden Co Chemical Div
CASOFRIZ—Borden Co Chemical Div
CASNTITE—Sherwin-Williams Co
CAST-REPEAT—Quigley Co Inc
CAS-TO-FIT—Robinson Clay Product Co
CALULYST—Borden Co
CAULK-N-SEAL—Blue Ridge Talc Co Inc

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GAULK-O-SEAL—Galbar Paint & Varnish Co

GAULTEK—Ever-Plastics Corp
GALREAL—K Pipe Corp
G-B—Clark-Roberts Industries Inc
G-C-O—Greenman-Elliott Co Inc
G-CRYTITE—Chemman-Elliott Co Inc
G-EDAR-BRAM—Jamison Lumber & Shingle Co

GEDARGAIN—Johns-Manville Corp

GEHARIZE—Sullivan Co
GEDAR-LUX—Cedar-Lux Products Co
GEDARTEX THIKBUT—Flintkote Co

GE HAPPY DAY—Crane Electric Industries

GE BEATMASTER—Combustion Engineering Superheater Inc
CELL-A-VENTOR—Universal Blower Co

GELLADOORS—Bilco Co

GELLASTAIRS—Bilco Co
GELL-U-BLANKET—Masonite Corp

GELUFODAN—Masonite Corp

CELLULITE—Gilman Brothers Corp
CELLULINE—O'Brien Corp
GEL-BLOCK—Celotex Corp

GELOBRIK—Celotex Corp

GELOCROME—Celotex Corp
GELOCRETTE—Celotex Corp
CEL-O-GLASS—Du Pont (E I) de Nemours & Co Inc

CELO-ROK—Celotex Corp

CELO-SHINGLE—Celotex Corp
CELO-SIDING—Celotex Corp
CELO-TEXBRIK—Celotex Corp

C-E LOW-BAM—Combustion Engineering Superheater Inc

CEMOBAT—Sensoblen (L) Sons Inc
CEMOIL—Tremco Mfg Co

CEMENTHIDE—Pittsburgh Plate Glass Co

CEMENTITE—U S Gypsum Co
CEMESTO—Celotex Corp
CEMEST—Sullivan Co

CENTRAZ—Christy Co Inc

CENTURY—Soprinet Engineering Co
CENTURY—Keeshey & Mattison Co

CEPAFO—Central Paint & Varnish Works

KERALITH-PRIMER SEALS—King (E & F) & Co Inc
CERAMO—Caray (Philip) Mfg Co

CERAMO—Ohio Hydrate & Supply Co

CEROPHANT—Crescent Waterproofing Corp
CERITITE—Crescent Waterproofing Corp
CEROSAL—Crescent Waterproofing Corp

CERTIFIED BUILDING PRODUCTS—Building Products Merchandising Service

CERTIGRADE—Red Cedar Shingle Bureau

CERTILE—Certain-teed Products Corp

CERTROCK—Certain-teed Products Corp

C-E SKELLY—Combustion Engineering Superheater Inc

C-H—Culver Hammer Inc
CHAIN LINK—Cyclone Fence Co

CHALLENGER—Kai Master Corp

CHALLENGER—Link Bule Co
CHALLENGER—Rapids-Standard Co Inc
CHALLENGER—Sensoblen Electric Co

CHAMPION—Continental Steel Corp

CHAMPION—Crane Company
CHAMPION—Gunnison Homes Inc

CHAMPION—U S Gypsum Co

CHAMPION—Vento Steel Products Co
CHAMPION—Whiting Furnace Co

CHANNELFORM—Bostwick Steel Lath Co

CHAN-L-CROS—Junior-Pro Products Co

CHECK DRIP—Dulgon Distributing Co
CHEM-KMATIC—Wilbur & Williams Co

CHEERFLATON—Adams Brothers Mfg Co

CHEVRON—Barclay Mfg Co Inc
"CHEVRONS"—Packard (E B) Co Inc
CHIX—Beardon Co

CHICAGO—Eddy Stoker Corp

CHICAGO-WIGLEY—Chicago Expansion Bldg Co
CHICKASAW—Memphis Hardwood Flooring Co

CHROME-O-PLATE—Illinois Bronze Powder Co Inc

CHROMEROC—Reboud Products Co
CHROMESMITH—Smith (E C) Mfg Co

CHROMETEX—Rotolord Products Co

CHROMWELL—Lincoln Electric Co
CHROMESEAL—Pittsburgh Plate Glass Co

CHROMOTRIM—Werner (E D) Co Inc

CHROTHERM—Minneapolis-Honeywell Regulator Co
CHRYSLER-AIRTEMP—Airtemp Div Chrysler Corp

CIURBI—Mid-States Steel & Wire Co

CINCH—National Lead Co
CINCINNATI—Marshalltown Trowel Co

CINGO—Russell (F S) Co

CIN-KOTE—Blue Ridge Talc Co Inc
CINTI ELBOW—Cincinnati Elbow Co

CIRCLE T—Trumbull Electric Mfg Co

CIRCU RAY—Tennessee Enamel Mfg Co
CIRKLAIR—Polson Co Inc
C & L—Clayton & Lambert Mfg Co

CLASSIC—Aar Register Co

CLASSIC—Edwards Co Inc
CLAYTON—Stratner Brick Co

CLEARLY—Sherwin-Williams Co

CLEARTEX—Abesto Mfg Co
CLEARVIEW—Ortado Venetian Blind Co

CLAYTRAC—Oliver Corp Clctrac Div

CLIFFDALE—American Radiator & Standard Sanitary Corp
CLIFFTON—American Radiator & Standard Sanitary Corp

CLIMATE-CHANGER—Trane Company

CLIMATROL—Mueller (L J) Furnace Co
CLINGER—Dennis (W J) & Co

CLINGER—Inland Steel Products Co

CLINTON—Wickwire Spenser Steel Div Colorado Fuel & Iron Corp
CLIPPER—Henderson Furnace & Mfg Co

CLIPPER—Trade-Wind Motorfans Inc

CLOS-TITE—Carr Adams & Collier Co

CORBY—Perfection Steel Body Co
CORBYN C & F—Wickwire Spenser Steel Div

CS—Chisholm-More Hoist Corp

CEMENTO—Sullivan Co
Colorado Fuel & Iron Corp

GOLAS—Flintkote Co

GOLCAP—Caray (Philip) Mfg Co
COLD-BAR—Galbar Paint & Varnish Co

COLPOREST—Commercial Shearing & Stamping Co

GOLLOPAKES—Cabot (Samuel) Inc

COLONIAL—American Cabinet Hardware Corp

COLONIAL—Miami Cabinet Div Cary (Philip) Mfg Co
COLONIAL TIMBERTEX—Ruhroid Inc

CO-LO-RA—Reardon Co

COLORADO—Wickwire Spenser Steel Div Colorado Fuel & Iron Corp
COLOR-CONDITIONING—Du Pont (E I) de Nemours & Co Inc

COLOR DYNAMICS—Pittsburgh Plate Glass Co

COLOR-GRADED—Wheeler-Osgood Co
COLORKOTE—Fir-Tex Insulating Board Co

COLOR-RITE—U S Gypsum Co

COLORSTONE—Taurus Industries Inc
COLOR-TONED—National Brass Co

COLOR TRIM—American Cabinet Hardware Corp

COLORINDUM—Horn (A C) Co
COLORWAY—Yarns Industries Inc

COLOR-PLY—Flintkote Co

COLORS 10—Timber Engineering Co
COLUMBIA—Pittsburgh Plate Glass Co

COLUMBIA—Samson Cordage Works

COMFORTMASTER—Thatcher Furnace Co

COM-MIN—Co F Mineral Wool Co
COMMANDE—Commander Door Inc

COMMANDER—Upton Co

COMMONWEALTH—Sherwin-Williams Co
COMFACT—Inesco Corp Inc

COMPASS—Goodyear Tire & Rubber Co

CONCO-HEAT—Conco Engineering Works

CONCORD—Lehon Co
CONCRETE FORM PRESWOOD—Masonite Corp

CONSERVATUM—W-Var Corp

CONDOE—Raybestos-Manhattan Inc
CON-SEK-TEX—Barrell (William L) Co

CONSERVADOR—Phileo Co

CONSERVOIL—Crane Company

CONSOVELD—Consolidated Water Power & Paper Co
CONTICO—Ruhroid Co

CONTINENTAL—Miller Metal Products Inc

CONVECTOR—Mueller (L J) Furnace Co
CONVERTIBLE—Bergner Mfg Div Republic Steel Corp

COOKE—Mid-States Steel & Wire Co

COOLAIR—American Cooler Corp
COOLFAIR—Pattin Furnace Co

COOLITE—Pittsburgh Plate Glass Co

COOL SPOT—Signal Electric Mfg Co
COPPER ARMORED—Sisakraft Co

COPPER CLIP—Bird & Son Inc

COPPER FABRIC—Waco Finishing Co
COPPERFAIR—Pattin Furnace Co

COPPERSKIN—Angier Corp

COPPER-TREAT—Wood-Treating Chemicals Co
COP-FIBRE—Forty-Eight Insulations Inc

COP-LOV—Whelwing Steel Corp

"COPROX"—Coprox Corp

COP-E-TEX—Waco Finishing Co
COP-O-BOY—Stain Shingle Div Weirhaeuser Sales Co

COR-DU-ROY—Lehon Co

CORKBOARD—Armstrong Cork Co

CORKOUSTIC—Armstrong Cork Co
CORKSTONE—Lasting Products Co

CORLON—Armstrong Cork Co

CORNALATH—Alabama Metal Lath Co
CORNALATH—Metal Trim Inc

CORNERITE—Penn Metal Co Inc

CORNERITE—Truscon Steel Co

CORNERITE—Whiting Corrugating Co
CORONA DRY—Pittsburgh Plate Glass Co

COR-O-PEL—Con-Cor Paint Co

COROSOFIL—Tremco Mfg Co
COROZONE—Coroair Heater Corp

CORPORAL—Certain-teed Products Corp

CORRIVANTI—Schorr (Adolph) De
COR TEM—Tennessee Coal Iron & Railroad Co

CORTLAND—Wickwire Brothers Inc

COUNTERFOLO—Drano Corp
COVER-COAT—U S Gypsum Co

CP—Chicago Pneumatic Tool Co

CRA—California Redwood Association

CRAFTCO—National Gypsum Co
CRAFTCO COVER-DRI—Flintkote Co

CRAFT-PAK—Masonite Corp

CRAW-FIR-DOR—Fir Door Institute
CRAXEMENT—Crescent Waterproofing Corp

CYCLONE—Ford Roofing Products Co

CYCLONE—New England Carbide Tool Co
CYC—Du Pont (E I) de Nemours & Co Inc

D

DAMPFOAT—Wilbur & Williams Co

DAMPFERROL—Hotstream Heater Co
DAMP-VENT—Woodward & Lothrop

DA-NITE ACRATHERM—Minneapolis-Honeywell Regulator Co

DANTORE—Dant & Russell Inc
DARRA—Toukgraf Corp

DASCO—Damasco Steel Products Corp

DAVIS & WELLS—Consolidated Machinery & Supply Co

DAY-STYEL—Dayton Rubber Co
DAYTON THOHDOR—Dayton Rubber Co

DEATH-FLY—Electric Ftg Screen Co Inc

DEGOBLIND—Flintkote Co

DECO-PLY—Actna Plywood & Veneer Co
DEGORALT—Flintkote Co

DEGRATIVE MICARTA—U S Plywood Corp

DECO-SHINGLES—Cincinnati Sheet Metal & Roofing Co
DEEPSEAT—Bennett-Ireland Co

DEFENDER—Keystone Steel & Wire Co

DEFENDER—Silent Glow Oil Burner Corp
DEFLECT-O-LITE—Sullivan Co

DELFTO—Day Company

DEFLECTOR—Barber-Colman Co

DEHYDRATE—Horn (A C) Co
DEHYDRAT—Dewar & Reynolds Inc

DELTA—Rockwell Mfg Co Power Tool Div

DELTA MULTIPLEX—Rockwell Mfg Co
DELTA Power Tool Div

DELUX—Insulita Div Minnesota & Ontario Paper Co

DELUXE—American Cabinet Hardware Corp
DELUXE—Downagie Steel Furnace Co

DELUXE—Evans Products Co
DELUXE—Farley & Locheater Mfg Co

DENSITE—Certain-teed Products Corp

DENSITINE—American Chemical Paint Co
DEPENDABLE—Beath & Milligan Mfg Co

Der Glidden Co
DERVAC—Dewar & Reynolds Inc

DERVATEX—Dewar & Reynolds Inc
DERBY RED—Love Brothers Co

DEXTER—National Brass Co

DEXTER HEAT VALVE—Sears-Roebuck & Co
DEXTER-TUBULAR—National Brass Co

DFFA—Denver Fire Clay Co

DFFA—Douglas Fir Plywood Association

DIAL-SET—Kai Master Corp
DIAMOND—Adams Co

DIAMOND—American Steel & Wire Co

DIAMOND—Barrett Div Allied Chemical & Dye Corp
DIAMOND—McDonald (A Y) Mfg Co

DIAMOND—U S Gypsum Co
DICKBOPE—Dick (E & J) Co Inc

DIFFUSEX—Libbey-Owens-Ford Glass Co

DILLON—Stanley Works

DIRECTIONS—Fisher Co Inc
DISPOSAL—General Electric Co

DISPOS-O-MATIC—Williams Oil-O-Matic Div Eureka Williams Corp
DIXIE—Hotstream Heater Co

DIXIE BELL—Hotstream Heater Co
DIXIE STAR—Hotstream Heater Co

DO-ALL—Wardak Electric Tool Corp
DO-MOR—Fluor Tool Co

DOOR-EASE—American Green Steel Co

DOORFAST—Bruce (E L) Co
DOORFAST—American Cabinet Hardware Corp

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DRAINRITE—Continental Steel Corp
 DRADEX—Reardon Co
DRAWTITE—Alth-Prouty Inc
 DREADNAUGHT—Clare Sanding Machine Co
 DRI-AIR—Tamm Industries Inc
DRI-BILT—Douglas Fir Plywood Association
 DRI-N-TITE—Hors (A C) Co Inc
 DRIVE-IT—Powder Power Tool Corp
 DRIVAL—Gidden Co
 DRYE—Wooler Seal Co
 DRYEX—Lanting Products Co
GRY KILN—Cary (Philip) Mfg Co
 DRYTEX—American Fluorit Co
 DUAL-PAFS—American Stained Shingle Co
 DUAL GRIP—Grand Specialties Co
DUBBLEAL—Masonite Corp
 DUBBLEAL—E S Gypsum Co
DUBLE COVERAGE—Ruberoid Co
DUBLECOTE—Barrett Div Allied Chemical & Dye Corp
DUBL-THIK—Upson Co
 DUCO—Du Pont (E I) de Nemours Co Inc
 DUCTBOARD—Ball Mountain Co
 DUCT SOUNDING—Ball Mountain Co
 DUCTURNS—Tuttle & Bailey Inc
 DUKROM—Du Pont (E I) de Nemours & Co
 DULCITE—Du Pont (E I) de Nemours & Co
DUL-KOTE—Tennessee Coal Iron & Railroad Co
 DULUX—Du Pont (E I) de Nemours & Co Inc
 DUNPEYFOR—Morrow Sales Co
 DUNBREK—Dunn (W E) Mfg Co
 DUREX—Horn (A C) Co Inc
DUR-FAST—Fasstener Corp
DURALITE—Pittsburgh Plate Glass Co
 DUR-SEAL—Farley & Lottcher Mfg Co
 DUR-TONE—Platensong Wall Board Co
 DUR-VENT—Klauser Mfg Co
DURUPATE—Pittsburgh Plate Glass Co
DUPLEX—Richkraft Co
 DUPLEX—U S Gypsum Co
DUPLEX—Upson Co
DURA—Flintkote Co
 DURABILT—Auer Register Co
 DURAC MILK—Rusch (A G) & Co Inc
 DURABOND—Pron Metal Co
 DURACAL—U S Gypsum Co
 DURACLAD—Sams (A S) Corp
DURACRALY—Crane Company
DURA-COTTA—Johns-Manville Corp
 DURA-FLEX—Auer Register Co
DURALIN—National Brass Co
 DURA-LINE—Auer Register Co
 DURALITE—Chicago Fire Brick Co
DURALL—New York Wire Cloth Co
DURAPLASTIC—Universal Atlas Cement Co
 DURA-SEAL—International Chemical Co
DURA-SEAL—Zegers Inc
 DURASTITE—Wesco Fibers Inc
 DURATRITE—Webb Products Co
 DURATREM—Tremco Mfg Co
 DURAWHITE—Ash Grove Lime & Portland Cement Co
 DURHAM'S—Durham (Donald) Co
 DURKIND—American Chemical Paint Co
 DURITE—Borden Co Chemical Div
DURITE—Certain-lead Products Corp
 DURMO—Selditz Paint & Varnish Co
 DURORITE—American Fluorit Co
 DURONIT—American Fluorit Co
 DURON—U S Gypsum Co
 DURONER—Bradford White Co
 DURSO—Ohio Hydrate & Supply Co
 DURST-A-LAY—American Fluorit Co
DUST-SLOP—Owens-Corning Fiberglass Corp
 DUTCH BOY NO 1—National Lead Co
 DUX-SULATION—Wilson (Grant) Inc
 DYE-CRETE—Wilbur & Williams Co
 DYN-MITE—Millers Falls Co

E

EAGLE—Samson Cordage Works
 EAGLE MINERAL WOOL—Eagle-Pfister Co
 EAGLE STAR—Eagle-Pfister Co
 EAGLE SUPER—Eagle-Pfister Co
 EAGLE SUPER—Eagle-Pfister Co
 EAGLE SUPERTEMP—Eagle-Pfister Co
 EAST-SELL—Arma Fibrowd & Veneer Co
 EASTMAN—Colson Equipment & Supply Co
EASON—Ruberoid Co
 EASY—Detroit Surfacing Machine Co
EASY-CURVE—Upson Co
 EASY-LIFE—Wilson Foundry & Machine Co
 EASY-ROOF—Phoenix Mfg Co
 EASY-SLIP—La Crosse Steel Roofing & Coating Co
 EASYVIEWER—Equipment Engineering Co
 ERONOLD—Sherwin-Williams Co
 ERONY—Platensong Wall Board Co
 E-C CORD—Goodrich Tire & Rubber Co

ECLIPSE—Red Devil Tools
 ECON-O—Sommer Metallcraft Corp
 ECONO—Standard Steel Cabinet Co
 ECON-O-CRYSTAL—Cryolite Co
ECON-O-MATIC—Stanley Works
 ECON-O-MISER—Fuel Econ-O-Miser Co
 ECONOMY—Auer Company
ECONOMY—Bird & Son Inc
 ECONOMY—International Heater Co
ECONOMY—Keystone Steel & Wire Co
 ECONOMY—Kirk & Blum Mfg Co
 ECONOMY—Platensong Wall Board Co
ECONOTOP—Ruberoid Co
EDGEWORTH—Weoster Products Inc
EDHAM—Weyernauser Sales Co
 EDMANGO—Edwards Mfg Co
 EDSON—O'Brien Corp
 EFKO METAL SASH-PUTTY—King (E & F) & Co Inc
 EFKO WOOD SASH-PUTTY—King (E & F) & Co Inc
 EFTECO—Fletcher Terry Co
 EGYPTIAN—Tamm Industries Inc
 EIGHT-TO-ONE—Ball Mountain Co
 ELITE—Myers (F E) & Brother Co
 ELASTIC—Kunz (E B) Fed
ELASTIC—Cary (Philip) Mfg Co
ELASTIGUM—Barrett Div Allied Chemical & Dye Corp
 ELBORADO—U S Gypsum Co
 ELECTRIC FURNACE—Chicago Fire Brick Co
ELECTRIC JANITOR—Minneapolis-Honeywell Regulator Co
 ELECTRIC PISTON—Bostrom Heater Co
 ELECTRIC-SHEET—American Brass Co
ELECTRIMMER—Skilsaw Inc
ELECTRO—Republic Steel Corp.
ELECTRONIC SERVICEMAN—McKee Door Co
 ELECTRONIC TORNAO—Lincoln Electric Co
 ELECTRO-WIND—Allen Steel Products Corp
ELECTRUMITE—Republic Steel Corp
 ELEPHANT—International Steel Wool Corp
 ELEVEITE—Insulator Co of America
 ELITE—Auer Register Co
 ELITE TRIP-PAR—Auer Register Co
ELLWOOD—American Steel & Wire Co
 ELSO—Electric Spraying Co
 ELYSIAN—Hoboken White Lead & Color Works Inc
 EMERALD—Platensong Wall Board Co
EMERSON JR—Emerson Electric Mfg Co
EMAREL—Caldwell Mfg Co
EMAMELGLAD—Cary (Philip) Mfg Co
 ENAMELOID—Sherwin-Williams Co
 END-LOKT—Exchange Savinilla Sales Co
 ENDOPEST—Swift & Co
 ENDOWEED—Swift & Co
 ENDURANCE—Gidden Co
 ENDURANCE IMPERIAL—Gidden Co
ENDURO—Republic Steel Corp
 ENVIRO—Hilltop Zinc Co
 ERBODUCT—Ehret Magnesia Mfg Co
 ES-100—Electric Soldering Iron Co Inc
ES-WALL—Elastic Stop Nut Corp of America
 ESSO—Exchange Savinilla Sales Co
 ESSO—Gilbert & Barker Mfg Co
 ETCHERWOOD—Wheeler Woodstock Co
ETERNIT—Ruberoid Co
ETERNUM—Barrett Div Allied Chemical & Dye Corp
EUREKA—New York Wire Cloth Co
 ESTON—Gidden Co
 EVANAR—Erma Products Co
 EVANAR—Platensong Wall Board Co
 EVENHEET—Samped Time Control Inc
 EVENTEMP—Northwest Metal Products Inc
EVERBOND X—Bruce (E L) Co
 EVERBRITE—Harris Inc
 EVERBUR—American Brass Co
EVERFAST—Barrett Div Allied Chemical & Dye Corp
EVERJET—Barrett Div Allied Chemical & Dye Corp
EVERLASTIC—Barrett Div Allied Chemical & Dye Corp
EVERLASTING—Stanley Tools Div Stanley Works
 EVERLASTING—Samped Time Control Inc
EVERLOX—Barrett Div Allied Chemical & Dye Corp
 EVERON—Gidden Co
 EVER-READY—Ohio Hydrate & Supply Co
EVER-STICK—Upson Co

EVERTITE—Ford Roofing Products Co
 EVERTITE—Rotzke Weatherstrip Mfg Co
 EVERWELD—Southern States Iron Roofing Co
 EX-DUST—Lanson Corp
EX-L-LITE—Republic Steel Corp
EXPANSLIP—Bennett Ireland Co
EXT-DFFPA.A—Douglas Fir Plywood Ass'n
EXT-DFFPA.A-B—Douglas Fir Plywood Ass'n
EXT-DFFPA.Plyshield—Douglas Fir Plywood Ass'n
EXT-DFFPA. Utility—Douglas Fir Plywood Ass'n
EXT-DFFPA.Sheaathing—Douglas Fir Plywood Ass'n
EXT-DFFPA. Concrete Form—Douglas Fir Plywood Ass'n
 EXT-O-VIEWOR—Standard Coverer Co
 EXTITE—Angier Corp
 EXTRA STRENGTH—Robinson Clay Product Co
EXTRALITE—Flintkote Co
EXTRADULITE—Libbey-Owens Ford Glass Co
 EYE COMFOST—Trucon Laboratories Div
 EZ—Frank Mfg Co
E-Z-FLEX—American Cabinet Hardware Corp
 E-Z-GLAZE—Farley & Lottcher Mfg Co
'EZ' ON—Baltz (R N) & Co
 E-Z-ON—McNally Brothers Co
 E-Z-ON—London Machinery Co
 E-Z PATCH—Sullivan Co
 E-Z ROLL—Engineered Products Co
 E-Z SCREEN—Security Co
 E-Z SWING—Ranch Mfg Co
 E-Z-ZIP—Beach & Muser Co
 KEWAY—Minnesota Wood Specialties Inc

F
 FARCO—Fabricated Products Co
 FABRICOTE—Gidden Co
 FABULON—Piero & Stevens Inc
 FACET—Lincoln Electric Co
FACTRI-FIT—Fir Door Institute
 FAIRFAX—Edwards Co Inc
FAN-GLO HETAIRE—Markel Electric Products Inc
 FARLITE—Farley & Lottcher Mfg Co
 FARLITE (OMPRESS)—Farley & Lottcher Mfg Co
 FARLO-BOL—Farley & Lottcher Mfg Co
 FARLO-SEAL—Farley & Lottcher Mfg Co
 FARLO-VENT—Farley & Lottcher Mfg Co
 FARLWOOD—Farley & Lottcher Mfg Co
 FARWOOD—Woods Lumber Co
 FARRIN-WALL—Western Brick & Supply Co
FASCO—Fasco Industries Inc
FAULTLESS—Inland Steel Products Co
 FEATHER FLITE—Garrick & Cantor Inc
FEATHER TOUCH—Ejler Co
 FEDERAL—U S Stowage Co
FELTEX—Cary (Philip) Co
FENESTRA—Fenestra Building Products
 FERA-MAT—Abrasive Metals Co
 FERAM—Horn (A C) Co Inc
 FERLSTONE—Gibsonburg Line Products Co
 FERRE-FAX—Horn (A C) Co Inc
FERRORBOARD—Trucon Steel Co
FERRORGLAD—Trucon Steel Co
 FERROBOLTS—Somerset (L) Sons Inc
 FERROMETAL—Milwaukee Stamping Co
 FERROTHERM—American Flange & Mfg Co Inc
 FERROWELD—Lincoln Electric Co
FIBERGLAS—Owens-Corning Fiberglass Corp
FIBERKOTE—National Mfg Corp
FIBERLITE—Insulate Div Minnesota & Ontario Paper Co
FIBEROCK—Cary (Philip) Mfg Co
FIBRE COATING—Cary (Philip) Mfg Co
FIBRE-TILE—Upson Co
FIBREX—Flintkote Co
 FIFTY-FIFTY—Du Pont (E I) de Nemours & Co Inc
 #500 RED LEAD—King (E & F) & Co Inc
#500 PUSH-OVER—Allith-Prouty Co
 FILTERED AIRE—American Foundry & Furnace Co
 FIN-FLEX—Auer Register Co
FIRE-GHEX—Cary (Philip) Mfg Co

FIRECRETE—Johns-Manville Corp
 FIREDAIRE—Anderson Stone Co Inc
 FIRE-DAIRE—Edwards Mfg Co
 FIRE GUARD—Forsyth Mfg Corp
 FIRE-HEARTH—Forsyth Stone & Furnace Lining Co
FIREITE—Johns-Manville Corp
 FIREITE—Fireline Stone & Furnace Lining Co
 FIRE PILOT—Samped Time Control Inc
FIRESTOP BESTWALL—Certain-lead Products Corp
FIRE-TENDER—Hotscomb & Hoke Mfg Co
 FIRE—Reardon Co
 FIREITE—Brwin Brothers Inc
FIRZITE—U S Plywood Corp
 FISHBUSTAL—Sullivan Co
FISSURESTONE—Celotex Corp
 FIT-SNUG—Ford Roofing Products Co
FIXIT—National Mfg Corp
 FLAME SCALES—Continental Steel Corp
FLASHING—Cary (Philip) Mfg Co
FLASHITE—Ruberoid Co
 FLAT-FLITE—Sherwin-Williams Co
 FLAT-TONE—Sherwin-Williams Co
FLAT TRANSITE—Johns-Manville Corp
 FLANAP—Sherwin-Williams Co
FLEETLITE—Fleet of America Inc
 FLEETWELD—Lincoln Electric Co
 FLEETWELD—Lincoln Electric Co
FLEXAIRONE—Flintkote Co
 FLEXAIRE—Victor Electric Products Inc
FLEXALUM—Hunter Douglas Corp
FLEXARAC—Westinghouse Electric Corp
 FLEXIBLOC—West Virginia Brick Co
FLEXBOARD—Johns-Manville Corp
FLEXCELL—Celotex Corp
FLEXGLASS—U S Plywood Corp
 FLEXI—Barger Mfg Div Republic Steel Corp
FLEXIBLAC—Gabel (Samuel) Inc
 FLEXI-FLOR—U S Gypsum Co
FLEXI-FLOOR—R C A Rubber Co
 FLEXIFONE—Operadio Mfg Co
FLEXI-GRIP—American Cabinet Hardware Corp
FLEXIGUM—Barrett Div Allied Chemical & Dye Corp
 FLEXI-KOTE—Robinson Clay Product Co
FLEXMETAL—U S Plywood Corp
 FLEXO—Starline Inc
 FLEX-O-GLASS—Warp Brothers
FLEXSCREEN—Bennett-Ireland Inc
FLEXSEAL—Pittsburgh Plate Glass Co
FLEXTOP—Cary (Philip) Mfg Co
FLEWOOD—U S Plywood Corp
FLINTBOARD—Flintkote Co
 FLINT-BOND—Robinson Clay Product Co
 FLINT CAST—Robinson Clay Product Co
 FLINTCAST—Robinson Clay Product Co
FLINTLOCK—Flintkote Co
 FLINT PATCH—Robinson Clay Product Co
FLOATING—Stanley Works
 FLO-SEAL—Sherwin-Williams Co
 FLOOR ENAMEL—Trucon Laboratories Div
 FLOOR ENAMEL—Trucon Laboratories Div
 FLOOR-GLASS—Warp Brothers Inc
FLOORMIX—Flintkote Co
 FLOOR SEAL—Sherwin-Williams Co
FLOORSET—Flintkote Co
 FLOORSTONE—Tamm Industries Inc
 FLOOR VIEWOR—Bradford-Standard Co Inc
 FLOOR-REX—Horn (A C) Co
 FLOOR-DYE—Trucon Laboratories Div
 FLOOR-REX—Horn (A C) Co
FLOOR-EVER—Delaware Floor Products Inc
FLOREX—Libbey-Owens-Ford Glass Co
FLORHIDE—Pittsburgh Plate Glass Co
 FLOOR LEV-POST—Holmes Mfg Co of O
 FLOOR-PAF—American Chemical Paint Co
FLO-WARM—Williamson Heater Co
 FLOW-WAX—Sherwin-Williams Co
 FLOW-DEY—American Fluorit Co
 FLOW-SEAL—American Fluorit Co
 FLOW-REX—American Fluorit Co
 FLOW-ROCK—American Fluorit Co
 FLOW-ROCK—American Fluorit Co
 FLOW-ROCK—American Fluorit Co
FLOWEX—Libby-Owens Ford Glass Co
 FLOW-FLITE—National Lead Co
 FLOW-STAR—Lahn Chemical Co

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FMC—Fleming Mfg Co
FOAMGLAS—Pittsburgh Corning Corp
FRAM-VAC—Clarke Sanding Machine Co
FOLD-A-FRAME—National Tool & Die Co
FOLD-R-WAY—Richards-Wilcox Mfg Co
FORD'S AIDE—Victor Electric Products Inc
FURD'S BLACK METAL—Ford Roofing Products Co
FORDY-NEER—Ford Roofing Products Co
FORM-A-COTE—Forman-Ford & Co
FORMAVITE—Forman-Ford & Co
FORMDUX—Airtemp Div Chrysler Corp
FORMFILM—Horn (A C) Co
FORM SEALER—Sullivan Co
FORMSTONE—Loring Products Co
FORTIFIED—E S Gypsum Co
40 OUTSIDE WHITE—Du Pont (E I) de Nemours & Co Inc
FOSS-SET—Woolter Brush Co
FOUNDATION COATING—Glidden Co
4-A—Aluminum Metal Lath Co
4-ALL FAMILINE—Woodville Linc Co
4500—Sargent & Co
4 POINT—Barrett Div Allied Chemical & Dye Corp
FOUR POINT LINE—King (E & F) & Co
4-SQUARE—Weyerhaeuser Sales Co
FR—Robinson Clay Product Co
FREE FLOW—Burt Mfg Co
FREELITE—U S Gypsum Co
FRENCHMAN—Hillman & Bell Co
FRENCH LOCK—Certain-teed Products Corp
FRESH-AIRE—Bennett-Ireland Inc
FRESH-AIR MAKER—Schwitzer-Cummins Co
FIBRAL—U S Machine Corp
FRICTEX—Sommers (L) Sons Inc
FRIGIDAIRE—Frigidaire Div General Motors Corp
FRIGID COAT—Wilbur & Williams Co
FRIGID-FLEEE—Carney Co Inc
FRI-LEE BRICKMAKER—Builders Material Inc
FRISCOPE—Taylor Instrument Co
FRITON—Patent Novelty Co
FUNGISIDE—Pittsburgh Plate Glass Co
FRUIT-BAN—Wilbur & Williams Co
FULATH—Inland Steel Products Co
FURNACESTAT—Minneapolis-Honeywell Regulator Co
FURNACE-GRILL—Price Fireplace Heater & Tank Corp
FYRO-PLACE—Price Fireplace Heater & Tank Corp

G

GALVANITE—Ford Roofing Products Co
GALVANNEALD—Keystone Steel & Wire Co
GALVANNEALD—Mid-States Steel & Wire Co
GALVANUM—Vita-Vac Corp
GALVITE—Sherwin-Williams Co
GALV-ZINC-COATING—Blue Ridge Tale Co Inc
GARDBOARD—Flintkote Co
GARDENEER—Inland Steel Products Co
GARDEX—Sullivan Co
GASTITE—Waterman Waterbury Co
G B C—General Blower Co
G/C—General Controls Co
GEMO—General Engineering & Mfg Co
GEMCO—Moore (Goodlee E) Co
GENERAL—General Wood & Co Inc
GENERATOR—Hottelstrom Heater Co
GIANT—Barrett Div Allied Chemical & Dye Corp
GIANT—Bird & Son Inc
GIANT—Breeze Corporations Inc
GIANT—Danner Metal Works
GIANT—Mid-States Steel & Wire Co
GIANT—Starline Inc
GIANT RED DEVIL—Crescent Tool Co
GIANT STRIP—Johns-Manville Corp
GIANT WEIGHT—Barrett Div Allied Chemical & Dye Corp
GIBRALTAIR—Pittsburgh Plate Glass Co
GILBARCO—Gilbert & Barker Mfg Co
GILCO—Gilson (J L) Co
GILCHRIST—Eastman-Gilchrist Laboratories
GILSONDIL—Flintkote Co
GILT EDGE—Farwell Osmun Kirt & Co
GIMCO ROLLBAT—National Gypsum Co
GIMCO SEALAL—National Gypsum Co
G-K—Robinson Clay Product Corp
GLASSBOND—Woolter Porcelain Enameling Co

GLASS-O-NET—Warp Brothers
GLASTONE—Libbey-Owens-Ford Glass Co
GLATEX—U S Gypsum Co
GLAZEOAT—Johns-Manville Corp
GLAZE-O-SCREEN—Sol-O-Lite Mfg Co
GLAZ-FABRIK—Sol-O-Lite Mfg Co
GLAZ-KALKA—Sherwin Williams Co
GLIDE-AWAY—Steel Door Div. Stamping Products & Mfg Co
GLIDDEN—American Steel & Wire Co
GLIDE—Frantz Mfg Co
GLIDWAY—Wolter & Loetscher Mfg Co
GLIDE-AWAY—Stamping Products & Mfg Co
GLIDE-UP—Rock Island Millwork Co
GLI-DOOR—Carr Adams & Collier Corp
GLIDSEAL—Glidden Co
GLITITE—Glidden Co
GL-6—Alton Laboratories Inc
GLOBE—Newport Steel Corp
GLOBAR—Barclay Mfg Co
GLO-FRY—Breeze Corporations Inc
GLOGAS—Superior Fireplace Co
GLORY—Inland Steel Products Co
GLORNE—Breeze Corporations Inc
GOLD BAND—Pittsburgh Steel Products Co
GOLD BOND—National Gypsum Co
GOLD BOND-GIMO—National Gypsum Co
GOLDEN FLEECE—Carney Co Inc
GOLDEN ROD—Hanover Wire Cloth Div Continental-United Industries Co Inc
GOLDEX—Sullivan Co
GOLD LABEL—Sargent-Gerke Co
GOLD LEAF—Sheffield Bronze & Paint Corp
GOLD METAL—Woodville Linc Co
GOLD-SEAL—Morgan Co
GOLD STRAND—Wickwire Spenser Steel Corp
GOLD STRIPE—Pittsburgh Plate Glass Co
GOLD TIP—Fletcher Terry Co
GOLPER—American Gas Machine Co
G P & F—Geisler Bros & Proj Co
PLY-SHEET—Georgia-Pacific Plywood & Lumber Co
G P X—Georgia-Pacific Plywood & Lumber Co
GRAM—Grap Company Inc
GRADE 1—Forman-Ford & Co
GRADE-U-FLOW—Minneapolis-Honeywell Regulator Co
GRADUTROL—Minneapolis-Honeywell Regulator Co
GRAND PRIZE—U S Gypsum Co
GRANITE—Truscon Laboratories Div Devoe & Reynolds Inc
GRANDINE—American Chemical Paint Co
GRAPH-A-MATIC—Remington Rand Inc
GRASSALL—Jadow (B) Inc
GRAYLITE—Insulite Div Minnesota & Ontario Paper Co
GRAYWICK—Wickwire Brothers Inc
GREEN BOTTOM—Continental Steel Corp
GREENCOTE—Green (A P) Fire Brick Co
GREEN HANDLE—Fletcher Terry Co
GREEN SEAL—U S Gypsum Co
GREEN TIP—Keystone Steel & Wire Co
GREENSTONE—American Asphalt Roof Corp
GRIP—Murray (D J) Mfg Co
GRILLADIER—Bennett-Ireland Inc
GRIP-CT—Lal Industries Inc
GRIPIT—Sullivan Co
GRIPLOK—Grand Specialties Co
GRIP-LOK—Somerset Metalcraft Corp
GRIP-TOW—Yale & Towne Mfg Co Philadelphia Div
GUARD—Certain-teed Products Corp
GUARDENE—Pyrene Mfg Co
GUARDIAN—Flintkote Co
GUARDWELL—Coppes Steel & Engineering Co
GUILD—Porter Cable Machine Co
GUILDAL—Mosler Brothers
GULFSTEEL—Republic Steel Corp
GUN-GRIP—Lentz Mfg Co
GULAP—U S Gypsum Co
GYPSTEEL—Certain-teed Products Corp

H

HAKO—Hachmeister Inc
HALLMARK—Beardon Co
HAMMER SETS—Rawlplug Co Inc
HAMTWIST—Star Expansion Bolt Co
HANDBRETT—Standard Conveyor Co
HANDI-CRANE—Construction Machinery Sales Cos
HANDPILES—Standard Conveyor Co
HANDY-ARM—F J & Brother Co
HANDY FARMER—Johnson Industries
HANDY-HUT—United Steel Fabricators Inc
HANSONITE—Hanson (Ebf) Inc
HARBOR—Harbor Plywood Corp
HARBOR PLYCRETE—Harbor Plywood Co
HARLEAL—National Lead Co
HARGURVE—Harbor Plywood Corp
HARNOULD—Harbor Plywood Corp
HARVARD—Starline Inc
HARVESTER—Starline Inc
HARWELD—Linsien Electric Co
HASKO—Haskelite Mfg Co
HASKO ARCH-KOR—Haskelite Mfg Corp
HASTINGS—Metal Tile Products Inc
HAWK SPEED—Farley & Loetscher Co
HAWTHORNE—Keystone Steel & Wire Co
HEALTHHEAT—Norge Heat Div Borg-Warner Corp
HEAT-A-LITE—Nu-Tono Inc
HEATEX—Marsh Wall Products Inc
HEATFORM—Superior Fireplace Co
HEAT-PAK—Aldrich Co Div Breeze Corp Inc
HEAT-PAK—Breeze Corporations Inc
HEAT-RITE—Aust Register Co
HEATROL—Estate Store Co Div Noma Electric Co
HEATSAVER—Donley Brothers
HEAT SEAL—Detroit Magnesia Mfg Co
HEATSTREM—Steele Inc
HEATVITYT—Parker-Kalms Corp
HEAT-FAST—Cosley Mfg Co
HEETAIRE—Market Electric Products Inc
HEET-MASTER—Aerill Products Co Inc
HELLITE—Johns-Manville Corp
HELIX—Hillwood Mfg Co
HERCULES—Richards Wilcox Mfg Co
HERCULES—Sargent & Co
HERCULES—Stanley Tools
HERCULITE—Pittsburgh Plate Glass Co
HERO—Bostick Laboratories
HERRINGBONE—Truscon Steel Co
HETTINGER'S TRIPLE SEAL—Weatherproof Products Corp
HEVI-LIFT—Harnischfeger Corp
HEVI-DUTY—Insulation & Refractories Co
HEX-CEL—American Steel & Wire Co
HEXMESS—Angier Corp
HEXTRALINE—American Steel & Wire Co
HI-BAY—Eaton-Knox Div Blue-Knox Co
HI-BOY—Dowagiac Steel Furnace Co
HI-BOY—Fairbanks Morse & Co
HI-VULC—Chicago Pneumatic Tool Co
HIDALFIT—Turner & Seymour Mfg Co
HIDE-DOOR—Winner Industries
HI-DEGREE—Cheseman-Elliott Co Inc
HI-E—N. Seal—Sommers (L) Sons Inc
HI-DRI—Louden Machinery Co
HI-DUMP—Jaeger Machine Co
HIGH STANDARD—Lowe Brothers Co
HI-LO—Higer Co
HILITE—U S Gypsum Co
HI-LO—Concrete Transport Mixer Co
HILLO—Ohio Hydrate & Supply Co
HI-LO—Wolfe Products Inc
HILUSTRE—Plastering Wall Board Co
HI-POWER—Portable Electric Tools Inc
HINES SHELF—Hines (Edward) Lumber Co
HI-RIB—Security Co
HISPEED—Louisville Cement Co
HI-STEEL—Inland Steel Products Co
HI-TEST—Tammis Industries Inc

HI-TEX—Moran Co Inc
HI-UP—Worthington Pump & Machinery Co
HI-WAY—Larkin Rule Co
HOAL—American Sheet Metal Works
HOFFMAN—Curtain & Lambert Mfg Co
HOLD-ALL—O'Neil (Carl W) & Associates
HOLD HEAT—Turner Brass Works
HOLGUN—Black & Decker Mfg Co
HOLGUN—Varni Electric Tool Co
HOLIDAY—Miller Metal Products Inc
HOLORIS—Fenestra Building Products
HOLT—Barrett Div Allied Chemical & Dye Corp
HOLTYTE—Continental Screw Co
HOLLYWOOD—Products Div Colgate Mfg Corp
HOLLON—Horn (A C) Co
HOMELINE—Louisville Cement Co
HOME-UTILITY—Black & Decker Mfg Co
HOPES—Hope's Windows Inc
HORN-O-TONE—Horn (A C) Co Inc
HOUSTEE—Mid States Steel & Wire Co
HORIZONTAL GLIDING—Andersen Corp
HORIZONTALINE—Marsh Wall Products Inc
HORIZONTAL SLIDING—Farley & Loetscher Mfg Co
HORNAL—Horn (A C) Co Inc
HORNEX—Horn (A C) Co Inc
HORNGLAZE WAX—Horn (A C) Co Inc
HORN LUME—Horn (A C) Co Inc
HORN LUX—Horn (A C) Co Inc
HORN-O-KOTE—Horn (A C) Co Inc
HORNOSTOL—Horn (A C) Co Inc
HORNORON—Horn (A C) Co Inc
HORNSTAR—Horn (A C) Co Inc
HORNSTONE—Horn (A C) Co Inc
HOT BLAST—Carey (Philip) Mfg Co
HOT BLAST—Cole Hot Blast Mfg Co
HOT BLAST—Turner Brass Works
HOUSEMART—Roddie Plywood Corp
HOWLE—Condensation Engineering Corp
HUMIDAIR—American Foundry & Furnace Co
HUMID-AIRE—Meyer Furnace Co
HUMIDIGRAPH—Bristol Co
HUMIDIGRAPH—Taylor Instrument Co
HUMID-U-STAT—Minneapolis-Honeywell Regulator Co
HURWOOD—Stanley Works
HYDRAL—Flintkote Co
HYDRAMOTOR—General Controls Co
HYDRATITE—Horn (A C) Co Inc
HYDRAULIC ACTION—White-Rodgers Electric Co
HYDROCAL—U S Gypsum Co
HYDRONIDE—Sommers (L) Sons Inc
HYDRO-FLO—Bell & Gossett Co
HYDRONITE—Higer Corp
HYDRO-LIX—Hilux Co
HYDRONON—Barrett Div Allied Chemical & Dye Corp
HYDRONONE—U S Gypsum Co
HYDROXIDE—Ray-Tite Co
HY-DUTY—Schwitzer-Cummins Co
HYPOL—Glidden Co
HY-POWER—Wise (J) & Sons Co
HYSTAWAYS—Hester Co
HYTEMPITE—Quigley Co Inc

I

IDEAL—American Steel & Wire Co
IDEAL—Tennessee Coal Iron & Railroad Co
IDEAL—Hinde & Dauch Paper Co
ID SHOP COAT—King (E & F) & Co Inc
IGHT—Armed Steel Corp
IGLUM—Big Electric Ventilating Co
IGLETTE—Big Electric Ventilating Co
ILBRONZE—Illinois Bronze Powder Co Inc
ILUMINITE—Peasler-Gaultier Paint & Varnish Co
IMCO—Red Devil Tools
I-M FUSH—United States Plywood Corp
IMMERSATH—Flash Stone Co Inc
IMMERSATHERM—Merco Corp
IMPERIAL—Armco Paint Co Inc
IMPERIAL—U S Gypsum Co
IN-A-SLIDE—New Monarch Machine & Stamping Co
INCO—International Nickel Co Inc
IN'ONE—International Nickel Co Inc
INCOR—Lone Star Cement Corp
INDIAN—Dowagiac Steel Furnace Co
INDWOR BUTDOR—White-Rodgers Electric Co
INDUSTREX—Libbey-Owens-Ford Glass Co

List of Manufacturers' Names
 Complete Addresses Starts on Page D-76

INERTOL—Carbolinum Wood Preserving Co
INGALAD—Ingersoll Steel Div Borg-Warner Corp
IN-QUIE—Insulation & Refrigerators Co
INSA-LITE—Sawencem Cement Co
INSULBRIC—Mastic Amblar Corp
INSL-COTTON—Taylor Bedding Mfg Co
INS-LITE—Insulate Div Minnesota & Ontario Paper Co
INSO-COTE—Wilbur & Williams Co
INSO-WITE—Tammes Industries Inc
INST LAG—Chamberlin Co of America
INST LAIRE—Messler Brothers
INSULBRIC—Quigley Co Inc
INSULARETE—Quigley Co Inc
INSULMATE—Mortell (J W) Co
INSULMESH—Truscon Steel Co
INSULUX—American Structural Products Co
INTERLOCK—Jones & Brown Inc
INTERGLOCKS—Sargent & Co
INTERIOR, A-A—Douglas Fir Plywood Ass'n
INTERIOR, A-B—Douglas Fir Plywood Ass'n
INTERLOX—Extruded Plastics Inc
INVLIZ—Grand Rapids Hardware Co
INVERLITE—Grand Rapids Hardware Co
IPX—Ink Plywood Co
IRON-COTE—Sullivan Co
IRONHIDE—Pittsburgh Plate Glass Co
IRONIZED—Sullivan Co
IRON MIX—Tammes Industries Inc
IRONSET—Fritline Stone & Furnace Lining Co
IRONVILLE—Adeil Clay Products Co
ISO-DUALIC—Perfection Steel Body Co
ISANOR—Perfection Stone Co Inc
ISORHOD—Pittsburgh Plate Glass Co
IVORY—U S Gypsum Co

J
JACK FROST—Barrett Div Allied Chemical & Dye Corp
JACKLITE—Lewis-Shepard Products Corp
JACKWAY—James Mfg Co
JANITROL—Surface Combustion Corp
JAP-A-LAC—Glidden Co
JAP SPAR—Glidden Co
JAY-BOARD—Barclay Mfg Co
JAY-PANELBOARD—Barclay Mfg Co
J & C—Jackson & Church Co
JECT-O-VALVE—Swartout Co
JEETS—Wilby-Overland Motors Inc
JETBLAK—Ruberoid Co
JETCRETE—Construction Machinery Sales Co
JFS—Stephens-Adams Mfg Co
JIFFEE-COILS—Hotstream Heater Co
JIFFY—Carlson (A B) & Co
JIFFY—Grand Haven Stamped Products Co
JIFFY—Peters-Kalon Corp
JK—Kilgits (James) Co
J-M—Johns-Manville Corp
JOHNNETT—Jordan Refrigerator Co
JU—Aldrich Co
JUMBO—Broeze Corp Inc
JUMBO—U S Gypsum Co
JUNE-AIRE—American Foundry & Furnace Co
JUNIATA—Diener (George W) Mfg Co
JUNIOR—West Wind Corp
JUNIOR BATS—U S Gypsum Co

K
KAL—U S Gypsum Co
KALITE—Certain-teed Products Corp
KALSO-KORD—Freshtite Engineering Co
KALKOMO—Pittsburgh Plate Glass Co
KALSO-LITE—Tammes Industries Inc
KAL-WOOD—Keller Products Inc
KANT-ARUSH—Grand Rapids Wire Products Co
KANT-LEAK—Sullivan Co
KANTO—Keystone Asphalt Products Co
KARDEX—Remington Rand Inc
KARRI-GDY—Silent Heat & Crane Co
KARRY KRANE—Hytor Co
KASSINO—General Die & Stamping Co
KASTITE—Chicago Fire Brick Co
KATHABAR—Surface Combustion Corp
KAIKIT—Sonneborn (L) Sons Inc
KAYLA—Drems-Hittoria Glass Co Karlo Dir
KAYO—Tammes Industries Inc
KCB—Newport Steel Corp
K-CREMO—U S Gypsum Co
KEM-GLO—Sherwin Williams Co
KEMI-KAL—Sherwin Williams Co
KEMIKO—Hobbs & Co

KEMILIME—Ash Grove Lime & Portland Cement Co
KEM SAMUEL—Sherwin-Williams Co
KEM-TONE—Sherwin-Williams Co
KENORAK—Kennedy (David E) Corp
KENY-GRENSE—Singer Kennedy Corp
KENNABLE—Puritan Cordage Mills
KENMORE—Certain-teed Products Corp
KENNRACK—McKeena (Jay G) Inc
KENWOOD—American Radiator & Standard Sanitary Corp
KENWOOD—Lindemann (A J) & Hoover Co
KEYTCHWORT—Plastic Molded Products Inc
KEYMESH—Keystone Steel & Wire Co
KEYN KNOD—Lockwood Hardware Mfg Co
KEYSTONE—Keystone Varnish Co
KEYSTONE—Grane Company
KEYSTONE—Seneca Wire & Mfg Co
K.F.A.C.—U S Gypsum Co
KICKAPOO—Keystone Steel & Wire Co
KIF—Buffalo Products Inc
KILNOLITE—Kelley Island Lime & Transport Co
KIMPREG—Kimberly-Clark Corp
KIMSUL—Kimberly-Clark Corp
KING HOSE PAINT LINE—King (E & F) & Co Inc
KING GLAZING COMPOUND—King (E & F) & Co Inc
KING METAL COAT LINE—King (E & F) & Co Inc
KING STRUCTURAL COATS—King (E & F) & Co Inc
KINTRIM—Kinkead Industries Inc
KIRKBAIRD—Concrete Transport Mixer Co
KITCHENAIDER—Mullins Mfg Corp
KITCHEN-AIRE—Stewart Mfg Co
KITCHEN-KRAFT—Midwest Mfg Co
KITCHEN-PROVED—Westinghouse Electric Corp
KITUP'N HANDY—Washington Steel Products Inc
KIT-UNETTE—Mormen Mfg Co
KLAMLER—Nulm Products Corp
KLEEN-AIR—Steel City Furnace Co
KLEENCRETE—Everette Corp
KLEENITE—Sullivan Co
KLEEN-SEALANT—American Fluorite Co
KLENGON—Cabot (Samuel) Inc
KLING-TITE—Sullivan Co
KLIP-LOK—Globe Siding Products Co
KLIXON—Spencer Thormalite Div Metals & Controls Corp
KLOVER KNOP—Woodrill Lime Co
K & M—Keasby & Mattison Co
KNICKERBOCKER—Flintkote Co
KNIGHT TRIPLE—Barland Weabstrip Material Co
KNOBBER—U S Gypsum Co
KNOWSAL—Startek Inc
KO—Stephens-Adams Mfg Co
KO-A-IRE—Jones & Brown Inc
KOSMO KORNEIS—Bogner Mfg Co
KOSKITE—Continental Steel Corp
KOLD-A-IRE—U S Air Conditioning Corp
KOLET-A-MATIC—Remington Rand Inc
KOLB FINIS—Independent Nail & Packing Co
KOLOR-BOX—Tammes Industries Inc
KOLOR-TRIM—Wood Conversion Co
KONEX—Sullivan Co
KONCREX—Horn (A C) Co
KONICAL—Inland Steel Products Co
KONIK—Continental Steel Corp
KONKRETE KORB—Tilden Tool Mfg Co
KONNSAL—Sullivan Co
KONNSSET—Sullivan Co
KONTITE—Sullivan Co
KOOLER-AIRE—U S Air Conditioning Corp
KOOGLSHADES—Ingersoll Steel Div Borg-Warner Corp
KOPFAX—Koppers Co Inc
KOPRO-O-P-15—Caray (Philip) Mfg Co
KORDUCT—Johns-Manville Corp
KORINA—U S Plywood Corp
KORK-PAK—Servisold Products Corp
KORSEAL—Goodrich (BF) Co
KORSEAL—Gleane-Blaton Corp
KRATWOOD—M & M Woodworking Co
KRAB-STEK—Lake Chemical Co
KRANE RAB—Silent Heat & Crane Co
KRESNO—Kresno Stamm Mfg Corp
KROMIK—Sherwin-Williams Co
K-SEAL—Morgan Co
K S V—Korbelia Co

KUTTO—Modern Specialties Mfg Co
KUTZITZ—Sawencem Co
KUVER-KRAC—Upson Co
K-VENTENE—Knappe Vogt Mfg Co
KWIKKEZE—Stratton Co
KWIK-WAY—Hart & Cooley Mfg Co
KYANITE—Boston Varnish Co

L
LACTILE—Caray (Philip) Mfg Co
LACQ—Glidden Co
LAMINEX—Whelan-Osgood Co
LAMINO—Keasby & Mattison Co
LAMSON—Clifton & Lassiter Mfg Co
LANSTONE—Globe Siding Products Co
LAPIDKININ—American Fluorite Co
LAPLITHE—Sonnitron (L) Sons Inc
LAP LAK—Bostolon Clay Product Co
LAP-TITE—Lelan Co
LARBON—Western Mineral Products Co
LARBON—Brisk Waterproofing Co Inc
LASTILE—Caray (Philip) Mfg Co
LASTEST—Hammer Metal Works Co
LAINDRYTE—Grane Co
LAUN—Monsanto Chemical Co
LAUX FUNGICIDAL—Monsanto Chemical Co
LAUX-GLUE—Monsanto Chemical Co
LAUTEX—Monsanto Chemical Co
LAUTINY—Monsanto Chemical Co
LAVANET—Toledo Desk & Fixture Co
LA VERRE TILE—Pittsburgh Glass Tile Co
LAYTITE—Conner Lumber & Land Co
LAYTITE—Sta-lete Mfg Co
L-BLOW—Trade-Wind Motorfans Inc
LEADER—Ludlin Rule Co
LEAD-HEAD-NAILS—Maze (W H) Co
LEAD-SEAL—Invention Co
LEADTEX—Bostolon Chemical & Brass Inc
LEATHERBACK—Protective Papers Inc
LEATHERWOOD—Massonite Corp
LEGO LATCH—Laboratory Equipment Corp
LEXTRU-GLO—Day & Night Mfg Co
LEIGH—Air Control Products Inc
LENGO—Griff Steel Products Inc
LEONARD—Air-Jet Mfg Co
LEPTYNE—Pittsburgh Plate Glass Co
LESLIE LOUVER—Leslie Welding Co
LEVELOR—Deuse & Reynolds Inc
LEVEL-TEMP—Wilcoffers Electric Co
LEV-L-FLOB—Central Paint & Varnish Works
L & J LECTO-HOBT—Lindemann (A J) & Hoover Co
LIBERTY—Day & Night Mfg Co
LIBERTY—Bostolon Steel Forge Co
LIBERTY—New York Wire Cloth Co
LIFE-LINE—Westinghouse Electric Corp
LIFETIME—Bennett-Ireland Inc
LIFETIME—Reynolds Metals Co
LIFETIME—Universal Sanitary Mfg Co
LIFT-O-KRANE—Silent Hoist & Crane Co Inc
LIGHT DUTY—Goodrich (B F) Co
LIGHT HOUSE—Kelley Island Lime & Transport Co
LIGHTNING—Pittsburgh Plate Glass Co
LIGHTNING JOINT—Johns-Manville Corp
LIGHT-SAVER—Fawcso Mfg Div Falls Stamping & Welding Co
LIGHTWELD—Lincoln Electric Co
LIGNOPULV—Sonnitron (L) Sons Inc
LIK-A-RITE—Glidden Co
"LIL-AD"—Lilly (David) Co
LIME-LITE—Ohio Hydrate & Supply Co
LIMOLD—North American Cement Corp
LIMPET—Keasby & Mattison Co
LINABESTOS—Keasby & Mattison Co
LINDO—Linder Mfg Co
LINCORWELD—Lincoln Electric Co
LINCWELDER—Lincoln Electric Co
LINEAWAY—Fawcso Mfg Div Falls Stamping & Welding Co
LINE-O-FLO—Barber-Colman Co
LINOTILE—Armstrong Cork Co
LIN-X—Sherwin-Williams Co
LIPMAN—Lipman-American Machine Co
LIQUID LITE—O'Brien Corp
LITHOFORM—American Chemical Paint Co
LITTLE AMERICAN—American Floor Surfacing Machine Co
LITTLE GLANT—York Clock Co Inc

LOAD KING—Yalo & Towne Mfg Co
LOAD-N-GATE—Hercules Steel Products Corp
LOAD-REN—Johnson (C S) Co
LOAD-ROD—Whiting Corp
LOCKABE—Plastering Wallboard Co
LOCKE—Lester Mfg Co
LOCK-JOINT—Inland Steel Products Co
LOCKWOOD—Lockwood Hardware Mfg Co
LOC-NAILS—E G Building Fasteners Corp
LO-F—Libbey-Owens-Ford Glass Co
LO-RED—American Engineering Co
LO-HIBBY—Century Engineering Corp
LO-K—Lockport Cotton Batting Co
LOK'D BAR—Hops's Windows Inc
LOK-JOINT—Insulate Div Minnesota & Ontario Paper Co
LOK-TITE—Carr Adams & Collier Co
LOMAINTENANCE—Allis-Chalmers Mfg Co
LORAIN—Thew Sheet Co
LOTT—American Steel & Wire Co
LOVREX—Libbey-Owens-Ford Glass Co
LOW-CHARGE—Jaeger Machine Co
LOWDENSITE—Insulate Div Minnesota & Ontario Paper Co
LOVSEAM—Edwards (Mfg) Co
LOZ—Aerostic Paint Co Inc
LUDITE—Alphaghy Ladium Steel Corp
LUMAC—Luzum Corp of America
LUMAPLAN DIV—Celanese Corp of America
LUMBER-BUGGOT—Notting Truck & Caster Co
LUMEX-TEX—Trucon Laboratories
LUMICAL—Abaco Mfg Corp
LUMICAL—National Chemical & Mfg Co
LUMINEK—Libbey-Owens-Ford Glass Co
LUMINEX—Koppers Co Inc
LUMINOR VORTEX—Iron Fireman Mfg Co
LUMI-SHIELD—Fluorid Mfg Co
LUMITAL—National Mfg Corp
LUMITE—Lumite Div Chicopee Mfg Corp of Ga
LUMNITE—Reardon Co
LUMNITE—Universal Atlas Cement Co
LUPTON—Flynn (Michael) Mfg Co
LUSTERTILE—Celotex Corp
LUSTRAGLASS—American Window Glass Co
LUSTRAM—Bios Bridge Tale Co Inc
LUSTRAWHITE—American Window Glass Co
LUSTRO-SHAL—Chapman Chemical Co
LUSTRO-WARE—Customized Plastic Products Inc
LUX-AIR—Wolfe Products Inc
LUX-AIR—Wolfe Products Inc
LUX-RIGHT—St Paul Corrugating Co
LYCOTIDE—Chapman Chemical Co
LYMAN—American Steel & Wire Co
LYONSORE—Lyon-Cooklin & Co Inc

M
MACHETA—Aerostat Fan Co
MAGUSTIC—National Gypsum Co
MAGIC CHEER—American Stone Co
MAGIC CIRCLE—Hotpoint Inc
MAGIC DIAL—Perfec Corp
MAGIC-DOOR—Stanley Works
MAGWELD—Lincoln Electric Co
MAGNE-FILTER—American Radiator & Standard Sanitary Corp
MAGNOLIA—Puritan Cordage Mills
MAGNONI—U S Gypsum Co
MAINTENANCE—Horn (A C) Co Inc
MALTA UNIVERSAL—Malta Mfg Co
MAMMOTH—Plastering Wallboard Co
MANGWELD—Lincoln Electric Co
MANHATTAN—Pittsburgh Plate Glass Co
MARB—Marshall Co
MARRAL—Lak Chemical Co
MARLITE—Formosa Marble Co
MARLITE—Marsh Wall Products Inc
MARLITE DELUXE—Marsh Wall Products Inc
MARLITE MARBEL PATTERNS—Marsh Wall Products Inc
MARLITE VELVETEX—Marsh Wall Products Inc

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MARLITE WOOD PATTERNS—Marsh Wall Products Inc
MAR NOT—Brewer-Williams Co
MARVEL—Lufkin Rule
MARVEL-LIFT—Crawford Door Co
MARVELVITE—Saneborn (L) Sons Inc
MARVO—Reading Co
MARVO—Munn & Steele Inc
MARCOBOND—Munn & Steele Inc
MARCONAST—Munn & Steele Inc
MARCOVITE—Munn & Steele Inc
MASCARETE—Munn & Steele Inc
MARSON BOND—Wilbur & Williams Co
MASTA—Arnesto Paint Co Inc
MASTER—American Cabinet Hardware Corp
MASTER—Master Woodworker Mfg Co
MASTER—San Equip Inc
MASTER-BILT—Bird & Son Inc
MASTER-CAULK—Calbar Paint & Varnish Co
MASTERCHAPT—Harvey-Whipple Inc
MASTERTHIL—Nelson (E F) Mfg Co
MASTER FRAME—Anderson Corp
MASTERS—Fenn Metal Co Inc
MASTER-LAC—O'Brien Corp
MASTER LINE—Turner Brass Works
MASTER-LOCK—Bird & Son Inc
MASTERMADE—London Machinery Co
MASTER PAVE—Bird & Son Inc
MASTER SECURITY—Kowance Mfg Co
MASTER-STOKERS—Munzie Gear Co
MASTIC BOARD—Keystone Asphalt Products Co
MASTICURETTE—Glidden Co
MATCHIMATE—Selditza Paint & Varnish Co
MA-TI-CO—Mastic Tile Corp of America
MASTITE—Ohio Hydrate & Supply Co
MAXAW—Gummin Portable Tools Div Cummins Chicago Corp
MAYARI—Bethlehem Steel Corp
MAYFAIR—American Radiator & Standard Sanitary Corp
MAYFAIR GREEN—U S Gypsum Co
MAYN AIR—Henry Furnace Co
MAZE—Barrett (William) Lj Co
MAZEX—Libbey-Owens-Ford Glass Co
MC DONALD LAIR—McDonald (A Y) Mfg Co
MEAZERALL—Lufkin Rule Co
MEDCO—Medusa Portland Cement Co
MELLO GLASS—Lowe Brothers Co
MELLOTONE—Lowe Brothers Co
MENGELEBORD—Mengel Co
MERYURY—Vulcan Electric Co
MERLIN—Wood (John) Mfg Co Inc
MERTLAND—Hedges (M M) Co
MESITEX—Fenn Metal Co
MESKROTOR—Mesher Brothers
METALANS—Monarch Machine Weatherstrip Mfg Co
METALASTIC—Sherwin-Williams Co
METALBESTON—Williams Wallace Co
METALCOLE—Lowe Brothers Co
METALTEAF—Pittsburgh Plate Glass Co
METAL FIX—Sheffield Bronze Paint Corp
METALITE—Thoro (J S) Co
METALLATION—Reynolds Metals Co Inc
METALLITE—Glidden Co
METAL MASTER—Wiss (J) & Sons Co
METALAN—Horn (A C) Co
METALSINO—Crescent Waterproofing Corp
METAPHRAM—Minneapolis-Honeywell Regulator Co
METROE—Chatham Moore Boat Corp
METLWAL—Martin-Parry Corp
METROPOLITAN—Mesher Brothers
METROTHERM—General Controls Co
MEXRO—Green (A F) Fire Brick Co
MEX-R-FIX—Mexion Refractories Co
MEYCO—Meyer Furnace Co
M-H—Minneapolis-Honeywell Regulator Co
MIAMI—Industrial Machine Tool Co Inc
MIAN—Wiss (J) & Sons Co
MICAFIL—Munn & Steele Inc
MICA-KOTE—Carey (Philip) Mfg Co
MICARTA—Westinghouse Electric Corp
MICHIGAN—Lufkin Rule Co
MILKIN—Boone (W J) & Co
MICROTHERM—Barber-Colman Co
MICROTROL—Barber-Colman Co
MIDGET—Utica Radiator Corp
MIDGET KING—Yale & Towne Mfg Co
MIGHTY MIDGET—Dowagiac Steel Furnace Co

MIGHTY MIDGET UNISHEAR—Stanley Works
MILCOR—Inland Steel Products Co
MIL-FLOOR—Celotex Corp
MILLION-MILER—GMC Truck & Coach Div General Motors Corp
MILG—Mongel Co
MILWAUKEE—(M O) Corp
MIMAX—Pittsburgh Plate Glass Co
MINALITE—American Lumber & Treating Co
MINARET TIP—American Cabinet Hardware Corp
MINERAL WOOL BOARD—Armstrong Cork Co
MINI MESH—Penn Metal Co Inc
MINNEMEYER—La-Crome Steel Roofing & Corrugating Co
MIRACOR—J & W Molding Co
MIRACLE WALLS—Tylac Co
MIRACULA—General Engineering & Mfg Co
MIRALITE—S & W Moulding Co
MIRALUM—Hummel Mfg Co
MIRAPLAS—S & W Moulding Co
MIRASTYLE—S & W Moulding Co
MIRA TRIM—S & W Moulding Co
MIRAVEL—S & W Moulding Co
MIRRO-GLA—Standard Stamping & Perforating Co
MIRROLAC—Devoe & Reynolds Inc
MIRRO-PLINT—Chicago Fire Brick Co
MIRRO-TELE—Curtis Gas Inc
MOBLAIRE—Westinghouse Electric Corp
MODERNAIRE—National Gas Equipment Co
MODERN CONSOLE—Payson Furnace Co Inc
MODERN HOMES—Lumbar Engineering Co
MODERNFOLD—New Castle Products Co
MODEX—Beardon Co
MODUFLOW—Minneapolis-Honeywell Regulator Co
MODUTROL—Minneapolis-Honeywell Regulator Co
MOE LIGHT—Moe Brothers Mfg Co
MOHAWK—American Radiator & Standard Sanitary Corp
MONABRI—American Saw Mill Machinery Co
MONABRI—Forest City Foundries Co
MONABRI—Grand Specialties Co
MONARCH—Keystone Steel & Wire Co
MONARCH—Malleable Iron Range Co
MONARCH—New Monarch Machine & Stamping Co
MONABRI—Rocky Mount Cord Co Inc
MONABRI—Tri-States Ridge Material Co
MONABRI—Henry Furnace Co
MONEL—International Nickel Co Inc
MONITOR—American Steel & Wire Co
MONITOR—Marshall Furnace Co
MONOCORD—Weyerhaeuser Sales Co
MONOFLO—Bell & Gossott Co
MONOGRAM—Quincy Store Mfg Co
MONLATH—Keystone Asphalt Products Co
MONORISE—Quincy Furnace Co
MONSEAL—Morse Co Inc
MONVENT—Burt Mfg Co
MONWALL—Armstrong Cork Co
MONYLAIR—Webb's Stone Co
MOONGLO—Formica Co
MORE-DRAIN—Borger Mfg Co Div Republic Steel Corp
MORFLEX—Worce Chain Co
MORSON-WALL—Borger Mfg Co
MORROWWALL—Borger Mfg Co
MOR-SUN—Morrison Steel Products Co
MORTARITE—Western Lime & Cement Co
MORTASRAL—U S Gypsum Co
MORTEX—Mortell (W V) Co
MORTITE—Mortell (J W) Co
MORTIFID—U S Gypsum Co
MOSAB—Mesole Tile Co
MOTO MIXER—Casta Belt Co
MOTORELAY—Barber-Colman Co
MOTORIZED—DRAPT-O-STAT—Hotstream Heater Co
MOTORFORER—Hershey Machine & Foundry Co
MOTO-SANDER—Dremel Mfg Co
MOTOTURE—Uno Ventilator Co
M-T—Metal & Turmoil Corp
MUFFLESTONE—Celotex Corp
MULE-HIVE—Lufkin Co
MULLINAIDER—Mullins Mfg Corp

MULTIBLADE—General Blower Corp
MULTICHROME—Stanley Works
MULTIGRIP—United States Steel Co
MULTI-MATIC—Romington-Rand Inc
MULTIPLATE—Pittsburgh Plate Glass Co
MULTI-SHINGLES—Barrett Div Allied Chemical & Dye Corp
MULTI STACK—Elizabeth Iron Works Inc
MULTI-THERM—Fenn Metal Co
MULTI-TINT—Selditza Paint & Varnish Co
MULTIVANE—Westinghouse Electric Corp Sturtevant Div
MULTI-V BELTS—Goodrich (B F) Co
MURALAC—Tylac Co
MURALEX—Libbey-Owens-Ford Glass Co
MURAL-TONE—Muralco Co Inc
MURA-TEX—Tile-Tex Div Flintkote Co
MURTE—Murray (D J) Mfg Co
MUREX—Metal & Thermo Corp
MUSTANG—Asbestos Co of Texas M-VB—Sewell Mfg Co
MW-40—Carey (Philip) Mfg Co
MW-40—Carey (Philip) Mfg Co
MYER-LEE—Feldstar Stainery Co Inc
MYKA-DISK—Insulation & Refractories Co

N

NALLOCK—Raymott Products Inc
NARROL—National Aerial Burner Co
NALCO—National Lead Co
NALL—Equipment Engineering Co
NAMER-ALL—Wilbur & Williams Co
NAMER-ALL—Wilbur & Williams Co
NAPCO—National Plywood Inc
NARROLINE—Anderson Corp
NARROWWALL—Holly Mfg Co
NATCO—National Finproving Corp
NATIONAL AMERICAN STEEL & WIRE CO
NATIONAL—Excelsior Store & Mfg Co
NATIONAL "200"—National Cash Register Co
NATROCO—National Mfg Corp
NATUR TEMP—Barstard Mfg Co
NATUR-TEMP—Plastergen Wallboard Co
NAVAJO—American Radiator & Standard Sanitary Corp
NALVALITE—Du Pont (E I) de Nemours & Co
NELESCO—Beardon Co
NEO-GLO HETAIRES—La Salle Lighting Products Inc
NEPONSET—Bird & Son Inc
NEPUNTE—Low Brothers Co
NERVA-PLAST—Rubber & Plastics Compound Co Inc
NEVASTAL SEAL-PRUF—Rubber & plastics compound Co Inc
NETMESH—Inland Steel Products Co

NEVAMAR—National Plastic Products Co
NEW-A-RIST—Glidden Co
NEVER SLIP—La-Crome Steel Roofing & Corrugating Co
NEVERSTAIN—Nichols Wire & Aluminum Co
NEW DEPARTURE—Breeze Corp Inc
NEWKOTE—Woodville Lime Co
NEW LONDNER—American Plywood Corp
NEWMANCO—Newman Brothers Inc
NIAGARA—Forest City Foundries Co
NI-CLAD—Lufkin Rule Co
NIFTY THRIFTY '50—Kinkard Industries Inc
NILES—Bestwick Steel Lath Co
NITEAIR—Lau Blower Co
NOAHS PITCH—Carey (Philip) Mfg Co
NO-D-R—Tennessee Eastman Corp
NO-DRIP—Mortell (J W) Co
NO-FLEX—Bart & Coolidge Co
NOFMA—National Oak Flooring Mfrs Association
NO-FREEZE—Horn (A C) Co
NOISEMASTER—Simpson Logging Co
NOKORODE—Chase Brass & Copper Co Inc
NON-CLIMBABLE—Keystone Steel & Wire Co
NON-LOGGING—Link Belt Co
NON-METALLIC—Standard Stamping & Perforating Co
NON-SAG—Farley & Lorfecher Mfg Co

NON-SYPHONING—Inland Steel Products Co
NO 1 SAVAGE—Robinson Clay Product Co
NO 20—Carey (Philip) Mfg Co
NO 25—Carey (Philip) Mfg Co
NORTH AMERICAN—North American Cement Corp
NORTHWOOD—Insulite Div Minnesota & Ontario Paper Co
NOBROW—Northwood Door Co
NO TAR IN—Bullfinch Fire Clay Co
NOVID—Cork Import Corp
NOVOPLY—United States Plywood Corp
NOX-EM-ALL—Barrett Div Allied Chemical & Dye Corp
NOX-O-PAK—Tamm Industries
NOYO—Union Lumber Co
NU-ALPINA—Inland Steel Products Co
NU-ART—Mackinburg-Duncan Co
NU-BILT—Edwards Co Inc
NU-BALK—Mackinburg-Duncan Co
NUCITE—Pittsburgh Plate Glass Co
NU-CUT—Heller Brothers Co
NUDECK—United Glucos Laboratories
NU-FLOOR—Horn (A C)
NU-FRAME—Ridger-Lang Co
NU GALV—Southern States Iron Roofing Co
NU-GARD—Mackinburg-Duncan Co
NU-GLAZE—Mackinburg-Duncan Co
NU-GRIP—Wiss (J) & Sons Co
NUKEMITE—Nukem Products Corp
NU-KOIL—Mackinburg-Duncan Co
NU-LIFE—Lelon Co
NU-LITE-O-GLASS—Clark Wire & Supply Co
NU-LUME—Mackinburg-Duncan Co
NU-METAL—Mackinburg-Duncan Co
NUROID—Flintkote Co
NU-REAL—Mesher Brothers
NU-SURFAC—Lelon Co
NU-STYLE—Flintkote Co
NU-STYLE—Carr Adams & Collier Co
NU-SURFAS—Nu-Surfas Corp
NU-TITE—Nukem Products Corp
NU-WAY—Horn (A C) Co Inc
NU-WAY—Mackinburg-Duncan Co
NU-WOOD—Wood Conversion Co

O

O-A—Oregon-American Lumber Corp
OAKS—Bethlehem Steel Co
OCTOPIUS—J.R. Chessa Fan & Blower Co Inc
OFF-WAY—Tamm Industries Inc
OHIO AUTOCLAVED—Ohio Hydrate & Supply Co
OHIO MARONS—Ohio Hydrate & Supply Co
OHIO WHITE—Ohio Hydrate & Supply Co
OHIO WOODLAND—Robinson Clay Product Co
OHIO—Ohio Hydrate & Supply Co
OIL-O-MATIC—Williams Oil-O-Matic Corp
OIL-AIR—Flintkote Co
OIL CHIEF—Dowagiac Steel Furnace Co
OIL ECONOMY—International Heater Co
OILFIRE—MONOGRAM—Quincy Store Manufacturing Co
OILFURY—Lennox Furnace Co
OIL-N-AIRE—Breeze Corporations Inc
OIL-AMERICAN—American Asphalt Roof Co
O-LITE—O'Brien Corp
OLSONITE—Sawdust Frangible Steel Co
OLYMPIC—Yim Car Sales Co
OLYMPIC—Washington Stone Works
ONE COAT KATKENE—Lucas (John) & Co Inc
#1004 GREENHOUSE WHITE—King (E & F) & Co Inc
100 PLUS—Stanley Works
ON-GUARD—Mackinburg-Duncan Co
OPAL—New York Wire Cloth Co
OPEN-TRUSS—Truscon Steel Co
ORANGE—Virginia Metal Products Corp
ORIENTAL—Hanover Wire Cloth Co
ORIENTAL—U S Gypsum Co
ORONALITE—Hackelite Mfg Co
O-T—Truscon Steel Co
OSU-LITE—Tamm Industries Inc

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RED DIAMOND—Missouri Portland Cement Co
 REDDY-FIT—Schumacher (F E) Co
 RED EDGE—Reynolds Wire Co
 RED E-FIT—Hottig Mfg Co
 RED END—Lofgren Rule Co
 RED HANDLE—Fletcher Terry Co
 RED HOT—Sheffield Bronze Paint Co
 RED LIFT—Lofgren Rule Co
 RED LIFT—Lewis Shepard Sales Corp
 REDIPREP—Upson Co
 RED JOINT—Breyer Brothers Whiting & Co
 RED METAL—Lofgren Rule Co
 RED TAG—Cyclone Fence Div American Steel & Wire Co
 RED TOP—Keystone Steel & Wire Co
 REEFTOP—U S Gypsum Co
 RED VIO-TEX—Warp Brothers
 REEDEX—Libbey-Owens Ford Glass Co
 REFLACT-O-LITE—Glidden Co
 REGAL—Mid States Steel & Wire Co
 REGAL—Puritan Cordage Mills
 REGENCY—Morgan Co
 REGLEX—Libbey-Owens-Ford Glass Co
 REGO-FLUX—Rastian-Bensing Co
 REGUIAIRE—Perfection Stove Co
 RELIABLE—Althith-Prouty Co
 RELIABLE—Lofgren Rule Co
 REN-O-VITE—Glidden Co
 REN-O-WAX—Glidden Co
 RENT-A-CLARK—Clarke Sanding Machine Co
 RE-NU—Flintkote Co
 RENZIT—Central Paint & Varnish Works
 RESBOND—Clore Mfg Co
 REPUBLIC-TAYLOR—Republic Steel Corp
 RESINIZED-SPEED-GRITS—Behr-Manning Corp
 RESINOX—Eco-Island Millwork Co
 RESINOTE—Bolly Tar & Chemical Corp
 RESIST-IT—American Plumb Co
 RESINBEST—M & H Woodworking Corp
 RESINFO—Reardon Co
 REVOLUBLE—Celotex Corp
 REVOLVABLE—Victor Electric Products Inc
 REX—Chain Belt Co
 REX—Fletcher Terry Co
 REX—Flintkote Co
 REX—Woodville Lumber Co
 REX ADJUSTABLE MOTOR CHARGE MOTOR MIXER—Chain Belt Co
 REX HORIZONTAL MOTOR MIXER—Chain Belt Co
 READE—Horn (A C) Co
 REX MOTO-AGITATOR—Chain Belt Co
 REX PAIR—Sherwin-Williams Co
 REXTAB—Flintkote Co
 REXVANE—Westinghouse Electric Corp
 REYN-O-CELL—Reynolds Metals Co
 REYNOLDS—Clark-Rabbit Industries
 REZ—Monaco Chemical Co
 REZOTE—Monaco Chemical Co
 REZISTAL—TREATED—Hottig Mfg Co
 REZO—Paine Lumber Co
 R-H—Rabbit Heater
 RICHARDSON—Flintkote Co
 RICHGLAZE—Richkraft Co
 RICHKURE—Richkraft Co
 RICHTOX—Lowe Brothers
 RINGULATOR—Kaiser Mfg Co
 RINDISEL—Huller Chemical Co
 RIGID—Machine Rebuilding Co
 RIPLEX—Bergner Mfg Div Republic Steel Corp
 RIPOLIN—Glidden Co
 RIP-O-LIN—Glidden Company
 RISTOKRAT—Conus Building Products Inc
 RITE-LOCK—Adams-Rite Mfg Co
 RITWALL—Ohio Lumber & Supply Co
 RITWAY—Milwaukee Stamping Co
 RIVAL—Larkin Bole Co
 RIVET—Goodrich (F F) Co
 R I W—Toch Brothers Inc
 R I W LIQUID KONKREIT—Toch Brothers Inc
 R I W PLUG-A-LEAK—Toch Brothers Inc
 R M—Robbins & Meyers Inc
 R M—Riverdale Chemical Co
 ROBINSEL—Robinson Clay Product Co
 ROCHESTER—Milwaukee Stamping Co
 ROCKFORM—Rockform Corp
 ROCKFORD—National Lock Co
 ROCK HARD—Durham (Donald) Co
 ROCKLATH—U S Gypsum Co
 ROCKOTE—Vita-Var Corp
 ROCKOSTYLE—Johns-Manville Corp
 ROCKTEX—Caray (Philip) Co
 ROCKTITE—Wesco Waterpumps Inc
 ROCO—Reardon Co
 RODDISGRAFT—Roddis Plywood Corp
 BOL-AWAY—Boiler Pipe & Tank Corp
 ROLCO—Rolscreen Co
 ROLLITE—Rolscreen Co
 ROLL-AWAY—Frantz Mfg Co

ROLLER COASTER—Sherwin-Williams Co
 ROLL-O-HOIST—Construction Machinery Sales Co
 ROLL-N-FOLD—Majestic Co
 ROLL-POINT—American Cabinet Hardware Co
 ROLL-UP—Stanley Works
 ROLM—Sturtevant
 ROL FILER—Stewart Co
 ROL-R-WEDC—Richards Wilcox Co
 ROL-TOP—Edwards Mfg Corp
 ROMAN—Woodhill Lumber Co
 ROMFH—Ludman Corp
 ROMOCO—Bucky Mount Cord Co Inc
 ROOF-DKNS—Ferman-Ford Co
 ROOF FLANGE—Kaiser-Polier Co
 ROOFINSUL—Johns-Manville Corp
 ROOF RENVI—American Asphalt Roof Co
 ROOF-VENT—Reed Unit-Fans Inc
 ROOF FLANGE—Kaiser-Polier Co
 ROTARY—Stewart Co
 ROTTRUCK—Sommer Metalcraft Corp
 ROT-UP—Truscon Steel Co
 ROTODIGGER—Skilaw Inc
 ROTOGUIDE—Skilaw Inc
 ROTOLIFT—Blisks Mfg Co
 ROTOVENT—Curtis Cos Inc
 ROU-NVENT—Webb Mfg Co
 RO-WAY—Rowe Mfg Co
 ROXBOND—Bosdale Building Products Corp
 ROX-UP—Bosdale Building Products Corp
 ROXPLORE—Bosdale Building Products Corp
 ROXSEAL—Bosdale Building Products Corp
 ROXTIM—Bosdale Building Products Corp
 ROYAL—American Steel & Wire Co
 ROYAL—Chattanooga Implement & Mfg Co
 ROYAL—Furness Lumber Co
 ROYAL—National Mortar & Supply Co
 ROYAL—Robinson Clay Product Co
 ROYAL FLINTKOTE—U S Gypsum Co
 RUBBER COAT—Wilbur & Williams Co
 RUBBER GARD—Wilbur & Williams Co
 RUBBER LIKE—Bird & Son Inc
 RUBBER MATS—Bird & Son Inc
 RUBBER ROLLER—American Cabinet Hardware Corp
 RUBBERTEX—Flintkote Co
 RUBERINE—Ruberoid Co
 RUB-N-MORE—Sullivan Co
 RUB-R-BOND—Elliott Paint & Varnish Co
 RUBY—Fletcher Terry Co
 RUDICO—Rudy Furnace Co
 RUTHSEL—Rudy Furnace Co
 R U F—Reed Unit-Fans Inc
 RUPST—Sullivan Co
 RUFTEX—Flintkote Co
 RUNWELL—Frantz Mfg Co
 RUSCO—Russell (F C) Co
 RUSSWIN—Russell & Erwin Mfg Div American Hardware Corp
 RUSTOTINE—Sullivan Co
 RUST-STOP—Sperling
 RUST-STOP—Wilbur & Williams Co
 RUTHLESS—Keystone Steel & Wire Co
 R V-LITE—Arvey Corp
 R V-TEX—Arvey Corp
 RWK—Reardon Co
 RYOLES—Silberton Corp
 RYSDON—Sioux Steel Co

S

SARINITE—U S Gypsum Co
 SACHEM—Samson Cordage Works
 SAFEGUARD—Sterling Hardware Mfg Co
 SAFEKOTE—Ruberoid Co
 SAFE-N-DRY—Ruberoid Co
 SAFE-T-GRIP—Central Paint & Varnish Works
 SAFE-T-MILL—Power Development Co Inc
 SAFE-T-STEP—O'Neil (Carl W) & Associates
 SAFETY CIRCLE—Allis-Chalmers Mfg Co
 SAGINAW—American Radiator & Standard Sanitary Corp
 SAG-NOTT—Harbor Plywood Corp
 SAKREITE—Campbell (H T) Sons Corp
 SALESMAKER—Bruce (E L) Co
 SAL-MO—Sall Mountain Co
 SAMCO—Standard Adhesive Mfg Co
 SAMPSON—Starline Inc
 SANAGOSTIC—Johns-Manville Corp
 SANDMASTER—Atlas Floor Surfacing Machinery Corp
 SAND-O-FLEX—Merit Products Inc
 SANDRAN—Sandrha Co
 SANDY MAN—Ecor Hot Heater Co
 SAN-FINISH—Alton Laboratories

SANICOTE—Beardon Co
 SANI-SEET—Ecor Plastics Corp
 SANITAX—Standard Coated Products Div Interebral Corp
 SANLIME—Ohio Hydrate & Supply Co
 SAN-RED LINE—Reynolds Wire Co
 SAN-SOLVENT—San-Equin Inc
 SANTORANE—Monaco Chemical Co
 SANTORITE—Monaco Chemical Co
 SARAN—Low Chemical Co
 SARATOGA—American Radiator & Standard Sanitary Corp
 SATINCOTE—Insulite Div Minnesota & Ontario Paper Co
 SATIN FEINISH—Truscon Laboratories Div Deuss & Reynolds Inc
 SATIN FLAT—Arresto Paint Co Inc
 SATIN-LAC—Willing Brothers Inc
 SATIN-LITE—Willing Mfg Co
 SATINOL—Libbey-Owens-Ford Glass Co
 SATIN SPAR—Certain-lead Products Corp
 SAVABUSH—Schalk Chemical Co
 SAVANNA—Robinson Clay Product Co
 SAVA-MAID—Crosley Div Aeco Mfg Corp
 SAV-A-SCREEN—Farley & Lotticher Mfg Co
 SAV-A-SPACE—Fir Door Institute
 SAX—ALDRICH Co
 S & S Surface Combustion Corp
 SCHAEFER—Central States Wallmaster Inc
 SCHUFFL—Pittsburgh Plate Glass Co
 SCIMITAR—Power Development Corp
 SCOPMOBILE—Mixing Millers Mfg Co
 SCOTCH—Minnesota Mining & Mfg Co
 SCOTTLITE—Minnesota Mining & Mfg Co
 SCOTSMAN—American Gas Machine Co
 SCPI—Structural Clay Products Institute
 SCREEN & SASH PRIMER LINE—King (E & F) Co Inc
 SCREEN-GLASS—Warp Brothers
 SCREEN MASTER—Engineered Products Co
 SCREEN-O-MATIC—Lockhart Mfg Corp
 SCREEN-O-MATIC—Lockhart Mfg Corp
 SREWLOCK—Carnaby Products Inc
 SREWLOCK—Clark-Rabbit Industries Inc
 SREW-TITE—Independent Nail & Packing Co
 SCRUGUN—Black & Decker Mfg Co
 SCR-U
 SCRU-TITE—Bennett-Ireland Inc
 SEABOARD—Baker Mfg Co
 SEAL BOND—Vita-Var Corp
 SEALDNEX—Flintkote Co
 SEALD LIGHT—Coddington (E D) Mfg Co
 SEALDON—Certain-lead Products Corp
 SEALEDDGE—Flintkote Co
 SEALED GRAYLITE LOK-JOINT—Insulite Div Minnesota & Ontario Paper Co
 SEA LUNG—Chicago Belting Co
 SEALIT—Sullivan Co
 SEA SWIRL—Associated Plywood Mills Inc
 SEALKOTE—Kearsby & Mattison Co
 SEAL OF QUALITY—Columbia Steel Co
 SEALSEAL—Sullivan Co
 SEALSET—Sealton Products Inc
 SEAL TIGHT—Meadows (W B) Inc
 REALTITE—Chapman Chemical Co
 REAL TITE—O'Brien Corp
 REALTITE—Starline Inc
 SEA MASTER—Superior Diamond Mfg Co
 SEAMLESS—Waterman Waterbury Co
 SEASON-STAT LIMIT—Mueller (L J) Furnace Co
 SECTIONFOLD—Wilson (J G) Corp
 SECTIONROLL—Farley & Lotticher Mfg Co
 SECURITY—National Mfg Corp
 SECURITY RASH—Security Co
 SEVUR-PLY—Security Co
 SEVUR-PLY—Security Co
 SELECTAIR—Johnson (S T) Co
 SELECT-A-BENCH—Landers Frary & Clark Co
 SELF-SEAL—Research Products Corp
 SELF-SETERING—Truscon Steel Corp
 SEL-VI-LAP—U S Gypsum Co
 SEMAPHORE—Barrett Div Allied Chemical & Dye Corp
 SEMI-LUSTRE—Sherwin-Williams Co
 SENECA—American Radiator & Standard Sanitary Corp
 SENSATHERM—Mercoid Corp
 SENTINEL—Bostons
 SENTINEL—General Water Heater Corp
 SENTRY—New York Wire Cloth Co
 SENTRY—Payne Furnace Co

SEUCOIA—Bedwood Sales Co
 SERIES "S2"—Croft Steel Products Co
 SEVITEE R—Herold (L B) Corp
 SEV-U-WELL—LXL Furniture Co Inc
 SEV-WALL—Service Products Div Woodall Industries Inc
 SEVEN STAR IMPERIAL—U S Gypsum Co
 TO SERVICE—Marsh (Jan F) Corp
 SHADMOORE—Clayco Corp
 SHAMLINE—American Asphalt Roof Corp
 SHAD-O-LINE—Upson Co
 SHADOTONE—Flintkote Co
 SHADOWLINE—Long Fir Gutter Co
 SHADOW-LINE—Wood Conversion Co
 SHADOW LOCK—U S Gypsum Co
 SHAKERTOWN—Perma Products Co
 SHALETEX—Streator Brick Co
 SHANK GAP—Bennett-Ireland Inc
 SHAWNEE—American Radiator & Standard Sanitary Corp
 SHAWNEE—Flintkote Co
 SHEDWELL—Frantz Mfg Co
 SHEETMETAL—Globe Sliding Products Co
 SHEET-FLEXTOX—Kearsby & Mattison Co
 SHERBROOK—U S Gypsum Co
 SHERSTONE—Globe Sliding Products Co
 SHELBY—National Tube Co
 SHELL-PL—Youngstown Mfg Inc
 SHELVDOR—Crosley Corp
 SHERADUCT—National Electric Products Corp
 SHERBURN—Technical Appliance Corp
 SHERIDAN—Lincoln Electric Co
 SHIELDALL—Venturers Industries Inc
 SHINGLECOAT—Barrett Div Allied Chemical & Dye Corp
 SHINGL-GARD—Wilbur & Williams Co
 SHINGL-ITE—U S Gypsum Co
 SHINGLETAK—American Asphalt Roof Corp
 SHIPLEY—Vita-Var Lye Co
 SHOWER-PROOF—Galbar Paint & Varnish Co
 SHURIK—Flintkote Co
 SHUT-O-VENT—Reed Unit-Fans Inc
 SIFO—U S Gypsum Co
 SILA-TEX—Tamm Industries Inc
 SILCO—Tamm Industries Inc
 SILCON BRONZE—Chase Brass & Copper Co Inc
 SILENT—National Mfg Co
 SILENTAIR—Bergner Mfg Co Div Republic Steel Corp
 SILENT BREEZE—Holcomb & Hoke Mfg Co
 SILENTITE—Curtis Cos Inc
 SILENTVANE—Westinghouse Electric Corp Starlevant Div
 SILLOCK—Messer Brothers
 SIL-O-FETT—U S Gypsum Co
 SIL-O-SEAL—Devon & Reynolds Co
 SILVER FLEECE—Carnoy Co Inc
 SILVER GLOW—Adhesive Mfg Co
 SILVER KROME—Ford Roofing Products Co
 SILVER STEEL—Adair (E C) Co
 SILVERSTITCH—Adair Steel Co
 SILVERSTONE—American Asphalt Roof Corp
 SILVERTON—Goodrich (F F) Co
 SIMPLEX—Wright Products Inc
 SINGLE DISC—Lincoln-Schulter Floor Machinery Co
 SINKMASTERS—Humphreys Mfg Co
 SINOX—Alberston & Co Inc
 SINOX—American Blower Corp
 SISALATION—Sisalcraft Co
 S I S—Barrett Div Allied Chemical & Dye Corp
 SKILDRILL—Skilaw Inc
 SKILTPOOLS—Skilaw Inc
 SKIP-TILE—Robinson Clay Product Co
 SKITUFF—Superior Fastener Corp
 SKOFFRUP—Richkraft Co
 SKA—Sisalcraft Co
 SKVLINE—Flintkote Co
 SKVEX—Libbey-Owens-Ford Glass Co
 SLATEKOTE—Johns-Manville Corp
 SLATE KOTE—Lohco Co
 SLIDA-DOOR—Graham Mfg Co
 SLIDE-ALL—American Sliding Door Hardware Corp
 SLIDE-EASE—U S Sliding Door Corp
 SLIDING-LOG-CLIP—E.G. Building Fasteners Corp
 SLIP-PROOF—Robinson Clay Product Co
 SLIP-PAR—National Cash Register Co
 SLIP-PROOF—Sullivan Co
 SMALLMESH—Inland Steel Products Co
 SMITH & HEMENWAY—Crescent Tool Co
 SMITH MOBILE—Smith (T L) Co
 SMITHWAY—Smith (A O) Corp
 SMOKEABATOR—Wheeler Furnace Corp

List of Manufacturers' Names With Complete Addresses Starts on Page D-76

SMOOTHCOE—Insulite Div Minnesota & Ontario Paper Co
SMOOTHING—Fairfield Engineering Co
SMOOTHWALL—Johns-Manville Corp
 S.N.—Scott-Newcomb Inc
SNAPLON—Bosson Steels & Mfg Co
SNAPTITE—Borger Mfg Div Republic Steel Corp
SNOW-FLY—Hottig Mfg Co
SNOLITE—Pittsburgh Plate Glass Co
SNOW DREPT—U S Gypsum Co
SNOWFLAKE—Kelby Island Lime & Transport Co
SNUG FIT—Hotstream Heater Co
SNUG TITE—Engineered Products Co
SNOK-IT—Tams Industries Inc
SNOWTIE—Lincoln Electric Co
SNOLAR FLAME—United States Radiator Corp
SNOLARITE—Beardon Co
SNODREPRE—Nelson Chemical Co
SOLEX—Pittsburgh Plate Glass Co
SOLLIDON—Landing Products Co
SOLLIDOR—Ink Plywood Corp
SOLLITE—Sollitt Corp
SONOAIRDUCT—Sonoco Products Co
SONORITE—Sonsborn (L) Sons Inc
SONOLASTIC—Sonsborn (L) Sons Inc
SONOMEX—Sonsborn (L) Sons Inc
SONOSHEN—Sonsborn (L) Sons Inc
SONOTURE—Sonoco Products Co
SONOTRIMIDE—Metropolitan Refining Co Inc
SONTRAMIDE—Barnes Mfg Co
SONTRIGATE—Puritan Corrugate Mills
SOUTH WIND—Stewart-Warner Corp
SONVAREAD—Sonsborn (L) Sons Inc
SPACEMAKER—Steeleraff Mfg Co
SPACE SAVER—Hyster Co
SPACE SAVER—Payne Furnace Co
SPEED—Louisville Cement Co
SPEEDMATT—Addressograph-Multigraph Corp
SPEED CLAMPS—Timmerman Products Inc
SPEED CLIPS—Timmerman Products Inc
SPEED-DRI—Central Paint & Varnish Works
SPEED-EASY—DuPont (E I) de Nemours & Co Inc
SPEED-DEE—Dalton Mfg Co
SPEED GRIPS—Timmerman Products Inc
SPEED-HEAT—Marshall Furnace Co
SPEED HOMELINE—Louisville Cement Co
SPEEDLAY—Certain-lead Products Co
SPEEDLIFT—Lewis-Shepard Products Corp
SPEEDMATIC—Porter-Cable Machine Co
SPEED NUTS—Timmerman Products Inc
SPEED-LITE—Lincoln-Schlieter Floor Machinery Co
SPEED SPIRAL—Super Tool Co
SPEEDTITE—Rouffard Brick & Tile Co
SPIN-A-BRUSH—Portable Electrical Tools Inc
SPINNER—American Floor Surfacing Machine Co
SPINNER—Inland Steel Products Co
SPIRAL—Milwaukee Stamping Co
SPIREX—Caldwell Mfg Co
SPOT—Samson Cordage Works
SPOTNAILER—Sonnalite Inc
SPRAY-AFOUSTIC—Spray-Flake Co
SPRAY-COTE—Spray-Flake Co
SPRAY-IT—Electric Spray Co
SPRAY-RITE—Binks Mfg Co
SPRED—Glidden Co
SQUARE DEAL—Keystone Steel & Wire Co
SQUARE DEAL—Upson Co
SQUARE GUTTER—Inland Steel Products Co
S R P—Sonsborn (L) Sons Inc
SSIROB—Southern States Iron Roofing Co
STAIR ABLE—Lincoln Electric Co
STA-FAST—Texas Co
STAINCURE—Wilbur & Williams Co
STAIN-GARD—Wilbur & Williams Co
STAIN-STOP—Wilbur & Williams Co
STAINTOX—Abesto Mfg Co
STAINWELL—Lincoln Electric Co
STAL-LITE—Wood Conversion Co
STALWARY—Flintkote Co
STAMINITE—Robinson Clay Product Co
STANDARD—American Cabinet Hardware Corp
STANDARD—Williamson Heater Co
STANDARD DUOLUX—Masonite Corp
STANDARD PRESSEDWOOD—Masonite Corp
STANDFORATED—Standard Stamping & Perforating Co
STANLEY-GARTER—Stanley Works Stanley Electric Tools Div
STANLOID—Stanley Works

STA-PAR—Slees Soga Paint Co
STAPLE-LOX—Flintkote Co
STAPLON—Hoteles (E H) Co
STAR—Houston Blow Pipe & Sheet Metal Works
STAR—Mid States Steel & Wire Co
STAR—Stadline Inc
STAR—Turner & Seymour Mfg Co
STAR—U S Gypsum Co
STARBLAST—U S Gypsum Co
STARBUCK—Sutton Corp
STARBUCK—Ruberoid Co
STAR-SLATE—Ruberoid Co
STATIC—Flintkote Co
STATITE—Angier Corp
STAUFFER KNAPSACK—Hudson (H D) Mfg Co
STA-WET—Sargent-Gerbe Co
STAYRITE—Horn (A C) Co
STAYPAK—Western Pine Association
STAY-RIB—Inland Steel Products Co
STAY TITE—Lehon Co
STEADFAST—Flintkote Co
STEEL CABLE—Goodyear Tire & Rubber Co Inc
STEELCRITE—Wheeling Corrugating Co
STEEL FIN—New York Blower Co
STEEL-FLITE—BIN-VEYON—Kewanee Mfg Co
STEEL MESH—From Metal Co Inc
STEEL-STRAP—Acme Steel Co
STEELTEX—Nichols Wire & Aluminum Co
STEELTEX—Pittsburgh Steel Products Co
STEELTITE—Steelote Mfg Co
STEEP-SLOPE—Bennett-Ireland Co
STEREWELD—Cleveland Trammell Die Cleveland Crane & Engineering Co
STERLEX—Libbey-Owens-Ford Glass Co
STERLING—Lorfin Bldg Co
STERLING—Widorf Heater Co
STEVENDORE JR.—Rapids-Standard Co Inc
STEWART ALLWATER—Storons Windows of Aluminum Inc
STO-A-WAY—Marshall Co
STOKABRIE—American Foundry & Furnace Co
STOK-A-TIMER—Mercoird Corp
STOKER-DISK—Insulation & Refractories Co
STOKERELAY—Minneapolis-Honeywell Regulator Co
STOKERMATIC—Rheom Mfg Co
Stokermatic Div
STOKEL-MERCURY—Stokel Stoker Co Inc
STOK RAILS—Logan Co
STONEFELT—Johns-Manville Corp
STONESET—Medusa Portland Cement Co
STONESULATE—Carey (Philip) Mfg Co
STONE TEX—Trucon Laboratories Div Devoe & Reynolds Inc
STONEWALL—Ruberoid Co
STONOLEUM—Continental Asbestos & Refractory Corp
STOP-A-RATTLE—Superior Fastener Corp
STOP-IT—Tams Industries Inc
STOR-A-WAY—Barber Mfg Co
STOR-IN-DOR—Gente Mfg Co Inc
STORMLIGHT—Sonsborn (L) Sons Inc
STORMPROOF—National Mfg Co
STORMSEAL—American Steel & Wire Co
STORMSEAL—Columbia Steel Co
STORMSEAL—United States Steel Co
STORMTIGHT—Sonsborn (L) Sons Inc
STORMY WEATHER—Protection Products Mfg Co
STOWAWAY—Lennox Furnace Co
STRADITE TRUCK—Hyster Co
STRAND—Fenestra Building Products Co
STRAN-STEEL—Great Lakes Steel Corp
STRATOLINE—American Cabinet Hardware Corp
STREAMAICE—Young Radiator Co
STREAMLINE—Muelter Brass Co
STREAMLINE—Tylac Co
STREAMLIVER—Wooler Osgood Co
STREAMLUX—American Cabinet Hardware Corp
STRIKE-RITE—Stanley Works
STRIPITE—Bostwick Steel Lath Co
STRIP SEAL—Trenon Mfg Co
STRONG-BILT—Upson Co

STRONGHOLD—Clark-Rabbitt Industries Inc
STRONGHOLD—Independent Nail & Packing Co
STRONGMAN—Southern Galvanizing Co
STRUTBOARD—U S Gypsum Co
STRUT-CAL—U S Gypsum Co
STRUTOLITE—U S Gypsum Co
STRUTPEACE—Sawgrass Co
STUBBY—Holly Mfg Co
STYL-LITE—Tams Industries Inc
STYCO MESH—U S Gypsum Co
STYCO SEAL—American Fluoroc Co
STYCO SEAL—Wondelle Line Co
STURDIBILT—M & M Woodcutting Co
STURDY—Felder Mfg Co
STURDYBILT—Sauliers Mill & Mfg Co
STYLE-CHROME—Tiletone Co
STYLON—United Plastic Tile Co
STYLE TILE—Narvion Radiator Products Inc
STYROFOAM—Dow Chemical Co
SULEO—Sullian Co
SUNBEAM—American Radiator & Standard Sanitary Corp
SUNCHECK—Valley Williams & Co
SUNFLX—National Gypsum Co
SUNFLOWER—Certain-lead Products Corp
SUN-GLD—Pittsburgh Plate Glass Co
SUN-GLASS—General Machinery Co
SUNLIGHT—General Motors Corp
SUNPROOF—Pittsburgh Plate Glass Co
SUN-RED EDGE—Reynolds Wire Co
SUNTILE—Cambridge Tile Mfg Co
SUNTONE—Murale Co Inc
SUN VITA—Keystone Wire Cloth Co
SUPER—Evans Products
SUPER—Walsh Refractories Corp
SUPERAIRE—Majestic Co
SUPER-CLEAR—Du Pont (E I) de Nemours & Co Inc
SUPER CYCLE—Clegg Pneumatic Tool Co
SUPER DE LUXE—Evans Products
SUPERDRIFT—Perforator Stone Co
SUPER-EX—Inland Steel Products Co
SUPER-FELT—Johns-Manville Corp
SUPERFLEX—Perforator Stone Co
SUPERFIN—American Foundry & Furnace Co
SUPER-HARDBOARD—Harbor Plywood Corp
SUPERIOR—American Foundry & Furnace Co
SUPERIOR—Blue Ridge Talc Co Inc
SUPERIOR—Carr Adams & Collier Co
SUPERIOR—Crane Company
SUPERIOR—Fletcher Terry Co
SUPERIOR—Inland Steel Products Co
SUPERIOR—National Mortar & Supply Co
SUPERIOR—Vanderburgs Mfg Inc
SUPERKLEEN—Devoe & Reynolds Inc
SUPER-KROME—Sheffield Bronze Paint Corp
SUPER-LIMOID—North American Cement Co
SUPERLITE—Superior Wall Products Co
SUPER-MASTER—Loon Builders Co
SUPERMESH—Serrin Inc
SUPER-NICKEL—American Brass Co
SUPER-PLYCRETE—Harbor Plywood Corp
SUPER PBR SEAL—Trucon Laboratories Div Devoe & Reynolds Inc
SUPERSEAL—Barland Weatherstrip Material Co
SUPER-SHOX—Slam Steel Co
SUPER GO—Eagle Picher Co
SUPERSTEEL—Kalamazoo Stone & Furnace Co
SUPER STEEL—Williamson Heater Co
SUPER-STRIP—Carey (Philip) Mfg Co
SUPERTEMP—Eagle Picher Co
SUPER-TEMPERED—Wickwire Spencer Steel Corp
SUPER-THERMO—Chicago Pipe Brick Co
SUPER TITE—U S Gypsum Co
SUPER WEIGHT—Barrett Div Allied Chemical & Dye Corp
SUPER-X—Republic Steel Corp
SUPREME—American Furnace & Foundry Co
SUPREME—Blue Ridge Talc Co Inc
SUPREME—Malta Mfg Co
SUPREME—Samson Cordage Works
SUPREME—Southern Pine Lumber Co
SUPREMS—Du Pont (E I) de Nemours & Co Inc

SURE DRAFT—Littell (H C) Burner Co Inc
SUREFIT—Henry Furnace Co
SUREGRIP—Stanley Works
SURETY—Carey (Philip) Mfg Co
SURFACEWELD—Lincoln Electric Co
SURFALYX—Vita-Vet Corp
SWANEE—Borger Mfg Div Republic Steel Corp
SWING-UP—Stanley Works
SWIN—Sherrin-Williams Co
SWMENTHON—Horn (A C) Co
SYNTEX—Flintkote Co
SYNTRON—Syntron Co
SYRACUSE—Porter-Cable Machine Co

T

TAC-IZY—Monarch Metal Weatherstrip Co
TAG—Tagliabue (C J) Corp
TAMARILL—Tams Industries Inc
TAMANITE—Tams Industries Inc
TAMCO—Tams Industries Inc
TAMCO—Tenn Art Metal Co
TAM-COTE—Tams Industries Inc
TAM-RETE—Tams Industries Inc
TAM-PUTTY—Tams Industries Inc
TAMTEX—Tams Industries Inc
TANK COATER—ALUMINUM—King (E & C) & Co Inc
TAPCO—Aktion Products Co
TAPERLOX—Flintkote Co
TAPERTEX—Flintkote Co
TAPGUN—Black & Decker Mfg Co
TARBESTOS—Carey (Philip) Mfg Co
TARBIT—Kelley Island Lime & Transport Co
TAR-ROK—Barrett Div Allied Chemical & Dye Corp
TASCOM—Cabot (Samuel) Inc
TAXITE—Sherrin-Williams Co
TAYLOR—Taylor (L S) Mfg Co
TECHIDE—Pittsburgh Plate Glass Co
TECO—Timber Engineering Co
TECTON—Bird & Son Inc
TEE-LOK—American Asphalt Roof Corp
TEE-LOK—Ruberoid Co
TEGGO—Techco Glass Co Inc
TEKWOOD—U S Plywood Corp
TELMASTER—York Check Co Inc
TEL-O-POST—Brainard Steel Co
TEMBORD—Armstrong Cork Co
TEM-CLIPS—Armstrong Cork Co
TEMCO—Tennessee Enamel Mfg Co
TEMLOK—Armstrong Cork Co
TEMPERED—DUOLUX—Masonite Corp
TEMPERED PRESSEDWOOD—Masonite Corp
TEMPERED TEMWOOD—Armstrong Cork Co
TEMPAL—Tennessee Stone Co Inc
TEMPRITE—Sullivan Co
TEMPRITILE—Masonite Corp
TEMPRYTTE—Truscon Steel Co
TEMWOOD—Armstrong Cork Co
TEMWOOD—Woodsline Lime Co
TENNESSEAL—Tennessee Coal Iron & Railroad Co
10-PLASTIC—Quigley Co Inc
TENSION-TITE—Rudiger-Lang Co
TENSULATE—Tennessee Products & Chemical Corp
TENT-TE—Allith-Prouty Inc
TERMINIX—Bruce (E L) Co
TERRAFLEX—Johns-Manville Corp
TERRAFOX—Wood-Treating Chemical Co
TERTRAC—American Tractor Corp
TESTAL—London Machinery Co
TEXACO—Texas Co
TEXBORD—Celotex Corp
TEX-LOK—Texas Co
TEXOLITE—U S Gypsum Co
TEXOPRO—Allis-Chalmers Mfg Co
TEX-TAB—Ruberoid Co
TEXTOLITE—General Electric Co
Chemical Div
TEXTONE—U S Gypsum Co
THARCO—Armstrong Co
THATCHSULATE—Carey (Philip) Mfg Co
THERMACOUSTIC—National Gypsum Co
THERMAL-FLO—Coleman Co Inc
THERMATEX—Wastator Furnace Co
THERMATIC—Wayne Home Equipment Co Inc

List of Manufacturers' Names With Complete Addresses Starts on Page D-76

THERMAX—Celotex Corp
THERMO-CON—Glaze Siding Products Corp
THERMO-CON—Higgins Inc
THERMOCRETE—Certain-lead Products Co
THERMO DRAULIC—Perfec Corp
THERMO DRIVE—Webster Electric Co
THERMO FILL—U S Gypsum Co
THERMO GRIP—Lafayette Industries Inc
THERMO HUMIDGRAPH—Bristol Co
THERMOROT—Vita Var Corp
THERMOPANE—Libbey-Owens-Ford Glass Co
THERMOPILOT—General Controls Co
THERMOSEAL—Flintkote Co
THERMO-SEAL—Russell (F C) Co
THERMOTEX B—Carey (Philip) Mfg Co
THERMOTHATCH—Globe Siding Products Corp Inc
THERMO TILE—Purter Haddon Company
THERMOTITE—Cast Insulating Products Corp
THICK BUTT—Luhon Co
THIKBRUK—Flintkote Co
THIKBUT—Flintkote Co
THINUP—King (E F) & Co Inc
THOR—Borden Co
THOR—Independent Pneumatic Tool Co
THORLITH—Standard Dry Wall Products Inc
THORSEAL—Standard Dry Wall Products Inc
3-M—Minnesota Mining & Mfg Co
THREE STAR—Sheffield Bronze Paint Corp
THRIFT T—Rouse & Mosser Co
THRIFTEX—Flintkote Co
THRIFT—Tork Clock Co Inc
THRLMAN—Chimney Sales Co
THY MARHET—Adams Food Co
TIGER—Kelley Island Lime & Transport Co
TIGER—Samson Cordage Works
TIGER—Texas Co
TIGER BRAND—American Steel & Wire Co
TILDEN PIN—Kennedy (David E) Inc
TILKAST—Kendrick (H Fred)
TILENE—Bottle Mfg Co
TILE ROOFING—Carey (Philip) Mfg Co
TILE-TEX—Flintkote Co
TILTHORSEAL—Le Toumeau (R G) Inc
TIMBERGRAIN—Ruberoid Co
TIMBERTEX—Ruberoid Co
TIMBERTOX—Wood Treating Chemical Co
TIME-O-SWITCH—Minneapolis-Honeywell Regulator Co
TIMBERCOID—Mercaid Corp
TIMERELAY—Minneapolis-Honeywell Regulator Co
TIMETROL—Penn Electric Switch Co
TI-NAMEL—Inland Steel Products Co
TINNER'S RED PAINT—Pittsburgh Plate Glass Co
TIN-O-LIX—Galbar Paint & Varnish Co
TI-TAN—Easer Mfg Co
TITE-LAP—Barrett Div Allied Chemical & Dye Corp
TITE-LITE—Trucon Laboratories Div Devoe & Reynolds Inc
TITE-LOCK—Barrett Div Allied Chemical & Dye Corp
TITELOCK—Inland Steel Products Co
TITE-LOK—American Asphalt Roof Corp
TITE-ON—Ruberoid Co
TITE-ROPE—Samson Cordage Works
TOASTMASTER—McGraw Electric Co
TORN BRONZE—American Brass Co
TOMAHAWK—Barrett Div Allied Chemical & Dye Corp
TONCAN—Republic Steel Corp
TONKA—Forman-Ford Co
TORIWELD—Lincoln Electric Co
TORVO—Matta Mfg Co
TORVOTE—Sullivan Co
TORKMASTER—Tork Clock Co Inc
TORKTHERM—Tork Clock Co Inc
TOR-ON—Pittsburgh Plate Glass Co
TORPEDO—Inland Steel Products Co
TORRID—Diemer (George W) Mfg Co
TORRID CAST—Walsh Refractories Corp
TORRIDIRECT—Cleveland Steel Products Corp
TORRID ZONE—Lennox Furnace Co Inc
TOTALME—Wilbur & Williams Co
TOTE ALL—Lake Shore Engineering Co
TOTEM—Wilbur & Williams Co
TOURNAUCRANES—Le Toumeau (R G) Inc
TOURNALIFTS—Le Toumeau (R G) Inc

TOURNAUTILIS—Le Toumeau (R G) Inc
TOUSATHETIKS—Le Toumeau (R G) Inc
TOWERMOBILE—Mixerable Mfrs
TOWN & COUNTRY—Du Pont (E I) de Nemours & Co Inc
TOX-A-TOL—Glidden Co
TOXEMENT—Toch Brothers
TRAFFIC TAP—Celotex Corp
TRAFORD TILE—Keasbey & Mattison Co
TRAILER—Cleveland Crane & Engineering Co
TRANE A-LEVEL—Argyle Mfg Co
TRANEX—Libbey-Owens-Ford Glass Co
TRANSITE—Johns-Manville Corp
TRANSITE CONDUIT—Johns-Manville Corp
TRANSITE KORDUCT—Johns-Manville Corp
TRANSPARENT PRIMER SEALER—King (E F) & Co Inc
TRANSPHET—Concrete Transport Mixer Co
TRANSPORTABLE—Concrete Transport Mixer Co
TRANSPORTABLE—Concrete Transport Mixer Co
TRANS SKIP—Concrete Transport Mixer Co
TRANSXAN—Concrete Transport Mixer Co
TRAVACQUISITE—National Gypsum Co
TRAVELAORER—Lull Mfg Co
TRAVERTONE—Armstrong Cork Co
TREAD STIRE—Horn (A C) Co Inc
TREMBOLT—Tremco Mfg Co
TREMPLEX—Tremco Mfg Co
TREMGARD—Tremco Mfg Co
TREMILX—Tremco Mfg Co
TREXNAMEL—Tremco Mfg Co
TRIANGLE—Day & Night Mfg Co
TRIANGLE—Keystone Steel & Wire Co
TRIOSEAL—American Plumb Co
TRIFLEX—Tuttle & Batley Inc
TRIMENDS—Trimedge Inc
TRI-MESH—Keystone Steel & Wire Co
TRIMTHERM—General Controls Co
TRIM THERM—General Controls Co
TRIM & TRELIS—Du Pont (E I) de Nemours & Co Inc
TRIMEX—Sunnobury (L) Sun Inc
TRIMZ—Dulid Wallpaper Inc
TRIPLE A—Quizler Co Inc
TRIPLE DRAIN—Republic Steel Corp
TRIPLE FLEX—Horn (A C) Co
TRIPLE LEADKOTE PRIMERS—King (E F) & Co Inc
TRIPLE LOCK—Denison Co
TRIPLE SEAL—Celotex Corp
TRIPLE SEAL—Weatherproof Products Corp
TRIPLE SEAL—Window Conditioning Co
TRIPLETAB—Flintkote Co
TRIPLE VENT—U S Gypsum Co
TRIP-L-Grip—Timber Engineering Co
TRIPLE-ITE—Williamson Heater Co
TRIPOLIA—Anti Hydro Waterproofing Co
TRI-RITE—Wheeling Corrugating Co
TRI-SAW—R C S Tools Sales Corp
TRITRAL—Sherwin-Williams Co
TRI-TAB—Bird & Son Inc
TRI-TONE—Carey (Philip) Mfg Co
TRIUMPH—Inland Steel Products Co
TROFSEAM—Edwards Mfg Co
TROUBLE—Althoff-Prouty Inc
TROUBLE SAVER—Steel Scaffolding Co Inc
TRU-BILT—West Coast Plywood Co
TRU-BIT—Fire Door Institute
TRUCKMASTER—Tulosa Scale Co
TRUCKTRACTOR—Clark Equipment Co Inc
TRUC-DIE—Wholesale Diecast Co
TRU-CURE—Trucon Laboratories Div Devoe & Reynolds Inc
TRU-DIG—Eaton Bird Patterns Co
TRU-FORM—Boice-Crane Co
TRU-FORM—West Coast Plywood Co
TRU-GRAIN—Johns-Manville Corp
TRU-LAMB NETS—Superform Products Corp
TRU-LOK—Wholesale Diecast Co
TRUSSON—Trucon Steel Co
TRUSS-LOOP—Bestwick Steel Lath Co
TRUSSTEEL—U S Gypsum
TRUSS-WING—Bestwick Steel Lath Co
TRU-TYE—Dravo Corp

TUB-CAULK—Miracle Adhesives Corp
TUB-ROVE—Keller Products
TUBULATOR—Wesling Furnace Co
TUB-BOBS—Barrows Lock Works
TUCFOTE—Du Pont (E I) de Nemours & Co Inc
TUPCRETE—Tufcrete Co Inc
TUPHENSE—Tufcrete Co Inc
TUFF-BOND—Moore (Goodloe E) Co
TUFF-COTE—Moore (Goodloe E) Co
TUFF-FLEX—Libbey-Owens-Ford Glass Co
TUF-FLEX—Millers Falls Co
TUFFLEX—Wood Conversion Co
TUFF-TEX—Tile-Text Div Flintkote Co
TUFF-TRED—Moore (Goodloe E) Co
TUFF-WOOD—Wood Conversion Co
TUF-LUSTRE—Breece (E L) Co
TUFSEAL—Tufcrete Co Inc
TUFTEK—Tufcrete Co Inc
TUFTOP—Tufcrete Co Inc
TULINE—Certain-lead Products Corp
TULINE—Extruded Plastics Inc
TURBOVANE—Westinghouse Electric Corp Sturtevant Div
TURN OVER—Colburn Tool Tractor Products Wickwire Spencer Steel Div Colorado Fuel & Iron Corp
TUSCAR—Pittsburgh Plate Glass Co
TUTCH LATCH—National Lock Co
TWENTIETH CENTURY—Starline Inc
TWIN CONTACT—Perfec Corp
TWIN-CUSHION—Macklanburg-Duncan Co
TWINDOW—Pittsburgh Plate Glass Co
TWINFUEL—Norman Products Co Inc
TWIN-FYR—Breeze Corps Inc
TWIN LOCK—Bird & Son Inc
TWIN-RING—Coleman Co
TWIN-TILE—U S Gypsum Co
TWO DRAIN—Inland Steel Products Co
TYGON—F S Stonegate Co
TYLA-CHROME—Tylac Co
TYLACHROMET—Tylac Co
TYLITE—Tylac Co
TYL-LOCK—Continental Steel Co
TYMOTHERM—Tork Clock Co Inc

U

U-ALCO—Union Aluminum Co
U-G-L—United Gilsonite Laboratories
U-LOY—Republic Steel Corp
UNIFED—Link-Belt Co
UNIFLEX—Robinson Insulation Co
UNI-FIN—Barber-Colman Co
UNI-FLO—Barber-Colman Co
UNI-FORMS—Universal Form Clamp Co
UNIGRID—Trucon Steel Co
UNILITE—U S Plywood Corp
UNIPAK—Farley & Lottcher Mfg Co
UNIPULL—Bonnett-Ireland Inc
UNI-BEAR—Farley & Lottcher Mfg Co
UNISHEAR—Stanley Electric Tools Div Stanley Works
UNITAIRE—Westinghouse Electric Corp Sturtevant Div
UNI-TEX—Elkhart Paint & Varnish Co
UNTRIM KNAPP—Knapp Brothers Mfg Co
UNIVERSAL—Certain-lead Products Corp
UNIVERSAL—Chicago Pneumatic Tool Co
UNIVERSAL—Cribben & Sexton Co
UNIVERSAL—Fischer Bracket Co
UNIVERSAL—Lauders Fray & Clark
UNIVERSAL—Ludkin Rule Co
UNIVERSAL—Caray (Philip) Mfg Co
UNXID—Parlor-Kalon Corp
UP AND OVER—Starline Inc
UPCO—Northwest Door Co
UP-N-OVER—Boek Island Millwork Co
UPSON—Republic Steel Corp
UPSON DUBL-THIK—Upson Co
UPSON KUYER-KRAK—Upson Co

UPSON STRONG-BILT—Upson Co
U S—American Steel & Wire Co
US AIRCO—U S Air Conditioning Corp
USJ—United Steel Fabricators Inc
USG—U S Gypsum Co
USP—U S Plywood Corp
USS—American Steel & Wire Co
USS—United States Steel Co
USS—Columbia Steel Co
USS—Cylinder Co
USS—National Tube Co
USS—Tennessee Coal Iron & Railroad Co
USS AMERICAN—American Steel & Wire Co
USS CABILLON—United States Steel Co
USS COLUMBIA—Columbia Steel Co
USS COR TEN—Tennessee Coal Iron & Railroad Co
USS PAINTHORN—United States Steel Co
USS STORMSEAL—American Steel & Wire Co
USS STORMSEAL—United States Steel Co
USS TENNESSEAL—Tennessee Coal & Railroad Co
USX—United States Steel Co
UTICA SERIES—Vitra Radiator Corp
UTILIFIBRANCE—Ingersoll Steel Div Borden Corp
UTILITRUC—Industrial Truck Div Clark Equipment Co
UTILITY—Aretex Co

V

VACKAR—Black & Decker Mfg Co
VACU DRAPT—Muncie Gear Co
VACUUM DRAFT—Norge Heat Div Borg Warner Corp
VALCALOX—Young Regulator Co
VALDEIRA—American Marietta Co
VALLEY FORGE—Eaton Magnesia Mfg Co
VALSPAR—Valentine & Co
VAMPPO—Valley Metal Products Co
VAN PACKER—Van Packer Corp
VARI-D-LITE—Flintkote Co
VARI-PITCH—Allis-Chalmers Mfg Co
VAPORAIR—Penn Butler & Burner Mfg Corp
VAPORSEAL—Angier Corrosion
V-DRAIN—Tennessee Coal Iron & Railroad Co
VEELUX—Mansfield Mfg & Bolting Co
VELDURO—Wesco Waterpains Inc
VELDURO—Devoe & Reynolds Inc
VELTONE—Wesco Waterpains Inc
VELVAGRIP—American Cabinet Hardware Corp
VELVA—Sargent-Gorke Co
VELVET—Keasbey & Mattison Co
VELVETEX—Sullivan Co
VELVEX—Libbey-Owens-Ford Glass Co
VELVO-GLA—Glidden Co
VEL WOOD—Marsh Wall Products Inc
VENOSTONE—Beardon Co
VENTAIR—West Wind Corp
VENTI-CRATE—Eaton Plywood & Veneer Co
VENTILETTE—Dietli Mfg Co Electrical Div Singer Mfg Co
VENTILATITE—Peerless Electric Co
VENTL-S—Morgan Co
VENTRALA—National Appliance Co
VENTURE—Du Pont (E I) de Nemours & Co Inc
VENTURA—American Blower Corp Div American Blower Corp
VENTURI—FLO—Barber-Colman Co
VEOS—Armstrong Cork Co
VERI-FAT—Portland Cement Co
VERILITE—Missouri Portland Cement Co
VERIPLEX—Vermont City Hardware Lumber Co
VERMONT—Ruberoid Co
VERNOIS—Mt Vernon Furnace & Mfg Co
VERNA TILE—Bunzlue Mills Inc
VERSBOND—Ohio Rubber Co
VIBRAPAC—Celotex Corp
VIBRAPAC—Besser Mfg Co
VIBRO-CON—Vibromat Mfg Corp
VIBRO-FILL—Horn (A C) Co Inc
VICTEEZ—MADAGASKA—Carpenter (L E) & Co Inc
VICTOR—Richards Wilcox Mfg Co
VICTOR—Stanley Works
VICTOR-BILT—Victor Electric Products Inc
VICTORY—Louden Machinery Co
VICTRO—Victor Electric Products Inc
VIGORAIR—Marshall Furnace Co
VIGORO—Swift & Co
VIKING—Vibromat Mfg Corp
VIMLITE—Celanese Corp of America Plastics Div
VINCLU—Protective Coatings Inc

List of Manufacturers' Names With
 Complete Addresses Starts on Page D-76

VINTEX—Beardon Co
VISAFILAME—Mercooid Corp
 VISORHID—Abesto Mfg Co
VISKALT—Flintkote Co
VISKOTE—Flintkote Co
VISTA—Pittsburgh Plate Glass Co
 VITA-CL—Vita-Var Corp
 VITA-CLOR—Vita-Var Corp
 VITA-LIX—Vita-Var Corp
 VITAFANE—Avery Corp
VITOLIOIL—Pittsburgh Plate Glass Co
VITRAMIC—Ruberoid Co
VITREKOTE—Flintkote Co
 VITREXAMEL—United States Steel Co
 VITREON—Robinson Clay Product Co
VITRIGEL—Caray (Philip) Mfg Co
VITROLINER—Condensation Engineering Co
VITROLITE—Libbey-Owens-Ford Glass Co
 VITROPLAST—Atlas Mineral Products Co
 VIT-TRIS—Edwards Mfg Co
 VIVIB—Wesco Waterpaints Inc
VMP—Virginia Metal Products Corp
 VOGTE—Forman-Ford & Co
 VOLAC—Devoe & Reynolds Inc
 VOLCANO—Tenn Brothers Inc
VOLEXTROL—Barber-Colman Co
VOYCE—Westinghouse Electric Corp
 VOLTAC—Moser Brothers
VULCANITE—Certain-Teed Products Corp
 VULCATEX—Horn (A C) Inc
 VULCO V-Gates Rubber Co
 VULCRETE—Flintkote Co Inc

W

WACO—Wilson-Albrecht Co Inc
 WAGNER—Miscellaneous Mfg
WALK-OVER—Barrett Div Allied Chemical & Dye Corp
 WALL-O—Rebmond Products Co
WALL-FLEX—R C A Rubber Co
 WALLGARD—Vita-Var Corp
WALLHIDE—Pittsburgh Plate Glass Co
 WALL-LITE—Wallace Mfg Co
 WALLMASTER—Central States Wallmaster Inc
 WALLSTONE—Tammis Industries Inc
 WALL-TEX—Columbus Coated Fabrics Corp
 WALL-STRIP—Devoe & Reynolds Inc
 WALLWOOD—American Plywood Corp
WALTILE—Keasbey & Mattison Co
WAPPAT—Mall Tool Co
 WARCO—Walsh Refractories Corp
 WARD ZEPHYR—Ward (Edgar T) Industries Inc
WARM-AIRE—Bennett-Ireland Inc
 WARM MORNING—Leake Stone Co
 WARRIOR—Downagie Steel Furnace Co
WARWOOD—Lawson (F H) Co
WASHBURNE—National Mfg Co
WASHINGTON—Standard Lime & Stone Co
WASP—Stanley Works
WASTE-AWAY—Westinghouse Electric Corp Appliances Dept
WASTE-KING—Given Mfg Co
 WATAUGA—Grabbal (C B) & Sons
 WATERBURY—Waterman Waterbury Co
WATERDYKE—Bird & Son Inc
 WATERFOIL—Horn (A C) Co

WATER HOT—Security Mfg Co
 WATERPLUG—Standard Dry Wall Products Inc
 WATER-RAT-TROLA—Ray Oil Burner Co
WATERSPAR—Pittsburgh Plate Glass Co
WATSON—Ruberoid Co
WAUKEGAN—American Steel & Wire Co
WAVELINE—Flintkote Co
 WAVELINE—Lehon Co
 WAXGLASS—Glidden Co
 WAXOFP—Schalk Chemical Co
 WCL—West Coast Lumbermen's Association
 WEARLETTE—Glidden Co
 WEARMASTER—Armeto Paint Co Inc
 WEARWELL—Lionwin Electric Co
WEATHER-BLOC—Air Rectifiers Inc
WEATHERBOARD—Caray (Philip) Mfg Co
 WEATHERCALK—Peora Paint Co Inc
 WEATHERCOTE—American Asphalt Roof Corp
 WEATHERCOTE—Glidden Co
 WEATHERWOOD—U S Gypsum Co
 WEATHERWIRE—Woodhull Lime Co
WEATHELOK—Johns-Manville Corp
WEATHERMAKERS—Carrier Corp
 WEATHERMASTER—Kai-Master Corp
WEATHERPAD—Ruberoid Co
 WEATHERPROOF—Starline Inc
WEATHERPROOF—Weatherproof Products Corp
 WEATHERSEAL—Morgan Co
WEATHERSHIELD—Certain-Teed Products Co
 WEATHER-TITE—Columbia Industries
 WEATHER-TITE—Ives (H B) Co
WEATHERTITE—Johns-Manville Corp
 WEATHERTITE—Peora Paint Co Inc
 WEATHERTWIN—Chamberlin Co of America
 WEATHER-VANE—Northern Wood Products Co
 WEATHERWOOD—U S Gypsum Co
 WERTEX—Webster (W F) Cement Co
WEDGE-EDGE—U S Plywood Corp
WEDGE-LOCK—Barrett Div Allied Chemical & Dye Corp
WEDGE-LOCK—Bergor Div Republic Steel Corp
 WEDGE-TIGHT—Caldor Mfg Co
WEDGLOK—U S Plywood Corp
 WEDDMASTER—Fairbanks Morse & Co
 WEDD-NO-MORE—Sherwin-Williams Co
WEIR—Meyer Furnace Co
WEIR-MEYER HEAT—Meyer Furnace Co
 WELCHBOARD—West Coast Plywood Co
WELDBORD—U S Plywood Corp
WELD-O-TROL—Westinghouse Electric Corp
WELDTEX—U S Plywood Corp
WELDWOOD—U S Plywood Corp
 WELLSVILLE SAVAGE—Chicago Fire Brick Co
 WELSCO—Werner (R D) Co Inc
 WESLOCK—Westwood Mfg Co
 WESTAIR—Western Appliance Co Inc
 WEST-FAB—Wesco Waterpaints Inc
 WESTBOARD—Washington Veneer Co
 WESTERN—Lufkin Rule Co
WESTMORELAND—American Radiator & Standard Sanitary Corp

WEVEGOTE—Insulite Div Minnesota & Ontario Paper Co
WEYERHAEUSER 4-SQUARE—Weyerhaeuser Sales Co
WHALE—Samsen Cerdage Works
 WHEEL-EZY—Rapid-Standard Co Inc
 WHEEL-IT—Bassett Industries
 WHEELPOOL—Nixonson Hauldred Corp
 WHITCO—Whitney (Vincent) Co
 WHITEHEAD—Mid States Steel & Wire Co
WHITE ROCK—Galetox Corp
 WHITE STAR—Detroit Vapor Stone Div Borg-Warner Corp
 WHITE—Tape Evans & Co
 WHITEBARK—American Asphalt Roof Corp
 WHITE VENEER—Elliott Paint & Varnish Co
 WHITEWIDE—Reardon Co
 WHIZZARD—Clarke Sanding Machine Co
WIGWAM—Ruberoid Co
 WILFAMCO—Wilson Foundry & Machine Co
 WILLOW—Robison White Lead & Color Works Inc
 WILSON—Metal Window Service Co
 WINDCO—Water Engineering Inc
WINDMASTER—Caray (Philip) Mfg Co
 WIND-O-BRIK—Cosmovers Co
 WINDOOR—Compo-Miracle Products Co
 WIND-O-SHALE—Margaret Millwork Co
 WIND-O-VENT—Dish Mfg Div Electrical Div Singer Mfg Co
 WIND-O-VENT—Ecod Unit Fans Inc
WINDOWALLS—Anderson Corp
 WINDOW CHARM—Youngstown Industries Inc
 WINDOW-FABRIC—Warp Brothers
 WINDSOR—Compo-Miracle Products Co
 WINDSOR—U S Gypsum Co
 WINGFOOT—Dennis (W J) & Co
 WINGFOOT—Goodyear Tire & Rubber Co
 WINKLER—S Machine Corp
WINTERGLD—American Radiator & Standard Sanitary Corp
 WINTERGARPE—Eyrone Mfg Co
WINTER WAY—American Radiator & Standard Sanitary Corp
WINTHROP—Flintkote Co
WINTITE—American Cabinet Hardware Corp
 WISSCO—Wickwire Spencer Steel Div Columbia Fuel & Iron Corp
 WITCH—Capener & Patterson
 WIZARD—Lufkin Rule Co
 WJL—Woodhull Lime Co
 WKO—Wheeler Osgood Co
 WOLMANIZED—American Lumber & Treating Co
 WOLMAN SALTS—American Lumber & Treating Co
 WOLVERINE—Lufkin Rule Co
 WOLVERINE—Marshall Furnace Co
 WONDEROTE—Sunnoboro (L) Sons Inc
 WONDEX—Tammis Industries Inc
 WOODBART—Sherwin-Williams Co
WOODGRAIN—Flintkote Co
WOOD HEALTH—Protection Products Mfg Co
WOOD LIFE—Protection Products Mfg Co
 WOOD-PRIME—Wilbur & Williams Co
 WOODSEAL—Sullivan Co
WOODTEX—Certain-Teed Products Corp
 WOODTOX—Wood-Treating Chemical Co
 WOODTREAT—Wood-Treating Chemical Co
 WOODVILLE—Ohio Hydraulic & Supply Co
 WOOD WINDOW UNITS—Pacific Mutual Door Co
WOOD YOUTH—Protection Products Mfg Co

WOOLKOTE—Woodhull Lime Co
WORTHWOOD—Weester Products Inc
WPA—Western Pine Association
 WRAP-DEI—Tullmany Pulp & Paper Co
 WR—White Rodgers Electric Co
WRIGHTEX—Wright Mfg Co
WRIGHTFLOW—Wright Mfg Co
WRIGHTWAY—Wright Mfg Co
WROUGHT BRASS OR BRONZE—American Cabinet Hardware Corp
 W-SHEETS—Wheeling Corrugating Co
 W & W—Wilbur & Williams Co
 WW CO—Robinson Clay Product Co
WYANDOTTE—American Radiator & Sanitary Corp
 WYR-O-GLASS—Warp Brothers
 WYR-WAY—Knapp Brothers Mfg Co
WYTEFACE—Kouffel & Esser Co

X

X-IT—Sullivan Co
 X-PANOSIAL—X-Pando Corp
 X-PANDOTITE—X-Pando Corp
 X-TITE—Wesco Waterpaints Inc
 XTRALITE—Marshalltown Tronol Co
XTRASTRONG—Samsen Cerdage Works
 XX PUNCHES—Parter-Kalon Corp

Y

YALE—Yale & Towne Mfg Co
 YANKEE—North Brothers Mfg Co
 YANLEPT—Clark Equipment Co Industrial Truck Div
 YARBUM—Hyster Co
YELLOW END—St Paul Corrugating Co
 YELLOW STRAND—Broderick & Bascom Box Co
 YOUNG—Youngstown Steel & Tube Co
 YORKAIRE—York Corporation
YOUNGSTOWN—Mullins Mfg Corp

Z

ZEEB-X—U S Gypsum Co
ZEPHAIH—Hunter Fan & Ventilating Co
ZEPHYR—Cree-Dipt Co Inc
 ZEPHYR—National Ventilated Awning Co
 ZEPHYR—Rock Island Millwork Co
ZEPHYRPLANE—Skisaw Inc
ZEPHYRS—Cree-Dipt Co Inc
 ZIRO-ZONE—Muskege Gear Co
 ZIROZONE—Copeland Refrigeration Corp
ZIG-ZAG—Stanley Works
 ZILCOY—Trucon Laboratories Div Devoe & Reynolds Inc
 ZILA—Sherwin-Williams Co
ZING-ALLOY—Inland Steel Products Co
 ZINGALIP—Armeto Steel Corp
 ZINCO—Atlas Tack Corp
 ZINC-O-LITH—Glidden Corp
ZIP-IM—Cincinnati Fly Screen Div Russell (F G) Co
ZIP-LIFT—Harnischfeger Corp
 ZIPRO—Columbus Plastic Products Inc
ZONATILE—Zonolite Co
 ZONEAIR—Payne Furnace Co
 ZONON—Robinson Insulation Co
ZOURITE—Lawson Co
 ZURA—Sunnoboro (L) Sons Inc

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SECTION III

Manufacturers and Addresses

P RINCIPAL MANUFACTURERS of building products and equipment are listed in this section in alphabetical order. In some instances, the manufacturing organization is listed under the name of a division rather than under the parent company; popular usage served as a guide in these cases. For example, the manufacturer of Chevrolet Trucks is listed as—

Chevrolet Motors Div., General Motors Corp., rather than as—
General Motors Corp., Chevrolet Motor Div.

In other cases such as those involving departments of companies, the more popular major name is used as the key to the index. For example, the garage hardware department of the Stanley Works is indexed as follows—

Stanley Works, Garage Hardware Dept.

Care has been taken to make this index as accurate as possible, but the American Builder is not responsible for changes in addresses and other discrepancies.

The Names of Manufacturers Who Advertise in American Builder Appear in Boldface

- A**
- Abnost Displays New York 2 N Y
Abart Gear & Machine Co 4834-36 West 16th St. Chicago 30 Ill
Abson Supply Company 58-10 41st Drive Woodside N Y
Abbot Fox Lumber Co Iron Mountain Mich
A-B-C Cotton Fabric Co 100 Pearl St. South Braintree Mass
A B C Steel Eqt Co 17th St & First Ave Tampa 5 Fla
Abel (John W.) Mansfield 0
Abertons Plywood Corp Aberdeen Wash
Abestos Mfg Corp Walsh at Carl St. Michigan City Ind
Abilene Brick Co Box 1017 Abilene Tex
Abington Pottery Abington Ill
Abrasive Prods Inc 100 Pearl St. South Braintree Mass
A B Stoves Co Merrill Pk Battle Creek Mich
Academic Slide Rule Co Carroll
Accessory Mfg Co 303 Admiral Blvd Kansas City Mo
Accurate Metal Weatherstrip Co 216 E 26th St New York 10 N Y
Accurate Spring Mfg Co 3821 W Lake St Chicago 24 Ill
Ace Seal-Rite Sales & Window Mfg Co Inc Garden City Mich
Ace Window Screen Co of America 1634 S Pulaski Chicago 23 Ill
Ackerman-Johnson Co 623 W Jackson Chicago Ill
Ace Appliance Mfg Co 35 S Raymond Ave Pasadena 1 Calif
Ace Asbestos Covering & Flooring Co 200 N Elizabeth Chicago 7 Ill
Ace Brick Co Ft Worth 2 Tex
Ace Bulletin & Directory Board Corp 37 1/2 E 12th St New York 3 N Y
Ace Door Co Queen & Lincoln Sts Houston Wash
Ace Electric Heating Co 1205 Washington Boston 18 Mass
Ace Eqt Co 213 Broadway Muskegon 4 Mich
Ace Flame Control Corp 3051 Rosslyn St Los Angeles 65 Calif
Ace Metal Goods Mfg Co 2 Orange St Newark N J
Ace Metal Prods Corp Box 237 Blue Island Ill
Ace National Refrigeration Co 29-24 40th Ave Long Island City N Y
Ace Pipe Strap Co 844 Harper Detroit 11 Mich
Ace Quality Paints 8250 St Aubin Detroit 11 Mich
Ace Rubber Mfg Co 1838 Lombard St Trenton N J
Ace Rush Balances Co 1626 Long Beach Los Angeles 21 Calif
Ace Seafloor Co Inc 168 Nostrand Ave Brooklyn N Y
Ace Shale Brick Co 1152 Main Buffalo 9 N Y
Ace Shingle Co Ltd 8961 Shaughnessy Vancouver B C Canada
Ace Specialty Mfg Co Thomas & Smead Ave Toledo 0
Ace Staple Co 1700 Hudson Ave Camden N J
Ace Steel Co 2816 Archer Ave Chicago 8 Ill
Ace Visible Records Inc 122 S Michigan Ave Chicago 3 Ill
Ace White Lead & Color Works 8250 St Aubin St Detroit 11 Mich
Acey Canvas Co Philadelphia Pa
Acey Mfg Co Mansfield 0
Acey Plastic Engineers Inc 177 Broadway New York 7 N Y
Active Display Advertising 1702 West 19th Ave Chicago 8 Ill
Active Screw & Mfg Co 4258 N Pulaski Rd Chicago 5 Ill
Ada Brick Co Ada Okla
Adair (Joe A.) Lbr Co Portland 4 Ore
Adam (Frank) Electric Co P O Box 257 St Louis 13 Mo
Adams Bros Mfg Co 1502 W North Ave Pittsburgh Pa
Adams C F Inc Ft Worth Tex
Adams Co Dubuque Ia
Adams Rite Mfg Co 540 W Chevy Chase Dr Glendale 4 Calif
Adams (R B.) Lumber Co Box 345 Mobile Ala
Adams-Thomas Co Jamestown 0
Adams & Westlake Co Safford St Elkhart Ind
Adapte Co 4102 N 100 St Milwaukee Wis
Adex Inc Sedalia Mo
Adex Corp 2130 E 105th St Cleveland Ohio
Admiralgate Multigrade Corp 1209 Rabritt Cleveland 17 Ohio
Adel Clay Prods Co Des Moines 9 Ia
Adelphin Mill 18105 Merchandise Mart Chicago 54 Ill
- Adel Precision Prods Co Van Owen & Cleon Sts Burbank Calif
Adel-site Co 37-19 23rd St Long Island City N Y
Adelmatic Cure & Plug Co Carthage N Y
Adelmidrock Log Cabin Co 22 E 46th St New York N Y
Adelsta Post Mfg Co Akron 0
Adelsteel Clamp Co 414 N Ashland Chicago 22 Ill
Adler-Jones Co 521 S Wabash Chicago Ill
Admiral Corp 3900 W Cortland Chicago 47 Ill
Admiral Homes 174 Prout Rd West Newton 27 Pa
Advance Car Mover Co West College Ave Appleton Wis
Advance Eqt Mfg Co 4617 S Chicago Ave Chicago Ill
Advance Glass Mfg Co 601 W Lafayette Detroit 26 Mich
Advance Mfg Co Tipton Ind
Advertisers Exchange Inc New York 16 N Y
Advertisers Mfg Co Hugo Wis
Aeromotor Co 2500 W Roosevelt Chicago Ill
Aerol Prods Co Inc 10 Wesley St S Hackensack N J
Aeroshade Co 5094 Highland Ave Washburn Wis
Aerovent Fan Co Ash & Raser Sts Piqua 0
Aetna Plywood & Vener Co 1722 N Elston Ave Chicago 22 Ill
Aetna Steel Prods Corp 730 Fifth Ave New York 19 N Y
A & F Fiberglass Co Box 4085 Alexandria La
Aetna Sewer Pipe Co Louisville Ky
Age Venetian Blind Co Ft Worth Tex
Agen Inc Quincy Ill
Agrow Lumber Co Centralia Wash
Agri-Rite Chemical Corp Lincoln Neb
Ahlbrandt A H Co Seymour Ind
Aiken Products Inc 12 Norfolk St Cambridge 39 Mass
Aiken Lumber Co Ironwood Mich
Air Control Prods Inc Glade St at Larch Coopersville Mich
Air Controls Inc 2310 Superior Ave Cleveland 14 Ohio
Air Corroctives of Chicago Inc 355 N Michigan Ave Chicago 1 Ill
Air Devices Inc 50 E 43rd St New York 17 N Y
Air-King Mfg Corp Tigard Ore
Air Master Corp 4317 Ravenwood Ave Chicago Ill
Air-Cel Co 22000 Woodward Ave Detroit 20 Mich
Aircrete Co Marietta 0
Air Placement Eqt Co 2525 Southwest Blvd Kansas City 8 Mo
Air Rectifiers Inc 3734 N. Southport Ave Chicago 13 Ill
Air Reduction Sales Co 60 E 42nd St New York 17 N Y
Airtemp Div Chrysler Corp 1610 Webster St Dayton 1 0
Air Temperature Inc Mills-Morris Co 292 Ponder Ave Memphis 3 Tenn
Air-Tite Window Stack Co Chicago Mass
Aire-Building Bracket Co 1551 Rydalmont Rd Cleveland Heights 0
Ajax Hardware Mfg Corp 4351 Valley Blvd Los Angeles 32 Calif
Ajax Time Stamp Co 368 Broadway New York N Y
Akon Paint & Varnish Co Firestone Ply & Resk Ave Akron 1 0
Akron Prods Co Seattle 0
Alabama Cement Tile Co 200 S 41st St Birmingham 1 Ala
Alabama Clay Prods Co 23rd St N at Fourth Ave Birmingham 3 Ala
Alabama Metal Lath Co 3239 Fayette Ave Birmingham 1 Ala
Alabastine Paint Prods Div Chicago Bronze & Color Wks
Alaire & Fred Sts Grand Rapids Mich
Aladdin Co 212 Davidson Bldg Bay City Mich
Aladdin Tools 3121 Main Kansas City Mo
Alamo Steel Stud Co Ivy Rock Rd Custerbushen Pa
Albany Corrugated Container Corp 481 S Saratoga Cohen N Y
Albany Plywood Corp Albany Ore
Albersee Stone Corp of Va 417 Fourth Ave New York 16 N Y
Albion & Co Inc Sioux City 3 Ia
Albi Chemical Corp 15 Park Pl New York 7 N Y
Alcaco Prods Inc 1138-1760 Creston Muskegon Michigan
Alcon Mfg Co 1640 W Walnut St Fairmont 0
Aletrich Co Div Breeze Corp Inc Wyoming Ill
Alexander Lumber Co Columbus Ga
Alexander Film Co Alexite Engineering Div Colorado Springs Colo
Alexander Mill Co 970 Milwaukee Ave Chicago 22 Ill
- Alexander-Yawkey Lbr Co Princeton Ore
Alger-Sullivan Lumber Co Century Fla
Algoma Mfg Co Algoma Wis
Alko Mfg Co 422 N Lincoln Chicago 16 Ill
All Climates Plan Book Agency Colorado Springs Colo
Allegany Ludlum Steel Co Oliver Bldg Pittsburgh 22 Pa
Allegory St & Co Bridgeville Pa
Allen Bros Inc Omaha Neb
Allen Steel Prods 12911 Hillview Detroit 27 Mich
Allen (W D.) Mfg Co 506 W Lake Chicago Ill
Alliance Clay Products Co 1500 S Mahoning Alliance Ohio
Alliancecaw Inc Alliance 0
Allied Building Credits Inc 3109 Wilshire Blvd Los Angeles 5 Calif
Allied Cloth Specialties Greenville Ohio
Allied Display Materials New York 16 N Y
Allied Housing Associates Inc Langhorne Pa
Allied Metal Fabricators Inc 188 Howard St New London Conn
Allied Synthetics Co 4670 DeSoto San Diego 9 Cal
Allied Tools Inc 221 Central Ave Newark 4 N J
Allied Welding & Mfg Co Orlando Fla
Allington & Curtis Mfg Co Saginaw Mich
Allis-Chalmers Mfg Co 1156 S 10th St Milwaukee 1 Wis
Allison Lumber Co Bellamy Ala
Allith-Prouty Co 819 N Bowman Ave Danville Ill
All-Lite Metal Window Co Bristol Pa
All Metal Partition Co Inc 194-204 DuPont St Brooklyn 22 N Y
Allmetal Weatherstrip Co 2241 N Knox Ave Chicago 39 Ill
All-Nu Products Co Camden N J
Alloy Tile Corp 109 Roosevelt Ave Belleville N J
Alloy Trim Inc 217 W Seven Mile Rd Detroit Mich
All-Steel Equipment Co Inc 245 John St Aurora Ill
Alway Mfg Co 2061 Bronx Bruns 60 N Y
All-Weather Window Co 4320 W Lawrence Chicago Ill
Alvha Lumber Co Alvha Wash
Alvo Mfg Co Grand River Ave Detroit 8 Mich
Alpha Portland Cement Co Alvha Bldg Easton Pa
Alson Inc 260 S Forge Rd Akron 0
Alside Inc 1415 Waterford Rd Akron 0
Alsynite Co of America 4654 De Soto San Diego 9 Calif
Alton Tile Co Rahway N J
Altman (W R.) Lbr Co Inc Syriana Ga
Alta Mfg Co 1647 W Winifram Chicago 13 Ill
Alton Brick Co Alton Ill
Alton Laboratories 207 S Green Chicago Ill
Alton Mineral Wool Co 2317 Whittemore Pl St Louis Mo
Alvord Bros Co East Point Ill
Alvora Craft Boat Co Minneapolis Minn
Alvornax Co Box 591 Pasadena Calif
Alvornatic Corp of America 2091 S 50th St Milwaukee Wis
Alvornex Inc Los Angeles Calif
Aluminum Anveng Co Div Orchard Bros Inc 67 Meadow Rd Rutherford N J
Aluminum Building Products Co Phoenix Ariz
Aluminum Building Products Route 1 Atlantic Jacksonville Fla
Aluminum Co of America 2156 Gulf Bldg Pittsburgh 19 Pa
Aluminum Goods Mfg Co 1516 Washington St Mantowee Wis
Aluminum Home Products Co Carr St at Southern By Knoxville Tenn
Aluminum Industries Inc Keller & Beckman Sts Cincinnati 25 0
Aluminum Ladder Co 402 Carlin St Worthington Pa
Aluminum Products Corp 467 S Woodward Ave Pontiac Mich
Aluminum Window Corp Div General Bronze Corp 59 Stewart St Garden City N Y
Alway-Ferguson Co Inc North & Disney Sts Cincinnati Ohio
Alvair Brick Co New Oxford Pa
Alvinsaid Roofing Co 66500 S Central Chicago Ill
Alvosa Socy Alvosa La

American Abrasive Metals Co 460 Cult St Irvington 11 N J
American-Acme Co Englewood Pa
American Agricultural Chemical Co 50 Church St New York 7 N Y
American Adhesives Products Co 8000 Franklin Blvd Cleveland 0
American Asphalt Paint Co 308 West Washington St Chicago III
American Asphalt Roof Co 7500 Truman Rd Kansas City 3 Mo
American Baler Co Bellrose 0
American Beauty Glass Tile Co Isabella Pittsburgh 12 Pa
American Bell & Spring Co 3255 Helmer St St Louis Mo
American Biltmore Co 2091 W Pershing Rd Chicago 9 Ill
American Bitlrite Rubber Co Perrine Ave Trenton 2 N J
American Black Granite Co Ashland Wis
American Blended Shellac Corp 70 Pine St New York 5 N Y
American Blower Corp 200 American Radiator & Standard Sanitary Corp P O 58 Roosevelt Park Annex Detroit 32 Mich
American Box Corp Leokovier Ore
American Brass Co Watertown 2 S Conn
American Brass Goods Co Grand Rapids Mich
American Brass Mfg Co 1525 E 49th St Cleveland 0
American Bridge Co Sub of U S Steel Corp Frick Bldg Pittsburgh 19 Pa
American Brush Mfg Co 3121 N E Sandy Blvd Portland Ore
American Cabinet Hardware Co 416 S Main St Rockford Ill
American Cable Div American Chain & Cable Co E Rosa & Thomas Wilkes-Barre Pa
American Can Co N Y Central Bldg New York N Y
American Cement Machine Co Inc Kookah Ia
American Central Div Avco Mfg Co Stenib 31 Connersville Ind
American Chain & Cable Co Inc Bridgeport 2 Conn
American Chain Div American Chain & Cable Co York Pa
American Chain Link Fence Co Bedford Mass
American Chemical Paint Co Box 311 Ambler Pa
American Conduit Co Irvington N J
American Conveyor Co 1115 W Adams Chicago 7 Ill
American Cooler Corp 3094 Mayflower St Jacksonville 3 Fla
American Copper & Brass Works Inc 610 E Front St Cincinnati 2 O
American Crayon Co Sandusky Ohio
American Crenote Works Inc 1207 Dublin St New Orleans La
American Crowsting Co Inc Columbian Bldg Louisville 2 Ky
American Cyanamid Co 30 Rockefeller Plaza New York 20 N Y
American Device Mfg Co Red Bud Ill
American Die & Tool Co Inc Reading Pa
American Emery Wheel Works 1 Richmond Square Providence 1 R I
American Enamel Products Co Waukesha Wis
American Engineering Co 2446 Aramingo Ave Philadelphia 25 Pa
American Expansion Belt & Mfg Co 903 N Spaulding Chicago III
American Extruded Products Co N Latrobe & Santa Monica Blvd Los Angeles Cal
American Fixture & Mfg Co 2300 Louisa Blvd St Louis Mo
American Flange & Mfg Co 20 Rockefeller Plaza New York City 20 N Y
American Flexible Conduit Co 35 Scott New Bedford Mass
American Floor Surfacing Machine Co 515 S St Clair St Toledo 3 O
American Fluorite Co 625 Rockdale Ave Cincinnati 27 O
American Food & Ice Co Cleveland 13 Ohio
American Foundry & Furnace Co 1201 Super St Bloomington Ill
American Foundry & Mfg Co 1011 Herbert St St Louis Mo
American Gears & Dies Co 605 Robert St St Paul 4 Minn
American Home 444 Madison Ave New York N Y
American Houses Inc 163 W 40th St New York 19 N Y
American Incubator Co 6441 Hastings St Detroit 11 Mich
American Incubators Inc New Brunswick N J
American Instrument Co Inc 8015 Georgia Ave Silver Spring Md
American Ironing Machine Co Algonquin Ill
American Knife Co 29-43 Lock Ave Baldwinville N Y
American Ladder Co 5303 Kewler Chicago 32 Ill
American Ladder Co 5505 NW 7th Ave Miami Fla
American-LaFrance Pneumatic Corp 903 Erie St Elmira N Y
American-Larson Ventilating Co Pittsburgh 22 Pa
American Lightning Rod Co Inc 67 Batterymarch St Boston 19 Mass
American Linc Inc Lowell Mich
American Liquid Gas Corp S Santa Fe & Sacramento Sts Los Angeles Cal
American Logging Tool Co East Mich
American Lumber & Treating Corp 332 S Michigan Ave Chicago III
American Mfg Co Noble & West Sts Brooklyn 22 N Y
American Mfg Co Inc 2118 Pacific Ave Tacoma Wash
American Mariposa Co 42 E Ohio St Chicago 11 Ill
American Mason Safety Treat Co Lowell Mass
American Metal Weather Strip Co Grand Rapids Mich
American Metal Sintering Corp 330-340 E Allegheny Ave Philadelphia Pa
American Metal Retained Co Inc Yardley Pa
American Mill Co Baltimore 2 Md
American-Olean Tile Co Kenilworth Ave Lausdale Pa
American Optical Co Safety Div Southbridge Mass
American Perlite Corp Richmond Calif
American Phenolic Corp 1839 S 24th Ave Chicago 50 Ill
American Pipe Tool Co 4855 W Kinzie Chicago III

American Plan Service Co 2701 Biscayne Blvd Miami Fla
American Plywood Corp New London Wis
American Radiator & Standard Sanitary Corp P O Box 1226 Pittsburgh 30 Pa
Americas Refrigerator & Machine Co N Minneapolis Minn
American Rock Wool Corp 20 N Wacker Drive Chicago Ill
American Rolling Mill Co Middletown Ohio
American Roof Truss Co 1030 E 61th St Chicago III
American Rubber Corp Huntsville Ala
American Rubber Products Corp 151 E 50th St New York 17 N Y
American Roe & Block Co Menominee Mich
American Roof Proof Co Inc 302 Butler St Brooklyn N Y
American Sanitary Mfg Co Abingdon Ill
American Sash & Door Co 16th & Bellefontaine Kansas City 1 Mo
American Saw & Mfg Co Baylston & Emery Sts Springfield Mass
American Saw Mill Machinery Co 169 Main St Hackettstown 2 N J
American Scale Co 919 Baltimore Ave Kansas City 6 Mo
American Screw Co 121 Stevens St Providence 1 R I
American Sheet Metal Works 325 N Alexander St New Orleans La
American Silica Sand Co Ottawa Ill
American Skin & Foundry Co Hyde St Racine Wis
American Sliding Door Hardware Corp 2084 First Ave New York 29 N Y
American Society of Heating & Ventilating Engineers 51 Madison Ave New York 17 N Y
American Southern Corp 1000 8th S Nashville 10 Tenn
American Stained Shingle Co Spruce & Denison Ave Columbus 8 O
American Steel Door Co 825 Grinnel Detroit 15 Mich
American Steel & Iron Works 5000 & S Loop Chicago 21 Ill
American Steel Scraper & Wheelbarrow Co Sidney O
American Steel & Wire Co 1420 Rockefeller Bldg Cleveland 13 O
American Steel Tool Mfg Co 42-24 Orchard St Long Island City 1 N Y
American Steel Works Orlando Fla
American Steel Works 1211 W 27th St Kansas City 8 Mo
American Stone Co 1641 S Kinlochhighway St Louis 10 Mo
American Structural Products Corp Box 1035 Toledo 1 Ohio
American Swiss File & Tool Co 400 Trumble St Elizabeth N J
American Technical Society 55th & Drexel Ave Chicago 37 Ill
American Telephone & Telegraph Co 195 Broadway New York 7 N Y
American Text & Sewing Co 1132 Mission San Francisco Calif
American Terra Cotta Corp 228 N LaSalle Chicago 11 Ill
American Textile Products Co 5006 Euclid Cleveland 3 O
American Traction Corp Columbus Ind
American Truck & Body Co Martinsville Va
American Turpentine & Tar Co Ltd 810 S Broad New Orleans La
American Varnish Co 1136 N Branch St Chicago 22 Ill
American & Venetian Tile Co 1625 Oak Kansas City 8 Mo
American Vermiculite Co Inc Ross Mountain Tenn
American Vitriol Products Co Guardian Bldg Cleveland 14 O
American Water Softener Co S E Corner Fourth & Lehigh Ave Philadelphia 33 Pa
American Welding & Mfg Co 190 Dietz Road Warren O
American Well Works 328 N Broadway Aurora Ill
American Wheelbarrow & Equipment Co 451 S Byram St Mishawaka Ind
American Window Glass Co Farmers Bank Bldg Pittsburgh 22 Pa
American Wire Fabrics Corp 500 Fifth Ave New York 18 N Y
American Woodworking Co 1452 N Lowell Ave Chicago 39 Ill
American Woodworking Machinery Co 100 Liberty St Harkensville N J
Amsline Inc 1753 N Honore Chicago 22 Ill
Ames Baldwin Wyrnning Co Parkersburg W Va
Ames Machine Co 2400 17th St San Francisco Calif
Ames Mfg Co Centre Building New Hampshire
Ames Metal Moulding Co 225 East 144th St New York 51 N Y
Ames (W B) Co 150 Homer Ave San Francisco 7 Calif
Amidon Sales Co Elgin O
Ames Sales Co 28 Church Buffalo 2 N Y
Ames (Charles H) Handle Co Stillwell Okla
Anacostia Copper Mining Co Bonnet Mont
Anacostia Sales Co 25 Broadway New York 4 N Y
Anacostia Wire & Cable Co 25 Broadway New York N Y
Anastetter Verner Inc Asuncion Wash
Anchor Concrete Machinery Co 1191 Fairview Columbus 12 O
Anchorage Home Inc Westfield Mass
Anchor Die Strators & Tooling Co Inc Box 311 New Albany Ind
Anchor Lumber Co Parkersburg W Va
Anchor Post Co Pease Div Post Products Inc 6500 Eastern Ave Baltimore 24 Md
Anchor Stone & Range Co New Albany Indiana
Anderson Corp Bayport Minn
Anderson Box Co 700 W Morris St Indianapolis 6 Ind
Anderson John K Co Minneapolis 16 Minn
Anderson Stone Co Inc Anderson Ind
Anderson (V E) Mfg Co Storm St Owensboro Ky
Anderson Pulley Co Memphis Tenn
Andrew Wrench Co Elmhurst Ill
Anemontal Corp of America 14 E 30th St New York N Y
Angeline County Lumber Co Kelly Tex
Angeline Hardware Sales Co Lufkin Tex
Angell Nail & Chisel Co 4580 E 71st St Cleveland 0

Angel Novelty Co 340 Broad St Fitchburg Mass
Angels Box & Lbr Co Angels Camp Calif
Angoff Corp 60 Widdell St Framingham Mass
Angeles Soil Pipe Co Association Ala
Anson & Gilkey Co Merrill Wis
Anthony Co 81 Belmont St Riverport Ill
Anthon Truck Co Box 75 Paducah Ky
Anti-Rust-Build Compound Co Senanton Pa
Anti-Hydro Waterproofing Co 39 Cortland St New York 7 N Y
Aper Brans & Bruns Works 116 Walker New York 13 N Y
Aper Rotax Corp 1070 E 152 St Cleveland 10 O
A-1 Plastic Molders Inc 1415 Diversy Parkway Chicago III
Apex Van Stalk Trading Corp 41 E 42nd St New York 17 N Y
Applon Art Glass Works New Bridge Rd Bergenfield N J
Applon Electric Co 1701-50 Wellington Ave Chicago 13 Ill
Applon Mfg Co Ravaria Ill
Applon Toy & Furniture Co Applon Wis
Applon, J W & Son Inc Box 849 Stas & 850 N Ninth St St Petersburg Fla
Appliance Mfg Co Alliance O
Approved Products Co 295 E 42nd St New York 17 N Y
Arboret Co Ltd 305 Lafleur Montreal Quebec Can
ARB Wood Co Detroit Mich
Arden Mfg Div Rockwell Mfg Co Munn Station Prospect Ill
Ares Metal Products Inc 224 N 2nd Ave Arcadia Calif
Arch Cape Shingle Co Arch Cape Ore
Archer (A W) Co 368 Broadway New York 13 N Y
Archibald-Dunlop-Midland Co 600 Roanoke Bldg Minneapolis 4 Minn
Architectural Model Materials Co 4339 W Diversy Blvd Chicago III
Architectural Plan Service Inc 89-51 164th St Jamaica N Y
Arcus 2701 Bessmer Cleveland 4 O
Arcus-Aluminum Corp 270 Park Ave New York 17 N Y
Arcus Co 333 N Michigan Ave Chicago 1 Ill
Arcus Lumber Co Hardwick S C
Argyle Mfg Co Colchester Ill
Arlidge Corp Fair Lawn N J
Arkansas Lumber Co Little Rock Ark
Arkansas Oak Flooring Co 2590 W Fifth St Pine Bluff Ark
Arkansas Soft Pine Bureau Bayfield Bldg Little Rock Ark
Arkansas Concrete Corp Brazil Ind
Arlington Inc 672 Jenks Ave St Paul 6 Minn
Armen Trasnage & Metal Products Inc 1939 Arden Ave Middleboro O
Armed Steel Corp 1939 Arden Ave Middletown O
Armed Laboratories Commercial & Duran Sts Glendale 3 Calif
Armour & Co Fertilizer Works Ltd 1355 W 31st St Chicago 9 Ill
Armour & Co Sanderp Div 1253 W 31st St Chicago 9 Ill
Armstrong Ray & Co 5554 Northwest Hwy Chicago 30 Ill
Armstrong Bros Tool Co 5300 W Armstrong Chicago 20 Ill
Armstrong Co 4065 S LaSalle St Chicago 9 Ill
Armstrong Cork Co 1010 Concord St Lancaster Pa
Armstrong Furnace Co 851 W 3rd Ave Columbus O
Armstrong Mfg Co 533 Knowlton St Bridgeport 3 Conn
Armstrong Paint & Varnish Works 1730 South Kilburn Chicago 22 Ill
Armstrong Products Corp Huntington 12 W Va
Armstrong Paint Co Inc 570 W 46th St New York 10 N Y
Arnold Paint Corp Box 9 Malapasc N Y
Arpe Corp New Holstein Wis
Arps Expansion Bolt Co 1430 N Boone St Marion O
Arroyo Products Co 30 S Market St Brooklyn 6 N Y
Arroyo Hart & Hegeman Elco Co 403 Hawthorne St Hartford 9 Conn
Arroyo Lock Corp 762 Myrtle Ave Brooklyn 11 N Y
Arroyo Mfg Co Box 468 Independence Kans
Arroyo Products Corp Grand Rapids Mich
Arroyo Tank Co Inc 15 Barrett St Buffalo 15 N Y
Arroyo Smith & Die Co 4700 Bellvue Ave Los Angeles Calif
Art Concrete Works 282 S Fair Oaks Pasadena Calif
Artcraft Ornamental Iron Co 724 E Hudson St Columbus 11 O
Artcraft Veneer Blind Mfg Co 2940 Olive St St Louis Mo
Artex Products Co Upper Darby Pa
Artex Green Corp 702 Sterling Pl Brooklyn N Y
Artistic Veneer Blinds Co 1855 Park Ave New York N Y
Art Mirror & Glass Specialty Co 4401 W Carroll Chicago III
Arvey Corp 3462 N Kimball Ave Chicago 18 Ill
Arvis Mfg Co Glendale Calif
Asbestos Corp 5300 Thousipiteulas St New Orleans 15 La
Asbestos Asphalt & Insulation Inc 2100 Fairlawn Ave Chicago 47 Ill
Asbestos Co of Texas Box 1082 Houston 1 Tex
Asbestos Service Co Waukesha 13 Wis
Asbestos Supply Co 8 10th Street St Spokane Wash
Ash Brick Co Van Wyck S C
Ash Green Lime & Portland Cement Co Fairfax Bldg Kansas City Mo
Associated Plywood Mills Eugene Ore
Associated Wood Products Portland Oregon
Astoria Spruce & Lumber Export Co Astoria Ore
Astoria Co 2917 W 25th St Cleveland 13 O
Astoria Brick & Tile Co Astoria Ore
Athens Stone Works Hicks & Mabry Sts Athens Tenn
Atlas Mfg Co 6418 S Ardmore Chicago Ill
Atlas Machine & Foundry Co 25 Chestnut Hill Ave Athol Mass
Atlas (E C) Co 402 S Illinois St Indianapolis 9 Ind
Atkinson Mfg Co Ludington Mich
Atlanta Oak Flooring Co Atlanta 1 Ga
Atlanta Stone Works Atlanta Ga
Atlanta Siding Co Columbus Ga
Atlanta Lumber Co 88 Broad St Boston Mass
Atlantic Sewer Works Hartford Conn
Atlantic Tank Corp 1211 Tenney Ave North Hemp N J
Atlantic Transportation Co Dixie Yale & Towne Mfg Co 101 W 87 Chicago 20 Ill

American Plan Service Co 2701 Biscayne Blvd Miami Fla
American Plywood Corp New London Wis
American Radiator & Standard Sanitary Corp P O Box 1226 Pittsburgh 30 Pa
Americas Refrigerator & Machine Co N Minneapolis Minn
American Rock Wool Corp 20 N Wacker Drive Chicago Ill
American Rolling Mill Co Middletown Ohio
American Roof Truss Co 1030 E 61th St Chicago III
American Rubber Corp Huntsville Ala
American Rubber Products Corp 151 E 50th St New York 17 N Y
American Roe & Block Co Menominee Mich
American Roof Proof Co Inc 302 Butler St Brooklyn N Y
American Sanitary Mfg Co Abingdon Ill
American Sash & Door Co 16th & Bellefontaine Kansas City 1 Mo
American Saw & Mfg Co Baylston & Emery Sts Springfield Mass
American Saw Mill Machinery Co 169 Main St Hackettstown 2 N J
American Scale Co 919 Baltimore Ave Kansas City 6 Mo
American Screw Co 121 Stevens St Providence 1 R I
American Sheet Metal Works 325 N Alexander St New Orleans La
American Silica Sand Co Ottawa Ill
American Skin & Foundry Co Hyde St Racine Wis
American Sliding Door Hardware Corp 2084 First Ave New York 29 N Y
American Society of Heating & Ventilating Engineers 51 Madison Ave New York 17 N Y
American Southern Corp 1000 8th S Nashville 10 Tenn
American Stained Shingle Co Spruce & Denison Ave Columbus 8 O
American Steel Door Co 825 Grinnel Detroit 15 Mich
American Steel & Iron Works 5000 & S Loop Chicago 21 Ill
American Steel Scraper & Wheelbarrow Co Sidney O
American Steel & Wire Co 1420 Rockefeller Bldg Cleveland 13 O
American Steel Tool Mfg Co 42-24 Orchard St Long Island City 1 N Y
American Steel Works Orlando Fla
American Steel Works 1211 W 27th St Kansas City 8 Mo
American Stone Co 1641 S Kinlochhighway St Louis 10 Mo
American Structural Products Corp Box 1035 Toledo 1 Ohio
American Swiss File & Tool Co 400 Trumble St Elizabeth N J
American Technical Society 55th & Drexel Ave Chicago 37 Ill
American Telephone & Telegraph Co 195 Broadway New York 7 N Y
American Text & Sewing Co 1132 Mission San Francisco Calif
American Terra Cotta Corp 228 N LaSalle Chicago 11 Ill
American Textile Products Co 5006 Euclid Cleveland 3 O
American Traction Corp Columbus Ind
American Truck & Body Co Martinsville Va
American Turpentine & Tar Co Ltd 810 S Broad New Orleans La
American Varnish Co 1136 N Branch St Chicago 22 Ill
American & Venetian Tile Co 1625 Oak Kansas City 8 Mo
American Vermiculite Co Inc Ross Mountain Tenn
American Vitriol Products Co Guardian Bldg Cleveland 14 O
American Water Softener Co S E Corner Fourth & Lehigh Ave Philadelphia 33 Pa
American Welding & Mfg Co 190 Dietz Road Warren O
American Well Works 328 N Broadway Aurora Ill
American Wheelbarrow & Equipment Co 451 S Byram St Mishawaka Ind
American Window Glass Co Farmers Bank Bldg Pittsburgh 22 Pa
American Wire Fabrics Corp 500 Fifth Ave New York 18 N Y
American Woodworking Co 1452 N Lowell Ave Chicago 39 Ill
American Woodworking Machinery Co 100 Liberty St Harkensville N J
Amsline Inc 1753 N Honore Chicago 22 Ill
Ames Baldwin Wyrnning Co Parkersburg W Va
Ames Machine Co 2400 17th St San Francisco Calif
Ames Mfg Co Centre Building New Hampshire
Ames Metal Moulding Co 225 East 144th St New York 51 N Y
Ames (W B) Co 150 Homer Ave San Francisco 7 Calif
Amidon Sales Co Elgin O
Ames Sales Co 28 Church Buffalo 2 N Y
Ames (Charles H) Handle Co Stillwell Okla
Anacostia Copper Mining Co Bonnet Mont
Anacostia Sales Co 25 Broadway New York 4 N Y
Anacostia Wire & Cable Co 25 Broadway New York N Y
Anastetter Verner Inc Asuncion Wash
Anchor Concrete Machinery Co 1191 Fairview Columbus 12 O
Anchorage Home Inc Westfield Mass
Anchor Die Strators & Tooling Co Inc Box 311 New Albany Ind
Anchor Lumber Co Parkersburg W Va
Anchor Post Co Pease Div Post Products Inc 6500 Eastern Ave Baltimore 24 Md
Anchor Stone & Range Co New Albany Indiana
Anderson Corp Bayport Minn
Anderson Box Co 700 W Morris St Indianapolis 6 Ind
Anderson John K Co Minneapolis 16 Minn
Anderson Stone Co Inc Anderson Ind
Anderson (V E) Mfg Co Storm St Owensboro Ky
Anderson Pulley Co Memphis Tenn
Andrew Wrench Co Elmhurst Ill
Anemontal Corp of America 14 E 30th St New York N Y
Angeline County Lumber Co Kelly Tex
Angeline Hardware Sales Co Lufkin Tex
Angell Nail & Chisel Co 4580 E 71st St Cleveland 0

Angel Novelty Co 340 Broad St Fitchburg Mass
Angels Box & Lbr Co Angels Camp Calif
Angoff Corp 60 Widdell St Framingham Mass
Angeles Soil Pipe Co Association Ala
Anson & Gilkey Co Merrill Wis
Anthony Co 81 Belmont St Riverport Ill
Anthon Truck Co Box 75 Paducah Ky
Anti-Rust-Build Compound Co Senanton Pa
Anti-Hydro Waterproofing Co 39 Cortland St New York 7 N Y
Aper Brans & Bruns Works 116 Walker New York 13 N Y
Aper Rotax Corp 1070 E 152 St Cleveland 10 O
A-1 Plastic Molders Inc 1415 Diversy Parkway Chicago III
Apex Van Stalk Trading Corp 41 E 42nd St New York 17 N Y
Applon Art Glass Works New Bridge Rd Bergenfield N J
Applon Electric Co 1701-50 Wellington Ave Chicago 13 Ill
Applon Mfg Co Ravaria Ill
Applon Toy & Furniture Co Applon Wis
Applon, J W & Son Inc Box 849 Stas & 850 N Ninth St St Petersburg Fla
Appliance Mfg Co Alliance O
Approved Products Co 295 E 42nd St New York 17 N Y
Arboret Co Ltd 305 Lafleur Montreal Quebec Can
ARB Wood Co Detroit Mich
Arden Mfg Div Rockwell Mfg Co Munn Station Prospect Ill
Ares Metal Products Inc 224 N 2nd Ave Arcadia Calif
Arch Cape Shingle Co Arch Cape Ore
Archer (A W) Co 368 Broadway New York 13 N Y
Archibald-Dunlop-Midland Co 600 Roanoke Bldg Minneapolis 4 Minn
Architectural Model Materials Co 4339 W Diversy Blvd Chicago III
Architectural Plan Service Inc 89-51 164th St Jamaica N Y
Arcus 2701 Bessmer Cleveland 4 O
Arcus-Aluminum Corp 270 Park Ave New York 17 N Y
Arcus Co 333 N Michigan Ave Chicago 1 Ill
Arcus Lumber Co Hardwick S C
Argyle Mfg Co Colchester Ill
Arlidge Corp Fair Lawn N J
Arkansas Lumber Co Little Rock Ark
Arkansas Oak Flooring Co 2590 W Fifth St Pine Bluff Ark
Arkansas Soft Pine Bureau Bayfield Bldg Little Rock Ark
Arkansas Concrete Corp Brazil Ind
Arlington Inc 672 Jenks Ave St Paul 6 Minn
Armen Trasnage & Metal Products Inc 1939 Arden Ave Middleboro O
Armed Steel Corp 1939 Arden Ave Middletown O
Armed Laboratories Commercial & Duran Sts Glendale 3 Calif
Armour & Co Fertilizer Works Ltd 1355 W 31st St Chicago 9 Ill
Armour & Co Sanderp Div 1253 W 31st St Chicago 9 Ill
Armstrong Ray & Co 5554 Northwest Hwy Chicago 30 Ill
Armstrong Bros Tool Co 5300 W Armstrong Chicago 20 Ill
Armstrong Co 4065 S LaSalle St Chicago 9 Ill
Armstrong Cork Co 1010 Concord St Lancaster Pa
Armstrong Furnace Co 851 W 3rd Ave Columbus O
Armstrong Mfg Co 533 Knowlton St Bridgeport 3 Conn
Armstrong Paint & Varnish Works 1730 South Kilburn Chicago 22 Ill
Armstrong Products Corp Huntington 12 W Va
Armstrong Paint Co Inc 570 W 46th St New York 10 N Y
Arnold Paint Corp Box 9 Malapasc N Y
Arpe Corp New Holstein Wis
Arps Expansion Bolt Co 1430 N Boone St Marion O
Arroyo Products Co 30 S Market St Brooklyn 6 N Y
Arroyo Hart & Hegeman Elco Co 403 Hawthorne St Hartford 9 Conn
Arroyo Lock Corp 762 Myrtle Ave Brooklyn 11 N Y
Arroyo Mfg Co Box 468 Independence Kans
Arroyo Products Corp Grand Rapids Mich
Arroyo Tank Co Inc 15 Barrett St Buffalo 15 N Y
Arroyo Smith & Die Co 4700 Bellvue Ave Los Angeles Calif
Art Concrete Works 282 S Fair Oaks Pasadena Calif
Artcraft Ornamental Iron Co 724 E Hudson St Columbus 11 O
Artcraft Veneer Blind Mfg Co 2940 Olive St St Louis Mo
Artex Products Co Upper Darby Pa
Artex Green Corp 702 Sterling Pl Brooklyn N Y
Artistic Veneer Blinds Co 1855 Park Ave New York N Y
Art Mirror & Glass Specialty Co 4401 W Carroll Chicago III
Arvey Corp 3462 N Kimball Ave Chicago 18 Ill
Arvis Mfg Co Glendale Calif
Asbestos Corp 5300 Thousipiteulas St New Orleans 15 La
Asbestos Asphalt & Insulation Inc 2100 Fairlawn Ave Chicago 47 Ill
Asbestos Co of Texas Box 1082 Houston 1 Tex
Asbestos Service Co Waukesha 13 Wis
Asbestos Supply Co 8 10th Street St Spokane Wash
Ash Brick Co Van Wyck S C
Ash Green Lime & Portland Cement Co Fairfax Bldg Kansas City Mo
Associated Plywood Mills Eugene Ore
Associated Wood Products Portland Oregon
Astoria Spruce & Lumber Export Co Astoria Ore
Astoria Co 2917 W 25th St Cleveland 13 O
Astoria Brick & Tile Co Astoria Ore
Athens Stone Works Hicks & Mabry Sts Athens Tenn
Atlas Mfg Co 6418 S Ardmore Chicago Ill
Atlas Machine & Foundry Co 25 Chestnut Hill Ave Athol Mass
Atlas (E C) Co 402 S Illinois St Indianapolis 9 Ind
Atkinson Mfg Co Ludington Mich
Atlanta Oak Flooring Co Atlanta 1 Ga
Atlanta Stone Works Atlanta Ga
Atlanta Siding Co Columbus Ga
Atlanta Lumber Co 88 Broad St Boston Mass
Atlantic Sewer Works Hartford Conn
Atlantic Tank Corp 1211 Tenney Ave North Hemp N J
Atlantic Transportation Co Dixie Yale & Towne Mfg Co 101 W 87 Chicago 20 Ill

American Plan Service Co 2701 Biscayne Blvd Miami Fla
American Plywood Corp New London Wis
American Radiator & Standard Sanitary Corp P O Box 1226 Pittsburgh 30 Pa
Americas Refrigerator & Machine Co N Minneapolis Minn
American Rock Wool Corp 20 N Wacker Drive Chicago Ill
American Rolling Mill Co Middletown Ohio
American Roof Truss Co 1030 E 61th St Chicago III
American Rubber Corp Huntsville Ala
American Rubber Products Corp 151 E 50th St New York 17 N Y
American Roe & Block Co Menominee Mich
American Roof Proof Co Inc 302 Butler St Brooklyn N Y
American Sanitary Mfg Co Abingdon Ill
American Sash & Door Co 16th & Bellefontaine Kansas City 1 Mo
American Saw & Mfg Co Baylston & Emery Sts Springfield Mass
American Saw Mill Machinery Co 169 Main St Hackettstown 2 N J
American Scale Co 919 Baltimore Ave Kansas City 6 Mo
American Screw Co 121 Stevens St Providence 1 R I
American Sheet Metal Works 325 N Alexander St New Orleans La
American Silica Sand Co Ottawa Ill
American Skin & Foundry Co Hyde St Racine Wis
American Sliding Door Hardware Corp 2084 First Ave New York 29 N Y
American Society of Heating & Ventilating Engineers 51 Madison Ave New York 17 N Y
American Southern Corp 1000 8th S Nashville 10 Tenn
American Stained Shingle Co Spruce & Denison Ave Columbus 8 O
American Steel Door Co 825 Grinnel Detroit 15 Mich
American Steel & Iron Works 5000 & S Loop Chicago 21 Ill
American Steel Scraper & Wheelbarrow Co Sidney O
American Steel & Wire Co 1420 Rockefeller Bldg Cleveland 13 O
American Steel Tool Mfg Co 42-24 Orchard St Long Island City 1 N Y
American Steel Works Orlando Fla
American Steel Works 1211 W 27th St Kansas City 8 Mo
American Stone Co 1641 S Kinlochhighway St Louis 10 Mo
American Structural Products Corp Box 1035 Toledo 1 Ohio
American Swiss File & Tool Co 400 Trumble St Elizabeth N J
American Technical Society 55th & Drexel Ave Chicago 37 Ill
American Telephone & Telegraph Co 195 Broadway New York 7 N Y
American Text & Sewing Co 1132 Mission San Francisco Calif
American Terra Cotta Corp 228 N LaSalle Chicago 11 Ill
American Textile Products Co 5006 Euclid Cleveland 3 O
American Traction Corp Columbus Ind
American Truck & Body Co Martinsville Va
American Turpentine & Tar Co Ltd 810 S Broad New Orleans La
American Varnish Co 1136 N Branch St Chicago 22 Ill
American & Venetian Tile Co 1625 Oak Kansas City 8 Mo
American Vermiculite Co Inc Ross Mountain Tenn
American Vitriol Products Co Guardian Bldg Cleveland 14 O
American Water Softener Co S E Corner Fourth & Lehigh Ave Philadelphia 33 Pa
American Welding & Mfg Co 190 Dietz Road Warren O
American Well Works 328 N Broadway Aurora Ill
American Wheelbarrow & Equipment Co 451 S Byram St Mishawaka Ind
American Window Glass Co Farmers Bank Bldg Pittsburgh 22 Pa
American Wire Fabrics Corp 500 Fifth Ave New York 18 N Y
American Woodworking Co 1452 N Lowell Ave Chicago 39 Ill
American Woodworking Machinery Co 100 Liberty St Harkensville N J
Amsline Inc 1753 N Honore Chicago 22 Ill
Ames Baldwin Wyrnning Co Parkersburg W Va
Ames Machine Co 2400 17th St San Francisco Calif
Ames Mfg Co Centre Building New Hampshire
Ames Metal Moulding Co 225 East 144th St New York 51 N Y
Ames (W B) Co 150 Homer Ave San Francisco 7 Calif
Amidon Sales Co Elgin O
Ames Sales Co 28 Church Buffalo 2 N Y
Ames (Charles H) Handle Co Stillwell Okla
Anacostia Copper Mining Co Bonnet Mont
Anacostia Sales Co 25 Broadway New York 4 N Y
Anacostia Wire & Cable Co 25 Broadway New York N Y
Anastetter Verner Inc Asuncion Wash
Anchor Concrete Machinery Co 1191 Fairview Columbus 12 O
Anchorage Home Inc Westfield Mass
Anchor Die Strators & Tooling Co Inc Box 311 New Albany Ind
Anchor Lumber Co Parkersburg W Va
Anchor Post Co Pease Div Post Products Inc 6500 Eastern Ave Baltimore 24 Md
Anchor Stone & Range Co New Albany Indiana
Anderson Corp Bayport Minn
Anderson Box Co 700 W Morris St Indianapolis 6 Ind
Anderson John K Co Minneapolis 16 Minn
Anderson Stone Co Inc Anderson Ind
Anderson (V E) Mfg Co Storm St Owensboro Ky
Anderson Pulley Co Memphis Tenn
Andrew Wrench Co Elmhurst Ill
Anemontal Corp of America 14 E 30th St New York N Y
Angeline County Lumber Co Kelly Tex
Angeline Hardware Sales Co Lufkin Tex
Angell Nail & Chisel Co 4580 E 71st St Cleveland 0

Angel Novelty Co 340 Broad St Fitchburg Mass
Angels Box & Lbr Co Angels Camp Calif
Angoff Corp 60 Widdell St Framingham Mass
Angeles Soil Pipe Co Association Ala
Anson & Gilkey Co Merrill Wis
Anthony Co 81 Belmont St Riverport Ill
Anthon Truck Co Box 75 Paducah Ky
Anti-Rust-Build Compound Co Senanton Pa
Anti-Hydro Waterproofing Co 39 Cortland St New York 7 N Y
Aper Brans & Bruns Works 116 Walker New York 13 N Y
Aper Rotax Corp 1070 E 152 St Cleveland 10 O
A-1 Plastic Molders Inc 1415 Diversy Parkway Chicago III
Apex Van Stalk Trading Corp 41 E 42nd St New York 17 N Y
Applon Art Glass Works New Bridge Rd Bergenfield N J
Applon Electric Co 1701-50 Wellington Ave Chicago 13 Ill
Applon Mfg Co Ravaria Ill
Applon Toy & Furniture Co Applon Wis
Applon, J W & Son Inc Box 849 Stas & 850 N Ninth St St Petersburg Fla
Appliance Mfg Co Alliance O
Approved Products Co 295 E 42nd St New York 17 N Y
Arboret Co Ltd 305 Lafleur Montreal Quebec Can
ARB Wood Co Detroit Mich
Arden Mfg Div Rockwell Mfg Co Munn Station Prospect Ill
Ares Metal Products Inc 224 N 2nd Ave Arcadia Calif
Arch Cape Shingle Co Arch Cape Ore
Archer (A W) Co 368 Broadway New York 13 N Y
Archibald-Dunlop-Midland Co 600 Roanoke Bldg Minneapolis 4 Minn
Architectural Model Materials Co 4339 W Diversy Blvd Chicago III
Architectural Plan Service Inc 89-51 164th St Jamaica N Y
Arcus 2701 Bessmer Cleveland 4 O
Arcus-Aluminum Corp 270 Park Ave New York 17 N Y
Arcus Co 333 N Michigan Ave Chicago 1 Ill
Arcus Lumber Co Hardwick S C
Argyle Mfg Co Colchester Ill
Arlidge Corp Fair Lawn N J
Arkansas Lumber Co Little Rock Ark
Arkansas Oak Flooring Co 2590 W Fifth St Pine Bluff Ark
Arkansas Soft Pine Bureau Bayfield Bldg Little Rock Ark
Arkansas Concrete Corp Brazil Ind
Arlington Inc 672 Jenks Ave St Paul 6 Minn
Armen Trasnage & Metal Products Inc 1939 Arden Ave Middleboro O
Armed Steel Corp 1939 Arden Ave Middletown O
Armed Laboratories Commercial & Duran Sts Glendale 3 Calif
Armour & Co Fertilizer Works Ltd 1355 W 31st St Chicago 9 Ill
Armour & Co Sanderp Div 1253 W 31st St Chicago 9 Ill
Armstrong Ray & Co 5554 Northwest Hwy Chicago 30 Ill
Armstrong Bros Tool Co 5300 W Armstrong Chicago 20 Ill
Armstrong Co 4065 S LaSalle St Chicago 9 Ill
Armstrong Cork Co 1010 Concord St Lancaster Pa
Armstrong Furnace Co 851 W 3rd Ave Columbus O
Armstrong Mfg Co 533 Knowlton St Bridgeport 3 Conn
Armstrong Paint & Varnish Works 1730 South Kilburn Chicago 22 Ill
Armstrong Products Corp Huntington 12 W Va
Armstrong Paint Co Inc 570 W 46th St New York 10 N Y
Arnold Paint Corp Box 9 Malapasc N Y
Arpe Corp New Holstein Wis
Arps Expansion Bolt Co 1430 N Boone St Marion O
Arroyo Products Co 30 S Market St Brooklyn 6 N Y
Arroyo Hart & Hegeman Elco Co 403 Hawthorne St Hartford 9 Conn
Arroyo Lock Corp 762 Myrtle Ave Brooklyn 11 N Y
Arroyo Mfg Co Box 468 Independence Kans
Arroyo Products Corp Grand Rapids Mich
Arroyo Tank Co Inc 15 Barrett St Buffalo 15 N Y
Arroyo Smith & Die Co 4700 Bellvue Ave Los Angeles Calif
Art Concrete Works 282 S Fair Oaks Pasadena Calif
Artcraft Ornamental Iron Co 724 E Hudson St Columbus 11 O
Artcraft Veneer Blind Mfg Co 2940 Olive St St Louis Mo
Artex Products Co Upper Darby Pa
Artex Green Corp 702 Sterling Pl Brooklyn N Y
Artistic Veneer Blinds Co 1855 Park Ave New York N Y
Art Mirror & Glass Specialty Co 4401 W Carroll Chicago III
Arvey Corp 3462 N Kimball Ave Chicago 18 Ill
Arvis Mfg Co Glendale Calif
Asbestos Corp 5300 Thousipiteulas St New Orleans 15 La
Asbestos Asphalt & Insulation Inc 2100 Fairlawn Ave Chicago 47 Ill
Asbestos Co of Texas Box 1082 Houston 1 Tex
Asbestos Service Co Waukesha 13 Wis
Asbestos Supply Co 8 10th Street St Spokane Wash
Ash Brick Co Van Wyck S C
Ash Green Lime & Portland Cement Co Fairfax Bldg Kansas City Mo
Associated Plywood Mills Eugene Ore
Associated Wood Products Portland Oregon
Astoria Spruce & Lumber Export Co Astoria Ore
Astoria Co 2917 W 25th St Cleveland 13 O
Astoria Brick & Tile Co Astoria Ore
Athens Stone Works Hicks & Mabry Sts Athens Tenn
Atlas Mfg Co 6418 S Ardmore Chicago Ill
Atlas Machine & Foundry Co 25 Chestnut Hill Ave Athol Mass
Atlas (E C) Co 402 S Illinois St Indianapolis 9 Ind
Atkinson Mfg Co Ludington Mich
Atlanta Oak Flooring Co Atlanta 1 Ga
Atlanta Stone Works Atlanta Ga
Atlanta Siding Co Columbus Ga
Atlanta Lumber Co 88 Broad St Boston Mass
Atlantic Sewer Works Hartford Conn
Atlantic Tank Corp 1211 Tenney Ave North Hemp N J
Atlantic Transportation Co Dixie Yale & Towne Mfg Co 101 W 87 Chicago 20 Ill

Atlas Abrasives Corp 461-12th St Brooklyn 15 N Y
Atlas-Ausonia Co 51 811es Lane North Haven Conn
Atlas Bolt & Screw Co 1100-1101 Irving Blvd Cleveland
10 D

Atlas Car & Mfg Co 1130 Ivanhoe Cleveland 10 O
Atlas Conveyor Co First & 15th Sts Flintstone Wis
Atlas Fence Co Allen St & Center Ave Philadelphia 4 Pa
Atlas Floor Surfacing Machinery Corp 250 E 24th St New
York 10 N Y

Atlas Mineral Products Co Metrotech Pk
**Atlas Plywood Corp Statter Bldg Boston
Mass**

**Atlas Press Co 1973 N Pitcher St Kalamazoo
Mich**

Atlas Shear Co Bridgport Conn
Atlas Tank Corp Sherman & Bowler Sts Fairhaven Mass
Atlas Tank Mfg Co San Francisco Calif

Atlas Tile Co Cour d'Alene Idaho
Atlas-Tyler Clay Co 208 W Washington St Philadelphia 5
Pa

Autorn Foundry Co Inc Dallas & Eleventh Sts Auburn Ind
Autorn Slank Co 7 Columbus Auburn N Y

Audel (Theodore) & Co 49 W 23rd St N Y N Y
Auer Register Co 2608 Payne Ave Cleveland 14 O
Augusta Hardware Co Augusta Ga

Augusta Lumber Co Augusta Me
Aurora (A E) Bay Village O
Aurora Equipment Co 675 Prairie Aurora Ill

Aurora Pump Co 460 E Lomb St Aurora Ill
Austin & Edly Inc 117 Broad St Boston Mass
Austin (M B) Co 1405 Shermer Northbrook
Chicago Ill

Austral Sales Corp 101 Park Ave New York 17 N Y
Auto Electrical Specialty Co 34-20 45th St Long Island
City N Y

Automotive 1445 Wood Ave Ardmore Pa
Automotive Co 20-55 Washington Ave Philadelphia Pa
Autographic Register Co 215 Seventh St Hoboken N J

Autolube Lubricants Co 1331 W Evans Denver 9 Colo
Automatic Electric Co Inc Pottstown Pa
Automatic Gas Equipment Co Bradford Ave Pittsburgh 21
Pa

Automatic Machine Products Co Blueknight Dr 63 Court
St Middletown Conn
Automatic Transportation Co Div Yale & Towne Mfg Co 53
W 21st St New York 11 N Y

Automatic Washer Co Newton Ia
Auto Sign Display Co St Louis Mo
Automatic Sales Div Verdo Co 7400 E 12th St Kansas
City Mo

Automatic Fan & Blower Co 222 W Adams Chicago 6 Ill
Autovox Co Kaskville Conn
Awward Co Wayne Township Paterson N J

Awling Hardware Co Baltimore 12 Md
Baling & Brierley & Co 410 Greenway St New York 14 N Y
Ayre & Brown Shingles Castle Rock Wash
Ayer Products 4905 S Santa Fe Los Angeles Calif

B

Babcock Lumber Co Frick Bldg Pittsburgh 19 Pa
Babcock & Wilcox Co 85 Liberty St New York 6 N Y

Babcock (W W) Co Bath N Y
Babcock (Samuel) & Co 610 Greenway St New York 14 N Y
Bader Corrugating Co La Crosse Wis

Bader Wire & Iron Wks Inc 2929 W Cleveland Ave Mil-
waukee 7 Wis
Bair American Window Co 2123 N 10th St Cleveland 15 O

Bagnall (L N) P O Box 2496 Winston-Salem N C
Bailey Lumber Co 1160 E 9th Ave New York 17 N Y
Bailey Lumber Co Bluefield W Va

Bailey & Weston Boston Mass
Bald Vanorder Lumber Co 3603 Regal Spokane 14 Wash
Bakelite Corp 30 E 42nd St New York 17 N Y

Baker Brush Co Grand Corner Green St New York N Y
Baker Industrial Truck Div Baker-Kaulling Co Leader Bldg
Cleveland 14 Ohio
Baker Mfg Co Evansville Wis

Baker Paint & Varnish Co 224 Sheridan Ave Jersey City 4
N J
Baker-Ross Inc 602 W McCarty St Indianapolis 6 Ind

Bakersfield Sandstone Co Bakersfield Calif
Baker-Thomas Lime & Cement Co Phoenix Ariz
Balduino-Hill Co 500 Browning Ave Trenton 2 N J

Baltimore Co Wayne Pa
Balua Ecuador Lumber Corp 502 Fifth Ave New York 18
N Y

Baltimore Brick Co 3220 E Madison Baltimore Md
Baltimore Coopage Tank & Tower Co Ostend & Crooks Sts
Baltimore 30 Md

Baltimore Paper Box Co Key Hwy Baltimore Md
Baltimore Portland Cement Corp Mt Winans Ave Baltimore
18 Md

Baltimore Tool Wks 1110 Race St Baltimore 20 Md
**Baltz (R N) & Co 1009 Harvard Terrace
Evanston Ill**

**Bambrick (Richard J) 125 Broad St New
York 6 N Y**

Bandy & Yeoman Inc Chicago Ill
Banks Steel Post Co Newark N J
Banner Mfg Co 1160 Greenway Columbus 12 Ohio

Bantam Mfg Co Boston 11 Mass
Barber-Colman Co 115 Loomis St Rockford Ill

Barber Gas Burner Co Cleveland Ohio
Barber-Groves Co 620 W Park Ave Aurora Ill
Barber Mfg Co Inc Minneapolis 9 Minn

Barber-Brook Co 6133 Linwood Ave Shreveport La
Barrels Mfg Co 1160 E Madison Baltimore 18 N Y
**Barclay Mfg Co 385 Gerard Ave New York
N Y**

**Barco Manufacturing Co 1001 W Winemack
Ave Chicago 40 Ill**

Barclay Mfg Co Bryan O

Barger (P M) Lumber Co Statesville N C
Barland Weatherstrip Material Co 1958 E 59th St Cleve-
land 3 O

Barlow & Seelig Mfg Co Elton Wis
Baronah (Chas H) Greeneside Ind
Barnes Lumber Co Charlottesville Va

Barnes Mfg Co 631 N Main St Mansfield O
Barnes Products Inc Detroit Mich
Barnes Tool Co 150-06-61 Brewery St New Haven Conn

Barnhill Mfg Co Charlotte N C
Barruhart (A W) Co 141 Highland St Port Chester N Y
Rarr (W M) & Co P O Box 3518 Memphis 6 Tenn
Barrell (William L) Co of N Y 40 Worth St New York 13
N Y

Barrett-Crevas Co 4631 S Western Blvd Chicago 9 Ill
**Barrett Div Allied Chemical & Dye Corp 40
Rector St New York 6 N Y**

Barrett Varnish Co 1532 S 50th St Cicero 50 Ill
Barratt (William L) 24 School St Bristol Conn
Barnes Lock Wks 24th & Commonwealth Aves N Chicago
Ill

Barrett (C O) & Snow Co 6200 Harvard Ave Cleveland
5 Ohio
Bassett Industries 302 E Fourth St Vinton Ia

Bassick Co Howard Ave Bridgeport 3 Conn
Bastian-Blossing Co 4229 W Peterson Chicago Ill
Batavia Clamp Co Inc Batavia N Y

Bate (J Herbert) Inc N Y N Y
Bates Prefabricated Structures Burlingame Calif
Bauer (Frank F) Marble Co 4332 W Melrose Chicago Ill

Bauer Mfg Co 1610 Rosoma St Wauver O
Baughman (M Inc Jerseyville Ill
Baxter (J B) & Co 2900 Rush St San Francisco 4 Calif

Baylor (William C) Block Co 801 S Henry Bay City Mich
Bay City Lumber Co Aberdeen Wash
Bay City Shovel Inc 2101 Center Bay City Mich

Bay (Samuel) Co 49 E Jackson Blvd Chicago 4 Ill
Bayley (Wm) Co 1200 Warber St Springfield 99 O
Ray Ridge Specialty Co Trenton N J

Bay State Abrasive Products Co Farmer St Westboro Mass
Ray State Belting Co 234 Sumner St Boston 10 Mass
Ray State Stamping Co 270 Chandler St Worcester 1 Mass

Ray W E Engineering & Supply Co Houston Texas
Beach Mfg Co Mill River St Montrose Pa
Beason Brick Co 619 Beason Bldg Wichita 2 Kans

Beach Chain Mfg Co 64 Mt Grove St Bridgeport 3 Conn
Beach Lumber Co Jacksonville Fla
Beal Pigs & Tank Corp 1045 N Columbia Blvd Portland
Ore

Bealear (E N) Lumber Co Greensboro N C
Bealear Lumber Co Beatrice Ia
Bealear Steel Tank Mfg Co S Beatrice Neb

Bealear Glass Co Jacksonville Fla
Bealear Wear Rubber Co Inc 129 Washington Ave So Hopkins
Ill

Beatty Art Crafts 2055 Brookfield Rd Pittsburgh 16 Pa
Beaver Art Metal Corp Ellwood City Pa
Beaver Mfg Co 800 Lake St Ingewald Calif

Beaver Pipe Tools Inc 600-100 State Ave Warren O
Beh & Co Inc 1150 Broadway New York N Y

**Behr-Manning Corp Div Norton Co 933 Sid-
ford St Troy N Y**

Beicher (J B) Rex N Y
Beicher (W A) Lumber Co Birmingham Ala
Beicher (W C) Lumber Co Trentville Ala

Belden Machine Co 1108 Whalley New Haven 15 Conn
Belden Brick Co Mount Ohio
Belgian Glass Co 1000 Valley Seattle 1 Wash

Bell (E S) Co U S Route 30 Hillsboro Ill
Bell Electric Co 1844 W 21st St Chicago Ill

**Bell & Gossett Co 8200 Austin Merton
Grove Ill**

Bellows-Plywood Corp Bellingham Wash
Bellows Co 623 S State St Appleton Wis
Bell Sound Systems 555 Marion Columbus 7 Ohio

Bellows Lumber Co Columbus Miss
Belmont Smelting & Refining Wks Inc 330 Belmont Ave
Brooklyn 7 N Y

**Belsaw Machinery Co 315 Westport Rd Kan-
sas City 2 Mo**

Belson Mfg Co 111 Franklin St Aurora Ill
Belwood Mfg Co Ackerman Miss
Bemis Bros Bag Co 408 Pine St St Louis 2 Mo

Bemis & Call Springfield Mass
Bemis Hardwood Lumber Co Robbinsville N C
Bemis Mfg Co Sheboygan Falls Wis

**Bendix Home Appliances Inc Div Avco Mfg
Corp 3300 W Sample St S Bend 24 Ind**

**Bendix Mfg Co 192 Lexington Ave New York
16 N Y**

Bendix Radio Div Bendix Aviation Corp Baltimore 4 Md
Bengal Co 214 N Nicholas Ave New York 29 N Y
Ben-Hur Mfg Co Milwaukee 12 Wis

Bennett Electric Co Des Plaines Ill
Bennett Industries Inc Peotone Ill
**Bennett-Ireland Inc 1151 Market St Norwich
N Y**

Bennett Lumber Corp Oliver & NYCRR No Tonawanda N Y
Bentley Mfg Co El Mechanic St Alden N Y
Benson Lumber Co San Diego 12 Calif

Bentley (J A) Lumber Co Zimmerman La
Bentley Bros 320 N 2nd St St Louis 2 Mo
Berg (F O) Co Spokane Wash

Berg Exp Corp Mansfield Wis
Berg (John) Mfg Co 5219 S La Salle Chicago Ill
**Berger Mfg Co Div Republic Steel Corp 1038
Belden Ave NE Canton 5 O**

Berger (Thomas W) Inc E 6 Fourth St Cincinnati O
Berkeley Metals Inc 118 Greenport Brooklyn N Y
Berkeley Specialties Co Berkeley Calif

Bernard (Philip) Co Sioux City Ia
Berna Mfg Co 3050 N Rockwell St Chicago 18 Ill
Bernstein Bros Pueblo Colo

Berna Co (Ohio) Inc 280 Lyell Ave Rochester 6 N Y
Bertens Surtage Div Yale & Towne Mfg Co Berrien Spring
Mich
Berry Bros Inc 211 16th St Detroit 7 Mich

Berry (Paul B) Grand Rapids 4 Mich
Bertram Co 40 N Hutchinson St Philadelphia Pa

Besser Mfg Co 125-50th St Alpena Mich
**Besser Disappearing Stair Co 1900 E Mar-
ket St Akron 5 O**

Best Homes Inc 628 W Lake St Peoria Ill
Best Lumber Co 1000 S Cass Gaithersburg Md

Bestle Mfg Co 419 S Sultana Ontario Calif
Best Universal Lock Co 10 N Senate Indianapolis 4 Ind
Bestwood Cedar Shingle Co Ltd Barren P C Canada

Bethlehem Steel Co South Bethlehem Pa
Bethier Drill Tools Co 950 Harbor Rd Egg Harbor City N J
**Better Homes & Gardens 1714 Locust St
Des Moines 3 Iowa**

Betty (R G) Lumber Co Montgomery Ala
Bovin Gros Mfg Co E Hampton Conn
Biance Mfg 2736 Victor St St Louis Mo

Bibb Mfg Co Main & Water Sts Muncie Ga
Biddle Co 612 S Main St St Louis 2 Mo
Biddle Purchasing Co 250 Broadway New York 8 N Y

Biehman-Merke Shingle Co Southfield Brown
Bigelow-Sanford Carpet Co Inc 1140 Madison Ave New York
N Y

Biggell Machine Co 516 Seventh St Grand Rapids 4 Mich
Bigco Co 164 Hallock Ave New Haven 6 Conn
Biggles Lumber Co Orem Utah

Big-Jax Co 190 Wyse Rd Archbold O
Billings & Spencer Co 12 Laurel St Hartford 1 Conn

Bilhamer (Nels) Inc 1844 13th Ave Rockford Ill
Bills Warehouse Bldg Co 7461 S Lake Park Chicago Ill
Binghamton Brick Co Inc Binghamton N Y

Binks Mfg Co 3124 W Carroll Chicago 12 Ill
Bismarck & Co 207 N Main St Houston 1 Texas
Bird & Son Inc 47 Wilson St E Walpole Mass

Birge Co Inc Niagara & Maryland Sts Buffalo 1 N Y
Birna Products 2605 Main St Buffalo 14 N Y
Birmingham Building Products Corp 1617 Second Birming-
ham 5 Ala

Birmingham Ornamental Iron Co Birmingham Ala
Birmingham Stone & Range Co Birmingham Ala
Birtman Electric Co 4140 W Fullerton Chicago 30 Ill

Rishee Linseed Co Lincoln Liberty Bldg Philadelphia Pa
Black Hawk Inc 333 9th Ave Kansas City Mo
Black Cat Corp Hattiesburg Miss

**Black & Decker Mfg Co 600 E Pennsylvania
Ave Towson 4 Md**

Black Hills Clay Products Co Belle Fourche S Dak
Black (John H) Co 505 Delaware Buffalo 2 N Y
Black (J W) Lumber Co Corvallis Ariz

Black Mfg Co Parkton 50 Md
Blackmer & Post Pipe Co 2100 Harvard St Louis Mo
Black Panther Tool Co 401 N Broad St Philadelphia 8
Penn

Black Sivalis & Bryson Inc 720 Delaware Kansas City Mo
Blackstone Corp 1051 Allen Jamestown N Y

Blackburn Corp White Pines Calif
Black Brick Co Cumberland Center Me
Blackell Powell Co 41 Berkeley St Philadelphia Pa

Riatt (Frank I) Co Inc Battlemune Fla
Blaw-Knox Div Blaw-Knox Co Farmers Bank Bldg Pitts-
burgh 1 Pa

Black (T C) Plywood Co Inc 363 Park Ave E Hartford Conn
Black-Lift Co Mt Vernon O
Blanchard Stewart & Welch 804 Standard Bank Bldg Van-
couver B C Canada

Bloomington Limestone Co Box 44 Bloomington Ind
Blount (G I) Co Everett Mass
Blount Lumber Co Laocena N Y

Blooville Co of America Div Hachmeister Inc 23rd & Fulton
Pittsburgh Pa

R L Shingle Co Arlington Wash
B L Tool & Machine Co Plainville Conn
Blount Diamond Corp 1630 S Main St Los Angeles Calif

Blount Corp 2500 La Grange Toledo 8 Ohio
Blue Mountain Mills John Day Ore

**Blue Ridge Div Libby-Wheeler Ford Glass Co
Nicholas Bldg 12th Floor Toledo 3 Ohio**

Blue Ridge Glass Corp Nichols Bldg Toledo O
Blue Rider Tile Co Inc Henry Va
Blue Star Products Fairfield Ia

**Blum (Julius) & Co Inc 532 W 22nd St
New York 11 N Y**

Bucary Mfg Corp 2227 Rud E El Monte Calif
Buckner Lumber Co Spokane Wash
Budin (C P) Lumber Co Memphis Tenn

Budington Mfg Co 2403 Republic Bldg San Francisco Calif
Bullfinch Lumber Co 164 W Wisconsin Ave Milwau-
kee 8 Wis

Bullfinch Lumber Co of Huntsville Huntsville Tex
Burgert & Co Washington Ave Paterson N J
Boards Steel Corp Milton Pa

**Boice Crane Co 930 W Central Ave Toledo
6 O**

Boise Fayette Lumber Co Boise Fayette Bldg Boise Idaho
Boise (Peter) Machine Wks 124 N Aberdeen Chicago Ill
Bommer Spring Hinge Co Inc 251-271 Classon Ave Brook-
lyn 5 N Y

Bonafide Mills Inc 295 Fifth Ave New York N Y
Bond Electric Corp Div Oilu Industries Inc New Haven 4
Conn

Bonded Scale & Machine Co 2178 S Third Columbus 7
Ohio
Bonidine Chemical Co 384 N Geneva Utes 4 N Y

Bonifay (R M) Lumber Co Newark Wis
Booner (R M) Nelson N Y
**Boone Service Dept American Builder Sim-
mons-Boardman Publishing Corp 30 Church
St New York 7 N Y**

Booth-Kelly Lumber Co Eugene Ore
Boydlen Co Chemical Div 150 Madison Ave New York 17
N Y

Bow Wood Co Maspeth L I New York
Bow Wood Products Co Inc Belleville S C
Bow Mfg Co 1938 Ferry St Kewanee Ill

Bostitch Inc 1101 Mechanic St Westery N J
Boston Brass Co Inc Waltham 54 Mass
Boston Insulated Wire & Cable Co Bag St Dorchester 25
Mass

Boston Lighting Red Co Dedham Mass
Boston Varnish Co 114 Second St Everett Station Boston
49 Mass

Boston Water Meter & Rubber Co. Cambridge Mass
Bostrom Brady Mfg Co 537 Stonewall St S W Atlanta Ga
 Busick-Gasdell Co Newark Ohio
 Buswick Laboratories Bridgeport 5 Conn
Bestwick Steel Lath Co 101 Heaton Ave Niles O
 Beworth Manufacturing Co 6723 Denison Cleveland Ohio
 Bowen (A M) Lumber Co Dyrarong Tenn
 Bowens Battery Co Mansington W Va
 Bowenshin Plastic Co Rowenston Ohio
 Bowler Lumber Co Bowler N Y
Bowser Inc Incinerator Div Cairo Ill
 Boydton Mfg Co Boydton Va
 Boyle James H: Mfg Co 4117 N Kilpatrick Chicago Ill
 Boyer Chemical Laboratory Co 2234 S Wabash Chicago Ill
 Boyle Mfg Co Los Angeles Calif
 Boyle-Midway Inc 22 E 40th St New York 16 N Y
 Bradford Gear Works Croyton Ill
Bradford Machine Tool Co 657-671 Evans St Cincinnati 4 O
 Breadham & Co Piedmont Bldg Greensboro N C
 Breadley R: R: & Co 25 W 52nd St New York 19 N Y
Bradley Lumber Co of Ark Warren Ark
 Bradley Miller & Co Bay City Mich
 Bradley & Wooman Co 2629 N Dearborn Chicago 16 Ill
 Bradley Machine Co Buffalo N Y
 Brady Conveyors Corp 24 W Jackson Blvd Chicago 4 Ill
Brainard Steel Co 1940 Larchmont Ave Warren 2 O
 Brainerd Mfg Co N Washington & Harris E Rochester N Y
 Braier Humes Inc N Erie Rock Ark
 Branette Curdage Co Hickory N C
 Brans Mfg Co Harvey Ill
 Brantford Harmon Co Wabash Bldg Birmingham Mich
 Brandt W K Co Wabash Bldg Birmingham Mich
 Brandt O G Co 615 S Paulina St Chicago 12 Ill
 Brandt L J Lumber Co Stuttgart Ga
 Brazil Hoop Brick & Tile Co Brazil Ind
 E & K Co Box 95 Plain Tex
 Breese-White Mfg Co Eads Ark
 Breinig Bros 1st & Harrison St Hoboken N J
 Brennan (Chas W) Co 2045 Reading Rd Cincinnati 2 O
 Brennan-Titchener Corp 118 E 13th St Cincinnati 2 O
 Bremer Bros Whiting & Co Shaker St Waupun Wis
 Briar Hill Stone Co Glenmont O
 Bridal Falls Shingle Co Waukesha Wash
 Bridger Lumber Co Bessemer Ore
 Bridgeport Brass Co 70 Grand St Bridgeport 2 Conn
 Bridgeport Chain & Mfg Co 1106 Crescent Ave Bridgeport 1 Conn
 Bridgeport Fabrics Inc 165 Holland Ave Bridgeport 1 Conn
 Bridgeport Hardware Mfg Corp 100 Seaside Park Bridgeport 5 Conn
 Bridgeport Safety Entry Wheel Co Bridgeport Conn
 Bridgeport W P Jarrett Co 1313 St. Milwaukee Wis
 Bridgerton Brick Co Bridgewater Mass
Briggs Mfg Co 3001 Miller Ave Detroit 11 Mich
 Briggs-Matson Co Inc 85 Paris St. Everett 49 Mass
 Briggs & Stratton Corp 2741 N 13th St Milwaukee Wis
 Bright Star Battery Co 60 5th Ave. Clifton N J
 Brikerette Associates Inc Grand Rapids Michigan
 Brille Mfg Co 60 John St Brooklyn 1 N Y
 Brisk Brick Co 222 N LaSalle Chicago Ill
 Brisk Waterproofing Co Inc 103 Park Ave New York 17 N Y
 Bristol Co Waterbury 91 Conn
 British Columbia Forest Products Ltd 1022 Metropolitan Bldg Vancouver B C Canada
 Bristol Door & Lumber Co Bristol Tenn
 Britvic Mfg Co 8 Kearney N Y
 Broadway Machine Co Inc Middletown N Y
 Broadway Rubber Mfg Co 529 E Broadway Louisville 2 Ky
 Brown Mfg Co Inc 1660 N Water St Milwaukee 2 Wis
 Brown Co Inc 2841 S Ashland Chicago Ill
 Brownback Motor Co Inc Cortland N Y
 Brownback & Baerens Bore Co 4303 N Union Blvd St Louis 8 Mo
 Brownell Wire Goods Co 105 E 3rd St Cincinnati O
 Brownhoun Pressed Brick & Mfg Co Brookhaven Miss
 Brooklyn Coppage Co Sumter N C
 Brooks Brick Co Brewer Mo
 Brooks-Scanlon Corp Foley Fla
 Brooks-Skinner Co 602 Presidents Ave Quincy Mass
 Brown Mfg Co Box 251 Quincy Ill
 Brown-Bloedorn Co St Paul Minn
Brown Co 190 Causway St Boston 14 Mass
 Brown (D D) Elkins Va
 Brown & Co Moshu Conn
 Brownell Co 1440 N Front St Dayton 1 O
Brown (George C) & Co Inc Greensboro N C
Brown-Graves Co 191 E Miller Ave Akron 1 O
 Brown & Grist 112 Todd Lane Newport News Va
 Brown (H C) Shingle Co Arlington Wash
 Brown & Johnson Corp Los Angeles Calif
 Brown Lightning Protection System Hartford Conn
 Brown Lumber Co Louisville Ky
 Brown & Sharpe Mfg Co 235 Pennmenade St. Providence R I
 Brown Stone Works Cleveland Tenn
 Brown's Tire & Lumber Co McCall Idaho
 Brown W R Corp 6790 S Armitage Chicago 39 Ill
Bruce (E L) Co Memphis 1 Tenn
 Bruner Ivory Handle Co Hope Ark
 Brunell H J & Co 215 Fulton New York N Y
 Brunner Mfg Co 1821 Broad St 11361 N Y
 Brunson Instrument Co 1405 Walnut St Kansas City Mo
 Brunswick-Balke-Culender Co Inc 6223 S Wabash Chicago Ill
 Bruso Nail Expansion Bolt Co Greensboro N C
 Bryant Electric Co 1821 State St Bridgeport 2 Conn
Bryant Heater Div Affiliated Gas Expt Inc 1825 St Clair St Cleveland 10 O
B & T Metals Co 425 W Town Columbus 16 O
 Buechel Tool Mfg Co 220 Adams Brooklyn 1 N Y
 Buch Mfg Co 809 S Market St Elizabethtown Pa
 Buch (Frank R) & Co 2135 W Touhy Ave Chicago 45 Ill
 Buckeye Handle Works Co Cortland Ohio
 Buckeye Incubator Co Springfield Ohio

Bucyrus-Erie Co 1045 Monroe Ave 5 Milwaukee Wis
 Buick Co 15423 Commercial Ave Harvey Ill
 Buffalo Bolt Co 101 East N Tompkins N Y
 Buffalo Forge Co 465 Broadway Buffalo 4 N Y
 Buffalo Products Inc 317 Babcock Buffalo 10 N Y
 Buffalo Scale Co 1200 Niagara Buffalo 13 N Y
 Buffalo Sprinkler Co Syracuse N Y
 Buffalo Walworth Co Inc Buffalo N Y
 Buffalo Wall Paper Mfg Co Tompkins N Y
 Buffalo Wire Works Co 320 Terrace Buffalo 2 N Y
 Bufilem Mfg Co Box 1595 Tarrytown 1 Wash
 Bufilem Mfg Co 21 S Main St Kobosimo Ind
 Builders Brick Co Seattle Wash
 Builders Fireproof & Supply Co 2004 Link St Houston Tex
 Builders Wall Paper Mfg Co Cedar Rapids Ia
 Builders Products 500 N Dearborn Chicago 10 Ill
 Building Products Merchandising Service Little Rock Ark
 Building Electricity Products Co Box 177 Detroit 12 Mich
Bundy Tubing Co 8109 E Jefferson St Detroit Mich
 Bunting Glider Co 18th & Allegheny Ave Philadelphia Pa
 Bunsan (Paul) Lumber Co Swanville Calif
 Bunsie Lumber Co Meridian Miss
 Bursdal (A C) Co 208 W Georgia St Indianapolis Ind
 Burgess Battery Co Battery Div Freeport Ill
 Burgess Co Inc Beaver Falls Pa
 Burgess Fastening Co 1221 W 9th St Cleveland 13 O
 Burgess-Manning Co Libertyville Ill
 Burgess-Overcasters Inc 1480 N Wabash Chicago Ill
 Burger Trap Co Tiffin O
 Burger Millwork Co Fremont Bridge Seattle 3 Wash
 Burger's Lathing Rod Co Fremont Ohio
Burnham-Corp Boiler Div Balter St Irvington-on-Hudson N Y
 Burnett (O F) & Bros Woodport N Y
 Burnett's Adding Machine Co 6071 Second Blvd Detroit Mich
 Burrows Corp 70 Free St Portland Me
 Burrows Land & Lumber Co Larchmont Va
 Burrows Clip System Inc 2441 S Indiana Ave Chicago Ill
 Burt (C E & F) Co Stone Vt
 Burt Mfg Co 929 S. Akron 11 O
 Burton Saw Co 91 Foster Ave Worcester Mass
 Burton (S T) Co 228 N La Salle St Chicago 1 Ill
 Busch (A G) Co Inc 265 E Superior St Chicago 19 Ill
 Buschman (E W) Co Inc Clifton & B O RR Cincinnati 32 O
 Busch (W G) & Co Nashville Tenn
 Busch Prefabricated Structures Inc Huntington Station Long Island N Y
 Busch-Machl Wm 8th & Eldon St Holland Mich
 Buschmann Mfg Co 2535 W University St St Louis 7 Mo
 Butler & Hart Manufacturing Co 2284 Albion Toledo 6 Ohio
 Butler Bin Co Waukesha Wis
 Butler Co Butler Ind
 Butler Mfg Co 1201 E Eastern Ave Kansas City 3 Mo
 Butler-McDonough Mfg Co Inc Ltd Vancouver B C Canada
 B W Molded Plastics Pasadena 4 Calif
 Butts (L M) Co Clark Bldg Pittsburg Pa
 Byles-Jamison Lumber Co Fresno Calif

Campbell Chalk Co York Pa
 Campbell Corp Co Atlanta 1 Ga
 Campbell (H T) Sons Corp Tuxedo 4 Md
 Camp Chemical Co 1560 62 62nd St Brooklyn 19 N Y
 Camp Co 1055 S State Chicago 21 Ill
 Camp Mfg Co Franklin Va
 Camp Mfg & Sales Co 105 S Trumbull Tacoma 2 Wash
 Canadian Forest Products Ltd Bunting Street Shingle Div Vancouver B C Can
 Canadian Western Lumber Co Fraser Mills B C Can
 Canadian Saver Ply Co Clemens St. Cancellation Ind
 Canthook Lath Co St Louis 1 Mo
 Canton Cast Products Co 210 61st St E Canton Ohio
 Canton Glass Co Inc Marion Ind
 Canvas Products Co 1256 S Seventh St St Louis 4 Mo
 Canvas Specialty Co Box 807 Hartford Conn
 Canyon Lumber Corp Seattle 1 Wash
 Capen Shingle & Rubber Co Cincinnati O
 Capewell Mfg Co 60-70 Governor St Hartford 2 Conn
 Capilano Building Co Vancouver B C Canada
 Capital Prefab Inc Austin Tex
 Capital Power Co 733 N Water Milwaukee 2 Wis
 Capital Mfg Co Olympia Wash
Capital Products Co 118 S Third St Springfield Ill
 Carbide & Carbon Chemicals Div Union Carbide & Carbon Corp 30 E 42nd St New York 17 N Y
 Carbolex Chemical Co 40 Harris Bldg Natural Bridge N Y
 Carbolignum Wood Preserving Co 548 W Highland Ave Carbondale 2 Ill
 Carbolite 2 Wis
 Carbyne Co Inc 11177 E Eighth Mile Rd Box 237 Detroit 32 Mich
 Carbons Products Co 30 Grosvenor Ave New York 1 N Y
 Carborundum Co Niagara Falls N Y
 Carbonyl Protective Coatings Inc 811 S Main Greensboro N C
 Carey Brick Co 6558 W Fullerton Chicago Ill
 Carey Industries 818 E Water St Syracuse 3 N Y
 Carey McCall Co 2156 E Datsch St Philadelphia 25 Pa
Carey (Philip) Mfg Co 316 S Wayne Cincinnati 15 O
 Carlson Products Corp 10265 Meach Ave Cleveland 5 Ohio
 Carlson (S B) & Co Amesbury Mass
Carlson & Sullivan Inc Duarte & California Ave Menlo Park Cal
 Carlton Mfg Co Carlton Ore
 Carline Tile Co Ironton O
 Carmanian Mfg Co Longview Ind
 Carman Lumber Co Forest Grove Ore
 Carney Co Inc 153 Chestnut Muskegon Minn
 Carolina Perfite Co 121 S Church Salisbury N C
 Carville Flange Co High Point N C
 Carwin Lumber Co Summersville S C
 Carwater (George B) & Co 430 N Wells Chicago 34 Ill
 Carpenter (L E) & Co Inc 130 West 42nd St N Y 14
 Carpenter Oak Flooring Co Birmingham Ala
 Carpenter & Patterson Inc 1100 Bennington St Boston 25 Mass
Carr Adams & Collier Co Dubuque Ia
Carrier Corp 902 S Goddard St Syracuse N Y
 Carr Lumber Co Plaquemine N C
 Carr & Mosel Co Des Moines 9 Ia
 Carroll (L B) Lumber Co Hurstonsale Va
 Carter Co 1053 4th St Elizabeth 4 N J
 Carter Mfg Co Memphis 2 Tenn
 Carters Ink Co Kendall Square Boston Mass
 Carter (W T) & Bro Houston Tex
 Cascade Lumber Co Yakima Wash
 Cascade Pacific Lumber Co 319 Pacific Bldg Portland 4 Oregon
 Cascoades Plywood Corp Portland Ore
 Case Crane & Kilbourne Jarolin Co 800 Eugene St Columbus 16 Ia
 Case (J J) Co 702 State St. Racine Wis
Case (W A) & Son Mfg Co 33 Main St Buffalo 3 N Y
Casement Hardware Co 406 N Wood St Chicago 22 Ill
 Casings Inc 2 W 45th St New York 19 N Y
 Casper Lumber Co Hobart Bldg San Francisco Calif
 Cassell Mold & Machine Co 1171 Womack Barberston Ohio
 Cassin Corp of America 1 Park Ave New York 16 N Y
 Castellan Tractor Co 600 W Washington St E Peoria 8 Ill
 Caster Lumber Co Montgomery Ala
 Cating Rope Works Inc Maneth 1 N Y
 Cavalier Corp Chattanooga Tenn
Ceco Steel Products Corp 5601 W 26 St Chicago 50 Ill
 Federal Mfg Co 32 E 54th St New York 22 N Y
 Federal Mfg Co 539 S Fourth St Minneapolis 15 Minn
Cedar-Lux Products Co 703 Main St Kansas City 6 Mo
Cedar Rapids Block Co Dur-O-Wal Div 656 12th Ave S W Cedar Rapids Ia
 Celadri Corp Willson Park L I N Y
 Celanese Corp of America Plaster Div 150 Madison Ave New York 16 N Y
 Celins Mfg Co Celina O
 Celis Plastic Chemical Co Pittsburgh 22 Pa
Celotex Corp 120 S LaSalle St Chicago 3 Ill
 Census Industries Inc Galien O
 Censontone Corp Neville Island Pittsburgh 25 Pa
 Cental Co 6606 S Hamilton Chicago 47 Ill
 Central Brass Mfg Co 4606 Hamilton Cleveland 14 Ohio
 Central Chemical Corp Hagerstown Md
 Central Division Co 221 LaSalle St Chicago 1 Ill
 Central Lumber Co Brookhaven Miss
 Central Marine Works Co 1234 Central Ave Minneapolis 1 Minn
Central Metal Strip Co 4343 N Western Ave Chicago 10 Ill
 Central Oak Products Co Nashville Tenn
 Central Paint, & Varnish Works 63-69 Prospect St Brooklyn 1 N Y
 Central Products Co Box 118 St Furber Bitter Creek Mich
 Central Serris Co 3511 S Shields Chicago 9 Ill
 Central States Wallboard Inc 952 Madison Ave Oak Park Ill

Century Electric Co 1806 Pine St St Louis 3 Mo
Century Engineering Corp Cedar Rapids Ia
Century Foundry Co 41 Sprague Waukegan Wis
Century Mirror Corp 1631 W 35th Chicago Ill
Century Wallpaper Mills Decatur Ill
Central Chemical Corp 2216 North W Lafayette Ind
Ceresit Waterproofing Corp 3227 S Shields Ave Chicago 16 Ill

Cherwell Tile Co Inc 4719 W 35th St Cleveland 9 Ohio

Certain-Lov Products Corp 120 Lancaster Ave Ardmore Pa

Chaffin Bros Co Buford Mass
Chain Belt Co 1000 W Bruce St Milwaukee 4 Wis
Chain Link Fence Co 147 W 31st St Chicago Ill
C & H Air Conditioning Fan Co 1603 DeKalk Atlanta Ga
Chalmers Oil Burner Co 318 First Ave N Minneapolis Minn
Chamberlain Co of America 1254 La Brosse St Detroit 24 Mich

Chambers Corp Shelbyville Ind

Champion Blower & Forge Co 1947 Charlotte Lancaster Pa
Champion De Arment Tool Co 1206-16 Main St Meadville 1 Pa
Champion Hardware Co 3500 Miller St Geneva O
Champion Mfg Co 2928 Washington Ave St Louis 3 Mo
Chamwell Hardware & Tool Co Fitzburg Mass
Chapman Sales Corvallis Ore
Chapman Chemical Co Memphis 2 Tenn
Chapman & Hovey Lumber Co Memphis Tenn
Charles Machine Works Perry Ohio
Charlotte Clay Products Co 1947 Saunders St Charlotte 22 W Va
Charlotte Lumber & Mfg Co Charlotte 3 N C
Charles Arthur Co & Son Baltimore 15 Md
Chase Bag Co 309 W Jackson Chicago Ill

Chase Brass & Copper Co 236 Grand St Waterbury 91 Conn

Chase-Shawmut Co 376 Merrimac St Newburyport Mass
Chas Turbine Mfg Co Orange Mass
Chatham Brick Co Sanford N C
Chatham Lumber Co Chattanooga Ga
Chattahoochee Veneer Co Chattahoochee Ga
Chattanooga Implement & Mfg Co Chattanooga Tenn
Chattanooga Machinery Co Highland Park Station Chattanooga Tenn
Chattanooga Saw Works Williams & Davis Site Chattanooga Tenn
Chattanooga Wheelbarrow Co 1213 E Main St Chattanooga 1 Tenn
Chewman-Elliott Co Inc 645 Kent Ave Brooklyn 11 N Y
Chevalis Brick & Tile Co Chehalis Wash
C & H Electric Co 436 W Jumeau Ave Milwaukee 3 Wis
Chelan Brick & Mfg Co Chelan Wash
Chelsea Elevator Co 549-551 W 52nd St New York 19 N Y

Chelsea Pan & Blower Co Inc 639 South Ave Plainfield N J

Chelsea File Works Norwich Conn
C H & E Mfg Co 3819 N Palmer St Milwaukee 12 Wis
Chemical Research Products Co Inc 235 W Olney Rd Norfolk Va
Chemical Supply Co 225 Plymouth Bldg Cleveland 15 O
Cheney (Henry) Hammer Corp Little Falls N Y
Cheney Metal Products Co 650 Prospect St Trenton 5 N J
Cherokee Brick Co Macon Ga
Cherry River Room & Lumber Co Richmond Va
Chesler 13 & Sons 41 Varick Ave Brooklyn 6 N Y
Chesley Industries Inc 7731 Lyon St Detroit 12 Mich
Cheshamouth (Thor E) Freeport Mich

Chevrolet Motor Div General Motors Corp General Motors Bldg Detroit 2 Mich

Chicago Joseph White Washers Chicago 22 Ill
Chicago Belting Co 121 North Green Chicago 7 Ill
Chicago Bronze & Color Works 2639 W Grand Chicago 12 Ill
Chicago Brush Company 171 W Lake Chicago 1 Ill
Chicago Card Holder Co 732 N Morgan Chicago 26 Ill
Chicago Curtain Stretcher Co 1124 W 37th St Chicago Ill
Chicago Down Draft Furnace Co 115 S Clinton Chicago Ill
Chicago Dryer Co 2210-2220 N Paulina Rd Chicago 39 Ill
Chicago Expansion Bolt Co 1338 W Concord Chicago 12 Ill
Chicago Faucet Co 2712 N Paulina Chicago Ill
Chicago Fire Brick Co 1453 S Edson Chicago 22 Ill
Chicago Lock Co 2026 Racine Ave Chicago 14 Ill
Chicago Metallic Sash Co 2112 Ogden Ave Chicago 12 Ill
Chicago Paints Inc 4160 W 34th Chicago 23 Ill
Chicago Plastic Products Co Inc 210 W Evergreen Chicago Ill
Chicago Pneumatic Tool Co Six E 44th St New York 17 N Y
Chicago Pottery Co 1920 N Clyburn Chicago 4 Ill
Chicago Pump Co 1151 W Waverly Chicago 22 Ill
Chicago Rawhide Mfg Co 1311 N Clinton Chicago 22 Ill
Chicago Specialty Mfg Co 913 W Montana Chicago Ill
Chicago Sporting Hinge Co 1500-1502 Carroll Ave Chicago 7 Ill
Chicago Steel Tape Co 7956 S Chicago Ave Chicago 17 Ill
Chicago Venetian Blind Co 2223 S Michigan Ave Chicago 8 Ill

Chicago Waterlock Die Great Lakes Industries Inc 1528 S Wabash Ave Chicago 5 Ill

Chicago Wheel & Mfg Co 1101 W Monroe Chicago Ill

Chicago Wood & Plastic Products 4291 W Irving Park Blvd Chicago 43 Ill

Chicopee Mfg Corp of Georgia 40 Worth St N Y 13 N Y

Chillers Mfg Co 625 Yale St Houston Tex
Chimney Inc Lum New York
Chimney Sales Co National Bank Bldg Fredericksburg Va
Chl-Namel Paint & Varnish Co 1101 S Third St Minneapolis Minn
Chippewa Falls Woolen Mill Co Chippewa Falls Wis
Chisholm (B S) Inc Reno Nevada
Chisholm Moore House Corp Columbus McKinnon Chain Corp 5000 Fremont Ave Tonawanda N Y
Christianson (C M) Co Piquette Wis
Christy Co Inc St Louis 10 Mo
Chrome-Tex Inc Cleveland 15 O

Chrome Co 141 W Jackson Blvd Suite 1227 Chicago Ill

Chrysler Corp 12200 E Jefferson Detroit 14 Mich

Church Brick Co Besdenston N J
Church Mfg Co Moonville & Montgomery Sts Holyoke Mass
Cincinnati Electrical Tool Div Le Wood (R K) Machine Tool Co 284 Madison Rd Cincinnati 5 O
Cincinnati Floor Co Eastern & Linwood Ave Cincinnati 26 O
Cincinnati Fly Screen Div Russell (F C) Co Union Commerce Bldg Annex Cleveland O
Cincinnati Galvanizing Co Chickering & Spring Grove Ave Cincinnati 10 O

Cincinnati Iron Fence Co Inc 2101 Florence Cincinnati 6 O

Cincinnati Rubber Mfg Co 4900 Franklin Ave Cincinnati 12 O
Cincinnati Sheet Metal & Roofing Co 226 E Front Cincinnati 2 O
Cincinnati Time Recorder Co 1733 Central Ave Cincinnati 14 O
Cincinnati Tool Co Thomas & Waverly Ave Cincinnati 12 O
Cipes Corp 22nd & Cole Sts St Louis 6 Mo
Ciro Tool Co Milwaukee 3 Wis
Circulators & Devices Mfg Co 128-160 32nd St Brooklyn 2 N Y

City Lumber Co Inc Bridgeport Conn

City Plating & Mfg Co 2nd & Cole Sts St Louis 6 Mo
C K L Machinery Co 160 Harrison St Oshkosh Wis
Clark & Co 719 Porter St Kalamazoo Mich
Clark-Babbitt Industries Inc 75 Federal Boston 10 Mass
Clark Brothers Bolt Co Inc Middleburg Conn
Clark Cast Steel Cement Co 2912 W 17th Wilmington 73 Del
Clark Door Co Inc 515 Henderson St Newark 8 N J
Clark Equipment Co Industrial Truck Div 258 Champion St Battle Creek 67 Mich
Clark & Hammer Inc Belleville N J
Clark Mfg Co Spring Park Minn
Clark (N) & Sons Div Pacific Clay Products Alameda Cal
Clark (Robert) Co Iron Tools Div 9328 Santa Monica Blvd Beverly Hills Calif
Clark (Victor R) Belting Co 605 W Washington Blvd Chicago 6 Ill
Clark Wire Supply Co 1638 S Paulina Chicago 23 Ill
Clark (Alex A) Mfg Co 4381 Montrose Ave Chicago 41 Ill

Clarke County Lumber Mills Thomasville Ala

Clarke Sanding Machine Co 57 Clay Ave Muskegon Mich
Clarney Products Inc 239 Java Brooklyn 22 N Y
Clarke Hardware Corp Juniper & Thomas St San Gabriel Calif
Classic Products Corp Caxton Bldg Cleveland 15 Ohio
Clear City Pipe Co Corinthille O
Clearcraft Co Box 863 Columbus 16 O
Clear Equipment Corp 1148 Blake St Cedar Falls Ia
Clearing Landfill Mfg Co 1710 Dixie Highway Louisville 10 Ky
Cleyton Studios E Thetford Wis
Clear City Pipe Co Engine Ore
Clear Mfg Co 4525 N 124th St Butler Wis
Clearing Lumber Window Co 2625 Elm Dallas 1 Tex
Clearwater Shingle Co Clearwater Wash
Clearwater Tank Co Chestnut Ill
Clemons (A) Lumber Co Eugene Ore
Clemons (C) Lumber Co Cottage Place Middletown N Y
Cleveland Chain & Mfg Co Broadway & Henry St Cleveland 8 Ohio
Cleveland Cleaner & Paste Co Cleveland 2 Ohio
Cleveland Cliffs Iron Co Negaunee Mich
Cleveland Diesel Engine Div General Motors Corp 2160 E 190th St Cleveland 11 O
Cleveland Gypsum Co Marion Bldg Cleveland 15 O
Cleveland Headers Co 2310 Superior Ave Cleveland O
Cleveland Lock Works Div Consolidated Iron Steel Mfg Co 1292 E 53rd St Cleveland 14 Ohio
Cleveland Mill & Power Co Lakewood N C
Cleveland Office Furniture Co Tompkins Mich
Cleveland Publications 448 S Hill Los Angeles Calif
Cleveland Quarries Co Cut Stone Dept 1740 E 12th St Cleveland 14 O
Cleveland Steel Products Co Turidiet Div 7306 W Madison St Cleveland 2 O
Cleveland Steel Specialty Co Inc 3765 E 91st St Cleveland 5 O
Cleveland Steel Tool Co Cleveland Ohio
Cleveland Transmittal Div Cleveland Crane & Engineering Co 1866 E 28th St Wickliffe Ohio
Cleveland Trencher Co 29100 9th Ave Cleveland 17 Ohio

Cleveland Twist Drill Co 3242 E Clair Cleveland 14 Ohio

Cleveland Vibrator Co 2870 Clinton Ave Cleveland Ohio

Clifton Mfg Co Waco Texas

Clifton Mill Bld Inc Clinton La

Clinton Lock Co Clinton Iowa

Clinton Metallic Paint Co Cedar St Clinton N Y

Clinton Wire Cloth Co 1940 Seaman St Clinton Ia

Clippert Belt Lacer Co Front St at 11th Grand Rapids 2 Mich

Clipper Mfg Co 1617 Cherry St Kansas City 8 Mo

Clips Brothers Mfg Co 1932 Harrison Ave Plymouth Ind

Clough Corp Clough Square Cincinnati 14 O

Clough Chemical Co 850-69 42nd Ave Oakland Calif

Close-to-Nature Co Colfax Ia

Cloud Bag Co Inc Springfield Mo

Cloud Mfg Co 353 Main St Newark Conn

Clover Valley Lbr Co Logansport Ind

Cloves James C & Sons 201-209 N Talman Ave Chicago 10 Ill

Cloves Cultry Co Clyde Ohio

Cloves Iron Works Inc Duluth 1 Minn

Clyde Forelain Steel Corp Clyde O

Cloz-O-Matic Mucker Co Trucksville Pa

Coastal Lumber Co Lake City S C

Coastal Plywood & Lumber Co Cloverdale Calif

Coast Insulating Products 634 S Western Ave Los Angeles Calif

Coats (A P) Lumber Co Tillamook Ore

Coats & Mitchell Co Portland 5 Ore

Coats Iron Works Inc Butler Wis

Coats Truitt Truck Products Wickwire Spencer Steel Div Colorado Fuel & Iron Corp Clinton Mass

Coddington (E D) Mfg Co 5024 N 37th St Milwaukee 9 Wis

Coffing Point Co 802 Walter St Danville Ill

Coffman (R G) Co Inc Orlando Fla

Cohn 151 & Sons Cedar Rapids Ia

Coile Electric Products Inc Federal Electric Products Co 43-08 Cresent St Long Island City 1 N Y

Cole Bolt Blast Mfg Co 3817 S Racine Chicago 9 Ill

Cole Mfg Co Box 2657 Memphis 2 Tenn

Coleman Co Inc Second & St Francis Sts Wichita 1 Kan

Colfax Lumber & Creosoting Co Colfax La

Colgate Mfg Corp 548 S Bayview Ave Amityville L I

Collier Bros 1941 Frederick St South Bend 4 Ind

Colloid Equipment Co Inc 500 Church St New York 7 N Y

Colman Bros Co Davis St Middleboro Mass

Colman Bros Co Torrington Conn

Colman Cedar Co 600 W Nickerson St Seattle 99 Wash

Colonial Clay Products Co New Brighton Pa

Colonial Pipeless Co 540 N Cicero Chicago 44 Ill

Colonial Hardwood Flooring Co Hagerstown Md

Colonial Knif Co Inc 257 Oak St Providence R I

Colonial Pipe Co Chester Calif

Colonial Ponds Lumber Co Ponds Ore

Colony Bros 1941 Frederick St South Bend 4 Ind

Colony Equipment Co Inc 500 Church St New York 7 N Y

Colony Steel Co 260 E 143rd St New York City 11 N Y

Columbia Brick Works 1320 S E Water Ave Portland 4 Ore

Columbia Chemical Division Pittsburgh Plate Glass Co Fifth Ave at Bellefield Pittsburgh 13 Pa

Columbia Industries 19th Ave at 36th St Long Island City N Y

Columbia Metal Co Inc 345 S 9th St Louisville 3 Ky

Columbia Metal Box Co 260 E 143rd St New York City 11 N Y

Columbia Mills Inc 428 S Warren St Syracuse 2 N Y

Columbian Pump Co E Railroad & Stewart Sts Columbus 10 Ohio

Columbia Naval Stores Co 1412 Savannah Bank & Trust Bldg Savannah Ga

Columbian Rope Co 3180 Genesee St Auburn N Y

Columbian Steel Tank Co 1509 Robinson Kansas City Mo

Columbia Nut & Bolt Co Inc 947 Main St Bridgeport 3 Conn

Columbian Vise & Mfg Co 9018 Besemer Ave Cleveland 4 O

Columbia Pipe Co Columbia S C

Columbia Protokrete Co Inc 2-100 Interstate Pl Carlstadt N J

Columbia River Paper Mills Vancouver Wash

Columbia Valley Lumber Co Bellingham Wash

Columbia Steel Co Russ Bldg San Francisco Calif

Columbus Bolt Works Co 291 Marconi Columbus 15 Ohio

Columbus Brass Mfg Co 620 Dublin Ave Columbus 16 Ohio

Columbus Coated Fabric Corp East Seventh & Big Four Rd Columbus O

Columbus McKinnon Chain Corp 5000 Fremont Ave Columbus 16 Ohio

Columbus Plastic Products Inc 1601 W Mount St Columbus 16 Ohio

Columbus Shoe Case Co Columbus Ohio

Combination Door Co Fond du Lac Wis

Combined Metals Reduction Co Box 150 Salt Lake City 1 Utah

Combustion Engineering-Superheater, Inc 268 Madison Ave New York 16 N Y

Combustionizer Div Steel Products Engineering Co 1150 W Main St Springfield Ohio

Comfort (George N) Lumber Co Cleveland O

Comfort Products Corp 2220 Lamesa St Dallas Tex

Commander Door Inc 48 Howell Ave Holmes Pa

Commercial Credit Corp First National Bank Bldg Baltimore Md

Commercial Enclosed Fuse Co Hoboken N J

Commercial Paste Co Bottles at Michigan Columbus 8 Ohio

Commercial Shearing & Stamping Inc 5777 W 65th St Overland Park 11 Kan

Commercial Solvents Corp 17 E 42nd St New York 17 N Y

Commonwealth Plastics Inc Superior Plastics Div 426 N Oakley Blvd Chicago 12 Ill

Commonwealth Products Co Real Estate Trust Bldg Philadelphia Pa

Commonwealth Varnish Co 4124 W Parker Ave Chicago 39 Ill

Commonwealth Products Co 15221 W Eleven Mile Rd Berkeley Mich

Compton (W H) Shear Co 314 Camden St Newark 3 N J

Conant Brothers Co 24 Portland St Boston 14 Mass

Conasauga River Lumber Co Conasauga Tenn

Coner Building Products Inc 1940 Thomas St Memphis 2 Tenn

Conco Engineering Works Div Conkey (H D) Co Mendota Ill

Concord Brick Co Concord N H

Concord Woodworking Co Inc 457 Main St West Concord Mass

Concor Paint Co 45th & Main Sts Kansas City Mo

Concrete Equipment Co 514 Ottawa Ave Rolland Mich

Concrete Pipe Machinery Co Box M-1000 Sioux City 19 Ia

Concrete Products Corp Humboldt Ia

Concrete Transport Mixer Co 4955 Fyler Ave St Louis 8 Mo

Condensation Engineering Corp 122 S Michigan Ave Chicago 3 Ill

Conduit Pipe Products Co Columbus O

Comp-Haste Lumber Co Charleston S C
Conglomerate-Watra Inc Kearny N J
 Conifer Lumber Mill Co Conit N Y
 Conkling (Frank A) Co Memphis 3 Tenn
 Conion Bros Mfg Co 4512 W Fillmore Chicago 50 Ill
 Conion Moore Corp 224 S Laramie Cleve 50 Ill
 Connecticut B'wer Co Hartford Conn
 Connected Telephone & Electric Div Great American In-
 dustries 100 Broad St Meriden Conn
 Connelly Inc 3152 S California Chicago 8 Ill
**Conner Lumber & Land Co Box 112 Marsh-
 field Wis**
 Connor (W B) Engineering Corp 114 E 32nd St New
 York 10 N Y
 Conroy-Frough Glass Co 1430 Western Ave Pittsburgh Pa
 Consolidated Eating Machine 156 Sixth St Brooklyn N Y
 Consolidated Brick Co Harscoett N Y
 Consolidated Cement Corp 111 W Monroe St Chicago 3 Ill
 Consolidated Industries West Chesire Conn
 Consolidated Iron-Steel Mfg Co 1292 E 53 Cleveland 14
 Ohio
**Consolidated Machinery & Supply Co Ltd
 2031 Santa Fe Ave Los Angeles Calif**
 Consolidated Power & Paper Co (Plastics Div) Wisconsin
 Rapids Wis
 Consolidated Tool Works Torrington Conn
 Consolidated Veneer Bldg Co 2401 Nicholson St
 Houston 8 Tex
 Consolidated Water Power & Paper Co 231 First St
 Wisconsin Rapids Wis
 Consolidated Wire Specialties Co 150 Broadway New
 York N Y
**Construction Machinery Sales Co 420 Vinton
 St Waterloo Ia**
 Consumers Co 100 LaSalle St Chicago Ill
 Consumers Glass Co 30 S Commercial Ave St Louis 6 Mo
 Contact Lumber Co Portland 4 Ore
 Continental Lathes & Rolling Co 1 Madison Ave New
 York 10 N Y
 Continental Bridge Co Postone Ill
 Continental Can Co Cincinnati Ohio
 Conti ental Diamond Fibre Co East Newark 45 Del
 Continental Motors Corp Muskegon 82 Mich
**Continental Radiant Glass Heating Corp 1 E
 35th St New York 17 N Y**
 Continental Rubber Works Pa
 Continental Screen Co 1249 Washington Blvd Detroit 26
 Mich
 Continental Sewer Co 100 Mount Pleasant Ave New
 Bedford Mass
 Continental Steel Corp 1150 S Main St Kokomo Ind
 Copper Steel & Wire Co 621 E 122nd St New York
 54 N Y
 Coway Lumber Co Conway S C
 Cook (A B) Co Malvern Ark
 Cook County Lumber Co 200 E 150th St Chicago 28 Ill
 Cook Electric Co 2710 S Southport Ave Chicago 14 Ill
 Cook (F C) & Co Baltimore 2 Md
 Cook Paint & Varnish Co North Kansas City Mo
 Cooke (R F) Mfg Co Cooke Place Orange Mass
 Cooker Metal Aiming Ohio
 Coolair Corp Box 399 Jubah 1 Minn
 Coolstream Corp 210 Butler St New York N Y
 Cooperative Industries Blue Ash & Thomas St Blue Ash O
 Coopers Creek Chemical Co W Conshohocken Pa
 Cooper-Smith Lumber Co Wilkes-Barre Pa
 Cooper (W E) Wholesale Lumber Co Los Angeles Calif
 Coon Bay Logging Co North Bend Ore
 Coon Bay Lumber Co Coon Bay Ore
**Coppo Steel & Engineering Co 14035 Grand
 River Ave Detroit 27 Mich**
 Copeland Lumber Co 135 S LaSalle Chicago Ill
 Copeland Refrigeration Corp Clinton & Thomas St Sidney O
 Copper (A M) & Co Baltimore 2 Md
Copperwell Steel Co 39 Teffield Glassport Pa
 Coppes Inc Nappanee Ind
 Coprex Inc 1270 Sixth Ave N Y City N Y
 Corbett Cabinet Co St Marys Pa
 Corbett Mill Co Ansonia Conn
**Corbin Cabinet Lock Div American Hardware
 Corp 100 Orchard St New Britain Conn**
**Corbin (P & F) Div American Hardware Corp
 67 Park Ave New Britain Conn**
 Corinth Machinery Co 480 Tate St Corinth Miss
 Corinth Planning Mill Co Box 829 Corinth Miss
 Cork Import Corp 39 Park Pl Englewood N J
 Cork Tannation Co Inc Commerce Bldg E 64th St New
 York City N Y
 Corley Mfg Co Chattanooga 1 Tenn
 Cornell Rolling Door Works 36th Ave & 13th St Long
 Island 6 N Y
 Cornell Wood Products Co 230 N Michigan Chicago 11 Ill
**Corona Heater Corp 1422 Euclid Ave Clevel-
 and O**
 Cornish Corp 410 Holmes Rd Houston Tex
 Corry-Jameson Mfg Corp 656 W Main St Corry Pa
 Corson (G & W B) Inc Ploughing Meeting Pa
 Corstite Corp Chrysler Corp New York 17 N Y
 Cortland Grinding Wheels Corp 1 Cortland St Chester
 Mass
 Corvallis Lumber Co Corvallis Ore
 Cotton & Hanks (Edw) N Y
 Couest Brothers Mfg Co East Point Ga
 Couch (S H) Co Inc 1 Arlington St North Quincy Mass
 Coupland (G N) Co Memphis 2 Tenn
 Country Gentlemen Independence Square Philadelphia Pa
 Covert (H W) Co 329 E 49th St New York 17 N Y
 Cox (H F) & Co 691 Division Ave NW Grand Rapids Mich
 Cox Mfg Co Ridgewill Ind
 Coyle (H B) Co 1416 N 31st St Philadelphia Pa
 Coyle McMorris Inc Birmingham Ala
 Coyle & Delaney Co Kent and Park Ave Brooklyn N Y
 Craik Orchard Stone Co Inc Crossville Tenn
 Craik Sales Corp 923 Air Way Greenville 1 Calif
 Craft-Ritt Products Inc Hastings Mich
 Craig Mountain Lumber Co Winchester Idaho
 Craig Wood Products Co 1024 Talbotton Rd Columbus Ga
Crane Co 836 S Michigan Ave Chicago 5 Ill
**Crane (H W) Co 1443 W Lake St Chicago 7
 Ill**
 Crane Electric Industries Eugene Ore

Crane Mills Inc Bry Ore
 Crane Packing Co 1812 W Belle Plaine Chicago Ill
 Crawford-Austin Mfg Co 325 S 8th St Waro Tex
**Crawford Door Co 401 St Jean Ave Detroit
 14 Mich**
 Crawford Door Co 401 St Jean Ave Detroit 14 Mich
 Crawford Industries Panama Calif
 Crager-Brax Co Fremas Calif
**Cree-Dix Co Inc 986 Oliver St North Tona-
 wanda N Y**
 Cree-Pox Chemical Co Memphis 12 Tenn
 Crescent Brass & Pipe Co 5170-5800 Trumbull Ave Des-
 Moines 2 Mich
 Crescent Brich Powder Co 116 W Illinois St Chicago 10
 Ill
 Crescent Machine Div Letonia Ohio
 Crescent Plywood Co Crescent City Calif
 Crescent Products Co Terre Haute Ind
 Crescent Shingle Co Kewanee Wash
 Crescent Tool Co 3949 Pierson St Jamestown N Y
 Crescent Truck Co 1025 Willow St Leominster Pa
 Creasy (Geo E) & Sons Utica N Y
 Crittlen & Barton Co 700 N Sacramento Ave Chicago 12
 Ill
 Crop (M E) Lumber Co Welch W Va
 Crittall Inc Waukesha Wis
 Crosby (L F) Co & Eastwood Mt Prospect Ill
**Groff Steel Products Inc 10 Market St
 Jamestown N Y**
 Cromar Co Susquehanna St Williamsport Pa
 Crosby Lumber & Mfg Co Crosby Mass
**Crosby Div Aveco Mfg Corp 1329 Arlington St
 Cincinnati O**
 Cross Austria & Ireland Lumber Co Brooklyn 6 N Y
 Crossett Chemical Co Crossett Ark
Crosssett Lumber Co Crosssett Ark
 Crosswell Long Leaf Lumber Co Inc Long Leaf La
 Crossley Lumber Co Inc Bedford Calif
 Cuna Dia & Tool Co 380 N Jefferson Chicago Ill
 Crown Slade & Screen Co 34 Locksley Rd Boston Mass
 Crown Stone Works Inc 4641 W 125th Pl Chicago Ill
 Cramer-Longford Door Co 2500 Boston Tacoma Wash
 Crystal Packing Co 717 E 61st St Los Angeles Calif
 Cusky Trailer Co South Bend Ind
 Cudaly Sack Co 221 N LaSalle Chicago Ill
 Culligan-Zeolite Co 1947 Sherman Ave Northbrook Ill
 Cumberland Portland Cement Co Chattanooga Tenn
 Cummer Sons Cypress Co Jacksonville Fla
 Cummings (C B) & Sons Co 5 Bridge St Norway Me
 Cummins Machine Works 31-13 McLeister Boston 10 Mass
 Cummins Engine Co Fifth & Wilson St Columbus Ind
**Cummins Portable Tools Div Cummins Chi-
 cago Corp N 4740 Ravenswood Ave Chi-
 cago 40 Ill**
 Cunningham Machinery Corp 725 Elvost St Shoreport La
 Cuyler Co 401 S 7th St St Louis 2 Mo
 Cuyler Products Corp 2650 S Hanley Rd St Louis 17 Mo
**Cuprinal Div Darworth Inc 2 Maple St
 Simsbury Conn**
 Currier Lumber Co 17507 Vanlyke Detroit 5 Mich
 Curtis Advestas Co Boston Mass
**Curtis Companies Inc 1200 S Second Ave
 Clinton Ia**
 Curtis Lighting Inc 6135 W 65th St Chicago 38 Ill
 Curtis Lumber Co Portland Ore
 Curtis Machine Co 1900 E Second St Jamestown N Y
 Curtis Mfg & Adhesives Co 29 Lewis Wharf Boston 10 Mass
 Curtis Publishing Co (Sunday Evening Post) Independence
 Square Philadelphia Pa
 Curtison Co 2227 Sawtelle Blvd Los Angeles 164 Calif
 Cutter Hammer Tools 313 North 12th St Milwaukee 3 Wis
 Cutter Mfg Co Charleston Mass
 Cyclone Fence Div American Steel & Wire Co Waukegan Ill
 Cyclone Mfg Co Urbana Ind
 Cyclone Sander Co Urbana Ind

David-Maypole Tool Corp Hurlburt & Foyette Sts Norwich
 Davidson Enamel Prod Inc 808 E Ribby St Lima O
 Davidson Mfg Corp 1020 W Adams Chicago Ill
**Davies (A) & Co 314 Straight S W Grand
 Rapids Mich**
 Davis Lumber Co Ltd Ansdley La
 Davis Plywood Corp 12555 Berra Rd Cleveland 11 O
 Davis Sales Agency Seattle 11 Wash
 Davis & Stahl Co 4035 Hamilton Ave Cincinnati O
 Davis-Watson Mfg Co Napaun N H
 Davis Automatic Pipe Castings Co Box 51 Calvin Station
 Des Moines 3 N Y
 Day-Brite Lighting Inc 5411 Bowling Ave St Louis 7 Mo
 Day-Brite Hydraulic Corp Bowler Green Ohio
 Day Co 700 W 49th St Chicago 21 Ill
 Day (J B) Co Harrison & Lyons Ave Cincinnati 22 O
 Day & Night Mfg Div Affiliated Gas Eng Inc S Shamrock
 Ave Manteca Calif
 Day-Smith Hydraulic Corp Camp Hill Pa
 Dayton Laminates Inc Dayton N C Chicago Ill
 Dayton Electric Mfg Co 748 W Adams Chicago Ill
 Dayton Irrigation Co Inc Dayton O
 Dayton Pump & Mfg Co 500 N Webster St Dayton 1 O
 Dayton Rubber Co 10 Rubber St Dayton 1 O
 Dayton Safety Ladder Co Scallion Bldg Cincinnati O
 Dayton Seals Co 110 E Fourth Dayton 2 Ohio
 Dayton Sump-Grip & Shure Co Manufacturing Co
 Dayton Corp Wayne & Carter Sts St Louis Mo
 Deacy (J C) Inc 1770 W Boreau Ave Chicago Ill
 Deakin Price Book Baraboo Wis
 Deakers Glass Co 214 St S & Western Ave Chicago 8 Ill
**Deaehorn Motors 15050 Woodward Ave De-
 troit 3 Mich**
 Deaehorn Stone Co Mercantile Bldg Dallas Texas
 Deaehorn (E) Fans Div American Mach & Metals Inc E
 Melroe Ill
 Deaehorn Iron & Steel Deaehorn Ala
**Deaehorn Pump Co 2750 Nelson Park Drive
 Deaehorn Ill**
 Deaehorn Steel Prods Co Box 28 Deaehorn Ind
 Decker (A R) Shingle Co Elma Wash
 Deconative Cabinet Corp 201 Fifth New York 16 N Y
 Decker Inc 2116 Proctor St NW Atlanta Ga
 Dedux Machine Works 2070 W 11 Mile Rd Berkeley Mich
 Deel Clay Prod Co Bloomington Ind
 Deemer Lumber Co Deemer Mich
 Deegreese Div Motor Products Corp 2336 Davis St
 Chicago Ill
 Deery & Co Melroe Ill
 Deering (J G) & Sons Bldfower Me
 Deer Park Pipe Industry Inc Deer Park Wash
 Deffner Lumber Co Tacoma Wash
 Deffner Machine Works Deffner Ohio
 Deffner Metal Weatherstrip Co Oak Harbor O
 Deffner Separator Co Rem 1520 165 Broadway New
 York 6 N Y
**Delaware Floor Prods Inc 295 Fifth Ave
 New York 16 N Y**
 Delaware Tool Steel Corp E Wilmington 99 Dela
 Delbridge Calculating Systems Inc 2502-10 Sutton Ave St
 Louis 12 Mo
**Delco Appliance Div General Motors Corp
 Lyell & Whitney Sts Rochester N Y**
 Del Mar Cabinet Co Inc 2805 Gordon Rd 8 W Atlanta Ga
 Delmore Instrument Co 112 Curciana Houston N J
 Delta File Works Inc Loony & Thompson Sts Philadelphia
 37 Pa
 Delta Heating Corp 85-67 Northern Blvd Jackson Heights
 N Y 11375
 Delta Tool Mfg Co Inc Baton Rouge La
 Deluge Metal Furniture Co 243 Struthers Ave Warren Pa
 Del West & Deaehorn 7001 S Chicago 32 Ill
 Deming Co 61 Broadway Salem O
 Dempster Mill Mfg Co Beatrice Neb
 Demsey & Associates 4911 Carnegie Cleveland 6 O
 DeMuth Steel Prods Co 20 N Wacker Dr Chicago 6 Ill
 Deniston Co 4850 S Western Ave Chicago Ill
 Denington Paint Brkks Wash Bureau N Y
 Dennis Chemical Co 2701 Papin St St Louis Mo
 Dennis (W J) & Co 4444 Irving Park Rd Chicago 41 Ill
 Denison Sugar Pipe Corp Denison Ill
 Denmore Brick Co Lebanon N H
 Denver Fire Clay Co 2301 Blake St Denver 17 Col
 Denver Floor & Safety Supply Co 4901 High St Denver Col
 Denver Sewer Pipe & Clay Co W 45th Ave & Fox Denver
 Col
 Dependable Machine Co Sedro-Bldg 1235 Greenhorn N C
 Des Lauriers Concrete Mould Co 1000 S Keeler Chicago Ill
 Des Moines Glass & Mfg Co Des Moines Ia
 Des Moines Lumber Co Des Moines Ia
 Des Moines Ornamental Iron Co 400-404 E Jackson Ave
 Des Moines 15 Ia
 Des Moines Steel Tank Co Independence Mo
 Desmond-Stephan Mfg Co 713 Walnut St Urbana O
 Desoto Hardwood Flooring Co Memphis Tenn
 Desoto Wood Mfg Co 1738 Elizabeth St N W Grand
 Rapids 2 Mich
Desoto 2 Mfg Co
 Detroit Seals Inc Park Ave & Sanford St Brooklyn 5 N Y
 Detroit Weatherstrip Corp 66 Varot St New York 18 N Y
 Detroit Brass & Malleable Works 100 R Campbell Detroit 9
 Mich
 Detroit Flint & Stamping Corp 625 Monroe Detroit 26
 Mich
 Detroit Hardware Mfg Co 1320 Mt Elliott Detroit Mich
 Detroit Heild & Machine Co Clay Ave & G T R B Detroit
 11 Mich
 Detroit Lubricator Co 5600 Trumbull Detroit Mich
 Detroit Moulding Corp Detroit Mich
 Detroit Michigan Stone Co 9900 Jefferson Detroit Mich
 Detroit Sheet Metal Works 1504 Oakland Blvd Detroit 6
 Mich
 Detroit Show Case Co Detroit Mich
**Detroit Steel Products Co 2250 E Grand Blvd
 Detroit 11 Mich**
 Detroit Surfacing Machine Co 7433 W Davison Detroit 4
 Mich
 Detroit Torsion & Mfg Co 12111 Cardinal at Horn St De-
 troit Mich
 Detroit Vapour Stone Div Borg-Warner Corp 670 E Wood-
 bridge Detroit Mich
 Down (E W) Co Chester Conn
 Downer Inc 21 E 53rd New York 22 N Y
 Downville Co 300 Phillips Toledo 1 O

Deane & Reynolds Inc 787 First Ave New York 17 N Y
DeWitt Inc Box 840 Lancaster Pa
 Dewar Mfg Co Inc 30 35th St Brooklyn N Y
 Dewey Mfg Corp W 42nd St & Dyer Ave New York 18 N Y
 DeWene (A) Lumber Co Philadelphia Miss
 Dewey Alloy Chemical Co Cambridge Mass
 Dewey Portland Cement Co 424 Alameda Rd Kansas City 2 Mo
 Dewey-Shepard Boiler Co 1311 N Capitol Ave Indianapolis Ind
 DeWitt Shingle Co Everett Wash
 DeWitt Co Fairfield Ia
Dexter Lock Co Grand Rapids Mich
 Doctor Lumber 4763 Broadway Newark Ohio
 Diamond Calk & Horsehoe Co Stratton St Duluth Minn
 Diamond Chain Co Inc 400 Kentucky Ave Indianapolis 7 Ind
 Diamond Expansion Bolt Co Inc 498 North Ave Garwood N J
 Diamond Match Co Chico Calif
 Diamond Rubber Div Goodrich (B F) Co 448 S Main St Akron O
 Diamond T Motor Car Co 4401 W 26th St Chicago Ill
 Dick (A B) Co Niles Ill
 Dick Bros Inc Reading Pa
 Dickerson (Clark) Lumber Co Reed City Mich
 Dickie Tonic Co Burlington & Warren Ave Downers Grove Ill
 Dickie (W R) Clay Mfg Co 922 Walnut St Kansas City Mo
 Dickinson Clay Prods Co Dickinson N D
 Dick (R & J) Co Inc 24 16th St St Paul Minn
 Dickson Weatherproof Nail Co 1900 Greenwood Ave Evanston Ill
 Dickson Machine Tool Co 90-12 Rockaway Woodhull St N Y
 Diehl Mfg Co Electrical Div Singer Mfg Co 1100 Findeuse Ave Somerville N J
 Diemer (George W) Mfg Co 427 N Monticello Chicago 24 Ill
 Dietsch Lumber & Coal Co Dietsch Bldg Kansas City 6 Mo
 Dietrich Brothers Inc Pleasant St Baltimore Md
 Dietsch (Eugene) 2425 S Sheffield Chicago 14 Ill
 Dietz (E H) Co Laight & Greenleaf New York N Y
 Dittlingham (C B) Bolt Co 7928 NE Mallory Ave Portland 13 Ore
 DiVincenzo (L) Inc 1700 London Rd Cleveland O
 Divals Mfg Co Box 511 Westfield Mass
 Diviner Craft, Grand Rapids Mich
Disston (Henry) & Sons Inc Tacony Station Unruh & Milner St Philadelphia 35 Pa
 Diversy Corp 1800 W Roscoe Chicago Ill
 Division Lead Co 830 W Kinzie Chicago 22 Ill
 Dixie Fire Brick Co Birmingham Ala
 Dixie Logging Tool Co Chattanooga Tenn
 Dixie Lumber Co Inc 8201 Fig St New Orleans La
 Dixon Industries 315 E Jackson Spokane Wash
 Dixon (Joseph) Crucible Div Rite-Rite Mfg Co Jersey City N J
 Dixie Foundry & Machine Co Portage Niagara Falls N Y
 Dixons Mfg Co 1200 Beardsley Ave Elkhart Ind
 Dixonsmum Co Cleveland 1 Ohio
 Dixons Mfg Co Wichita 2 Kan
Dodge Bros Corp Div Chrysler Corp 7900 Joseph Campau Ave Detroit Mich
 Dodge Carb Co Inc 664 Manor St Lancaster Pa
Dodge (F W) Corp 119 W 40th St N Y 18 N Y
 Dodge (F W) Co Springfield N J
 Dog (W S) Inc 894 Manhattan Ave Brooklyn N Y
 Dolan Lumber Co Augusta Ga
 Dolan & Carson Lumber Co Merchants Exchange Bldg San Francisco Calif
Dole Valve Co 1923 Carroll Ave Chicago 12 Ill
 Dollar (Robert) Co Glendale Ore
 Dolphin Paint & Varnish Co 922 Lowell St Toledo 3 Ohio
 Dooler Bros 13900 Miles Ave Cleveland 5 O
 Doolittle & Co New Britain Conn
 Dooly Lighting Rod Co Amston Ala
 Doolin Metal Strip Mfg Co 2410 S Cicero Ave Chicago 50 Ill
Dorfle Mfg Co 1904 First Ave Hibbing Minn
 Dorsey Trailers 401 Hickman Kiba Ala
 Douglas Distributor Corp 901 Grand Ave NE Washington 17 D C
 Douglas Fire Wholesalers Inc Marysville Wash
 Douglas Guardian Watchmen Corp 118 S Front St New Orleans 1 La
 Douglas (John) Co 714 & B O R E Cincinnati O
 Douglas Steel Equipment Co Newburg Miss
 Dow Chemical Co 1000 Main St Midland Mich
 Dow (H) Refect Div Clayton Station E Toledo Vt
 Dow House 6518 S Newark Ave Chicago 21 Ill
 Dowling (F M) Lumber Co Garda Ala
 Downs Truss & Bolt Co 540 W Vernon Ave New Orleans 3 La
 Dowsett Spring Co Douglas Mich
 Draper (Fred) Lumber Co Colville Wash
 Draxton Corp 318 S Broadway St Chicago 22 Pa
Dromel Mfg Co 2409 18th St Racine Wis
 Dresden Mfg Co 3422 E Anaheim Lane Beach Calif
 Drexel (C) & Co 30 Ford St Kingston Mass
 Drexel Corp 318 S Broadway St Chicago Ill
 Dreyer-Harris Co Harrison N J
 Dretz Mfg Corp N Green Bay at Frantz Milwaukee 10 Wis
 Drexel & Co 2710 Peach St Pittsburgh 12 Pa
 Dreyer Brick Co Essex Junction Vt
 Dreyfus Houses Inc Baltimore 1 Md
 Dreyfus Lamp Co New York N Y
 Draywall Tring Co Burlingame Calif
Draywall Tarp Inc 455 Fifth Ave New York 19 N Y
 Du All Scaffold Bracket Co 44 E Broad St Columbus O
 Du Bois Lumber Co Vancouver British Columbia
 Dudson Distributing Co Omaha Neb
 Dudley Lock Corp 570 W Omaha Chicago Ill
 Duff Norton Mfg Co 2710 Peach St Pittsburgh 12 Pa
 Dugans' Invaluable Stone Patch & Stone Stain Prod 7015 S Prairie Chicago Ill
 Dumas Co 1309 17th Racine Wis

Dumperste Die Mann Construction Co Inc 131 N Ludlow St Dayton O
 Duncan Fire Cutter Co Inc 818 Securitia Bldg Seattle Wash
 Duncan Lumber Co Inc Seattle 11 Wash
 Dunham Shaw Corp 35 W 42nd St New York 18 N Y
 Dunham (C A) Co 400 W Madison St Chicago 6 Ill
 Duncker Radiator Corp Dumkir N Y
 Dunsmuir (H A) Westery E J
 Duran (W E) Co 415 W 23rd St Holland Mich
 Duran-Safety Ladder Corp 9th at Soo RR Oshkosh Wis
 Dur-Therm Div Motor Wheel Corp 111 W Mt Hope Lansing 3 Mich
 Duplex Hanger Co 5300 Lakeside Ave Cleveland 14 O
 Duplex Inc 654 N Laper Dr Los Angeles 46 Calif
 Dupont (C A) Co 400 W Madison St Chicago 6 Ill
 Durabilt Homes Co Denver Col
 Durand Corp 411 E 25th St Baltimore 2 Md
 Durand Chemical Co 77 Traveler Boston 11 Mass
 Durbin-Duro Inc 6600 Olive St St Louis 5 Mo
 Durham (Donald) Co 295 Second St Des Moines Ia
 Durham Mfg Co Durham Conn
 Durham Mfg Corp S Monmouth Municipal Ind
 Durand Inc 420 Lexington Ave New York 17 N Y
 Durkee-Atwood Co 217 NE 7th St Minneapolis 13 Minn
 Dury Metal Prods Co Kildare & Seibert Sts Chicago Ill
 Durn Mfg Co 409 Lafayette New York 3 N Y
 Dwyer Lumber Co Portland 6 Ore
 Dwyer Prods Corp Michigan City Ind
 Dyke Bros Ford Smith Ark
 Eagle Electric Mfg Co 23-10 Bridge Plaza S Long Island City 1 N Y
 Eagle Lock Co 20 S Main St Terryville Conn
 Eagle Panel Co 703 E 13th St New York 9 N Y
 Eagle Picher Co American Building Cincinnati O
 Eagle Rule Mfg Corp 510 Hunda Point Ave New York N Y
 Eagle Steel Wool Co 6201 W 65th Chicago Ill
 Eagle Stone Co Rome Ga
 Earle Hardware Mfg Co Noble & Gregg Sts Reading Pa
 Earle Kitchens Unit Co 116 E 43rd St New York N Y
 Earle Mold Pattern Co Pleasantville N Y
 East Coast Tileboard Corp 41-59 Wyckoff Ave Brooklyn 27 N Y
 Eastern Machine Co Robertown Pa
 Eastern Nail Co 50 Allegee St Providence 9 R I
 Eastern Stainless Steel Corp Baltimore 3 Md
 Eastern Venetian Blind Co Baltimore 13 Md
 East Ohio Sewer Pipe Co Irondale O
 East Mfg Co 401 W Tompkins St Chicago 5 Ill
 East Washing Machine Corp Spencer & RR Aves Syracuse N Y
 East Mfg Co 740 E 140th St Cleveland 10 O
 Eaton Metal Products Corp Omaha 2 Neb
 Eatonville Lumber Co Eatonville Wash
 Eberhard & Sons Co 1127 Madison St Little Chute Wis
 Eberhard-Faber Pencil Co 37 Greenpoint Ave Brooklyn 22 N Y
 Eberhard Mfg Co Div Eastern Metalbale Iron Co Cleveland Ohio
 Ebeling Lumber Co Everett Wash
 Eberle & Son Stuber Div Potia Transmission Co Rockford Ill
 Eckenrodt Prods Co Inc Nashville Tenn
 Economics Laboratory Inc Guardian Bldg St Paul Minn
 Eckenrodt Rubber Co 1234 S 1st St Detroit Mich
 Economy Bias Binding Co 41 E 11th St New York N Y
 Economy Fuse & Mfg Co Greenview Ave at Diversy Pkwy Chicago 11 Ill
 Economy Housing Co Wahoo Neb
 Economy Mfg Co Stone Mountain Ga
 Economy Mfg Co 11 Harvey Philadelphia Pa
 Economy Necessity & Printing Co 227 W 39th St New York 18 N Y
 Economy Pumps Inc Die Hamilton-Thomas Corp. Weiler & Zimmerman Aves Hamilton O
 Economy Sile & Mfg Co Frederick Md
 Eddy Stoker Corp 1713-18 North Ave Chicago Ill
 Eddy Valve Co Box 363 Waterford N Y
 Edens-Ritch Lumber Co Corrigan Tenn
 Edgerton Mfg Co Plymouth Ind
 Edwards Co Inc Post Hill Rd Norwalk Conn
 Edwards Co Sanford N C
 Edwards Mfg Co Fifth & Columbus Sts Cincinnati 2 O
 Edwards (S) & Co 342 Madison Ave New York N Y
 Edwards Window Corp Holland Mich
E G Building Fasteners Corp 101 Park Av Rm 1133 New York 17 N Y
 Eary Register Co Dayton 2 O
 Eber & Magnesia Mfg Co Crawford & County Line Rd Valley Forge Pa
 Eimer Corp 854 S Fourth West St Salt Lake City Utah
 Eimer Corp 420 Lincoln Chicago 29 Ill
 Eimont Carlson & Co 1400 Broadlax Ave Rockford Ill
Elastic Stop Nut Corp of America 2350 Vauxhall Rd Union N J
 Elastic Tip Co 370 Atlantic Ave Boston Mass
 Elin Tool & Screw Corp 1902 Broadway Rockford Ill
 Eldon Mfg Co 1010 E 62nd St Los Angeles Calif
 Electric Protection Co Inc Home Savings Bank Bldg Albany 2 N Y
 Electrical Engineers Eupt Co Woodman Division St Melbourne Park Ill
 Electric Screen Co Inc Lindenwood Long Island N Y
 Electric Furnace-Man Inc Emmaus Pa
 Electric Products Co 7016 Euclid Cleveland 3 Ohio
 Electric Soldering Iron Co Inc 1740 W Elm St Deep River Conn
 Electric Sprawl Co 1415 Illinois Ave Shobogon Wis
 Electric Trench Radiator Corp Paris Ky
 Electric Wheel Co Quincy Ill
 Electric Wire Co Whitewater Wis
 Electro-Lift Inc 32 Church St New York 7 N Y

Electromaster 151 Lafayette Mt Clemens Mich
 Electromote Mfg Corp 49 Crutch St Rochester 3 N Y
 Elgin-Butler Brick Co Austin Tex
 Elgin Software Corp 142 N Grove Ave Elgin Ill
 Elgin-Standard Brick Mfg Co Elgin Tex
 Elgin Stone & Oven Div Acme Vulbride Records Inc 122 S Michigan Ave Chicago 3 Ill
 Elkhoe Co 139 8th St Cambridge 42 Mass
 Elman Tool Co 2117 E 56th St Minneapolis 17 Minn
 Elmer (C) & Co 1000 W 1st Ave Long Elizabeth N Y
Elmer Co Railroad St Ford City Pa
 Elmer Mfg Co 1874 S 54th Ave Chicago 50 Ill
 Elkhart Brass Mfg Co 1300 W Beardsley Ave Elkhart Ind
 Elk River Coal & Lumber Co Swadlow Va
 Ellington Shobogon Wis
 Elliott Addressing Machine Co 143 Albany St Cambridge 30 Mass
 Elliott Best Mill Co 600 W Spokane St Seattle 4 Wash
 Elliott Hardware Co 100 Pine St Potsdam N Y
 Elliott Patent & Varnish Co 4523 W 87th Ave Chicago 24 Ill
 Ellis Venetian Blind Co 5459-69 Lake Park Ave Chicago 15 Ill
 Elwood Co 5530 W Harrison Chicago 44 Ill
 Elmer Corp Salt Lake City Utah
 El Paso Brick Co 32 Pass Tex
 Elrod J L Lumber Co Charlotte N C
 Elroy Naval Stores Co Vidalia Ga
 Elm Park Electric Co 1200 E 1st Clair Ave Cleveland 3 O
 Ely Thomas Lumber Co Camden-on-Gauley Va Va
Empson Electric Mfg Co 8100 Florissant Ave St Louis 21 Mo
 Empire Brush Works Inc Williams & School Sts Port Chester N Y
 Empire Lumber Co Box 97 Milwaukee 13 Wis
 Empire Roofing & Insulation Co Tulsa Okla
 Empire Stone Co Belleville Ill
 Empire Varnish Co 2638 E 76th St Cleveland 4 Ohio
 Emporium Forestry Co Conifer N Y
 Emrick Inc 1224 Clinton Ave Kalamazoo Mich
 Enamel Prods Co 300 Eddy Rd Cleveland 8 O
 Endeavor Lumber Co Endeavor Pa
 Engraving Elevator Co 3rd & Philadelphia 6 Pa
 Engineered Prods Co 129 Smith Flint 4 Mich
 Engineers Plywood Prods Co Box 1226 Tacoma Wash
 Englewood Home Co 6214 S 1st Ave Chicago Ill
 Engle & Worth Lumber Co McMinville Ore
 Engman Mfg Company 1317 Locust St Des Moines Iowa
Ennis Supply Co 334 First Street N Minneapolis 1 Minn
 Ensign Products Co Cleveland 5 Ohio
 Enterprise Paint Mfg Co 241 S Ashland Chicago Ill
 Enterprise Co Columbus Ohio
 Ensign & Binell Co 80 Eighth Ave New York 10 N Y
 Equipment Engineering Co Charles Ill
 Equipment Mfg Inc 21550 Hoover Rd Detroit 5 Mich
 Equip Div Amora Ept Co John & Frairie Sts Amora Ill
 Eruo Mfg Co 2308 Edison Ave Chicago 50 Ill
 Erickson (C E) Co Inc 1440 Walnut St Des Moines Ia
 Erickson Power Lift Trucks Inc 1409 Marshall St NE Minneapolis 13 Minn
 Erie Art Metal Co Inc 100 School Ave Erie Pa
 Erie City Iron Works Erie Pa
 Erie Hoist Co Erie Pa
 Erie Pump & Engine Works 145 Glenwood Ave Medina N Y
 Erie Steel Construction Co Glast & N P RR Erie Pa
 Erie Cabinet Co E Biddle & Railroad West Chester Pa
 Erie Chain Wks 311 E 22nd St New York 10 N Y
 Erie Chemical Prods Corp 1127 Madison St Little Chute Wis
 Essex Rubber Co Beakes St Trenton N J
 Essex Wire Corp Parantite Wire & Cable Wks Fort Wayne Ind
 Essex Wood Corp 1250 S Santa Fe Ave Los Angeles 21 Calif
 Est-Wood Corp 424 Madison Ave New York 17 N Y
 Estate Store Co Div Soma Electric Co Hamilton O
 Estes (F R) & Sons Inc 1100 E 1st Ave New York N Y
 Ester Wire Wks Co 36 Cliff St New York 7 N Y
 Estwing Mfg Co Rockford Ill
 Ethel Corp 405 Lexington Ave New York 17 N Y
 Eugene Plywood Co Eugene Ore
 Eureka Lumber Co Washington N C
 Eureka Plywood Co Eureka Calif N Y
 Eureka Prods Corp O'Fallon Ill
 Evans Brick Co Urichville O
Evans & Co 480-416 Trumbull St Elizabeth N J
 Evans Hardwood Flooring Co 3900 Shonto St Louis Mo
 Evans Pipe Co 23 Newport Ave Urichville O
 Evans Prods Co Plymouth Mich
 Evansville Metal Rod Co Evansville Ind
 Evans & Howard Sewer Pipe Co 5200 Manchester Ave St Louis Mo
 Everett Corp 424 W 42nd St New York N Y
Eveready Brikpak Co 1509 S Michigan Blvd Chicago 5 Ill
 Eveready Co Frederick Md
 Everett Hardwood Lumber Co Everett Pa
 Everett Shingle & Shake Co Everett Wash
 Evergreen Slide Co Inc Greenville N C
 Everhot Heater Co 5421 Wesson Ave Detroit Mich
 Everhot Mfg Co Plinth & St Charles Woodstock Ill
 Everite Pump & Mfg Co 1018 S Pioneer St Lancaster Pa
 Ever-Plastics Corp 420 Lexington Ave New York 17 N Y
 Ever-Tite Compiling Co Inc 256 W 54th St New York 19 N Y
 Everwear Mfg Co 35 S Spencere Springfield Ohio
 Evanson Box Co Klamath Falls Oregon
 Excelsior Incinatorator Co 512 N Ravenswood Chicago Ill
 Exact Weight Scale Co Columbus Ohio
 Excel Auto Radiator Co 320 E 21st Chicago Ill
 Excel Metal Cabinet Co Inc 1018 S Pioneer St Lancaster Pa
 Excelsior Stone & Mfg Co 534 S Front St Quincy Ill
 Exchange Sawmills Sales Co R A Long Bldg Kansas City Mo
 Excelsior Inc 415 Lexington Ave New York 17 N Y
 Extension Drawer Support Co 3727 Broadway Place Los Angeles 7 Calif
 Extruded Plastics Inc 100 New Canaan Ave Norwalk Conn
 E-Z Mark Tool Co 3707 S Robertson Blvd Culver City Calif
 E-Z Tight 611 S Broadway Albuquerque N Mex
E-Z Way Sales Inc Div of Minnesota Wood Specialties Inc Box 300 Dept A St Paul Park Minn

F

Faber-Castell (A W) Pencil Co 41 Dietsen St Newark 4 N
 Fabricated Products Inc 701 Washington Rd Pittsburgh 10 Pa
 Fabry (W H) Mfg Co Date & Orange Sts Alhambra Calif
 Factory Built Homes Inc Melbourn N Y
 Fairbanks Co 395 Lafayette St New York 3 N Y
 Fairbanks Morse & Co 800 S Michigan Ave Chicago 5 III
Fair (D L) Lumber Co Louisville Miss
 Fairfield Brick Co Zearville 0
 Fairfield Engineering Co 321 Chicago Marion Ohio
 Fairmont Wall Plaster Co Fairmont W Va
 Fairmount Tool & Forging Inc 13011 Quincy Ave Cleveland 6 O
 Fair Corp 2927 W Canal St Milwaukee 8 Wis
 Famous Mfg Co 4700 Railroad Ave East Chicago III
 Farmer Mfg Co Brookside Park Cleveland 10
 Farley Electric Corp 1322 E Church Adelardin Mich
 Farley Mfg Co 1939 E Grand Ave Ivesdale III
 Farley & Loeschner Mfg Co Dubuque Ia
 Farmers Lumber & Supply Co Sioux City 11 Ia
 Farm Journal Washington Square Philadelphia 5 Pa
 Farquhar (A B) Co 21 Duke St York Pa
 Farwell Lumber Co Poland N Y
 Fartin (M B) Lumber Co Station & Winton Aves Cincinnati 0
 Farris Lumber Co Marton Miss
 Farwell Ozum Kirk & Co 198 Fairfield Ave W St Paul 1 Minn
 Far West Shingle Co Arlington Wash
Fasco Industries Inc Davis & Teppin Sts Rochester 2 N Y
Fastener Corp 860 Fletcher St Chicago 14 III
 Fastlines Carter Corp 1947 Clarence St Evansville 7 Ind
Fawcog Div Ft Falls Stamping & Welding Co 1703 Front St Cuyahoga Falls O
 Fayette Brick & Tile Co Fayette Mo
 Fay Flour Machine Co 27018 Ave New York N Y
 Fay (J A) & Egan Co Eastern Ave & Hazen St Cincinnati 22 O
 Feather Feltc 1709 W 8th St Los Angeles 17 Calif
 Feather-Lite Mfg Co 8205 Lyndon Detroit 21 Mich
 Feeders Shigan Corp 70 Tomawards St Buffalo 7 N Y
 Federal Electric Inc 1020 E 10th St Newark 5 N J
 Federal Enterprises Inc 8700 S State Chicago III
 Federal Industries Inc 19720 W Eight Mile Rd Detroit 12 Mich
 Federal Motor Truck Co 5780 Federal St Detroit Mich
 Federal Seaboard Terra Cotta Corp New York 16 N Y
 Felton Sizing & Co Inc 145 N Fourth St Philadelphia Pa
 Felt & Tarrant Mfg Co 1729 North Paulina Chicago III
 Fene Co of America 698 S Dearborn St Chicago 5 III
Fenster Building Products 2250 E Grand Blvd Detroit 11 Mich
 Fenston Steel Works Inc 5901 Market St Seattle Wash
 Ferguson (Harry J) Co 141 West Ave Jenkintown Pa
 Ferguson (W T) Lumber Co St Louis 1 Mo
 Ferris Business Equipment Inc 244 Great Meadows Rd Stratford Conn
 Fessenden Cos Inc Torrington Mass
Fiat Metal Mfg Co 9301 W Belmont Ave Franklin Park Ill
 Fibre Conduit Co 1842 E Beach St Milwaukee 7 Wis
 Filer & Stowell Co 147 E Chester St Milwaukee 7 Wis
 Finch & McCullough Aurora Ill
 Finishing Line Association of Ohio Home Bank Bldg Toledo 0
 Fink (John E) Lumber Co Cable Wis
 Finnerell System Inc 517 East St Elkhart Ind
 Finnerell Corp 3110 W 51st St Chicago III
 Fiveline Stone & Furnace Lining Co 1800 N Kingsbury Chicago III
 Firestone Industrial Products Co 1200 Firestone Pkway Akron 17 O
 Firestone Plastics Co Pottsdam Pa
 Firestone Tire & Rubber Co 1200 Firestone Pkway Akron 17 O
 Fir Mfg Co Myrtle Creek Ore
 Fir Products Co P O Box 188 Oregon Ore
 Fir-Tex Insulating Board Co U S National Bank Bldg Portland Ore
 Fir-Tex of So Calif Los Angeles Calif
 Fischer Bracket Co Hyde Park 36 Mass
 Fischer & Hayes Rope & Steel Co 4915 W Lake Chicago III
 Fischer Lumber Co Marlova Ore
 Fisher Lumber Co 225 Lincoln Ave
 Fisher Leather Belting Co Third & Wood Sts Philadelphia Pa
 Fisher & Young Titusville Pa
 Fiske (J W) Iron Work 80 Park Pl New York 7 N Y
 Fisk Tire Div U S Rubber Co 1230 Ave of the Americas New York 20 N Y
 Fitter (Edwin H) Co 5633 Taomsc St Philadelphia 24 Pa
 Fitzhugh's Boiler Co Inc 101 Park Ave New York N Y
 Fivale Equipment Mfg Co 103 Beade St New York 7 N Y
 Fix-All Products 323 W Holland New York 11 N Y
 Flame-Seal Corp 4987 Goodhue Bldg New Orleans 16 La
 Flash Bridge Co Riverview Mich
 Flash-Stone Co Inc 20 E Rittenhouse St Philadelphia 44 Pa
Fleet of America Inc 110 Pearl St Buffalo 2 N Y
 Fletcher Lumber Co 4243 Duncan Ave St Louis 10 Mo
 Fletcherman Lumber Co Portland Ore
 Fleming Mfg Co 4985 Fyler Ave St Louis 9 Mo
 Fleming & Sons Inc 1120 E 12th St Dallas 8 Tex
 Fletcher (H E) Co West Chestnut 2 Mass
 Fletcher-Terry Co 4715 Santa St Farmerville Conn
 Flex-Arm Mfg Co Pasadena Calif
 Flexible Steel Lacing Co 4640 Lexington Chicago 44 III
 Flexroll Mfg Co 3781 Lorain Cleveland 13 Ohio
 Flexrope Co Inc 1932 E Monument Ave Dayton 1 O
 Flexstone Corp 1464 Main Buffalo 9 N Y
 Flex-O-Glass Mfg Co 1194 N Cicero Ave Chicago 51 III
 Flex-O-Lite Co St Charles III
 Flexrock Co 361th & Filbert Sts Philadelphia 4 Pa
 Flexroc Co Port Austin Mich

Flint (A W) Co 85 Lloyd St New Haven 6 Conn
Flintkote Co 30 Rockefeller Plaza New York 20 N Y
 Flint-Northern Blind Mfg Co Flint 5 Mich
FloT & Walling Mfg Co Henry T Park Bldg Kendallville Ind
 Florsheim-Hull Co 4181 W Monroe Chicago 41 III
 Florida Stone Co Gardner Mass
 Florida Georgia Brick & Tile Co Jacksonville Fla
 Florida Metalcrafters 2719 Fairfield Ave S St Petersburg Fla
 Florida Portland Cement Co Div General Portland Cement Co Tampa Fla
 Florida City Ornamental Iron Co 2637 27th Ave Minneapolis Ave Bellmore 24 N Y
 Fisher Bros Astoria Ore
 Fluid Heat Div Anchor Post Products Inc 6500 Eastern Ave Bellmore 24 N Y
 Fluorescent Fabricators Div Easy-Easy Lighting Inc 1925 Choptauk Ave St Louis Mo
 Fluorescent Lighting Co Monticello N Y
 Flush Door Div Culler Furniture Co 780 Union Commerce Bldg Cleveland 14 Ohio
Flush Wall Radio Co 965 Broad St Newark 2 N J
Flynn (Michael) Mfg Co 700 East Godfrey Ave Philadelphia 24 Pa
 Fogel Refrigerator Co 3400 Eadom St Philadelphia Pa
 Fogel-R Sales Co Dept AB-4 P O Box 383 Downey Calif
 Fogelway Strayway Co Inc 813 Seaboard St Portsmouth Va
 Foley Lumber Industries Jacksonville Fla
Foley Mfg Co 2300 N E Fifth St Minneapolis 18 Minn
Follansbee Steel Corp Third & Liberty Sts Pittsburgh 30 Pa
 Follitt Time Recording Co 219 High St Newark N J
 Folsom Co Circuit Prod Div 210 Oak Lane Dallas Tex
 Foltz (H D) Ltr Co Alexandria La
 Fote (J B) Foundry Co Fredericktown O
 Forbes Steel Corp Garrison St Box 329 Cantonburg Pa
 Forbush Advertising Agency 519 First National Bldg Euid Ohio
 Ford Chain Block Div American Chain & Cable Co Inc York Pa
 Ford Cement Block Machine Co Cedar Falls Ia
Ford (Ivon R) Inc McDonough N Y
 Ford Metal Working Corp 2701 Bridge Plaza New Long Island City N Y
Ford Motors Co Dearborn Mich
 Ford Roofing Products Co 188 W Randolph St Chicago 2 Ill
 Fordyce-Cronsett Lumber Co Farday Ark
 Forest City Bit & Tool Co 200 Kishwaukee Rockford III
 Forest City Foundries Co 2500 W 27th St Cleveland O
 Forest Filter Products Co Forest Grove Ore
 Forest Products Co 61 First Ave E N Kallinell Mont Forks Shingle Co Seattle Wash
 Forman-Ford & Co 111 E Second St Minneapolis Minn
Fornica Co 4614 Spring Grove Ave Cincinnati 32 O
 Form Stone Co 200 S Franklinton Bld Baltimore 23 Md
 Forming Mfg Co 125 Scarsier Ave Bridgeport 1 Conn
 Fort Hill Chemical Co 26th & Smallman St Pittsburgh 22 Pa
 Forty-Eight Insulations Inc Thomas & McGee Sts Aurora Ill
 Foshier Carrier Div-Standard Forge & Axle Co Montgomery Ala
 Foster Lumber Co Montgomery Ala
 Foster Mfg Co 287 Delaware Buffalo 17 N Y
 Foster Mills Inc Williams Ore
 Foster Glass Co Union National Bank Bldg Clarkburg W Va
 Four-Way Lock Co 4619 Ravenwood Ave Chicago III
 Four Wheel Drive Auto Co E 12th & Ante St Clintonville Wis
 Fowler Mfg Co 2545 S E Gladstone Portland Ore
 Fowler Shingle Co Sullivan Wash
 Fox (Abbot) Lumber Co Iron Mountain Mich
 Foxboro Co 86 Newport Ave Foxboro Mass
 Fox Bros Mfg Co Collins & Sidney Sts St Louis 4 Mo
 Fox (M Ewing) Co Inc 13615 St & Rider Ave New York 51 N Y
 Fox Furnace Co Elyria O
 Fox Valley Forge Elyria III
 Fox Paint Co Inc 1775 Mentor Ave Cincinnati 11 Ohio
 Francis (Charles E) Co 50 W Frederick St Huntington Ind
 Franklin Equipment Co Monteville Ia
 Franklin Glass Corp 225 Stuart Butler Pa
 Franklin Glass Co Chestnut & Water Sts Columbus 15 O
 Franklin Oil Heating Inc Columbus Ohio
 Franklin Research Co 5137 Lancaster Ave Philadelphia 31 Pa
 Franklin Rubber Corp Philadelphia Pa
Frantz Mfg Co Sterling Ill
 Fraser Brick Co Dallas Tex
 Fraser Co Inc St Louis Mo
 Frederick Brick Works Frederick Md
 Freehold Sons Co Buffalo Mich
 Freeman Moulder Div Illinois Iron & Bolt Co 914 E Michigan Ave Chicago 15 Ill
 Fremont Rubber Co 250 McPherson Fremont O
 French & Beach Div Kellogg-Brown-Root Co 50 Farnam St Des Moines Ia
 French Co 320 Broadway Waynesboro Pa
 French (J E) Co 49 N First St Philadelphia 6 Pa
 French-Gallagher Mfg Co S Broad & Manning Philadelphia 5 Pa
 French Calculating Machine Co Inc 2350 Washington St Leandro Calif
 Friedrich (Ed) Inc 1115 E Commerce San Antonio Tex
 Friedrich Steel Construction & Engineering Co Lexington Ky
 Frigidaire Div (General Motors Corp) 300 Markham St Dayton 1 O
 Frig Corp 27-01 Bridge Plaza N Long Island City 1 N Y
 Fritz Mfg Co 2522 N Clark Chicago III
 Fritz Lumber Co 135 Granite Boston 24 Mass
 Frostrand Furniture Mfg Co Inc Shreveport La
 Frost Hardwood Floors Inc Shreveport La
 Frost Lumber Industries Inc Box 1125 Shreveport 1 La

Frost-Bibber Lumber Co Alberta Ala
 Frost-Shower Sales Co 1713 N Grand Hollywood 28 Calif
 Frost-Pack Trailer Co 10641 Harper Ave Detroit 32 Mich
 Frost-Greener Supply Co Sunnyside Calif
 Frost-Lumber Co 123 Carroll St St Louis 4 Mo
 Fuel Kcon-O-Mixer Co 1 Washington Ave Providence 5 Rhode Island
 Fuel Displays Inc 5-19 48th Ave Long Island City N Y
 Fuller (H B) Co 253 Eagle St St Paul 2 Minn
 Fuller & Johnson Mfg Co Madison Wis
 Fuller Mfg Co 2 E E Northland Iowa
 Fuller Tool Co 905 Fairview Brown 59 N Y
 Fuller (W P) & Co Inc Mission & Beale Sts San Francisco Calif
 Fulton Bag & Cotton Mills 170 Boulevard Klam Atlanta 3 Ga
 Fulton Band Mill Memphis Tenn
 Fulton Glass Co Hartford City Ind
 Fulton Tool Works Inc Huntington W Va
 Fuse-Bath Mfg Co Oakland Calif
 Fy-Flyer Co 1902 Fy-Flyer Bldg Dayton O

G

Gabriel Steel Co 13700 Sherwood St Detroit 12 Mich
 Gaffney Brick Co Gaffney S C
 Gagner Clay Products Co Green Bay Wis
 Gaines Harbwood Lumber Co St Louis Mo
 Gairing Tool Co Detroit Mich
 Galloway (C C) & Son Inc 101 Park Pl New York N Y
 Gallion Alstair Body Co Gallion Ohio
 Gallion Handle & Mfg Co Gallion Ohio
 Gallion Mfg Co 1848 19th St Rockford III
 Garden City Paving & Mfg Co 1750 N Ashland Chicago 22 Ill
 Gardner Lumber Co Gardner Ore
 Gardner-Denver Co 100 Williamson St Quincy Ill
 Gardner Mfg Co 2740 Barlow St Burton Wis
 Gardner Wire Co 2125 S Green St Chicago Ill
Gardinghouse (L F) Co Inc Tepeka Kan
 Garner (H B) Co Inc 104 Hospital St Providence R
 Garrett Mfg Co Pompton Plains N J
 Garwick & Carter Inc 2050 W Florence Ave Los Angeles 4 Calif
 Garrison-Wagner Printing Co 2018 Washington St Louis Mo
 Gary-Flopper Steel Corp Gary Ind
Gate City Sash & Door Co Box 901 Fort Lauderdale Fla
 Gates Rubber Co 1001 S Broadway Denver 17 Col
Gates & Son Inc 80 S Galapago Denver 9 Col
 Gaynor (E S) Lumber Co 266 Mott St New York 13 N Y
 Gay-Wemack Lumber Co Jacksonville Fla
GBH-Way Homes Inc Walnut Ill
 Geckler Bros Steel Roofing Co Anderson Ind
 Gehl Bros Mfg Co West Bend Wis
 Geibrock Prods Bepo Park N Y
 Gem City Stone Mfg Co Quincy Ill
 Gem Clay Products Co Detroit Mich
 Gem Foundry Co Birmingham 3 Ala
 Gem Mfg Corp Racine Ohio
General Air Conditioning Corp 4542 E Dunham St Los Angeles 23 Calif
 General Air Conditioning Corp International 9 Ohio
 General River Co 8501 Ferris Ave Murton Grove III
General Bronze Corp Stewart Ave Garden City L I N Y
 General Burglar Alarm Co Inc 365 E 146th New York 23 N Y
 General Cable Corp 420 Lexington Ave New York 17 N Y
 General Ceramics & Sealrite Corp Sanitary Ware Div 21 Cross Mill Rd Kearsney N Y
 General Chemical Div Allied Chemical & Dye Corp 40 Rector St New York N Y
 General Clay Products Co Huntington Bank Bldg Columbus 15 Ohio
General Controls Co 801 Allen Ave Glendale 1 Calif
 General Conveyor & Mfg Co 3601 Salena St Louis 15 Mo
 General Die & Stamping Co 266 Mott St New York 13 N Y
 General Detroit Corp 2272 E Jefferson Ave Detroit 7 Mich
 General Door Mfg Co 1718 N 1st St Milwaukee 12 Wis
 General Dry Batteries 13000 Alhambra Cleveland Ohio
General Electric Co Air Conditioning Dept 5 Lawrence St Bloomfield N J
General Electric Co Apparatus Dept 1 River Rd Schenectady 5 N Y
General Electric Co Appliances & Merchandise Dept Boston Ave Bridgeport 2 Conn
General Electric Co Chemical Dept Pittsfield Mass
General Electric Co Construction Materials Dept 1285 Boston Ave Bridgeport 2 Conn
General Electric Co Electronics Dept Electronics Park Syracuse N Y
General Electric Co Home Bureau & Contract Sales Dept 310 W Liberty St Louisville 2 Ky
General Electric Co Lamp Dept Nela Park Cleveland 12 O
 General Engineering & Mfg Co 4617 Oleatha Ave St Louis 16 Mo
 General English Co Inc Gloucester City N J

General Fireproofing Co 413 Denick Ave Youngstown 1 O
 General Builders Co 123 Georgia Ave Dept 43 Cincinnati 5 O
 General Aircraft Inc 333 Avenue of the Americas New York 14 N Y
 General Hardware Corp 3618 W Pierce St Milwaukee Wis
 General Hardware Mfg Co 117 Duane St New York 13 N Y
 General Housing Co Dallas Tex
 General Implement Corp Terrestrial Tower Cleveland 13 Ohio
 General Industries Inc 300 S Wayne Ft Wayne 5 Ind
 General Machine Co Inc 4th & Furnace Emmaus Pa
 General Metalbale Co 1401 Central Ave Minneapolis Minn
 General Paint Corp Army at Potrero San Francisco 19 Calif
 General Paint Corp 1101 W Victory Blvd Burbank Calif
 General Plywood Corp 334 E Broadway Louisville Ky
 General Porelain Enameling & Mfg Co 2700 N Karlov Ave Chicago Ill
General Portland Cement Co 111 W Monroe St Room 905 Chicago 3 Ill
 General Refractories Co 1516 Leaven St Philadelphia 2 Pa
 General Refrigerator Corp 678 Broadway New York 12 N Y
 General Shale Prods Corp Johnson City Tenn
 General Switch Corp Bushing St & N 9th St Brooklyn 11 N Y
 General Tire & Rubber Co 1708 E Market St Akron 9 O
 General Utilities Corp 300 Broad St Philadelphia 3 Pa
 General Water Heater Corp Burbank Calif
 General Woodcraft Co Inc North Bergen N J
 General Wood Wash Council Buffalo Pa
 General Modern Kitchens Inc Geneva Ill
 General Lumber Co Asheville N C
 General Tool Div General Steel Warehouse Co Inc 1812 S Kostler Ave 23 8th St New York 10 N Y
 George (F C) Machine Co 100 S Westmoreland Dr Orlando Fla
 George Glass Co 120 E 23th St New York 10 N Y
 Georgia Marble Co Tate Ga
 Georgia Pacific Plywood & Lumber Co 300 Park Ave New York 17 N Y
 Gerity Motion Car 10 S Superior St Toledo 4 O
 Gerlinger Carter Co Dallas Tex
 Gerling Seed & Plant Co 300 Broadway Los Angeles Calif
 Gertrud Mfg Corp Maryland & Oliver St Baltimore 3 Md
 Gerard J A Jr & Co 1962 Hawthorne Pl Melrose Park Ill
 Gerard Steel Structures Co 290 E 13th St Chicago 32 Ill
 Gerry (Louis M) Mattapan 25 Mass
Gerty (H S) & Co Inc 3348 N 10th St Philadelphia 40 Pa
 Gouder Parabolic & Fry Co 1429 W St Paul Ave Milwaukee Wis
 G. F. Mfg Co Extra Ia
 Grand Grip Mfg Co 45 Oceola St Oklahoma City Okla
 Grand Rapids Corp of America 615 N Aberdeen St Chicago 22 Ill
 Grand Rapids Line Prods Co Gilsbourn O
 Gibson-Homans Co 2367 Woodhill Rd Cleveland O
 Gibson Electric Refrigerator Co Greenfield Mich
 Gibson Inc 418 Sixth St N W Washington 1 D C
 Gibson Anderson Lumber Co Gibson Mich
 Gibson Wood Co 23 Hill St Hudson 8 N Y
 Gilbert (A C) Co New Haven Conn
 Gilbert & Barker Mfg Co West Springfield Mass
 Gilbert & Bennett Mfg Co 600 Miller Ave Georgetown Conn
 Gilchrist Timber Co Gilchrist Oregon
 Gillilan Bros Inc Venable Bldg at Berens Los Angeles Calif
 Gillilan Shingle Co Kerville Ore
 Gillin L J Co 42022 Berner Ave Detroit 28 Mich
 Gillette Varnish Co Day & Howell Sts Jersey City N J
 Gillies Bros Braintree Old Canada
 Gillman Bros Co 1000 W 4th St Gilman Conn
Gilson Bros Co Box 315 Fredonia Wis
 Gitsa Molding Corp 4400 W Rahn Chicago Ill
 Gittins Bros Lumber Co Eugene Ore
Given Mfg Co 3855 Santa Fe Los Angeles 58 Calif
 Gladding (H F) & Co Inc South Steeler N Y
 Gladding Bros Mfg Co 3 Keyes St San Jose 3 Calif
 Gladding McLean & Co 1274 Harrison St San Francisco Calif
 Glanbeck Stone & Mfg Co Greenboro N C
 Glanisher Co 923 Penn Ave Pittsburgh 22 Pa
 Glass Blower Door Co 3404 W Madison St Chicago Ill
 Glassware Mfg Co Salem Ore
 Glassie Corp North Kansas City 16 Mo
 Glassier Bros Kingston Ohio
 Glassiers Tool Mfg Co 611 W Adams Chicago 6 Ill
 Glass-Hey Brick Co Reading Pa
 Glasswood Range Co Taiton Mass
 Glasson Co 300 E 29th St Cleveland 2 O
 Glass American Corp Box 740 Kokomo Ind
 Glass Lighting Prods Inc 297 7th Ave Brooklyn N Y
 Glass Mills Inc 430 S Madison St Chicago Ill
 Glass Pilot Wks Inc 3300 S Market St Williamsport 5 Pa
 Glass Siding Prods Co P O Box 430 Whiting Ind
 Glass Silos Trenton N J
Glover Mfg & Sales Co 2491 Manchester Rd Akron O
 Glover-Johnson Corp 4420 N Ravenswood Chicago Ill
 GMC Truck & Coach Div General Motors Corp Pontiac Mich
 G. M. Laboratories Inc 1212 E Knox Chicago 41 Ill
 Gonder (Joseph) Instrumentry 5121 N Ravenswood Chicago 40 Ill
 Goodfry Concrete Co 1201 Wolf St Elkhart Ind
Goldblatt Tool Co 1910 Walnut St Kansas City 8 Mo
 Gold Metal Finishing Furniture Co Racine Wis
 Gold Seal Mfg Co 1223 W Kinzie Chicago Ill
 Gold Seal Roofing Co Chicago Heights Ill
 Goldsmith Metal Lath Co Chickering & B R R Cincinnati 6 Ohio
 Goodrich Bros Lumber Co Yaxos City Miss
 Goodrich Rubber Co Inc 493 Whitehall Rd Trenton N J
 Goodrich Metal Prods Co 2320 Fifth St Detroit Mich
Good Housekeeping 57th St at Eighth Ave New York 19 N Y
 Goodman Lumber Co Goodman Wis
 Goodman Lumber Co 500 S Main St Akron 15 O
 Goodrich Grinding Wheel Co 1540 W Madison Chicago Ill

Goodrich (W B) Inc Ewing N B
 Goodwin Johnson Ltd Vancouver B C Canada
 Goodrich Tire & Rubber Co 1144 E Market St Akron O
 Goodrich Box Co White Pine Lumber Dist Reno Nevada
 Goodrich (C) Chemical Co Kansas City 7 Mo
 Gordon (Mason) Lumber Co Commerce Ga
 Gordon-Kapp Co 275 Bowman St Mansfield O
 Gordon (Turn) & Ladder Inc 1920 Ester Blvd Goshen 4 Ind
 Gordon Mfg Co 10th & Reynolds Sts Goshen Ind
 Gordon (S) & Dorr Co Goshen Ind
 Gosler (J B) Co 1807 Columbus Rd Cleveland 13 O
 Gossett (J C) Co 36 E Woodbridge Detroit 26 Mich
 Goss (Robert) Chemical Co Kansas City 7 Mo
 Goss-Morseman Co Inc 35 W 44th St New York N Y
 Goulds Pump Inc 75 Fall St Seneca Falls N Y
 Graham (John H) & Co Inc 105 Duane St New York 13 N Y
 Graham Lumber Co Newark Calif
 Graham Lumber Co 53 W Jackson Blvd Chicago 4 Ill
 Graham Lumber Co Preston Ga
 Graham (Thomas) & Co Inc Madison Ind
 Gram Mfg Co Vancouver Wash
 Grammes (L F) & Sons Inc 380 Union St Allentown Pa
Grand Haven Stamped Prods Co Grand Haven Mich
 Grand Home Appliances Co 2323 E 67th St Cleveland 4 Ohio
 Grand Rapids Brass Co Scribner Ave at Wenk St Grand Rapids Mich
 Grand Rapids Wash 709 W Burton St Grand Rapids 9 Mich
 Grand Rapids Hardware Co 560 Eleventh St N W Grand Rapids 2 Mich
 Grand Rapids Plaster Co Grand Rapids Mich
 Grand Rapids Store Expt Co 1340 Monroe St N W Grand Rapids 2 Mich
 Grand Rapids Vapor Kiln Inc Grand Rapids Mich
 Grand Rapids Varnish Corp 1350 Steele Ave SW Grand Rapids 2 Mich
 Grand Rapids Wire Prods Co 501 Front Ave Grand Rapids 4 Mich
 Grand Serravallo Co 3110 W Grand Ave Chicago 22 Ill
 Grandy Lake Shingle Co Concrete Wash
 Granite City Steel Co Grant Granite City Ill
 Grant (H) Mfg Co 1505 State St St. Rapids Mich
Grant Pulley & Hardware Co 31-85 White-stone Parkway Flushing 1 N Y
 Grasselli Chemical Dept E I DuPont de Nemours & Co Wilmington 98 Del
 Graton & Knight Co 342 Franklin St Wrentham 4 Mass
 Gravel Motor Plow & Cultivator Co Dunbar W Va
 Gray (L) Lumber Co Meridian Miss
 Gray & Dudley Co 2300 Clifton Rd Nashville Tenn
 Gray Lumber & Shingle Co Box 872 Seattle Wash
 Gray (Robert) Shingle Co Houston Wash
 Grayson Lumber Co Birmingham Ala
 Graystone Concrete Prods Co 134 Nickerson St Seattle Wash
 Gray (William S) & Co 1210 Canadian Pacific Bldg New York 17 N Y
 Great Falls Brick Co Great Falls Mont
Great Lakes Carbon Corp 18 E 48th St New York 17 N Y
Great Lakes Steel Corp 3750 Penobscot Bldg Detroit 26 Mich
Great Lakes Steel Corp Stran-Steel Div Penobscot Bldg Detroit 26 Mich
 Green (A P) Fire Brick Co 1108 E Brockbridge St Metairie Mo
 Greene Bros Lumber Co Elizabethtown N C
 Greene Lumber Co Greensboro N C
 Greene Mfg Co 1028 Douglas Racine Wis
 Greenfield Tap & Die Corp Greenfield Mass
 Green (Harry A) Sons 1822 E Canal Chicago Ill
 Greenlee Tool Co 2136 12th St Rockford Ill
 Green Lumber Co Inc Magnolia St Laurel Miss
 Green (T) Tool Wks 325 W 10th Chicago 10 N Y
 Green Mountain Glove Co Randolph Vt
 Greenstate Mfg Co Rich Hill Mo
 Greer Lumber Co Grand Rapids Mich
Grogg & Son 21-31 Bladwin Ave Framingham Mass
 Grubler (K H) Mfg Co 830 Mason Springfield Ohio
 Grey Iron Casting Co Mt Joy Pa
 G. R. & G Stamping Co 6408 S State St Chicago 21 Ill
 Grubb (W) Mfg Co 102 E 10th St Chicago 11 Ill
 Grubb Mfg Co 1415 Cherry St Erie Pa
 Grubb Lumber Co Huntington West Va
 Grubb Tool Wks 325 W 10th Chicago 10 N Y
Grill-Craft Co 1487 Summit Ave St Paul 5 Minn
 Grinnell Co Inc 260 W Exchange St Providence 1 R I
 Grip Tool Co 216 S Michigan Chicago 4 Ill
 Griswold Lumber Co Portland 4 Ore
 Grissell Mfg Co LaFayette Grand St Bellevue Ky
 Guarantee Specialty Mfg Co E 96th & NYC BR Cleveland 8 Ohio
 Guarantors Prods Inc Wellington O
 Guardian Electric Mfg Co 1621 W Walnut St Chicago 12 Ill
 Guard-Hy Mfg Co 1501 S Laflin Chicago 22 Ill
 Guinard Brick Wks Columbia S C
 Guildenry Corp 255 W 7th Chicago 20 Ill
 Gulf Lumber Co Mobile Ala
 Gulf Oil Corp 3802 Gulf Bldg Pittsburgh Pa
 Gulfport Crossing Co White Bldg Gulfport Miss
 Gulf States Crooning Co Hattiesburg Miss
 Gulf States Gypsum Co Houston Tex
 Gunpatite Laboratories 931 N Ogden Chicago 16 Ill
 Gunite Construction Corp 424 Lexington Ave New York 17 N Y
Gunnison Homes Corp U S Steel Corp Sub New Albany Ind
 Gurdan Lumber Co Gurdan Ark
 Gurdan Lumber Co 2615 Washington Ave St Louis 3 Mo
 G-W Mfg Co Orchard & Walter Mansfield O

Habitant Sheet Inc Bay City Mich
Hachmeister Inc 2338 Forbes Pittsburgh 13 Pa
 Hadley Lindsey Co First National Bank Bldg Yonkers 2 N Y
 Haines Concrete Co Inc 2145 Central Pkwy Cincinnati 14 O
Hager (C) & Sons Hinge Mfg Co 2451 De-Kalb St St Louis Mo
 Hagan Shingle Co Forks Wash
 Hages (George) Mfg Co Div Pettibone Mulliken Corp 1418 E 14th St No Park Ave New York 51 N Y
 Haines Corp Walnut St Bridge at 31st St Philadelphia Pa
 Halsey Electric Co 37 William St New York 3 N Y
 Hallow & Howard Lumber Co Larimer & Seventh Sts Denver Colo
 Hall (D H) Lumber Co Columbus Miss
 Hallowell & McDonald Los Angeles Calif
 Hall Enterprises Cases Wis
 Hallett Mfg Co Joe Mobile 2 Ala
 Hall-Inner Lumber Co Amory Miss
 Hall Level & Mfg Wks 1118 E Fourth St Austin Tex
Hall-Mack Co 1344 W Washington Blvd Los Angeles 7 Calif
 Hall & Neely New Albany Miss
 Hamer J P Lumber Co Kenosha W Va
 Hamilton Antaresole Register Co Hamilton O
 Hamilton Beach Co Div Seavill Mfg Co Rapids Dr & Forest Ave Racine Wis
 Hamilton Castings Div Mfg Co 1600 Dixie Hwy Hamilton O
 Hamilton Mfg Co 1935 Evans St Two River Wis
 Hamilton Metal Prods Co Hamilton O
 Hamilton Rubber Mfg Corp Mead & Lever St Trenton N J
 Hammerstein Shingle Co Monroe Wash
 Hammond Cedar Co Ltd Hammond B C Can
 Hammond Lath Products Inc Chicago 10 Ill
 Hammond Lumber Co 417 Montgomery St San Francisco Calif
 Hammond Paint & Chemical Co 3312 Railroad Ave Beason N Y
 Hammond Mfg Co Inc Plainfield N J
 Hancock Mfg Co 1950 State St St. Rapids Mich
 Hancock Brick & Tile Co Findlay O
 Hancock Iron Works Pontiac Mich
 Hancock Lumber Co Guilford Ga
 Hancock (M S) Inc Cases Mo
 Hancock Co 249 N Grider St Bloomington Ill
 Handing Devices Co Inc 581 Boylston St Boston Mass
 Handymen Co Minneapolis Minn
 Handy Mfg Co 2432 W Lawrence Chicago 25 Ill
 Handy Things Mfg Co Ludington Mich
 Handley Co Bradford Pa
 Handon & Goodman Co Belleville N J
 Hanna Paint Mfg Co 95 W Long Columbus 15 Ohio
 Handyside W Tools Div Continental-Teled Industries Co Inc 1945 Continental St Hanover Pa
Hansen (A L) Mfg Co 5037 N Ravenswood Ave Chicago 40 Ill
 Hanson Machinery & Supply Co 820 Broadway Eureka Calif
 Hanson Scale Co 527 N Ada Chicago 22 Ill
 Hanson (Elof) Inc 220 E 42nd St New York 17 N Y
 Hanson Mfg Co 325 W 6th Chicago 10 Ill
 Hanson-Walker Refractories Co Farmers Bank Bldg Pittsburgh 22 Pa
Harpur Plywood Corp Hoquiam Wash
 Harvest Co Oak Park Ill
 Harbord Fabricators 59 Branch St Louis 7 Mo
 Harbit Plywood Co Olympia Wash
 Harber Silos Co Inc Coltsville N Y
 Harding Co 205 W Wacker Chicago Ill
 Harding Glass Co Fort Smith Ark
 Harless Lumber Co Greensboro Wash
 Harless Prods Co Duane N Y
 Harless Prods Inc Reading Pa
 Harlock Machine Co Cleveland Tenn
 Harwood Corp of America Asheville N C
 Harwood Products Corp Newark Wis
 Harrow Co Fourth at New York Des Moines Ia
 Harlow Prods Corp 25 Fox St New Haven Conn
 Harms (H F) 81 Co 1933 Pacific Tacoma Wash
 Harms Oil Co Allison Ia
Harnischfeger Corp 4400 W National Ave Milwaukee 14 Wis
 Harris-Hub Del Spring Co 1313 S 55th Ct Cicero Ill
 Harris Inc 145 N High St Columbus O
 Harris (J E) Co Foot of Surber Wrentham Ohio
 Harris Mfg Co Greenway at Walnut St Johnson City Tenn
 Harris Paint & Varnish Co 1239 Harrison Ave Canton 1 O
 Harrison Steel Cabinet Co 4718 W Fifth Ave Chicago 44 Ill
 Harris Profile Fire Doors Inc 4608 W 20th Chicago 50 Ill
 Harris Prods Co Inc Miami Beach Fla
 Harrop Chemical Co 125 Hoboken Ave Jersey City 2 N J
 Hart & Conley Mfg Co 508 E 8th St Highland Mich
 Hartford Clump Co East Hartford Conn
 Hart Mfg Co 2006 N Western Pkwy Louisville 3 Ky
 Hart Moisture Gauges Inc 126 Liberty St New York 6 N Y
 Hart Oil Burner Div Avery Farm Macly Co Peoria Ill
 Hart Products Inc 915 E Kentucky St Louisville 4 Ky
 Hart Sash Holder Co Lexington Mo
 Hartshorn (Stewart) Co 351 Fifth Ave New York 1 N Y
 Hart-Thompson Lumber Co Barboursville Ky
 Hartill Brothers Memphis Tenn
 Hartzell Fan & Ventilating Co Inc Memphis 2 Tenn
 Hartzell Propeller Fan Co Div Castle Hills Corp 1964 Stewart Ave Piqua O
 Harved Lumber Co Reading Pa
 Harvey Machine Co Inc 19200 S Western Ave Torrance Calif
 Harvey Mfg Co LaMesa Calif
 Harvey Mfg Co Racine Wis
 Harvey-Whitely Inc 55 E Superior St Springfield Mass
Haskellite Mfg Corp 781 Ann St N W Rapids 2 Mich
 Haskell (William H) Mfg Co 20 Commerce St Pawtucket R I
 Haslam Lumber Co Haslam Tex

Hackett Chute & Conveyor Co 717 Brower Ave Oaks 1 Pa
Hassall (John) Inc Clay & Oakland Sts
Brooklyn 22 N Y

Hastings Canvas & Mfg Co Hastings Neb
Hastings Brick Works Hastings Neb
Hastings & Co 4007 Farm St Omaha 3 Neb
Hattiesburg Brick Works Hattiesburg Miss
Hatch Mfg Co 129 Tenth St Brooklyn 15 N Y
Hauserman (E F) Co 2850 Grand Ave Cleveland 5 O
Haven Busch Co 501 Front Ave Grand Rapids 4 Mich
Hawley Portland Cement Co Cedar Rapids Ia
Hawkins Iron Co 212 Fourth St Birmingham Ala
Hawley Lumber Co Ontonagon Mich
Haze Drinking Faucet Co Fourth & Page Sts Berkeley
10 Calif

Hoyer Adhesives Co St Louis 15 Mo
Rayman Window Co 4401 Race St Denver 16 Colo
Haynes Prods Co 4007 Farm St Omaha 3 Neb
Hayward Lumber & Investment Co 410 San Fernando St
Los Angeles 21 Calif

Hazard Insulated Wire Wks Div Globelec Co 1898 Hask-
St Wilkes-Barre Pa
Hazard Wire Rope Div American Chain & Cable Co
Wilkes-Barre Pa

Hearthaire Conditioning Co 3126 Kearmouth Rd Cleve-
land O
Hearthside-Tristone Fireplace Co 645 W 42nd St Seattle
Wash

Heath & Milligan Mfg Co Div Glidden Co 1833 S
Normal Chicago Ill

Heathlister Co 661 E Brighton Ave Syracuse
5 N Y

Heckman Bldg Prods Co 4018 W Lake Chicago Ill
Hedges (M M) Co 700 E Main St Chattanooga 3 Tenn
Hendel-Walsh-Weidner Div Combustion Engineering-Super-
heater Inc 201 Madison Ave New York 10 N Y

Hendler Mfg Co Carroll Ia
Hendler & Co Tacoma 1 Wash
Hendrette Lumber Co Philadelphia N J
Heli Co 3000 W Montana St Milwaukee 1 Wis
Helm Bros Co 24 W North York Pa
Helm's Mosab's Shavers 1629 Euclid Santa Monica
Calif

Heller-Allen Co Napoleon O
Heller Bros W 400 Woodmont Ave Newark 4 N J
Heller Co 2149-M Superior Ave Cleveland 14 Ohio
Heller (W C) & Co 1050 Bryant St Montpelier O

Heltzel Steel Fabric & Iron Co Warren O
Hemphill (A D) Co 129 S Franklin Lake City Minn
Henderson Furnace & Mfg Co Sebastopol Calif
Henderson-Melton Co Philadelphia 3 Miss

Hendrick Mfg Co Carlisle Pa
Hensel-Clausen Co 223 Prospect Pl Fremont O
Hennrich Machine Co Hennrich N H
Henschel (C B) Mfg Co 239 W Mineral Milwaukee Wis
Hensler Lumber Co Hensler Pa
Hertel (L B) Corp 225 N Wells St Chicago 10 Ill
Hercules Powder Co Inc 917 Market St Wilmington 90 Del

Hercules Steel Products Corp Gallion O
Herman Brothers Lumber Co Prospect Oregon
Hermann Machine Co Campbell & Monk Sts Williams-
port 19 Pa

Hermitage Portland Cement Co Nashville Tenn
Herring-Hall Marvin Co Safe Co Hamilton O
Hertz-Zimmers Moulding Co 3920 E Outer Dr Detroit
Mich

Hessler Machine & Foundry Co 1940 Miller St Man-
hattan Pa
Hertzer Electric Co 12680 Elmwood Cleveland 11 Ohio
Hertz Mfg Co Quincy Pa

Heun Warning & Ventilating Co 1855 S 54th Ave Chicago
Ill
Hewitt & Anderson Div St Paul Foundry & Mfg Co
620 Kirkwood Ave Fairfield Ia

Hewitt (Charles) Kansas City Mo
Hewitt (W B) & Son Co P O Box 377 Toledo 1 Ohio
Hewitt (C B) & Co Inc 18 Green St New York 13 N Y
Hewitt Rubber Div Hewitt-Bishop Inc Central & Kenning-
ton Aves Buffalo 5 N Y

Hexagon Electric Co 1617 Clap Ave Roselle Park N J
Heyer Corp 1850 S Kostner Chicago Ill
Heyer Sales Co Millersville Ill

Heywood Waterford Co Gardner Mass
Hicks Gate Co Fredericktown O
Hidden Brick Co Vancouver Wash
Higgins (Charles M) Co 271 Ninth St Brooklyn N Y

Higgins Inc Industrial Canal Hook Orleans La
Highland Cordage Co Hickory N C
High Sierra Pine Mills Inc Orville Calif

Hill Engineering Co Geneva City Mo
Hill-Bloom Machine Co 740 W Washington Chicago Ill
Hilger Co 1209 St Germain St Cloud Minn
Hill-Bloom Lumber Co 6515 Page St St Louis Mo

Hill Diesel Engine Co Lansing Mich
Hill (H B) & Co Inc Ft Wayne Ind
Hill Termite Control Systems 1282 Madison Memphis
3 Tenn

Hillwood Mfg Co 21708 St Clair Ave Cleveland O
Hilper-Dowd Edwards Inc Oakdale La
Hinds & Busch Paper Co 4255 Beattor St Sandusky O
Hines (Edward) Lumber Co 77 W Washington St Chi-
cago 8 Ill

Hirsch (H A) Mfg Co 3119 W Lake St Chicago 12 Ill
Hobac Veneer & Lumber Co Carthersville Mo
Hobart Mfg Co Troy O

Hoboken White Lead & Color Wks Inc 15th & Adams St
Brooklyn 15 N Y
Hocking Valley Brick Co 150 E Broad St Columbus 15 O
Hodell Chain Co Cooner Ave at E 40th St Cleveland 3 O

Hodgman Rubber Co Inc Bowlet St Prineville Mass
Hodson (E F) Son 393 Boylston St Boston 14 Mass
Hoe (H) & Co Inc East River at 138th St New York
54 N Y

Hoffman Iron Mills Co Inc Fall River Mass
Hoffman Lumber Co 4007 Farm St Omaha 3 Neb
Hoffman Specialty Co 1001 York St Indianapolis 7 Ind
Hohmann & Barnard Inc 204 E 23rd St New York 16
N Y

Hottama (F) Adjustable Scaffold Bracket Co 201 23rd St
Paterson 4 N J

Holcomb & Hoke Mfg Co Inc 1545 Van Buren
Indianapolis 7 Ind
Holden & Martin Lumber Co Brattleboro Vt

Hollmer Coil Spring Mfg Co Anahan near Florence Va
Los Angeles Calif

Holland-American Co 8124 S Heyne Chicago 20 Ill
Holland Furnace Co Holland Mich
Holland Ladder & Mfg Co 1930 Gerds St Holland Mich
Holland Mfg Co Central Ave & Bank Sts Baltimore Md

Hollister Rubber Co 37 Overlook Terrace New York N Y
Holly Chemical Co 122 E 25th St New York N Y
Holly (L R) 1430 Liberty Harrisonburg Pa
Holly (H M) Corp 844 Cooper St Camden N J

Hollystone Co North Hollywood Calif
Holly Hill Cypress Co Holly Hill S C
Holly Hill Lumber Co Holly Hill S C
Hollymade Hardware Mfg Co 4865 Exposition Blvd Los
Angeles 16 Calif

Holly Mfg Co 875 S Arroyo Pkwy Pasadena
2 Calif

Holmes (E & B) Machinery Co Chicago & Falarno
Buffalo 4 N Y
Holmes (E & B) Machinery Co Chicago & Falarno
San Francisco Calif

Holmes Mfg Co 211 N Madison Ave Los Angeles 4 Calif
Holmes Mfg Co of Ohio Akron 5 O
Holmes Prods Co Woodstock Ill
Holm's Mfg Co 106 N Main St Akron 5 O

Holmstrom Co Inc Canadian Pacific Bldg New York N Y
Holt Hardware Co De Witt St Ontario Wis
Holt Mfg Co 651 20th St Oakville 12 Calif

Holton Industries Co 400 E Main St Syracuse Ill
Holtkamp Logging Co Ltd Vancouver 8 C Canada
Homasote Co 1935 Harvey Rd Trenton 3 N J
Home Building Plan Service 2434-2 N E Sandy Boulevard
Portland 12 Ore

Home Comfort Mfg Co Peoria 3 Ill
Home-Craft Electronic Prods 1204 S Kedzie Ave Chi-
cago 23 Ill
Home Essentials Corp 79 Cliff New York N Y

Homelite Corp 67 Riverside Ave Port Ches-
ter N Y
Home Planer Inc 11711 E 8 Mile Rd East Detroit 26
Mich

Home Plan Book Co 1596 Selby Ave St Paul 4 Minn
Homer Furniture & Foundry Corp Colmar Mich
Homesite Co 720 Washington Ave S Minneapolis 5 Minn
Homes Inc Cell Head Bld 4200 Kingston Pike S W
Knoxville Tenn

Homes of the East Plan Service 89 Elmgrove Ave Presi-
dence 6 R I
Hom-0-Grat Planner Corp 11711 E Eight Mile Rd
Detroit Mich

Honeycutt Mfg Co 2715 Oak St Kansas City 8 Mo
Honeyman Mfg Co Portland Ore
Hoober & Anderson Inc 9 East 50th New York 10 N Y

Hood Brothers 4330 Orchard St Frankford Philadelphia
24 Pa
Hood Rubber Co Div Goodrich (B F) & Co 98 Nichols
Ave Watertown 72 Mass

Hook Strapper Mfg Co Queens Village N Y
Hooker Glass & Paint Mfg Co 539 W Washington St
Chicago Ill

Hooper (William E) & Sons Co 1319-23 Cherry St
Philadelphia Pa
Hooper Hines Inc 709 E 38th St Indianapolis Ind
Hooper Panel Co New Albany Ind

Hooper & Anderson Co 4 Jackson Ind
Hooper & Allison Co 1939 Hutt St Xenia O
Hooper Bros Wks Hope Ark

Hoppe's Windows Inc 84 Hopkins Ave James-
town N Y
Hopert Mfg Co Hopewell N J

Hopkins Lumber Co Memphis Mo
Hopps Press Inc 460 W 34th St New York N Y
Hopson (W C) Co Grand Rapids 2 Mich

Horn (A C) Co Inc 43-42 Tenth St Long Island City
1 N Y
Horn Bros Shingle Co Ltd N Vancouver B C Can
Horton Flooring Co Dollar Bay Mich
Horton Cedar Mfg Co Ltd Victoria B C Can

Horton Mfg Div Anatic Corp Greenville S C
Horse Accessories Co 2702 N 17th St Philadelphia 32 Pa
Hosking Paper Co 1301 Lake Ave Wilmette Ill

Hoskins (E H) Co Inc 10 Hart St New Conn
Hotpoint Inc 5600 W Taylor St Chicago 44 Ill
Hottelam Heater Co 2363 E 69th St Cleveland 4 O

Hough (Frank G) Co 801 Sunnyside Ave Libertyville Ill
Hough Shade Corp 1283 S Jackson St Janes-
ville Wis

Hough Beautiful 572 Madison Ave New York
22 N Y
Hough (Harden) 420 Lexington New York 17 N Y

Household Patent Co Norristown Pa
House of Hospitality 11544 Ventura N Holly-
wood Calif

Housemaster 18320 Lanark Cleveland 19 Ohio
Housing Plan Service Inc 140 Nassau St New York 7
N Y
Houston Blow Pipe & Sheet Metal Wks Houston Tex

Houston Bros Picking Mfg
Houston Ready-Cut House Co 2601 Polk Ave Houston 3
Tex
Howard Mfg Co 2448 E 56th St Los Angeles 11 Calif

Howard Mfg Co Kent Wash
Howe & French Inc 305 Franklin St Boston 10 Mass
Howell (E S) Charles Ill
Howell Mfg Co Colman St & Hubbard Ave Philadelphia
11 Pa

Howell (H R) Co Malcolm Ave S E & Fourth St Min-
neapolis 14 Minn
Howe Seal Co 2847 Seal Ave Roland Vt
Howen (R M) Inc Fall River Mass

Howen (R M) Inc Fall River Mass
Howen Bros Steel & Iron Works 2949 N Super Denver 11
Colo
H & R Mfg Co 20900 St Clair Cleveland 17 Ohio

Howland Lumber & Stone Service Lewis Wis
Hubbard & Co 6301 Butler St Pittsburgh 1 Pa
Hubbard (H D) Spring Co Pontiac Mich
Hubbell (Harvey) Inc St Paul & Rockwell Ave Bridgeport
5 Conn

Huber Brothers Inc Roselle N J
Huber (B D) Mfg Co 547-91 E Illinois Chicago 11 Ill
Hughes Bros Foresthill Calif
Hughes-Kennan Co 648 Newman Mansfield Ohio

Hulbert (William) Mill Co Everett Wash
Humbold Brick & Tile Co Humboldt Kan
Humboldt Paper & Supply Co Humboldt Ia

Humboldt Plywood Corp Aretz Calif
Hummel Mfg Co Springfield Ill
Humphrey Brick & Tile Co Brookville Pa

Humboldt Mfg Co 201 E Fifth St Mansfield O
Hunter Douglas Corp 150 Broadway New
York 7 N Y

Hunter Fan & Ventilating Co 381 S Front St
Memphis 2 Tenn
Hunter Tool Co 1109 S Robertson Blvd Los Angeles 35
Calif

Huntington Harwood Co Huntington W Va
Huntington Industries Inc 2368 Prospect
Memphis Tenn

Huntington Shingle Co Springfield Ore
Hunt (J S) Lumber Co Nangorches Tex
Hunt (Lay H) Lumber Co Nangorches Tex

Hunt Millwork Corp Meador Wis
Huron Portland Cement Co Ford Bldg Detroit 26 Mich
Hurtware Machine Works 6216 Westnouth Chicago 21 Ill
Hurtwood Oak Flooring Co Inc Hurtwood Ala

Hus & Hatfield Studio Mount Minn
Hussey (C G) Co 2360 Second Ave Pittsburgh 19 Pa
Huskins Co Box 11 Cedar Grove Sta Silverport La

Hutchinson Mfg Co Norristown Pa
Hutter Bros Saw Mfg Co Inc 1290 University Ave
Rochester 7 N Y
Hutting Mfg Co Muskegon Ia

Hutting Sash & Door Co 1109 S Vandewater Ave St Louis
10 Mo
Hutton & Bourbonnais Co Box 320 Hickory N C

Huy-Mig Co Eastford & Cloness Southbridge Mass
Huy-Murphy Co Murphy Bldg Ridgeway Pa
Hyde Park Lumber Co Ketchikan Alaska

Hydraulic Mfg Co Burt Wis
Hydraulic Press Div 708 Olive St St Louis Mo
Hydracore Div Bucyrus-Erie Co 1046 Monroe Ave S
Milwaukee Wis

Hydroblast 52 De Soto Ave Ocean Springs Miss
Hydro Prods Inc Madison 5 Wis
Hygienic Prods Co Canton O

Hyron & Co Electric Co Box 698 Waldorf Md
Hyron Engineering Inc 404 Washington Ave N Min-
neapolis 1 Minn
Hytor Co 2902 N E Cleckmas St Portland 8 Ore

I
Idaho Fire Brick & Clay Co Troy Idaho
Idaho Pile Co Sandpoint Idaho
Idaho Shingle Co Idaho Ore

Ideal Brass Wks 250 E Fifth St St Paul 1 Minn
Ideal Cabinet Corp Div Des Lauriers Corbett
Mould Co Inc 7722 Joy Rd Detroit 4 Mich

Ideal Cement Co Colorado Portland Div Denver National
Idell Denver 2 Colo
Ideal Co Waco Tex

Ideal Hanger Co 1292 E 53rd St Cleveland 14 O
Ideal Industries Inc 1006 Park Ave Syracuse Ill
Ideal Mfg Co Newark N J

Ideal Ventilator Co 160 Atlantic Ave Providence 7 R I
Ile Electric Ventilating Co 2550 N Pulaski Ave Chicago
14 Ill

Illinois Brick Co 228 N LaSalle St Chicago Ill
Illinois Brumme Foundry Co Inc 2923 S Clark St Chicago
14 Ill

Illinois Duster & Brush Co 1944 Webster Ave Chicago
14 Ill
Illinois Iron & Bolt Co 914 S Michigan Ave Chicago 5 Ill

Illinois Lock Co 802-12 S Ada St Chicago 7 Ill
Illinois Lumber Mfg Co Cairo Ill
Illinois Malleable Iron Co 1905 Diservey Pkwy Chicago
Ill

Illinois Nail Co 326 N Peoria Chicago Ill
Illinois Portland Enamel Co 628 S Winchester Ave Chicago
12 Ill

Illinois Wire & Mfg Co Box 1396 Joliet Ill
Illinois Zinc Co 2959 W 47th St Chicago 32 Ill
Imperial Brass Mfg Co 1200 W Harrison Chicago Ill

Imperial Handle Mfg Co Fairbush Ohio
Imperial Malleable Iron Co 38-01 Queens Blvd Long Island City
N Y
Imperial Moulded Products Corp 2925 Harrison St Chicago
12 Ill

Imperial Motor Corp Kingston Pa
Imperial Paper & Color Corp Pigment Color Div Glenn
Falls N Y

Incinerator Products Co 687 S Post Ave Detroit 17 Mich
Inclinator Co of America 2212 Paxton Blvd Harrisonburg Pa
Independence Lbr & Mfg Co Independence Mo

Independent Lock Co 1950 Cleghorn St Pittsburg Mass
Independent Metal Strap Co Inc Third Ave & Third St
Brooklyn 15 N Y

Independent Nail & Packing Co Stone St Bridgeport
Mass
Independent Pneumatic Tool Co State &
Gim Sts Aurora Ill

Independent Protection Co Inc 1605 S Main St Goshen
Ind
Independent Silo Co 752 Vandalla St St Paul Minn

Independent Steel Co 54 W Grand Ave Chicago Ill
Indiana Body Co 615 S H St Richmond 1 Ind
Indiana Demountable Housing Inc 907 E Michigan St
Indianapolis Ind

Indiana Ink Co Jasper Ind
Indiana Lead Lumber Co Pittsville Calif
Indiana Fiberglass Forming Co Colfax Ind
Indiana Limestone Co Bedford Ind

Indianapolis Paint & Color Co Capital & Thiel Sts Indi-
anapolis Ind
Indiana Steel & Wire Co Muncie Ind
Indiana Veneer & Panel Co New Albany Ind

Industrial Chemical Development Corp 847 Madison Ave New York 17 N Y
Industrial Chemical Sales Div West Virginia Pulp & Paper Co Box 1333 Elm St Charleston New York 17 N Y
Industrial Glass Co 1012 Garfield St Danville Ill
Industrial Iron Works 6011 S W Macadam Ave Portland 1 Ore
Industrial Lumber Co Little Rock Ark
Industrial Machine Tool Co Inc 301 S Oak St Fenton Mich
Industrial Products Co Nash Tr Bldg Nashville 3 Tenn
Industrial Truck Div Clark Equipment Co The Inn Baiter Creek Mich
Industries Inc 820 S Palahi Rd Chicago 24 Ill
Infra Insulation Inc 525 Broadway New York N Y
Ingalis Iron Works Co Birmingham Ala
Ingersoll Products Div Borg-Warner Corp Kalamazoo Mich
Ingersoll-Rand Co 11 Broadway New York 4 N Y
Ingersoll Steel Div (Borg-Warner Corp) 310 S Michigan Ave Chicago 6 Ill
Ingram-Richardson Mfg Co 1940 McMillan St Beaver Falls Pa
Inland Lumber Co 55 E Wacker Drive Chicago 2 Ill
Inland Mfg Co Oakland Calif
Inland Steel Co 38 S Dearborn St Chicago 3 Ill
Inland Steel Container Co 6532 S Menard Ave Chicago 36 Ill
Inland Steel Products Co 4111 W Burnham Milwaukee Wis
Inland White Lead Co 741 W Gladys Ave Chicago Ill
In-Sink Erator Mfg Co 1231 14th St Racine Wis
Intracotton Div Taylor Broiding Mfg Co Taylor Tex
Insul Mat Products Co Inc 6127 Cedar Ave Philadelphia 43 Pa
Insulation Industries Inc Janesville Wis
Insulation & Refractories Co Williamson Wayne County N Y
Insulation Service Co Allingpore N Mex
Insulate Co Div Minnesota & Ontario Paper Co 500 Baker Arcade Bldg Minneapolis 2 Minn
Insulux Products Div Owens-Illinois Glass Co Toledo 1 O
Insul-Wool Insulation Corp 121 N Dodge Wichita 12 Kans
Intercontinental Corp Empire State Bldg 350 Fifth Ave New York 5 N Y
Inter Lakes-Gulf Lumber Co Cleveland 15 Ohio
Interlock Metal Units Inc 50 CHC New York N Y
Inter-Mountain Coal & Lumber Co Elkins W Va
Intermountain Homes Logan Utah
International Insulation Co Salt Lake City Utah
International Aqueducts Inc Rockefeller Center N Y
International Brick Co El Paso Tex
International Business Machines Corp World Headquarters Bldg 5100 Madison Ave New York 22 N Y
International Chain & Mfg Co 1941 Norwalk St York Pa
International Chemical Co Inc 3140 S Canal St Chicago 16 Ill
International Croceting & Construction Co Galveston Tex
International Engineering Inc 1200 Bolander Ave Dayton 1 O
International Fire Equipment Corp 94 State St Boston Island 10 N Y
International Fireproof Door Co 76 Lexington Ave Brooklyn 5 N Y
International Glue Co 325 Marginal Boston Mass
International Harvester Co 150 N Michigan Ave Chicago 1 Ill
International Heater Co 101 Park Ave Utica N Y
International Lighting Co 1511 Easton St Louis 14 Mo
International Mfg Co 2360 S Delaware Denver Colo
International Molded Plastics Inc 4387 W 35th St Cleveland 9 Ohio
International Nickel Co Inc 67 Wall St New York 5 N Y
International Nutty Tool Corp Oswego N Y
International Oil Burner Co 3800 Park Ave St Louis 10 Mo
International Plastic Corp Morristown New Jersey
International Safety Window Corp 121-123 20th St Brooklyn 32 N Y
International Steel Co 1321 Edgar St Evansville 7 Ind
International Steel Wool Corp Fine & Kenton St Springfield 0
International Television Corp 238 William St New York N Y
International Timber Products Inc Seattle 1 Wash
International Twist Drill Corp 624 Wyandotte St Kansas City 6 Mo
Interstate Brick Co Salt Lake City Utah
Interstate Lumber Sales Eugene Ore
Interstate Oil Co 87 Shawnee Ave Kansas City 2 Mo
Investors Syndicate 200 Roanoke Bldg Minneapolis Minn
Iowa Furniture Co Iowa Mich
Iowa Pipe & Tile Co Des Moines Ia
Ipk Plywood Corp Kenner La
Iri-Gator Mfg Co Tucson Ariz
Ironcraft Inc San Jose 1 Calif
Iron Fireman Mfg Co 3259 W 106 St Cleveland 11 O
Ironite Iron Co 322 Cass Mt Clemens Mich
Ironton Fire Brick Co Ironton O
Irvington Firm & Tank Co 20 Vowey St New York N Y
Iryon Ager Bit Co Wilmington O
Isenhour (G W) & Sons Salisbury N C
Island Equipment Corp 27-03 Bridge Plaza N Long Island City 1 N Y
Ives (H B) Co 5 Artisan St New Haven 8 Conn
Ivory Pipe Co Klamath Falls Ore
Ivan Brothers Inc 1555 Prairie Ave South Bend Ind
IXL Furniture Co Goshen Ind

Jacob Wood Electric Co Inc Minneapolis Minn
Jacques Power Saw Co Denison Tex
Jacuzzi Bros Inc Jacuzzi Ave Richmond Calif
Jadon (H) Inc 860 Broadway New York City N Y
Jaeger Machine Co 600 W Spring St Columbus 16 O
James Mfg Co Ft Atkinson Wis
Jamestown Metal Products Jamestown N Y
Jamestown Plywood & Veneer Co 34 Steele St Jamestown N Y
Jaminon Cold Storage Door Co 425 Forest Dr Hagerstown N Y
Jaminon Lumber & Shingle Co Everett Wash
Jansville Cotton Mills River & Race Sts Jansville Wis
Janney & Co 1000 Broadway New York City N Y
Jarvis & Jarvis Inc 110 Pleasant St Palmer Mass
Jaspert Lumber Co Newald Wis
Jaymie Mfg Co Inc Egg Harbor N J
Jaymor Co Hood River Ore
J-D Products Co Des Moines Iowa
Jefferson Electric Co 910 25th Ave Bellwood Ill
Jefferson Lumber Co Birmingham Ala
Jefferson Wood Working Co 1316 W Hill Louisville Ky
Jeffrey Mfg Co 927 N Fourth St Columbus 16 Ohio
Jefferys Lumber Co Inc Oxford N C
Jefferys-McKraith Mfg Co P O Box 137 Macon Ga
Jefferys-Mycroft Mfg Co Oxford N C
Jeffries (J W) Lumber Co Silverport La
Jelliff (C O) Mfg Corp 122 Poynt Ave Southport Conn
Jenken Brick Co Montgomery Ala
Jenkins Bros 80 White St New York N Y
Jensen (E) Mfg Co Worcester Mass
Jens (F) Sales Co Box 217 Ft Loma Station San Diego Calif
Jettrethane Inc 2417 Walnut St McKeesport Pa
Jesse Paint & Varnish Co 349 N Western Ave Chicago Ill
Jett Refrigerator Co 2 Littleworth Buffalo 13 N Y
Jitterbug Sander Co Inc Menominee Mich
J M J Products Co 226 Centerville Ave Belleville Ill
Johns-Manville Corp 22 E 40th St New York 16 N Y
Johnson & Carlson 548 W Eastman Chicago 22 Ill
Johnson Co 235 S Dock St Sharon Pa
Johnson (C D) Lumber Corp American Bank Bldg Portland Ore
Johnson (C S) Co Champaign Ill
Johnson Farm Box Co 4619 Rensselaer Ave Chicago Ill
Johnson Industries Inc 236 McPherson Hwy Fremont O
Johnson Industries Inc 2110 S 7th Blvd St Louis 4 Mo
Johnson (J W) Co 1237 N Monroe Chicago Ill
Johnson Lumber Co Inc Manchester N H
Johnson Mfg Co Inc Fox & Holly Sts Seattle Wash
Johnson Metal Prods Co Erie Pa
Johnson Motors Div Outboard Marine & Mfg Co Waukegan Ill
Johnson Plastic Corp Chagrin Falls Ohio
Johnson Brick Rope Co 120 Wall New York 5 N Y
Johnson Quality Homes Inc Pemberton N J
Johnson (R C) & Co Inc 900 2nd St Racine Wis
Johnson (S T) Co 340 Arlington Ave Oakland 4 Calif
Johnson Steel & Wire Co 51 Wiser Ave Worcester 1 Mass
Johnson Glass Co Inc Hartford City Ind
Johnson & Jennings Co Cleveland Ohio
Johnson Mfg Co 2821 E Hennepin Ave Minneapolis 13 Minn
Johnson (R F) Paint Co 3925 Huston Ave Cincinnati N Y
Johnson Co 13833 S Indiana Ave Chicago 27 Ill
Joliet Wall Paper Mills Inc Joliet Ill
Jonestown Brick Janesville Wis
Jones & Brown Inc 439 Sixth Ave Pittsburgh 19 Pa
Jones (C J) Lumber Co Everglades Fla
Jones (M) Lumber Co Natchez Miss
Jones & Lindholm Steel Corp 511 Rom St Rm 405 Pittsburgh 19 Pa
Jones (R T) Lumber Co North Tawaneau N Y
Jones Superior Machine Co 1272 W North Ave Chicago 22 Ill
Jordan Refrigerator Co 235 N Broad Philadelphia 43 Pa
Jostin (A D) Mfg Co 122 Lake Drive Manistee Mich
Jostin Show Case Co 105 Kingston Boston 11 Mass
Jora Brick Works Houston N A
Joyce-Candian Co E First & Bott Sts Dayton 3 O
Judd (H L) Co Inc 45 S Murdoch St Wallingford Conn
Juferte Co Inc 552 Jeacockt Bldg Des Moines 9 Iowa
Junior-Pre Products Co 3206 Morganford Rd St Louis 16 Mo
Just Mfg Co 4610 W 21st St Chicago 10 Ill
Justrite Mfg Co 2061 N Southport Chicago 14 Ill

Karlsen (E) Inc 125 N 45th St New York 19 N Y
Karlen-Davis Co Tacoma 1 Wash
Karr Range Co Belleville Ill
Kato Engineering Co 717 Elm St Manhattan 3 Minn
Kaufmann & Washburn Co 721 N Central Ave Baltimore Md
Kauffman Corp 17210 Gable St Detroit 12 Mich
Kaul Clay Mfg Co Spring St Toronto O
Kaul Lumber Co Birmingham Ala
Kausman Co Inc
Kawner Co 714 N Front St Niles Mich
Kaylor Moisture Guards 126 Liberty St New York 6 N Y
Kay-Tite Co 10 White St West Orange N J
K-B K (E) Forging Co 2645 N Keeler Chicago 18 Ill
K-B Mfg Co 526 N Plum St Lancaster Pa
Keasbey & Mattison Co 1944 Mitchell St Ambler Pa
Keagler Brick Co Chillicothe Mo
Keeford Mfg Waterproofing Co Inc 53 W Jackson Blvd Chicago 4 Ill
Keen Equip Co Inc Vinceland N J
Keen (F) Mfg Co 24 High St Beatrice Neb
Keller Prods Co 7029 Superior Ave Cleveland 3 O
Keller Prods Inc Manchester N H
Keller Island Lime & Transport Co 1122 Leader Bldg Cleveland 14 O
Kelling Lumber Co Monroe La
Kelling (Spencer) & Sons Inc Niagara Square Buffalo 5 Wash
Kelling Seltzer & Supply Co 6452 S Clero Chicago 38 Ill
Kelly-Springfield Tire Co Cumberland Md
Kelvinator Div Wash-Kelvinator Co 14250 Plymouth Rd Detroit 32 Mich
Kemper-Thomas Co Park Ave E Cincinnati O
Kence Inc 1125 N Ridge Rd Lorain O
Kendall Lumber Co Plaza Bldg Pittsburgh Pa
Kendrick Brick & Tile Co 315 Holly St C
Kemper Mfg Co Albert & Martha Sts Philadelphia 35 Pa
Kenna Metal Inc 700 Lloyd Ave Latrobe Pa
Kenebec Box & Lumber Co St Gardner Mo
Kenebec Inc Bingham Me
Kenebec Inc Truss Door Div Bingham Me
Kennedy Co 1620 Dime Bldg Detroit 26 Mich
Kennedy Co Schiller Park Ill
Kennedy (H G) Lumber Co Seattle 1 Wash
Kenneth (C) Conway N Y
Kerens Hardwood Flooring Co Wood St Kenosha W Va
Kerr Co-BI Co Van Buren O
Kerr Co Inc 103 Canal St Rome N Y
Kentile Inc 80 Second Ave Brooklyn N Y
Kent Lumber Co San Francisco 4 Calif
Kent Machine Co Cuyahoga Falls O
Kentucky Metal Prods Co 3106 Preston St Louisville 13 Ky
Kerworth Motor Truck Corp 8801 E Marginal Way Seattle 1 Wash
Kerzich Co 303 N Michigan Ave Chicago 1 Ill
Kern (Paul B) Lumber Co Washington D C
Kerns Incerator Div Morse-Boulger Destructor Co 211-D E 2nd St New York 17 N Y
Kerres & MacCracken 152 S Van Brunt St Englewood N J
Kerros Prods Box 414 Hastings Mich
Kerry & Hanson Flooring Co Grappling Mich
Kester Solder Co 4201 W Wrightwood Chicago Ill
Ketcham (G M) Mfg Corp 83 Washington St Brooklyn N Y
Kett Tool Co 5 E 3rd St Cincinnati O
Kouff & Esser Co 300 Adams St Hoboken N J
Kewanee Boiler Corp Kewanee Ill
Kewanee Machinery & Converter Co Kewanee Ill
Kewanee Mfg Co 150 Burlington Ave Kewanee Ill
Keystone Asphalt Prods Co 43 E Ohio Chicago 11 Ill
Keystone Brass & Rubber Co 2705 N Broad St Philadelphia Pa
Keystone Frame & Mfg Co 3629 E Riverside Spokane Wash
Keystone Glue Co Willamport Pa
Keystone Lime Was Inc Keystone Pa
Keystone Lumber Co Camden Ark
Keystone Refractories Co 120 Liberty St New York 6 N Y
Keystone Steel & Wire Co 7000 S Adams Peroria 7 Ill
Keystone Tarsh Co 71 Ottago St Brooklyn 31 N Y
Keystone Wire Cloth Co Hanover Pa
Keystone Wire Matting Co 709 Rowland Beaver Falls Pa
K H P Milwaukee Steel Co 4600 W Mitchell St Milwaukee 1 Wis
Kilde (Walter) & Co 675 Main St Belleville 9 N J
Kimball Bros Co 939 Ninth St Council Bluffs Ia
Kimball Glass Co Vinceland N J
Kimball Mfg Co 1629 Sycamore Royal Oak Mich
Kimberly-Clark Corp 4500 N Francisco La Neneah Wis
Kimberly-Clark Corp Kimball Div 4500 N Commercial St Neneah Wis
Kinloch Laboratories 1720 Sanson St Philadelphia Pa
King-Chippewa Co St Louis 4 Mo
King Co Owatonna Minn
King (E & F) Co Inc 440 Pleasant St Norwood Mass
Kingham Trailer Co 15th & Hill Louisville Ky
King Lumber Industries Canton Miss
King Lumber Industries Inc Cincinnati N Y
King Mfg Co 3146 W Chicago Ave Chicago 22 Ill
King Refrigerator Corp 7602 Woodhaven Glendale Long Island N Y
Kingland Clay Prods Co Ludwigham N J
Kingsley Lumber Co Portland 9 Ore
Kingsley Mfg Co 748 E 82nd St Cleveland 3 Ohio
Kingston-Conley Div Hoover Co 700 Brook Ave N Plainfield N J
King Stone & Range Co Sheffield Ala
Kinkead Industries Inc 450 W Superior St Chicago 10 Ill
Kinman Mfg Co Seventh & Fitz Ave Columbus 16 O
Kinzua Pine Mills Co Kinzua Ore
Kipton Industries Newark Ohio
Kirtley Electric Inc 1505 E Jackson San Gabriel Calif
Kirtly Lumber Co Kirtly Bldg Houston 2 Tex
Kirks & Blum Mfg Co 2846 Spring Grove Ave Cincinnati O
Kirks Plastics Co Los Angeles Calif

Kirkhill Inc Kirshill Bldg 6826 McKinley Ave Los Angeles Calif
 Kirman Engineering Corp 123 Mercer St New York 13 N Y
 Kirpatrick (Thomas) Estate Vancouver B C Canada
 Kirton Co 3435 E Jefferson Ave Detroit Mich
 Kirsh Co St George Miss
 Kisco Co Inc 2440-46 DuKalb St St Louis Mo
 Kitchell Lumber Co Ashland Ky
Kitchen Maid Corp Andrews Ind
 Klamath Basin Pine Mills Corp Klamath Falls Ore
 Klauer Mfg Co Niles & Washington Sts Dubuque Ia
 Klaus Grabel 132 Font New York 5 N Y
 Klein Chemical Co School La E of Ridge Philadelphia 29 Pa
 Kleinfont Co Baldwin Park Calif
 Klein Heat Inc 1829 W Carroll Chicago Ill
 Klein Mfg Co Burlington Ia
 Klein (Mathias) & Sons 3209 W Belmont Chicago 18 Ill
 Kleinert Timber Co Fort Worth Wash
 Klier-Vue Knifc Back Co Inc 1778 Broadway New York 19 N Y
 Kline (Lewis T) Co Alpha Mich
 Klinger DT-Bill Mfg Co San Antonio A Tex
 Kniel Ernest & Co 109 W Kellogg Blvd St Paul 2 Minn
 Klumb (C E) Lumber Co Crystal Springs Miss
 K & M Corp Norfolk Va
 Knape & Vogt Mfg Co 4855 Richmond N W Grand Rapids 4 Mich
 Knapp Bros Mfg Co Cincinnati 36 O
 Knapp-Monarch Co Bond Ave & Potomac St St Louis Mo
 Knickerbocker Mfg Co 603 Liberty Jackson Mich
 Knight (James) Co Wills & Church Sts Sandusky Ill
 Knook Lumber Co Appleton Wis
 Knox Corp Knox Bldg Thomson Ga
 Knudson & Mercer Lumber Co Chicago 4 Ill
 Koeltion Plywood & Veneer Co 509 W Roosevelt Bld Chicago 7 Ill
 Koeltion Co 3026 W Concordia Ave Milwaukee 10 Wis
 Kogap Lumber Industries Modified Ore
 Koli-Noor Plywood Co Inc Bloomington N J
Kohler Co 44 High St Kohler Wis
 Kokomo Sanitary Pottery Co Kokomo Ind
 Kolbus (K) Corp 1504 W Hopkins Milwaukee 6 Wis
 Koll-Master Corp 124 Walburg St Oregon Ill
 Koldstad Mail Box Duluth Minn
 Kool-Air Engineering Co San Bernardino Calif
 Kool-Vent Aluminum Awning Distributors Box 1855 Pittsburgh 20 Pa
 Koppers Co Koppers Bldg Pittsburgh 19 Pa
 Korman Industries Inc 32 Logan St Superior 3 C
 Korsch Mfg Co Edge Rd 145 Ave Cleveland O
 Kosmos Portland Cement Co Starke Bldg Louisville Ky
Kovon (L O) & Bro Inc Dept AD 154 Ogden Ave Jersey City T N J
 Koza Steel Swimming Pools Inc 134 Ogden Ave Jersey City 7 N J
 Koz-Aire Inc Red Oak Ia
 Kramer & Co Inc 551 18th Ave Newark N J
 Kramer Co Niles Calif
 Kramer-Bord Inc 553 River Rd N Tonawanda N Y
 Kraus (Walter S) Co 48-02 43rd St Woodside N Y
 Kreamer (A) Inc 307 Kent Ave Brooklyn N Y
 Krenning Timber Co Krenning Colo
 Krewy Mfg Co 2nd & 12 Sts Baltimore Md
Krezo Stamm Co 408 Commercial Ave Palisades Park N J
 Krome-Kote Co Hyde Park Bank Bldg Chicago 15 Ill
 Kuhn (H B) Ford 1811-8423 Third Ave Brooklyn 20 N Y
 Kurlow (J F) Paint Co 291 E Market Louisville Ky
 Kwik-Mix Co Port Washington Wis
 Kwiksand Inc Rochester N Y
Kwikset Locks Inc 516 E Santa Ana Ave Anaheim Calif

Laramie Brick & Tile Co Laramie Wy
 Laredo Brick Co Laredo Tex
 Larsen (Charles O) Co 253 Avenue G Sterling Ill
 Larson Lumber Co San Jose Calif
LaSalle Lighting Products Inc 145 Seneca St Buffalo 3 N Y
 Lassen Lumber & Box Co Monadnock Bldg San Francisco Cal
 Las-Nik Mfg Co E & Worne Sts Hamilton O
 Lasnik Products Co Inc Kewauqua Bldg Pittsburgh 22 Pa
 Lasting Products Co Franklinston Rd Baltimore 23 Md
 Las Vegas Brick Co Las Vegas N Mex
 Lasch Products Co Las Vegas N Mex
 Latch Lock Mfg Co St Paul & Main
 Lathrop Inc Fremont Ca
Laub & Blower Co 200 Home Ave Dayton 7 O
 Laughlin (Thomas) Co 100 Fow St Portland 6 Me
 Laurillon Foundry Co Laurillon Pa
 Leamon Lbr Co Medford Ore
 Lawrence Engine-Burling Ill
 Lawrence Engineering Service 98 Smith St Peru Ind
 Lawrence Engineering Service Peru Ind
 Lawrence Steel Co 2746 Venice Blvd Los Angeles 35 Calif
 Lawrence Warehouse Co WP Story Bldg Los Angeles Calif
 Lawrence (W W) & Co 1124 W Carson St Pittsburgh 19 Pa
Lawson (F H) Co Evans & Whately Sts Cincinnati 4 O
 Lawson Mfg Co Wilmington Pa
 L E N Closets Inc 400 N Superior St Chicago Ill
 Leach Lumber Co & Box Factory Oakland Wis
 Leary (G F) Lumber Co Greenville S C
 Leash Mfg Co Higginsville Mo
 Leasor (E S) Mfg Co Natchez Miss
 Leathers (A H) Mfg Co Dickson Tenn
 Le Blanc Lumber Co Greenville Springs Baton Rouge La
 Leibel Foundry Co 18 E Fort Baltimore 30 Md
 Lee Rubber & Tire Corp Conshohocken Pa
 Lee Tideswell Cypress Co Perry Ala
Leeson Steel Prods Inc 658 N Lake Shore Dr Chicago Ill
 Leevonia Tool Co Holt & Main Ave Leevonia O
Lefax Dept AB1 Philadelphia 7 Pa
 Legish Stalium Sink Corp 21-07 40th Ave Long Island City 1 N Y
 Legish Portland Cement Co 718 Hamilton St Allentown Pa
 Leigh Sewer Pipe & Tile Co Fort Dodge Ia
 Leiman Co of America Cantonment Ind
 Leiman Sprayshield Co 3351 York Rd Philadelphia Pa
 Leiton Co 4425 S Daley Chicago Ill
 Leiswood Corp 1703 Ironwood Dr South Bend Ind
 Leiden Specialty Co Oconomowoc Wis
 Leifeld Iron Works Crescent & Mill Bld Grand Rapids 2 Mich
 Leitch Electric Co 1501 Loc St Dayton O
 Leming (M E) Lumber Co Cape Girardeau Mo
 Lemk Mfg Co 30 Cunningham St Boston Mass
 Lemmon Wallpaper Co Joliet Ill
 Lemmer Furnace Co Marshall Mo
 Lemmer Electric Mfg Co 3903 Perkins Ave Cleveland O
 LePage's Inc 40 Swanson St Gloucester 1 Mass
 Lemle Welding Co 2937 W Carroll Ave Chicago Ill
 Lemm Engineering Co Inc Clayton Ga
 LeMay (R G) Inc 2305 N Adams Peoria Ill
 Letracon Building Products & Broadway New York 6 N Y
 Letracon Concrete Inc 39 Broadway New York 3 N Y
 Lewis Co (R G) Watertown Wis
 Lewis Bolt & Nut Co Inc 593 Malcolm Ave S E Minneapolis Minn
 Lewis Engineering & Mfg Co 1255 S Mahoning Allentown Ohio
 Lewis Mfg Co Bay City Mich
 Lewis-Sharp Products Inc 117 Walnut St Watertown 2 Mass
 Lewis-Sinimer Co New Boston N H
 Lewiston Brick & Tile Co Lewiston Me
 Lexington Lumber Co Columbus 8 Mo
 Leybold-Smith Shingle Co Tacoma Wash
 L H L Lumber Corp Carlton Ore
Libbey-Owens-Ford Glass Co 12th Fl Nicholas Bldg Toledo 3 O
 Liberty Bell Mfg Co Minerva O
 Liberty Foundry Co St Louis Mo
 Leitch Co Inc 1210 N Hoyne Chicago 22 Ill
 Lieber (Charles A) St Louis 10 Mo
 Lifetime Industries Wave Bldg Louisville Ky
 Lightome Appliance Corp 738 Broadway N Y 3 N Y
 Lightning Adding Machine Co 1260 W Second Los Angeles 36 Calif
 Lightolier Co 346 Claremont Ave Jersey City 5 N J
 Lighty Bros Miller Ky
Light Features RFD 3 Santa Ana Calif
 Lilly (David) Co E F D #3 Santa Ana Calif
 Lilly Products Co Attleboro Mass
 Lima Electric Motor Co Lima O
 Lind (O J) Co Inc Montclair N J
 Lincoln Electric Co 13010 Calt Rd Cleveland 1 O
 Lincoln-Schleuter Floor Machine Co 1250 W Van Buren St Chicago 7 Ill
 Lincraft Inc Burlington N Y
 Link Air Products Co 30 E 42nd St New York 17 N Y
 Linkman (A J) Boreman Bldg 601 W Cleveland Ave Milwaukee 7 Wis
 Lindsey Wagon Co Laurel Miss
 Link-Belt Co 207 N Michigan Ave Chicago 1 Ill
 Link-Belt Speeder Co Cedar Rapids Ia
 Link Mfg Co Fargo N D
 Link-Newcomb Mill & Lumber Co Tehama Miss
 Linon Plywood & Door Albany Ore
 Linotype Products Corp 1006 Clinton St Hoboken N J
 Lion-Paste Co 335 S Polaris Chicago Ill
Linseed Oil Products Co 355 N Del Monte St Pasadena Calif
 Linton Penic Co Lewisburg Tenn
 Lionel Corp 15 E 26th St New York N Y
 Lion Shingle Co Aberdeen Wash
 Lion-Railway Corp 806 Emeran Ave Solvay Sta Syracuse 1 N Y
 Lippert (E T) Saw Co 608 Lincoln Ave Pittsburgh 9 Pa
 Lippmann Engineering Works 4603 W Mitchell St Milwaukee 16 Wis
 Linton Hoist & Crane Co Linton O
 Lisk-Savery Corp Canandaigua N Y

Litka Pencil Corp 2406 Eagle Ave Alameda 1 Calif
 Litch-I-Bar Co Holland Mich
 Lithographers Camden N J
 Little (George) Co 10 E 40th St New York 36 N Y
 Little Giant Prods Inc Peoria 3 Ill
Little (H C) Burner Co Inc 2nd & Lincoln Sts San Rafael Calif
 Littleton Hardware & Foundry Co Inc 48 Charles St Littleton Pa
 Living for Young Homebuilders 575 Madison Ave New York 22 N Y
 Lively Co Co 668 N Lake Shore Chicago Ill
 L & M Mfg Co Gillespie O
 Local Trademarkers Inc 87 Madison St New York 16 N Y
 Locke Mfg Co Ohio St Kansas City 6 Mo
 Locke Ream Co Salem Mass
 Locke Store Co 114 W 11th St Kansas City 6 Mo
 Lockwood College Point N Y
 Lockhart Mfg Corp 6359 E Devision Ave Detroit 12 Mich
 Lock Joint Window Co Oklahoma City Okla
 Lockwood Wood Products Co 114 S Santa Fe Wichita Kans
Lockport Cotton Batting Co Elmwood Ave Lockport N Y
Lockwood Hardware Mfg Co 1950 Cloghnan St Fitchburg Mass
 Lockwood Wood Products 321 Pacific Bldg Portland 4 Ore
 Logan Clay Products Co Logan O
 Logan Co 1115 Franklin St Louisville 4 Ky
 Logan-Lock Co 6600 S Central Ave Chicago Ill
 Logan (Henry) Co Inc 80 Beausole Ave Newark 5 N J
 Log-Products Co 4877 San Fernando Rd W Los Angeles 39 Calif
 Lombard Governor Corp Main & Pleasant Sts Ashland London Furniture Co Cleveland O
 Longman Mfg Co Edison & Clark Sts Albion Mich
Long Star Cement Corp 342 Madison Ave New York 17 N Y
 Long Star Cementing Co Longview Tex
Long-Bell Lumber Co R A Long Bldg Kansas City 6 Mo
 Long Fire Gutter Co 600 Dewey Cadiz O
 Long Lake Lumber Co Spokane Wash
 Long (L A) Leaf Lumber Co Fisher Ia
 Long Mfg Co Tarboro N C
 Longtree Shingle Co Kalama Wash
 Longmeyer Brick & Tile Co Littleton Colo
 Long (Ralph L) Co 2370 Olive Lemon Grove Calif
 Longview Shingle Co Longview Wash
 Long (W B) Co 134 W Illinois Chicago Ill
 Lookout Boiler & Mfg Co Mine Rd & Compress Rk Chattanooga 1 Tenn
 Lookout Industries 516 Park Way Piedmont Calif
 Lookout Hardware Mfg Corp 391 W Broadway New York 12 N Y
 Look Angles Ladder Co 6230 S Alameda Los Angeles Calif
 Loudon Machinery Co 1120 Broadway Fairfield Ia
 Louisiana Central Lumber Co Clark La
 Louisiana Cypress Lumber Co Fouchita La
 Louisiana Long Leaf Lumber Co Fisher La
Louisville Cement Co 315 Guthrie St Louisville 2 Ky
 Louisville Electric Mfg Co 3008 Magazine St Louisville Ky
 Louisville Fire Brick Wks Inc 4554 Louisville Ave Louisville Ky
 Lowner Mfg & Supply 5607 W 10th Minneapolis Minn
 Lowery Flexible Coupling Co 5001 W Lake Chicago 44 Ill
 Lowell Clay Products Co Lowell Wis
 Lowmeyer's Plan Service 120 Machin Peoria 8 Ill
 Lowrey Inc 1525 E 31rd St Chicago 15 Ill
 Lowruss 436 E Third St Dayton O
 Lowry Mfg Co Endersin N D
 Lowry Mfg Co 545 E Illinois St Chicago 11 Ill
 Lowther (Henry A) Co Joliet Ill
 Lucas (John) & Co Inc 1619 Pennsylvania Blvd Philadelphia Pa
Luoke (William B) Inc 514 Railroad Ave Wilmette Ill
Ludman Corp Box 4541 265 S W 32nd St Miami Fla
 Ludwick-Celadon Co 104 S Michigan Ave Chicago 3 Ill
 Ludwig Mfg Co Inc 2401 Durand Rd Racine Wis
 Luffkin Bats Co 1230 How Ave Saginaw Mich
 Lull Mfg Co 3612 E 44th Minneapolis Minn
Lumber Engineering Co 7742 Greenfield Dearborn Mich
 Lumber Fabricators Inc Ft Payne Ala
 Lumbus Co 515 Madison Ave New York 22 N Y
Lumite Div Chicopee Mfg Corp of Georgia 49 Worth St New York 13 N Y
 Lumite Corp Pawling N Y
 Luria Engineering Corp 500 Fifth Ave New York 18 N Y
 Lustrated Press Co Ennetts St Bristol Conn
 Lustr Plastic Tile Co 53 S Main St Akron O
 Luther Grinders & Tool Co Sheboygan Wis
 Lush (F C) & Co Rafter Bldg New Orleans 12 La
 Lutz (Wm R) Co 18 Bergen Brooklyn N Y
 Lutz-Vinc Inc 5 W Franklin & Edwards Sts Elkhart Ind
 Lutz (Donald W) Tacoma Wash
 Lzman (H B) Co Southampton Mass
 Lyon Conklin & Co Inc Race & McComas Sts Baltimore Md
 Lyon Metal Products Inc 321 N Madison St Aurora Ill
 Lyon Rural Electric Co San Diego Calif

M

MacFarland (L D) Co 146 Sandpoint Idaho
 MacGillis & Gibbs Co 326 E Wisconsin Ave & Keester Milwaukee 2 Wis
 Mackie Mill Co Markham Wash
 Mackin Venetian Blind Co Monroeville Ill

Mark International Motor Truck Corp 350 Fifth Ave New York 17

Macklin-Brown-Duncan Co P O Box 1197 Oklahoma City 1 Okla

Macklond Co 2232 Boger St Cincinnati 22 O
Macklin Co Jackson Mich
Mace Corp 1345 Henry St Huntington Ind
Machomer Inc 1925 Trent Canton O
Machon Steel Prods Co Maronh Ill
MacWright Co 2936 14th Ave Rossmore Wis
Madden Handle Co Mt Vernon St
Made-Rite Prods Inc 2108 N 7th St St Louis Mo
Madwell Mfg Co Oakland Calif
Madison Glee Corp 53 Park Place New York 7 N Y
Maender Brush Mfg Co Inc 138 E 9th St St Paul Minn
Magazine Inc 1949 Meyer St Flintstoning Mich
Magawac Co Inc Bldg 15 Fort Wayne Ind
Magnesia Prods Co Milwaukee Wis
Magnesium Co of America 3222 Indianapolis Blvd E Chicago Ind
Magnum Prods Co Bell Calif
Maguire-Walters Co Inc Pensakill N Y
Majors (R T) Co 8650 Mt Elliott Detroit 11 Mich
Major Chief Co Gardner Mass
Mail Safe Mfg Co St Paul 2 Minn
Major Industries Co Bangor Me
Maine Steel Prods Inc S Portland Me
Majestic Car Corp Canton N Y
Majestic Co Brown St Huntington Ind
Majestic Mfg Co 4556 Gaitline St St Louis Mo
Majex Chemical Corp 1107 E 8th Los Angeles 21 Calif
Mallard Prods Inc Glen Cove L I N Y
Malleable Iron Fittings Co 21 Thatchers St Branford Conn
Mallory Iron Range Co Beaver Dam Wis
Mall Tool Co 7740 South Chicago Ave Chicago 19 Ill
Mallinckrodt Refractor Hvt
Malros Co Center Grove New York 14 N Y
Malla Mfg Co Malta O
Malvern Clay Co Okemore Okla
Mannhattan Terrazzo Brass Strip Co Inc 1915 Park Ave New York 25 N Y
Mantle Mfg & Bldg Co 13 Stiegel St Manheim Pa
Mantowite Shiplighting Co Mantowite Wis
Mansfield Hardwood Lumber Co Sheverson La
Mansfield Sanitary Factory Inc Ferrysville O
Mansfield Tire & Rubber Co 1941 Warner St Mansfield Ohio
Mansie Lamp Co of America 224 W Jackson Blvd Chicago Ill

Maple City Furnace Co Mountmorth Ill
Maplewood Lumber Co 30 W Washington Chicago 1 Ill
Marchand (A J) Inc 630 Fifth Ave New York 19 N Y
Marchant Calculating Machines Co Oakland Calif
March Stairways 1695 N Cleveland Ave St Paul 3 Minn
March Assoc 1140 W 49th New York 18 N Y
Marietta Paint & Color Co Green & Acme Sts Marietta O
Marion Lathing Supply Co Omaha Park 16 Long Island City N Y
Marion Basket Co Inc Marion Ind
Marion Handle Mills Inc Water St Marion Va
Marion Machine Foundry & Supply Co Marion Ind
Marion Metal Products Co Cheney Ave Marion Ohio
Marion Power Shoe Co 617 W Center St Marion O
Marion Tool Corp 1111 Miller Ave Marion Ind
Markal Co 3052 W Carroll Chicago 12 Ill
Mark Kay Mfg Co 2713 S Second St St Louis Mo
Market Electric Prods Inc Berriek All Buffalo 3 N
Market Products Corp Rochester Mich
Market Forge Co 80 Garvey St Everett 49 Mass
Markroy Co Madison Ill

Markwell Mfg Co Inc 200 Hudson St New York 13 N

Markwell Coil Co 4135 Manchester Rd St Louis 10 Mo
Markway Pumps 568 Greenwood Ave Ridgewood N Y
Marmon-Berrington Co Inc 4630 Harding St Indianapolis 7 Ind
Marona Mill Co Acme Wash
Marquart Millwork Co 20 Cape St Oshkosh Wis

Marquette Cement Mfg Co 20 N Wacker Dr Chicago Ill

Mar-Rail Conveyor Co 548 York Ave Packerack 8 Mich
Marshall Co 1695 N Cleveland Ave St Paul 9 Minn
Marshall Mfg Co Marion N C
Marshalltown Trowel Co Marshalltown Ia
Marsh (Jas F) Corp Shreveport La
Marsh Lumber Co Inc Dover Ohio
Marsh & Truman Lumber Co 362 S Michigan Ave Chicago Ill

Marsh Wall Prods Inc 228 Main St Dover O

Mars Venetian Blinds Le Mars Iowa
Martin Bros Box Co Oakland Ore
Martin-Beckman Inc 1100 W 12th St
Martin Pipeprods Co 2100 Military Rd Owensboro Ky
Martin Hill P & Sons 802 W 12th St Owensboro Ky
Martin Metal Mfg Co Wichita Kans
Martin-Parry Corp Box 964 Toledo O
Martin (Roy O) Lumber Co Alexandria La
Martin (S) Clyde & Sons Dallas Tex
Martin-Senour Co 2520 S Quarry Chicago 8 Ill
Martin Steel Products 111 W Longview Mansfield Ohio
Mason Corp P O Box 219 W Hartford Conn
Marvel Eng'g Co Inc 1180 N Main St Oshkosh Wis
Marvel Metal Prods Co 1100 S Central Park Ave Chicago 24 Ill
Marvel Rack Mfg Co 21 First St Minneapolis Minn
Maryland Bolt & Nut Co Falls Rd Baltimore 9 Md
Maryland Modern Housing Corp Box 7345 Halethorpe Baltimore 27 Md
Mason Perlite Inc Houston 7 Tex
Mason (A) & Sons Inc Peru N Y
Mason City Brick & Tile Co Mason City Iowa
Mason Pavers Co Leaburg O

Masonite Corp 111 W Washington St Chicago 2 Ill

Masonry Equipment & Engineering Co 325 E Michigan Ave Three Rivers Mich
Masonry Tool Mfg Co Rochester N Y
Mason 2nd Brick Yarner Co Detroit 1 Mich
Massachusetts Chemical Co Boston 19 Mass
Massy Harris Co Inc Racine Wis

Massillon Refractories Co Massillon Ohio

Master Address Co 2308 Eastlawn Minneapolis 16 Minn

Master Builders Co 7016 Euclid Cleveland 3 Ohio
Mastercraft Plastics Co Inc 95-32 160th St Jamaica 4 N Y
Master Electric Co 126 Davis Ave Dayton 1 O
Masterflex Corp Sister Bay Wis
Master Lock Co 2600 N 32nd St Milwaukee Wis
Master Metal Prod Inc 261 Chicago St Buffalo 1 N Y
Master Metal Strip Service Co 1720 N Kilbourn Ave Chicago 39 Ill
Master Rule Mfg Co Inc 40 Mulberry St Middletown N Y
Master's Products Co Boston Harbor Mich
Master-Taper Co 4531 N Beacon St Chicago 40 Ill
Master Woodworking Mfg Co 409 E Fort St Detroit 26 Mich
Master Asphalt Corp South Bend Ind
Master Tile Corp of America Newburgh N Y
Master-John W & Son Inc Bazard & Bevern Baltimore 20 Md
Material Dealers Newspaper Mat Service P O Box 428
Materials & Treatment Co Inc North Ave & Third St Milwaukee 12 Wis
Mathes (John B) & Sons Inc Dover N H
Mathews Conveyor Co 100 Tenth St Ellwood City Pa
Mathews (Jas H) & Co 1315 W Liberty Ave Pittsburgh 22 Pa
Mathison Machine Wks 200 Blackhawk Park Ave Rockford Ill
Mathis Wire & Mfg Co Inc Juliet Ill
Math Seattle Lumber Co Skinner Bldg Seattle 1 Wash
Maxwell Venetian Blind Co Miami Fla
May-Bill Inc Frankfort Ky
May Run Garden City La
May (D C) Co Durham N C
Mayes Bros Tool & Mfg Co Inc Fort Austin Mich
Mayhew Steel Prod Inc 30 Bridge St Shelburne Falls Mass
May (J L) Co Inc 121 W 19th St New York 11 N Y
Maytag Co Bureau Corp Baltimore Md
Maytag Co Newton Iowa
Maze (W H) Co Church St & The River Peru Ill
Mazda (E M) Co Chicago 11 Ill
McCall Lumber Co Duertown Ga
McCarroll Lumber Co Deandam Springs La
McCartor Shingle Co Ltd 2418 Rock Bay Ave Vancouver B C Canada
McCaskey Register Co 2509 S Union Ave Alliance O
McClinton (D M) Lumber Co Portland 5 Ore
McCluskey & Garbis 7000 State Rd Philadelphia Pa
McCool River Lumber Co 900 First Nat'l Soo Line Bldg Minneapolis Minn
McCrone Corp Detroit Mich
McCracken & McCall Inc Lexington 9 Ky
McCrosky Tool Corp Bradfield Pa
McCull Lumber Co Atlanta Ga
McDonald (A T) Mfg Co 1200 Pine St Dubuque Iowa
McDonald Mfg Co 544 E 31st St Los Angeles Calif
McDonald & Miller Inc 3509 N Spaulding Ave Chicago 18 Ill
McDonough Mfg Co Eau Claire Wis
McDonough & Brown Lumber Co Sandpoint Idaho
McGowan (W M) Lumber Co Inc Ruthven Ala
McGrath (M) Lumber Co 242 E Fifth St St Paul 1 Minn
McGrath Curran Lumber Co Kansas City Miss
McGraw Elec Co 5201 W 85th St Chicago 11 Ill
McGraw Hill Book Co 300 W 42nd St New York 16 N Y
McGraw-Hill W & Co 3400 Thomeer Ct Cleveland 9 Ohio

McKee Door Co 143 Hermite Aurora 9 Ill

McKenna (Jay G) Inc Route 5 E Jackson Blvd Elkhart Ind
McKewen Bros Co 5303 S Keeler Chicago Ill
McKinley (Orman O) Co 4530 N Keystone Ave Indianapolis 16 Ind
McKinney Mfg Co 1939 McKinney St Pittsburgh 12 Pa
McLean-Arkansas Lumber Co N Little Rock Ark
McLean & Co Fort Worth Texas
McMinville Mfg Co McMinville Tenn
McMurry Mfg Co 1533 Arapahoe Denver Colo
McNear (Robert) Shingle Co Ltd 905 Prosvine Bldg Vancouver B C
McNulty Bros Co 920 W Division St Chicago Ill
McNear Brick Co San Rafael Calif
McPherson-Huff Tool Co Salsina O
McQuay Inc Broadway & Johnson St N E Minneapolis 13 Minn
McQueston (George) Co East Boston Mass
Meadow River Lumber Co Rainelle W Va
Meadow Valley Lumber Co Quincy Calif
Meadows (W R) Inc 2 Kimball Elgin Ill
MeasUREMENTS Corp Intevale Rd Boston N J
Meber Products Co Helen & Ella Pittsburgh Pa
Mefford Corp Modified Ore
Media Machine Works Inc Media Pa
Meier Bros Co 1000 W 12th St St Louis 10 Mo
Medusa Portland Cement Co 1000 Midland Bldg Cleveland 15 O
Mellicke Systems Inc 3458 N Clark St Chicago 13 Ill
Mellick Steel Safe Co Oakland & Dawson Eas Toledo O
Melville (J J) & Co 40 St Louis 8 Mo
Melby Machinery Mfrs 2302 California Ave Everett Wash
Melch-O-Thine & Signal Co Inc 119 S Jefferson Chicago Ill
Melroe Mfg Co 4720 Avonlea Los Angeles 11 Calif
Memphis Hardwood Flooring Co Memphis Tenn
Memphis Oak Flooring Co Memphis Tenn
Memphis Plywood Corp Box 292 North Bend Ore
Menasha Woodware Co 440 River St Menasha Wis
Mengel Co 2302 S Fourth St Louisville 1 Ky
Menck Stene & Lime Co Quincy Ill
Menomonie Indian Mills Rd Menomonie Wis
Menumer Lumber & Supply Co Marathon Wis
Mephiste Tool Co Inc Bailey St Hudson N Y

Mercoid Corp 4201 W Belmont Ave Chicago Ill

Mercery Mfg Co 4044 S Halsted Chicago Ill
Meridian Publishing Corp 17th & Locust Sts Des Moines Ia
Meridian Plastics Inc Cambridge O
Merit Oak Flooring Co Birmingham 1 Ala
Merit Products Inc Melrose & N Edgemont Los Angeles 2 Calif
Merkin (M J) Paint Co Inc 1441 Broadway New York 18 N Y

Merriam Mfg Co 100 Main St Durham Conn

Merrill Monahan Corp 120 S Niagara St Lockport N Y

Merritt Products Co Akron 8 O
Merryweather Products Co Akron 8 O
Merryn Mfg Co Erie Pa
Messier Bros Sixth Pagar & Seventh Sts St Louis 2 Mo
Messler (George L) Steel Corp 1940 Stump St Evansville Ind
Messner Brass Co 2708 S Seventh St St Louis Mo
Meta-Kote Corp Gardner Bldg Toledo 4 Ohio
Metal Arts Mfg Co Box 4144 Harwell & Oakleaf Bldg S.W. Atlanta Ga
Metal Building Products 8825 Grinnell Detroit 13 Mich
Metalcraft Screen Co 1171 Tremont St Boston 20 Mass
Metal Crafters E Ave at 10th St N Cedar Rapids Iowa
Metal Decreasing & Mfg Co 2021 W Fulton Chicago Ill
Metal Industries Inc Burr-Lock Division Youngstown Ohio
Metallic Arts of New England Inc 243 Broadway Cambridge 19 Mass
Metalizing Engineering Co Inc 38-14 30th St Long Island City 1 N Y
Metal Products Co Fredericksburg Va
Metal Products Corp 807 NW 20th St Miami 37 Fla
Metal Prods Corp West Haven Conn
Metal Products Mfg Co 1762 Renner Seattle 44 Wash
Metal & Thermic Corp 19 Nassau St New York 5 N Y
Metal Tile Prods Inc 120 N Broadway Hastings Mich
Metal Trims Inc Youngstown 1 O
Metal Window Serr Co 4601 W 47th St Chicago Ill
Metamora Rubber Wks Metamora O
Met-Cro Specialties Co 87-31 78 Woodhams 21 Long Island N Y
Metropolitan Electric Mfg Co Steiway St & Dilmar Ave Long Island City 3 N Y
Metropolitan Greenhouse Mfg Corp 1851 Flushing Ave Brooklyn 6 N Y
Metropolitan Lumber Co Milwaukee Wis
Metropolitan Paving Brick Co Rembert Bldg Canton Ohio
Metzgar Co 413 Douglas W Grand Rapids 4 Mich
Mexico Refractories Co Mexico Mo
Meyer-Bell Co 1925 S Michigan Ave Chicago Ill
Meyerford Co 5223 W Lake Chicago Ill
Meyer (F) & Bro Co Peoria Ill

Meyer Furnace Co 1300 S Washington Peoria Ill

Meyers (Fred L) Mfg Co 1520 Boulder St Hamilton O
Meyer (W F) & Sons Inc 404 W Wells Chicago Ill
Meyer & H Display Alhambra Calif

Miami Cabinet Div Carey (Philip) Co 1950 Grand Ave Middletown N Y

Miami Window Corp 2051 South Ave Miami Fla
Michaels Art Bronze Co Inc Court & Lawrence St Costington Ky
Michigan & Peffer Iron Works Inc 1415 Harrison St Francisco 3 Calif
Michigan Brush Mfg Co 7411 Center Detroit 10 Mich
Michigan California Lumber Co Los Angeles Calif
Michigan Copper & Brass Co 5850 W Jefferson Detroit 9 Mich
Michigan Door Co 330 Franklin St S W Grand Rapids Mich
Michigan Ladder Co Forest Ave at Nissly Ypsilanti Mich
Michigan Maple Block Co 1930 Standish Ave Petoskey Mich
Michigan Pole & Tie Co Newberry Mich
Michigan Power Shovel Co 250 Miller Rd Benton Harbor Mich
Michigan River Timber Co Nebraska Bridge Supply & Lumber Co Omaha 3 Neb
Michigan Wire Cloth Co 2104 Howard St Detroit 16 Mich
Michigan Wire Goods Co 230 N 2nd St Niles Mich
Mighty Selfish Corp Fremont Ill
Mighty Heater & Specialty Co
Migert Lumber Co 8 Wall St Norwalk Conn
Midland Brick Co Chillicothe Mo
Midland Co 120 Basson Ave South Milwaukee Wis
Midland Valley Lumber Co St Louis 2 Mo
Mid States Steel & Wire Co Crawfordville Ind
Mid West Abrasive Co 505 W Washington St Oremo Mich
Mid West Acoustical & Supply Co 1183-M W 6th St Cleveland 2 O
Midwestern Perite Corp Oklahoma City Okla
Midwest Houses P O Box 334 Mansfield Ohio
Midwest Housing Corp 625 E Eastern Janesville Wis
Midwest Jobber Inc 3300-3308 S Racine Ave Chicago 8 Ill
Midwest Lumberite Co 2040 W Washington Blvd Chicago 12 Ill
Midwest Mfg Co Galveston Ill
Midwest Metal Stamping Co Kellogg Ia
Midwest Plywood Co 10101 London Detroit 21 Mich
Midwest Steel Prods Co Kansas City Mo
Midwest Wall Paper Co Juliet Ill
Milfin (B) Head Co Dairp Tenn
Milhite Sales Corp Encampment Wyoming
Milford Crane & Machine Co Milford Conn
Mill City Mfg Co Portland Ore
Miller Bros Co Johnsons City Tenn
Miller Co 200 Center St Meriden Conn
Miller & Co Jackson Tenn
Miller & Co Inc Selma Ala
Miller (E C) Cedar Lumber Co Aberdeen Wash
Miller (Gon E) Lumber Co Portland 4 Ore
Miller (F W) Co Rockford Ill
Miller Mfg Co 323 W Bryn Mawr Chicago Ill
Miller Metal Products Inc 2215 Russell St Baltimore 20 Md
Miller-Piehl Co Seymour Wis
Miller (Robert E) & Co Inc 33-35 Pearl St New York N Y
Millers Falls Co Wells & Deans Sts Greenfield Mass
Miller-Somes Inc Tarrytown N Y
Miller & Sons Bellingham Wash
Miller (F B) Mill Co 412 1/2 St Brewton Ala
Millens Brick Co 2100 Montier Willitsburg Pa
Mill & Mine Supply Inc 2702 Fourth Ave S Seattle 4 Wash

Mills Co 905 Wards Rd Cleveland 10 Ohio

Millwork Distributors 2 N Kesson St Baltimore 24 Md

Milwaukee Brush Mfg Co 2200-2240 N 30th St Milwaukee Wis

Milwaukee Elec Tool Corp 5316 W State St Milwaukee 8 Wis

Milwaukee Flush Valve Co 301 E Reservoir Ave Milwaukee 12 Wis

Milwaukee Hay Tool Co 2773 S 29th St Milwaukee Wis

Milwaukee Plywood Co. 1227 W Bruce St. Milwaukee 4 Wis
 Milwaukee Power Equipment Co. 1414 W Bruce Milwaukee
 4 Wis
 Milwaukee Sewerage Commission, Milwaukee Wis
 Milwaukee Stamping Co. 824 E 23rd St. Milwaukee 14 Wis
**Milwaukee Strip Service Inc 4621-23 W
 Lisbon Ave Milwaukee 8 Wis**
 Mineral Insulation Co. Chicago Ridge Ill
 Mineral Pigments Corp. Marikirk 1 Md
 Mineral Prods. San Antonio Tex
 Miner-Hillard Milling Co. Wilkes-Barre Pa
 Miner J H Mfg Co. Meridian Miss
 Miner & Son Saw Mfg Co. Silverton 90 La
 Mine Safety Appliances Co. 230 Broadway Ave. Pittsburgh
 8 Pa
 Miniature Lumbercraft Co. Tulsa Okla
 Minimize Co. 3760 W Roosevelt Rd. Chicago 24 Ill
 Minneapolis Builders Supply Co. Minneapolis 1 Minn
**Minneapolis-Honeywell Regulator Co 2747 S
 Fourth Ave Minneapolis 8 Minn**
 Minneapolis Machine & Tool Co. Minneapolis 4 Minn
 Minnesota Lined Oil Paint Co. Minneapolis 15 Minn
 Minnesota Mining & Mfg Co. 900 Fairview Ave. St. Paul 6
 Minn
 Minnesota Paints Inc. 1101 Third St. S. Minneapolis 15
 Minn
 Minnesota Platen Corp. Pipestone Minn
 Minnesota Specialty Co. Inc. 119 S Fourth St. Minneapolis
 1 Minn
 Minnesota Wood Specialties Inc. PO Box 216 St. Paul Park
 Minn
 Mitchell Bros. San Antonio 2 Tex
 Motor Homes Corp. Huntington W Va
 Minton (T W) & Co. Scarborough Wis
 Minox Co. Inc. 11 W 42nd St. New York 18 N Y
**Miracles Adhesives Corp. 214 E 53rd St New
 York 22 N Y**
 Miracle Chemical Prods Co. Cleveland O
 Miracle Paint Refractor Co. Inc. St. Paul Minn
 Miraflores Mfg Co. 621 S Wallace St. Chicago 20 Ill
 Miro-Flex Co. Wichita Kans
 Miroflex Products Co. Inc. 878 Broadway New York 3 N Y
**Mirro-Glo Cabinet Co. 8051 Central Park Ave
 Skokie Ill**
 Missouri Mfg Co. Inc. S Franklin & Walton Sts. Syracuse N Y
 Mission Line Products Co. 841 Ducommun St. Los Angeles
 Calif
 Missouri White Pine Sash Co. Scott & Standard. Missouri
 Mont
 Missouri Hardwood Co. 206 Fifth Ave. New York N Y
 Miss Valley Hardware Co. Memphis Tenn
 Missouri Valley Lumber Co. Memphis Tenn
 Missouri Portland Cement Co. 313 Olive St. St. Louis 8 Mo
 Mitchell Bros. Co. Cadillac Mich
 Mitchell Mfg Co. 2525 N Clayburn Ave. Chicago 14 Ill
 Mitchell Mfg Co. 2740 S. Milwaukee 7 Wis
 Mitchell Models 536 Chicago St. Joseph Mich
 Mitchell Moulding Co. 1501 Circle Ave. Forest Park Ill
 Mitchell (E L) Rubber Co. 2139 San Fernando Rd. Los Angeles
 65 Calif
 Mittle & Merrill. Saginaw Mich
 Mivomobile Mfg. 6855 NE Haley St. Portland 16 Ore
 M M A Inc. Lancaster Pa
 M M P Plywood Corp. Box 5637 Kenton Station Portland
 Ore
 M & M Wire Clamp Co. 975 17th Ave. Minneapolis 14 Minn
 M & M Woodworking Co. 2301 N Columbia Blvd. Portland 3
 Ore
 Mobile Paint Mfg Co. Butler Ridge Mobile 9 Ala
 Mobile River Saw Mill Co. Mt. Vernon Ala
 Mobilite Corp. 555 S. E. 4th St. Portland 14 Ore
 Modac Lumber Co. Klamath Falls Ore
 Modern Iron Works. Quincy Ill
 Modern Light & Equipment Co. 3812 S. Wabash Chicago Ill
 Modern Metals Co. 417 Medavac St. Nashville Tenn
 Modern Plastics Co. 641 Pacific Blvd. Los Angeles Calif
 Modern Specialties Co. 4140 W Harrison Chicago Ill
 Modern Stainless Specialties Co. Ltd. Modern Electric Labo-
 ratory 306-308 E 69th St. Chicago 21 Ill
 Modern Venetian Blind Inc. 261 Fifth Ave. New York 16
 N Y
 Modern Welding Co. 1500 E 12th. Owen Sound Ky
**Modine Mfg Co 1300 DeKoven Ave Racine
 Wis**
 Moer Bros Mfg Co. Ft. Atkinson Wis
 Mohawk Asphalt Heater Co. Frankfort N Y
 Mohawk Carpet Mills Inc. Amsterdam N Y
 Moisture Register Co. N Garfield & Main. Alhambra Calif
 Moline Iron Works. Moline Ill
 Molly Corp. 524 Court St. Bowling Pa
 Monarch Door Co. Filson Pa
 Monarch Door & Mfg Co. Tacoma Wash
 Monarch Metal Weatherstrip Co. 6535 Etzel Ave. St. Louis
 14 Mo
 Monarch Tile Mfg Corp. 15374 Halo Detroit 3 Mich
 Monitor Waterproofing Co. 950 Manistee Ridge. North Min-
 neapolis 11 Minn
 Monitor Kopt Corp. 640 W 24th St. New York 17 N Y
 Monitor Stone Co. Inc. 105 Canal St. New York N Y
 Monroe Calculating Machine Co. Orange N J
 Monroe Co. Inc. 16703 Quebec Ave. Cleveland 6 Ohio
 Monroe Shingle Co. Monroe Wash
 Monsanto Chemical Co. 1700 N Second St. St. Louis 4 Mo
 Monsanto Chemical Co. 911 Western Ave. Seattle 4 Wash
 Monsanto Chemical Co. Plastics Div. 190 Monsanto Ave.
 Springfield 2 Mass
 Montague Stone & Furnace Works. 2011 N Columbia Blvd.
 Portland Ore
 Montabath (J H) Co. 2504 Park Ave. New York 51 N Y
 Monterey Hardwood Flooring Co. Monterey Tenn
 Moore (Benjamin) Co. 105 Canal St. New York N Y
 Moore Bros. Lighting Rod Co. Marsville Mo
 Moore Business Forms Inc. Tempepton & Grout Sts. Niagara
 Falls N Y
 Moore Dry Kiln Co. Box 4248 Jacksonville Fla
**Moore (Goodloe E) 2011 N Vermilion Dan-
 ville 2 Ill**
 Moore Mill & Lumber Co. Randolph Ore
 Moorhead Brick & Tile Co. St. Joseph Mo
 Morgan Co. Goshawk Wis
 Morgan Lumber Co. Washington St. Jackson Tenn
 Morgan Sash & Door Co. 2247 Erie Island Ave. Chicago 8
 Ill

Morrill & Sturgeon Lumber Co. Portland Ore
 Morrison (A) Lumber Co. Portland Oregon
 Morrison Cross & Co. Edwin W Va
 Morrison Mills Co. Anacostia Wash
**Morrison Steel Prod Inc 601 Amherst St
 Buffalo 1 N Y**
 Morse Sales Co. Winston-Salem 3 N C
 Morse-Bouguer Destructor Co. 205 E 42nd St. New York
 17 N Y
 Morse Chain Co. 7601 Central Ave. Detroit 8 Mich
 Mortallite Tile Machine Co. Inc. 2623 Riverside Dr. Los
 Angeles Calif
 Mortell (W C) Co. 550 N Hobble St. Kansas City
 Morten (Henry J) Associates Inc. Detroit 2 Mich
 Morton Mfg Co. Morton Kitchens Cabinet Div. 5125 W Lake
 St. Chicago 44 Ill
 Morton Mfg Co. Memphis 3 Tenn
**Mosaic Tile Co. 1949 Pershing Ave Zanes-
 ville O**
 Mosler Safe Co. Hamilton O
 Mosler Safe Co. 320 Fifth Ave. New York 1 N Y
 Moss (T J) Tire Co. 217 N Fourth St. St. Louis Mo
 Moss-Tire Co. 1952 E 59. Cleveland 3 Ohio
 Mossings Inc. 2603 S Holt Rd. Indianapolis 2 Ind
Moutille Inc. Joliet Ill
 Moutille Lumber Co. Bensenville Mass
 Mt. Emily Lumber Co. LaGrange Ore
 Mt. Jefferson Box & Veneer Co. Lyons Ore
 Mt. Pleasant Milling Co. Fairport Wash
 Mt. Shasta Pine Mfg Co. Mt. Shasta Calif
 Mt. Vernon Furnace & Mfg Co. Mt. Vernon Ill
 Mt. Whitney Shingle Co. Deming Wash
 Mt. Whitney Lumber Co. 3930 E Washington Blvd. Los An-
 geles Calif
 Mounting & Robinson Lumber Co. Eighth & Horn Sts. Cin-
 cinnati O
 Mower Lumber Co. Charleston 28 W Va
 Muehlenberg Perfume Process Inc. Ft. Worth 3 Tex
 Mueller Brass Co. Rigdon & Charles Sts. Port Huron Mich
 Mueller Co. Decatur Ill
**Muellor (L J) Furnace Co 2005 W Oklahoma
 St Milwaukee 15 Wis**
**Mulkey (Sam) Co 1621 Locust Kansas City
 8 Mo**
**Muller Machinery Co Inc 248 Whitman Ave
 Metuchen N J**
 Mullins Lumber Co. Mullins S C
Mullins Mfg Corp Warren O
 Multi-Add Computer Corp. 249 W 34th St. New York N Y
 Multifinish Mfg Co. 2115 Monroe Ave. Detroit 7 Mich
 Multiple Display Fixture Co. 911-21 N 10th St. St.
 Louis 1 Mo
 Multiplex Machinery Corp. 1430 Fremont St. Elmore O
 Multi Ply Wood Sash Co. Olympia Wash
 Multi-Products Inc. 1920 S Western Chicago Ill
 Multimetal Lumber & Box Sales Co. 4274 SW Meridian
 Portland Ore
 Mumford Co. 961 Confederate Ave. S W Atlanta Ga
 Muncie Gear Co. Muncie Ind
 Mundle Mfg Co. Peru Ill
 Munro & Steele Inc. Castle Island Terminal S Boston Mass
 Munroe (E) & Sons Mfg Corp. Smallman at 23rd St.
 Pittsburgh 22 Pa
 Muralo Co. Inc. 572 Richmond Terrace. Staten Island 1 N Y
 Murdock Mfg & Supply Co. 425 Plum St. Cincinnati O
**Murphy Red Door Co 19 W 44th St New
 York N Y**
 Murphy Finishes Corp. 67 W 44th St. New York 18 N Y
 Murphy Paint Dist. Interchemical Corp. Woonter O
 Murphy (Thomas D) Co. Red Oak Iowa
 Murray Black Co. Springfield O
 Murray Corp. of America. 1900 S Washington St. Rich-
 mond 2 Pa
Murray Corp of Texas Dallas Tex
 Murray (D J) Mfg Co. 104 Muncie Blvd. Wausau Wis
 Murray (John) Hastings N Y
 Murray Tile Co. Inc. Clermont Ky
 Murray Venetian Blind Corp. Brooklyn 30 N Y
 Mustang Marine Co. Inc. Robinson Pl. Newburgh N Y
 Mustang Clay Prods Co. Mustang Okla
 Mossman & Shafer Inc. 15 E Third St. Cincinnati 2 O
 Mustang Trailer Co. 6114 Forest Park Dallas 15 Tex
 Mutchler Bros. Sappanone Ind
 Mutual Fire Calumet Co. Taylor Way & Lincoln Ave. Tacoma
 Wash
 Mutual Plywood Corp. Eureka Calif
 Myers (F D) & Bro Co. 110 Orange St. Ashtand O

National Brick Block Co. St. Paul 1 Minn
 National Brush Co. Porter St. Aurora Ill
 National Carbon Co. 30 E 42nd St. New York N Y
 National Cart Corp. Peaslee St. Chicago 20 Ill
 National Cash Sales. 601 W 90th St. Chicago 20 Ill
 National Cash Register Co. Dayton 9 O
 National Clay & Mfg Co. 3617 S. May St. Chicago 9
 Ill
**National Clay Pipe Mfrs Inc 100 N LaSalle St
 Chicago 2 Ill**
 National Crapon Co. Easton Pa
 National Fire Casting Co. Touhy Ave. at Larnedale St. Chi-
 cago Ill
**National Door Co 7 Michigan Ave Kenilworth
 N J**
 National Electric Prods Corp. Chamber of Commerce Bldg.
 Pittsburgh 25 Pa
 National Enameling & Stamping Co. 270 N 12th St. Mil-
 waukee Wis
 National Fireproofing Co. 203 E Ohio St. Pittsburgh 12 Pa
 National Gas Equip Co. Inc. Terrell Tex
 National Guard Prods Inc. 540 Jackson Ave. Memphis 7
 Tenn
**National Gypsum Co 325 Delaware Ave Buf-
 falo 2 N Y**
 National Hanger Co. 253 W 26. New York 1 N Y
 National Hardware Co. 46-30 167th Ave. Woodhams N Y
**National Homes Corp Bypass Rd Lafayette
 Ind**
 National Ideal Co. 914 Summit Toledo 4 Ohio
 National Kalamein Co. Inc. 420 Lexington Ave. Brooklyn
 21 N Y
 National Lock Co. 111 Broadway New York 6 N Y
National Life Insurance Co Montpelier Vt
 National Lightning Protection Co. 2340 Eugene St. St.
 Louis Mo
 National Lime & Stone Co. Findlay O
National Lock Co 1902 7th St Rockford Ill
 National Lock Washer Co. 65 Johnson St. Newark 5 N J
National Mfg Co Sterling Ill
 National Mfg Corp. 3743 Pleasant St. Towaunawa N Y
 National Mfg & Stamping Co. Des Moines Iowa
 National Metal Art Mfg Co. 1900 8th Ave. Brooklyn 15 N Y
 National Metal Prods Co. Waterloo Ind
 National Metal Prods Co. Chicago & Claxson Sts. Pitts-
 burgh Pa
 National Mirror Works. 1925 Kildwaukee St. Rockford Ill
 National Mortar & Supply Co. 1st National Bank Bldg.
 Pittsburgh Pa
 National Paint Service Inc. 1315 W Congress St. Chicago Ill
National Plastic Prods Co Odenton Md
 National Plumbing Fixture Corp. 2nd. Ewood City Ohio
 National Plywoods Inc. 2710 Throop St. Chicago Ill
 National Paper & Treating Div. Minnesota & Ontario Paper Co.
 50th Baker Avenue Bldg. Minneapolis 2 Minn
**National Radiator Co 223 Central Ave
 Johnstonva Pa**
 National Rubber Wood Sales Inc. 86 24 at Colvin. Largo Ind
 National Rubber Machinery Co. 47 W Exchange. Akron & I
 National Sash Weight Corp. 1711 Woomers St. Balti-
 more Md
 National Sawdust Co. Inc. 69 N 6th St. Brooklyn 11 N Y
 National Screen Co. Inc. Seattle Wa
 National Screen Door Co. Montgomery 3 Ala
 National Sewing & Mfg Co. 2446 E 75th St. Cleveland O
 National Sewing Machine Co. Belvidere Ill
 National Sheet Metal Co. Peru Ill
 National Sprinkler Co. Los Angeles 35 Calif
 National Stamping & Electric Works. 3250 W Lake St. Chi-
 cago Ill
 National System Garage Ventilation. 330 N Church St. Des-
 Moines Ill
 National Tile & Mfg Co. 1374 Highland Ave. Anderson Ind
 National Tileboard Corp. New York 61 N Y
 National Tole Co. Inc. Minneapolis 1 Ky
 National Tube Co. Frick Bldg. Pittsburgh Pa
 National Venetian Blind Co. 1770 N. Sichel. Los Angeles
 11 Calif
 National Ventilated Awning Co. 605 Hall St. Dallas 1 Tex
 Nationwide House Plan Service. Rockford Ill
 Natropac Inc. Minneapolis Minn
 Navajo Tribal Sawmill. Window Rock Arizona
 Naval Stores Div. Glidden Co. Jacksonville Fla
 Navajo Tillsites Corp. 3600 W Touhy Ave. Chicago 43 Ill
 Neal Lumber & Mfg Co. Bloomington Wis
 Nebraska Bridge Supply & Lumber Co. 40th & Leavenworth
 St. Omaha 5 Neb
 Nell & Fry Co. Camden O
 Nellis (J) Lumber Co. Ledyard Mont
 Nelson Chemical Co. Detroit Mich
 Nelson (B F) Mfg Co. 401 NE Main St. Minneapolis 13
 Minn
 Nelson-Harkins Industries. 2923 N. Damon. Chicago Ill
 Nelson (Herman) Corp. 1824 Third Ave. New York N Y
 Nelsonite Chemical Products Inc. 226 Scribner Ave. N W
 Grand Rapids 2 Mich
 Nelson (N P) Iron Works Inc. 817 Bloomfield Ave. Clifton N J
 Neo-Ray Prods Inc. 215-223 E 22nd St. New York 19 N Y
 Neoprene Meter Co. 50 W 39th St. New York 20 N Y
 Neuhit (John J) Inc. Statewide Philadelphia 36 Pa
 Nevee. 291 N Michigan Chicago Ill
 Nettles Lumber Co. Lenoir Ala
 Nettleton Timber Co. Box 3395. Seattle 14 Wash
 Newark Buller Regulator Corp. Inc. 15 Ward St. Bloom-
 ington 8 N Y
 Newark Brush Co. 255 Michigan Ave. Kenilworth N J
 Newark Lumber & Bracket Co. Inc. Rahway N J
 Newark Steel Post Co. 18 Park Ave. New York 20 N Y
 Newark Wire Cloth Co. 361 Verona Ave. Newark 4 N J
 New Bedford Furnace Co. 235 Broadway New York N Y
 Newberry Shingling Co. Larnedale St. Chicago Ill
 New Bethlehem Tile Co. New Bethlehem Pa
New Castle Prods Co New Castle Ind
 New Century Homes. Clinton Ind
 Newell Mfg Co. Lowell Mich
 Newson Hardwood Co. Newington La
 New England Marble Co. 22 Beaman St. Boston 8 Mass
 New England Carlsile Tool Co. Inc. Auburn & Brookline Sts.
 Cambridge 73 Mass
 New England Mfg & Supply Corp. 42 Church St. New Haven
 Conn
 New England Tank & Tower Co. 99 Tilton St. Everett
 Mass

New England Wooden Ware Corp Winterset Mass
New Era Light Co Trenton N J
New Grand Bond Lumber Co Williamsport
Newhall Chain Forge & Iron Co 48-50 W Broadway New York 7 N Y

New Holland Metals Co New Holland Pa
Newman Bros Inc 660 W Fourth St Cincinnati 3 O
Newman (Rudolph) Lithographing Co 400 S Jefferson Chicago Ill
Newman Machine Co Franklin Blvd Greenston N C
New Mexico Clay Products Co Albuquerque N Mex
New Mexico Timber Co Albuquerque N Mex

New Monarch Machine & Stamping Co 406 SW Ninth St Des Moines 9 Iowa

New Orleans Roofing & Metal Co Cortez & Orleans New Orleans La
Newport Industries Inc 1605 New York Central Bldg New York 17 N Y
Newport Steel Corp 9th & Lowell St Newport Ky
New York Blower Co 333 W 32nd St Chicago 16 Ill
New York Drop Cloth Mfg Co Inc 10-57 Jackson Ave Long Island City N Y
New York Rubber Corp Empire State Bldg New York 1 N Y
New York Standard Blackboard Co Inc 144 W 18th St New York 11 N Y

New York Wire Cloth Co New Canaan Conn

Noy Mfg Co 915 W 24th St Canton O
Niagara Plywood Inc 1234 Broadway Buffalo N Y
Niobols Mfg Co Ottumwa Iowa
Nirchis & Cox Lumber Co Grand Rapids Mich
Nichols Metal Strip Service 2104 Gilbert Cincinnati 6 Ohio
Nichols & Co 161 First St Cambridge 41 Mass
Nicholson File Co 65 Acorn St Providence 1 R I

Nichols Wire & Aluminum Co 1729 Rockingham Rd Davenport Iowa

Nirley Bros Inc Memphis Tenn
Nivala Plywood Corp Garfield Ind
Nixon Hardware Corp St Joseph Mich
Nixalite Co of America 135 W 3rd St Davenport Iowa
Noble Co 1860 Seventh Oakland 20 Calif
Nobles Industries Inc Columbus Ind
Noiseless Window Spring Co 397 5th Ave New York N Y
Nolan Co Bowers Co
Noma Electric Co 25 W 13th St New York 11 N Y

Nordahl Co 100 W Alameda Ave Burbank Calif

Nordberg Mfg Co Chase & Oklahoma Ave Milwaukee 7 Wis
Norge Div Borg-Warner Corp Appliance Division Milwaukee Plaza Bn 214 Chicago 11 Ill
North American Cement Corp 41 E 42nd St New York 17 N Y
North American Refractories Co 1 E 6 Bldg Cleveland 14 Ohio
North Bangor State Co Bangor Pa
North Branch Flooring Co 2415 W Barry Ave Chicago 11 Ill
North Bros Mfg Co Dix Stanley Town 224 Lehigh Ave Philadelphia 33 Pa
North Carolina Granite Corp Smith & Hale Sts Mount Airy N C

Norge Heat Div Borg-Warner Corp 610 E Woodbridge Ave Detroit 26 Mich

Norm Advertising 79 Madison New York 16 N Y

Norm Prods Co 1150 Chesapeake Columbus 12 O

Norris Bros Inc Dan St Robinson Ill
North American Cement Corp 41 E 42nd St New York 17 N Y
North American Refractories Co 1 E 6 Bldg Cleveland 14 Ohio
North Bangor State Co Bangor Pa
North Branch Flooring Co 2415 W Barry Ave Chicago 11 Ill
North Bros Mfg Co Dix Stanley Town 224 Lehigh Ave Philadelphia 33 Pa
North Carolina Granite Corp Smith & Hale Sts Mount Airy N C

Northwood Lumber Sales Corp Sanderville Fla

Northern Conveyor Co Western Ave Janesville Wis
Northern Forestry Products Inc Malone N Y
Northern Hardwood Veneers Inc Butler Wis
Northern Indiana Brick Co Mishawaka Ind
Northern Industries Inc 30 N Water St Milwaukee 2 Wis
Northern Ohio Co Plain Ariz
Northern Redwood Lumber Co Korbell Calif
Northern Rubber Products Co Minneapolis 1 Minn
Northern Sash & Door Co Hartline Wis
Northern Wood Prods Co 2100 Pensacola Bldg Detroit Mich
North Pacific Plywood Inc Tacoma Wash
North Plywood Inc 410 Terry Ave N Seattle 9 Wash
North Robbins Plywood Inc Seattle 9 Wash
Northrup Advertising & Merchandising Service 1010 Euclid Cleveland 15 Ohio
Northwest Cedar Prods Ltd Foot of Kerr Rd Vancouver B C Canada
Northwest Door Co Tacoma 1 Wash
Northwest Engineering Co 135 S LaSalle St Chicago 11 Ill
Northwestern Prods Co 2721 Spruce St St Louis 3 Mo
Northwestern Steel & Wire Co 1247 Griswold Sterling Ill
Northwestern Terra Cotta Corp 1750 Wrightwood Ave Chicago 14 Ill
Northwestern Insulations Co Spokane Wash
Northwest Metal Prods Co Inc 1327 E Mason Green Bay Wis
Northwest Metal Prods Inc 55 Spokane St Seattle 4 Wash
Northwest Timber Co Gilboa Idaho
Norton Co 1 New Bond St Waukesha 6 Mass
Norton Door Closer Co 2901 N Western Ave Chicago 18 Ill
Norwalk Lock Co Div Seegal Lock & Hardware Co 397 Broadway New York 13 N Y
Nourse Oil Co Clinton & Frisco Tracks Kansas City Mo

Nova Sales Co Trenton 3 N J

Nox Engine Co Ballantine St Lansing 5 Mich
Nox-Rub Chemical Corp 2425 S Halsted Chicago 8 Ill
N S W Co 12915 Belmont Ave Detroit 3 Mich
Nu Air Chemical Div Olympic Tool & Mfg Co Inc New York 7 N Y
Nu-Bell Plastics Corp Inc 2250 N Pulaski Chicago 39 Ill
Nu-Formal Corp 444 N Lake Shore Chicago 3 Ill
Nu-Kra Window Co Bedford Ohio
Nu-Glass Inc
Nukem Products Corp 111 Colgate Buffalo 20 N Y
Nurem Cos Inc Bloomington Ind
Nu-Sulfur Corp 735 Belmont Ave Chicago 49 Ill

NuTone Inc Red Bank & Madison Roads Cincinnati 21 O

Nutting Truck & Caster Co Inc 1162 W Division St Fairbault Minn
Nu View Home Number 2910 Carnegie Cleveland 15 Ohio
NuWall Mfg Co 923 N 19th St Milwaukee 3 Wis
Nu-Way Builders Corp 7326 Fulton N Hollywood Calif
Nu-Way Coupling Co Los Angeles 4 Calif
Nye Tool Co 4120 W Fullerton Chicago 11 Ill

Oakboro Lumber Co Lenoir N C

Oaker Mfg Co Tipton Ind
Oakland Foundry Co New York 6 N Y
Oakland Products Co Belleville Ill
O'Brien Corp 101 N Johnson St South Bend 21 Ind
Oakley Products Inc 15017 Cleveland Ave Cleveland 11 Ohio
O Cedar Corp 2246 W 49th Chicago 9 Ill
Ocheco Lumber Co Princeton Ore
Ochs Products Co Millersville Ga
Ochsen Stone Mfg Co 342 W Erie Pa
Ochsen Pressed Brick & Tile Co Ogden Utah
Ochs Bros Shingle Mill Longview Wash
Ohio Blow Pipe Co 1127 Doan Ave Cleveland 11 Ohio
Ohio Can & Crown Co Hamilton O
Ohio Corrugating Co Pine St Warren Ohio

Ohio Foundry & Mfg Co Steubenville Ohio

Ohio Hydrate & Supply Co Woodville O
Ohio Lighting Rod Co West Milton O
Ohio Machine Products Co Columbus Ohio
Ohio Match Co Box #115 Spokane Wash
Ohio Rubber Co 102 Ben Hur Willoughby O
Ohio Stone Co 701 Eleventh Portsmouth Ohio
Ohio Corrugating Co Pine St Warren Ohio
Ohio Window Glass Co 4045-7 St Clair Cleveland 14 Ohio
Ohio-Bishop Co 1500 Kinross Rd Columbus O
Olmer Register Co Dayton O
Ollak Mfg Co Depot St Montclair N J
Olsen Bros 2240 Deninger Ave Fort Wayne 4 Ind
O Kefs & Merritt Co 3704 E Olympic Blvd Los Angeles 23 Calif
O K Mfg Co Minneapolis 1 Minn
Olsenite Co Pasmic N J
O K Shingle Co Arlington Wash
Old Guilford Forge Guilford Conn
Old Hickory Furniture Co Martinsville Ind
Old Virginia Brick Co Salem Va

Oliver Corp Cietrac Div 19300 Euclid Ave Cleveland 17 O

Oliver Corp Industrial Div 19302 Euclid Ave Cleveland O

Oliver Machinery Co 1001 Coldbrook St N E Grand Rapids 2 Mich
Olson (C A) Mfg Co Filbert St Elyria O
Olson Mfg Co Albert Lee Minn
Olson Bros 2240 Deninger Ave Fort Wayne 4 Ind
Olympia Shingle Co Olympia Wash
Olympia Veneer Co Olympia Wash
Olympic Glove Co Olympia Wash
Olympic Glove Co Inc 47 Madison Ave New York 16 N Y
Olympic Plywood Co Shelton Wash
Olympic Stained Prod Co 1118 Leary Way Seattle 7 Wash
Oma-Bianca Co Omaha Neb
O'Morrow (W M) & Co 6244 S Alameda Los Angeles Calif
One-Div W I & Sons Inc 43 Royalton Ave Minneapolis 5 Minn

One-Div Frame Corp 2109 Third Ave N Birmingham 3 Ala

One-Minute Washer Co Kelllogg Wash
One-Spot Co Elkhart Ind
Oneida Card Associates Inc 190 E Chestnut Chicago 9 Ill
Oncord Machine Works Inc 3910 W Palmer Chicago 47 Ill
Oney Steel Finishing Institute Inc 2311 First National Bank Bldg Pittsburgh 22 Pa
Operadio Mfg Co 110 N Eleventh St St Charles Ill
Orangeburg Mfg Co Inc 488 Madison Ave New York 22 N Y
Orange Screen Co 420 Lexington Ave New York 17 N Y
Orangeville Mfg Co 2-20 N Main St Orangeville Pa

Orchard Bros Inc 617 Meadow Rd Rutherford N J

Oregon Mfg Co Easton Pa
Oregon-American Lumber Corp Veneta Ore
Oregon Lumber Co Baker Ore
Oregon Plywood Corp Oak St Sweet Home Ore
Oregon Pulp & Paper Co Oregonian Bldg Portland Ore
Oregon Trail Lumber Co Union Ore
Oregon-Washington Plywood Co 1002 United States National Bank Bldg Portland 4 Oregon
Orignal Enders Co Oremburg Iowa
Ornamental Metal Works Paducah Ky
Orton Crane & Shovel Co 608 S Dearborn St Chicago 5 Ill

Orage Products Co Linn Creek Mo

Orborne (C S) & Co Warren N J
Orborns Mfg Co Hamilton & Marquette Sts Cleveland 14 O
Osgood Co Cheney Marion Ohio
Oshkosh Wood Prod Corp Oshkosh Wis
Oshkosh Wood Preserving Co of America Inc 1437 Bellvue Ave Buffalo 12 N Y
Olsen (David) Moulding Corp Sacramento 3 Calif
Ottawa Mfg Co 260 Eleventh Ave New York 1 N Y
Ottawa Mfg Co Ottawa Kans
Outdoor Oven Fireplace Co Efford Conn
Ottawa Verdian Blind Co Div Taso Co 2625 Elm St Dallas 1 Tex
Oval Wood Dish Corp Shiloh Ave Tupper Lake N Y

Overhead Door Corp PRR & Kickapoo St Hartford City Ind

Overhead Door Div United Products Co 900 N 43rd St Milwaukee 8 Wis
Overmyer Ferram Glass Co Tulsa Okla
Overton (S K) Co 1000 Indiana Ave South Haven Mich
Owens-Toll Co 341 Cedar St Orem Utah Minn
Owen Block Co 6029 Breakwater Ave Cleveland 2 Ohio
Owen (R C) Co Hopkinsville Ky
Owen Rubber Products 2457 Meador Akron 12 Ohio
Owensboro Sewer Pipe Co Owensboro Ky

Owens-Corning Fiberglas Corp Nicholas Bldg Toledo O

Owens-Illinois Glass Co Kayle Div Box 1035 Toledo 1 O

Owens Mfg Co Owens Mich
Ox-Way Tool Co 325 Broadway New York 10 N Y
Oxan Lumber Co Prescott Ariz
Oxark Oak Flooring Co Rimrock Mo

Paeasche Airbrush Co 1909 W Diversy Chicago 19 Ill

Pabon Products Inc 475 Brannan St San Francisco 18 Calif
Pacific Board Fabrication Co 646 E Gage Los Angeles 1 Calif
Pacific Brass & Hardware Mfg Co El Monte Calif
Pacific Chemical Co 6019 District Blvd Los Angeles 12 Calif
Pacific Clay Prod 306 West Ave 26 Los Angeles 31 Calif
Pacific Lumber Co 100 Bush St San Francisco Calif

Pacific Lumber Co 35 E Wacker Dr Chicago 1 Ill

Pacific Mfg Co Santa Clara Calif
Pacific Mutual Door Co Tacoma Bldg Tacoma Wash
Pacific National Lumber Co Tacoma Wash
Pacific Plastic & Mfg Co Los Angeles Calif
Pacific Plywood Corp Williamsport Ore
Pacific Portland Cement Co 417 Montgomery St San Francisco 6 Calif
Pacific Plywood Corp Los Angeles 26 Calif
Pacific Timber Co Everett Wash
Pacific Veneer & Plywood Corp Bellingham Wash
Pacific Wire Products Co 1955 E 16th Los Angeles Calif
Pacific Wood Tank Corp 461 Market St San Francisco 5 Calif

Packard (E B) Co Inc 130 Cedar N Y 6 N Y

Packard Farmseed Corp 3354 M Crawford Chicago 41 Ill
Pack River Sales Co Spokane Wash
Packwood Shingle Co Packwood Wash
Page Belling Co Concord S C
Page Converter Co El Monte Calif
Page & Hill Homes Spokane Minn
Page Steel & Wire Div American Chain & Cable Co Menasha Pa
Paine (Benjamin O) Millbury Mass

Paine Co 2951 Carroll Ave Chicago 12 Ill

Paine Lumber Co 73 W Algonia Oskosh Wis

Painville Co of America Inc Cleveland 14 Ohio
Paisley Prods Inc 1770 S Canalport Ave Chicago 16 Ill
Palladium Prod 6127 Cedar Ave Philadelphia 43 Pa
Palmer Engine Works Co San Francisco 4 Calif
Pallet Mfg Co Hibbel St & North Ave Pittsburgh 12 Pa
Palmer Machinery Co 2503 Porter Jacksonville 1 Fla
Palmer Mfg Co 2200 W Fillmore Phoenix Ariz
Palmer-Shile Co 16000 Fullerton Detroit 27 Mich
Palmetto Lumber Sales Co Inc Spartanburg 8 C
Pal-Pak Insulation Co Hartland Wis
Pallier Corp 53 W Jackson Chicago 4 Ill
Pancanville Perfite Inc Kansas City Kan
Pancelli Display Inc 1131 Van Dusen Chicago 11 Ill
Panel Windows Inc Winchester Ave Martinsburg W Va
Panhandle Dist Reg Sales Corp 230 Park New York 17 N Y
Panhandle American Houses Amarillo Tex
Panther Oil & Grease Mfg Co Box 7111 Ft Worth Texas
Pape Machine Co 30 W Main Stillwater N Y
Pape Machine Co Minneapolis 15 Minn
Paragon Electric Co 1600 12th St Two Rivers Wis
Paragon Utilities Corp 50 Van Dusen Brooklyn N Y
Paragon Casement Window Corp 180-11 Jamaica 3 N Y
Paragon Eght Co Tulsa Okla
Paragon Wire Co Inc 91 Glenisher New York N Y
Parents Magazine 52 Vanderbilt Ave New York 17 N Y
Pariskay Novelty Co 2510 S Western Ave Chicago 9 Ill
Pariskay Novelty Co Paris Mo

Parkey Inc Highland Park Ky

Parkey (Chas) Co 412 Jordan St Meriden Conn
Parkey & Griffith Lumber Co Jonesville Va
Parkey (Fra) & Sons Oshkosh Wis
Parkey-Camp Corp 94 Van Dusen St Worcester 14 N Y
Parkey Mfg Co 150 Washington St New York 14 N Y
Parkey Rust-Proof Co 2177 E Milwaukee Ave Detroit 11 Mich
Parkey (S) Hardware Mfg Co 27 Ludlow St New York 2 N Y

Parkey & Stearns Johnson Va

Parks Woodworking Machine Co 1524 Knowlton St Cincinnati 23 O

Parwood Corp 33 Water St Wakefield Mass
Parlyn Ltd 5396 Alhambra Ave Los Angeles 32 Calif
Parsons Bros Lumber Co 1000 N Broadway St
Parsons Bros State Co Penn Ariz Pa
Patt & Seymour Inc Solway Station Syracuse 9 N Y
Patent Cereals Co 35 Mellen Geneva N Y
Patent Novelty Co Inc Fulton Ill

Patent Scaffolding Co Inc 38-21 12th St Long Island 12 N Y

Paton-McIntosh Lumber Co 5 Giff Hammeck Fla
Patterson Lumber Co Portland 5 Ore
Patterson-Sargent Co 1325 E 35th St Cleveland 14 O
Patton Clay Mfg Co Patton Pa
Patton (N E) Co 303 S Van Buren Champaign Ill
Pavlovium Inc 1239 St Nicholas Ave New York 32 N Y
Paston & Frank Lumber Co Kansas City Kans
Paxton Furniture Co 501 Broad Oaks Dr Monrovia Calif
P C & Hand Forged Tool Co Portland 2 Ore
Peabody Co Inc 5816 S Hooper Ave Los Angeles 11 Calif
Pearl City Plywood Co Inc 1 E Elm St Jamestown N Y
Pearson Hardware Flooring Co Orida Tenn

Pearson (D) Mfg Co 822 Lake Villa Ill

Pease Woodworking Co Blue Rock & Terrill Sts Cincinnati 23 O

Peaslee-Gaillert Lumber & Varnish Co Inc 223 N 15th St Long Beach Ky

Peasey Mfg Co Oakland Me
Peavy Lumber Co 3000 S Shrewsbury La
Peck St & Wilcox Co St Paul Minn
Peckel Paint Co Inc 3501 N Fourth St Philadelphia 40 Pa
Peele Co Inc 42 Stewart Ave Brooklyn 6 N Y
Peerless Cement Corp Free Press Bldg Detroit 26 Mich
Peerless Chain Co Lewis Park Wisconsin Minn
Peerless Electric Co 1500 N Market St Warren O
Peerless Glue Co 600 Highland St Grand Haven Mich
Peerless Lumber Co 300 Fulton St New York 10 N Y
Peerless Lead & Tool Co Sterling Ill
Peerless Mfg Co 1400 W 67th St Louisville 10 Ky
Peerless Novelty Co Grand Haven Mich
Peerless Products 114 W 3 Kansas City 6 Mo
Peerless Steel Eght Co 38 S Dearborn Chicago 11 Ill

Peelers Wire Goods Co Inc 2710 Ferry St Lafayette Ind
 Pelzer-Phelan 437 N 5 Philadelphia 22 Pa
 Pelzner Mfg Co 1218 Chicago Ave Evanston Ill
 Penberthy Injector Co 1243 Holden Ave Detroit 2 Mich
 Penberthy Lumber Co Los Angeles Calif
 Penstone Co Tready N J
 Penninsula Plywood Corp Port Angeles Wash
 Penn Boiler & Broom Mfg Corp Fruitville Rd Lancaster Pa
 Penn Cretic Prods Co 20th & Lippincott Sts Philadelphia 3 Pa
 Penn Electric Switch Co Goshen Ind
 Penn-Treg Mfg Co Minneapolis 3 Minn
 Penn Hardware Co Inc 28 Broadway Pa
 Penn Metal Co Inc 140 Central St Boston 9 Mass
 Penn Scale Mfg Co 150 W Berks Philadelphia 22 Pa
 Penn Supply & Metal Corp 1825-43 N Fifth St Philadelphia 22 Pa
 Pennsylvania-Dixie Cement Corp 60 E 42nd St New York 17 N Y
 Pennsylvania Illuminating Corp Scranton Pa
 Pennsylvania Sill Mfg Co 49 Lea Whittemarsh Philadelphia 7 Pa
 Pennsylvania Saw Corp York Pa
 Pennsylvania Wire Glass Co 1612 Market St Philadelphia 3 Pa
 Penunson Inc 70 E 45th St New York 17 N Y
 Pennon Prods Co Chelmsa Wash
 Penon Brick & Tile Co 28th St Philadelphia 3 Pa
 Peoria Ironing Board & Specialty Co Peoria Ill
 Peoria Metal Specialty Co Peoria Ill
 Peonand Wire Cloth Co Inc Hoyt St S Norwalk Conn
 Perfector Steel Body Co Galion O
 Perfection Store Device Co 637 E 71st St Chicago 19 Ill
 Perfection Store Device Co 7000 Cleveland O
 Perfect Corp 475 W Oklahoma Ave Milwaukee 7 Wis
Per-Fit Products Corp 1200 E 52nd St Indianapolis Ind
 Perfo Mac and Rubber Co Inc 281 Fifth Ave New York 16 N Y
 Perkins Gun Co 652 Cannon Ave Lansdale Pa
 Perlite Mfg Co Carlsbad Ca
 Permacrete Prods Corp Columbus O
 Perma-Jack Corp 1113 E 200th St Cleveland 17 O
Perma Prods Co 5455 Broadway Cleveland 4 O
 Perma-Steel Corp Detroit Mich
 Perma-Stone Co 719 E Hudson St Columbus 11 O
 Perma-Ton Co 410 Shadyhill Rd Pittsburgh 5 Pa
 Per-O-Mat Mfg Corp 3604 Woodland Kansas City 3 Mo
 Permuton Co 300 W Grand St New York 18 N Y
 Permutite Prods Sausalito Calif
 Permutite Mfg Corp 38 Kerr Ave Newark 5 N J
 Permutite Lumber & Box Co Postonish Wash
 Petroleum Electric Inc Petaluma Calif
 Peters (L) & Sons 1904 N Front St Philadelphia Pa
Peterson Products Co 628 Milton Janesville Wis
Peterson Window Corp 1341 E 8-Mile Rd Ferndale 20 Mich
 Peters Shingle Co Chelmsa Wash
 Petso Industries 1107 E 8 Los Angeles 21 Calif
 Peterson Heat & Power Co Springfield Ave Stamford Conn
 Peterson (J C) Co 3167 W Mission Rd Alhambra Calif
 Petrolene Milliken Corp 4710 W Division Chicago 51 Ill
 PETRI (W T) & Sons 1229 S Center Youngstown 5 Ohio
 Petrol-Fast Paint Mfg Co 932 Loughborough St Los Angeles 10 Mo
 Phelps Power & Light Co Rock Island Ill
 Phoenix Mfg Co 4129 N Port Washington Rd Milwaukee 23 Wis
 Phoenix Mfg Co 5700 W Roosevelt Chicago 50 Ill
 Philadelphia Hardware & Mallicole Iron Wks Inc N State Rd & King St Philadelphia Pa
 Phinon Corp Toga & Co Sts Philadelphia 34 Pa
 Phillips Petroleum Co Bartlesville Okla
 Phillips-Rhine Lumber Co Inc Box 699 Brookhaven Miss
 Phoenix Caster Co Inc Middleboro Rd Hamilton O
 Phoenix Hardware Mfg Co Perry & Illinois Sts Buffalo N Y
 Phoenix Lock Co 327 3rd Ave Newark 7 N J
 Phoenix Mfg Co Juliet Ill
 Phoenix Shingle Co Seattle Wash
 Phoenix Craft Co Yonoi Blvd Vandewater & Olive St Louis 10 Mo
 Picking Lumber Corp Standard Calif
 Pickett & Eckel Inc 5 S Walnut Chicago 4 Ill
 Pierce (H H) Lumber Co Morrison La
 Pierce & Stevens Inc 710 Ohio St Buffalo 3 N Y
 Pinter Inc 2006 Clark Bldg Pittsburgh Pa
 Pine Ball Brick & Pipe Co Winston-Salem Ore
 Pine Logging Co of Calif Fresno Calif
 Pine Plume Lumber Co Montgomery 1 Ala
 Pioneer Co 1051 Century Bldg Pittsburgh 22 Pa
 Pioneer Furnace Co Div Pioneer Water Heater Corp 3131 San Fernando St Los Angeles 4 Calif
 Pioneer Gen-E-Motor Corp 5841 W Dickens Chicago 39 Ill
 Pioneer Hardware Co New Haven Conn
 Pioneer Latex & Chemical Co Inc Lincoln Blvd Middlesex N J
 Pioneer Mfg Co 2052 E 87th St Cleveland 4 Ohio
 Pioneer Rubber Co Willard Ohio
 Pioneer Tool Co Inc Bloomfield N J
 Pioneer Water Heater Corp 2131 San Fernando Rd Los Angeles 4 Calif
 Piper (H K) Mfg Co Robinson Ill
 Pison Machine & Mfg Co Puma O
Pittsburgh Corning Corp 307 4th Ave Pittsburgh 22 Pa
 Pittsburgh Glass Tile Co 108 Isabella St Pittsburgh 12 Pa
 Pittsburgh Incentive Co Beam Way Wagon Pittsburgh 11 Pa
 Pittsburgh Plastic Tile Co Pittsburgh 19 Pa
 Pittsburgh Plate Glass Co Brush Div 3223 Frederick Ave Baltimore 22 Md
Pittsburgh Plate Glass Co 632 Duquesne Way Pittsburgh 19 Pa
Pittsburgh Steel Prods Co Box 118 Pittsburgh 30 Pa
 Pittsburgh Water Heater Co 193 Chartiers Ave Pittsburgh Pa
 Placerville Lumber Co Placerville Calif

Plans Div Paisley Prods Inc 716 Washington Ave N Minneapolis Minn
 Plainfield Lumber & Supply Co Plainfield N J
 Plainfield Homes Inc Evanston Ill
 Plainfield Co 746 Cleveland New Orleans 12 La
 Plant & Griffin Lumber Co Jonesville Va
 Plaston Hwy Lidsy-Owens Ford Glass Co Nicholas Bldg
 Plasteel Prods Co 155 Mac Adam Ave Washington Pa
 Plastering Wall Board Co 196 Philadelphia Ave Buffalo 7 N Y
 Plastic Prods Co 6473 Georgia Ave Detroit 11 Mich
 Plastic Tile Co of America 2613 Detroit Cleveland 13 Ohio
 Plastic Woven Prods 51 Camden St Paterson N J
 Plast-N-Kote Co 425 Lakeside Ave Cleveland 15 O
 Plastering Corp 12623 Barwell Detroit 35 Mich
 Platsburg Wallpaper Co Plattsburg N Y
 Plastics Jointless Fabrica Co 1800 N Kingshighway Chicago 14 Ill
 Plomb Tool Co 2309 Santa Fe Ave Los Angeles 54 Calif
 Plumbers Speciality Mfg Corp Los Angeles Calif
 Plumbers Woodwork Co Algona Wis
 Plumb (Fayette B) Inc Tacoma & Thompson Philadelphia Pa
 Plummy (P W) Lumber Corp Winchester Va
 Plumbett Chemical Co 3500 S Morgan Chicago Ill
 Plunkett-Wobster Lumber Co Inc New Rochelle N Y
 Plumbond Indus Inc 50 W Algona St Oaklawn Wis
 Plytek Corp 6507 N Richmond Portland Ore
 Plymouth Cordage Co Court St N Plymouth Mass
 Plymouth Rubber Inc 50 Broadway Canton Mass
 Plymouth Stamped Metal Co Galion Ohio
 Plytex Corp 1449 W Willow St Chicago 22 Ill
 Plywood & Door Corp Inc 800 E 19th St Cleveland 14 Ohio
 Plywood Inc 4445 Bellevue Detroit 7 Mich
 Plywood Inc 540 East 15th St Tacoma Wash
 Plywood Structures 2852 E 11 Los Angeles 23 Calif
 Plywoods-Plastics Corp Hampton S C
 Plywood-Plywood Co Inc 50 Broadway New York N Y
 Poyono Metal Prods Co E Stroudsburg Pa
 Poissant Lumber & Mfg Co Pickens S C
 Poisson-Williams Corp Inc 240 E Oregon St Portland 14 Ore
 Polia (J D) Mfg Co 3437 W Ogden Chicago 23 Ill
 Polka Brick & Easton Pa
 Poly Products Pasadena 8 Calif
 Pomeroy (S B) Co Inc 25 Bruckner Blvd New York 24 N Y
 Pomonas Pump Co Pomona Calif
 Pomonas Terra-Cotta Co Pomona N C
 Ponderosa Mfg Co 2000 E Redmond Ave Portland Ore
 Pontiac Varnish Co Pontiac 12 Mich
 Popp Mfg Co West Bend Wis
 Poptank Corp 825 Niagara St Stratford Conn
 Pope & Talbot Inc 320 California St San Francisco 4 Calif
 Porcelain Metals Corp 1400 S 13th St Louisville 10 Ky
 Porcelain Prods Inc 422 W Sandusky St Findlay O
 Porite Mfg Co 488-98 Belleville Pike N Arlington N J
 Portable Electric Tools Inc 235 W 19th St Chicago 20 Ill
 Portable Elevator Mfg Co Bloomington Ill
Portable Heater Co 814 Engineers Bldg Cleveland 14 O
 Porter (H W) & Co Inc 825 Freilingshagen Ave Newark N J
Porter Cable Machine Co 1714 N. Salina St Syracuse 10 N Y
 Porter (C G) Machinery Co 666-668 Front Ave N W Grand Rapids 4 Mich
 Portland Lumber Co 825 Freilingshagen Ave Newark N J
 Portland Lumber Mills Pl of N Burlington St Portland 8 Ore
 Portland Plywood Corp Portland Ore
 Portland Shingle Co 9036 N Deaver Ave Portland Ore
 Portland Stone Foundry Co Portland Me
 Post-Lock Washer Co Newark 5 N J
 Post (Frederick) Co 335 W Lake St Chicago Ill
 Potter Mfg & Lumber Co Downers Grove Ill
 Potter Refrigerator Corp Buffalo N Y
 Potts-Farrington Co 1224 Cherry St Philadelphia 7 Pa
 Poulson & Nardon Inc Soto & Lewis Blvd Chicago 11 Calif
Power Power Tool Co Portland Ore
 Powell Pressed Steel Co Hubbard Ohio
 Powell (William) Co Draper & Cousins Sts Cincinnati O
 Power Development Co Inc 6721 Denison Ave Cleveland 2 O
 Power King Tool Corp 1833 Cleveland St Warren Ind
 Power (L) & Co Inc 2820 Oakland St Philadelphia 46 Pa
 Powermatic Machine Co McMinnville Tenn
 Power-Pack Conveyors Cleveland 19 O
 Power Regulator Co 2720 Greenview Ave Chicago 14 Ill
 Draper Co Worcester Mass
 Pratt (E W) Montgomery Tenn
 Pratt & Lambert Inc 95 Tonawanda St Buffalo 7 N Y
 Pratt Lumber Co Corning Ga
 Pratt & Whitney Divs. Ingersoll-Rand Co 1 Charter Oak Blvd West Hartford 1 Conn
 Prevat Blah & Tile Co 1367 S Kingshighway Blvd St Louis 10 Mo
 Precision Bluff Homes Corp Trenton 3 N J
 Precision Eght Co 3714 N Milwaukee Ave Chicago 41 Ill
 Precision Homes Co Stenton Calif
Precision Parts Corp 402 N First St Nashville 7 Tenn
 Precision Tool Co Inc Box 155 Brooklyn 1 N Y
 Proon Corp Billingham Wash
 Pro-Fab Industries South Bend Ind
 Profab Mfg Co Los Angeles 22 Calif
 Prefabricated Prods Co Seattle 9 Wash
 Prefabricators Inc Baltimore Md
 Premier Products Div Chicago Ryder Co Inc Hyland & College Ave Niagara Falls N Y
 Premier Furnace Co Downers Grove Ill
 Premier (W W) & Co Adrian Mich
 Prentiss Walters Prods Co 6150 Second St Wisconsin Rapids Wis
 Prentiss Co Menominee Mich
 Preservative Paint Co 5410 Airport Way Seattle Wash
 Pressed Steel Co Wilkes-Barre Pa
 Pressite Engineering Co 3800 Chestnut St St Louis 10 Mo
Prestateiln Appliance Div Leeson Steel Prods 666 Lake Shore Dr Chicago 11 Ill
 Prest-Glam Corp 8 E 12th St New York 3 N Y

Prestite Mfg Co 5850 W Ogden Ave Chicago 50 Ill
 Presting (M) Lumber Co Alamogordo N M
 Price Bros Co Dayton 1 O
 Price-Evans Foundry Corp Chattanooga Tenn
Price Fireplace Heater & Tank Corp 5 Austin Pl Buffalo 1 N Y
 Price (F) & Water Foundry Co Poughkeepsie N Y
 Price-Plaster Brass Mfg Co 3011 Bumblebee St Los Angeles 51 Calif
 Price (F) Inc 10 E 40th St New York N Y
 Prime Mfg Co 1601 S First St Milwaukee Wis
Prime Mover Co Muscatine Iowa
 Pringle & Brodie Machinery Co 566 W Polk St Chicago 7 Ill
 Procter & Gamble Co Geyne Ridge Cincinnati O
 Products-Ford Irons Inc 80 Broad St New York 4 N Y
 Prosser Inc LaGranda & Sharpe Sts Springfield O
 Protuse Corp Erie Pa
Protection Prods Mfg Co 2305 Superior St Kalamazoo 99 Mich
 Protective Prods Co 801 W Currie Ave Minneapolis 5 Minn
 Protective Castings Inc Box 3985 Detroit 27 Mich
Protective Papers Inc Union McHenry County Ill
 Protective Ventilator Co 310 W 92nd St New York N Y
 Pro-Test-C Johnson Corp 4525 Penn Dr Low Reno Calif
 Gables Fla
 Protel Corp 73 Market St Kew-Forest 2 N J
 Protex Weatherstrip Co 4308 S Western Ave Chicago 11 Ill
 Proton Tool Co 2209 Santa Fe Los Angeles Calif
 Proton Lumber & Box Co Warrens Ind Low Reno Calif
Pryno & Co Inc N Towne & Railroad Ave Pomona Calif
 PTI Inc 401 Broadway New York 7 N Y
 Pugh Sound Plywood Co 230 E "P" St Tacoma Wash
 Pugh (J B) Inc 3147 E Ludlow St Philadelphia Pa
 Pullman Mfg Corp 325 Hollenbeck Rochester N Y
 Pullman Window Corp 12950 Lyndon Ave Detroit 27 Mich
 Pulverizing Machinery Co Inc Chatham Rd Summit N Y
 Pumice Aggregate Sales Corp 121 S Yale Albuquerque N M
 Purdy Brush Co Portland 3 Ore
 Purdy Prods Inc 3419 E Broadway N Little Rock Ark
 Purinton Paving Brick Co Galveston Ill
 Puritan Chemical Co Peters at Haynes St Atlanta 3 Ga
 Puritan Cordage Mills 1201 Washington St Louisville Ky
 Puritan Sales Co Atlanta Ga
 Purvis (J C) & Sons 7000 Harrison Boston Mass
 Putnam Lumber & Export Co Jacksonville Fla
 Pye-National Co 1334 N Kottner Chicago 51 Ill
 Pye-National Co Multi-Vent Div 1334 N Kottner Ave Chicago 51 Ill
 Pyramid Co 5100 Manchester St Louis 10 Mo
 Pyramid Metals Co 1355 N Wells Chicago 10 Ill
 Pyramid Mouldings Inc 5353 W Armstrong Chicago 30 Ill
 Pyramint Process Co Inc E Rochester N Y
 Pyramint Prods Co 2224 S State St Chicago Ill
 Pyrene Mfg Co 540 Belmont Ave Newark 8 N J
 Pyrex Clay Prods Co Oak Hill O
Pyrex Gas Div Union Carbide & Carbon Corp 30 E 42nd St New York 17 N Y

**Ramsert Fasteners Inc 12117 Borea Road
Cleveland 11 Ohio**

Ramsay Chain Co Inc 1057 Broadway Albany N Y
Ransford Co 112 Killbuck Ave Tonawanda N Y
Randle Shingle Co Randle Wash
Rash-Williams Mfg Co Inc New York 12 N Y
Raspette Mfg Co 1817 S Broadway St Louis 4 Mo
Rasor Plywood Co Tacoma Wash
Rasone W At Lumber Co Harrison La
Rapid Mfg Co Grand Rapids Mich
Rapid Machinery Co Marion Iowa
Raphis-Standard Co Inc 235 Rapids Bldg Grand Rapids 2 Mich
Rasotter (Lund) & Sons Co Fort Wayne Ind
Rat Biscuit Co 19 N Limestone Springfield Ohio
Ratier Mfg Co Norwich Conn
Ratland Corp 4245 N Knox Chicago 41 Ill
Wia
Ravens Metal Products Corp 5618 Ravens Seattle Wash
Rawlpin Co Inc Industrial Bldg 271 Church St New York 15 N Y
Rawstorfberger John Co 423 N Plankinton Milwaukee
Rayboston Manhattan Inc Manhattan Bldg 92 Townsend St Passaic 2 N J
Raynor Mfg Co East River Rd Dixon Ill
Ray Oil Refiner Co 457 Bernal Ave San Francisco 12 Calif
Raynor Inc Lumber Div New York
Ray O Var Co 212 E Washington Ave Madison 10 Wis
R B Company 1919 Granite Ave Kansas City Mo
R & A Rubber Co 1833 E Market St Akron O

**R & S Tool Sales Corp 200 Meem Ave Rockdale
Box 1434 Joliet Ill**

Reading Chain & Block Corp 2100 Adams St Reading Pa
Reading Hardware Co Foot Sixth St Reading Pa
Readybuilt Prods Co 1707 McHenry St Baltimore 23 Md
Ready Made Sign Co Inc 117 Worth St New York N Y
Ready Power Co 1825 Grand River Ave Detroit 8 Mich
Reed Corp 2200 N Second St St Louis 6 Mo
Reed Crane Mfg Co Buffalo N Y
Red Devil Tool Bolt St Irvington 11 N J
Redfield Brick & Tile Co Redfield Iowa
Red Jacket Cold Sales Co 115 E Rich St Columbus O
Red Jacket Mfg Co Rockingham Rd & Clark St Davenport Iowa
Red River Valley Brick Corp Grand Forks N D
Red Spot Electric Co
Red Tigers Food Inc 20 N Wacker Chicago 6 Ill
Red Wing Sewer Pipe Corp Red Wing Minn
Redwood Garden Materials Co Los Angeles 21 Calif
Redwood Mfg Co Hubart Bldg San Francisco Calif
Redwood Sales Co San Francisco 4 Calif
Redwood Press Corp Fred W McInyre Bldg Worcester Mass
Red & Prime Mfg Co 100 Danvers Ave Worcester 1 Mass
Red 18 St Corp Three Rivers Mich
Red Unit Fans Inc 1001 St Charles Ave New Orleans 8 La
Reese Metal Weatherstrip Co 712 Park Ave St Minneapolis 15 Minn
Reese Padlock Co 126 Sherman St Lancaster Pa
Reeves (Huron) Co Co 2220 S Grand Ave Los Angeles Calif
Reeves Steel & Mfg Co 6 Iron Ave Dover O
Revelent Corp 155 E 44th St New York 17 N Y
Revelent Letters Co 411 E 101st St New York 29 N Y
Revelent Hardware Corp 2245 W Western Ave Chicago 8 Ill
Refrigeration Corp of America 2215 North Amboy N J
Refrigeration Sales Co 81 Lexington St New Britain Conn
Reid-Way Inc 2935 First Ave Cedar Rapids Iowa
Reilly Tar & Chemical Corp 1600 Merchants Bank Bldg Indianapolis Ind
Reliable Insulators & Brooder Co Quincy Ill
Reliable Jack Co Dayton O
Reliable Paste & Chemical Co 2500 S Shields Chicago Ill
Reliance Homes Inc Island Road Lester Pa
Reliance Mfg Co
Reliance Products Corp 209 N E Davis St Portland Oregon
Reliance Steel Prods Co 4000 Walnut St McKeesport Pa
**Remington Arms Co Inc Industrial Tool Div
936 Barnum Ave Bridgeport 2 Conn**
**Remington Rand Inc Systems Div 315 Fourth
Ave New York 10 N Y**

Reno 4372 W Ogden Chicago 23 Ill
Reno Craft Products 1714 Walnut Ave Wilmette Ill
Reno Press Brick Co Reno Nev
Reno Stone Co 1000 W Exchange Owosso Mich
Re-Su-It Corp 424 W 42nd St New York 18 N Y
Reo Motors Inc 1331 N Washington St Lansing 20 Mich
Repeal Brass Mfg Co 2100 E 27th St Los Angeles Calif
Republic Brass Co 1623 E 45th St Chicago 9
Republic Crouching Co 11 S Meridian St Indianapolis 4 Ind
Republic Fire Motors Co 2240 W Diversy Chicago Ill
Republic Hardware & Distributing Corp Indianapolis 4 Ind
Republic Heater Corp 2231 Randolph St Huntington Park Calif
Republic Rubber Div Lee Rubber & Tire Corp Youngstown 1 O
Republic Steel Co 1750 Army St San Francisco Calif
Republic Steel Corp Republic Bldg Cleveland 1 O
Research Prods Co 1015 E Washington Ave Madison 10 Wis
Resins Prods & Chemical Co 712 Levent Philadelphia Pa
Resolite Corp Zellenople Pa
Resore Copper & Brass Inc 230 Park Ave New York 17 N Y
Resolator Co 8700 Tunnel Ave North Bergen N J
Revolvador Corp 1520 E Slauson Ave Los Angeles 11 Calif
Resort Bus Linc Co Albany Ga
Resorts-Gammon Lumber Co Inc El Dorado Ark
Resynolds & Manly Lumber Co Savannah Ga
**Resynolds Metals Co Building Prods Div 2001
S Ninth St Louisville 1 Ky**
Resynolds-Shaffer Co 12100 Glenhurst Detroit 4 Mich
Resynolds Wire Co 85 Crawford Ave Dixon Ill
Reznor Mfg Co David St Worcester Pa
Rhamling (J Thomas) Detroit Mich

**Rheem Mfg Co 570 Lexington Ave New York
22 N Y**

Rhodes (James H) & Co 157 W Hubbard St Chicago 10 Ill
Rich (Howard R) Carrollton Ky
Rich Lumber & Mfg Co Highland Ave & Lester Bld Cincinnati O
Richard Brice Co Edwardsville Ill
Richards-Wilcox Co 174 Third St Aurora Ill
Richardson (T R) Lumber Co Birmingham 3 Ala
Richardson (T S) Co Montgomery Falls Wis
Richley Mfg Co 2301 Rochester Rd Springfield Ill
Rickcraft Co 228 N LaSalle St Chicago 1 Ill
Rickland Shale Products Co Columbia S C
Richmond Builders Inc 423 N W K St Richmond Va
Richmond Cedar Works Baggs & Nester S Norfolk Va
Richmond Engineering Co Seventh & Hospital Sts Richmond Va
Richmond Eyeglass Door Co Box 334 Richmond Ind
Richmond Radiator Co 19 E 47th St New York 17 N Y
Richmond Sewer Anchor Co 816 Liberty Ave Brooklyn 8 N Y
Richmond Mineral Color Wks 229 E Wisconsin Ave Milwaukee 2 Wis
Rich Will Co 1053 Union Commerce Bldg Cleveland O
Ridgely Tannery Co Springfield O
Riel Co Elgin O
Riel (L H) Lumber Co Marlette Mich
Rieser (L S) & Sons Omaha Neb
Rieser (W C) Brick Prod Co 25 E 78th St New York 21 N Y
Riggs-Buttram Lumber Co Athens Tenn
Richters Metal Prods Corp 6000 St Buffalo 3 N Y
**Riehl Laminated Prods Inc First National Bank
Bldg St Paul 1 Minn**
Ries-Scott Lumber Co Chicago 1 Ill
Rittenhouse Co Inc Earl St Homers Falls N Y
Ritter (W M) Lumber Co Columbus Ohio
Rittinger Corp 1292 Niagara St Buffalo N Y
Riverside Shingle Mills Ltd New Westminster B C Can
Riverdale Lumber & Stone Co Inc Riverton Va
Riviera (Oswald) Co 440 E Central Ave Chicago 25 Ill
Roach & Mouser Mfg Co Muscatine Iowa
Roanoke Welder Brick Co Inc Roanoke Va
Roanoke Furniture Co Cambridge Mass
Robbins Floor Products Tusconia Ala
Robbins Flooring Co Reed City Mich
Robbins Lighting Protection Co Maryville Mo
Robbins Mfg Co 1815 N Central Park Chicago 47 Ill
Robbins & Myers Inc Clark Bldg Springfield 99 O
Robbins Tire & Rubber Co Tusconia Ala
Robertson-Fulton Controls Co Robertson Thermat Div Youngwood Pa
Roberts & Mander Corp 237 Jacksonville Rd Hathorn Pa
Roberts Mfg Co Dept B Cleburne Texas
Robertson (A J & Son Inc Birmingham N Y
Robertson & Harriet Sawmill Co Vancouver B C Canada
Robertson Mfg Co Trenton N J
Robson Cutlery Co Inc 2646 Case St Perry N Y
Robson Presser Co 1950 Fort Huron St Fort Huron Mich
Robinson Clay Prod Co Second Nat'l Bank Bldg Akron 9 O
Robinson Insulation Co Great Falls Mont
Robinson Mfg Co Everitt Wash
Robinson Plywood & Timber Co 2100 Black Norton Everett Wash
Robinson & Sons Sewer Pipe Co Union Commerce Bldg Cleveland O
Robinson Ventilating Co Zellenople Pa
**Robot Appliances Inc 13165 Prospect Ave
Detroit Mich**
Roboloyer Corp 16050 Ryan Rd Detroit 34 Mich
Robson Prods Van Wert O
Reform Corp 15160 W 8 Mile Road Detroit 35 Mich
Reformer Lead Works 350 Exchange Rochester 8 N Y
Reformer Products Div GM 1000 Lexington Rochester N Y
Reform Bolt & Steel Co 126 Mill St Rockford Ill
Reform Brass Wks Rockford Ill
Reform Brick & Tile Co Rockford Iowa
Reform Mire Box Co Rockford Ill
Reform Paint Mfg Co N Madison St at Market St Rockford Ill
Reform Sash Holder Inc 203 S Main St Rockford Ill
Reform Screw Products Co 2501 9th St Rockford Ill
Reform Wire Stripper Co Union Bldg Rockford Ill
Reck Island Lumber Co Rock Island Ill
Reck Island Millwork Co 2525 Fourth Ave Rock Island Ill
Reck Island Sash & Door Co Rock Island Ill
**Reckoff Mfg Co Delta Power Tool Div 620
E Vienna Milwaukee 1 Wis**
Reckoff Sales Corp 20 N Wacker Dr Chicago Ill
Reckoff Mfg Co 1871 English Ave Indianapolis 6 Ind
Reckoff Sprinkler Co 50 Harton St Worcester 5 Mass
Reck Mount Card Co PO Box 1271 Rocky Mount N Carolina
Reck-Wood Flooring Inc 364 E 27th St Chicago 16 Ill
**Reddis Plywood Corp 1155 Palmetto Marsh-
field Wis**
Redding's (John A) Sons Co Broad & Neroni Sts Trenton 2 N J
**Red (Justus) & Sons Inc Roe Ct Patchogue
L I N Y**
Reger Co Inc 3718 Chicago Ave Minneapolis 7 Minn
Rogers Insulating & Glass Co Gloucester Mass
Rogers Paint Prod Inc 2250 St Adolph Ave Detroit 11 Mich
Rogers (Samuel C) & Co 191 Dutton Ave Buffalo 11 N Y
Rogoff Co 176 Franklin St New York 13 N Y
Rogue Lumber Sales Co 245 E Kinross St
Rohlf & Co 918 N Western Ave Los Angeles 27 Calif
Rohm & Haas Co Washington St Philadelphia 5 Pa
Rohlf & W Co 712 S Belmont Chicago 24 Ill
Roll-A-Way Corp 2954 N Sheffield Ave Chicago 14 Ill
Roll-A-Way Sprinkler Co San Antonio Tex
Roller Co 2445 Kings Highway Fairfield Conn
Rollacore Co Pella Iowa
Rome-Turley Radiator Co Rome N Y
Rome-Dun Inc 1026 Rome Loan Life Bldg Dallas Tex

Roor Structures Inc 45 W 45th St New York N Y
Roor (George D) Corp Blackhawk Ave Rockford Ill
Rop-Lee Products Co 1401 W 9th Cleveland 13 O
Roshore Lumber Co Springfield Ore
Rosburg Lumber Co Rosburg Ore
Rosbury Shingle Co Rosburg Ore
Rose (D M) & Co Knoxville 4 Tenn
Rose Mfg Co Galesburg Ill
Rose Varror Co 333 Miller Harbor Benton Harbor Mich
Ross Chemical & Mfg Co 849 Deville Detroit 17 Mich
Ross Equipment Co Springfield O
Ross Sprinkler Co Pasadena Calif
Ross (Warren) Lumber Co Falconer N Y
Roser Bros Port Angeles Wash
Rotary Chain Inlet Co 848 Lawrence St Allentown Pa
Rotary Lift Co 1076 Kentucky St Memphis 2 Tenn
Rotomone Products Co Inc East Orange N J
Roth (Ray E) Co 2484 Fourth Ave Rock Island Ill
Roth Mfg Co 863 E 140 Cleveland 10 Ohio
Round (David) & Son Cleveland 5 Ohio
Rouse (Henry) Mfg Co Neways Mich
Rowe Mfg Co Galesburg Ill
Row Shingle Co Grayland Wash
Row River Lumber Co Portland 5 Ore
**R O W Sales Co 1365 Academy Royal Oak 3
Mich**
Roxdale Building Prod Co 2916 White Plains Rd New York 6 N Y
Royal Electric Co Inc Pentwater R I
Royal Glass Works Corp 50 20 25th St Long Island City 1 N Y
Royal Heaters Inc 1024 Westminster St Albany Calif
Royalholm Kitchen Corp 179 N Tenth St Brooklyn 11 N Y
Royal Mfg Co Bowling Green O
Royal Ink Industries Inc Grand Haven 1 Mich
R & R Shingle Mfg Co Cottage Grove Mich
Rubak Div Great American Industries Inc 230 Park Ave New York N Y
Rubber & Plastic Coated Products Co Inc 30 Rockefeller Plaza New York N Y
Rubber & Plastics Compound Co Inc 30 Rockefeller Plaza N Y 29 N Y
Rubbernet Co 56 Ferry St Newark 5 N J
Rubercoid Co 500 Fifth Ave New York 10 N Y
Ruden (N H) Co 2810 Fourth Ave S Minneapolis 8 Minn
**Rudiger-Lang Co 8th & Carleton Sts Ber-
keley 10 Calif**
Ruff Furnace Co Doraville Mich
Rugg Mfg Co Greenfield Mass
Ruggs Co 176 Franklin St New York 13 N Y
Rush Lumber Co Hawkinsville Ga
Ruslander & Sons Inc 18 Litchfield St Buffalo 13 N Y
Rusler (Russell) & Ward Brick & Nut Co 100 Midland Ave Fort Chester N Y
Russell Electric Co 4501 S Western Blvd Chicago Ill
**Russell & Erwin Mfg Div American Hardware
Corp 102 Washington New Britain Conn**
**Russell (F) Co Union Commerce Bldg Annex
Cleveland 1 O**
Russell Harrington Cutlery Co Southbridge Mass
Russell & Fugh Lumber Co Springfield Ind
Rustle Crafts Co Inc Englewood N J
Rustle Furniture Co Inc Williamstown N J
Rustle Hickory Furniture Co LaPorte Ind
Rustle Co 3125 Perkins Ave Cleveland 14 O
Rustolomeo Corp 2425 Oakton St Evanston Ill
Rutensher Electric Co Inc Marion Ind
Rutland Fire Clay Co Curtis Ave Rolland Vt
Rutledge Weatherstrip Mfg Co 1447 Park St Emeryville Calif
Ruud Mfg Co 2934 Ashland Pittsburg Pa
Rybolt Heater Co Smallton O
Rybolt (Joseph T) & Son 2558 W 10th St Chicago 8 Ill
Rylock Co Ltd San Leandro Calif

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Rybolt Heater Co Smallton O
Rybolt (Joseph T) & Son 2558 W 10th St Chicago 8 Ill
Rylock Co Ltd San Leandro Calif

Rheem Mfg Co 570 Lexington Ave New York 22 N Y
Rhodes (James H) & Co 157 W Hubbard St Chicago 10 Ill
Rich (Howard R) Carrollton Ky
Rich Lumber & Mfg Co Highland Ave & Lester Bld Cincinnati O
Richard Brice Co Edwardsville Ill
Richards-Wilcox Co 174 Third St Aurora Ill
Richardson (T R) Lumber Co Birmingham 3 Ala
Richardson (T S) Co Montgomery Falls Wis
Richley Mfg Co 2301 Rochester Rd Springfield Ill
Rickcraft Co 228 N LaSalle St Chicago 1 Ill
Rickland Shale Products Co Columbia S C
Richmond Builders Inc 423 N W K St Richmond Va
Richmond Cedar Works Baggs & Nester S Norfolk Va
Richmond Engineering Co Seventh & Hospital Sts Richmond Va
Richmond Eyeglass Door Co Box 334 Richmond Ind
Richmond Radiator Co 19 E 47th St New York 17 N Y
Richmond Sewer Anchor Co 816 Liberty Ave Brooklyn 8 N Y
Richmond Mineral Color Wks 229 E Wisconsin Ave Milwaukee 2 Wis
Rich Will Co 1053 Union Commerce Bldg Cleveland O
Ridgely Tannery Co Springfield O
Riel Co Elgin O
Riel (L H) Lumber Co Marlette Mich
Rieser (L S) & Sons Omaha Neb
Rieser (W C) Brick Prod Co 25 E 78th St New York 21 N Y
Riggs-Buttram Lumber Co Athens Tenn
Richters Metal Prods Corp 6000 St Buffalo 3 N Y
**Riehl Laminated Prods Inc First National Bank
Bldg St Paul 1 Minn**
Ries-Scott Lumber Co Chicago 1 Ill
Rittenhouse Co Inc Earl St Homers Falls N Y
Ritter (W M) Lumber Co Columbus Ohio
Rittinger Corp 1292 Niagara St Buffalo N Y
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Riverdale Lumber & Stone Co Inc Riverton Va
Riviera (Oswald) Co 440 E Central Ave Chicago 25 Ill
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Robbins Lighting Protection Co Maryville Mo
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Robbins & Myers Inc Clark Bldg Springfield 99 O
Robbins Tire & Rubber Co Tusconia Ala
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Robson Presser Co 1950 Fort Huron St Fort Huron Mich
Robinson Clay Prod Co Second Nat'l Bank Bldg Akron 9 O
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Reform Brick & Tile Co Rockford Iowa
Reform Mire Box Co Rockford Ill
Reform Paint Mfg Co N Madison St at Market St Rockford Ill
Reform Sash Holder Inc 203 S Main St Rockford Ill
Reform Screw Products Co 2501 9th St Rockford Ill
Reform Wire Stripper Co Union Bldg Rockford Ill
Reck Island Lumber Co Rock Island Ill
Reck Island Millwork Co 2525 Fourth Ave Rock Island Ill
Reck Island Sash & Door Co Rock Island Ill
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Reckoff Sales Corp 20 N Wacker Dr Chicago Ill
Reckoff Mfg Co 1871 English Ave Indianapolis 6 Ind
Reckoff Sprinkler Co 50 Harton St Worcester 5 Mass
Reck Mount Card Co PO Box 1271 Rocky Mount N Carolina
Reck-Wood Flooring Inc 364 E 27th St Chicago 16 Ill
**Reddis Plywood Corp 1155 Palmetto Marsh-
field Wis**
Redding's (John A) Sons Co Broad & Neroni Sts Trenton 2 N J
**Red (Justus) & Sons Inc Roe Ct Patchogue
L I N Y**
Reger Co Inc 3718 Chicago Ave Minneapolis 7 Minn
Rogers Insulating & Glass Co Gloucester Mass
Rogers Paint Prod Inc 2250 St Adolph Ave Detroit 11 Mich
Rogers (Samuel C) & Co 191 Dutton Ave Buffalo 11 N Y
Rogoff Co 176 Franklin St New York 13 N Y
Rogue Lumber Sales Co 245 E Kinross St
Rohlf & Co 918 N Western Ave Los Angeles 27 Calif
Rohm & Haas Co Washington St Philadelphia 5 Pa
Rohlf & W Co 712 S Belmont Chicago 24 Ill
Roll-A-Way Corp 2954 N Sheffield Ave Chicago 14 Ill
Roll-A-Way Sprinkler Co San Antonio Tex
Roller Co 2445 Kings Highway Fairfield Conn
Rollacore Co Pella Iowa
Rome-Turley Radiator Co Rome N Y
Rome-Dun Inc 1026 Rome Loan Life Bldg Dallas Tex

Roor Structures Inc 45 W 45th St New York N Y
Roor (George D) Corp Blackhawk Ave Rockford Ill
Rop-Lee Products Co 1401 W 9th Cleveland 13 O
Roshore Lumber Co Springfield Ore
Rosburg Lumber Co Rosburg Ore
Rosbury Shingle Co Rosburg Ore
Rose (D M) & Co Knoxville 4 Tenn
Rose Mfg Co Galesburg Ill
Rose Varror Co 333 Miller Harbor Benton Harbor Mich
Ross Chemical & Mfg Co 849 Deville Detroit 17 Mich
Ross Equipment Co Springfield O
Ross Sprinkler Co Pasadena Calif
Ross (Warren) Lumber Co Falconer N Y
Roser Bros Port Angeles Wash
Rotary Chain Inlet Co 848 Lawrence St Allentown Pa
Rotary Lift Co 1076 Kentucky St Memphis 2 Tenn
Rotomone Products Co Inc East Orange N J
Roth (Ray E) Co 2484 Fourth Ave Rock Island Ill
Roth Mfg Co 863 E 140 Cleveland 10 Ohio
Round (David) & Son Cleveland 5 Ohio
Rouse (Henry) Mfg Co Neways Mich
Rowe Mfg Co Galesburg Ill
Row Shingle Co Grayland Wash
Row River Lumber Co Portland 5 Ore
**R O W Sales Co 1365 Academy Royal Oak 3
Mich**
Roxdale Building Prod Co 2916 White Plains Rd New York 6 N Y
Royal Electric Co Inc Pentwater R I
Royal Glass Works Corp 50 20 25th St Long Island City 1 N Y
Royal Heaters Inc 1024 Westminster St Albany Calif
Royalholm Kitchen Corp 179 N Tenth St Brooklyn 11 N Y
Royal Mfg Co Bowling Green O
Royal Ink Industries Inc Grand Haven 1 Mich
R & R Shingle Mfg Co Cottage Grove Mich
Rubak Div Great American Industries Inc 230 Park Ave New York N Y
Rubber & Plastic Coated Products Co Inc 30 Rockefeller Plaza New York N Y
Rubber & Plastics Compound Co Inc 30 Rockefeller Plaza N Y 29 N Y
Rubbernet Co 56 Ferry St Newark 5 N J
Rubercoid Co 500 Fifth Ave New York 10 N Y
Ruden (N H) Co 2810 Fourth Ave S Minneapolis 8 Minn
**Rudiger-Lang Co 8th & Carleton Sts Ber-
keley 10 Calif**
Ruff Furnace Co Doraville Mich
Rugg Mfg Co Greenfield Mass
Ruggs Co 176 Franklin St New York 13 N Y
Rush Lumber Co Hawkinsville Ga
Ruslander & Sons Inc 18 Litchfield St Buffalo 13 N Y
Rusler (Russell) & Ward Brick & Nut Co 100 Midland Ave Fort Chester N Y
Russell Electric Co 4501 S Western Blvd Chicago Ill
**Russell & Erwin Mfg Div American Hardware
Corp 102 Washington New Britain Conn**
**Russell (F) Co Union Commerce Bldg Annex
Cleveland 1 O**
Russell Harrington Cutlery Co Southbridge Mass
Russell & Fugh Lumber Co Springfield Ind
Rustle Crafts Co Inc Englewood N J
Rustle Furniture Co Inc Williamstown N J
Rustle Hickory Furniture Co LaPorte Ind
Rustle Co 3125 Perkins Ave Cleveland 14 O
Rustolomeo Corp 2425 Oakton St Evanston Ill
Rutensher Electric Co Inc Marion Ind
Rutland Fire Clay Co Curtis Ave Rolland Vt
Rutledge Weatherstrip Mfg Co 1447 Park St Emeryville Calif
Ruud Mfg Co 2934 Ashland Pittsburg Pa
Rybolt Heater Co Smallton O
Rybolt (Joseph T) & Son 2558 W 10th St Chicago 8 Ill
Rylock Co Ltd San Leandro Calif

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Rustle Furniture Co Inc Williamstown N J
Rustle Hickory Furniture Co LaPorte Ind
Rustle Co 312

St Louis Screw & Bolt Co Broadway & Keber Ave St
 Louis 15 Mo
 St Louis Surface & Paint Co 4210 Arlington Ave St
 Louis 20 Mo
 St Louis Terminal Warehouse Co St Louis Mo
 St Maries Lumber Co St Maries Idaho
 St Mary's Clay Prods Co St Mary's Pa
St Paul Corrugating Co S End Wabasha St
Bridge St Paul 1 Minn
 St Paul Foundry & Mfg Co Conn Ave at Ryan St St Paul
 3 Minn
 St Paul Hydraulic Hoist Div Gar Wood Industries Inc 2207
 University Ave St Paul 14 Minn
 St Paul & Tacoma Lumber Co 1220 8th St Paul Ave Tacoma
 Wash
 St Regis Paper Co 230 Park Ave New York 17 N Y
 Sakreie Inc Box 11 St Bernard Cincinnati 17 O
 Sales Service Machine Tool Co 2361 University Ave St
 Paul 4 Minn
 Salubrious Motor Die Works Mfg Co E Lexington & Reservoir
 Pomona Calif
 Salt Mountain Co 176 W Adams St Chicago Ill
 Samsberg Mfg Co Fidelity Bldg Cleveland 14 Ohio
 Samey (Wm J) Iron Co 917 Military Bld Kenmore 17
 N Y
 Sampel Time Control Inc Spring Valley Ill
 Sampson Tools Mfg Co 258 Norfolk Newark N J
Sanson Corrugate Wks 89 Broad St Boston
10 Mass
 Sanson Prods Co 3219 University Ave Chicago 47 Ill
 Sanson-United Corp Armistead Ave & Weiss Blvd Rochester 1
 N Y
 Sausberger Inc 46 Stone St Rockland Mass
 Sands Level & Tool Co 605 Clinton St Clinton Ind
 Sandora Co Architects Bldg Philadelphia 3 Pa
 Sandvik Saw & Tool Corp 150 W 10th St New York N Y
 San-Engin Inc 1100 E Brighton Ave Syracuse 5 N Y
 Sanitary Dash Co 111th St 24th Ed Bld Long Island City 1
 N Y
 Sanitary Reviewer Co Inc Lyncx & 4th Ave Dunkirk N Y
 Sanitary Refrigerator Co Fond du Lac Wis
 Sanitary River Harbors & Shingle Co St Stephen S C
 Sanitary Lumber Co Lebanon Ore
 Sanitium Lumber Co Sweet Home Ore
 Sanyugal Prods Inc Newark 1705 Urbana Rd Cleve-
 land 14 O
 Sapolin Paints Inc 229 E 42nd St New York 17 N Y
 Sarsane Machine Co 3075 E 17th St Cleveland 11 Ohio
 Sarschemm Controls Inc Empire State Bldg New York
 1 N Y
 Sash Hoisting Stone Co Bloomington Ind
Sargent & Co Water St Now Haven 9 Conn
 Sargent-Corby Co 323 W 15th Indianapolis 6 Ind
 Sargent-Bundy Corp Randolph W Va
 Sargent Herrick Co 3101 W Warren St Chicago 22 Ill
 Sarsenium Cements Co 2359 Starbuck St Pittsburgh
 15 Pa
 Saunders Co Bridgton Me
 Savage Arms Corp Utica N Y
 Savagan Co 25 Huntington Ave Boston 10 Mass
 Saw-L-Time Devices Inc 88 Manhattan St Rochester N Y
 Sawmill Mfg Co Sharon Pa
 Sawyer-Beall Mfg Co 401 Kibbille St Johns Mich
 Sawzall Co 125 1st St Harrison Pa
 Scais-Models Libertyville Ill
 Scahert Associates Inc 415 E 55th St New York 22 N Y
 Scahert Brothers Mfg Co Huntington Ind
 Scahler Feat 5009 Superior Cleveland 3 Ohio
 Scahler Lumber Co Inc Jackson Tenn
 Scahler Bros Lumber & Shingle Co Aberdeen Wash
 Scahler Co 1086 Summit Cincinnati 4 O
 Scahler Chemical Co 351 E 2nd Los Angeles 12 Calif
 Scahler H B Mfg Co Omaha Neb
 Scahler Iron Prods Co Racine Wis
 Scahler Bros Inc E Portia Ill
 Scahler (William) & Co Evans City Pa
 Scahler-Crossland Inc New York 18 N Y
 Scahler-Bantam Co 221 Park Ave Waverly Iowa
 Scahler (Chas A) 228 E 10th St Des Moines 2 N Y
 Schilling Lumber Co Patersburg W Va
Schlage Lock Co 2201 Bay Shore Blvd San
Francisco 19 Calif
 Schlichter (E F) Inc Commercial Trust Bldg Philadel-
 phia 2 Pa
 Schlichter (P M & W) Inc 302 E 45th St New York N Y
 Schmitt Bros Lumber Co Grants Pass Ore
 Schmitt Lumber Co Cadmus Wash
 Schneider Brick & Tile Co Inc Pere Marquette New Or-
 leans La
 Schneider Bros Lumber Co Marquette Mich
Schneider Bros 3200 N W Yeon Portland Ore
 Schmitz (T W) 314 Trayway Bldg Denver 2 Colo
 Schrade (George) Bridgport Conn
 Schreiber (Wm C) Lumber Co 2271 S Lumber Chicago
 16 Ill
 Schreiber 10 Pa & Co 621 E Pearl St Cincinnati O
 Schreiber (Dr Adair) 1212 E Orange N J
 Schreiber (H A) Co 1210 Washington Ave Wilmette Ill
 Schreiber (Arnold J) 117 Frederick Oklaokos Wash
 Schreiber (Wm) 228 Fourth Ave Pittsburgh Pa
 Schriebers Level Inc 17403 Gable Ave Detroit 12 Mich
 Schriebers (F E) Co Hartsville O
 Schriebers Wall Co Hartsville O
 Schriebers (F M & C) Co Inc 504 Railroad St Joliet Ill
 Schriebers Laboratories 910 7th Beaver Falls Pa
 Schriebers Supply Co Colby Mead E Pittsburgh Pa
 Schriebers (A F) Mfg Co 3215 McClure Ave Pittsburgh 12 Pa
 Schriebers Lumber & Shingle Co Inc Plaquemine La
 Schriebers-Cummins Co 1125 Massachusetts Ave Indi-
 anapolis 7 Ind
 Scientific Heater Co Cleveland O
 Scientific Model Animals Co 113 Monroe Newark 5 N J
 South Lumber Co Fulton Ala
 South Lumber Co Bridgeport O
 South Lumber Co to Bureau Calif
 Southside Wood Prods Inc Seaside Pa
Scott (O M) & Sons Marysville 9 Conn
 Scott Mfg Co 100 Mill St Waterville 11 Conn
 Scott-Craft Co 1732 E 4th Ave S Seattle 4 Wash
 Streets & Fabricated Metals Corp Div of General Woodcraft
 Co 34th St & Paterson Plank Bld Box 21 N Bergen N J
 Scrofield Mfg Co 1805 Pacific Highway San Diego 1
 Calif
 Seaboard Plastics Corp 137 Coll St Irvington 11 N Y
 Seaboard-Retort Co Perth Amboy N J
Saal-All Clip Co Box 302 Flint Mich

Seaton Prods Inc 927 Second Ave Minneapolis 2 Minn
 Seal Rate Caulking Co Inc 6335 Linden Ave Detroit 21
 Mich
 Sealrite Insulation Mfg Co 115 Madison Ave Waukesha
 Wis
 Seapored Porcelain Metals Inc 28-00 Borden Ave Long
 Island N Y
 Sear Lumber Co Mobile Ala
 Seaside Bailer Wks 5237 E Marginal Way Seattle Wash
 Seattle Cedar Lumber Mfg Co 1450 W 46th St Seattle
 Wash
 Sees-Lite Mfg Co 4916 Easton Ave St Louis Mo
 Sectional Garage Works 2342 Battery Buffalo 11 N Y
 Security 1757 Portico Ave Detroit 3 Mich
 Security Fence & Mfg Co 8701 N 30th Omaha 12 Neb
 Security Wash & Screen Co Detroit 3 Mich
 Sedgwick Machine Wks 150 W 15th St New York N Y
 Seed Filter Co Freeport Long Island N Y
 Seeger Refrigerator Co Arcade at Wells St Paul Minn
 Seeger-Sunbeam Co Inc Paul Minn
 Segal Lock & Hardware Co Inc 395 Broadway New York
 13 N Y
 Segler & Kahlbaum & Co The Crown Wks
 Sheerling Lates Prods Co Barstow St Akron 9 O
 Seiditz Paint & Varnish Co 18th & Garfield Ave Kansas
 City 10 Mo
 Seitz Battery & Co 5235 Valley Ave Philadelphia 43 Pa
Selck (Walter E) & Co 223 W Hubbard St
Chicago 11 Ill
 Select O-Plane Co Div Screw Machine Prods Co 1612 Eddy
 Philadelphia 5 Pa
Self-Staring Window Co 2613 Stevens Ave
South Minneapolis Minn
 Selten Corp 891 Andrew Bldg Minneapolis 12 Minn
 Sellers Paint & Varnish Co 831 E 61st St Los Angeles
 Calif
 Selway-Meske Co Merrill Wis
 Seneca Lumber & Millwork Co 636-701 W Tiffin St
 Fortoria O
 Seneca Wire & Mfg Co Vine St Fortoria O
 Sentry Metal Prods Div Sentry Control Corp Philadelphia
 21 Pa
 Sentry Shop-A-Draft Co 50 N Wacker Dr Chicago 6 Ill
 Seneca Corp 800 Cross St Pottstown Pa
 Serrick Corp John Lees Dr Indiana Pa
 Service 119 N Morton St Evansville 20 Ind
 Service-Craft & Truck Corp 540 N Brownwood Ave Alhambra
 Mich
 Service Parts Systems 4607 St Aubin Detroit Mich
 Service Prods Div Woodall Industries Inc 3500 Oakton Ave
 Norfolk Va
 Service Corp 1373 Euclid Ave Cleveland 15 O
Servicised Prods Corp 6051 W 65th St Chi-
cago 38 Ill
 Sew Prods Inc Buffalo N Y
 Sew Paint & Varnish Co 1009-11 W 8th St Kansas
 City Mo
 Sevton Can Co Everett 49 Mass
 Sewton (S B) Store & Mfg Co 502 W Conroy St Balti-
 more Md
 Seymour Mfg Co Inc 500 Franklin St Seymour Ind
 Shawwood 15058 Delano Van Nuys Calif
 Shawson Bros Lumber Co Memphis Tenn
 Sharon Hardware Mfg Co 249 Pearl St Sharon Pa
 Sharon Steel Co Sharon Pa
 Sharys Mfg Co New York 13 N Y
 Sharp Mfg Co Salem Ore
 Shasta Plywood Co Anderson Calif
 Shaver Tractor & Boat Div Manning Maxwell & Moore Inc
 414 Broadway Muskegon Mich
 Shaw (H C) Co Stockton Calif
 Shaw Lumber Co Yamhill Ore
 Sheboygan Chair Co Sheboygan Wis
 Sheehy-Brown Mfg Co 311-321 5th Ave Minneapolis Minn
 Sheet (H M) Co Quincy Ill
 Sheet Metal Products Co 2401 Henderson Kilgore Tex
 Sheffield Brick & Tile Co Sheffield Ind
 Sheffield-Brown Co 1714 Waterloo Cleveland O
 Sheffield Mfg Co 119 W 25th St New York N Y
 Sheffield Steel Corp Kansas City 3 Mo
 Shelly Metal Prods Co Shelly O
 Shelly Springs Hinge Co Shelly O
 Shell Oil Co Inc 50 W 56th St New York N Y
 Shell Industries Inc 630 Fifth Ave New York 20 N Y
 Shelton Tank Co 103 Canal St Shelton Conn
 Shepard Elevator Co 2425 Colerain Cincinnati O
 Shepard & Moore Lumber Co 31 Mills St Boston Mass
 Shepard Niles Crane & Hoist Corp 410 Schuler Ave Mon-
 roe Falls N Y
 Shepherds John C Lumber Corp Charlotte 1 N C
 Shepherds Lumber Corp Montgomery Ala
Shepler Mfg Co 1312 Sheffield St Pittsburgh
Pa
 Sheridan Press Brick & Tile Co Sheridan Wyo
 Sherman (Edw J) Lumber Sales Portland Ore
 Sherman (H H) & Co 22 Barner St Battle Creek Mich
 Sherman Products Inc 3200 W 14-mile Rd Royal Oak
 Mich
 Sherwin-Williams Co 101 Prospect Ave Cleveland 1 O
 Shetter (M) & Sons Co Clio Mich
 Shevin-McLoud Lumber Co First National Son Line Bldg
 Minneapolis Minn
 Shimer (F M J) & Sons Inc Box 268 Milton Pa
 Shires (Cobb) 721 Union Indianapolis 25 Ind
 Shively Corp 210 E St Joseph Indianapolis 2 Ind
 Shible & Co Box 179 Mandan N D
 Shiplaster Inc 1214 Third St St. Minneapolis Minn
 Shivers Boat of America 873 Peachtree St NE Atlanta
 5 Ga
 Shragar & Johnson Inc Atlantic Iowa
 Shreveport-Centrol & Sons Co 8 S Michigan Ave Chi-
 cago 3 Ill
 Shrieves Corp 5901 W 66th St Chicago 38 Ill
 Shriver Automatic Corp Detroit Mich
 Shriver Glass Div 850 Windsor St Hartford Conn
 Shriver Hout & Crane Co 475 63rd St Brooklyn N Y
 Shriver Sioux Oil Burner Corp Orange City Iowa

Silverette Prods Inc 181 E Erie Chicago Ill
 Silver Lumber Co 60 Battery Bunker Boston 10 Mass
 Sistray Lighting Inc 1270 83rd Ave New York N Y
 Sitmonds Abrasive Co Div Sitmonds Saw & Steel Co 5510
 Tacoma St Philadelphia Pa
Simonds Saw & Steel Co 510 Safety Found
Bank Bldg Fitchburg Mass
 Simons Co Industrial Div 2100 S Indiana Chicago Ill
 Simons Brick Co 1185 S Boyle Ave Los Angeles Calif
 Simons Brothers Stone Co Grand Rapids Mich
Simplex Lumber Co 6826 E Warren Detroit 7
Mich
 Simplex Oil Heating Corp 1 Park Place New York 7 N Y
 Simplex Stone Eng Inc Grand Rapids 2 Mich
 Simplex Lumber Co White Ridge Seattle 1 Wash
Simplex Logging Co 10655 Stuart Bldg
Seattle 1 Wash
 Sims Lumber Co Selma Ala
 Sinclair Lumber Co Inc Laurinburg N C
 Sinclair Refining Co 630 Fifth Ave New York N Y
 Singer Kennedy Co 21 E Van Buren St Chicago Ill
 Sinks-Baxia Co 220 S Missouri Indianapolis Ind
 Sioux Falls Metal Culvert Co Sioux Falls N D
 Sioux Steel Co Sioux Falls S D
Siskrafft Co 206 W Wacker Dr Chicago 6
Ill
 Sisco Mines Ltd Dominion St Bld Montreal Que Can
 (R J) Co New London Conn
 Siska Spence Lumber & Mfg Co 2500 Geneva Kansas
 City 3 Mo
 Skally-Stright Shingle Co Everett Wash
 Skelton Div Skelly Oil Co Tulsa Okla
 Skellum Hardware Co 455 John St Trenton 4 N J
Skilaw Inc 5033 Eiston Ave Chicago 30 Ill
 Skinner Irrigation Co Troy O
 Skinner (M B) Co 21 Sample & Merrill St South Bend
 Ind
 Skilton Industries Titusville Pa
 Sklymakar Lock Co 115 SW Lake Ave Lancaster Pa
 Sklymakar Prods Inc 169 W 10th St Chicago Ill
 Skyan Valve Co 4300 W 18th St Chicago Ill
 Skyan-Balson Corp 293 Fifth Ave New York 16 N Y
 Skyanone Inc 913 Chicago Ave Nashville Tenn
 Skyan (O) Corp 3533 N 27th St Milwaukee 1 Wis
 Skyan Lumber Prods Inc 10 Division Ave Millington N J
 Skyan Chemical & Color Co 115 N York St Brooklyn 1 N Y
 Skyan's Besting Div Chicago 50 Mass
 Smith (D B) & Co Inc Station Place Utica 2 N Y
 Smith (E C) Mfg Corp 115 N York St Brooklyn 1 N Y
 Smith (E J) Mfg Co 115 N York St Brooklyn 1 N Y
 Smith (F P) Wire & Iron Wks Inc 2346 N Cuyahoga Chi-
 cago Ill
 Smith (George B) Chemical Wks Maple Park Ill
 Smith (H B) Co Westfield Mass
 Smith (H E) Co Mammes at Harold Adrian Mich
 Smith (L) & Co Inc 105 Nassau St New York N Y
 Smith (O) Mfg Co Middletown Conn
 Smith (J F) Co 421 Chapel St New Haven Conn
 Smith & Kandler Co E Linden Ave Linden N Y
Smith (L C) & Corona Typewriters Inc 701
E Washington St Syracuse 1 N Y
 Smith Lumber Co Red Bay Ala
 Smith (M B) Lumber & Shingle Co Henry Bldg Seattle
 Wash
 Smith (M W) Lumber Co Inc Jackson Ala
 Smith (H) & Refining Co Kilburn & Smith Bldg Rockford Ill
 Smith-Orr Dealers Mich
 Smith (Ralph L) Lumber Co Dierks Bldg Kansas City Mo
 Smith (E H) Mfg Co Springfield Mass
 Smith (E A) Mfg Co Brattleboro Vt
 Smith (Seymour) & Son Oakville Conn
 Smith (T L) Co 2355 N N St Milwaukee 2 Wis
 Smith (W F) Lumber Co Montgomery 3 Ala
 Smith-Wood Prods Inc Portland & Coquille Ore
 Smith (W F) Lumber Co 105 Chestnut St Chapman Ala
Smith's Haird & Mfg Co Casapaglia 8 Mich
 Smooth-Holman Co 323 N Kensington Ave Inglewood Calif
 Smooth-On Mfg Co 574 Commonwealth Ave Jersey City N J
 Snodaker (Frank C) & Co Inc 3531 N 9th St Philadel-
 phia 40 Pa
 Snell-Jones Tank Corp Bruckton Mass
 Snow-Lee Lumber Co 232 W First St Reno Nev
 Snowflake Falls Lumber Co Snowflake Falls Wash
 Snow Lumber Co High Point N C
 Snyder & Willard Ridgeway N Y
 Socony-Kerosin Oil Co 26 Broadway New York 4 N Y
 Soederberg (Carl) Lumber Co Spokane 8 Wash
Solar Air-Flt Co 323 S Elkhart Ave Elkhart
Ind
 Sol-4-Lite Mfg Co 4301 W North Ave Chicago 39 Ill
 So-Low Wks Inc Lumbard 8 O
Solvay Sales Div Allied Chemical & Dye Corp
40 Rector St New York 6 N Y
 Solvent Chemical Prods Inc 15821 Second Ave Detroit
 Mich
 Sonoco Lumber Co Somers Mont
 Sonoco Iron Foundry Co Somerville Mass
 Sommer (J L) Mfg Co 24 Veeber St Newark N J
 Sommer & Mace Glass Works Co 3504 S Oakley Ave
 Chicago 9 Ill
 Sommer Metalcraft Corp 400 Fulton Dr Crawfordville Ind
 Southfield (E C) Co Southfield Mich
 Southwestern (L) & Sons Inc 85 Lexington Ave New York
 16 N Y
Sonoco Prods Co South St Hartsville S C
 Sorval (Frank) Inc PF 270 Fifth Ave New York 10 N Y
 Sox Mfg Co 105 S Catterin Ave PO Box 38 Harper Station
 Detroit 13 Mich
 Soyle Steel Co 1750 Army St San Francisco 24 Calif
 Spaulding Co Marysville Wash
 South Atlantic Lumber Co Greenwood N C
 South Bend Tube & Mfg Co South Bend Ind
 South Bend Lath Wks 400 E Madison St South Bend 22
 Ind
 South-Central Dow Co Clinton Pa
 Southern Industries Inc Philadelphia 34 Pa
 Southern Barbecue Grill Co Grandville 6 Calif
 Southern-Belling Co Jacksons Bldg Atlanta Ga
 Southern Brick Co Ninety-3rd St
 Southern Brick & Tile Co Louisville Ky
 Southern Cement Co 608 Protective Life Bldg Birmingham
 3 Ala

Southern Galvanizing Co 1610 Bush St Baltimore 30 Md
Southern Lumber Co Warren Ark
Southern Metal Products Corp 921 Bayner Memphis 6
Tenn
Southern Mill & Mfg Co Tulsa Okla
Southern Mills Corp Oxford Ala
Southern Oregon Plywood Corp Grants Pam Ore
Southern Oregon Sugar Pine Co Medford Oregon
Southern Pine Chemical Co Ltd Gladden Co Jacksonville
Fla

**Southern Pine Lumber Co 304 E Fifth St
Texarkana Ark**

Southern Pine Co Houston Tex
Southern Pine Wks Inc 4 Point Rd Atlanta Ga

Southern Screw Co Statesville N C
Southern Shaver Bar & Cabinet Co 4511 Kyle St Houston
Tex

Southern Star Lumber Co McKenzie Tenn
Southern States Iron Roofing Co 110 Stiles Ave Savannah
Ga

Southern Wire & Iron Wks 441 Memorial Dr SE Atlanta
Ga

Southern Wood Preserving Co E Point Station Atlanta Ga
Southern Zonitex Co Atlanta Ga

Southington Hardware Mfg Co William & Smith Sta South-
ington Conn

Southwest American Homes Houston 1 Tex
Southwestern Crossing Co Muskogee Okla

Southwestern Portland Cement Co 1034 Withlere Blvd
Los Angeles Calif

Southwestern Sash & Door Co Phoenix Ariz
Southwest Lumber Co Alamosa N Mex

Southwest Lumber Mills Inc McNary Ariz
Southern Mfg Co Little Rock Ark

Spaulding & Son Inc Grand Ave
Spang Chaffait Div National Supply Co Grand Bldg Pitts-
burgh Pa

Spaulding Bros Inc 1140 N Howe Chicago Ill
Spawners (A J) Co Minneapolis Minn

Spawrge Wire Co 569 E Railroad Home N Y
Spartan Hardware Lumber Co Spartan Ark

Sparks-Wilbington Co 2400 E Michigan Ave Jackson Mich
Sparks Ceramic Co E Sparta O

Spartan Glass Co E Garyland Ave Dayton 4 O
Sparta Spoke Factory Sparta Tenn

Speasman Co 308 E Rochester N Y
Speasman Co 308 E Spence St Wilmington Del

**Specialty Tool Mtrs Inc 732 S Illinois St
Belleville Ill**

Speed Inc 7308 Associate Ave Cleveland 14 O
Speed-0-Print Corp 1801 W Laramie Chicago 11 Ill

Speedy Products Inc 19 Bayler St New York 6 N Y
Speedway Mfg Co 1834 S 52nd Ave Cicero 55 Ill

Speedways Containers Inc 1271 Niagara St Buffalo 13 N Y
Speeder Ketting & Co Niagara Sq Buffalo 5 N Y

Speeder Locomotive Div Aco Mfg Corp Oliver St Williams-
port 19 Pa

Speeder Thermatoid Div Metals & Controls Corp 30 Forest
Hillboro Mass

Sperr Parady Inc 1800 Church St Adrian Mich
Spokane Fine Prods Co 348 N Wall St Spokane Wash

Spokane Portland Cement Co Spokane 8 Wash
Spokane Sash & Door Co Spokane Wash

Spokane Inc 1218 Sherman Ave Evanston Ill
Spora O Bond Co 2225 S Humboldt Milwaukee 12 Wis

Sorapa-Flake Co 2727 W Irving Park Rd Chicago Ill
Springfield Plywood Co Springfield Ore

Spring Garden Brick Co York Pa
Springing IN Pl Co 20 N Water Dr Chicago 6 Ill

Square D Co 6000 Harvard Detroit 11 Mich
S R Mfg Co Schenectady N Y

Starbuck Corp 1091 Main St Pawtucket 1 R
Star Equipment Corp 1891 Atlantic Ave Brooklyn 33
N Y

Starr (Eugene C) Tiffin O
Stamford Wallpaper Co Inc Stamford Conn

**Stamping Prods & Mfg Co Steel Door Div
14001 Intervale Ave Detroit 27 Mich**

Standard Automatic Mfg Co 601 W Evergreen Chicago 7 Ill
Standard Amvico Co Hartford Conn

Standard Brick & Tile Corp Evansville Ind
Standard Bronze Co Rayone 9 N Y

Standard Building Prods Co 621 McDonald Ave Brooklyn
18 N Y

Standard Clay Mfg Co New Brighton Pa
Standard Coated Prods Div Interchemical Corp 67 W 44th
St New York 18 N Y

Standard Conveyor Co 140 W 2nd St New York 6 N Y
Standard Cotton Prods Co Flint Mich

Standard Crayon Mfg Co Danvers Mass
Standard Dry Kiln Co 798 S Harvard Indianapolis Ind

Standard Dry Wall Prods Inc 77 Hudson St New
Eagle Pa

Standard Electrical Tool Co 2480 River Rd Cincinnati 4 O
Standard Electric Mfg Co W Berlin N Y

Standard Elmure Granite Co 1754 N Spaulding Chicago
Ill

Standard Engr Co Brooklyn N Y
Standard Fire Hose Co 8236 W 3rd St Los Angeles 36
Calif

Standard Floor Co Gulf Bldg Pittsburgh Pa

Standard Forge & Axle Co Birmingham Hwy Montgomery
2 Ala

Standard Gas Equip Corp Buzard & Hamburg St Balti-
more Md

Standard Homes Co 14th & G N W Washington D C
Standard Industrial Prods Inc Evansville Ind

Standard Lime & Stone Co First National Bank Bldg Balti-
more 3 Md

Standard Mfg Co Cedar Falls Ia
Standard Mirror Co 141 E Madison St & P E R Buffalo N Y

Standard Oil Co of New York N Y
Standard Oil Co of Indiana Inc 910 S Michigan Ave Chi-
cago Ill

Standard Paste & Glue Co 3620 W 38th St Chicago 32 Ill
Standard Pettite Co 202 N Euclid Ave Pasadena Calif

Standard Products Co 2130 W 110th Cleveland Ohio
Standard Register Co Dayton 1 O

Standard Shingle Co Port Angeles Wash
Standard Stamping & Perforating Co 3129 W 49th Place
Chicago 52 Ill

Standard Steel Cabinet Co 3701 N Milwaukee Ave Chicago
41 Ill

Standard Turnbuckle Co Corry Pa
Standard Varnish Wks 2000 Richmond Terrace Staten
Island N Y

Standard Wire Cloth & Screen Co N East Extended York
Pa

Stanford Wood Prods Co Stanford Ky
Stanley Chemical Co 1018 Bay St E Berlin Conn

**Stanley Electric Tool Div Stanley Wks
New Britain Conn**

Stanley Oliver Mfg Co 701 N Bangeman Chicago Ill
Stanley Tools Div Stanley Wks New Bri-
tain Conn

Stanley (William W) Co Inc 403 Broadway New York
13 N Y

Stanley Wks New Britain Conn

**Stanley Wks Deer Control Div 155 Lake St
New Britain Conn**

**Stanley Wks Garage Hardware Dept New
Britain Conn**

Stanton (E J) & Son Los Angeles 54 Calif
Stamag Prefabricated Building Co Montclair N J

Star Brick & Tool Co 1015 9th St Rockford Ill
Star Brush Mfg Co 700 Harrison Ave Boston Mass

Star Expansion Prods Inc 148 Cedar St New York 6 N Y
Star Fuse Co Inc 235 Canal New York N Y

Star Brick Co Canton 1 O
Star (Jas Et Co) Plum & Minnie Sts Memphis Tenn

Star (J N & Co) Griffin Wk Harvard Ill
Starline Inc 300 Front St Harvard Ill

Star Metal Prods Inc 707 Butler St Brooklyn 17 N Y
Star Portland Wallpaper Mills Inc Ill

Star Bros Bell Co E Hampton Conn
Starrett (L S) Co 101 Crescent St Athol Mass

Star (J W) & Sons Lumber Co Atlanta Ga
Star Sash Balance Corp Oak Harbor O

Sta-Tite Inc 4020 N Port Washington Rd Milwaukee Wis
State-Tite Products Co 2107 Detroit Cleveland 13 Ohio

State Lake Cedar Lhd Dewdney B C Can
Sta-Warm Electric Co 503 N Chestnut St Ravenna O

**Steadfast Equipment Co 874 Franklin Ave
Thornwood N Y**

Stearns Coal & Lumber Co Stearns Ky
Stearns Mfg Co Inc 822 E Beecher Adrian Mich

Stearns Mfg Co 2700 Roosevelt Rd Bradview Ill
Steffel Stone & Brick Corp 2913 N 47th St Milwaukee
Wis

Steel Basket Co Cedar Rapids Iowa
Steel City Furnace Co Springdale Pa

Steel Erecting Co Lumber Co Birmingham Ala
Steelcraft Mfg Co 3418 Gratiot St Louis 8 Mo

**Steelcraft Mfg Co 9017 Blue Ash Rd Ros-
smoyns O**

**Steel Door Corp 359 S Jessie St Pontiac
Mich**

Steel Partitions Inc Box 45 Jamestown N Y
Steel Scaffolding Co Inc 856 Humbolt St
Brooklyn 22 N Y

Steel Wall Tile Co 829 N Milwaukee Ave Chicago Ill
Steel Window Prods Co 175-34 Hillside Ave Jamaica 3
N Y

Steel & Wire Prods Co 217 S Central Ave Baltimore Md
Stemco Corp 12117 Berea Rd Cleveland 11 O

Stemm Bros Inc Leavenworth Wash
Stentz Nipples Inc 285 Ocean Ave Jersey City N J

Stensgaard (W L) & Associates Inc 346 N Justice Chicago
Ill

Stevens-Adams Mfg Co 274 Ridgeway Ave Aurora Ill
Stephenson (L) Co Wells Mich

Stephenson Mfg Co 230 E Tust St South Bend Ind
Sterling Bldg Co 4846 W Lake Chicago Ill

Sterling Foundry Co 8 Wallace Sterling Ill
Sterling-Freeland Industries Inc 4701 N Western Ave Chi-
cago 22 Ill

Sterling Grinding Wheel Div Cleveland Quarries Co 1430
Broad St Tiffin O

**Sterling Hardware Mfg Co 2345 Nelson St
Chicago 18 Ill**

Sterling Motor Truck Corp Inc 2021 S 54th St Mil-
waukee 1 Wis

Sterling Paint & Varnish Co 184 Commercial Madison Mass
Sterling Tool Prods Co 1363 E 96th St Chicago 11 Ill

Sterling Wheelbarrow Co 7036 W Walker Milwaukee 14
Wis

Sterling Windows Inc 369 Lexington Ave New York 17 N Y
Stetson Iron Machinery Co 3202 First Ave S Seattle 4
Wash

Stevens Advertising Agency Inland Bldg Indianapolis 4 Ind
Stevens (K A) Level Co Newton Falls Ohio

Stevens Mfg Co South Bend Ind
Stevens Plywood Corp Stevens Wash

Stevens (C) Minneapolis Minn
Stewart (E A) Lumber Co Texarkana Tex

Stewart Hartman Co 250 Fifth Ave New York 1 N Y
Stewart Iron Works Inc Box 1036 Cincinnati 1 O

**Stewart Mfg Co 3209 E Washington St In-
dianapolis Ind**

Stewart Motor Corp Buffalo N Y
Stewart-Warner Corp 1825 W Diversey Chicago 14 Ill

Stewart (H A) Co 140-174 Portland St Boston 14 Mass
Stillwater Clay Prods Co 3334 Prospect Ave Cleveland
16 O

Stillwater Mfg Co Stillwater Minn
Stimel Winch Co 37-24 35rd St Long Island City 1 N Y

Stinson Lumber Co Owensboro Ky
Stinson Mill Co Vernon Pl & Shiloh Ave Seattle 7
Wash

Stoddard Lumber Co Baker Oregon
Stokes Lumber Co San Francisco 5 Calif

Stokermatic Co 1610 S Industrial Salt Lake City 4 Utah
Stokol Stoker Co Inc 1145 E 22nd St Indianapolis 7 Ind

Stone (F H) Lumber Co Columbia Falls Mont
Stone Creek Brick Co Stone Creek O

Stone (J E) Lumber Co Nacogdoches Tex
Stone (W H) 729 S 21st St Milwaukee Wis

Stone Machinery Co Stone Ridge Manlius N Y
Stonhard Co 1306 Spring Garden St Philadelphia 23 Pa

Stonhard Waterproofing Mfgs Inc 212 Commerce Bldg Kal-
amazo Mich

Stop-Bust Co Box 494 Chattanooga Ten
Stor-Field Inc 247 Fifth Ave New York N Y

Store Engineering Co Youngstown O
Store Kraft Mfg Co Beatrice Neb

Storv (W M) Lumber Co Winston-Salem N C

Storm Windows of Aluminum Inc Marion O
Storm (Albert) & Co 101 Park Ave New York 17 N Y

Stortz (Louis) & Sons Inc 210 Vine St Philadelphia Pa
Stotter Wallpaper Mills Crystal Lake Ill

Stoughton Cab & Body Co Stoughton Wis
Stout Homes 701 Stephenson Bldg Detroit 2 Mich

Stover Steel Tank & Mfg Co Freeport Ill
Stoware Inc Stowe Vt

Stowell-McGrory Co Mill & 3rd Sts Dixfield Me
Stowers Lumber & Mfg Co Harrison Tenn

**Stran-Steel Prods Co 758 E Kent Rd St
Louis O**

**Stran-Steel Div Great Lakes Steel Corp
Tucumseh & Escore Escore 29 Mich**

**Strand Garage Door Div Detroit Steel Pro-
ducts Co 3101 Griffin St Detroit 11 Mich**

Strattonest Co 14000 Grand River Ave Detroit 27 Mich
Strawmather Shower Corp 51 E 42nd St New York N Y

Strattonest Corp 51 E 42nd St New York N Y
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Tagliabue (C) Corp 614 Frelinghuysen Newark 5 N J
 Talk-A-Phone Mfg Co 1512 S Pulaski Chicago III
 Tallman Mfg Co Nilesville Ill
 Talman Robbins & Co 214 W Superior Chicago Ill
 Tamblin Systems 1115 S Pearl St Denver Co
 Tamko Asphalt Prods Inc Joplin Mo
 Tanna Industries Inc 221 N LaSalle St Chicago I Ill
 Tangloft Co Grand Rapids 4 Mich
 Tannowitz Wm 201 Park Ave NW Grand Rapids 4 Mich
 Tappin Mfg Co New Britain Conn
 Tappan Steel Co Mansfield O
 Tartar Webster & Johnson I Montgomery San Francisco Calif
 Tavant Co Ltd 15134 S Oriana Box 62 Paramount Calif
 Taylor Bedding Mfg Co Taylor Tex
 Taylor-Colombini Co Spartanburg S C
 Taylor-Glede Co Webster Mass
 Taylor (Halsey W) Co 1259 N Park Ave Warren O
 Taylor James L J Mfg Co 1123 Parker Ave Poughkeepsie N Y
 Taylor Instrument Co Olson & Ames St Rochester N Y
 Taylor Leek Co 2934 W Leighton Philadelphia 32 Pa
 Taylor (L S) Mfg Co 849 Marietta St Atlanta Ga
 Taylor Machine Wks Louisville Miss
 Taylor & Newcomb Inc Cantonville-Baltimore 28 Md
 Taylor (R L) Inc 12482 Evergreen Bldg Dn 23 Mich
 Taylor (S G) Chain Co Box 509 Hammond Ind
 Taylor-Selouff Co Spartanburg South Carolina
 Taylor-Stiles & Co I Bridge St Ringlesville N J
 Taylor Stone Co McHenry O
 Technical Appliances Corp 1 Van Ave Shirburne N Y
 Technical Development Laboratories Tenafly N J
Technical Glass Co Inc 2050 E 48th St Los Angeles Calif
 Technical Oil Div South Tex Cotton Oil Co Houston Tex
 Technical Supply Co 1911 University Ave Palo Alto Calif
 Tel-Post Co 140 Ash St Akron O
Temco Inc 4104 Park Ave Nashville Tenn
 Tempo Lumber Co Pinebluff Tenn
 Temponation Hetherington Co Portland 5 Ore
 Temption Kenly & Co 1020 S Central Chicago 44 Ill
 Tennant (G H) Co 2544 N Second St Minneapolis 11 Minn
Tennessee Coal Iron & Railroad Co 20th St at First Ave Birmingham Ala
 Tennessee Eastman Corp Kingsport Tenn
 Tennessee Enamel Mfg Co Tocco Station Nashville 9 Tenn
 Tennessee Line Equip Co Elizabethton Tenn
 Tennessee Prod & Chemical Corp American National Bank Bldg Nashville 3 Tenn
 Tennessee State Inc Knoxville Tenn
 Tennessee State Wks Chattanooga Tenn
 Tennessee Valley Assn Marketers Nashville Tenn
 Tepler Appliances Inc Cincinnati O
 Terminal Co 3567 Rigdon Blvd Pittsburgh 13 Pa
 Terrell Lumber Co Grants Pass Oregon
 Terrell Lumber Co Grants Pass Oregon
 Terrill (D H) Saw Co Ranor Mo
 Tesco Chemicals Inc Atlanta Ga
 Tesco Inc Tulsa Okla
 Teslor Chemical Co 500 Buckhee Rockford Ill
 Texas Brick Co Brownwood Tex
Texas Co 135 E 42nd St New York 17 N Y
 Texas Crumbing Co Water St Orange Tex
 Texas Fence Co Dallas Tex
 Texas Lumber Co New Willard Tex
 Texas Housing Co 9001 Denton Dr Dallas 9 Tex
 Texas Sheet Metal Co 19 Goodrich St Akron 11 O
 Texas Vermiculite Co Austin Tex
 Texark Flooring Co Crockett Texas
 Textile Colors Div International Paper Co Plant Dr Fair Lawn N J
 Textile Industries Inc 5101 Lorraine St Detroit Mich
 Thabet Mfg Co 200 Huron St Detroit 4 O
 Thatcher Furnace Co Center St Garwood N J
 Thayer Foundry Co Atchison Kan
 Thayer Portable House Co Keosauqua N C
 Therman Electrical Mfg Co 5119 District Blvd Los Angeles Calif
 Thermo Metal Prods Inc New London Conn
 Thermal Co 45 W Durtum St Philadelphia 19 Pa
 Thermoid Co 400 Whitehead Rd Trenton N J
 Thermo-Rite Mfg Co 49 Goodrich St Akron 11 O
 Thro Shovel Co 1000 E 24th St Lorain O
 Thimney Pulp & Paper Co Thimney Bld Kaukauna Wis
 Thielstraetm Lumber Co Opelesnes La
 Thomas & Associates Inc Minneapolis 11 Minn
 Thomas Lumber Co Windfield La
 Thomas Lumber & Mfg Co Quincy Fla
 Thomas Moulding Floor Mfg Co 195 W Wacker Dr Chicago 1 Ill
 Thomas Products Co 8490 Lynden Ave Detroit 21 Mich
Thomason Plywood Corp Fayetteville N C
 Thomas & Proctor Lumber Co 3404 N Hall St St Louis 7 Mo
 Thomas Sanitary Prods Co Akron O
 Thomas Truck & Cater Co 2331 Mississippi River Keokuk Iowa
 Thompson (George E) Co 616 41st Ave N Minneapolis Minn
 Thompson-Katz Lumber Co Memphis Tenn
 Thompson Maloney Co Edmund & High Sts Philadelphia 36 Pa
 Thompson (O E) & Sons 400 N River Ypsilanti Mich
 Thorp Corp 54th & Central Bld Chicago 10 Ill
 Thorn (J S) Co Allegheny Ave & Twentyfirst St Philadelphia 32 Pa
 Thornton (L M) Mfg Co 2821 E 18th St Kansas City Mo
 Throat-Ezy Mfg Co Cornua Mich
Thrush (H A) Co Peru Ind
 Thurston-Flaxell Ltd Peru Moody B Can
 Thurston (E T) & Sons 1001 E 18th St
 Thurston Lbr Co 7199 B St Canada
 Thyer Lumber & Box Co 2198 Douglas Bld West Toledo O
Thyer Mfg Corp Pollman Homes Div 2657 Wayne St Toledo 9 O
 Tibbals Flooring Co Nevada Tenn
 Tiffin Art Metal Co Tiffin 16 O
 Tilden Tool Mfg Co 1895 N Fair Oaks Blvd Pasadena 3 Calif
 Tile-Tex Div Cleveland 4 O
 Tile-Tex Div Flintkote Co 1200 McKinley Ave Chicago Heights Ill
 Tiltonone Co 2323 N Wayne Ave Chicago Ill
 Tiltette Cement Co Inc 401 Lafayette St New York 3 N Y

Tilly (John S) Ladden Co 112 South St Watervliet N Y
 Tilt-A-Door Corp 408 Nine Mile Road Detroit 20 Mich
 Timbman 3253 Glasgow Detroit 10 Mich
 Time Engineering Co 1319 15th St NW Washington 9 D C
 Timberline Inc Duffield Me
 Timber Prods Co Modford Ore
 Timberstone Decorative Co New York 10 N Y
Timber Structures Inc Box 3782 Portland 8 O
 Timon Prods Co Box 206 538 Yearling Bld Columbus 9 O
Timken Silent Automatic Div Timken-Detroit Axle Co 100 Clark St Jackson 32 Mich
 Timm Industries Inc 5245 San Fernando Rd Los Angeles 39 Calif
 Timmerman Prods Inc 2018 Fulton Rd Cleveland 13 O
 Titan Mfg Co Inc 290 Terrace Buffalo 2 N Y
 Titan Knut Pine Mill Bedford Ore
 Tiwald Hanger Co 1450 E 57th St Chicago Ill
 Tobey Mfg Corp 1221 E Segunda St San Jose Calif
 Todd Bros Inc 2600 Richmond Terrace Staten Island 3 N Y
 Todd Co Inc Rochester 3 N Y
Toledo Desk & Fixture Co Maumee O
 Toledo Interlocking Brick 2600 Lagrange St Toledo 12 O
 Toledo Pipe Threading Machine Co 1431 Summit St Toledo 1 O
 Toledo Plate & Window Glass Co 1041 Ulmer St Toledo O
 Toledo Pressed Steel Co 399 Phillips Ave Toledo 14 O
 Toledo Scale Co 1009 Telegraph Bld Toledo 12 O
 Toledo Advertising Co Broadway & Washburn Bld Toledo Ohio
 Tomber Tool & Engineering Co 740 N Washington Ave Minneapolis 1 Minn
 Toolkraft Corp Plainfield N J Springfield 1 Mass
 Toolring Lumber Co Marion N Y
 Tool Clock Co Inc 1409 Grove St Mt Vernon N Y
 Toolring Mfg Co 70 Franklin St Torrington Conn
 Topp-Plate Corp 1746 Seabright Ave Long Beach Calif
 Topp River Bridge Co Silver Lake Wash
 Tower (R J) Iron Works Greenville Mich
 Towner Corp 1225 E 152nd St Cleveland 10 O
 Towering Iron Works 1225 E 152nd St Cleveland 10 O
 Tracticon Co Box 728 Milwaukee 1 Wis
 Tractorline Corp Deerfield Ill
Tracey Mfg Co 3125 Probie St Pittsburgh 12 Pa
Trade-Wind Motors Inc 5725 S Main St Los Angeles 37 Calif
 Tradeville Co Cincinnati 9 O
 Trade Co LaRue Wyo
 Trade Slacks Co 45 W 27th St New York N Y
 Trade Lumber Co Portland O
 Treat-Nantle Co Inc N Tonawanda N Y
 Treaster (John) Steam Carpet Wks Memphis N Y
 Treco Industries Box 211 Red Oak Tex
 Tremon Mfg Co 5701 Klusman Rd Cleveland O
 Tremont Lumber Co Joyce La
 Tremont Nail Co 121 Elm St Wareham Mass
 Treon Inc 5090 Wild St Philadelphia 27 Pa
 Trenton Pipe Nipple Corp Trenton N J
 Trenton Porters Co Trenton N J
 Trenton Rubber Mfg Co Trenton N J
 Trezle Mfg Co Lockport N Y
 Trevo Prods 604 Hartford Buffalo 23 N Y
 Tri-Color Condit & Cable Co Jersey Ave New Brunswick 12 Wis
 Tri-Flex Mfg Co Jung & Andrew Milwaukee 12 Wis
 Tri-Lo Mfg Co 1421 E 24th St Cleveland O
 Trimble & Fink Mfg Co Baltimore 1 Md
 Trimledge Inc 4021 Manning Youngstown 1 O
 Trion Corp Subsidiary of Trenton Steel Wks Inc 2801 Market St Seattle 7 Wash
 Trina Co Inc Merchandise Mart Chicago Ill
 Trinit Mfg Corp 6420 Ferris New York 91 N Y
 Triner Sealed & Mfg Co 2716 W 21st Chicago Ill
Trinity Portland Cement Div General Portland Cement Co 111 W Monroe St Chicago Ill
 Tris Lumber Co Eugene Ore
 Trison Inc 1000 Island Ave McKees Rock Pa
 Triplett Lumber Co Inc Lorain N C
 Triple-X Chemical Laboratories 2603 S Calumet Chicago 25 Ill
 Triplex Heating Specialties Co 242-68 Grant St Peru Ind
 Trivler Corp 5200 Grand Ave Cleveland 5 O
Tri-Saw Corp 6611 Clayton Road St Louis 17 Mo
Tri-State Big Materials Co Inc 708 Nell P Anderson Bldg Box 1476 Fort Worth 2 Tex
 Tri-Tren Heater Co 40 Howard St Somerville 14 Mass
 Tri-Tron Products & Mfg Co 1809 W Roscoe Chicago 13 Ill
 Tri-Tro Crete Lumber Co Trent Creek Mich
 Troy Shovelage Co Grant and Scott Sts Troy O
 Truckett Co Union Commerce Bld Cleveland 14 O
 Trucking Corp North Ridge Cleveland O
Truline Developments 9155 Sunset Boulevard West Hollywood 46 Calif
 Trumbull Electric Mfg Co Plainville Conn
 Truscon Laboratories Div Devoe & Reynolds Inc Caniff St Great Truck Bldg Detroit 15 Mich
Truscon Steel Co Sub Republic Steel Corp C100 Truscon Ave Youngstown 1 O
Truscon Steel Co Pressed Steel Div Youngstown O
 Trussitt Div Siemens Bro Inc 2575 W Como Ave St Paul 5 Minn
T & S Brass & Bronze Works Inc 121 E Second St Minneola I N Y
 Tuba Cordeiro Co 104 Sycamore St San Francisco Calif
 Tucker-Dorsey Mfg Corp 2159 Fletcher Ave Indianapolis 6 Ind
 Tucker Duck & Rubber Co 2525 Ganison St Fort Smith Ark
 Truck Mfg Co Breckton 39 Mass
 Tuck Wm Slaps Inc 41 Union Point Lockport N Y
 Tuffco Inc Inc 533 Yearling Bldg Des Moines 9 Iowa
 Tuffin Inc 80-80 S 24th St Pittsburgh 3 Pa
 Turner Brass Wks Steamtown Ill
 Turner Bros Bladen N C
 Turner Bros Co 400 Magna La
 Turner Machinery Co 500 Beale St San Francisco 5 Calif

Turner Mfg Co Statesville N C
Turner & Seymour Mfg Co Lawton St Torrington Conn
 Turner & Stanton Co Box 25 Norwich Conn
 Tuttle & Bailey Inc 1706 Corbin Ave New Britain Conn
 Tuttle's Tile-On Cement Co Chicago Ill
 Twentyfirst Century Paint & Varnish Co 456 Driggs Ave Brooklyn 11 N Y
 Twentyfirst Century Prods Inc Provia Ill
 Twin-Brush Corp Clarksville Tenn
 Twin City Brick Co 1307 Maxwell Ave St Paul 4 Minn
 Twin City Hardware Lumber Co 509 N Cleveland Ave St Paul 4 Minn
 Twin City Shingle Co Centralia Wash
 Twin City Tank Sibs & Specialty Co 38th Ave NE & Fifth St Minneapolis 1 Minn
 Twin City Shingle Co Kaniash Idaho
 Twin Harbors Lumber Co Aberdeen Wash
 Twin Harbors Lumber Co Raymond Wash
 Twin-Tite Truck Co Box 11 St Bernard Cincinnati 17 O
 Type Plywood Co Beaver Wash
 Tygh Valley Lumber Co Portland Oregon
Tylos Co Monticello Ill
 Tyner Friction Co Niles Mich
 Tyler & Hipsbach Glass Co 2949 N Paulina Chicago 13 Ill
 Tyra (E K) Co Forest Lake Minn

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Uarco Inc 5000 S California Chicago 32 Ill
 U-Bild Enterprises Van Nuys Calif
 Utah Pine Lumber Co Pater Valley Calif
 Utah Knit Co Inc 176 Broadway New York N Y
 Umpqua Plywood Corp Roseburg Ore
 Uradilla Sibs Co Uradilla N J
 Underwood Veneer Co - Vancouver
 Unexcelled Chemical Corp 11 Park Pl New York 7 N Y
 Uniflow Mfg Co 1525 E Lake Rd Erie Pa
Union Aluminum Co Sheffield Ala
 Union Clay Mfg Corp Deer Road Birmingham N Y
 Union Claxon Co Lowell Mass
 Union Fork & Hoe Co 400 Hooking Ave Columbus O
 Union Hardware Co Torrington Conn
 Union Insulating Co Inc Parker Rd Parkersburg W Va
 Union Lumber Co Crocker Bldg San Francisco Calif
 Union Mfg & Gauge Co Syracuse 1 N Y
 Union Metal Mfg Co 1400 Maple Ave NE Canton 5 O
 Union Rubber & Asbestos Co Allen & Donahoe Trenton N J
 Union Roll Sheet Corp Church & Railroad Sts Le Roy N Y
 Union Steel Prods Co 212 N Barton St Albion Mich
 Union Tool Co Orange Mass
 Union Twist Drill Co Monroe St Athol Mass
Unique Balance Corp 200 E 134th St New York 17
 Unique Mfg Co Inc 221 W Walton Chicago Ill
 United Prods Co 1013 W Washington Bldg Chicago 7 Ill
 Uni-Plate & Shovel Corp 6504 W Burnham St Milwaukee Wis
 United Brick & Tile Co 903 McGee Kansas City Mo
 United Brush Mills 116 Woodmont New York N Y
 United Cement Prods Co Wichita Kan
 United Gilslette Laboratories 1396 Jefferson Ave Scranton Pa
 United Home Building Plan Review Shreveport La
 United Industries Inc 231 S LaSalle Chicago Ill
 United Laboratories Inc 16801 Euclid Ave Cleveland 18 Ohio
 United Lumber Mfg Corp 1001 W Elizabeth Ave Linden N J
 United Materials & Richmond Brick Co Ltd Point Richmond Calif
 United Metal Box Co Inc 168-186 Seventh St Brooklyn 15 N Y
 United Metal Prods Inc 865 S High St Akron 11 O
 United Plastic Tile 855 Commonwealth Ave Boston 18 Mass
 United Screw & Bolt Corp Cleveland Div 3590 W 58th St Cleveland 2 O
 U S Air Compressor Co 5300 Harvard Ave Cleveland O
 U S Air Conditioning Corp 3302 Como Ave SE Minneapolis 14 Minn
 U S Challenge Co 134 N La Salle St Chicago Ill
 U S Clifton Filter Mfg Co Bloomington Ill
 U S Die Casting Co Elgin O
 U S Electrical Tool Co Industry & Western Ave Cincinnati 14 O
 U S Expansion Bolt Co 25 State St & PRR York Pa
 U S Glass Co Tiffin Ohio
 U S Gotta Petcha Paint Co Dudley & Eddy Sts Providence R I
 U S Gypsum Co 300 W Adams St Chicago 6 Ill
 U S Hardware & Mfg Co Pawtucket R I
 U S Home Inc Marietta Ga
 U S Instrument Corp 407-11 Broad St Summit N J
 U S Kalsomine Co 50 Church New York N Y
 U S Life-Ray Co Dayton O
 U S Lumber & Hardware Co 950 Hamilton Columbia Pa
 U S Machine Corp Walnut & Carl Sts Lebanon Ind
U S Mengel Plywoods Inc Louisville 1 Ky
 U S Mineral Wool Co St Matthews Wis
U S Plywood 85 W 44th St New York 10 N Y
 U S Sizing Tire Co 110 E 42nd St New York N Y
 U S Radiator Corp Buhr Bldg Detroit 31 Mich
 U S Register Co Jones & Pearson Battle Creek Mich
 U S Rock Wool Co Salt Lake City Utah
 U S Rubber Co 1230 Ave of the Americas New York N Y
 U S Rubber Co Mishawaka Ind
 U S Sanitary Mfg Co Pittsburgh Pa
 U S Sanitary Specialties Corp 1091 S California Ave Chicago 12 Ill
 U S Savings Loan League 221 N LaSalle St Chicago Ill
U S Sliding Door Corp 404 E 108th St New York 20 N Y
 U S Steel Co 525 William Penn Plaza Pittsburgh 30 Pa
 U S Steel Tool 228 Rockefeller Plaza New York 20 N Y

F S Stonecar Co 5500 E Tallmadge Ave Akron 9 O
**United Steel Fabricators Inc 333 Gasche St
Wooner 0**

United Steel & Wire Co 437 Downs Ave Battle Creek Mich
United Text & Awning Co 759 N Spring St Los Angeles Calif

United Tubing & Lumber Co Memphis Tenn
United Wallpaper Inc 222 W N Rank Drive Chicago Ill
United Wire Goods Mfg Co Inc 1152 Broadway New York N Y

Uni-Therm Prods Co Elyria O
Unit Structures Inc Poughkeepsie N Y

**Universal Atlas Cement Co 100 Park Ave
New York 17 N Y**

Universal Battery Co 3410 S LaSalle Chicago Ill
Universal Blower Co 1990 S Adams Birmingham Mich
Universal Bottle Gas Co Rochester N Y
Universal Clay Mfg Corp Birmingham N Y
Universal Concrete Pipe Co Inc High & Main Sts Columbus 15 O
Universal Drafting Machine Co 790 Lorain Ave Cleveland 2 O
Universal Engineering Corp 639 West "C" Ave Cedar Rapids Iowa
Universal Lgtg Co 3401 W Division Chicago Ill
Universal Fabricating & Mfg Co Emd Ohio
Universal Fabricators 1801 Boone Ave Bronx N Y
Universal Fixture Corp 32-35 47th Long Island City 1 N Y

**Universal Form Clasp Co 1230 N Kostner Ave
Chicago 51 Ill**

Universal Hosiery & Mfg Co Cedar Falls Iowa
Universal Insulation Co Van Wert O
Universal Mfg Corp W New Castle Zellebue Pa
Universal Motor Co 3224 Universal Dr Oklahoma City
Universal Plan Service Portland 4 Ore
Universal Roller Screen Co 4929 W Kinzie Chicago Ill
Universal-Rundle Corp Caruthers St New Castle Pa

Universal Sanitary Mfg Co New Castle Pa
Universal Sewer Pipe Corp 1500 Union Commerce Bldg Cleveland O
Universal Steel Engrg Corp 32-35 47th Ave New York 1 N Y
Universal Tamper Inc Peoria Ill
Universal Venturi Blnd Co 215 S Harlem Chicago 8 Ill
Universal Window Co 950 Parker St Berkeley 10 Calif
Unit Ventilator Co Cripplestone Station Saguenay Mass

Upton Co 43 Upton Pl Lockport N Y

Upton-Walton Co 1256 W 11th St Cleveland 13 O
Utica Sales Corp 350 Fifth Ave New York 1 N Y
Utica-Lumber Co Utica La
Utah Fire Clay Co Salt Lake City Utah
Utah Pottery Prods Co Salt Lake City Utah
Utah Radiator Corp 2222 Dwyer Ave Utah 2 N Y
Utah Aqueduct Corp 4851 S Alameda St Los Angeles 11 Calif
Utah Cabinet Co Los Angeles 3 Calif
Utah Trailer Mfg Co 3995 Meadow St Los Angeles 54 Calif
Utah Rock Asphalt Co Box 531 San Antonio Tex

V

Vacriol Products Corp 2467 Penn Ave Memphis 9 Tenn
Vaccini Sales Co Little Rock Ark
Valentines & Co 11 E 36th St New York N Y
Valentine Engrg Co 541 W Washington Chicago Ill
Valley Porting Co Verona Pa
Valley Metal Prods Marcellus Ill
Valley Metal Prods Co Plainwell Mich
Valley Welding & Boiler Co 1601 Water St Bay City Mich
Van Cleef Bros Inc 7809 S Woodlawn Chicago Ill
Vanconer Plywood Box 729 Vancouver Wash
Van Deuse Lumber Sales Corp Portland Ore
Van Dorn Electric Tool Co 600 E Pennsylvania Ave Towson 4 Md

Van-Packer Corp 209 La Salle St Chicago 4 Ill

Van Vleet Lumber Co Rainier Ore
Vaporine Co 216 W Kinzie Chicago Ill
Varrar Inc Merchandise Mart Chicago 54 Ill
Vanguard & Bottling Mfg Co 135 S LaSalle St Chicago 3 Ill
Vendo Co 7400 E 12th St Kansas City 3 Mo
Vener Prods Co Mofford Ore
Venetian Blind Corp Los Angeles Calif
Vent-A-Hood Co 1907 Plantation Dr Dallas 9 Tex
Venitile Corp 5536 Blumensd Blvd Miami Fla
**Vento Steel Prods Co Inc 250 Colorado Ave
Buffalo N Y**

Verd-A-Ray Corp Toledo O
Verdigris Valley Vitified Brick & Tile Co Neodesha Kan
Verlex Sales Inc Los Angeles Calif
Vermiculite Prods Corp Washington D C
Vermiculite Prods Inc Kansas City 6 Kan
Vermiculite Prods Inc Houston Tex
Vermont Marble Co Proctor Vt
Vermont Shade Roller Co Burlington Vt
Vermont Soapstone Co Perkinsville Vt
Vermontone Tool Div Metex Corp 338 W Lincoln Ave Mt Vernon N Y

Vestal Lumber & Mfg Co Knoxville Tenn
Vestal Stone Co Building Specialties Div Snowwater Tenn
Victor Adding Machine Co 3900 N Rockwell St Chicago Ill
Victor Electric Prods Inc 2950 Robertson Dr Cincinnati O
Victor Engineering Corp Green Lane & Wilson Ave Bristol Pa
Victor Prods Corp Hagerstown Md
Victor Sew Works Inc 19 Cottage Place Middletown N Y
Victor Specialties New Rochelle N Y
Viking Air Conditioning Corp 5001 Walworth Ave Cleveland 0
Viking Mfg Corp 1747 Chester Ave Cleveland 14 O

Vikon Tile Co Washington N J

Vikre (J N) Co 3018 14th St N Minneapolis Minn
Vim Car Sales Co 3001 E Pers St Los Angeles Calif
Virginia Metal Prods Corp 1000 E 13th St N Y
Vinton (R A) Lumber Co Greenwood Minn
Virgonum (Lore) Lumber Co Inc Columbus 8 O

**Virginia Metal Prods Corp 80 Hudson St
New York 13 N Y**

Virginia Oak Flooring Co Palucki Va
Virginia Perlite Co Randolph Hopewell Va
Visiting Corp Merchandise Mart Plaza Chicago 38 Ill
Vitrified Wazed Co Emery St Westfield Mass
Vita Automatic Windows Inc 101 Park Ave New York 17 N Y

Vital Mfg Co 7500 Quincy Cleveland 4 O
Vita-Var Co 1180 Raymond Blvd Newark N J
Vitroson Steel Prods Wks 3650 E 93rd St Cleveland 5 O
Vitrified Wazed Co Emery St Westfield Mass
Vitro Mfg Co 60 Greenwood Dr Pittsburgh 4 Pa
Vixies Tool Co 87th & Koster Sts Cleveland O
Vogue Mfg Co Ft Wayne Ind
Vogue Venetian Blind Co Los Angeles 46 Calif
Vulker (Williams) & Co Inc 239 Main St Kansas City Mo
Voltrath Co Sheboygan Wis
Von Stern (John H) Co Beatrice Neb
Vonnung Moulder Corp Madison Ave at Caven St Indianapolis 2 Ind

Voon Co New Haven Conn
Vorlar Co Rutherford N J
Vortice Mfg Co Danvers Iowa
Vose (J P) Lumber Co Dubuque Ia
Vredenburg Saw Mill Co Vredenburg Ala
Vrederick Corp 1300 Eastern Royal Oak Mich
Vulcan Electric Co 88 Holten St Danvers Mass
Vulcan Iron Wks Co 1423 Stout St Denver 2 Col
Waddell Co Greenwood O

**Walden Radiator Co 26 Francis Ave Harford
Conn**

Walden Tool Mfg Co 140 Liberty St Quincy 69 Mass

W

Wage Electric Inc 54 Park Pl New York 7 N Y
Wahash Paper Co Terre Haute Ind
Wahash Screen Door Co 310 S Michigan Chicago 4 Ill
Wahlberg Co Greenwood O

**Wadsworth Homes 6011 Johnson Drive Mission
Kan**

Wadsworth Howland & Co 141 Federal Boston Mass
Wadsworth & Irwin Inc 123 NE Oregon St Portland 14 Ore
Wagner Aiming & Mfg Co Scranton & Barber Aves Cleveland 1 O
Wagner Electric Corp 6410 Plymouth Ave St Louis 14 Mo
Wagner Mfg Co Stamford Conn

Wagner Mfg Co Cedar Falls Iowa

Waldo Harwood Co Waldo Ark
Waldorf Heater Co Philadelphia 2 Pa
Wals Lumber Co Spokane 8 Wash
Walker-Gordon Laboratory Co Plainsboro N J
Walker Lumber Co McMinville Tenn

**Walker-Turner Div Kearney & Trecker Corp
639 South Ave Plainfield N J**

**Wallace (J D) & Co 134 S California Ave
Chicago 12 Ill**

Wall Lumber Mfg Co Sultan Wash
Wallace Mfg Co 10th & Fayette N Kansas City Mo
Wallace Mill & Lumber Co Paramount Calif
Walled Lake Door Co Walled Lake Mich
Wallin Lumber Co Columbus Miss
Wall (P) Mfg Co 290 Erie St Grove City Pa
Wallace Refractories Corp Oak & Ferry Sts St Louis 7 Mo
Wallers Mfg Co 136 Pennsylvania Ave Oakmont Pittsburgh Pa

Walshall Lumber Co Hammond La
Walton Lumber Co Everett Wash
Walton Plywood Co Everett Wash
Walton Lumber Co 42nd St New York 17 N Y
Ward (Edgar T) Industries Inc 820 S Pulaski Rd Chicago 2 Ill
Ward La France Truck Corp 1950 Ward St Elmira N Y
Wardlow & Jordan National Market Reqs 723 Union Arcade Ridg Davenport Iowa
Ward Lumber Co Milwaukee Wis
Ward Refrigerator & Mfg Co 6501 S Alameda Los Angeles Calif
Wardwell Mfg Co 2164 Fulton Rd Cleveland 9 O
Ward Laboratories 1827 Delaware Pkwy Miami Fla
Warm Springs Lumber Co Warm Springs Ore
Warner Co 219 N Broad St Philadelphia 7 Pa
Warner Lumber Co Asheville N C
Warner Mfg Co 1001 16th Ave SE Minneapolis 14 Minn
Warner Ventilator Co Spring at Frank Sts La Grange Ind
Warner Products 8418 S Ashland Chicago Ill
Warp Bros 1104 N Cicero Chicago 51 Ill
Warr Co Atlanta Ga
Warren Bldg Sawing Washers Co Detroit Mich
Warren (J D) Mfg Co Montpelier O

**Warren-Knight Co 138 N 12th St Philadelphia
7 Pa**

Warren-Lamb Lumber Co Rapid City S Dak
Warren Shale Co Inc 2907 E Hennipin Ave Minneapolis 13 Minn
Warrenton Shingle Co Toledo Ore
Warren Works Corp 195 W Adams Chicago Ill
Warren Venetian Blind Co Minneapolis 13 Minn
Warren Tool Co 1943 Dye St Wheeling W Va
Washburn Flaming Co 298 Elm Cambridge Mass
Washburn Co Gordon Bldg Worcester Mass

Wash Co Inc 729 N Bowman Ave Danville Ill
Washington Brick & Lime Co Spokane Wash
Washington Door Co Tacoma Wash
Washington Iron Wks Seattle 4 Wash
Washington Mfg Co Tacoma 3 Wash
Washington Shingle Co Anacortes Wash
Washington Steel Prods Inc E 11th St Tacoma Wash
Washington Stone Wks Everett Wash
Washington Veneer Corp Box 33 Olympia Wash
Washington Woodcraft Co Washington N J
Water Engineering Inc Cleveland 13 O
Waterbury Foundry Co Waterbury Conn
Waterbury Rope Co Inc 400 Park Ave Brooklyn N Y
Waterbury Tank Co 200 Fifth Ave New York N Y

**Waterhill Boilers Inc 154 Ogden Ave Jersey
City N J**

Waterhill Sales Co Cleveland 18 O
Waterloo Div Empire Varnish Co 2636 E 76th St Cleveland 4 O
Waterman-Waterbury Co 1121 Jackson St NE Minneapolis 13 Minn
Watson Co 1443 Main Buffalo 9 N Y
Watson (Geo E) 417 S Washburn Ave Chicago Ill
Watson Sales Mfg Co Kansas City Mo
Watson-Townsend Co Watsontown Pa
Waukesha Motor Co 1945 Jay-Vee Dr Waukesha Wis
Wauwa Lumber Co Wauwa Ore
Wax Lumber Co Woodville Miss
Way Impactor Inc 12 N Third St Columbus 15 O
Waytie Co 102 W Madison St Chicago 2 Ill
Wayne Agricultural Wks Inc Box 1006 Goldsboro N C
Wayne Chemical Prods Co 9501 Copeland Ave Detroit 17 Mich
Wayne Home Engrg Co 801 Glasgow St Fort Wayne Ind
Wayne Mfg Co 5074 Western Detroit Mich

Weatherbest Corp N Tonawanda N Y

Weatherbest Buildings Inc 255 Chandler St Buffalo 7 N Y
Weather-Proof Co 1409 E 40th St Cleveland 3 O
**Weatherproof Prods Corp Waldo St P O
Box 8490 Kansas City 5 Mo**

Weather Seal Co 10 E Pearl St Cincinnati 2 O
Weather Seal Inc 24 W Huron St Hartford 0
**Weather-Vane Corp 611 S Flower St Burbank
Calif**

Weaver-Beach Co Scottsville N Y
Webb Belling & Supply Co 1501 W 12th St Kansas City 7 Mo
Webb (Geo B) 8901 Alpine Ave Detroit 4 Mich
Webb Mfg Co 211 Main Rd Concord O
Webb Prods Co Inc "G" & Columbia Sts San Bernardino Calif
Webb Electric Co Selmetary N Y
Webb-Knapp Co 1919 Chadwick St Jamestown N Y
Webb Showers & Fixture Co 3700 Avalon Blvd Los Angeles Calif
Webber Veneer & Plywood Co Shawano Wis
Webbs Steel Corp 120 Broadway N Y
Webster Electric Co Clark & DeKoven Sts Racine Wis
Webster (H E) Lumber Co Kansas City 6 Mo
Webster (Warren) & Co 17th & Federal Sts Camden 5 N J
Webster (W F) Cement Co 224 Thierlocke Cambridge 41 Mass
Webb-McLain Co 641 W Lake St Chicago Ill
Weiner (H C) Lumber Co Wilkes-Barre Pa
Weiner (Henry) Mfg Co 941 Oak St Elkhart Ind

Web-Bin Prods Co Box 95 Memphis 1, Tenn

Webb (Henry) Co 17-18 Peachtree Ave Marietta N Y
Webb Co 952 Addison St Chicago 13 Ill
Webb Bull Mfg Co State Hwy 2239 nr Chimney Rock Crossing Bound Brook N J
Webb Paper Co 1444 E 49th St Cleveland 3 O
Wells (Frank B) Co Bristol N H
Wells (J W) Lumber Co Menominee Mich
Wells (J W) Lumber Co of Ala Montgomery 1 Ala
Wells Lamp Corp 106 Carroll Buffalo N Y
Wells Lumber Co Memphis Tenn
Welt & Sons Paper Co 426 W Larned St Detroit 25 Mich
Wendell Mfg Co 4234 N Lincoln Ave Chicago 18 Ill
Wendling-Nathan Co San Francisco 11 Calif
Wentworth & Irwin Inc 125 NE Oregon St Portland 14 Ore
Wenzel (H) Tent & Duck Co 1035 Hickory St St Louis Mo
Wenzel Mfg Co Stamford Conn
Werner Canvas Prods Co 609 Birpen St Brooklyn 7 N Y
Werner (R D) Co Inc 295 Fifth Ave New York 16 N Y
Wesco Waterprints Inc 742 Grapson St Berkeley 10 Calif
West Electric Heater Co 390 First St San Francisco 5 Calif
West Bend Engrg Corp 299 S Water St West Bend Wis
West Coast Plywood Co Aberdeen Wash
West Coast Plywood Co Los Angeles Calif
West Coast Shingled Shingle Co Seattle Wash
West Coast Wood Preserving Co 1114 4th Ave Seattle 1 Wash
Westcott (J D) & Son Williamson W Va
Westwood Lighting Corporation Garden Ind
Western Appliances Co Inc 5646-50 Grand River Ave Detroit 10 Mich
Western Brick Co 106 E Whittey St Lockport NY
Western Brick Co Danville Ill
Western Brick Co Clinton Ohio
Western Brick & Supply Co Omaha Neb
Western Cartridge Co Div Ohio Industries E Alto Ill
Western Chain Co 1814 W Belmont Chicago 13 Ill
Western Clay Mfg Co Helena Mont
Western Cooprage Co American Bank Bldg Portland Ore
Western Door & Plywood Corp 990 SW Second Ave Portland 1 Ore
Western Foundry Co 2400 SW Water Ave Portland 1 Ore
Western Holly Appliances Co 8536 Hays St Culver City Wash
Western Lime & Cement Co 125 E Wells St Milwaukee Wis
Western Metalcraft Inc Olympia Wash
Western Mineral Prods Co 1729 Madison NE Minneapolis 1 Minn
Western Perlite Corp Phoenix Ariz
Western Pipe Mfg Co 313 E Jackson St Spokane Wash
Western Prods Inc New Castle Ind
Western Rawhide & Belting Co 1502 W North Ave Milwaukee 5 Wis
Western Reserve Mfg Co 3708 E 93rd St Cleveland 5 O
Western Saw Wks 1844 W Washington Blvd Los Angeles Calif
Western Stonecar Co Monmouth Ill
Western Stone Co Culver City Calif
Western Veneer Co Lebanon Ore
Western Vermiculite Co Denver Col

Western Wheel Barrow Mfg Co. 8 Ft Smith Ark
Western Wire Products Co. 321 S 15th St. St. Louis 4 Mo
Westinghouse Electric Corp Sturtevant Div
Hyde Park Boston 36 Mass
Westinghouse Electric Corp Electric Appliance
Div 653 Page Blvd Springfield 2
Mass
Westinghouse Electric Corp Lamp Div
Bloomfield N J
Westinghouse Electric Corp Lighting Div
1216 W 58th St Cleveland 0
Westinghouse Electric Corp Appliance Div
Mansfield 0
Westinghouse Electric Corp 306 Fourth Ave
Pittsburgh 30 Pa
West Leeburg Steel Co Breckenridge Pa
Weston Electrical Instrument Corp 614 Frellinghousen Ave
Newark 5 N J
West Oregon Lumber Co Portland 9 Ore
West Side Lumber Co Touhamee Calif
West Virginia Brick Co Charleston W Va
West Virginia Lumber Co Elkin W Va
West Waterway Lumber Co Box 3205 Seattle 14 Wash
West Wind Corp 1800 Airport Way Seattle 4 Wash
Westwood Mfg Co Box 2261 Terminal Annex
Los Angeles 54 Calif
Westall George B Co 113 Arch St Philadelphia 6 Pa
Weyerhaeuser Sales Co First National Bank
Bldg St Paul 1 Minn
Weyerhaeuser Sales Co Plywood Dept Tacoma 1 Wash
What Cheer Clay Prods Co What Cheer Iowa
Whelan Instrument Co 847 W Harrison St Chicago 7 Ill
Wheeler-Arnold Co Wintertown Wis
Wheeler Lumber Co Pine Bluff Ark
Wheeler-Opagard Box 1029 Tacoma 1 Wash
Wheeler-Refetto Co Congress & Atlantic Aves Boston 10
Mass
Wheeling Corrugating Co Wheeling W Va
Whelton Furnace Corp Martins Ferry O
Wheeling Steel Corp Wheeling W Va
Whelton Tile Co 716 & Kresna Aves Wheeling W Va
Wheland Co 27th & Broad Chattanooga 2 Tenn
Whitaker-Grover Fibreprofs Co Waplesburg O
Whitaker (Wm D) Sedgey & Co Phila Philadelphia 24 Pa
White Creek Shingle Co Rockport Wash
White (David) Co 319 W Court St Milwaukee
12 Wis
Whitehall Metal Studs Inc 469 E Ohio Chicago Ill
White Hall Sewer Pipe & Stomware Co White Hall Ill
Whitehead (Judy) Heater Co 4111 Broadway Oakland Calif
Whitehead & Kales Co W & K Square Detroit Mich
Whitehead Metal Prods Co Inc 80 10th & Washington Sts
New York 14 N Y
White Horse Mill Co Inc Elmucias Wash
Whitehurst (R W) Mfg Corp Cooke & Bennett Norfolk Va
Whitman Mfg Co 3249 Castles Ave Los Angeles 39 Calif
White Mfg Co Gardena Calif
White Soap Wringer Co 4709 Mohawk Fullerton 1 N Y
White Motor Co 842 E 79th St Cleveland 1 O
White Pine Lumber Co Grodne Idaho
White Pine Lumber Co Spokane 2 Wash
White Products Corp Middleville Mich
White River Lumber Co Emmucias Wash
White River Timber Co Bergland Mich
White Rodgers Electric Co 1299 Cass Ct St Louis 6 Mo
White's (S B) Sons Inc 47 Rodney Norfolk Va
White Star Lumber Co 317 S Borber Dr Bogalusa La
Whiting-Adams Co 709 Harrison Boston 15 Mass
Whiting Corp 15613 Lathrop Ave Harvey Ill
Whiting Fence Co 1800 Sixth St Cambridge 42 Mass
Whitlock Corrugate Co 146 South St New York 5 N Y
Whitman Mfg Co 3249 Castles Ave Los Angeles 39 Calif
Whitney (Barthel) D & Son Inc Winchendon
Mass
Whitney (Vincent) Co 130 10th St San Francisco 3 Calif
Whittier Mills Co Chattahoochee Ga
Whitwick Bros Inc 189 Main St Cortland N Y
Whitwick Spenser Steel Div Colorado Fuel & Iron Corp
575 Madison New York 19 N Y
Whitman (Ezra) Iron Works 2035 E 11th Tulsa 4 Okla
Wilbur & Williams 130 Lincoln St Boston 35 Brigham
Mass
Wilcox Critchfield & Co 55 S Main St Middletown Conn
Wilde Drop Forge & Tool Co 2942 Fairmount St Kansas
City 8 Mo
Wiley (John) & Sons Inc 440 Fourth Ave New York 16
N Y
Wiley (R & W) Corp 129 Dearborn St Buffalo N Y
Wiley (A) Co Die Glidden Co Third & Bern Sts Reading
Pa
Wilkie Co 5524 Arch St Philadelphia 39 Pa
Wilkinson Lumber Co Maryville Calif
Willamette Valley Lumber Co Dallas Tex
Willamina Lumber Co Willamina Ore
Willapa Harbor Lumber Mills Raymond Wash
Willapa Shingle Co Box 707 Raymond Wash
Willard Concrete Machinery Co Ltd Lynwood Calif
Will Burt Co 12 8th St Ocala Fla
Willamina Clay Prods Co Portland Ore
Williams-Bowman Rubber Co So 54th Ave Ciera Ill
Williams-Brownell Inc Adams St
Williamsburg Steel Prods Co 92 4th St Brooklyn 22 N Y
Williams Brothers Corp Chambliss Ga
Williams (C K) & Co Exton 2 Pa
Williams Co 245 Rayson Ave London O
Williams (C) Fabricators Box 256 Huntington Station
N Y
Williams Form Engineering Corp Madison & Garden Sts
Grand Rapids Mich
Williams (L J) & Sons Sheridan Ark
Williams & McKithan Lumber Co Lynchburg Va
Williams Mill Co Inc Bonds N C
Williams Oil & Mfg Co Die Burke-Williams Co 1501 E Bell
St Bloomington Ill

Williams Heater Co 4558 Marburg Ave
Cincinnati 9 0
Williams Prods Co Inc 6127 Cedar Ave Philadelphia 43 Pa
Williams Stone Lining Co Taunton Mass
Williams & Voria Hardwood Co Jackson Miss
Williams & Voria Lumber Co Chattanooga Tenn
Williams & Voria Saw Mill Co Birmingham Ala
Williams-Wallace Co 100 Hooper St San Francisco 2 Calif
Williams & Williams Prods Corp 326-28 E 44th St New
York 17 N Y
Willis Mfg Co Inc Galesburg Ill
Willis Steel Corp Box 149 Galesburg Ill
Willman Prods Co 1444 E 49th St Cleveland 3 O
Willis-Overland Motors Inc Wolcott Blvd Toledo O
Willis-McCarty Prods 2612 N Lincoln Chicago Ill
Wilmington Casting Co Wilmington O
Wilson (A K) Lumber Co 165 W Wacker Chicago 1 Ill
Wilson & Williams Co PO 130 Canton Calif
Wilson-Albrecht Co 3365 Woodlake Ave Minneapolis 16
Minn
Wilson Cabinet Co Smyrna Del
Wilson (David) Lumber Co Lac la Poudre B C Can
Wilson Foundry & Machine Co Pontiac 11 Mich
Wilson Grant Inc 141 W Jackson Blvd Chicago Ill
Wilson Hardware Mfg Co 4432 S State St Chicago Ill
Wilson-Imperial Co 127 Chestnut St Newark 5 N J
Wilson (J G) Corp 372 Lehigh Ave New York 17 N Y
Wilson (L S) Mfg Co 2300 S Western Ave Chicago 8 Ill
Wilson Plastics Inc 131 Arthur St Sandusky O
Wilson Saw Div Media Machine Inc Media Pa
Wilson Steel & Wire Co 4840 S Western Ave Chicago 9 Ill
Winchberger Corp E Seventh & Division Sts Sioux City Iowa
Winchester Heater Co 1000 W 10th St Lincoln Neb
Winco Ventilator Co 1431 Veronica Ave St Louis 15 Mo
Windahime Corp 323 56th St W New York N Y
Wind (Jacob) Electric Co Inc Minneapolis Minn
Windon Conditioning Co 32 Brown St Barberton O
Window Corp of America 3835 Ninth New York 34 N Y
Winn-Shawer Door Co 4532 San Fernando Glendale 4
Calif
Winnor Industries 1023 Washington Ave St Minneapolis 15
Minn
Winnit Mfg Co Trenton N J
Winpower Mfg Co 1225 First Ave Newton Iowa
Winged Edge Tool Works Martell Calif
Winston (N K) Associates 22 West 48th Street New York
N Y
Winson Mfg Corp 15-32 127th St College Point N Y
Winsville Mfg Co
Winter Bros Lumber Products Inc Oak Park Ill
Winter Lumber Sales Co Martell Calif
Winter Lumber Sales Co 2600 Foshag Tower Minneapolis
Minn
Wiremaid Co Station A Hartford 10 Conn
Wirt & Knox Mfg Co 2300 W York St Philadelphia Pa
Wisconsin Abrasive Mfg Co 1300 E Park Pl Milwaukee
13 Wis
Wisconsin Brick Corp Madison Wis
Wisconsin Door Co 10101 Lyndon Detroit 21 Mich
Wisconsin Laboratories Inc Milwaukee Wis
Wisconsin Laminating Co Chilton Wis
Wisconsin Lumber Stone Corp Milwaukee Wis
Wisconsin Timber & Land Co Sheboygan Wis
Wis (J) & Sons Co 45 Littleton Ave Newark N J
Wistar Underhill & Co Philadelphia 2 Pa
Witt Corvair Co 2112 Winfield Ave Cincinnati 14 O
Witte Engine Works Div Oil Well Supply Co 1601 Oakland
Ave Kansas City 3 Mo
Witke Mfg & Sales Co 12100 S Peoria Chicago Ill
Woldek Electric Tool Corp 4627 W Huron St Chicago 44 Ill
Wolgan-Wilson Land & Lumber Co Meridian Miss
Wolfe (Harry M) 948 Lake Shore Dr Chicago 11 Ill
Wolfe Products Inc 765 Miami Ave Akron O
Wolff Mfg Co 2090 W Fulton Chicago Ill
Wolfgang Steel Corp Astoria Steel Prods Corp 730 Fifth
Ave New York 19 N Y
Wolverine Brass Wis Grand Rapids Mich
Wolverine Portland Enameling Co 3350 Section Ave Detroit
10 Mich
Wolverine Portland Cement Co Kalamazoo 9 Mich
Wolverine Tube Div Calumet & Hecla Consolidated Copper Co
1465 Central Ave Detroit 9 Mich
Wunder Window Co Pittsburgh Mass
Woodall Industries Inc 7557 E McNichols Rd
Detroit 34 Mich
Woodall Industries Seattle Wash
Wood Conversion Co First Natl Bank Bldg
St Paul 1 Minn
Woodcraft Industries Inc 3244 W Foster Ave Chicago
25 Ill
Woodcraft Mfg Co Farmington Minn
Wood (E K) Lumber Co 727 Kennedy St Oakland Calif
Woodware Products Corp 122 N Seventh St St Louis Mo
Woodworking Prods Co 34 Industrial St New York 10 N Y
Woodford Hydrant Co Des Moines Iowa
Wood (Gar) Industries Inc Michigan Blvd Wayne Mich
Woodworking Products Inc Venice Pa
Wood (John) Mfg Co Inc Conshohocken Pa
Woodlawn Plywood Co Houston Wash
Woodmark Industries Inc 4691 Highway Seven Minne-
apolis 16 Minn
Wood Metal Industries 161 Park Ave New York N Y
Wood Preserver Co St Louis Mo
Wood Products Co 421 Phillips Ave Toledo 12 O
Woodrow Engineering Co 5073 Broadway Chicago 40 Ill
Wood-Creek Shingle Co Seattle Wash
Wood Lumber Co Inc Memphis Tenn
Woods (H A) Machine Co Danvers & Alger Sts Boston 27
Mass
Wood Treating Chemical Co 5137 Southwest St Louis
10 Mo
Woodville Lime Co 2140 Jefferson Toledo 2 O
Woodward Lumber Co Cottage Grove Ore
Woodward Lumber Co Vance Bldg Seattle 1 Wash
Woodward-Walker Brown Inc Silvermont 24 La
Wood Window Program 38 S Dearborn St
Chicago 3 Ill
Woodworkers Tool Works 222-24 S Jefferson St Chicago 6 Ill
Woody (W W) Lumber Co Keira Miss
Woody Stone Co Inc Bloomington Ind
Woolter Brush Co 600 Madison Ave Wuster 0

Wooster Products Inc Leehr & Wyant Sts
Wooster 0
Wooler Rubber Co Wooster O
Worldwide Synthetic Construction Bldg Dallas 2 Texas
Worsham Co Inc 7329 Lohmeyer Ave St Louis 17 Mo
Worthington Pump & Machy Corp 261 Canal
St Holyoke Mass
Worthington Pump & Machy Corp Construc-
tion Dept Sales Div Demolition W J
Wright Bros & Rubber Co Trenton N J
Wright Heist Div American Chain & Cable Co Inc 1100 E
Prince St York Pa
Wright J Walter Lumber Co Bristol Tenn
Wright Mfg Co Wright Rubber Prods Div Box
6567 Houston 5 Tex
Wright Power Saw & Tool Co 292 Lybrook Ave Stratford
Conn
Wright Products Inc St Paul Park Minn
Wrightville Hardware Co Wrightville Pa
Wright Lumber Co Los Alamos Calif
Wurdack Chemical Co 4577 Fyler St St
Louis 9 Mo
Wurdack (William) Electric Div Federal Electric Prods Co
4400 Clayton Ave St Louis 10 Mo
Wurdackite Chemicals Corp Allahi Sq Wyandotte Mich
Wurdock (A) & Sons Co Elkhart N Y
Wyenco Products Corp 344 Locke St N W Atlanta Ga

X

X Ponds Corp 43-15 36th St Long Island 1 N Y

Y

Yale & Towne Mfg Co Stamford Conn
Yankee Mill Brick Mfg Co 725 Stuart Bldg Lincoln Neb
Yankee Tire & Rubber Mfg Co 5055 Belleville Detroit 13
Mich
Yardley Industries Farmco & Towne Sts Columbus 15 O
Yates-American Machine Co 701 Fourth St Selbit Wis
Yanley-Bussell Lumber Corp White Lake Mich
Yellow Pine Sales Co Newark N J
Yeoman Hoag Co Monticello Iowa
Yonkers Sash Weight Corp Yonkers 1 N Y
York Corp Roosevelt & Smith Sts York Pa
York Corrugating Co 109 S Adams St York Pa
York Safe & Lock Co York Pa
York Shipley Inc Box 348 York Pa
York Tack Nail Works York Pa
York Wall Paper Co York Pa
Youngman-Reynolds Lumber Co Montgomery Ala
Young (J O) Co 25 Laurel St Springfield Mass
Young (L A) Spring & Wire Corp Detroit Mich
Young Radiator Co 709 S Marquette St Re-
noire Wis
Young Regular Co 5209 Euclid Ave Cleveland 3 O
Youngs Bay Lumber Co Boonburg Ore
Young Specialty Co Milwaukee Wis
Youngstown Industries Inc 719 S State St Girard Ohio
Youngstown Mfg Co 66-76 S Prusset St Youngstown 9
Youngstown Plywood Co 1028 W Rayen Ave Youngstown 9
Youngstown Sheet & Tube Co Furnell Bldg Youngstown 1 O
Youngstown Steel Prods Co Youngstown O
Yostanti Wood Furniture Co Ionia Mich

Z

Zalmer Mfg Co 1213 Walnut Kansas City Mo
Zamboni Lumber Co Inc Round Mountain Calif
Zegers Inc 6050 S Chicago Ave Chicago 17
Ill
Zero Plywood Co 3405 E Pien Los Angeles 23 Calif
Ziegler Hardwood Co Franklin N C
Zimner & Williams Co 2 Waterloo Lane Waterloo Iowa
Zierden Mfg Co 3815 S Kinrosskinie Ave Milwaukee 7
Wis
Zimmerman (F M) Aurora Ill
Zink (Frank J) 141 W Jackson Chicago 4 Ill
Zink (John) Co 4401 S Peoria Tulsa 1 Okla
Zimner & Williams & Co Inc 513 W 59th St New York
19 N Y
Zip Abrasive Co 1360 W Ninth St Cleveland 13 O
Zonolite Co 135 LaSalle St Chicago 3 Ill
Zonolite Insulation Co St Louis 10 Mo
Zowl Lumber Co Groveville Wash
Zoss Lumber & Mfg Co 4901 1/2 W Macedonia Ave Portland 1
Ore
Zurn (J A) Mfg Co Erie Pa

1952 American Builder Directory

SECTION IV

Industry and Allied Professional Trade Associations

An Alphabetical Listing

PROMINENT INDUSTRY and Professional Organizations and their addresses are alphabetically listed for the convenience of builders, contractors, architects, retail material dealers, and other readers who will find it helpful in securing information concerning local and national groups.

Many building problems dealing with specialized materials can be overcome or diminished by contact-

ing the proper trade association. The Editors of the American Builder feel that this listing can prove to be a valuable addition to this year's directory.

Care has been taken in compiling this listing so that it might be as accurate as possible. However the American Builder cannot be responsible for changes in addresses and other discrepancies.



INDUSTRY AND ALLIED PROFESSIONAL TRADE ASSOCIATIONS

- Allied Building Metal Industries, 101 Park Avenue, New York, New York. A. W. Nelson, President.
- ALUMINUM WINDOW MANUFACTURERS ASSOCIATION**, 74 Trinity Place, New York 6, New York. Herbert S. Blake, Jr., Secretary.
- AMERICAN BLEACHED SHELLAC ASSOCIATION**, 70 Pine St., New York 5, New York.
- American Concrete Institute**, 7400 Second Blvd., Detroit, Michigan. Harvey Whipple, Secretary.
- American Concrete Pipe Association**, 228 N. LaSalle St., Chicago, Illinois. Howard F. Peckworth, Managing Director.
- American Forest Products Industries, Inc.**, 1319 Eighteenth St., N. W., Washington 6, D. C. G. C. Wathen, Secretary.
- American Gas Association**, 420 Lexington Ave., New York 17, N. Y. Alexander Forward, Director.
- American Hardware Manufacturers' Association**, 342 Madison Ave., New York City, New York. Chas. F. Rockwell, Secretary.
- American Institute of Real Estate Appraisers of National Association of Real Estate Boards**, 22 W. Monroe St., Chicago, Illinois. Harold U. Nelson, Secretary.
- American Institute of Steel Construction, Inc.**, 101 Park Ave., New York City, New York. V. G. Iden, Secretary.
- American Lighting Equipment Association**, 1270 6th Ave., New York City, New York. J. W. Millard, Secretary.
- American Paper & Pulp Association**, 123 East 43rd St., New York, New York. E. W. Finker, Executive Secretary.
- American Society for Testing Materials**, 260 S. Broad St., Philadelphia, Pennsylvania. C. L. Warwick, Secretary-Treasurer.
- American Society of Heating & Ventilating Engineers**, 51 Madison Ave., New York City 10, New York. A. V. Hutchinson, Secretary.
- American Turpentine Farmers Association Cooperative**, 108 West Hill Ave., Valdosta, Georgia. J. Luedie Smith, Jr., Secretary.
- American Walnut Manufacturers Association**, 666 N. Lake Shore Drive, Chicago 11, Illinois. Burdett Green, Secretary-Manager.
- American Wood Preservers' Association**, 1427 Eye St., Washington, D. C. Horace L. Dawson, Secretary.
- American Wood Window Institute**, 209 Sterick Bldg., Memphis, Tennessee. Clark E. McDonald, Managing Director.
- AMERICAN ZINC INSTITUTE, INC.**, 60 E. 42nd St., New York City 17, New York. Ernest V. Grest, Secretary.
- Anthracite Institute**, 101 Park Ave., New York 17, N. Y.
- Appalachian Hardwood Manufacturers, Inc.**, 414 Walnut St., Cincinnati 2, Ohio. C. H. Clendenen, Secretary-Manager.
- Arkansas Soft Pine Bureau**, Boyle Bldg., Little Rock, Arkansas. B. E. Lowry, Executive Secretary.
- Asbestos Cement Products Association**, 509 Madison Ave., New York 22, New York. Chester C. Kelsey, Manager.
- Asphalt Roofing Industry Bureau**, 2 W. 45th St., New York City 19, New York. J. S. Bryant, Manager.
- Asphalt Tile Institute**, 101 Park Ave., New York 17, New York. C. B. Whittelsey, Jr., Managing Director.
- Associated Equipment Distributors, Inc.**, 360 N. Michigan Ave., Chicago 1, Illinois. P. D. Herman, Secretary.
- Associated General Contractors of America, Inc.**, Munsey Bldg., Washington 4, D. C. Herbert E. Foreman, Managing Director.
- Association of Manufacturers of Woodworking Machinery**, c/o Porter Machinery Co., Grand Rapids, Michigan. C. O. Porter, President.
- Atlantic Millwork Institute, Inc.**, 122 E. 42nd St., New York City 14, New York. Cliff Melander, Secretary.
- Barn Equipment Association**, 330 S. Wells St., Chicago 6, Illinois. W. Floyd Keepers, Executive Secretary.
- Better Light, Better Sight Bureau**, 430 Lexington Ave., New York City 17, New York. G. R. Trumbull, Manager.
- Building Material Distributors' Association**, 20 N. Wacker Dr., Chicago, Illinois. B. E. Babbitt, Managing Director.
- Building Material Exhibitors' Association**, 530 Echo Lane, Glenview, Illinois. Richard G. Breeden, Jr., Secretary.
- Building Products Institute**, 1520 18th St., Washington, D. C.
- Building Research Advisory Board** (National Research Council, National Academy of Sciences), 2101 Constitution Ave., Washington 25, D. C.
- CALIFORNIA REDWOOD ASSOCIATION**, 576 Sacramento St., San Francisco 11, California. Philip Farnsworth, Manager; Kenneth Smith, President.
- CANVAS AWNING INSTITUTE, INC.**, 2937 W. 25th St., Cleveland, Ohio. Walter C. Astrup, president.
- Cast Stone Institute**, 2135 Queen's Chapel Rd., N. E., Washington, D. C. C. G. Walker, Managing Director.
- Cement Institute**, 111 West Washington St., Chicago 2, Illinois. A. E. Herje, Secretary.
- Clay Products Association**, 100 N. LaSalle St., Chicago 2, Illinois. John D. Cook, Secretary.
- Clay Sewer Pipe Association, Inc.**, 1105 Huntington Bank Bldg., Columbus 15, Ohio.
- Concrete Masonry Manufacturers' Association**, 3256 W. Sixth St., Los Angeles 5, California. Cliff Hendrickson, Secretary-Manager.
- Concrete Reinforcing Steel Institute**, 38 S. Dearborn St., Chicago 3, Illinois.
- Convactor Manufacturers' Association**, c/o American Radiator & Standard Sanitary Corp., 40 W. 40th St., New York City, New York. F. E. O'Callahan, Secretary.
- Conveyor Equipment Manufacturers' Association**, 1129 Vermont Ave., Washington 5, D. C. R. C. Sollenberger, Executive Vice President.
- Copper and Brass Research Association**, 420 Lexington Ave., New York City 17, New York. T. E. Veltfort, Manager.
- Decorative Lighting Guild of America**, c/o Foster & Davies, Kieth Bldg., Cleveland 15, Ohio. Don M. Julien, Secretary.
- DOUGLAS FIR PLYWOOD ASSOCIATION**, Tacoma Bldg., Tacoma 2, Washington. O. Harry Schrader, Jr., Managing Director.
- Edison Electric Institute**, 420 Lexington Avenue, New York City 17, New York. C. W. Kellogg, President.
- Electrical Industrial Truck Association**, 3701-H N. Broad St., Philadelphia 40, Pennsylvania. Wm. Van C. Brandt, Managing Director.
- Finishing Lime Association of Ohio**, Home Bank Bldg., Toledo, Ohio. L. E. Jolimon, secretary.

- FIR DOOR INSTITUTE**, 1205 Rust Bldg., Tacoma 2, Washington. John O. Harter, Managing Director.
- Flat Glass Jobbers' Association**, 2140 S. Peoria St., Chicago 8, Illinois. Harold L. Smith, President.
- Foundation for Lathing and Plastering**, Room 420, Denrike Bldg., Washington, D. C. E. M. Lurie, 173 W. Madison St., Chicago, Illinois, Director.
- Gas Appliance Manufacturers' Association**, 60 E. 42nd St., New York City, New York. H. Leigh Whitelaw, Managing Director.
- Glazed Brick & Tile Institute**, 1520 18th St., Washington, D. C. J. J. Cermak, Secretary.
- Gum Turpentine Farmers' Cooperative Association**, Vidalia, Georgia.
- Gypsum Association**, 20 N. Wacker Drive, Chicago 6, Illinois. Lloyd H. Yeager, Manager.
- Hardwood Plywood Institute**, 600 S. Michigan Ave., Chicago 5, Illinois. Charles E. Close, Secretary-Treasurer.
- Indiana Limestone Association**, Redford, Indiana.
- Insect Wire Screen Cloth Bureau**, 74 Trinity Pl., New York 6, New York. Ralph W. Bacon, Secretary.
- Institute of Boiler and Radiator Manufacturers**, 60 E. 42nd St., New York City, New York. R. E. Ferry, Manager.
- Insulated Siding Association**, 530 Echo Lane, Glenview, Illinois. Richard G. Bredlen, Jr., Secretary-Manager.
- Insulation Board Institute**, 111 W. Washington St., Chicago 2, Illinois. J. B. Blackburn, Manager.
- Kitchen Guild of America**, Merchandise Mart, Chicago, Illinois. W. M. Jennings, Executive Secretary.
- Lead Industries Association**, 420 Lexington Ave., New York City, New York. Felix E. Wormser, Secretary-Treasurer.
- Manufacturers' Promotional Service**, 522 First National Bank Bldg., Atlanta, Georgia. D. M. Strickland, Secretary.
- MAPLE FLOORING MANUFACTURERS' ASSOCIATION**, 35 E. Wacker Drive, Chicago 1, Illinois. L. M. Clady, Secretary-Manager.
- Marble Institute of America, Inc.**, 108 Forster Ave., Mount Vernon, New York. Homer Shawhan, Managing Director.
- National Lath Manufacturers' Association**, Engineers Bldg., Cleveland 14, Ohio. Donald R. Wadle, Commissioner.
- Metal Window Institute**, 806 Rowland Bldg., Cheltenham, Pennsylvania. George Hingston, Executive Secretary.
- Millwork Cost Bureau**, 28 E. Jackson Blvd., Chicago 4, Illinois. O. L. Appleton, Secretary.
- National-American Wholesale Lumber Association, Inc.**, 41 E. 42nd St., New York City, New York. Sid L. Darling, Secretary-Manager. Managing Director.
- National Association of Commission Lumber Salesmen**, 201 Roosevelt Bldg., St. Louis, Missouri.
- NATIONAL ASSOCIATION OF HOME BUILDERS**, 1628 Connecticut Ave., N. W., Washington 6, D. C. Frank W. Cortright, Executive Vice President; Nicholas Molnar, Secretary.
- National Association of Ornamental Metal Manufacturers**, 209 Cedar Avenue, Washington 12, D. C. O. J. Condon.
- National Association of Real Estate Boards**, 22 W. Monroe St., Chicago, Illinois. Herbert U. Nelson, Executive Vice President.
- National Association of Silo Manufacturers**, Norwich, New York. Z. W. Craine, Craine Inc., Secretary.
- National Association of Wholesalers**, 200 Fifth Ave., New York City 10, New York. Chester Kelsey, Secretary.
- National Building Granite Quarries Association, Inc.**, 114 E. 40th St., New York 16, New York.
- National Building Material Distributors Association**, 20 N. Wacker Dr., Chicago 6, Illinois. E. E. Babbitt, Managing Director.
- National Cinder Concrete Products Association**, 1600 Arch St., Philadelphia, Pennsylvania. Harry H. Longenecker, Secretary.
- National Clay Pipe Manufacturers, Inc.**, 100 N. LaSalle St., Chicago 2, Illinois. J. D. Cook, Secretary.
- National Clean Up and Paint Up Campaign Bureau**, 1500 Rhode Island Ave., N. W., Washington, D. C. Ralph W. Emerson, Executive Secretary.
- National Coal Association**, 804 Southern Bldg., Washington, D. C. J. D. Battle, Executive Secretary.
- National Concrete Masonry Association**, 38 S. Dearborn St., Chicago 3, Illinois. E. W. Dienhart, Secretary.
- National Contract Hardware Association**, 420 Madison Ave., New York 17, New York. John R. Schoemer, Secretary.
- NATIONAL COTTON COUNCIL OF AMERICA**, P. O. Box 18, Memphis 1, Tennessee.
- NATIONAL ELECTRICAL MANUFACTURERS' ASSOCIATION**, 153 E. 44th St., New York City, New York. W. J. McDonald, Managing Director; George B. Cumming, General Secretary.
- National Foundation for Lathing & Plastering, Inc.**, 173 W. Madison St., Chicago 2, Illinois. Erwin M. Lurie, National Director.
- National Glass Distributors Association**, 435 N. Michigan Ave., Chicago 11, Illinois. North Storme, Secretary.
- National Hardwood Lumber Association**, 59 E. Van Buren St., Chicago, Illinois. J. W. McClure, Secretary-Treasurer.
- National Industrial Sand Association**, 1325 E. St., N. W., Washington, D. C. V. P. Ahearn, Executive Secretary.
- National Lime Association**, 927 15th St., N. W., Washington, D. C. Walter S. Stauffer, President; W. Vernon Brumbaugh, Secretary.
- National Lumber Manufacturers' Association**, 1319 Eighteenth St., N. W., Washington, D. C. R. A. Colgan, General Manager.
- National Metalclad Door Association**, 550 Elliott Sq., Buffalo 3, New York.
- National Mineral Wool Association**, 1270 Sixth Ave., New York City, New York. Fred H. Sides, Jr., Secretary.
- NATIONAL OAK FLOORING MANUFACTURERS' ASSOCIATION**, 814 Sterick Bldg., Memphis, Tennessee. Henry H. Willins, Secretary.
- National Paint, Varnish & Lacquer Association, Inc.**, 1500 Rhode Island Ave., N. W., Washington, D. C. R. W. Elton, Secretary.
- National Plywood Distributors Association**, 20 N. Wacker Dr., Chicago, Illinois. E. E. Babbitt, Managing Director.
- National Ready Mix Concrete Association**, Munsey Bldg., Washington, D. C. V. P. Ahearn, Executive Secretary.
- National Retail Hardware Association**, 333 N. Pennsylvania St., Indianapolis 4, Indiana.
- National Retail Lumber Dealers' Association**, 202 Ring Bldg., Washington 6, D. C. H. R. Northup, Secretary-Manager.
- National Roofing Contractors Association**, 315 W. Madison St., Chicago, Illinois.
- National Sand & Gravel Association, Inc.**, Munsey Bldg., Washington, D. C. V. P. Ahearn, Executive Secretary.
- National Terrazzo and Mosaic Association, Inc.**, 711 14th St., N. W., Washington 5, D. C.
- National Warm Air Heating & Air Conditioning Association**, 145 Public Square, Cleveland 14, Ohio. George Boeldner, Managing Director.
- National Wholesale Hardware Association**, 505 Arch St., Philadelphia 6, Pennsylvania. George A. Ferley, Managing Director.
- National Wholesale Lumber Distributing Yard Association, Inc.**, 1400 Ridgely St., Baltimore, Maryland. J. Jackson Kidd, Secretary.
- National Woodwork Manufacturers' Association**, 332 S. Michigan Ave., Chicago 4, Illinois. Ormie C. Lance, Secretary-Manager.
- New Freedom Kitchen Bureau**, 420 Lexington Ave., New York City, New York. J. Vinton Potter, Director.
- Northeastern Lumber Manufacturers' Association**, 271 Madison Ave., New York City, New York. R. E. Broderick, Secretary-Treasurer.
- Northern Hemlock and Hardwood Manufacturers' Association**, E. R. A. Bldg., Oshkosh, Wisconsin. O. T. Swan, Secretary.
- Northern Pine Manufacturers' Association**, 4329 Oakland Ave., Minneapolis 7, Minnesota. W. A. Ellinger, Secretary.
- Ohio Brick & Tile Institute**, 306 Market Ave., N. Canton, Ohio.
- Oil Burner Institute**, 30 Rockefeller Plaza, New York City, New York. C. F. Curtin, Secretary.
- Open Steel Flooring Institute, Inc.**, 2311 First National Bank Bldg., Pittsburgh 22, Pa.
- Oxychloride Cement Association, Inc.**, 1028 Connecticut Avenue, N. W., Washington 6, D. C.
- Pacific Clay Products Institute**, 703 Ninth & Hill Bldg., Los Angeles 15, California. J. J. Stein, Secretary.
- Pacific Lumber Inspection Bureau**, Henry Bldg., Seattle, Washington. F. W. Alexander, Secretary-Manager.
- Pacific Lumber Remanufacturers' Association**, Portland, Oregon.
- Perlite Institute**, 35 W. 53rd St., New York 19, New York. Richard L. Davis, Secretary-Treasurer.
- Plastic Wall Tile Manufacturers Institute**, 168 N. Michigan Blvd., Chicago, Illinois.
- Plate Glass Manufacturers' Association of America**, First National Bank Bldg., Pittsburgh, Pennsylvania. P. A. Hughes, Secretary.
- Plumbing & Heating Industries Bureau**, 35 E. Wacker Drive Chicago, Illinois. Norman J. Radder, Secretary.
- PONDEROSA PINE WOODWORK**, 38 S. Dearborn St., Chicago 3, Illinois. J. G. Hillington, General Manager.
- PORTLAND CEMENT ASSOCIATION**, 33 W. Grand Ave., Chicago 10, Illinois. C. D. Franks, Vice President and General Manager.
- PREFABRICATED HOME MANUFACTURERS INSTITUTE**, 908 20th St., N. W., Washington 6, D. C. Harry H. Steidle, Manager.
- Producers Council, Inc.**, 815 15th St., N. W., Washington, D. C. C. H. Mortensen, Executive Secretary.
- Propeller Fan Manufacturers' Association**, General Motors Bldg., Detroit, Michigan. C. C. Shuler, Secretary.
- RED CEDAR SHINGLE BUREAU**, 3508 White Bldg., Seattle 1, Washington. W. W. Woodbridge, Secretary-Manager.
- RETAIL PAINT & WALLPAPER DISTRIBUTORS OF AMERICA, INC.**, 319 N. Fourth St., St. Louis 2, Missouri. Erwin E. Douglas, Executive Secretary.
- Rubber Manufacturers' Association**, Rubber Flooring Manufacturers' Division, 444 Madison Ave., New York City, New York.
- SAND-LIME BRICK ASSOCIATION**, 2140 Wood St., Saginaw, Michigan. J. Morley Zander, Secretary.
- Sanitary Cast Iron Enamelled Ware Association**, 1108 Clark Bldg., Pittsburgh, Pennsylvania. K. E. Hanson, Secretary.
- SHELLAC INFORMATION BUREAU OF THE AMERICAN BLEACHERS MANUFACTURERS ASSOCIATION, INC.**, 65 Pine St., New York City, New York.
- Sink & Counter Top Manufacturers' Institute**, 514 Park Bldg., Cleveland, Ohio. R. L. Davison, Secretary.
- Southern Hardwood Producers, Inc.**, Sterick Bldg., Memphis, Tennessee. L. J. Heatherly, Secretary-Manager.
- Southern Pine Association**, Canal Bldg., New Orleans, Louisiana. H. C. Berles, Secretary-Manager.
- Southern Pine Inspection Bureau**, Canal Bldg., New Orleans, Louisiana. A. S. Boisfontaine, Manager.
- Southern Plywood & Veneer Association**, Johnson Bldg., Charlotte, North Carolina. Joseph Gall, Manager.
- Southern Sash & Door Jobbers**, 209 Sterick Bldg., Memphis 3, Tennessee. Clark E. McDonald, Secretary-Treasurer.
- Southern Wholesale Lumber Association**, McMullan Bank Bldg., Livingston, Alabama. Robert F. Darrah, Secretary-Manager.
- Southern Woodwork Association**, 1925 Ponce de Leon Ave., N. E., Atlanta, Georgia. Joseph G. Rowell, Counselor.
- STAINED SHINGLE & SHAKE ASSOCIATION**, 5527 White Bldg., Seattle, Washington. Joe S. Pearson, Secretary.
- Steel Kitchen Cabinet Institute**, Park Bldg., Cleveland, Ohio. Mr. Tuscany, Secretary.
- Stoker Manufacturers' Association**, 307 N. Michigan Ave., Chicago 1, Illinois. Marc G. Bluth, Executive Secretary.
- STRUCTURAL CLAY PRODUCTS INSTITUTE**, 1520 18th St., N. W., Washington 6, D. C. J. J. Cermak, Secretary.
- TILE COUNCIL OF AMERICA**, 10 E. 40th St., New York, New York. Alfred McMillan.

Tile Manufacturers' Association, 50 E. 42nd St., New York City, New York.

Truck Mixer Manufacturers' Bureau, Munsey Bldg., Washington 4, D. C. V. P. Abarn, Secretary.

United States Savings & Loan League, 221 N. LaSalle St., Chicago, Illinois, Morton Bodfish, Executive Vice President.

Venetian Blind Association of America, 435 N. Michigan Blvd., Chicago, Illinois.

Vermiculite Association, Inc., 64-67 83rd Place, Rego Park, New York. Wm. S. Elliott, Secretary-Treasurer.

Vermiculite Institute, 208 S. LaSalle Street, Chicago, Illinois.

Wallpaper Institute, 501 Madison Ave., New York 17, New York. W. L. Carver, Secretary.

Weatherstrip Research Institute, 259 Addison Rd., Box 101, Riverside, Illinois. L. G. Klee, Secretary.

West Coast Lumbermen's Association, 1410 S. W. Morrison St., Portland, Oregon, Harold V. Simpson, Executive Vice President.

West Coast Woods Promotion, 1410 S. W. Morrison, Portland 5, Oregon, Paul E. Kendall, Manager.

WESTERN PINE ASSOCIATION, Yeon Building, Portland, Oregon. S. V. Fullaway, Secretary-Manager.

Wholesale Building Material Division of the National Plywood Distributors Association, 30 N. Wacker Dr., Chicago 3, Illinois. B. E. Bahbitz, Managing Director.

Window Glass Manufacturers' Association, 19 West 44th St., New York City, New York. Charles R. Stevenson, Secretary.

Woods-for-Venetians Association, Russ Bldg., San Francisco, California. F. M. Binion, Secretary-Treasurer.

Wood-Ply Research Foundation, Incorporated, 185 N. Wabash Ave., Chicago 1, Illinois. Miss I. M. Crouse, Secretary.

WOOD WINDOW INFORMATION SERVICE, 38 S. Dearborn St., Chicago 4, Illinois. E. W. Rudlick, Manager.

Woodwork Jobbers Service Bureau, 30 N. LaSalle St., Chicago, Illinois. Adolph Pfund, Secretary.

LOCAL CHAPTERS OF THE NATIONAL ASSOCIATION OF HOME BUILDERS

ALABAMA

Birmingham Association of Home Builders, 215 Comer Bldg., Birmingham, Alabama. F. L. Bassell, Executive Vice President.

Tri-Cities Home Builders Association, Shop Pike, Sheffield, Alabama. Hubert H. Daily, Secretary-Treasurer.

Montgomery Home Builders Association, P. O. Box 1224, Montgomery, Alabama. G. C. Dickey, Secretary-Treasurer.

ARIZONA

Phoenix Association of Home Builders, Bank of Douglas Bldg., Phoenix, Arizona. Britton Burns, Executive Secretary.

ARKANSAS

Arkansas Home Builders, 218 Pyramid Bldg., Little Rock, Arkansas. Miss Lorette Passe, Executive Secretary.

CALIFORNIA

Peninsula General Contractors & Builders Association, Inc., 1950 El Camino Real, San Mateo, California. Harry E. Smith, Executive Vice President.

Home Builders Association of Fresno, 1837 Merced St., Fresno, California. Noyes Alexander, Executive Secretary.

Home Builders Institute, Suite 907 315 W. 9th St., Los Angeles, California. Clifford L. Rawson, Executive Secretary.

Building Contractors Association of California, Inc., 115 So. Alvarado St., Los Angeles 4, California. Edward M. Silis, Executive Vice President.

Associated Home Builders of the Greater East Bay, Inc., 277 W. MacArthur Blvd., Oakland 11, California. John I. Hennessy, Executive Vice President.

General Contractors Association of Contra Costa County, Inc., 1731 Mt. Diablo Blvd., P. O. Box 343, Walnut Creek, California. Frederick C. Kracke, Executive Vice President.

Associated Home Builders of Sacramento, 137 Tiwoli Way, Sacramento, California. C. B. Perkins, Secretary-Manager.

Marin Builders Association, Inc., Room 26 Cheda Bldg., San Rafael, California. Thomas E. Schaal, Secretary.

Associated Home Builders of San Francisco, Inc., 31 Geary St., Suite 200, San Francisco, California. William E. Gillis, Executive Vice President.

Home Builders Association of San Joaquin County, 1858 S. Stockton St., Stockton, California. Bill Phillips, President.

COLORADO

Colorado Springs Home Builders Association, P. O. Box 206, Colorado Springs, Colorado. John Boulton, Secretary-Treasurer.

Denver Association of Home Builders, 933 Sherman, Denver, Colorado. Eugene R. Miller, Executive Secretary.

CONNECTICUT

Greater Bridgeport Builders Association, P. O. Box 458, 265 Sturges Rd., Fairfield, Connecticut. Arnold P. Olson, Executive Secretary.

Home Builders Association of Hartford County, Inc., 62 LaSalle Road, W. Hartford, Connecticut. Clayton W. Johnson, Executive Secretary.

Home Builders Association of Greater New Haven, 80 Elm St., New Haven 3, Connecticut. William B. Young, Secretary.

DELAWARE

Home Builders Association of Delaware, Capitol Trail, Newark, Delaware. Francis E. McCann, Executive Secretary.

DISTRICT OF COLUMBIA

Home Builders Association of Metropolitan Washington, Suite 303, 1757 K St., N. W., Washington, D. C. James W. Pearson, Executive Director.

FLORIDA

Daytona Beach Home Builders Association, 914 North Halifax Ave., Daytona Beach, Florida. Hugo Quillian, Secretary.

Home Builders Association of Florida, 224 1/2 South Beach St., Daytona Beach, Florida. W. W. Patrick, Secretary.

Home Builders Association of Jacksonville, 217 W. Church St., Jacksonville, Florida. Walter J. Cowart, Executive Secretary.

Contractors & Builders Association of Greater St. Petersburg, 3140 Central Ave., St. Petersburg, Florida. Lewis D. Williams, Executive Secretary.

Builders Association of South Florida, 220 Miracle Mile, Coral Gables 34, Florida. George S. Miller, Executive Secretary.

Tallahassee Home Builders Association, Capitol Hills, Tallahassee, Florida. Horrie B. Culpepper, President.

GEORGIA

Home Builders Association of Atlanta, 312 Volunteer Bldg., Atlanta 3, Georgia. Luther B. Stephens, Executive Secretary.

Home Builders Association of Columbus, Georgia, 1043 Sixth Ave., Columbus, Georgia. C. Ed. Cooper, Jr., Secretary.

Home Builders Association of Savannah, 34 East Bryan St., Savannah, Georgia. J. D. McLamb, President.

IDAHO

Idaho Falls Home Builders Association, Corner of So. Water & Oak Sts., Idaho Falls, Idaho. Earl Anderson, President.

ILLINOIS

Chicago Metropolitan Home Builders Association, 130 W. Randolph St., Chicago 1, Ill. Martin C. Huggert, Executive Vice President.

Home Builders Association of Decatur, Illinois, 1950 West Forest, Decatur, Illinois. C. S. Madaus, Secretary.

Peoria Area Home Builders Association, 1905 Prospect Rd., Peoria, Illinois. A. C. Hyle, Secretary.

INDIANA

Elkhart Home Builders Association, 2825 South Main St., Elkhart, Indiana. C. A. Huffman, President.

Evansville Home Builders Association, Inc., 610 Court Bldg., Evansville 19, Indiana. M. T. Schick, Executive Secretary.

Home Builders Association of Fort Wayne, 260 Central Bldg., Fort Wayne 2, Indiana. Clem J. Steigmeyer, Director of Public Relations.

Marion County Residential Builders, Inc., 206 Evans Bldg., 136 No. Delaware St., Indianapolis 4, Ind., G. William Mohr, Executive Secretary.

Muncie Home Builders Association, 300 Cowing Ave., Muncie, Indiana. George Hiron, Secretary-Treasurer.

South Bend-Mishawaka Home Builders Association, 1111 So. Webster St., South Bend, Indiana. Wm. H. Weist, Secretary.

IOWA

Home Builders Association of Cedar Rapids, 2461 1st Ave., S. W., Cedar Rapids, Iowa. R. T. Powell, Secretary.

Home Builders Association of Des Moines, 909 Sixth Ave., Des Moines 14, Iowa. William Weesner, Executive Secretary.

Home Builders Association of Mason City, Iowa, First National Bank, Mason City, Iowa. A. M. Halsor, Secretary.

Quad City Association of Home Builders, Rm. 225, Fifth Avenue Bldg., Moline, Ill. Kenneth Shogren, Secretary-Treasurer.

Home Builders Association of Sioux City, 23 W. 17th St., Sioux City, Iowa. Syl Myerchin, Secretary-Treasurer.

KANSAS

Topeka Home Builders Association, National Bank of Topeka Bldg., Topeka, Kansas. Arnold W. Johnson, Secretary.

Wichita Association of Home Builders, 129 N. Market St., Wichita, Kansas. Frank Malone, Secretary-Treasurer.

KENTUCKY

Home Builders Association of Lexington, 875 E. High St., Lexington, Kentucky. J. W. Davis, Jr., Secretary.

Associated Home Builders of Louisville, 614 East Broadway, Louisville 2, Kentucky. W. Arthur Sorrell, Executive Secretary.

LOUISIANA

Home Builders Association of New Orleans, Inc., 427 Carondelet St., New Orleans 12, Louisiana. Eugene W. Rose, Executive Vice President.

Home Builders Association of Shreveport, Suite B-2, 509 Market St., Shreveport, Louisiana. Larry Ronson, Executive Vice President.

MARYLAND

Home Builders Association of Maryland, 7 St. Paul St., Baltimore 2, Maryland. C. Philip Pitt, Executive Secretary.

MAINE

Home Builders Association of Maine, 234-A Middle St., Portland 3, Maine. Milan O. Welch, Executive Secretary.

MASSACHUSETTS

Home Builders Association of Greater Boston, 7 Water St., Boston 8, Massachusetts. Robert W. Heard, Manager-Director.
Franklin County Builders Association, 54 Petty Plain Rd., Greenfield, Massachusetts. John F. Winseck, Secretary.
Springfield Home Builders and Contractors, Inc., 134 Chestnut St., Springfield 3, Massachusetts. William Putnam, Secretary.
Home Builders Association of Worcester, 151 Main St., Worcester 8, Massachusetts. Robert H. Wood, Executive Secretary.

MICHIGAN

Michigan Association of Home Builders, 307 American State Bank Bldg., Lansing, Michigan. Mrs. L. M. Saunders, Secretary.
Battle Creek Association of Home Builders, 440 Hubbard Rd., Battle Creek, Michigan. Glenn Hanna, Secretary.
Builders Association of Metropolitan Detroit, 1401 Dime Bldg., Detroit 26, Michigan. Earl Doyle, Executive Vice President.
Flint Association of Home Builders, 429 So. Dort Highway, Flint, Michigan. H. J. Rohner, Executive Secretary.
Grand Rapids Home Builders Association, 800 Association of Commerce Bldg., Grand Rapids, Michigan. Henry W. Lightner, Executive Secretary.
Home Builders Association of Kalamazoo, 609 So. Burdick St., Kalamazoo, Michigan. E. McCammon, Executive Secretary.
Lansing Home Builders Association, 1125 So. Pennsylvania Ave., Lansing 2, Michigan. E. P. R. Boynton, Executive Secretary.
Saginaw Valley Builders Association, 810 East Genesee St., Saginaw, Michigan. W. T. Nagle, Secretary.
Tri-Cities Builders Association, Spring Lake, Michigan. Albert Jordan, Secretary.
Washtenaw County General Contractors, Inc., P. O. Box 368, Ann Arbor, Michigan. Wm. M. Brown, Secretary-Treasurer.

MINNESOTA

Minneapolis Home Builders Association, 1750 Hennepin Ave., Rm. H-15, Minneapolis 3, Minnesota. Lawrence W. Nelson, Executive Secretary.
St. Paul Home Builders Association, 79 Western Ave., Commodore Hotel, St. Paul 2, Minnesota. A. L. Keffer, Executive Director.

MISSISSIPPI

North Delta Home Builders Association, Box 634, Clarksdale, Mississippi. R. C. Krenser, Secretary.
Greenville Chapter of NAHB, Allen-McKee Lumber Co., Greenville, Mississippi. James McKee, Secretary-Treasurer.
Home Builders Association of Jackson, Inc., 108 Moss Ave., Jackson, Mississippi. Woodrow F. Cole, President.

MISSOURI

Home Builders Association of Greater Kansas City, 4638 J. C. Nichols Parkway, Kansas City, Missouri. James L. Hutton, Executive Secretary.
Home Builders Association of Greater St. Louis, 8843 Forsythe Blvd., Clayton 5, Missouri. Laurence E. Delmar, Executive Secretary.

NEBRASKA

Home Builders Association of Lincoln, 421 No. 9th St., Lincoln, Nebraska. W. F. Hoppe, Jr., Secretary.
Omaha Home Builders Association, 1805 Harney St., Omaha 2, Nebraska. A. B. Parks, Executive Secretary.

NEW HAMPSHIRE

Builders Association of New Hampshire, 413 Blodgett St., Manchester, New Hampshire. Roland H. Breton, Secretary-Treasurer.

NEW JERSEY

HBA of Somerset & Morris Counties, Madisonville Rd., Basking Ridge, New Jersey. Frank Van Arsdale, Secretary.
New Jersey Home Builders Association, 171 Main St., Hackensack, New Jersey. Clarence H. Von Drehle, Executive Secretary.
Atlantic Home Builders Association of New Jersey, 7714 Ventnor Ave., Margate City, New Jersey. Eddy Sharnan, Secretary.
Home Builders Association of Metropolitan New Jersey, Military Park Hotel, Suite 733, 16 Park Lane, Newark 11, New Jersey. William J. Gaynor, Executive Director.
Home Builders Association of Northern New Jersey, 171 Main St., Hackensack, New Jersey. Clarence J. Von Drehle, Executive Director.
New Jersey Shore Builders Association, P. O. Box B-5, Sea Girt, New Jersey. Arthur C. Turner, President.
Home Builders Association of Raritan Valley, P. O. Box 350, New Brunswick, New Jersey. Samuel S. Himeinstein, Secretary.
Home Builders League of South Jersey, 622 Cooper St., Camden 2, New Jersey. Harry Smith, Secretary.
Home Builders Association of Mercer County, 143 E. State St., Trenton, New Jersey. A. M. Bernstein, Secretary.

NEW MEXICO

Albuquerque Home Builders Association, 1225 So. Yale St., Albuquerque, New Mexico. L. R. Vander Kamp, Executive Secretary.

NEW YORK

Home Builders Association of Albany, New York, Inc., 80 Eagle St., Albany, New York. Joseph F. Dragan, Executive Secretary.
Chemung Valley Home Builders Association, 57 East Market St., Corning, New York. Mason J. Bower, Executive Secretary.
Genesee County Builders Association, 142 Bank St., Batavia, New York. R. G. Locke, Acting Secretary.
Long Island Institute, Inc., 143 Fulton Ave., Hempstead, L. I., New York. O. J. Hartwig, Executive Secretary.
Niagara Falls Home Builders, Inc., Niagara Bldg., Niagara Falls, New York. Anthony P. Solari, Executive Secretary.
The Niagara Frontier Builders Association, Inc., 1106 Morgan Bldg., Buffalo 2, New York. John C. Donovan, Executive Vice President.
The Better Builders Association of Onondaga, Inc., 2627 South Salina St., Syracuse, New York. Mrs. Arlene S. Woodmansee, Acting Secretary.
Rochester Home Builders Association, 240 Powers Bldg., Rochester 14, New York. Wm. J. Hill, Executive Secretary.
Home Builders Association of Schenectady, De Winter Bldg., Netherlands Village, New York. Louis Laffortun, Executive Secretary.
New York Home Builders Association, 348 Goldwater Road, Rochester 11, New York. Joseph Entress, Secretary.
Southern Tier Home Builders Association, 1222 Dorothy St., Binghamton, New York. Curtis Booth, Secretary.
Home Builders Association of Westchester, Inc., 9 South First Ave., Mount Vernon, New York. James E. Cook, Secretary.

NORTH CAROLINA

Charlotte Home Builders Association, P. O. Box 3007, Charlotte, North Carolina. J. C. Purnell, Jr., Secretary-Treasurer.
Sanford Association of Home Builders, First Federal Savings & Loan Association, Sanford, North Carolina. H. A. McNeely, Secretary.

OHIO

Home Builders Association of Greater Akron, 651 1st Central Tower Bldg., Akron 8, Ohio. A. J. Alexander, Secretary-Treasurer.
Elyria Home Builders Association, 134 Kenwood St., Elyria, Ohio. L. H. Popp, Executive Secretary.
Home Builders Association of Stark County, Ohio, Inc., 243 Montrose Ave., N. W. Canton, Ohio. Robert Colaner, Executive Secretary.
Home Builders Association of Greater Cincinnati, 907 Union Trust Bldg., Cincinnati 2, Ohio. Earl DeLairre, Executive Secretary.
Home Builders Association of Greater Cleveland, Allerton Hotel, E. 11th & Chester Ave., Cleveland, Ohio. Jerry Madigan, Executive Director.
Columbus Home Builders Association, 16 E. Broad St., Suite 1306, Columbus, Ohio. Miss Lillian Tupes, Executive Secretary.
Home Builders Association of Butler County, 375 Columbia Road, Hamilton, Ohio. John C. Hicks, Secretary.
Lorain Home Builders Association, 388 Franklin Ave., Amherst, Ohio. Carl Springer, Executive Secretary.
Home Builders Association of Mahoning Valley, 35 Aylesboro Ave., Youngstown Ohio. C. E. McGranahan, Executive Secretary.
Home Builders Association of Mansfield, Box 191, Lexington, Ohio. Harley Watkins, Secretary.
Home Builders Association of Marion, 613 Oak St., Marion, Ohio. J. C. Sallinger, Secretary.
Montgomery County Builders Association, 127 S. Main St., Dayton 2, Ohio. Curt Miller, Executive Secretary.
Northwestern Ohio Contractors and Builders Association, 1582 Virginia Ave., Lima, Ohio. N. A. Buckmaster, Secretary.
Ohio Home Builders Association, 5 East Long St., Columbus, Ohio. A. H. Falace, Executive Secretary.
Home Builders Association of Sandusky, 227 McDonough St., Sandusky, Ohio. Wm. R. Henry, Secretary.
Clark County Home Builders Association, 1337 N. Plum St., Springfield, Ohio. E. V. Enterline, Secretary.
Toledo Association of Home Builders, Inc., 332 Spitzer Bldg., Toledo, Ohio. Guy Roberts, Executive Vice President.

OKLAHOMA

Ada Chapter of NAHB, P. O. Drawer 127, Ada, Oklahoma. Erwin T. Hovis, Secretary-Treasurer.
Enid Home Builders Association, 209 Knox Bldg., Enid, Oklahoma. Herman Knut, President.
Home Builders Association of Lawton, 415 1/2 'D' Ave., Lawton, Oklahoma. Irvin C. Matron, Executive Officer.
Miami (Okla.) Chapter of NAHB, 201 So. Main, Miami, Oklahoma. Mrs. Fred Ernst, Secretary-Treasurer.
Home Builders Association of Muskogee, 226 Wall St., Muskogee, Oklahoma. J. S. Hurt, Secretary-Treasurer.
Norman Home Builders Association, 623 N. Porter, Norman, Oklahoma. James R. Adair, Secretary-Treasurer.
Bartlesville Home Builders, P. O. Box 778, Bartlesville, Oklahoma. Myrtle Barlow, Secretary-Treasurer.
The Oklahoma State Home Builders Association, Room 328, Biltmore Hotel, Oklahoma City, Oklahoma. Gus Fields, Executive Director.
Oklahoma City Home Builders Association, Room 328, Biltmore Hotel, Oklahoma City, Oklahoma. Gus Fields, Executive Secretary.
Ponca City Chapter of NAHB, 107 Whitworth Ave., Ponca City, Oklahoma. Roger A. Hawk, Secretary-Treasurer.
Stillwater Chapter of NAHB, Box 248, Stillwater, Oklahoma. Leonard G. Herron, Jr., Secretary.
Tulsa Home Builders Association, Inc., 1033 Hunt Bldg., Tulsa, Oklahoma. Mrs. George Wilder, Executive Secretary.

OREGON

Master Builders of Oregon, Portland Coke & Gas Co., Public Service Bldg., Portland, Oregon. O. A. Stevenson, Secretary-Treasurer.
Portland Home Builders Association, 218 Platt Bldg., Portland 5, Oregon. John M. Richardson, Executive Secretary.

PENNSYLVANIA

- Home Builders Association of Allegheny County, 1105 Standard Life Bldg., Pittsburgh 22, Pennsylvania. H. Wm. Hanna, Jr., Executive Director.
- Home Builders Association of Fayette County, 62 Race St., Uniontown, Pennsylvania. Russell Dills, Secretary.
- Home Builders Association of Greater Johnstown, Route 4, Johnstown, Pennsylvania. James M. Custer, Secretary.
- Home Builders Association of Northwestern Pennsylvania, Suite 311, Security Peoples Bank Bldg., Erie, Pennsylvania. Ralph W. DeLaney, Executive Director.
- Lehigh Valley Home Builders Association, 1136 Cedar Crest Blvd., Allentown, Pennsylvania. Roma Dante, Secretary.
- Monroe County Builders and Contractors Association, Marshalls Creek, Pennsylvania. Harvey W. Huffman, Secretary.
- Home Builders Association of Philadelphia and Suburbs, Robinson Bldg., 42 So. 15th St., Philadelphia, Pennsylvania. Wm. E. Johnson, Executive Vice President.
- Home Builders Association of Shenango Valley, P. O. Box 303, Sharon, Pennsylvania. Robert G. Heutsche, Secretary.

PUERTO RICO

- Home Builders Association of Puerto Rico, Box 485, San Juan, Puerto Rico. Louis A. Torregrosa, Secretary.

RHODE ISLAND

- Home Builders Association of Rhode Island, 71 Jackson St., Rm. 201, Providence, Rhode Island. Franklin A. Hurd, Executive Secretary.

SOUTH CAROLINA

- Piedmont Association of Home Builders, P. O. Box 957, Greenville, South Carolina. Waco F. Childer, Jr., Secretary.

TENNESSEE

- Home Builders Association of Chattanooga, 3823 Lerch St., Chattanooga, Tennessee. John R. Harries, Secretary.
- Home Builders Association of Knoxville, R. 6, Hickston Hills, Knoxville, Tennessee. John W. Cary, Secretary-Treasurer.
- Home Builders Association of Memphis, 640 Strick Bldg., Memphis 3, Tennessee. Frank C. Stuelein, Executive Vice President.
- Nashville Home Builders Association, 606 Commerce Union Bank Bldg., Nashville, Tennessee. Marion F. Thomas, Jr., Executive Secretary.

TEXAS

- South Texas Home Builders Association, 1001 Wilson Bldg., Corpus Christi, Texas. F. M. Hutclers, Executive Vice President.
- Home Builders Association of Abilene, Texas, 2401 No. 14th St., Abilene, Texas. Artiel Henson, Secretary-Treasurer.
- Austin Home Builders Association, 204 Nalle Bldg., Austin, Texas. Roger Newhall, Secretary-Treasurer.
- Home Builders Association of Dallas, Home Builders Auditorium, 2109-15 Live Oak, Dallas, Texas. Glover A. Godfrey, Executive Vice President.
- Home Builders Association of El Paso, Chamber of Commerce, 310 San Francisco St., El Paso, Texas. Robert H. Crockett, Executive Secretary.
- Home Builders of Fort Worth, 356 Majestic Bldg., Fort Worth, Texas. Henry L. Geddle, Executive Secretary.
- Houston Home Builders Association, 537 Kress Bldg., Houston 2, Texas. H. T. Fendlerbosch, Executive Secretary.
- Home Builders Association of Lubbock, 1300 4th St., Lubbock, Texas. Sam Lemons, President.
- Home Builders Association of Sabine Area, 2471 Hazel Ave., P. O. Box 2844, Beaumont, Texas. Clemence Morrigh, Executive Secretary.
- Permian Basin Home Builders Association, 1300 West Wall St., Midland, Texas. Jim Kelly, Executive Secretary.
- Home Builders Association of San Angelo, 1909 W. Beauregard, San Angelo, Texas. Dean R. Chollar, Secretary-Treasurer.
- San Antonio Home Builders Association, 1411 Majestic Bldg., San Antonio 5, Texas. J. Clay McGaughey, Executive Vice President.
- Texas Association of Home Builders, Inc., 512 Perry Brooks Bldg., Austin, Texas. Thomas D. Caldwell, Executive Secretary.
- Texas Panhandle Home Builders Association, P. O. Box 2307, Amarillo, Texas. Miss Lois McSweeney, Executive Secretary.

UTAH

- Utah Home Builders Association, 39 Exchange Place, Salt Lake City 1, Utah. Earl P. Staten, Executive Vice President.
- Utah Valley Home Builders, 47 No. University Ave., Provo, Utah. George B. Carter, Executive Secretary.

VIRGINIA

- Home Builders Association of Richmond, 2403 W. Main St., Richmond, Virginia. C. G. Yagel, Executive Secretary.

WASHINGTON

- Seattle Master Builders, 1930 Sixth Ave., Seattle 1, Washington. V. H. Dent, Executive Vice President.
- Master Builders of Washington, 2311 W-95, Seattle 7, Washington. Samuel Anderson, President.
- Home Builders Association of Spokane, 546 Peyton Bldg., Spokane 8, Washington. Robert W. Twigg, Executive Secretary.

- Tacoma Master Builders Association, 1103 1/2 Division St., Tacoma 3, Washington. J. Howard Kane, Executive Vice President.

WEST VIRGINIA

- Home Builders Association of Charleston, P. O. Box 2401, Charleston 29, West Virginia. Frank L. File, Secretary.

WISCONSIN

- Madison Builders Association, Room 505 Cantwell Bldg., 121 So. Pinckney St., Madison 3, Wisconsin. L. E. Gerretson, Executive Secretary.
- Milwaukee Builders Association, 259 East Wells St., Suite 355, Milwaukee 2, Wisconsin. Roy F. Healy, Executive Vice President.
- Rock County Builders Association, 1200 No. Bluff St., Janesville, Wisconsin. Wm. Sanford, Secretary.
- Wisconsin Builders Association, 905 Hackett St., Beloit, Wisconsin. Glenn Welhermeier, Secretary.
- Racine-Kenosha Home Builders Association, 610 Main St., Racine, Wisconsin. Arthur J. Morrissy, Jr., Executive Secretary.

RETAIL LUMBER ASSOCIATIONS

- Arizona Retail Lumber & Builders Supply Association, 414 Luhrs Bldg., Phoenix, Arizona. Gus M. Michaels, Secretary-Manager.
- Arkansas Association of Lumber Dealers, 727 Pyramid Bldg., Little Rock, Arkansas. E. DeMott Henderson, Secretary.
- Building Material Merchants of Georgia, 1925 Ponce de Leon Ave., N. E., Atlanta, Georgia. Joseph G. Rowell, Counselor.
- Carolina Lumber & Building Supply Association, 114 Builders Bldg., Charlotte, N. Carolina. E. M. Garner, Secretary.
- Central Kansas Lumbermen's Association, Salina, Kansas. M. L. Dinger, Secretary.
- Central Missouri Association of Retail Lumber Dealers, Jefferson City, Missouri. I. C. Gulshan, Secretary.
- Florida Lumber & Millwork Association, 2218 Edgewater Drive, Orlando, Florida. Mrs. Marie M. Bennett, Secretary.
- Illinois Lumber & Material Dealers' Association, 410 S. 5th St., Springfield, Illinois. J. D. McCarthy, Secretary.
- Independent Retail Lumber Dealers' Association, 303 Wesley Temple Bldg., Minneapolis, Minnesota. Edwin W. Elmer, Secretary.
- Indiana Lumber & Builders' Supply Association, 219 N. Pennsylvania St., Indianapolis 4, Indiana. Carl W. Nagle, Secretary.
- Intermountain Lumber Dealers' Association, 712 Newhouse Bldg., Salt Lake City 1, Utah. C. W. Nertz, Secretary.
- Iowa Retail Lumbermen's Association, 1912 Grand Avenue, Des Moines 14, Iowa. W. H. Badeaux, Secretary.
- Kentucky Retail Lumber Dealers' Association, Lebanon, Kentucky. Donald A. Campbell, Secretary.
- Louisiana Building Material Dealers' Association, 528 Florida St., Baton Rouge, Louisiana. R. Needham Ball, Secretary-Manager.
- Lumber & Supply Dealers' Council of Georgia, 1925 Ponce de Leon Ave., N. E., Atlanta, Georgia. J. G. Rowell.
- Lumber Dealers' Association of Connecticut, P. O. Box 1662, New Haven, Connecticut. William P. Beach, Secretary.
- Lumber Dealers' Association of Western Pennsylvania, Plaza Bldg., Pittsburgh 19, Pennsylvania. R. F. McCrea, Secretary.
- Lumber Merchants' Association of Northern California, 214 Front St., San Francisco, California. Jack Pomeroy, Executive Vice President.
- Lumber Trade Association of Cook County, 30 North LaSalle St., Chicago 2, Illinois. Phoebe B. Heas, Secretary.
- Lumbermen's Association of Texas, Second National Bank Bldg., Houston 2, Texas. Gene Ebersole, Executive Vice President.
- Maine Retail Lumber Dealers' Association, P. O. Box 236, Lewiston, Maine. Ralph E. Jordan, Secretary-Treasurer.
- Maryland Retail Lumber Dealers Association, c/o Lee Lumber & Supply Co., Baltimore, Maryland. Lee J. Etelson.
- Massachusetts Retail Lumber Dealers' Association, c/o W. E. Atkinson Co., Newburyport, Massachusetts. Willis F. Atkinson, Secretary.
- Michigan Retail Lumber Dealers' Association, 1009 Bank of Lansing Bldg., Lansing, Michigan. Hunter M. Gainer, Secretary.
- Middle Atlantic Lumbermen's Association, 1528 Walnut St., Philadelphia 2, Pennsylvania. Robert A. Jones, Secretary.
- Mississippi Retail Lumber Dealers' Association, P. O. Box 1968, Jackson 115, Mississippi. E. B. Lemmons, Secretary.
- Montana Retail Lumbermen's Association, 107 E. Main, Missoula, Montana. W. J. Howard, Secretary-Manager.
- Mountain States Lumber Dealers' Association, Colorado National Bank Bldg., Denver 2, Colorado. Joseph V. Smith, Secretary-Manager.
- Nebraska Lumber Merchants' Association, Terminal Bldg., Lincoln 8, Nebraska. Phil Runtion, Secretary.
- New Hampshire Retail Lumbermen's Association, Meredith, New Hampshire. Harold Greatorex, Secretary.
- New Jersey Lumbermen's Association, 1060 Broad St., Newark 2, New Jersey. Edw. C. Frick, Secretary.
- New York Lumber Trade Association, Grand Central Terminal, New York, New York. Whitney F. Harris, Secretary-Manager.
- North Dakota Retail Lumbermen's Association, P. O. Box 534, Fargo, North Dakota. Maynard A. Finch, Secretary.
- Northeast Missouri Lumbermen's Association, Columbia, Missouri. O. W. Hetrick, Secretary-Treasurer.
- Northeastern Retail Lumbermen's Association, 339 East Avenue, Valley Cadillac Bldg., Rochester 4, New York. Paul S. Collier, Secretary-Manager.
- Northern Indiana and Southern Michigan Retail Lumber Dealers Association, South Bend, Indiana. Robert Chamberlain, Secretary.
- Northwest Missouri Retail Lumbermen's Association, c/o Hyde Valley Lumber Co., St. Joseph, Missouri. Elmer Ford, Secretary.

- Northwestern Lumbermen's Association, Fourth Avenue South, Minneapolis 2, Minnesota. W. H. Badeaux, Secretary.
- Ohio Association of Retail Lumber Dealers, Green and Market Streets, Xenia, Ohio. Findley M. Torrence, Secretary.
- Oklahoma Lumbermen's Association, Leonhardt Bldg., Oklahoma City, Oklahoma. W. M. Morgan, Manager.
- Oregon Retail Lumbermen's Association, Western Lumber Co., 212 N. Russell Street, Portland, Oregon. C. A. Faries, Secretary.
- Rhode Island Lumber Dealers' Association, c/o E. E. Smith Lumber Company, Inc., Providence, R. I. J. Marshall Peters, Secretary.
- South Dakota Retail Lumbermen's Association, c/o H. W. Ross Lumber Co., Sioux Falls, South Dakota. Ralph J. McNeerney, Secretary-Treasurer.
- Southern Missouri Retail Lumber Dealers' Association, Hayti, Missouri. W. T. Nethery, Secretary.
- Southern California Retail Lumbermen's Association, 111 West Seventh St., Los Angeles, California. Orrie W. Hamilton, Secretary-Manager.
- Southwest Missouri Retail Lumber Dealers' Association, Springfield, Missouri. Grover McSpadden, Secretary.
- Southwestern Iowa Retail Lumbermen's Association, c/o Cranford Lumber Co., Council Bluffs, Iowa. J. Stivers, Secretary-Treasurer.
- Southwestern Lumbermen's Association, R. A. Long Bldg., Kansas City 5, Missouri. Allan T. Flint, Secretary-Manager.
- Tennessee Building Material Association, 711 Broadway, N. W., Knoxville 17, Tennessee. R. O. Brownlee, Secretary-Manager.
- Texas Line Yard Retail Lumber Dealers' Association, Waco, Texas. George H. Zimmerman, Secretary.
- Vermont Retail Lumber Dealers' Association, c/o E. R. Wiggins Builders Supplies, Chester, Vermont. Walter Kangas, Secretary.
- Virginia Building Material Association, 3303 Monument Avenue, Richmond 21, Virginia. Harris Mitchell, Secretary-Manager.
- Western Retail Lumbermen's Association, 1319 W. Nickerson, Seattle 99, Washington. W. C. Bell, Managing Director.
- West Virginia Lumber & Builders' Supply Dealers' Association, Box 1589, Fairmont, West Virginia. Sam H. Diemer, Secretary.
- Wisconsin Retail Lumbermen's Association, 501 Milwaukee Gas Company Bldg., Milwaukee 2, Wisconsin. H. P. McDermott, Secretary.

1952 American Builder Directory

SECTION V

Participating Communities in 1951 National Home Week

An Alphabetical Listing by States

LISTED ALPHABETICALLY by states and sponsors in this section are those communities which responded to *American Builder's* roll call of all cities and towns which observed *National Home Week* in 1951. Their efforts in showing new homes, home remodeling, and building materials stimulated and renewed great interest in home ownership and home maintenance.

Alabama

Birmingham Association of Home Builders

California

Home Builders Institute (Los Angeles)
Associated Home Builders of the Greater East Bay, Inc. (Oakland)

Associated Home Builders of Sacramento
Peninsula General Contractors and Builders Association, Inc. (San Mateo)
General Contractors Association of Contra Costa County, Inc. (Walnut Creek)

Connecticut

Greater Bridgeport Builders Association
Home Builders Association of Hartford County (West Hartford)
Home Builders Association of Greater New Haven

District of Columbia

Home Builders Association of Metropolitan Washington

Illinois

Chicago Metropolitan Home Builders Association
H. H. Troup Lumber Co. (Kankakee)
Quad City Association of Home Builders (Moline)
New Athens Lumber Co. (New Athens)

Indiana

Marion County Residential Builders, Inc. (Indianapolis)

Iowa

Home Builders Association of Cedar Rapids
Home Builders Association of Des Moines

Kansas

Wichita Association of Home Builders

Louisiana

Home Builders Association of New Orleans

Maryland

Home Builders Association of Maryland (Baltimore)

Massachusetts

Home Builders and Contractors Association, Inc. (Springfield)
Master Home Builders Association of Worcester

Michigan

Flint Association of Home Builders
Grand Rapids Home Builders Association

Minnesota

Minneapolis Home Builders Association
St. Paul Home Builders Association

Missouri

Home Builders Association of Greater Kansas City
Home Builders Association of Greater St. Louis

New Jersey

Atlantic Home Builders Association of New Jersey (Margate)
Home Builders Association of Metropolitan New Jersey (Newark)

This listing is not necessarily complete, but is as complete as the record to date permits. Its purpose is not only to give credit where credit is due for the highly successful *National Home Week* of 1951, but to provide a source list of experienced Home Week sponsors upon whose work communities which have not yet participated might base their plans for getting into the Home Show Parade for 1952.

New York

Home Builders Association of Albany
Niagara Frontier Builders Association (Buffalo)
Long Island Home Builders Institute, Inc.
Home Builders Association of Westchester, Inc. (Mt. Vernon)
Rochester Home Builders Association
The Better Builders Association of Onondaga, Inc. (Syracuse)

Nebraska

Home Builders Association of Lincoln
Omaha Home Builders Association

North Carolina

Comau Lumber Co. (Durham)

Ohio

Home Builders Association of Stark County, Inc. (Canton)
Home Builders Association of Greater Cincinnati
Home Builders Association of Greater Cleveland
Columbus Home Builders Association
Montgomery County Builders Association (Dayton)
Sandusky Home Builders Association
Toledo Home Builders Association

Oregon

Portland Home Builders Association

Pennsylvania

Home Builders Association of Metropolitan Pittsburgh

Rhode Island

Home Builders Association of Rhode Island (Providence)

Tennessee

Home Builders Association of Memphis
Nashville Home Builders Association

Texas

Texas Panhandle Home Builders Association (Amarillo)
Home Builders Association of Dallas
Houston Home Builders Association
Home Builders Association of San Angelo
San Antonio Home Builders Association

Utah

Utah Home Builders Association (Salt Lake City)

Virginia

Richmond Home Builders Association

Washington

El Monte Lumber and Fuel Co. (Elma)
Seattle Master Builders
Home Builders Association of Spokane, Inc.
Tacoma Master Builders Association

Wisconsin

Rock County Builders Association (Beloit)
Milwaukee Builders Association
Racine-Kenosha Home Builders Association

THE

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TRADE MARK

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MANUFACTURING DIVISIONS

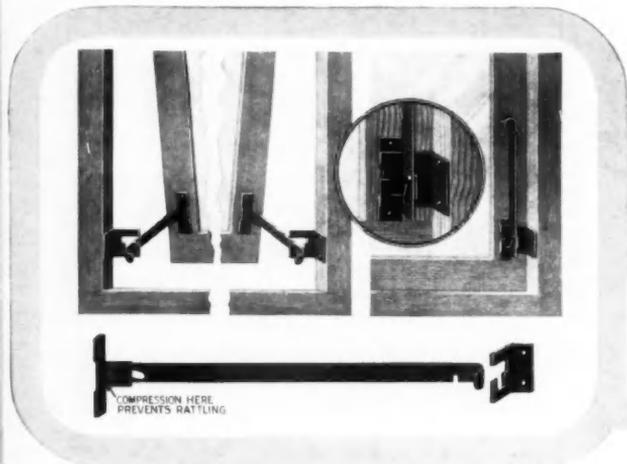
CHANDLER, CALIFORNIA
DETROIT, MICHIGAN
NASHUA, NEW HAMPSHIRE

WILMINE, NEW JERSEY
CORTLAND, NEW YORK
OKLAHOMA CITY, OKLAHOMA

PORTLAND, OREGON
LEWISITON, PENNSYLVANIA
DALLAS, TEXAS

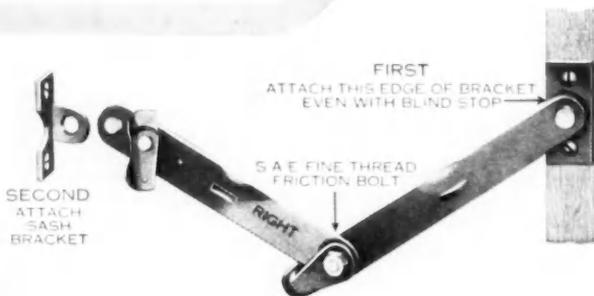
The Home Buyer and the

Extras



The Home Buyer is naturally impressed with the "extras." National Storm Sash Adjusters add strong customer appeal to the house without materially affecting the over-all cost.

No. 85 Storm Sash Adjuster Set — Holds sash securely in position either open or closed. No rattling. 5 inch and 10 inch sizes. Made entirely of steel. Japanned or Cadmium finish. Packed one pair — one right and one left — in an envelope, with 1x7 screws.



No. 86 Nois-Less Storm Sash Adjuster Set — Locks sash securely in closed position. Top window sash can be lowered all the way down without interference from the Adjuster. Size, 12 inches over all. Set is packed in a box. Consists of one right, one left and one No. 200 Pull. Cadmium finish only.



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