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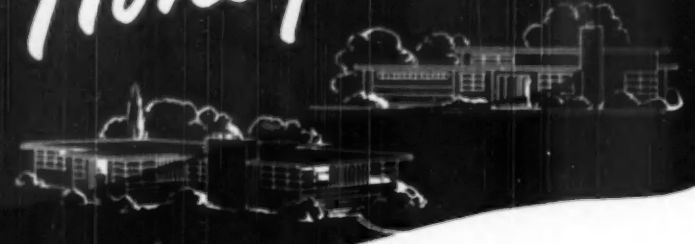
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IN YOUR JANUARY ISSUE

Pre-convention report on the clinics and activities planned for the 1951 NAHB CONVENTION AND EXPOSITION which opens January 21 at The Stevens Hotel, Chicago.

A gigantic BUILDING PRODUCTS ON REVIEW feature in which more than 400 of the latest products used in construction are described and pictured. Don't miss this "Exposition in Print" of the newest and most improved building materials and equipment available.

A cross-section of the homes exhibited by builders and dealers in the nation-wide observance of NATIONAL HOME WEEK of 1950, the biggest and best to date! These homes are typical of the attractive designs being offered in every price range by today's home builders, and offer substantial evidence of why home sales skyrocketed during NATIONAL HOME WEEK.

Second article on CONSTRUCTION LUMBER. Fundamentals of correct nailing practices in framing, how various types of joints should be nailed, and the type and sizes of nails to use will be covered.

First of a series of articles on AUTOMATIC HEATING CONTROLS. This article will contain basic information on automatic heating control systems for residential and small commercial buildings.

SPECIAL GATEFOLD BLUEPRINT of a 3-bedroom house designed especially for the January 1951 *American Builder* by the well-known architect, Walter A. Anicka.



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Building ideas for today

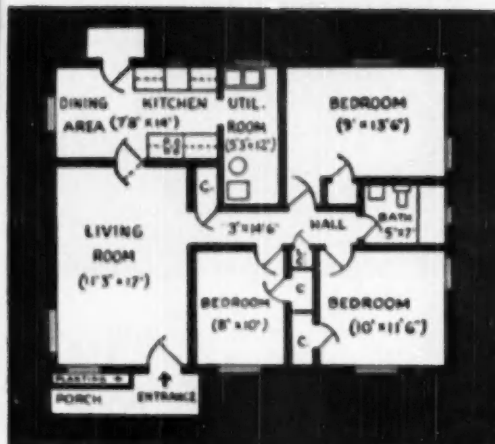


Meet Mr. M. T. Broyhill and his two sons (M. T. Jr., left, and Joel T., right) leading Washington builders and developers. They asked homeseekers "What sort of a home do you really want?"

Here is a capsule of the answers: 74% said, "I want ram-

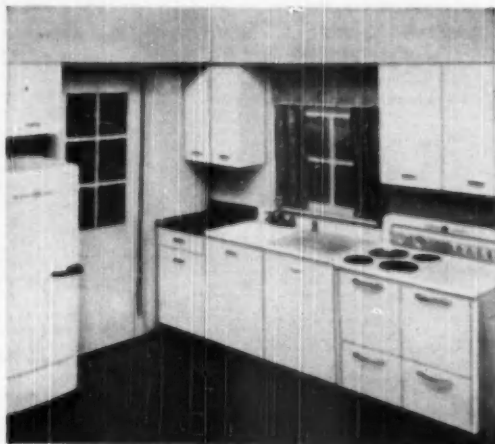
bler!" 63% said, "I want 3 bedrooms!" 83% said, "I want a General Electric Kitchen!"

The Broyhills designed a home to meet these specifications. What followed is a most amazing success story. All 1000 G-E equipped houses were sold within 60 days!



This all-on-one-floor house is built of brick, has 3 bedrooms, a large living room, tile bath, copper plumbing, dining space, clear oak hardwood floors, furred and plastered walls.

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This is the kitchen 83% of the people interviewed in the survey want in their new homes—General Electric! It includes the G-E Spacemaker Refrigerator, G-E Speed Cooking Range, G-E Dishwasher, G-E Disposall® Unit, G-E Steel Cabinets and G-E Texolite® Counter Tops. Yet, the complete house sold in the \$10,000 class!

— *from Washington!*

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How Combat Inflation?

THE MOST serious imminent danger with which the American people are confronted is inflation. The value—i.e., purchasing power—of the dollar has declined about 40 per cent since 1939. Most persons consider inflation to be increases in prices; but increases in prices are the effect, not the causes of inflation. The causes are policies that reduce the value of money. These are policies of government, such as deficit spending, that excessively increase the supply of money (including currency, checking accounts and savings accounts); in proportion to the supply of purchasable goods; and this excessive increase in the supply of money can be arrested only by government changing the policies responsible for it.

This subject has been very ably and lucidly discussed by Lewis H. Brown, chairman of Johns-Manville, in a recent address entitled "Fiscal and Credit Control to Help Beat Inflation" which has been published in pamphlet form.

It seems to be the government's general policy now to combat inflation by shackling the economy with direct controls such as wage and price fixing, allocation of materials, inventory limitations, formulas, regulations, and directives. In October, with an election near, the administration had not had the

courage yet to tackle wage controls, and highly inflationary advances in wages were being made and sought; but wage fixing will soon have to come if the government's policy of arresting inflation is to be use of direct controls.

The trouble with such direct controls is that most of them deal only with the effects and not with the causes of inflation; and as long as the causes continue, the effects cannot be more than partially prevented without the government assuming a control over every part of the economy and over the income and expenditures of all individuals that would establish a totalitarian state as tyrannical as those of the Nazis, Fascists and Communists.

Mr. Brown in his address proposed ten means of arresting inflation by combatting its causes. They include the following: (1) Vigorous curtailment of every non-essential government expenditure and subsidy. (Mr. Brown did not say so, but this curtailment should include expenditures and subsidies by state and local governments.) (2) Enough taxation to pay the cost of war "as we go along." (3) Utilization of the powers of the Federal Reserve System to fight inflation. (4) Avoidance of deficit spending "as if it were the plague." (5) The use of selective controls when necessary, but avoiding as far as possible

direct controls. (6) Retaining as far as possible a free market and the freedoms that in the long run will enable America to produce enough to defeat Stalin. (7) Encouragement of the sale of war bonds by instilling confidence in the people that the purchasing power of their bonds will not be lessened by inflation.

The problem presented by inflation is very complicated and difficult. But history leaves no doubt as to the effects of inflation and almost as little doubt as to the futility of trying to curb it by direct controls and at the same time maintain any semblance of economic freedom. We have had much inflation already. If the decline in the purchasing power of the dollar should continue much farther, people generally would lose confidence in their money and government bonds and begin rushing to convert them into goods, greatly stimulating the increase in prices, causing uncontrollable inflation.

Uncontrollable inflation would be bad enough in itself. It has preceded and been a major cause of every great revolution in world history. And, because it would break down our economy, and drive our people to desperation, it would be the best means conceivable of making it impossible to resist the attacks of Communism from both within and without.

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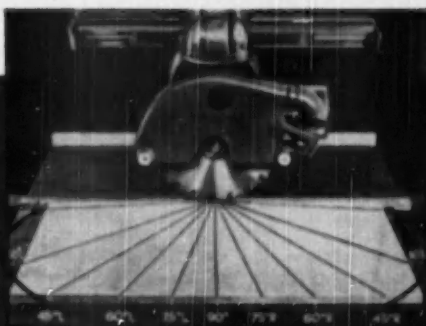
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TRENDS in the Building Field

How Controls Will Affect Builders

DURING the past six weeks, government controls that will radically affect the 1951 operations of most builders have been imposed on the construction industry. Unless the controls are upset by total war or a change in Administration, they are, in the opinion of those who made and are making the rules, the beginning of controls in the building industry that will continue for many years to come. Builders will begin to operate under a system of credit and material curbs never experienced except during World War II.

The Administration is convinced of the necessity for vastly increased defense expenditures including the stockpiling of weapons and the supplying of arms to allied nations.

This program, which is in its initial stages, requires large but undetermined amounts of steel, bronze, copper, aluminum, cobalt, lumber and other durable materials, as well as a portion of the labor which is being used by the building and other industries.

The National Production Authority has been set up to write and enforce a set of controls that will produce the required amount of armament and control the civilian economy to the extent needed. Some of the staff are veterans of the government agencies that did this same sort of job during World War II.

The prospect is for economic controls stretching on for long years—a longer time than those in effect during World War II, according to the nation's stabilization chief, Alan Valentine. He said, in his first public appearance since becoming head of the Economic Stabilization Agency, that controls and the defense production program had to be of a kind that will endure "not for four years but possibly for much longer. . . ."

The first of these controls was Regulation X, which became effective October 12, and requires substantially larger down payments by buyers of new homes. For example, a \$12,000 house now requires a down payment of \$1,900 from veterans and \$3,100 from civilians. A new house costing \$25,000 or more requires a

down payment of 50 per cent from civilians and only slightly less from veterans.

The regulation is intended to cut housing starts from the current annual rate of 1,300,000 to about 850,000. The government therefore expects builders to cut their starts in 1951 to about 35 per cent of the 1950 total.

Those who drew up Regulation X are not sure what it will accomplish. The bulk of the market is in homes of the \$10,000 to \$12,000 class and in many communities down payments of \$3,000 to \$4,000 have been required for the lowest cost homes. Regulation X would therefore represent little change in previous financing arrangements. Present interest of the Administration is to relax the rules if 800,000 to 850,000 starts are not achieved.

It is believed by some authorities in Washington that the regulation will affect principally large operative builders who build 100 or more houses a year. These large operative builders are not very numerous and their total production of homes represents a minor part of total housing production.

Furthermore, the effects of Regulation X will not begin to be known until next spring, the peak months for starts of new homes.

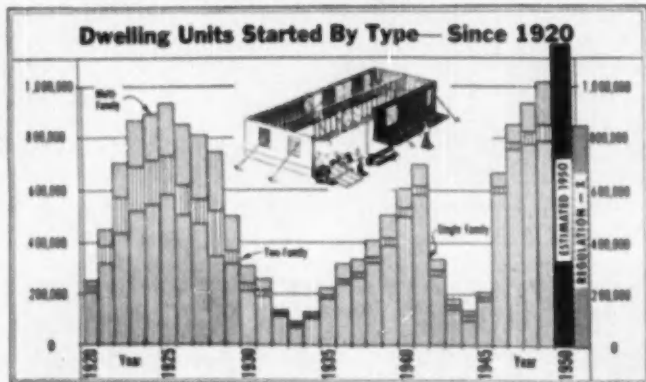
Generally, the average builder who started 15 homes this year says to himself that he should start only 10 next year. If he is building homes

in the \$15,000 class it is apparent that veteran buyers will need \$3,550 in cash and civilians will need \$4,300, which is likely to be substantially more in most communities than was required in 1950. Demand for new houses in this price bracket in previous years, and builders' estimates of current prospects for this class in their communities will determine if they can be sold readily at priced.

As to the materials situation, certain classes will be more plentiful and cheaper in 1951 and others will be scarcer and more expensive. It is expected that there will be a plentiful supply of lumber, gypsum and possibly cement, all hard to get this year. Plumbing and heating systems and probably metal windows will be in short supply. Some plumbing fixtures, when present stocks are exhausted, may be *ersatz*.

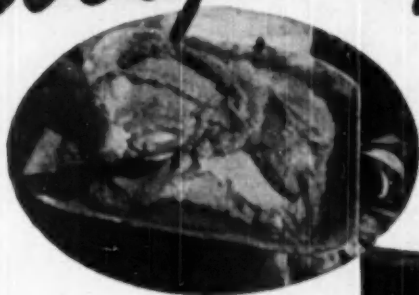
Unemployment in the building trades, as a result of the new regulation, will be difficult to solve at local levels in many instances. Presumably the unemployed are to seek work in defense plants, but many areas have no plants with defense orders.

Only definite restrictions on non-residential construction so far is on amusement buildings. Further starts are banned. NPA Administrator William H. Harrison, in issuing the order on amusement building, indicated that further action might be taken to halt other non-residential building.



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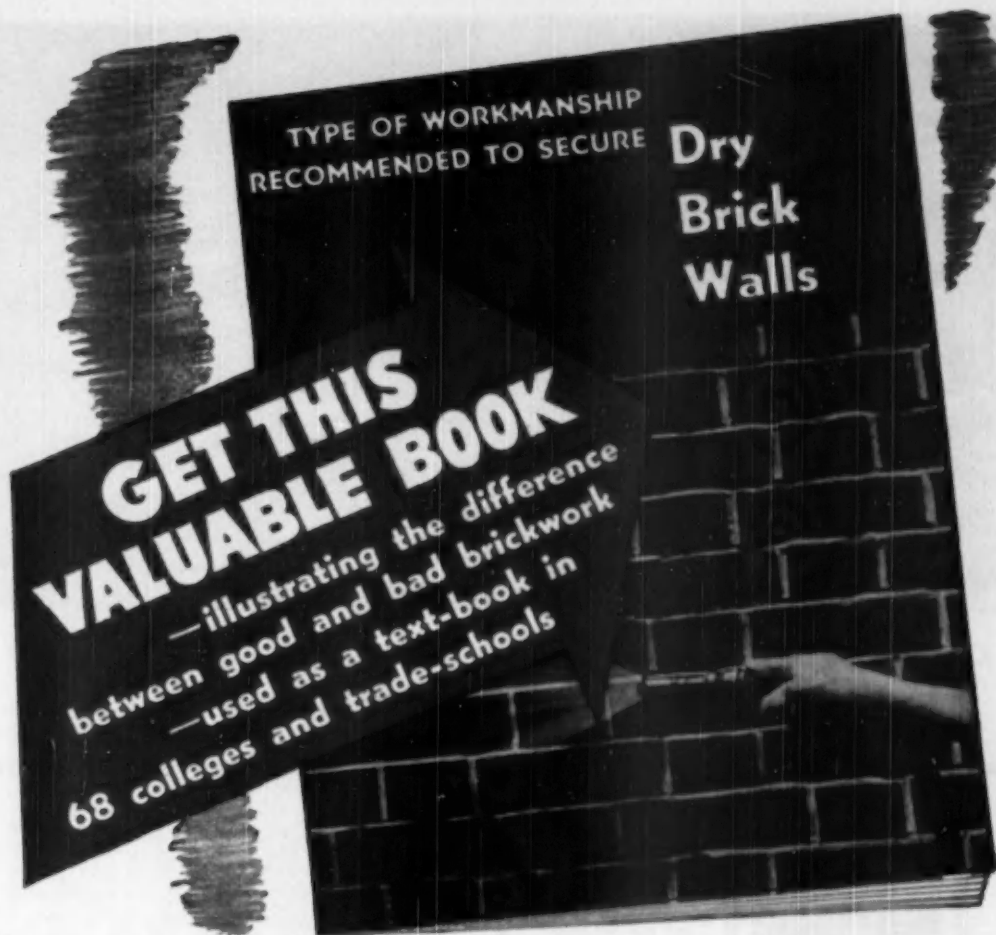
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Ease of handling—and all the other Speedmatic performance features—stem from one scientific source . . . **BALANCE.** Yes, your Speedmatic Saw balances perfectly when you lift it—balances perfectly when it's in action. You can demonstrate this 2-Way Balance to your own satisfaction—by simply lifting and starting a Speedmatic . . . at your distributor's counter.

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PORTER-CABLE MACHINE CO. 3012 N. Salina St., Syracuse 8, N.Y.

Manufacturers of SPEEDMATIC and GUILD Electric Tools

In Canada: Strongridge Ltd., St. Catharines, Ont.



PORTER-CABLE **Speedmatic** RADIAL ARM

Get the most out of your Speedmatic—Simply mount your Speedmatic Saw on this sturdy Radial Arm. You'll get unsurpassed quality production on work involving compound or straight mitering, beveling, notching, channeling, cross cutting, ripping. The cost? Only a fraction of the cost of two separate saws. At your Speedmatic distributor's.

PORTER-CABLE
Speedmatic

THE BALANCED LINE



You'll build or
remodel better with
Gold Bond

You're in the POST again!

Here's the latest ad in the Gold Bond series—it'll run in full color in the Dec. 16th Saturday Evening Post, and a lot of people in your community will read it! It discusses a question they've been asking themselves: *is now a good time to buy or build?* It tells them about all the value and comfort you build into your new houses, with the help of the Gold Bond line of related building materials. Ads like this one will help you get your full share of business in '51!

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Build with confidence or no extra cost by specifying trademarked Gold Bond Building Products.

Can you think of a better Christmas present?

Goodness knows, we never want to give "big" presents. But this year we're turning the tables and giving ourselves the biggest present in the world. We're facing a house! Smart, too, because we're getting built-in comforts that won't run around a few years ago. And of all, we're getting a house when we need it... when our kids are young enough to get a kick out of it!

There's a lot of wisdom in buying or building a house right now. You get more real value for your money than in most other investments. You get worth-while features that couldn't be bought in the "good old days" for any money.

Take fireproofing. It cost a dime years ago in your house. But today, thanks to modern science, sheathing under clapboards or other outside finish, and get extra structural wall strength, too.

For better plaster walls and ceilings, instead of old-time "knocking wood" lath for the base, there's modern fireproof Gold Bond gypsum lath, strong as rock, a guarantee of long lasting wall beauty.

Even heating is less of a problem with fireproof Gold Bond rock wool insulation. A full thick blanket cuts heating costs up to 40%, and keeps your house up to 15° cooler in hot weather.

There are just a few of the extra values you get in a house today. You also get apartment-like convenience of arrangements. Your new house is thousands of steps a year easier to keep clean. Looks smart too to work, live and play in!

So if you want to do something about a house, there's no better time than Christmas to start planning! For free suggestions on new building or remodeling, see your Gold Bond Lumber or Building Material Dealer first!

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

LATH, PLASTER, LINI, SHEATHING, WALL PAINT, ROCK WOOL INSULATION, METAL LATH, FIREPROOF WALLBOARDS, DECORATIVE INSULATION BOARDS AND SOUND CONTROL PRODUCTS.





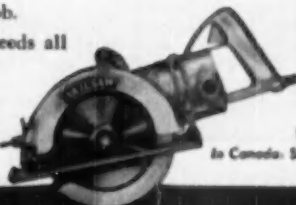
"SKIL Saw keeps going where going is toughest"

It takes a good, tough saw to stand the gaff on rip-sawing. That's one reason carpenters everywhere prefer hi-torque, powerful SKIL Saws. SKIL Saws keep going where others bind and stall. SKIL Saws withstand the roughest use because of extra strong gears. SKIL Saws stay out of the shop, stay on the job.

Try SKIL Saw yourself. See how it speeds all kinds of sawing. Feel how perfect balance

and scientifically placed handles for *both* hands make it easier to handle. Try SKIL Saws today. Ask your SKIL Tools Distributor for a demonstration.

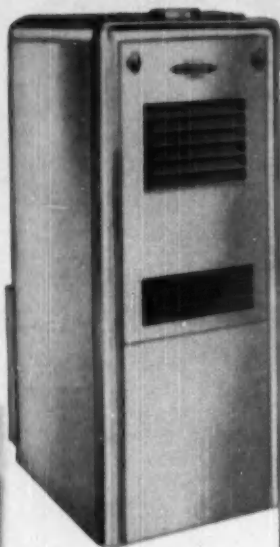
SKIL Tools are made only by SKILSAW, INC.
3033 Elston Ave. • Chicago 30, Ill.



SKIL

PORTABLE TOOLS

Factory Branches in Principal Cities
In Canada: SKITOOIS, LTD., 66 Portland St., Toronto, Ont.



DELCO-HEAT Units

give home buyers the value, dependability and features they want

Check the specifications of these outstanding General Motors products!

"GA" series Gas-fired Conditioners. These forced warm air furnaces feature multi-section heat transfer systems, with electrically welded *Multi-Rod* radiators that completely enclose the flames of

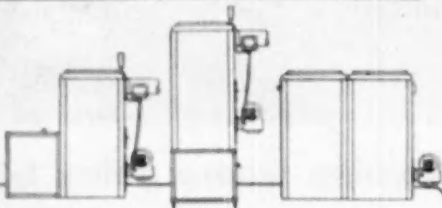
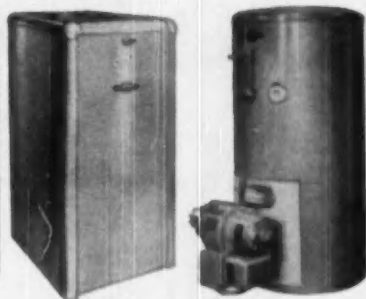
double ribbon-type burners... insuring the extraction of maximum heat from the fuel. Delco *Rigidframe* motors on blowers. AGA-approved for all gases and for high altitude installations.

Model (Available with either 12 or 16 gauge heat exchangers)	Dimensions			Blower		AGA Approved Ratings Btu per Hour (in thousands)			
	Height Inches	Width Inches	Depth Inches	RPM	CFM Max.	Nat., Mfg., Mixed or LP-Air Gas		LP-Gas	
						Input	Output	Input	Output
GA 63	35	22	26	550	350	62.5	50	60	48
GA 90	35	22	26	650	800	90	72	90	72
GA 120	35	28½	26	660	1050	120	96	130	96
GA 150	35	35	26	620	1300	150	120	150	120
GA 210	35	48	26	800	1600	210	168	210	168

"S" series Steel Oil-fired Boilers. Here are the perfect units for radiant heating systems in small homes—and for conventional steam and hot water systems, too. Have famous Delco-Heat

pressure atomizing burner, powered by *Rigidframe* motor. Provide year-round hot water for household use. Available in both deluxe and round-jacket models. Also larger capacity, cast iron boilers.

	Capacity			Oil Burner Nozzle GPH	Dimensions		
	Btu per Hour Output	E. D. R.	Net		Height Inches	Width Inches	Depth Inches
Steam Hot Water	95,200 95,200	396 635	300 480	1.0 1.0	49	24	38½



"OPC" series Oil-fired Conditioners. Value priced! Blower-filter unit may be mounted *inside or behind* furnace. For basement, utility room or alcove installations. Features Delco-Heat pressure atomizing burner and *Rigidframe* motors. Deluxe model, with matching furnace and blower units, also available.

Capacity Btu per Hour Output* (Minimum)	Firing Rate GPH	Blower				Filter Size Inches
		RPM	CFM Max.	Motor		
				HP	Watts†	
78,000	¾	400-700	900	¼	385	20 x 25 x 1

*On basement installations add 15% duct loss to net heat loss—compensate for unusual conditions.
†Maximum watts allowable on motor.

New homes sell better when they're equipped with Delco-Heat!

Delco-Heat manufactures a complete line of automatic home heating products—for all fuels, all heating systems, and all sizes of homes. And our engineering and sales departments will be glad to serve you in any way possible. Also manufacturers of electric water systems for domestic water supply. For information about Delco-Heat products, write to Delco Appliance Division, Dept. AB-12, General Motors Corporation, Rochester 1, New York.



IN MAGAZINES—over 8,000,000 home-minded families see Monowall advertisements in full color.




ON TELEVISION—millions more see Monowall in Armstrong's Circle Theatre, over the NBC network.



Your customers are being sold on Armstrong's Monowall

Today, more and more home owners think first of Armstrong's Monowall® when they plan to modernize a bathroom or a kitchen. Armstrong's consistent program of national advertising has made "Monowall" a familiar name to them.

Full-color Monowall ads have appeared for years in *The American Home* and *Better Homes and Gardens* magazines. More recently, Monowall has been displayed and demonstrated on Armstrong's Circle Theatre program over the NBC Television Network. It is the first pre-decorated panelboard in the field to be advertised on this powerful medium. This concentrated advertising program serves as an

important selling force for every builder who uses Armstrong's Monowall. It creates a demand for Monowall in both remodeling and new dry-wall construction. Get full details about Monowall from your Armstrong lumber dealer or write directly to Armstrong Cork Company, 1612 Lincoln Street, Lancaster, Pennsylvania. 



Armstrong's Monowall



TOM
HENDERSON

TOM HENDERSON
FAMOUS COLLIER'S CARTOONIST

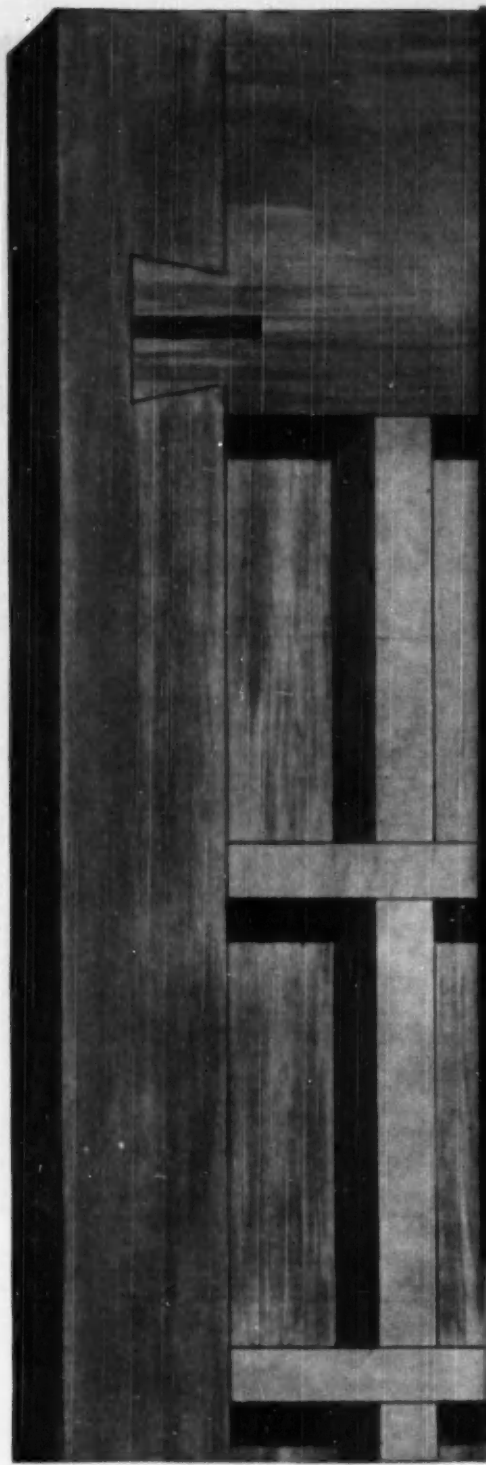
"Why, Mr. Ellis . . . don't you know that
EVERYTHING HINGES ON HAGER!"

C. Hager & Sons Hinge Mfg. Co. • St. Louis, Mo.
Founded 1849—Every Hager Hinge Swings on 100 Years of Experience



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AMERICAN BUILDER



MORE

for your money, in

MENGEL

Hollow-Core Flush

DOORS!

Installation and finishing expense leads most builders to demand the extra beauty, durability, economy and *sales appeal* of Mengel Hollow-Core Flush Doors.

- 1 *Balanced* seven-ply construction to provide controlled reaction in changing weather conditions.
- 2 Hardwood construction throughout — stronger, more durable, free from grain-raising, more easily and economically finished.
- 3 Exclusive Insulok grid core material has inherent tendency, cannot cause warping, nor transfer grid pattern to faces.
- 4 Greater strength. Adequate core stock surface area provides maximum gluing surface and resistance to warpage.
- 5 Precision key-locked dove-tailed joinings of stiles and rails add strength and stability.
- 6 Ready to finish. Door faces are smoothly belt-sanded. Stiles are machine-planed at factory — prefit to standard book sizes.
- 7 Fully guaranteed. Each door must meet rigid quality control standards and constant inspection throughout manufacture.
- 8 Mengel Hardwood Flush Doors are economical — no mouldings to paint — no corners to collect dirt. Smooth hardwood surfaces are less absorbent and less costly to finish — easier to clean and longer-lived.

Write for complete specifications. Use the convenient coupon.

Also see —
MENGEL STABILIZED SOLID-CORE DOORS
the finest products of their type on the market.



The Mengel Co., Plywood Division
2506 South Fourth Street, Louisville, Ky.

Gentlemen: Please send me, without obligation, full specifications on _____ Mengel Hollow-Core Flush Doors; _____ Mengel Stabilized Solid-Core Doors.

Name _____

Street _____

City _____ State _____

Now-for the best in
plastered interior angles

MILCOR⁺ Corner-Ex

The ultimate in
reinforcement for
internal corners
and angles

- Smooth, Finished Edges — can't snag; are safer to handle.
- Center Stiffener — for fast, accurate spotting.
- Extra-wide Angle — makes a snug fit.

With Corner-Ex, your jobs go up
faster — and they go up right!

Industry's Outstanding Packaging —
three sub-bundles per carton.
Easy to carry. Easy to use. Easy
to store.



Reg. U.S. Pat. Off.

For complete details — Tear out this coupon and mail today!

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Formerly Milcor Steel Company
4025 WEST BURNHAM STREET • MILWAUKEE 1, WISCONSIN
Baltimore 24, Md. • Buffalo 11, N. Y. • Chicago 9, Ill. • Cincinnati 28, Ohio
Cleveland 14, Ohio • Detroit 2, Mich. • Eastern City 8, Mo. • Los Angeles 23, Calif.
New York 22, N. Y. • Rochester 9, N. Y. • St. Louis 10, Mo.

INLAND STEEL PRODUCTS CO.
4025 West Burnham Street, Milwaukee 1, Wisconsin

Send me literature giving complete information on
the advantages offered only by Milcor Corner-Ex.

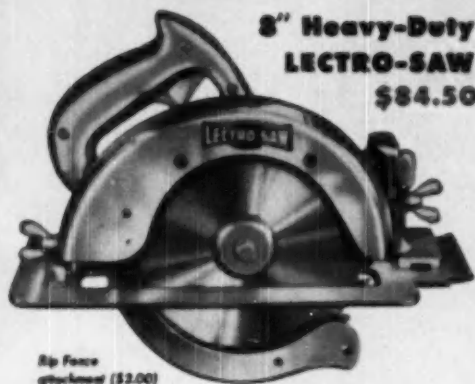
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Company

Company Address

City () State

FD-214

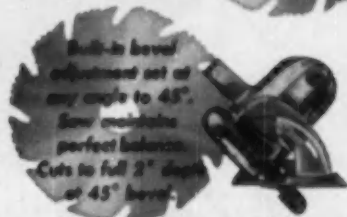


**8" Heavy-Duty
LECTRO-SAW**
\$84.50

Rip Fence
attachment (\$2.00)



Telescopic blade
to depth adjustments
permit use of any
cutting depth from 0"
to full 2 1/2".



Built-in bevel
adjustment set at
any angle to 45°.
Saw maintains
perfect balance.
Cuts to full 2" depth
at 45° bevel.

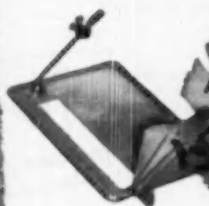
**6" Heavy-Duty
LECTRO-
SAW**

CUTS TO
FULL 2"
DEPTH

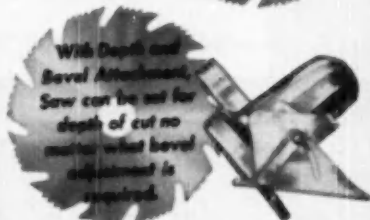


\$54.50

Rip Fence
attachment (\$2.00)



Depth and Bevel
Attachment (\$5.45)
permits bevel cuts
to 45° and depth
adjustment from
0" to 1 1/2".



With Depth and
Bevel Attachment,
Saw can be set for
depth of cut no
matter what bevel
adjustment is
required.

Save TIME and MONEY with POPULAR-PRICED HEAVY- DUTY LECTRO-SAWS

These powerful, heavy-duty LECTRO-SAWS save you money by cutting sawing time on the job, eliminating sawing fatigue and shortening construction time. They're close-coupled, perfectly balanced and powered by motors designed by Black & Decker especially for power sawing. Yet they cost far less than you'd expect!

In addition to making any type of cut in a wide variety of materials, these husky LECTRO-SAWS have telescoping blade guards, two-pole "instant-off" trigger switches and ground wires for complete operator safety. You'll find they can't be beat for abundant power, speedy sawing, ease of handling and safety. See them at your building supply dealer's today. HOME-UTILITY Division, BLACK & DECKER MFG. Co., Dept. H-666, Towson 4, Maryland.

PROFESSIONAL SAWS AT POPULAR PRICES

LECTRO-SAW

HOME-UTILITY Division, BLACK & DECKER Mfg. Co.,
Towson 4, Maryland.

Quality
THROUGH AND THROUGH



For Those Who Expect a Lot for Their Money

You can't see all the quality features of Eljer Brass Fittings unless, of course, you subject them to various laboratory tests. But quality *is* there . . . and to such a degree that your clients, who are entitled to expect a lot for their money, will be more than satisfied.

The finest of materials . . . modern, efficient equipment and machinery . . . craftsmen highly skilled in their trades . . . all contribute to this high standard of quality established by Eljer. To you, this means

dependability and service from the items you specify. So be sure to specify the best . . . specify Eljer Fittings . . . designed for Eljer Fixtures.

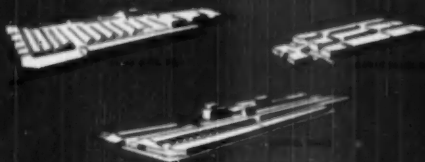
A COMPLETE LINE

The fitting illustrated above . . . E-9430-B, C. F. Over-rin Bath Filler with Drop Spout . . . is a popular item in Eljer's complete brass line. All moving parts are completely and easily renewable. For full descriptions of all Eljer Fittings ask your Eljer Distributor for a copy of Eljer's Brass Goods Catalog or write to Eljer Co., Ford City, Pa.



It pays you, it pays us—because we specialize in Plumbing Fixtures and Brass

ELJER





ASSOCIATIONS

Their Plans and Activities



'How to Build under Controls' Tops NAHB Convention Agenda

A comprehensive "how to do it" program for home builders, featuring what might be termed "How to operate as advantageously as possible for all concerned under new government rearmament regulations," is in final draft for the five-day convention of the National Association of Home Builders at the Stevens Hotel, Chicago, January 21-25.

For the general sessions in the Grand Ballroom, individual speeches will be held to a minimum, with emphasis on panel discussions. Among panels scheduled are: supply and distribution of all critical building materials; status of housing construction and mortgage finance regulations; proper role of government in housing; better house design; and public relations and merchandising.

This year, in addition to the regular clinics on semi-technical and technical subjects, there will be a "Builders' Shop Talk" session each morning, affording the average delegate ample opportunity to take part in the discussions. This feature is an outgrowth of an experiment at last year's convention when California Builder Earl Smith led an informal meeting at which individuals discussed their handling of particular problems and received the benefit of others' experience.

The general schedule will get under way on Monday morning, Jan. 22, with NAHB women builders presenting a full-scale program in the Grand Ballroom. Included in this session will be a discussion of whether builders are meeting the needs of the American housewife; a consideration of European housing conditions; and suggested solutions for minority housing.

Monday afternoon will be devoted to association business, with reports from top national officers. On Tuesday the program will move into treatment of individual builders' problems. Scheduled clinics cover Federal Housing Administration and Veterans Administration questions and answers, at which delegates will have an opportunity to question leaders of the agencies; a discussion of the best ways for using substitute materials; and a session on tax problems, led by Sylvanus Felix, well-known Oklahoma City tax counselor. These will be consecutive morning meetings in the Grand Ballroom.

NAHB's land planning panel will

meet on Tuesday night. Builders will have the opportunity to consult with the group of leading land developers, which will analyze actual project plans and make suggestions.

Tuesday afternoon has been designated for examination of the materials situation and the role of government in housing, with top officials of the National Production Agency and other important government departments present. Also under development is a "how to do it" session.

(Continued on page 178)

Florida Builder Named to ECA Board of Experts

Frank J. Rooney, a Florida builder and charter member of the Builders Association of Southern Florida, Miami, received national recognition recently when he was selected by the Economic Cooperation Administration as a member of an eight-man board of experts to seek a solution to economic problems in Western Germany.

It will be Rooney's task to find an answer to the pressing housing problem, ECA officials said. He is the only building expert on the delegation. The group will spend three months in study before making recommendations for remedial action to ECA.

NRLDA Alert on Legislative Developments, Directors Report at Meeting

Reports by officers and committee chairmen of the National Retail Lumber Dealer Association at the annual meeting of the board of directors Oct. 9-11 in Houston, Texas, indicated that the association is prepared to keep a close watch over legislative developments and economic controls arising from the rearmament program while going forward at the same time with other basic programs designed to heighten the prestige and protect the welfare of the industry. More than 500 dealers and their wives attended the sessions.

Elected president of the group was Clyde A. Fulton of the Colborn-Fulton Lumber Co., Charlotte, Mich., succeeding C. B. Sweet, Long-Bell Lumber Co., Longview, Wash. C. W. Gamble, Boise-Payette Lumber Co., Boise, Idaho, was named vice president, and Fred R. Stair, Farragut Lumber Co., Knoxville, Tenn., was elected treasurer. H. R. Northup and Edward H. Libbey were re-elected executive vice president and secretary, respectively.

In his farewell address as president, Sweet expressed the firm belief that the industry is on the right track and paid a tribute to the teamwork of its leaders.

"One of the biggest and most vital tasks which I recommend to those who will steer the affairs of the Na-

(Continued on page 180)



NATIONAL Retail Lumber Dealer Association officers, named at meeting Oct. 9-11 in Houston, Texas. From left: H. R. Northup, executive vice president; C. W. Gamble, vice president; Clyde A. Fulton, president; Fred R. Stair, treasurer; and Edward H. Libbey, secretary.

Dealer's Viewpoint



E. B. "COTTON" NORTHUP, Executive Vice President of National Retail Lumber Dealers Association became a regular columnist for *American Builder* starting with this issue. Mr. Northup, widely known in the lumber and building materials industry, joined NRLDA as secretary in 1940. From 1927 to 1940 he was an executive officer for the National Lumber Manufacturers Association.

Public Knowledge of Facts Key to Realistic Controls

One of the most urgent tasks confronting the retail lumber and building materials industry in the early stages of the new rearmament program is to enlist public support of sound government policy as it affects the distribution of building materials.

Among its very first moves, the government has gotten off base by including lumber on the list of materials in short supply, by going too far in restricting housing credit, and by its announced plan to limit construction of recreational and amusement facilities. Doubtless there will be other such moves which, though made with good intentions, nevertheless fail to take the realities into account.

It is not enough for the retail lumber industry to register protests against these unfortunate moves. In addition, it is important that the public be given accurate information regarding the materials situation and outlook and the full reasoning behind the industry's views, so that we can obtain some measure of public support and avoid the erroneous impression that we are objecting to any form of regulation good or bad.

Fortunately NRLDA had begun to set up machinery for getting our views before the public on a broad front even before the defense production program was started. That machinery consists of the National's new Minute Man Committee com-

posed of more than 900 individual dealers in all parts of the country.

The main function of the Minute Men is to issue to their local newspapers in their own names press releases provided by the National. The first release, distributed late in August, was splendidly received by the press, as was the second release sent to Committee members at the end of September.

The first release assured the public that a relatively large volume of building could go ahead next year in spite of the rearmament program. The second stressed the fact that shortages of materials, other than those containing critical metals, would end within a short time and that the supply of most building products would be ample for all purposes by early next year or before.

This localized publicity, supplementing that done nationally from the Washington office of NRLDA, can go far toward correcting misunderstandings and getting timely facts before the people of the country.

The ultimate goal of the Minute Man program is to have one committee member in every county, so as to cover the entire nation from one end to another. The response from dealers appointed to the Minute Man Committee so far indicates that the fullest cooperation can be expected and that is all that is needed to assure the success of this vital new program.

Set Attendance, Exhibit Records at Oklahoma Dealer Convention

New records were set in both attendance and exhibits at the fourth annual convention of the Oklahoma Lumbermen's Association when 1925 lumbermen registered and 141 individual companies set up display booths. The meeting was held in the Oklahoma City municipal auditorium Oct. 17-18.

Paul Leonhard of the Chaffin Brothers Lumber Co. in Oklahoma City was elected president of the group, succeeding Walter Hinton of the George C. Wright Lumber Co., Altus. Sy Akard, Akard and Caton Building Materials, Enid, was named vice president, and Alfred L. Leonhardt, H. E. Leonhardt Lumber Co., Oklahoma City, was re-elected treasurer.



NEW OFFICERS of Oklahoma Lumbermen's Association, elected at annual meeting in Oklahoma City Oct. 17-18. From left: Alfred L. Leonhardt, Oklahoma City, treasurer; Paul Leonhard, Oklahoma City, president; Sy Akard, Enid, vice president.

Featured speakers were Dewey H. Neal, business manager of the *Farmer-Stockman* magazine, and Oscar Monrad, vice president of the First National Bank and Trust Co., of Oklahoma City, the state's largest banking institution. Neal pointed up the potentialities of the state's farm market in a talk, "Young McDonald Has the Farm." Monrad also stressed the future of the state, both in farming and mineral resources.

More than 750 persons attended the annual banquet, at which W. M. "Bill" Morgan was cited for his work as secretary-manager since the association was organized in 1947. A group of dealers from all parts of the state made up a fund independent of the association and bought Morgan a new automobile.

Frank Carey, Jr., of the Carey Lumber Co., served as convention director.

For Pre-convention report of 1951 NAHB Convention and Exposition See January AMERICAN BUILDER

Shingle Bureau Meets Dec. 8

The annual meeting of the Red Cedar Shingle Bureau, representing all of the northwestern mills producing Certigrade Red Cedar Shingles, will be held at the New Washington Hotel, Seattle, Dec. 8.

Tobin North Jersey Speaker

William J. Tobin, labor and chapter relations director for the National Association of Home Builders, was guest speaker at the Oct. 10 regular meeting of the Home Builders Association of Northern New Jersey.

Producers' Council Names New Director

Verne Boget, vice president and building products sales manager of Gladding, McBean and Co., Los Angeles, has been named a director of the Producers' Council. Representing the West Coast, he will serve for a term ending in 1952.

Boget, who has been affiliated with Gladding, McBean for 29 years, was elected a vice president in 1948. He has served on the advisory committee of the Tile Council of America and is now a member of that group's promotion and architectural committee.

Vatterott New St. Louis Builder Association Head

Joseph H. Vatterott was installed as 1951 president of the Home Builders Association of Greater St. Louis at a dinner dance in the Norwood Hills Country Club Nov. 4. Vatterott, a member of the association for many years, served as first vice president in 1950 and fourth vice president the year before. He has been a member of the Bildor's Labor Committee for three years.



Joseph H. Vatterott

Other new officers are: Clinton Schattgen, first vice president; Charles Upson, second vice president; N. V. Bussman, third vice president; Elmer Vorhof, fourth vice president; Silvio Lombardi, secretary; Richard Higginbotham, treasurer; and Gene Vescova, sergeant-at-arms.

Ralph S. Duke, who heads the Bildors Annual Home Show, was installing officer.

3 Presidents and Governor



PRESIDENTS of the three home builder associations in state of Washington are on hand while Governor Langlie signs National Home Week proclamation in Olympia. From left: Mel Pedersen, Tacoma Master Builders Association; Wayne Guthrie, Spokane Home Builders Association; and Harold L. Larson, Seattle Master Builders Association.

Cortright's Column

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



Will YOU Be In Business in 1951?

There's nothing so eye-catching and breath-taking as a skilled diver performing a well-executed jackknife. He runs, hits the diving board with tremendous impact and is propelled high into the air. At the apex of his upward movement his body forms an inverted "V", or jackknife. He then zooms downward into the water.

With a diver, this downward zoom looks good. Applied to housing starts, it's still eye-catching, breath-taking . . . but tragic.

That's what's happening in this great housing industry. Applications for FHA approval and requests for VA Certificates of Reasonable Value skyrocketed upward in the week prior to the now famous Regulation X, which was effective last October 12. Following this peak of activity, the volume of new housing business for FHA and VA or conventional lenders has sunk to an all time low. If these agencies didn't have a large backlog of applications, cobwebs might well be forming in every office, because requests for loans on "post-Regulation X" housing are negligible.

This low in new loan business now will show up in a lack of housing starts early next year. So it's the job of both industry and government to start worrying now about what is going to be done about it.

This is the era of the "great unknown". Even the government doesn't know what impact Regulation X will have upon the building industry. This may be one reason it was dubbed "X". But there's no question about the impact being serious. One reliable yardstick, the new applications filed for FHA insurance, shows that for the week when Regulation X was announced, applications totaled 23,014, whereas filings for the previous week were only 6,069. This means plenty of applications got in under the wire.

But the weeks after Regulation X tell a different story. From the high of 23,014, the following week plummeted to a mere 3,815. And the week ending November 3 had the total of only 1,914 in single family housing units.

There's an old saying that says "Nothing succeeds like success." To be successful in these trying times, one must be fully informed. A builder must know what conditions he will face in the future.

Once each year there are gathered together a great majority of the leaders in every phase of the home building business, both in private enterprise and government. This occasion is the annual convention and exposition of the National Association of Home Builders, January 21-25. The place: the Stevens and Congress Hotels in Chicago. Because of the many problems facing our industry, this convention will undoubtedly be the most important ever held. It is your opportunity to learn the answers. You are urged to make use of its opportunities whether or not you are a member of NAHB.

The six great unknowns of "Building in 1951" can be broken down into the following categories: construction loans, labor, materials, prices, market and regulations. Each of these subjects will be thoroughly discussed and explained by leaders in their respective fields during this convention.

Here is a quick rundown on some of the more important sessions and clinics at the Chicago convention: "The Proper Role of Government in American Housing in 1951", "Stretching the Supply of Building Materials in 1951", "Increased Production and Improved Distribution of Building Materials", "Better Design for Today's Houses", "FHA-VA-Federal Reserve Board Questions and Answers", "Status of Housing Construction and Problems of Mortgage Finance", etc.

Five days spent at this important convention will be five of the most important days of your life. Lessons and information learned will show you how to keep in business and keep in the black. Plan to attend.



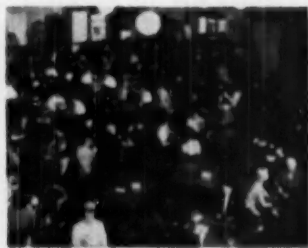
Dallas Center Offers Many Services

More than 100 home builders and their wives, enroute to the National Association of Home Builders recent directors meeting in Houston, stopped over in Dallas for an inspection of the Home Builders Auditorium, new permanent headquarters of the Dallas association and an outstanding service center for both the industry and public.

A Spanish-type building containing more than 12,000 square feet of floor space, the center houses more than 60 exhibits. These surround an auditorium with seats for 250 persons and a large stage.

No charge is made for use of the auditorium, which is currently booked by local groups for about 70 per cent of the afternoons and evenings not required for regular meetings of the Dallas association. This assures a traffic of between 6,000 and 7,000 persons monthly through the exhibit area.

The building also contains a snack bar for lunches and beverages; a library of more than a thousand pieces of associate members' literature; club rooms for directors' and committee



TYPICAL meeting in auditorium which fills a community need. No charge is made to local organizations for use of space

meetings; and modern administrative offices for the home builders association.

Grover A. Godfrey, executive vice president of the Dallas NAHB affiliate, reports that sufficient income is earned through sale of exhibit space to meet operating expenses of the center. A full-time hostess and janitor are the only employees required. With large neon signs outside, the headquarters provides an effective advertisement for the Dallas home-building industry.

30

Lans Speaks in California

"The Building Industry in the Light of Present World Conditions" was the topic of a recent talk before the Peninsula General Contractors and Builders Association, San Mateo, Calif., by Carl G. Lans, director of the Technical Service Division of the National Association of Home Builders.

Lans discussed current legislation, availability of materials, and substitutes for critical materials, research programs, and architectural planning and design.



DIRECTORS of Peninsula General Contractors and Builders Association, San Mateo, Calif., pose with guest speaker, Carl G. Lans, NAHB Technical Service Division director. From left: Ronald Campbell and Richard Dolacchi, directors; Walton A. Gould, vice president; Perry A. Bygdson, president; Lans; Henry Gramberger and Roy Matlock, directors; and Alec McKenzie, secretary-treasurer. Present for the meeting were 90 builder members



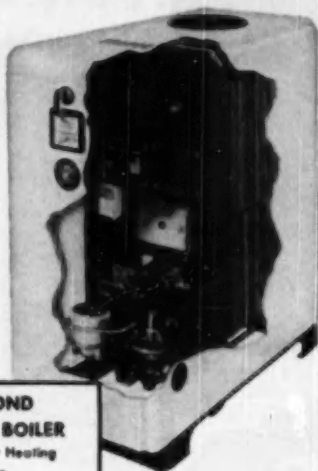
Up and Down the Mississippi



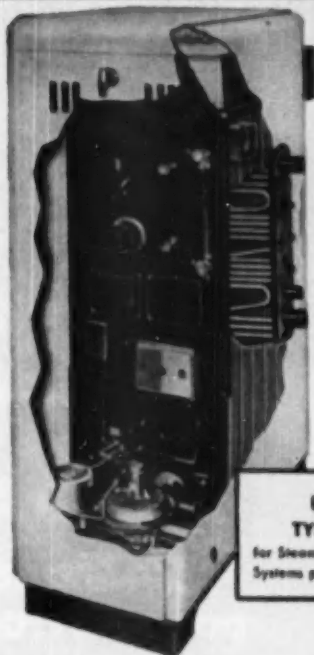
RECENT TRAVEL of Thomas P. Coogan, National Association of Home Builders president, took him to two widely-separated cities on the Mississippi river, Minneapolis and Memphis, as honor guest of the local home builder chapters. At Minneapolis (above) he gets first slice of barbecue, flanked on right by national director S. G. Pearson and on left by national directors Emil Frank and Harold Boesdahl. In Memphis (left) are: Frank Jamison, Memphis Association first vice president; B. W. Horner, FHA director; Wallace E. Johnson, Memphis past president; William E. Clark, national director; Coogan; and D. T. Kimbrough, president of the Memphis association

AMERICAN BUILDER

Heat the house with RICHMOND... CAST IRON...WET BASE...GAS FIRED BOILERS!



**RICHMOND
TYPE WFD BOILER**
for Hot Water Heating
Systems



**RICHMOND
TYPE K BOILER**
for Steam, Vapor and Hot Water
Systems plus Domestic Hot Water

- **WET BASE**...prevents heat from radiating to floor; permits installation at radiator level.
- **REMOTE PILOT IGNITER**...added safety and convenience feature...standard equipment with diaphragm gas valve controls for manufactured gas. Meets Eastern Utility requirements.
- **EASY CLEANOUT**...top flue cleanout that saves disconnecting of piping and controls.
- **WHITE JACKET**...baked white enamel casing of sturdy construction. Beautifully streamlined with smooth, rounded corners.

- **FIELD-PROVED**...to give trouble-free performance with minimum service...Richmond Boilers are extra efficient due to their "wet base" design...economical for maintenance and installation.

Consider together Richmond's improved design, construction and appearance and you know there are no better boilers to specify or install. AGA approved.



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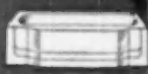
RICHMOND RADIATOR CO.—AFFILIATE OF REYNOLDS METALS CO.



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Gas—Cast Iron or steel
AGA—Approved

See your distributor or Best Catalog Index.

Richmond Radiator Company AB-12
19 East 47th Street, New York 17, N. Y.
Please send me additional information and literature on the new Richmond Boilers. No obligation, of course.

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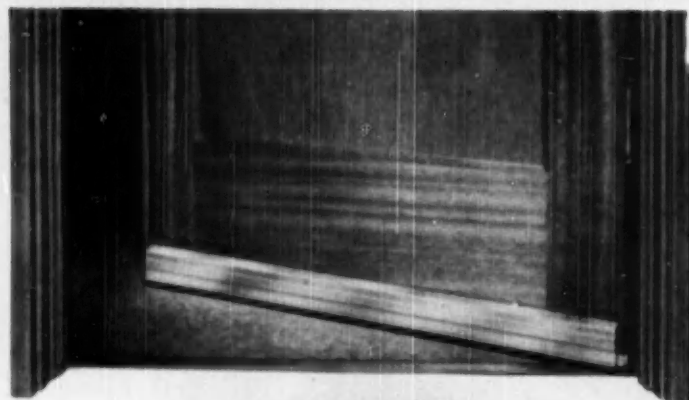
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Mack says...

YOU SELL with these

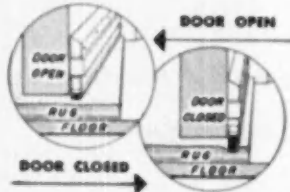


Nu-GARD Automatic DOOR BOTTOM AND DRAFT ELIMINATOR

THE MOST UNIQUE DOOR BOTTOM OF THEM ALL!

Here's the most efficient, most practical door bottom on the market! Overcomes the old problem of clearing rug or carpet every time door opens. Beautifully designed with smart, silvery-satin finish. Easily installed by anyone. All working parts made of high quality Alacrome metal—will not rust or tarnish. Furnished in 28", 32", 36", 42" and 48" lengths. May be shortened approx. 2". Fits right or left hand doors. Packed in individual cartons, including necessary screws and completely illustrated instructions.

This handsome double-duty display case given to you with your introductory assortment order. Removable top becomes handy shelf on front to hold demonstration model. Case contains 24 door bottoms, twelve 32" and twelve 36" lengths—individually packaged.



SHOW 'EM HOW IT WORKS AND IT'S SOLD!

A single demonstration makes the sale every time! Just show them how the heavy, thick felt hugs the floor when the door is closed. How it seals out noise, dust, drafts, saves fuel! Then when the door opens how the hinged felt section automatically raises to clear carpet or floor.



Nationally Advertised TO BUILD TRAFFIC FOR YOU!

Our advertising in leading national magazines tells millions of readers to buy these quality products from you. So keep well supplied!



You can't sell 'em if you don't stock 'em so order today. Your stock will be shipped same day your order is received.

MORE... PROFIT MORE sure-fire favorites!

More than ever... swell to have, swell to sell!

Numetal WEATHER STRIP for windows and doors



FOR DOORS Packaged in handy sets for almost all standard doors. Available with regular brass and felt door bottom strip, or with threshold and exposed hook. Easily installed—no special skill or tools needed. Comes complete. All ready to install.

FOR WINDOWS Also comes complete in convenient packages. Fits all standard 28", 30", 32" and 36" double hung windows. Cut-to-dimension service available. Quickly and easily installed by anyone. Each set contains necessary strip for complete job, plus nails and instructions. Individually packaged—ready to hand customer!

Nu-WAY WEATHER STRIP Easiest in the world to put on!



Any clerk can sell it! Any customer can install it! Works perfectly on most any type window, storm sash or door. Made of moth-proof, pre-shrunk, color-fast wool felt and white metal. Attractive display carton holds 12 individual 20-ft. rolls.



DON'T FORGET *Air-CALK* SPEED LOAD

America's favorite calking compound in the most efficient load on the market. Packaged 10 loads to each carton and 4 cartons per shipping case. You'll need a good supply to keep up with this fast-seller!



Air-Glaze GLAZING COMPOUND

Sells better because it does the job better—really "stays up"! Won't crack or peel off. Perfect for all glazing. Packaged in attractive cans—1/2 pint, pint, quart, 5 lbs.—in drums from 50 to 550 lbs.



ORDER NOW — Your order will be shipped same day received!

MACKLANBURG-DUNCAN CO.
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SPENCER

The quality line of
HEATING BOILERS

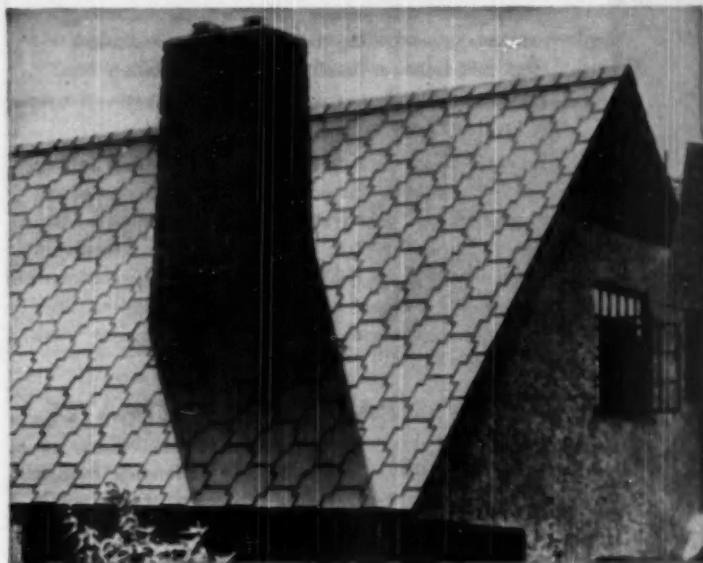
There is a **SPENCER**
for every building . . .
for every fuel, with ca-
pacities from 290 to 45,000
square feet, steam. Preci-
sion engineered and man-
ufactured to give superior,
guaranteed service.



VERSATILE • DEPENDABLE
BACKED BY MORE THAN
60 YEARS' LEADERSHIP



Presenting the new Barrett EVER-FAST[†] SHINGLES



● Here's a true double-coverage, lock-down shingle that is locked in 4 places against even a hurricane!

The lock is a part of the shingle itself—no metal clips.

And the lock is flexible—provides for the expansion and contraction of the roof, and for movement of the roof deck.

Each shingle *locked* in 4 places.

The heaviest winds can't lift these Barrett EVER-FAST[†] Shingles, nor can they ever slide out of place.

Only two nails for each shingle.

All nails are concealed and protected from the weather—no rusting or staining.

Extra large nailing area to insure nails

being driven into roof-boards.

Fewer shingles for your job—only 111 to the square means faster application.

The beautiful colors and blends of Barrett EVER-FAST[†] Shingles—in plain and weathergrain finish—give a handsome appearance on the roof—a balanced design that is architecturally attractive.

The shingles have a deep head-lap of 3½", and wide side-lap of 6" for greater protection. Fire-resistant, they carry Underwriters' Class "C" Label. High rag-content felt gives greater tensile strength. Permits greater saturation. Makes for longer life.

Phone, wire or write today for complete information.

a 4-point-locking
shingle that gives
100% DOUBLE
coverage...and
puts 3 thicknesses
on 50% of the roof!



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Allied Chemical & Dye Corporation
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Birmingham 5, Alabama
285 W. Wacker Drive
Chicago 4, Ill.

SPECIFICATIONS		COLORS	
Size	20" x 20"	Plain	Weathergrain
Head-lap	3½"	Blue Black	Greengrain
Shingles per Square	111	Deep Green	Redgrain
Bundles per Square	3	Deep Red	Bluegrain
Approx. Weight per Square	235 lbs.		Slategrain
Underwriters' Label	Class "C"		Browngrain

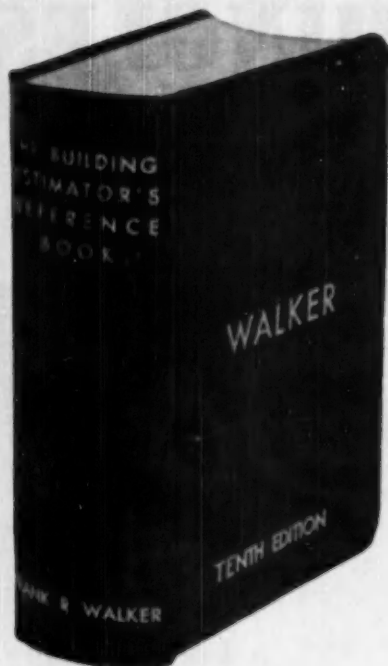
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†Trade Mark of Allied Chemical & Dye Corporation

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The Building Estimator's Reference Book

By Frank R. Walker



1700 pages, 1000 illus., 1000 tables,
25-page index, 4 1/2 x 6 1/2, flexible

COVERS

Excavating, Foundation Work, Reinforced Concrete, Framing, Millwork, Lathing and Plastering, Painting and Decorating, Glass and Glazing, Structural Steel, Masonry, Sheet Metal, Marble and Tile, Heating and Air Conditioning—and many other building subjects.

The new Tenth Edition contains latest estimating and cost data on everything that goes into house construction, from foundation to finish. It can be used in any locality, regardless of local prices or wage scales. It covers all types of small and large building construction.

For 30 years Walker's handbook has furnished contractors and estimators the most complete compilation of estimating and cost data available. The new edition has been revised and improved in the light of postwar conditions. Thousands of items that enter into construction estimates are logically arranged and tabulated for ready reference. A complete cross-index enables the user to quickly locate any subject.

HELPS PREPARE BETTER ESTIMATES

A copy of this new edition will help any builder, contractor or estimator in figuring and performing work at minimum costs. It will reduce the chance of overlooking an important item in an estimate. New methods of doing various kinds of work are explained and new building materials that have come on the market since wartime restrictions were lifted are fully described.

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Enclosed find \$10 remittance for which send me a copy of the New Tenth Edition of THE BUILDING ESTIMATOR'S REFERENCE BOOK and a Free copy of THE VEST POCKET ESTIMATOR. If I do not find the books entirely satisfactory I will return them within five days of receipt and you will refund my \$10.

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The Vest Pocket Estimator

This is one of the most popular little estimating books ever used by contractors. It contains 220 pages, 2 1/2 x 5 inches, and is flexibly bound to fit the vest pocket. Estimating and cost data most frequently referred to is presented in condensed tabular form. It can be instantly referred to on the job or in the office.

Right
from

House Beautiful

BETTER your home...better your LIVING

A PREVIEW OF THE SALES BUILDING OPPORTUNITIES TO BE FOUND IN THE JANUARY ISSUE OF HOUSE BEAUTIFUL REACHING YOUR BEST CUSTOMERS ON OR ABOUT DECEMBER 20th

HUMID VERSUS DRY HEAT

Another of *House Beautiful's* informative Climate Control editorials appears in the January issue . . . a factual, realistic argument for letting regional climate dictate house design, rather than style, alone. Entitled, "Different Places Need Different Houses", it contrasts architectural solutions to the two major American summer climate problems—the humid heat of the East and the dry heat of the West.

The design principles discussed in this editorial are based on extensive research by *House Beautiful's* Climate Control Project . . . research that you'll find invaluable in facing the problems of sound design in your locality. Plan now to watch for it!



The American taste trend toward naturalism is exemplified in this outstanding house, featured editorially in January House Beautiful. Inspired use of the simplest materials has produced an air of spacious richness and repose, a skillful blending of house and landscape. Imagination in molding the chimneys has made very commonplace objects highly decorative.

NATURALISM AND ARCHITECTURE

JANUARY HOUSE BEAUTIFUL

PRESENTS OUTSTANDING EXAMPLE OF NEW AMERICAN TREND

Simplicity, honest use of materials, frank exposure of structure, skillful integration of natural and man-made forms, careful selection of site. Those fundamentals, featured in an eleven-page presentation in the forthcoming issue, have produced one of the great houses of the last decade . . . a new kind of architectural beauty.

It's a house that achieves distinction by an inspired use of the simplest materials—stone, concrete, tile

and wood—each for its own intricate beauty. Its rich textures and glowing colors need no other ornamentation than good craftsmanship. It fits into the landscape, with a low ground maintenance cost. Above all, it's proof that a fine house can be built of almost anything . . . that the secret of architectural beauty and spacious richness lies in *how* materials are used, not *what* the materials are.

Study its characteristics carefully in your *January House Beautiful*.

You'll find that much can be learned from its design principles of great value to your business.

FREE

COUNTER CARDS ARE
YOURS FOR THE ASKING.
TURN THE PAGE FOR COMPLETE DETAILS.

ADVERTISERS

FOR EASIER, MORE PROFITABLE SALES TIE-IN YOUR FORTHCOMING PROMOTIONS WITH THESE FAMOUS NAMES FEATURED IN THE ADVERTISING PAGES OF JANUARY HOUSE BEAUTIFUL

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5. **PORTLAND CEMENT**
PORTLAND CEMENT ASSOCIATION

WINDOWS, DOORS & EQUIPMENT

6. **THERMOPANE INSULATING GLASS**
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7. **HEATILATOR FIREPLACES**
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CONTINENTAL RADIANT GLASS HEAT

* WEBSTER BASEBOARD HEATING

WARREN WEBSTER & COMPANY
Every month in House Beautiful, Webster advertising tells your prospects about Webster Baseboard Heating — true perimeter heating with forced hot water. Proven in service in more than 12,000 installations. Descriptive literature on request to Warren Webster & Company, Dept. HAB-1, Camden 3, New Jersey.



9. WILLIAMS OIL-O-MATIC OIL BURNER WILLIAMS OIL-O-MATIC DIV.

WILLIAMS-EUREKA CORP.
Rugged, beautiful, more economical! Williams Oil-O-Matic COMPLETE heating units provide warm air (winter air conditioning), hot water, or steam heat in homes of every size. Oil-O-Matic's buyers guide booklet "There is a BIG difference in Oil Burners" candidly compares all types. Write Williams Oil-O-Matic Division, Eureka-Williams Corp., Bloomington, Illinois.

LIGHTING-WIRING

10. **CUTLER-HAMMER MULTI-BREAKER**
CUTLER-HAMMER MFG CO.

MAJOR APPLIANCES

11. **MONARCH ELECTRIC RANGES**
MONARCH MALLEABLE RANGE CO.



Sited on the brink of a mountain stream, the "naturalistic" house, presented in January House Beautiful, required a system of protective walls and dams. Note how they have been designed to become part of the house, itself. The flying-wing concrete roof rafters, mounted on their stone piers, have the distinction and power of sculpture.

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- * **ORLYT GREENHOUSES**
LORD & BURNHAM CORP.
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ROTO ROOTER CORP.
14. **SCOTT'S LAWN CARE PRODUCTS**
O. M. SCOTT & SONS

* No counter card available.

Letters to the Editor

Spreading the Light

Sirs: Being an ardent reader of the *American Builder*, I am interested in an article on the Publisher's Page for August, 1950, titled "How to Prevent Socialism." I believe that this article is a truth that hits the nail right on the head. If copies are available I would be interested in securing them for local distribution.

Harry G. Anderson
Elgin, Ill.

Sirs: I would like to have some copies of the Publisher's Page of the September and October, 1950, issues. [Titles of the editorials are "The Real Danger to the Nation—Inflation," and "The Twin Dangers—Communism and Inflation."] They tell the truth all the way through and I want to try to make a few people see the light.

Ira Roby
Wabash, Ind.

American Builder is gratified by the interest shown in its editorial ideas and by readers' desire to make these articles available to other groups. Both Mr. Anderson and Mr. Roby have been given permission to reproduce the editorials mentioned.—The Editors

Condensation Remedy

Sirs: I have a problem which involves condensation in a low-pitch roof—a kitchen with a shed roof not exceeding a 3:12 pitch. The ceiling of this room is covered with fiber board insulating blocks and has rock wool batts above. In very cold weather this ceiling will drip water in a number of places. We are sure that there is not a leak through the roof.

Elmer Ogborn
Contractor-Builder
Salina, Kan.

It would appear that much of your difficulty is due to a penetration of warm air through the rock wool batts, with the result that this warm air meets the cold air coming from above to create moisture in the ceiling. Possibly the rock wool batts have been laid rather carelessly between the ceiling joists, and warm air escapes through the resultant openings into the attic area. It is suggested

that a good moisture barrier, preferably an aluminum foil, be placed on cold side of rock wool batts, thoroughly sealing all joints. This will prevent warm air from escaping into the cold air area, eliminating the moisture that now forms.—The Editors

Roof Trussing Problem

Sirs: I am building a church basement addition over which a new church will eventually be built, but which for some time will simply be covered by a shed roof. The board wants to eliminate posts because they would be in the way of tables, etc. I know a steel beam should go the length of the building, which is 46 x 24 feet, but would like to know how to brace it otherwise because of the steel shortage.

P. R. Stewart
Addison, Mich.

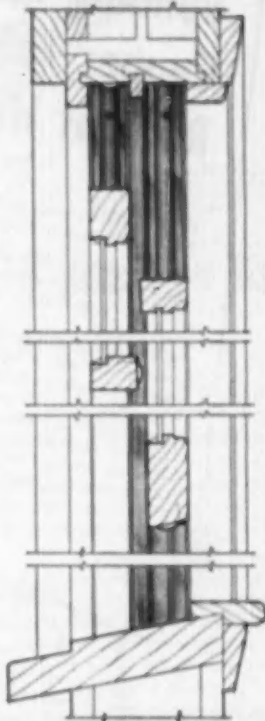
It is suggested that you use a series of wood trusses to span the 24-foot width in place of steel beams. For this width span, a simple truss made of 2 x 4 or 2 x 6 members with intermediate struts between top and bottom cords can easily be built. These trusses must be similar to those used in the low-pitched roof of the current ranch-type house.—The Editors

Pneumatically-applied Concrete

Sirs: We have received the October issue of your publication, and were very pleased with the article on the Miller Construction Co., located here in Waterloo, Iowa. Since this presentation covers the application of Jetcrete as faced by a medium-sized builder, we would like to ask your permission to reprint the article, for which, of course, we will give full credit to *American Builder*. I haven't talked to anyone at the Miller company as yet but I imagine they will have the same reaction as ourselves, since the article can definitely do nothing but promulgate a feeling of good will because of its thoroughness and exactness of presentation.

Earl T. Larsen
Advertising Manager
Construction Machinery Sales Co.
Waterloo, Iowa

NETTINGER'S Top Soil COMBINATION SASH BALANCES AND BRONZE METAL WEATHERSTRIPPING IN ONE UNIT



COMPLETE CARTON PACKAGED

- 1st. Low cost of \$3.50 per window, any size.
- 2nd. Easy to apply.
- 3rd. Velvet smooth in operation.
- 4th. Absolutely weatherproof.
- 5th. Sales helps and displays.
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- 7th. Wide consumer acceptance.
- 8th. Shipments at once.
- 9th. See your lumber dealer today.

THE WEATHERPROOF PRODUCTS CORP.
329 Westport Road Jefferson 3133
Kansas City 7, Missouri

SEE OUR CATALOG IN SWEET'S BUILDER FILE 3e/3b

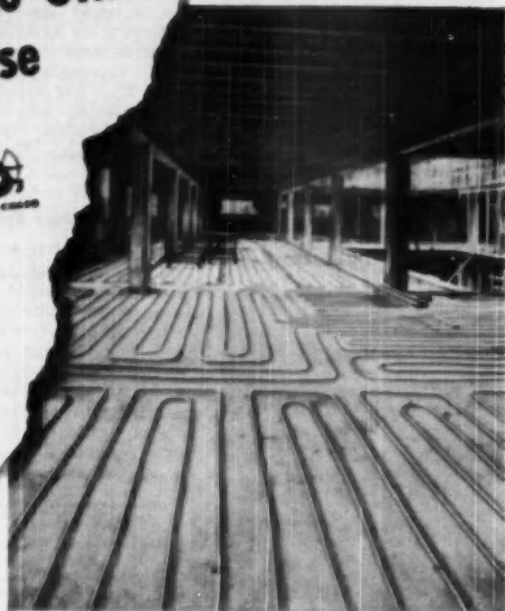
3-Story San Francisco Office Building Installs Chase Copper Tube Radiant Heating!



HERE'S WHY you too will want Chase Copper Tube in your Radiant Heating Installation!

**EASY TO BEND • LONG LENGTHS • LOW COST
LIGHT IN WEIGHT • SOLDERED FITTINGS • LONG LIFE • SMALL DIAMETER**

60,000 feet of Chase Copper Tube were used in this concrete floor radiant panel heating installation in the National Red Cross Building in San Francisco. Architect: Gardner A. Dailey & Associates. General Contractor: Swinerton & Walberg. Heating Contractor: Robert Brown & Son, Oakland, Calif.



CHASE COPPER TUBE means easier installation in large radiant heating applications. Long coils, in 60 and 100 foot lengths, reduce number of connections... soft temper, small-diameter tube bends by hand... joints quickly made with solder-joint fittings.

Chase Copper Tube's light weight and long life are important, too. Get economical installation plus lasting service with Chase!



SEND FOR FREE BOOK. Just mail the coupon for helpful information on the design of radiant heating installations.



Chase Brass & Copper Co., Dept. AB 1250
Waterbury 20, Conn.

Gentlemen: Please send your book, "Suggestions for Designing Radiant Panel Heating with Copper Tube."

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Chase



the Nation's Headquarters for
BRASS & COPPER

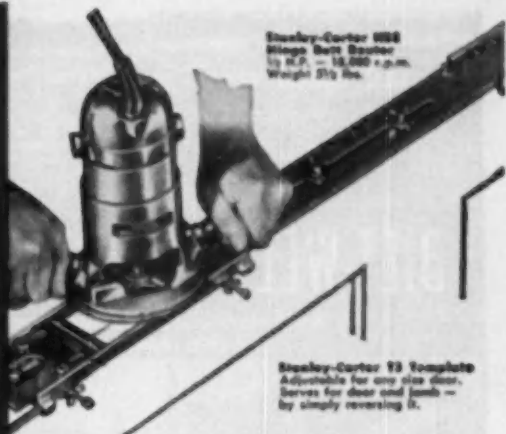
WATERBURY 20 CONNECTICUT

SUBSIDIARY OF KENNECOTT COPPER CORPORATION

THIS IS THE CHASE NETWORK... *handiest way to buy brass*

ALBANY! ATLANTA BALTIMORE BOSTON CHICAGO CINCINNATI CLEVELAND DALLAS DENVER! DETROIT HOUSTON! INDIANAPOLIS KANSAS CITY MO. LOS ANGELES MILWAUKEE
MINNEAPOLIS NEWARK NEW ORLEANS NEW YORK PHILADELPHIA PITTSBURGH PROVIDENCE ROCHESTER! ST. LOUIS SAN FRANCISCO SEATTLE WATERBURY *(The Chase Office)*

The fastest method of hanging doors



Stanley-Carter Hinge Butt Router
1/2" S. — 12,000 r.p.m.
Weight 2 1/2 lbs.

Stanley-Carter T3 Template
Adjustable for any size door.
Serves for door and jamb —
by simply reversing it.

...with a precision fit every time

Just ask any builder if he would be interested in hanging doors 6 times faster. You'll get a quick answer because speed means money to him.

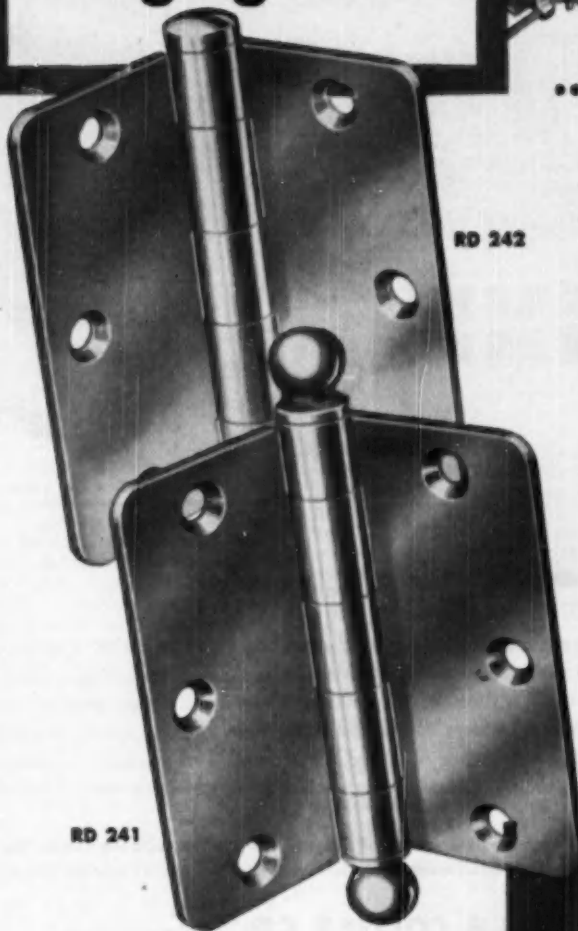
Hanging doors is easy with Stanley RD Butt Hinges (Round Cornered) and a Stanley-Carter Hinge Butt Router with Template.

The "secret" is the uniform standard of Stanley RD Hinges. And with round corners, the hinges exactly match the round cornered mortise made by the router bit — assuring a perfect fit every time and eliminating the need to square up corners of mortises.

The best evidence of this uniformity is the practice of some builders to mortise doors and jambs at separate points, apply the hinge halves with the assurance that the doors will operate perfectly when they are hung later on the job.

There's good business for you in this Stanley combination for faster mortising and hanging doors. Write for full details.


Stanley RD Butt Hinges
(Round Cornered)
In plated steel, brass,
bronze, and aluminum
Sizes: 2 1/2" x 2 1/2", 4" x 4"



RD 242

RD 241

STANLEY

REMEMBER  THREE HINGES TO A DOOR

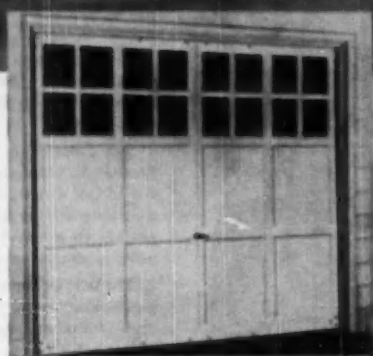


BILT-WELL WOODWORK is installed in "Hanley Hills" Homes, St. Louis, Missouri

Bilt-Well Products used: SUPERIOR WINDOWS, CARR-DOR GARAGE DOORS, BILT-WELL CORNER CABINETS, BILT-WELL COMBINATION DOORS



SUPERIOR Unit Windows



CARR-DOR Garage Doors



Center: Mr. Norman Schuermann, Builder
 Left: Mr. John D. Adams, Sec. Gen. Mgr., Carr-Adams Mfg. Co.
 Right: Mr. Harry M. Murray, Sales Rep., Carr-Adams Mfg. Co.



BILT-WELL Corner Cabinets

Bilt-Well Woodwork . . . known for over 84 years for its finer quality . . . manufactured of that fine wood, kiln-dried Ponderosa Pine which is scientifically treated to give a lifetime of satisfactory service . . . the choice of discriminating Architects, Dealers, Builders and Homeowners . . . enhancing the value, comfort and convenience of America's Homes. The product of master craftsmen devoting their skill and modern scientific methods to the old art of woodworking.



Join the thousands of users of Bilt-Well Woodwork today. Distributed by leading Woodwork Jobbers in the 37 Eastern States.

CARR, ADAMS & COLLIER CO. Dubuque, Iowa

The Bilt-Well Line: Superior Unit Wood Windows • Exterior & Interior Doors • Entrances & Shutters • Cas-lite Casements • Carr-dor Garage Doors • Basement Unit Windows • Louvers & Gable Sash • Breakfast Nooks • Combination Doors • Screens & Storm Sash • Corner (China) Cabinets • Gill-dor Cabinets • Ironing Board Cabinets • Mantels & Telephone Cabinets • Multiple-Use & Linen Cabinets • Stair Parts.

On and Off the Record

News, Views and Comments



FBI WANTS HIM—On page 234 of *American Builder's* September issue there is a description of a fugitive from justice who, among others, had defrauded two companies in the building industry. He is still wanted. Shortly before the September issue was received, a man answering the description disappeared from the employ of a concern in the building industry in Texas. He had been with the company only a short time, and when he left, he helped himself liberally to the firm's cash. The victimized employer feels that the fugitive in question was the man.

SENATOR O'CONNOR—"It was not through the passion of economic security," he said recently, "that America became the freest of peoples and the greatest industrial nation in the world. The present day stress upon security represents a negative attitude, and is based on the psychology of fear."

MUCH MORE—The Senator had a lot more to say in the same vein, and all of it is good sense.

STOP!—Let's stop asking Washington to do it, he concluded. Demands for Federal aid are responsible for increasing non-military government expenditures.

GOVERNMENT SPENDING—"It is at a point where it poses a definite threat to solvency," said O'Connor. "Worst of all, in a period of greatest prosperity, the nation is piling up huge deficits this year and next year and possibly for years to come. The only possible way to avoid serious damage to the nation's fiscal structure, and possible complete collapse—the only development Communists everywhere are patiently awaiting—is to cut government spending drastically. . . . The people of this country, businessmen particularly, and Congress absolutely, must be brought to a realization that the nation cannot go on buying everything it would like to have, social benefits, reclamation projects, new services in government and the like. . . ."

NOT A FAUCET—"You can't turn home building on and off like a faucet" is an expression frequently heard

since the imposition of Regulation X. It's true. From the initial planning stage until a development shows up as starts in the statistics there is a lapse of up to six months. Early autumn figures showed that starts already were declining. Chances are that if left alone, starts next year would have adjusted themselves to about what Regulation X purports to obtain.

UNCERTAINTY—About all the Regulation is likely to do is confuse home builders to such an extent that effectiveness of the Regulation is extremely doubtful, to say the least.

NO FAITH—The whole attitude of the bureau heads who run government reflects complete lack of faith in the good sense of both builders and buyers.

ADJUSTMENTS—Changes in the Regulation have been promised if it does not work as planned. Any relaxations will not be felt in increased activity for at least four months after relaxation becomes effective. That is the minimum time required to convert plans into starts.

BANKERS—American Bankers Association on September 18 recommended 15 per cent down payment for veterans, and same for FHA loans. Recommended minimum 25 per cent down payment on conventional loans, and increase of low interest rates on government guaranteed loans. Urged down payment increases at once, and deferment of interest rate and amortization period changes until extent of down payment changes had been ascertained.

BUILDERS—Generally, they oppose increase in down payments to veterans and to low income groups.

CONTROLS—Do they work? No, says the Committee for Constitutional Government, all the price and production controls imposed by bureaucrats did not stop the workings of the law of supply and demand.

PROOF—The proof offered is that prices increased an average of 87 per cent since 1939. Reason they did not triple with the supply of pocket-book and check book money is that production increased 60 per cent.

STAY TIGHT WITH **KAY-TITE**



KAY-TITE
CONTROLS WATER SEEPAGE
IN POROUS MASONRY

CINDER BLOCK WALLS
CEMENT BLOCK WALLS
STUCCO SURFACES
PUMP AND BOILER PITS
FIELD AND QUARRY STONE
CONCRETE MASONRY
RETAINING WALLS
ROUGH MASONRY
UNGLAZED TILE
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BRICK WALLS
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FISH PONDS

KAY-TITE CAN BE USED ABOVE OR
BELOW GRADE, INSIDE OR OUTSIDE

Available in 50 lb. drums
White and 9 colors. Write

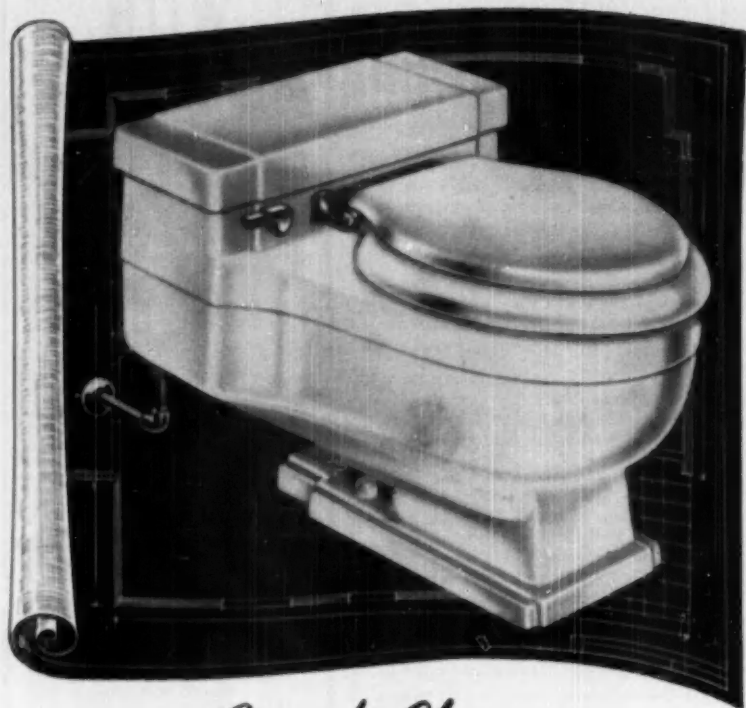
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COMPANY

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West Orange, New Jersey

Case advanced design makes good homes better



Five Great Favor-Features

BURY-IN TANK. The modern low-level design first sponsored by Case.

NON-OVERFLOW. This Case development provides complete overflow prevention.

QUIET ACTION. Strong rim flush and tank filling are exceptionally quiet.

LOWER BOWL. A brand new feature. Bowl is 14" high in line with modern hygiene.

WATER PROTECTION. Special safeguards include china channel enclosing riser—open atmospheric vent, etc.

• • •

And a new lavatory with the same distinctive design motif —the Case *Windell* #785.

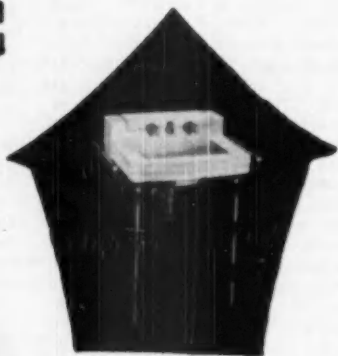
It's the New Case ONE-PIECE

With the Case One-Piece Water Closet #1000* you can now provide a new degree of refinement and sanitary protection in the modern bathroom. Lower bowl height, new water-supply safeguards, non-overflow design, and unusually quiet operation make this the most advanced water closet ever offered. The Case low overall height and integral tank make for unequalled economy of space—the One-Piece can be installed under a window, in a corner, or even under a stairway. It belongs in the finest homes—it adds to the value and livability of moderate-priced ones. In 26 colors and white. Distributed nationally—see your Classified Telephone Directory.

W. A. Case & Son Mfg. Co.,
33 Main Street, Buffalo 3, New York.
Founded 1853.

Case

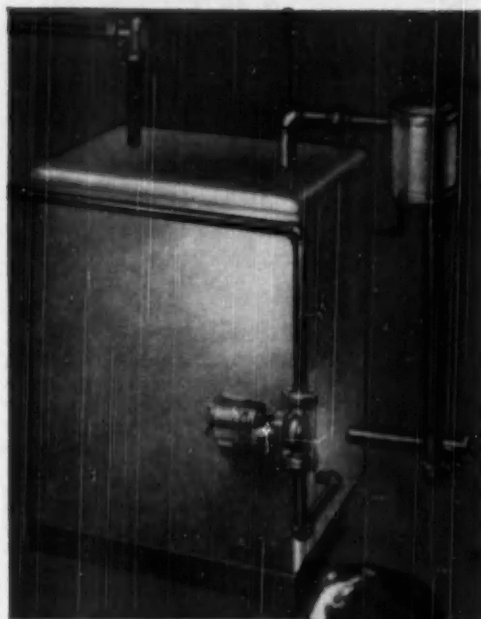
Fine Vitreous China



RADIANT WARMTH . . . HOT WATER . . . FUEL ECONOMY

You get **ALL THREE** with

B & G Hydro-Flo Heating



Remember that the heating systems you install can give more cause for satisfaction—or complaint—than any other single part of a home. So why not be guided by the experience of other builders and select B & G Hydro-Flo Heating? Hundreds of thousands of homes today are enjoying the comforts and economy of this radiant forced hot water system.

B & G Hydro-Flo Heating is automatically controlled to deliver a mere blush of warmth on mild spring and fall days or a full quota of heat in zero weather. Whether you install radiators, baseboards, convectors or concealed radiant panels, indoor temperature is always at the comfort level.

Saves fuel and money!

B & G Hydro-Flo Heating amazes and delights owners with its economy—burns just enough fuel to match the weather! No over-heating to cause fuel waste . . . but always plenty of heat when the thermometer hits bottom.



Ample hot water—winter and summer

The modern home needs hot water as never before . . . automatic washers and showers require ample quantities for satisfactory operation. The Water Heater of a Hydro-Flo System produces an abundance, all year 'round and at trifling cost.



Get the complete story!
Send today for illustrated
booklet, "Capture the Sun
with B & G Hydro-Flo
Heating."



BELL & GOSSETT

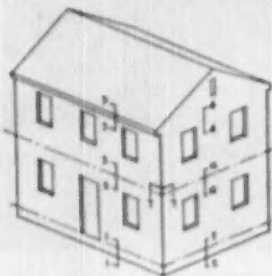
Company

Dept. BV-11, Martin Grove, Ill.
Canadian Licensee: S. A. Armstrong, Ltd.,
1400 O'Connor Road, Toronto, Canada

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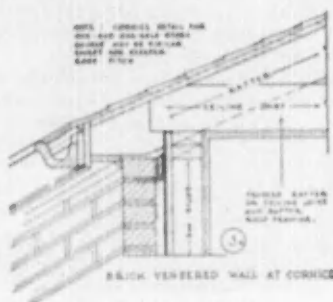
TECHNICAL GUIDE for Builders and Craftsmen



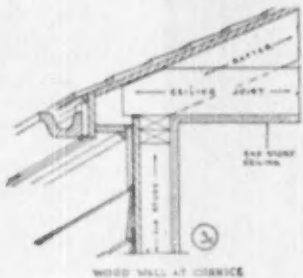
TWO STORY HOUSE
KEY ELEVATION showing section location

Woodframe-Brick Veneered House Framing Details

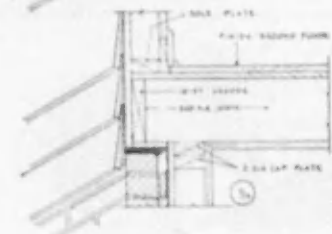
A universally accepted method of good construction is shown in detail in the accompanying drawings



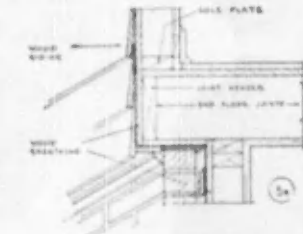
BRICK VENEERED WALL AT CORNICE



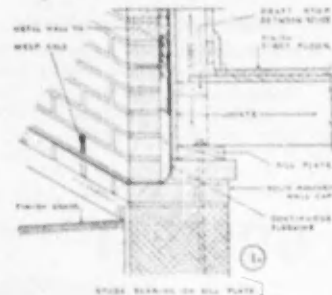
WOOD WALL AT CORNICE



BRICK VENEERED WALL



WOOD WALL



FRONT WALL DETAILS - WITH MAIN JOISTS PERPENDICULAR TO WALLS

WALL SECTIONS. Two types of construction shown for each section number on key view

THE BEST practices in wood-frame brick veneered house construction are shown in these typical wall assemblies prepared by the National Lumber Manufacturers Association, Washington, D.C.

A standard two-story house is indicated in the key elevation. This house is framed with floor joists, ceiling joists, and rafters parallel to the end or gable wall, and perpendicular to the roof ridge. The bearing wall is shown as the front wall in the details. These details can be used with any shape house and for framing which is not parallel throughout.

Sections are shown by number on the key elevation with the corresponding number placed at detailed wall section. Two methods of construction are indicated for each section. These are designated by a small letter and a numeral. Both methods conform to the accepted standards for this type of construction.

The first requirement for a brick veneered wall above grade is to provide a foundation sufficiently wide to support the veneer, and allow a one-inch air space between veneer and sheathing. This requires approximately four inches in additional foundation depth.

At the top of the veneer a framed projection in the form of an overhang at the second story, a roof overhang, or a gable wall extension, is required for weather protection and appearance.

Continuous base flashing is provided at the bottom of wall, usually one or two brick courses above the concrete foundation. Flashing is se-

(Continued on page 50)



Avoid Timber Rot, Peeling Paint, Crumbling Plaster

Asphalt Paper is Not Vapor Proof—Merely Waterproof

Unventilated walls with ordinary insulations which permit water vapor to seep through, condense and accumulate, can cause damage. Over a million dollars was recently spent in ripping out and replacing crumbling plaster walls in a tremendous brick and steel, nationally known, apartment development in Greater New York.

Vapor, a gas, flows through a wall, including plaster and asphalt, from high vapor density areas to low. Upon reaching a substance colder than its dew-point temperature, it condenses.

"Dew will not form on the walls and ceilings of a well-insulated house. But it may condense in the insulation in the walls or on the siding or sheathing. The insulation and wood then become damp. In time this dampness may cause the wood to rot, and the paint to peel off." U.S. booklet, "Insulation and Weather-proofing," Page 11, Division of Farm Buildings and Rural Housing.

Multiple accordion aluminum is impervious to vapor and is non-condensation forming. Because of its slight mass, the aluminum sheet on the warm side quickly approximates the temperature of the contacting air; and never falls below the dew-point. Heat flow by inner as well as outer convection is blocked by the fiber and aluminum sheets. The air spaces practically eliminate conduction. The additional aluminum sheets reflect back 97% radiation on the warm side and emit only 3% on the cold side.

Because of low (3%) emissivity, the aluminum on the cold side is slightly warmer than the cold contacting air, so condensation on it is not possible. No dew-point is possible anywhere on or within the insulation.

This construction for walls is available commercially as **INFRA INSULATION, TYPE 4** and **TYPE 4 Jr.** They cost under 7¢ a sq. ft., material with labor, in new construction between wood joists.

THERMAL FACTORS, TYPE 4 INFRA

Down-Heat C.064, R15.62 equals 5" DRY Rockwool
Up-Heat C.109, R 9.17 equals 3" DRY Rockwool
Wall-Heat C.105, R 9.52 equals 3 1/2" DRY Rockwool
VAPOR PERMEABILITY equals ZERO

*Multiple Accordion Aluminum and
Triangular Reflective Air Cells*

INFRA INSULATION, INC.
10 Murray Street New York, N. Y.
Telephone: COrtlandt 7-3833

INFRA INSULATION, INC.
10 Murray Street, New York, N. Y. Dept. B-12

Please send me free, "Government booklet, 'Insulation and Weatherproofing.'"

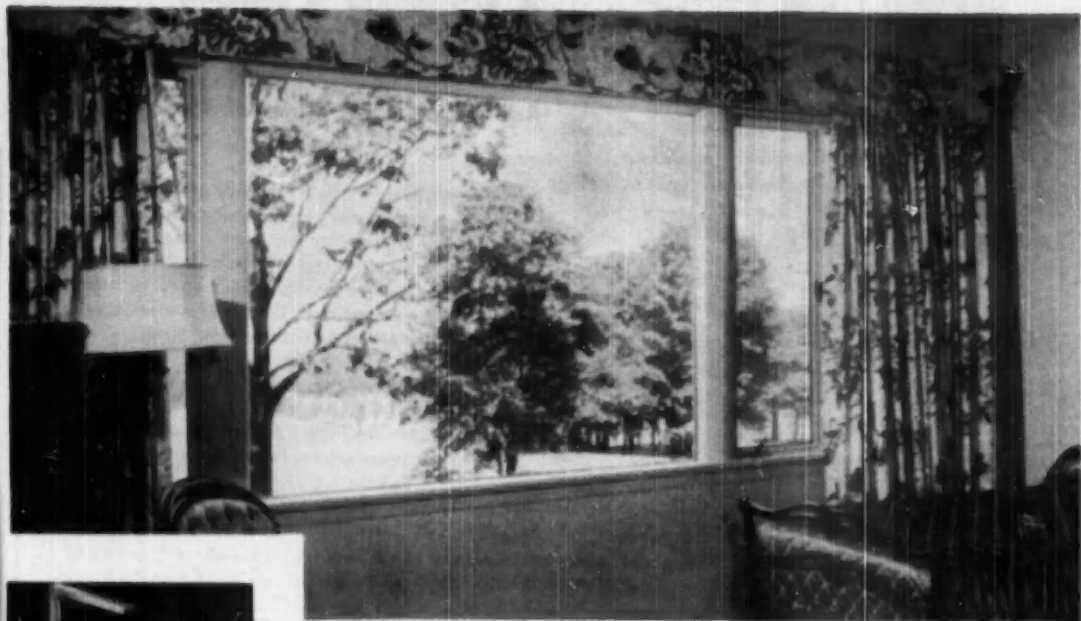
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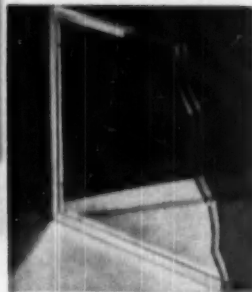
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Send Price Lists of Insulations Send Free Sample

For jobs that win a quick customer O.K.—



WHEN a picture window is installed, the beauty of the outdoors is brought into the room. Twindow, Pittsburgh's window with built-in insulation, is ideal for this purpose. It reduces heat losses and eliminates downdrafts near window areas. And Twindow can be set as easily as a single pane of glass. Architect: Edward T. Wassell, Wilkes-Barre, Pa.

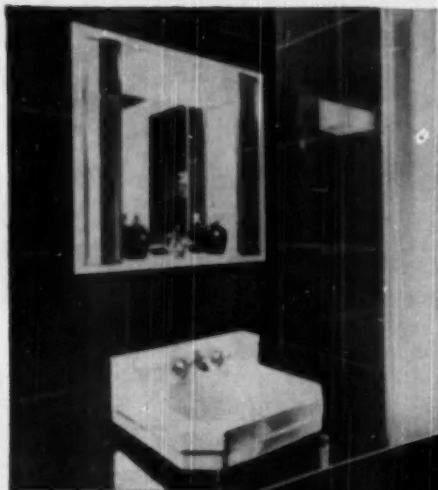


TWINDOW is made up of two or more panes of Pittsburgh Polished Plate Glass. There's a layer of air trapped between them and hermetically sealed to keep out dirt and moisture. The entire unit is enclosed in a stainless steel frame to protect the seal and glass edges and simplify installation. Forty-seven standard Twindow sizes are available, adaptable either for wood or steel sash.

PENNVERNON Window Glass is preferred by builders and homeowners because of its excellent visual properties. It has a high degree of transparency, flatness and freedom from defects. It's used extensively for windows, French doors, shelves, corner windows, sun porches, skylights, greenhouses and winter windows.



Glass can help you!



TWO things delight the modern homemaker—a bright, cheerful bathroom, as shown here, and a smart, up-to-the-minute kitchen. Walls or wainscots of Carrara Structural Glass are the answer. Carrara is colorful, easy to keep clean, lasts indefinitely. It's ideal, too, for window sills, fireplace surrounds, splash panels, built-in shelves.

MERCHANTS the country over know that a new store front of Pittsburgh Glass and Pitco Store Front Metal gives added sales appeal, brings in more customers, increases business. Pittsburgh offers you a complete line of glass and store front metal products and experienced crews of workmen to handle the installation. When you use Pittsburgh Products, it makes your selling job easier. For Pittsburgh is recognized by your customers as the leader in the store modernization field. Architect: J. Bedford Wooley, Philadelphia, Pa.



Build it better with

Pittsburgh Glass



See the complete listing and descriptions of Pittsburgh Plate Glass Company products in Sweets' Catalog Files.

PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

5 NEW FEATURES DeWALT

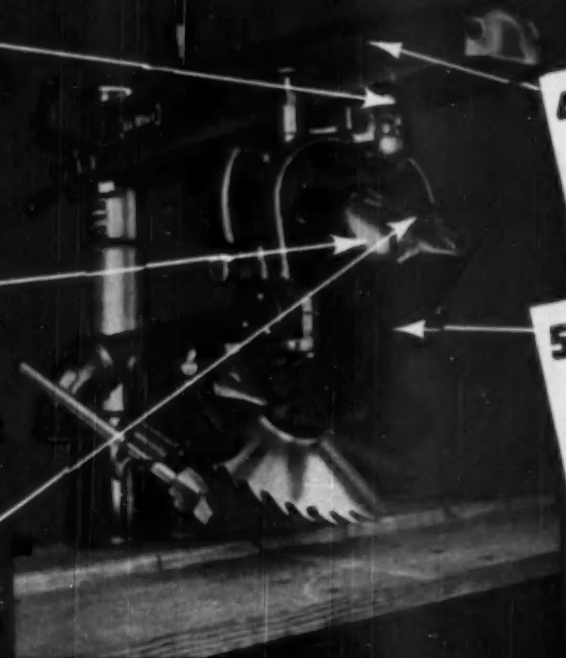
1 DOUBLE ROW grease-sealed-for-life BEARINGS
Double row bearings on carriage head mean more rigidity—and greater ease of operation.

2 4 MOTOR CAPACITIES
Available in 2 H.P. and 3 H.P. single phase
3 H.P. and 5 H.P. three phase

3 TOTALLY-ENCLOSED FAN-COOLED MOTOR
At no greater cost than open motors.

4 2 ARM LENGTHS
You can cross-cut 1" stock in 16" and 24" widths, and rip a maximum of 36".

5 LOW DEAD RISE 12% DEEPER CUT
Flat surface on bottom of motor permits greater use of cutting tool. You can use 14" saw blade and get 4 1/2" cut.



"This DeWalt saw is the best I've ever used. It's got more power and more rigidity than any other saw I've ever used."

There's more to this saw than meets the eye.

Well, we have made a better carriage head to give you improved rigidity and ease of operation.

There's more to this saw than meets the eye. We've made a better motor to help you work faster and more efficiently.

There's more to this saw than meets the eye.

It's got more power and more rigidity than any other saw I've ever used. It's got more power and more rigidity than any other saw I've ever used.

There's more to this saw than meets the eye. We've made a better carriage head to give you improved rigidity and ease of operation.

There's more to this saw than meets the eye. We've made a better motor to help you work faster and more efficiently.

There's more to this saw than meets the eye.

DEWALT INC.

DE WALT, INC., 112 Fountain Avenue, Lancaster, Pa.

Please send me literature and complete specifications on the new DE WALT OR and GW.

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BONDED HARDWOOD BLOCK FLOORING

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WORLD-FAMOUS BOAT BUILDERS



SALEM RIDGE, RIDGEWOOD, N. J.
DEVELOPMENT USES 340,000 SQ. FT. OF
HIGGINS FLOORING IN 440 HOMES

Gives you the advantage of quality flooring installations in HOUSING PROJECTS

Higgins Flooring helps you win more bids, finish more jobs per year—get your money in faster—win compliments from owners.

1. You buy Higgins Hardwood Blocks by net measurement—each one precision cut to 9" x 9" face. No dimensional loss allowance to make for tongues and grooves.
2. You install Higgins Blocks quickly, easily—over steel, concrete, any type subflooring. Can be laid in adhesive—or blind nailed.
3. No "lefts" or "rights" to slow you down. Pick any Higgins block; it fits. No waste by splitting when blind nailed; tongues are integral part of block, cross-grain-reinforced.
4. Blocks come with final luxury finish—no on-the-job finishing. Housewives like the easy, low-cost maintenance of a Higgins floor. These are just a few of the many profit features.

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MULTIPLE PLY BONDED
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Warp, Buckle, Cup, or Crack.

- Water-Repellent
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Gentlemen: Please send sample of Higgins Bonded Hardwood
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THIS IS IT!

MZP METALLIC ZINC PAINT

*is the ideal
protection for
metal surfaces*



STOPS RUST... IS ELASTIC... GOES FARTHER... LASTS LONGER... HAS PLEASING APPEARANCE ...STICKS FAST... EASILY APPLIED... HIDES RUST

Stops Rust—Zinc oxide and metallic zinc dust replaces rust-stopping zinc lost where galvanizing wears thin! *Elastic*—MZP film expands and contracts with metal to maintain unbroken coating! *Goes Farther*—Gallon covers 600 to 800 sq. ft., about twice the area of many paints. *Lasts longer*—In actual tests MZP has given complete rust protection longer than any other paint! *Has Pleasing Appearance*—Paint film dense & smooth and available in attractive colors! *Sticks Fast*—Made especially for metal, it won't "check" or peel! *Easily Applied*—By brush or

spray, goes on fast and uniform! *Hides Rust*—Completely obscures even darkest rust discolorations! Scientific, long-period use tests under all exposure conditions by paint manufacturers, agricultural colleges and the American Zinc Institute, as well as actual use by thousands of farmers have proved MZP the ideal protective paint for metal surfaces. In addition, MZP has stood the test of time, giving extraordinary service for nearly a century in Europe and more than 25 years in this country. Send for booklets below.

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The free booklets offered in the coupon at right are fully illustrated and packed with practical information on galvanized sheets, roofing installation, Metallic Zinc Paint, etc. Send for those you can use, today!

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Without cost or obligation, send the illustrated booklets I have checked.

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this Loader
is "Loaded"...

with

Profit-Building Features

The Lull Shovel loader mounted on an Oliver Industrial Wheel Tractor makes a proved profit-building team no matter what your loading problem.

It's a ruggedly built unit that's easy to operate . . . two conveniently located levers control every operation. Bucket is hydraulically controlled . . . assures a full load and fast, easy discharge. Down pressure can be applied to the bucket for greater digging or crowding action below ground level. Mid-section pivot of loader arms assures maximum lift to clear high trucks.

Wherever there's digging, loading, lifting, carrying, scraping or backfilling to be done, you'll find the Shovel loader performing with speed and efficiency which result in enormous savings in time and manpower.

Specially designed alternate attachments . . . quickly and easily interchangeable . . . greatly increase the Oliver Lull Loader's usefulness. Among them are Combination Coal and Snow Buckets, Concrete Buckets, Log Lifting Forks, Cranes and Backfiller Blades. In addition, a Tilting Lift Tower can be mounted on the Oliver Industrial Model "77" or "88" tractor.

You'll want more information on this cost-cutting, profit-building team. For all the facts, see your Oliver Industrial Distributor or write direct to:



OLIVER MODEL "77" with Log Lifting Fork attachment on Lull Shovel loader. Useful for handling pipe.



OLIVER MODEL "77" with Lull Shovel loader handling coal in specially designed coal bucket.



OLIVER MODEL "88" with Lull Tilting Tower Universal Loader with adjustable width lifting forks and material bucket. Hydraulic arms permit forward tilting of tower.

THE OLIVER CORPORATION

Industrial Division: 19300 Euclid Avenue, Cleveland 17, Ohio

A complete line of Industrial wheel and crawler tractors



EDITORS'
Round Table

ON JUNE 10, a small group of business and professional men who reside inside but at the edge of Chicago, found themselves criticizing the operation of government, and, as usual, doing nothing but criticizing.

ONE OF THEM called attention to the fact that the big trouble with businessmen is that they do one of two things—either criticize and do nothing, or stand up before audiences who already agree with them, and plea that something be done.

IN THE GROUP were three who do a lot of convention speaking. One of them suggested that there was something fundamentally dishonest about telling other people what should be done without demonstrating.

THE RESULT was a proposal to study the qualifications of candidates for legislative office in the November elections, determine who were best fitted, and then do some active campaigning in behalf of the chosen candidates for state and national legislative offices.

AS USUAL, of course, everybody expected to be too busy to find time to do any real work.

AFTER THREE HOURS of what at times was pretty hot discussion, all agreed that business in this country is getting just what it deserves simply because business men are too busy to pay attention to government, or too important to conduct open meetings or ring door bells.

THE ATTORNEY, automobile man, publicist, editor, trucking contractor and furrier—they constituted the group—decided to find the time and justify their citizenship over and beyond the mere act of voting.

ON JULY 10 they held a mass meeting. It was a hot night, but nearly 200 people came out to listen to candidates for Congress and the Senate.

THE 200 were then asked whether they wanted to form an organization for good government. They did, and the six were mandated to form a not-for-profit corporation, and to actively get into the campaign.

THE ORGANIZATION membership is limited to men and women in the district who have never held either elective or appointive political office, aver that they seek no such offices, and

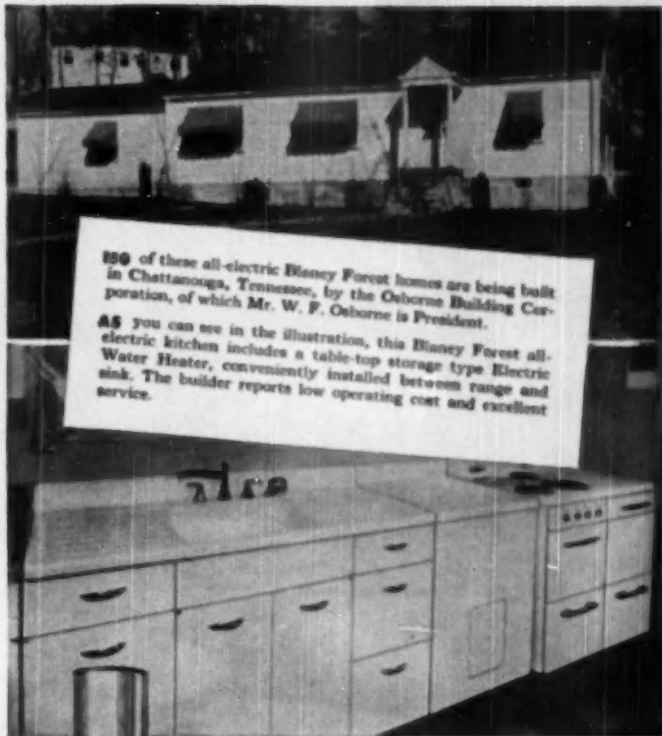
(Continued on page 59)

"ELECTRIC WATER HEATERS help bring **sold** signs,"

SAYS BUILDER W. F. OSBORNE

"When a builder undertakes a housing project, one of his first concerns is seeing that a 'Sold' sign is erected as soon as possible, even before the house itself is completed."

This statement by Mr. Osborne explains why his homes include Electric Water Heaters, along with other electric appliances. Nationwide sales and survey figures indicate that people prefer Electric Water Heaters. When you give them what they want, you sell more houses, faster!



150 of these all-electric Honey Forest homes are being built in Chattanooga, Tennessee, by the Osborne Building Corporation, of which Mr. W. F. Osborne is President.

As you can see in the illustration, this Honey Forest all-electric kitchen includes a table-top storage type Electric Water Heater, conveniently installed between range and sink. The builder reports low operating cost and excellent service.

... OF COURSE,
IT'S ELECTRIC!

It pays to install Electric Water Heaters. They're completely automatic, clean, dependable in operation. They save money for builder and customer alike. Installation can be made anywhere—no floor or vent. This shortens hot water lines, cuts piping cost, prevents water waste. Fully-insulated storage tank for extra economy of operation. Safety assured by all electric, dependable temperature control.

ELECTRIC WATER HEATER SECTION

National Electrical Manufacturers Association • 155 East 44th Street, New York 17, N. Y.

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 THERMOGRAY • TOASTMASTER • UNIVERSAL • WEBB • WESTINGHOUSE

IT'S EASY to INSTALL an ELECTRIC WATER HEATER
 in a house wired for an Electric Range!



Window

Nature splashes color with carefree abandon in the glorious, glamorous outdoors. Here, with her magic brush, she paints dazzling scenes—breathtaking views. And they are truly enjoyed through Ceco Picture Windows of Steel because more view gets in. Slender frames and muntins do the trick. So, bring window wonderland to the homes you build—bring nature's murals in motion right into every room. There are other reasons you'll want to provide these better-than-ever windows. They're engineered

**CECO
STEEL**

In construction products **CECO ENGINEERING**



Advantages of Ceco Steel Casements



Controlled ventilation
up to 100%



Easy to open and close
Can't stick or warp



Easy to wash
from inside



Easy to install screens and
storm windows from inside

Wonderland...

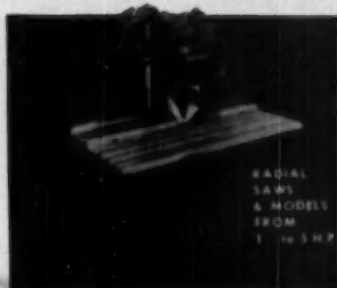
to assure tightest weatherseal. Then, too, they are extra strong with sections $1\frac{1}{8}$ " deep. Yes, when you use Ceco Steel Windows—you know you've used the very best—you're sure of economy too.

CECO STEEL PRODUCTS CORPORATION

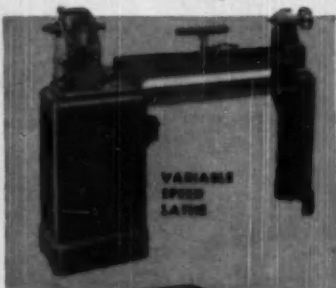
GENERAL OFFICES: 5601 West 35th Street, Chicago 56, Illinois
Offices, warehouses and fabricating plants in principal cities

makes the big difference

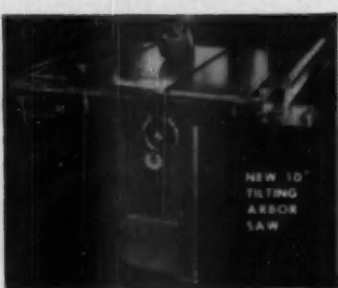
A model to fit your needs...



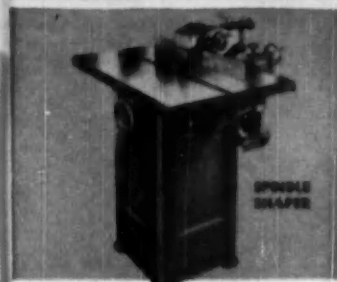
RADIAL
SAWS
& MODELS
FROM
1 to 3 HP



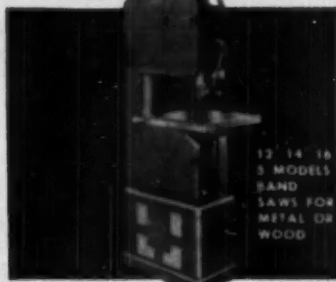
VARIABLE
SPEED
LATHE



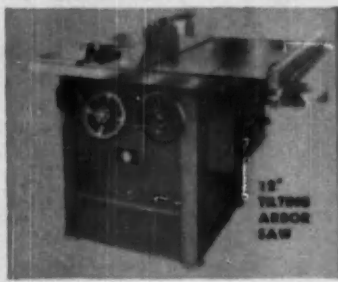
NEW 10"
TILTING
ARBOR
SAW



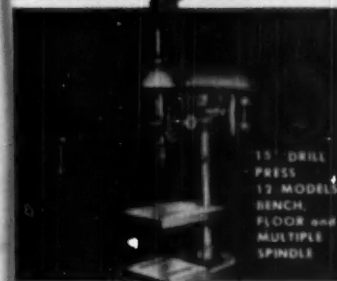
SPINDLE
SHAPE



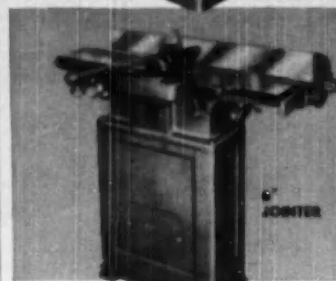
12 14 16
3 MODELS
BAND
SAWS FOR
METAL OR
WOOD



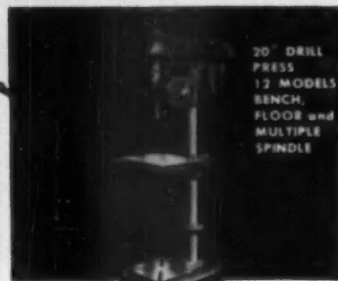
18"
TILTING
ARBOR
SAW



15" DRILL
PRESS
12 MODELS
BENCH,
FLOOR and
MULTIPLE
SPINDLE



JOINTER



20" DRILL
PRESS
12 MODELS
BENCH,
FLOOR and
MULTIPLE
SPINDLE

DRILL PRESSES • BAND SAWS

RADIAL SAWS • JOINTERS

BELT AND DISC SURFACERS

LATHES • TABLE SAWS

IG SAWS • TILTING ARBOR SAWS

KEARNY & TRECKER
MILWAUKEE

WALKER-TURNER DIVISION

PLAINFIELD, NEW JERSEY

There's a Walker-Turner Machine—designed with industry's special needs in mind—for practically every metal and woodworking requirement.

In the woodworking shop Walker-Turner radial, tilting arbor and band saws, jointers, spindle shapers and lathes quickly repay their modest investment. Drill presses, metal cutting band saws, radial drills, cut-off machines and flexible shafts cut metal working costs.

If you are not taking advantage of Walker-Turner functional design in your plant call in your local Walker-Turner distributor. He'll be glad to show you what others are doing—and what you can do—to save on machine investment and operating cost. Write for new industrial catalog. Address Department AB12.

SOLD ONLY THROUGH AUTHORIZED DEALERS

AMERICAN BUILDER

EDITORS' Round Table

(Continued from page 55)

have no known affiliation with any political party.

THROUGHOUT OCTOBER the six, and about 100 others of the original 200 held a series of district meetings to promote the candidates of their choice. It is perhaps needless to mention, from the constituency of the organizing sextet, that their candidates all were pledged to stop the drift to socialism, and to cut inflationary government spending.

HOW MANY PEOPLE were reached both directly or indirectly is purely conjectural, but out of the venture came several revealing facts.

THE FIRST is that there is a genuine hunger among the great majority of voters for dispassionate discussion of political issues and candidates, and that when the socialistic measures of the past 18 years are explained in detail, anti-socialist votes can be won.

THE SECOND, and perhaps most important, is that there is no such thing as a labor vote. The fact that union labor leaders issue orders, and that some union publications have closed editorial policies, does not mean that union rank and file members follow those orders, or that their minds are either closed or empty.

TO ILLUSTRATE, a young member of a violently pro-socialistic union remarked at one of the meetings that the stuff he has to take from some of the union heads, and the stuff he reads in his union publication are insults to his intelligence.

IT WAS ESTIMATED that interested union members at the meetings comprised well over half the total. The area encompassed is residential in character, but includes more than 200,000 people. The independent thinking and genuine desire for the other side of the story among union members was the most surprising development of the movement.

AT ONE MEETING a group of people strongly advocating public housing had their views completely reversed when they were shown the cost, the results and the waste, together with the political implications of public housing.

THE ORGANIZATION, winding up its current activities late in October.

(Continued on page 63)

DECEMBER 1950

ALL 3 AGREE

"Greatest Advance Ever" IN WINDOW DESIGN



SPECIAL Construction Features

EXTRUDED ALUMINUM

Cross-Section of Frame

showing how four channels hold all sash in precise alignment.

Cross-Section of Connection Between Upper and Lower Sash

Interlocking sash provides weather-tight center joint.

NO PUTTY

Cross-Section of Sash

Indicates how Koroseal rubberless putty in a time-saving, cost-saving Fleetlite window installation.

Many other construction features in this sensational new window!



Individually packed in cardboard container.

Made by

FLEET OF AMERICA, INC., 112 PEARL STREET, BUFFALO, N. Y.

Fleetlite
Complete ALUMINUM WINDOWS

ARCHITECTS, BUILDERS AND HOME OWNERS all agree that the new FLEETLITE Aluminum Window represents the greatest single advance ever in window design and construction.

FLEETLITE is a complete packaged aluminum window, providing frame, sash, storm sash and screen as an integral unit, easily installed at one time.

Many thousands of FLEETLITE Windows have already been installed in new homes throughout the U.S. and Canada. Home owners are enthusiastic about its beauty, convenience and sturdy construction. . . . A typical comment is made by Mrs. Roy Wilhelm, 171 High Park Blvd., Eggertsville, N. Y., who writes:

"I am delighted with my new Fleetlite Windows. We believe they are the outstanding feature of our new home and add so much in year around comfort, convenience and beauty."

The new FLEETLITE Aluminum Window could not be made so accurately with wood, could not be made at so low a cost with steel. Only through use of aluminum extrusions is such a revolutionary window practical.

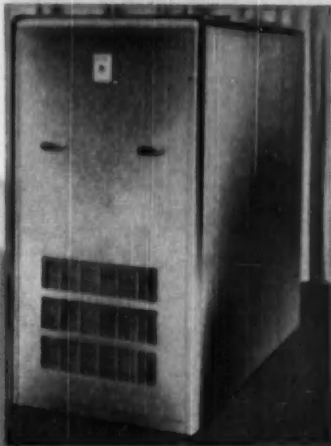
FLEETLITE Aluminum Windows will help sell houses for you. Find out more about them today!

• See your building supply dealer, or write for descriptive literature, price information and name of nearest distributor.

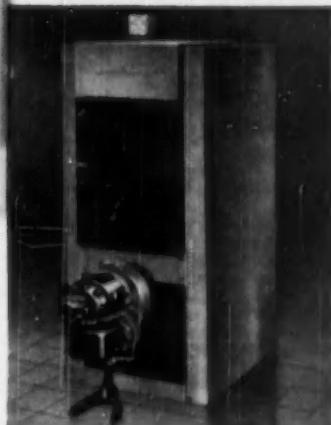
Fleetlite
AMERICA'S QUALITY WINDOW

AMERICAN-Standard

First in heating . . . first in plumbing



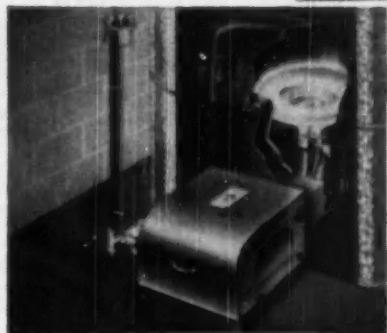
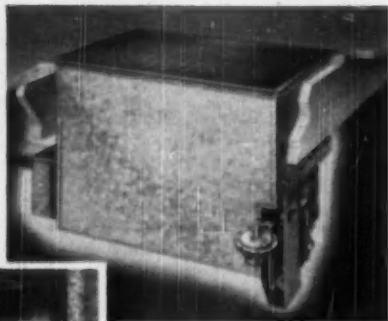
WINTERWAY: This brand-new, efficient, basement type winter air conditioner is made in two sizes—100,000 and 120,000 Btu capacity at register—to meet the oil heating requirements of small and medium size homes. The Winterway has a sturdy steel heating element with wrap-around type radiator that completely encircles the shell. Flue can be located on either side.



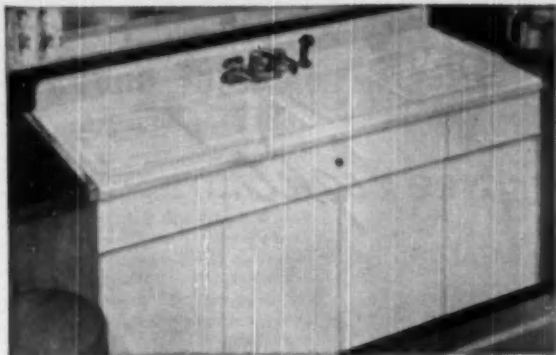
ARCOLINER: The famous Arcoliner Wet Base Boiler (for steam and hot water systems) is now also available in this new model for hot water only. This limitation has made possible important cost savings while still retaining full American-Standard quality. This economical boiler offers all the advantages of completely automatic heat plus the convenience of year 'round hot water. Jacket extension optional.

New products
to choose from when
you're selecting quality
heating equipment
and plumbing fixtures

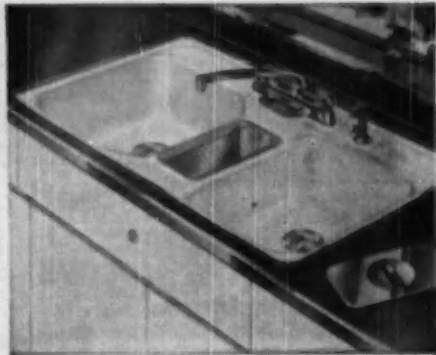
NAVANO: This new gas floor furnace is only 27½" deep, takes up very little floor space. It can be installed easily in small buildings with or without a basement, and requires no excavation. Factory-assembled, it is available in three sizes with Btu input per hour of 25,000 to 50,000 and can be supplied with flat floor grille or dual wall register. It burns manufactured, natural, mixed, butane, propane or butane-air gas.



STANFLAME: Wide modernization activity and the rapid increase in gas heating facilities give special interest to this new conversion burner. Of a vertical, upshot type, the Stanflame operates efficiently with boiler, furnace, or winter air conditioner . . . burns manufactured, natural, mixed, liquefied petroleum, or LP-air gas. Available in two sizes, with easily adjustable input feature.



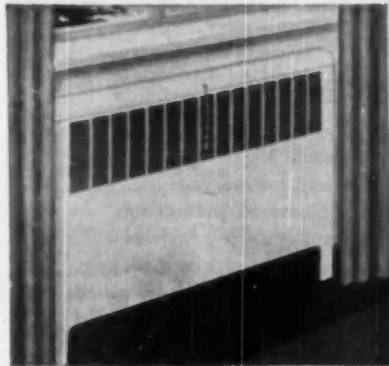
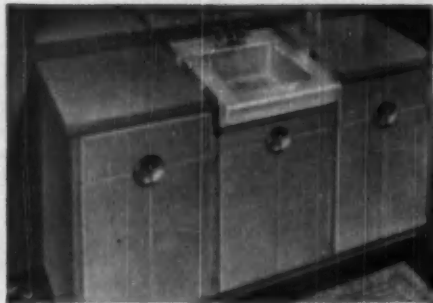
SINK CABINETS: These handsome-looking, smooth-front, steel cabinets, designed for the famous Hostess Sinks, provide lots of storage room and are fitted with just about every modern convenience. They harmonize with base and wall cabinets of any design.



TRIWELL SINK: A double-compartment sink with handsome new fittings, the Triwell Sink is both good-looking and practical. It has a covered third well between the regular compartments containing a hidden, removable garbage basket of non-tarnishing chromium-plated brass. Easy to clean, easy to keep clean.

THE NINE products shown here are representative of the many new additions during 1950 to the American-Standard line of heating and plumbing products—the most complete in the industry. These new additions give you still wider flexibility in designing and styling . . . afford even greater choice of units to fit today's varied needs. Their engineering and construction advantages assure long, efficient service.

With the new American-Standard Catalogue it is amazingly simple to choose quickly and accurately just the right plumbing fixtures and fittings for every job. Your Heating and Plumbing Contractor will be glad to give you full information on the complete American-Standard line. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.



NEW MULTIFIN CONVECTORS: The New Multifin line of convectors, designed for installation in all hot water or steam systems, includes sizes ranging from a small 18-inch high, 4-inch deep unit to a large 58-inch high, 10-inch deep unit. There are 63 stock model sizes for either free standing or recessed installations, plus special service models to meet special building requirements.



DRESSLYN: The new Dresslyn is both a lovely lavatory and a distinctive dressing table combined in a single unit. Available in two styles, two sizes, and in 31 color combinations, it features a deep-bowl lavatory of genuine vitreous china . . . has plenty of storage space and ample counter top area.



LOOK FOR THIS MARK OF MERY

SANISTAND FIXTURE: The Sanistand Fixture offers women the same convenience and sanitation the standing urinal does for men . . . makes washrooms cleaner, neater . . . reduces rest room maintenance. Enthusiastic approval by thousands of women in extensive test installations has led to hundreds of permanent installations.

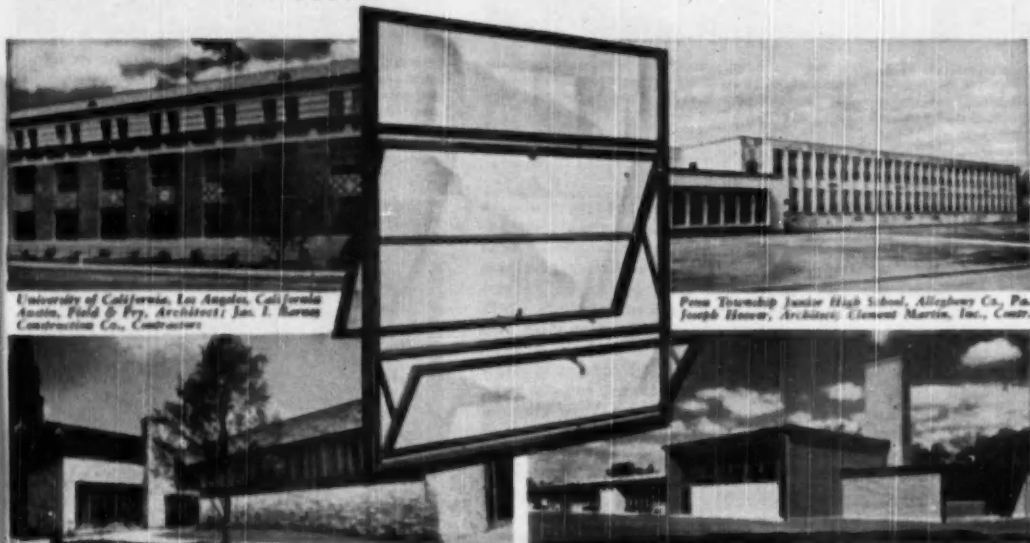
Serving home and industry

AMERICAN STANDARD · AMERICAN RADIATOR · CHURCH SEATS · DETROIT LIBRATOR · KEWANEE MODELS · EGGI HEATER · TONAWANDA RIN



TRUSCON
Intermediate
Projected
STEEL
WINDOWS

free *light...*



University of California, Los Angeles, California
Austin, Field & Fry, Architects; Jas. I. Burns
Construction Co., Contractor

Penn Township Junior High School, Allegheny Co., Pa.
Joseph Howe, Architects; Clement Martin, Inc., Contr.

South Chicago Library, So. Chicago, Illinois Paul Gerhardt, Jr., Architect
Charles B. Johnson & Sons, Contractor

Dearfield School, Dearfield, Illinois Parkin & Will, Architects & Engineer
Chell & Anderson, Contractor

free *air...* low maintenance

Generous glass areas admit a flood of nature's free sunlight, and permit economical, controlled room lighting. Outward projecting, rain deflecting ventilators may be kept open during inclement weather. Inward projecting ventilators prevent drafts by directing air currents toward ceiling. Exterior glass surfaces can be washed from room-side. Rigidity in even the largest ventilators is assured by a heavy one-piece casement-type vent frame section; electrically welded at the four corners. A wide range of types and sizes available, to achieve any architectural effect desired. Screens and shades easily attached. Illustrated literature giving complete details on request.



FREE Book on Truscon Steel Windows. Write for it. The Truscon Steel Company manufactures a complete line of Steel Windows and Mechanical Operaters... Steel Joists... Metal Lath... Steeldeck Roofs... Reinforcing Steel... Industrial Steel Doors... Coal Chute Doors... Steel Lintels... Concrete Reinforcing Bars... Welded Steel Fabric.

TRUSCON STEEL COMPANY

Subsidiary of Republic Steel Corporation
YOUNGSTOWN 1, OHIO
Warehouses and sales offices in principal cities

EDITORS'
Round Table

(Continued from page 59)

tober, was under no illusions that its work was going to carry an election. It did, however, prove a number of things. The first is that door bell ringing is not beneath the dignity of a business man who is genuinely concerned with the preservation of freedom and private enterprise. The second is that intelligent union men are the greatest potential allies of freedom and private enterprise—if the issues are told to them fairly. The third is that the most liberal education a business man can obtain is to get himself on the common level of citizen to citizen with people whose paths he does not cross in his business and social activities. The fourth is that if we are ever to get away from government by organized minorities it will be through the slow, arduous process of creating an organized majority whose enlightened aim is better government as an end to better living for all.

IN ANOTHER part of Chicago, one of the city's most successful and best known advertising agency heads took it upon himself to do the same job alone. His district includes both the Chicago Gold Coast and the near slum area behind it. For nearly two months he rang door bells in the less favored district. He thinks he accomplished very little, feeling that he was unable to change many voters' minds. Possibly he was right, but at least, in most cases, he was able to plant a doubt, and that is something.

IT IS THE "people on the other side of the tracks" that have to be reached, and they can be reached only on the common basis of citizen to citizen, either in their front rooms or in small neighborhood meetings. Politicians cannot influence them, nor will they be greatly influenced by what they read. They can be talked to, however, and they will listen. Not all by any means will agree, but the principal job is to tell them the other side of the story, and get everybody to vote.

WHAT THIS country needs more than anything else is a 98 per cent vote rather than the 51 per cent that filled Washington in 1948.

EVERY BUSINESS MAN has some time to give to personally doing something about government. Until he does find and give that time he has no right to complain or criticize. The least he can do is vote.

DECEMBER 1950

PAINE REZO DOORS

beauties from
every point of view

Look Inside

—interlocking wood mesh
core provides dimensional
stability

Look Outside

—plywood faces are match-
ed for figure and color

Look Onside

—1 1/4" standard thickness
for unsurpassed rigidity
and strength

and
Look

at the Unconditional Guarantee
of Satisfaction

a product warranty backed by more than four
million installations and the world's largest
exclusive producer of cell-type flush doors.

Is it any wonder that Paine Rezo is the door most specified,
most demanded and most insisted upon by architects and
contractors everywhere. See Sweet's File or write directly
for data bulletin.

Manufactured by the

PAINE LUMBER CO., LTD. Oshkosh
Wisconsin

ESTABLISHED 1853

HOW to get more "A-H Appeal" at Less Cost



with the MASONITE HARDBOARD FAMILY

You can please the young and old, the style-minded and budget-minded when you install Masonite Hardboards. And you can work out those pet ideas of your more particular customers, giving them luxurious, yet practical rooms for little money. There are 19 types and thicknesses of Masonite Hardboards—enough to meet any application problem. Here are two examples of how these hard, dense, grainless panels of "wood-made-better" can put more "home" into a house.



HOW to deal with doubles—at low cost. No "twin trouble" here! Room for two of everything with spacious wardrobes built of durable $\frac{3}{8}$ " Tempered Presdwood. Sturdy $\frac{1}{4}$ " Tempered Presdwood works up easily into the convenient sun-seat. Crackproof walls and ceilings of rigid $\frac{1}{4}$ " Masonite Panelwood resist scuffs and dents, form a lasting base for charming colors.

HOW to create a modern "thinking room." The work-a-day world slips away in a well-planned retreat like this, created for so little with the help of Masonite Hardboards. Just as easy to use in remodeling as in new construction. Super-smooth walls are made with inexpensive $\frac{1}{4}$ " Masonite Panelwood finished in a two-tone color scheme. Cabinet doors carry a rich texture that looks and feels like expensive Spanish-grained leather. It's Masonite Leatherwood.

Get all the facts about Masonite Hardboards—Mail the coupon!

MASONITE[®]



CORPORATION

"Masonite" signifies that Masonite Corporation is the source of the product

Lumber dealers have 19 types and thicknesses of Masonite Hardboards for a thousand uses

MASONITE CORPORATION, Dept. AB-12
P. O. Box 777
Chicago 90, Illinois

Please send me information and literature about Masonite Hardboards.

Name.....

Address.....

City and Zone.....State.....

The answer to the nation's need
for fast industrial construction!

**STRAN
STEEL**

QUONSETS

For **FACTORIES • WAREHOUSES • MACHINE SHOPS • STORAGE BUILDINGS**



Large industrial structures . . .

TODAY'S urgent construction jobs can be completed *faster* with Quonset buildings.

Quonsets give you more than speed. You get maximum economy of material, all-steel fire safety, adaptability, construction ease, and the durability of N-A-X alloy steel.

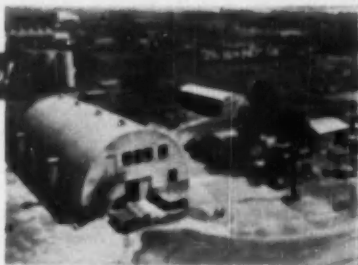
Today's Quonset is the product of widespread experience gained in use by the Armed Forces in World War II, plus experience acquired by industry, agriculture and commerce in peacetime. Under any circumstances, Quonsets are the best bet in buildings.

Quonset dealers are located all over America. For information, see the one nearest you. Or, write us or phone VInewood 5-8000 in Detroit.

GREAT LAKES STEEL CORPORATION
Stran-Steel Division • Ecorse, Detroit 29, Mich.

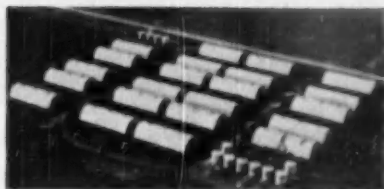
. . . and smaller ones, too!

The Arco Company, producer of industrial paint, needed maximum fire safety for its lacquer manufacturing division at Cleveland. It chose Quonset buildings, centering production in the Quonset 40x80 in foreground. Nitrocellulose and other combustibles are stored in nearby smaller Quonsets.



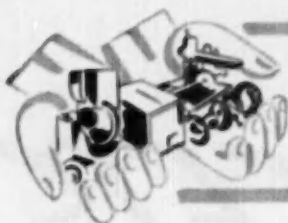
An example of Quonset speed

88,000 SQUARE FEET OF STORAGE SPACE COMPLETELY BUILT IN ONLY 48 DAYS — This grain storage depot at Beresford, S.D., was part of last fall's Department of Agriculture program. More than 2,500 Quonsets were erected at 805 different mid-western locations, providing storage space for over 80 million bushels.



NATIONAL STEEL CORPORATION





NEW PRODUCTS

Offered by Manufacturers

MASONRY SAW GUIDE

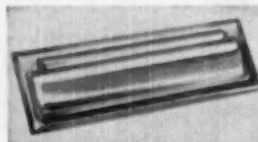
AB125005



With new "Guide-A-Cut" adjustable measuring guide, adaptable to any Clipper Masonry Saw conveyor cart, it is now possible to make angle cuts (45 and 90 degrees) with ease on any masonry material. Guide eliminates need of tacking material guide strips on conveyor cart or the use of a special cart. Quickly and easily adjusted, it holds material firmly to eliminate slipping. Clipper Manufacturing Co., Dept. AB, 2800 Warwick, Kansas City, Mo.

MAIL DROP PLATE

AB125004



With a special wrought brass design, this mail drop plate has effect of being solid cast brass, but is less expensive. Interior hood is also made of wrought brass. Mounting screws are hidden under the flap which is held in place by spring tension. Size of opening, 1 1/2 x 7 inches, meets all U.S. Postal Regulations. Available in all standard finishes. Ajax Hardware Manufacturing Corp., Dept. AB, 4351 Valley Blvd., Los Angeles 32, Calif.

ELECTRIC LIFT TRUCK

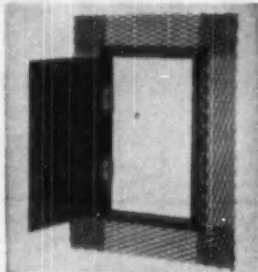
AB125013



The Marforge Load-Mobile electric lift truck now has a high-low switch provided for easier maneuverability in close quarters. When button is at low, truck moves at slow speed regardless of position of operating pedal. When button is at high, the operator controls the speed by means of a foot pedal. Spring mounted casters normally clear the floor but when truck hits the heavy springs ride it promptly. This feature allows truck to pass over obstructions, inclines and rough terrain without difficulty. Market Forge Co., Dept. AB, Everett, Mass.

STEEL ACCESS DOORS

AB125011



Improvements in Milcor steel access doors include new, no-sag, spring hinges that allow door to be opened to 175 degrees. By extracting pins from hinges, door can be removed from frame. New rust-inhibitive, gray paint is used as primer coat. Individual packaging of doors has been adopted, with one door packed in a carton and contents clearly identified by a bright, easily read label. Doors provide convenient servicing of key points in plumbing, heating, electrical and refrigeration systems by eliminating necessity of cutting into or damaging the walls. Made in three styles and 11 sizes ranging from 8 1/2 to 24x36 inches. Inland Steel Products Co., P. O. Box 292, Dept. AB, Milwaukee 1, Wis.

BENCH GRINDERS

AB125006



Four new bench grinders offered by this firm are designed for use in garages, repair shops, metal working plants and tool and maintenance shops. Model 470 has a 6-inch diameter wheel 1/2-inch wide with 1/2-inch arbor hole. Length, 11 1/2 inches; height, 7 1/2 inches. Base is 6 1/2 inches deep by 6 inches wide. Weight, 32 pounds. Models 471, 475, and 478 have wheel diameters up to 8 inches and widths up to 1-inch. Motors on all models are ball-bearing equipped, with bearings sealed. Wheel speed is 3440 r.p.m. Cummins Portable Tools, Dept. AB, 4740 Ravenswood Ave., Chicago 40, Ill.

PLASTIC WINDOW STOOLS

AB125001

Kerro plastic window stools are a composite of structural materials and plastic resin, laminated and molded with heat and pressure into variety of sizes and patterns. Combined with moisture resistant core, they offer strength, durability and light weight. For window stools, shelves, fireplaces, mantels and other trim. Permanent decorative surface needs no painting or refinishing. Cleaned with a damp cloth or with plain soap and water. Easy to install. Kerro Products, Dept. AB, P. O. Box 414, Hastings, Neb.

ALL-STEEL GARAGE DOOR

AB125007



New 9-foot-wide all-steel Strand garage door features attractive horizontal lines to give a low look. Rugged, X-type steel bracing adds strength and rigidity to one-piece door leaf. Door is quickly installed and comes complete with packaged hardware that is factory assembled. Made of galvanized steel to protect against rust. Strand Garage Door Div., Detroit Steel Products Co., 3101 Griffin St., Detroit 11, Mich.

DELIVERY TRUCK

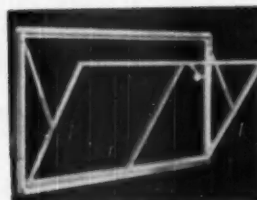
AB125026



New White 3014 delivery truck features greater vision in all directions, and is equipped with a power-lift cab which provides accessibility for maintenance. It has a low frame height for easier and quicker loading and unloading and an over-all length of 202 1/16 to 298 1/16 inches. Body is designed to be used over a long period of time because it will not become obsolete. The White Motor Co., Dept. AB, Cleveland 1, Ohio.

ALUMINUM BASEMENT WINDOWS

AB125023



Uloka aluminum basement window is easy to install and entire vent section is removable. Joints are precision made and frame is finished in satin to match other Uloka windows for the home. Window is 32 1/2 inches wide and available in lengths of 14 1/2, 18 1/2, and 22 1/2 inches. Union Aluminum Co., Dept. AB, Sheffield, Ala.

New Products continued on page 70



More
builders
are
buying
Schlage
locks...

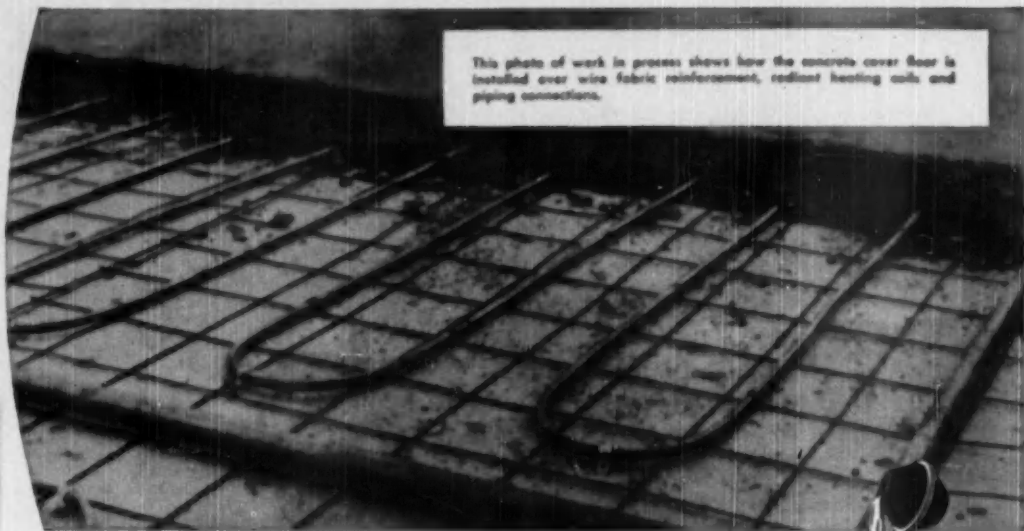


Schlage locks help sell houses

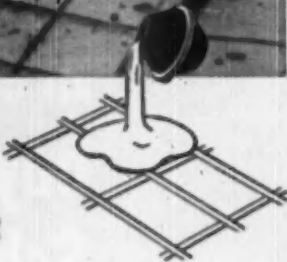
SCHLAGE

SCHLAGE... FIRST NAME IN CYLINDRICAL LOCKS

This photo of work in process shows how the concrete cover floor is installed over wire fabric reinforcement, radiant heating coils and piping connections.



For new homes that stay new *American Welded Wire Fabric*



EXCESSIVE settling can be prevented in the homes you build, by reinforcing all concrete construction with American Welded Wire Fabric. That means you prevent cracked plaster, warped floors, gaping baseboards and sticking doors . . . seepage and damp basements, cracked, sunken and bulging sidewalks and driveways . . . all of which tend to make a new home old before its time.

When you use Welded Wire Fabric to reinforce concrete, its strength is distributed *evenly* throughout all parts of the basement, first floor, ground slabs and outer walls. All are joined into a solid unit by the continuous reinforcement American Welded Wire Fabric can provide.

Make sure your new homes will have enduring strength and beauty. Select the proper size and design for each type of construction from the wide variety of sizes and designs available in U-S-S American Welded Wire Fabric. Many prominent builders have found that is the best way to build better homes, make quicker sales.

You can get U-S-S American Welded Wire Fabric from your jobbers' and dealers' stocks.

USE THIS FREE SERVICE

It will pay you well to get the latest information on American Welded Wire Fabric. Send today for our illustrated folders, which show typical uses of wire fabric reinforcement in factories, farms, airports and public buildings, as well as in residences, sidewalks, curbs and driveways. If you wish, our qualified experts will be glad call and show you how you can use U-S-S American Welded Wire Fabric to the best advantage. Just drop a line, on your business letterhead, to our nearest sales office.

AMERICAN STEEL & WIRE COMPANY, GENERAL OFFICES, CLEVELAND, OHIO
COLUMBIA STEEL COMPANY, SAN FRANCISCO
TENNESSEE COAL, IRON & RAILROAD COMPANY, BIRMINGHAM
SOUTHERN DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

Every type of concrete construction needs

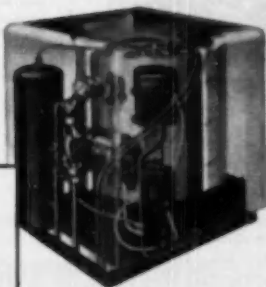


AMERICAN WELDED WIRE FABRIC
reinforcement

UNITED STATES STEEL

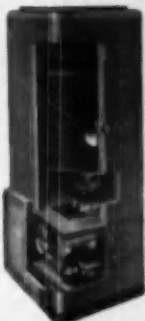
KITCHEN-TYPE OIL BOILERS

— the most revolutionary development in modern home heating — automatically heat the home, also supply ample domestic hot water.



OIL AND GAS LO-BOILERS (above), "Duty-Designed" for radiant and radiator systems in all sizes of homes, have unusually high heat output for unit size. Gas model shown.

COMPACT OIL AND GAS FURNACES (below), specifically designed for small homes, bring to every owner the full benefits of winter air conditioning without a cost premium. Oil model shown.



WRITE TODAY FOR FULL DETAILS AND PERFORMANCE DATA!

QUIET The exceptional quietness of the famous wall-flame burner has proved its value in thousands of next-to-living-quarters installations.

COMPACT Close attention to engineering every detail of design has held required floor area to a minimum—saving space, saving cost.

EFFICIENT For many years Timken Silent Automatic heating equipment has been "The Accepted Standard" for economy of operation.

COMPETITIVE Timken Silent Automatic heating equipment is priced to compete with other makes of comparable quality—or lesser quality in many instances.

PRE-ASSEMBLED Every feasible assembly operation, including all essential interior wiring and piping, is completed on most models before shipment.

BUILD MORE HOUSES FOR THE SILENT HOME

Specify
TIMKEN
Silent Automatic
HEAT!

There is no sounder way to upgrade dwelling values than to install Timken Silent Automatic Heat. Homes sell faster, and custom jobs earn greater satisfaction from their owners, when your specifications call for this advance-designed heating equipment. Exceptional compactness, plus simplified unit installation, offer important advantages in house design and major construction savings. Here's the complete line, with units priced to fit your construction budget!

93 MODELS OF FINE HEATING EQUIPMENT FOR OIL, GAS AND COAL

TIMKEN
Silent Automatic
HEAT

OIL • GAS • COAL

TIMKEN SILENT AUTOMATIC DIVISION

The Timken-Detroit Axle Company • Jackson, Michigan
The Timken-Detroit Axle Company of Canada, Ltd., Toronto, Ont.



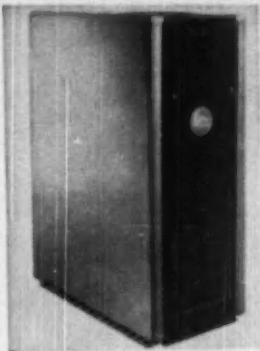
PLANTS AT: DETROIT AND JACKSON, MICH. • OSHKOSH, WIS. • UTICA, N. Y. • ASHTABULA AND KENTON, OHIO • NEW CASTLE, PA.

DECEMBER 1930

NEW PRODUCTS

(Continued from page 66)

OIL BURNING BOILER AB123009

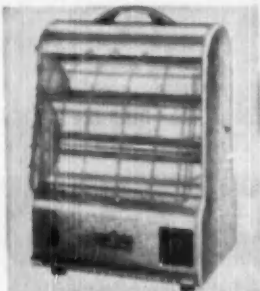


New 15-inch "OB" series oil burning boiler combines economical price, economical use of oil and easy installation. Insulated steel cabinet is finished in two tones of blue. Boiler and burner are completely enclosed and occupy space 21 inches wide. Top, both sides, bottom and rear of combustion chamber are surrounded with heat transfer surface. Automatically controlled. Several sizes and ratings available. Dunkirk Radiator Corp., Dept. AB, Dunkirk, N. Y.

SQUARE EDGE CONCRETE FORM AB123012

New type Atlas square edge concrete form is especially designed for use on all structures where architectural concrete is required. Supplied with improved Atlas Captive Fastener, which, permanently attached to the form, eliminates waste motion due to extra handling and unloading of parts. Forms can be crane handled in large panels or in light individual units by one man. Can be used with wood or steel walers using any standard make of wall ties. Basic units are 12 inches wide. Irvington Form & Tank Corp., Dept. AB-E, 20 Vesey St., New York 7, N. Y.

PORTABLE HEATER AB123017



Fan-Glo Heaters unit, with built-in thermostat, produces and maintains any desired temperature between 40 and 85 degrees F. Thermostat dial is simply adjusted to temperature desired. When room reaches this temperature, unit automatically turns off. Neo-Glo heating elements in the unit give each heater a double-duty action. One element is mounted in front of chrome-plated reflector and radiates infrared rays. Second element heats cool air drawn in by fan. Operates on 115 volts A.C. Market Electric Products, Inc. and LeSalle Products, Inc., 143 Seneca St., Dept. AB, Buffalo 3, N. Y.

PORTABLE ROUTER AB123008



Working from any 115 volt outlet, powered by a 1/16 H.P. Dumore motor, this portable router develops 19,000 r.p.m. for fast, clean routing of wood, linoleum, Formica, or plastic. Quick-change chuck has 1/8-inch capacity, and 1/8, 3/16 and 1/4-inch router bits are available. Adjustment for depth of cut is quickly attained, and positively locked, by two knurled set screws at router rear. The Dumore Co., Dept. AB, Racine, Wis.

COUNTER-FLOW-TYPE FURNACE AB123016



Heat exchanger in the new Mar-Sun counter-flow-type furnaces for concrete slab floor homes is similar to the Mar-Sun Utility model for each fuel. Blower and blower motor are at the bottom. Return air is heated as it is drawn through the unit, then as the blower distributes it through the ducts just enough heat is transmitted through the floor slabs to keep the floors at a comfortable temperature. The balance flows gently into the rooms. This furnace is equipped with the QV "Ball Flame" mechanical draft oil burner for lighter oils. ACAA approved and listed by Underwriters' for zero inches clearance. Morrison Steel Products, Inc., Furnace Div., Dept. AB, Buffalo 7, N. Y.

WATER REPELLENT ENAMEL AB123027

Water-Pel enamel can be applied to any surface whether dry, damp or wet, and will resist mold and mildew. Hard leathery surface has an attractive sheen which is impervious to moisture. All dirt and grime can be easily removed without injury to finish. Minimizes maintenance problems. Is ideal for use in dairies and dairy barns. Painting can proceed without waiting for walls to dry. Water-Pel Paints, Inc., Dept. AB, 907 Terminal Sales Bldg., Portland 3, Ore.

ODOR REMOVER AB123031



The latest No-Odor toilet is an automatic mechanically operated unit that completely eliminates all odors from toilets. No chemicals are used to destroy one odor and thus create another. Odors never enter the room, but are instantly taken out of the bowl through the flushing ring of the water closet and carried into the sewer beneath the water seal of the bowl. Unit fits any standard make of water closet and does not change the style, operation or efficiency of the toilet in any way. Mechanism is entirely concealed. The No-Odor Toilet Co., Inc., Dept. AB, 414 E. Third St., Sterling, Ill.

PLASTIC COATINGS AB123033

New Vinyl plastic coating, "Calvinac," can be applied to wood or metal by brush, spray or dipping, and dries in the air. Coating is highly dielectric, resistant to alcohol, acids, salts, alkali, and fumes, and is particularly effective in protecting petroleum equipment. Coating is non-toxic. James Lithgow Co., Inc., Registered Chemical Engineers, Dept. AB, Los Angeles 22, Calif.

New Products continued on page 158

INSERT NUMBERS AND MAIL COUPON FOR INFORMATION American Builder, 79 W. Monroe Street, Chicago 3, Illinois

Name

Address

City State

No. No. No. No.

No. No. No. No.

No. No. No. No.

No. No. No. No.

No. No. No. No.

When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder

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A FRESH LOOK AT
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Here's the biggest news in decorative surfacing! It's **Panelyte**... St. Regis' new, beautiful, *high-pressure* laminated plastic for all working surfaces. See Panelyte's glowing, true-as-life colors... striking patterns... visualize their countless decorative possibilities in the design and creation of beautiful necessities. Then look *below* the surface, at the technical advantages Panelyte offers... **Panelyte** is hard, dense, strong and tough. It is harder to mar... withstands heavy impacts... resists abrasion as no other plastic surface does. (We've tested... we know.) Panelyte won't swell or shrink... is easy to work. Its big sheet size (up to 48" x 120") makes for easier, more economical installation with fewer seams.

Whether you're specifying surfacing materials for interior use... manufacturing a product that calls for such materials... using plastic surfacing in any way... it will pay you to find out all about new, beautiful **Panelyte**. Just use the coupon below.

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3. **CIGARETTE-PROOF** Panelyte offers extra protection against forgetful smokers... may be specified in any installation.
4. **VERTICAL SURFACES** Versatile Panelyte brings new beauty to walls, cabinet facings, interiors, all "up and down" surfaces. Panelyte won't scuff, chip, crack, dent or discolor... is non-absorbent, won't pick up stains or odors.
5. **BIG SHEET SIZE (48" x 120")** means easy, economical installation... fewer "joints"... greater beauty.

See Sweet's
Architectural File
Number 14a
9

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SEWER PIPE IS

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Bermico is tough—and built to last a lifetime. Besides being root proof and corrosion-proof, its joints won't open when the ground settles. It stands up under extremes of heat and cold... delivers high water capacity flow. When laid underground it does not shatter from traffic shock.

You'll find Bermico both easier to handle and more economical. It weighs far less than any other type of pipe—and its handy 8-foot lengths store with less breakage.

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Mr. Contractor.

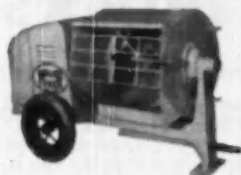
here are the Plaster and Mortar Mixers with

- LOWER FIRST COST
- LONGER LIFE
- LESS MAINTENANCE

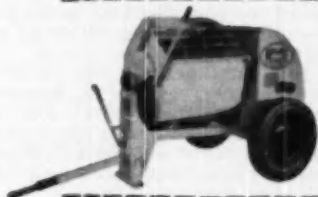
The Muller Mixer has all three. And with a size to suit every job you don't have to buy a larger or smaller mixer than you actually need. • Forty years' experience in mixer design and production have taught us how to give you the best value for your dollar. • Look at the illustrations and prices below and then write for complete data on the size you desire and the name of your nearest dealer.



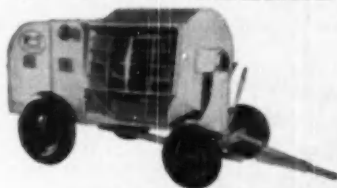
The MULLER 3 Cubic Foot Plaster and Mortar Mixer is equipped with a 2.7 H.P. Briggs and Stratton Air-Cooled Engine or a 1 H.P. Electric Motor to plug into a light socket for inside work. Goes through 30" door. Will handle the average one bag batch of Plaster or Mortar. With Gasoline Engine **\$320.00*** or with Electric Motor **\$300.00.***



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The MULLER 6 Cubic Foot Heavy Duty Plaster and Mortar Mixer is for large jobs and steady use where high output is essential. Regularly equipped with a 7.7 Briggs and Stratton Engine and can also be supplied with Power Tilt for fast Finger Tip Operation. With Gasoline Engine and 5.50 x 16 Pneumatics **\$615.00.*** Power Tilt Extra **\$50.00.***



For the large job where central mixing is used there is no mixer like the Muller 10 to 12 Cubic Foot Size. Regularly equipped with a big 18.7 H.P. Wisconsin 4 Cylinder Engine and Finger Tip Power Tilt it is built to stand up under severe operation. Heavy Drum Shell and Liners assure long life. With Gasoline Engine Complete **\$1375.00.***

* Prices subject to change without notice.

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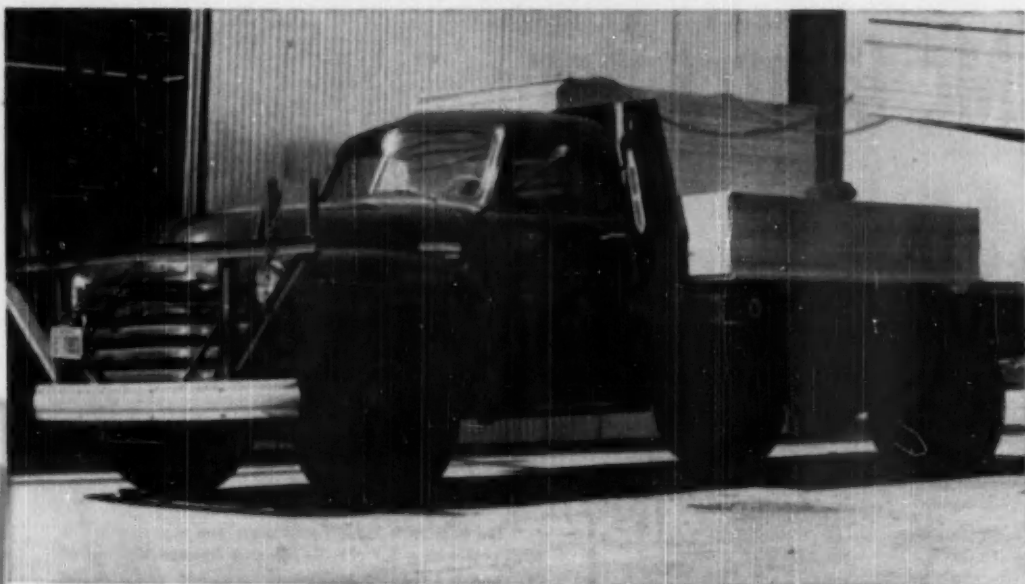


Manufacturers of tilting and non-tilting concrete mixers, concrete carts, mortar boxes.

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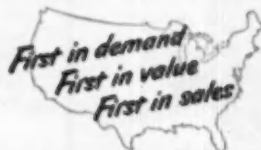
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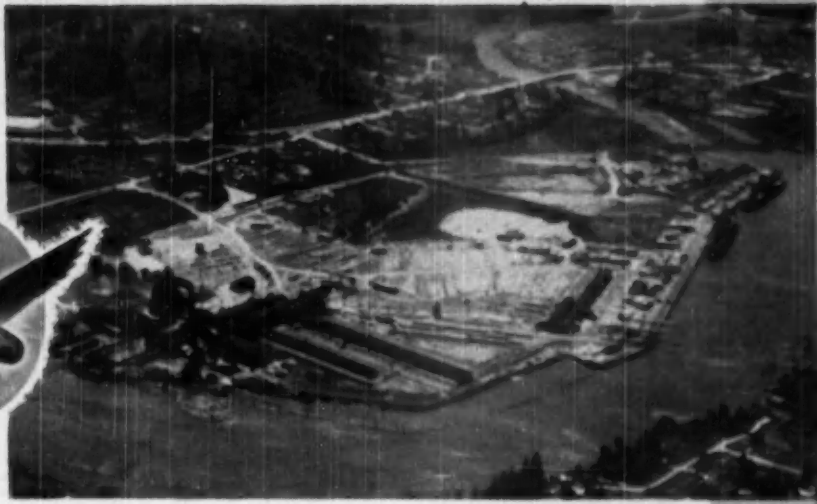
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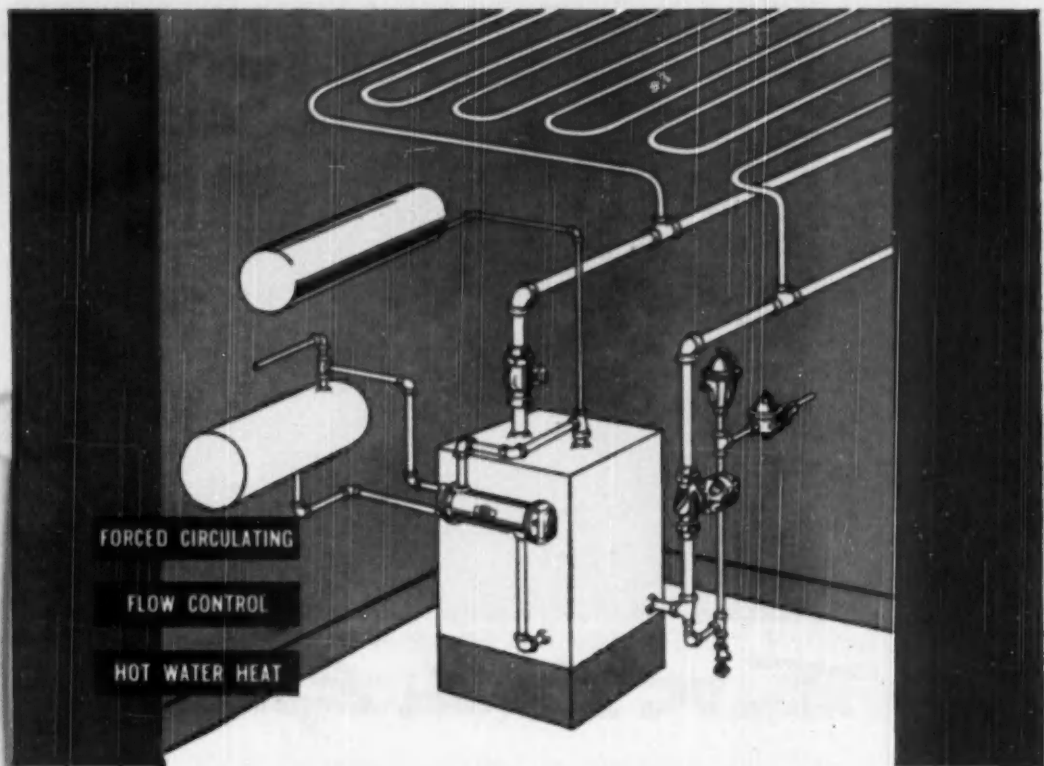


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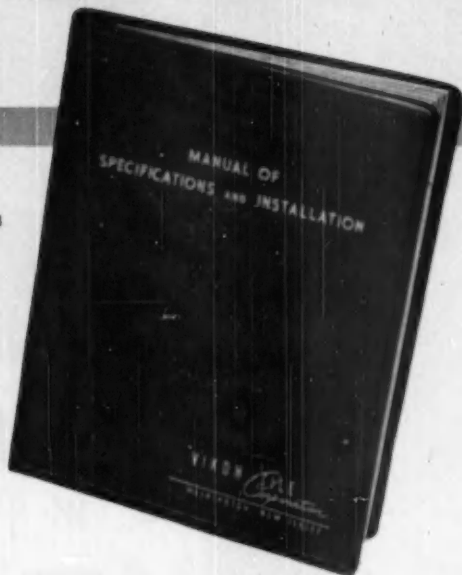
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THE SIMPSON LOGGING COMPANY has been logging in the Pacific Northwest since 1895, has been producing lumber for over 25 years, and benefiting from continued sound and progressive forest management, we intend to supply our customers with lumber and lumber products for many, many years to come.

To assure a constant source of logs, we have under our management over 160,000 acres of timber-growing lands. In this area, we harvest a continuous succession of "crops". Scientific forest management includes many activities, such as "block-logging", selective logging, manual planting, fire control and pest control. All these, and more, are constantly practiced by the Simpson Logging Company.

Our lumber mills in the Pacific Northwest supply old-growth green Douglas Fir and Western Hemlock in all grades and all sizes. Shipments are made especially to the water-borne markets on the Gulf and Atlantic Coasts. A limited supply of Redwood lumber is available from our expanding California operations.

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Simpson Fir Doors, manufactured from mature Douglas Fir, are available in all areas in all FDI grades, all specifications and all designs including the Simpson Flush Door. The increasingly popular Simpson Western Hemlock Door is manufactured in all FDI patterns.

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From our forests and mills all grades and sizes of old-growth green Douglas Fir and Western Hemlock lumber are available especially to the water-borne markets on the Atlantic and Gulf Coasts. Redwood lumber is now available in limited quantities and specifications from our California operations.

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Simpson Acoustical Tile is available through authorized acoustical contractors, and Simpson Holmstrom Acoustical Tile through regular distributors and dealers. These fine acoustical products are preferred because of high sound absorption and Holmstrom drilled perforations.

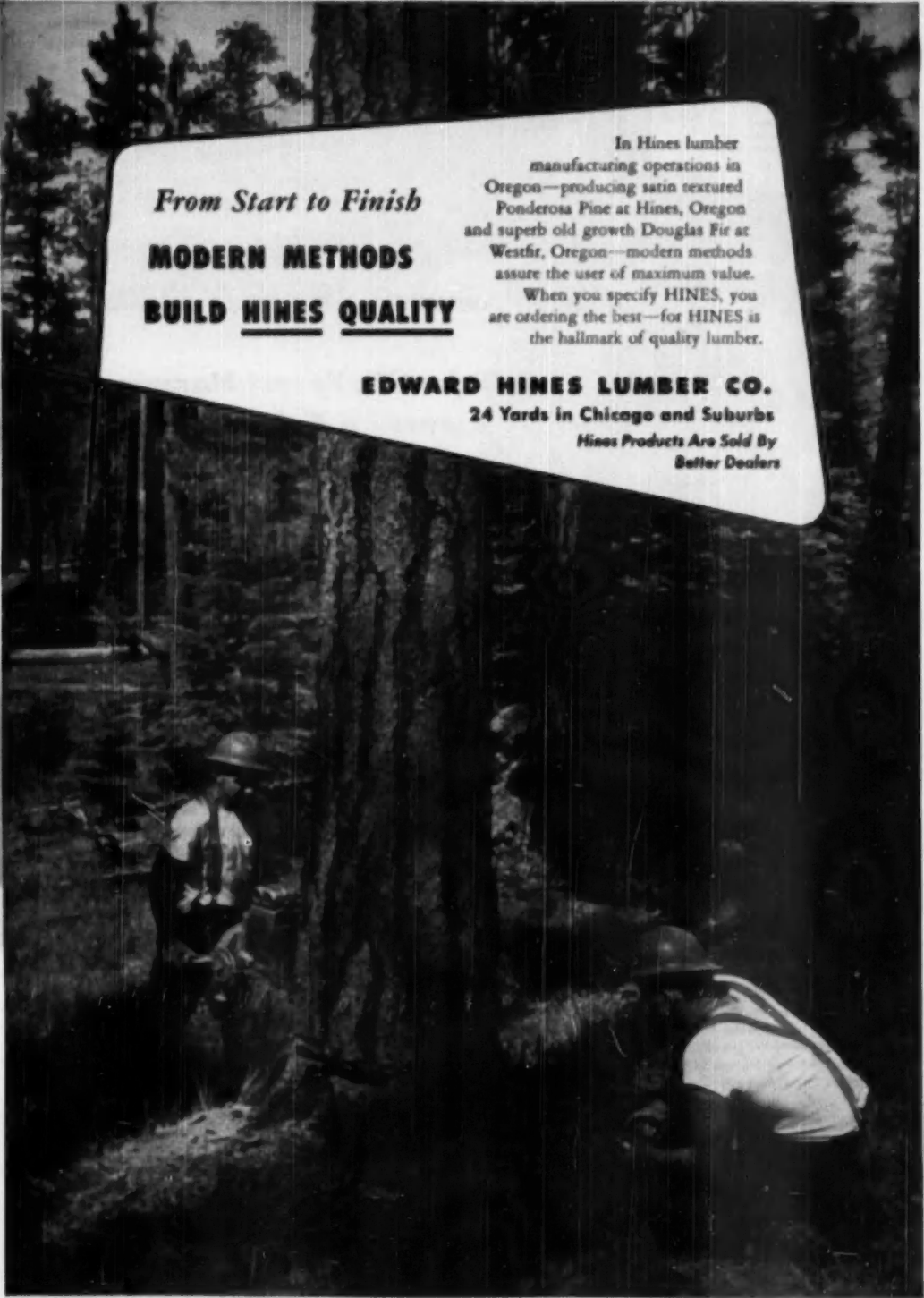
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We conserve timber by converting mill left-overs into Insulating Board Products including Interior Finish Board, Panel and Tile-board, Sheathing and Loft, Roof and Cold Storage Insulation, and Acoustical Tile.

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Architect specifies KIMSUL* for insulating efficiency, ease of installation



The handsome new home of Mr. Charles S. Bevilander, in Weston, Massachusetts. David Fried, designer; Nicolai Construction Company, Contractor.

Each year, as the facts and figures about KIMSUL* insulation become better known, more and more architects specify it for residential construction. For in today's highly competitive market, maximum efficiency with *low true cost* is an absolute necessity.

The many-layer stitched KIMSUL blanket provides *lifetime* uniform pro-

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KIMSUL is flexible, caulkable, and provides an insulated fastening edge.

For complete information, see Sweet's Architectural and Builders Catalogs, or write to:

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Neenah • Wisconsin

DAVID FRIED • Architect

208 HAWLEY STREET

BOSTON 16, MASS.

COMM-FBI 64822

August 22, 1949

Kimberly-Clark Corporation

Neenah

Wisconsin

Gentlemen:

Kimsul insulation impressed me most for the ease and rapidity of its installation. I have tried other types, and have even had the trying experience of me walking off the job when installing other insulation.

In designing the Bevilander House, I bought the best quality insulation obtainable, with the least installation problems. Kimsul insulation more than met this bill. I was advised to use a crew of three men complete the installation in the Bevilander House in one day. In those days of building headaches, this is impressive.

Due to the extra width and flexibility of the Kimsul blanket, which enabled it to be fitted into narrow stud spaces. This, coupled with its high insulating efficiency and fire-resisting covering, sold me completely.

Needless to say, I shall continue to specify Kimsul insulation in my houses.

Sincerely

DAVID FRIED, Architect

Now 2 Types of KIMSUL insulation

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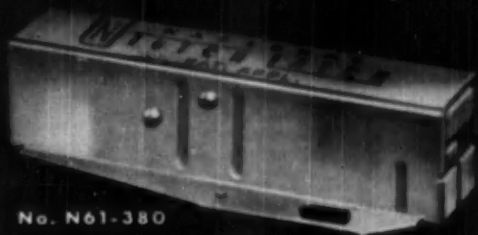


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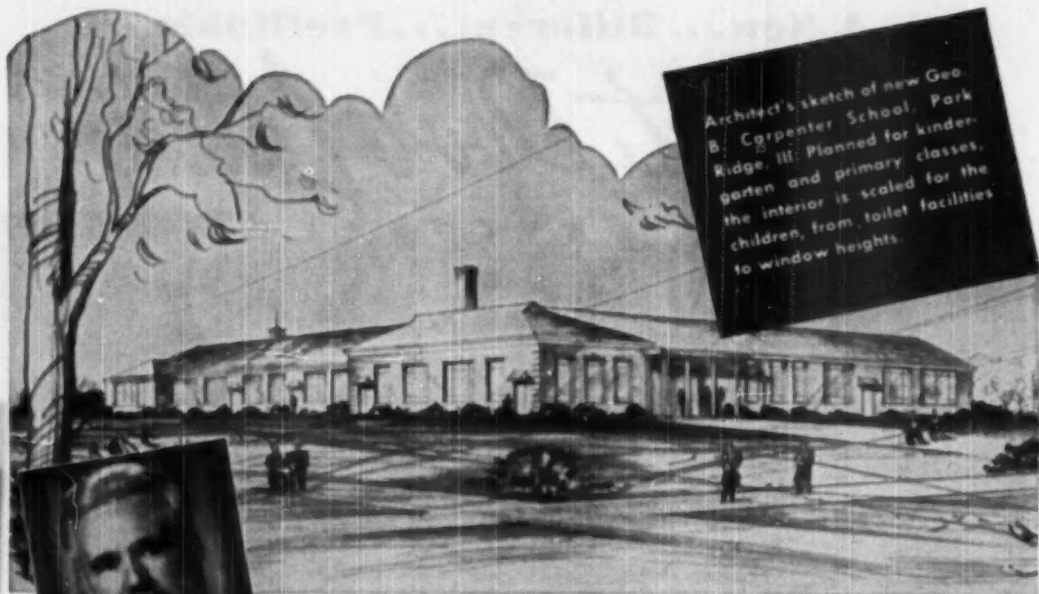
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"Carey Fire-Chex offer fire-safety available in no other roofing material. They are the only shingles of any kind awarded Underwriters' Laboratories, Inc., highest fire-protective rating—Class A*; actually contain more asbestos fibers per square than conventional asbestos-cement shingles! As for permanence, Fire-Chex' extra heavy-weight construction (325 lbs. per sq.) guarantees longer wear, greater weather protection. Equally important, Fire-Chex' colors and blends appealed to me because of their distinctive beauty."

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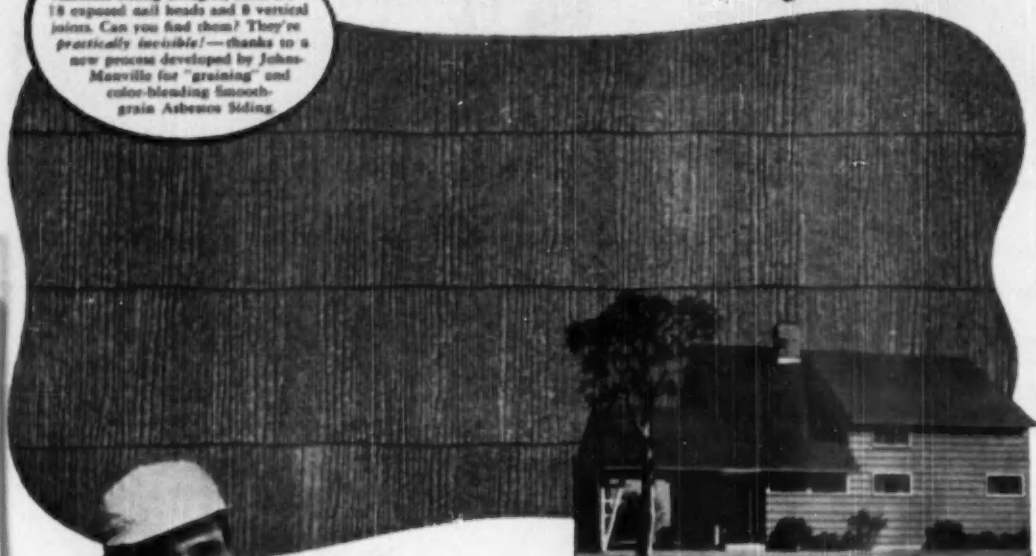
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DECEMBER 1950

BOOK REVIEW



WHENEVER we look over the list of the country's leading publishers of carpentry instruction books, the name of Delmar is continually being brought to our attention. The reason is that Delmar Publishers issue an excellent five-volume series of building titles that offers authoritative building information in an easy-to-understand form at an attractive price—features that always appeal to a builder looking for new books to add to his professional bookshelf. The books in this series are: **HAND TOOLS AND PORTABLE MACHINERY**; **CONCRETE FORM CONSTRUCTION**; **SIMPLIFIED STAIR LAYOUT**; **FRAMING, SHEATHING AND INSULATION**; and **INTERIOR AND EXTERIOR TRIM**. We will talk about just the last two of these titles this month.

FRAMING, SHEATHING AND INSULATION

237 pages, illustrated, 8 1/2 inches by 10 1/2 inches. Delmar Publishers, Inc. \$2.50.

In this book, as in all of these basic building volumes, the text is divided evenly between descriptions of the various building operations to be done and actual instructions in the ways to do them. For example, in one section under the subject of Side Walls and Sheathing there are three pages telling just what balloon frame construction is, then come seven pages of instruction dealing with the proper method to use when framing walls in a balloon frame. In this way the reader has the advantage of not only knowing *how* but also *why*—an important feature that is employed in all sections of the book.

The five main headings in this volume are: Sill, Girder and Floor Framing; Side Walls and Sheathing; Roof Framing; Special Framing Problems; and Insulation. Simple, down-to-earth writing combined with dozens of clear, well selected drawings make this a book that gives the reader a full course in house framing, sheathing and insulation complete in one volume. Excellent for home or school instruction.

INTERIOR AND EXTERIOR TRIM

264 pages, illustrated, 8 1/2 inches by 10 1/2 inches. Delmar Publishers, Inc. \$4.50.

In this book, as in its companion work above, theory and practice are brought together to make the subject as easy to understand as possible. What could be simpler than, say, the instructions in the section on exterior side wall covering. First, the reader is told in a few words what bevel siding, drop siding, shingle siding and composition siding are and how to estimate the quantity of siding needed for a job. Then the necessary tools are listed and the step-by-step methods of putting on siding are set down in 1-2-3 order under the following headings: How to Apply Bevel Siding with Cornerboards, How to Apply Bevel Siding with Mitered Corners, How to Apply Drop or Matched Siding, How to Apply Wood Shingle Siding, How to Provide for Scaffold Brackets, How to Shingle Above Windows, and How to Apply Composition Shingle Siding.

The same thorough treatment is given to all the aspects of building and installing exterior and interior trim. When a book does that there is really not a great deal more that can be asked of it.

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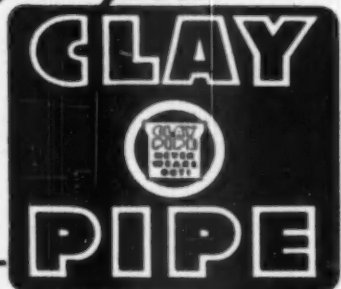
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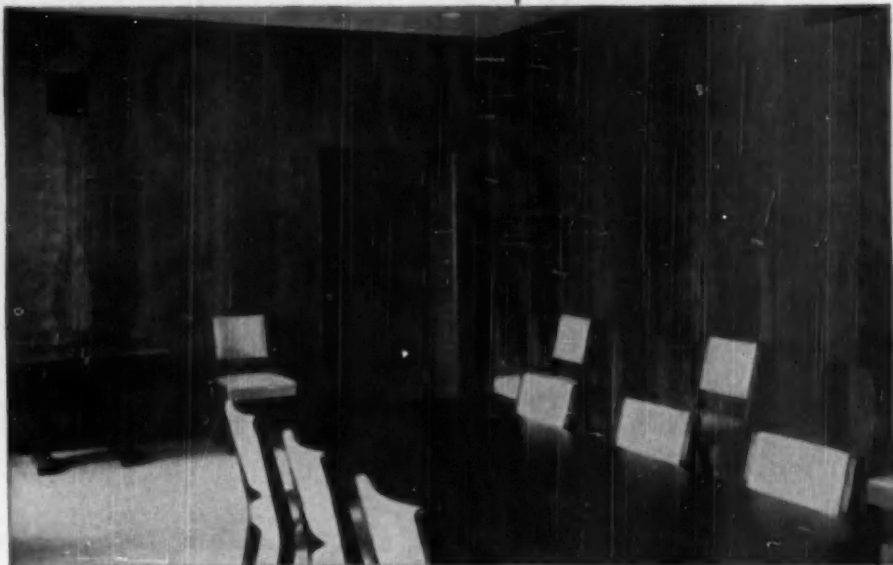
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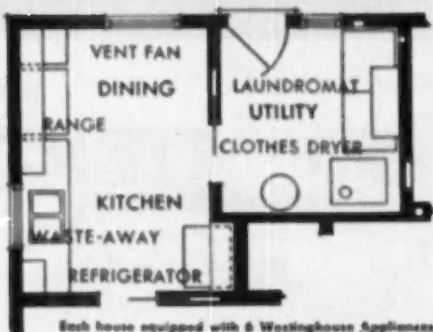


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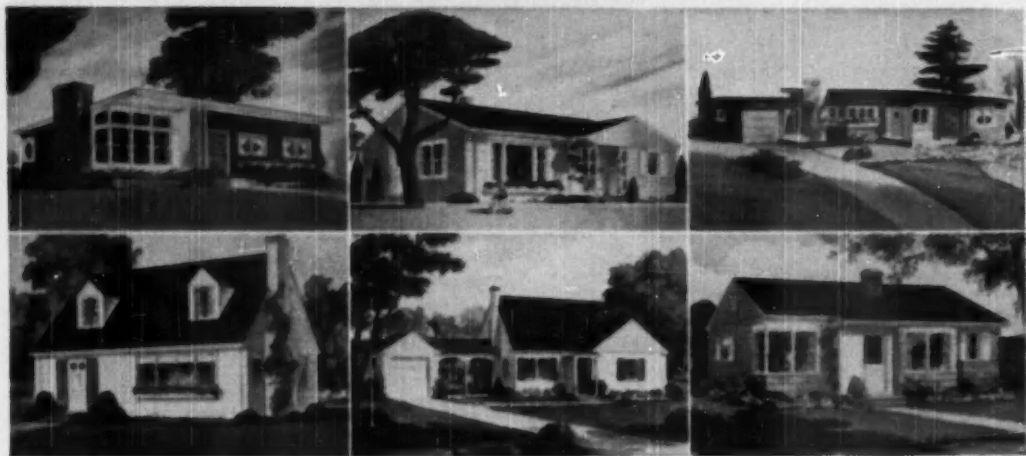
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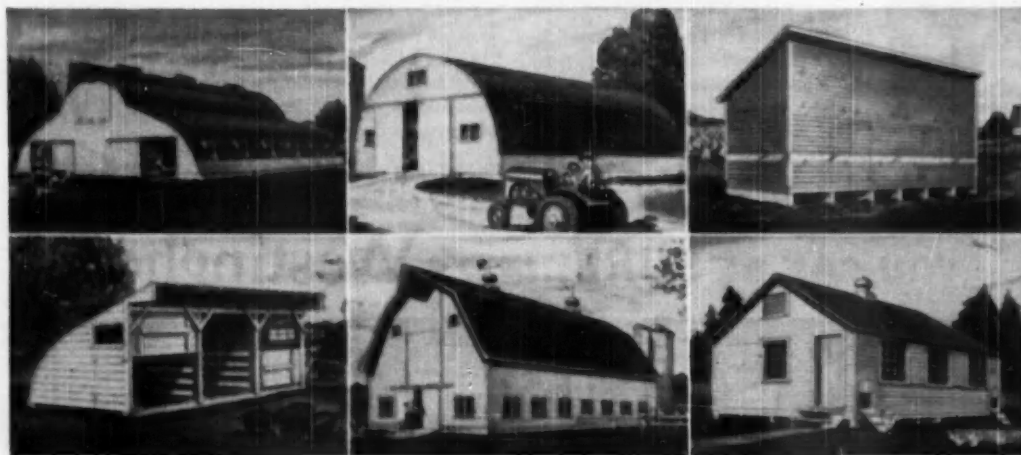
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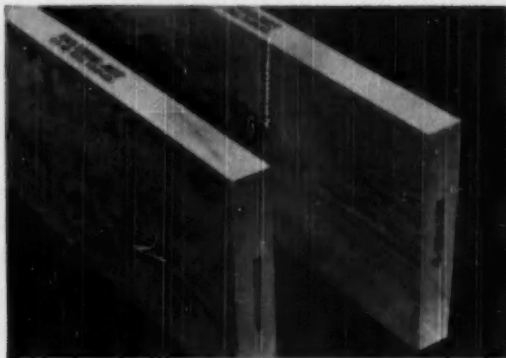
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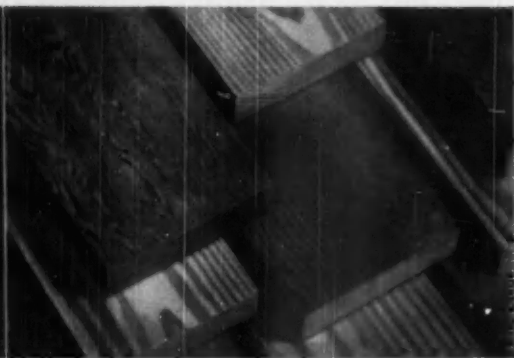
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Through national advertising in the leading home magazines and state farm papers, Weyerhaeuser tells the story of the 4-Square Building Services . . . tells prospect that the scores of designs are available for study at lumber dealers' yards. Magazine inquiries are referred to 4-Square Dealers. Ask your dealer about them.

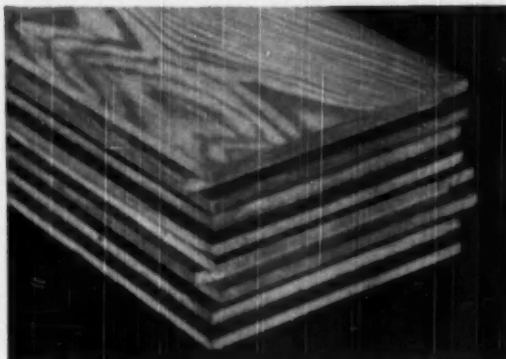
Build for **GREATER PROFIT** with



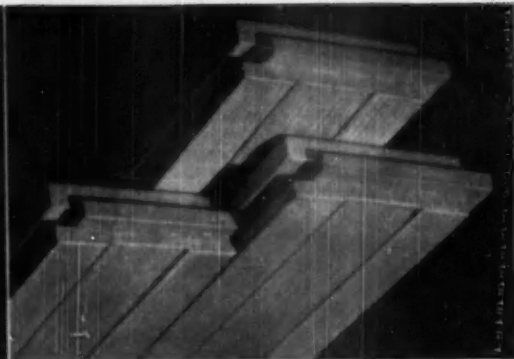
4-SQUARE SPECIAL S2S JOISTS are specially kiln-dried to a low moisture content of 12%. They impart greater stiffness to the structure . . . and because they are full sawn with unsurfaced sides, they will support more than 10% greater loads than standard joists surfaced on four sides.



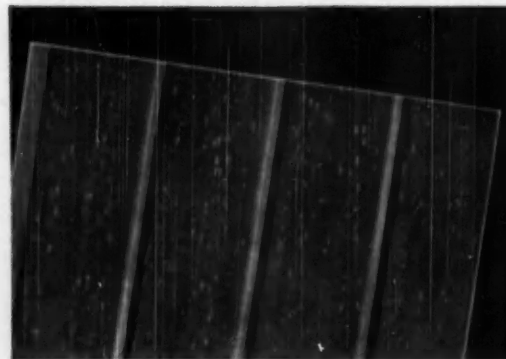
4-SQUARE LUMBER, pressure treated with Wolman salt, is clean, odorless, paintable, non-corrosive and non-leaching. It is as easy to handle and work as ordinary lumber. It is treated as prescribed by the American Lumber and Treating Company and the American Wood Preservers Association.



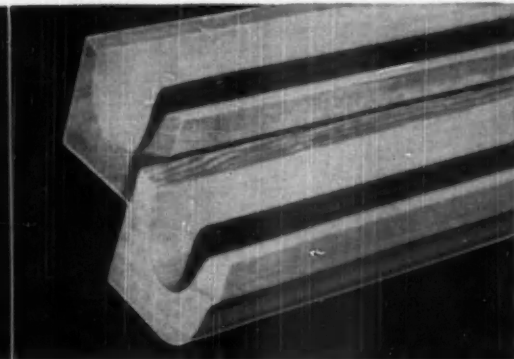
END-MATCHED LUMBER. Tongued and grooved at ends and edges, the pieces mesh at sides and ends. With End-Matched it is not necessary to join ends over framing members. This saves sawing, nailing, double-nailing and material waste.



HEMLOCK FLOORING. West Coast Hemlock Flooring is grooved and tongued at ends and edges . . . and hollow-back finished, the same as hardwood. It lays up to form a tight, beautiful, serviceable floor that hardens with age.



DRIFTWOOD PANELING. Its pleasing pecky surface, its grain, shades and coloring under various finishes make Driftwood the choice of designers of modern interiors.



WOOD GUTTER of Douglas Fir is unequalled for durability, beauty and economy. It is easily installed and becomes a permanent part of the house. Wood Gutter belongs on good homes.

4-Square Special Lumber Products

SPECIAL VALUES IN LUMBER USE... LUMBER BEAUTY... LUMBER ECONOMY

THROUGH continuous research and lumber refinements Weyerhaeuser is providing practical assistance to men engaged in building.

In addition to the complete line of regular 4-Square Lumber Products, Weyerhaeuser now offers a valuable group of 4-Square Lumber Specialties.

These Specialties are important. They enable you to provide added values to your buildings through greater utility, economy, beauty, and durability.

Owners have a vital interest in building materials as they affect good construction. When you employ 4-Square Lumber Specialties, you present convincing evidence that practical provision has been made for the best in modern materials and methods.

Among the Weyerhaeuser 4-Square Lumber Specialties are such items as Pressure Treated

lumber which is rapidly proving its value in good construction... S2E Joists, (surfaced two edge) kiln-dried to avoid shrinkage and of a thickness to give greater stiffness to structures. 4-Square End-Matched lumber is one of the most versatile and popular items for drop siding, ceiling, finished floors, sub-floors, and sheathing. Wood Gutter and Wood Paneling do so much for the enduring beauty of fine wood homes.

Every Weyerhaeuser 4-Square Lumber Specialty has a place in good construction. See your 4-Square Dealer about them.

Other Weyerhaeuser 4-Square Lumber Specialties:

Knotty Pine Paneling • Ridgewood Paneling • Knotty Cedar Paneling • Fabricated Wood Parts • Nu-Loc Studs • Heart Dimension • Kolorite Stained Red Cedar Shingles • Glued-Up Lumber • Clear-Type Dimension • Log Cabin Siding

Weyerhaeuser

4-SQUARE LUMBER AND SERVICES

WEYERHAEUSER SALES COMPANY • SAINT PAUL 1, MINNESOTA



NATIONALLY ADVERTISED TO HOME PLANNERS AND ARCHITECTS

● Weyerhaeuser helps Builders with national advertising in important magazines read by Home Planners and Architects. These groups are being told the construction story of Special 4-Square Lumber Products. Other Weyerhaeuser advertising is appearing in American Home, Better Homes and Gardens, and a comprehensive list of State Farm Papers.

**The roofs
will always be "new"
on this street!**

Group of homes in Great Neck, N. Y., built by Alexander and Holgers, Inc., Jamaica, N. Y. Roofs are "Century" No. 5 Asbestos-Cement Roofing Shingles.



**Long life and lasting beauty make
"Century" Asbestos-Cement Roofing Shingles
EASY TO SELL**

When a customer says, "I want a roof that will last," he's a definite prospect for Keasbey & Mattison "Century" Asbestos-Cement Roofing Shingles!

Consider the facts: "Century" Asbestos Roofing Shingles resist fire, weather, and termites—will last the lifetime of the house!

And the *beauty* lasts, too! As a new roof, "Century" Asbestos Roofing Shingles present a smart, modern appearance that pleases every home owner. The attractively textured surface won't weather out; the colors are "built in"—they are an integral part of the shingles.

Then, when you point out the economies, your

sale is as good as made! "Century" Asbestos-Cement Roofing Shingles save costs three ways: The initial cost is moderate. And they are specially designed for quick, easy application—save both time and labor. Finally, "Century" Asbestos Roofing Shingles need a minimum of maintenance—*never need painting*—to provide perfect, lasting protection.

"Century" Asbestos-Cement Roofing Shingles are made in a variety of eye-pleasing colors—White, Black, Spanish Red, Surf Green, and Graytone—and in popular patterns. All are suitable for reroofing as well as for new construction. Ask your Keasbey & Mattison dealer for complete information, or write us direct.

KEASBEY & MATTISON
COMPANY • AMBLER • PENNSYLVANIA



ORIGINAL MANUFACTURERS OF ASBESTOS-CEMENT SHINGLES IN THIS COUNTRY

AMWELD

**Interior
Steel Doors
and Frames**

**Sliding Closet
Door Units**

*One-piece assembled
frame or the famous
AMWELD Original
"K-D" (Knocked-Down)
Frame Unit.*



From coast to coast, AMWELD is becoming the "most asked for" interior steel door and frame unit and sliding closet door unit.



If you do not have our Building Products Catalog, we'll gladly send you one.

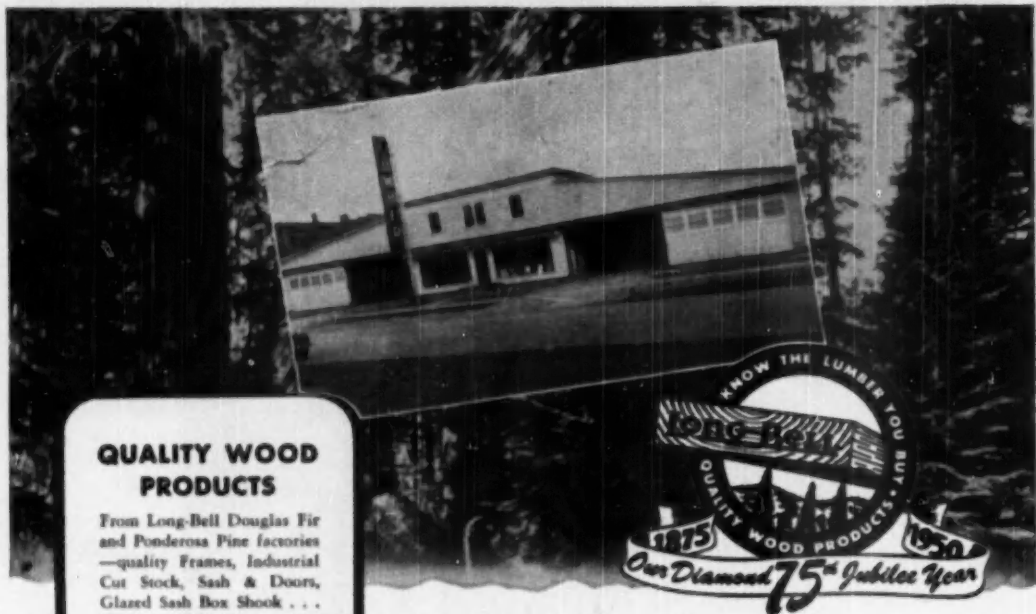


BUILDING PRODUCTS DIVISION

**THE AMERICAN WELDING & MANUFACTURING CO.
WARREN, OHIO**

Quality Welded Products Since 1918

**FROM TREE TO TRADE LONG-BELL RESOURCES BENEFIT
THE LUMBER AND WOOD PRODUCTS INDUSTRIES...**



**QUALITY WOOD
PRODUCTS**

From Long-Bell Douglas Fir
and Ponderosa Pine factories
—quality Frames, Industrial
Cut Stock, Sash & Doors,
Glazed Sash Box Shook . . .
Kitchen Cabinets . . . Un-
painted Furniture . . . Pre-
fabricated Building Stock . . .
varied Products.

**OAK FLOORING
PONDEROSA PINE
PLYWOOD
TREATED PRODUCTS**

. . . Woods treated with creosote
and standard salt preservatives,
from Long-Bell Wood Preserving Plants.

The timber resources, modern plants and efficient distribution methods established by Long-Bell Lumber Co. for the past 75 years are an important asset of all branches of the lumber and wood products industries. These extensive resources make available adequate and economical supplies of Douglas Fir, West Coast Hemlock, Southern Pine, Ponderosa Pine, White Fir and Southern Hardwoods from Long-Bell's 14 ultra-modern manufacturing plants in southern and western states.

The Long Bell Lumber Company

Established 1875

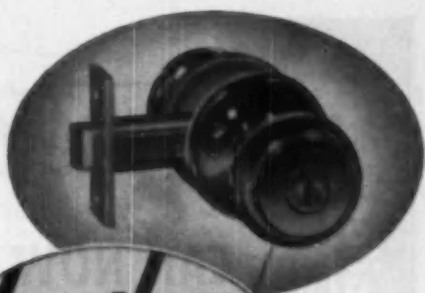
KANSAS CITY 6, MISSOURI

DIVISIONAL SALES OFFICES

EASTERN DIVISION • Kansas City, Mo.

WESTERN DIVISION • Longview, Wash.

*There's more than
meets the eye in...*



Look inside a KWIKSET lock. See the advanced design, the simplicity of operation, the rugged, precision-built construction... the *built-in* features that make KWIKSET locks *first choice* with architects and builders across the nation. KWIKSET's unique cam action locking device provides positive knob locking. The ingenious half-round spindle reduces number of working parts. And fewer parts mean faster, more economical manufacturing operations... *lower unit cost!*

But mechanical design isn't the whole story. KWIKSET locks are exceptionally clean and attractive in appearance

... beautifully hand-finished in satin or polished chrome or brass, or satin bronze.

Builders find that KWIKSET locks save money when they *buy them*... save money when they *install them*. Simple, 2-hole installation cuts time and labor on the job to an absolute minimum. Add to this Kwikset's high quality and striking beauty and there is little wonder why more and more builders are installing more and more KWIKSET locks.

MATERIAL AND WORKMANSHIP UNCONDITIONALLY GUARANTEED

MANUFACTURED BY



DISTRIBUTORS

Kwikset Sales and Service Company

SAN FRANCISCO, CALIFORNIA

DEPT. 8-11

DECEMBER 1950

101

* a good tile retailer

YOU*

**CAN NOW
RENT
TILE CUTTERS**

*To Your
Customers!*



INCREASE TILE SALES AND MAKE PROFIT FROM RENTAL WITH THIS TILE CUTTER RENTAL PROGRAM. MERCHANDISING UNIT INCLUDES RENTAL FORMS, AD MATS, AND POINT OF SALE DISPLAYS. GET YOUR SHARE OF THE HOME INSTALLATION MARKET! SEND FOR RENTAL BULLETIN AND THE NAME OF YOUR NEAREST DISTRIBUTOR TODAY!

Write Department AB-2

J.M.J. PRODUCTS CO.

MAKERS OF THE FAMOUS PT-91 PLASTIC WALL CUTTER



ENGINEERS MANUFACTURERS
BELLEVILLE, ILLINOIS

NOW! Every door
can be a sliding door

with

**Sterling
HARDWARE**

The **NEW 600 Line**

- Mounts in standard door frame!
- Requires only 1" head room!
- Provides vertical adjustment!

The most outstanding achievement in sliding doors today! Now anyone can easily and quickly install a sliding door. Mounts in standard door frame. Requires only 1" head room! Made for 3/4" and 1 1/4" doors... also for light cabinet doors.

**NEW STERLING
GUIDE STRIPS**

Eliminate difficult and costly door grooving with new Sterling Guide Strips! Made for doors of all widths. Quick and easy to install.

Here is the quick, easy way to install by-passing doors. No special millwork... no notching or grooving... no troublesome hanging.

ANOTHER ALL-TIME FAVORITE!... **STERLING'S 800 LINE**



No. 840
HANGER
For side mount-
ing. Not ad-
justable.

No. 845
HANGER
For top mount-
ing. Not ad-
justable.

No. 850
HANGER
For top mount-
ing. Fully ad-
justable.

No. 860
HANGER
Ideal for pocket
doors.

- For pocket doors.
- For single sliding doors.
- For by-passing doors.
- For extra heavy doors.

**HANGER
FOR
CABINET
DOORS**

STERLING has the most complete line of interior sliding door hardware on the market. Hangers for light cabinet doors, for all types of wardrobe, closet and pocket doors and heavy duty hangers for extra heavy doors. Latches, Flush Pulls, Edge Pulls and all other accessories. WRITE TODAY FOR YOUR ILLUSTRATED CATALOG.

Sterling Hardware Manufacturing Co.

2345 Nelson Street, Chicago 18, Illinois

Selected

for the two most outstanding promotions
in the field of home-building



... for the "Good American Home Program", dedicated to economical modern housing and endorsed by National Retail Lumber Dealers' Association.



... for the Museum of Modern Art's Exhibition House (co-sponsor: Woman's Home Companion), dedicated to good modern architectural design in speculatively-built houses.



Selected

for thousands of American homes



XH2 FRONT AND BACK DOOR SET

Front Door: XH 291 Latch Set, XH Handle outside and knob and rose inside. 170 KA Deadlock with XH cylinder collar.

Back Door: 170 KA Deadlock, inside trim chromium; keyed-alike with front door lock.

TUBULAR LATCH SETS



NADIAN DESIGN. Brass.
For doors of either hand.

THE YALE & TOWNE MANUFACTURING COMPANY, Stamford, Conn., U. S. A.

DECEMBER 1950

103

THE

Gunnison

**ALL-STAR
LINE UP**

- ★ the *Coronado*
- ★ the new **CHAMPION**
- ★ two big new sizes

Gunnison Homes, Inc., U. S. Steel Corporation Subsidiary, is now granting additional DEALER FRANCHISES. We welcome inquiries from qualified, financially sound businessmen. Investigate NOW! Write Dept. A-8 for complete information.



Coronado

**SEE OUR BOOTH AT
THE NAHB CONVENTION
EXPOSITION IN CHICAGO
JANUARY 21-25.**

The Coronado... a long, low, rambling home with spacious rooms, sweeping horizontal lines, picture window, wide roof overhang. Available in two elevations, five sizes, right or left hand plan.

The new **CHAMPION**, with eight-foot picture window... more than twenty-five square feet of light, bright space! Available in five elevations, five sizes, right or left hand plan.

Two new **CHAMPION** sizes, 4 and 5, each 24' x 40', with larger bedrooms, 20-foot living rooms, big American Kitchen. Available in five elevations, right or left hand plan.



CHAMPION

Wherever There's Better Living...



Gunnison Homes

UNITED STATES STEEL U.S. CORPORATION SUBSIDIARY
NEW ALBANY, INDIANA

"Gunnison," "Champion"
and "Coronado"
—T.M. Gunnison
Homes, Inc.



Pictures illustrated in SKY BLUE are: Cadillac recess tub with micrometer shower fitting, Emerson twin lavatories and Prince reverse trap closet combination.

THERE'S GOLD IN BRIGGS *Beautyware* IN COLOR

Whether you feature only one or all four of Briggs famous decorator colors—the result is always *plus profits* for you! The reason is as simple as ABC! A: Modern families want colored fixtures—even though most of them are afraid they can't afford the cost. B: Briggs Beautyware gives them colored fixtures at practically no extra cost! C: When they find this out, you—

Only 10% more than white* . . . for any one of these smart new decorator colors

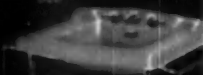
who either sell or have built a house with Briggs Beautyware in color—have a *sure sale!* No wonder the biggest builders and the most wide-awake plumbing dealers are so enthusiastic about Briggs. Follow their lead . . . let Briggs start building new profits for you—today! Briggs Manufacturing Company, 3001 Miller Avenue, Detroit 11, Michigan.



Merit Award granted by American Society of Industrial Engineers for excellence in engineering and manufacture.

*10% additional charge for colored ware applies to complete sets including Briggs brass fittings.

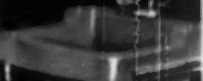
8-1330W
Sky Blue
Porcelain Enamel
Sink



8-3220W
Columbian
Porcelain Enamel
Sink



8-1420W
Columbian
Porcelain Enamel
Sink



8-1220W
Columbian
Porcelain Enamel
Sink



8-1120W
Columbian
Porcelain Enamel
Sink





CARL WANEN
Women Court Apartments
Chicago, Illinois



GEORGE FABE
The Flamingo Apartments
Cincinnati, Ohio

Take it from these **SUCCESSFUL** builders!

IT'S UNANIMOUS! Yes, each leading builder shown here chooses Kelvinator—and gives as his reason *his own experience*. Over long years, each man has had conclusive proof of Kelvinator's greater dependability . . . and lower cost of ownership . . . based

on actual comparative performance!

Kelvinators will kindle sales and save dollars for you in your next project. See exactly how. For full information, write to Dept. AB, Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.



*Kelvinator featured exclusively, nation-wide,
in the Good American Home Program*

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION • DETROIT 32, MICHIGAN

ELECTRIC REFRIGERATORS • ELECTRIC RANGES • ELECTRIC FREEZERS • ELECTRIC WATER HEATERS • ELECTRIC AIR DRIER



SAM DELEVITT
Chicago, Illinois



WILLIAM S. FRIEDLANDER
Copogue, Long Island, N. Y.



The basic problem

THE PROBLEM which confronts the home building industry is not what to do about Regulation X or other rumored regulations, or whether to accept or fight price controls and allocations of materials. These are merely the by-products of the basic problem. That problem, and it should be an openly debated issue, is how to preserve individual freedom and constitutional government. Until the people of the United States decide on a course and adhere to it, economic confusion and moral frustration are all that anyone can expect.

Until the invasion of South Korea was accepted as a challenge to us there were four courses open. One of these was to chamberlain our way into eventual trouble with Russia directly. Our war in Korea signaled the abandonment of chamberlaining. That left three courses open. The first of these is to allow Russia to foment a continuing series of Koreas in various parts of the world. If we have to fight these isolated wars practically alone, as we are doing in Korea, we shall bankrupt our economy, bleed our manpower to death, and fall easy prey to Russia in Stalin's own good time. Such a course appears to be suicidal.

That leaves two courses open. The first of these is immediately to open all-out assault on Russia, with or without foreign aid. There are too many obvious reasons against that course until the fourth and last alternative has been explored thoroughly. That last course is to withdraw from the international military and political scene.

The suggestion of such a course naturally invites the application of what generally has become a scornful epithet, isolationist. But, there certainly can be nothing wrong with suggesting careful study of a course that can preserve the economy of the world, save hundreds of thousands of American lives, and in the end offer a surer way to restore balance and sanity to a world now ground under the heels of gangster despots just as it formerly was ground under the heels of monarchical despots.

It should be remembered before discarding a return to military isolationism that the decline of monarchical despotism was brought about through the example of better living presented by a free people operating under the first constitutional form of republican government the world had ever known. Since that is historical fact, is it idle to hope that the new era of gangster despotism in Europe cannot likewise be crushed quicker and easier by the example of clinging to traditional ideals of freedom, production and distribution, than by compromising with regulated economy, and engaging in endless wars?

All Americans, and particularly American business men, have been too gullible. They have accepted too much regulation and too much foreign policy change without asking enough questions. Now, by this lack of inquisitiveness and personal interest in government, business is again being subjected to things like Regulation X which, because its alleged need has not been explained by anyone, must be viewed as another of many attempts to kill freedom and replace it with the kind of gangster despotism that holds most of Europe and Asia in its grip. The problem is not Regulation X. It is where is the United States going, who is taking it there and why.

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INTO BUILDERS' HOMES from Sept. 10 to 17 streamed millions of interested people, many in the mood to buy

Home Week 1950: Demand Outstrips Supply

TURNING out at exhibit homes in greater force than ever before for National Home Week of 1950, home seekers literally "bought everything in sight," according to an *American Builder* survey of volume of sales and number of visitors at cities representing all sections of the nation.

Typical reply to the query, "How many homes were sold during the Week?" was "Everything we had for present delivery." In many cases model homes were sold out before the Week started as a result of early publicity. In one city, Memphis, Tenn., less than 300 homes were unsold out of 2,000 shown on opening day. Richmond, Va., reported: "Unable to answer question since sales continue as a result of National Home Week."

As far as price was concerned, homes between \$8,000 and \$14,000 led sales by a wide margin. Homes over \$15,000 outsold others in only two reporting centers, Spokane, Wash., and Cleveland. People were interested in the more expensive houses, however; in Chicago the Home and Home Furnishings Festival, observed in connection with the Week, drew big crowds to models priced as high as \$60,000.

Prefer Ranch-Type

Also reflecting a current trend was the widespread preference expressed

City and State	Number Homes Sold	\$ Value	Price Range Selling Best	Preferred Type	Total Number of Visitors
Sacramento, Calif.	Already oversold	—	\$ 8,000-10,000	Modern	—
San Mateo, Calif.	154	1,500,000	8,500-10,500	Ranch	25,000
Chicago, Ill.	2,000	—	9,000-16,000	Ranch	1,000,000
Indianapolis, Ind.	All previously sold	—	9,000-12,000	—	100,000
Grand Rapids, Mich.	16	170,000	9,000-10,000	—	—
Minneapolis, Minn.	—	—	9,000-11,000	Cape Cod	30,000
Jackson, Miss.	42	400,000	8,000-10,000	—	125,000
Albany, N.Y.	—	—	8,000-13,000	Cape Cod and Ranch	—
Buffalo, N.Y.	70	750,000	8,000	Ranch	65,000
Long Island, N.Y.	—	—	9,000-11,000	Ranch	—
Syracuse, N.Y.	All previously sold	—	9,500	—	15,000
Cleveland, Ohio	154	1,960,000	16,000-25,000	Ranch	23,000
Columbus, Ohio	Many already sold	—	10,000-15,000	—	—
Dayton, Ohio	All previously sold	—	10,000 or less	Ranch	10,000
Toledo, Ohio	—	—	12,500	Cape Cod	20,000
Youngstown, Ohio	25	400,000	12,000	Ranch	30,000
Philadelphia, Pa.	700	7,200,000	8,500-12,500	Row	150,000
Providence, R.I.	36	425,000	10,000	—	20,000
Memphis, Tenn.	Most already sold	—	Under 12,000	—	50,000
Dallas, Texas	150	120,000	8,000-14,000	Ranch	20,000
South Texas	—	—	9,500-12,000	Ranch	15,000
(Corpus Christi area)	22	280,000	—	—	—
Utah	53	800,000	10,000-14,000	Ranch	30,000
(Salt Lake City area)	—	—	16,000	Ranch	—
Richmond, Va.	—	—	15,000-25,000	Ranch	29,000
Spokane, Wash.	33	447,000	Under 10,000	Ranch	16,000
Tacoma, Wash.	13	160,000	10,500-18,000	Ranch	50,000
St. Louis, Mo.	9	—	12,500-28,500	Ranch	150,000
Milwaukee, Wis.	22	340,000	—	—	—

for the one-story, single-family residence, called in its many variations the "ranch-type." The selective survey showed that home seekers throughout the country gave this type a heavy priority. In Philadelphia, row housing was still most popular in the city limits, but detached homes were ahead in the suburbs with ranch houses leading

other one family homes in popularity.

A breakdown of results by cities is given in the accompanying chart. In many cases only sales of model homes are recorded, no estimates being available at the time of the over-all number of houses, including orders for future delivery, sold as a direct result of the National Home Week promotion.



LUMBERMEN have cut twice as much timber as existed when the Pilgrims landed and we still have three-fourths as much standing

Construction Lumber

Resources—Types and Grades—Moisture and Lumber—Using the Right Grades—Types of House Framing—Recommended Practices in Good Framing

SINCE 1776 more than 2,500,000 million board feet of lumber have been cut from the nation's forests. In addition to the sawed lumber, the forests have produced about 500 million telephone and telegraph poles, 11 billion fence posts, 10 billion railroad ties, seven billion cords of fuel wood and millions of tons of pulp for paper production. The annual national lumber production now is running at a rate in excess of the 34,200,000,000 board feet cut in 1949.

The above figures make it easy to understand why, for many years, there have been predictions of timber famine within 10, 20 or 30 years. Although all those who predicted a nation without forest resources were serious, they failed to remember the simple fact that trees grow prodigiously, thus making lumber our only renewable natural resource. In the state of North Carolina, for example, logging and lumber manufacturing have been going on continuously for more than 300 years and yet the state has been producing lumber at an annual rate of

FIRST OF A SERIES

This 34-page presentation on construction lumber and its uses is the first of a series of four installments on this subject. The January issue will carry details on "Correct Nailing in Framing"; February—"Gloss Laminated Framing Members" and March—"Framing Farm Buildings."

about one to one-and-a-half billion feet per year for the past 40 years. There are now more saw mills in North Carolina than in any state in the union.

The historical rule that lumbermen had to "cut out and get out" has long since changed. Protection of forest against the ravages of fire and insects plus selective logging and re-seeding is now common practice. Timber is considered as a crop to be harvested at regular intervals at maturity, or when trees reach a satisfactory log size. Al-

though the only large remaining so-called virgin timber stands are now in the Pacific Northwest, billions of feet of lumber are being produced annually from second, third, fourth and even fifth-growth timber. The quality of lumber is not directly dependent on whether it comes from virgin timber but depends on the density and rate of growth.

At present there are about 461,041,000 acres of forest land in the United States capable of producing commercially valuable timber. The United States Forest Service estimates that there are 1,600,792,000,000 board feet of standing timber of saw log size at the present time. This figure changes with the rate of timber growth and with the amount cut annually. Wood grows in our forests at the rate of about 35,301,000,000 board feet per year. About 4,000,000,000 board feet are lost annually due to fire, insects and disease.

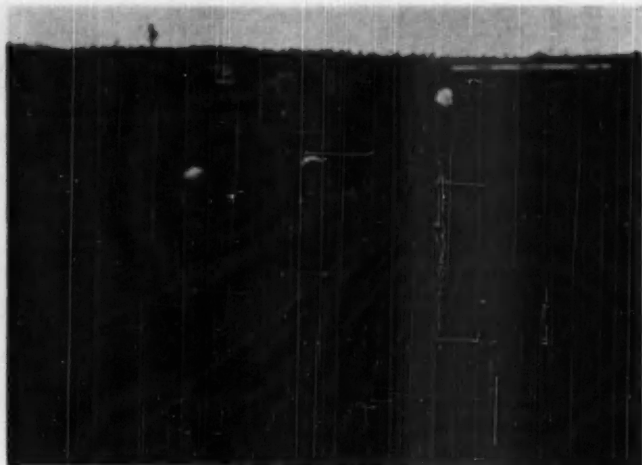
Of the total available supply of saw timber about 65 per cent is in the western part of the United States, 21 per

LUMBER

cent is in the southern states and 14 per cent is in other areas, principally in the northeast and the three lumber-producing lake states.

The largest single owner of forest land is government with about 121,000,000 acres controlled by federal, state and local bodies. Privately owned forest land is characterized by small ownership with about 40 per cent in farm wood lands and another 40 per cent in small lots of less than 5,000 acres. The balance of 20 per cent is in ownerships of from 5,000 acres to 200,000 acres. The large holdings adapt themselves much easier to scientific harvesting of timber, re-seeding and tree farm operations, although sound forestry practices of selective logging, re-planting and tree farming are common with all holders of commercial timber.

The U. S. Bureau of the Census reported 53,109 sawmills operating in the United States in 1947, with about three per cent of the mills producing about 52 per cent of the lumber. The same census reported only 43 mills cutting more than 50,000,000 feet per year. One large mill in Longview,



MODERN lumbering includes the cultivation of seedlings and their re-planting in areas previously harvested. Bulk of future tree crops, however, come from natural re-seeding

Wash., which is now the center of the nation's lumber production, often cuts more than a million board feet in an eight-hour shift. Despite the volume cut by a few large producers, the lumber industry is widely scattered and made up of operations of all sizes. In fact, 62 per cent of the sawmills cut only eight per cent of the lumber produced nationally. The capital outlay in America's forest industries is in ex-

cess of \$10,000,000,000 and more than 2,000,000 persons are directly dependent on this industry for their livelihood.

Out of a total production of 34,257,000,000 board feet of lumber in 1949, 22,437,000,000 feet, or 67.11 per cent, were consumed in the construction industry. The balance was used for boxing and crating, industrial purposes, by the railroads, and exported.

Lumber Is a Tradition

The common saying that there is no glamour in a piece of dimension lumber disregards the fact that lumber has played, and is still playing, a leading part in the almost miraculous growth and development of what is now the most powerful nation on earth. When the early colonists first landed on the shores of America the hardships of establishing a new nation were lightened immeasurably by the abundance of fine timber. This not only gave them immediate means of erecting shelters to protect them from the elements and their enemies, but also developed into America's first export business in manufactured goods. The shipments of huge timbers and masts, so long that the boats being used were too small to handle them adequately, were dramatic evidence to the Old World that the new nation could produce prodigious quantities of its renewable natural resource.

The earliest sawmills were of the sash saw type. A sash saw consisted of a single blade held rigidly in a sash and moved slowly up and down so that it gradually ate its way lengthwise through a log to make timbers and boards.

The lumber industry was given tremendous impetus in 1820 when Benjamin Cummins, a blacksmith of Burtonville, N. Y., hammered out the first circular saw on his anvil. It was not until about 1860 that the first band saw was successfully operated at Fort Wayne, Ind., and it was 20 years later before lumbermen generally began to accept the band saw as a practical method of production. Shortly after the circu-

lar saw was invented, sawmill operations utilizing steam power began to assume their present-day characteristics of highly mechanized operations. In fact these early circular sawmill operations employed the first production line manufacturing techniques which have proved so successful in mass production for all industry. Along with the increased mechanization of the sawmill, the logging and woods operations have all become highly mechanized.

From the time the first lumber was cut at Jamestown, Va., the industry's center of activities has moved with development of the country and population growth, which required increasingly large quantities of lumber for dwellings, farm buildings, commercial structures, industrial establishments, bridges, railroads and other purposes. From Maine the peak production center moved to New York about 1850. Pennsylvania took the lead about 1860 when more than 30 large mills were located along the Susquehanna river around Williamsport. In the early 1870's and continuing through the early 1890's, the lake states of Michigan, Wisconsin and Minnesota became the nation's largest lumber producing area. At the turn of the century activity centered in the southern pine area and in 1909 that region hit its all-time high annual production figure. About this time lumber production in Oregon, Washington and the northwest began to assume major importance and that area now produces more lumber than any other single region.



Map Courtesy U. S. Forest Products Laboratory

THE principal forest regions of the United States showing the types of trees grown in the areas

LUMBER CONSUMPTION AND UTILIZATION—1929-1949

Mill Size Class ¹	1929		1939		1949 ²		1947	
	No. of Mills	% of Total Footage	No. of Mills	% of Total Footage	No. of Mills	% of Total Footage	No. of Mills	% of Total Footage
50,000 M feet and over	790	55.6	120	25.8	44	15.8	43	11.0
25,000 to 50,000 M feet			218	33.4	151	18.4	132	12.0
15,000 to 25,000 M feet			309	9.9	135	7.0	151	6.1
5,000 to 15,000 M feet			908	10.5	414	8.1	545	10.8
1,000 to 5,000 M feet			3,208	17.8	3,190	15.9	2,486	22.1
500 to 1,000 M feet	3,932	7.8	3,165	6.0	2,344	1.1	4,447	25.4
50 to 500 M feet	10,985	8.4	12,185	6.1	9,979	7.9	25,340	11.8
1 to 50 M feet	1,730	—	—	—	—	—	18,760	9.9
All Mills	22,430	100.0	20,497	100.0	14,644	100.0	63,190	100.0

¹Mill size class refers to output in a particular year, not the capacity. ²No classification by sawmill size included in 1939 census. Source: U. S. Bureau of the Census.

SIZE OF SAWMILLS IN THE UNITED STATES

	1929	1939	1949	1950	1951	1952	1953	1954	1955	1956	1957
Northern	56.0%	25.7%	7.5%	3.5%	4.5%	5.4%	6.7%	6.3%	6.0%	6.0%	6.0%
Central	18.9	17.9	8.7	4.5	7.9	7.9	7.4	6.8	6.8	6.8	6.8
Southern	15.0	10.1	45.6	41.0	20.4	20.5	24.7	44.0	34.0	34.0	34.0
Lake States	6.4	32.9	7.8	4.8	3.1	2.9	3.3	3.3	3.3	3.3	3.3
Western	4.0	4.9	29.3	43.5	48.0	43.8	43.1	42.1	42.1	42.1	42.1
Pacific	6.8	2.2	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	0.3
Total United States	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Percentages in 1949 based on valuation; all subsequent years based on production.

Source: U. S. Bureau of the Census.

LUMBER PRODUCTION BY GEOGRAPHIC REGIONS

Year	Building and Construction	House and Casing	(Million Board Feet)				Export	Total
			Industrial	Railroad	Other	Total		
1929	20,137	4,645	4,220	3,622	3,197	28,821		
1930	13,820	4,088	3,255	3,052	2,332	26,547		
1931	9,673	3,358	2,390	2,050	1,701	19,660		
1932	6,460	2,425	1,425	1,841	1,186	15,116		
1933	6,185	2,549	1,613	1,583	1,221	13,160		
1934	7,900	3,601	1,679	1,830	1,540	16,401		
1935	10,090	3,221	2,150	1,732	1,813	19,014		
1936	14,612	3,864	3,516	2,156	1,394	25,488		
1937	14,618	4,003	3,760	2,397	1,443	25,190		
1938	18,067	5,840	3,542	1,478	977	32,504		
1939	16,637	4,954	3,754	1,880	1,104	28,429		
1940	20,337	4,295	3,394	1,939	972	30,947		
1941	22,876	6,142	3,820	2,396	690	34,907		
1942	25,966	9,139	4,742	3,209	463	43,519		
1943	19,744	14,142	4,964	2,148	910	37,908		
1944	11,900	15,341	4,602	1,145	986	34,974		
1945	15,708	11,714	3,898	1,886	430	31,546		
1946	20,983	6,754	4,554	1,990	650	34,931		
1947	21,994	4,928	4,785	1,881	1,260	34,868		
1948*	24,150	4,480	4,804	1,647	646	35,927		
1949*	22,637	4,817	4,510	1,600	687	33,651		

TYPES OF LUMBER AND GRADES



THE head saw in a modern band sawmill. These saws vary in size with some of them as large as 18 inches wide and 65 feet long, traveling as fast as two miles per minute

PROFITABLE operation of a modern sawmill, whether large or small, is a highly technical undertaking. It not only requires perfect coordination of a large number of factors and steps necessary to produce the finished product, but the manner in which lumber is cut from the logs is very important in relation to the ultimate use to which the lumber is to be put. From a technological standpoint the bulk of lumber today is cut and finished on precision machinery under scientific conditions.

Lumber is graded according to a comprehensive set of firmly established and enforced grading rules and markings. This makes it possible for the lumber purchaser to specify grades, which assure uniformity. Trees native to the United States are divided into two classes—hardwoods, which have broad leaves, and softwoods or conifers, which have leaves

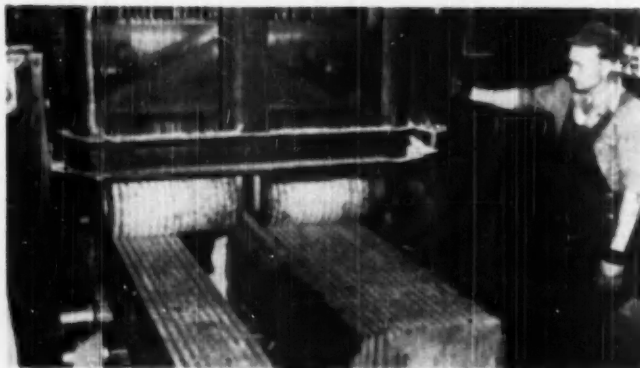
like needles or scales. No definite degree of hardness divides the hardwoods and softwoods. In fact, many hardwoods are actually softer than the average softwood. Generally, hardwoods come from the broad-leaved trees, which shed their foliage annually; softwoods come from needle bearers, which retain their foliage for more than one year. Practically all construction lumber is softwood.

The fact that no two trees grow exactly alike—and that therefore no two pieces of lumber can be exactly alike—with the same width of growth rings, sapwood and other characteristics makes it necessary to judge each individual piece that comes from each log. Specific grade and size standards have for years been established by the American Lumber Standards, formulated after consultation between officials of the U. S. De-

partment of Commerce and representatives of lumber manufacturers, distributors, wholesalers, retailers, engineers, architects, and builders. In each accredited sawmill belonging to a member of any of the lumber manufacturing associations, trained lumber graders sort lumber as it comes through the mill. Their work, in turn, is checked periodically by association lumber inspectors whose job is to keep grading standards at the levels specified by American Lumber Standards and grading rules adopted by the various regional lumber manufacturing associations.

Much of the lumber manufactured by the various association mills is marked to identify the association rules under which it was made, the grade, and the mill from which it came.

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. The accompanying tables give the breakdown of softwood lumber by grade classifications and also the breakdown of yard lumber grades as used by the lumber manufacturer associations under the American Lumber Standards. Yard lumber is less than five inches in thickness and is intended for general building purposes. Grading is based on the usefulness of each entire piece. Factory or shop lumber is selected for further manufacture. Grading is on the basis of the percentage of the area of a piece which will produce a limited number of cuts for a specified minimum size and quality. Structural timbers are five inches or more in



Large pieces, known as "cants", from the head saw, are run through the gang saw, a series of blades which cut dimension and boards to the thicknesses desired

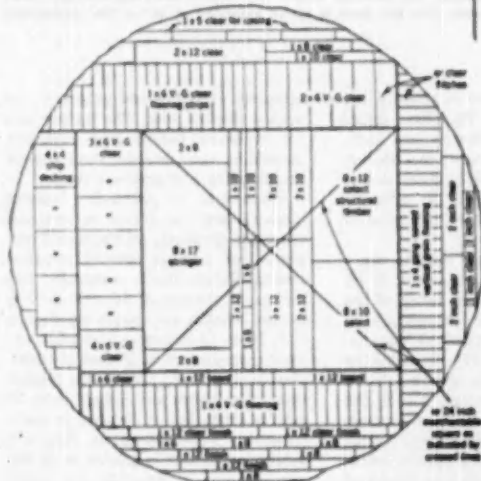
thickness and width. They are graded on a basis of strength and intended for use where working stresses are required. Henceforth this discussion will be confined primarily to the construction lumber grades of yard lumber, and their correct use.

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.

During the early days of the lumber industry there was no uniformity in rough and finished sizes of lumber. Various mill owners cut thicknesses

THE TABLE of the right gives the general requirements of the various grades as used by lumber manufacturer associations under the American Lumber Standards



Courtesy West Coast Lumbermen's Association

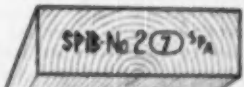
GENERAL CLASSIFICATION OF SOFTWOOD LUMBER

Softwood lumber (this classification applies to rough or dressed lumber unless given otherwise)	Grade
Yard lumber (lumber less than 2 inches thick, intended for general building purposes; grading based on use of the entire piece)	Finish (less than 2 inches thick and 12 inches and under in width)
Structural material (lumber 2 inches or over in thickness and width, except joist and plank; grading based on strength and on use of entire piece)	Boards (less than 2 inches thick and 6 inches in width); <i>Strip (under 2 inches in width)</i>
	Dimension (2 inches and under 2 inches thick and of any width)
Factory and shop (grading based on area of piece suitable for cuttings of certain size and quality)	Joint and plank (2 inches or over in width)
	Beams and stringers (3 inches and over thick and 8 inches and over wide)
Shop lumber graded for general cut up purposes	Posts and timbers (4 by 4 inches and larger)
	Factory plank graded for floor, bench, and other cuttings, 1 inch to 4 inches thick and 2 inches and over wide
Shop lumber graded for general cut up purposes	Shop lower grade
	1 inch thick (northern and western pine and Pacific coast woods)
Shop lumber graded for general cut up purposes	All thicknesses (ypress, redwood, and North Canadian pine)
	Shop lumber graded for general cut up purposes

Courtesy U. S. Forest Products Laboratory

THE ABOVE classification of softwood lumber gives the grade names used by lumber manufacturer associations for various classes of material under the lumber standards

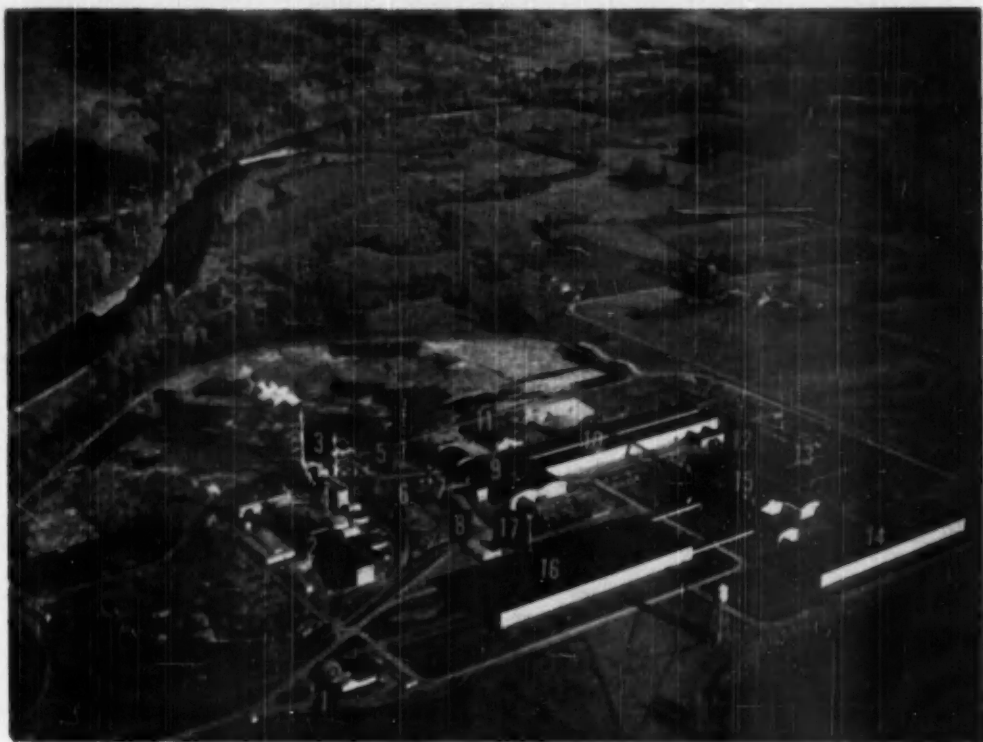
Finish forms (lumber of good appearance and finishing)	Grade A (practically free from defects)
Total products of a typical log averaged in series according to quality as determined by appearance	Grade B (allows a few small defects or blemishes)
	Grade C (allows a limited number of small defects or blemishes that can be covered with paint)
Boards (lumber containing defects or blemishes which detract from the appearance of the finish but suitable for general utility and construction purposes)	Grade D (allows any number of defects or blemishes which do not detract from the appearance of the finish especially when painted)
	No. 1 boards (round and tight-knotted stock; size of defects and blemishes limited; may be considered water-tight lumber)
Lumber suitable for use without waste	No. 2 boards (allows large and coarse defects; may be considered "grain-tight" lumber)
	No. 3 boards (allows large and coarse defects than No. 2 and occasional knot holes)
Lumber permitting waste	No. 4 boards (low quality lumber admitting the coarsest defects, such as decay and holes)
	No. 5 boards (must hold together under ordinary handling)



THIS is a sample diagram of a 45-inch Douglas fir log, showing the lines of saw cuts and positions of the different items cut. The individual items into which the flitches and cuts could be cut are indicated on drawing

TYPICAL grade marks used by lumber manufacturer association member mills. The species and grade are given in addition to the mill, identified by number

LUMBER *Construction* LUMBER



THE NEWEST lumber manufacturing operations include processes for utilizing increasingly more of the raw timber than in past generations. Above is one of the most modern lumber manufacturing plants in the world, a unit of the Weyerhaeuser Timber Co. at Springfield, Ore. (1) Office; (2) container board plant; (3) recovery boiler; (4) chip storage bins; (5) power plant; (6) hog fuel building; (7) chipper building; (8) log barber; (9) sawmill; (10) green chain building; (11) machine shops; (12) stacker building; (13) dry kilns; (14) rough dry sheds; (15) planing mill; (16) shipping shed; (17) cafeteria. The log pond is easily identified at left of the photograph.

and sizes to fit the particular needs of special customers or special areas. It was soon discovered that if a buyer procured lumber from two or more mills, he was often unable to match it for thickness, either rough or finished. Development of American Lumber Standards and their wide adoption in the industry assure buyers that all common boards and dimension so manufactured will be uniform in thickness and width regardless of the source of supply. An accompanying table shows the finished thicknesses of standard lumber yard boards and dimension.

Lumber sizes are based on its rough, green dimensions. For example, although described as 4 inch by 4 inch, which is the "nominal" size, a piece which has been dried and

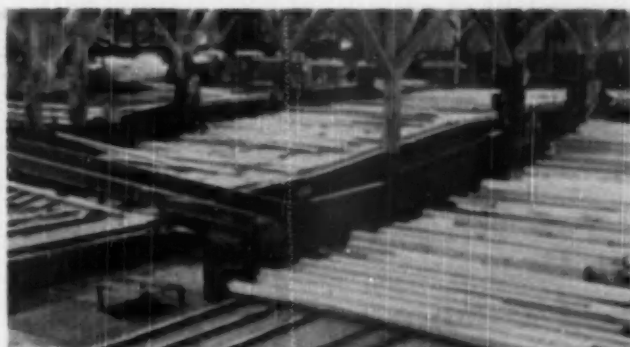
dressed on four sides is actually $3\frac{3}{4}$ inch by $3\frac{3}{4}$ inch. The first figure quoted in lumber dimensions indicates nominal thickness; the second, width; and the third, if there is one, is the length. Lengths on common lumber normally are in multiples of two feet.

Common boards, or boards, are a general purpose item available at all lumber yards in one or more of the kinds of wood most frequently used in building. The standard nominal widths are 4, 6, 8, 10, 12 inches or wider. Although the grades shown are from No. 1 through No. 5, the very lowest grades of any species are almost never available in retail yards. Their use is mainly for special industrial purposes. Boards are produced with square edge, dressed and

matched (tongue-and-groove), or with a shiplap joint. The largest uses for common boards are subfloors, sheathing, roof boards, barn boards, rough siding and concrete forms.

Dimension is primarily framing lumber, used for joists, rafters and studing. Strength, stiffness, and uniformity of size are essential requirements. Dimension is nominally two inches in thickness dressed to $1\frac{1}{2}$ inches. Widths are usually nominal 4, 6, 8, 10 or 12 inches and lengths normally run from 6 to 20 feet in multiples of two feet. Dimension thicker than two inches and longer than 20 feet is made but it is used in comparatively small quantities. Basically dimension lumber is graded to fill the requirements of framing for buildings.

Standard Lumber Abbreviations And Terms

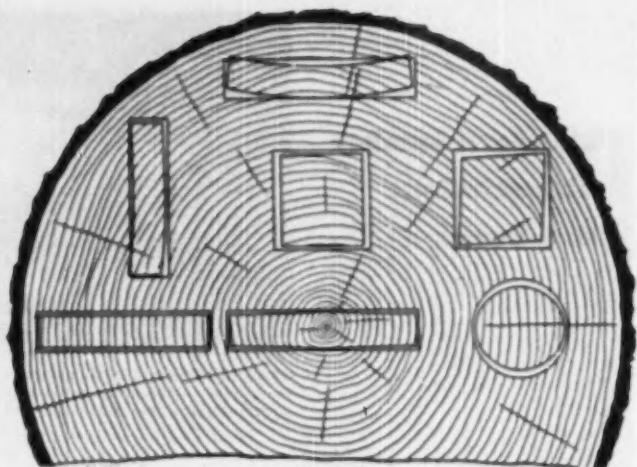


GRADING tables in a large, modern sawmill. Here lumber produced by the different machines moves on conveyors and is inspected and graded by men well experienced in judging lumber values. This lumber will be graded again after it is dried and surfaced.

AD—Air dried.
ALS—American Lumber Standards.
a. l.—All lengths.
av. l.—Average length.
av. w.—Average width.
a. w.—All widths.
B1S—Beaded one side.
B2S—Beaded two sides.
bd. ft. or b. f.—Board foot. (An area of 1 square foot, 1 inch thick).
Bev.—Beveled.
b. m.—Board (foot) measure.
Btr.—Better.
Cig.—Ceiling.
Clr.—Clear.
CM—Center matched; that is, the tongue-and-groove joints are worked along the center of the edges of the piece.
Com.—Common.
D&CM—Dressed (1 or 2 sides) and center matched.
D&H—Dressed and beaded; dressed one or two sides and worked to tongue-and-groove joints on both the edge and ends.
D&M—Dressed and matched; dressed 1 or 2 sides and tongued and grooved on the edges. The match may be center or standard.
D2S&CM—Dressed two sides and center matched.
D2S&M—Dressed two sides and matched.
D2S&SM—Dressed two sides and standard matched.
Dim.—Dimension.
DS—Drop siding.
E—Edge.
E&CB1S—Edge and center bead one side.
ECM—Ends center matched.
E&CV1S—Edge and center V 1 side.
EG—Edge grain.
EM—End matched; either center or standard.
FAS—Firsts and seconds combined in one grade (hardwoods).
f. a. s.—Free alongside vessel at a named port.
FG—Flat grain.
Flg.—Flooring.
f. o. k.—Free of knots.
Hrt.—Heart.
Hrtwd.—Heartwood.
KD—Kiln-dried.
lgr.—Longer.

lin. ft.—Linear foot.
LR—Log run.
Lr. MCO—Log run, mill culls out.
M—Thousand.
M b. m.—Thousand (feet) board measure.
MCO—Mill culls out.
Merch.—Merchantable.
m. l.—Mixed lengths.
Mldg.—Moulding.
MR—Mill run.
m. w.—Mixed widths.
P—Planed.
Pky.—Pecky.
Pln.—Plain, as plain sawed.
Qtd.—Quartered—when referring to hardwoods.
rdm.—Random.
res.—Resawed.
Rfra.—Roofers.
rip.—Ripped.
r. l.—Random lengths.
r. w.—Random widths.
S&E—Surfaced 1 side and 1 edge.
S1E—Surfaced one edge.
S2E—Surfaced two edges.
S1S—Surfaced one side.
S2S—Surfaced two sides.
S1S1E—Surfaced 1 side and 1 edge.
S2S1E—Surfaced 2 sides and 1 edge.
S1S2E—Surfaced 1 side and 2 edges.
S4S—Surfaced four sides.
S4SCS—Surfaced four sides with calking seam on each edge.
S&CM—Surfaced 1 or 2 sides and center matched.
S&M—Surfaced and matched.
S2S&CM—Surfaced two sides and center matched.
SB—Standard bead.
Sd—Seasoned.
Sdg.—Siding.
Sel.—Select.
Sh. D.—Shipping dry.
Ship.—Shiplap.
SM—Standard matched.
s. n. d.—Sap no defect.
Sq. E. & S.—Square edge and sound.
T&G—Tongue and groove.
Tbr.—Timbers.
V1S—V one side; that is, a longitudinal V-shaped groove on one face of a piece of lumber.
VG—Vertical grain.

Moisture and Lumber



Drawing Courtesy U. S. Forest Products Laboratory

THIS cross-section of a log shows the characteristic shrinkage and distortion of boards and timbers as they are affected by the direction of the annual rings and how they are cut in relation to those rings. Note that tangential shrinkage is about twice as great as radial.

THE DIMENSIONAL stability as well as the strength of lumber is affected by the amount of moisture in the wood. Like many other materials, it shrinks as it loses moisture and swells as it absorbs moisture. The moisture in lumber cut from living trees, ordinarily known as sap, can be considered as water in any discussion of drying or seasoning lumber. The amount of moisture in living trees of the different species of soft-woods varies widely but it is only until the last 25 to 30 per cent that moisture is removed from lumber that actual shrinkage takes place, and since construction lumber in actual usage comes within this range the possible effects of shrinkage must always be a con-

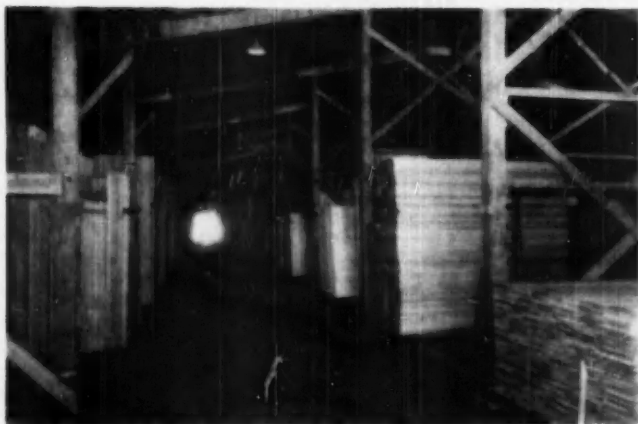
sideration in good framing practice.

Trade terms such as "shipping dry," "air dry," and "kiln-dried," although widely used, have no specific or agreed meaning with respect to quantity of moisture actually in the lumber. In common use, however, "shipping dry" lumber is partially air-dried to reduce freight charges and may in some cases have a moisture content of 30 per cent or more. "Air-dry" lumber has been exposed to the air for an indefinite length of time. If it is exposed for a sufficient length of time it may have a moisture content ranging from six per cent to 24 per cent, depending on the section of the country and the season. For the United States as a whole the minimum moisture-content range of

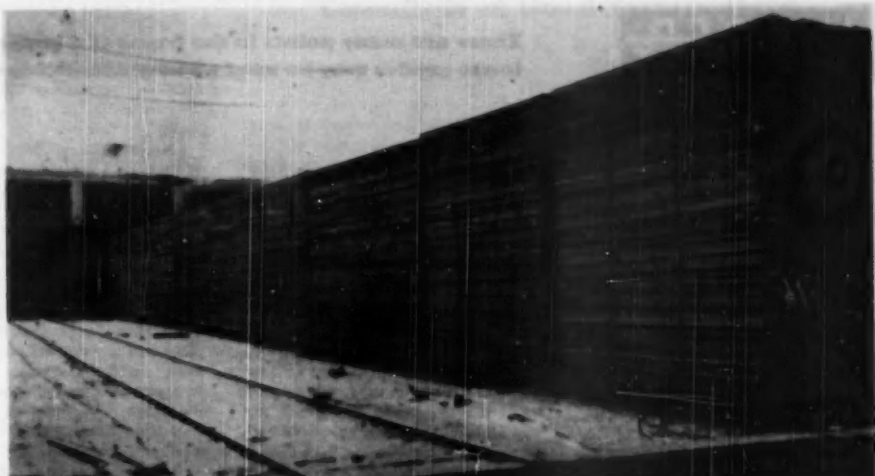
thoroughly air-dry lumber is 12 to 15 per cent, and the average is somewhat higher.

"Kiln-dried" lumber has had the moisture content reduced under scientifically controlled conditions. It may be removed from the kiln at any time the moisture in the lumber is reduced to the desired minimum. By weight, freshly-cut wood is from one-third to two-thirds water. Most of this has to be removed and the large, modern mills as well as a great many of the relatively small operators in all sections of the country now do it with dry kilns. This offers the following advantages to both manufacturer and buyer: (1) Time is shortened between manufacture and shipping; (2) Orders can be filled on short notice; (3) Degrading losses are minimized; (4) Insects and fungi are killed; (5) Yard areas can be decreased; (6) The process is controllable, regardless of season, temperature and weather.

Green one-inch boards can be dried to six to ten per cent moisture content in three to four days in a modern dry kiln but common boards used in construction are seldom dried to that low percentage. All schedules vary according to the species of wood and the thickness of the lumber. Ordinary construction lumber is dried to 12 to 18 per cent moisture content. Regardless of how well dried or seasoned lumber is when it gets on a job, the climate and relative humidity of the atmosphere or conditions of use always tend to force the moisture content of the lumber close to the maximum it will absorb under the local conditions.



WHEN seasoned or kiln-dried lumber is delivered to a dealer or wholesaler, it should be piled either flat or on end in sheds where it will be protected from the weather.



TEN loads of lumber stacked ready to enter a modern dry kiln where it will be dried to desirable moisture content under scientifically controlled conditions which ensure minimum shrinkage after delivery to the builder or contractor

Wood increases in strength, hardness and stiffness as it dries, provided the wood is not injured in any way by undue checking, or honeycombing. The permanent holding power of nails driven into dry lumber is much greater than nails driven into lumber with a high moisture content.

For many years there were conflicting claims as to the effect the different drying methods have on the strength of lumber. After making some 150,000 tests on kiln-dried and air-dried specimens of 28 different species of lumber, the U. S. Forest Products Laboratory reports that proper kiln drying and proper air drying of lumber show no difference in the strength of the lumber in the two methods. Many lumber manufacturers use a combination of the two methods where green lumber is first yard-piled for a time to partially dry it out before it is put in the dry kilns where the moisture content is brought down to an exact percentage specified.

The manner in which lumber is stored at the dealer's or wholesaler's yard depends on its degree of dryness or seasoning when received. Green or partially seasoned construction lumber should be open-piled on stickers according to recommended conventional practices for air-drying lumber. If lumber is received which is dried to a moisture content of less than 20 per cent, it is good practice to solid-pile it in a shed which will offer ample protection against rain and wind. Lumber that has a moisture content higher than 20 per cent is very apt to become stained or decayed when piled solidly. Some species of lumber, even when dried to less than 20 per cent moisture content, will stain or decay unless

properly protected against the weather, not to mention the undesirable increase in dimensions and moisture content that result from undue exposure to the elements. To keep dry construction lumber at a satisfactory moisture content, it should be stored in sheds, either open or closed.

Even when dried lumber is stored outdoors for only a short time, there is grave danger of warping and checking as well as an increase in the width and thickness of the end portions of the boards or dimension. A simple means of protecting dry lumber awaiting use on a building site is to pile it solidly on timbers and to cover at least the top and ends of the pile with a tough, moisture retardant paper. When lumber is used in concrete forms before it is used in the structure itself, it should be properly piled and protected from rain and sunshine as soon as possible after the forms are removed. This will enable it to dry and remain straight and free from checks. The workability as well as the serviceability of lumber is immeasurably increased on the job when it is kept dry and clean.

Molds and stains in wood are caused by fungi, which are microscopic plants that must have organic material on which to live. These generally can be traced to lack of proper precautions in yarding logs, and in piling, storing and handling sawed material. Prompt seasoning or kiln-drying of green lumber eliminates most of the danger at the mill. Some higher grades of certain species are dipped in antiseptic solutions to prevent fungus stains. The higher grades in most species do not permit any stain. The buyer's best assurance of receiving lumber free

from stain is to deal with yards or mills that follow good lumber drying and handling practices.

According to extensive research, sap stained lumber does not differ from unstained wood in any property—structural strength, workability, paint-holding quality, glueability, nailability or any other. Stain fungus exists only on water soluble materials and continues to grow only so long as the lumber is unseasoned or has a high moisture content. It stops growing when lumber is dry.

On the other hand, decay of wood is caused by organisms which attack the elements of the wood's structure—the cellulose or lignin. This happens at times when the fungus or organisms cannot be detected visually, but again moisture must be present. Because moisture in wood is essential to its deterioration, all buildings should be designed so that framing members will not become alternately wet and dry. Wood that is continuously water-soaked, however, will not deteriorate any more than wood that is continuously dry.

Where service conditions in structures are such that framing lumber cannot be kept dry at all times, treated lumber should be used in those places. There are a number of excellent chemicals and processes now used to greatly improve on the natural qualities of wood as a permanent building material. The choice depends on the situation which calls for treated lumber and whether or not it is to be painted or otherwise finished. In structures where there is danger of damage from termites or other insects, adequately treated lumber is available to eliminate this threat to permanence.

There are many points in the frame of a house where lower grades may be used without sacrificing quality

Using the Right Grades

HISTORY reveals that house framing as we know it today was first used about a hundred years ago. No records hold the name of the first builder to employ the modern method of joists, studs and rafters in house construction. It is known that the methods in use today are the result of countless hours of thought and the application of sound engineering principles to the task of building houses that are permanent at a cost commensurate with economic values. The artisans, many of whom were ships' carpenters, who built some of the first houses in America, followed sound engineering principles and while they may have not known it, they were leaving for us a priceless heritage of building artistry in design, sound construction, lasting value and a demonstration of the correct use of building materials. Although the development of the wire nail about the middle of the last century and its mass production gave tremendous impetus to the joist-stud-rafter system of framing, the basic principles which assure rigidity and permanence have not changed. Lumber always has been, and still is, the most versatile building material—plentiful, light in weight, strong, easy to work and permanent.

With lumber becoming more expensive as years pass, it is especially important that lumber used in framing make a maximum contribution to the strength and rigidity of the structure, for the money invested. To use dimension lumber economically, it is well to understand the basic principles of strength and stiffness. The strength of a piece of dimension, a 2 x 8 for example, varies as its width and as the square of its depth. The load which it will carry depends on the type, number, size and location of defects, as well as the quality of the clear wood. A 2 x 8 is four times as strong as a 2 x 4 when both pieces are placed with the greatest dimension vertical (on edge). When the two pieces are placed on their sides, the 2 x 8 is only twice as strong as the 2 x 4.

The stiffness of dimension lumber

varies as the cube of its depth. This quality of stiffness, furthermore, is influenced but very little by the grade. As a result, dimension for load support, such as floor joists, can often be of a lower grade, but wider, and still fulfill all the requirements of both strength and rigidity. In fact a wide joist in a lower grade is stiffer than a two-inch narrower joist of a higher grade.

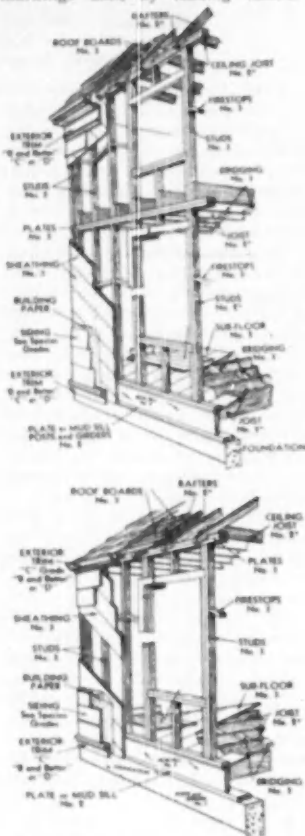
In designing or building it should be remembered that the use of standard mill lengths of dimension for floor joists, studs, rafters, girders and similar members is most economical. When this can be done builders find appreciable savings in both labor and material. Sometimes only a few inches difference in the size of the structure or rooms, or in room heights, will permit great savings in material and time. A simple example: If a room is designed to be 11 feet 8 inches wide with the joists running the width of the room, floor joists would have to be 12 feet, 6 inches long—obviously requiring 14-foot pieces cut down. If the room width is reduced to 11 feet, 5 inches, 12-foot joists can be used without cutting or waste.

Durability has always been important in home building and still is a prime consideration. Economy has always been a factor, but it is a more serious problem today than ever before. Because of that it is essential that the right grade of lumber be used in the right place in house framing to eliminate unnecessary costs and at the same time guarantee sturdiness and durability. Much housing in the past has been wasteful of lumber, thus making it more expensive than necessary.

Both designers and thrifty home builders have joined in research and practice to demonstrate that the most economical construction is that which uses the lowest grade of a species which is suitable for the purpose. Not all housing lumber needs to be select structural any more than all parts of an automobile need to be tempered steel. The prime consideration is right use. An average home may

contain from 1,000 to 2,000 pieces of lumber, large and small. Each piece has a function to perform. It must add stiffness, insulation, strength or pleasing appearance to the house.

Modern lumber grading rules and markings used by leading lumber



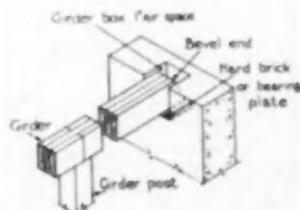
DETAILS above show how lower grades of lumber may be used in many places in house framing without sacrificing any of the desirable attributes of rigidity, durability or permanence in the structure. These grades are based on rules of the West Coast Bureau of Lumber Grades and Inspection

manufacturers under American Lumber Standards assure uniform characteristics in any one grade and size. Each grade—No. 1, No. 2 and No. 3, for example—is designed to meet certain requirements. In any well-constructed house there are places where No. 1 belongs. But there are many places also where the builder with an eye for savings finds that No. 2 and No. 3 amply meet the need.

In one-story houses No. 3 studs can be used. In two-story construction No. 2 studs can be used for the first floor and No. 3 for the second floor. In each case engineering experience by the West Coast Lumbermen's Association has determined that the grade will give the required strength with a dependable margin of safety to spare. No. 3 studs do not look as nice as No. 1. They may contain large knots, small knot holes, short strips of bark along one edge, white specks or pitch pockets. But they are enclosed in the walls where the home owner is interested in having strength and not appearance. No. 3 used where it belongs can give all the strength required with an adequate margin to spare.

Lower grade boards, graded according to lumber association grading rules, are satisfactory for subflooring and sheathing. The U. S. Forest Products Laboratory reports: "The requirements for subflooring are not exacting. . . . The lower grades of boards are ordinarily considered satisfactory for subfloors." And adds: "The primary requirements (for wood sheathing) are ease of working, ease of nailing and moderate shrinkage. . . . As in subfloors, defects such as knots and checks are not important."

In buying and using lower grades for house framing, builders should not underestimate the importance of making sure that the grades conform to those established by the various regional lumber manufacturing associations under American Lumber Standards.



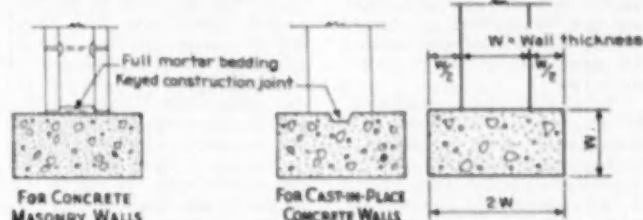
BUILT-UP girder with the end set in a concrete wall. Note that end of girder is not imbedded in masonry so it can "breathe"

Essentials of Good Foundations

A HOUSE can never be any more permanently plumb or solid than its footings and foundation. No end of house ills and annoyances result from improper footings. Since they bear the weight of the foundation and the structure on it, they must be carried down to firm ground, six inches below the frost line, rectangular in shape, and must be adequate in size. With so many sizes and weights of houses and with such disparity in the bearing power of soils, it is not reasonable to expect one size of footing to be suitable for all conditions. Where local building codes do not set minimums, it has been found that for the small house with average soil condi-

on each side. Exact dimensions should be determined from the weight of the chimney and the bearing capacity of the soil. Where chimneys occur in outside walls or inside bearing walls, chimney footings should be cast integrally with the wall footings.

Foundations, like the footings on which they rest, must be plumb, level, solid and permanent. Concrete block, poured concrete, and stone are all satisfactory for foundations when properly used. All mixes for concrete or mortar should be watched carefully, however, to assure permanence. Since the strength of concrete depends on the use of well-washed,



Drawings courtesy Portland Cement Association

RESIDENTIAL foundation footing recommendations for best all-around results. The general rule on size is to build residential footings with a depth equal to the thickness of the foundation wall and a width equal to twice the thickness of the wall

tions, the foundation wall footings should be as deep as the foundation wall is wide and should be twice as wide as the wall, with the extra width evenly divided on both sides. It is also a good rule to make the bearing post footings from eight to 12 inches deep and from 18 to 24 inches square, depending on the load to be carried and the soil conditions. When footings are built in damp soil, the site should be drained with four-inch drain tile, laid with open joints, around the footings. This should be connected with a sewer or other drainage system.

Often footings that are correct in every way are undermined to permit the entrance of service connections or drainage pipes. This weakens footings permanently. When it is necessary to undermine footings, they should be either enlarged at that point, or better still, reinforced with steel rods. Footings which support cast-in-place concrete walls should be cast with a recess to form a keyed construction joint with the wall.

When chimney footings are independent of other footings, they should have a minimum thickness of eight inches and a minimum projection of six inches on each side in a one-story dwelling. For a two-story house, chimney footings should have a minimum thickness of 12 inches and a minimum projection of eight inches

coarse sand and gravel, plus mixture of the proper proportions with cement and water, experienced supervision is essential. The Portland Cement Association recommends that cast-in-place or poured concrete basement walls be at least eight inches thick. Masonry, or concrete block basement walls should have a nominal thickness of 12 inches. When the walls do not extend more than four feet below the grade level, however, they may have a nominal minimum thickness of eight inches. In some cases local building codes permit the use of eight-inch block walls to a depth of seven feet where soil conditions justify. Basement walls should extend at least eight inches above the finished exterior grade level. In excessively damp soil, if a dry basement is to be assured, the outside of the foundation wall should be waterproofed.

Some builders who would never slight footings, foundation or bearing post footings, occasionally fail to realize the importance of porch and stoop piers and footings. A badly settling porch or stoop is always an eyesore and frequently affects the entire superstructure of the house. These should always be tied to the house foundation and be put in place so they will be able to sustain their loads without settling any more than the foundation.

Types of House Framing

THERE ARE many types of house framing used in various parts of the country, but for purposes of discussion they may be classified in four basic groups—the Braced Timber Frame, Modern Braced Frame, Balloon Frame, and Platform Frame.

The braced timber frame is the oldest type and originated in New England. The early colonists brought with them a tradition of heavy, European half-timber construction. This was nourished by the abundance of standing timber directly at hand when they landed in America. Nails had to be made by hand so the early craftsmen used them sparingly, and devised methods of fastening with mortises and tenons held together by wooden dowel pins.

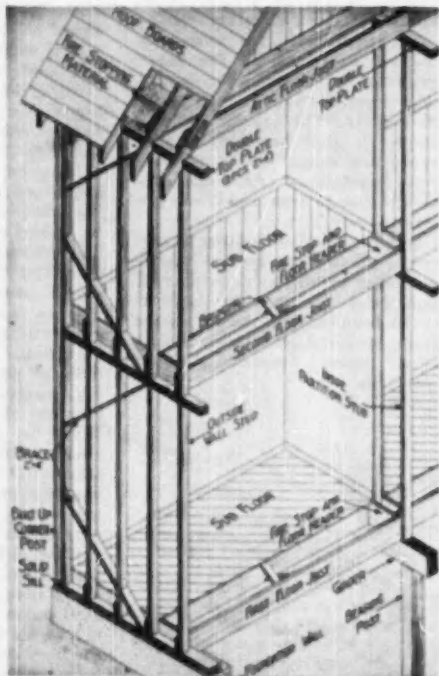
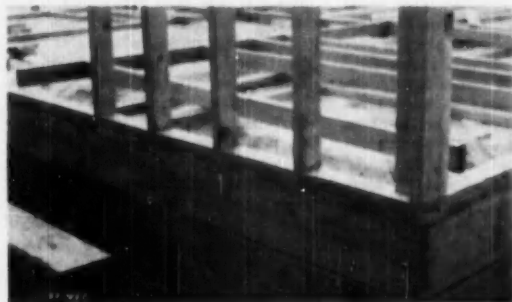
The principal framing members of the old New England houses were often hewn out of the trees nearest at hand and were ordinarily of much larger dimensions than were required for necessary strength. The time required in those days to prepare the timbers necessary for building a house, as well as the time required for actual construction, permitted the timbers and framing members to dry out thoroughly before the building was completed. Under these condi-

tions the old braced timber frame resulted in a practically structurally faultless house. Many of these old houses still standing today in the eastern states and still structurally sound are evidence of the soundness of this construction.

In those sections of the country where many of the old braced timber frame houses still stand, a modern adaptation of that same frame has been developed. This type of frame is sometimes called the "combination frame." Corner posts and girts built up of two or three pieces of two-inch lumber take the place of the solid timbers formerly used. Nails replace mortises, tenons and dowel pins for fastening. With the elimination of the heavy timber girts, the intermediate posts formerly required to support them have been done away with, and the studs, in addition to furnishing bearing surfaces for the inside and outside walls, are utilized for support as well. The corner bracing, and in most cases, the solid sill, has been retained. The fact that each story is framed separately is the principal characteristic of this method.

The modern braced frame is in every way adaptable to modern building needs, but to be completely efficient it should not be slighted during assembly. Fire stops or floor headers of two-inch lumber should be placed between the floor joists to make the frame fire-resistant and vermin-proof. These headers also make it possible to lay the subfloor diagonally, an important consideration. Partition studs should rest directly on the girder and not on the subfloor above the joists in this type of frame. This is important in minimizing settling because of uneven shrinkage in the walls and bearing partitions.

The balloon frame for two-story houses is another modern and accepted type of framing applicable to the building of substantial houses in all parts of the country. As is the case in the modern braced frame, it is built almost entirely of two-inch lumber. The distinguishing feature of the balloon frame is that the wall studs extend two stories high with the ends of the second floor joists spiked to their sides and resting upon false girt or ribband board, which is notched



OUR present systems of stud, joist and rafter framing did not become general until after the middle of the last century

THE MODERN braced frame is in every way adaptable to modern needs, but it must not be slighted during assembly

into them on the inside. A box sill is ordinarily used with this type of framing.

Because there are no girts or plates in the walls, fire-stops must be fitted between the studs to prevent free circulation of air throughout the walls. Floor headers and fire-stops between the joists accomplish a similar purpose. Subfloors are usually laid diagonally and bearing partition studs rest on the girders. Corner bracing is required unless wood sheathing is applied diagonally or plywood sheathing is well nailed. The balloon frame offers the advantages of speed and economy plus excellent rigidity. Common errors or faults in this type of framing are eliminating floor headers, setting partitions on studs on the subfloor above the joists, and eliminating bracing without compensating with the proper sheathing.

In both the braced and balloon frames, setting partition studs on girders or directly on bearing walls is important. If this is not done to equalize shrinkage the floors are liable to settle unevenly due to the uneven distribution of large framing members which can shrink or swell across the grain. After lumber has been in a house for a number of years it may reach a moisture content as

low as six per cent or less and it is possible for kiln-dried 2x10, for example, to shrink as much as a quarter of an inch across the grain under these conditions. If there are a couple of 2x10's on edge and a few 2x4's laid flat, all with grain horizontal, it is easy to see how that series of members can settle out of line as against opposite members set with the grain vertical, where shrinkage is inconsequential.

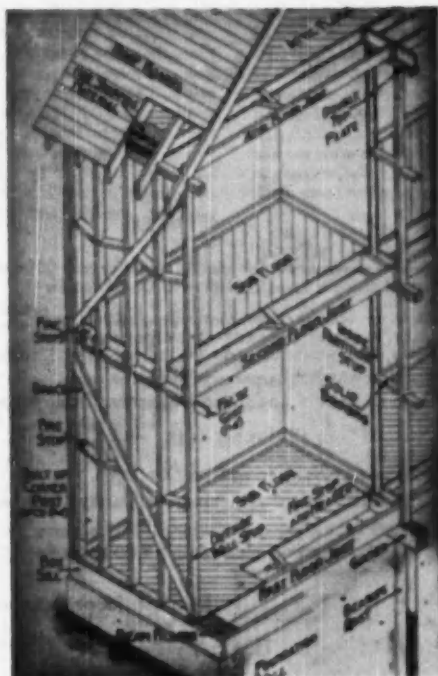
The availability of kiln-dried framing lumber and its protection against excessive shrinkage has popularized the very recently-developed platform frame, which is gaining in popularity. This is also referred to as the "western frame." In this type the first floor is built on top of the foundation walls as though it were a platform, and the second floor is built above the first in a like manner, supported by walls and partitions. This type of framing is unquestionably the fastest and safest form of good construction. Interior and exterior walls are framed exactly alike, assuring balanced shrinkage or settling if any occurs.

Each floor is framed separately, with the subfloor in place before the wall and partition studs are raised. All full-height studs can be the same length. This permits the specification

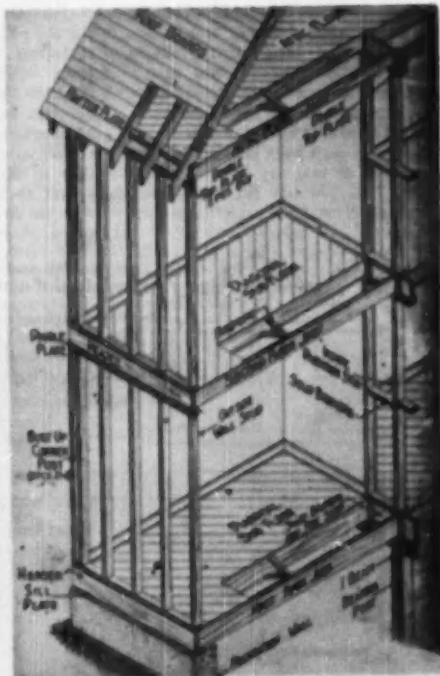
and use of precision manufactured, exact length, ready-to-use lumber with consequent labor and waste-saving on the job. The outer ends of the first floor joists rest on a sill plate and the inner ends rest on a girt or I-beam.

The platform feature of this frame automatically fire-stops the walls and partitions at each floor level. The subflooring may be laid on each platform before any studs are raised. This speeds up the subflooring operation and assures workmen a safe, sound floor on which to work. An added advantage here is that walls and partitions may be completely framed on the floor, then raised as units.

The importance of selecting good posts and girders, or lally columns and I-beams to support the frame of a house cannot be underestimated. They should be of a size sufficient to support the weight of the main bearing partitions, which most conventionally-built houses have, plus a good portion of the weight of the floor, plus the contents of the house. Many houses are cheapened by the use of undersized or too few supporting members and yet there is strength to support any ordinary loads. The difficulty here is, however, that such houses, and particularly the floors, lack stiffness, which is vital to a well-built house.



THE BALLOON-TYPE of frame for two-story houses is another modern and accepted type of framing structures

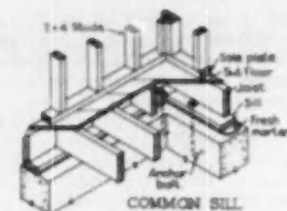


THE PLATFORM or western frame is the most popular and is believed to be the fastest and safest form of framing

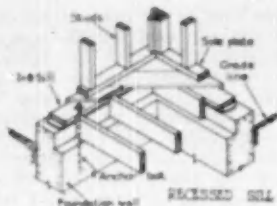
In obtaining source material, photographs and drawings for this presentation on Construction Lumber, we gratefully acknowledge the assistance of the National Lumber Manufacturers Association, Southern Pine Association, West Coast Lumbermen's Association, Western Pine Association, U. S. Forest Products Laboratory, Portland Cement Association, and the Weyerhaeuser Sales Co.

Recommended Practices in Good Framing

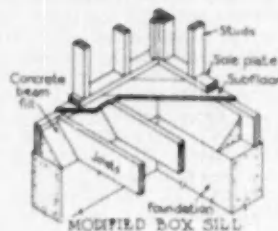
IN MODERN framing the sill is the means of securing the house to the foundation in addition to providing a nailing surface for the joists. Three different types of sills are shown in the details on the three principal types of house framing and others are shown in accompanying drawings. To firmly anchor and seal a house to its foundation, the sill must be more than merely set on the foundation. It should be anchored with $\frac{1}{2}$ -inch or $\frac{3}{4}$ -inch bolts imbedded in the concrete or masonry at least every eight feet. The box sill is anchored with concrete, known as "beam fill-



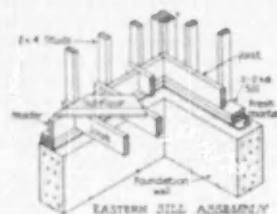
COMMON SILL
POPULAR type of sill construction, particularly where high winds prevail



RECESSED SILL
THIS was developed for use where the house must set close to the grade



MODIFIED BOX SILL
USED where low winter temperatures prevail. Not good for moist climates



EASTERN SILL ASSEMBLY
TYPE of sill construction favored by early builders and still in use

ing," which also seals the joint between the framework and the foundation. When a solid sill, or a combination sill (plate under box sill) is used, the joint between it and the foundation should be sealed by placing the sill, or the plate, on a bed of mortar or on impregnated wood fiber strips, which, when compressed as the bolts tighten, forms a permanent air tight gasket. The foundation and sill measurements should be such that the sill will set back from the outside edge of the masonry far enough to permit the sheathing to come flush with the foundation.

Joists

Joist sizes, like girder sizes, are dependent upon their species, the length of the span they bridge, the space between them, and the loads they are required to carry. Failure to use joists of sufficient size is sometimes the cause of sagging, squeaking floors, and cracked plaster in ceilings below. The accompanying tables give recommended joist sizes, spacing, and spans. In house construction, joists, studs and rafters are spaced 16 inches on center by the majority of builders in the U. S. Floor joists must be straight and dry. Where

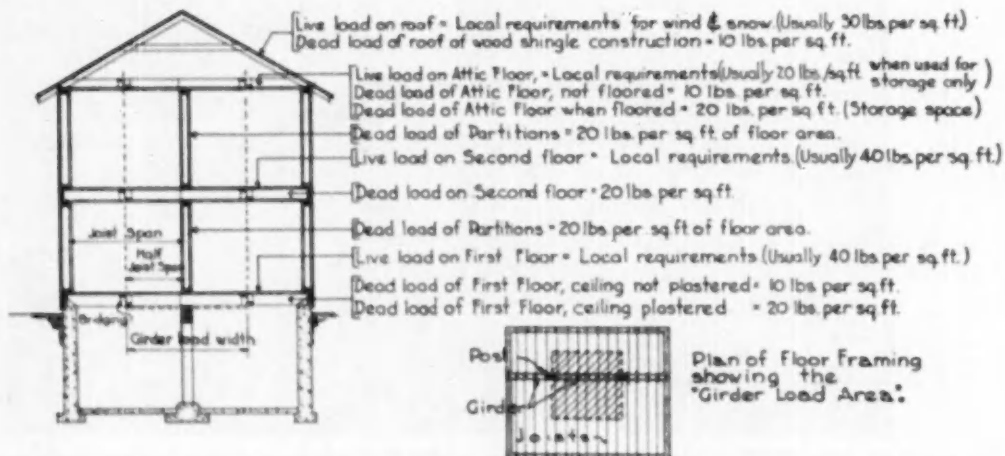


DIAGRAM which can be used as a method of figuring loads for the various members and floor in house framing

ALLOWABLE SPANS FOR DOUGLAS FIR AND SOUTHERN YELLOW PINE FLOOR JOISTS

Douglas Fir						
DRESSED LUMBER, Includes S&S and S&E						
Nominal size (inches)	Spacing c. to c.		No. 1 dimension		No. 2 dimension	
	Pt.	Pr. Pt.	Pt.	Pr. Pt.	Pt.	Pr. Pt.
2 x 6	12	11 3/8	11 3/8	11 3/8	10 0	9 0
	16	10 2	10 2	10 2	8 6	7 9
	20	9 6	9 5	9 5	7 9	7 1
	24	8 11	8 11	8 4	7 1	7 1
2 x 8	12	15 0	15 0	15 0	14 3/8	13 3/8
	16	13 8	13 8	13 8	12 2	11 0
	20	12 6	12 6	12 2	11 0	10 3
	24	11 11	11 11	11 1	10 3	9 6
2 x 10	12	17 0	17 8	17 8	17 8	17 8
	16	16 0	16 0	16 0	15 3/8	15 3/8
	20	14 11	14 11	14 11	14 1	14 1
	24	14 0	14 0	14 0	12 10	12 10
2 x 12	12	19 0	19 0	19 0	18 0	18 0
	16	17 3	17 3	17 3	16 3	16 3
	20	16 1	16 1	15 5	14 7	14 7
	24	15 1	15 1	14 1	13 10	13 10

Southern Pine						
DRESSED LUMBER, Includes S&S and S&E						
Nominal size (inches)	Spacing c. to c.		No. 1 dimension		No. 2 dimension	
	Pt.	Pr. Pt.	Pt.	Pr. Pt.	Pt.	Pr. Pt.
2 x 6	12	11 3/8	11 3/8	11 3/8	10 1	9 1
	16	10 2	10 2	10 2	8 7	8 1
	20	9 6	9 4	9 4	7 1	7 1
	24	8 11	8 11	8 5	6 5	6 5
2 x 8	12	15 0	15 0	15 0	14 10	14 10
	16	13 8	13 8	13 8	12 7	12 7
	20	12 6	12 6	12 6	11 6	11 6
	24	11 11	11 11	11 11	10 5	10 5
2 x 10	12	17 0	17 0	17 0	16 1	16 1
	16	16 0	16 0	16 0	15 1	15 1
	20	14 11	14 11	14 11	14 1	14 1
	24	14 0	14 0	14 0	13 0	13 0
2 x 12	12	19 0	19 0	19 0	18 1	18 1
	16	17 3	17 3	17 3	16 1	16 1
	20	16 1	16 1	15 1	14 1	14 1
	24	15 1	15 1	14 1	13 1	13 1

joists have a "crown," they should be laid with the "crown" up. Every precaution must be taken to make certain that when laid they form a flat surface for the subfloor and ultimately the finish floor. Joists should always be doubled under partitions paralleling their run.

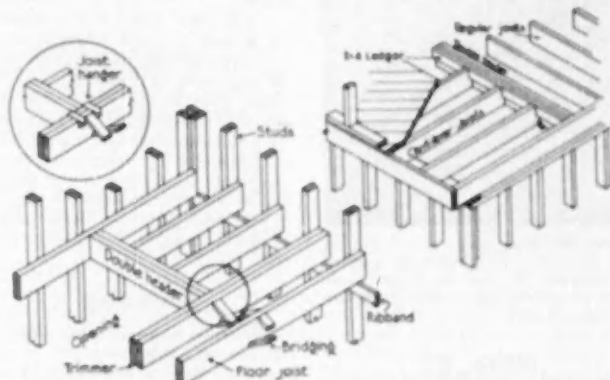
Framing, particularly floor joists, is often seriously weakened by mechanics when they are installing plumbing and heating systems. It is extremely important that carpenters, who are familiar with the requirements of these framing members, do whatever cutting and notching of framing members is necessary for this purpose.

When it is necessary to cut away one or more of the floor joists completely, such as for an opening for a stairway or fireplace, the strength lost in cutting off these joists must be regained. The loose ends of the joists cut away are secured to a header composed of two pieces of lumber of the same dimensions as the joists. These headers, are in turn, supported by double or triple joists, depending on the amount of material it is necessary to add to regain the strength of the joists that have been cut away. The framework around the opening is thus again tied together and the lost strength is regained.

Where headers longer than six feet are necessary, they should be fastened to their supporting joists by means of stirrup irons or joist hangers.

Bridging

The purpose of bridging is to keep the joists in alignment and to distribute to all of the joists any excep-



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.



BRIDGING at the underside of joists is never nailed until the subfloor is nailed in place

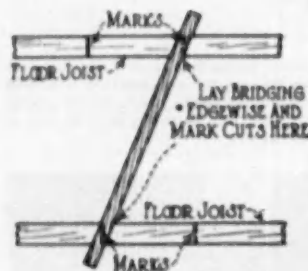
CONSTRUCTION LUMBER

tionally heavy, concentrated loads or sudden joists that may be applied directly above one or two of them. To be effective, bridging must be criss-crossed, properly fitted and securely nailed. Wood bridging is usually 1 x 3-inch good material, nailed with 6 or 8 penny nails. Bridging at the underside of joists is never nailed until the subfloor is laid because of the danger of the bridging pushing individual joists upward out of alignment.

Wherever joist spans exceed eight feet, bridging should be used and exceptionally long joist spans should be

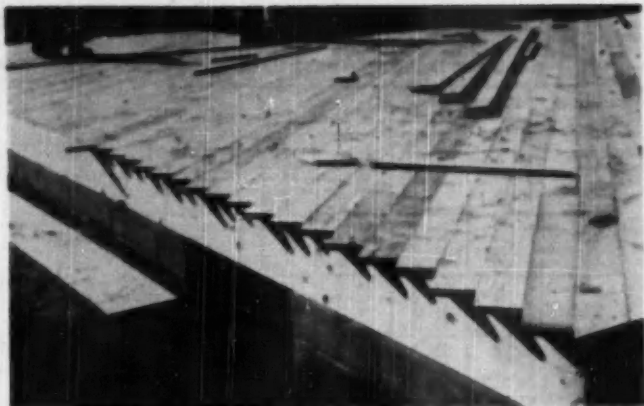


BRIDGING is an item which should not be overlooked or superficially handled in framing; (A) and the arrows show how a concentrated load is distributed to adjacent joists



TO FIND the correct cut for floor bridging lay a piece of joist material across two joists and mark as shown in the drawing. Lay a piece of bridging material across as shown, mark it and this will give the length and cut

bridged every six feet. When one row of bridging is used, it should of course be in the center of the span where the greatest strain will occur. Where plumbing or heating pipes occur in a partition or where a bearing partition runs parallel to the joists, the double joists beneath it should be



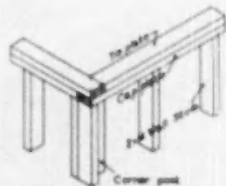
SUBFLOORING laid diagonally adds much stiffness to the structure in addition to giving a free choice of laying the finish floor parallel to, or at right angles to joists

braced with vertical solid bridging—that is, lengths of 2" x 6" the height of the joists themselves, properly nailed.

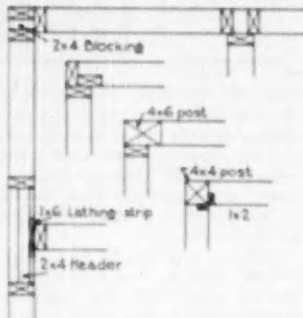
Tests have shown that it requires three times as much weight to cause a certain amount of deflection in a bridged beam as it does to cause the same deflection in one that is not bridged. Bridging is just as necessary on second floor and ceiling joists as it is on the first floor. It is difficult to remedy defects due to poor bridging, or lack of bridging, after a house is completed, but it is a simple matter to watch it closely during construction.

Subflooring

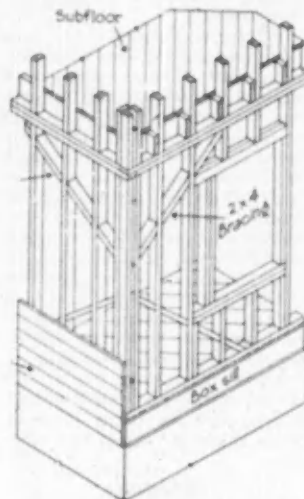
When one-inch boards are used for subflooring, they may be placed across the joists or diagonally. As far as labor is concerned, it is more economical to lay the boards at right angles across the joists but from all other standpoints it is better to lay the subflooring diagonally. Where end-matched subflooring is used, the time difference between laying the boards across or diagonally is minimized, because the use of end-matched boards permits them to be butted together anywhere without the



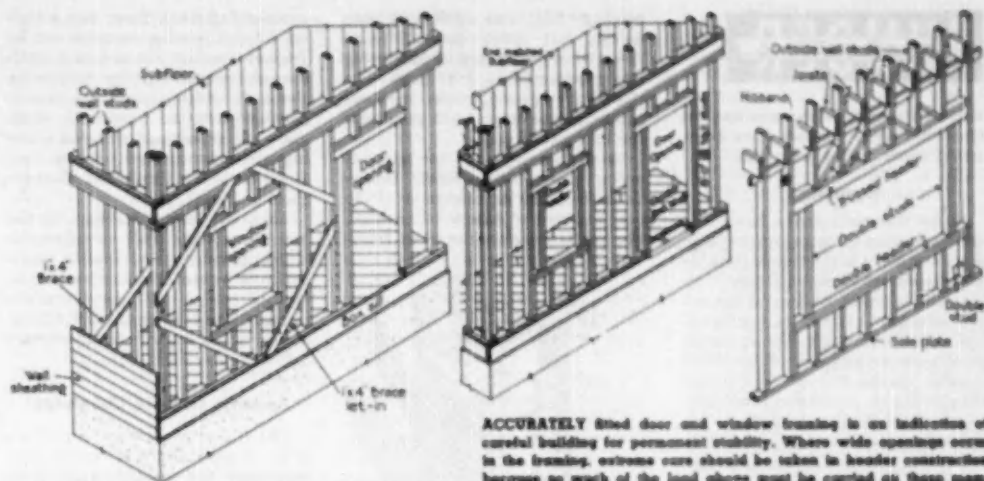
CAP and its plates should be used for all exterior walls and the corners lapped and nailed with three 18 penny nails



THERE are a number of good methods of building corner posts. Any of those above are good. Note also that two partition starters are shown in this drawing



WHEREVER cut-in bracing is used to obtain rigidity, it is of vital importance that cuts be accurate and nailing adequate



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 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 planed for rigidity.

necessity of cutting to make joints over the joists.

Diagonal subflooring gives the builder the free choice of laying the finish floor in either direction—parallel to the joists or at right angles to the joists. It also adds considerable stiffness to the structure. Subflooring boards up to eight inches in width should be nailed at every joist with two 8 penny nails in each board. Three or more nails should be used in each board at each joist if the boards are wider than eight inches. It takes about 30 pounds of 8 penny nails for each thousand feet of subflooring.

The importance of correct nailing in the subfloor, as well as the finish floor, should not be discounted. It is the working up and down of nails in their sockets that causes the annoy-

ing creaking and squeaking in floors when they are walked on. Bulging, bumpy floors are also very often the result of too few nails or of improper nailing.

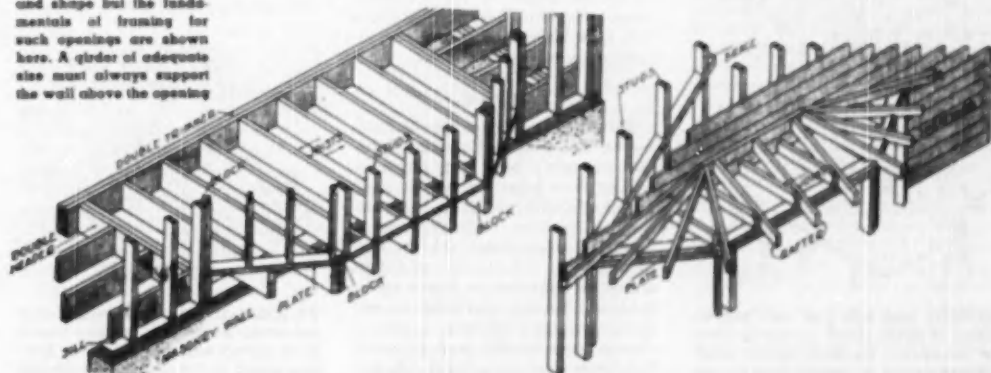
Studs

Regardless of what type of framing method is used, all studs must be exactly the same length for each wall section of similar height. These framing members should be nailed together with 12 penny or 16 penny nails according to the practices recommended in details given in this issue. It is common in platform framing to completely assemble studded wall sections on the subfloor or away from the site and erect them as units. This practice gives a better nailed joint between the studs and the sole plate because studs can be fastened

with nails through the plate instead of toe-nailing the studs to the plates.

Each wall should be plumbed with spirit level and line, and well braced, as soon as it is raised. A line from corner to corner should be used to see that each wall is straight and that each stud is in proper alignment. Regardless of whether the sections are erected on the subfloor as units or piece-by-piece, all framing should be securely braced with permanent as well as temporary bracing as soon as it is in place and plumbed. Wind exerts very appreciable pressures on open framing and can easily throw a carefully plumbed structure out of line unless it is well braced throughout all steps in the construction. Careful cutting, fitting, nailing, bracing and fire-stopping are all essential to sound, substantial walls, which not

BAY windows vary in size and shape but the fundamentals of framing for such openings are shown here. A girder of adequate size must always support the wall above the opening.



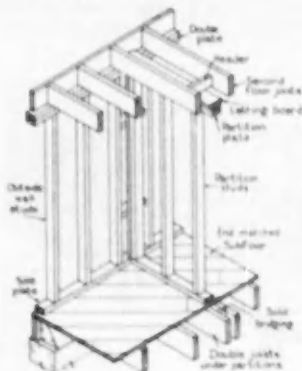
only carry weight of the structure but must also resist pressure from occasional abnormally high winds.

Openings

In the construction of a house it is necessary to make openings for windows and doors in the frame. Because these openings must be properly reinforced to avoid weakening the entire structure, extreme care is essential in their treatment. The extent of reinforcement and type of treatment depends on the size and location of the opening. It is common good practice to double headers with the larger dimensions set vertically, or their equivalent, 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 here, as in all parts of any house, are essential, and should always be carefully supervised.

All rough window and door openings must be of the correct size to take the window frame or door frame without difficulty to assure tightness and stiffness. Before framing rough openings for windows, the dimensions of the window frames, including sash balances or weights, must be known. These vary according to type and weight of sash, including glass. Their dimensions must be obtained from the supplier or the manufacturer if frames are not already on the job.

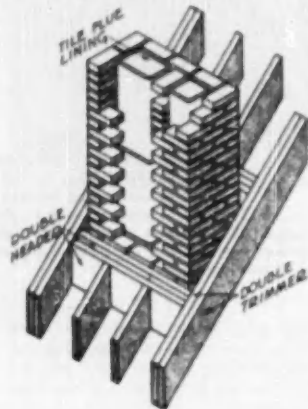
To make an opening for a door, add three inches to the width of the door and three inches to the height of the door which is to be used in the



DOUBLED joists with 2"x8" solid bridging every 18 inches should be under bearing or non-bearing partitions through which plumbing pipes or heating ducts are run

opening. This rule applies to both outside and inside doors, French doors or any other type of door going into a conventional door jamb. The above are general rules and, of course, measurements will vary with special types of doors.

Rough opening sizes for upward-acting garage doors should be obtained from the manufacturer of the type and style of door to be installed. The points to remember when fram-



A MASONRY chimney, regardless of its location, must be self-supporting and independent of the house framing

ing any opening for a window or door are that it must be rigid in all respects, square, and so planned that when the window or door is installed the opening will be sealed or caulked tightly against weather and any free flow of hot or cold air.

In estimating inside and outside studded walls, no allowances are made for openings. The studs are estimated by count, allowing one for every 16 inches of length to be walled and three for each corner post. Bay window framing is estimated as any outside studded wall. Where there are "walls of glass" or other special opening features, however, the above rule must be modified in making estimates on material required.

Partitions

Partitions in a house may be bearing or non-bearing. A bearing partition supports a load from above by having floor joists running at right angles to it and resting on it. A non-bearing partition acts only as a screen or an enclosure. As has been pointed out, non-bearing partitions should be supported by double joists, bridged. Bearing partitions require special support when these partitions do not occur directly over the partition below or above a girder. The ac-

companying detail shows how a typical off-side bearing partition can be framed satisfactorily to assure rigidity and permanence, by reinforcing the studs which support the off-side bearing partition. Partitions which carry soil pipes require special framing and recommended practice here is the use of 2 x 6 studs and plates instead of 2 x 4's.

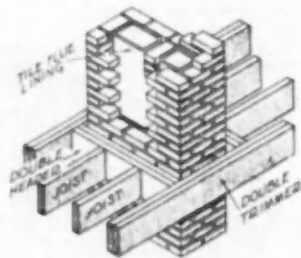
Lack of proper framing of the bathroom joists and partitions in which plumbing and heating pipes are to be located plus careless notching and cutting of framing members to permit the passage of pipes are responsible for many unsatisfactory bathroom floors and walls.

Framing Around Chimneys

The masonry chimney, regardless of its location, should always be self-supporting and constructed so as to be absolutely independent of the house framing. Size of footings for chimneys was given earlier in the discussion on foundations. The walls of a chimney with terra cotta flue lining should be not less than four inches thick if built of brick and not less than eight inches thick if built of stone.

All combustible materials such as wooden framing members should be at least two inches from the chimney wall. The open spaces between floor framework and the chimney should be filled with mortar, mineral wool, or other incombustible material. Proper framing around the chimney is very important and under no conditions are any joists, headers, nailing strips or any wood fastenings or bearing members to be in direct contact with the walls of the chimney. The settlement of a house and shrinkage of lumber is never in conformity with the settlement of a chimney. Correct framing details around a chimney are shown in the accompanying drawings.

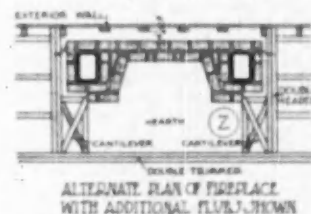
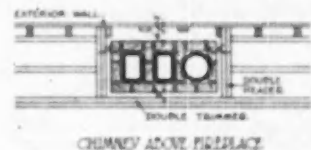
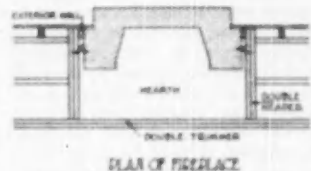
While it is permissible, from the standpoint of fire hazard, to plaster



NO JOISTS, headers, nailing strips, wood fastenings, or bearing members should be in contact with chimney. Wood members should be two inches from chimney

directly on the brickwork of a chimney, the practice should be discouraged because plaster cracks are certain to develop. The best practice is to box in the chimney with studs, set two inches from the brickwork, and put the lath and plaster on these. All smoke pipe intakes for chimneys should be at least 18 inches below any wood joists or combustible ceiling construction, unless adequate provisions are made to insulate with asbestos board or similar material.

Chimneys should be capped with



FOUR details on wall and floor framing around fireplaces and fireplace chimneys

stone, terra cotta, or concrete, and should extend at least three feet above a flat roof and two feet above gable roof. Any increase in the wall thickness of the chimney should be made at least 12 inches below the rafters and not above the roof, except for capping. Chimney flashings should be arranged to generously overlap and allow for any movement that may occur in the chimney or roof. Only the best material and workmanship should be used for flashing, because it is very difficult to replace once it fails. Tin, copper and lead are used extensively, with copper the most highly recommended.

Unless a manufactured metal fireplace core is used, the following

points should be observed in building a masonry fireplace. The width, height and depth of the fireplace opening should be of proper proportion to each other and to the size of the room. A fireplace opening about three feet wide and two feet high is large enough for the average living room. The depth should never be less than 16 inches, nor more than 24 inches. The height, except for very large fireplaces, should not be over two feet six inches and should never exceed the width. The area of the cross section of the smoke flue should never be less than one-tenth to one-ninth the area of the fireplace opening.

An essential of any fireplace is a properly constructed smoke shelf and smoke chamber. The smoke shelf is formed by setting the brickwork back at the top of the throat. It should be not less than four inches wide. Eight to twelve inches is better. This deflects smoke driven downward by gusts of wind which stop the draft in the chimney temporarily. There are many variations in fireplaces being built in houses today which do not conform to the conventional design of an opening facing into one room from one side of the chimney. The general principles above, however, apply to good design.

The header-joists or beam supporting the trimmer arch under the hearth should be not less than 20 inches from the chimney breast. The hearth should be not less than four inches thick and should extend at least 20 inches in front of the fireplace. The woodwork around the fireplace should be not nearer than eight inches at the sides of the opening and 12 inches at the top.

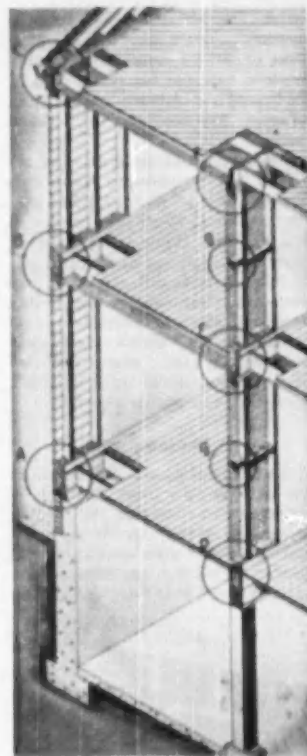
The combustible material used for filling between the framing members and the brickwork should be supported by strips of sheet metal or metal lath set into brickwork and nailed to the joists with a buckle joint to allow for the settling of the chimney.

Fire-Stops

Because all buildings are subject to damage by fire as long as their contents are inflammable, the important considerations for the home builder are to know how fires can be prevented in the structure and, in the event a fire starts, how it can be confined by means of construction techniques to make its spread difficult so there will be time to get to it and extinguish it.

When it is realized that 96 per cent of all dwelling fires originate inside the house and that practically every dwelling fire is due to carelessness or defects in the internal construction of

houses, the importance of prevention is appreciated. The installation of electric wiring and fixtures by experienced electricians under competent supervision and according to Underwriters' standards leaves little chance for fires from this source. Neither is it difficult to construct the chimney and the framing around it to eliminate the chimney as a cause of fire.



THE PRINCIPLES of fire-stopping are illustrated here in a very general way. Not all the different parts of a house where fire-stops should be used are shown, but points marked alphabetically are the main routes for flow of air and gases through walls and floors of the structure. Note that these points are closed with either incombustible material or 2-inch lumber

Fire-stopping is required by many building codes and is always good practice. Fire-stops are put into a building to prevent the passage of flames, hot air and gases. The principle locations of fire stops are shown in an accompanying detail. All joints should be tight—poorly fitted fire-stops are little better than none. Three common methods of fire-stopping are: (1) Two-inch lumber fitted in between the studs and joists; (2) The vital points boxed in with

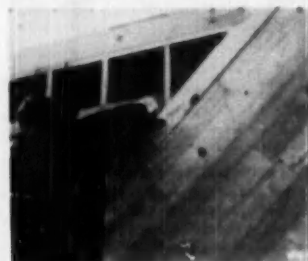
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one-inch boards and the boxes filled with incombustible material such as loose mortar or mineral wool; (3) Metal lath, bent and nailed into place between the studs and joists. The lath is then plastered and the box thus formed filled with incombustible material. The balloon-type of framing requires more fire-stops than the platform or braced frame. In fact, the headers, sole and top plates used in the braced and platform systems form effective fire-stops at the critical points.

The slight additional expense involved in fire-stopping a house cannot rightfully be charged to fire prevention alone. Much of it serves as bracing in the frame of the house. It more than pays for itself in the additional strength and rigidity it imparts to the entire structure. In the final analysis, however, there is no better fire prevention than good housekeeping—the elimination of piles of combustible trash in attics, basements and clothes closets.

Sheathing

Sheathing may be considered as the "muscles" of a frame structure. It serves in combination to tie the framework firmly together as a unit and to impart some insulation and weather-tightening qualities to the exterior walls. It is therefore important



A FRAME wall with diagonal wood sheathing, two nails properly placed in each board at each stud, is four times as strong as a similar wall with horizontal sheathing similarly nailed. Unless end-matched lumber is used, joints should come only on the studs and each board up to 8 inches wide should be face-nailed at each stud with two 8-penny nails. Here end-matched sheathing is being applied

and that when boards are used for sheathing, they be of adequate quality, properly fitted and nailed. Unless end-matched 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

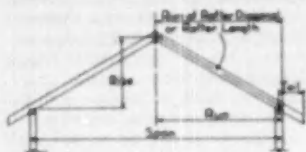
with two eight penny nails. Wider boards should be fastened with three nails.

Experience and tests have proved that board sheathing applied diagonally and properly nailed to any frame structure imparts much more strength than when applied horizontally. In addition to this, 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 job could. Tests at 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 similarly nailed.

Roof Framing

The roof of a house ordinarily serves two purposes—as a cover to keep out the elements and to achieve architectural effects. There are several basic roof types which are commonly used now on houses such as the gable, hip, hip and valley or intersecting gable, and flat roof. There are infinite variations in the first three with different pitches, dormers,

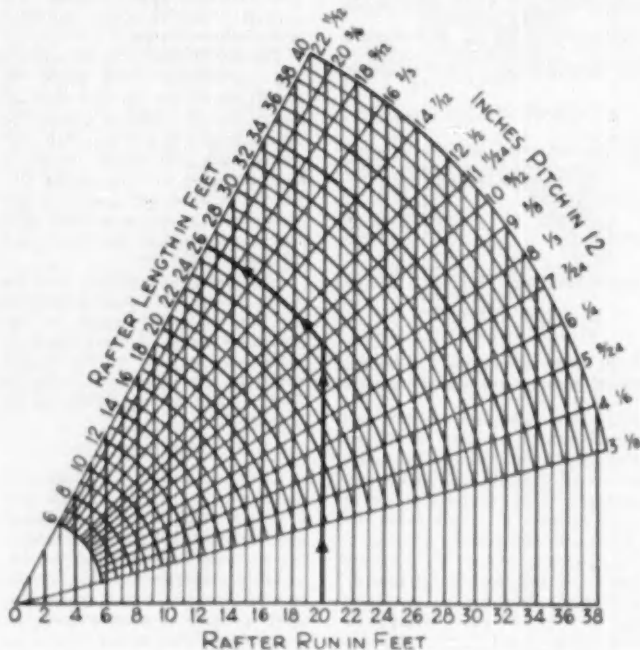
overhangs and trim. Regardless of what type of roof is used on a house, it must be well framed so it will have strength enough to resist winds, sustain snow loads in northern climates, keep out heavy rain and wind in ad-



THE basis for figuring gable roof framing is the right angle triangle. The principal parts, and terms used to designate them, are shown in the cross section above

dition to being architecturally attractive.

Insufficient roof pitch probably causes more trouble than any other single factor, particularly in climates where there is any appreciable amount of snow. Where the snowfall is very heavy, roof pitch on a gable roof house covered with shingles should never be less than one-third. In addition to using the proper pitch in these climates, builders will avoid trouble also by holding to simple,

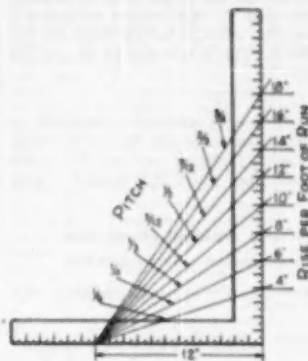


Revised from FHA Minimum Property Requirements

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 28 feet

straight roof lines on their houses.

As a basis for figuring snow loads the following figures have been found reliable. For total horizontal area covered by a roof of less than 45-degree or one-half pitch, make the following allowances in pounds per square foot of area according to location—Minnesota, Michigan and Northern New England, 30 pounds; Buffalo, Albany and Boston areas, 25 pounds; Chicago, Cleveland and New York City areas, 20 pounds; Wheeling, Pittsburgh and Philadelphia areas, 15 pounds; St. Louis, Cincinnati and Baltimore areas, 10 pounds; and the Southern and Pacific coast areas, five pounds per square foot. If



"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, as shown on the opposite page. The drawing above shows a number of rafter pitches in relation to the steel

the average annual snowfall in any area is compared with the fall in the cities and areas mentioned above, a good basis for figuring can be found. This should always be supplemented by local experiences and practices.

Roof rafters must be of sufficient size and strength to support the weight of the roof covering, carry a snow load and resist wind pressures without sagging. If rafters are undersized or spaced too far apart, they will sag, the roof covering may be fractured or disturbed so it will leak. An accompanying table lists recommended rafter sizes, lengths and spacing for specified loads.

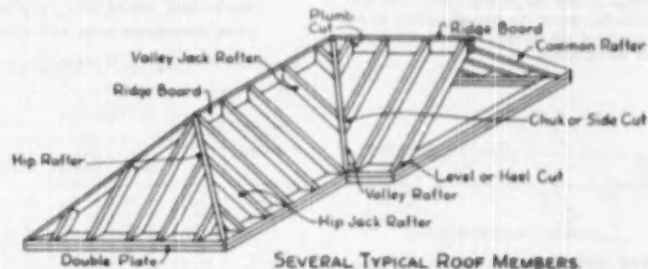
Rafters must always be well nailed at all points, particularly where they are fastened to the structure itself. In areas subject to extremely high winds, steel straps or other devices may be used to reinforce the nailing in rafters as well as studs. Details on other pages illustrate correct nailing and fastening practices. The use of

Rise in Inches per Foot of Run.	Equivalent Pitch	Common Rafter	Hip or Valley Rafter
3"	1/4	.515	.719
4"	1/3	.527	.728
5"	5/24	.542	.738
6"	1/2	.559	.751
7"	7/24	.579	.766
8"	2/3	.601	.783
9"	3/4	.625	.801
10"	5/12	.651	.822
11"	11/24	.678	.844
12"	1	.707	.867
13"	13/24	.737	.892
14"	7/12	.768	.918
15"	3/4	.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"	7/6	1.01	1.13
22"	11/12	1.04	1.16
23"	23/24	1.08	1.19
24"	Full	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 plate. If

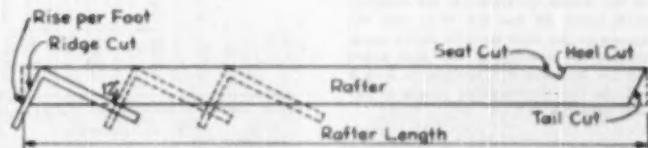
rafters are to be continued over the plate, add twice the horizontal cornice projection to the span before multiplying by the factor above. If the rise per foot of run contains a fractional part of an inch, use the next larger number of inches.

Courtesy National Hand Book



SEVERAL TYPICAL ROOF MEMBERS.

THE names, shapes and locations of the various types of gable roof rafters and members, along with some of the cuts are illustrated in the detailed drawing above.



THE step-off method of measuring common rafters is based on the unit of run, which is 12 inches. Place the square on the edge of the rafter stock as shown in the drawing with the 12-inch mark on the blade at the edge of the stock and the number of inches in rise on the tongue at the same edge. In this position the line drawn along the tongue in the plumb or ridge cut and the line drawn across the blade is the angle of the seat or plate

cut. To arrive at the length, mark carefully at the point where the 12-inch mark strikes the edge of the piece and at the point where the rise in inches on the tongue strikes the same edge. Step off as many of these markings as there are feet in the run, which is one-half the span of the building. If there is a ridge rafter in the roof, one-half the thickness of the ridge piece must be taken off at the plumb, or ridge cut, on each rafter

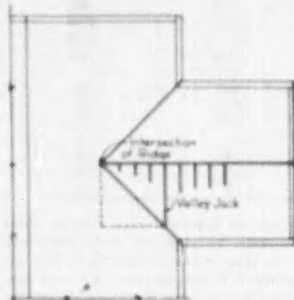
collar beams, knee walls and other bracing is common practice in certain areas to add rigidity and strength to roof framing. These special treatments should never be overlooked as

important supplements to the choice of good rafter material, its proper fitting and nailing.

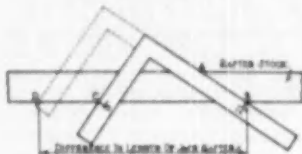
Any window in a roof, whatever type it may be, is a dormer window

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and may be put there to be used for light and ventilation in a finished room or may be only for appearance or architectural effect. Dormers are of two main types structurally. In one the dormer is built on top of the roof



THE DISTANCE that any jack rafter is placed, on the ridge place, from the intersection of the ridge and valley is the same as the run of that rafter. This permits the use of the step-off method in determining the length. This is illustrated in detail above



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

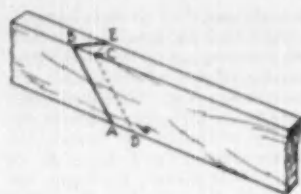
and in the other the dormer is formed by continuing the dormer sidewall from the attic floor above the roof line. The former method is shown in an accompanying drawing.

Trussed Rafters

Roof trusses or trussed rafters are not new to the construction industry, but it is only within the last decade that they have been designed and adapted to house construction to any great extent. Several types have been developed both with and without split ring connectors, and proved practical. They can be designed and built economically to support any standard

type of roofing, including slate or tile, and will adequately support any standard ceiling finish of plaster on lath or dry wall materials. Four different trusses, all of which have been proved in tests and on jobs, are shown on accompanying pages.

When roof trusses are used instead of conventional framing, the framing members can be made smaller. This holds true for both the rafter members and ceiling joists, which are combined into one unit in a truss. Some builders report savings of as much as 30 per cent in material. The simple trusses used in houses can be assembled on a large workbench or table, or on the subfloor where it is easy to work, thus saving labor by eliminating the need for working on scaffolding or ladders with the usual time consumed in climbing up and down during the process of erecting a conventional set of ceiling joists and rafters. Once roof trusses are fabricated, they can be erected easily and quickly because although they are bulky, they are relatively light in



THE SIDE or cheek cuts on jack rafters are relatively easy to determine with the following method. Using the proper pitch square, mark the plumb cut A-B, shown in the drawing above. Then take a small piece of the rafter stock and lay one edge along the line A-B, marking the other side of the block to establish the point C in the line C-D. From the point C, square across the top of the rafter to establish the point E. Then connect the points E and B to establish the jack rafter side cut. Either rights or lefts may be cut with this method

weight. For example, one type of truss for a 16-foot span will weigh about 75 pounds and one for a 24-foot span about 120 pounds. These

ALLOWABLE SPANS FOR YELLOW PINE AND DOUGLAS FIR RAFTERS

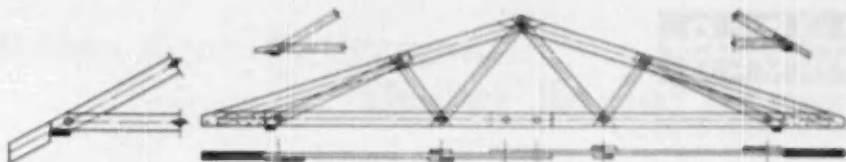
(First table below is for Yellow Pine and the second is for Douglas Fir)

[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.	No. 1 Dimension		No. 2 Dimension		No. 3 Dimension		No. 4 Dimension			
		Dense 1000-f		Medium Grain 800-f		Light 600-f		Heavy 400-f			
		Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing		
2 x 4	12	12	3	10	11	11	5	10	2	10	2
	16	15	8	9	5	9	11	8	10	9	2
	20	9	6	8	5	8	10	7	11	6	5
	24	9	8	7	8	6	1	7	5	6	4
2 x 6	12	19	6	16	11	17	9	15	10	16	5
	16	16	6	14	6	15	5	13	9	14	3
	20	14	8	13	1	13	9	12	3	12	8
	24	13	5	12	0	12	7	11	3	11	4
2 x 8	12	25	3	22	7	23	6	21	1	22	6
	16	22	0	19	6	20	6	18	3	19	0
	20	19	6	17	6	18	4	16	4	17	0
	24	17	11	16	0	16	9	14	11	15	6
2 x 10	12	32	1	28	7	30	0	28	9	27	0
	16	27	10	24	6	26	0	22	2	24	1
	20	24	10	22	2	23	3	20	6	21	6
	24	22	8	20	2	21	3	18	11	19	6

Nominal size (inches)	Spacing c. to c.	No. 1 Dimension		1200-f		800-f		No. 2 Dimension			
		Light roofing		Heavy roofing		Light roofing		Heavy roofing			
		Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing	Light roofing	Heavy roofing		
2 x 4	12	9	5	8	5	10	11	10	7	9	5
	16	8	3	7	4	10	6	9	2	8	4
	20	7	4	6	7	9	6	8	3	7	4
	24	6	6	6	0	8	7	7	6	6	5
2 x 6	12	17	7	15	8	19	0	16	11	16	5
	16	15	3	13	7	16	6	14	8	12	0
	20	13	7	12	2	14	8	11	1	12	9
	24	12	5	11	1	13	5	11	8	10	8
2 x 8	12	25	3	22	7	23	3	22	7	22	0
	16	22	0	19	6	20	6	19	0	19	1
	20	19	6	17	6	18	9	17	0	17	5
	24	17	11	16	0	17	11	16	0	15	6
2 x 10	12	32	1	28	7	30	7	27	10	24	0
	16	27	10	24	4	27	10	24	8	24	1
	20	24	10	22	2	24	10	22	2	21	6
	24	22	8	20	2	22	8	20	2	19	8

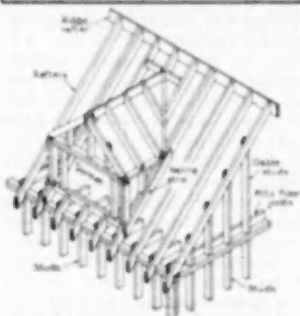
Light roofing: Material weighing, in place, 5 pounds or less per square foot.
Heavy roofing: Material weighing, in place, over 5 pounds per square foot.



THE MOST economical overhang with Teco trussed rafters is obtained by notching the upper chord over the plate. A rafter may also be used. Extension of the lower chord beyond the wall provides a canopy type of overhang but the roof plane is broken and additional flashing may be required. Two to four foot overhangs with the soffit at ceiling level usually require the addition of a diagonal member to carry the upper chord directly to the wall.

LENGTH OF HIP RAFTERS BY STEP-OFF METHOD

In using the step-off method to determine the length of hip or valley rafters, the unit of run, which is 12 inches on common rafters, becomes 17 inches. Although the unit of run here is 17 inches, the number of steps is determined by the span of the building or the run of the common rafters, just the same as when stepping off the length of common rafters. Because the unit of run here is changed to 17 inches, fractional parts of a foot must be applied to the 17 inches instead of to 12 inches. For example, if the run is 15 feet and 3 inches, take 13 steps with 17 inches as the unit of measurement and then, because three inches is one-fourth of a foot, take one-fourth of 17 inches, or 4 1/4 inches, and add that to the 13 steps already taken to determine the length of the hip or valley rafter.



WHEN this type of dormer framing is employed it is essential that double rafters be used at each side of the dormer and that all joints be accurately cut and securely nailed. Rafters should have at least 2 1/2 inches bearing on the cap plate and must be well nailed with two or three 10 penny nails.

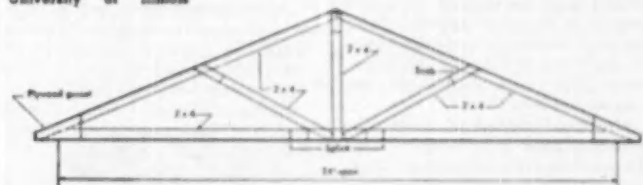
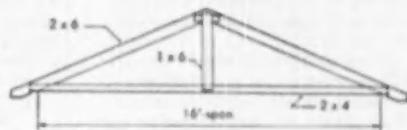
weights, of course, vary with the type of truss and the loads which they are designed to carry.

Roof truss construction holds many advantages in easing work and reducing labor time in other phases of house framing, besides the roof, particularly in one-story houses. Because no bearing partitions are required, trusses can be erected as soon as sidewalls are framed and braced, thus enclosing the structure against weather at an early stage. This leaves one big room in which to lay floors and set up interior partitions and storage walls. It also simplifies the

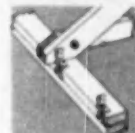


THE TRUSSED rafter actually is not a rafter but is a roof truss. Above is a sketch showing a typical trussed rafter for a long span assembly with Teco split rings. The Timber Engineering Company (Teco), affiliated with the National Lumber Manufacturers Association, maintains a staff of engineers to work with architects and builders in designing a wide variety of wood trusses for all types of structures.

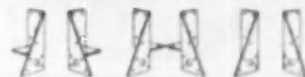
THE SIMPLE trussed rafter at right was designed for a 16-foot span, with the trusses placed two feet on center. The one below is designed for a 24-foot span. These were both included in research by the Small Homes Council of the University of Illinois.



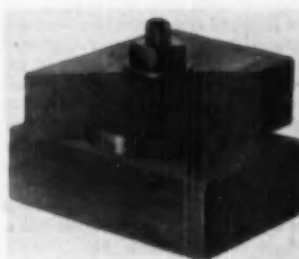
GROOVING tool used to install Teco split rings when using them as fastenings in trusses.



DETAIL showing how Trip-L-Grip framing anchors are used to tie trusses to plates.



TECO Trip-L-Grip framing anchors are made in three types, both left and right hand, for light frame construction. They make toenailing unnecessary and are valuable time-savers in the erection of trussed rafters. They are also used for joint hangers.



TECO split rings are made in two sizes but trussed rafters are built almost exclusively with the 1 1/2-inch diameter ring. The Teco grooving tool cuts a circular groove 1/4 inch deep or one-half the width of the ring in each member. Although the split ring carries the load, a machine bolt with washers is used to hold the members in close contact.

application of interior ceiling and wall materials.

Because of the extra load carrying capacities and rigidity of trusses they are usually spaced 24 inches on center, although that can be shortened or lengthened depending on the type of structure and load-bearing requirements as well as the dimensions of the material to be used for ceiling and roof sheathing.

Although trusses are simplest to use with a straight gable roof or low pitch on a rectangular house, they can be adapted for many variations in roof lines and complicated building layouts. In an L-shaped building, for example, trusses can be used for the main roof structure, supplemented by small jack rafters or by smaller roof trusses where they are needed. This can also be done on a hip roof.

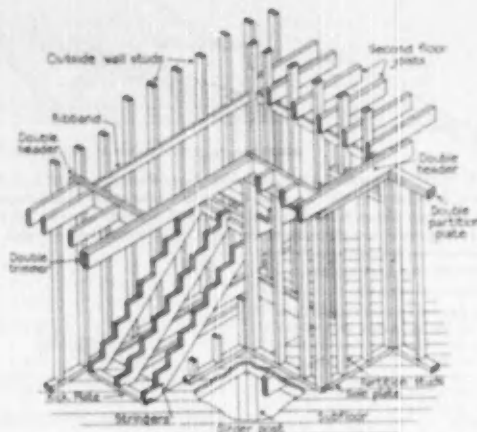
The upper or lower members of a roof truss may be extended to obtain variations in cornice projections, wide overhangs and other extensions of roof lines.

Since strength of trusses depends to a great extent on good nailing and fastening of the various members, this phase of their construction should never be slighted. It is also important that good lumber be used for truss members. Lumber should be at least No. 2 grade of dimension. Any quality lower than that is not recommended.

One good method of tying roof trusses to plates is by using the Teco Trip-L-Grip framing anchors. These can be nailed to the plates first at the points where trusses are to be set and then as each truss is raised it can be promptly fastened to its proper anchor at each end. Trusses are raised to their approximate position on the top plates in an upside-down position and then swung up into position with the plates carrying the weight of the trusses. Because there is no ridge piece in a trussed roof, it is essential that roof sheathing be good, substantial material, well nailed to each truss to firmly tie all of them together in a single rigid roof unit.

Because roof boards are used to give some bracing effect as well as to furnish the base for the roof covering, joints should be staggered. At least two eight penny nails should be used in each board at each rafter. Boards wider than six inches require at least three nails.

In framing and finishing any house, the problems of moisture va-

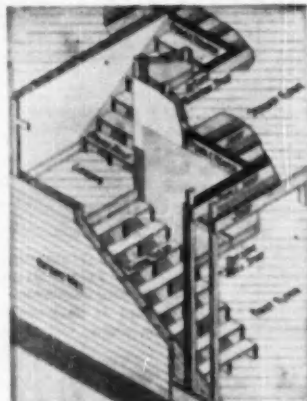


STAIRWAYS should be framed with not less than three horses and of stock wide enough to leave 3½ inches of material behind each cut. Landing must be carefully supported and the stair braced against thrust. Accurately cut horses or stringers are important

por accumulation and control must be known and provisions made for minimizing possible damage to the structure and its interior from these sources. This subject was treated comprehensively on pages 94-98 in the September, 1950 issue of American Builder.

Stairway Framing

Although stair layout and building is a phase of construction confined largely to millwork manufacturing firms who employ professionals to help builders with these problems the importance of good framing around



THE POINTS where adequate reinforcing is needed in framing around stairway openings are shown in this drawing. The amount of material to be added is shown in black in each case. Where headers longer than six feet are used they should be fastened to their supporting joists with hangers or stirrups

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 assurance 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 50 per cent of the accidents in homes are falls, with about one-third of them on stairways, it is well to adhere to the basic principles of stair safety when planning and building them. It has been found most satisfactory to hold risers to 6¼ to 7 inches and treads to 10½ to 10¾ inches. Of course slight variations in these dimensions may be made, but in all cases the sum of the tread and riser should equal about 17½ inches. All treads must be the same width and all risers the same height in any one flight of stairs. The angle with the horizontal should be between 30 and 36 degrees for maximum safety in stairs. A nosing of about one inch is desirable. All stairs should be equipped with permanent and substantial handrails 36 inches above the center of the treads.

Adequate headroom for all stairs is essential. Minimum distance between nose of treads and soffit over stairway in a line parallel with the horses should be 6'-8" for main stairs and 6'-4" for basement and service stairs. These dimensions must apply also to the header at the foot of the stair.

Building Your Retirement Under Social Security

by William Ford Willger

WASHINGTON lawmakers have enlarged a great social structure and raised its roof. In so doing, they bring men who have their own businesses into the benefit end of Social Security. Contractors and builders will be on an equal footing with their employees in getting a monthly retirement check at 65 years of age or over if they choose. Wives and survivors will also be in line for something.

When the Income Tax blanks for 1951 arrive there will be a separate form for the payment of your own Social Security tax as a self-employed person during that year. If your business is incorporated you will be taxed as an employee, in the same manner as your office help and workmen on the job.

In any event, whether your business is incorporated or not, if you lack a Social Security card you should apply for one because, beginning January 1, 1951, you are in the "system" and payments will be compulsory. Your first payment of tax as a self-employed person will be in 1952 when you pay your 1951 income tax.

The amended Social Security law will not only include you as a beneficiary but will increase the benefits for your workmen. Naturally this will mean increases in the rates you as an employer and they as workmen pay. However, these increases will not take effect until 1954. In that year employer-employee rate of 1½ per cent each will be raised to 2 per cent each; in 1960 to 2½ per cent each; in 1965 to 3 per cent each; after 1969 it will be 3½ per cent each.

You as the sole owner or partner in a business whose net income is \$400 or more a year will pay a tax, beginning with 1951, of 2¼ per cent. You will never pay, no matter what your business nets, on anything more than the first \$3,600 of net income. The 2¼ per cent rate will be increased to 3 per cent in 1954, to 3¾ per cent in 1960, to 4½ per cent in 1965. It will be 4¾ per cent in 1970 and afterwards.

Simple as it is to figure out your Social Security tax, a couple of examples might not hurt. Say you net \$3,500 for 1951, your tax will be 2¼ per cent of that sum. If you net \$16,000 your tax will be 2¼ per cent on \$3,600, not on the larger sum.

In the case of a partnership business, each partner pays separately on his own portion of the partnership net business income. This holds true, no matter who your partner or partners are, even in the case of a wife. Bear these facts in mind, because when you pay income taxes you and your wife probably make joint returns. For Social Security your payment and hers (the government calls them "contributions") must be made separately.

Let's take a look at your Retirement Benefits, for which you may be eligible at 65 or older. Here are the possible beneficiaries:

- (1) Yourself when you retire at 65 or over;
- (2) Your wife at 65 or over or at any age if she is caring for a child or children under 18;
- (3) Your unmarried children under 18;
- (4) Yourself as a "dependent husband" at 65 or over, if your wife is "fully and currently" insured in Social Security.

For Survivors' Benefits the following are possible recipients:

- (1) Your widow at any age if she is caring for a child under 18 years of age;
- (2) Your widow if she is 65 or over;
- (3) Your divorced wife (should you have one) if a child less than 18 years old is under her care;
- (4) If your wife dies "fully and currently" insured, you may benefit as a "dependent widower."
- (5) Whether or not your survivors are entitled to monthly benefits, there is a lump sum payment at your death if you are insured under Social Security.

Neither you nor your survivors will have to pay any Federal income taxes on Social Security benefits of any sort.

Tables I and II which follow, give illustrations of Retirement and Survivors' Benefits:

TABLE I
Retired Self-Employed Monthly Benefits

Average Monthly Earnings	Single	Married, with wife 65 or over; she may be younger if caring for child under 18
\$100	\$50	\$ 75
150	58	86
200	65	98
250	72	109
300 or over	80	120

TABLE II
Survivors' Monthly Benefits of Insured Self-Employed (Covered for 3 years)

Average Monthly Earnings	Widow & 1 Child	Widow & 2 Children	Widow & 3 Children	1 Child Alone	2 Children Alone	Age Widow 65 or over
\$100	\$ 75	\$ 80	\$ 80	\$38	\$43	\$38
150	86	115	120	43	73	43
200	98	130	150	49	81	49
250	109	145	150	54	91	54
300	120	150	150	60	100	60

In thinking of the Social Security tax, be sure to free your mind of any idea that its benefits are some form of "relief" or that they place you and your family among the "needy." Federal Old Age and Survivors Insurance is earned by your payments over a sufficient length of time. The time is measured in "quarters of coverage." That is to say, the year is divided into four parts of three months each, the first quarter beginning with January and so on. In a quarter of coverage you must have earned \$100 net of self-employment income.

As a self-employed person in the building and contracting business, yours is a "covered" employment; in other words, one covered by Social Security. Under the Amended Act all businesses except farming and certain professions are now covered with Federal Old Age and Survivors' Insurance. Architects are not covered.

If you combine or have combined, the profession of architect with that of builder or contractor your past, present or future earnings in that field cannot help you to build Social Security credits. Your earnings as an architect are not subject to Social Security taxes. Your fees as an architect should be kept separate from your earnings as a contractor and builder. If one or more of your partners be a practicing architect he or they should do likewise. This will avoid any mixup in the records when figuring Social Security taxes.

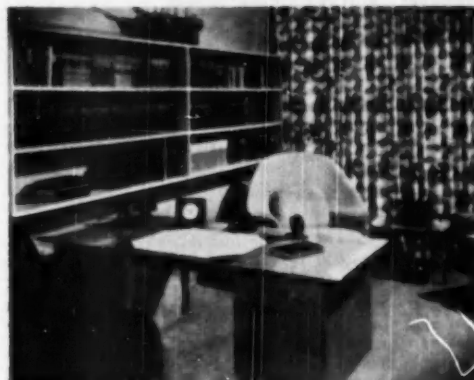
(Continued on page 196)



WAITING ROOM of one section of building devoted entirely to dentists. Acousti blocks cemented to ceiling to absorb excess sound



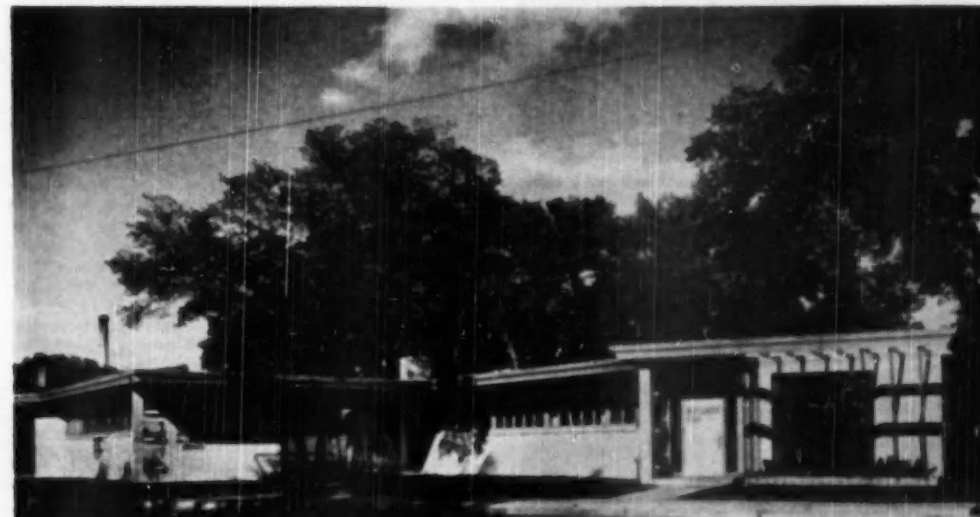
WAITING ROOM of large combination doctors and dentists section. Walls are finished in birch plywood with Acousti-tile ceiling



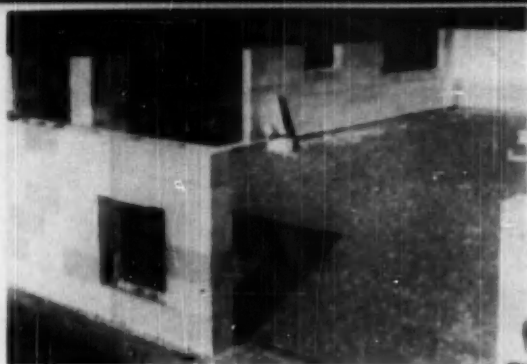
DOCTOR'S OFFICE is arranged for efficiency and cleanliness. Birch plywood walls and book shelves add decorative note to room



LABORATORY is provided with a series of built-in fixtures, counters, shelves and equipment to meet every emergency that arises



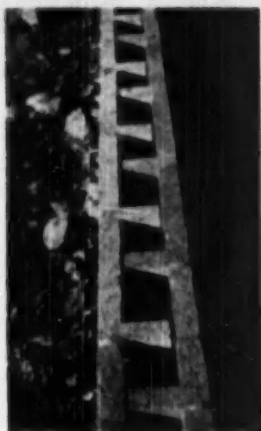
PRINCIPAL STREET VIEW of building. Entrances and waiting rooms are featured with large windows. Battery of windows occurs in offices



EIGHT INCH WALLS built up of twin interlocking units



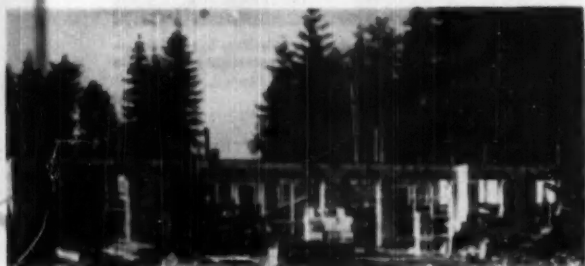
PARTIAL WALL construction with joints rubbed for finished appearance



WALL SECTION eight inches thick, showing double wall with open joints for air passage

Twin Walled Dual Insulating Construction

This system is based upon double wall construction in which the outer and inner walls have no direct connection



HOUSE IN CONSTRUCTION using concrete and cluder blocks



COMPLETED HOUSE with concrete blocks exposed for finish

ALCON—the twin walled dual insulating building construction system, is not just another type of cement block, but is in itself a complete and fully developed building construction method, from foundation to roof. The system is applicable to any climate for the construction of all types of buildings.

The system, devised by J. Fehr, Vancouver, B. C., Canada, is unique. It differs from other types of concrete block construction, in that the standard method of building consists of two walls, i. e. the outer or weather wall, and the inner or insulating wall.

The system is based upon a building block having an L-shape. Two of these L-shape blocks form the standard wall unit. The outer and inner block forming the double wall have no direct horizontal contact with each other.

The second and probably the most important feature is the "motionless" or "dead" air which is enclosed and sealed between the outer and inner walls. Since the vertical edges of the return ends of the blocks on the inner side of the walls remain open, cold air which has a tendency to settle towards the bottom of a shaft, is permitted to "settle" or "squat" without, however, setting the air between the walls in motion. These open vertical joints, together with the motionless air, prevent formation of the condensation between the walls. The system thus provides a dry and healthy atmosphere within the building at all times of the year.

The standard block consists of concrete and may readily be produced on any standard block-making machine by simply providing the necessary mould or die. Compressive strength of the block should at no time be less than 1,000 pounds per square inch.

Additional insulating properties in the Alcon wall are provided through the use of Pumicite block on the inner wall above ground level. A cinder block may be used with equal success. A Pumicite wall is available. It can be left in its original form for interior finish with joints pointed, or it can be plastered direct to the block-sur-

face without recourse to furring strips. Compressive strength of the "insulating block" should not be less than 700 pounds per square inch.

Below ground level both inner and outer walls should be of concrete blocks. The construction of the foundation does not require the customary "cribbing." The cavities within the foundation walls are filled with poured concrete. The most effective method is to pour after laying three or four courses.

When placing joists in position on the wall it is necessary to retain the insulating property of the wall which is based on the "motionless" air between outer and inner wall. Thus the wall is constructed in the customary manner up to the placing of joists. Joists are then properly spaced and inner blocks filled in between joists. When the outer and inner wall and joists are placed, then a two-inch thick flat block or tile is placed as a cap over the wall. This method encloses the joists in a housing of their own, and at the same time the cap forms the base for the upper wall structure.

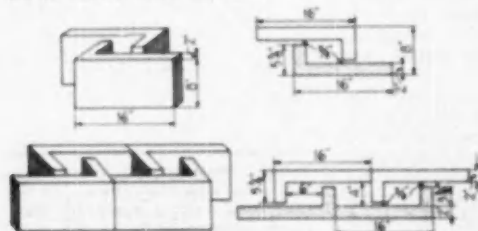
Where the nature of the building requires it, vertical reinforcing can be used almost anywhere within or along the structure. Lumber for forms is not required. The only requirement is the closing of the vertical joints inside the wall, where reinforcing is to be applied. Posts, buttresses, pillars and piers for heavy beams or loads may be incorporated at almost any point in the structure.

The setting of an Alcon wall always starts at a corner of the building. It is immaterial whether a start be made with corner type "A" or "B," since the ultimate result will be the same. It is important to bear in mind that the corner must be started with a 14-inch block, both for the outer as well as the inner wall. The return end of the block used for the outer wall forms the angle of the outer corner.

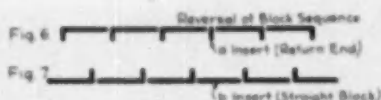
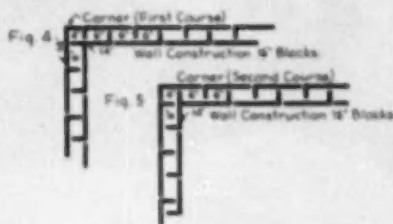
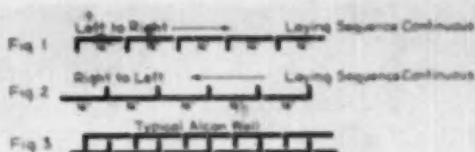
The Alcon block is laid end to end, either from left to right or from right to left according to the corner at which the construction starts. The blocks for the outer wall run in opposite direction to the blocks of the inner wall. If the first course of a wall has been started with corner type "A," the second course is started with corner type "B" or vice versa. In this manner the joints are staggered, and a bond is provided between the outer and inner walls.

A building may be started at one or more corners simultaneously. The insertion of partition walls, chimneys, window or door openings may have to be considered. In such cases the sequence of the blocks may have to be reversed. In other words, a row of blocks, having been started from left to right, will have to be changed to run from right to left. It is an easy matter for an experienced mason or bricklayer to cut the block to the desired length and fit inserts into the wall which match the general pattern, the return ends fitting over one another.

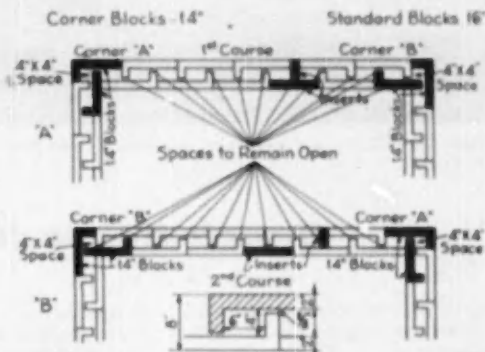
If an additional finish surface, such as plaster or stucco, is desired on either the exterior or interior of block, it can be applied directly to the block surface without the use of wood or metal lath.



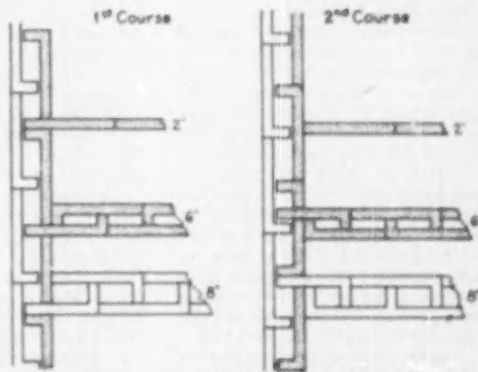
TYPICAL WALL SETTING of blocks with plan indicating standard detail sizes. The 2/8 inch clearance avoids condensation in wall



WALL SYSTEM is based upon a building block having an L shape. Two of these L shaped blocks form the standard wall unit in which the outer and inner walls have no contact with each other



CORNER BLOCKS AND INSERTS for reversal of block directions for first and second course. Note that corner blocks are 14 inches wide and the intermediate blocks 16 inches. Wall is 8 inches thick



PARTITION WALLS can be either 2, 6 or 8 inches thick as required. These can be constructed of clinker or Puzosite



FRONT ELEVATION of this one-story house presents a pleasing combination of materials with traditionally styled features

Ranch House for a 50-foot Lot

THE BLUEPRINT house presented here was designed by Charles B. Sommer, A.I.A., Chicago. It is a good example of combined traditional and contemporary styling.

All rooms of the house are placed on one level. They comprise a living-dining room, kitchen, bath, two bedrooms, screened porch and attached garage. Rooms are arranged in a compact unit with the over-all width of the house kept within 40-feet, for construction on a lot 50 feet wide.

Face brick, Lannon stone and wide beveled siding are used effectively on the exterior. Wide projecting roof overhangs extend on all sides of the house. A feature that adds to the general appearance is the extension of the gable end which is placed at the extreme roof projection. This method of construction adds mass to the appearance of the gable end and apparent increase to size of house.

Another feature which cannot be overlooked is the combined treatment

of entrance and garage as a single design unit. This prevents the garage from appearing as an addition to the main body of the house, which so often is the case in this type of plan.

The central position of living-dining room makes this area the core or focal point of the house. The service area, which includes garage, kitchen and basement stairs, is placed at one side of the core, with the bedrooms and bath on the opposite side. This makes an ideal division of fundamental areas. A full basement is provided with ample space for recreation, utilities and laundering.

Construction follows accepted practice, which includes 10-inch concrete walls placed on spread footings. Exterior walls above are brick, 8 inches thick, furred and plastered on the inside. Roof is covered with asphalt shingles. The ceilings are insulated with 4-inch fiberglass batts. All framing members are 2x6 and 2x10 spaced 16 inches O.C.

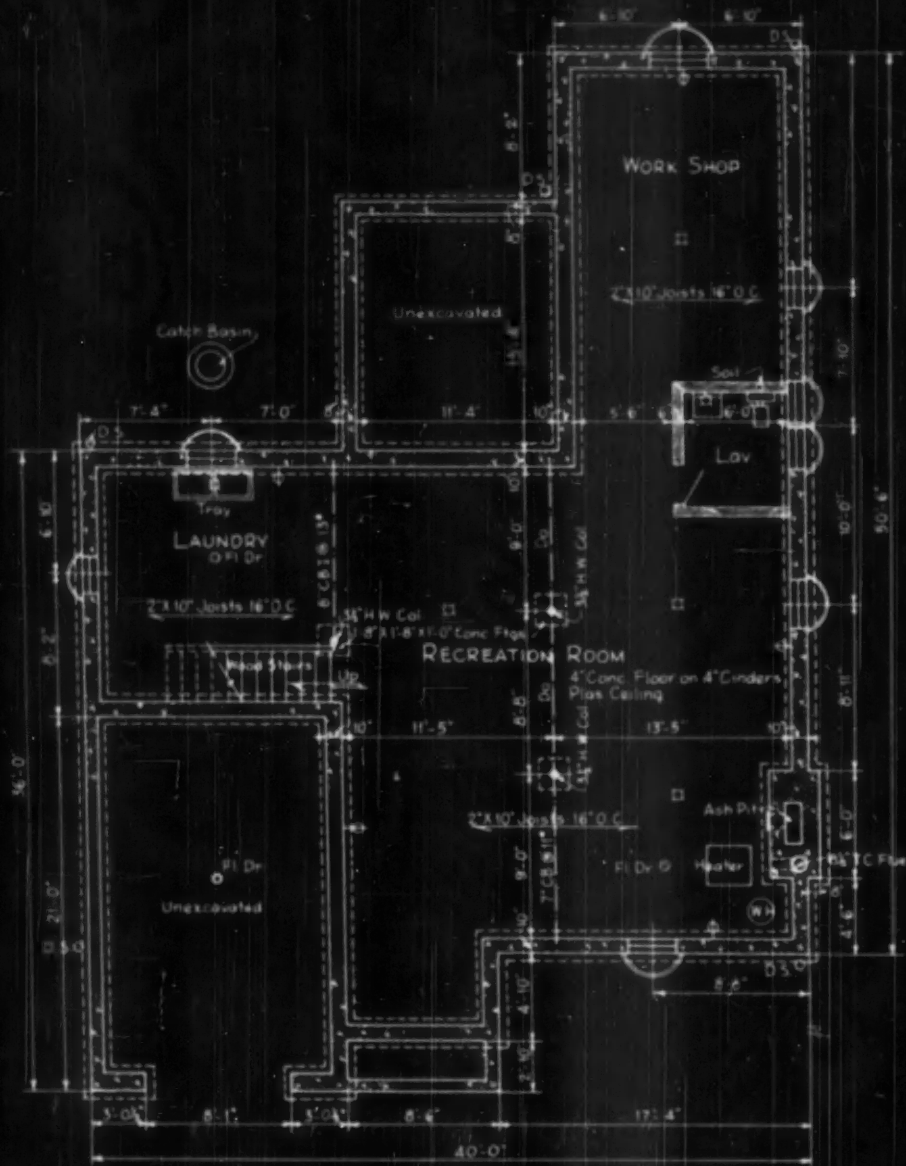
AMERICAN BUILDER

Blueprint House

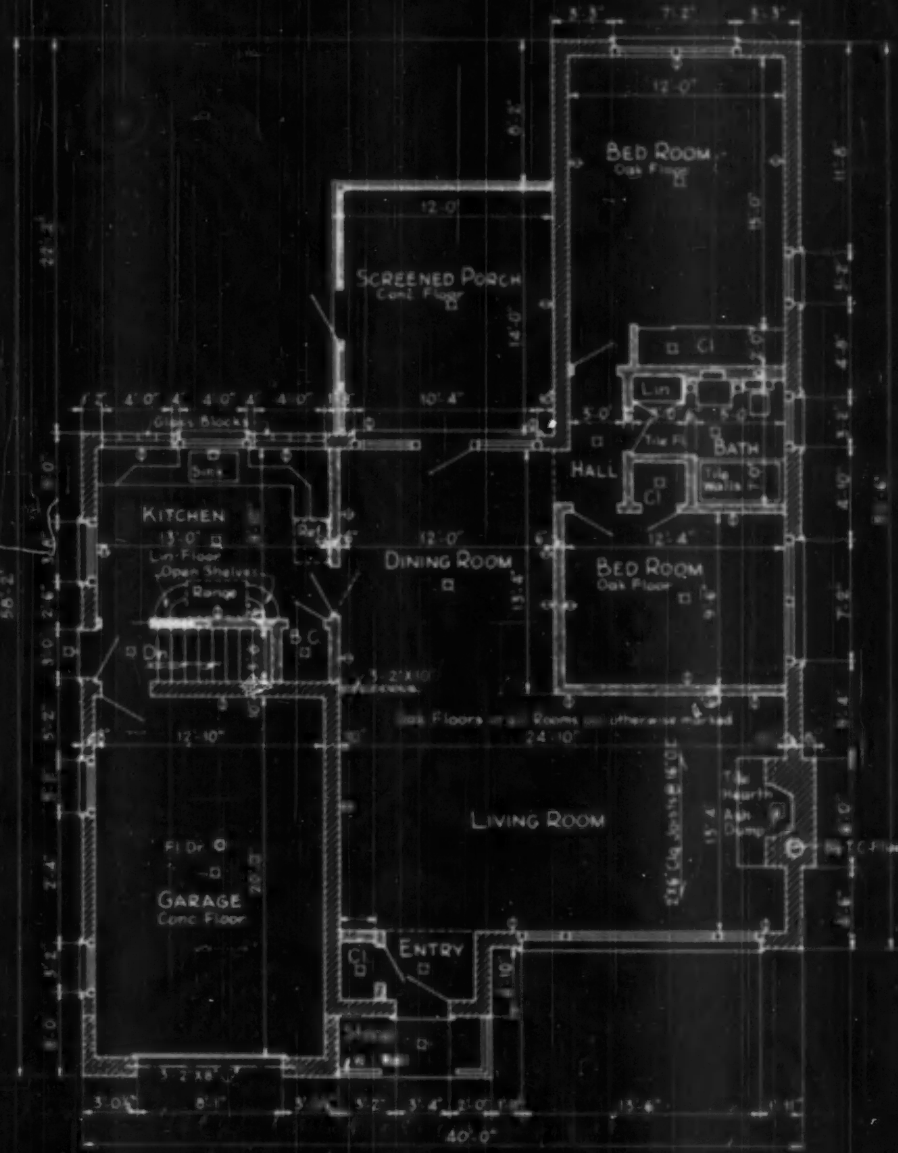
Number 48

Charles B. Sommer, A.I.A.

Further information and complete 1/4 inch scale blueprints available on this house from American Builder Plan Service, 30 Church Street, New York 7, N. Y.

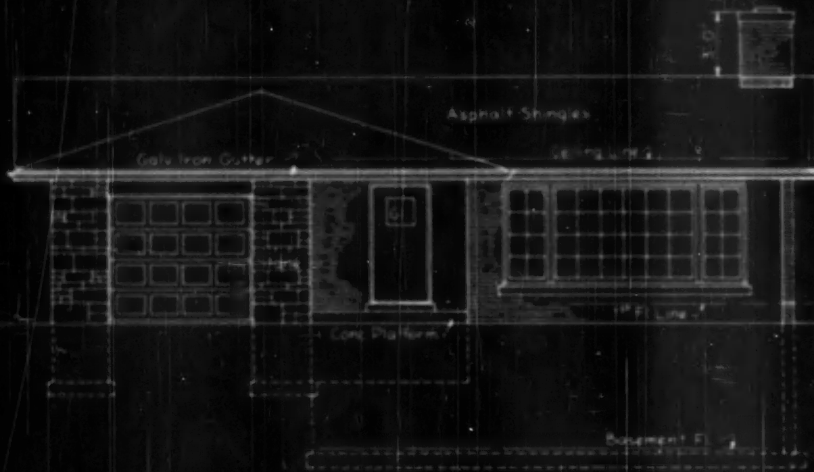


BASEMENT PLAN



FIRST FLOOR PLAN

DESIGN NO A B 162
 AMERICAN BUILDER BLUE-PRINT SERIES
 Designed By
 CHARLES B. SOMMER A.I.A. ARCHITECT
 1448 W. Henderson St. Chicago, Ill.
 American Blueprint Printing Co., 19 W. Madison St., Chicago, Ill.



FRONT ELEVATION



RIGHT SIDE ELEVATION



LEFT SIDE ELEVATION



REAR ELEVATION



FRONT VIEW of house designed by Alwin Cassens, Jr., and built by Stackler & Frank, Hempstead, N. Y. Cost of house is \$24,900

Best Homes for Family Living

Parents' Magazine has spotlighted the work of leading builders in nation-wide competition of homes built and sold in 1949

CONSIDERABLE interest was aroused in building circles through the nation-wide competition sponsored by Parents' Magazine's Expandable Homes Program, which was open to all builders who built and sold more than one house in 1949.

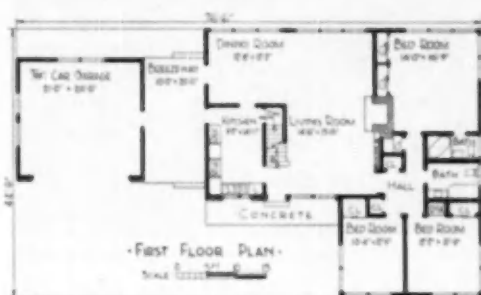
The program was divided into two price groups. These were based on actual selling prices. (1) Houses that sold for not more than \$15,999. (2) Houses that sold from \$16,000 to \$25,000. Each of the price groups was then divided into five geographical areas and merit awards given to the winners. The only restriction placed upon an entry was that it must be owner-occupied by a family with one or more children.

Considerations which influenced the judges in their selection included the usefulness of the site as planned for outdoor family activities, the intelligent use of manufactured materials and products for durability, simplicity of maintenance, attractive architectural design, and the structural soundness and quality of workmanship.

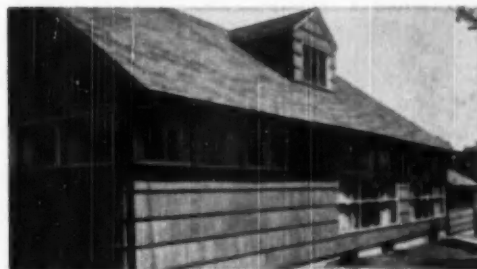
The winning entries illustrated in this article cover both price groups and are taken from geographical area 1, which includes Washington, D.C., and Hempstead, N.Y.

The house designed by Alwin Cassens, Jr., and built by the Stackler & Frank organization was sold for \$24,900. The plan is a practical grouping of rooms, arranged according to zones, with good circulation to all areas. Abundant storage facilities are available on the ground floor, or living area, as well as the attic and basement. The full basement under the house is well lighted and ventilated with adequate space for recreation, storage and equipment of all kinds, both present and future.

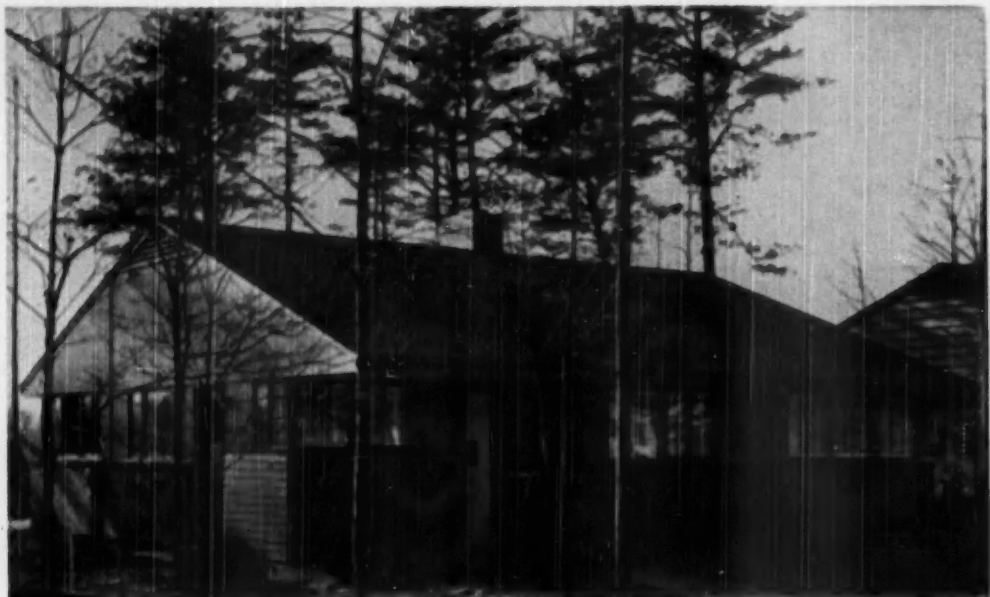
Other items included in the sale price are G.E. automatic dishwasher, Kelvinator 8-cubic foot refrigerator and



FLOOR PLAN of six rooms provides ample space for family living



REAR VIEW showing fenestration in living and bedrooms



FRONT VIEW of house designed by Robton Hoop and built by Carl M. Froeman, Inc., Washington, D. C. Cost of house is \$14,950

Best Homes . . .



LIVING ROOM fireplace wall combines materials pleasingly



LIVING ROOM and dining ell as unit make a large usable area

electric range with stainless steel hood containing an electric fan, Bendix Economat clothes washer, Rheem automatic electric water heater and Vinyl plastic-top sink. Landscaping and other features on the exterior are included in the sale price.

Materials used include U.S. Gypsum plaster board, Rock wool insulation in walls and roof, double coursed red cedar shingles on exterior walls, used together with brick veneer. Revere copper tubing was used throughout, and the colored bathroom fixtures are by Kohler. Hinged window



FLOOR PLAN has the elements of good living within its periphery

AMERICAN BUILDER



REAR VIEW of Freeman house showing arrangement of windows and terrace for rear lot living with emphasis on privacy

sash are aluminum with special feature 12-foot long picture windows in living and dining room. Capitolaire Division U. S. Radiator Corp. oil fired forced warm air heating unit supplies heat to all livable areas.

The house designed by Robinson Heap and built by the Carl M. Freeman, Inc., builders, was sold for \$14,950. The house contains six rooms. These include three bedrooms and bath. Rooms are arranged within the 36 x 33 foot rectangle so as to produce good circulation with a maximum of efficiency in the use of space. Exterior indicates a clever handling of materials. Brick, vertical boards, and horizontal siding are used effectively to avoid a regularity of pattern. It is regretted that no provisions are made for a future attached garage and additional storage space. While the house is without a basement area the attic is made accessible for storage by a disappearing stair located in the bedroom hall.



HIGH WINDOWS and sliding wardrobe doors permit greater flexibility in furniture grouping in master bedroom

Materials used follow in general those of the other house with several exceptions. These include Bryant gas heater with radiant copper pipes in the slab, 10-inch-thick cavity brick exterior walls, JM asphalt roof shingles, Armstrong asphalt tile floor throughout, American-Central steel cabinets, Fefestra steel sash, Magic Chef gas range, Frigidaire and Bendix automatic washer.



KITCHEN AND BREAKFAST ROOM is the long narrow type with an orderly arrangement of fixtures on both walls

How Many Times Around?

By R. E. Sabers

THE NEW credit terms will, of course, mean less buying . . . at least of certain things. That goes without saying. On the other hand, the stiffening of terms conceivably may well turn into an asset instead of a liability for the very good reason that removing some of the pressure from excessive demand should retard the relentless inflationary spiral that has been building up steadily for so long we can scarcely remember when it all began.

It reminds me of Jack Dionne's story of the small saw mill owner in the south who was having trouble getting a fireman. Finally one day there appeared a husky individual whose broad shoulders gave promise of being the solution of how to keep enough fuel in the firebox. He got the job and went to work immediately.

Towards noon the owner decided to see how his new employee was getting along. The energetic fireman was heaving to with great gusto although the boiler was showing unmistakable signs of melting at the seams.

"Good heavens, man," shouted the owner. "Look at that steam gauge. Don't you see the pointer is past '90!'"

"Ninety, hell," was the reply of the perspiring fireman. "That's the third time around."

Since the redoubtable Jack told me the story, the inflationary pointer has made another round or so in many an industry and there seems to be little concern on the part of those who are stoking the boilers as to whether they blow up or not.

The morning papers proclaim somewhat blandly that the ever-alert railroad brotherhoods are setting their sights for wage increases ranging up to 35 cents an hour which adds up to something like a billion dollars annually for the railroads already wobbling from the impacts of government rules and regulations and from the round-after-round of increases that have been achieved with the help of politicians with the ballot box ever in mind.

The steel workers too are all set to go. So are the coal miners. And the amalgamated clothing workers think 12½ cents an hour will be about right for their next bite. The list is endless.

In the meantime, I took a short train trip a few days ago while my car was being repaired. I used to enjoy the 40-mile jaunt on the local that made its way leisurely through the countryside, stopping at each little town to take on and discharge passengers. Now it was

as I encounter the eagerness with which the ultimate consumer welcomes the many substitutes that now are arriving on the scene to take its place. Recently I attended an exhibit of glass products and came away amazed at the number of things now made of glass fibres and was impressed no end by their great strength, versatility and economy. Same with plastics. Same with anything and everything.

The two-car train with its half-dozen riders that goes huffing and chuffing up the weedy right-of-way receives not so much as a passing glance from the family that scoots along the highway on balloon tires at a mile a minute while the radio entertains the occupants with news and music from afar off.

Nor does the average home owner give passing thought to the days when tending the furnace was a night-and-morning job and carrying out the ashes took up his Saturday afternoons or kept him away from church on many a Sunday.

Better things have come to bless our way of life. . . . ways that are much to be preferred and far more economical too, but still there are those who cling tenaciously to the belief that you and I should

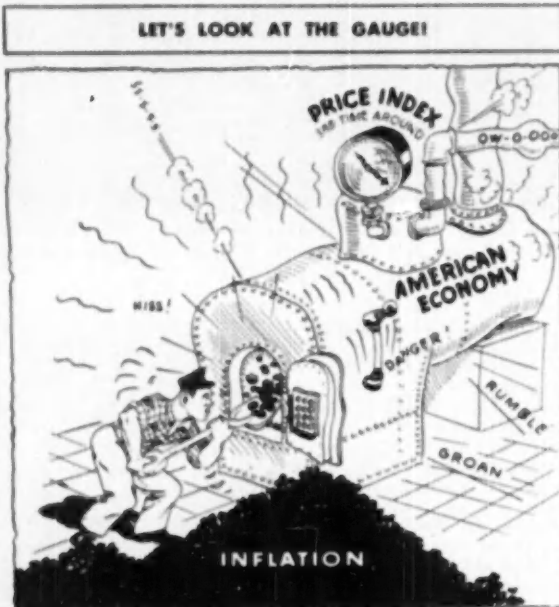
not only use the obsolete but should pay more for doing so.

I am not alone in my ready acceptance of the new for I do not know of a single family in my entire neighborhood that uses coal and I am equally sure that few of the children have ever ridden on a train.

Such being the case, I find it difficult to understand why anyone should assume that the answer to the declining use of coal or anything else will be found in higher and higher prices. Just what type of reasoning does it take to figure out that Mr. and Mrs. Ultimate Consumer will pay more for anything less convenient to use or harder to operate.

When prices get too high, people simply quit buying and whenever they stop doing so, there is consternation

(Continued on page 168)



all but empty and the depots along the way were deserted. The train crew's answer to the embarrassing problem of diminishing popularity is higher wages for doing less work!

The approach of fall used to bring with it the rattle of coal in the chutes which lead from the trucks to the basement, but today the clatter is stilled. Instead I hear only the indistinct murmur of fuel oil pumps, or whatever it is, that causes the oil to flow into the tank in the basement.

The answer of the man with the bushy eyebrows who controls all things which pertain to the destiny of the coal industry is higher and higher pay for less and less work!

Steel seems not to have suffered so greatly from the blight of diminishing returns due to higher and higher costs. But I am not too sure about that either



SNOW or BLOW—

it's always fair weather for

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Let it snow, let it blow—it makes no difference in the smooth, easy operation of Ro-Way Overhead Type Doors!

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That's why you'll find Ro-Way Overhead Type Doors completely dependable—come snow or blow. So specify Ro-Way for *all* of your installations—residential, commercial, industrial.

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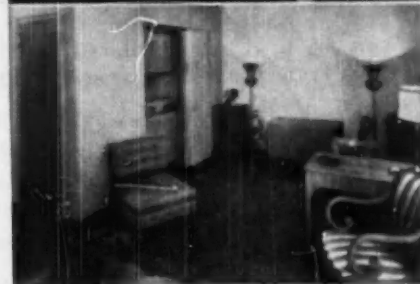
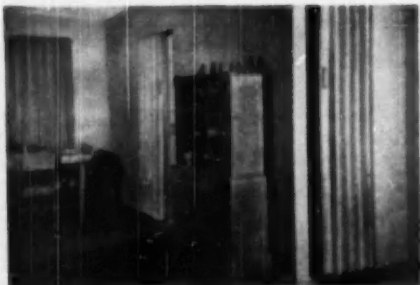
Builders use "MODERNFOLD" DOORS for Bigger Profits!

260 "MODERNFOLD" DOORS IN THIS PROJECT

"... made every inch of floor and wall space usable, and cut construction costs." That's why "Modernfold" accordion-type doors were used in this Carvel Court Apartments job in Indianapolis, Indiana, according to the builder. And the tenants say the beautiful, space-saving doors were a big factor in choosing their apartments.

THIS BUILDER USES 37 "MODERNFOLD" DOORS.

In Anderson, Indiana, the Anderson Towers Apartments use this fabric-covered metal-framed "Modernfold" door in every apartment to conceal a built-in kitchen when not in use. No other type of door could do the job so well—so beautifully—or so profitably for the builder.



THEY'RE HAPPY ABOUT "MODERNFOLD" DOORS IN BIRMINGHAM, ALABAMA. And here's the South Park Apartments in Birmingham, Alabama! This big project uses a "Modernfold" door in every apartment to conceal the hideaway bed in the closet. Because "Modernfold" doors don't swing but fold, furniture can be placed right next to it—an important feature in small apartments.

Whether you're building for rental or for sale, investigate the space-saving and beauty of "Modernfold" doors. Remember they help sell faster and promote higher rentals. And they cost no more—and often less—than ordinary swinging doors. That's because they reduce labor time... eliminate trim, painting, hardware and other expensive extras. Get full details today. Look up our installing distributor under "doors" in your classified phone book... or mail coupon.

NEW CASTLE PRODUCTS, New Castle, Ind.
In Canada: Modernfold Door Company
of Canada, Limited, Montreal



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—SOLD AND SERVICED NATIONALLY—

New Castle Products
P. O. Box 835
New Castle, Indiana
Gentlemen:

Please send me full details on "Modernfold" doors.

Name.....

Address.....

City..... State.....

No. G-14 Mahogany Door Frame

Attractive and eye arresting details used in conjunction with plain, flat surfaces, often form the basis of good design for the modern store front and entrance.

The problem involved in the remodeling of the Marilyn Shoe Store, New York City, was to create a design that would be in keeping with the femininity of the merchandise sold within. This was done by going back to traditional form which was incorporated into the shaping of the entrance jamb.

The jamb of door is constructed of a continuous frame of four inch structural channels welded together at the intersection of jamb and head. These are rigidized by imbedding the sill ends in concrete footings extending one foot below the underside of floor slab. These channels provide lateral stiffness to absorb the whip of the swinging Herculite doors.

The steel jamb and head are then enclosed in a mahogany hardwood decorative casing. The casing is secured to wood blocks bolted to channel frame. In order to facilitate the removal and replacement of glass sidelights and transom in the event of breakage, the inside face of the mahogany casing is made removable. Glass of sidelight is extended into and against the face of rough nailing block in order to have proper coverage because of the scalloped edge of finished frame.

The doors are two 2 foot-6 inch by 7 foot by 3/4 inch thick tempered polished plate glass. They are provided with 1/2-inch-thick curved Plexiglas push plates.

It should be noted that at Detail "A" in plan section the jamb and head are tapered to give the effect of a two-sided moulded picture frame which, as shown in the photograph, outlines the various selling areas to the best advantage.



How to Cut in Moulds for Panel Work

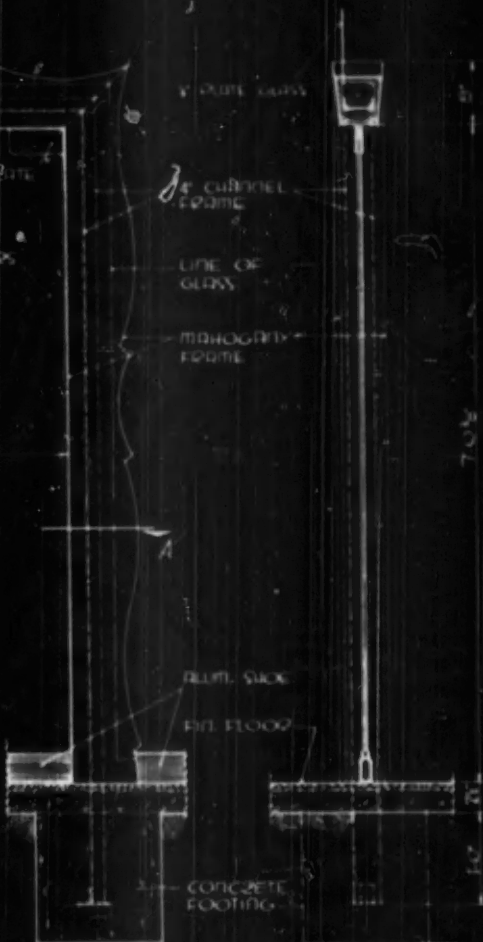
George B. Fusk of Portsmouth, Ohio, suggests that when cutting mouldings or beads for an opening or panel, to first mitre-in the piece that would cover the short length of opening; then cut the piece that is to cover the long dimension 1/16-inch longer than necessary. This permits the joints to spring together, thus always making a tight joint.

AMERICAN BUILDER

AMERICAN BUILDER'S STORE FRONT DETAILS

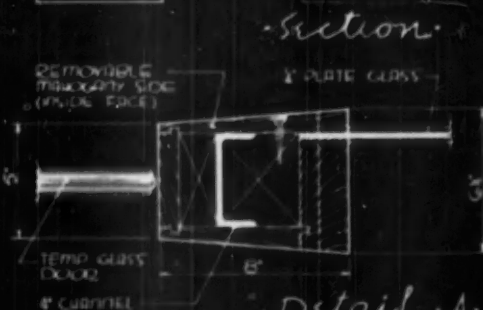
Designed and Detailed by Louis J. Gaudin for American Builder

N° G-14 MAHOGANY DOOR FRAME



Marilyn Shoes

N.Y.C.





**They can sit closer...
in comfort
with WOOD WINDOW UNITS!**

No cold flows into this room from the muntins and mullions of these double-hung windows. No heat seethes out from them in summer. For these windows are made of *wood*—the natural insulating material that does so much to help control indoor climate.

Double-hung wood window units today are available with a scientific preservative treatment to give greater resistance against stain, decay, insect attack or humidity. They won't rust or corrode—are efficiently weatherstripped. And remember, they are available as pre-assembled units with modern sash balances—and in a wide variety of styles.

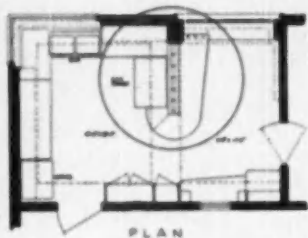
WOOD WINDOW INFORMATION SERVICE
38 South Dearborn Street
Chicago 3, Illinois

See your local lumber dealer for wood window units

**No. D-73
Breakfast Counter**

The modern kitchen of today is often separated into units such as the work area and space set aside for informal dining. This arrangement is possible when sufficient space is made available during the planning stage.

The breakfast counter detailed on the opposite page, and shown in the



encircled area of the plan below, forms the separation between the work and dining portions of kitchen. In this case the eating bar extension or counter becomes an architectural feature of the room, while at the same time remains extremely practical in its use and service.

In its construction the counter is placed at table height so that a normal chair can be used. The counter side of the center vertical extension is decorated to form an attractive back-drop with shelves for dish display. The opposite side forms the background for either gas or electric range. In this case the counter is cut back to the vertical surface to provide a recess for stove as indicated in plan.

The one-inch-thick plywood counter top is covered with Formica with $\frac{3}{8}$ -inch plywood face at edge. A recess is provided directly under the top of the vertical center extension for fluorescent tube lighting which illuminates the counter surface.

Note the position of the spotlight and exhaust fan in the ceiling beam directly over the stove. These two fixtures are arranged as a single unit and are shown clearly in the photograph on Detail Plate.

Isometric drawing indicates the method of framing required to construct a sturdy counter and back. The basic vertical members are 2x6s secured to bottom wood plates. Steel straps are secured to both ends of 2x6 vertical members where indicated on drawing. Straps are extended through floor and attached to floor joist below; 1x4-inch horizontal members support the counter and area below.

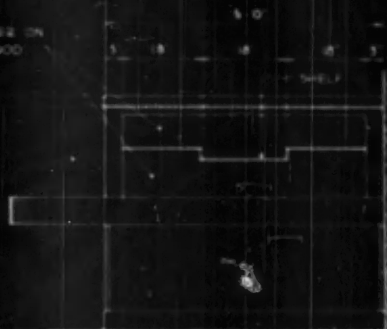
AMERICAN BUILDER'S BETTER DETAIL PLATE

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

NO. D-73 BREAKFAST COUNTER



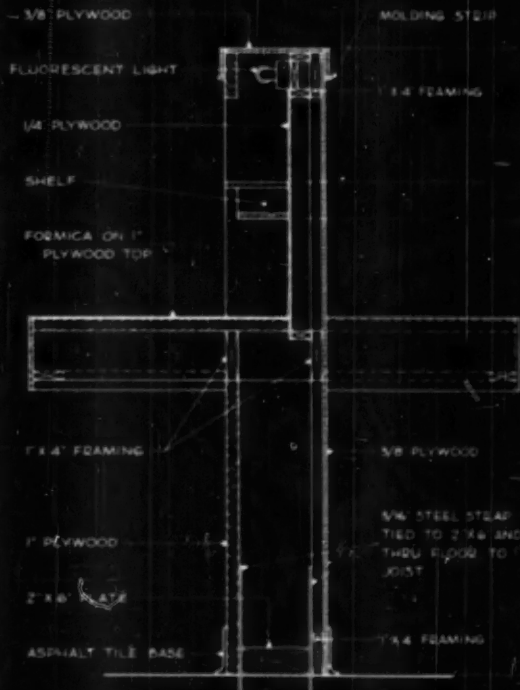
WALL PAPER ON
1/4" PLYWOOD



Elevation



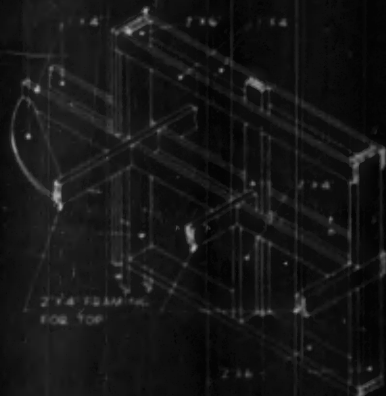
Plan



Section



1" x 4" FRAMING FOR
CURVED END

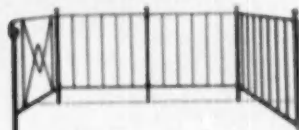


Mr. Building Supply Dealer:
A LOT of SALES
 in this Little Space



Complete Stock of
FAST SELLING
WROUGHT IRON RAILINGS
 in 15 Square Feet

Builders buy more standard railings if you can deliver immediately from stock. You can store a complete supply of railings for small homes in only 15 square feet in your warehouse or showroom. That's a small space for a highly profitable, fast moving item. Additional supplies and odd sizes may be obtained overnight from your warehouse distributor. Write for details today.



Display Suggestions:

An assembled railing makes an attractive wall or window display, takes little room, and sells the railings. Use the railings instead of partitions in your showroom.

Use the 205 two step section, newel post, 3/2" straight section for small display.

- CUSTOM QUALITY
- STOCK SIZES
in Modular Lengths
- LOW COST

Coffman's Standard Railings are hand wrought and welded by quantity production methods which keep the cost low. They are designed in modular lengths to fit any porch of modern design. They are easy to install and practically indestructible. FREE Rail-O-Graph helps builders determine fit. Increase your service and profits with this modern, low cost item.

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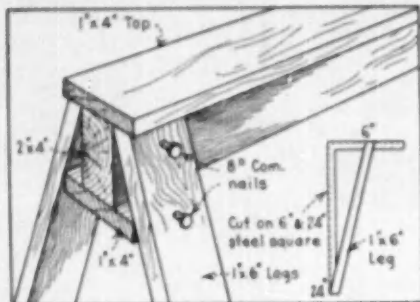
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TECHNICAL GUIDE

for Builders and Craftsmen

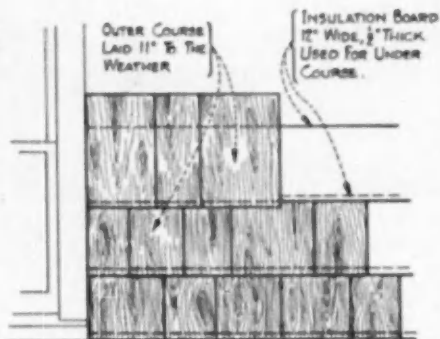


How to Make a Simple Saw Horse

A sturdy saw horse which is easily carried about, can be quickly assembled and knocked down. Horse is built up of one piece of 2x4, two lengths of 1x4, and four lengths of 1x6s for legs. Use figures 6 and 24 on steel square to obtain angle of cut for legs.—J. G. Caldwell, San Mateo, Calif.

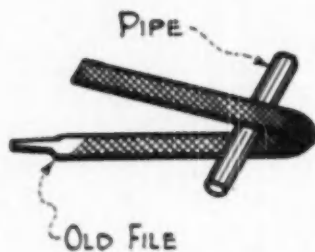
How to Save in Laying Double Coursed Shingles

When laying double-coursed shingles on sidewall of house, 3/4-inch-thick insulation board 12 inches wide may be used for the first layer in place of shingles when the exposure for the finished course is 11 inches. This method reduces the material and labor used.—Arthur N. Nelson, Kansas City, Mo.



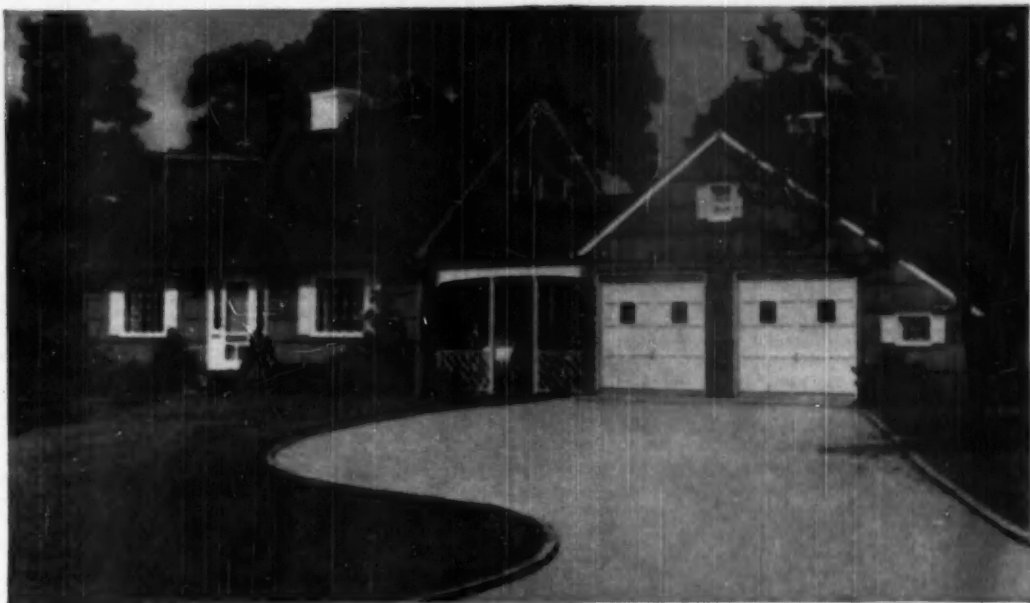
How to Make a Pipe Vise

This simple but effective pipe vise may be quickly made from an old file by heating center and bending to a two-inch open end. By tightening file over pipe or bolt as it is held in vise it can quickly thread pipe or loosen nut from bolt.—M. J. Hiland, Lansing, Ill.



CORRECTION . . .

The Pittsburgh Plate Glass Company, who furnished material for the article titled "Installing Double-glazed Windows" (page 48, November *American Builder*) have requested that several of the specifications be changed as follows: Glazing rabbet requirement, page 48, should be 3/4 inch instead of 1/2 inch. Opening dimension, mentioned under 5th picture page 52 and 3rd picture page 128 should be 3/4 inch instead of 1/2 inch.



A Heatilator Fireplace is an important "extra value" feature in this custom-built Housing Guild home on Long Island



"I give customers Extra Comfort at no extra cost with **HEATILATOR FIREPLACES!**"

says **ROBERT J. FOUNTAIN, Vice-President of Housing Guild, Inc.**

Mr. Fountain, a leading Long Island builder, has used over 100 Heatilator® Fireplaces in this big development. He gives his customers genuine Heatilator Fireplaces that circulate heat instead of wasting it up the chimney. He's found that the Heatilator name makes it easy to close sales faster.

Smokeless... Trouble-free. The Heatilator unit is a scientifically designed steel form, complete from floor to flue, around which any style fireplace can easily be built. It assures correct construction, and eliminates common causes of smoking. It draws air in at floor level, heats it and circulates it to every corner of the room. It gives all the heat necessary on cool spring and fall days, cuts dollars from your customer's heating bill. People know the Heatilator name . . . it's been nationally advertised for 23 years.

Adds Little to cost. Best of all, the use of Heatilator Fireplace units adds very little if any to the cost of the completed fireplace. It provides all the vital parts of the fireplace—saves the cost of a separate damper, firebrick, and masonry otherwise required—and on most jobs reduces time and labor expenses.

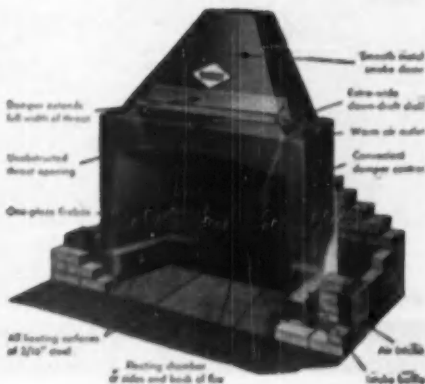
HEATILATOR FIREPLACE

Sells Houses FASTER!

DECEMBER 1950

Write today for complete specifications. Heatilator Fireplaces are sold by all leading building material dealers. Accept no substitute. Look for the Heatilator name on the dome and on the damper handle. Heatilator, Inc., 6512 E. Brighton Ave., Syracuse 5, N. Y.

*Heatilator is the registered trademark of Heatilator, Inc.



Catalogs and HOW-TO-DO-IT INFORMATION

836—GARAGE DOOR OPENER—The Crane "300" remote controlled unit which automatically opens and closes garage doors and lights up interior and driveway is described and illustrated in a four-page pamphlet distributed by The Crane Co., 836 So. Michigan Ave., Chicago, Ill.

837—MOLDINGS FOR CORRUGATED GLASS—Sash and partition moldings for corrugated glass are subject of literature published by O. E. Stelzer, Box 715, South Bend, Ind. Furnished with drawings and specifications, literature shows varying installations of corrugated glass using both the economy partition moldings and the new snap-on moldings of extruded structural aluminum with satin finish.

838—PORTABLE TOOLS—A new catalog entitled "Milwaukee Quality Tools" describes in detail the drills, grinders, hammers, kits, polishers, sanders, saws and screw shooters and nutsetters manufactured by the Milwaukee Electric Tool Corp., Milwaukee 8, Wis. The 47 pages list complete specifications and outstanding features of each model and are profusely illustrated with on-the-job photographs of actual usages. Addresses of authorized Milwaukee service stations are also recorded on the back cover.

839—GAS HEATING EQUIPMENT—Three new specification sheets which have been released by Temco, Inc., Nashville 9, Tenn., describe the Temco gas wall fur-

nace, the Temco gas conversion burner and the Temco automatic gas clothes dryer. Illustrated and containing complete descriptions and specifications, the sheets also show detailed drawings with exact dimensions.

840—CIRCUIT BREAKERS—A 12-page bulletin No. 3410 describing fully magnetic, non-thermal, non-enclosed, general purpose circuit breakers, is now available from the Heinemann Electric Co., Trenton 4, N.J. Illustrations, charts, diagrams, graphs and cutaway drawings portray the Heinemann line of one-, two- and three-pole breakers.

841—ORNAMENTAL IRON—For porches, canopies and railings is shown on a specification sheet published by the Des Moines Ornamental Iron Co., 400 S. E. Jackson Ave., Des Moines 15, Ia. Dimensional diagrams indicate shapes and sizes of columns, brackets and railings available.

842—AIR RECOVERY CELLS—Is the title of a new bulletin on the recently introduced Type "C" air recovery or purification cells of activated carbon for reclaiming odorous conditioned air. Specifications, arrangement details, capacity and resistance curves and various types of applications are contained in this 16-page publication issued by the W. B. Connor Engineering Corp., 116 E. 32nd St., New York 16, N.Y.

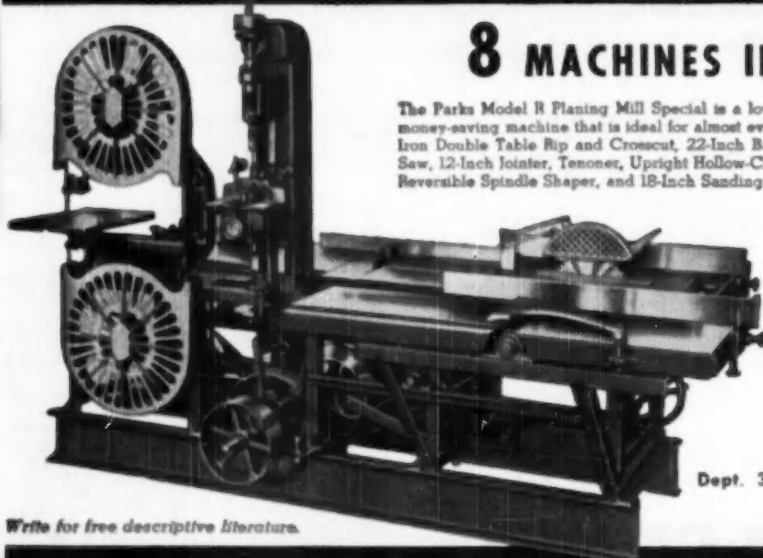
843—BASEMENT HOSE REELS—A four-page pamphlet distributed by The Zierden Co., 3815 S. Kinnickinnic Ave., Milwaukee 7, Wis., is devoted to the Water Boy basement Rollaways, hose reels installed in the basement with outlet box outside the home. Drawings show typical installations. Equipment in each of the three available models is itemized.

(Continued on page 156)

The **PARKS** PLANING MILL **SPECIAL**

8 MACHINES IN ONE

The Parks Model R Planing Mill Special is a low priced, multi-purpose, money-saving machine that is ideal for almost every shop. It offers a Cast Iron Double Table Rip and Crosscut, 22-Inch Band Saw, Swing Cut-Off Saw, 12-Inch Jointer, Tenoner, Upright Hollow-Chisel Mortiser and Borer, Reversible Spindle Shaper, and 18-Inch Sanding Disc.

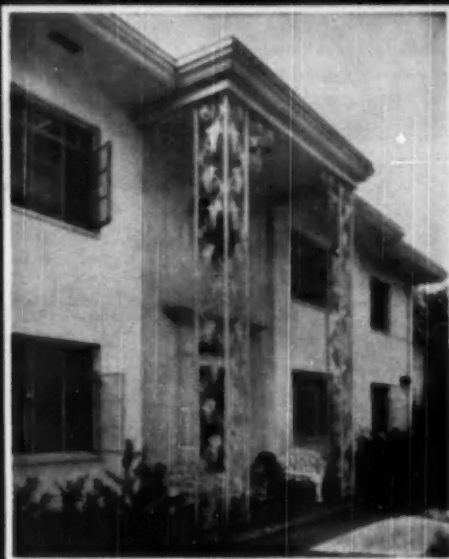


The
PARKS
Woodworking
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Dept. 30-A2, 1546 Knowlton St.,
Cincinnati 23, Ohio

Write for free descriptive literature.

MANUFACTURERS OF QUALITY WOODWORKING[®] MACHINES Since 1887



Bryans Apartments, Charlotte, N. C.
 Charles W. Conolly, Charlotte, N. C., Architect
 Southeastern Contractors Co., Charlotte, N. C., Contractor

HOPE'S WINDOWS

1818 *The Name Guarantees* 1950

In this southern apartment building, the broad eaves shelter the windows from the noon-day sun, and the wide-opening HOPE'S STEEL CASTMENTS give full ventilation.

In a northern building, the perfect operation and fit of HOPE'S WINDOWS would be valued for their weather-tight protection from chill winds and, in both north and south, owners report that maintenance costs are the lowest ever experienced. Builders, too, find that Hope's Windows are not expensive to install as compared to other construction of comparable quality.

HOPE'S WINDOWS, Inc.
 Jamestown, N. Y.

THE FINEST BUILDINGS THROUGHOUT THE
 WORLD ARE FITTED WITH HOPE'S WINDOWS

8 GOOD REASONS Why

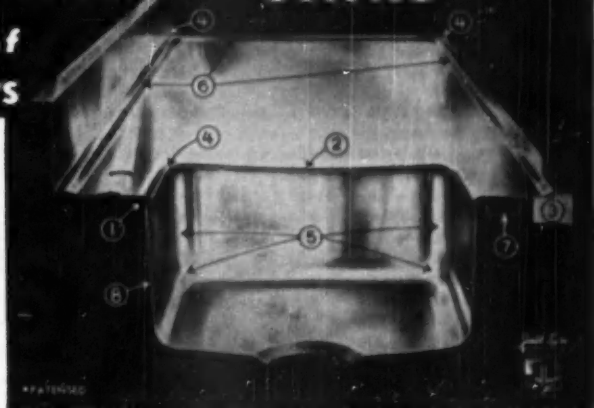
Just Line Radiluxe

STAINLESS STEEL
 SINKS

are **FIRST CHOICE** of
Architects and Builders

- 1 *Patented* Anti-splash Rim around entire perimeter of the bowl at point where bowl joins the drainboards, seamless welded and polished.
- 2 *Patented* Double Pitched Drainboards, gradually sloping lengthwise to the bowl and sidewise to center of drainboard.
- 3 Wood Frame around front and ends, facilitates fastening to the cabinets.
- 4 Seamless Construction, all joints welded and polished.
- 5 Radius corners in bowl—vertical radius $1\frac{1}{2}$ " at top tapering to $15/16$ " at bottom, all bottom horizontal radii are $15/16$ ".
- 6 All corners of raised edge are die drawn.
- 7 U-type structural channel extending the full length of the drainboard.
- 8 Sound Deadened on the underside to prevent undesirable metallic sound.

Radiluxe Sinks can be supplied in any size and shape and with either one, two, or more sink bowls—to meet individual requirements.



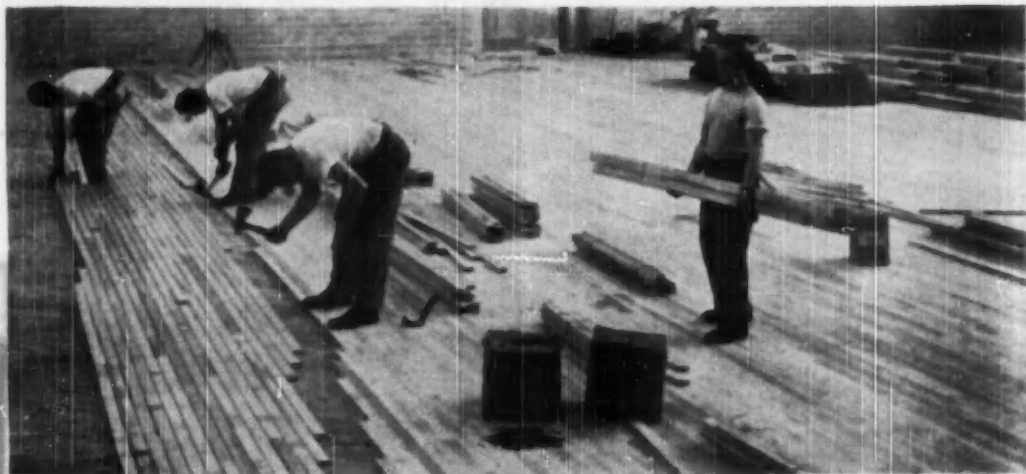
Write today for literature 8-12 and send us your specifications.
 We will gladly submit details and estimates.

Just Manufacturing Co.
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CONNOR LAYTITE MAPLE FIRST AGAIN

Laytite 25-32x2 1/2" Maple as laid in the new Elizabeth Waters Grade School, Fond du Lac, Wisconsin.

Laytite is made under Maple Flooring Manufacturers Association specifications and is famous for uniform quality. Write for prices.



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CONNOR FOREST PRODUCTS SINCE 1872

Catalogs

(Continued from page 154)

844—ALUMINA PROCESSING—A new booklet describing and picturing operations at its Hurricane Creek, Arkansas, alumina plant has been issued by Reynolds Metals Co., 2000 S. Ninth Street, Louisville, Ky. This 12-page, three-color booklet features a sequence of 10 pictures showing how pure alumina is extracted from raw bauxite ore. A history of the plant and company is also part of the booklet.

845—SPECIFICATION CARD—Specification card represents latest information concerning specification chemicals for the government and its contractors as well as general information regarding chemicals required for protective surface treatments of industrial metals. It is available from American Chemical Paint Co., Ambler, Pa.

846—ELECTRIC SAWS—Literature describing and illustrating portable electric saws is available from Independent Pneumatic Tool Co., Aurora, Ill. Features of the Thor "Silver Line" are shown.

847—HEAT CIRCULATING FIREPLACES—Drawings, photographs and specifications of Heatform, heat circulating fireplaces, are offered in literature available from Superior Fireplace Company, 1708-C East 15th St., Los Angeles 21, Calif.

848—RUBBER TILE—Wright Rubber Tile, a colorful new folder, includes for the first time the newest Wrightex colors. Offered by Wright Manufacturing Co., P. O. Box 6567, Houston 1, Texas, folder is printed in four colors.

849—"HOW TO PLAN HOME HEATING"—A 16-page booklet by this title offered by The Meyer Furnace Co., P. O. Box 989, Peoria 1, Ill., presents heating in story form, and is interesting and beneficial reading for the builder and architect.

850—PANELS WITH STEEL CROSS MEMBERS—Three different size panels as well as individual pieces used in constructing the steel cross members are illustrated in a new bulletin offered by Symons Clamp & Mfg. Co., 4249 Diversey Ave., Chicago 39, Ill. Also included is a chart showing hardware required for panels with steel cross members.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department

(December, 1950)

American Builder
79 W. Monroe St., Chicago 3, Ill.

Please send me additional information on the following product items, or catalogs, listed in this department:

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City

State

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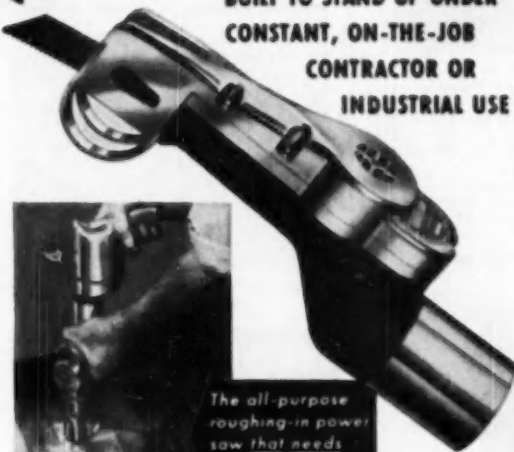
*Please note that occupation must be stated if full service is to be given.

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The all-purpose
roughing-in power
saw that needs
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- NO STARTING HOLE NEEDED... Simply place guide next to material and "rock" tool into an upright position.
- CUTS RIGHT THRU IMBEDDED NAILS... wood, plaster, iron pipe, sheet metal, "Transite" and most other materials—even in cramped quarters.
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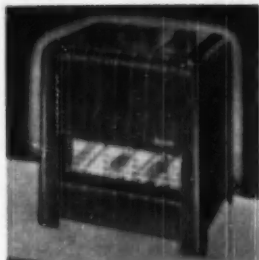
City _____ Zone _____ State _____

NEW PRODUCTS

(Continued from page 70)

GAS HEATER

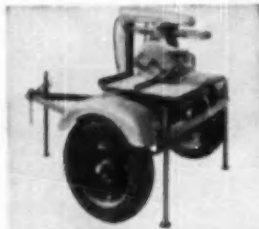
AB125028



New 85,000 B.T.U. capacity Temco gas heater is capable of warming three to five rooms, and is offered with a wide selection of automatic control accessories. Finished in beaver brown porcelain enamel, it features a Pyrex glass front and is equipped with double radiators. Convenient access door is located in right end of heater through which the pilot may be lighted and burner adjustments made. Approved for use with natural, manufactured or L. P. gas. Temco, Inc., Dept. AB, Nashville, Tenn.

MOBILE WOODWORKING SHOP

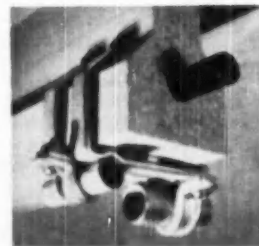
AB125018



Low-cost mobile woodworking shop, a trailer-mounted Delta Multiplex, brings factory production line economy on wheels to the job site. Builders can do much of their own millwork from mill-run lumber, since by changing tools on the spindle the Delta Multiplex can do over 125 different cutting jobs. Delta Power Tool Div., Rockwell Manufacturing Co., Dept. AB, Milwaukee 1, Wis.

HANGER FOR CONCRETE JOISTS

AB125023



Loadrip clamp hanger offers solution to the problem of attaching piping, conduit, ducts, furring strips and other suspended fixtures to underside of precast concrete joists. It consists of a simple, two-piece hanger that can be assembled and installed on standard precast concrete joist in a few seconds. No special tools are needed. Hanger grips just more firmly with every added pound of load. United Industries, Box 449, Dept. AB, Madison, Wis.

(Continued on page 160)

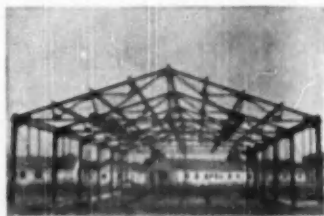
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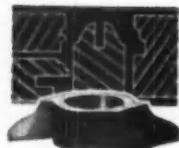


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What features do buyers like best? Mark C. Bane, builder and developer of Richmond, Va., decided to find out—before starting a new real estate development. He invited former purchasers of his houses to advise him on some twenty points. For wall construction 54% voted for dry wall construction over plaster walls.

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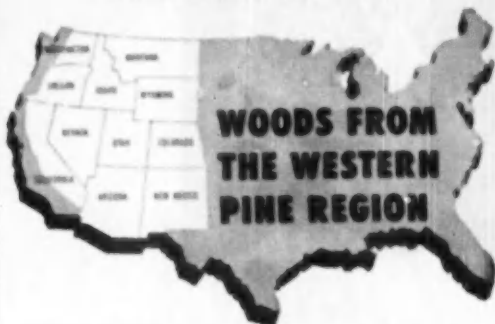
Standard Homasote (Big Sheets) ()	Wood-textured Homasote (Panels) ()
Striated Homasote (Tiles and Panels) ()	The Nova-Shingle and the Nova-Speed Shingling Clip ()
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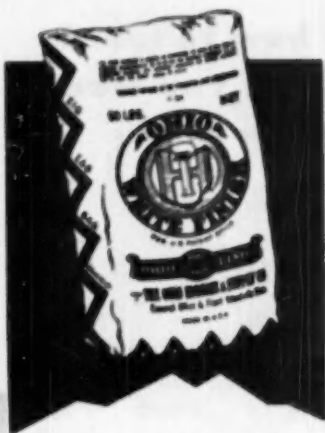
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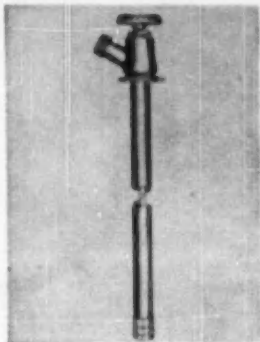
* and its twin brands:
HAWK SPREAD
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NEW PRODUCTS

(Continued from page 158)

OUTSIDE WALL FAUCET AB125030

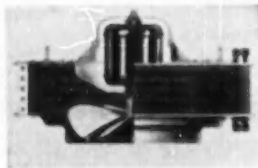


Weatherall outside wall faucet eliminates bother of shutting off water in basement before winter to prevent freezing of line in house. With this device, the valve itself is located inside the house although handle is outside in usual location. Faucet is easy to install. To replace present faucet, remove sill cock and replace with Weatherall. Existing hole in wall need not be enlarged. Made in 1/2 and 3/4 inch sizes and in 12 and 14-inch lengths. Rockford Brass Works, Dept. AB, Rockford, Ill.

ROTARY DRILL BIT AB125035

Cryo-Twist carbide-tipped rotary drill bit for drilling masonry materials has positive double dust lift. Two spiral low-angle flutes are turned in the steel drill body. Diameter of body is the same as diameter of the hole to be drilled, and for that reason powerful steel support is given to the carbide tip. Drills offered in sizes from 3/16-inch to 1-inch. The New England Carbide Tool Co., Inc., Dept. AB, 60 Brookline St., Cambridge 29, Mass.

PROJECTION UNIT HEATER AB125024



Over-all dimensions of Trane projection heater remain the same, but an attractive offset rail has been added to the bottom to give added rigidity and improved appearance. Only motor and housing-brackets protrude beyond top of unit. All bracing is done beneath top plate for added strength. Motor may be removed through top of unit or through discharge orifices on larger models. New series of heaters includes a new model, number 275-P which has a 35-inch fan and a 451,000 B.T.U. capacity. Capacities for other models range from 55,300 B.T.U.'s for No. 100P to 550,000 B.T.U.'s for No. 300P. The Trane Co., Dept. AB, LaCrosse, Wis.

TOOL DISPLAYS AB125021

To help dealers sell more Red Devil tools, three new display boards are now offered free to dealers for cost of tools displayed. One features wood scrapers and two feature painter's cutlery. Brightly colored boards are packed for eye-appeal. Red Devil Tools, Dept. AB, Irvington 11, N. J.

(Continued on page 162)

STOP HEAT LOSS with KORK-PAK...the INSULATING VAPOR SEAL



- Non-Extruding
- Water-Proof
- Greater Resiliency
- Low Material Cost

Install KORK-PAK at the slab-footing joint to prevent heat loss through concrete floor slabs in basementless houses and structures on grade—get maximum joint filling efficiency PLUS the highest insulating factor of any similar material. KORK-PAK's low cost and easy handling make it ideal for many applications such as Bill Vapor Seal, Glass Building Block Seal, Joint Filler, etc., in every type of construction.



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VAN-PACKER PACKAGED CHIMNEY

BUILDERS

- **SAVE MONEY**
 Costs up to 50% less than brick.
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 Hangs from ceiling or below joists. Use space underneath.
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 Install in 3 man hours or less.
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 Immediate delivery to job of complete chimney.

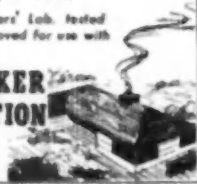
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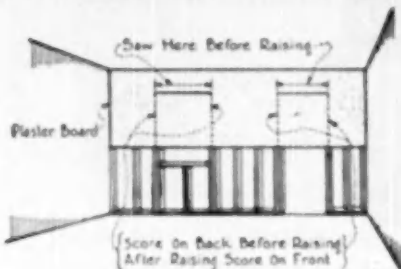
136 S. Clark St.
 Chicago 3, Ill.



AMERICAN BUILDER

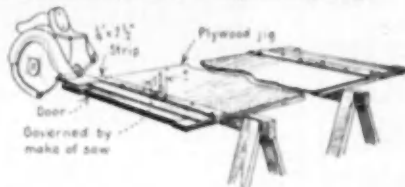
TECHNICAL GUIDE for Builders and Craftsmen

How to Cut Openings in Plaster Board



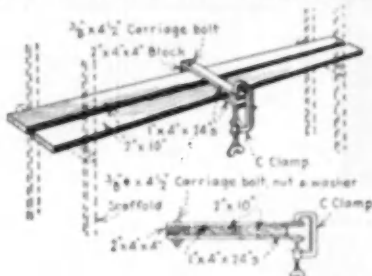
To prevent cracking or breaking, plaster board should be raised in position on the wall before cutting window and door openings. The horizontal cut over opening is slash-sawed with a keyhole saw, and the vertical side cuts are scored on the back before board is placed in position. After erection, the side cuts are scored again from the front. The scrap is then given a sharp blow with the hand to snap the gypsum after which it can be easily lifted out.—Submitted by John Mack, Elmira, N.Y.

How to Make a Door Squaring Jig



Make a plywood panel 1-3/16 inches shorter than door opening. Glue and nail 1/2 by 2-1/2 inch strip on top and bottom of panel as indicated in accordance with established distance required by portable saw. Set template on door and saw off ends.—Submitted by J. G. Jewell, San Mateo, Calif.

How to Make a Scaffold Plank Stiffener



With several men working on a scaffold a certain amount of spring or sag takes place in the horizontal planks. To eliminate this condition a plank stiffener is secured midway between the uprights as shown in drawing.—Submitted by Harry J. Hutchins, Lake Jem, Fla.

DECEMBER 1950

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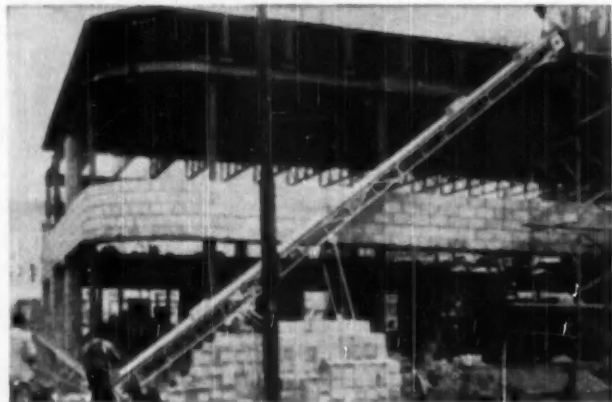
The new Dremel Model 2000 is a fast-cutting, finish sander. It offers for the first time in the building field, a top-quality electric sander at a remarkably low price. Truly a versatile performer, it sands dry-wall joints, smooths plaster, puts a satin-like finish on doors, woodwork, siding, etc. Rugged construction, trouble-free design—plus low initial purchase and operating cost—all demand your thorough investigation. Call your supplier, or write us for details.

DREMEL MANUFACTURING CO., 2414 18th Street, RACINE, WIS.

EVERY BUILDER NEEDS . . . EVERY BUILDER CAN AFFORD
THE NEW DREMEL ELECTRIC MODEL 2000 SANDER



COST-CUTTING PORTABLE ELEVATOR AMAZES BUILDERS · CONTRACTORS



Biggest news in material handling for contractors and builders is the new, low-cost, portable MULKEY ELEVATOR. Custom built and tailored to the requirements of the building trades . . . handles concrete blocks, bricks, mortar, sand, dirt, lumber, roofing, insulation, sacks, boxes, with ease. Strong as a bridge, yet one man handles and operates . . . easily trailed up to 35 miles per hour. Has patent-design clutch and brake assembly. Basic length, 24 ft., 17½ ft. maximum lift, 8 ft. extension available. Balanced up to 40 ft. approximate maximum lift 28 ft. One contractor reports . . . "my MULKEY ELEVATOR keeps 10 men constantly supplied with brick and mortar . . . it has paid for itself many times over." Write now for FREE LITERATURE AND PRICES!

SAM MULKEY CO. • 1621 Locust • Dept. C-1 • Kansas City, Mo.

NEW PRODUCTS

(Continued from page 160)

BATHROOM CABINETS

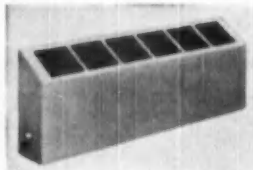
AB125019



Rieter bathroom cabinets, built to fit all bathrooms, are available in sizes from 16x22 to 18x30 inches, requiring wall openings of 14x18 to 16x26 inches. Clear-image plate glass mirrors, with or without etched design, are anchored with concealed screw posts that go all the way through the door for rigid construction. All mirrors have ¼ inch bevels and are easily cleaned. There is no mirror frame to catch dust or dirt. Mirror doors are of laminated Masonite. Glass shelves are provided. Rieter Woodwork Specialty Co., Dept. AB, Cedarburg, Wis.

CONVECTORS

AB125036



New Madine Type F12 convactor has over-all height of only 12 inches, for free-standing or recessed installation under picture windows. Available in 6- and 8-inch depths and in eight lengths ranging from 40 to 96 inches. Enclosures longer than 72 inches are designed with removable center supporting legs for greater strength and rigidity. On these lengths, dual dampers and lower grilles (optional) are available. Another new Madine convactor, Type S-14, is intended for heating bathrooms or other areas where heat loss is small or space limited. A sloping-top wall cabinet, the S-14, is 11 inches high, 4 inches deep, and is available in 10-, 18- and 26-inch lengths having steam ratings of 5, 10 and 15 square feet.

ALUMINUM SCREEN FRAME

AB125034



Aluminum screen is designed for framing Kaiser Aluminum shade screening, but may be used also with conventional wire cloth screen. It is readily assembled from framing sections measuring 15/16 inches wide by 7/16 inches thick, trim cover sections and cast aluminum corners. Frame and trim sections are roll-formed from Kaiser's 1305 aluminum alloy for high strength and finish. Sections for screen frame are supplied in 15-foot lengths. Kaiser Aluminum & Chemical Sales, Inc., Dept. AB, 1924 Broadway, Oakland 12, Calif.

(Continued on page 164)



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For A Complete Line of Nationally
Advertised Residential and
Industrial Doors and Operators

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 ATLANTA, Olive and Washington St., Decatur
 BALTIMORE, 5910 Falls Road
 BILLINGS, 1311 Fourth Ave., N.
 BIRMINGHAM, ALA., 2630 N. 12th Ave.
 BOONTON, 430 William St.
 BRIDGEPORT, 736 Railroad Ave.
 BUFFALO, 587 Window Ave.
 CADILLAC, 313 Haynes St.
 CANADA, Ottawa, Ontario, 335 Roosevelt Ave.
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 CHARLOTTE, 1730 Tryon St.
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 CHICAGO, 1431 W. Lake St.
 CINCINNATI, Montgomery and Lexington
 CLEVELAND, 2086 E. 70th St.
 COLUMBUS, 554 West Rich St.
 DALLAS, 5627 Yale Blvd.
 DENVER, 1001 Bennett
 DES MOINES, 1210 Neo Way
 DETROIT, 4651 Beaufort
 EL PASO, 1630 E. Missouri
 ELKHART, 1714 S. 7th St.
 EVANSVILLE, 421 Fulton Ave.
 HARRISBURG, PA., 31 S. 31st St.
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 INDIANAPOLIS, P.O. Box 6028
 JACKSON, MISS., P.O. Box 2021
 JACKSONVILLE, 2707 Main St.
 KANSAS CITY, 1730 Oak Street
 KNOXVILLE, 1915 W. Cumberland Ave.
 LAWTON, 18 "C" St.
 LITTLE ROCK, 924 E. Third St.
 LONG ISLAND CITY, 32-18 37th Ave.
 LOS ANGELES, 107 Arona St., El Segundo Cal.
 LOUISVILLE, 2425 Lexington Rd.
 LUBBOCK, 2217 Clavis Rd.
 MASON CITY, 521 First National Bank Bldg.
 MEMPHIS, 596 Madison
 MERIDIAN, 2211 Fourth St.
 MILWAUKEE, 1040 W. Forest Home Ave.
 NASHVILLE, 915 Church St.
 NEW ORLEANS, 1537 Algopment
 NEWARK, 35-35 Broadway
 NEWTON UPPER FALLS, 90 Linden St.
 ODESSA, 106 N. Belmont St., Box 829
 OKLAHOMA CITY, 4626 N. W. 10th St.
 OMAHA, 4001 Dodge
 PHILADELPHIA, 840 Coffman St.
 PHOENIX, Box 2758
 PITTSBURGH, 86 S. 29th St.
 PORTLAND, OREGON, 516 S. W. First St.
 ROCKFORD, 615 Salem Ave. S. W.
 ROCKESTER, N. Y., 422 Scin St.
 ST. LOUIS, 1617 Lafayette
 ST. PAUL, 180-184 E. 6th St.
 SALT LAKE CITY, 156 W. Second S. St.
 SAN ANTONIO, 477 Westwood Drive
 SAN FRANCISCO, 683 Mission St.
 SAVANNAH, 12-20 Bay St. W.
 SCRANTON, 313 Mulberry St.
 SHREVEPORT, 111 Patton
 SPRINGFIELD, ILL., 447 N. Walnut
 TACOMA, P.O. Box 1614
 TORONTO, 1011-15 Utica
 TOLEDO, 1215 So. Everston St.
 UTICA, 1321 Ridger St.
 WASHINGTON, 610 Hall St., S. W.
 WICHITA, 1445 S. McLean Blvd.

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the fastest, most economical way
 to give your houses
 fine quality screens!



Guaranteed by
 Good Housekeeping
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SNAPS INTO PLACE FROM INSIDE! Flick of a finger installs Durall. No ladder climbing, no side frames to cut.



ALUMINUM! NO RUST AND NO PAINTING! Durall keeps its good looks, will not rust or stain house.



ROLLS UP FOR STORAGE! Durall swings free for window washing... makes compact roll for storing.

Crawford Door Company

Main Plant: 22-401 St. Jean Ave., Detroit 14, Michigan

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DURALL Tension Screens are made by one of the oldest manufacturers of wire screening. For complete information, write the New York Wire Cloth Co., Dept. AB-12, 445 Park Avenue, New York 22, New York.

Avoid costly errors
with this . . .

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Level Transit**



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complete with tripod



Now David White offers you, at the lowest price anywhere, the finest of Universal Level Transits with $4\frac{1}{2}$ " protected arc, internal focusing and coated optics.

Don't wait if you're in the market for a new all-round practical builder's instrument — see the improved new David White Model 3000 Universal Level Transit now.

You'll find this instrument properly used will be your best insurance against costly layout and building errors. The new $4\frac{1}{2}$ " protected arc means easier, more accurate readings, less likelihood of instrument damage through accident. Internal focusing assures you of dust and dirt-free inside lens surfaces, better protection for optical parts and mechanism. Coated optics mean clearer, distortion-free images, sharper definition, positive readings at greater distances and under adverse conditions. Instrument spindle supported on ball bearings for perfect horizontal adjustments.

Ask your nearest dealer to give you complete information on this and other fine engineering instruments. Or write direct to David White Co., 311 W. Court St., Milwaukee, Wis.

We offer complete, prompt repair service on all makes of instruments — levels, transits, theodolites, etc.

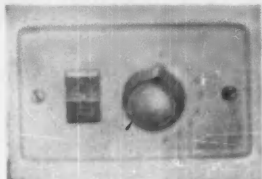


Prices subject to change without notice.

NEW PRODUCTS

(Continued from page 162)

MASTER SELECTOR SWITCH AB123002



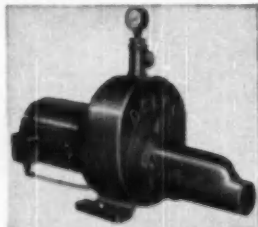
Combination selector switch and control switch, CE2452, enables user to select any one of nine different circuits and operate them separately, or, with one sweep, turn on or off all nine circuits. For 21-volt remote-control wiring systems, the switch is of the rotating type, mounted on an ivory colored switch plate together with a separate single pole, double throw momentary contact type. Useful in such spots as the master bedroom, front and rear entrances, kitchen, or other convenient areas in the home. General Electric Co., Construction Materials Dept. AB, Bridgeport 2, Conn.

SNAP-IN BRIDGE AB123025



Welco Snap-in bridge consists of two channels, one of which telescopes into the other and locks into holes located for either 16, 12 or 8-inch center joints. When first joined the two units form an angle. The points at one end should engage just about $\frac{1}{8}$ inch below subfloor while points on the other end engage adjacent joint near the bottom. Pressure is then applied upward at fulcrum until bridge snaps into place. Made of 20-gauge steel. Welco Co., Dept. AB, 952 Addison St., Chicago, Ill.

CONVERTIBLE PUMPS AB123010



Horizontal Delco-Jet convertible pumps, available in $\frac{1}{3}$ and $\frac{1}{2}$ -H.P., are quickly and easily converted from shallow well to deep well operation. Shallow well capacities range from 480 to 790 gallons an hour. Deep well from 200 to 870 gallons an hour. Pump does not have to be located directly over the well. Motor and main working parts of pump are designed for easy removal for repair without disturbing any of the plumbing or pipes. Delco Appliance Div., General Motors Corp., Dept. AB, Rochester 1, N. Y.

(Continued on page 166)

**VENTO
STEEL
Casement
WINDOWS**



They Give-

Effortless Operation

Gracefully designed, easy-moving Roto or Lever type operators and locking handles, as specified. Extension type hinge for ease in cleaning.

Weatheright Seal

Double contact construction gives snug fit. Positive cam action locking handle insures weathertight seal around perimeter of the ventilator.

Lasting Service

Solid steel sections; all corners electrically welded; cleaned and prime painted. A permanent installation.

Write us for full information, also facts about Vento steel basement, utility and barn windows, Vento steel lintels for cost-saving block construction.

VENTO Steel Products

CO., INC.

247 COLORADO AVE. • BUFFALO 15, N. Y.

AMERICAN BUILDER



Model 1000 BONDACTOR

Available to Meet Your Needs . . .

Model #1000-S BONDACTOR
Operates with a 105 CFM air compressor.

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Operates with a 210 CFM or larger air compressor.

How!
New Opportunities . . . New Profits for You

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You Can Do It Better . . . More Profitably
with **BONDACT** Process Equipment

Expand and Profit with BONDACTOR These 2 Ways

1. New Construction. Construction with the BONDACTOR is easier, faster, better. It costs less to build . . . and you profit more. You get the big savings in time, labor, money . . . and you keep the profits. What's more, you can take advantage of new methods and designs . . . and you can build without the use of many critical materials.

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AIR PLACEMENT EQUIPMENT CO. 2325 Southwest Blvd., Kansas City 8, Mo.

When you build with RILCO . . . we do half the work!

RILCO TIED ARCHES



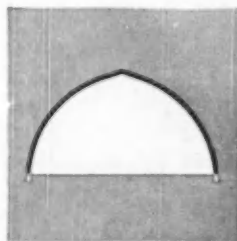
This Type 70 Tied Arch is placed 2' O.C. and serves as roof rafter as well as ceiling joist. Each unit is precision-cut and drilled at the factory so your crew need do nothing but place them in position. All the necessary hardware is furnished. Rilco Tied Arches are made in sizes up to clear spans of 60 feet.

RILCO BOWSTRING TRUSSES

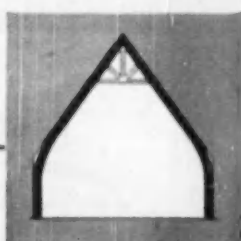


These sturdy units come to the job knocked-down or assembled ready to be swung into position. No on-the-job cutting or fitting to slow you down. Upper and lower chords are glued-laminated kiln-dried Douglas Fir. Web members are solid timbers. All hardware is furnished and can be installed without special tools. Rilco Bowstring Trusses are made in sizes up to 130 feet clear span.

RILCO TYPE 54 and 59 ARCHES—Excellent for airplane hangers and similar structures where interiors must be free of supports. Rilco arches provide sturdy, joint-free strength from foundation to ridge.



RILCO CHURCH ARCHES—Rilco makes many designs, all distinguished for their graceful curves and the beauty of their graining. Rilco engineers will gladly develop special designs for specific structures.



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WORKS WONDERS
WITH WOOD

Laminated PRODUCTS, INC.

1647 FIRST NATIONAL BANK BLDG., ST. PAUL 1, MINNESOTA

BONDEX does both

CEMENT PAINT



ADDS LIVABILITY... by offering moisture protection millions know they can count on! No other cement paint has so many satisfied users... so much word-of-mouth advertising! When you say "BonDEX"—it's accepted as the Best!



ADDS SALABILITY... For BonDEX comes in 12 beautiful colors as well as gleaming white. It decorates as it protects... adds beauty and distinction to masonry surfaces inside and out! Sales become easier when you use BonDEX.

BONDEX users are BonDEX boosters! That's why it is the best-known, best-accepted brand on the market... **OUTSELLS ALL OTHER CEMENT PAINTS COMBINED!**

BonDEX seals the surface of masonry—protects against moisture both indoors and out! It guards against surface disintegration. It adds color, beauty... satisfaction and saleability to all types of masonry buildings.

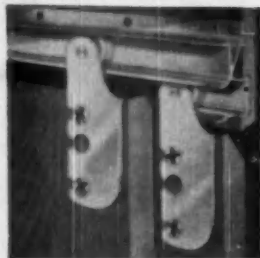


THE REARDON COMPANY: St. Louis 8
Chicago 9 • Los Angeles 21 • Bayonne, N. J. • Montreal 1

NEW PRODUCTS

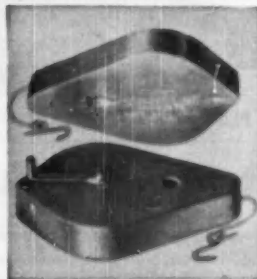
(Continued from page 164)

SLIDING DOOR HARDWARE AB123013



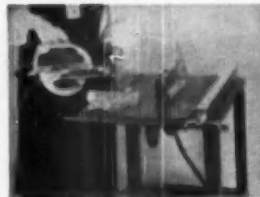
KannaTrack Series 275, an improved hanger for bypassing cabinet and wardrobe doors, has a heavier double track extrusion and an improved nylon-wheeled hanger, countersunk on both sides. This permits doors to be mounted in two positions in relation to the track, thus conforming with modern flush panel design. Designed specially for lightweight $\frac{1}{2}$ " or $1\frac{1}{2}$ "-inch bypassing cabinet, show case or wardrobe doors. Jay G. McKenna, Inc., Dept. AB, Elkhart, Ind.

CHALK-LINE AND PLUMB BOB AB125033



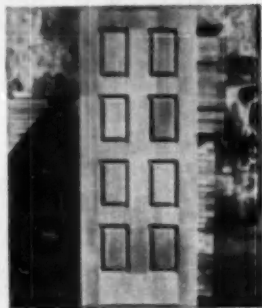
An air tight case for holding both line and pigment is a feature of the new "Strait-Line" self-chalking chalk-line box. Containers have self-locking handles that fold flat after chalk line has been pulled out, used and reeled in. Flat position of handles when locked simplifies pocket carrying as well as storage in tool boxes. Chalk line box may also be used as a plumb bob. Furnished with 50-foot line. Strait-Line Products, P. O. Box 417, Dept. AB, Santa Ana, Calif.

DUAL-PURPOSE SAW AB125030



Model 71 Guide-Master power saw, with a 7-inch blade, permits precision angle and bevel cutting. The saw easily attaches on the saw table and can be removed again to operate as a maneuverable portable saw. It eliminates the necessity of extra equipment by making it possible to do bench and outside work with one tool. Saw will frame 2-inch material at a 45 degree angle and cut from 2 $\frac{1}{2}$ inches to $\frac{1}{2}$ -inch at 90 degrees. Saws and tables are available separately. Mail Tool Co., 7717 S. Chicago Ave., Chicago 19, Ill.

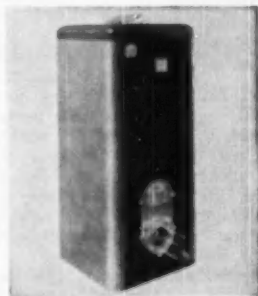
AMERICAN BUILDER

RAISED PANEL DOOR**AB125014**

A special Malorkay door of raised panel design has been added to this firm's extensive list of designs. The door has eight equal panels raised on both sides, manufactured in three sizes of 1 1/2-inch thickness. Sizes are 2 feet 6 inches by 6 feet 8 inches, 2 feet 8 inches by 4 feet 8 inches, and 3 feet by 4 feet 8 inches. Available in both "A" and "B" grades, they may be ordered pre-finished and rain sealed. M and M Wood Working Co., Dept. AB, Columbia Blvd., Portland, Ore.

SASH HOLDER**AB125029**

Model VSH-20, a 1/2-inch size Vikre sash holder, is designed for plain rail sash and has the same patented features of the standard 1/2-inch Vikre Model VSH-57. Spring tension type holders of both these models are fully enclosed to eliminate sticking and binding. Holders require one hole drilled in the sash. Patented steel spring tension is adjustable. J. N. Vikre Co., Inc., Dept. AB, Minneapolis, Minn.

VERTICAL STEEL BOILER**AB125003**

New Kewanee Cottage boiler, for oil or gas firing, is rated to produce 77,000 B.T.U.'s and capable of producing enough heat to take care of overloads of 50 per cent and more without sacrificing high efficiency. Solidly welded in one piece to A.S.M.E. Code, with 9-gauge tubes. Compact in size. Inexpensive. Kewanee Boiler Corp., Dept. AB, Kewanee, Ill.

UTILITY DRILL**AB115026**

Lightweight, \$17 utility drill comes in handy carrying case with complete kit of drill accessories, including a 14-inch drill steel and three assorted-size rock bits, a star drill adapter and 25 feet of air hose. Designed for use by plant maintenance crews, this self-rotating pneumatic hammer drill weighs only 19 pounds. Used for placing anchor bolts, running conduit, cable, pipe and many other jobs, unit will drill concrete, brick or stone with standard drill steel, a star drill adapter furnished with drill accommodates standard star drills. A special stop-rotation feature converts the S17 to a lightweight chipping hammer or pick. Gardner-Denver Company, Dept. AB, Quincy, Ill.

DECEMBER 1950**DRAMEX**

COLORS LIKE PAINT
RESURFACES
LIKE PLASTER!

INTERIOR FINISH



ONE COAT... fills plaster cracks—covers blemishes—gives you a **NEW WALL**, beautifully colored and finished. It's ideal for reconditioning and redecorating old walls—inexpensively!



ONE COAT... turns wallboard into beautiful "living room" walls. Many beautiful surface finishes are possible. And it's so easy to apply. Ideal for "dry wall" construction in new homes or old.

DRAMEX... mixes with water—stays mixed without restirring—colors without streaking—is bluish-proof—dries in 4 hours—becomes plaster-hard—requires no sizing! **AND DRAMEX WALLS CAN BE REPAINTED WITH OIL PAINT!**



THE REARDON COMPANY, St. Louis 8
Chicago 9 • Los Angeles 77 • Bayonne, N. J. • Montreal 1

**50
YEARS**



WITHOUT REPLACEMENT

Your customers can be sure of a lifetime of service when you recommend windows hung with Spot Sash Cord. Nearly all the Spot Cord installed during the last 50 years is *still in service* today! Spot Cord is inexpensive to install . . . requires practically no maintenance, replacement or adjustment . . . cannot get out of order.

For long range customer satisfaction, for years of quiet, efficient operation, recommend weight and pulley hung windows using Spot Sash Cord.

Identify Spot Cord by the Colored Spots, our trade mark (Reg. U. S. Pat. Off.)

Samson
CORDAGE WORKS
Boston 10, Massachusetts



Suberson . . .

(Continued from page 146)

abroad in the land. A slow-down or any semblance of a return to sanity is heralded as the sure sign of a depression!

Whenever any nation becomes obsessed with the erroneous belief that there is no other trend but the up of boom-time and that a leveling off or a decline spells a depression (as is so frequently voiced these days by business men, labor leaders and politicians) you can bet your bottom dollar we are no longer made of the stuff that it takes to build a strong nation.

We now are facing the most dangerous situation in the history of our nation. Labor costs are forced up at re-occurring intervals. Business men follow suit. The consumer pays the inflated cost . . . but only as long as he is able to do so. Finally something will happen, and that, of course, is exactly what "Good old Joe" is hoping and praying will take place . . . one of the greatest busts the world has ever seen. Whoever wants to, can then move in and pick up the pieces.

The paying limit applies to all people and to all products. None can escape. A few evenings ago, we visited at considerable length with an astute young man who had started in the restaurant business with \$1500 cash and \$8000 borrowed money. He had been told by his bankers he should pay back the \$8000 in at least two years, but he went them one year better. He paid it off in twelve months and has become one of the city's most successful business men.

"What is your average meal check?" I asked.

"Thirty-six cents," was his reply. "Furthermore that's as high as we can go. When we get beyond that point they begin to carry their own lunches and at that exact time we run into trouble. We have 96 seats in our second restaurant and feed 2200 people a day. You don't have to have a diagram to figure out what happens when turnover begins to diminish."

All of which may seem to be far removed from the housing industry. But is it? With the price of each and every one of the many component housing parts edging up constantly the time was rapidly coming when houses would be priced out of the market.

Of course it didn't make much difference what the price was if someone else furnished the money or the credit so that the obligation could be liquidated with rent-like payments. On the other hand, excessive demand, created by free-and-easy-credit was feeding the inflationary flames to the point

(Continued on page 170)



A long-time favorite with craftsmen, the No. 923 Bit Brace with the new self-centering chuck is now better than ever. It saves time . . . speeds work. Just drop the bit into the square socket, tighten the chuck, and the bit automatically centers itself. Securely seated in a square steel socket, it's ready for any boring job. For fast, smooth action . . . long, dependable service, get the No. 923 with the new self-centering chuck . . . it has everything you want in a Bit Brace. Stanley makes a complete line of Bit Braces. See the style and size you want on display at your local dealer's.

OTHER WORK-SAVING FEATURES. Head spins on ball bearings and a bronze bushing. Cocobolo hardwood handle and head. Nut and cotter pin lock chuck in place. Forged Universal jaws take both round and square taper chank bits to 1 1/2". 5 sizes — 6" to 14" sweep.

STANLEY TOOLS, NEW BRITAIN, CONNECTICUT

THE TOOL BOX OF THE WORLD

STANLEY

Reg. U. S. Pat. Off.

**HARDWARE • TOOLS • ELECTRIC TOOLS
STEEL STRAPPING • STEEL**

AMERICAN BUILDER

How to Avoid Pitfalls in Painting Concrete and Masonry

Clean walls, wetted surfaces and proper curing are keys to success

Since concrete and concrete products are playing an ever-increasingly important part in the modern building industry, the *American Builder* considers it appropriate to review the techniques for painting concrete and has obtained the counsel of *Harry L. Vanderwerp*, chief chemist of the Medusa Portland Cement Company, for this purpose.



FIRST COAT—WRONG—the painter here is applying a coat of cement paint without preparing the surface. When the plaster drippings and other particles fall off wall the paint coat will come off the wall too



FIRST COAT—RIGHT—the right way to paint a masonry surface is to prepare it initially by giving the wall a thorough cleaning, removing loose particles such as dirt, dust and efflorescence with a scrub brush

According to Mr. Vanderwerp, painting concrete falls into two categories: first, painting concrete masonry units or monolithic concrete walls; second, painting concrete floors and steps.

Painting Concrete Walls

Generally the rules for decorating concrete or concrete masonry unit walls also govern the painting of porous surfaces of masonry, stucco, common brick and rough plaster (except gypsum plaster). Painting concrete and concrete masonry unit walls commonly found in basements, block houses and industrial buildings, garages and fences is most satisfactorily done with a white cement-water paint powder (known to the building trades as cement paint) consisting of white portland cement and titanium dioxide and/or zinc sulfide and other ingredients. This powder should meet the requirements of federal specifications. A good job can be expected to last up to seven or eight years, but the success depends upon the care and curing of the original application.

Importance of Preparation

The first important step is the preparation of the surface to be painted. Mr. Vanderwerp has stressed that a wall should never be painted without first giving it a thorough surface cleaning, removing all dirt, dust, loose particles and efflorescence. Surfaces should be scoured with a stiff wire brush, particularly along mortar joints and cracks to insure removal of accumulated dirt and loose particles in these indentations. Once loosened, dirt can be washed or hosed off with clean water. Use of soaps or cleaning compounds is not advised because, unless completely removed, they prevent proper bonding of the paint.

Remove Old Coatings

All old coatings of oil paint films, enamels, varnishes or glue sizing and other coatings (with the exception of old coatings of sound well-bonded cement paint) must be removed since these coatings prevent the paint from adhering

(Continued on page 171)

All the Surfaces of the Sills . . .



Lowell, Mass.
Veterans Housing
Project

. . . Were Brush Treated With

CUPRINOL[®]

**STOPS ROT
AIDS DIMENSIONAL STABILITY**

For the recent Veterans Housing Project developed by the Lowell, Mass., Housing Authority the architects were Krokyn & Browne. They, and the Housing Authority, appreciated the greatly increased value of treating vulnerable construction lumber with Cuprinol, and the low cost for its application. The general contractors were Davison Construction Co.

The specifications, therefore, called for all surfaces of sills, studs to above the first floor level, and all ends of joists over walls and bearings to be brush coated with #10 Cuprinol.

Cuprinol is a long established liquid wood preservative with copper, or zinc, naphthenate base that stops rot and termites, reduces the swelling and shrinking of wood, and minimizes grain raising and separation checks in plywood. Cuprinol is easily applied on-the-job by brush, spray or dip, and is completely harmless to the skin when handling. It is widely carried by lumber yards and building supply dealers.

See Sweet's File for Builders 28/4 or write for information on types of Cuprinol for specific use.

CUPRINOL Division, Darworth Incorporated
56 Maple Street
Simsbury, Conn.

Painting Concrete . . .

(Continued from page 169)

to the wall. Old organic coatings can be removed with a solution made with 1½ pounds of caustic soda mixed with one gallon of hot water—or, more effectively, by sandblasting. The freely-applied caustic soda solution loosens the film so that it can be washed away with water. Whitewash



FIRST OR SECOND COAT—WRONG—although the painter has carefully cleaned the wall, he is painting it without wetting the masonry. This may cause early failure of the paint.

FIRST OR SECOND COAT—RIGHT—wetting the masonry with a fine spray prolongs life of paint by controlling surface suction and providing a moisture reserve for hydration.

calcimine and cold water paints can be removed by washing the surface with a scrub brush and a solution of one part muriatic acid and five parts water after which the loosened finishes are hosed off. When acid or caustics are used, rubber gloves should be worn by the worker. In all cases, the mechanic must be assured that the surfaces are thoroughly washed off with water to remove all traces of the caustic soda or acid.

Application of First Coat

Immediately prior to the application of the first coat, the wall is thoroughly wetted, then allowed to drain. This controls surface suction and aids in providing a reserve of moisture to aid the hardening process of the paint. A hose adjusted to a fine spray is well suited for this purpose. Superficial dampening with a brush dipped in water is not effective. When the paint is applied, the surface should be moist but not without free water; some suction is necessary and will not be provided if the wall is dripping wet.

The cement paint is made ready in keeping with the manufacturer's directions, but, since cement paints will not remain in a usable state much longer than two hours after being mixed with water, only enough paint for immediate use within a few hours should be prepared at one time. Keeping the mixed batch in a tightly covered container (from which the paint bucket is filled) prolongs the period of use.

Scrubbing in First Coat

A common pitfall in the application of cement paint, Mr. Vanderwerp opined, is the failure to scrub in the first coat on rough surfaces. This scrubbing works the paint into voids, provides a continuous paint film free from pinholes or other openings and produces a good bond between the paint coating and the wall surface and between coats of paint. An ordinary scrub brush is used. For smooth concrete surfaces, a bristle, whitewash, calcimine, Dutch or wall brush is adequate.

Cement paints may be applied with spray guns, but tests have shown that where waterproofing is a major factor, the best results are obtained by scrubbing the paint into the surface.

Need for Curing

As soon as it is possible to do so without damage to the finish, the first coat should be fine-sprayed and maintained

(Continued on page 173)

This is the way to balance windows . . . and weatherstrip them too!



SASH BALANCE AND WEATHERSTRIP UNIT

Do two jobs at once on any double-hung window. Here is an installation on an economy frame giving an all metal sash run. Or simply "cap" old or new wood parting beads. Allmetal Sash Balance give stable sash—provides finger-tip control—cuts labor and material costs and provides better windows by weatherstripping as well as balancing. Send for complete information now.

ALLMETAL WEATHERSTRIP CO.

2243 North Knox Avenue, Chicago 39, Illinois

Gentlemen: Please send me complete information and prices.

Name _____

Address _____

City _____

REZTOR

*the World's Largest
Selling Gas Unit Heater*



Hang from ceiling
or install on floor



**You'll have
less sales resistance
because IT'S BUILT RIGHT
AND PRICED RIGHT**

Give customers what they want, and you make sales. Reznor gas unit heaters do just that with graceful design, attractive finish, full automatic safety features, and easy serviceability. If you're not selling Reznor heaters today, write at once, or see your Reznor Distributor.

REZTOR MANUFACTURING CO.
17 UNION ST. - MERCER, PENNA.
Send me 30 page catalog in full color

Name _____
Firm _____
Address _____
City _____ Zone _____ State _____

Building Center Provides Office, Yard Facilities For Small Contractors

Two years ago in Santa Monica, Calif., an ordinance was discovered and put in force which prohibited contractors from using their residences as business offices. When they were no longer able to keep trucks on their premises or to list their residence phones for business purposes, some of the smaller contractors were faced with giving up their operations. To prevent this, Joe Waugh, present executive secretary of the Bay Builders Exchange, took the following action:

Formed a company to build a service yard with storage facilities for builders who had previously operated from their homes; and found a well-located 120x640-foot piece of ground which he leased for 13 years with an option to buy in five. Formed a \$100,000 corporation and started to sell 1,000 shares of stock to persons in the industry for \$100 per share. \$25,000 worth proved to be enough for the project, so sale was dropped.

On the property Waugh built 38 20x24-foot concrete block buildings adjoining each other in two rows. Each structure has a 20x24-foot open space in front. There are a few "doubles," buildings of the same size but with an additional 20x45 foot space alongside.

Singles rent for \$35 a month, doubles for \$45. They have metal roofs and metal sliding doors. The yard is enclosed by a steel fence and is flood-lighted at night.

The office of the Bay Builders Exchange is on the property and Waugh has his office there. The tenants receive telephone service, mail, and can arrange for deliveries to their units when they are absent. As an added feature, Waugh plans to build a showroom across the front of the property.

Booklet on J. C. Nichols Gives Foundation Program

A booklet, "Footprints Across America," about the work of the late J. C. Nichols, dean of American community builders, and the program of the J. C. Nichols foundation, was recently published by the Urban Land Institute, administrators of the foundation.

The Nichols Foundation will make an annual award to an individual or group in the field of urban, community and neighborhood development which has made "a significant contribution to the amenities of urban living." Other activities using foundation funds are also contemplated.



SAVES TIME

Best shows how Symons System saves time in erecting and stripping forms. Bolt passes through 2 x 4 studs and tie legs. Wedge secures the assembly. The simple device cuts forming time 30%.

SAVES LABOR

Harry G. Dabring, Foreman, Taylor Brothers, South Bend, Ind., states "Seven men set up the forms for a 26' x 27' foundation in one hour and fifteen minutes."

SAVES COST

With time and labor cut in two... Plus savings in nails, spreaders, walers and bracing... Plus for greater reuse of forms... Costs drop to a new low.

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BARRACKS
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(No Brackets Needed)

- * Roll like a ball in a self-cleaning track. Bearings cannot pile up or wear unevenly. Factory lubrication. Storm Apron and weather strip prevent rain, sleet and snow from washing down behind the door from above.
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Please send me complete details on Contractor's Premiums.

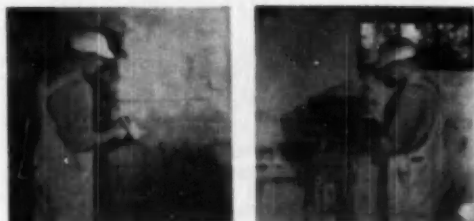
Name _____
Address _____
City _____ State _____

AMERICAN BUILDER

Painting Concrete . . .

(Continued from page 171)

in a moist condition for 24 hours. This first coat should be damp when the second coat is applied. The second coat on all surfaces is applied with an ordinary bristle, whitewash, calcimine, Dutch or wall brush. It is as equally important to cure cement paint as it is to cure concrete. The second (and



PAINTING OLD COATING—WRONG—painting over an old coating such as ordinary oil paint or whitewash should be avoided since such coats prevent cement paint from bonding.

PAINTING OLD COATING—RIGHT—old coating of points should be removed, be-fore painting, with acid or by sand-blasting to assure a bond.

other coats) must be sprinkled two or three times per day for at least two days with a fine spray.

Paint must not be applied in temperature under 40° F. nor should it be exposed to rain until after it has hardened.

Painting Concrete Floors

Mr. Vanderwerp believes that there is only one practical way to paint concrete floors and steps—on which cement paints are not generally used since traffic causes the paint to chip or flake off. However, a recently developed coating with a base of thermoplastic rubber resin proves successful, when properly applied, on concrete floors, Mr. Vanderwerp has stated.

Rubber base paints will give long-lasting finishes, Mr. Vanderwerp continued, if the concrete is first properly etched; this is essential whether the base be new or old concrete. A 10 per cent solution of muriatic acid should be poured on the concrete floor, allowed to stand for 10 minutes and then thoroughly hosed off with clean water and allowed to dry. This roughens the concrete and forms teeth so that the rubber base coating can key into the concrete. When used on old floors, it is important that all oil, grease and soap—for example, around laundry trays and work benches—are removed with a lye solution prior to etching with muriatic acid.

The use of two coats is necessary for satisfactory results; a third coat is strongly recommended for floors subject to heavy wear. The second coat (and third) is not applied until the preceding coat is dry to the touch. After the final coat is applied, the floor should not be used for three days. Painting below ground with the rubber base paint requires maximum ventilation since moisture condensation retards bonding and hardening.

In any event, a long-lasting, beautifully finished wall or floor demands only adequate care in the original application.

Home Builders Keep FHA in Black

The Federal Housing Administration has had a net profit of \$161,480,891 over operating expenses in its 16 years of existence. FHA gets its income from premiums paid by home buyers on insured mortgages, plus a \$20 to \$45 fee charged home builders for inspection of homes, while under construction.

DECEMBER 1950



ROBERTSON

Bermuda TILE FOR PATTERN

Now you can have the permanence of tile, with all the design freedom that wallpaper gives you. Four delightful patterns in 4 of our most popular colors give you 16 different architectural or decorative treatments. And think of the results you can guarantee! A surface which never needs waxing, polishing or painting. A surface which acids or harsh cleaning agents can't harm or stain. A surface which is absolutely waterproof and fireproof. Remember, too, the initial cost of Robertson Bermuda Tile is its only cost!

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MANUFACTURING COMPANY
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Ualco

This year promises to be a truly great year for institutional building. To get your share make your bids stand out by specifying **Ualco Lifetime® Aluminum Windows** — Casement, Hopper, Twin-sul, Basement . . . over 500 standard and modular sizes and variations. All Ualco Lifetime® Aluminum Windows meet the highest standards . . . and chop a substantial amount from construction costs. *Only Ualco offers Aluminum Casement Windows in Modular Sizes! Mail coupon, today . . . it'll be well worth your while to get complete details . . . NOW!* See our catalog in Sweet's Files.
*Registered U. S. Pat. Off.



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Today!

UNION ALUMINUM COMPANY, Inc.
Department A-123
Sheffield, Alabama

Gentlemen: Without obligation, please send me your latest catalog. Please check 1 on an
 Architect Building Supply Dealer Building Contractor.

Name _____ Title _____

Company _____

Street _____

City _____ State _____

UNION ALUMINUM COMPANY, Inc.
SHEFFIELD, ALABAMA

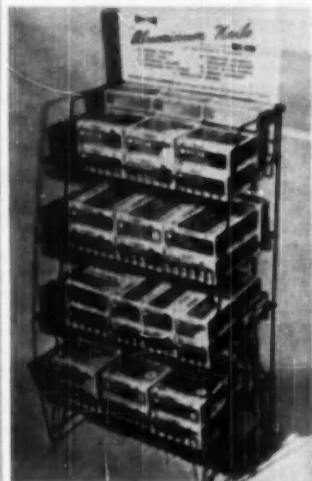
Circle 12 on Reader Service Card

Increasing Uses Boost Market for Aluminum Nails

Aluminum nails, once considered only a substitute for steel when the latter was in short supply, are receiving increased recognition as being advantageous for a number of applications, including wood siding, gypsum lath, cedar shakes, cedar shingles, asbestos roofing and siding, insulated siding, slate and tile roofing and aluminum roofing. Their use is particularly desirable where prevention of rust and stain is important.

Aluminum nail manufacturers point out that because of this resistance to stain and rust, putting or counter-sinking is not required which can effect considerable savings.

In accordance with Federal Housing Administration requirements,

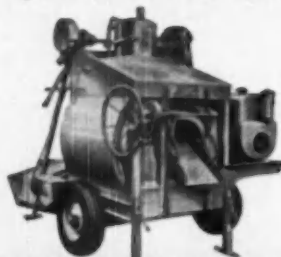


NAILS in display boxes are packaged for specific nail uses, rather than by weight

aluminum nails are etched, a process which removes dirt, grease and oil and roughens the surface, greatly improving the holding power. FHA also requires that the nails be made from a high strength alloy to provide drivability and high corrosion resistance.

Since aluminum is very light, a pound of aluminum nails contains almost three times as many nails as a pound of the same size nails made from other metals. Nails being sold by weight, one aluminum nail manufacturer, the Nichols Wire and Aluminum Co., Davenport, Iowa, makes the weight differential clearer for merchandising purposes by packaging its nails by types and work area to be covered, rather than by the pound.

to cut the cost of your concrete work



JAEGER BUILDS A BETTER MIXER

Improved mixing blade design, drum rollers on Timken bearings, advanced automotive transmission and drum gear protection—these are some of the features of Jaeger's latest **SPEEDLINE** mixers. Sizes 65, 115, 165 with famous Skip Shaker power loader; 31/2" tilters and non-tilt types. Send for Catalog.



THE JAEGER MACHINE COMPANY
821 Dublin Avenue Columbus 16, Ohio

Red Cedar Closet Lining

**Brown's
SUPERCEDAR**
NATIONALLY
ADVERTISED

Guaranteed 90% Red Heart or Better

Only **SUPERCEDAR** is of the same uniform high quality standard that guarantees every package to contain 90% Red Heart or better, and 100% oil content that produces the pleasing aroma

**ALL WIDTHS PUT-UP
48 FT. TO PACKAGE**

More home builders are specifying cedar lined closets today than ever and **Brown's SUPERCEDAR** is nationally advertised to thousands of new home prospects, architects and builders. **SUPERCEDAR** closet lining is surfaced, tongue and grooved, ready to put on with no waste. Packaged and sealed with the **Geo. C. Brown** label and guarantee, since 1906.

Product of
GEO. C. BROWN & CO., Inc.
GREENSBORO, N. C. ESTABLISHED 1906

**LARGEST MANUFACTURERS OF
ANOMATIC RED CEDAR IN THE WORLD**

100% oil content
Suggest Cedar Lined
Closets to Every Home
Builder. There is
Nothing Better than



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A FEW THINGS TO REMEMBER ABOUT KIRBY:

Kirby manufactures

Dimension, Siding, Shiplap, S2S&CM, Finish, and Flooring (both Hardwood and Pine, End Matched and Plain End), and all the items generally used in building.

Also a large number of Industrial items, such as: Car Framing, Siding, Farm Implement Stock, Furniture Stock, Crating, Oil Field Timbers, Railroad Ties and Piling.

Kirby's lumber is better

Because Kirby grades all logs as they are brought into their mills, and each log is manufactured into the items it is best suited for, then properly dried and milled to pattern ordered. This insures Dense, Strong Dimension; Interior Finish; Siding that finishes smoothly; and Flooring that lays right.



All logs are harvested from Kirby's own well managed forests and cut on a selective plan that will insure this same good quality of lumber far into the future.

KIRBY LUMBER CORPORATION

P. O. Box 1719

Houston

Texas

4 Big Advantages of ALCASCO Aluminum Casements

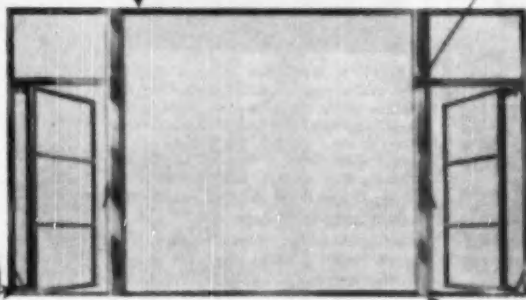
1 - FULL 1 1/2" SECTIONS

Available only in Alcasco . . . structurally stronger. Pully 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 1/2", 3/4", or 1" thickness.

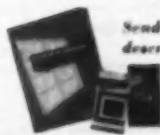
4 - INTERLOCKING MULLIONS

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
- approved — over 75,000 Alcasco Aluminum Casements have been sold through Building Material Dealers since 1947.



Send for details and descriptive literature.

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ALCASCO
ALUMINUM**

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HOW TO MAKE ACCURATE ESTIMATES



NEW REVISED

TAMBLYN BUILDING LABOR CALCULATOR

You, too, can make accurate estimates. Forty years of on the job cost analysis has produced the factors given in the Tamblin Building Labor Calculator. Use these factors and make your estimate right!

HOW TO USE THE TAMBLYN BUILDING LABOR CALCULATOR

... simple multiplication of figures

To figure the cost of laying 8" x 8" x 16" cinder block analyze the cost of 100 square feet as follows: (Wage rates and material prices assumed.)

Item	Quantity	Unit Price	Total Cost
111 Pcs. 8" x 8" x 16" cinder block	@ 24c		\$26.64
4.4 C. F. Mortar	@ 45c		1.98
Total Material Cost			\$28.62
4.0 Hrs., Mason	@ \$5.00		\$20.00
4.0 Hrs., Tender	@ 1.75		7.00
4 Hrs., Foreman	@ 3.50		14.00
Total Labor Cost			\$24.00

Or 28.6c per square foot for material—and 24c per square foot for labor. Figuring for all the trades is as easy as this example—and accurate!

WHAT CONTRACTORS SAY ABOUT THE TAMBLYN SYSTEM

"I think it is the best system I have seen."
 "... just the thing I wanted..."
 "... I want to congratulate you upon an excellent piece of work."

THE TAMBLYN SYSTEM
 1115 So. Pearl St., -48 Denver, Colo.

Request the Tamblin Building Labor Calculator on free 10-day trial. At the end of 10 days I will return it or send you check for \$10.00.

NAME

ADDRESS

CITY STATE

FREE EXAMINATION OFFER

Lowered Front Floor in Remodeled Shop Provides Needed Display Area

Converting a Forest Hills, N.Y., grocery store into a fashionable dress shop was the recent accomplishment of Marie Frommer, architect.

The original store floor was three feet above street level and was reached by three steps surrounding



STONE steps that were a barrier to customers were removed. As seen below, front floor in display area was lowered and placed within the interior



LIGHTS in coves and valances provide the major source of illumination in the Louise and Alice dress shop, with manikins, highlighted by flush ceiling fixtures

the entire store front. In designing the new shop, Miss Frommer dropped the front display area to the street level, with steps up to the main merchandising section within the store itself. This provided much more successful display windows, eliminated the hazard of the original exterior front steps and created an inviting entrance to the store. Brick piers at the front were replaced by steel columns to complete the open front design.

In the interior, in which the canopy is rust color, the ceiling blue and the carpet beige-rose, lighting is furnished from coves and valances supplemented by flush spots. The cove at the front projects through the façade to form an entrance canopy.

The shop will be air-conditioned.

For RAPID-FIRE GLAZING

Red Devil AUTOMATIC DIAMOND POINT DRIVER

Speed up your glazing of sash and frames and mirrors. Use only one hand. Automatically drives DIAMOND POINTS at machine gun speed under hardest wood. 100% efficient from any angle. Points can't drop out. Holds a chip of 100 Dia. round Points.

Diamond Points are made in 1/4" and in 1/2" lengths. 100 to the stick. Will not cut into. Will not bend.

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SOLE IMPORTERS: BOSTON TOOL CO., 100 WASHINGTON ST., BOSTON, MASS. 02108
 DIST. THROUGH: WOOD-BURNING, 100 WASHINGTON ST., BOSTON, MASS. 02108

Made \$900 IN SPARE TIME

"I did very well last year with my Foley equipment, about 950 saws and 240 lawn mowers, in my spare time. About \$900 for me."
 —Leo H. Mix

Carpenters make up to \$2 or \$3 an hour in spare time. With a Foley Automatic saw Filer you can file hand, band and circular saws better than the most expert hand filer. Cash business—no canvassing. No eyestrain. No experience needed. **FREE BOOK**

"INDEPENDENCE AFTER 40" shows just how you can start at home in spare time, with small investment, no overhead—and develop into a full-time repair shop. Send coupon today for this practical plan. No salesman will call.

Send Coupon for **FREE BOOK** **40!**

FOLEY MFG. CO., 1224-G Foley Bldg., Minneapolis 18, Minn.

Send **FREE BOOK**, "Independence After 40".

Name

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WOOD
PRODUCTS
 Finished
 Hardwood Flooring
 Casings
 BEER, Gum and PINE
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 Standard Base
 ARKANSAS SOFT PINE
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ARKANSAS

You can really
DO THINGS
with this versatile
HARDWOOD PLYWOOD!



Here at last is a genuine *hardwood* plywood, free from the disadvantages of soft woods, yet *attractive* in price. It is *ideal* for dry-wall construction, built-in cabinets, furniture, partitions, store fixtures, etc.

Mengelbord* is a low-priced utility hardwood plywood available in standard stock panel sizes 1/4" thick, 3-ply. It is moisture resistant—recommended for a wide variety of interior uses.

Mengelbord has a one-piece face with no joints or oval patches. It is made from beautiful unselected White Gum (Tupelo) with the face grain running the long way of the panel for greater strength and better decorative effects.

It is smoothly sanded, free from grain-raising, warp-resistant, cuts and works cleanly.

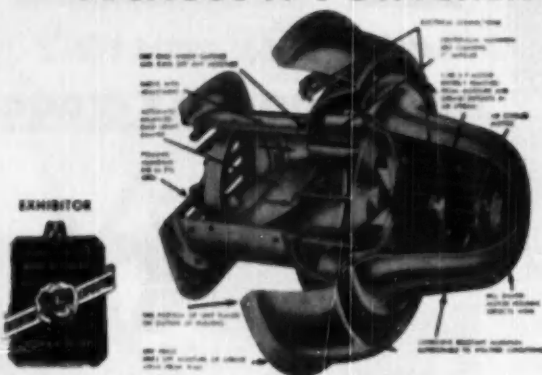
Mengelbord is light in color and suitable for a variety of finishes: paint, stain, natural, or as a base for wallpaper.

Write today for samples and descriptive literature. No obligation, of course.

Where fine wood panels of Mahogany, Oak, Birch or Walnut are desired—ask for Mengelbord. Literature on request.

Plywood Division, The Mengel Co., Louisville, Ky.
 *Reg. U. S. Pat. Off.

HOME BUYERS LIKE THE KITCHEN-AIRE EXHAUST FAN BECAUSE IT'S DIFFERENT



Differs, because it is **FIRE-SAFE**, grease laden air is **NOT** drawn over motor;
Differs, because intake grill may be mounted above cooking range even on inside wall;
Differs, because ordinary 6" stove pipe will serve for making connection between intake grill and exhaust fan;
Differs, because it is **QUIET**, operating mechanism is mounted **OUTSIDE** the wall;
Differs, because it is **weatherproof**, back draft damper protects against heat loss, operating mechanism is housed in corrosion-free aluminum.

Yes, the Kitchen-Aire is different. Electrically operated, easily installed, the Kitchen-Aire adds that plus-value which makes any home salable. It is the last word in Kitchen ventilation, a feature your buyers will like. Underwriters Approved. Advertised in Better Homes and Gardens.

STEWART MANUFACTURING CO.
 3204 E. Washington Street, Indianapolis, Indiana

Ask for a "BESSLER" when buying a DISAPPEARING STAIRWAY



Made in
Seven
Models

With a Bessler Disappearing Stairway it is possible to finish off the space above for use as either storage or added sleeping quarters.

Constructed of the finest materials, it is easily and quickly installed in old or new homes. Saves floor space in the room below and is easily operated.

Write for literature
THE BESSLER DISAPPEARING STAIRWAY CO.
 1900 E. Market St. Akron 5, Ohio

Association News

NAHB Convention

(Continued from page 27)

devoted to the solution of a number of technical construction problems.

Clinic will be resumed Wednesday morning in separate meetings; included will be cost accounting; time and material accounting; public housing referenda; low-cost rental apartments; and similar subjects. The big design panel will also take place Wednesday morning, according to present plans.

The Grand Ballroom will be used Wednesday afternoon for consideration of mortgage finance problems, including Regulation "X" and related orders. Leading Federal officials will also be on hand to answer questions at this session. Public relations, merchandising and new building ideas will be principal topics Thursday morning.

A number of outstanding entertainment features have been planned for women. There will be guided sight-seeing trips and housing tours, factory tour, luncheons, tickets for radio and television shows, and "Kaffee-Klatsch" each morning in women's headquarters.

Highlighting general entertainment will be a vaudeville show and convention dance Monday evening and the big annual banquet Wednesday evening.

Three educational exhibits will be on display, consisting of winning entries in contests on land planning, home design, and merchandising.

The convention-exposition director, Paul Van Auken, reports that more manufacturer exhibit space is being occupied than ever before—all available space in the Stevens and Congress Hotels. Van Auken said that space was sold out by Oct. 1, making it necessary to turn down a number of firms. Many new and improved products will be shown, some on view for the first time at a national show.

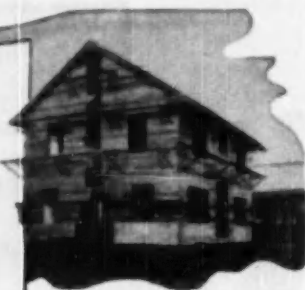
Attendance drives through local associations have foreshadowed an unusually heavy builder attendance; and the architectural contest, design panel and a discussion of architect-builder relationships are expected to attract a record representation of architects.

Van Auken stressed the importance of making advance hotel reservations—NAHB members through their local executive officers, and non-members through convention headquarters at 111 W. Jackson Blvd., Chicago. Registrants were advised to specify type of accommodations desired and to include registration fees of \$15 for men and \$10 for women with requests for reservations.

St. Paul Industry Meeting

A general industry meeting was held by the St. Paul Home Builders Association Oct. 18. Main topics of discussion were financing and taxes.

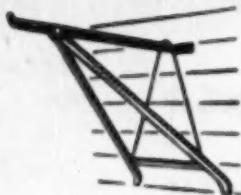
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to do
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"TROUBLE SAVER"
Scaffold Brackets**



"Trouble Saver" Scaffold Brackets save time, labor and materials.

- Erected and dismantled faster than you can build a makeshift wooden scaffold.
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- Corner bracket also available.

Available through offices and distributors from coast to coast.



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Complete information on all "Trouble Saver" Scaffolding Accessories.

Manufacturers of
"Trouble Savers" Since 1912

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**ASK YOUR
DEALER FOR BOSTWICK
METAL LATH, CORNERBEAD,
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**MANY DEALERS
PREFER BOSTWICK
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**BOSTWICK GIVES
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NO RED TAPE**

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FREE
BOSTWICK
CATALOG**

Bostwick

THE BOSTWICK STEEL LATH CO.

103 HEATON AVE. • NILES, OHIO

Association News

NRLDA Alert on Legislative . . .

(Continued from page 27)

tional in the future," he said, "is to keep everlastingly at the job of persuading the individual dealer to play his own individual part in major industry programs. We now have, perhaps, 1000 dealers who are participating actively in our legislative and educational work. Think where we can go if we multiply that number by five, or by ten!

"We have tremendous potential strength—a tremendous potential force for the good, if only we can make the most of it. The big job is to persuade those who are hanging back to step out and do their part. The results to date are so encouraging that we are fully warranted in keeping patiently but relentlessly at it until every last dealer has his shoulder to the wheel."

Executive Vice President Northrup reported on the present status of the defense production program as it affects the building materials industry and on the outlook for further controls. He stated that the National is in daily touch with officials in Washington who are operating the controls program and that the industry will be kept closely informed of all pertinent new developments.

In analyzing the outlook for construction and materials, Norman P. Mason, past president of NRLDA, said that copper wire and steel sheets would be the most serious bottlenecks in 1951. He added that building products which do not contain strategic metals would be in ample supply by early next year, if not sooner, thus creating a buyer's market.

Provided that the defense production program is not stepped up much beyond present schedules, Mason predicted that new construction next year probably would run around \$21 to \$23 billion, and that the repair and modernization market would be strong. He anticipated a moderate increase in farm construction, no more than a moderate drop in new commercial building, and a cutback of 50 per cent or more in new housing.

Clarence Thompson, chairman of the Lumber Dealers Research Council, reported that results of a study of space requirements in housing, financed by the Council at the University of Illinois, would be announced soon. He added that the Council has voted to undertake a study of the distribution of building materials and is considering a proposal for a study of storage wall construction.

After announcing that seventeen 30-Day Courses for employees of retail lumber dealers already have been scheduled in fourteen colleges and universities for the new school year, W. C. Bell, chairman of the Educational Committee, said that his group will proceed immediately to consider

plans for a series of management conferences for dealers, yard managers, and department heads.

Bell reported that 4000 employees from some 3000 yards already have completed 89 of the 30-Day Courses at 19 colleges and universities.

Russell Nowels, chairman of the Subcommittee on Products Data, announced that plans for offering the new Dealer Product Data Book to members of the National, through their state and regional associations, are developing rapidly and said that copies of the new counter sales and data book would be ready by about Jan. 1.

Phil Creden, chairman of the Public Relations Committee, reviewed the objectives of the National's public relations program and said that this activity was more vital than ever in a period like the present when the retail lumber and building materials industry faces new problems and challenges arising from emergency conditions.

Creden said that one basic objective in the program during the coming year would be to make certain that the public understands and accepts the views and viewpoints of the industry and continues to regard the industry as a valuable and indispensable part of community life.

In previewing the public relations program for the coming year, Everett B. Wilson, director of the Public Relations Department, said it would include expansion of the Minute Man Program, issuance of a new pictorial brochure explaining the services of the industry, and preparation of supplements to the Public Relations Guide. In addition, he said, the National would intensify its publicity program, with special emphasis on problems arising from the defense production controls.

New Aluminum Window Group Formed in Merger

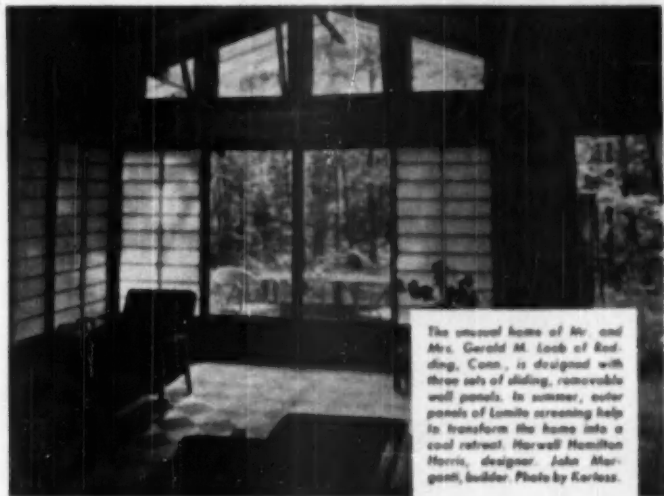
A new association representing 18 aluminum window manufacturers was formed recently in New York City when members of the Aluminum Window Manufacturers Association and the Aluminum Window Institute voted in a joint meeting to merge the two groups. Included in the new association are manufacturers of double-hung, casement and projected windows for residential, commercial and monumental-type buildings.

The association will continue a program of promoting high standards of quality in the design and production of all types of aluminum windows, according to President Wilson A. Smith. Rigid specifications and a "Quality Approved" seal program were established.

Herbert S. Blake, Jr., will continue as secretary of the Aluminum Window Manufacturers Association with headquarters in New York City.

DECEMBER 1950

House with Removable walls has MAINTENANCE-FREE SCREENING!



The summer home of Mr. and Mrs. Gerald M. Loeb of Redding, Conn., is designed with three sets of sliding, removable wall panels. In summer, outer panels of Lumite screening help to transform the home into a cool retreat. Harwell Hamilton Harris, designer. John Marquetti, builder. Photo by Karlson.

It's Rustproof Lumite Saran Screening THE IDEAL SCREEN CLOTH FOR EVERY EXTERIOR USE!

☆ **STAINPROOF!** Lumite Screening can't cause unsightly, costly stains on the house.

☆ **LONG-LASTING!** An independently conducted accelerated weathering test proves Lumite Screening superior to all other types of screen-

ing. Replacement and repairs are minimized with Lumite Screening!

☆ **NEVER NEEDS PROTECTIVE PAINTING!** Lumite Screening can't rust, rot or mildew. And—it's non-inflammable . . . easy to handle . . . low in cost.

Sold through hardware, lumber, building supply dealers and screen manufacturers.

Registered Trade Mark

LUMITE
SARAN SCREEN CLOTH



SEND FOR FREE
SAMPLE AND ADDITIONAL
INFORMATION TODAY!

LUMITE DIVISION, Chicago Mfg. Corp. of Co. AB-1
40 Worth Street, New York 13, New York

GENTLEMEN: I am interested in the rustproof, stainproof, long-lasting qualities of LUMITE Saran Screen Cloth. Please send me FREE sample and further information.

NAME

COMPANY

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ATTIC FANS



Cool comfort
at low cost!

• Low cost home cooling is here! The Hunter Package Fan is a compact, powerful ventilating fan that is easily installed in any attic to pull in fresh, cool breezes and push out stale, humid air. Thousands are now in use throughout the nation.

Installation of the Hunter Package Fan is simple and inexpensive. Fan, motor and suction box are all in one unit that requires only a ceiling opening in hallway and 18" clearance in attic. Fan rests on attic floor; shutter fastens to ceiling opening. No "extras" to buy or build.

HUNTER PACKAGE ATTIC FANS are available in four models, ranging from 4750 CFM to 9500 CFM, to fit any home size and climate. Quiet, powerful and dependable. Manufactured by Hunter, exclusive fan makers since 1886.



MAIL FOR BOOKLET

Hunter Fan and Ventilating Company
381 South Front St., Memphis, Tenn.
Send free copy of "How to Cool for Comfort" to:

Name _____

Address _____

City & State _____

Association News, cont'd

Insulating Siding Group Elects 1951 Officers

Lee H. Mattes was elected president of the Insulating Siding Association at the recent annual meeting in Chicago. Mattes, president of the Mastic Asphalt Corp., South Bend, Ind., succeeds Stuart H. Ralph, vice president of the Flintkote Co., New York City.



Lee Mattes

Other new officers are: Vice President William Waldman, president of the Brixite Manufacturing Co., South Kearney, N.J., and Treasurer Gordon C. Estes, vice president, Globe Siding Products Co., Whiting, Ind. Richard G.

Brenden, Jr., was reappointed association manager.

Committee heads include W. W. Wilson, Bick and Son, Inc. East Walpole, Mass., planning; Frank W. Yeager, Flintkote Co., technical; and Norman S. Gilbert, Jones and Brown, Inc., Pittsburgh, Pa., publicity.

Varied Program Presented At Milwaukee Meeting

A general membership meeting, first of its fall and winter series, was held by the Milwaukee Builders' Association Sept. 19, with the Frigidaire Sales Corp. serving as host. Harry Forman, entertainment chairman, was master of ceremonies.

The program was opened with a sound movie, "What Makes it Cold," which was followed by a panel discussion on "Materials-Men-Money." Speakers and their subjects were: William Fuller, Mid-City Lumber Co., the lumber situation; Lorenz Meyer, W. H. Pipkorn Co., supply of cement, rock lath and hard materials; and Roy F. Healy, association executive vice president, report on a recent survey of construction loans.

Redwood Publicity Aide

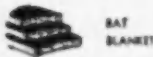
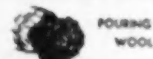
Appointment of David S. Way as assistant to the chief of the division of public relations and conservation for the California Redwood Association has been announced by Sherman A. Bishop, general manager.

Now **INSULITE**
INSULATING
WOOL

MADE OF
FIBERGLAS
NON-FRAGILE
DURABLE
EASY TO INSTALL

in the New
improved
ROLL BLANKET PACKAGE

AND THREE OTHER HANDY FORMS



- 25% longer roll, uniformly compressed.
- Fewer packages to handle on the job.
- Less fitting and cutting.
- Easier... faster to install.
- No bags or cartons to discard.
- Better vapor barrier of stronger tougher paper.



*Reg. U.S.P.M.

**NEW—
EASIER WAY TO
FRAME SINKS**



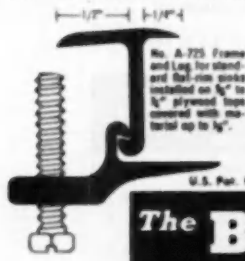
**NO RABBETING - NO INTRICATE FITTING
NO SCRIBING - NO SPECIAL TOOLS NEEDED**

**CHROMEDGE[®]
Sink-Lok[®] Frame**
grips edges of coverings
permanently watertight

Here at last is a sink frame that seals joints watertight to stay! The frame overlaps the covering a full quarter-inch so edges can't work loose or curl up. The joint stays neat and sanitary as long as the covering material lasts!

Yet the Sink-Lok Frame is one of the easiest of all frames to install! It is a simple T-type frame anchored from underneath the sink-top. No intricate scribing, or fitting is needed. No special tools are used. No rabbeting or mortising of the counter top is required. In addition, the frame supports the sink bowl itself, and the sink can be removed at any time without marring or damaging either the frame or the sink-top material.

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 1/2" to 1" thick, covered with any material up to 1/8" thick. Also available for most vitreous china sinks. Write for complete information and prices.

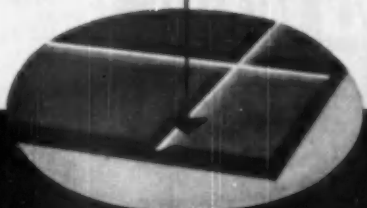


U.S. Pat. No. 2640761

The B & T Metals Co.
Columbus 16, Ohio



NEW BEVEL EDGE!



adds greater sales for
PRESTILE

Here's new beauty and smoothness to attract your customers! Prestile's new beveled edge, giving a "3-D" sweeping shoulder, creates a 3-dimensional "3-D" effect of remarkable depth and charm. Investigate Prestile's new "bevel" why Prestile's reputation for dependable quality and prompt deliveries means more sales.



12 SMART COLORS! 4 POPULAR PATTERNS!



PRESTILE

DE LUXE TILE BOARD OF LASTING BEAUTY

WRITE!

Dept. B, Prestile Mfg. Co. • 5850 Ogden Ave. • Chicago 50, Ill.

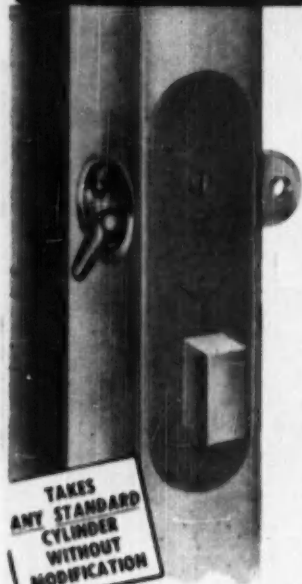
Yes, we want to learn more about:

- Prestile De Luxe Tileboard
- PrestTrim Aluminum Mouldings

Your Name

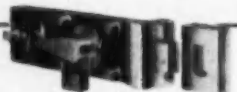
Clip this memo to your letterhead and mail today!

**THIS ADAMS-RITE
DEADLOCK HAS A
7/8" BACKSET!**



**TAKES
ANY STANDARD
CYLINDER
WITHOUT
MODIFICATION**

Use Series 970 for narrow-
est extruded aluminum, steel or wood
styles. Depth is only 1-1/2". Will take
1 or 2 standard cylinders which can be
keyed to job, or Adams-Rite Thumb
Turn (as shown) for emergency one-
sided operation. Locks and turns are re-
versible. Fifteen other standard backsets
to 1-3/4". Series 980 is identical except
for 3/4" diameter, 5-pin tumbler cylin-
der and 15/16" backset. Rugged steel
and brass construction, armored bolt
with 5/8" throw. Bronze or aluminum
face and strike. Radius, flat and beveled
face interchangeable. Write for com-
plete data.



**HORIZONTAL LOCKS FOR DOORS
WITHOUT STRIKES**

Takes the place
of 2 locks. Has single or double bolts
and 1 or 2 cylinders. Can be installed
in any tempered glass door, top or
bottom channel. Four sizes.



**Michigan Builders Sponsor
Clinic at State College**

A home building clinic, sponsored
by the Michigan Association of
Home Builders and Michigan State
College, and held at the school in East
Lansing October 24-25, was attended
by builders, retail lumber dealers and
persons in related fields from
throughout the state. Speakers, panel
members and instructors were both
college faculty members and active
builders; and subjects included land
planning, design and construction, fi-
nancing, cost information, estimating
methods, heating ideas and use of
concrete.

Among clinic speakers were Lorin
Miller, dean of the engineering school
at Michigan State, and Frank W. Cor-
right, National Association of Home
Builders executive vice president.
Michigan builders taking an active
part in the program were Edward W.
Pratt, Royal Oak; Walter Neller,
Lansing; John Weinhart, president,
Builders Association of Metropolitan
Detroit; David Satin, Kalamazoo,
NAHB regional vice president;
Gerald Healy, Flint; Ward H. Black-
all, Grand Rapids; Russell Hartlove,
Lansing; and Charles A. Bowser,
Lansing, president of the Michigan As-
sociation of Home Builders.

Exhibits Exhibited During
NATIONAL HOME WEEK OF 1950
will appear in your
JANUARY AMERICAN BUILDER

**UP TO \$40 A DAY
EXTRA MONEY!**



"MY BELSAW CIR-
CULAR SAW SHOP
gives me big profits at
low expense... I can
run 35 to 40 saws in 5
hours and make \$40."

- T. A. Phillips

You can start this repeat CASH Business in
your own home, while you are working at your
regular job. No experience needed... pays for it-
self from just 65 saw jobs. - H. Jensen

You can make \$4 to \$6 an hour in your SPARE
TIME sharpening and setting CIRCULAR SAWS
for builders, lumber yards, factories. Send post-
card for your FREE Illustrated Catalog today.

BELSAW MACHINERY CO
4503 FIELD BLDG., KANSAS CITY 2, MO.

DO SURFACING FASTER



**WITH
BELSAW
MULTI-DUTY
PLANER**

Planes and joints up to 1 1/4 in. x 6 in. Power feeds
at 16 ft. per minute. Self-aligning chip breaker
and pressure bar... ALL Big Planer features at
Lowest Cost. Sharpens knives IN THE CUTTER-
HEAD! Provides saw table for rabbeting, mold-
ing and matching. Send for FREE Catalog -
BELSAW 986 PLANER.

BELSAW MACHINERY CO
1342 FIELD BLDG., KANSAS CITY 2, MO.

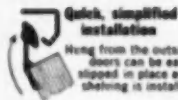
HAR-VEY ROLLING DOOR HARDWARE

introduces an Economical

*New Hanger
for Wardrobes*



Exclusive new features that save time, trouble, and money!



**Quick, simplified
installation**
Hung from the outside,
doors can be easily
slipped in place after
shaving is installed.



**Space
between
doors can
be varied**
- no
limit on number of doors

Track can be used for Trim in cabinets and show-cases, because hardware is mostly concealed

Economically designed for lower cost

Quality-made of 100% rustproof materials with extruded aluminum track

This new Har-Vey Hardware is ideal for cabinets, wardrobes and similar installations

Learn all the advantages today - mail this coupon now

Address: Hardware Division @

METAL PRODUCTS CORPORATION
507 N. W. 20th St. Miami, Florida

Please send me your free folder on rolling doors & Har-Vey Hardware

NAME _____
COMPANY _____
STREET _____
CITY _____ STATE _____

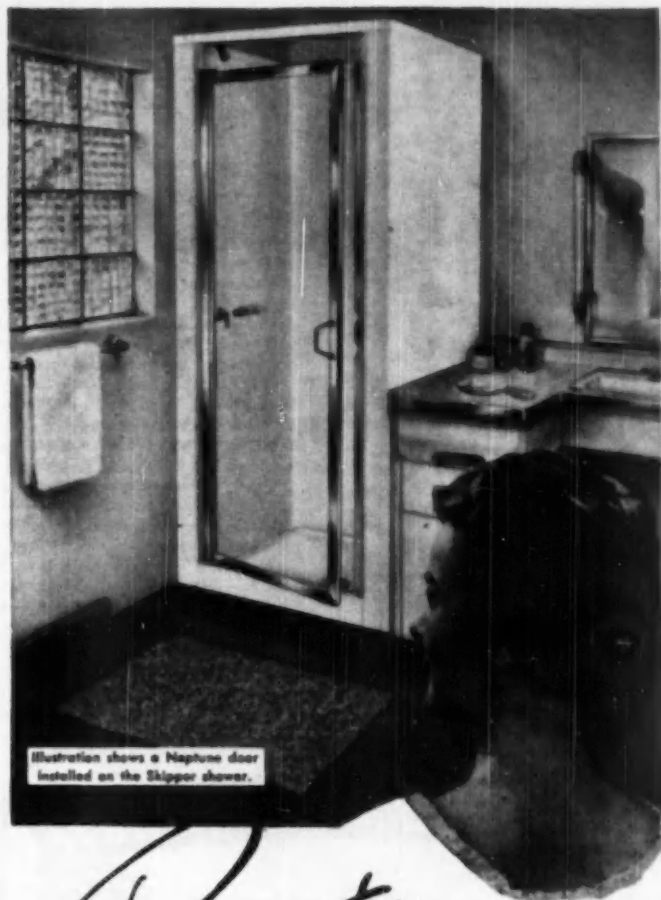


Illustration shows a Neptune door installed on the Skipper shower.

Beauty

...combined with
the greatest value
ever offered in a
bathroom shower

The Flat Skipper

The largest selling shower cabinet in the plumbing field. Such popularity of the Skipper shower can be attributed to its distinctive pleasing lines that give a smooth clean cut beauty found only in other much higher priced showers.

The interior of this shower is unusually free from joining seams which makes it very easy to keep clean. Bonderized, galvanized steel used throughout eliminates rusting. The precast stonetex receptor provides a solid permanently water-tight base. The workmanship is the standard Fiat high quality, no raw unfinished edges.

Size 32" x 32" x 76"

Write for
catalog of
Flat showers

Consult your plumbing contractor on the economy features of Fiat shower installations.



FIAT METAL MANUFACTURING COMPANY

Three complete plants

Long Island City 1, N. Y.

Los Angeles 33, Calif.

9301 Belmont Ave., Franklin Park, Ill.

In Canada: The Porcelain and Metal Products, Ltd. Grills, Ontario

Association News, cont'd

Mineral Wool Group Names New Officers

George D. Sudlow was elected president of the National Mineral Wool Association at the group's recent annual meeting in New York City. Sudlow, vice president in charge of sales of the American Rock Wool Corp., Chicago, succeeds William R. Wilkinson, vice president of the Johns-Manville Sales Corp., New York City.



George D. Sudlow

C. J. Rusden, president of Fibrock Insulation Manufacturing Co., Tacoma, Wash., was named association vice president. On the newly-elected board of directors, in addition to the president and vice president, are:

William R. Wilkinson, vice president, Johns-Manville Sales Corp.; Harry E. Carney, Jr., president, The Carney Co., Inc., Mankato, Minn.; Webb R. Robinson, Jr., president, United States Mineral Wool Co., South Milwaukee, Wis.; Ed R. Stevens, vice president, Baldwin-Hill Co., Tronton, N.J.; Jul Z. Holtman, The Flintkote Co., New York City; Edward J. Detgen, Owens-Corning Fiberglas Corp., Toledo, Ohio; and C. S. Northen, Jr., vice president, Sloss-Sheffield Steel and Iron Co., Birmingham, Ala.

Practical Program Held At Ohio State Convention

A practical and interesting program, featuring national leaders in the building industry, was presented for the 7th annual convention of the Ohio Home Builders Association at the Deshler-Wallick Hotel, Columbus, Nov. 26-28, General Chairman A. B. Stanberry of Toledo has reported.

Other members of the convention committee were: J. R. Mueller, Amherst; George N. Seltzer, Cleveland; G. W. Hartman, Youngstown; Earl Lawrence, Canton; I. M. Paul, Cincinnati; L. H. Popp, Elyria; Walter L. Hyle, Akron; Charles L. Prior, Columbus; Robert Adams, Lima; Raynor B. Pyle, Toledo; and Phil Fanz, Akron.



ROWELL FLOORING COMPANY
MIAMI, FLORIDA

Recommends that . . .

ALL WOOD FLOORING

Be dip-treated with . . .

They say, "Working in a home is a greater source of pride and joy to the owner than beautiful wood floors. WOODLIFE keeps them straight and tight—no bulges, squeaks or unsightly wide cracks. It also keeps them safe for the life of the house against termites, beetles and rot."

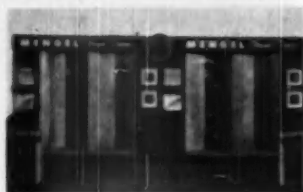
See your local dealer
or write for information



Protection Products Mfg. Co.

Research Laboratory and Plant KALAMAZOO, MICH.

Display Booth Available to Mengel Distributors



A newly-designed display booth for Mengel Flush Doors is being made available to Mengel Co. dealers and distributors for use at local shows and exhibits, the firm announced recently.

The booth, 20-feet wide by 8-feet deep, is composed of two 10-foot units, either of which may be used as a complete booth where a 10-foot display is required. The full 20-foot exhibit features eight selected doors as well as cutaway samples of both hollow-core and solid-core construction and color photographs of installations.

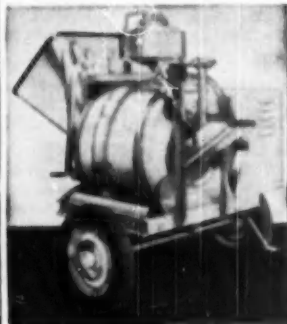
Booth is being made available on a loan basis, without charge, through the Advertising Manager, Plywood Division, The Mengel Co., Louisville, Ky.

Renew Your Subscription

Two Mixers Every Builder Should Have

3 1/2 S NON-TILT

Improved Grad Back Hopper with cone-operated shaker gives you power loader speed without its cost. 100% Timber equipped. Drum tracks are fully machined.

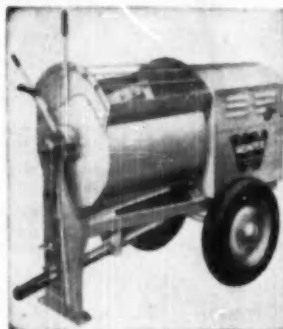


- Positive no-slip, no-thrust spur gear drive.
- Separate, self-cleaning blades and buckets mix and remix batch thoroughly in less time!
- Vertical water tank accurately calibrated.

Compact, perfectly balanced and charge design.

SUPER "6" WONDER

This new 6 cu. ft. Wonder has telescoping axle. Special cone-type wheels available which permit mixer through 32" door. Plus many other features. A better mortar mixer any way you look at it!



- Often pays for itself on first job.
 - Triple mixing hoos with exclusive adjustable blades assure perfect mixing.
 - Mixes cement mortar, patent plaster with hair or fiber, etc.
- Renewable, longer-lasting drum liner guarantees long range savings. Jack shaft equipped with anti-friction Timken bearings assures longer trouble-free performance.



CONSTRUCTION MACHINERY COMPANIES . . . WATERLOO, IOWA

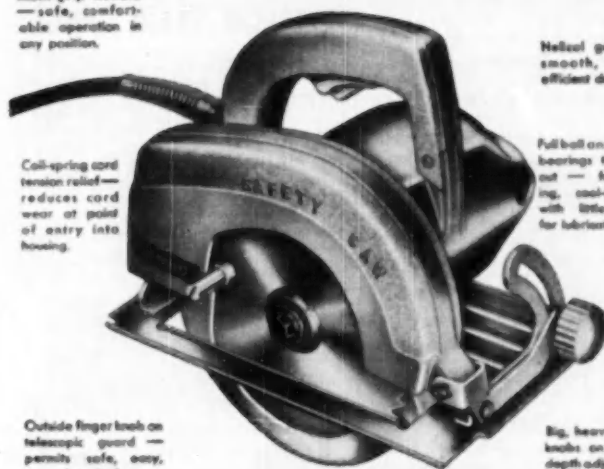
The 6" SAW with BIG SAW Features

Part of the *extra value* you get in the new Stanley W65 6" Safety Saw is its many *big saw* features. They mean added years of use and greater safety for you. Just look at these important details.

Multi-grip handle — safe, comfortable operation in any position.

Coil-spring cord tension relief — reduces cord wear at point of entry into housing.

Outside finger knob on telescopic guard — permits safe, easy, manual control.



Helical gears — smooth, quiet, efficient drive.

Full ball and roller bearings throughout — free-rolling, steel-running, with little need for lubrication.

Big, heavy metal knobs on 40 and depth adjustments — easy to turn, wear-resisting, long lasting.

The NEW
STANLEY W65
with carrying case

The W65 is adjustable in depth of cut from $\frac{1}{8}$ " to 2". Quick-set tilting adjustment permits easy beveling in marked graduations up to 45°. Net weight 10 lbs. Operates on A.C. or D.C. current. Can be supplied in all voltages. Saw furnished with combination blade, wrenches, lubricant, and durable all-steel carrying case. Accessories available. See the W65 at your dealer's, or write for complete descriptive literature. Stanley Electric Tools, 492 Myrtle St., New Britain, Connecticut.

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL
DECEMBER 1950

NPA Order Bans New Recreation Buildings

A National Production Authority order banning construction of new buildings for amusement, recreational or entertainment purposes became effective Oct. 27.

NPA administrator William H. Harrison said the purpose of the ban, NPA Order M-4, is to conserve important materials, especially certain metals in short supply, for defense needs. He described the prohibited construction as "a type which does not further the defense effort, either directly or indirectly, and does not increase the nation's productive capacity."

The order also warns that anyone starting construction which is not specifically named on the prohibited list, but which does not further the defense effort, runs a risk of not being able to complete the building. The order says:

"It will be the policy of NPA to further limit or prohibit construction of additional types which do not further the defense effort or increase the nation's productive capacity, when such action is deemed necessary in the interest of national defense to minimize material shortages. If such action becomes necessary, any such construction commenced after the effective date of this order may be halted, even though its commencement at the present time is not forbidden by this order."

Order M-4 does not affect construction already under way, and permits repair and maintenance of existing buildings as well as a limited amount of alteration and modernization. Exempt from the ban are small construction jobs not exceeding \$5,000 cost for any consecutive 12-month period.

Also exempt are construction by the Department of Defense and the Atomic Energy Commission. Restoration of any building is permitted after a "disaster, an act of God, or an act of war."

In addition to the general prohibition of amusement and entertainment construction, the order lists 44 specific types of prohibited construction. Included in the list are amusement parks, assembly halls used primarily for recreation or amusement, band stands, race tracks, stadiums, and theaters of all kinds.

Excuse!

See what America's builders offered the public during
NATIONAL HOME WEEK of 1950
in your
JANUARY AMERICAN BUILDER

WHEN YOU ARE READY TO SELECT
SPACE-SAVING DOORS
check these important features



That "Finished Look"

FOLDOOR comes in a wide choice of beautiful, colored, highly durable plastic-coated fabrics to harmonize with any color scheme. Topped with an attractive formed cornice, FOLDOOR installations have that finished look.



"Easy Glide" Operation

Built with a light sturdy frame of rust-resistant steel, FOLDOOR travels on a rugged, 18-gauge two-rail steel track. The double-track trolley—two sets of two large-diameter wheels—insures smooth, easy-glide operation.



"Door-Knob Height" Hardware

Handled at normal, door-knob height is a FOLDOOR feature especially desirable in homes with small children. FOLDOOR'S simple yet positive latching mechanism is easily operated with one hand. No fumbling, no fumbling with FOLDOOR.



"Wall-Fit" Thickness

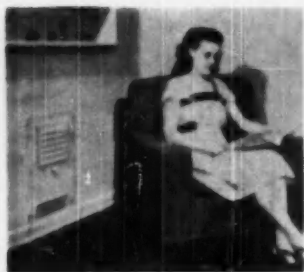
FOLDOOR occupies the least amount of "stack" space of any extensible door. When pushed back onto itself, FOLDOOR'S maximum thickness is only 5 1/2 inches. This means FOLDOOR fits inside the measurements of most walls—does not stick out into the room.

You get them all with the new improved

HOLCOMB & HOKE
FOLDOOR

HOLCOMB & HOKE MFG. CO. INC.

1543 Van Buren Street • Indianapolis, Indiana
Profitable Installing Distributors Ship Sell Open



RADIATORS force out heat at floor level. Each has blower fan with 1/70 HP motor

Design Hot Water System To Lower Heat Costs

A hot-water heating system for homes and other buildings called "Copperheating," recently introduced in Detroit, is said by its manufacturers, Copperheat Industries, Inc., Detroit, to give exceptionally fast heat from a cold start and to deliver hot water heat for only slightly more than the cost of warm air.

In operation, a circulating pump is

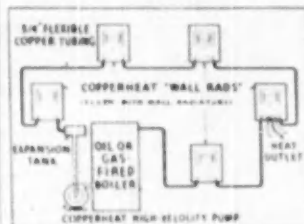


DIAGRAM of "Copperheating" system

attached to the gas or oil-fired boiler. When thermostat is turned up, hot water is pushed at 10 feet per second through 3/4-inch copper tubing.

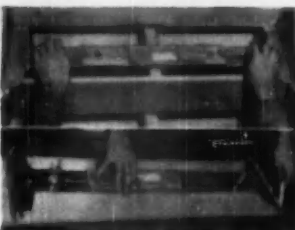
New type radiators, called Wallrads, have small, individual blowers with both thermostatic and manual control, which push heat out rapidly across the floor.



WALLRAD radiator in building under construction. Working parts of unit are installed after building has been completed

See hundreds of
BUILDING PRODUCTS ON REVIEW
in Your
JANUARY AMERICAN BUILDER

Save HALF Your Time BUILDING STAIRCASES



Above—Measure tread or rise in 10 seconds. Below—Mark board with gauge for perfect fit.

ELIASON STAIR GAUGE

in 10 seconds gives you BOTH correct length and angle of stair treads, risers, closet shelves, etc., ready to mark board. Each end pivots and locks at any LENGTH OR ANGLE automatically. Adjustable from 20° to 90°. Saves a day or more; increases your profits \$20 or MORE on each staircase. Fully guaranteed. Circular on request.

Only \$12.95 cash with order, or C. O. D. plus postage.

ELIASON TOOL CO.

2119 E. 56th St., Minneapolis 17, Minn.

Dealers and Distributors Wanted

need AUTOMATIC CONTROL



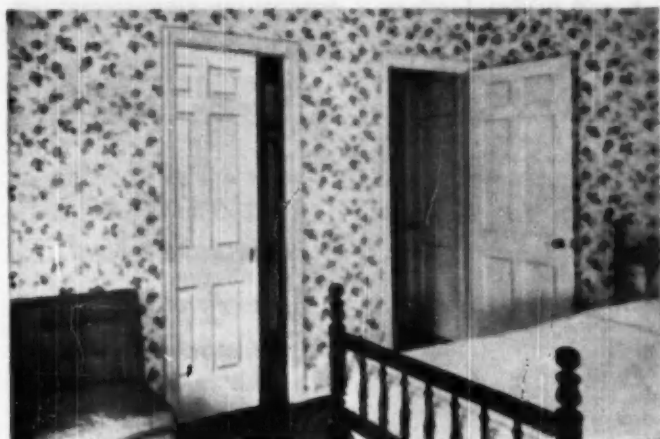
Check

GENERAL CONTROLS

801 Alton Avenue Glendale, California

Manufacturers of Automatic Pressure, Temperature, Level and Flow Controls
FACTORY BRANCHES: Baltimore 3, Birmingham 3, Boston 16, Buffalo 3, Chicago 3, Cincinnati 2, Cleveland 15, Dallas 2, Denver 4, Detroit 21, Glendale 1, Houston 6, Kansas City 2, Minneapolis 2, Newark 6, New York 17, Philadelphia 23, Pittsburgh 22, St. Louis 3, San Francisco 7, Seattle 1, Tulsa 6, Washington 6. DISTRIBUTORS IN PRINCIPAL CITIES

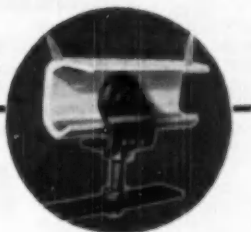
AMERICAN BUILDER



**"CASH IN"
... Now!**

**Recommend the NEW
VANISHING DOOR HANGER
by Richards-Wilcox**

SILVER STREAK—R-W
No. 1019 NEW Vanishing
Door Hanger and Alu-
minum Track.



Here is our latest, newest contribu-
tion to modern living convenience
—an advanced sliding door hanger
applicable to installation in the thin-
ner walls of modern residential con-
struction—R-W No. 1019 Silver
Streak. Note, particularly, these
desirable features:

1. The track is made of very heavy non-corrosive aluminum.
2. The highly finished ball-bearing wheels are made with solid laminations of fabric impregnated with a plastic which assures long wear and silent operation. The hanger is vertically adjustable.
3. The NEW aluminum track is easily adaptable to installation for operating parallel wardrobe doors. The tracks are simply installed back to back for operating doors as thin as $\frac{1}{4}$ ".

Another Richards-Wilcox Standout



**R-W's No. 820-2
Blue Streak**

Self-Lubrication Door
Hanger with SELF
SEALER BEARINGS
(Perpetual Lubrication)
For doors 1 $\frac{1}{2}$ " to 2 $\frac{1}{2}$ "
thick, weighing up to 300
pounds... on garages,
warehouses, factories,
stores, barns and similar
buildings.

1880-1930—OVER 70 YEARS



Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"
AURORA, ILLINOIS, U.S.A. Branches in all principal cities

SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT
INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS
ELEVATOR DOOR OPERATING EQUIPMENT



POINTING joints after initial set

**Concrete Finished to
Give Effect of Stone**

Unusual effects in concrete finish are being achieved by the "Rope-Concrete" method developed by Reardon Industries, Inc., of Cincinnati. By the Reardon method, irregularly-spaced rope is embedded in the poured slab. A variety of colors and surface textures may also be used.

The installation begins with preparation of slab in the usual manner. Sections of the surface are then divided by embedding lengths of rope in fresh concrete. Lengths should be irregular and spaced in irregular curves to give a natural effect to the surface.

Rope of 1-inch diameter has proved most satisfactory and should be sunk to its full thickness—level with the concrete surface.

At this point, sections separated by rope can be finished with any of a variety of surface finishes and colors. Location, use, surroundings and all contributing factors should dictate color or finish.

After the concrete has taken its initial set, the ropes that formed the interstices are carefully removed, leaving an irregular pattern of undercut joints marking the vari-colored areas. These joints are then pointed in any color desired.

**Factory Film Dramatizes
Free Enterprise System**

"The Shadow of a Pioneer," a 22-minute sound film dramatizing progress of individual employees of the Keystone Steel and Wire Co., Peoria, Ill., has been produced for the company by Frances and C. L. Venard.

The film includes scenes of steel and wire making through open hearth furnaces, rolling mills, wire drawing and fabricating. For showing to civic groups, social clubs, labor, fraternal and business organizations, and schools, it is available free—except for transportation costs from the Venard Organization, Peoria 2, Ill.

SPEED UP REPAIRS and MAINTENANCE with *American*



BELT SANDER

Use American Sandeplane Belt Sander to save time and eliminate tedious hand sanding and planing. Many uses from roughing to final finish on wood, metal, marble, stone, composition board. Take this tool to the job—or use it in your shop. Two models—with and without dust collector bag. Well-balanced, powerful, efficient.

FLOOR SANDER

Every maintenance and repair job should include floor sanding for extra profits! Use a new American Super 8—cuts twice as fast as standard 8" floor sander! 2 H. P. motor... drum driven by vari-speed transmission... drum speed range 1600 to 2800 r.p.m. ... correct drum pressure selected by variable control—52 lb. to 105 lb.—to meet all conditions in floors. Operates efficiently even with low voltage!

POWER SAW

Faster for any cut—American 8 1/2" Portable Electric Saw! 10 times faster than hand sawing for maintenance and construction. Cuts wood, stone, metal, tile, compositions. Big power. Motor develops 2 1/4 H.P. with blade speed 5400 r.p.m. Easy one-hand operation. 8 1/2" blade makes 5" straight cut, will cut 2 1/4" plank at 45° angle.

AMERICAN Floor Surfacing Machine Co.
511 So. St. Clair St., Toledo 3, Ohio

SEND COUPON!

The American Floor Surfacing Machine Co.
511 So. St. Clair St., Toledo 3, Ohio
Send latest bulletin—price on the following:

American Sandeplane Belt Sander
 American Super 8 Floor Sander
 American Power Saw

Name _____
Street _____
City _____ State _____

Black and Decker Leaders Get 40-Year Service Pins

Following company policy of presenting service pins on five-year anniversaries of employment, Black and Decker Manufacturing Co., Towson, Md., awarded its first 40-year pins to the firm's two founders, S. Dun-



S. D. BLACE (right), Black and Decker Manufacturing Co. president, receives 40-year service award from A. G. Decker, Jr., firm's vice president of manufacturing can Black and Alonzo G. Decker at a recent testimonial dinner. The two are president, and vice president and general manager, respectively.

Black and Decker have been active in the management of the company's affairs since its start as a small shop. More than 3,000 persons are now employed in its international portable electric tool operations.



This EMBLEM ON
YOUR DOOR MEANS...

- A More profits for you
- B More service to your customers
- C MORE SALES



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NATIONWIDE SERVICE

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THE SEAL
WE'VE BEEN
LOOKING FOR!



YES! FABCO is the PREMOLDED CAULKING that fits all standard steel or aluminum roofing and siding sheets.

FABCO eliminates costly hand caulking by closing and sealing all openings between corrugated sheets and flat surfaces, such as curbing, flashing at corners, eaves, ridge roll or cap, gutters, gables and around doors and windows.

FABCO provides firm nailing and bolting support, prevents flattening and deforming of sheets.

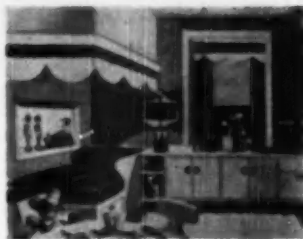
FABCO prevents electrolytic corrosion by insulating aluminum sheets from steel construction members.

FABCO Closure Strips are premolded of naturally weatherproof rubber composition, neoprene composition or asphalt compound. They can be worked, cut punched or drilled with ordinary tools and are easily and quickly installed as sheets are laid.

For complete specifications and descriptive drawings of applications in most corrugated construction assemblies:

Write for Bulletin 501-L TODAY!

FABRICATED PRODUCTS CO.
PITTSBURGH 16, PA.



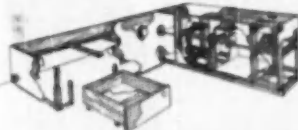
CHILD-SIZE bed and cabinets, designed by Masonite Corp., are compact, practical

Built-in Furniture Designed for Children

Maintaining that more built-in furniture would be used in children's rooms if proper plans were available to builders, the Masonite Corp., Chicago, has designed a built-in bed and cabinet scaled to juvenile needs.

The junior-size bed is 6 feet long and 2 feet, 9 inches wide, large enough for many years' use. Height of the cabinets is 2 feet, 6 inches; their depth, 1 foot, 9 inches. Designed for a room corner, the ensemble may be installed anywhere in the home, including the attic. The group also includes a book shelf; a drawer which may be used to house a phonograph, television set or radio; and a mobile drawer which fits under the bed.

The design avoids complicated construction. Specified materials are 1 x 4-inch lumber for primary framing members with intermediate framing of 1 x 2-inch pieces; cabinet tops and doors of Masonite 5/8-inch Tempered Presdwood; and 3/4-



CUTAWAY perspective view illustrating construction of child's bed and cabinet

inch Tempered Presdwood for sides of beds.

As planned the unit measures only 8 feet from wall corner of bed to extremity of cabinets. Dimensions of a number of units may be altered to meet special requirements.

Valances over bed and window shown in illustration are cut from Presdwood boards 3/4-inch thick.

Copies of the working drawings may be obtained free from the Masonite Corp., 111 W. Washington St., Chicago 2, Ill. They are designated as Plan No. AE-251.

Renew Your Subscription

DECEMBER 1950

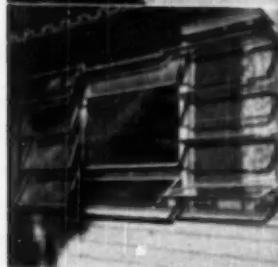
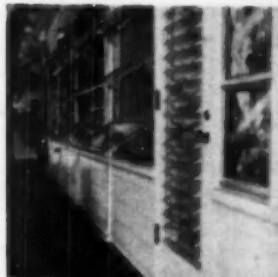
Life Has Become
Increasingly
Complicated
for Builders
**BUT YOU CAN
STILL DEPEND
ON**



**TIGHTEST
CLOSING
WINDOW
EVER
MADE**



Yes, builders everywhere are using AUTO-LOK, secure in the knowledge that window problems will not be added to the many other uncertainties that complicate their progress these days.



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- For simplified installation, and to save you time and money.
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- For positive protection against all climatic extremes.
- For draft-free ventilation, even when it's raining or snowing.

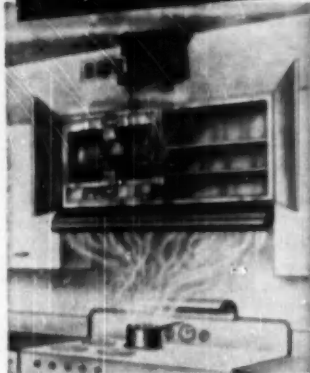
Pictured are close-up views of the Farmingdale, Mich. residence of Carl F. Unruh, Director of Purchasing, FORD MOTOR COMPANY, DETROIT. NOTE Ludman Jalousie Doors shown in top photo.

Consult your copy of SWEET'S, or write for name of nearby AUTO-LOK distributor. Address:

LUDMAN CORP., Dept. AB-12
P. O. Box 4341, MIAMI, FLORIDA

The most MODERN kitchen ventilating system

**TRADE-WIND
SUPER CLIPPER
CABINET VENTILATOR**



**Installs in cabinet
over range... double
inlets provide
COMPLETE ventilation**

Only the Super Clipper Kitchen Ventilating System—made by Trade-Wind—exhausts cooking fumes and heat from both the stove and at the ceiling level.

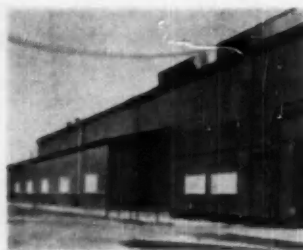
This newest development is installed in metal or wood cabinets directly over the stove.* The twin squirrel cage blowers produce 600 CFM—more than sufficient power to trap all cooking heat, grease and odors from the range top as well as through the second inlet at the ceiling. The motor is equipped with a 2-speed control. Two metal air filters are provided. Both a fold-under hood and stationary hood are available and both are optional.

No other kitchen ventilator can do the complete job that the Super Clipper accomplishes. And no other ventilator offers the architect, the builder and the home owner the versatility and efficiency which the Super Clipper provides for the modern kitchen.

*Several manufacturers now build metal cabinets especially for the Super Clipper. Wood cabinets can also be built on the job. Trade-Wind does not provide the cabinet.

Write today for complete information.

**TRADE-WIND
MOTORFANS, INC.**



PLEXIGLAS sheets, mounted across 16-foot openings in Philadelphia plant, admit large areas of light to interior of building

Plexiglas Used Profitably In Industrial Building

Large panels of corrugated translucent white Plexiglas, used for side-wall glazing by the Midvale Steel Co. in alterations to their Philadelphia plant, have provided good natural inside lighting as well as a pleasing exterior appearance.

The acrylic plastic panels are installed across each of a series of openings in an extension to the company's press building. Each opening



WHITE plastic sections contrast pleasingly with red-painted galvanized iron sheets is 15 feet long and is covered by four 48x72x.125-inch sheets.

Corrugated to a 2 3/4-inch frequency, the Plexiglas is lapped over one corrugation with the structure's galvanized iron sheathing at each end of an opening, and with the edges of adjoining plastic sheets.

Panels are held in place at top and bottom by 20-gauge sheet iron flashing, being bolted at the bottom and riding free at top. Oversize boltholes and neoprene grommets are used with all edge and bottom bolts, to prevent damage to the plastic material at those points from expansion or contraction with extremes of temperature.

Second Installation
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Designed expressly to link troublesome stop gauge failures, the Comet Adjustable Stop Gauge offers you these advantages:

More time saved because unit is easily adjustable for any job need. Stops may be positioned without use of wrench and can be used in either right or left hand application. The bar is engraved in 1/4" stops and is plated or an all other parts to make it weather proof and long wearing. Increased production, because all stops are positive and accurate to give work settings on rough stop castings. Saves you money because it costs no more than other units, yet lasts longer and produces more.

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HERE ARE THE FACTS

Here's a brand new, 40-page semi-technical book which clearly presents the facts on the use of Calcium Chloride. Filled with graphs, tables and charts and developed through research conducted by nationally recognized authorities, the book contains much material not heretofore available. The information contained in this book is primarily of a factual nature, of interest to contractors, architects, engineers, plant operators and men in the allied fields. Write for your copy today—there is no obligation.



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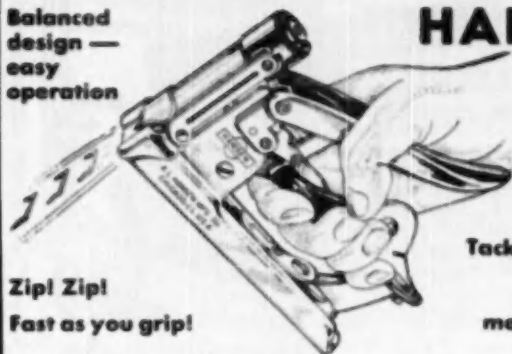
Please send me five copies of the new, 40-page book, "The Effects of Calcium Chloride on Portland Cement." Please check:

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Balanced
design —
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operation



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Fast as you grip!

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the Tacker
with 1001
uses —

Tacks insulation,
ceiling tile,
metal lath, etc.



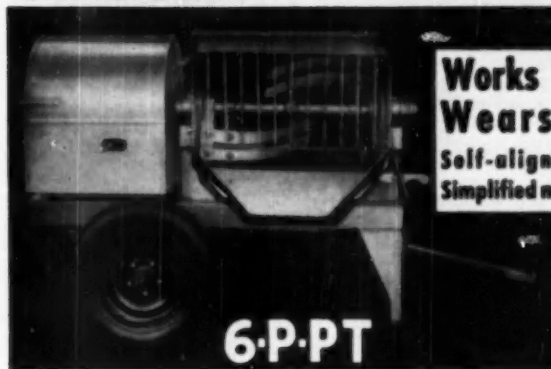
INSULATION of all types quickly and properly installed with Hansen, the Tacker you hold and operate with one hand — securely holding material and bracing self with other. Flanges on insulation are easily tacked securely in place. Reflective insulation leaks and holds better when tacked with Hansen. Building paper, screens, ceiling tile, are among other time-saving uses of this modern tacking method.

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GILSON Mortar and Plaster Mixer



Works Better,
Wears Less
Self-aligning shaft
Simplified maintenance

6-P-PT

THE GILSON mortar mixer does the good job you want on every batch — and is built to stay on the job. You can depend on this mixer more than on any other because the precision, self-aligning ball bearings keep running true despite the pull of big and heavy loads. Even more, you easily change any part of the mixing unit without disturbing

the shaft or bearings . . . no need to have your Gilson torn down in a repair shop. Grates have narrow openings to safeguard hands—a safety feature that you want to protect your men and yourself. Model 6-P-PT is one of 39 mixers now serving contractors coast to coast. Write for the 6-P-PT bulletin and the name of your Gilson distributor.

GILSON BROTHERS CO. Fredonia, Wisconsin

Manufacturers of Contractors Equipment Since 1911

DECEMBER 1950

INDUSTRY BRIEFS

The board of directors of **Marquette Cement Manufacturing Co.** has approved immediate construction of a cement-producing plant at Brandon, Miss., 12 miles east of Jackson, Miss. The new plant, scheduled for completion around Sept. 1, 1951, will produce a yearly total of one million barrels of all types of portland cement as well as oil well and masonry cement, company officials said. As an adjunct to this project Marquette will also build a dock at Vicksburg, Miss., with facilities for transfer of cement from railroad cars to barges on the Mississippi River.

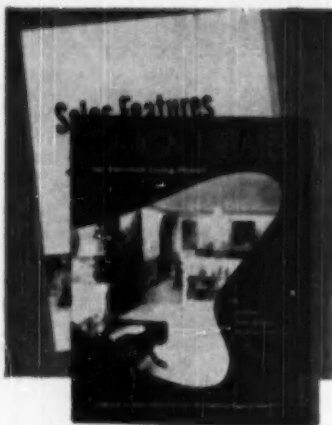
John Stolarz has been appointed sales promotion and advertising manager for the **Delta Power Tool Division** of **Rockwell Manufacturing Co.**, Milwaukee, Wis. He will also continue temporarily as sales manager of the firm's **Delta Multiplex Radial Saw Division**. Another Rockwell appointment is that of **Ewald Schutz** as chief engineer of the **Delta Multiplex Division**, Leetoma, Ohio. Schutz was formerly chief engineer of **DeWalt, Inc.**, Lancaster, Pa.

Earl E. Salisbury, sales manager for **Metal Products Corp.**, Miami, Fla., was recently named vice president of the company. The firm, manufacturer of **Har-Vey Rolling Door Hardware** and metal-frame windows, has also announced opening of a branch plant in **Los Angeles**.

Robert S. Moss, formerly assistant to the treasurer of **Grayson-Robinson Stores**, has been appointed controller of **Lightolier, Inc.**, Jersey City, N. J. **D. Blitzer**, president, has announced. Moss succeeds **Harry I. Condon**, who retired from active business after 21 years with the lighting firm.

The Rittling Corp., manufacturers of heat transfer products, has announced the consolidation of its manufacturing facilities and engineering departments in a new location, **Hamburg, N. Y.**, Buffalo suburb. New sales offices were opened in downtown Buffalo. At the same time, **President Charles R. Rittling** reported development of a new design in base-board heating units, soon to be released.

193



Free to Builders... Two New Planning and Idea Books

"Sales Features for Electrical Living Homes" shows the "most wanted" sales features in homes...features that have proved their appeal to home owners. Has 52 pages of illustrations, diagrams...on kitchens, laundries, electric bathrooms, and smart lighting ideas for every room in the house. Also gives simplified data to help in planning an adequate wiring system.

With each Sales Feature, you'll find a brief summary of Selling Points to help you and your salesmen turn prospects into buyers.

"Design Details for Electrical Living Homes" fills a real need for construction details on valances, cornices, cove, soffit, pinhole spot, under-cabinet and other unusual lighting effects. Kitchen and laundry plans, with complete dimensions, are also shown.

Photographs of actual installations illustrate the planning ideas, and construction details show exactly how to build them.

To get these books, send coupon below to Better Homes Bureau, Westinghouse Electric Corporation, Dept. AB-12, Box 868, Pittsburgh 30, Pennsylvania. G-10115

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INDUSTRY BRIEFS

Fred J. Walters, Hotpoint, Inc., vice president, has been named defense co-ordinator for the company. President James J. Nance has announced Walters will head a defense contract committee as chairman. Also announced by Hotpoint were the promotion of Edward R. Taylor, sales manager, to general sales manager, and the promotion of John F. McDaniel, previously assistant sales manager, to sales manager.

Purchase of the assets of Fred W. Wappat, Inc., Mayville, N.Y., has been announced by Paul Jones, president of the American Security Corp., Marion, Ind., and president of Cummins Portable Tools Division, Chicago. The Wappat firm has manufactured portable electric hand saws for the industrial and heavy construction fields for 25 years. The newly-acquired property will be operated by Cummins as the Fred W. Wappat Division. The entire Wappat personnel and identity of the Wappat line will be retained.

Creation of an additional executive vice presidency and promotion of departmental and administrative heads have been announced by Caterpillar Tractor Co. Personnel involved and their new posts are: Harmon S. Eberhard, executive vice president; William Blackie, who will coordinate with the Peoria plant the administration of the Juliet and San Leandro plants and Caterpillar Tractor Co., Ltd., new British subsidiary; W. H. Franklin, who will assume administrative direction of the accounting and traffic and order departments; and A. N. Whitlock, who will assume direct supervision of accounting.

A. R. Kelso has been elected vice president of Mack Trucks, Inc., it has been announced by E. D. Branson, chairman and president. At the same time Kelso was named vice president and director of Mack Manufacturing Corp., the parent company's wholly-owned subsidiary.

The recent appointment of Lawrence H. Russell as sales manager of the Walker-Turner Division, Kearney and Trecker Corp., Plainfield, N. J., has been announced by the general manager, Cara L. Lane. Russell has had 10 years experience in the power tool field, including two as sales manager of the Power King Division of the Atlas Press Co.

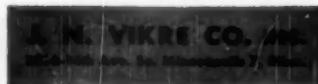


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Vikre Sash Holders with their patented adjustable spring tension keep your clients' windows perfectly balanced at all times. All parts of holder are fully encased to eliminate wear or faulty operation of window. Install Genuine Vikre Sash Holders for better performance at lower cost.

Genuine Vikre Sash Holders are used and recommended by one of the world's largest makers of pre-cut homes. For full information write for folder B-1.



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**LOWEST COST
ACOUSTICAL TREATMENT
BONDS TO ANY CLEAN SURFACE**



Now you can specify an efficient acoustical material which combines lowest cost with maximum fire protection, handsome appearance and exceptional ease of application. It is fire-safe **Zonolite® Acoustical Plastic**.

Applied like ordinary plaster, it bonds to any clean, firm, water-resistant surface including concrete, masonry, or plaster—curved, irregu-

lar or flat. There's no furring, lathing, cutting or fitting—no unsightly seams to catch dirt.

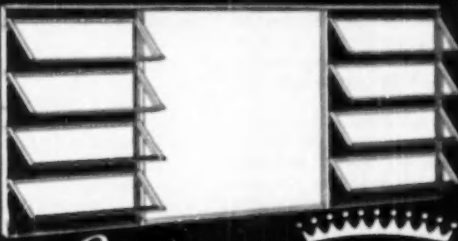
Because of these and other cost-cutting factors, **Zonolite Acoustical Plastic** can often be used where other acoustical treatments would be 'out of the question. But, why not have complete data in your files? Write today to Dept. AB-120.

ZONOLITE COMPANY

Dept. AB-120, 133 S. La Salle Street, Chicago 3, Ill.

**Zonolite is a registered trademark.*

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• AWNING TYPE •
• EXTRUDED ALUMINUM
WINDOWS

• Especially designed for use in
Schools, Hospitals, Public Buildings
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HEAVY 2 1/8" SECTIONS

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14 MARKET STREET JAMESTOWN, N. Y.

INDUSTRY BRIEFS

T. A. Crawford has been elected a



Crawford

vice president of **Timken-Detroit Axle Co.** He will continue as general manager of the Timken Silent Automatic Division, a post he has held since 1934, after joining the firm in 1926. Prominent in trade association activities for many years, Crawford is currently a board member of both the Oil Heat Institute and the Stoker Manufacturers Association.

C. D. Alderman has been named general manager of merchandising for **Mullins Manufacturing Corp.**, G. E. Whitlock, president, has announced. Alderman, who joined Mullins in 1938 and served during the war as an Army Ordnance Department major, became sales manager in 1948. Other promotions announced at the same time are D. F. Rucks, Jr., from assistant sales manager to sales manager of the kitchens division; M. L. Onko, formerly in charge of builder sales to assistant sales manager and manager of builder sales; and J. A. Rishel, from manager of appliance sales to assistant sales manager and manager of appliance sales.

Allied Building Credits, Inc., has announced the promotion to assistant vice president of **M. O. Harum** and **G. E. McCully**, formerly manager and assistant manager, respectively, of the business development department, and **R. E. King**, former manager of the Pittsburgh office.

Four changes in key personnel of the **Norge Division of Borg-Warner Corp.** have been announced by Division Vice President **H. L. Clary**. **John A. Drake**, formerly manager of market research and a member of the firm 20 years, has been named director of marketing; **Glenn T. Thompson**, manager of business services 17 years for Hotpoint, Inc., is manager of market analysis; **Preston L. Kelsey**, affiliated with R. L. Polk for 20 years, was named manager of product coordination; and **William A. Korb**, on the Norge staff more than 20 years, is manager of orders and scheduling.

The board of directors of the **Van Packer Corp.** have announced the promotion of **Kenneth W. Mayer**, general sales manager, to vice president in charge of sales.

ROE

STEEL TAPES

are best for
BUILDERS...

the facts prove it!

FIRST AND FOREMOST, Roe Steel Tapes are extremely easy to read... and they go right on being clearly legible year after year. The black markings are permanently etched into the steel which is then nickelplated to provide a lustrous contrasting background. A transparent plastic overcoating is added for top-most wear resistance—and durability.



A - Steel tape
B - White nickel
C - Black etched markings
D - Plastic overcoat

Pictured here is the Roe Steel Tape #202 with polished chrome-plated, sturdy welded steel case. Other Roe models feature cases in handworn leather, and in metal-banded leather and leatherette. They have a reinforced rust resistant liner, precision winding drum, flush-folding handle, press button center and roller mouthpiece. All are available with 1/8, 3/8, 7/8 or 100-foot tapes; feet in inches and eighths, or in tenths and hundredths.

Get Roe Steel Tapes from your hardware dealer—or write us giving his name and address.



JUSTUS ROE & SONS

Makers of fine steel tapes since 1876

ALBANY, NEW YORK

... Social Security (Continued from page 133)

The same rules apply to *engineering* which is also an employment not covered by Social Security.

To earn the Old Age and Survivors' Insurance Benefits it will be necessary for you to have at least one quarter of coverage for every two quarters after January 1, 1951, up to but not including the quarter in which you die or become 65 years old. Six quarters of coverage is the smallest number to make you eligible and 40 quarters is the maximum needed.

Because you are a "new starter" in Social Security, the Government has worked out a way to put you on an equal footing with the wage-earners already in the "system." For this reason, quarters of coverage *after 1936* will be counted in your favor, if you earned those quarters of coverage when you were a worker whose pay was taxed for Social Security. To be fully insured as a New Starter you need only *six* such quarters of coverage if you are now 62 years of age or older. If you are now 65 and have no previous quarters-of-coverage credits, you will need only 1½ years of self-employment to be eligible for the benefits.

At any age you will be considered currently insured in the event of *death*, if there are six quarters of coverage to your credit out of the 13 quarters before that sad happening. Under such circumstances your orphaned child less than 18 years of age, or your widow with a child under 18 years old, can receive the monthly benefits. However, your widow's monthly benefits in that case will permanently end when the child reaches 18.

When you are 65 or over, and you have earned the proper quarters of coverage, you can retire if you want to. This does not mean that you have to pull out from business entirely. You may continue in the building and contracting game or any other covered work so long as your earnings from such work are not more than \$50 a month. After retirement you'll be suspended from benefits for the period of time in which you earn more than that figure. If you wish to practice as an architect or engineer—should you be one or the other or both—there is no tax on earnings from these professions, nor suspension of benefits if you should receive such earnings over \$50 monthly.

Here's a pleasant surprise: Having retired, you can get your monthly benefits and at the same time enjoy *unlimited* income from your stocks, bonds, rents, mortgages or any kind of capital investment.

If your business is incorporated, you can draw dividends from it without deduction, providing you do not earn more than \$50 a month in salary or other compensation.

In any event, should you be fortunate enough to have a country place to retire to and farm, there's no limit on what you can make—farming being a non-covered employment—and still get your monthly retirement check from Uncle Sam.

This retirement benefit will be figured on your average monthly earnings—from wages and/or self-employment—based on the years from 1951 to age 65, or death if that comes earlier. In your capacity of a self-employed person you will get, as a monthly payment, 50 per cent of the first \$100 average plus 15 per cent of the next \$200. If you lack six quarters of coverage *after 1951* the monthly benefit will be 40 per cent of the first \$50 plus 10 per cent of the next \$200, plus 1 per cent for every year you earned \$200; in addition there's an increase according to the Government's "conversion table." As a veteran of World War II you would receive a wage earnings credit of \$160 for each month of service.

Social Security experts call your benefit the "primary insurance amount." The smallest primary benefit is \$25 a month, unless the average of your monthly earnings falls below the unlikely sum of \$35. The benefit amounts for dependents and survivors are:

- Half the "primary insurance" to a wife;
- Three-quarters to a widow;
- Half to a child under 18—except that the first child in a deceased beneficiary's family gets three-quarters;
- Three-quarters to parents.

The *lump sum payment at death* is three times the primary monthly amount.

It is important for you to realize that *benefits are not paid automatically*. A claim must be filed before any insurance payments are made. In the case of monthly payment benefits, they can go back no more than six months from the date when the claim is filed. The lump sum payment is made only if the claim is filed within two years after the death of the insured person.

The *place to make claims* is the nearest Social Security office. The Government will not consider you retired until you apply for and begin to draw Retirement Benefits which may be any time from 65 on that you decide to quit.



VITA mortar gun shows filling in the vertical joints while blocks are in position

Report New Mortar Gun Cuts Block Laying Costs

A new mortar gun has proved successful for quick and inexpensive laying of cement blocks, cinder blocks and hollow tile without the skilled labor usually required for this work, according to the manufacturer, Vita Labor Saving Tools, Inc., Smithtown Branch, N.Y.

The Vita gun uses any standard mortar mix, operates on 110 or 115 volts, AC or DC. It can be used to fill vertical joints after blocks have been laid as well as for the conventional method of buttering individual blocks before application.

The gun feeds mortar through a hopper to an electrically-driven worm and then through a nozzle in a uniform, rod-like supply. It weighs 13½ pounds.

The president of the firm, Larry Vita, said that, on a house recently built in Smithtown with 7,500 cinder blocks, a job analysis showed a saving of \$956 in mason labor through use of the gun.



MORTAR GUN was used to lay 7,500 cinder blocks for this Smithtown N.Y. home

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DECEMBER 1950



here's one section...

of the latest Universal-Rundle Family Bathroom

- Featuring sectionalized*
- ★ Lavatory and Tub Space
 - ★ Separate Shower and Toweling Room
 - ★ Central Wash, Dress and Storage Area
 - ★ Private Water Closet Compartment

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Time Features for Bath and Kitchen
UNIVERSAL-RUNDLE CORPORATION
NEW CASTLE, PENNSYLVANIA



UNIVERSAL-RUNDLE CORPORATION
NEW CASTLE, PENNSYLVANIA

Please send: Ernst Payer Family Bathroom Plan
Information on U-R Fixtures

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Write for complete plans and illustration by Architect Ernst Payer A.I.A. Free

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EXCLUSIVE

5-Section

CONSTRUCTION



THE

"OVERHEAD DOOR"

TRADE MARK

★MIRACLE WEDGE★

★SALT SPRAY STEEL★

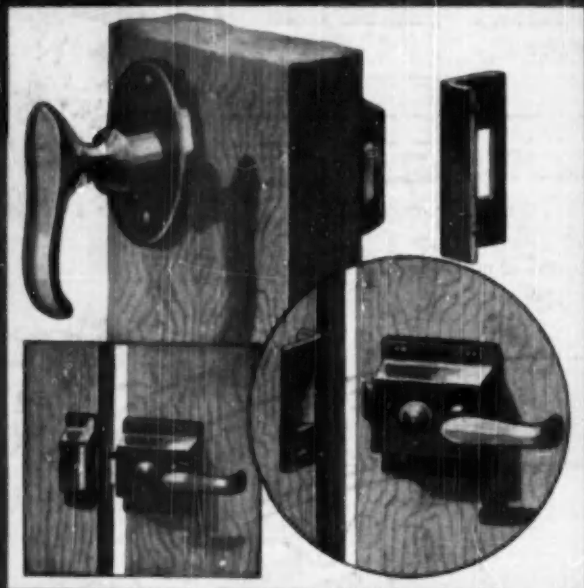
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