HOW TO MAKE QUICK PROFITS FROM OLD HOUSES

CHANGE THIS...

WITH CELOTEX INSULATING SIDING

There's quick profit in promoting the modernization of drab old houses with colorful Celotex Insulating Siding.

Every old house in your community... that needs repairing or repainting... is a good prospect. Celotex Insulating Siding gives new life and sales value to an old house. It does two jobs at once -- decorates and insulates. And it's the only siding with a Celotex cane fibre core.

Celotex Insulating Siding is now made in brick design under the trademark, "CELOBRIC", and in stone design under the trademark, "CELOSTONE".

For complete information -- see your Celotex salesman
... or write to

THE CELOTEX CORPORATION, CHICAGO 3, ILLINOIS
WHICH IS THE RIGHT WINDOW TO USE?

For maximum economy—Type 2414N. Meets most residential window needs. Use this for all general locations. One swing leaf provides full 50% opening... deflects air into the room.

For maximum ventilation—Type 2424. Provides 100% opening. Costs 70% more than Type 2414N because it has two ventilators with Roto-Adjusters. Obviously, there are places where this extra ventilation makes the additional cost well worth while.

For maximum view—Type 4424. Picture window, plus ventilation... many other types and sizes of Fenestra Casements to provide a right window for every need.

First, it is a high-quality Residence Steel Casement specially designed to cost less. It has a single ventilator—yet 50% opening is more than you get with ordinary windows. Cost is reduced even further by manufacturing standardization.

Second, installation cost is less because the window is a complete, assembled unit. It's made for the widely-used 2'10" x 4'6" opening.

Third, maintenance cost for your customers is minimized by Fenestra's well-known high quality. Fenestra Casements are Bonderized and priming paint is baked on.

This economy window provides the many benefits that have made the whole family of Fenestra Casements so appealing to home buyers—easy opening, safer cleaning and easier screening from inside the room... plus Fenestra's trim steel frame which allows 16% more glass area than ordinary windows of the same size.

For full information and prices of all types of Residence Steel Casements, see your Fenestra dealer—or write to Detroit Steel Products Company, Dept. AB-9, 2260 East Grand Boulevard, Detroit 11, Michigan.
A 6 ply 8' - 18' Upson Strong-Bilt Panel goes through Mr. Blandings' door to make distinctive walls and ceilings of lasting beauty. Can be applied any month of the year.

Beautiful crackproof ceilings for Mr. Blandings' Upson Strong-Bilt Panels are used in thousands of homes all over the land—give added value to any house—stay free from continuing expense.

A front yard scene from the motion picture, "Mr. Blandings' Dream House" starring Cary Grant, Myrna Loy and Melvyn Douglas.

Mr. BLANDINGS and UPSON Build a Dream House

Another signal recognition for Upson Products!

Replicas of "Mr. Blandings' Dream House" as it appears in the motion picture have been built in 60 American cities. The Upson Company is the only manufacturer of interior wall and ceiling materials officially designated by RKO Radio Pictures, Inc. and the Selznick Releasing Organization, producers and distributors of the motion picture, to supply wall and ceiling panels for local Blandings houses. Above is a typical Blandings Dream House erected in Atlanta, Georgia with interior walls and ceilings of Upson Strong-Bilt Panels.

THE UPSON COMPANY 18 Upson Point, Lockport, New York
## FEATURES

### Street of Modern Homes
- St. Louis Builder Introduces New Methods in Arranging Group Layouts

### Variety Adds Value to Penn Model Village
- Thirteen Different Designs Used in 30-House Project

### A Neighborhood Planned from the Ground Up
- Planning Plus Attention to Materials and Workmanship Result in Fine Homes

### Economy House for a Narrow Lot
- Simplicity of Plan and Elevation Makes Versatile City House

### Controlled Development Assures Value
- High Quality Construction Emphasizes Traditional Houses

### Engineered House Construction, Part III
- Plumbing

### New Idea for Auto Service Station
- Novel Services Incorporated in This Unusual Station

### Two Motels Designed to Render Complete Service
- Two Solutions to Problem of Tourist Court Construction

### Examples of Low-Cost Housing
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- Precutting Helps Hold Costs Down on 151-House Development
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- Experimental House of Texcrete
- Precutting and Yard Assembly Keep Costs Down
- Lumber Dealer Delivers Economy Houses

### Designed for Comfortable Living
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### Tests Prove Value of Insulation
- Importance of Proper Herd Condition Shown in Recent Study

### Showroom Serves As Building Education Center
- Dealer Uses Showroom to Demonstrate Application of Many Types of Supplies

### Big Demand for Modern Small Apartments
- Tremendous Need for Quality Rental Units Successfully Met in Spokane, Wash.

### Behind the Scenes
- In an Asphalt Tile Factory

### Many Men, Many Minds
- Opinions on Housing Often Are Based on Ignorance and Misconception

### Styling Stores for Today's Trade
- Architectural Treatment of Small Store Attracts Attention

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- Monolithic Houses Produced at Low Cost

### New Products
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### How-to-Do-It and Better Detail Plate

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American Builder, September, 1948.

The SEVERN Oil Boiler, with its trim lines and colorful jacket, blends perfectly with the decorations of this distinctive basement workshop. The Severn's tight construction keeps fuel odors from escaping into the room and adds to the shipshape cleanliness of the entire house. In the downstairs powder room are two popular American-Standard Plumbing Fixtures — the quiet COMPACT Water Closet and the shelf-back COMRADE Lavatory. These fixtures come in gleaming white and a choice of colors.

FIRST in heating and plumbing
with architects...with realtors...with home-owners!

A MERICAN-STANDARD Products are big favorites with people who recommend, specify or buy heating equipment and plumbing fixtures.

Their smart styling pleases those who look at them from the point-of-view of design; their sound construction details meet the exacting requirements of engineers; and their flawless performance, operating economy and long life appeal to home-owners.

Yes, you're sure of public acceptance when you choose American-Standard...for more American homes have heating and plumbing by American-Standard than by any other single company. For details of the complete line, contact your Heating and Plumbing Contractor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pa.

For a hillside house, what could be nicer than a terrace-level utility room that doubles as a recreation room for all the family? A folding panel wall reveals the efficient, automatic gas fired WYANDOTTE Winter Air Conditioner, ideal for installation where space is at a premium. The ALDEN Laundry Tray, with its two deep compartments finished in smooth, easy-to-clean enamel, lightens washday tasks.

A MERICAN-Standard First in Heating and Plumbing

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILER • ROSS HEATER • TONAWANDA IRON
The Real Issue in the Election

The real issue in the political campaign this year is private enterprise versus socialism. The danger is that this real issue will not be frankly and adequately discussed. There are politicians in all parties who will try to dodge or straddle it. The advocates of private enterprise should prevent as much of this dodging and straddling as they can by attacking every socialistic policy now in effect or proposed and thereby putting on the spot every politician who favors any such policy.

Most of the politicians, like most of the people, profess to be unequivocally in favor of private enterprise. But almost every voter favors one or more socialistic policies that he believes now benefits or would benefit him. The politicians know this, and almost every politician, whatever his professed general principles, supports one or more socialistic policies that are favored by some of those whose votes he is seeking.

Even Sen. Taft became one of the authors of the socialistic T-E-W housing bill. Gov. Dewey has advocated the St. Lawrence "seaway" and a toll-free super-highway across New York State to provide more government-subsidized competition with the private enterprise railways. Members of Congress from the agricultural midwest, regardless of party, still support subsidies to maintain farm prices when they are now the highest in history while deploring "inflationary" prices fixed by industry to pay advancing wages.

Almost every socialistic policy includes a subsidy for somebody. Every subsidy is paid from taxes. High taxes have become the heaviest burden and the greatest danger to private enterprise. Most politicians, regardless of party, favor one or more socialistic policies because they have learned that they can get many votes by taking money from people in taxes and then returning part of it to the same people through socialistic policies of subsidization.

The recent shocking disclosures of infiltration of the federal government by Communists have been highly enlightening as regards some past developments. When years ago American Builder, among other commentators on public affairs, began charging that the New Deal clique were promoting destruction of private enterprise because so many of their policies were socialistic, New Deal bureaucrats replied that they were merely trying to "help" private enterprise which they said had "broken down." Now some former members of that clique, such as Henry Wallace and "brain truster" Rexford Guy Tugwell, are disclosing what were their true principles and purposes all the time by leading the so-called Progressive party on an avowedly socialist platform and with unanimous Communist support. Meanwhile, hearings by congressional committees have been disclosing that other members of the New Deal clique while employed by our government were acting concertedly as spies for the Russian government. Could any better evidence be needed that the reason why many New Deal policies seemed to be intended to destroy private enterprise was that this was their real purpose?

There is one sure evidence that any proposed or already adopted government policy will help to destroy private enterprise. This is, that it is favored by Socialists or Communists. They never favor a policy for any reason excepting that it is inimical to private enterprise. Hence Republicans and Democrats who, for whatever reasons, support policies favored by Socialists or "Commies" are simply playing the socialist game.

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Samuel O. Dunn, chairman of the board of Simmons-Boardman Publishing Corporation and publisher of American Builder, was signally honored at the Chicago Railroad Fair when Monday, August 16, was designated as "Sam Dunn Day." Mr. Dunn, who is recognized as one of the outstanding railroad economists of the world, has been editor of Railway Age, a Simmons-Boardman publication, for more than 40 years. In connection with the event a testimonial dinner was accorded to Mr. Dunn "in recognition of his lifetime of devotion and outstanding contributions to the welfare of railroads and the railway supply industry." The dinner was attended by several hundred executives of the railroads and railway supply firms.
Here it is:
The STANLEY DOOR
AND HARDWARE COMBINATION
you've been waiting for!

From your own letters, you have wanted this Stanley Door and Hardware set for a long time. Many of you have written asking that we furnish such a door. Now, here it is—the original Stanley Econ-O-Matic Hardware plus a door. Don't accept a substitute. Your nearest dealer either has it or can get it promptly.

**DOOR**: This is a beautiful, 24-panel door—all panels closed—designed for an 8' x 7' opening. Door is already pre-cut to 7' 11\(\frac{1}{4}\)" wide and 6' 11\(\frac{1}{2}\)" high. Stiles and rails are 1\(\frac{3}{8}\)" thick, all clear, kiln dried stock which has been treated with rot preventive solution. Panels are of 3\(\frac{1}{16}\)" thick tempered masonite—very strong! Door is furnished in two sections with tongued and grooved meeting stiles to make a snug joint in the center. Each door comes wrapped in cardboard and has a protective board at either end.

**HARDWARE**: This is the No. 2731\(\frac{3}{8}\)×1001 set Econ-O-Matic Swing-Up Hardware, the famous set with automatic opening feature. Complete hardware packed in carton for easy handling.

With national advertising of Stanley FLOATING* Door Equipment to architects and home-owners helping, this combination set gives you a profitable opportunity for increased installation business. Write for details, including detailed specifications and installation information, now! The Stanley Works, Garage Door Dept., New Britain, Conn.

*Copyrighted
BECAUSE IT DOESN'T BREAK

It's a combination you can't beat for bigger sales and bigger volume—Firestone Velon screening consumer advantages plus Firestone Velon national advertising and merchandising aids. Cash in on the newest thing in screening. Feature made-up screens of Firestone Velon—the screening that can't rust, rot or corrode, won't bleed down the housefront; the screening that's amazingly strong and resilient, takes rough handling without denting, bulging or breaking.

From the handling standpoint, it pays you to frame Velon. It's lightweight, handles easily in storage and shipping, cuts with a scissors and leaves no sharp, dangerous ends.

Cash in on Firestone's national reputation.

Order early—order enough—for a big screen season next Spring! Ask your supplier for free merchandising aids: consumer folders, window streamers, counter cards, newspaper mats and Velon screening samples.
Fast, economical sanding — smooth, uniform surfaces — that’s what you get with a Sterling Portable Electric Sander! Use it to sand doors, cabinets, frames, drawers, dry wall construction, sills, stair treads and to smooth plaster. Use it for either occasional or continuous heavy production, maintenance and repair work.

The Sterling is vibrationless, lightweight, easy to operate on flat or curved surfaces.

See Sterling’s “Orbital Motion” principle. Your distributor will demonstrate the Sterling Sander at your convenience. Ask him now — start saving time and money now.

Write for illustrated folder!
STERLING TOOL PRODUCTS CO.
1334-A Milwaukee Avenue, Chicago 22, Illinois

BUILDERS, CARPENTERS, CONTRACTORS AND PAINTERS
USE THE STERLING.

STERLING 1000 SANDER
PORTABLE ELECTRIC
Hold Heat Where It Belongs with Flintkote Insulating Wool

*Inside in Winter
*Outside in Summer

Nobody has to "sell" the value of home insulation anymore. That's an accepted fact.

But there still remains for the builder or contractor the responsibility for selection. Home owners depend on them to get them the most value for their building dollar.

And that's an excellent reason for your recommending Flintkote Insulating Wool, a Fiberglas® Product. It's just naturally better!


And Flintkote Insulating Wool is efficient. The ASHVE Guide establishes its thermal conductivity as "K" = .27 BTU.

So help your customers give their clients the great home comfort, fire protection, the easy installation, the economy and permanence that add up to greater satisfaction and more insulation per dollar with Flintkote Insulating Wool.

Sweet's has complete specifications and data. Or, write us, we'll rush you full details. THE FLINTKOTE COMPANY, Building Materials Division, 30 Rockefeller Plaza, New York 20, N.Y.

*Made by Owens-Corning Fiberglas Corp.
TELEPHONE RACEWAYS MAKE A BIG DIFFERENCE—IN SMALL HOMES, TOO

Up-to-the-minute small-home planning calls for telephone raceways. It's the sure way of avoiding exposed telephone wiring on walls and woodwork ... and providing the owner with the utmost in telephone convenience.

The added cost of telephone raceways is a minor item. A few pieces of pipe or electrical tubing installed inside the walls during construction provide a clear path for telephone wires to outlet locations.

For small or large homes, your Bell Telephone Company will be glad to help you plan modern telephone arrangements. Just call your Telephone Business Office and ask for "Architects and Builders Service."

BELL TELEPHONE SYSTEM
In roofing, Color Means Asphalt!

Your customer is thinking today in terms of color. He is thinking of color as a part of the design of his home. He has had a chance to see what color has done for other homes in making them bright and cheerful. He wants his house warm, friendly and inviting, too.

In the roof area where color styling starts, Asphalt means color . . . and color means Asphalt. Color in wide variety is one appealing feature that has helped push Asphalt Shingles to their present position of dominant leadership among roofing materials. It is estimated that 86% of all roofing purchased is some form of Asphalt.

The book below is a helpful guide to the effective use of color. Be sure to get a copy. In the meantime, sell what sells! Sell colorful, economical, fire-resistant Asphalt Shingles!

FREE! ... This booklet, "Choose Your Roof for rain... AND SHINE", will help you sell. 24 pages in full color. Filled with tips on choosing and combining colors for exterior styling. From members or direct.

CONSTRUCTION'S BIGGEST DOLLAR'S WORTH

ASPHALT SHINGLES

ASPHALT ROOFING INDUSTRY BUREAU
Room 1703 • 2 W. 45th St. • New York 19, N. Y.

SPONSORED BY 28 LEADING MANUFACTURERS OF ASPHALT SHINGLES • ROLL ROOFINGS • SIDINGS • AND BUILT-UP ROOFINGS
A HOUSE IS AS GOOD AS ITS OWNER

Any architect will tell you that he cannot build a first-rate house with second-best materials... just as he cannot do his best unless the client agrees with him on the best specifications.

That’s why leading architects would rather build for House & Garden readers. Matching highest standards with highest incomes, House & Garden readers can afford the most creative architects... the finest building materials...

An analysis of House & Garden’s subscribers shows a higher percentage of readers with incomes over $10,000 than any other home service magazine.*

*51%... latest H & G survey
27%... latest figures of next magazine
Right at the beginning — in the blueprint stage — is the time to get special advantages for yourself and your customers by figuring on INSULITE (Bildrite) Sheathing. It cuts easily and goes up fast to save time and protect your profit margin. It builds a better home for your customers, and adds to your reputation as a good builder.
A Wood-Faced Fire Door which offers these advantages

1. Increased Safety
   The only wood-faced fire door which bears the Underwriters' label. All Weldwood Fire Doors are approved for class B openings.

2. Beauty
   Because of their beautiful wood faces Weldwood Fire Doors harmonize perfectly with any decorative scheme.

3. Durability
   The Underwriters' Laboratories tested a Weldwood Fire Door for durability by mechanically opening and closing it 200,000 times. At the end of the test, the door was unaffected and still opened and closed perfectly.

4. Dimensional Stability
   Weldwood Fire Doors are so dimensionally stable that we guarantee them against sticking in summer or rattling in winter due to any dimensional changes in the door.

5. Light Weight
   At last . . . a really fireproof door that is not heavy or unwieldy. A standard 3 x 7 door weighs approximately 80 lbs.

6. Vermin and Decay Proof
   The mineral composition core used in Weldwood Fire Doors is permanently resistant to fungus, decay, and termites.

7. High Insulating Qualities
   Another noteworthy characteristic of the core is its high insulating value over a wide range of temperatures. It is efficient against temperatures from freezing up to that of superheated steam.

8. Moderate Cost
   Investigate these doors for use on your next job. You will be pleasantly surprised at the low initial cost, and the minimum of maintenance required.

Here's the newest Weldwood combination of beauty plus utility: a fire-safe door that carries the Underwriters' label . . . faced with fine cabinet hardwood for decorative beauty.

Now your entire building can be beautifully finished. It's no longer necessary to break up a decorative motif to gain fire-safe construction.

And we do mean fire-safe! In the regular one-hour fire test by the Underwriters' Laboratories, the Weldwood Fire Door withstood an ultimate temperature of 1700°. Yet the unexposed surface remained cool to the touch!

Cost? So moderate it will surprise you. Maintenance expense? Negligible. Combine those two facts with the great dimensional stability that spells long service life, and you soon see what a beautiful bargain the Weldwood Fire Door really is.

Write for full particulars.

WELDWOOD COMPANION DOOR for matching installations

When absolute fire protection isn't a necessity . . . yet when you want a really first-class opening . . . choose the new Standard Weldwood Flush Door.

It is made with the same incombustible mineral core but without the fire-proofed edge banding and, therefore, does not carry the Underwriters' label. Otherwise it offers the same advantages . . . amazingly high dimensional stability, beauty, durability, lightweight, high insulating qualities . . . and it sells for less than the fire door.

Weldwood Flush Doors can be matched perfectly with the Fire Doors, to carry the same decorative theme throughout the building.

Write for full information.

UNITED STATES PLYWOOD CORPORATION
55 West 44th Street, New York 18, N.Y.
Superior in detail, low in price, wide in range of types and sizes...

REYNOLDS ALUMINUM RESIDENTIAL CASEMENT, FIXED AND PICTURE WINDOWS

How to Write Air Infiltration Specification:
Windows of the type furnished shall have been tested by a recognized laboratory and shall have shown air infiltration not exceeding \( \frac{\frac{1}{2}}{\text{cubic foot}} \) of air per minute per foot of vent perimeter when subjected to static pressure equivalent to a wind velocity of 25 mph.

REYNOLDS ALUMINUM CASEMENT WINDOWS MEET THIS SPECIFICATION.

REYNOLDS Lifetime ALUMINUM Gutters and Downspouts

Rustproof permanence at about half the price of other rustproof materials.
Three styles available in either plain or stippled-embossed aluminum.

A.I.A. File Brochures on request from REYNOLDS METALS COMPANY, Building Products Division, Louisville 1, Ky.

WORLD'S LARGEST PRODUCER OF ALUMINUM BUILDING PRODUCTS:
Shingles, Clapboard Siding, Corrugated and S-V Crimp, Snap-Seal and Standing Seam Roofing, Weatherboard Siding, Built-Up Roofing, Nails, Gutters, Wall Tile, Windows, Reflective Insulation, the "Alumi-Drome" (prefabricated utility building).
The economy and safety of your buildings is permanent when Pittsburgh Steeltex lath is used as a backing for interior finishes. Your homes sell easier. Your reputation as a designer and builder is enhanced because owners quickly sense the value of fire-resistant construction and freedom from plaster cracks and stud marks provided by Steeltex. Many architects specify Steeltex and experienced builders prefer it because of its ease of installation and the savings in material. They both agree that Steeltex definitely makes possible the finest construction available in homes and other types of buildings.

It will pay you to write today for our illustrated technical booklet which shows how you can assure better construction at low cost with Pittsburgh Steeltex lath for plaster.

STEELTEX for Plaster, Floor Lath, Stucco, Masonry Veneer Available Now at your local dealer.

Pittsburgh Steel Products Company
Subsidiary of Pittsburgh Steel Company
Grant Building • Pittsburgh 30, Pa.
BECAUSE IT LEADS IN PERFORMANCE

INSELBRIC
THE INSULATING BRICK SIDING

Through the years INSELBRIC has become the standard of excellence for all insulating brick sidings. INSELBRIC looks like real brick, insulates better than real brick, and lasts a lifetime—makes old frame houses look like new brick homes. INSELBRIC, "the only insulating brick siding people ask for by name," leads in performance—leads in sales—makes more profits for dealers!

JONES & BROWN, INC.
National Distributors of Inselbric and Inselstone
PITTSBURGH, PA.

MASTIC ASPHALT CORP.
World's Largest Exclusive Producers of Insulating Brick Siding. Makers of Inselbric and Inselstones.
SOUTH BEND, IND. • ELIZABETH, N. J.

Jones & Brown, Inc.
439 Sixth Avenue
Pittsburgh 19, Pa.

Yes, I want to know how I can build a permanent, profitable business of my own with INSELBRIC. Please send me the full INSELBRIC story at once!

Name
Street
City
Permanence, Safety and Utility Assured throughout the Robert Gair Company by Truscon Steel Building Products

The new Cambridge, Mass. plant of Robert Gair Co., manufacturers of Folding Boxes, Display Containers, Corrugated and Fibre Shipping Containers, Displays and Boxboards, is an excellent example of architectural beauty attained with Truscon Steel Windows in a combination office and factory building. These windows help achieve long, sweeping lines.

Maximum light and ample ventilation in the new Gair building are provided by mechanically operated Truscon Pivot Steel Windows. These windows are especially suited for industrial and commercial buildings such as factories, warehouses, garages and filling stations. Write for free catalog on complete Truscon Steel Window line.

A view of the Truscon Ferrobord Steeldeck Roof, the permanent answer to roof problems. Ferrobord is formed of either 18 or 20 gauge copper bearing or electrogalvanized strip steel with interlocking members. Truscon Ferrobord Steeldeck Roof provides a smooth, quickly installed, fire-resistant surface over which any type of built-up roofing can be applied, with or without insulation. Write for descriptive literature.

Where metal sidewalls were required Truscon Ferroplate Siding was used throughout the building. Used alone or in conjunction with brick, Ferroplate offers the advantages of quick construction, fire resistance and economy. Write for literature.

TRUSCON STEEL COMPANY YOUNGSTOWN i. OHIO Subsidiary of Republic Steel Corporation
You can't see the difference in these two bundles of flooring...

...BUT there will be a big difference in the floors they make

The flooring on the left has been carefully kiln dried, accurately machined, and properly graded. It will make a beautiful, long-lasting hardwood floor that will completely satisfy the home owner. The flooring on the right was poorly seasoned, indifferently graded, and has serious manufacturing defects. Difficulty and added expense will be experienced in laying this flooring, and there will undoubtedly be complaints on the completed floor.

Hardwood flooring has to be bought on confidence. There's no bigger gamble than the purchase of unbranded flooring through "fly-by-night" sources of supply!

- Hardwood flooring, more than almost any other building material, must be purchased on the reputation of the manufacturer and the integrity of the dealer who sells it. Flooring is received in wire-bound bundles, making it impractical to examine individual pieces, as you can do when unloading lumber. Furthermore, even closest scrutiny of every strip will not disclose shortcomings in seasoning or certain defects in manufacture. These will become apparent only as the flooring is being laid, or after the floor has been in use.

When you buy flooring through unknown sources, you have no recourse. You don't know what you're getting until it's too late! Protect the home buyer, and yourself, by purchasing accepted brands of flooring and buying through recognized, reliable dealers.
$2,000 DOOR PRIZE

Name the New Roddiscraft Door
1st Prize $1,000 — 2nd and 3rd Prizes $500 each

All you have to do is name the new Roddiscraft Door with the accordion type veneer core and follow the directions listed below.

About the Door Here are some facts about the door to guide you in selecting a winning name.

The new Roddiscraft door has a core made up of selected strips of veneer. These strips are spot-glued at intervals and stretched within the rails to form an accordion core design. This is a radical departure from the conventional core. The accordion core creates the strength and rigidity of a solid core with 50% less wood content.

Veneer strips are spaced 2" apart at points of greatest core-strip bending. This provides maximum support to the face panels and protects against puncture from abuse.

Face panels and rails are hardwood throughout. The whole assembly is pressure bonded with the finest glues obtainable and seasoned in specially constructed kilns for permanent straightness.

THERE YOU HAVE ALL THE FACTS YOU NEED TO THINK UP A PRIZE-WINNING NAME. PUT ON YOUR THINKING CAPS AND FOLLOW THESE SIMPLE DIRECTIONS:

1. Select the name you believe most appropriate and fitting. Then, in 25 additional words or less, complete the following statement: "I believe the new Roddiscraft Door with the accordion type veneer core is a superior door because .......
   " Each name submitted must be accompanied by a statement.

2. Send all entries to the Roddis Lumber and Veneer Company, Marshfield, Wisconsin. All entries must be mailed before midnight, November 20, 1948. Send as many entries as you please.

3. Entries will be judged on the basis of originality and aptness of thought by a panel of expert judges. All entries become the property of the Roddis Lumber and Veneer Company. The judges’ decision will be final. In the event of a tie, duplicate prizes will be awarded.

4. The first prize winner will receive $1000; the next two winners will receive $500 each. All winners will be notified by registered mail.

5. This contest is open only to dealers and their employees and the employees of architectural firms, and millwork houses.
This ever-popular, low-cost DeWalt is easy to carry from job to job. When you put it to work you actually have a "saw-shop" on the job, because every time you change the cutting tool, you have another machine!

To build more and better houses faster—builders use this portable, low-cost DeWalt. Because most of its working parts are now of light-weight, heat-treated aluminum, operators find it easier to handle—safer than ever before—and it does the fast, accurate work they want. It's a machine you can get quickly. Write for catalog. DeWalt, Inc., 19 Fountain Avenue, Lancaster, Penna.
KOHLER PLUMBING FIXTURES
in bathrooms like this, create lasting satisfaction

When home-owners see the name "Kohler" on plumbing fixtures, they know the answers to many important questions. The Kohler reputation for first quality assures them that besides the beauty and harmony they admire, there is the highest degree of practicality, serviceability and durability.

In the illustration Kohler fixtures are placed in relation to other facilities so that comfort and convenience combine with a well-balanced effect. The fixtures come in pure white or delicate pastel shades.

The Cosmopolitan Bench Bath has a base of non-flexing iron, cast for rugged strength and permanent rigidity, and coated with lustrous, glass-hard, easy-to-clean Kohler enamel. The efficient Triton shower fitting is shown with the Niedecken Mixer. The Gramercy lavatory, with roomy shelf, is made of highest quality vitreous china. All the fittings are of chromium-plated brass, precision-made and convenient to use. Kohler quality is a 75-year-old tradition. Kohler Co., Dept. 4-C, Kohler, Wisconsin. Established 1873.

Convenience, practicality and economy are here planned in good measure. All outlets on the same wall simplify piping. Here there is easy access to all fixtures. Storage facilities are roomy and modern in design.

KOHLER OF KOHLER
PLUMBING FIXTURES • HEATING EQUIPMENT • ELECTRIC PLANTS
Only Numetal Weather Strip has all these exclusive features

No weatherstrip on the market offers as many exclusive features as NUMETAL. It's efficient...permanent...inexpensive. What's more, it is conveniently packaged in individual sets that make it a perfect over-the-counter sales item. Shipped prepaid on orders totalling two dozen sets or more.

Has a patented turned edge and embossed nailing zone that make a weather-tight "dead air" space between the strip and the frame. Dirt, soot and cold air cannot pass UNDER this strip.

The "tension" in NUMETAL is "built-in" and forces the free edge of strip to make a firm, positive contact with sash at two points.

Patented design gives NUMETAL greater longitudinal strength, prevents strip from buckling.

Hemmed edge makes NUMETAL practically humproof.

Easily installed without removing windows or doors.

Small hammer and household scissors only tools needed.

For doors and windows

Complete in a handy package ready to hand your customer

Window sets packaged for 28", 30", 32", or 36" size double hung windows. Door sets packaged for 32"x80" and 36"x84" sizes, or for any special size required. Each set complete with weatherstrip, accessories and instructions. *These products sold only to legitimate retail hardware, building material and lumber dealers*

DRIP CAPS for doors and casement windows

At right, No. AFB, Brass. Furnished in any length. Holes punched, nails furnished. 20-gauge, 1/4" wide.

At right, No. DCB, Brass. A very effective rain drip. Very easy to install, no special rabbeting required. Furnished in any length.
Modern Methods of Home Heating

By J. L. SHANK
Consulting Engineer

INTRODUCTION BY
S. KONZO
Professor of Mechanical Engineering at the University of Illinois

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Latest Information on Modern Boilers, Radiators

One Pipe Hot Water Heating
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PROGRESSIVE FOREST OPERATIONS

A BOUNTIFUL CROP of trees for tomorrow is seen in this panoramic picture of a Weyerhaeuser forest in the Pacific Northwest. Notice how the loggers have worked only selected areas. As a part of prudent harvesting, generous seedblock areas will be left for later cutting.

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GREATER VALUES WITH THE
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ONE OF THE MOST important words in the lexicon of the lumber industry is foresight. Why? There are three good reasons. First, the lumber dealer and the contractor must have a continuing supply of lumber . . . and trees grow slowly, so we must plan today for tomorrow's needs. Second, the continuing high demand for lumber requires foresighted planning to get the most good lumber from every log. Third, the wisest and most profitable kind of lumber retailing is always based on foresight.

As an owner and processor of timber, Weyerhaeuser believes that thinking ahead and planning ahead is simply good business. From decade to decade and from year to year, Weyerhaeuser mill and forest practices have been constantly changed, improved, modernized—always with the goal of increasing the long-time forest yield, getting more usable product out of every tree, and making the sale of lumber a “better deal” for all concerned.

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In lumber retailing, Weyerhaeuser was among the first to see and meet the need for foresighted selling. To this end, two outstanding plan-and-idea tools were developed—the Weyerhaeuser 4-Square Home Building Service and the Weyerhaeuser 4-Square Farm Building Service. Through these building Services, and the advertisements, folders, booklets and other materials which support them, the lumber dealer and the contractor can influence sales in the planning stage. And that kind of selling means more profit to the seller, more value and more complete satisfaction to the buyer.

By such looking ahead, and planning ahead, and working ahead, Weyerhaeuser is helping to build your present business and fortify your future business with the best in forest products and advanced building designs and construction practices.
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The finest in Window Construction calls for the first and finest Sash Balance!

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Every factor is in your favor when you specify Stainless Steel Storefronts. Attractive and inviting these new store fronts offer your client a durability that can only be expected of steel. And, because Stainless Steel will not corrode, warp, crack or discolor, there is practically no maintenance.

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Photographs Courtesy of Brasco Mfg. Co.
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“Plywood stands the Gaff”

___ says
Aberdeen Builder, J. B. Lamb

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Because of continuing high demand, all types and grades of Douglas fir plywood may not always be immediately available. For price and delivery information, contact your regular sources of supply. For use data, write the Douglas Fir Plywood Association, Tacoma 2, Wash.

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Home owners want permanent, trouble-free houses. So you, the builder, install copper plumbing, copper screens and windows that are draftless, that open and close freely and easily. Later you use these features to help sell your houses to prospective buyers. So give the buyer these extra features—especially if they save you money.

**GIVE WINDOW ECONOMY**

You can keep building costs down without sacrificing quality by installing pre-assembled window units. They save time. They save labor, because they come complete, ready to install. That's real economy. Windows equipped with Pullman Sash Balances effect an additional saving by eliminating the need for weight boxes... by making possible wider window areas... by allowing use of narrow, modern trim or no trim at all.

**GIVE TROUBLE-FREE WINDOWS**

Pullman balanced windows are trouble-free. Pullman Balances are guaranteed for the life of the building. No cords to break. No weights to fall. Complete owner satisfaction. An exclusive sales advantage to builders. Ask your dealer for Pullman-balanced pre-assembled window units. Or for information write Pullman Manufacturing Corporation, 325 Hollenbeck Street, Rochester 5, N. Y.

**GIVE A BALANCED WINDOW**

Housewives want windows that open freely, easily, noiselessly. They don’t want to lift the weight of the window against friction. They want double hung windows that are perfectly balanced, that stay opened at any position. Pullman Balances are the answer. They not only fit inconspicuously into the window frame but also perfectly balance the weight of the window.

Specify Window Units with PULLMAN Sash Balances
Only the Servel Gas Refrigerator has no moving parts in its freezing system to wear.

Twenty-one years ago, the first Gas Refrigerator came off the Servel assembly line. Ten years later, there were 1,000,000 Servels in operation. Today, the Servel families are well on their way to the 3,000,000 mark. The trend to Gas Refrigeration is gaining momentum by the year. Right now, more people than ever before prefer the noiseless, trouble-free service that only Servel can give.

Alert apartment owners are well aware of this trend. That’s why more and more of them are “going gas” when ordering refrigerators for new apartments... or buying replacements for older buildings. They know that Servel’s silence and year-after-year dependability pay off in tenant satisfaction.

**Low Operating Cost...Lowest Upkeep Expense**

Apartment owners also know that Servel’s famous “no noise, no wear” freezing system saves them money, too. There’s no lost efficiency. Operating costs remain low... even after years of service. And since Servel has no motor, pump or compressor, upkeep expenses are practically nil.

The Servel Gas Refrigerator is made in three sizes—the spacious 8- and 6-cubic-foot models for large apartments... and the compact, but still roomy, 4-cubic-foot model for small apartments. For complete information, see your Sweet’s Catalog... or write to Servel, Inc., Evansville 20, Indiana.
**owners choose the refrigerator that**

**silent... lasts longer!**

"FOR OUR NEW 24-APARTMENT BUILDING

...we chose Servel. After observing refrigerator performance for the past ten years, we decided that trouble-free service was the feature we desired most.”

of Larsen & Blix
Managers of 2626-32 West Gregory St.
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Here's why
Servel stays silent
...lasts longer

The Gas Refrigerator operates on the simple, continuous absorption principle. The small gas flame circulates the refrigerant that supplies the constant cold needed to preserve food and make ice cubes. Not a single moving part (no motor, no pump, no compressor, etc.) is used in the entire freezing operation.
When you're buying kitchens...

National acceptance is important

You can install a Youngstown Kitchen anywhere, and always count on public acceptance.

Because people know about Youngstown.

They know Youngstown Kitchens are striking in beauty, solidly built and designed to give ample storage space combined with dozens of convenience items. They've seen them in thousands of dealers' stores—and in new and old homes of friends.

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Whatever you're building—mansion, cottage or apartment—the nearly-endless selection of Youngstown Kitchen combinations simplifies your problems.

Factory-fabricated Youngstown units come completely assembled and ready for installation.

Every unit you pick is white-enamed, welded steel. Sink tops are acid-resisting porcelain enamel. Doors, drawers and tops are all sound-deadened.

Sixty Mullins field men and 7500 trained Youngstown Kitchen dealers throughout the country are ready to cooperate with you...give you the advantage of Youngstown's great experience and pioneering in the kitchen business. For name of nearest distributor or field man, please write.

MULLINS MANUFACTURING CORPORATION • WARREN, OHIO

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World's largest makers of Steel Kitchens
Use Both...

**SISALATION** and **SISALKRAFT**

for insulated **DRY WALL** construction

**at new low cost!**

This new insulated DRY WALL construction meets

**FHA Vapor-Barrier Requirements** (Class A, Federal Specifications UU-P-147)

This new insulated DRY WALL construction (SISALATION plus SISALKRAFT) combines insulation and vapor-barrier advantages at very low cost. It helps prevent passage of harmful moisture into walls! SISALATION, bowed in between studs, provides TWO insulating air spaces, and its reflective surface helps keep homes warmer in winter, cooler in summer. Heavily reinforced by cross-laid sisal fibres, tough and strong, SISALATION and SISALKRAFT remain in place, permanently and effectively, for the life of the building. Here is quality construction with true economy!

Write today for further information and samples of these two products,

**The SISALKRAFT Co.**

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Please send more information, samples and where I can buy SISALATION and SISALKRAFT. I am an [Architect] [Contractor]

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Name
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City & Zone
State
How many times have you said to yourself, "Metal windows are all right in the summertime, but what about winter?" Ceco considered that question and got busy. What they did and what they learned became history when Ceco announced All-Aluminum Storm Windows that really allow you to use the controlled ventilation principle built into metal casements. Metal screens have always offered perfect ventilation, so summer presented no problem. Now the winter ventilation problem is solved with the first trouble-free storm window for steel casements.

**WHY SPECIFY CECO STORM WINDOWS AND SCREENS?**

1. Ceco's special-design storm panel covers the entire window opening—the condensation problem is solved, yet ventilation when needed is also provided.  
2. Rubber weathering seal around the perimeter of the window sash provides the tightest possible seal.  
3. Ceco storm windows are easy to put in and take out from the inside.  
4. They are neat and trim—slender frames mean more light gets in.  
5. Ceco storm windows fit perfectly—which means no on-the-job planing is necessary.  
6. Maintenance cost is eliminated—no painting or re-painting required.  
7. Ceco screens cost no more than ordinary screens—factory finish—no on-the-job trimming or fitting.  
8. Standard screens for every purpose—will not warp, shrink, swell, twist or rot.

**CECO STEEL PRODUCTS CORPORATION**

GENERAL OFFICES: 5601 West 26th St., Chicago 50, Illinois

In construction products **CECO ENGINEERING** makes the big difference

DOOR CHIME & CLOCK K-38: Combination Door Chime and electric clock (Telechron movement). White enamel, nine inches square. Two notes front door; one note, rear. List, $14.95.

NOTHING THAT COSTS SO LITTLE AS A NUTONE DOOR CHIME DOES SO MUCH TO HELP SELL YOUR NEW HOMES!

TODAY, MORE AND MORE builders are adding carefully chosen “extras”—those finishing touches that help sell new homes more quickly.

THOSE REFINEMENTS must, of course, justify their cost. For never before has there been greater need to guard building budgets.

THAT’S WHY NUTONE DOOR CHIMES fit in so perfectly. Nothing that costs so little does so much to help sell your new homes! Nothing gives the prospective buyer more comfort or more regard for your considerate planning.

SO GET ALL THE FACTS, figures, and wiring details on NUTONE Door Chimes. You'll find that it pays. Write or phone your nearest NUTONE office for full particulars.

Support the Adequate Wiring Program

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EASTERN SALES
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DISTRICT OFFICE
206 McKeecher Bldg., Detroit 1
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Special Offer!
Check the July or August issue of American Builder for the NUTONE ads that offer you a choice of NUTONE Door Chimes . . . on consignment! It's an unusual offer.

THIS OFFER EXPIRES SEPTEMBER 30, 1948
Carryable Power for Electric Tools

Weighs only 175 pounds
Generates 5000 watts

The New HOMELITE Carryable DUAL-PURPOSE GENERATOR
(Gasoline-Engine-Driven)
For operating both high-cycle and standard universal 110 volt tools. Write for complete information.

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CONSTRUCTION & EQUIPMENT

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Nu-Tone Door Chimes
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Stanley Garage Door Hardware
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Yale Trim Hardware
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Baldwin-Hill
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Carey
Colatex
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Moritz Weather Stripping
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Crawford Garage Doors
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Crate Fixtures
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BETTER HOMES & GARDENS
Better Homes & Gardens is 100% service — ads and all. Cover to cover, it is devoted entirely to better living in a better home. Naturally, it appeals first to husbands and wives whose big interest is home and family. And of course it appeals most to husbands and wives who have the money to carry out the good ideas it suggests. These people are your best customers. They live in better-than-average homes. They earn better-than-average incomes. That's why it will pay you to carry the brands they've been sold on in Better Homes & Gardens.
To a company that has now completed 71 years of service to the building industry.

Thorn Aluminum Double Hung Windows are offered to combat inflationary trends in home construction.

They are priced for the most modest—Built for the most luxurious.

Send for "Thorn Products for the Home"

J. S. THORN CO., PHILA. 32, PENNA.
NEW SELF-FEED RIP SAW
Does more jobs, costs less!

XL RIPPER

New improved model now ready!

Roll Attachment for RESAWING straight or diagonal!

Here's the way to get bigger output with smaller investment! Put an XL RIPPER on the job and watch production go up! It's a high speed self-feed rip saw PLUS! Takes up to 4" stock, with 15" ripping capacity, saws stock as short as 4" on a production basis! RESAWS up to 4" stock, either straight or up to 45° diagonally, with special fence and roll attachment. Also does accurate dadoing and rabbeting, slices strips for blinds, bolts lath stock from slabs, takes up to 5 saws on lath. Four feeds, from 50 to 190 feet per minute.

The XL RIPPER is a real money-maker, and it's priced LOW! Write today for literature and name of nearest dealer!

SMITHWAY MACHINE COMPANY
Manufacturers of the XL Line of Woodworking Equipment
4617 Airport Way Seattle 8, Washington

New XL MOLDMATCHER
New XL LOK-SAFE SHAPER COLLAR
New XL SPINDLE SHAPER
It's time to forget previous ideas about Aluminum siding!

Kaiser Aluminum Siding is a completely new kind of building material, made of highest grade aluminum, roll-hardened by precision machinery. It's a strong dent-resistant siding, with permanent beauty unmarred by knots, splits or sawing scars.

Curved surface creates tension
Result: A weatherproof lock

And this exclusive curved surface does even more. It is a deliberately engineered feature which makes this the strongest aluminum siding ever known. When lower edges are nailed down, the curve creates a tension which results in absolutely weathertight joints. And it creates beautiful clean lines.

Forget about high costs with Kaiser Aluminum Siding! It actually saves you money in many ways. Its light weight speeds construction, cuts labor costs—and its application requires no special tools. What's more, it takes fewer nails and its non-porous surface requires less paint. Paint goes on faster, too!

Your clients can forget about maintenance! Kaiser Aluminum Siding will never rot, rust, warp or crack in any climate! It's fire-resistant, can't be damaged by rats or termites. It comes from the mill with its surface especially prepared and prime coated to assure extra firm paint adherence and lasting finishes.

Kaiser Aluminum Siding
product of Permanente Metals Corp.

SOLD BY PERMANENTE PRODUCTS COMPANY, KAISER BUILDING, OAKLAND 12, CALIFORNIA . . . WITH OFFICES IN:

Atlanta • Chicago • Cincinnati • Cleveland • Dallas • Detroit • Houston • Indianapolis • Kansas City • Los Angeles • Milwaukee

Minneapolis • New York • Oakland • Philadelphia • Portland, Ore. • Salt Lake City • Seattle • Spokane • St. Louis • Wichita
June 9, 1949

Gentlemen:

As you know, we have distributed Texaco Asphalt Roofing Products for well over 30 years and have handled large quantities of Texaco Solid Roofing Asphalt during this period.

Our dealer and built-up applicator customers are thoroughly "sold" on the uniform high quality of your products; also they find that the neat, attractive packages in which you market are a distinct aid to them in re-selling to the consumer.

We consider the above to be our principal advantages in handling your products, plus of course the ready acceptance of the TEXACO Brand throughout this area where it is well and favorably known by everyone.

Very truly,

E. E. Neff
President

The Texas Company
P O Box 2332
Houston 1, Texas

June 9, 1949

Asphalt SHINGLES and ROOFING
Crossett Siding
Holds Paint

That's because it's produced from soft textured Arkansas Soft Pine which is free from pitch, absorbs primer and finish coats uniformly and does not bleed through.

A Sure-Fire Oil-Saving
KRESKY Floor Furnace

Will Keep Your Customers Warm and Care-free This Winter

KRESKY MFG. CO., INC.
601 2ND STREET
PETALUMA, CALIFORNIA
The Best Known Name in Oil Heating Since 1910
NOW STRAND ANNOUNCES a track-type door for 16' x 7' openings, with the same sturdy strength, ease of operation and other advantages of Strand all-steel single doors. The new Strand double-garage door saves you about 15% of the cost of two single doors, eliminates the cost of building a center post, and ensures an unobstructed opening 16' wide, with ample space for two of the new, wider cars.

INSTALLED QUICKER—Strand all-steel doors for double-garages are shipped in two 8' x 7' door leaf units, with splice channel and packaged hardware. Surprisingly quick and easy to install.

THE PROTECTION OF GALVANNEALING, added to the strength of steel, assures lifetime durability of Strand Doors. They're hot galvanized for rust protection—and annealed, too—for a smooth, uniformly coated surface and a clinging base for paint without need for a special priming coat.

BUILT FOR STRENGTH—welded all-steel door leaf, and welded all-steel frame and braces, provide outstanding strength for a lifetime (steel will never sag, warp, shrink, swell or rot).

OPERATES EASILY—A child can open the Strand Door. Simple, efficient hardware is designed for trouble-free service.

Strand Doors are available without waiting and without limit. Mail the coupon now for more information.
Out of a dismal swamp

CAME THIS NEW
SURENESS

Almost every conceivable test was used in establishing N.D.M.A. Standards for toxic preservative treatment of woodwork such as doors, screens, windows. For example, treated and untreated wood samples were tested in a Louisiana swamp... subjected to long exposure and fungus attacks.

Out of such research, N.D.M.A. has established minimum preservative standards which help make wood a better building material than ever. The N.D.M.A. seal means sureness of value to the owner—when you specify woodwork products.

Six Steps in the Public Interest
1. An efficient test for measuring effectiveness of toxic preservatives.
2. Minimum standards governing the toxic preservative treating of woodwork products.
3. A seal identifying products treated in conformity with N.D.M.A. Toxic Preservative Standards.
5. Laboratory check tests of preservative solutions.
6. Educational effort in the public interest.

The STANLEY-CARTER J-5
POWER PLANE
cuts Smoother and Faster
with the Exclusive Spiral Cutter

No matter how fast you "hog off" the wood with a Stanley-Carter J5 Power Plane, you leave a smooth surface that needs no sanding. The patented spiral cutter shears off the wood at 18,000 R.P.M. It has to be smooth.

With a J5, you can handle door, sash, screen and similar work 3 to 5 times faster. Develops a full 1 H.P. — weighs only 16 lbs. — planes surfaces up to 2½" wide, depth to ½"— takes straight or bevel cuts to 45°.

Write for Catalog.
Stanley Electric Tools, Stanley-Carter Sales Dept., 534 Myrtle St., New Britain, Conn.

SHARPENS ITS OWN CUTTER — Just set it up in the Bench Bracket and use the simple Grinding Attachment.

STANLEY
HARDWARE · HAND TOOLS · ELECTRIC TOOLS
No other floor sander gives you the same rugged performance... the same quality work... or the same drastic savings in labor. Prove it to yourself—NOW! Check these revolutionary features of the New Porter-Cable F-10 Floor Sander!

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Masons can feel the difference
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Masons like the rich, buttery plasticity of Atlas Mortar Cement. Trowels travel fast and smooth. Masons find that these qualities make it easier for them to produce workmanlike jobs.

And Atlas Mortar Cement is satisfactory in yield, too... represents profitable savings for contractors, especially on large jobs. Also, it is outstanding in water retention, color, strength and durability.

Backed by years of research, Atlas Mortar Cement complies with ASTM and Federal specifications for masonry cement.

For further information, write Universal Atlas Cement Company (United States Steel Corporation Subsidiary), Chrysler Building, New York 17, N. Y.

SKILLED HANDS PREFER
ATLAS MORTAR CEMENT

"THE THEATRE GUILD ON THE AIR"—Sponsored by U. S. Steel Subsidiaries—Sunday Evenings—September to June—ABC Network
BUILDERS can view with pride their accomplishment in providing more than 2,000,000 new, permanent non-farm homes in the three years since V-J Day. Starts in the fourth quarter of 1945 averaged 25,000 units per month, in 1946 the average was 55,000 and in 1947 went up to 70,000. For the first 6 months of 1948 the average monthly rate was 75,000. It is believed that the present rate of residential construction exhausts the available supply of construction labor and many items of building material. June, of course, is normally one of the peak months of the year in starts. This June, 93,500 dwellings were started as compared with 77,200 last June, almost equal to the all-time record of 97,000 starts in May.

It is of the greatest significance that about 40 per cent of the 2,000,000 new dwellings started since V-J Day are being built in rural non-farm communities of less than 2,500 population. This reflects a movement of many industries to move parts or all of their operations to small towns where they are assured of a more continued and stable labor supply, as well as the desire on the part of many people for the advantages of small-town life.

Last month American Builder made a survey through northern Illinois and Iowa with the purpose of seeing the scope and type of building being done in smaller communities. As a yardstick to measure building activity, the 1940 non-farm population of the United States was considered as almost 100,000,000 with 850,000 new non-farm homes started in 1947, a rate of 8.5 new homes per thousand population. The ratio for each state was computed with the result that Illinois and Iowa built at the rate of 4.7 and 5.1 dwellings respectively per thousand non-farm population in 1947. Typical of areas where building activity has not increased dramatically, Chicago built 14,425 dwellings in 1947 in the metropolitan area for a population of about 5,000,000, a rate of about three per thousand population. Only one of the eleven communities surveyed failed to equal Chicago's average. As a group the communities of 2,500 or less population, started 98 new homes in 1947. Their rate per thousand was 7.7, somewhat below the national average but better than the average for the states of Illinois and Iowa.

In all except one of the towns, it was found that all existing housing was occupied and that there is still considerable talk of a housing shortage. In some of the smaller towns, twenty or thirty new homes were built in the last two years where none at all had been built for twenty years.

Much is written about the current national boom in births, marriages and divorces. The marriage and divorce rates are of primary importance to builders. From the chart, it will be noted that, from 1890 to 1920, the number of marriages, except for 1918, increased steadily from 500,000 to 1,200,000 each year. It remained at that level except for the years 1931, 1932 and 1933. The number remained comparatively high with minor dips in 1938 and during the war years. It reached an all-time peak of 2,300,000 in 1946 and declined to 2,000,000 in 1947. The year 1948 is expected to hold practically even with 1947, although it is more than possible that there will be a drop.

The number of divorces has risen steadily from 1890 with only a minor decline from 1930 to 1933. Divorces also reached a peak of 600,000 in 1946 and declined in 1947. Although a divorce frequently means the need for another dwelling unit to house those separated, most divorces probably result in a change of partners, and thus no new dwelling unit is required.

It can be expected that there will be a drastic drop in the number of marriages in the next few years possibly to under a million a year; the Bureau of the Census estimates that the 1950's will see the lowest increase in family formation in this century. The housing shortage will cease to be a problem. Builders will need to actively sell new homes against the competition of older ones and to push the modernization of old homes in order to maintain an adequate volume of business.
FIREPLACE UNITS
FOR ALL YOUR CUSTOMERS

More sales—better profits for you—with the Bennett Line—Fireplace Units, Dampers (Steel and Cast-iron), Clean-outs, Ash Dumps, Lintel Bars, etc. to fit every prospect’s requirement. Only Bennett builds two types of Fireplace Units, to meet all building needs.

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For Modern, Insulated Homes, with Central Heating

BENNETT Fresh-Aire FIREPLACE UNIT

Fresh air, from outdoors, is heated and circulated throughout the room. No loss of expensive furnace heat up the chimney... no cold, unhealthy floor drafts—and no smoke!

The unit cannot interfere with the traditional beauty of the fireplace—it’s hidden within the masonry... Easier and quicker to build. Mantel may be designed with complete freedom.

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Write us for FREE FIREPLACE CATALOG at 948 Market Street.

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Draws cool air from floor level, heats and recirculates it throughout the whole room! Keeps air fresher. Furnishes a complete form for the mason—saves your customers’ construction and operation costs... No smoke. Adaptable to any mantel design.

GUARD AGAINST RUST INDOORS AND OUT

Keep metal surfaces covered with S.R.P. "Sure Rust Prevention" and other Sonneborn Protective Coatings

This machinery is in an ice-making plant. The “weather” here is continually cold and damp. The piping, structural members and sheet metal surfaces are covered with Sonneborn’s S.R.P.—for “Sure Rust Prevention”.

S.R.P. goes on like paint, forms an impenetrable, rust-inhibitive barrier against moisture, corrosive salts, acid fumes and vapors and weather exposure. Its protective film expands and contracts with the temperature to prevent cracks and peeling.

When applied on old metal, S.R.P. penetrates through the old rust to bond firmly with clean metal. Two types: S.R.P. 75-Primer; S.R.P. 87-Finish. For interior and exterior work—new or old.

TO COMPLETE THE PROTECTION

Other Sonneborn protective coatings used in this plant include SONOLASTIC Aluminum Paint, a bright, washable finish over S.R.P. 75 (Primer), and WONDERCOTE, a one-application semi-paste primer-sealer-finish for interior surfaces other than metal.


Sonneborn "BUILDING SAVERS"

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In the Southwest: Sonneborn Bros., Dallas 1, Texas
4 different jobs
4 different reasons

why the choice was
K & M "Century" APAC
Asbestos-Cement Board

A quick glance at the pictures will tell you why more and more builders are specifying "Century" Apac board... a 4' x 8' asbestos-cement sheet that has as many uses as a building has surfaces.

From the construction standpoint, Apac is a time and money saver. You can fasten it in place with nails or screws. No drilling necessary. To cut—just score it, then snap off. Supplied in thicknesses of 3/16", 5/16", 3/8", the big, tough sheets are easy to handle, and they cover fast. Result: A good job that's economical and profitable for you.

Ask your K&M dealer to give you further facts about versatile "Century" Apac... or write direct to us. We'll give your inquiry prompt attention.

Original manufacturers of asbestos-cement shingles in this country.

KEASBEY & MATTISON
COMPANY - AMBLER - PENNSYLVANIA
HEATING COSTS

Slashed

with multiple installations

of OIL-FIRED BOILERS

Here's how a Multiple Installation of G-E Oil-fired Boilers slashes costs in fuel, supervisory expenses, cleaning bills.

FUEL BILLS REDUCED ... G-E Oil-fired Boilers are connected in parallel, and one or more units cut out automatically when proper temperature is reached. Many users report substantial savings on fuel.

SUPERVISORY EXPENSES CUT. These units require no continuous supervision* because they’re fully automatic. That means substantial savings. Shut down risks are minimized, too.

CLEANING BILLS SLASHED. These clean-operating boilers cut soot and grime to a minimum ... reduce cleaning and redecorating bills.

Find out HOW and HOW MUCH a G-E Multiple Installation can save you. Your G-E Dealer will heat-survey your building without charge. General Electric Company, Air Conditioning Department, Section H6139, Bloomfield, New Jersey.

*Unless required by local or state law

A typical multiple installation of General Electric Oil-fired Boilers

Trinity Lutheran Church, Stapleton, Staten Island

GENERAL ELECTRIC

Automatic Oil and Gas Heat
LOW-COST HOUSING—Last December Nathan Straus, advocate of public housing, stated in a magazine article that the post war house has a $15,000 price tag on it. American Builder challenged Straus, offered to show him thousands of well-built houses in any part of the country with price tags of less than $10,000. Of course, nothing ever was heard from Straus.

PUBLIC HOUSERS—Most of them want nothing to do with facts, and that might explain why Straus did not reply to the invitation. There are many more thousands of houses with price tags of less than $10,000 now than there were then. There are so many of them in some parts of the country that if Straus would expose himself, he would find himself beset by salesmen.

AMERICAN BUILDER—The pages of this magazine have carried scores of plans, photographs and descriptions of low-cost houses ever since the close of the war. There are so many available that no magazine could present more than a very small fraction of the total.

HOME WEEK—American Builder editors were in more than 25 major cities in all parts of the nation during July and August. They saw thousands of new low-cost homes, and thousands more in various stages of completion.

THE PUBLIC—During National Home Week, several million Americans visited demonstration homes. No one will be able to tell them that the nation's home builders are not building at capacity, building quality homes, and building them inexpensively.

MR. KIRBY—He is a carpenter, who had saved his money for years, and finally built a house for himself in which to house his wife, son, and invalid mother-in-law. One morning, however, government crews appeared and started to wreck the new four-room cottage. Mr. Kirby, spending his own money and using his own hands to build a house for himself had committed a crime. He had failed to get a government permit. That was in Easthamstead, England. All home building in England is controlled by government.

PETITION—All that stopped the demolition crews before they had razed the house completely was a petition got up by his neighbors, and presented to Prime Minister Attlee. If that had not worked, the neighbors were going to appeal to the King. The New York Times dug that story up and printed it on May 5.

T-E-W BILL—It is exactly that kind of thing that would happen in this country if the T-E-W bill had passed. Public housing has been proved in England to be a snare and a delusion, and about the worst thing that can happen to the poor who need housing in England or in any other country.

CONGRESSMAN GWINN—He said, “Government housing brings political party corruption by the exchange of tenants' votes for low rents. It leads in the nature of things to government bribery of investors and must lead, as the sad experience of a lost Europe now proves, to a firmly entrenched state socialism, totally contradictory to everything which we think of as American freedom and American self-government. We believe that if the American edifice of constitutional liberty is good at all, it must be good all the way through. It cannot stand part good and part bad as a source of housing.

HOW IT WORKS—Said the Congressman, "In my district in the city of Yonkers, N.Y., is Mulford Gardens, a 550-family unit government house. A family of four earning more than $1,700 cannot qualify for an apartment. That is what the law says. But, 275 families, half of the 550 families, have incomes running above this legal minimum and up to $8,000.”

The New SARGENT Cylinder Padlock with the stainless steel shackle . . .

Here's tops in a quality padlock—one shackle with the burglar resistance of steel, the weather resistance of brass. This new Sargent Cylinder Padlock has a case of solid, one-piece extruded brass; a shackle of hard, stainless steel; an excellent five pin tumbler lock. It's built to endure—it has everything your customers need in a quality padlock. By stocking this one lock you should be able to cut your padlock inventory in half. Made in three popular sizes, with or without brass chain. See this new padlock and other new Sargent products at Booth No. 50-51, National Hardware Show Grand Central Palace, Oct. 12-16

SARGENT & COMPANY
New York New Haven, Conn. Chicago
WIDE, double-weight flanges and full side-wall lengths make Copr-fibre Blanket installation a fast, efficient one-man job... saving valuable time and producing a tight, "tailor-made" job without joints or need for cutting.

Along with the substantial savings in installation time, you get top quality all-mineral insulation. Copr-fibre is proof against fire, rot, water, vermin, termites and vibration—in addition to providing permanently low thermal conductivity for maximum insulating effect.

Write today for sample and details on Copr-fibre Blankets, Batts, and pouring wool for your jobs.

FORTY-EIGHT INSULATIONS, INC.
AURORA, ILLINOIS
CERTAIN-TEED UNIVERSAL ASPHALT SHINGLES

Possessing outstanding usefulness for re-roofing, Certain-teed Universal Shingles "stay put" in any kind of weather.

Each Certain-teed Universal Shingle is securely locked to every shingle surrounding it by a special self-locking device. This additional anchorage gives extra resistance to the "loosening forces" of high winds and driving rains.

Even if rains ceased and winds never blew, the Universal Shingle would still be in demand for its "good looks". The self-lock design assures a shingle pattern of originality and charm. Universal Shingles are also available in both rich solid colors and Certain-teed's outstanding and superior blends.

Coast to coast, by an 8 out of 10 margin, America's first choice roofing material is Asphalt. It pays to sell what sells especially when YOU feature Certain-teed Universal—the popular self-locking asphalt shingle that is applied right over old roofs, quickly and at low cost.

BUILD ON CERTAIN-TEED THE WELL-KNOWN NAME

CERTAIN-TEED PRODUCTS CORPORATION • 120 EAST LANCASTER AVENUE • ARDMORE, PENNSYLVANIA
HOME BUYERS
DON'T LIKE TO GET "STUCK"!

HOME BUYERS like to feel that they're getting the most modern type of kitchen equipment. Today the trend is to Electric Ranges. Another million American families switched to Electric Cooking last year. Conservative estimates indicate that this year at least a million more Electric Ranges will be installed.

This is a definite trend that cannot be ignored. Progressive builders recognize this trend. Electricity is a "must" in any house, and it's simple and economical to include wiring for an Electric Range leading to a range outlet in the kitchen at the time of construction. This is assurance that the houses you build are not only modern today, but will stay modern for years to come!

Electric Range Section, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, 155 East 44th Street, New York 17, N.Y.
A-B STOVES • ADMIRAL • CROSLEY • ESTATE HEATROLA • FRIGIDAIRE • GENERAL ELECTRIC • GIBSON • HOTPOINT • KELVINATOR • LEDO • MONARCH • NORGE • QUALITY • UNIVERSAL • WESTINGHOUSE

Follow the trend...

Wire FOR ELECTRIC RANGES

Another 1,000,000 American families switched to Electric Cooking last year.
Editors' Round Table

Vacations do not stop the regular monthly meetings of the editorial staff, and the round table was held as usual in August. It probably was natural that with the temperature and humidity both about 90, much of the discussion had to do with heat and condensation. Incidentally, for about four hours the discussion generated a lot of heat of its own. More about that later.

This Column is written as the staff meeting proceeds, so first things first. The first subject was introduced by the member who had spent two weeks in Minneapolis and Saint Paul.

A Builder with whom he had spent a lot of time told him that heat loss into the ground from panel or radiant heated concrete slabs in basementless houses was causing a lot of concern.

"The Usual Method," said the builder, "is to place a moisture barrier between the slab and the fill, that is, between the sand or cinders and the slab. When that is done, capillary action draws the moisture from the ground into the fill. Thus, the fill, also damp and cold, deflects the heat downward, causing heavy heat losses."

The Right Way, continued the builder, is to place a layer of aluminum foil or other vapor barrier directly on the ground, then lay a 6-inch bed of sand or cinder fill over the barrier, and pour the slab over the fill with no vapor barrier between. That, he said, reduces the moisture in the fill, and reduces the heat loss.

No One Argued the point. Maybe one or more readers will argue it. Emboldened, the Minnesota traveler went on to report that another builder had suggested he publish the truth about copper pipes in basements. The truth, according to the builder, is that copper pipe in basements should not be covered if the aim is to avoid radiation.

"Too Many Negatives," said the stickler for easy ways to say things. "Make a positive statement." The positive statement is that if copper pipe in basements is left entirely exposed, the heat stays in it. If it is covered, the covering provides a radiation medium, and dissipates the heat. In that respect copper pipe and iron pipe act differently.

In Minnesota, they do not cover (Continued to page 64)

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Electric Water Heater Section National Electrical Manufacturers Association

155 East 44th Street, New York 17, N.Y.

Bryant Fowler General Electric Hotpoint
Hotstream Jud Whitehead Kelvinator Mertland
Monarch Norbe
Penco Rex Royal
Selectric Rex Smithway
Sunbeam Thermogry]
Thermowatt Toastmaster Universal Wesco Westinghouse

It's easy to install an electric water heater...

... in a house wired for an Electric Range!
copper pipes unless they want to heat the basement. Stands to reason, concluded the Minnesota wayfarer. Copper pipe is buried in concrete floors, or walls or ceilings for radiant heat.

In July, reported the staff's champion of justice, we published a letter from L. L. Campbell, Asheville, N.C., in which Mr. Campbell said that an estimated 175 housing units that had cost 10 million dollars were being sold by TVA at ten cents on the dollar in the Town of Norris, Tenn. On July 20, Howard K. Menhinick, Coordinator, Village Disposal Program, TVA, wrote:

The Facts are as follows: The gross book cost of the town sales unit, which included 1,284 acres of lands 304 houses and 5 apartment buildings, warehouses, stores, sewage and water utilities and so on, was $2,905,000. The net book cost (gross cost, less accumulated depreciation) was $1,761,000. The minimum acceptable price . . . was $1,849,750, which included $32,000 worth of privately owned structures located on licensed lots in the town. These structures consisted of a religious fellowship building and several war surplus prefabricated dwellings that were acquired and erected by veterans. They were purchased from the owners by TVA and included in the unit sale without profit or loss to TVA, in order to simplify sale. The successful bid was $2,107,500, or $314,300 more than the net book cost, and $257,750 more than TVA's advertised minimum acceptable price.

Norman J. Radder of the Plumbing and Heating Industries Bureau, read Frank Cortright's column in which it was suggested that builders should present owners of new homes with booklets offering advice on the care and maintenance of homes. Mr. Radder says the Cortright suggestion is an excellent one, and asked us if our readers are familiar with what the manufacturers of plumbing fixtures are doing. With vitreous china plumbing fixtures, the manufacturers send the owner a small booklet entitled, "Prize this Vitreous China Fixture." With enameled cast iron fixtures, they send a similar booklet entitled, "How to Take Care of This Fixture." Both tie in with the Cortright suggestion.

As Usual, the entire staff was in the field during July. Every month one of (Continued to page 606)
YOU ARE CORDIALLY INVITED TO VISIT THE
Stainless Steel Exhibit
SPONSORED BY THE
American Iron and Steel Institute
at the Architects Building
401 Park Avenue, New York City

ELECTRO METALLURGICAL COMPANY
Unit of Union Carbide and Carbon Corporation
30 East 42nd Street, New York 17, N. Y.
You'll do the job 10 times faster than hand sawing—with an AMERICAN Power Saw! It's a time-saver on any cut... easy one-hand operation... ideal for construction, maintenance and repair work. Use it to cut wood, metal, stone, tile, composition.


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EDITORS' ROUND TABLE
(Continued from page 64)

them concentrates on small towns and rural areas. In July the rural traveler spanned the corn belt. Crops, he reported, are amazing. In many areas, yield records will be broken.

Building in the small towns throughout the area follows the established pattern in most areas of the nation. Volume is tremendous, and new homes are being paid for in full with cash. The volume would be even greater if more skilled labor could be obtained. The volume is expected to continue indefinitely.

After That Report, he suddenly asked what is wrong with adapting the old-fashioned farm kitchen to new, modern houses. Asked to elaborate, he said that farmers and many small town folk still like to make the kitchen the center of activity, as well as the general family gathering place. His suggestion is that a large room separated from the kitchen by a counter or modern folding door, be provided; that the room have a fireplace, book cases, study tables, and small game facilities.

The Only Taker of the idea was a staff member whose wife is a prominent member of a woman's club, and whose children are getting some socialist teaching in the local school. He said that if he could gather the entire family into a room like that just one night, he would read them the T-E-W bill, and expose all of its bogus promises regarding the magic of public housing. Then he would be sure that at least one woman and two children would not fall for the oratory of socialist teachers and speakers, of whom he says there are too many, mostly unopposed.

The Four Hours of heated discussion were about grammar. Over a rainy weekend the editor had combed the July issue of American Builder with a hyper-critical eye, and spent a whole day studying an English grammar. Then he combed the July issues of a lot of other magazines. He was really loaded for bear, but as things turned out there were a half dozen other grammar books in the office. They do not agree on all points, especially fine points. No use of going into all of the technicalities here, but it is safe to say that regardless of how peculiar any given grammatical construction might appear, if it is in American Builder, there is authority for it in at least one text book on English grammar.
Eljer

Architects and builders can be sure that millions of American families take pride and satisfaction in their Eljer-equipped bathrooms... that they enjoy the extra convenience, long-life styling and superb quality of Eljer's Fine Plumbing Fixtures. And this year, Eljer advertising in consumer magazines like The Saturday Evening Post will reach 75,000,000 people, many of whom will want Eljer Fixtures. Some of them will be your clients.

AS ADVERTISED IN THE SATURDAY EVENING POST

IT PAYS YOU... IT PAYS US... BECAUSE WE SPECIALIZE IN PLUMBING FIXTURES EXCLUSIVELY
ELJER BATHROOMS... Styling that “Lives”

Enjoy the convenience of a bathtub with an end-seat... comfortable for foot bathing or a sitting shower. Think of the advantages of a low, wide front rim-seat... easy to step in or out, and ideal for bathing the children. It’s a bathroom that lives, by making life more enjoyable for the entire family.

For almost half a century Eljer has been making quality fixtures... the best that can be made... in a wide variety of related styles and colors that match harmoniously to create a beautiful bathroom ensemble.

Our bathtubs are made of rugged, rigid cast iron...

coated with a heavy enamel finish. Lavatories and closets are real vitreous china. Every Eljer fixture resists scratching, stains and the effects of all ordinary acids. That is why the glass-like finish is so easy to keep spotlessly clean and new looking.

Ask your plumbing or building contractor about Eljer products, or write for Eljer’s booklet “Fixtures of Beauty and Distinction”. Eljer Co., General Offices, Ford City, Pa.

Eljer’s complete line of plumbing fixtures includes units for kitchen, laundry and bathrooms... in a variety of styles to satisfy every purse and purpose. Modernly-styled sinks, acid-resistant enamel fused on cast iron, especially designed to be used alone or in counter and built-in cabinet arrangements.

MANUFACTURERS OF FINE PLUMBING FIXTURES SINCE 1904

ELJER

Factories at Ford City, Pa., Salem, Ohio and Los Angeles
There are over Ten Million Eljer Fixtures in Use

more and more people are asking for the Extra Features available

Only in Eljer’s Fine Line of Plumbing Fixtures and Brass Trim
America is growing. The pioneer spirit is as bright today as it was when covered wagons moved along the Oregon trail. Today, the nation is growing vertically more than horizontally; the builder of big buildings is the pioneer of today.

Eljer has been active in the American construction scene since 1904. More and more Eljer plumbing fixtures are being installed in new buildings of every kind . . . and there is an Eljer fixture for every need.

Eljer's line covers the complete range of vitreous china and enameled cast-iron fixtures as well as brass trim. To learn more about it, see your nearest Eljer distributor or write to Eljer Co., Box 192, Ford City, Pa.
NAHB Chapters Step Up Activities
And Plans for National Home Week

Variations of the phrase “Homes on Parade” began appearing in newspapers and were heard over radio stations in cities all over the country last month as the publicity program of NAHB chapters for National Home Week swung into high gear. Many chapters worked feverishly in August to round out plans which were late in getting underway, and those who started planning early were just as busy carrying out details.

It is apparent that many chapters laid careful plans to avoid some of the pitfalls that are to be expected in the first National Home Week venture. This was evident in Chicago, where safeguards were set up to prevent exhibit homes from becoming mere furniture salesrooms. The display homes in the metropolitan area of Chicago are being shown later than the official date for National Home Week because it is being combined with a previously planned home furnishings festival. Many department stores and furniture dealers are cooperating by furnishing homes put up by members of the Chicago association.

A committee of experienced interior decorators will pass on the furnishings planned for each house so that no home will be “over-furnished”. The cost of furniture shown in any home will be commensurate with the selling price of that home. The Chicago show has the powerful Chicago Tribune behind it and is expected to bring tangible benefits to the builders and the public.

Mayoral proclamations have been issued in many cities where public officials are cooperating with home builders. Chambers of Commerce and building material dealers have been helping stimulate interest and promote advertising. Most participating chapters of NAHB have provided substantial funds for their share in the advertising effort.

A few chapters are relying principally on one model home as the central feature of their programs. St. Petersburg, Fla., is building such a home with the American Legion helping to publicize it. In Portland, Ore., the association is sponsoring a home show that will coincide with National Home Week. Most chapters, however, planned to show a number of homes. The Long Island Home Builders Institute expected around 100 houses to be exhibited, some furnished, some unfurnished and some incomplete. Milwaukee built an entire small subdivision. In Washington, D.C., several economy-priced projects are being shown as well as a number of expensive homes in the higher cost brackets.

Rochester, N.Y., is showing houses in at least three developments in the economy house brackets and many others in the middle and upper range. Indianapolis lists a large number of exhibiting builders. Jacksonville, Fla., is covering both lower and medium price ranges. Cleveland, Cincinnati and Columbus are having substantial parades of homes.

Activity is just as high in Oklahoma, Texas and California. Posters indicating membership in California associations and standing for quality construction are being displayed in the San Francisco Bay area, in Los Angeles, and other parts of the state.

Many other chapters besides those specifically named are participating, and publicity efforts by the National Association of Home Builders and the local chapters are being heard on radio programs and read in the daily press. Executive Vice President Frank Cortright states that early reports on National Home Week activity indicate that the economy house will be highlighted, a feature greatly desired by the association and calculated to educate the public to the fact that housing is being built in the moderate price bracket.
Cortright’s Column

By Frank W. Cortright

Executive Vice President, National Association of Home Builders of the United States

The finest sales argument the established home builder has to offer is his own reputation. Home builders who lead the industry in design, building methods and planning must drive the quality and integrity story home to the public.

The greatest service and the greatest sales endeavor that reputable home builders can make today is to point out forcefully to the buying public the value and need of discrimination in every phase of home purchasing. Urge buyers to be exacting in their demands. Convince them they should know their builder, their lending institution, the quality of materials which are used! This is public service selling and it pays rich dividends to builders who employ it.

It stands to reason that the home builders who know that they are doing a good job will be rewarded by making the public "integrity-conscious." Members of NAHB have pledged themselves to build quality homes regardless of the price range. They operate under an ethical code of conduct, and the public should be told how it benefits from this code.

The average man will inspect an automobile from bumper to bumper with earnest concentration. He’ll give it a road test, consider the record of the manufacturer and go to fantastic lengths to make certain he is getting a substantial product for his money. The American woman is equally discriminating in the selection of furniture or her clothes. Yet Mr. and Mrs. America will invest many times more money in a new home—the largest investment they ever make—with what amounts to a casual inventory of the really important factors.

We in the industry know the importance of the man behind the home. Let’s tell the public about it. Let’s give the purchase of a home the stature it deserves in the consumer’s mind. When the public learns to look for the name and reputation of the builder before buying, the industry will have moved ahead to a new plane. The wide-awake, progressive home builder will assume a strong position in a permanent, stable market, and the gyp builder will disappear from our system.

This is the time to publicize the three important “knows” in home buying. Know your builder. Know the house you are buying. Know your financing. In other words, know what you are doing.

Never before has the home builder been in such a fine position to give quality and service to his prospective buyer. Intelligent planning and the elimination of on-site waste in manpower and materials has progressed to the point where the home buyer can expect a better product for his money than ever before. As further advances are made in pre-site assembly of materials, the home builder will constantly incorporate greater economies into construction.

The men who have made this progress possible are the established home builders who constantly strive for the high degree of efficiency which spells better building and satisfied home owners.

Not only have these builders sought new and improved methods, they have enlarged the scope of their service to the challenging field of community planning. Now every phase of residential construction from the original conception of a neighborhood to the occupancy of the last unit comes within the province of the home builders’ plans.

Let’s tell Mr. and Mrs. America how they profit by dealing with reputable home builders before building or buying a home. Let’s, show them why it’s important to do business with a builder whose integrity has been established through years of proved service. Let’s sell quality builders and building along with quality homes!
NAHB Committee Gives Suggestions For New Abridged Building Code

A joint meeting of the NAHB Architecture and Building Code Committee and the Building Officials Conference of America Code Committee was held recently in Rochester, N.Y., to discuss provisions of a proposed "Small Municipality Code," more simplified than BOAC's basic code.

The group revised a draft of the code, suggesting that it be called "Abridged Building Code" instead of the title given above, and the suggested revisions are being submitted to a BOAC review committee before the new code is presented at the BOAC annual meeting in New York in September.

The proposed code will embrace dwelling structures, rental housing, minor commercial and industrial construction. Each member of the NAHB committee contributed from his individual experience in construction methods and customs so that when the code is released, it should be sufficiently flexible to fit almost any locality with little need for revision.

NAHB representatives attending the conference included Luther J. Boggs of Atlanta, committee chairman; Hugh Selby of Cleveland, John Weinhart of Detroit, Frank Collins of Philadelphia, and Carl Lans, director of NAHB's Technical Service Department.

BOAC members attending included Walker S. Lee, chairman, Abridged Code Committee; Albert Baum, chairman, Basic Code Committee; George E. Strehan, consultant and author of the code; Douglas M. Halstead, building inspector of Garden City, N.Y.; Thomas J. Moran, building commissioner of Brookline, Mass., and Jesse L. Stettler, building inspection superintendent of Ardmore, Pa. The membership of BOAC consists of building officials only, but there is an affiliated organization known as the Building Officials Foundation which includes in its membership manufacturers, dealers, builders and others connected with the building industry. The foundation cooperates with BOAC and gives financial aid in carrying out its programs.

Minneapolis Chapter Considering Changing Association Name

The Minneapolis Contractors and Builders Association, Minneapolis affiliate of NAHB, is considering changing its name. A committee has been sitting down suggested new designations to replace the old one which is considered misleading and too much of a mouthful over the telephone. So far, leading suggestions are "Minneapolis Home Builders Association" or "Home Builders Association of Minneapolis." Members are voting on which it shall be.

Baltimore Plan Interests Civic Groups

BOB BREADY, center, president of the Maryland Home Builders Association, introduces Mayor D'Alesandro of Baltimore, left, to Eddie Carr, NAHB past president. The occasion was at a meeting of over 300 who viewed NAHB's slide film, "Slum Rehabilitation—the Baltimore Story." Organizations represented included the League of Women Voters, the Citizens Housing and Planning Association, the Maryland League for Representative Government, members of the Baltimore City Council, Real Estate Board, Mortgage Bankers Association, Junior Chamber of Commerce, and building and loan group representatives.
Tucson Builders Forming New Chapter of NAHB

Leading builders of Tucson, Ariz., met recently and appointed an organization committee to lay the groundwork for forming the first NAHB affiliate in their state. Regional Vice President Charles R. Malowney was instrumental in getting the builders interested in forming the new chapter.

The committee includes Malowney, Jim Bonnell, Albert Oshrin, Miss A. U. Jackson, Glenn Poole, Jess Stewart, Robert Heyer and George Dalton who is chairman. Bonnell, formerly eastern editor of American Builder and assistant secretary of the Long Island Home Builders Institute, was named executive secretary of the new Tucson association.

Malowney and Normine Watkins, NAHB director of membership promotion and chapter relations, were given an opportunity to discuss private enterprise housing with News Editor Frank Howard over radio station KTCU in Tucson.

Jacksonville to Play Host To Florida Home Builders

The Jacksonville Home Builders Association will be host to the Florida Home Builders Association at the fall meeting September 17-18. The meeting is to be held at the Ponta Vedra Hotel, Ponta Vedra Beach, just outside of Jacksonville.

MORE THAN 20 representatives of various segments of the home building industry in Tucson, Ariz., as they met to form a new NAHB chapter, the Tucson Home Builders Association. In left foreground is Charles R. Malowney, NAHB regional vice president, one of the speakers, and right foreground is Normine Watkins, of NAHB, in charge of membership and chapter relations, who also addressed group.

NAHB Gets In Early Licks On Presidential Aspirant Dewey

Because Dewey is the Republican presidential candidate and exerts present influence as head of the party, the National Association of Home Builders is interested in seeing that he knows where the industry stands on socialized housing. To make it perfectly clear, Executive Vice President Frank Cortright sent the following telegram to Dewey just before the 80th Congress, during its special session, took up the housing bill:

"Noting that labor leaders and others are urging you to ask the Republican leadership to support the T-E-W Bill, I, as executive vice president of the National Association of Home Builders, feel it proper to advise you that the nation's builders will break all existing residential construction records this year and will utilize the full supply of labor and building materials without additional legislation by the 80th Congress.

"We respectfully submit that the T-E-W Bill, S. 866, would institute a controlled economy in housing and that its public housing and slum clearance titles would initiate a subsidized housing movement which could not be controlled or stopped short of the eventual socialization of housing in this country. Our President, Milton J. Brock of Los Angeles, and I, representing more than 13,000 members who construct an estimated 80 per cent of the new housing in urban areas, would greatly appreciate an opportunity of discussing with you our industry's problems and future needs."

Working on NAHB's Neighborhood Contest

GOING OVER plans for the NAHB 1948 neighborhood contest are, left to right, Seward Mott, executive director of the Urban Land Institute, William P. (Bill) Atkinson, chairman of the NAHB Land Planning Committee; Normine Watkins, director of membership and chapter relations and Herbert Carlson, NAHB counsel, standing around Frank Cortright, NAHB executive vice president, who is seated.
Carey gives you 3 patterns in a brand new line of insulated sidings

- Bricsulate
- Stonesulate
- Thatchsuicate

Now... cover a wider market with the great new line of profit-building Carey Insulated Sidings. Build sales with this complete range of quality products... products backed by the famous name of Carey—for more than three-quarters of a century serving home and industry. Order direct from your Carey dealer or write to Dept. AB-9.

Features:
- Shiplap edges for precision alignment, easy application
- No "picture framing" along panel board edge
- Heavy mastic coating anchored into the surface
- Thick, deeply imbedded granules
- Deep shadow lines that lend added beauty—distinctive styling
- Carey asphalt saturating, with complete penetration that assures 50% longer weathering
- Insulation plus structural strength
- Attractive colors: Bricsulate in Red, Red Blend, Tapestry, Light Buff, Gray Blend; Thatchsuicate in Amber Blend; Stonesulate in Gray Blend
In announcing the new, improved Series FEC Winter Air Conditioners, Janitrol again steps far ahead of the field.

Many new products sacrifice easy accessibility for servicing to gain better appearance. Janitrol's different...Serviceability and appearance are both improved in the new models.

Note in the cut-away unit shown below how compactly the controls, burners and other components are assembled, yet each is easy to reach.

Note too, the new modern styling made possible by the new Twin Air-flow Ventilating Circulators.

This functional design assures a positive directional flow of air to keep the controls cool regardless of the compactness of the installation.

1 New Improved, Long-Life, Cast-Iron Heat Exchanger • Design improved to provide easier removal of both the top plate flue gas collector and the new type, interior suspended alloy steel turbulators.

2 Twin Air-Flow Ventilating Louvres • Admit a direct flow of ventilating air to assure the cool operation of all controls, regardless of the compactness of the installation.

3 New Type Ribbon Burners • New design, features a quickly removable, steel burner chassis. The individual runner ribbons and the burner ribbons are nested in an open top holder which may be quickly and easily removed as a complete unit. Each burner has its own non-linting primary air shutter adjustment.

4 New, Plug-in, Self-Positioning Electrically Operated Pilot • Complete pilot assembly can be quickly removed or replaced in a matter of seconds. Plugs into regular type electrical outlet. New actuating lever and switch design assure long-life positive operation.

5 Combination Fan and Limit Control • Switch mechanism and thermal element are placed in the most convenient and accessible location. Improved factory-set positive positioning to prevent damage during installation work.

6 Standard Dimensions, All Parts and Controls Completely Enclosed • All six sizes are a standard 26" in depth, and 60" high, only the width changes. All units are crated, easily moved through standard size door. No separate housings or extended controls to be figured for roughing-in dimensions.
WINTER AIR CONDITIONER...first again to meet the changing requirements of today's and tomorrow's modern ideas of housing and improved comfort.

The new Janitrol FEC is clean to look at...clean to work with...there's no extension of controls outside the casing, no extraneous housing for filters or other component parts. Everything is enclosed in the smart, gleaming, streamlined, grey baked enamel cabinet.

With Janitrol...the home owner has gained great improvements in gas-heating comfort and automatic operating economy.

With Janitrol...the architect and builder have been able to offer more saleable homes because of more compact, completely automatic modern heating.

FOR EASIER SERVICING...

7 Large Capacity Blowers • Rubber cushioned blower chassis support cradles the blower, absorbs all vibration, results in quiet operation. Blower can be factory adjusted for C-A-C operation.

8 Over-size Filters • Double filter suspension provides more than adequate filter area to assure clean circulated air at standard or lower air volume.

9 Accessible Control Assembly • All units of the control and burner assembly are compact. Can be inspected and serviced by removing upper front cabinet panel.

10 Duct Mounted Thermo-drip Humidifier • Humidifier is shipped separately. It may be conveniently located in the supply duct near the Conditioner after it is installed.

Specification sheets and performance data are available on all Janitrol equipment. Write today for your copies.
Uniform-width Kelvinators simplify kitchen planning!

Yes!—Uniform-width Kelvinators give your clients their choice of any combination of models to suit their budgets. No changes in floor-plans are necessary!

Only Kelvinator offers the flexibility of uniform widths for easier kitchen planning. And only Kelvinator features these amazing new appliances. For the first time ever, the refrigerator that is refrigerated from Top-To-Bottom. The "Automatic Cook" Electric Range that cooks big meals without watching. The big 6 cu. ft. "Space-Saver" Home Freezer... for year 'round feasting and smart savings on food!

Kelvinator — of Course!

For Smaller Kitchens...
"Space-Saver" Package Gives Small Kitchens Big-Kitchen Advantages!

"Space-Saver" Refrigerator, 24" wide, capacity full 6 cu. ft.—holds 50% more food than the prewar model of identical outside dimensions. Companion range is only 21" wide—new design permits installation flush against wall. Stars a full-size, double-unit oven... three new type tilt-up surface units—one 8", two 6". Kelvinator quality throughout.

For further information, write Kelvinator Division, Nash-Kelvinator Corporation, Detroit 32, Michigan.
Public Housing an Issue in 1949

The fact that the special session of Congress passed a housing bill without provisions for public housing and slum clearance should not be viewed as a victory for free private enterprise. Nor should it be accepted as final disposition of the issues of government subsidized housing and government control of the home building industry.

Federal public housing, federally subsidized slum clearance, and control of home building by a government bureau were not dropped from the housing bill because Congressional advocates of such socialistic measures have come to view them as false doctrines. Actually, they were not dropped at all; they were merely shelved. They were shelved for the announced reason that they involve government spending considered to be inflationary at this time. After the bill was sent to the White House, Senator Taft is said to have stated that he still believes in a program of limited low-cost public housing, and that he favors legislation for such a program at a later date.

There is a vast difference between deciding against a measure because it is considered to be fundamentally unsound, and deciding against it because the time is not right for passing it. Thus, if the Senator has been quoted correctly, there can be no doubt that a battle has been postponed, rather than a victory won. The fact that the Senator also is said to have stated that the differences between the President and the 80th Congress represent the differences between two basic concepts of government, with Congress clinging to traditional free enterprise Constitutional government, and the President seeking socialistic departures, should mislead no one. Mr. Taft always has, and still does make an exception of public housing in his otherwise unqualified opposition to socialistic measures. Why Mr. Taft makes an exception of public housing has never been explained, and is beside the question. The only pertinent fact is that he does make the exception. The only important results of the fact are that public housing and federal aid for slum clearance again will be live issues in the 81st Congress.

How far public housing will get in the next session of Congress depends principally on how much public support it gets. In the contests of the past two years, public housing has had well organized, aggressive minority support from leftist elements. Resistance has come wholly from several segments of an industry trying to save itself as well as a form of government, and it will not be enough to win at the finish.

Two things will be needed in 1949. The first is a united industry switch from a defensive position to an offensive. No fight ever has been won with defensive tactics. The second is an informed public to supply the needed power for that switch. The public cannot be expected to inform itself. That is the job of the home building industry. There are about six months in which to do it. How well the industry does the job will be the final determining factor in resolving the issue of public housing.
A builder of high class homes in St. Louis suburb introduces new methods in arranging group layouts

JOHN C. GROSS

SPLENDID example of a modern ranch house. Simple roof line and planting box are effective.

THE "Street of Modern Homes" is part of the $5,000,000 Clayton Gardens subdivision, now being built in Clayton, Mo., a St. Louis suburb. The John C. Gross Construction Co., developers and builders of this project, have completed 35 houses with 20 more in process of construction. Prices of the houses are in two groups. One group ranges from $18,500 to $25,000, and the other from $25,000 to $40,000, depending upon location and size.

The houses in the upper bracket represent some of the best of the current work of Bernard McMahon, well known Clayton, Mo., architect. Each house is a refreshing departure in exterior treatment from the prevailing characteristics of the usual ranch and two-story houses that are built today. The adherent to the traditional can find nothing offensive in these designs, nor can the modernists reject them, as they include many favored modern features. A detail, that is being used effectively by McMahon in many of his recent home designs, is the use of extended wing walls which receive the wide overhang of roof. This feature is employed on both one- and two-story houses with equal success.

Rolling terrain and the fact that Clayton Gardens was plotted without alleys have caused the architect to
move the service units toward the front of the houses in some cases. This fact permitted the designer to provide a service yard in front, with a fence that complements and becomes an integral part of the house design.

Rooms throughout the houses are large and spacious. Cross ventilation is provided in all bedrooms. A number of the houses have inside floor plant-
THE plan of the house above provides for complete segregation of all living units. The large, combination living and dining room dominates the entire plan. A feature of the plan is the enclosed patio that is placed at the front of the property. Louvred wall screens the occupants from the public. Bedroom wing is entirely separated from the living quarters. Below is the street as it was originally laid out and studied with the aid of ¼-inch scale models. This method is used by the Gross organization in development of their high-priced home areas.

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OPEN patio is provided in front of house by enclosing area with high louvred wall. Exterior walls are common brick, painted

ing boxes introduced in strategic areas. Porches, a necessary adjunct for the St. Louis climate, are provided in all the homes.

Solid exterior masonry walls, 12 inches thick, placed on concrete foundations, are used for both one- and two-story units. Floor and roof construction are wood. Asphalt shingles are used for all roofs.

Contrary to expectations, Gross has not used any stock plans in the building of homes in Clayton Gardens. The plans of each house or group of houses are prepared to meet a particular site or requirement. The builder recently added to his organization a young man who prepares a ¼-inch scale model of all the houses before they are built. This method has been found to be of great value in planning the individual house, as well as determining the proper relationship of one house to the other in the block development. In this manner guesswork with regard to masses, setbacks, and walks is entirely eliminated.

If the complete story on the operations of the John C. Gross Construction Co. were to be told, it would, of necessity, include the many types of buildings this company has erected. They range from the minimum low cost dwelling, up through the medium and high-priced homes, as well as apartments and all types of commercial structures.

In the past two years, this company has erected 28 four-and six-family apartment buildings, and completed
commercial structures worth an estimated $250,000. In addition to Clayton Gardens, another subdivision known as Hillvale Park is well underway.

The field where this company excels, and the one in which it has specialized and done the greatest amount of building, has been in the construction and merchandising of medium and high-priced homes. The organization is geared to maximum production in the building as well as the selling of houses.

In the production of houses, this builder has placed the emphasis upon all types of power equipment, both on the site and at the source of supplies. All work except plumbing, heating and bricklaying is handled by Gross. Lumber is unloaded from cars at the company's warehouse yard, where it is processed, cut and stacked in the most efficient manner. This process involves the selection of lumber, the inspection and treatment of wood, the cutting and grading, the sawing, the trimming, and the loading into trucks or railcars.

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This plan is well suited to meet needs of average family. The three areas of the house, such as living, service and sleeping, are completely separated from each other, yet entirely integrated to form compact unit.
TWO-story houses, as the one at right, have been used to produce proper balance and scale in the block arrangement. Extended wing walls on front of house have again been used with marked success. Interesting features are use of colored cement stucco on front wall and louvred fence enclosing service yard. Plans below provide for service units toward street, and living and sleeping areas toward rear to capture view correctly on the job. On jobs where power has not yet been made available, Gross provides his own portable electric power plant.

To carry on building in the winter, a rather unique method is used to assure comfort to the workman where the house is under construction. Stewart-Warner gasoline heaters that produce 100,000 B.T.U.'s per hour are placed outside the houses, and the heat blown into the rooms through a flexible duct secured to a window.

Sale of houses in Clayton Gardens is carried on primarily through the company's own organization. Edward Gross, father of the builder, is in charge of all sales. Gross insists that the houses are to be completely finished, which includes decorating and landscaping, before they are offered to the public.
In a new section of Minneapolis, there is a recently completed, two-block development which is known as Penn Model Village. Its 30 houses show how extra value can be added to small homes by intelligent use of community planning and close collaboration between architect and builder.

Penn Model Village is easily distinguished from the surrounding neighborhood. Larger lots were used. These were arranged in an irregular pattern by curving the central street through the two blocks and eliminating alleys. Work on this project was started in 1945 by the Farmers and Mechanics Savings Bank of Minneapolis, the sponsoring organization. Original plans for Penn Village called for building 30 houses for veterans under the $10,000 ceiling program. McEnary and Krafft, architects of Minneapolis, were commissioned as project architects and prepared five of the thirteen basic plans. Other plans were selected from the Architects Home Plan Institute, a cooperative organization of Minneapolis architects. The James Leck Co., though primarily an industrial builder, became the general contractor.

In March, 1946, the bank publicized its effort, and work began to proceed in earnest. Then began a period of worry and soul searching. Houses by the hundreds were standing partially completed for lack of vital building materials. Costs were soaring. The architects rejected plan after plan to keep costs from exceeding the GI priority limit of $10,000. Many of the dream gadgets and wrinkles that had been considered were completely forgotten. The story of the building operation was a tale of rising prices and shortages. These difficulties called for extra efforts from both architect and builder. It was nearly a year from ground breaking to final completion. Sales were completed in the fall of 1947, and the last house occupied in December, 1947.

At this time the promotional picture was as bright as the building picture had been dismal. More than 30,000 people came to look at the houses. Toward the end of the public exhibition, the visitors to the Village were asked to express their opinions on the architectural features. In most cases, they voted for the more traditional features. They showed a marked preference for hipped roofs as against flat roofs. They voted for horizontal siding over shakes, shingles, vertical boards, or battens. They preferred drab to bright colors. They insisted on attached garages, on fireplaces, on dining rooms or dining alcoves. Large picture windows and plenty of glass area received unanimous approval.

There was another group that rendered a somewhat different verdict. These were the actual purchasers. The more advanced design features, not too popular in the mass survey of opinion, proved no barrier to sales. This indicated that a demand does exist for reasonable and intelligent departures from the normal in small house design.

Most of the original owners of Penn Model Village homes are hard at work furnishing and landscaping their properties. In a few cases, homes have been resold. The prices, at which these recent sales have been...
The traditional house, at left, with its modern fenestration, is taken from a design by the Architects Home Plan Institute. Ample space for additional bedrooms is provided in unfinished second floor area.
THE flat roof, split-level house of contemporary design provoked most of the comment from the visitors to Penn Village. The two bedrooms shown in plan at right are raised a half story above the living room level. With this type of arrangement an abundance of light is obtained for all rooms, including the basement. View below shows the story-and-a-half living room. This design was prepared by project architects.
MODERN flat-roof example shown below provoked considerable comment from visitors. The plan at right shows two-bedroom layout with a combination living room and dining space that is 28 feet long. This house is suitable for either a narrow or a wide, shallow lot. Designed by McEnary & Krafft, project architects.

ONE of the smaller houses, also designed by McEnary & Krafft, project architects, contains 1,020 square feet exclusive of garage. An interesting effect is obtained on the exterior by the overhanging roof and the assimilated effect of hand-split shakes on sidewalls. A compact arrangement of rooms is achieved in plan shown at left. Basement is provided under the entire area.
A GOOD neighborhood does not 'just grow.' It must be planned. This is the attitude of Reid-Paterson, Inc., developers and builders of Meadowood of Birmingham, a suburb of Detroit, Mich. The good planning going into Meadowood, however, is amply supplemented by careful buying of all materials plus meticulous supervision of their application. As part of the policy of "planning from the ground up," this firm replatted the subdivision which was originally made up of 40-foot lots. The lots now average 46 feet in width and 130 feet in depth, providing 18 to 20 feet between houses.

Giving a little "extra" in design and quality has paid well in this development. Sales expenses are held to a minimum and home purchasers are enthusiastic about the homes they own and the future of their neighborhood. The houses are not ordinary—inside or out. Special care in design gives individuality to each house in the low-cost project. Care in selection of materials and workmanship assures stability and permanence in each house. Where 2x8 joists would ordinarily be satisfactory and pass all inspections, Reid-Paterson are using 2x10's. All rafters are 2x6's. Three 3/8-inch reinforcing rods are placed about the fifth course up on all the cinder block foundations to virtually insure against cracking from lateral pressure. Each foundation is waterproofed below grade, inside and out, with IPC compound. For the inside coat this material is mixed with white cement and water and results in an enamel-like, white finish impervious to water.

Although the exterior of each house is individually designed, five basic floor plans are used, although even these are varied in each job. Two houses with similar plans are never placed side by side. When the project is completed there will be about 200 houses in Meadowood. Beneicke, Pajot & Lorenz, architects, do the designing for Reid-Paterson. Veterans are being given preference in all purchases and with few exceptions all houses finished have been delivered to veterans.

Price range on the houses is between $12,000 and $13,000. This includes a ribbon side drive to the garage site and sod on the lawn back to the rear line of the house. Variation in appearance of the homes is not only achieved in the designs themselves, but location of chimneys is varied, brick colors and wood trim are changed, walks are curved differently and house setbacks are varied to further add to the individuality of each.

In addition to the kitchen door which opens to the rear or to the side of the house, a French door is always installed to open to the rear yard. Sometimes this is from the dining room, living room or even from a bedroom. This is done to make it easy for the owner to add a screened porch, terrace or sun parlor at a later date. Basement windows are arranged so they will not interfere with any sizable addition to the rear.

The houses are brick veneer over frame with insulating board sheathing. Hardwood floors are sanded and finished on the job. Interior walls are covered with oilcloth and the baseboards are fully insulated. All baths are apartment style with shower and lavatory. Basements are of the full-walkout type and are finished for recreation purposes.
Planned from the Ground Up

The houses are individually designed over five basic floor plans, with no two similar houses placed adjacent to each other. Individuality is further attained by variations in colors of brick, exterior trim and location of the chimneys.
kitchen is standard, and a completed small storage room with shelves for fruit jars and miscellaneous items is included in each basement. The furnace, water heater and laundry facilities in the basements are arranged so they occupy one side or one end only, thus providing ample, clear room for recreational or hobby purposes.

Each bathroom includes a shower, with walls and floors covered with ceramic tile. Plenty of well-placed closet and storage space is planned in each house, including attractive built-in bookshelves in each living room.

Unfinished attics are all planned so that living quarters can be built there at minimum expense. A built-in stairway to each second floor is always provided. It is also standard practice to place two windows in each end of the attic and where this is not done there is usually a dormer to give the equivalent amount of ventilation and light. Heat ducts and wiring are stubbed to the attic floor level. Heat is supplied by oil-fired, forced warm air Armstrong furnaces.

Wallace E. Reid is president, Hamilton H. Paterson is vice president and treasurer, and Miss E. M. Coolidge is secretary.

EACH house is given some type of detail treatment to make it different from any other house in the project. Two examples of what is being done can be seen above. Although there are other houses in the project built over the same basic floor plan, exterior appearance is so varied that each house has its own individuality.
so is secretary of Reid-Paterson, Inc. Both Reid and Paterson spend much of their time on the construction jobs supervising and checking to assure quality workmanship, and maximum output by labor. This gives the workmen closer contact with the "office" and avoid delays and misunderstandings that often add so many extra dollars to construction costs. Many employees have been with Reid-Paterson for at least 10 years and the majority of the men follow the lead of their employers in taking pride in their work and the quality of it. Power tools are used extensively on the job, where the various men are trained and have become specialists in doing the different operations according to the standards established by Reid-Paterson.

In conformity with the firm's policy of avoiding delays and dissatisfaction on the part of home purchasers, no house is sold until it is completed and the final price established. This also permits tenants to move in without disturbance from workmen entering the house to complete small jobs there which disrupt normal living for the family occupying the new house. Considerable attention is given to selecting families which will tend to have common interests, in addition to being in about the same age and economic group. The project is located within a few minutes' drive from the principal shopping district of Birmingham, and good transportation is available to Detroit where many of the owners are employed.

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IN ADDITION to the kitchen door which opens to the rear or to the side of the house, all houses in this development have a French door opening to the rear yard from the dining room, living room or a bedroom. This is done to make it easy for the owner to add a screen porch, terrace or sun parlor at a later date without excessive cost. Basement windows are also arranged so they will not interfere with plans if such an addition is made.
FROM the office of Walter T. Anicka, architect, Ann Arbor, Mich., comes the blueprint house for this month. It is designed primarily for a lot not more than fifty feet wide. By removing the garage from the house and placing it at the rear of the property with a driveway from the front, it would be possible to reduce this width to forty feet.

A total of 870 square feet, exclusive of the garage, comprises the area of this house. Five rooms, including two bedrooms, bath and ample closets are included in the overall floor plan. This type of house makes a direct appeal to the veteran, as well as the large scale operator who builds for the mass market, because of the possibilities of economy.

For purposes of economy, the architect has avoided all unnecessary breaks in the exterior wall surfaces. He has attempted to hold to a basic rectangular shape, insofar as it was consistent with good planning. The simple yet effective lines of the roof reflect the restraint exercised in the contour of the exterior walls.

Consistent with Anicka’s planning, the service units have again been placed toward the front of the property. To the left, adjoining the kitchen, is the entrance porch leading directly to the living room. The position of entrance and service doors permit economy in the use of walks and driveways. Access to the rear of the property is obtained through the door from the dining room. The basement which is partially excavated contains a laundry and recreation room.

Exterior walls are faced with double-coursed wood shingles spaced 12 inches apart. Shingles on the roof are of wood with every fifth course doubled. Windows throughout are of aluminum with sliding sash.

Because of a typographical error the Anicka blueprint house published in the August issue was given the number 17. It was number 19.

To avoid confusion when ordering plans, please be sure to mention the month and year of the issue in addition to the house number.
FIRST FLOOR PLAN

DESIGN NO. AB 133
AMERICAN BUILDER BLUE PRINT SERIES
Designed by
WALTER T. ANICKA, ARCHITECT.
Ann Arbor, Michigan.

Simmons-Bardman Pub Corp. 105 N. Adams St., Chicago III.
THE one-story, story-and-a-half and two-story houses in Colonial Farms range in price from $18,000 to $25,000. Curvilinear streets, quality materials and workmanship plus rigid long-term restrictions promise permanent high standards in the neighborhood.

This 200-house development brings high-quality construction in traditional architectural style to home buyers in the nation's motor city.

In a beautiful wooded subdivision of 45 acres, Cox & Baker of Detroit, are creating the restful charm of early American architecture in the nation's automobile center. Colonial Farms is a planned community of 200 homes, most of them in the moderate-price bracket. With an eye to maintenance of future values, the plot was carefully planned with curving streets and wide lots. In addition a rigid set of restrictions assures the character of the neighborhood will remain high. The location is in Grosse Point Farms, east of Mack Avenue and north of the Seven Mile Road, adjacent to good transportation, shopping and educational facilities.

Lots vary in shape and size. Minimum frontage is 50 feet and the maximum, 100 feet. Terrain, trees and orientation of the houses in relation to sunlight and prevailing winds were carefully considered in laying out the lots. Streets are paved and curbed with full-width sidewalks in front of all building sites.

John W. Baker, in charge of construction and sales for the firm, carefully supervises all phases of the operation. He also oversees all details of planning for the houses. The firm operates its own architectural service for houses built for speculation as well as those which are custom built. All houses are individually designed on the exterior, but the firm uses several basic floor plans. These are often varied in some degree so that there are very few homes in the entire subdivision which will have identical layouts. Houses with similar floor plans are never built side by side.

To implement the promise that a home buyer in Colonial Farms will "realize the vision of modern living
THE two-bedroom brick veneer house shown above is priced at $18,500. The sales price on these houses always includes a garage and about half of them are completed with double garages. House interiors are completely decorated with firm's own crews with quality construction in traditional style," Cox & Baker provide more than the minimum in equipment generally accepted as constituting a completed house. Each kitchen is equipped with an F. E. Smith ventilating fan, a NuTone combination chime and clock, and a Hotpoint food waste disposal unit. Youngstown kitchen cabinets are also standard in Colonial Farms. Kitchens usually include a small dining area in addition to a dining room. Work counter tops are linoleum in combination with porcelain enamel sink tops.

Built-in niches and bookshelves are also common in these houses. Frequently a complete cabinet with glass sliding doors is built in the dining rooms. Glass block panels are used judiciously to not only admit light but to add to the decorative effect of both interiors and exteriors. Where large plate glass windows are used, they are either Thermopane or Twindow.

The firm operates its own masonry, carpenter and decorating crews. Plumbing, wiring and heating work is sublet. Work is scheduled so that the masonry crews are kept in.
busy all the time. Most of the houses are brick or stone veneer, and many of them have fireplaces. Foundations are concrete blocks. Interior walls are plastered over gypsum lath. All ceilings are insulated with cotton insulation, and in some houses, the sidewalls are also insulated with the same material. Heat is supplied by Lennox oil-fired forced warm air furnaces.

The bathrooms in these houses receive the same careful attention in planning and equipment as the balance of the house. Walls and floors are covered with ceramic tile, and fixtures are of top quality, although shortages have forced the firm to vary in its selection of brands.

Where the layout of a house does not make it feasible to complete the attic for additional living quarters, a Precision Parts Corp. folding stairway is installed. In other houses where second floor bedrooms and other facilities can be completed later, a built-in stairway is included. Floors are Bruce prefinished hardwood, except in the kitchen and bathrooms. Kitchen floors are finished with linoleum.

THIS is another of the houses which are proving popular with buyers in Colonial Farms. The price, including the 55-foot lot and garage, is $18,500.

THE rendering and floor plan above is an example of the latest type of designing for this project. These are placed on the largest lots and are priced at about $25,000. Several items of extra equipment, including food waste disposal units, are included in all houses in development.
In plumbing as in heating, the system must be adequate. It must be adequate to meet the codes, the specifications, and to meet the immediate and future needs of the occupants of the house. What is an adequate plumbing system, and from whose point of view is it adequate? Is it a system that will barely squeak by? Or is it a system with a plus margin of safety, utility and quality? Will it take care of the user’s immediate needs? Have the needs of the future—the needs of a growing family been anticipated?

Right at the outset let it be made clear that few inflexible rules can be set down. In judging the adequacy of any plumbing system there are many factors that must be considered. One factor is building codes. According to the codes of one city, a plumbing system might come through without a demerit against it and yet the same system may fail miserably when measured in terms of the codes of another city.

A recent nationwide survey discloses that the building industry is over blessed with building codes. It is estimated there are between 1,500 and 1,800. Of course, builders are directly affected by only one, or at most—several, depending upon the extent of operations. But whether affected by many or few, the fact remains builders are affected by them. In one way or another, all municipal building codes have something to say about plumbing—what is permissible, what is passable, and what is not. So for enlightened self-interest every builder should be intimately acquainted with the plumbing codes in the area or areas in which he operates.

Some of the provisions of the codes may not make sense. But someone had a reason for writing those provisions into the codes. If the reasons are good, if they serve the best interests of the community, no one has just cause for complaint.

One more thought on codes. If a builder has the conviction that his local building codes are not everything they should be, and he is certain that his conclusions are based on the doctrine that what is good for most of the people is also good for him, he will be doing himself and the building industry a service by taking steps, through his association, to have the impracticalities eliminated. Any code provisions which tend only to add to the cost of a structure without contributing anything of tangible value to the structure will only react against the building industry and not against those responsible for the stipulations.
Location of the building is another factor that bears upon the plumbing system. Because some sections of the country enjoy summer weather the year round, less of the building budget need be spent on the shell of the structure, and more can be allotted to interior accoutrements. The reverse is true, in varying degree, where the weather ranges from cool to frigid several months of the year. Thus a home built in Key West, Miami or San Diego may sport a bath and a half or even two baths, a spacious kitchen and a well appointed laundry; while a home built in Chicago, Detroit or Medicine Bow, and costing an identical sum, might have but one bath, a not so spacious or well appointed kitchen. The laundry might consist of a nothing more than a common laundry tub. Besides, this house will need a heating system.

The cultural development of the community is an important factor. If the local gentlefolk have been educated to expect the best in plumbing fixtures, and if they are likely to be somewhat brand conscious, they will expect brands with which they are familiar—brands which they associate with quality. That also means matched bathroom sets should be installed.

Perhaps one of the best and quickest ways of raising the esteem of the industry in the public eye is to resolve to always give a dollar's worth of building value for a dollar. Members of the industry must not forget that they are judged by the company they keep. What does all this have to do with an adequate plumbing system? Just this. If a contractor or plumber skimps on a job by allowing ¾-inch pipe to be installed where 1-inch or 1-inch pipe is required, or if he skims on any of the parts of the plumbing system, whether they are hidden or visible, eventually the secret will come out of hiding. From a long pull point of view, it is wise to forfeit a few extra dollars for the sake of delivering a better house and thereby enhance a reputation among customers and prospective customers. These remarks refer to skimping on a job for the sake of extra profit. Obviously, there are practical considerations which must be reckoned with. The first of these is the construction budget. This must be kept in balance if a reasonable profit is to be made on operations. No one advocates allotting $1,500 for a plumbing system if the budget will allow only $1,000. Therefore, the second consideration is the planning of a practical yet economical plumbing system that will include fixtures for the bathroom, kitchen and laundry of a style and quality in consonance with the budget along with an adequate hot and cold water supply and drainage system. This is practicality plus economy. For greatest economy, it is practical in one-story houses to install the bathroom and kitchen back to back in adjoining rooms but with enough space between to enable economical servicing of the piping should the need arise. The buyer of any house will eventually appreciate that bit of foresight.

In multi-story houses, it is desirable to install the plumbing fixtures and piping in a single vertical plane. This will concentrate the fixtures and piping and permit a single vent stack as in the house under consideration here. This is mentioned merely to emphasize that it is practically possible to give the buyer extra values in the plumbing system—values that will give him extra utility, comfort, convenience and dependability that he will brag about, while at the same time practicing installation economies that will allow the builder to profit without subtracting one iota from the quality of the system.

"Let the buyer beware" is a good caution to keep in mind when examining the bids of sub-contractors. That does not imply that these men are unprincipled. However, they know that it is the lowest bid that generally gets the contract. They know, too, there is more than one way to cut their costs. Often a sub-contractor will deliberately submit a low bid and then proceed to cut standards and quality by making short cuts and substitutions that only the most careful supervision and inspection will detect.

Before accepting a bid from any plumbing contractor, a builder should examine it carefully to see what he is to get and for how much. The bid should be compared with the specification to make certain it is actually based upon the specification. In particular, the bid should spell out a complete and accurate description of the fixtures and other materials to be supplied. Manufacturers' catalog descriptions are excellent guides to use in checking plumbing fixture bids and specifications. A mere glance at the fixture specification will reveal the wisdom of a full and complete fixture description for it shows exactly what the contractor intends to supply and at what price. This also enables

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**Here** planned piping permits the convenience of an extra toilet and lavatory in what was a clothes closet.
the builder to make an intelligent comparison with competitive bids thus revealing inequalities in design, material, trim and price. The bid should comply with the local codes and that no extras are being included which neither the codes nor the specifications require. In other words, acceptance of the lowest bid is not always the best practice.

In every trade there are good, better and best craftsmen. There may also be some that are not even good. In this latter bracket there are contractors whose credit is not good and who have to pay cash for every item they purchase. If credit involvement is only temporary due to unusual circumstances, that is one thing. But if slow pay and defaulting of obligations is chronic, beware. A bad reputation is almost never earned. Inability to meet financial obligations may also be an indication of slip-shod business methods plus inability or unwillingness to do good work. It may cost a little more to deal with reliable contractors but it is cheaper in the long run—cheaper in time, effort and energy—cheaper in the sense that the job can be completed sooner and more than likely will be done better.

To many it is probably no news that there are but three parts to a plumbing system; (1) The supply piping (2) The fixtures (3) The plumbing system. Each is a subject in itself. Therefore, each will be treated separately for the sake of clarity and convenience.

The initial connection is from the water main to the Buffalo box, often referred to as the curb box. It is provided for the purpose of shutting off the water supply from the main to the house should this become necessary for one reason or another. In some instances the city insists upon bringing the water to the Buffalo box. In other instances, it is the responsibility of the plumbing contractor. This point is covered in local regulations. But regardless of who does the work, it involves tapping the water main and installing a corporation cock. Special tools permit this to be done while the main is under pressure without danger to the workers and without loss of either pressure or water. The connection from main to Buffalo box is flexible to allow for shifting and settling of the earth and to guard against breakage due to earth vibration. The material which can be used for this connection is specified in local codes. It may be lead, copper or brass. When this makes the connection, the builder need not be concerned. It is made by a plumbing contractor the builder must assure himself that code regulations are followed.

From Buffalo box to house—Here again the code has its say. There may be a choice of material anywhere from lead, to cast iron, and from copper to brass to wrought steel and wrought iron pipe and approved fittings. When selecting the material for the water supply piping, it will be well to consider the characteristics of the water supply. If it contains corrosive elements and incrustation is a possible factor, it is wise to consider lead, brass or copper pipe even if the code permits use of ferrous pipe and fittings. If the building is on contract there is little doubt that the client will be more than glad to pay a little extra for the added protection and service non-corrosive piping will give. With the pipe supply as critical as it is, the temptation to use second hand pipe may rear its ugly head. Of course the code may prohibit the use of used materials. But if not, the urge should be throttled because it is pound foolishness that will only lead to trouble, complaints and possibly expense and law suits.

It goes without argument that all supply piping should be of adequate size, and durable; that all joints should be tight and that the piping be pitched so it can be drained if the house is closed during freezing weather. Adequate water service is impossible unless the pipe is of correct size. While it may be true that few people ever turn on several faucets at the same time while they are inspecting a house, the story is different once they move into it. Then if the flow of water is inadequate when someone is drawing water for a bath, another is flushing a toilet and a third wants water for the laundry, washing dishes, or watering the garden, there is disappointment and much complaining. It is then that the capabilities of the builder and his integrity will be seriously questioned. He suffers in proportion to the depth of the grievance and to the extent that the grievance is advertised by the buyer.

What is adequate flow? Obviously, adequate flow is a general term. Lewis H. Kessler, Professor of Sanitary Engineering of Northwestern University, put it this way: "All plumbing codes I have seen insist on adequate or ample water supply to fixtures. These are unfortunately general terms. The modern water system has to meet the demands of convenience in keeping with a rising standard of living as well as of health. If the consumer need not wait to the point of impatience for a fixture to fill, the rate of supply is adequate. Total daily consumption has nothing to do with the problem."

TOILET flush valve equipped with integral vacuum breaker

Whether the flow of water to fixtures is adequate depends largely upon the size of the service pipe—that is, the pipe from the Buffalo box to the water meter or to branch lines in the house. While some plumbing codes may actually specify the minimum size of this pipe, plumbing contractors are pretty well agreed that the service pipe should not be smaller than one inch. This means new pipe, of course. However, this makes no allowance for possible deposits of rust, corrosion, lime, or magnesium. It is easy to see then that as water consuming accessories, such as dishwashers, food waste disposers, lawn sprinklers, and garage faucets are added and as the inside diameter of the piping decreases, the flow of water may become inadequate if several fixtures are used at the same time.
Take the Anicka House which is the subject of this series of articles. The plans call for the following fixtures: 3 lavatories, 3 toilets, 1 5-foot bath, 1 double-basin kitchen sink, 1 laundry tub, 1 garage faucet (presumably), 2 sill cocks (presumably). Now if all of these fixtures were used at the same time—a remote possibility—a flow of about 80 gallons per minute would be needed.

Reference to the table, below, will disclose that a 1-inch service pipe has a capacity of 85 gallons per minute, and should give adequate flow after allowances have been made for future possible increased water needs, friction loss, tuberculation, scale, and lime deposits.

The table also discloses that a 3/4-inch service pipe would "get by." But the normal price differential between 3/4-inch and 1-inch pipe is so slight as to be almost negligible. Besides 1-inch service pipe assures that the buyer of the house will have adequate flow to satisfy any peak load he may call for—now or later.

This is the piping which branches off from the service piping, to the fixtures and other outlets. Generally, galvanized steel pipe is used for these branch lines. If the budget permits, galvanized wrought iron or copper, or brass pipe have definite advantages to offer. But there is something besides price to consider. Selection of piping, whether service or branch, should be determined by the water and soil characteristics. Corrosive water and soil will dictate the selection of pipe that will best meet the conditions. While the sketch, Figure II, does not apply specifically to the Anicka House it will serve as guide to the selection of correct pipe sizes to various fixtures and appliances. Branches to sill cocks and garage faucets are not indicated. However, 3/4-inch diameter pipe generally gives satisfactory flow to these outlets unless a lawn irrigation system is called for, in which case 1/2-inch pipe should be considered. 3/4-inch or 1-inch diameter extensions should be shunned except perhaps in circulating domestic hot water lines and short extensions to the closet tank. Smaller pipe sizes than those shown should never be used. If experience shows there is a tendency toward quick reduction in pipe diameter because of rust, scale or liming, pipe one size larger in diameter should be considered.

To guard against water hammer in branch lines, each fixture should be equipped with air chambers as shown in the sketch. Nothing less than 3/4-inch pipe should be employed for such air chambers. Each fixture should be equipped with these protective covers on both hot and cold water lines.

It is wise economy to insist upon the use of the best pipe fittings available—fittings made by a manufacturer of established reputation. Good fittings will more than justify their slightly higher cost—may even save money—because they will be accurately threaded, accurately machined, thread lengths will seldom, if ever, vary and, therefore, there should be no culls due to imperfections. They can be assembled in less time. Besides, accurate, straight cut threads result in straight pipe lines—give assurance that each pipe line will go exactly where it was aimed—no detours, no dog legs.

Every fitting in a pipe line tends to interfere with free flow. Technically this is known as friction loss. Often the use of union ells and union tees will reduce the number of fittings and, therefore, reduce friction loss proportionately. In addition, the use of union fittings makes repair of pipe lines simpler because lines so equipped are easily disconnected without breaking fittings or cutting lines. Conversely, they are as easily reconnected.

In the rush and bustle of construction, it is easy to overlook essential parts—valves for example. If they are included in the plumbing specifications, naturally, they should be in the house. Careful builders insist upon the installation of shut-offs for each fixture, especially at the closets, lavatories, and kitchen sink. The buyers of buildings will appreciate such thoughtful consideration. It is well to include valves in the principal pipe lines in the basement and to tag each one so the lady of the house (or the "master") will know which one to
turn to shut off the water supply to any part of the house in case pipes rupture or other trouble is encountered. If the budget permits, use gate instead of globe valves for they offer less resistance to the free flow of water. Gate valves are especially important where frequent opening and closing may be necessary—at the water meter, for example. Here the valve should be installed in the house service line ahead of the meter. A stop and drain valve is called for in the line or lines to the sill cocks. The drain feature of the valve permits draining the pipe to prevent freezing and rupturing of sill cocks during the winter. Also convenient, time and money saving (to the home owner) are valves, on the hot and cold water supplies to the water heater. These permit the easy removal of the heater for repairs or replacement and without the need for shutting off the water supply to any other part of the house.

While inspecting supply piping, the builder should be sure all piping that will be hidden behind walls or under floors is braced and otherwise supported. Simple, inexpensive sheet metal clamps will do the job. They will keep the piping tightly in place, guard against sagging and possible breakage, and prevent mysterious rattles which are difficult to locate and more difficult to remedy once the house is finished. This applies to drainage piping as well as to supply piping.

Often piping on outside walls is unavoidable. It is axiomatic that heavy insulation is the best, most effective safeguard against freezing. It is also self evident that if this added protection is to be provided it should be written into the specifications.

Much has been written and much more will be written about the health hazards of back siphonage. It can spring from two sources: (1) the inaptitude of the installer; (2) undersize piping. Number one can be avoided by letting plumbing contracts to licensed master plumbers. Their knowledge and experience have taught them how to avoid the cross connections in piping which permit the entry of polluted water into the fresh water lines. Hazard two can be avoided by insisting upon adequate pipe sizes. Where pipe sizes are inadequate a drop in water pressure can be expected when, for example, the lawn is being sprinkled, water drawn at the sink or bath downstairs and faucets are open upstairs. The pressure drop may be so great that only a trickle will flow from the upper outlets. Couple this with other conditions and a condition is created which can cause a backflow of waste into the potable water supply. Many plumbing codes demand the installation of approved siphon breakers which will prevent such backflow. Closet tank flush valves are now available which have built in vacuum breakers of approved design. Also available are similar devices for direct flush valves. Modern bath and lavatory faucets are made and installed to provide a sufficient gap between the spout and the spill rim of the fixtures.

Where the water supply is "hard," it is almost certain that sooner or later some owners of houses will want to install water softeners. Builders in such areas who really want to please home purchasers will draw up piping plans so softened hot and cold water can be delivered to the sink, laundry, tub, bath, showers and lavatories while only hard water will be piped to water closets, sill cocks, garage faucets and other similar outlets. Any licensed plumbing contractor can demonstrate how simply and inexpensively it can be done.

Providing supply and waste piping for the bath or powder room which may be installed later, as the needs of a growing family demand it, is another thoughtful consideration that customers appreciate. Of course it can not be done for the wishing. But certainly it can be done at a minimum of extra cost at the time the house is being constructed—a cost which can be passed along to the buyer painlessly. This foresight on the part of a builder can be turned to good account as a strong, effective selling feature.

The next installment in this series will deal with the selection and specification of the plumbing fixtures.
New Idea for Auto Service Station

MODERN techniques of installing plate glass were used to full advantage in this unusual automobile service station

FREE bus service from this station to stores in nearby shopping center is one of the accommodations offered to patrons

AN INNOVATION in modern automobile service station design has been achieved in the new Mobilgas establishment located in the Crenshaw shopping area of southwestern Los Angeles. It is located on a plot with room to park 250 cars. This places the station about one-fourth mile from the main shopping center, but patrons of the station and parking lot may use the free bus service which transports them to entrances to the various stores.

The tower is 75 feet high, constructed of steel covered with red and white baked enamel finish. Plate glass windows around the circular office, display and lounge area are 20 feet high and 8 feet wide. The large canopy has eight rings of neon tubing on the underside as special lighting. Because prevailing winds blow from the south, doors to the lubritorium, washing and polishing bays open to the north, even though this is the side opposite the street. The southern, or street side, of the station is practically one solid wall of glass. The building was designed by Albert B. Gardner, architect, and built by Edward R. Siple Co., contractors. The building covers 10,500 square feet and has 5,308 square feet of gross floor space.

GROSS floor area of the building is 5,308 square feet. The concrete floor inside the circular area is stained red.
Two Motels
Designed to Render Complete Service

Even though the small lot set definite limitations on what could be planned as a motel, clever angling of individual quarters provides adequate privacy and also gives each unit a private balcony. Principal sacrifice in angling the units was a narrowing of the interior court. Individual parking areas for units are along both sides of the building.

Because of space limitations, it was not possible for Architect Burton A. Schutt to design a conventional motel on the site chosen for this structure. With the lot only 100x200 feet, it was necessary to incorporate motel-type units in a hotel design. Intended to provide middle-class accommodations for motorists traveling Wilshire Boulevard in Los Angeles, the pleasing combination achieved here has permitted the motel to enjoy the income of a luxury hotel.

The pleasant arrangement of rooms at a 45-degree angle not only brings light and privacy but also maximum ventilation. The outside entrances to balconies further implement the plan to offer maximum privacy. Parking areas on two sides of the building, along with the outside entrances from parking spaces to quarters, preserve the informality of motel living.
Designing and constructing tourist courts present problems peculiar to that type of accommodation. Here are two good examples of problems and how they were solved.

**THE SITE** for this motel was across the highway from the beach and presented some particularly unusual problems to Architect Burton A. Schutt. He was not only asked to plan conventional accommodations for tourists, but also to plan for auto service, food service to cars, table service in a dining room, and a cocktail bar. By angling rooms above the garage area, every unit not only fronts toward the sea, but is provided with a private, recessed balcony. Ground level public areas are close to the road.

BY the simple expedient of elevating living quarters above highway traffic, patrons of this motel can enjoy an unobstructed view of the beautiful scenery on the opposite side of the highway. Each room faces the ocean.
POURED CONCRETE Solves This

By using a light-weight aggregate and mechanizing the operation, this firm has been able to erect two and three-bedroom monolithic houses with one and two-car garages to sell between $7,990 and $9,550.

Footings, garage floor and porch slab are all poured as an integral unit. Color is added to concrete porch floors where desired. Houses are known as "Pumacrete Homes".

Interior walls are also poured concrete. Floors are covered with either oak parquet or asphalt tile. Roofs are of conventional wood framing, covered with either cedar or asphalt shingles. Steel windows are inserted in concrete forms and made part of walls.

A technique for constructing poured concrete houses with light aggregate has enabled the Ketell Construction Co. to erect about 300 two and three-bedroom houses complete with one and two-car garages in a price range of $7,990 to $9,550. Some variation in price is the result of different values on the lots. The projects are located in Chino and Pomona, Calif. The houses are known as "Pumacrete Homes".

The firm has three sets of forms for each model house. One set is used for houses being poured; one set is employed on houses to be poured the next day and a third is held in reserve against contingencies. About three houses a day are poured. Forms are oiled and cleaned after each use and are expected to last indefinitely for this type of work. About 100 houses are required to amortize the original cost of the forms. From 40 to 50 forms are required for each house. The large ones which run from three to 16 feet wide are set in place by a crane. All corner forms are set by hand.

Houses of the type built by this firm have been up for more than a year, and no trouble from contraction or expansion has been reported, although it is a solid monolithic house. No expansion joints are used because the company has found that the light-weight concrete does not expand and contract to the same extent as standard concrete.

After sites are graded, houses are staked out and a trencher excavates for exterior footings. Footing forms are in long lengths for easy handling and are placed in the trenches, set to a line, leveled and reinforcing steel placed in position. The forms are held in position by standard hand tampers. The concrete is then compacted and the forms are removed. The concrete set is covered with brush and paper for several days before the forms are removed. The concrete is hard enough to support the forms and to avoid cracking by the removal of the forms.

No trouble with porosity or air pockets has been encountered. The concrete set is covered with brush and paper for several days before the forms are removed.
placed. All porch slabs and attached garage slabs are poured at the same time as the footings, to integrate the units. Where it is desirable, color is added to porch floors. All foundation walls are brought up level with the finished floor. After the foundation is complete, interior curbs are stripped, the subgrade is leveled and prepared for installation of rough plumbing, water and gas lines. A two-inch concrete slab is then poured and covered with two coats of water-proof emulsion. The finish slab, which is three inches thick, is poured over this and leveled with top of foundation, in which steel dowels previously were inserted.

Nailing blocks, the length of the thickness of interior walls, are secured to the slab in positions which accurately define the room layout. These act as spreaders for the partition forms. Prior to erecting the wall forms, reinforcing steel is erected, rough plumbing, wiring and other components to be inside walls are put in place. Interior door bucks, access doors to plumbing installations and furnace opening are all set in place before forms are set. With forms made to actual room sizes, except for 2x2 corner panels, the actual erection is made easy with the use of the crane. All panels are lettered as to exact positions they occupy in the various model houses. The panels are locked together with a special patented clamping method. Tops of the walls are brought to line by tacking a continuous 2x4 plate from wall to wall, with a spreader being used for alignment. Plumbing is made easy because of the nailing blocks previously secured to the foundation.

Exterior wall forms are erected in about the same manner. Window bucks of special design permit insertion of steel sash which are hung to holes provided in the forms. Jambs of the bucks are flared to permit easy stripping. After the forms for the inside of the exterior walls are set, reinforcing steel is placed and the job is ready for erection of the forms for the exterior wall.

These forms, in large sections, with whalers attached, are set easily and quickly with the crane. Care is taken to project whalers on corners so vertical kickers can be applied to all exterior corners.

Fire place forms are constructed so they collapse. This is also true of the flue alignment cores. The pumice-concrete is conveyed to the top of the wall for pouring in two ways. In some instances a conveyor belt is used, and in others a hoist and bucket does the job.

After the forms are stripped from each house, sacking and necessary wall conditioning are done immediately, while the walls are still green.

Roofs on the houses are of conventional frame construction, covered with either wood or asphalt shingles. Interior ceilings are stucco and interior walls are finished in light stipple. Floors are either oak parquet or asphalt tile. Bathrooms are all of the pullman-type with tub showers enclosed in tile.

The four pictures at right illustrate various stages of erection method. Forms are made in large sections to facilitate handling and are fastened in place with a patented clamping device. A large crane is used to place and remove forms.
FIFTY-FOUR houses were sold in the first five days, with 80 per cent of all purchasers making down payments of more than $1,200. Twenty-six homes were reserved by deposits of smaller sums. This is the sales record of Thomas Companies, Inc., on Rancho Camino Real subdivision between Arcadia and Monrovia, Calif.

The deals were completed before any foundations were in except on one model home which was completed. On a similar tract of 257 houses on Oxnard, Calif., the firm sold 74 houses before the model was completed.

The reasons these houses sold so readily are, first, that they are good small houses, and, second, because they are priced below $10,000 in an area where the need is for that type of housing.

The Rancho Camino Real tract will comprise 151 homes. About 106 will be two-bedroom to sell for $8,100 to $8,250. The remainder will be three-bedroom houses priced at $9,150 to $9,250. All have two-car garages. Lots are 60 or more feet wide by 115 to 180 feet deep. All improvements are in and paid for.

There are four basic floor plans and 16 elevations from which prospective buyers may make selections. Leroy Carver, sales manager, set up headquarters in the garage of the model home. The garage is lined with wallboard, and, on one wall, he tacked the floor plans and 16 elevations, all executed in fine colors. On another wall is a large plot plan with each lot numbered in two ways—one number indicates the particular floor plan and elevation designated for that lot; the other number indicates the sequence in which houses will be started. When a prospect becomes interested, he can, with the help of a salesman, select the floor plan and elevation he desires, and then proceed to the plot plan and choose the lot on which that particular house will be built. This gives the buyer a wide choice of houses, frontages and completion dates. Houses are being completed in about 90 days.

The houses are constructed conventionally from precut framing. Siding, shingles or stucco are used as exterior finishes, with plastered walls inside and asphalt shingles on the roofs.

Herbert T. Lundahl, vice president and general manager, who is in charge of construction, reports that the firm has spent much time studying methods and operations to cut down working time and to raise efficiency. The work is divided into crew operations, with each crew specializing in one type of work. The firm operates its own mill in which window and door frames, shutters, trim, and fascia boards are fabricated. Doors, windows and cabinets are purchased from manufacturers. Rough plumbing is fabricated in a shop on the site.

The system of handling and cutting lumber on this job has been one of the biggest factors in reducing construction costs. The lumber dealer who fills requirements is given a framing lumber list for each separate house. This lumber is piled in the sequence in which it will be used—mudsills on top and roof sheathing on the bottom. A wire strap is wrapped around the pile, and it is dumped in front of the house for which it is to be used. One man with a 2 1/2 horsepower portable saw goes from house to house on the site and cuts the lumber in these piles into the exact sizes which are needed for the house to be built on each lot. This man, like the lumber dealer, is given a detailed cutting list for each house, with nothing left to guess or to memory. As the lumber is cut, as much as possible is used immediately to eliminate extra handling. The balance is placed near the spot where it is to be used. The layout man moves in with a special plan which shows where every stud goes.

In addition to building the houses already mentioned in the two projects above, this firm is building 19 houses in San Marino to sell for $23,000 to $30,000 and a large 608 rental project.
These conventionally-built small houses can be purchased for $295 down and $37.50 per month. They are built to conform to the Uniform Building Code.

**Private Builder Delivers House for $3,795**

About 500 of these homes are to be built by this firm in their market area.

**Experimental House of Texcrete**

THE HOUSE below is built of Texcrete, a building material recently introduced to the Southwest. The material is used as an aggregate to manufacture light-weight masonry blocks.

Two youthful Fort Worth, Texas, builders, Oscar A. Seward, III, and W. F. Shurtleff, Jr., have completed two "guinea-pig" houses of Texcrete. They are built on a concrete foundation with the light-weight masonry blocks used for walls and partitions. They will sell for $4,700, exclusive of lot. The houses each consist of two bedrooms, living room, kitchen, bath and hall. Overall, each is 721 square feet. Included in the price of each home is an automatic water heater, and a gas-fired space heater of 30,000 B.T.U. capacity. Seward and Shurtleff already have launched a project of 29 houses to be built in Fort Worth and have plans for a project of 400 to be started with the 29 are completed. The exterior of the house is finished with three coats of stucco. Interior walls are plastered.
Precutting and Yard Assembly

Keep Costs Down

Low-cost houses for low-income families also sold as rental properties, mountain cabins, beach and guest houses and motels

ONE-BEDROOM houses completely erected and finished on level lots are being offered by the Allied Building Supply Co., Alhambra, Calif., for $4,310. The same house, 625 square feet in area, can be supplied as a two-bedroom house with a smaller living room for $4,500. The prices include all equipment except heating. A wall heater is available for an additional $92.

H. Gordon Hammerson, president of the company, attributes the low prices to the fact that one company does all the work of fabrication, erection and selling. There is only one basic house, and all structural sections are precut and assembled in jigs at a central yard. Completion of a house is guaranteed in 30 days, and in good weather, requires only three weeks.

Studs are 2x4 on 16-inch centers, and rafters are 4x4 on 24-inch centers. Interior walls are painted Sheetrock. Roofs are built on 4x4 beams.

Over them is a layer of Sheetrock, a layer of Reynolds Foil insulation, then furring strips with wood sheathing above. The final surface of the low-pitch, almost flat roofs, is two coats of 15-pound felt individually mopped, and topped with 90-pound granitized asphalt roll roofing.

Exteriors are redwood or stucco. Redwood walls are given two coats of paint, or one of oil and one of varnish. Arthur DiLaura, plumbing contractor, assembles the rough plumbing at the Allied yard, and installs the vents in the partition panels. Houses are built on concrete slabs.

The mortgage company takes a first trust deed of $2,850 on the houses, plus a reasonable loan on the lots. If the owner is short a few hundred dollars, Allied takes a second trust deed to cover. Aluminum screens, tub and shower, and chrome fixtures are supplied. Plumbing outlets are extended one foot outside the houses.

UPPER SASH of windows are casements. Note tilted 4x4 posts for porch canopy. At right, living room seen from front door.
Lumber Dealer Delivers Economy Houses

The first eleven houses in a development at the edge of Port Allen, La., across the river from Baton Rouge, averaged 780 square feet each, and sold for an average of $6,080. The price of each house included its share of a $20,000 investment by the builder in sewage, water and sidewalks. The price range was from $5,350 to $7,900. The builder is Leo Murtagh, owner of the Port Allen Lumber & Supply Co.

Footings of all the houses are 8-inch concrete, and piers are 8-inch by 20-inch brick. Sills are 6x6, and floor joists, 2x10 on 16-inch centers. Rafters are 2x6. Sheathing and subflooring are laid diagonally, and roofs are solidly boarded. Aluminum louvers, Andersen windows and doors, and Coleman floor furnaces are standard in all the houses. Walls are Sheetrock, finished with Textone. Kitchen and bathroom floors are asphalt tile, and roofs are asphalt shingle. Copper screens for windows or doors are included. American kitchen units are used throughout.

The 680-square foot house, shown at the top of this page, was built and sold on contract for $5,350, including a detached garage. The 890 square foot house at the bottom of the page was sold for $7,200. The price included a garage with workroom, L&H electric range, L&H 30-gallon electric hot water heater, 30,000 B.T.U. Coleman floor furnace, Holcomb & Hoke 36-inch attic fan fitted in an airtight fan well with a plywood chute, and a Savage washing machine. The American kitchen unit consisted of a 54-inch sink cabinet, two 24-inch base cabinets and two 18-inch wall cabinets.
Described as "A Home for a Hoosier Family" at the 23rd Annual Indianapolis Home Show, this house is suitable to any community of quality.

Designed for Comfortable Living

Described as an adaptation of an early American cottage by the designer, Edward D. James, architect, this spacious dwelling was the larger of two model homes featured at the 1948 Indianapolis Home Show. In reality, the house is an effective adaptation of modern architecture to the needs of a specific mid-western family. It was selected for exhibition by Home Show officials because of the many practical features incorporated into its design that make for comfortable living.

Using his family as a model, Architect James, a member of the Indianapolis firm of Burns and James, designed the house to meet his family's particular requirements and tastes. Hence the plan provides privacy of bedroom areas, openness of living areas, and space-saving and step-saving food preparation areas. A basementless home, the laundry and utilities are combined in an area adjacent to the kitchen and garage, and accessible from the living quarters.

For purposes of the Home Show, the house was constructed of materials that were available in lieu of trying to use the unusual. For the exterior, beveled siding was combined with sienna Indiana sandstone, topped with a roof of asbestos shingles.
Dry wall construction was specified for the interior by J. F. Cantwell, managing director of the Show. In the living quarters, laminated fiber panels were used on all walls and ceilings. Attached to the studding and joists from the rear by patented floating fasteners, the walls were unmarred by nail-holes or other marks. Washable wallpaper in both plain and patterned design was applied to these panels adding color and warmth to the rooms. In the library, walnut panels comprised the background for the sienna sandstone fireplace, creating an interesting contrast to the colorful paper of the adjacent walls. In the laundry and garage, plywood was applied to the walls and ceilings. Asphalt tile, brick, concrete, and linoleum made up the floor materials.

The low-pitched roof and horizontal lines of the dwelling are designed to blend the house into the landscape as an integral part of its setting. Huge glass windows on the garden side of the house merge the indoors and outdoors.

The house turns its back to the street to capture the vista of the garden, and provide privacy for outdoor living. The living-dining room, which looks out upon the garden, and the work areas are sunken the depth of two steps from the remainder of the house. An enclosed porch adjacent to the kitchen, and entered from the dining area, can be converted into a summer living-dining room. For convenience in serving, a window to the porch is provided above a small breakfast bar in the kitchen.

The U-shaped kitchen looks out over the yard on the side of the house. The combination utility and laundry room, easily accessible from the kitchen, faces the street and has an outside entrance. This room provides space for storage besides housing a complete line of laundry equipment.

An inter-communicating unit in the kitchen drew the approval of visiting housewives. With this device the housewife can talk to the front door caller without stepping outside her kitchen, saving her many footsteps per day.

**FLOOR PLAN** of house as it will actually be built in exclusive residential district of Indianapolis. Note hobby room.
Tests Prove Value

INSULATED, VENTILATED barn has adequate window space for lighting—another reason why barn stayed dry throughout test.

INSULATION for the barn consists of 3,600 square feet of mineral wool, 43 square vapor seal paper. Ventilating equipment is two fans, one thermostat, 10 back-draft dampers for intakes, and 10 air spreaders for intakes. Construction of unventilated barn, below...
Importance of proper housing conditions for herds is vividly shown in recent comparative study of two dairy barns

W. C. Krueger, extension agricultural engineer, Rutgers University, concluded a 60-day comparative study of two New Jersey dairy barns—one insulated with mechanically controlled ventilating system; the other, uninsulated and unventilated. In the properly insulated and ventilated barn, there was no sickness among the 26-cow herd—milk production brought a total income of $3,359.77. In the uninsulated, unventilated barn, several cows in the herd were ill; the total income was $2,225.53.

The one-story, insulated and mechanically ventilated barn is 34 feet wide, 80 feet long, and has an 8-foot ceiling. Sidewalls and ceiling are completely insulated with fireproof mineral wool insulation. Positive ventilation is provided by two electrically-operated exhaust fans controlled by thermostats. The barn was designed for stabling 40 milking cows by the Extension Service and dairy department personnel of the New Jersey College of Agriculture. At the time of testing, the total animal population consisted of 35 cows.

The uninsulated barn, on the Ayers-Struble farm, Sussex County, N.J., was considered to be representative of a better-than-average dairy operation. It is typical of thousands of barns found in principal milk-producing areas of the country. A two-story barn with gable roof, it is constructed with the north wall of the first story built into the side of a hill so that loads of hay can be driven into the mow. The barn is 32-feet wide, 96 feet long, and has an 8-foot, 3-inch ceiling height.

No attempt was made to insulate this barn, and there is no definite ventilating system. Exchange of air is provided by opening windows and doors.

It was freezing or below on both farms 55 out of the 60 days. Inside the insulated barn, temperatures remained fairly uniform and changed slowly, never going below 43 degrees. In the uninsulated barn, fluctuations were rapid. In one instance, the temperature varied between 38 and 58 degrees in a 24-hour period.

Had the herd in the insulated barn maintained a level of production for the 60 days equal to the first 15-day period, a total gain of $919.19, or 4/10 of 1 per cent would have been realized over actual total receipts. In the other barn, there was a loss of more than 9 per cent, or $313.14.

About $455 was invested in facilities to control temperature and humidity in the ventilated, insulated barn. This investment returned about 42 per cent during the 60-day test period.
Building material dealer erects new showroom and offices which demonstrate application and uses for a broad line of equipment and supplies

When a building material dealer revamps office and showroom so the new arrangement gives both builders and their clients a liberal education in new construction techniques and the use of new materials, he does more than a modernization job. That is the kind of job done by Ruffin & Payne in a recently completed new business home in Richmond, Va.

Proof of the educational possibilities is the fact that at the "open house" last spring—which was attended by hundreds of friends of the firm—an instructor in the vocational school at Richmond brought an entire class of young architectural students to "see what can be done with new interior finish materials". At Ruffin & Payne, he said, the students could learn things that are not yet printed in any textbook.

The new showroom is at the service of any of Ruffin & Payne's builder customers. They may come for ideas themselves, or to show their customers novel effects achieved with new plywood and plastic finishes. They see new arrangements and types of kitchen cabinets, breakfast nooks and built-in furniture and closets.

Opening of the new offices and showroom marks the 56th year of the firm's operation. Originally it started as a fuel and feed business with a small line of lumber. But today it not only carries a broad line of building material—it conducts a mill operation, the output of which accounts for half of the sales volume. Millwork products are shipped throughout the South and as far north as New York. The professional builder, in addition to getting his lumber and other building material, can contract here for custom-built millwork in large or small volume.

The new offices are just as much a part of the showroom as the large public display area, planned especially...
UNUSUAL checkerboard display window in the new Ruffin & Payne showroom shows some exterior materials the firm sells to show modern uses of plywood and the manner in which it can be combined with other materials, both conventional and modern. They were designed by Russell R. Kilburn, New York City architect, specifically for that purpose. They serve as educational and selling tools.

Take, for example, the office of Thomas L. Ruffin, president and treasurer of the firm. Prospects are welcome to go in and see the effect obtained by use of sliced walnut %4-inch plywood and select white maple, combined with solid walnut window and door jambs and stools.

A builder, asking how it was installed, would learn that the panels were nailed and glued, using V-joints on three walls. The V-joint is made by sanding the edge of the panel at a 45 degree angle—just going through the face veneer. To go deeper would expose some of the plywood core which would not take stain evenly and would make finishing difficult.

How was that fine walnut finish produced? First it was filled—with ordinary paperhanger’s paste, sanded when dry. Then it received two coats of lacquer (the customer can find out what kind, for Ruffin & Payne stocks it). The first coat was steel-wooled when dry, at least five hours being allowed before the opera-

INTERIOR of checkerboard show-window shows samples of roofing panels above and wooden plywood panels below, finished with paint and varnishes sold by the firm
MATERIALS USED IN RUFFIN & PAYNE SHOWROOMS

U. S. Plywood Weldwood and Weldtex Mengel flush doors
Schlage and Yale & Towne hardware
Johns-Manville Fibracoustic acoustical units
U. S. Gypsum Co. Acoustone plaster
Marlite hardboard and metal mouldings
Breinig Bros. stains, varnishes and plywood finishes
Johns-Manville asphalt floor tiles

THIS office is done in natural finish panels of walnut plywood, made with V-joints.

The last coat was allowed to dry overnight and then was rubbed with steel wool. Two coats of paste wax, rubbed down, completed the finish.

A visiting builder, in the same office, can see how sliding closet doors are made from plywood without hardware being necessary. He will see a double glazed, insulating glass picture window, a ceiling of acoustical plaster. He can note how plywood is used flush, without face trim. Any detail of installation or finish is available to him.

The same type of information can be obtained in, or about, any of the other offices or the showroom. In the office of Craige Ruthn, vice president in charge of purchases and overall operations, comb grain oak plywood

OVER 1,000 persons visited Ruffin & Payne's "open house". This group, coming on special invitation in evening, is largely Richmond builders and their families.

THOMAS L. RUFFIN, president and treasurer of Ruffin & Payne
CRAIGE RUFFIN, vice president, purchases and operations
and solid oak are used. In the office of the secretary, S. P. Collier, knotty white pine paneling, shiplapped with a V-joint, demonstrates a different treatment and finish.

Rotary cut, unselected birch plywood in 24-inch wide panels, nailed and glued over furring strips, form three walls of the office of W. A. Williams, Jr., vice president in charge of mill operations. The other wall is finished with Weldtex instead of plywood, showing how the two materials can be combined.

Sales Manager Ralph M. Wilkinson, in his office, can show two types of ordinary fir plywood combined in a simple design with a special finish. In the salesmen’s office, an entirely different material, insulating board wall plank, is used for the walls and the ceiling is of acoustical tile. One wall is finished with natural birch plywood to show how it can be combined with the other material.

Even the billing offices, the corridors, wash rooms and rest rooms play their part in demonstrating.

In one corner of the large showroom, three different types of kitchen cabinets, custom built in the Ruffin & Payne mill, are installed. An egg-crate ceiling in this sample kitchen contrasts with vertical rounds for a pleasing breakfast room decoration. Breakfast room furniture in solid natural birch, the table topped with linoleum, completes the effect. Some of the cabinet doors are sliding and require no hardware. Others are the conventional type with painted finishes, demonstrating the paint line handled by the company.

Ruffin & Payne, with foresight and thoughtful planning, has been able to give better service to its builders and the public, with resulting benefit to the company.
EXTERIOR is in two tones of brick: A cream color and a red-rug face brick. Fenestration is generous and reveals careful planning. Steel sash are used throughout. Modern motif of building is accentuated in front entrances. The Elizabethan, right

**Big Demand for Modern Small Apartments**

Popularity of multiple-family buildings in Spokane, Wash., emphasizes the need for similar structures throughout the country.

These modern apartment buildings are typical of the kind of multiple units being erected in Spokane, Wash., to ease the tremendous demand in that city for quality rental shelter. Financed by private agencies as well as FHA Title 608, they offer tenants the ultimate in modern conveniences. Taking full advantage of the "packaged mortgage," the builders have furnished, as standard equipment, garbage disposers and laundries, equipped with automatic washing machines and dryers. The resultant livability these "plus" features add to the apartments is heartily acclaimed by the tenants.

The Elizabethan, shown above, was the first 608 to be erected in Spokane. The building is straightforward in appearance and practical in plan. It is an L-shaped structure fronting on two streets, and contains 27 apartments. Six of these apartments have two bedrooms, while the remaining 21 are one-bedroom units.

The building has three floors. The ground floor is 28 inches below grade level and contains the laundry, a large locker room, the heating plant, and eight apartments. Three main front entrances open into corridors which extend to rear entryways. This latter feature is an added convenience for tenant car owners, since a car port for 15 cars is located in the rear. A connecting corridor between front and rear entrances on the ground floor permits tenants to circulate to any part of the building without going outside.

Each apartment has a large living room and dining area. Floors are oak throughout except in the bathrooms and kitchens where linoleum is used. Each kitchen is...
equipped with a GE electric sink and garbage disposal unit. Ample storage is provided in large bedroom wardrobe closets. Stair halls are carpeted and receive adequate daylight through large panels of glass block.

The building was designed by Victor L. Wulff and Ralph J. Bishop, architects. It was erected by Hazen and Clark, contractors, and is owned by M. T. Donato. The construction cost including architects’ fees, landscaping, appliances, carpeting, blinds and land was $228,000.

The Exeter, designed and built by Walter Bailey of Spokane, was privately financed. Later, Bailey erected a twin structure across the street, named the Tyanwanda, which is a 608 project.

The Exeter is unique in that it features an exterior stairway to the second floor apartments. By so locating the stairs, the designer eliminated the need for connecting corridors within the building. Entry to each apartment is direct from the outside, adding a degree of privacy seldom achieved in multiple-family dwellings.

A two-story structure, The Exeter contains eight one-bedroom apartments and four bachelor units. Rental includes heat, hot water, electric ranges and refrigeration. The one-bedroom apartment rents for $90 a month and the bachelor units, for $70. A laundry with metered Bendix washing machines and dryers, and lockers for the tenants are in the half-basement.

EACH apartment has a large, well-proportioned living room and dining area.
Behind the Scenes
In an Asphalt Tile Factory

Highly mechanized equipment makes manufacture of this popular floor covering one of most rapid and efficient operations known.

Of all fabricated building materials, manufacture of asphalt tile is among the most rapid and efficient operations known. Within 30 minutes after the raw materials go into the mixers, the tile is packaged and ready for shipment.

This is because modern asphalt tile plants are highly mechanized and simplified practices in producing quality, sizes and colors have been adopted by the Asphalt Tile Institute in conjunction with the U.S. Bureau of Standards.

Manufacture of this flooring material consists of mixing asbestos, mineral coloring pigments and asphaltic or resinous binders under heat into a thermoplastic mass and then rolling and cutting it into standard sizes and thicknesses.

After thorough mixing, the mass is formed into a sheet which moves by belt conveyor to finishing calenders. This sheet, passing through the calenders, is compressed into one of the two standard thicknesses of 1/8 or 3/16-inch. At the same time it is given its smooth surface.

After leaving the calender machine, the sheet moves to a punch press where it is generally die-cut into one of these usual sizes:
- Squares 9x9 and 12x12 inches; rectangles 6x12 and border tile 18x24 inches from which the required width is cut on the job; half-tile cut diagonally from 9x9 and 12x12-inch squares for diagonal installations; feature strip in widths of 1, 1 1/2, 2 1/2 and 3 inches.

Since material is produced in both plain and marbled colors, floor design is unlimited.

Plain colors include black, dark red, dark green, light green, light gray, light red, medium red, tan, buff, cream, white and blue. These colors are used to mottle tiles for marbled effects, which are obtained by using one color as background and one or more of the other colors for veining.

Also available are tiles bearing lettering, pictorial representations or other devices to provide individualized decorative effects in a floor.

Because it is a thermoplastic material and will follow the contour of the sub-floor, asphalt tile should be laid only on sound, smooth, surfaces. New concrete should be troweled to a smooth surface and be free of grooves and depressions. Expansion joints must be filled on both new and old concrete and the surface cleaned of paint and foreign matter. Asphalt tile manufacturers provide underlayment compounds to simplify the preparation of sub-floor surfaces.

Wooden sub-floors should be of double thickness, of seasoned tongue and groove boards no wider than three inches, non-springy and sanded smooth. Underlayment compounds also are available for wood floors. Asphalt tile should not be installed on wood on or below grade where the wood is most likely to rot.

1. MOTTLE colors are forced through these small openings and then added to the background colors

4. MOTTLE colors for marbleizing are added to the mix a short time before the mixing cycle is completed

7. HERE the material is carefully fed into a punch press where it is die-cut into tile with square edges
2. BACKGROUND colors are prepared on the floor above mixing machines and poured through hopper openings.

3. THESE machines mix raw materials. Large pipes at top of each machine connect with hoppers on floor above.

5. THE hot mix here has been formed into a blanket and is shown being stripped from the face of the roll.

6. READY for the first of the finishing calenders, the still hot, rough blanket is folded over and turned.

8. INDUSTRIAL tile is hand set, block by block in fast-setting cement. Floors are ready for immediate use.

9. TESTING an asphalt tile floor for conductive resistance. Asphalt tile far exceeds the safety margins.
Everyone in the United States is entitled to his own opinion on the housing problem but it should be based on facts and knowledge of the real problems involved.

It takes a national "problem" to bring out the fact that there are many men of many minds when it comes to working out solutions.

Now, in any country on the face of the globe, everyone has a right to his own opinion, albeit in most places it is necessary to think twice before expressing them publicly, if at all. Not so in this fair land of ours. Here it is still permissible to give vent to one's ideas on almost any subject that comes to mind and do so with such vim and vigor as one may possess and through any instrumentality of his choosing.

All of which usually complicates the situation since the authority of the spokesman too often is unknown to the listeners and his statements may be taken more seriously than the background of information warrants. Chaos is the inevitable result of too many men of too many minds.

Housing is a typical example.

However, before delving into the subject, there is another aspect of the situation which pertains to any so-called problem regardless of whether it applies to houses, automobiles, washing machines or anything else.

It is easy to criticize.

We refer, of course, to the nation-wide tendency to criticize somebody, either for actually creating the emergency or at least for not doing anything constructive to bring about a satisfactory solution.

Once again this is particularly true of housing.

Here is a typical example of what we are driving at. We came across the following paragraph in the declarations approved unanimously at the annual gathering of one of our greatest churches. After touching on several other subjects, this is what was said about housing:

"We believe that the tardiness, obstructive tactics and inertia exhibited in meeting the housing shortage represent the most harmful violation of common decency and the most flagrant dereliction from our social duty to veterans in the postwar record of the American Congress. We have repudiated our pledges to those who fought for our homes by denying them..."
houses. We recommend that this assembly telegraph this section of the report to the appropriate committees of Congress.

There you have the reason for the housing shortage! It is interesting to observe that apparently it is not the same reason for the post-war shortages of automobiles, clothing, meat, radios, electric washing machines or anything else.

According to our interpretation of this particular paragraph, the housing shortage is due to the tardiness, obstructive tactics and inertia of the American Congress... a most harmful violation of common decency... the most flagrant dereliction of the American Congress... a most harmful violation of common decency... the most flagrant dereliction from our social duty to veterans... We have repudiated our pledges to those who fought for our homes by denying them houses.

The italics are ours. They emphasize some mighty harsh words. It would appear that the writers of the declaration earnestly believe that the housing shortage can be solved by an Act of Congress and that the lack of a solution is a deliberate determination on the part of the nation's statesmen to prevent veterans from finding a place to live by tactics that are described as "tardy and obstructive." Furthermore, that these actions on the part of our lawmakers amount to the repudiation of a promise.

When we came across the statement it made us pause for serious thought because it seemed to us that it represents the type of thinking which spells the destruction of competitive free enterprise in America. It apparently subscribes wholeheartedly to the idea that socialized housing is the answer to a temporary lack of homes. It ignores completely the fact that the shortage actually is being taken care of by private industry at a rate which measures up closely to the largest home building year in American history. It fails to take into consideration the fact that this miraculous achievement has been carried on despite handicaps which probably have never been equaled since the first human habitation was constructed. Nevertheless, homes have been built during the past two years at a prodigious rate and already the housing shortage has been solved in many a community. That is something usually overlooked.

There Is A Shortage

We are not foolish enough to make the unqualified statement that America has no housing problem, especially in the large cities, but we do claim that the final answer to the problem will best be found in the efficient operation of competitive free enterprise rather than through the bungling of bureaucratic endeavor, hampered by countless miles of red tape—complicated by the impractical ideas of theorists and the wasteful efforts of constructionists who have no need to conserve money, time or materials, since the overburdened taxpayer must foot the bill.

The dismay which occupied our thoughts when we read the housing declaration with its succinct result of three things: (1) the apparent lack of knowledge on the part of the church people that the first post-war chance at a solution of the housing problem was under bureaucratic supervision which permitted the selection of a housing expediter who failed miserably to expedite, (2) the fact that they were not aware that private competitive enterprise is building individual homes at a rate which is rapidly solving the housing shortage in many, many areas and that the extension of its activities into the rental field has been largely prevented by the government edict, (3) the fact that church men should subscribe so wholeheartedly to the trend toward the socialization of houses which is the most question involved in the proposed "relief" legislation. If such a step were taken in one of our great industries, one does not think to be a seer to imagine what would soon take place in other industries. It raises the grave question as to what would also happen eventually to our churches if such a program should be carried out.

We have no brief with the church for calling attention to the urgent need for a solution of the housing problem... or any other problem, for that matter. Our concern is based primarily upon the fact that instead of pointing to the highly commendable records that have been made since the great building industry shook itself loose from government controls, the declaration refers to these achievements in such terms as "tardy," "obstructive," "harmful violation of common decency," "the most flagrant dereliction," "repudiation of pledges," "denial to veterans," and so forth.

The hard-working home builders of America who have covered the landscape with acres of houses in practically every section of the United States (more than 800,000 a year for two years) will wonder at the harsh terms used in the declaration... especially when they are coupled with a plea to the American Congress for more of the same measures which so greatly hampered the beginning of the nationwide surge of home building now under way.

Volume Breaks Record

A more constructive attitude, it appears to us, would have been to call attention to the need for more homes without suggesting socialization as an answer. Opposition to the measures under consideration stem from those groups which have given the subject much thought and attention, and have had far more practical experience than those who promote them.

They have observed the delays, red tape and high cost which accompany bureaucratic journeys into the field of private enterprise. They believe honestly and sincerely they can do it better, quicker and far more economically than it can be done by the government AND THE EVIDENCE IS ALL ON THEIR SIDE.

Once again let us reiterate that the church is well within its rights to resolve concerning the need for an early end to the housing shortage. On the other hand, there is grave a doubt in our mind concerning the wisdom of suggesting methods that should be employed to bring it about. Freedom of thought, speech and action would be a thing to be desired in our church today to point out that less than half of America's families attend church or have church affiliations. Yet it is doubtful that anyone in the industry would suggest decrying that fact in resolutions or propose ways and means for correcting such a distressing situation.

It all adds up, as we said earlier, to the fact that there are many men of many minds when it comes to working out the solution of any problem. Perhaps it is well that this is the case, for here in America we have been able to come up with some pretty fair answers in the past. And we shall continue to find satisfactory answers as long as the solution is written by those who best know the subject and as long as competition keeps them up on their respective toes.

American Builder, September, 1948.

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**Styling Stores**

**For Today's Trade**

A small candy store, which could have been dwarfed by larger neighbors, is saved by smart architectural treatment.

There can be no argument against the fact that this attractive candy store stands out as exceptional only because of the clever design and wise selection of materials used for structure and decoration. The front was small, and the store is in a block with three other large units, yet it commands the attention necessary to attract customers through the unusual flush door treatment.

The entrance is interesting in that it sets in at an angle, with the entire front of plate glass surrounding the door and jamb with no visible structural members. Even the bally post in front harmonizes with the vertical diameter wood posts inside.

The Bit o' Sweets candy shop is located in Hempstead, Long Island. Herman H. Siegal, architect, and Ernest D. Rapp, designer, divided one wall into a series of three bays, as seen in the picture above at the right. Each bay contains a mirrored panel from floor to ceiling, separated by piers into which are set odd-shaped showcases, open at one end and flush with the edge of the pier. The center photo shows how this gives the effect of a double case and makes the entire store seem wider.

The piers adjacent to the mirrors are finished in chocolate brown. The ceiling is light cocoa. Woodwork is a pickled oak finish. The soffit, which extends out over the vestibule, at the front of the store, is painted vermillion. Lemon yellow is used for accent.

The lighting is a combination of incandescent and fluorescent. In the ceiling are recessed incandescent high-hats with birds' eye lamps. Fluorescent tubes are used in the display cases.

The ceiling is of Celotex acoustical squares. Armstrong linoleum, in a jaspe pattern, is used for the floor covering, contrasting accent circles surrounding the small hexagonal display cases in the center of the store. The whole effect is of a store much larger than actually is the case.
Stucco Properly Applied

Finds Ready Acceptance

BUILDERS and plastering contractors in Green Bay, Wis., estimate that 150 to 250 of the city's 500 new houses this year will be finished with stucco. Two decades ago there were only two or three stucco houses a year in the city. The reasons advanced by builders for the popularity of stucco are costs of application and maintenance and techniques developed by local plastering contractors to make the material practically impervious to weather changes.

Winter temperatures in Green Bay hover near the zero mark, and frequently dip well below. Summer days usually are hot, and the nights cool. A drop of 40 degrees between midday summer heat and midnight is not uncommon. An exterior building material, therefore, has to resist wide ranges of temperature and quick changes. To meet these conditions, plastering contractors have developed a method of applying stucco that results actually in a steel reinforced siding one inch thick.

The method used consists of nailing waterproof building paper over the sheathing. Next, 1½-inch, 17-gauge Keymesh, a galvanized wire fabric in rolls three feet wide, is applied with furring nails spaced eight inches on center. The furring nails hold the mesh firmly ¾ inch from the backing. Thus, the ¾-inch scratch coat completely embeds the steel. A ¾-inch brown coat is applied after the scratch coat has cured. Finally, a ¼-inch finish coat is applied. The resulting thickness is one inch, and the mesh is steel reinforcement.

Two methods of applying color are used. One calls for mixing the pigment in the finish coat. The other calls for use of a Venetian cement paint. In either case a finish is obtained that will require very little maintenance expense. Two to three weeks are allowed for each coat of stucco to cure, as a precaution against shrinkage cracks.

Stucco costs in Green Bay range from $2.50 to $3.00 a square yard. Lloyd Meacham of the real estate and building firm of Meacham & Son, stated that Green Bay home owners ask for stucco, and that as a result, the 15 homes being built by his firm this year all will be stucco, or stucco trimmed with stone. The company offers a four-room house complete with bath, basement, hardwood floors and warm air heating for $8,500. Ralph P. Belanger, a plastering contractor who operates three crews, plastered 74 houses in the first six months of 1948. Of these, 54 had stucco exteriors.

Finishes used in Green Bay vary from smooth to rough and patterned. One plastering contractor has developed a method of applying the finish coat that gives the appearance of wood siding. Prior to the war, there was a slow, steady increase in the use of stucco. The great increase, however, has come since V-J Day. It is freely estimated that there is two-thirds more stucco used now in Green Bay than before the war.
Monolithic Houses Produced At Low Cost

TOURNALAYER machines, manufactured by G. R. LeTourneau, Inc., are being used to erect 100 two-family dwellings at Muroc Air Force Base, Lake Muroc, Calif. The houses are to be occupied by air force base personnel. The initial contract for the 100 houses totaled $750,000.

The Tournalayer method of home building is not new. Home builders were introduced to the huge machine more than a year ago. Houses had already been built by the equipment in Mississippi, Texas, Arizona, Brazil and Argentina when the William Radkovich Co., of Los Angeles obtained Tournalayer equipment to answer government bids advertised by the Los Angeles office of the Corps of Engineers.

The bid submitted by Radkovich for family quarters to be erected at the base specified a monolithically poured, reinforced, insulating pumice concrete home, single story, cast by the LeTourneau method. All houses are poured and formed at a central operating point and require only 16 hours before being placed on sites. Uniformity in design is eliminated by employing separate patterns in rigging forms, varying facing, and multi-color combinations in painting.

Two sizes of house forms are employed to shape each of the double-unit dwellings. One form will monolithically cast a basic unit of a house 32 feet, 8 inches by 24 feet with a longitudinal center partition, while a smaller size casts, in one piece, a structure measuring 18 feet, 8 inches by 24 feet. Each of these units is picked up and carried bodily to the housing area by the Tournalayer machine, and there the units are set seven feet apart on previously prepared footings. They are then joined together with a conventionally constructed corridor, 7 feet long and 16 feet wide. This portion is further tied by pneumatically-applied mortar or gunite. This leaves little to be done other than normal finishing work in completing the structure.

Each living unit has two bedrooms, a large living room, kitchen, dining room, bathroom and service porch. Work crews, kept at a minimum on this machine-method project, are completing pours on large units in an hour and a half, and on the smaller ones, in as little as 45 minutes. Pouring continues until the flat roof on each unit is completed.

Most of the finishing work has been subcontracted. Electricians, plumbers, millwrights, metal and cabinet workers complete their various jobs as specified. Floors are poured, troweled and given a one-inch finish coat of concrete. Because of the monolithic, poured roofs on the structures, no caulking is necessary. They are treated with a water-proofing compound.

AT LEFT is one type of Tournalayer-built home. The flat-roofed duplex at right is the type being erected at Muroc Air Base.
American Builder, September, 1948.

AFTER basic course of classroom training, men are assigned to jobs for experience.

**Manufacturer Trains Franchise Holders**

A SYSTEMATIC course of training and assistance in obtaining equipment is an integral part of the service rendered to new franchise holders by the FormStone Co., Baltimore, Md. The FormStone patented process is a method of applying exterior or interior wall finishes on new or existing buildings. In addition to obtaining the exclusive rights in any given territory, the franchise holder and several of his mechanics receive complete training in the craftsmanship of applying the product. This course also includes training for executives in selling, designing, and estimating.

The product can be applied over any surface with sound backing—shingles, siding, brick, stucco, cinder block or concrete block. A typical operation in an area where volume is possible consists of four crews of five men each, grossing about $150,000 with a gross profit of 39 per cent.

EVERY step in the application process is included in the training course. Here men are learning how to prepare surfaces, what tools to use, how to use them and how to apply the mortars. At right, a student develops patterns in Form Stone.

AFTER the student has created a stone-like pattern, he is taught to blend it with natural stone granules of various colors, using a special blowing device. The margin of each stone block is then tooled to create the true mortar joint.

**New Wall Concrete Construction**

A NEW type of concrete wall construction, introduced by the Modern-Wall Co., Osborn, Ohio, provides a means of pouring, at the building site, a wall skeleton of interlocking, cement-filled metal forms. The forms are anchored between panels of standard insulating board or plywood, and two types of lightweight (26 or 28 gauge) interlocking metal members are used.

The process, Modern-Wall Co. claims, enables unskilled workers to erect walls of the steel-encased concrete framework in accordance with any architectural plan without the use of machinery.

Metal members, forming the basic elements of this new concrete construction, consist of a preformed angle, bent double to form a 14-inch square tube that becomes the vertical member; an 8-foot horizontal channel, and small metal clips with which the panel boards are secured to the channel.

The horizontal channels have squares punched out at 18-inch intervals, into which the tube-like vertical forms are inserted. Both the vertical and horizontal members may be cut to meet any dimensional requirements, or to permit installation of windows, doors, or in-the-wall plumbing or heating fixtures.

Modern-Wall Co. recommends this construction method for most types of residential and light commercial or industrial structures.
How to Make a 2x4 Out of a 2x6

In offering this idea, HERBERT E. FEY, New Braunfels, Texas, says: “to increase the length of a 2x4, I mark off the 2x6 as shown in the sketch and then rip along the mark from both sides. Where these slits meet at the exact center, I drill a hole for starting the keyhole saw. I then cut away the remaining two inches of the mark. The final step is to spike the two pieces together with long nails. A 2x6 four feet long will make a 2x4 six feet long; a six-foot piece will make a nine foot 2x4; a ten foot piece will make a fifteen feet 2x4, and so forth.

How to Mortise Railings

TIME and labor can be saved when mortising numerous small mortises for vertical strips used in railings, cribs, and play-pens if a continuous groove is made in both rail pieces. Filler strips are to be forced into the groove between uprights. Mark off the mortise positions on both rails and insert the vertical members. Care must be exercised to cut the filler strips to the right length in order to obtain a tight fit. Force small glued dipped wedges beside those tenons that do not fit properly and plane off all filler strips so that they are flush with the rail. HERBERT E. FEY, New Braunfels, Texas, suggested this short cut.

How to Set Mud Sill in A Concrete Wall

THE sketch below shows a 2x3-inch member placed on top of a basement wall and secured to concrete wall by means of 16d nails imbedded into the concrete. This has proved to be a fast and efficient way of setting the grade of the concrete wall, screeding the concrete smooth and fastening the mud sill.

Since the 2x3-inch member is on the grade, grouting or shingling of the mud sill is not necessary, nor is it necessary to bore holes for bolts. Just spike the mud sill to the 2x3. Submitted by J. JEROLD NORMAN, Oswego, Ore.

How to Hang a Thick Door on a Thin Frame

THE need for blocking out hinges when hanging a thick screen or other house door on a thin frame is unnecessary if the hinges are reversed as shown in the sketch. Take out the pin and turn one half of the hinge over. Then replace the hinge. It has been found that this will offset the butt sufficiently to make the use of blocks unnecessary. HERBERT E. FEY, New Braunfels, Texas.

How to Strengthen a Platform Railing

STRONGER joints will result when nailing horizontal members of a platform railing to the upright members if the ends are notched or halved as shown in the drawing. The ends are lapped and held together by means of two bolts. The strength of such a joint is evident because nails can be driven not only through the center, but from the top and bottom as well.

How to Slot a Tenon For a Tight Fit

IN submitting this suggestion, HERBERT E. FEY, New Braunfels, Texas, states: “I have found that instead of trimming tenons in order to get a tight fit in holes, it is best to form the tenon to the approximate size, and then cross slot it with a fine saw. This permits the end of the tenon to be squeezed and driven into the hole to make a perfect fit. A coat of glue or cement applied to such ends will make a better job.

American Builder will pay $5 for your favorite short cut or job pointer. Send rough draft to Architectural Editor, American Builder, 105 W. Adams St., Chicago 3, Ill.
CONSTRUCTION DETAILS - CORNER WINDOWS

HORIZONTAL SECTIONS AT CORNERS
WEIGHTS AND CORDS
SPRING BALANCERS

Details above are for double hung wood windows, used with weights and cords or spring balancers.

Detail at left shows stationary sash picture window with iron pipe makers possible a narrow corner post or caring, especially desirable in today's design trends.

ELEVATION - STATIONARY SASH

Details of thermal insulated glass picture window with double-hung window at sides for ventilation.

Note: Corner sections same as details above for weights and cords or spring balancers. See plate D-45 for installation details of insulated glass windows and metal trim.

ELEVATION - STEEL D.H. WINDOW

CORNER SECTION - MULLION DETAIL

AMERICAN BUILDER'S BETTER DETAIL PLATE

American Builder, September, 1948.

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SMALL ROOM HEATER

A new chrome model, fan-circulating electric heater, specially designed for heating bathrooms and other small rooms, is now being manufactured by Electromode Corp., Rochester, N.Y. Known as the Bilt-in-Wall Small-Room Heater, it is easily installed in practically any type of wall construction. The heater connects to the regular 110-volt A.C. house circuit. It is rated as 1,320 watts. A quiet built-in fan distributes 80 cubic feet of heated air per minute. Heat is generated by a patented cast aluminum heating element which has no exposed wires or coils. The heater is equipped with a thermal safety switch that prevents overheating.

SCAFFOLD SUPPORT

A one-man scaffolding system, invented by G. W. Wetzel, 409 W. Murray St., Macomb, Ill., requires no nailing, bracing, or cumbersome timbering. The scaffold may be adjusted to any working height without loss of excess time. Since only ½-inch lag screws are needed to hold the scaffold in place, surface of the construction being worked on will not be marred. The Wetzel Scaffold is especially suited to remodeling work, or for scaffolding in halls, auditoriums, and gymnasiums.

ALL-PURPOSE SAW

DeWalt, Inc., 101 Martha Ave., Lancaster, Pa., have added an all-purpose machine, Model GR, to its line of woodworking machinery. Especially designed for precision production work, this new model features a 3 H.P. motor driving a 14-inch diameter saw with a 4 ½-inch depth cut. Model GR is actually a complete saw shop in one machine, according to its manufacturers. It is a cut-off saw, a miter saw, a rip saw, a tilting arbor saw, a double miter saw, and a variety saw. Using the proper cutting tool, it's a dado machine, a gaining machine, a grooving machine, a rabbing machine, and a shaper. The machine is adapted to these various operations by simply changing the cutting tool.

SHOWER DOOR FRAMES

Kits of completely fabricated frames for glass shower doors and tub enclosures are now being offered to dealers by the Eugene Extruded Metal Corp., Division of the Southern California Glass Co., 2445 S. Santa Fe Ave., Los Angeles, Calif. The dealer supplies his own glass. Eugene Corp. offers advertising support to the dealers. A series of newspaper ad mats illustrating and describing Eugene shower doors and enclosures, three-color consumer folders, and window streamers are supplied. The frames are heavy aluminum with patented concealed hinges, adjustable jamb section, and rubber set construction that makes the glass panel shock resistant and waterproof.

INSULATING SIDING CUTTER

A new Grip Cutter, now offered by La Belle Industries, Inc., Oconomowoc, Wis., is adjustable to handle all types of insulating siding up to one inch thick. One man may operate the cutter. It is self-feeding, and cuts quickly and accurately any length and angle. Weighing 37 pounds, the portable Grip Cutter is easy to handle. Protected steel blade makes clean straight edges.

MASONRY WATERPROOFING

A new, transparent, waterproofing liquid, named “Crystal” and made by Wurdack Chemical Co., 4956 Fyler Ave., St. Louis, Mo., may be applied by brush or spray. It waterproofs by penetrating. It becomes invisible after application, and does not affect color or texture of the surface to which it is applied. The surface may be painted afterwards. Crystal is derived from Silicone, the chemical discovered and developed by Dow-Corning and made commercially available after World War II. Wurdack Co. modified it as a waterproofing for bricks, concrete, stucco, and other masonry.
American Builder, September, 1948.

is made water repellent by positive action of one coat of Crystal to the exterior. Capillary attraction which causes water to soak through a wall is stopped, but Crystal does not clog or seal the pores. Natural moisture within in the wall may evaporate, since it is not permanently trapped.

COMMERCIAL AND HOME FAUCET AB9815A long-lasting faucet that requires no washers is now being produced by the Western Faucet Co., Inc., 1500 S. E. Gideon, Portland, Ore. The faucet, invented by W. G. Smith, president of the company, will not leak. No friction is involved in shutting it off. As soon as the handle is released into neutral position, pressure of the water against a heat-resisting synthetic rubber diaphragm closes the faucet automatically. The faucet, the "Drip-Lok," may be used commercially or in the home.

BAND SAW AB9820An all-purpose 14-inch Band Saw that handles wood, metal, and plastics, not only for production jobs but for home work shop users is on the market. All castings are heat treated before machining to relieve stress and distortion. The heavily-ribbed, 14 inch by 14 inch, table surface is ground smooth and tilts a full 45 degrees right and 15 degrees left angle. The wheels have Neoprene tires for oil resistance and wearing features. Each wheel is balanced for smooth and quiet operation. This band saw is the newest addition to the line of working power tools offered by the Foster Manufacturing Co., One Kinsey Ave., Buffalo 17, N.Y. The unit weighs 140 pounds.

STUCCO REINFORCEMENT AB9838A new type of wire mesh for stucco reinforcement is now being produced by Keystone Steel & Wire Co., Peoria, Ill. The new product is applied in 3-foot wide strips over water-proof building paper. A special nail driven over the wire, clipping it between the top of a ¾-inch or ¾-inch thick disc and the bottom of the nail head, results in a ¾-inch or ¾-inch space between the backing and the reinforcement. This permits complete embedment of the mesh in the stucco. The product, "Keymesh," is a fabric packaged in rolls 150 feet long by 3 feet wide. It is corrosion resistant, has openings of sufficient size to permit easy embedment of the fabric in the stucco coat, and is amply strong to support and rein-

GAS-OIL CONVERSION BURNER AB9830A new combination gas-oil conversion burner now on the market can be installed to convert any standard furnace or boiler. The burner operates by a sealed, outside thermostat that, because it is set at a temperature above the gas company's peak load, will automatically switch from gas to oil as the temperature drops below this predetermined and locked setting. The burner, "TWINfuel," switches back to gas when the cold snap is over. The burner is marketed by Norman Products Co., Columbus, Ohio.

"NEW LOOK" WATER HEATERS AB9818A new series of water heaters for all fuels, designed for good appearance so they may be used in the kitchen and laundry alongside other attractive home appliances, is being introduced by Rheem Manufacturing Co., 570 Lexington Ave., New York, N.Y. The new Deluxe and Royal Deluxe models are made for use with gas, electricity or oil. The gas models are equipped with a dual control to insure safe operation at all times. All models have tanks with bottoms welded after galvanizing. Insulation is Fiberglas. The heaters are surrounded by an exterior jacket of white enamel finish, attractively trimmed.

NEW GARAGE DOOR AB9831An upward-acting garage door now on the market may be installed in a space of 2½ inches between the ceiling and the top of the header. The
new door, the "Ro-Way," made by Rowe Manufacturing Co., Galesburg, Ill., is especially adaptable to buildings with low headroom. It is four sections high, four panels wide, with 13/8-inch thick stiles and rails; blind mortise and tenon joints; made from Douglas Fir or Sitka Spruce. Sizes are 8x6 feet, 6 inches high, or 8x7 feet high.

The Ro-Way door may be closed and locked with the top section tilted inward as far as 8 inches to provide garage ventilation. This is done by a patented Two-Way switch, located on the horizontal section of the track. When door is closed in normal manner, the top section is firmly sealed against the header.

**IMPROVED SASH BALANCE AB9837**
Milwaukee Strip Service Inc., manufacturers of Milwaukee Combination Sash Balance and Weatherstrip, have announced that their product is now available with bronze spring covers. The covers completely hide the steel sash balance springs, giving a neater, more finished appearance to the window when installed. Basic design remains unchanged, and the product is sold either with or without the spring covers according to the customer's preference.

**PLEXIGLAS JALOUSIES AB9816**
Jalousies—outside window blinds controlled from within—are being manufactured of Plexiglas by the Tropical Awning Shutter Co. of Miami, Fla. The firm custom-builds the jalousies in a wide range of colors. This is a new use for the Plexiglas material. The shutters of the jalousies will not crack, warp or check, even after prolonged exposure to sun and weather, because of the durability of the material from which they are made. They are extremely light in weight. Colors can be selected for any decorative scheme, or translucent white can be used where privacy is desired. The jalousies serve as awnings or storm shutters.

**EDGING MACHINE AB9823**
A new 7-inch edging machine for contractors and builders has been introduced by Clarke Sanding Machine Co., Muskegon, Mich., builders of floor sanding and maintenance equipment. The machine, called the "V-7 Edger," is powered by a 1½-horsepower, continuous heavy duty, Universal motor which assures rated disc and vacuum fan speeds on all types of jobs. It will not stall under any service requirements. It operates on 115 volts, 25 to 60 cycles, A.C. or D.C. The disc is precision balanced, 7 inches in diameter, with a reinforced pad, fabricated from heat and oil-resistant rubber, bonded to it. Sandpaper is attached by a positive nut clamp. Speed of the disc is 3,000 r.p.m.

**BASEBOARD HEATING UNIT AB9821**
A new baseboard heating unit with a heating capacity of 600 B.T.U. per hour per lineal foot and with 170-degree forced water is announced by American Builder, September, 1948.

The Ritting Corp., 1202 Niagara St., Buffalo, N.Y. The heating core of the unit is continuous copper tubing with aluminum fins secured by a special Ritting process. The entire unit is covered by a decorative, heavy-gauge sheet-steel, grilled, warm air outlet and deflector. The cover is readily removed for cleaning. For installing, no recessing is required, and the unit can be installed either before or after floors are laid by means of wall brackets and fittings. It can be connected to any steam or hot water boiler.

**JOINTER ATTACHMENT AB9811**
A new attachment to fit its 8-inch jointers, increasing the width of material than can be planed on these machines from 8 inches to 16 inches, has been introduced by J. D. Wallace & Co., 136 S. California Ave., Chicago, III. The attachment, called an "equalizer," consists of a heavy steel bar bolted in the rabbet ledge. The bar is fitted with an adjusting screw so that the end adjacent to the cutter-head can be adjusted tangent with the cutting circle on the knives. When not in use, the equalizer bar can be hinged back in the rabbet ledge, slightly below the surface of the rear table. To plane wide stock, the bar is folded back out of the way and the

Continued to page 166

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When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder.
You save 3 ways with Ro-Way Overhead Type Garage Doors

IN SPACE—The installation of a Ro-Way Door makes use of overhead space that would otherwise be unused. No side wall space or valuable floor space is taken up by its installation or operation. No other type of door gives such maximum clearance at all four sides of the door opening.

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There’s a Rollway for every Doorway!
Dealers Form Organization to Finance Research to Lower Building Costs

Inspired by the accomplishments of several research projects to reduce home building costs, and particularly by the University of Illinois, several midwestern dealers have successfully organized a group to sponsor continuous research on costs and methods of building. The organization is known as "The Committee of 100."

Ray Schaub of the Northern Indiana Lumber & Coal Co., Whiting, and Clarence Thompson of the Thompson Lumber Co., Champaign, Ill., originally conceived the idea and were successful in enlisting the aid of J. D. McCarthy, secretary of the Illinois Lumber & Material Dealers Association. The plan, now endorsed by the National Retail Lumber Dealers Association, has assumed nationwide proportions. Up to August 1, 61 dealers in 19 different states had subscribed to the plan, financially as well as morally. Norman Mason, president of NRLDA, has accepted the post of depository for funds.

Schaub, Thompson, Mason and others in the organizing group, have set a goal of about 100 subscriptions to form the organization. Mass dealer solicitations are being made through state and regional dealer associations. The amount a dealer subscribes is entirely voluntary, but the group has set about 25 per cent of each company's annual insurance expense as an equitable amount. Schaub has agreed to serve as temporary chairman of "The Committee of 100."

It is planned that all dealers in the United States will be given an opportunity to participate in the plan to further sponsor home building cost research, with no individual or group having any voice in control of the research funds except lumber dealers.

(Continued to page 144)

NRLDA Annual Meeting November 8—11

THIS is an aerial view of the central portion of Miami Beach, Fla., where the 1948 National Retail Lumber Dealers Association annual meeting will be conducted. The large hotel at left in the picture is the Roney Plaza, which will be convention headquarters.

Sessions will open Monday, November 8, with closed meetings of the executive committee, the secretaries of federated associations, the labor relations committee and the industry engineered homes committee. Tuesday, Wednesday and Thursday mornings, starting at 9:30 and concluding at 1:30, regular business sessions of the board of directors and interested dealers will be conducted. All dealers who can attend these meetings are invited to do so. Here they will become informed first hand on industry problems and the association program to be undertaken next year.

Tuesday, Wednesday and Thursday afternoons and evenings will be open for recreational purposes. All reservations are being handled by Executive Vice President H. R. "Cotton" Northup in the Washington office.

The President's Column

By N. P. Mason, President NRLDA

School Days Are Here Again. Vacations are over. Building will be starting its Fall upswing this coming month—a presidential campaign with its charges and counter-charges is in full swing—and we in the Housing Industry are very much in the public eye. What an opportunity we have to tell the home folk of our communities how we are breaking house building records and licking the housing shortage; how we are sending young men to educational courses we ourselves have arranged in the nation's famous educational institutions; how we are carrying on research looking for ways to build for less money.

National New Homes Week is with us and I extend my congratulations to those wideawake members of the construction industry, dealers, builders, bankers, real estate men, who have been cooperating to show the home folk of their communities what the building industry is doing. Just a word to those of you who for one reason or another did not take part in National Homes Week. It is always time, and especially right now, to start a drive in your area to tell your homefolk the story of your industry. You can serve your industry and win national recognition too. Your National Association and its federated regional associations with the active support of American Builder and other trade journals are making awards for outstanding public relations campaigns carried on by dealers. Read the details in the American Builder, and make up your mind that you will be one of the dealers who receive this recognition.

(Continued to page 142)
Beauty and utility at LOW COST are the outstanding features you can offer your customers if they specify HASTINGS ALUMITILE, the distinctive ultramodern aluminum wall and ceiling tile.

Miss (Hastings) Alumitile Invites You To Date Her for a Profitable 1948-'49

For residences you can offer bathrooms, kitchens, snack bars, recreation rooms, etc., of unusual durability, beauty and distinction, and for restaurants, service stations, medical and dental laboratories, offices, hospitals, etc. Alumitile is the ideal commercial installation because it is highly resistant to all the hazards encountered such as heat, alkalies, stains, etc. It is also chip proof and will not crack or peel. Decide to investigate the possibility of selling and applying Alumitile in your territory today.

Dealers!! Join Our Profitable Dealer Organization and be numbered among the successful business men who are selling and applying Hastings Alumitile.

When competition is a factor think of the tremendous advantage that is yours in being able to supply the last word in beautiful durable wall and ceiling tile at a savings up to 50%. With 14 beautiful, sparkling, pastel colors to choose from and the wide range of tile sizes to work with, an almost limitless number of decorative schemes in color, pattern, and design are possible. You can meet the requirements of the modest homes or rental properties as well as the more pretentious homes and apartments.

Note this wide range of tile sizes:

- 5 x 5, 10 x 10 Strips
- 2.5 x 2.5 Caps
- 5 x 5 Corners
- 5 x 10 Tiles
- 5 x 10 Base
- 10 x 10
- 10 x 20

METAL TILE PRODUCTS CO., INC.
HASTINGS, MICHIGAN

METAL TILE PRODUCTS, INC.
Dep't 27, Hastings, Michigan

I am interested in learning more about Hastings Alumitile. Please send literature and the name of my closest distributor so that I may personally investigate Alumitile.

Name: ___________________________
Position: _________________________
Business: _________________________
Address: _________________________
City: ___________________ Zone: ______ State: _______
READY - use aveseen: eaaee

1. Being pure white lead, Eagle RTU has traditional beauty and durability.
2. It’s factory-mixed for new efficiency, goes to jobs in original containers.
1. Eagle RTU’s fine brushing and hiding qualities make for easy application.
2. Its smoothly gleaming coat gives lasting distinction to your buildings.
1. Eagle RTU is favored by builders for its time-and-labor-saving convenience.
2. It’s preferred by homeowners for its whiter white that stays white longer.
1. Eagle RTU is pure white lead paint in a modern form.
2. It is backed by Eagle-Picher’s 104-year-old reputation.

THE EAGLE-PICHER COMPANY
CINCINNATI 14, OHIO
Member of the Lead Industries Association

Dealer Review
(Continued from page 140)
next November at the annual meeting of the NRLDA at Miami Beach.

There Is Magic in the American system of free initiative. Look at these figures showing the amount of living space available for each citizen here and abroad. In Russia with her Communist planning, it is 40 square feet. In England with Socialist management, it is 105 square feet, but in America, with freedom of initiative, it is 410 square feet. Yes, there is magic in the way America does things.

Have You Heard of the plans of a group of retail lumbermen to conduct a program of research into house construction cost reduction? Every dealer from coast to coast is invited to be a part of this progressive movement, to help by contributing funds, and to be among the first to learn what it discovers. Write to Ray Schaub, Northern Indiana Coal & Lumber Co., Whiting, Ind., for details.

Are Retail Lumbermen Really Retailers? Some in government doubt it. The bureaucrats are still working to control and harass business. Your Association last month found the Bureau of the Census writing a new definition of what constituted a retailer and their draft didn’t include most of us. Perhaps there was the fine hand of the Wage and Hour Division underneath. It pays to be wary. While we have a bureaucratic government, it is wise to have a wideawake National Association watching government developments. Perhaps it cannot always bring reason, but at least we do not lose our rights by default.

Whether the Special Session of the Congress was good politics or not cannot be decided as I write this but it did not make President Truman popular with many here in Washington. This city is not the pleasant and invigorating place in July and August that it is in springtime. Vacation plans for Association staffs had to be altered in a hurry, and more than one wife must have had cause for complaint. It is an election year.

The Statistics Prove that the private housing industry is producing the housing we need. Why meddle with federal public housing? Why kill the goose that lays the golden eggs?
WITH Chronotherm, Honeywell’s handsome new electric clock thermostat, owners of your homes can enjoy the most carefree heating comfort they have ever known—and at the same time save fuel! Chronotherm keeps homes at just the right comfort temperature from morning to night. Then, when the family retires, it automatically switches to lower fuel-saving temperature, or in mild climates, shuts off the heat. In the morning, the desired daytime temperature is restored gradually, without overshooting. The result, according to government authorities, is savings of 10 per cent or more of the heating bill—with complete comfort and convenience.

Make certain you include Honeywell’s new, nationally advertised Chronotherm in every house you build. It is another way to provide your homes with the latest in modern improvements. Minneapolis-Honeywell, Minneapolis 8, Minnesota. In Canada: Toronto 12, Ontario.
Of course only the finest hardware goes into well-built buildings. That's why so many of the world's outstanding buildings are equipped with Schlage . . . the finest in quality locks.

Write for Illustrated Booklet: "Locks by Schlage"

SCHLAGE LOCK COMPANY
SAN FRANCISCO NEW YORK

ORIGINATORS OF THE CYLINDRICAL LOCK

Dealer Review

(Continued from page 140)

ers. A Controlling Committee of 100 will be set up to represent every area of the country. This could consist of one dealer and an alternate from each state in the union. This Committee of 100 would then meet at least once a year to allocate the money on hand to specific research projects. All funds of this group are to be kept separate from any association budget—local, state or national. All money raised is to be spent for the single purpose of searching out ways to reduce the cost of new buildings to consumers.

In arriving at proper subjects for research, it is planned to develop a study for determining methods of improving and simplifying home construction. The result should be a reduction in the cost of conventionally-built houses constructed of lumber and other commercially available materials. Research will include an analysis of the structural system; exterior and interior finishes; exterior accessories, both functional and decorative; millwork, heating systems, electrical systems, and the study of dealer-contractor relations.

Dealers or others who wish to participate in this project to lower the costs of conventionally-built houses may obtain further information by contacting Ray Schaub, Northern Indiana Lumber & Coal Co., Whiting, Ind. Checks to help finance the project or pledges of financial assistance should also be addressed to Schaub.

Pomeroy Named Executive Officer of California Dealer Association

J. F. POMEROY was appointed acting executive vice president of the Lumber Merchants Association of Northern California at a recent executive committee meeting at Pleasanton, Calif. He succeeds Robert J. Wright who resigned his position August 1 to enter business for himself.

Pomeroy was with the association for one year before entering military service during World War II and has been Wright's assistant for the past two years. He was in the U. S. Air Force for 3½ years as flight engineer on duty in the North Atlantic area, including Labrador, Newfoundland and Iceland. His association activities have included being director of five 30-day training courses, and developer of personnel service as well as extensive field work which has resulted in the addition of many new members.

(Continued to page 148)
Gone now are those problems of clearances... of setting and fitting door frames; those time- and labor-consuming details associated with custom-made frames. The new Pittsburgh Herculite Door-Frame Assembly is a completely assembled, factory-built, packaged unit, ready to install when it reaches the job. And it is available in twelve standard styles to fill almost every requirement.

"Pittsburgh's" Herculite Door-Frame Assembly is constructed to accommodate standard Herculite Tempered Plate Glass Doors. It's supplied complete with Piptco Checking Floor Hinge, moldings for transom glass, supports for sidelights, strikes for locks, sockets for bolts, and thresholds when specified. Metal craftsmen fabricate this frame to high quality standards, using special checking gauges to assure accuracy of all dimensions. Architectural styling has been combined with structural and mechanical engineering to produce a unit that is both attractive and well-constructed.

You will find our literature on this new and revolutionary door-frame assembly of real value. Why not fill in and return the coupon for your free copy? Do it now.

Pittsburgh Plate Glass Company
2298-8 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, your literature on "Pittsburgh's" new Herculite Door-Frame Assembly.

Name
Address
City State

Made of extra-heavy extruded aluminum, highly polished and anodized, this frame is both handsome and rugged. It is heavily reinforced with steel channels and tie rods, as partially shown here.

Architects: Wilson, Morris and Crain, Houston, Texas.

Beauty, Ruggedness, Ease of Installation...
Announcing

THE ONLY GLASS RADIANT HEAT—This is a revolution within a revolution! Radiant heating has had the industry on its ear with its miracles, and now Radiant GLASS Heat brings you even bigger and better miracles! It adds to all the advantages of radiant heating, makes it practical for every purse, for every building, old or new, with a source of electricity!

AMAZINGLY ECONOMICAL TO INSTALL AND OPERATE—No need now to lay expensive piping . . . no need at all for a cellar or utility room or a chimney! Radiant Glass Heat conveys its healthful infra-red rays (no ultra-violet rays, no sunburn) directly to you by means of a glass panel set in a metal frame which can be painted to harmonize with any room decor.

The installation cost of approximately $350 is less than 1/3 the installation cost of conventional systems. No replacement or maintenance costs. Operating cost, with electricity at 1½c or less per k.w.h., compares most favorably with any other type of heating.

ZONE CONTROLLED—Each room, individually, may be kept at the desired temperature. Heat may be shut off entirely in a room not in use. A room heated by Radiant Glass Heat is more comfortable at 68° than at 72° with ordinary heat, because the infra-red rays warm the body directly. And the air is not dried out.

Radiant Glass Heat is one of the eagerly-anticipated postwar wonders! It was developed in France in an effort to find for the Maginot Line, a heat that would be attended by no fumes, dust or danger of explosion. The 300-year-old, internationally-known master glass makers, St. Gobain of Paris, devised a method to fuse an aluminum element into tempered glass. This process worked miraculously to solve the problem.

Now the Blue Ridge Glass Company of Kingsport, Tennessee, makes Radiant Glass Heat available in America. It is the cleanest and safest heat known! It is a revolutionary development that will be of the greatest interest to the building industry.

WHO WILL BE INTERESTED IN THE BIRTH OF A NEW SUN?

THE HOMEOWNER—Because thermostatic control in each room gives heat when and where wanted . . . heats that cold room as never before . . . keeps baby’s room at the proper temperature. No soot, no film, no dust. Attractive unit blends harmoniously with any type of architecture. An amazing additional use of this miracle heat is in floor panels in garages to heat the car for quick starting during cold weather.

THE BUILDER OR CONTRACTOR—Because he is economy-minded, and Radiant Glass Heat makes possible the elimination of cellar or utility room, chimneys and expensive piping. Saves $1000 or more per installation.

THE HEATING ENGINEER—Because he is interested in efficiency, and Radiant Glass Heat gives more healthful, more penetrating heat at less cost than any other system. No cold spots. Zone-control means smaller heating bills. No maintenance or replacement charges. No soot, film, dust or fumes, no danger of explosion. Almost no dehydration of air.

THE ARCHITECT—Because he is on the lookout for news; and Radiant Glass Heat is news. It is the cleanest and safest heating system yet devised by man! It gives greater opportunity for harmonious interior decoration, frees more wall space, makes for a more livable home.

CONTINENTAL RADIANT GLASS HEATING CORP., 521 FIFTH AVE., NEW YORK 17
A new SUN!

SEND COUPON NOW FOR FURTHER INFORMATION

Continental Radiant Glass Heating Corp.
Dept. 18, 521 Fifth Avenue, New York 17, N.Y.

Gentlemen:
Please send me additional information on this new wonder-heat, without any obligation on my part.

NAME (PLEASE PRINT)

COMPANY (if any)

ADDRESS

CITY ZONE STATE
In-wall condensation does its dangerous work behind walls, where you can’t see the damage until it’s too late. Cracked walls, peeling paint and ruined wallpaper, soggy inefficient insulation ... the penalty is high and repairs are costly.

Bird Neponset Black Vapor Barrier is the permanent answer to in-wall condensation. Placed on the warm side of insulation, it not only ends vapor worries, but it also seals cracks, eliminates sidewall drafts and loss of heat. For about $20 for a $10,000 house, positive vapor protection is yours ... specify Bird Neponset Black Vapor Barrier. Consult Sweets Architectural File 2e-1. For sample write Bird & Son, inc., 16 Pine Street, East Walpole, Mass.

Better roofs are built with Bird Masterbilt® Thick-Butt Shingles. Tough, handsome, fire resistant, Masterbilts give double protection where it counts ... on exposed tabs. Try them on your next job.
**Only Dexter Tubulars**

**have all these 9 features of superiority**

Dexters are built to allow for slight inaccuracies that so often occur during installation. A Self-Adjusting Alignment feature for the spindle does it — overcomes a lot of possible binding.

Another reason why Dexter Tubulars install so easily, operate so smoothly. Another feature — and a big reason — one of the nine big reasons — why your builder contractors who make every minute count prefer Dexter Locks.

1. Stay-tite Set Screw
2. Two Big Coil Springs
3. All Steel Interior
4. Solid Brass Trim
5. Uniform Boring for Locks and Latches
6. Self-Adjusting Alignment
7. 25 Years Specialized Experience
8. Shallow Face Plate Mortise
9. Lifetime Guarantee

**National Brass Company**

Grand Rapids, Michigan

Makers of Builders, Cabinet, Screen Door and Shelf Hardware
Sanitary... because they're lifetime vitreous china!

"Sanitary" means hygienic, preserving health. Every detail of material process, design construction, installation and operation of Universal toilets is sanitary.

LIFETIME Uni-closets and closet combinations please the most fastidious and assure continuous practical service with enduring beauty of sanitary surfaces.

UNIVERSAL SANITARY MFG. CO.

UNIVERSAL VITREOUS CHINA CLOSETS

Catalogs and HOW-TO-DO-IT INFORMATION

452—LET'S CONSIDER AGGREGATE—the title of Bulletin No. 701 offered by the Walter Maguire Co., Inc., 330 West 42nd St., New York 18, N.Y., is an educational treatise on the most important element of good concrete, the aggregate. The bulletin gives the recommendations of the leading cement companies, and the Portland Cement Assn, for good aggregate and shows comparative strength analyses.

453—ANTHRACITE HEATING—A new booklet has been prepared by the Anthracite Institute in New York City to provide up-to-date information on hard coal heating equipment. Titled "How to Choose the Right Heating Equipment," it describes various types of stoker equipment for industrial, commercial, and apartment installations.

454—RUBBER MATS AND MATING—A new catalog section on rubber mats and matting for factories, offices, stores, institutions and homes is available from The B. F. Goodrich Co., Akron, Ohio. The section gives detailed description of the construction of the various products and pictures of some typical applications.

455—HEAT TRANSFER PRODUCTS—The entire Young line of heat transfer products is graphically pictured and described in catalog No. 148 recently released by the Young Radiator Co., Racine, Wis. The line includes convectors, unit heaters, air conditioning equipment, radiators, aircraft products, heat exchangers, and specialized products.

456—RUBBER TILE—A profusely illustrated brochure on Fremont Rubber Tile, with full color pictures of installations and many suggested patterns is available from the Fremont Rubber Co., 164 McPherson Highway, Fremont, Ohio. Fremont Rubber Tile is easily installed on an old or new base floor. It is produced in a wide variety of patterns and colors.

457—WOODWORKING MACHINERY—A series of bulletins describing various pieces of woodworking machinery are available from the Hutchinson Manufacturing Co. of Norristown, Pa. One bulletin gives specifications for the Speel Marvel 12-inch bandsaw; a second describes the single, spindle shaper and accessories, and a third gives specifications for the Beaver Combination Woodworker. Other bulletins cover the Model H Safety Saw and bandsaw.

SERVICE COUPON—CLIP and MAIL to CHICAGO

Readers Service Department
American Builder, 105 W. Adams St., Chicago 3, Ill.

Please send me additional information on the following product items, or the catalogs, listed in this department:

Numbers
Name
Street
City
State
OCCUPATION*

*Please note that occupation must be stated if full service is to be given.
At Last—
THE HOUSE PAINT THAT
MAKES OLD EXTERIORS
SPARKLING NEW

This dazzling white paint means tremendous extra profits to you

Now handle more jobs in less time at less cost than ever before... and every job adds to your reputation as a painter!

First on the market—there is no other paint like Devoe One-Coat White House Paint! Proved by performance on 1,861 jobs—year upon year it stood the test of time... fulfilled every expectation. The secret is two-fold... superlative self-sealing ability and a hiding power exceeding twice that of ordinary paints.

Watch your business grow by giving your customers the brightest, whitest, most sparkling repaint job they have ever known. The brilliant beauty of One-Coat House Paint is long lasting, too, for its enamel-like gloss finish is self-cleaning.

Apply Devoe One-Coat House Paint to any previously painted outside surface. See how easily it brushes, how smoothly it levels and how remarkably it builds up on corners. It dries dust free in 6 to 8 hours and spreads 500 to 550 sq. ft. per gallon.

Cut yourself in on your share of the profits from the biggest paint success in years. Be the first painter in your community to enjoy the advantages of Devoe One-Coat House Paint! Call your Devoe Dealer, today.

DEVOE & RAYNOLDS COMPANY, INC.
787 First Avenue, New York 17, N. Y.
Four New Patterns

Here are the new patterns of Armstrong's Monowall®. They make the Monowall line more complete and an even easier line to sell.

The new colors are: No. 120 White with Chinese Red Lines, No. 42 Plain Blue, No. 420 Blue with White Lines in Tile-Design, and No. S-420 Blue with White Lines in Streamline-Designs.

All Monowall patterns are fast moving items. The four new ones will be too, because it is an Armstrong policy to add only items of proved demand. This policy helps dealers avoid tying up precious capital in slow moving items, and it enables Armstrong to make more total product available for everyone.

Monowall has particular advantages in remodeling. The big four-foot wide sheets are quickly installed with little muss or bother. They can be cemented to any surface that is level, solid, and sound. The patterns with score lines can also be nailed. In either case Monowall will hide cracks, small holes, or other blemishes in the old wall with very little preparation.

Monowall has a hard high-gloss surface applied to a backing of special water-resistant Masonite. This surface will take years of wear and yet stay bright and smooth. Heat and cold won't cause it to chip, crack, or peel. Even the score lines are made to resist wear. They are smoothly rounded to avoid sharp corners where wear could concentrate.

Ask your Armstrong wholesaler for full information or write Armstrong Cork Company, 1609 Lincoln St., Lancaster, Pennsylvania.
Yes, a long future that's full of satisfaction to the home owner. Wiring that you can specify and install with confidence. For the home wired today with Paranite Building Wire—Paraflex—ABC Cable—Service Cable—will be giving the same efficient electrical service in 1998 and beyond. Every bit of Paranite wire or cable is made under the watchful eye of SQC—Statistical Quality Control! Nothing is left to chance. Scores of tests, graphs, measurements—figures and figures—by columns and rows of columns—are compiled and analyzed, while the individual operations are still in progress. With Paranite's goal set high and Statistical Quality Control guarding each individual operation, you can confidently recommend and use Paranite Wires and Cables in all construction.

Building Wire Types R—RH—RW—T—TW
Service Entrance Cable
Paraflex Non-Metallic Sheathed Cable
A.B.C. Flexible Metallic Cable

IF IT'S PARANITE, IT'S RIGHT!

DISTRIBUTED THROUGH WHOLESALERS
PARANITE WIRE AND CABLE
Division of Essex Wire Corporation
FORT WAYNE 6, INDIANA

This fifth article in a series by the Asphalt Roofing Industry Bureau gives recommendations for application of roll roofing by both exposed and concealed nail methods.

How to Apply Roll Roofing

A PRINCIPLE of asphalt roll roofing application is that work should be done in clear, mild weather. This type of roofing should be applied at outside temperatures below 45 degrees only in emergencies, and then it should be stored in a warm place until ready for use.

As a preliminary step to application, it is good practice to cut roll roofing into 12 to 18-foot lengths and lay them on a smooth, level surface in a warm place for several hours until they flatten out.

If any kind of asphalt roofing is to give the full trouble-free service of which the material is capable, it must be applied over a soundly constructed roof deck. This is as true for roll roofing as it is for shingles.

Two kinds of asphalt cement are used in roll roofing application—lap cement for the exposed nail method and special plastic or quick-setting cement for the concealed, or blind, nail method. Cement should be kept in a warm place before using. If necessary to warm it quickly, place an unopened can of cement in warm water; never heat asphalt cement directly over a fire.

For application to a wood deck, nails 3/4 inch or 1 inch long should be used. If application is over old roofing, nails should be long enough.

(Continued to page 158)
Successful production of framing materials for pre-fabricated houses, according to Mr. John F. Sage, Manager of the well known E. L. Bruce Co., Bruce, Miss., "depends upon cutting identical lengths with exacting tolerance. To achieve this, we found it necessary to devise a method of equalizing and mitering in the same operation."

Walker-Turner Radial Saws, installed in tandem and equipped with air-actuated work-holding clamps, proved the solution and speeded operations 350%, with considerable reduction in man-hour costs.

Used in conjunction with the Radial Saws is another set-up of 5 Walker-Turner 15" Drill Heads connected in one assembly. Together, the two set-ups perform four operations on each work piece: squaring, boring, mitering and compound mitering. Tolerances are kept to 1/32".

For equal achievements, whether working wood, metals, or plastics, consider the complete line of light weight, compact Walker-Turner Machine Tools. All are low-cost machines, highly adaptable to varied speeds and methods of mounting and control. For complete catalog, write to Walker-Turner Division, Kearney & Trecker Corp., Plainfield, New Jersey.

Model RA-1108. Price: with 2 or 3 h.p. motor less base $445.00*
You Told Us What You Wanted...

Now Eagle Announces The Greatest Door Closer Ever Built

-Incorporating every feature you asked for
-Designed to meet your needs for years to come

The EAGLE LOCK Company

Eagle Industries, Inc. - National Sales Representative - 110 North Franklin Street, Chicago 6, Illinois
Never before has one hydraulic door closer incorporated such an array of long-awaited features. This Eagle innovation gives you right-hand, left-hand, hold-open and non-hold-open operation in one standardized unit—without mechanical change. Complete control through all standard swinging arcs. Easiest possible regulation by one screw. Simplified installation by mounting plate. Compact design. Lighter in weight for easier handling. Smartest styling. And—thoroughly proved in actual service.

The Only Closer with Right-Hand, Left-Hand, Hold-Open or Non-Hold-Open Operation in One Standardized Unit . . . Without Mechanical Change

**Builders . . .**

As the men responsible for installation, you will appreciate the easier handling, the simplified installation and the fool-proof regulation of this Eagle Door Closer development. Write for 20-page, four-color illustrated brochure which presents the facts in detail.

Even the Eagle Door Closer package is as outstanding as the Closer itself. Colorful, compact and readily identified, each package contains one complete closer with mounting plate, template, wood and machine screws for easy installation on any standard interior wood or metal doors.
 Builders told us what they expect in a good level. That's why we say the Stanley Aluminum Level No. 233 is what you need — it's made carefully to meet builders' requirements.

It's light for easy handling, yet strong, thanks to the Stanley truss construction. This bridge type design narrows the cross section for easier holding and puts extra metal around the glasses and at all points of extra strain. All four sides milled square.

Six cat's-eye glasses, under heavy glass covers, are fully adjustable to any angle around the circle and for degree of pitch to the foot. Adjustments protected by fixed cover plate against accidental blows. Dust-tight. Water-tight. All parts easily replaceable.

Useful more ways, more places and more years than just an ordinary level... a tool a building man can respect, a real Stanley Tool. Stanley Tools, New Britain, Conn.

(Continued from page 154)

Exposed Nail Method

Parallel to eaves (Figure 1)—Apply the first course the full width of the roll. The lower edge should extend at least 3/4 inch over the eaves and the end should extend the same distance over the rake. Nail the strip every 18 inches along a line 3/4 inch from the top edge to hold it in place while rake and eaves nails are being placed. Then nail along the eaves and rake every 2 inches on a line 3/4 inch from the edge of the roof deck. Nails in rows parallel to the roof boards should be staggered slightly.

Place the next course so that it will lap 2 inches over the lower course. Nail it along the top every 18 inches. Then lift the lower part of the sheet and apply lap cement evenly on the upper 2 inches of the lapped course. Embed the overlapping sheet in the cement and nail through the lap.

Nails should be two inches apart, staggered slightly to avoid splitting the deck sheathing and spaced not less than 3/4 inch in from the edge of the top sheet.

Parallel to rakes (Figure 2)—Start at the ridge at one end of the roof and use strips which have been cut to allow the lower end of each strip to project 3/4 inch over the eaves. Place the first sheet so that it overhangs the rake 3/4 inch and nail along the ridge end and the lap edge every 18 inches, 3/4 inch from the edge of the roofing material. Apply succeeding strips similarly, placing them so that each course overlaps 2 inches.

Lift each overlapping sheet and apply lap cement evenly over a 2-inch strip along the edge of the underlying sheet which will be covered by the lap. Embed the edge of the overlapping sheet in the cement and place nails 2 inches apart and 3/4 inch from the edge of the top sheet. Nail along the rakes and eaves with nails...
NEW RICHMOND UNIT

takes an "E" for EASY!

GUN-TYPE OIL-FIRED
WINTER AIR CONDITIONER!

Now! A Unit Designed with the TRADE in Mind!

Another Richmond "Plus". In the new Richmond Oil-Fired Winter Air Conditioner you get a real installation timesaver. First locate your furnace. Then you simply hook up the burner to the panel and all elements are right where you want them. No time and trouble on unnecessary adjustments—that means $25 to $35 saved.

Final Assembly is quick, too. This Richmond unit comes in three packages—the heaviest weighs only 395 lbs. (appr.). All you do is place combustion and burner assembly in the furnace unit, spin four wing nuts and make electrical connections at junction box. That's all! Now you're ready for supply lines and flue connections.

Unit Installed!

RICHMOND
RADIATOR COMPANY
AFFILIATE OF REYNOLDS METALS CO.

Now! A Unit Designed with the TRADE in Mind!

Another Richmond "Plus". In the new Richmond Oil-Fired Winter Air Conditioner you get a real installation timesaver. First locate your furnace. Then you simply hook up the burner to the panel and all elements are right where you want them. No time and trouble on unnecessary adjustments—that means $25 to $35 saved.

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Unit Installed!
BEAUTY and QUALITY for all

Duo-Laps bring luxurious, deep-horizontal shadows and genuine Red Cedar siding to ALL applications, ALL budgets. These versatile double-course shingles give old or new homes that rich "wide siding" effect at substantial savings. They're pre-stained in eight handsome colors, can be laid with full 12" or 14" exposure over solid or spaced sheathing.

PROTECTIVE, INSULATING

Duo-Laps' genuine Red Cedar is unexcelled as insulation—keeps homes cool in summer, warm in winter. Hand-dipped, butted, squared and tapered, they're easier to apply, more protective, longer wearing. Get beautifying, cost-cutting Duo-Laps for all-around siding satisfaction.

Write for Free color folder and name of your nearest Duo-Lap dealer

THE American STAINED SHINGLE CO.
GENERAL OFFICES COR. SPRUCE ST. AND DENNISON AVE.
COLUMBUS 8, OHIO

How-To-Do-It

(Continued from page 158)

inches apart and 3/4 inch in from the edge of the roof deck.

End laps—All end laps should be 6 inches wide and cemented the full width of the lap. End lap nails should be in two rows, 1 inch and 5 inches from the edge of the overlapping sheet. Stagger the nails and space them 2 inches apart in each row.

Stagger all end laps so that in no case will an end lap in one row be adjacent to or over any part of an end lap in another row.

Hips and ridges (Figure 3)—To finish a hip or a ridge, cut a strip of roll roofing 12 inches wide and long enough to extend from one end of the hip or ridge to the other. Bend it lengthwise along its' center. Snap a chalk line 3 1/2 inches down on each side of the hip or ridge and apply a 2-inch band of lap cement along each side with the lower edge of the band of cement even with the chalk line. Place the strip of roofing over the hip or ridge, embedding it firmly into the bands of cement. Space nails 2 inches apart 3/4 inch above each edge of the strip.

Concealed Nail Method

Parallel to eaves (Figure 4)—Apply 9-inch-wide strips of smooth roll roofing along the rakes and eaves, allowing them to overhang 1/2 inch. Fasten them with nails 1 inch in from each edge and 4 inches apart. Completely cover these strips with quick-setting asphalt cement as work continues.

Apply a full width strip for the first course, holding it 3/4 inch back from eaves and rakes. Press it firmly into the cement after securing the upper edge with a staggered row of nails spaced 4 inches apart and placed high enough so that the next course will lap over every nail by at least 1 inch.

Place the second course (the method for all succeeding courses is similar) so that it will lap over the first by the amount required by the pitch of the roof. Fasten it along its upper edge as specified for the first course. Then lift the lower edge of the second course and apply the special cement over the lap. Roll down the lifted portion and press it firmly into the cement at all points.

(Continued to page 162)
The dominant distributor of Building Materials in the Southwest, Cameron Wholesale is well equipped to serve the Building Material Dealers in this great market. With 18 conveniently located warehouses, overnight delivery service is available through Cameron's fleet of 76 trucks and Common Carrier Service, to every Building Material Dealer in this marketing area. Well geared to best serve this vast and profitable market, Cameron Wholesale is proud of the part it plays in the building activities of the great Southwest. The fine reputation of the Cameron Company is based on 80 years experience in the Building Material Field.

So Far This Year, Texas Is Second Among All States In Dollar Volume Of Building Construction.
Chromtrim

The Economy

METAL MOULDING

for Every Building Use!

Chromtrim is a quality product worthy of the enviable reputation which these trade-marked metal mouldings bear. There's a Chromtrim profile for 90% of all private, commercial, industrial installation needs.

This handy wall chart shows you at a glance the 42 most popular Chromtrim shapes. Dealers are selling more and more Chromtrim mouldings to meet new building and remodelling needs.

Now!

CHROMTRIM'S
NEW DRIVE SCREWS
FOR THAT PERFECT
SMOOTH INSTALLATION
WHICH CUSTOMERS
DEMAND

Chromtrim is now available punched for quick, accurate installation with a new type nickel plated drive screw. This new fastener eliminates the extra prising required in installed mouldings. These drive screws are designed to seal leaks without hammer-driving and leave no multiply holes or split around edges in your Chromtrim's handsome finials. Chromtrim is standardizing on this new type screw only after thorough testing and recommendations of skilled mechanics.

The handy Chromtrim Wall Chart gives you a complete listing of the 42 shapes with the best for every need. This chart, and many others, are available from your distributors. Write today!

R. D. WERNER CO., INC.
295 FIFTH AVENUE • NEW YORK 16, N. Y.

IN CANADA:
R. D. WERNER CO., Ltd., Fort Dalhousie, Ont.

How-To-Do-It

(Continued from page 160)
of contact until a small bead of cement appears along the edge of the sheet. This can be accomplished by "stepping" the lapped edges with the feet, by rolling or by "brooming" with a stiff brush. This is the most important part of the process.

Parallel to rake—Directions for application parallel to the eaves apply generally to application parallel to the rakes, except that work is started from the ridge where sheets are fastened at the top with three or four nails. Sheets should be permitted to hang free until they lie smoothly before they are nailed and cemented.

End laps—All end laps should be at least 6 inches wide and nailed every 3 or 4 inches under the overlap. The entire width of the lap is secured with cement.

Hips and ridges (Figure 5)—As sheets of roofing in the regular courses come up on the sides of a hip or ridge, they should touch each other and should be nailed in place.

To finish hips and ridges, cut strips of roofing 12 inches by 36 inches.

Bend these strips lengthwise through the center and "shingle" them on the hip or ridge. Start at the lower end of the hip or at either end of the ridge and lap each strip 6 inches over the lap end of the preceding one.

Before applying strips which have been cut, snap a chalk line on each side of the hip or ridge 5/8 inches down from the peak. Apply quick-setting asphalt cement over the entire area included between the chalk lines. Fit the folded strips over the hip or ridge, pressing them firmly into the cement. Nail only on the end of each strip which will be covered.

Before leaving the job, check all laps and press down those which might have pulled away.
Engineers say Pacific is the best boiler you can buy—at any price. Higher efficiency with any fuel—coal, stoker, oil, or gas—longer life, and a host of unique construction features, make a hit with them.

Architects prefer Pacific—a favorite with them since 1915. They like the uniform high quality! Also, they appreciate the expert installations and prompt service available through the 14,152 contractors who install Pacific.

EVERYONE PREFERS PACIFIC

And no wonder! Pacific is the finest steel boiler money can buy. Here's completely automatic heating at moderate cost for homes with oil or gas. There are features by the dozen: Two-tone, high lustre, baked-enamel finish. Removable front panel for easy access to burner and controls. Thick rock wool insulation. PLUS Pacific's exclusive "plate flue" construction which assures longer flue life and faster, more efficient heat transfer. Want the best in boilers? Then specify Pacific for all residential and commercial needs. Built to conform with the A.S.M.E. Code.

Pacific Steel Boiler
OAK FLOORS WELCOME ANY Style Changes

Because of costs, some of your new home buyers are probably going to use their present furniture for a while. They want new things for their new houses, but they just can’t afford them now.

You can make them much happier by pointing out how the warmth and charm of oak flooring bring out the best in any furniture. When they can buy new pieces, oak floors provide a beautiful setting that will enhance any style or color of furniture and furnishings.

To help you point out this value of oak flooring, as well as its beauty, durability and long-time economy, ask your oak flooring dealer for the free booklets—Oak Floors for Long-time Beauty. It will help you tell and sell the advantages of oak floors, for now and the future.

Also ask for the new Builders’ Data Book which provides detailed information and specifications for planning, laying and finishing oak floors.

Tell about oak flooring today . . . and you’ll sell more of it tomorrow.

KENTILE floors make homes COST LESS and SELL FASTER!

More and more, the floor they pick to save and sell is—Kentile! For instance: Levitt, miracle builder of Long Island, has built 2,000 homes and will build 4,000 more this year—all using Kentile in every room. Why?

Kentile is low, low priced, and can be laid—tile by tile—with astonishing speed... right on concrete, even below grade, without priming. Yet Kentile is so flexible it can also be laid directly on sound wood floors with boards not over 3” wide.

Kentile, laid square by square—with 23 colors plus feature strips—offers unlimited design possibilities. You can put a different floor in every room—give a house that custom designed look connected with high priced building. And it is definitely MODERN to match today's low price decor.

Your customers know the advantages of Kentile—because of full color, full page ads in such magazines as Saturday Evening Post, Better Homes & Gardens, House Beautiful.
NEW PRODUCTS
(Continued from page 138)
material pushed through the machine
to plane & the surface. 1
er itted 1 ; Pt 4 « + +
Material is guided into the cutter-
head flush with the first cut, so
that the second cut will blend into it without
leaving a shoulder or joining
mark.
LEVER-HANDLE WASTE AB9802
The designs of the Lever-Handle
Waste shown is simple and fool-
proof—joints and packing are care-
fully fitted to assure a positive seal
when closed, and a fast draining
sink when open. This design also
permits the drain to be installed in
residential sinks. The O-Ring Seat
is made of a special rubber to re-
sist hot water, grease and acid.
Made in two sizes, the Waste is
fabricated of the finest material—
the strainer is stainless steel, the
flange of stainless, sanitary, drif-
metal, and the body of cast bronze.
Product of the Atlantic Brass
Works, Inc., 2035 W. Harrison St.,
Chicago 12, Ill., the Lever-Handle
Waste is easily and quickly installed
without riveting or soldering.
LINOLEUM BOARD AB9815
A new, linoleum-surfaced plywood
board, suitable for walls and counter
or work suraces, is being marketed
under the name “Perma-Bord” by
the Perna-Bord Corp. of Columbia,
S.C. The project is made by bonding
Armstrong linoleum to a specially
laminated plywood. The bonding
agent does not permit the linoleum
to crack or blister under the effect
of live steam or oven heat, according
to the manufacturer. At present, the
board comes only in 4' x 8' sheets,
but larger size sheets will be added
to the line later. Perma-Bord can be
handled and cut exactly like plywood.
For dry wall installations, it can be
nailed directly to the studs without
a subwall. A 4D nail, driven through
the linoleum into the plywood back-
ing, can be completely concealed by
a tap on the plastic surface which
seals over the hole where it entered.
(Continued to page 168)
A complete manual on...

HOW TO INSTALL
METAL CASEMENTS...SCREENS
...STORM WINDOWS

1. Contains easy-to-read A B C's of Installation. Easy to follow details, pictures, charts...gives all the information for proper installations.

2. Helps eliminate extra costs. Shows how to do the job economically...cuts losses caused by mishandling and faulty installation methods.

3. Helps establish customer good will. Shows how to do the job efficiently...gets the right results the first time.

CONTAINS IMPORTANT INSTRUCTIONS
- Erection fittings and hardware
- Proper way to store
- Size of rough openings
- Inside clearance for screens and storms
- Simplified installation details
- How to assure weathertightness
- How to glaze and paint

Here, in simple language, is all the know-how needed for the installation of metal casements, storm windows and screens. Ceco offers you this important, instructive manual to help make every job practically fool-proof. It tells you how to cut costs, eliminate damage to windows, avoid loss of time. Write for free copy today. If you live in one of the western states, ask for special Pacific Coast Edition. CECO STEEL PRODUCTS CORPORATION, 5601 W. 26th St., Chicago 50, Ill.
The Barcol OverDoor

With Electric Operator

For Public Garage Service Entrances

Barcol OverDoors and Barber-Colman Electric Door Operators are the ideal combination for openings in public garages, automobile agencies, service stations, and other establishments where traffic is heavy. They operate easily, quickly, efficiently...provide convenience and valuable time-saving both to garagemen and their customers.

Only Barcol OverDoors offer all these distinctive features: exclusive cam-controlled action for weather-tight closing without sticking or binding; tailored twin-torsion springs for safe, accurate counter-balancing; and continuous vertical track brackets for strength and durability.

Couple these features with quality construction and guaranteed installation by factory-trained representatives and you have doors that give dependable, trouble-free service at lowest maintenance cost. Barcol OverDoors are adaptable to existing buildings as well as new construction. Consult your Barcol representative for complete details.
Ready for immediate Installation

the revolutionary new

ANTHRATUBE

Anthratube production has been stepped up to meet the greatly increased demand for worry-free Automatic Heating this winter

Now, with the Anthratube, your customers can have completely automatic heat without the worry about fuel shortages and yet save fuel dollars!

This all-in-one unit burns a plentiful, economical size of anthracite. It’s completely automatic from bin feed to ash removal.

The Anthratube saves up to 38% on fuel bills because its proved efficiency is over 80%. Its compact design... built-in “heat slinger” and other revolutionary features... give it quicker response and superior performance compared with ordinary types of heating units.

Your customers want clean, comfortable, economical, worry-free heat—and plenty of it! Now you can give it to them with the Anthratube!

For more information on the Anthratube write directly to us or to one of the Anthracite Institute approved manufacturers.

APPROVED MANUFACTURERS OF THE ANTHRATUBE

AMERICAN BOILER WORKS CO.
Erie, Pa.

AXEMAN-ANDERSON COMPANY
Williamsport, Pa.

BETHLEHEM FOUNDRY & MACHINE CO.
Bethlehem, Pa.

ANTHRACITE INSTITUTE

101 Park Avenue
New York 17, N.Y.
Figure it out for yourself! Compute the complete cost per square of roof, using any material that requires solid roof sheathing. Then compute the lower cost of Certigrade cedar shingles, using spaced sheathing. Compare these costs for yourself.

Cedar Shingles can be laid on spaced sheathing because of their overlapping "bridging" construction. This saves builders nearly 50% of the costs of sheathing, nails and sheathing application. Cost of materials including decking is the only right way to get comparative costs on complete roofing jobs.

Although the unit cost of substitute roofing materials before application is sometimes lower than the unit cost of Certigrade No. 1 shingles, the complete Certigrade roof usually costs less! And a roof of Red Label Grade Certigrades, on spaced sheathing, is always a money-saver.

Figured by the cost per square, per year of life, Certigrades are always your best buy.

For a cost comparison chart on roof construction, write:

**RED CEDAR SHINGLE BUREAU**

5510 White Building, Seattle 1, Washington, or Metropolitan Building, Vancouver, B.C., Canada

**NEW PRODUCTS**

(Continued from page 168)

**VENTED WALL HEATER**

A89807

Styled to blend into any room treatment, a new vented heater which is installed within a wall for heating on both sides of the partition is being introduced by Holly Manufacturing Co., 875 S. Arroyo Parkway, Pasadena, Calif. The heaters are available with inputs of 37,000 B.T.U. and 45,000 B.T.U. for natural or manufactured gas. They are also available for LP gas. Designed for use in second story installations or on concrete-slab floor construction, the heater requires a wall opening of 28 inches by 51 inches. The bottom of the pack is off the floor, permitting any rug treatment and simplifying cleaning problems. The air inlet is located in a hidden duct beneath the raised panels and efficiently pulls the cold air off the floor. Top panel louvers give a downward and outward direction to warmed air flow, while louvers near the base of the heater give off radiant heat. All internal parts are concealed from view.

**PACKAGED HOME FLASHING**

A89801

To promote the use and proper grade of sheet metal for weatherproofing low-cost houses, a packaged home flashing system employing specially developed, easily handled, non-rustable sheet copper has been put on the market. The package includes ten sheets of 31-gauge tempered copper, pre-cut to 18 inches by 48 inches, 200 hardware bronze nails, and an instruction booklet. The package was developed by Revere Copper and Brass, Inc., 230 Park Ave., New York 17, N.Y., as a result of extensive research into the use of metal in low-cost residential building. Sold through lumber and building supply dealers, this package marks the first time that copper has been packaged as a building material. In developing the system, Revere not only engineered a special gauge, temper and size of sheet copper but has also worked out sound and simple techniques of application.

(Continued to page 172)
DON'T EXPECT A BOY TO DO A MAN'S JOB!

Fireproof, full-thick, Gold Bond Rock Wool Batts protect your customers — and your reputation!

EVERY new home owner is always proud to tell friends, "Our house is fully insulated!" What a let-down when they learn the insulation was installed so thin that they are getting only a fraction of the benefits insulation can really provide. Then they go gunning for the builder!

It costs so little more to standardize on full thickness insulation, that it isn't worth risking your reputation with thin, flimsy products. Full Thick Gold Bond Rock Wool Batts are built to exacting specifications that insure maximum insulation comfort and fuel savings. And because they fill the stud space and are fireproof, they provide a permanent fire stop. Insist on genuine Full Thick Gold Bond Rock Wool Batts and you'll be giving your clients the best.

You'll build or remodel better with Gold Bond

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.
NEW PRODUCTS
(Continued from page 170)

SMOKELESS FURNACE AB8812.
A smokeless coal-burning warm air furnace has been developed by the Wheeling Furnace Corp., Martins Ferry, Ohio. Named Smokabator, the furnace operates on a down-draft principle rather than the conventional up-draft. Thus the primary air enters through the feed or firing door and is drawn down through the hot bed of coal or coke. In traveling down through the fire bed the smoke and gases carried by the air are consumed, resulting in near-perfect combustion. The furnace is approved by the Smoke Abatement Commission of Pittsburgh, Pa. Other features of the Smokabator include an over-sized refractory magazine which reduces the number of firing periods. The more complete combustion in the Smokabator eliminates the need for daily ash and hot clinker removal, and the gravity feed, stoker-like action of the Smokabator reduces the necessity for constant furnace tending.

AIR MOVER AB8814
The V. E. Sprouse Company, Inc., Columbus, Ind., has introduced a new 30-inch air mover designed for wide application. For home use, it is easily installed in the window, or in the attic. In addition, its capacity, rated at approximately 7,000 C.F.M., makes it equally applicable to business and industrial establishments. Powered by a 3/4 H.P. motor, this air mover operates quietly and economically. Its overall dimensions are 36 inches by 36 inches, and it is furnished with an attractive grille.

(Continued to page 174)
Another leading builder proves that "value pays off"

uses KIMSUL* in 600-home project

Here are a few of the 600 units recently completed by Timely Builders. All are insulated throughout (walls and ceilings) with many-layer KIMSUL* insulation.

Builders everywhere are finding it out. Value pays off—in fast sales, satisfied buyers. And when you're building for satisfaction, comfortize your homes with many-layer KIMSUL insulation. KIMSUL provides lifetime fuel savings, lifetime home comfort.

Cut to fit standard stud and rafter widths, KIMSUL blankets install quickly, profitably. Avoid delays—eliminate the need of skilled labor or expensive machinery. Compressed to 1 5 actual length, KIMSUL is easy for workmen to handle. It's light in weight, clean—no dust, no sharp particles.

KIMSUL has a high thermal efficiency. ("k" factor 0.27). Won't sag or settle. And it's the only brand with the PYROGARD fire-resistant cover.

For peak performance at lower cost, specify KIMSUL by thickness. Commercial Thick (about ½") and Standard Thick (about 1") for walls, attics, and floors. Double Thick (about 2") for attics.

Free: Write for the new KIMSUL Insulation Application Data File and Technical booklet. Simply address Kimberly-Clark Corporation, KIMSUL Division, Neenah, Wisconsin.

Kimberly-Clark Corporation
Neenah, Wisconsin

March 22, 1948

Gentlemen:

By September of this year, we will have completed over 600 new homes in Bergen and Passaic Counties. Each of these new homes is completely insulated with "KIMSUL" as installed by the Home Insulation Company of Clifton, New Jersey.

We feel confident that the choice of this well known and efficient "KIMSUL" blanket to insulate the sidewalls and ceilings and therefore preclude the necessity of costly extras later to the purchaser, has been an important factor in the ready sale of these homes.

We have several large new tracts upon which we will erect many more of this type home. In keeping with our policy of attempting to give the purchaser the greatest value for his dollar, you may rest assured that "KIMSUL" will be a standard specification in all of our future plans.

Very truly yours,

Stephen Dudink, Prop.
NEW PRODUCTS
(Continued from page 172)

COMPACT WALL HEATER AB9806
A new, gas-fired, forced air, wall heater, with floor-level warm air discharge, is being introduced by the Payne Furnace Co., Beverly Hills, Calif. In a compact casing, the vented heater, named “Panelair,” measures 25 inches across the front and 9 inches from front to back. It can be fully or partly recessed in a wall and in direct contact with wood. Warm air discharge is possible from all four sides to heat several rooms. Two fans draw return air from the ceiling, and heated air is forced out near the bottom through small grilles, the only portions of the “Panelair” showing in living areas. This floor-level heat discharge combats cold floors resulting from under-floor ventilation required in non-basement construction. The low-level, forced warm air discharge counteracts the tendency for warm air to collect at the ceiling and cold air to settle to the floor. Fans and electric motors of the “Panelair” are vibration-insulated.

PORTABLE ELECTRIC DRILL AB9813
A new model, light-weight, 3/8-inch highpower, portable electric drill, offering handling ease and convenience for industry and home workshop, has been announced by Portable Electric Tools, Inc., 255-259 W. 79th St., Chicago, Ill. It is called Model No. 256. The drill has a comfortable pistol grip handle with Cutler-Hammer trigger switch. The motor has been redesigned for increased power. It is air-cooled and of the universal type 110-115-volts. The gear case and handle are natural satin finish die-castings. The motor housing is of seamless aluminum tubing with satin finish. The drill is supplied with a 6-foot rubber-covered cable and attachment plug of top quality.

(Continued to page 176)
There’s nothing that sells Mrs. Home Buyer more quickly than a truly modern, up-to-the-minute kitchen.

There’s nothing that says “modern living” more clearly than a General Electric Disposall.*

This electrical marvel shreds all food waste, flushes it automatically into sewer or septic tank. It banishes the garbage can, and means a more healthful, more convenient way of living.

Readership checks of national advertising show that women are extremely interested in this new appliance. They want it in their homes! It represents the modern way of living to them.

Install Disposalls in your kitchens—and you’ve installed “extra” sell in your homes!

It’s a simple matter to install a DISPOSALL!

- The Disposal fits snugly under kitchen sink—replacing the standard drain.
- Installable in any modern sink with 1 ½- to 4-inch drain opening, this is how the Disposall looks installed in the General Electric Sink.
- Close-up, under-the-sink view shows all plumbing and electrical connections.

Mail this coupon for complete information.

General Electric Company, Appliance and Merchandise Dept.
1285 Boston Avenue, Bridgeport 2, Conn. Dept. AM 189.

Please send me complete information about the G-E Disposall:

NAME

ADDRESS

CITY STATE

*General Electric’s registered trade-mark for its food-waste disposal appliance.
4 reasons why you should use Cabot's Creosote STAINS

- **Give Real Protection**
  Cabot's Stains contain a high proportion (60-90%) of undiluted creosote oil, the best wood preservative known. This means years of protection from decay and termites.

- **Easy to Use**
  No thinning or preparation necessary... won't peel or blister, even on green wood.

- **Economical**
  Cabot's Stains cost 1/3 as much as good paint... brush on quickly and easily.

- **Large Color Selection**
  The rich, non-fading colors range from clear, brilliant hues to weathering browns and grays... bring out the natural beauty of clapboards, shingles, and siding.

Write today for Color Card and Complete Information.

Samuel Cabot INCORPORATED
2227 Oliver Building
Boston 9, Mass.

### NEW PRODUCTS

*(Continued from page 174)*

**COMBINATION DOOR AB9826**

A new, all aluminum, combination storm and screen door is now available, designed by Eagle-Picher Co., Cincinnati, Ohio. The door permits a quick change as the seasons demand, with removable glass inserts for winter and screens for summer. It is manufactured in standard door opening sizes, and distributed nationally through authorized Eagle-Picher contractors. Like the Eagle-Picher windows, the door is made of extruded aluminum. A soft, non-glare finish gives the door a smart appearance that blends well with home exteriors.

**UTILITY BOX AB9809**

Through a square corner design in full gauge steel walls, a new type utility box provides ample finger room for installation work. Made by National Electric Products Corp., Pittsburgh, Pa., the new No. 2020 "Relevee" flush device utility box is 17½ inches deep, 4 inches long, and 2½ inches wide. Eleven smooth 1/2-inch knockouts are provided—three on the bottom, three on each side, and one on each box end. Rocking is eliminated by a smooth flat back. Ears have been made integral parts of the box, which is electro galvanized throughout. Legs are tapped on 3 9/32-inch centers for all standard makes of push button, rectangular rotary switch and flush convenience. The box can be efficiently installed with all types of wiring, including rigid heavy conduit, non-metallic sheathed cable, armored bunched cable and flexible steel conduit.

*(Continued to page 178)*
CHASE COPPER TUBE
for soil, waste and vent lines is IMMEDIATELY AVAILABLE!

Drainage installation of Chase Copper Tube in one of the 280 homes built by Levitt & Sons, Strathmore at Roslyn; L. I. Distributor: Gar Supply Corporation, Long Island City, N. Y.

Is YOUR building program bogging down, because pipe for drainage lines is hard to get? Then do as other builders all over the country are doing—switch to Chase Copper Tube. You can get it right away—in all the sizes used for soil, waste and vent lines.

You can install Chase Copper Tube quickly, too. Fewer joints are needed because it comes in 20-foot lengths. The joints you do need are made in a jiffy with solder-type fittings. Pre-assemble if you like—the assemblies are sturdy units that will stand plenty of rough handling.

And Chase Copper Tube does a better drainage job. Its smooth inner surface offers no obstruction to the flow of wastes—the solder-type fittings eliminate pockets.

Want more details? Write for literature on Chase Copper Tube for drainage lines. Address Dept. AB 98.
NEW PRODUCTS
(Continued from page 176)

WINTER AIR CONDITIONER AB9824
Efficiency and economy of operation are featured in a new oil-burning, winter air-conditioning unit manufactured by the Conco Engineering Works, Mendota, Ill. The unit, the "Conco V.F.," has a patented "Conco-Breeze" horizontal burner. The combustion chamber is of tunnel-type construction. Heavy-gage copper-bearing steel is used for quick transfer of heat by both primary and secondary surfaces. An attractive room thermostat controls the unit. Combina-

RITE-LOCK adds distinction and convenience to today's sliding doors. It's new, compact, trouble-proof...fits almost any thickness of door. The latching action is positive and releases with a natural sliding movement of the bar in the cup. For convenience and economy a finger pull is formed in the face plate. Look at these advantages:

* Adjustable in height from 1-1/8" to 1-3/16""  
* Installs in a single assembly, requiring only a 3-1/2" x 2-5/8" notch  
* Adaptable to right or left hand doors  
* Outer case measures only 3-1/2" x 2-5/8"  
* Pivot block 1-4" diameter cylinder available

Ask your Hardware Consultant or write us for complete details.

FORK TRUCK SHOVEL A89988
A new type of fork truck shovel attachment now on the market has a pneumatic snubber which minimizes the shock and strain to the upright assembly when the load is discharged. In addition to the snubber, the shovel has 3-point suspension, with a roller cam lock and a single point hook which permits release of any load with a 15-pound pull. The shovel, made by Clark Equipment Co., Trueno

Artcraft produces the finest, most exacting custom-made ornamental iron work from specifications at amazingly low cost. This is in addition to our regular, low-priced, stock ornamental work. Write today for more information, or send specifications direct.

Delivery: Two weeks for custom work; immediate delivery for stock items.

Terms: Payment with order or C.O.D.

Artcraft Ornamental Iron Co.
724 E. Madison Street, Columbus, 11, Ohio

Send me FREE by return mail my copy of your new 40-page catalogue titled "ART in IRON."

NAME  ADDRESS  CITY  STATE

OCCUPATION

FREE  Now 40-page catalog "ART in IRON" shows Artcraft's talent in custom and stock ornamental iron work. Ask for your copy. Write for exact information, send for hors d'oeuvres or custom work immediately.

Note: All Artcraft ornamental iron work is hand-cast in the USA. The finest are the best, the better the product is made.
Now in production!

...Johns-Manville's new $7,000,000 Insulating Board plant at Natchez, Miss.

TWO plants...Natchez, Miss., and Jarratt, Va., are now producing J-M Insulating Board Products...

- Johns-Manville announces the completion of a new plant in Natchez, Miss., which will be devoted entirely to the manufacture of insulating board products.

Located in the heart of Mississippi's pine forests, the new J-M factory has its raw materials right at its doorstep.

From this modern plant will come an ever-increasing flow of J-M Insulating Board products, including Building Board, Decorative Ceiling Panels, and Bevel Planks.

These popular J-M Building Materials have a smooth, finely textured, decorative surface called Glazecoat®, produced by an exclusive J-M process.

Other items in the line include Weatherite® Sheathing and J-M Insulating Lath, widely used to improve construction and cut costs.

All these insulating board products offer the customer many extra advantages. They are structurally strong and tough yet light in weight...are made to exacting standards of uniform density throughout...and have clean sharp edges that help to make a neat job.

NEW PRODUCTS
(Continued from page 178)

**ALUMINUM NAILS**

Six types and sixteen different sizes of aluminum nails are being made by Reynolds Metals Co., 2500 S. Third St., Louisville, Ky. Aluminum nails are highly resistant to corrosion and stain, and will not discolor. Among the new nails is a 1 1/4-inch plaster board nail especially suitable for fastening the various types of plaster board currently available. In addition, there is the shingle nail, the felt paper nails, and special roofing nails. All nails are etched to increase their holding power. The common nails include sizes 4, 6, 8, 10 and 16d. The roofing nails, supplied with 7/16-inch heads, come in 3/, 1 1/4, 1 1/2, 1 1/2, 2, and 2 1/2-inch lengths. The special roofing nail is supplied with a barbed 1 1/2-inch shank with a 7/16-inch head.

**EASY TO CLEAN - EASY TO LOAD**

Tacking presents no problem when you use a Duo-Fast Hammer Tacker. It is time-saving, efficient and thorough. One hand does the complete job. This is the easiest, quickest method of tacking insulation, building papers and felts. Write for information on the Duo-Fast hammer, gun and air tackers.

**DOORKNOB LOCK**

A tumbler-type cylinder lock built into the outer knob is the new product of the LaBelle Industries, Oconomowoc, Wis. The outer knob spins like a bearing when locked, and cannot be jammed or sprung. A quarter turn with a small milled-type key will lock or unlock the unit. When the outer knob is locked, it will remain locked even after the door is opened from the inside. The inner knob, which cannot be locked, serves as a safeguard against accidentally locking children in rooms or buildings. The lock is designed to fit all door latches.

**VERSATILE PAINT**

A new heavy-duty synthetic paint protects concrete surfaces with an abrasion-resisting coating that does not check, crack or dust. The paint dries to a hard, durable, glossy finish in three to four hours. It seals concrete surfaces from moisture above or below grade; expands and contracts easily with the surface covered, and resists acids, alkalis and extreme degrees of heat or cold. Besides forming a protective covering on concrete, the new synthetic paint can also be applied to exposed metals, machinery, boilers and pipes, and to porous masonry surfaces. Introduced by Lowebo, Inc., Chicago, Ill., the paint is being marketed under the trade name, "Concrete for Concrete." (Continued to page 182)
QUICK AND EASY TO INSTALL. One-two-three quick hammer blows — that's all it takes to make a tight joint with BERMICO Sewer Pipe. No joining compound necessary. Faster-laying BERMICO is light — easy to carry from truck to trench and easy to handle on the job. It's rugged; there are no delays because of breakage, and you can back-fill right away. BERMICO is made of impregnated fibre and withstands sudden temperature changes or soil settlements. Built for a lifetime of trouble-free service.

BERMICO IS IDEAL FOR HOUSE-TO-SEWER OR SEPTIC TANK CONNECTIONS. Made in a full range of sizes, connections, bends, reducers, adaptors, etc. Nationally advertised. Use BERMICO Perforated pipe for drainage purposes.

SPECIFY BERMICO, the fibre pipe that meets with ample safety-margins all Bureau of Standards' requirements (Commercial Standard—116-44). When you sell BERMICO you help your customers and help your business. For further information write Brown Company, Dept. A-1, 500 Fifth Avenue, New York, N. Y.
NEW PRODUCTS
(Continued from page 180)

BASEBOARD GRAVITY REGISTER AB9804
A new gravity register manufactured by Air Control Products, Inc., Coop-
erville, Mich., has a face that is easily removed for cleaning ducts. A
simple balanced damper mechanism, designed for the register, holds in any
position without adjustment; requires no screws, and has no friction parts
to wear. The register is smartly styled to blend with any interior.

CORNER CABINET AB9836
A new revolving corner cabinet now on the market, the "Handy Mandy," has
two revolving shelves, 27 3/4 inches in diameter, supported on three
ball bearings. Its overall measurement, front to back, is 29 1/4 inches,
permitting it to pass through a 21/2-foot door. The purpose of the cabinet,
mainly, is to utilize dead corners in a

Also doubles as a production machine in your shop. Particularly useful in
finishing cupboards, bookcases and

U, or L shaped kitchen. The cabinet
height is the same as the average stove or sink height. The door is
birch-face, with birch core and door
stock: cabinet front of clear hard-
wood; sides, shelves and false bottom
of 3/8-inch fibre-board. The cabinet
is manufactured by the Galion Cab-
nit Co., 702 Charles St., Galion,
Ohio.

COMBINATION SCREEN DOOR AB9805
A new combination storm and screen
door of aluminum is now on the mar-
det. Designed to resist abuse, particu-
darly from growing youngsters, the
door is called the "Alumatic," and is
a companion to the Alumatic alu-
ninum combination storm and screen
window. The new door is constructed
of extruded hollow aluminum sections,
which are light in weight and
munsally strong. The storm panel
insert and the screen insert, with
aluminum screen, are easily inter-
changed for weather changes. The
Alumatic door is fitted to the frame
of the doorway and may be used on
both front and rear doors of homes and
apartments. Alumatic combination
windows and doors are manufac-
tured by the Aluminum Building
Products Co., Milwaukee, Wis.

BOICE-CRANE COMPANY
966 Central Avenue • Toledo 6, Ohio

Baseboard Gravity Register - Saws and Saws Joints - Spindle Sanders - Lathe - Thickness Planers - Screw Drives - Drill Presses - Jointers

American Builder, September, 1948.
BUT will you be ready when sales slow down? Finished with Pratt & Lambert Paint and Varnish, your houses will be more saleable. Don't wait for the slow-down to come. Offset labor's high cost with these fine products. The new, authoritative P&L Paint colors have superb hiding, excellent spreading and are easy working. Pratt & Lambert-Inc., 80 Tonawanda Street, Buffalo 7, N.Y. In Canada, 6 Courtwright Street, Fort Erie North, Ontario.
Jones & Brown Adds Pittsburgh Interlocking Plastic Tile

FURTHER expansion of product lines by Jones & Brown, Inc., aggressive national distributors of Inselbrite insulating brick siding and Ko-Z-Aire Conditioning Units, has been announced by E. N. Rosenthal, president of the Pittsburgh firm. The company is now the exclusive national distributor of Pittsburgh Interlocking Plastic Tile, a patented feature wall tile formerly distributed by Pittsburg Tile Co.

In discussing Jones & Brown acquisition of a complete line of interlocking plastic wall tile, Mr. Rosenthal said, "We have been interested in the development of plastic wall tile for several years, and we are well aware of the difficulties experienced in the successful application of ordinary plastic tile. The interlocking principle has solved those difficulties and we are swinging the full force of our thirty regional sales offices into the merchandising of this modern plastic tile wall covering."

The new Jones & Brown product will be identified by the name "Pittsburgh Interlock Tile." It is a molded 4 1/4" inch by 4 1/4" inch tile, made of Polyethylene which may be permanently affixed to nearly every type of wall through the use of a patented interlocking feature. The tile is available in pastel, solid colors and marbled effects with self-trim or contrasting corners and feature strips.

Much of the personnel of the Pittsburgh Tile Co. has been merged with the Jones & Brown organization headquarters' staff in Pittsburgh. The new Tile Division of Jones & Brown, Inc., will be managed by Richard G. Brown, former president of Pittsburgh Plastic Tile. He will be assisted in the organization and operation of the new Division by H. A. Lamont, former office manager for Pittsburgh Tile.

Free Door Chimes For Demonstration Homes

NuTone, Inc., Chicago, announces that one of several types of door chimes manufactured by the firm are being made available free to builders for demonstration purposes. The offer is being limited to builders who construct 25 or more homes in 1948. The builder may select the chime he would like to install and the model will be sent him at no cost. The only requirement is that he post a small identification card with the NuTone door chime in the model home in which the door chime is installed.
"I Like Supertreated Pol-mer-ik because it's the 100% PURE LINSEED OIL that levels better!"

So says Master Painter M. Kistin of Cleveland, Ohio. He knows the importance of using a good linseed oil to carry color pigment and supply the protection and beauty of a clear, strong film. Supertreated Pol-mer-ik, the 100% pure linseed oil, does this to perfection and brushes finer, levels faster and better to produce finer paint jobs.

Why? Because Pol-mer-ik is Supertreated. It is given a special processing that strengthens its molecular structure...making it the finest linseed oil science has produced. Write for your dealer's name.

Supertreated Pol-mer-ik

100% PURE LINSEED OIL

Raw and Boiled Available in Factory-sealed Cans
5-gallon, 1-gallon, quarts and pints

EXTRA VALUE AT NO EXTRA COST

Product of ARCHER-DANIELS-MIDLAND CO.
640 Roanoke Building, Minneapolis, Minnesota
Send additional information on Supertreated Pol-mer-ik Linseed Oil.

Name: ___________________________

Firm: ___________________________

Address: ________________________

City __________________ Zone ______ State _______
Eljer Company Buys More Manufacturing Facilities

Eljer Co., Ford City, Pa., has acquired the manufacturing facilities of the H. B. Salter Manufacturing Co. at Marysville, Ohio, it is announced by David J. Crane, Eljer vice president and sales manager. The purchase includes Salter's subsidiaries.

This transaction adds to the present Eljer facilities a first class modern brass foundry together with complete machining equipment for casting, machine screw parts, die casting, tube bending and plating. The main plant and equipment at Marysville, recently completed, provide facilities that are equal to the best in the industry. Officials of both the Eljer Co. and the Salter organization believe the merger will result in improved service to Eljer customers, as well as to the customers of the H. B. Salter Co. The newly acquired plants have ample facilities for expansion to take care of increasing needs as they develop from time to time.

H. B. Salter, who has joined Eljer in an executive capacity, is in charge of the new operations.

Plywood Distributors Announce Fall Meetings

Fall meetings of the National Plywood Distributors Association have recently been announced by B. E. Babbitt, managing director.

The midwest meeting is scheduled for September 20 and 21, at Edgewater Beach Hotel, Chicago, Ill.; northeast meeting, September 25 and 24, at Chalonte Haddon Hall, Atlantic City, N. J.; the southern meeting will be held October 13, 14 and 15, at Tides Hotel, Redington Beach, Fla., and the western meeting will be held October 4 and 5, at Multnomah Hotel, Portland, Ore.
A “partnership” with brick pays off… in many ways.

Brick puts extra-salability into your buildings.

Think of all the extra sales values brick offers… beauty, fire safety, great structural strength, freedom from maintenance and periodic refinishing. These are values that brick keeps, year in and year out, values that mean higher resale value in any type of building.

Brick protects your reputation as a user of dependable materials.

You can be sure of brick’s resistance to shrinking and warping, to weathering and decay. And in today’s building market such assurance is particularly important.

Brick helps you build better and at less cost.

Look at the all-around economies in brick engineered housing. There’s an example of the efficiency you can achieve with brick’s modular sizes and easy adaptability to the best in design and construction. If you haven’t yet teamed up with brick, here’s a good way to begin this profitable partnership….

SEND TODAY FOR “BRICK ENGINEERED HOMES”

Here are practical plans for six beautiful homes all designed on modular coordination. They’ll help you put the maximum in value into the houses you build. Send 25¢ to Structural Clay Products Institute, Desk AB-9, 1756 K Street, N. W., Washington 6, D. C.
Asbestos Cement Group Elects New President

E. W. (Pat) Smith, vice president in charge of sales, Philip Carey Manufacturing Co., Cincinnati, Ohio, was elected president of the Asbestos Cement Products Association at its recent annual meeting in Skytop, Pa. Smith succeeds Stuart H. Ralph of the Flintkote Co., New York, who has filled the office for two terms.

Vice president for the coming year will be Clifford F. Favrot of Ashestone Corp., New Orleans, La. Samuel P. Moffit of the Ruberoid Co., New York, was re-elected treasurer, Chester C. Kelsey, who became secretary when the association moved its offices to New York early this year, remains in that position.

Directors of the association include Ralph and L. M. Cassidy, John-Manville Sales Corp.; R. H. Galloway, Asbestos Limited; Otis Massey, the Asbestos Company of Texas, and R. J. Tobin, Tile Roofing Co., Inc.

Announce Plans For Home Display Exposition

Plans for "Year 1949 Home Display" have been announced by Home Displays, Inc., Minneapolis, Minn. This organization includes four Minneapolis associations in the home construction and allied fields. The presentation will be a nine-day exposition at the Minneapolis auditorium, October 1-9.

W. F. Buckholz is president of Home Displays, Inc., a new organization with offices at 300 National building, Minneapolis, Minn. Other officers include C. V. Carlson, first vice president; H. R. Rosendahl, second vice president, and W. H. Biddle, treasurer. E. M. Overby, for the past 6 years associated with the Weyerhaeuser companies as director of all phases of home planning and construction, was (Continued on page 190)
This could have been a dark corner. Clever use of Insulux makes it light and cheerful. Insulux Glass Block can be used to advantage in almost any home entrance.

**EXPERIENCE PROVES:**

**Insulux helps sell houses**

All over the country, builders who have used Insulux Glass Block agree—**Insulux helps sell houses!**

Pictured on this page are only a few samples of the many, many new homes where wise use of Insulux has meant quicker sales.

Insulux is attractive and functional. It can be used in any room in the house, and fits in well with practically every type of architecture.

The price is right, too. Builders who once thought Insulux Glass Block was an expensive material now are saying: "We've found Insulux costs no more than windows."

To the builder, Insulux offers strength plus durability and ease of installation. It is laid similar to ordinary brick and is free from rot, rust and corrosion.

**GREATLY EXPANDED PRODUCTION FACILITIES MEAN INSULUX IS NOW AVAILABLE FOR IMMEDIATE DELIVERY IN LARGE OR SMALL LOTS.**

---

**Light with privacy** . . . illustration shows typical good use of Insulux in a bathroom.

**Garages, too,** are better with glass block panels. Insulux resists break-ins and is easy to maintain.

In the kitchen, Insulux panels transmit light, are easy to clean, seldom steam up.

---

**MAIL FOR FREE IDEA BOOK**

AMERICAN STRUCTURAL PRODUCTS COMPANY
Dept. E-5B, P.O. Box 1035
Toledo 1, Ohio

Gentlemen:

Please send me free, fully-illustrated booklet, "Ideas for Brighter Homes."

Name ________________________________

Address ___________________________________

Firm ______________________________________

City __________________________ Zone___ State___
ORNAMENTAL IRON
BY Coffman

LOW COST ENTRANCE OR STOOP RAILS
... In 5 Stock Sizes

Inexpensive—distinctive entrance rails, ideal for front and rear doorway platforms. Available in 5 stock sizes, at low cost, from building supply dealers. They are decorative, practical, and an investment in safety.

So Easy to Install!

Illustration shows extended newel post and conventional attachment knee on top and bottom rail for easy installation. Rugged, solid construction, with distinctive Coffman hand-wrought inside scroll at newel post. Custom railings also available to your dimensions.

The R. G. Coffman Co., Inc.
Orrido, Florida

Send free catalog of designs, sizes, and prices of your complete line of Coffman Ornamental Iron to:

NAME

FIRM

ADDRESS

CITY STATE

(Continued from page 188)

named secretary and general manager.

Industrial and trade associations who are sponsoring the exposition include Minneapolis Contractors and Builders association, the Electric Appliance Dealers association, Northwestern Lumbermen's association, and the Minneapolis Builders' Exchange.

The exposition, which will be sponsored annually by the newly organized group, will occupy the main and lower floors of the auditorium. Complete presentations of ideas and materials for the planning, construction, remodeling, equipping and furnishing of homes will be offered.

Vice President-Secretary Of Simmons-Boardman Dies

ROY V. WRIGHT, vice president, secretary, and a director of Simmons-Boardman Publishing Corp., passed away July 9. A former New Jersey State Senator from Essex County, Mr. Wright had also been managing editor of Railway Age and editor of Railway Mechanical Engineer, Simmons-Boardman publications. Since 1912, he has edited Locomotives Cyclopedia and Car Builders' Cyclopedia, other magazines of the same publishers.

Mr. Wright was a fellow and former president of the American Society of Mechanical Engineers, and chairman of a committee of that society which conducts an educational program for civic responsibility.

Vermiculite Company Formed In Texas

FORMATION of the Texas Vermiculite Co., to process and distribute Zonolite-brand vermiculite products in Texas, has been announced by A. T. Kearney, president, Zonolite Co., Chicago.

Principal interests in the new organization are the Zonolite Co., and Gerald R. Stark, who will serve as president of Texas Vermiculite. Stark was formerly advertising and export sales manager of Flinckote, New York, and was also vice president of the Patent and Licensing Corp., a Flinckote subsidiary. Since 1945, he has been vice president of B. F. Nelson Co., Minneapolis.

Texas Vermiculite was formed after the acquisition of the Mineral Products Co., San Antonio, processors of vermiculite in Texas. Robert Rice, former president of Mineral Products, is a director and general counsel of the concern.

Porcelain Enameled Cast Iron Bathroom Accessories

A complete line of recessed and screw-on type accessories now available in quantities in standard colors—White, Black and Green. Display board, shown above, No. D-995 furnished at net cost of applied fixtures only, with stock order.

Order from your wholesaler.

ASK FOR CATALOG NO. 9

ILLINOIS PORCELAIN ENAMEL CO.
422 South Winchester Ave., Chicago 12, Ill.
WHY **Keymesh**

Reinforcing for Stucco Overcoating & Plaster

Insures a Stronger, More Durable Wall

---

**Provides stronger reinforcement**—Keymesh is made of strong, copper-bearing steel wire. It's specially woven with a reverse twist—Keymesh lays flat when unrolled. No bumps or bulges to cause uneven thickness of the "scratch" coat. Keymesh is heavily galvanized for protection against corrosion.

**Embeds thoroughly**—The special open mesh design of Keymesh allows each steel strand to be completely embedded by the "mud", insuring lasting strength of the wall. Keymesh is the right size for easy troweling, and the right size for holding the scratch coat firmly while setting. Joins easily with compact, smooth laps. No bumps or high spots in the first or following coats.

**Keeps distance from wall**—Keymesh is easily furred out with special Keymesh furring nails to keep it at a uniform and proper distance from the wall—to insure full thickness of the scratch coat.

**Contractors and builders**—Try Keymesh on your next stucco job. It's easy to handle, doesn't cut hands—saves lather's time. Plasterers prefer Keymesh because it lays flat, trowels easily. Find out for yourself why Keymesh can help reduce your costs. And write for new Contractors Data Book on Keymesh Reinforcing.

Shipped in handy sized rolls, 150 feet x 3 feet. For EXTERIOR Stucco or Overcoating, use: Keymesh—1½" hexagon mesh, 17 gauge galvanized wire, or 1" hexagon mesh, 18 gauge wire. For INTERIOR Plaster or Base for Tile, use: Keymesh—1" hexagon mesh, 20 gauge galvanized wire.

---

Actual section of finished wall reinforced with Keymesh. Note the protruding ends which show how Keymesh becomes deeply embedded in the scratch coat.

Keymesh being applied—note how it unrolls flat without bulging or sagging.

Keymesh easily forms around corners and curved surfaces without buckling.

Keystone Steel & Wire Company
Peoria 7, Illinois
American Floor Machines Opens New York Office

A NEW office has been opened in New York City to handle sales and service exclusively on equipment and supplies manufactured by the American Floor Surfacing Machine Co., Toledo, Ohio, it is announced by W. B. Crew, executive vice president and general manager. T. J. Mueller has been appointed manager of the greater New York area. The office is located at 670 Sixth Ave.

Facilities include a complete service department, with factory-trained service men to take care of all types of repairs and replacements.

Prefab Institute Names New Chairmen


New Lighting Fixture Firm Organized

J. H. Millstein, president of the J. H. Millstein Co., Jeanette, Pa., has announced the organization of a new, wholly-owned subsidiary, the Lightcraft Corp. The new firm manufactures a complete line of lighting fixtures, designed specifically for kitchens, game rooms, dinettes and bedrooms as well as for commercial establishments. It also makes a complete line of portable electric lamps.

Lightcraft Corp. is utilizing the expanded, modern facilities of the parent concern. Production of the new line is already under way and immediate shipments are being made to electrical wholesalers.

Harold L. Pomerantz, formerly with Glassoiler Co., has been named sales manager of the new organization.

New Sales Manager For Walker-Turner

KENNETH F. WHITFIELD, formerly assistant general sales manager, has been appointed advertising and sales promotion manager of Walker-Turner, Division of Kearney & Trecker Corp., Plainfield, N. J. Whitfield is a graduate of Newark College of Engineering and has worked in an executive capacity with Walker-Turner for fifteen years.

Rheem Appoints Two New Vice Presidents

CLIFFORD V. COONS has been appointed vice president in charge of sales, and G. M. Greenwood, vice president and treasurer of Rheem Manufacturing Co., it was recently announced by R. S. Rheem, president.

Coons went to New York as manager of container sales, and since 1945 he has been general manager of sales. He will continue to make his headquarters in New York.

Greenwood, who joined the Rheem Co. in 1941 as treasurer, was made a member of the board of directors later that year.

Bryant Produces New Films On Water Heaters

TWO new sound-slide films showing modern water heater production and features have recently been produced by Bryant Heater Co. of Cleveland, Ohio. The films are being shown by Bryant distributors to dealer groups throughout the nation. They feature Bryant’s new Blue Seal automatic storage water heater. The films are being made available to utility companies, dealer organizations and association groups at nominal cost.

House Magazine Honored

THE “Marlite Dealer,” house magazine published by Marsh Wall Products, Inc., Dover, Ohio, was accorded the Award of Merit by the National Advertising Agency Network and the International Council of Industrial Editors.
CONNECTICUT IN CALIFORNIA... Authentic colonial saltbox reproduced in exact detail by the Bel Air Building Company of Los Angeles. Now on exhibition—this prime example of 17th century architecture features that prime 20th century work-saver... a "New Freedom Gas Kitchen"!

Wherever there's news in building there's a

"NEW FREEDOM GAS KITCHEN"

"NEW FREEDOM GAS KITCHEN"... Compact, cozy—it's as delightful to dine in as it is easy to work in. You can see the shining new automatic Gas range built to "CP" standards, the big 8-foot Servel Gas refrigerator. Unseen—but equally work-saving—is the automatic Gas water-heater which supplies the right quantity and quality hot water to the automatic sink.

"Cert. Mark, Amer. Gas Assoc., Inc.

Here they are... the four simple requirements that make every "New Freedom Gas Kitchen" a best seller

1. START with one of your best step-saving kitchen designs.
2. SPECIFY a new automatic Gas range built to "CP" standards.
3. PUT IN a silent trouble-free Servel Gas refrigerator.
4. PROVIDE constant hot water from an automatic Gas water-heater.

FROM EVERY ANGLE a "New Freedom Gas Kitchen" smooths your way! Makes designing easier, if you're an architect... because new Gas appliances fit smartly into any size or type of layout. Makes your financial risk smaller, if you're a builder... because banks as well as prospective buyers, recognize the higher re-sale value of a house with new super-quality, super-modern Gas equipment. For more details on how to use and profit by the nation-wide "New Freedom Gas Kitchen" program—see your local Gas company or write direct to:

AMERICAN GAS ASSOCIATION, 120 Lexington Ave., New York 17, N.Y.
You can save space -- save money -- save time with rolling doors -- and be assured of a lifetime of easy rolling with HAR-VEY ROLLING DOOR HARDWARE

featuring quality bronze hangers and smooth, silent ball-bearing action -- made in sizes to match any door constructed for residential use.

Modern rolling doors save yards of floor space, offer full use of every square inch of every room, and allow complete visibility for closets. The greater demand for small homes increase their need -- and reduced cubic footage makes an appreciable saving in construction & finishing time and costs. Equipped with Har-Vey Hardware, they are simple to install and provide years of trouble-free fingertip action.

Send today for folder showing varied uses & installation details of rolling doors & complete information on Har-Vey Hardware:

Hardware Division N
Metal Products Corporation
807 N. W. 20th St. Miami, Florida

NAME ____________________________________________
COMPANY ___________________________________________
STREET _____________________________________________
CITY ___________________ STATE __________

YOUR DEALER'S NAME

VIKON METAL TILE
is easy on the estimate!
LIGHT IN WEIGHT...
LASTING BEAUTY!

Tight budget? You can still figure on a generous use of smart, gleaming tile on walls and ceiling of bath, shower, kitchen, utility and game rooms, halls, laundry and so on. For Vikon Metal Tile gives you true tile beauty at very low cost -- and it is so light in weight that walls need no extra strengthening.

These are individual tiles, made of steel or aluminum, with a face of durable, baked-on synthetic enamel in a choice of 27 fade-resistant decorator colors and stainless steel. Will not chip, crack or craze. Highly resistant to the effect of heat and ordinary household chemicals; fire-resistant, water-proof, seal against insects. Many other advantages. Write today for complete information.

See our catalog in Sweet's Files

VIKON TILE CORPORATION, WASHINGTON, N. J.
FOR GARAGE DOOR REMODELING
YOU CAN'T BEAT THE
COBURN

NO. 500 SWING-OVER HARDWARE SET

- The popular, fast-selling No. 500 Hardware Set is adaptable to practically all types of garages.
- It is economical to use on remodeling jobs or new installations.
- It is easy to erect and to operate.
- It doesn't interfere with usable floor space.
- All hardware (except locking handle) is inside the garage.

Send for catalog showing full line of hardware for numerous types of sliding doors—garage, barn, airport, wardrobe, cabinet. Other Coburn Products include fire door hardware, overhead trolleys and conveying systems for carrying loads up to 3,000 lbs.

WICKWIRE SPENCER
HARDWARE PRODUCTS

"American" Brand Insect Wire Screening
Made in standard mesh and in grades to suit every purse and purpose—bright or antique bronze, galvanoid, aluminum and other non-ferrous metals.

"Clinton" Brand Hardware Cloth
Made of cold-drawn carbon steel, heavily galvanized after weaving to give added strength at intersections. In all standard meshes and widths.

Wissco Flexible Clothes Line
Long-wearing, strong, flexible, rust-proof. Smooth, lustrous surface. In 50, 75- and 100-ft. cut lengths.

Perfection Brand Door Springs
Unequalled for toughness, durability and resistance to rust. Looped or hooked ends. Packed in boxes, with hooks for installation in each box.

WICKWIRE SPENCER STEEL
A DIVISION OF
AMERICAN WIRE FABRICS CORPORATION
A SUBSIDIARY OF

500 FIFTH AVENUE - NEW YORK 18, N. Y.

Boston • Buffalo • Chicago • Denver • Ft. Worth • Philadelphia • Pacific Coast Subsidiary—The California Wire Cloth Corp., Oakland 6, Cal.
Just off the press!

Send for your free copy

"White Fir of the Western Pine Region" is a book every builder, architect, wood user, and dealer should have. It tells all about this fine, general utility wood, which is now in plentiful supply and suitable for a multitude of purposes in the industrial and residential construction fields.

The contents of this 56-page book with 66 illustrations include the following—

- A detailed description of the properties and grades of White Fir.
- Photographs of the wood in actual use in residences, commercial buildings, box shooks, cabinets, etc.
- Full-page photographs of the typical pieces of each grade with explanatory text.

The book is indexed and gives a listing of standard manufactured sizes and an alphabetical catalogue of uses for White Fir and the recommended grades for each.

Now's the time to send for your free copy of "White Fir of the Western Pine Region." Address—Western Pine Association, Dept. 140B, Yeon Building, Portland 4, Oregon.

*These are the Western Pines

 Idaho White Pine  *Ponderosa Pine

 *Sugar Pine

These are Associated Woods:

 Larch  *Douglas Fir  *White Fir
 Spruce  *Cedar  *Lodgepole Pine

Well manufactured—thoroughly seasoned—carefully graded—by all Association member mills.

American Builder, September, 1948.
Use the right appeal
to Sell more
bathroom accessories

She appeal A woman
wants the right accessory, whether
it's a flower in her hair or a towel
bar in her bathroom. Catch her eye
with this brightly gleaming chrome
that's so easy to keep clean. Point
out the smartly modern design with
all screws concealed.

P.S. Builders can
make good use of these sales
points in selling new homes.

He appeal A man wants to know
how it works and who's behind it. Tell him how
this chrome won't flake or wear off because it's
tougher, heavier—backed by Gerity's reputa-
tion with big auto makers for the very best in
chrome plating. Show him the self-centering
backplate which gives a better installation in
less time—an exclusive
Gerity patent.

Bigger Sales and
Better Turnover with

EYE-CATCHING
DISPLAYS, TOO!
Write for complete catalog
and price list.

Gerity-Michigan CORPORATION
Adrian, Michigan
INSTRUMENT FOR GREATER INCOME

Faster cutting on the job. Greater accuracy.
Maximum versatility. Constant service...
Comets give all these. They save on every cutting operation—which makes for greater income. Count on Comets for "more cuts per dollar." See your Comet dealer or write direct.

CONSOLIDATED MACHINERY & SUPPLY CO., LTD.
2039-33 Santa Fe Avenue, Los Angeles 31, California

ALUMINUM BUILDING PRODUCTS CO.
1229 SOUTH 41st STREET MILWAUKEE 4, WISCONSIN

USE ATLAS FORMS FOR ANY JOBS FOR MANY JOBS

ATLAS Speed Forms are profitably versatile, they can and will save you to 50% of form and labor costs in the erection of concrete floors, walls, columns, fittings, circular tanks, domes, bins, caissons, bridges, manholes, etc.

Write for money-saving details.
IRVINGTON FORM & TANK CORPORATION
IRVINGTON 16, NEW YORK

INVESTIGATE NOW!
If you have an aggressive organization selling direct to home owners you may be able to qualify for this excellent opportunity!

Aluminum combination windows
- Storms, screens, weatherstripping — in one unit.
- Aluminum construction, hollow insulating section.
- Complete self-storage, removable sill.
- Double-hung design, open in any position.
- Telescoping sill for weather-tightness.

Aluminum combination doors
- Blend with any architectural design.
- Take punishment of all kinds.
- Special aluminum frame for perfect fit.
- Beautify and protect all doorways.

ALUMINUM BUILDING PRODUCTS CO.
1229 SOUTH 41ST STREET MILWAUKEE 4, WISCONSIN
NOW! COPPER FLASHING COSTS LESS THAN YOU THINK!

**IT'S SO LOW IN COST . . . SO ECONOMICAL TO INSTALL, THAT Revere Home Flashing enables even low-cost houses to have the lasting protection of durable, non-rusting copper flashing!**

Revere Home Flashing comes to you packaged, complete, ready for you to install. Each package contains: (1) 10 sheets of Revere Copper, in a special temper and special gauge, pre-cut to 18" x 48", the right size for easy handling and economical installation; (2) enough hardware bronze nails to do the job right; (3) a 16-page instruction book that clearly shows—in words and pictures—the fastest and surest way to install flashing around doors, windows, chimneys, and adjacent wall and roof joints.

And Revere Home Flashing offers you much more than economy. For it adds an important sales point to every house; it enhances the reputation of the builder as a user of quality materials; it assures complete satisfaction for the owner.

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- Light in Weight—Weighs about 25 lbs.

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It is mounted higher for convenient use by the operator. The matching Blade is matched and sharpened from high grade steel or low grade steel.
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- Punch will last after a day's work, will hold its edge.

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*General Electric's registered trade-mark for its food-waste disposal appliance.
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The National No. 240 Ball-Bearing Floor Hinge construction is radically different from other floor hinges. The part which bears the weight of the door and the spring closing feature are independent of each other, although necessarily combined. In this hinge the pressure of the spring is not against the bearing carrying the weight of the door, but is absorbed by a 1-inch case-hardened roller, which prevents wear on the hinge bearing. Keeps the door firmly in center of opening when at rest. Pivot for the top is attached by simply boring five ⅜-inch holes. Requires no chisel.

No measuring or mortising is required to mount pivot plate to head jamb. Simply place end against jamb and insert three screws.

Reversible side plates are furnished with this hinge. A jamb plate can be furnished when concrete floors are used.

No. 225 Push Plate—Made of wrought steel with wide beveled edges. Highly polished. Slightly bowed to force center and ends tightly against door when screws are inserted.

Your National Dealer will co-operate in supplying as many of your hardware requirements as possible.