Labor-Saving Tools and Equipment at Work
New Celotex Advertising Campaign Clicks!

...Thousands of prospective home owners writing for timely information on Building NOW!

Builders all over the country tell us that the tremendous new campaign which Celotex has launched to stimulate building activity is the most constructive advertising they've seen in years—that it's bound to benefit everyone in the industry!

And that's not all. Home-building prospects from coast to coast are enthusiastic, too! They've read, and responded by the thousands, to the smashing 2-PAGE SPREADS which Celotex is publishing in THE SATURDAY EVENING POST, BETTER HOMES AND GARDENS, SUCCESSFUL FARMING, PROGRESSIVE FARMER, and other leading magazines.

As a result, Mr. Builder, more and more of these people are thinking seriously about building now! This means more prospects for you because in every one of the big 2-page ads, Celotex points you out as one of the key men to consult and depend upon when building.

An opportunity such as this is too good to neglect! So act now to make the most of it. See your Celotex dealer. Examine the Celo Charts which these thousands of prospects are requesting. And get full details on how you can work with your Celotex dealer to your greater mutual profit!
Hampton Village Medical Center, St. Louis, Mo., equipped with beautiful, low-cost Fenestra Steel Residence Casements. Builder Vollmar writes that Fenestra Casements solved a special problem—sash installation after brickwork had been completed. He added that maintenance of this sturdy sash is practically nil and that the owners were very pleased with the ease of operation. Architect: Preston J. Bradshaw, St. Louis. Contractor: Theodore M. Vollmar, St. Louis.

No Wonder Fenestra Casements win the approval of architect, builder and owner.

Slender muntins help carry out the flowing horizontal lines of today's architecture. Perhaps that's why so many architects are specifying Fenestra* Steel Residence Casements for distinctive new buildings.

Add to that the ease with which Fenestra Casements are installed—as single units or as whole walls of combined units—and you have one of the reasons for Fenestra's popularity with builders.

Owners like the ease of operation ... the simple twirl of a Roto-Adjuster that swings casement leaves out to sweep in passing breezes. Fenestra Casements never stick or warp or swell, because they're steel. They are washed, screened, storm-sashed from inside.

Precision manufacturing methods and Bonderizing and prime painting for rust prevention cut maintenance to a minimum.

But perhaps even more important—to architect, builder and owner alike—is Fenestra's lower cost. Standardization of types and sizes streamlines production ... actually gives you higher quality for less money. Yet production volume permits plenty of variety.

Take advantage of these benefits. See your nearest Fenestra representative for window types and sizes, or write to Detroit Steel Products Company, Department AB-5, 2260 E. Grand Boulevard, Detroit 11, Michigan.

*®

Fenestra

RESIDENCE STEEL CASEMENTS
No visible face nailing! No nails to countersink. No nail holes to fill! No joints to tape!

Amazing Upson Floating Fastener anchors panels securely from the back. Designed to compensate for normal structural movement.

Want to speed up your house jobs? Have beautiful crackproof walls and ceilings?

Want to reduce your costs by finishing jobs weeks ahead of normal building schedules?

Then look at Upson dry-built full-wall construction!

Use Upson Strong-Bilt Panels in full wall sizes. Have carpenters, already on the job, go right ahead with the application of interior walls and ceilings, any month of the year in any climate. No water, no plaster, no drying out period.

Here truly is a major contribution to the Economy Home! An acknowledged improvement in wall and ceiling quality that does not add to either material or labor costs. A construction method demonstrated in more than 1,000,000 walls and ceilings. A material proved by 10 years of use. F. H. A. accepted!

Strong-Bilt is a sturdy, 6-ply panel approximately 5/8" thick—laminated for strength and rigidity. Impregnated with gums, resins and oils. Has beautifully pebbled surface pre-sized at the factory. Made in standard and full wall sizes—8' wide by 12', 14', 16' and 18' long.

Independent authoritative tests show insulation value 3.2 times greater and impact resistance up to 6 times greater than boards of similar thickness having a mineral core.

Plan! Build! Act now! Don't miss your opportunity in dry-built full-wall construction. Send the coupon now! Our representative will help with your first job.


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STATE
Volume 71

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Number 5

In This Issue

Publisher's Page .............................................. 7
Dishonest Price-Tag ........................................ 7

Monthly Review of NAHB ................................. 69

Editorial ....................................................... 75
A Little Public Housing

Features

Labor-Saving Tools and Equipment Mean Much to the Builder .... 76

Labor-Saving Tools and Equipment At Work ..................... 76

Power Tools Help California Builder Achieve Maximum Output

Getting The Most Out of Power Equipment ....................... 80

Proper Handling Required To Achieve Maximum Efficiency with Power Tools

Building with Power Tools ..................................... 83

Advantages of Power Tools in Construction Field Quickly Recognized by Two ex-G.I.'s

Modern Equipment Cuts Cost ................................... 86

600 Moderate Priced Homes Completed in Year Through Use of Power Tools

List of Manufacturers of Contractors' Equipment ................. 89

A Blueprint for Better Living .................................. 90

Norman R. Johnson Designs Blueprint House of the Month

Sheltered Entrances Are Worth Sacrifice of Space .............. 95

Entrances That Are Integral With House Design Are Assets to Homes

Open Planning—The Answer to Small Houses .................... 98

Illusion of Larger Rooms Obtained Through Use of Door Height Partitions

When A Builder Builds His Own ................................ 102

Advanced Ideas in House Design Incorporated Into Home of Builder

Wood Flooring Developed to Use With Radiant Heat ............ 106

"It Pays To Be Careful—Together" ................................ 108

Many Advantages Accrue to Builders Through Association Group Insurance

Materials Handling Methods Make Precutting Profitable .......... 110

Low-Cost Housing with Style and Quality ....................... 112

Tucson Builder Provides Low-Cost Homes Without Sacrificing Quality

Contractors Get Quick Service .................................. 115

Lumber Yard Provides Every Kind of Item for the Home

Construction Outlook for 1949 ............................... 116

Herman B. Byer Forecasts a Building Year Marked by Adjustment and Stabilization

Dramatize Your Project for National Home Week ................ 117

Ideas Advanced on How Builders Can Obtain Greatest Benefits from Week

Shopping Center for Established Community .................... 118

Individuality is Essential to Stores in Shopping Center

Ranch Style in Block and Brick .................................. 119

Buffalo, N.Y., Builder Successfully Specializes in Ranch Style Homes

Engineered House Construction, Part VI ......................... 120

How to Properly Construct Exterior Walls

The Swinging Pendulum .......................................... 124

R. E. Saberson Points to Danger of Over-Production in Houses

New Products .................................................. 144

Departments

Trends .......................................................... 55
Easy Financing Will Do It

On and Off the Record ......................................... 59

Editors' Round Table .......................................... 61

Technical Guide, How-To-Do-It and Better Detail Plate .......... 126

Dealer Review .................................................. 136

Catalogs ......................................................... 138

Index to Advertisers ........................................... 246
AT LAST! A NEW WEATHER STRIP

that just slides into place!

Mack says...

NOW ANYONE CAN BUILD PRE-FIT UNITS FROM KD STOCK!

TWIN-CUSHION WEATHER STRIP

Never before a strip so easy and quick to install ... so profitable to use

COMPLETE COVERED JAMB This sensational new weatherstrip is a solid unit side jamb cover of heavy white metal with a spring bronze cap over the parting stop area. As illustrated at the right and lower left, the spring cap has two wings extending out and under each sash to form a weather-tight, constant seal. Windows never stick or bind with Twin-Cushion. Eliminates wood parting stop. Use with any type sash balance.

Imagine a weather strip that can be used on any regular KD Stock Jamb or plain unrabbeted Jamb! Imagine a strip that requires no special milling of sash or jamb, no special machinery, equipment or specially trained labor to install! Now anyone can build pre-fit units from regular KD Stock. Installed for one-half ordinary labor cost!

It does sound too good to be true, but that's exactly what TWIN-CUSHION offers you! Furnished in pre-fit packaged sets—screw holes punched, sash plugs attached, complete with screws and installing instructions—ready for quick installation. No wonder they say it's the quickest, easiest, most profitable weatherstrip on the market for you to use!

Send for your FREE copy of our illustrated brochure and prices today!

PROMPT SHIPMENT MADE ON ALL ORDERS

MACKLANBURG-DUNCAN CO.

OKLAHOMA CITY 1, OKLAHOMA
Barbara Ward, youthful and articulate foreign editor of the London "Economist"—a brilliant but perhaps not excessively profound observer—in the New York Times Magazine a few weeks ago fired a polite volley at the "welfare state," where more and more services are "free" to the beneficiaries, but not to the taxpayers.

Miss Ward was not writing just about her native Albion either; she reminds us that "the most powerful democracy in the world, the United States, is also committed to a considerable degree to the same policy." The central idea of the "welfare state" is that a large proportion of the national income is taken away from those with the ability and the gumption to provide for their own necessities, and is passed around among the improvident, the unenterprising, and the unfortunate, so that nobody is denied a living of an honest dollar.

The provision for a minimum income is supplemented in Britain by "free" medical care, a considerable extension of "free" education, and with food and housing bearing a price-tag representing only a fraction or less of the total cost—they simply invite people to clamor for things which use up a lot of labor and materials and turn away from things which might satisfy their wants almost as well, but which are less wasteful of labor and material.

Once let government step in and start subsidizing some product or service, adding the cost to taxes, and an end comes to using labor and material most efficiently—because the subsidized articles and services are made to look deceptively cheap to consumers, while the goods and services which are taxed to provide the subsidies have their price-tags arbitrarily marked up.

Housing in this country has always been the sufferer from the practice of charging so large a part of the cost of state and local government to real estate taxes, combined with the successful effort of special interests to get sales taxes and other "earmarked" for some exclusive purpose, e.g., such as spending gasoline taxes solely on highways.

Subsidies work a double hardship on the people who do not get them (1) by making the products they produce and sell competitively unattractive compared to the goods that are subsidized, and (2) by making the whole community less well off than it would otherwise have been—since production and consumption of economical products is discouraged in favor of those which use up more labor and material.

The most encouraging sign of the times is the willingness more and more people are showing to think through such questions as these, and then to object vigorously when their study shows them how they and the country are being imposed upon by "welfare state" demagogues.

James G. Lyne
President, Simmons-Boardman Publishing Corp.
You can climb them all—BUT

One is RIGHT for the job

In order to save time and money on the job, you naturally select the right ladder to get you up to where you want to go. For the same reasons, contractors who use one of the seven Medusa Job-Fitted Cements rather than a regular cement, get better results at lower cost. These builders are using the Medusa cement especially prepared for the type of work at hand ... consequently, the job is done faster, better and frequently at lower cost. For instance, if you want a beautiful, weathertight masonry wall, don't use just any cement—select Medusa BrikseT Masonry Cement. This cement contains a minimum of alkalies, eliminating unsightly efflorescence caused by mortar. It also makes mortar with minimum shrinkage during hardening, thereby preventing ugly separation cracks. BrikseT has these qualities because it's carefully prepared at the mill especially for masonry work.

Or, if you want a finer, whiter stucco construction, use Medusa Waterproofed Gray Portland Cement and Medusa Waterproofed White Portland Cement for the finished coat ... the waterproofing material ground in at the mill repels dirt, rain water at the stucco surface.

Your dealer can tell you of the various uses of other Medusa Job-Fitted Cements. Check the coupon below and we will send information on any or all Medusa Cements. If you are uncertain about the proper cement for certain work, just drop us a line.

*When not available, use Medusa Waterproofing Paste or Powder.

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Write for these FREE books
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Look at these simple steps outlined in two publications just off the press: Plan your houses for greater sales appeal; equip them for quick acceptance; provide simplified fuseless wiring system and look to Westinghouse for help.

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Better Homes Bureau
Westinghouse Electric Corporation
P.O. Box 868, Pittsburgh 30, Pa.

Please send my free copies of "How to Make Your House the Hit of the Home Show" and "Planning Book for Electrical Living Homes".

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A COLD CUSTOMER WON'T BRING IN HOT PROSPECTS

Satisfied owners of the homes you have built are far and away your best sales-getters. You use good design in your homes, you build and equip them well. You go to great lengths to produce houses that will sell and stay sold. But do you give enough attention to the one thing that can make or break your home? Yes, a poorly heated home can sour an owner faster than anything else you can name.

HEIL Means Satisfaction
Heil's new oil- and gas-fired winter air conditioners and oil-fired boilers are engineered and built for more satisfaction. You'll find that they are quieter. You'll find that they use heavier gauge steel, more careful welding, closer tolerances—for longer life. Heil units are famed for their uniform heating—they even incorporate refractory chambers to hold heat between burner "on" periods. More heating surface in all

Heil units means lower fuel bills, eliminating another common complaint.

You Profit More with HEIL Automatic Heat
Heil units are honestly and adequately rated, so you don't need to pay a premium for oversize units to be safe. Factory wiring and pre-assembling of small and medium-sized units cuts installation time, results in a neater job.

Heil units use less space, fit neatly even in first floor utility rooms. Their smooth, handsome lines and baked enamel finish adds to the beauty of your homes. Yes, any way you look at it, you'll be ahead with quality automatic heating in your homes—HEIL Automatic Heating.

You'll be interested to know about two special propositions Heil has for builders. Write Heil, Department 8259, today, for full information. You'll profit from it!

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Why do floor layers swear by

Bradley STRAIGHT LINE Hardwood Flooring?

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- No Crook . . . No Offset Angle End Matching
- Improved Tongue and Groove Design
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- No Nailed-in Tension to Open Up Later
- Proper Seasoning . . . No Buckling or Shrinking
- Natural Figure and Texture Retained
- A Flush Surface that Stays Put
- A Beautiful Finished Floor

These are the basic requirements by which Bradley constantly strives to produce a better flooring . . . these, the reasons why Bradley Brand is regarded by builders who know as the Standard of Comparison in Hardwood Flooring.

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WARREN, ARKANSAS
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avoid condensation problems!

Weight load on ceilings less than 1 oz. per sq. ft.

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You add real value with this aluminum insulation. It reflects radiant heat—keeps homes cooler in summer, warmer in winter. And it's your best bet as a vapor barrier to prevent condensation. Large building developments everywhere have taught builders—and buyers—the value of Reynolds Reflective Insulation. It cuts costs, in labor and materials. It's windproof, waterproof, odorless.

Aluminum bonded to one or both sides of tough Kraft paper. In handy 250-ft., rolls 25", 33" and 36" wide.

Meets minimum F.H.A. requirements.
"and believe it or not
ROOM-DARKENING too!"

Columbia’s room-darkening window shades revolutionize light control. They’re decorative and functional, too. Sturdy, long-wearing ... with the additional special talent of shielding a room from light.

Look for room-darkening shades in Columbia’s REGAL grade. Made of high-count cambric, with a truly beautiful “hand” and a smooth, dust-shedding surface. Economically priced ... and easily washable for thrifty maintenance. In light as well as dark colors.

See Columbia’s VELLMO, too, a super quality grade, so completely lightproof that it’s standard for such uses as X-ray rooms. And here’s the surprise ... VELLMO boasts high-style pastels and dazzling white. Any size you need up to 150 inches wide!

Columbia Window Shades and Venetian Blinds are sold only in leading department and furniture stores and shade shops designated as Columbia Authorized Dealers. May we send you samples of our room-darkening shades and the name of the Columbia Authorized Dealer nearest you? Write today.

Perfect for

- hotel rooms,
- hospital rooms,
- housing projects,
- school rest rooms, auditoriums,
- recreation and convention rooms with television sets.

Columbia
WINDOW SHADES
AND VENETIAN BLINDS

The Columbia Mills, Inc. • 428 South Warren Street, Syracuse 2, N. Y.
YOUR COSTS COME DOWN WITH EVEREADY BRIKSaw

Cut WET or DRY

Now you can have Dust-Free masonry cutting whenever you want it! Take your choice of EVEREADY BRIKSaw completely equipped—Or reduce first costs by buying BRIKSaw for standard dry cutting only—Later install inexpensive Wet Cutting Kit.

WRITE FOR NAME OF NEAREST DISTRIBUTOR

LOW COST in FIRST COST in OPERATING COST

ANY CUTTING POSITION
With effortless speed you shift the Cutting Head from one “Adjusta-Height” Notch to another to cut: Quarry Tile—Brick—Partition Tile—Concrete Block.

AUTOMATIC BLADE PRESSURE
Longer blade life, faster cutting with patented Blade Pressure Equalizer Spring that automatically adjusts blade cutting pressure.

INSTANT “HEAD LOCK”
A few turns of the handle locks head in a fixed position.

EXCLUSIVE “TOE-MATIC”
A light upward tilt of the Foot Treadle—and you set Head to any desired angularity.

EVEREADY BRIKSaw Blades
For every masonry material—from Bricks to Porcelain, from Glazed Tile to Concrete Blocks—there is an EVEREADY BRIKSaw Blade (Abrasive or Diamond) to give top cutting performance WET or DRY.

On almost every masonry material, operator has his choice of these different cutting conditions:
1. Standard Cutting Speed—Standard blade life. 2. Faster Cutting Speed—somewhat shorter blade life. 3. Longer Blade Life—somewhat slower cutting speed. Remember: There is an EVEREADY BRIKSaw Blade for every and every type of masonry cutting!

EVEREADY BRIKSaw Company
1505 S. Michigan Blvd., Chicago 5, Illinois
These Two* Grades of

Douglas Fir

PLYWOOD

Will Speed and Improve Your Flooring Jobs!

PLYSCORD . . . for smooth, tight, rigid subfloors that are laid faster and provide a superior base for finish flooring.

For the perfect subfloor, use Douglas fir plywood PlyScord—identified by the "grade-trademark" shown above. The big panels of PlyScord cover joints quickly, providing a smooth, even surface that's extra rigid, extra strong, tight and draft-free. PlyScord cuts application time and costs; contractors report that PlyScord can be laid in half the time required for other subflooring. It saves up to 50% on nailing, up to 60% on sawing and fitting. And the finished flooring job will be better because PlyScord won't warp, cup, squeak or shrink. PlyScord should be specified, too, for wall and roof sheathing—to insure stronger, tighter, more rigid construction.

PLYBASE . . . a new grade, for a smooth, firm, rigid base under linoleum, asphalt tile and other wall-to-wall coverings.

Yes—floor coverings such as linoleum, tile, carpeting, and other wall-to-wall materials will look better and last longer when laid over PlyBase. The smooth, firm, solid panels reduce joints to a minimum, virtually eliminating ridges and uneven wear. In addition to new construction, PlyBase is ideal on remodeling jobs, as a smooth base over old, worn, uneven surfaces. And for walls, PlyBase presents a smooth, solid backing surface for tile and other coverings. Sanded smooth, PlyBase is readily identified by the "grade-trademark" shown above. Let it speed—and improve—your next job!
THERE'S A NATIONAL ELECTRIC FLEXIBLE WIRING SYSTEM for every housing job

2 TYPES OF NE BUILDING WIRE

Dilec Safecote (Type 8) Rubber insulation covered with a flame-resistant, saturated fibrous serving. The durable colored coating is marked and measured . . . Free stripping . . . Moisture resistant . . . Smooth finish for easy fishing . . . A quality-built wire for general building purposes.

NE Thermo-plastic (Type TW) High resistance to moisture, acids, alkalis, oil and grease . . . Wide range of permanent colors, marked and measured . . . Use NE Type TW where conditions are unusually moist or hot.

2 TYPES OF GALVANIZED, FLEXIBLE-STEEL ARMOR PROTECTION

Flexsteel—Flexible Steel Conduit. Used with either Dilec Safecote or NE Thermo-plastic wires, Flexsteel provides an approved, grounded pull-in and pull-out system. Rounded channel construction makes fishing easy. A conduit system with no waste.

A.B.C. (Armored Bushed Cable) Besides the grounding provided by the "bondhook" channel construction of A.B.C. Cable, sizes 14 and 12 also have a low resistance grounding strip. Anti-short bushing protects conductors against sharp cut edges of steel. A.B.C. is furnished complete with Dilec Safecote or NE Thermo-plastic wire.

2 TYPES OF NON-METALLIC SHEATHED CABLE

Canvas-Back Loomwire—A new, small diameter cable that eliminates paper stripping. (No kraft wrappings to strip back). Has a saturated, fire-resistant cotton braided sheath. Each conductor carries full insulation to the terminal screw.

NE-o-Prene Loomwire—The first Neoprene-sheathed Loomwire to be listed by Underwriters' Laboratories, Inc. Ideal for barns and other wet locations where rot, fungus, moisture, ammonia-laden air and drastic weather changes are destructive to other types of approved wiring. The toughest, most durable non-metallic sheathed cable available.

Sold through leading electrical wholesalers
Installed according to National Electrical Code.
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 5,000 lbs.
Hold down floor costs
WITH BRUCE FINISHED FLOORS

Builders report savings up to $100 and 3 working days per house

Everybody wants to hold down building costs to hold up building volume. One way to do this is to use Bruce Finished Flooring. Builders say it saves up to $100 and 3 working days on every house they build ... because there's no costly, time-consuming sanding or finishing on the job. Owners praise the quality of Bruce Finished Flooring, the beauty and durability of the wonderful new 1949 finish. For complete information, write E. L. BRUCE CO., MEMPHIS, TENN.

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With the new improved 1949 finish

Product of E. L. Bruce Co., Memphis, Tenn., World's Largest Maker of Hardwood Floors

Bruce Also Makes Block Flooring, Strip Flooring, Random-width Planks, Hardwood Moulding and Trim, Pine and Hardwood Lumber, Furniture Parts, Cedaline Closet Lining, Everbond X Mastic, Terminix, Floor Care Products.
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Facts About
Thermal Insulation... for Architects, Builders and Engineers!

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Here it is!

THE NEW, LOW-COST

PORTABLE SAW-SHOP you've waited for!

This new, 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.

Light in weight (about 200 lbs. net), this DeWalt is nevertheless perfectly balanced. It is equipped with the entirely new and exclusive DeWalt-built, voltage-relay capacitor motor which operates on either 110 or 220 volts—a motor which develops 2 1/2 to 3 times the horsepower it's rated for. It is a motor you can depend on for continuous, trouble-free service.

What's more, this DeWalt can be equipped with legs for inside shop use. With this DeWalt, your men will help you set new standards of performance and quality in building your houses better, faster and at lower costs.

Order one now for immediate delivery. Write for catalog. DeWalt, Inc., 15 Fountain Avenue, Lancaster, Penna.

DeWALT

THE SAW THAT'S FIRST WITH BUILDERS
No need to pay extra design and fabrication costs for specially constructed sash for individual projects. You can now get ready-made stock sash for Thermopane*. It comes to the job complete, either glazed or ready for glazing with Thermopane, ready to install in the same way as regular single-glazed sash. In wood or metal:

**DOUBLE-HUNG**
**CASEMENT**
**PICTURE WINDOW**
**AND OTHER COMMON TYPES**

The availability of this sash makes it easier for you to fill the growing demand for Thermopane for windows of all types.

More than 60 manufacturers are now making standard sash for Thermopane in a wide range of stock sizes. More will be in production soon.

If your supplier does not yet have ready-made sash for Thermopane, urge him to stock it. Or write us for a list of sash manufacturers.

---

American Builder, May 1949,
DON'T OVERLOOK THESE PROFIT-MAKING ITEMS!

ORDER NOW!

**Nu-WAY SCREEN DOOR GRILLE**

Another sturdy, attractive screen door grille that anyone can install in 5 minutes. Furnished in flexible black enamel finish, fully assembled, ready to install.

**Nu-WAY PUSH GRILLE**

Here's an easy companion sale to screen door grilles. This very ornamental grille in silvery satin finish is made for 32" and 36" doors. Packed 12 to a carton, and screws furnished with grille.

**ATTRACTIVE Nu-WAY SHELF BRACKET**

An attractive, yet durable shelf bracket for many uses. Beautiful permanent silvery satin finish will not rust or corrode. Simple to install—one pair, 2 screws—holds shelf easily. Made for 4", 5", or 6" standard glass or wood shelving.

**FIT-ALL ADJUSTABLE SCREEN DOOR GRILLE**

Keep those screen door grille profits rolling your way with the

- FULLY ADJUSTABLE
- EASY TO INSTALL
- SILVER SATIN FINISH
- STURDILY BUILT
- ARTISTIC DESIGN

These beautiful FITS-ALL Screen Door Grilles have a wide sales appeal. Made of Alacrome metal, with a silvery satin finish that enhances the beauty of a door. Will not rust or corrode. Sturdy construction not only protects screen, but acts as a rigid brace two ways. Packed 12 to a carton. Comes complete with screws ready for anyone to install.

**NO. 1 FITS-ALL STANDARD GRILLE FOR ALL DOORS**

The No. 1 FITS-ALL Grille will fit nearly any door. Can be adjusted from 18" to 37" between stiles as shown on door at left and door shown at top of ad.

**NO. 2. Our No. 2 FITS-ALL is furnished in pairs for the lower panels of screen doors with divided lower sections such as the door at the left. Fits doors from 30" to 36" in width. Packed 12 to a carton.**

**NO. 3. Our No. 3 FITS-ALL is for the lower section of screen doors with a center crossbar like the one at the right. Fits doors from 30" to 36" in width. Packed 12 to a carton.**

Your order will be shipped same day received!

MACKLANBURG-DUNCAN CO.
OKLAHOMA CITY 1, OKLAHOMA
Announcing

ANOTHER GOLD BOND FIRST!

WITH the rapid stapler application for insulation batts, the strength of the paper flange became an increasingly important factor—particularly for overhead application. So Gold Bond Research went to work!

Today, Gold Bond Rock Wool Batts have a double-thick paper flange which will support more than the weight of the batt in any position. In addition, the flange can not be easily damaged by stapler or hammer during application. So once again, National Gypsum leads the way with another first in better building products!

Give your customers the best! Always use Gold Bond Rock Wool Batts!

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.

FIREPROOF
as the rock from which it's made!

FULL-THICK
for real firestop and efficiency!

VAPOR BARRIER
is part of the Batt!

You’ll build or remodel better with Gold Bond
USE ONE HAND OR BOTH!

SKIL Saw

is easier to operate in any position!

With SKIL Saw you make any cut in the way that's most convenient for you. On all ordinary cuts, SKIL Saw's perfect balance assures easy, one-hand operation with the rear handle. On overhead or other unusual cuts you get the safe, sure control of SKIL Saw's scientifically placed extra handle.

With one hand or both... SKIL Saw is easier to use because it's lighter, more compact, more powerful. Seven fast-cutting models with capacities up to 4½ inches in wood. Ideal, too, for cutting metals, tile and compositions; for scoring stone, marble and concrete. Ask your SKIL Tool Distributor to demonstrate SKIL Saws today.
THE MASON'S TROWEL TELLS HIM

ATLAS MORTAR CEMENT IS SMOOTH

The first stroke of the mason’s trowel tells the story...gives proof of the smooth, buttery plasticity of Atlas Mortar Cement. Contractors also appreciate the satisfactory yield, the strength and fine color of Atlas Mortar. Its outstanding durability is proved by rigid laboratory tests.

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

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

OFFICES: Albany • Birmingham • Boston • Chicago
Dayton • Des Moines • Kansas City • Minneapolis
New York • Philadelphia • Pittsburgh
St. Louis • Waco
TIMKEN
Silent Automatic
is FIRST with the BEST!
Revolutionary new
KITCHEN-TYPE
OIL BOILER
—supplies automatic heat and hot water for four- and five-room homes and is so compact and quiet it may be installed IN THE KITCHEN!

Here's the most important small-home heating news in years—the new Timken Silent Automatic Kitchen-Type Oil Boiler! Finished in gleaming white—for kitchen installation—this extraordinary unit combines a house-heating boiler, fired by the famous Wall-Flame Oil Burner, an instantaneous water heater, an expansion tank, a motorized circulating pump, a tempering valve and complete automatic controls. It is completely enclosed in a beautiful counter-high cabinet topped by a stainless steel work surface. It covers a floor area of only 25 x 30 inches.

Think of the sales appeal this unique factory-assembled heating package will give your new small homes! Best of all, it's priced to help you cut costs and offer better houses at lower costs. Here's proof again that it pays to install Timken Silent Automatic! Write today for complete information.

SPECIFY SPENCER FOR—

all-weather comfort and security

What a grand and glorious feeling when you put the finishing touches on your new building by seeing that plans call for the finest in heating facilities. With Spencer "A" Steel Heating Boilers, you can assure clients of clean, effortless operation at low cost all year round.

Precision engineering and long experience have developed many outstanding features in Spencer "A" Steel Heating Boilers. To name just a few—

- Available in a complete range of capacities (from 1,500 to 42,500 square feet, steam)
- Patented Spencer service—water heating method
- New frame design, with heavy-duty, precision-ground doors
- Tube position staggered, to speed water circulation
- Larger sizes can be cut in half for traversing narrow openings
- Specially designed interchangeable grates

THERE IS A SPENCER FOR EVERY BUILDING ... FOR EVERY FUEL

COMMERCIAL SERIES:
- "A" (steel)—for industry, schools, apartments
- "L-2", "L-3" (cast iron, magazine feed)—for large homes, churches, apartments

RESIDENTIAL SERIES:
- "C" (steel) and "21" (all-purpose, cast iron)—for homes, small buildings
- "F" (cast iron, magazine feed) and "R" (steel)—for small homes

THE SPENCER MARK OF ENGINEERING SKILL

* All Spencer Heaters are High Standard Avco Products—
- Backed by over fifty years of heating experience
- Manufactured under ASME, IIB, and SBI codes
- Precision-engineered—to meet rated specifications
- Individually tested and inspected
- Installed only by the heating trade
- Clean—Quiet—Economical—Effortless—Safe
A name with a future

PEOPLE have confidence in the builder or lumber dealer who handles products they know. This confidence makes a whole house, or a bill of materials, easier to sell. Armstrong's national advertising has helped sell Temlok® Sheathing and homes built with it. These full-color advertisements go regularly to more than 5,000,000 readers of The American Home and Better Homes and Gardens. They explain how Temlok makes homes strong and comfortable.

Most of these readers know very little about any kind of sheathing. Many of them don't even know what part it plays in home construction. But when they read that Temlok Sheathing provides both strength and insulation, in one economical material, they want to know more about it. Sooner or later most of these people will be looking for a builder with the kind of home they want to buy.

That's why, last month, we increased the size of these Temlok Sheathing ads to full pages. Now, more than ever, a home built with Temlok will be easier to sell. For full details and samples of Temlok Sheathing, see your Armstrong lumber dealer. Or write Armstrong Cork Company, 1605 Ross St., Lancaster, Pennsylvania.
### House Beautiful Retains Advertising Leadership

**Active Home Market Continues to Produce Outstanding Results**

Publication of total advertising figures for all magazines during 1948 revealed that, for the sixth consecutive year, *House Beautiful* again led all magazines in advertising space devoted to home furnishings. The figures for the eight leading magazines as reported by PIB are:

<table>
<thead>
<tr>
<th>Magazine</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>House Beautiful</td>
<td>557.3</td>
</tr>
<tr>
<td>House &amp; Garden</td>
<td>440.3</td>
</tr>
<tr>
<td>Better Homes &amp; Gardens</td>
<td>276.2</td>
</tr>
<tr>
<td>Ladies' Home Journal</td>
<td>232.8</td>
</tr>
<tr>
<td>Life</td>
<td>203.7</td>
</tr>
<tr>
<td>Good Housekeeping</td>
<td>188.9</td>
</tr>
<tr>
<td>American Home</td>
<td>141.2</td>
</tr>
<tr>
<td>Saturday Evening Post</td>
<td>97.0</td>
</tr>
</tbody>
</table>

This continued leadership endorses the fact that the active market represented by *House Beautiful* is a primary source of sales for manufacturers of home furnishings and equipment. The unique editorial formula of *House Beautiful* is aimed directly at families who have a desire to improve their living conditions. The function of *House Beautiful* is to fan this urge into action at the point-of-sale for all types of home merchandise. Its ability to create this Sales Action is also borne out by the advertising leadership *House Beautiful* enjoys in subclassifications of home furnishings.

Here is the record for 1948:

<table>
<thead>
<tr>
<th>Classification</th>
<th>Lead Over 2nd Mag.</th>
</tr>
</thead>
<tbody>
<tr>
<td>China, Glass &amp; Pottery</td>
<td>14.1%</td>
</tr>
<tr>
<td>Silverware &amp; Metal-ware</td>
<td>27.2%</td>
</tr>
<tr>
<td>Furniture</td>
<td>17.9%</td>
</tr>
<tr>
<td>Floor Coverings</td>
<td>2.4%</td>
</tr>
<tr>
<td>Carpets &amp; Rugs</td>
<td>17.3%</td>
</tr>
<tr>
<td>Draperies, Curtains &amp;</td>
<td>34.8%</td>
</tr>
<tr>
<td>Upholstery Fabrics</td>
<td>16.3%</td>
</tr>
<tr>
<td>Beddings &amp; Linens</td>
<td></td>
</tr>
</tbody>
</table>

### They read

*House Beautiful*

because

they want the finest

building materials

and they get the finest because they read

**House Beautiful**

The magazine that creates more Sales Action

### Don't let your wife read House Beautiful

unless you want her to buy a house

**House Beautiful**

The magazine that sells both sides of the counter

**He reads**

*House Beautiful*

because

he builds houses

and he builds more houses because he reads

**House Beautiful**

The magazine that sells both sides of the counter
Like the famous 20th Century Limited of the New York Central Railroad... the new Sterling Century Sander gives you speed, quality and dependable service.

Sand cabinets, dry wall construction, window and door trim—all types of building work—with the new low cost Sterling Century. Weighing only 4 3/4 pounds it permits easy, one hand operation for vertical or horizontal sanding. Only 4 inches high, it gets into those hard-to-reach spots. A powerful, vibration-less tool, built for long, continuous use.

Sterling performance and quality at low cost. Send coupon for new Century catalog now.

The Century's pad speed is 5000 r.p.m.—plenty of power to assure fastest, most uniform sanding. Pad quickly loads with 1/2 of standard abrasive sheet.

The Sterling Tool Products Co.,
1334 A Milwaukee Avenue, Chicago 22, Illinois

Canada: Terminal Warehouse Bldg., Dept. 10, Toronto, 1

Send me the new Century catalog.
"SURE, tenants are easy to get today," says Francis J. Schroedel, prominent Milwaukee, Wisconsin builder and apartment house owner. "But will they be tomorrow?"

TO ASSURE FUTURE DEMAND for his beautiful new Estabrook Estates, Mr. Schroedel is equipping each of its 200 apartments with a complete Hotpoint All-Electric Kitchen. For average rents of approximately $100 a month, future residents will enjoy the advantages of a Hotpoint Automatic Electric Dishwasher, Hotpoint Electric Disposall®, Unit, full-size Hotpoint Automatic Range, brilliant Hotpoint Refrigerator and matching Hotpoint wall and base cabinets.

BUILDERS AND ARCHITECTS interested in making new homes most attractive to today's value-wise buyers are likewise taking advantage of the extra sales appeal of Hotpoint All-Electric Kitchens. Why not investigate this profit-making opportunity now? See your Hotpoint distributor or dealer...or write to Hotpoint Inc. (A General Electric Affiliate) 5600 West Taylor Street, Chicago 44, Illinois.

Everybody's Pointing To Hotpoint

Hotpoint PIONEER OF THE ALL-ELECTRIC KITCHEN
Now, there's a way to help stretch precious working hours and slash your wiring costs, without sacrificing quality—General Electric PVX® nonmetallic sheathed cable.

Look at these features and you can easily see why PVX has fast become standard almost everywhere for open and concealed work. More and more cost-conscious builders are discovering that General Electric PVX goes in fast—gives a neat, dependable job:

**SPACE-SAVING**—Easy to handle—requires small holes and little installation space.

**LIGHTWEIGHT**—Makes handling easy during installation.

**EASY TO STRIP**—Crushed-paper armor on individual conductors is easy to remove—thermoplastic insulation strips freely, leaves a clean conductor for connection.

To get the rest of the facts on PVX and the other products in the General Electric wire and cable line, send for a free copy of the 42-page booklet Building Wires, Cables, and Cords for every purpose. Address Section W21-52, Construction Materials Department, General Electric Company, Bridgeport 2, Connecticut.
If your clients and prospects prefer winter air conditioning, you can provide them with a new kind of indoor comfort. For with Janitrol there need be no "cold intervals" as these new models can be installed for C-A-C operation and Time-Modulation control. This means constant, unvarying floor to ceiling temperatures more closely controlled than ever possible before. Yet, this great heating improvement costs no more to buy...no more to operate.

For certain types of house plans the features of radiant panel heating have many advantages. There are also many advantages to the use of Janitrol warm air heat for radiant systems. Installation can be simple...its practicability proved in hundreds of homes. Floor or ceilings are used for radiation...there's nothing to get out-of-order in the heat distributing system.

Whether you use Janitrol Gas-Fired heating for winter air conditioning or for radiant panel heating you add more sales appeal to your homes. Prospects are well acquainted with the Janitrol name and the high quality it stands for...they will respect your choice of heating and will assume that other equipment in your house is also thoroughly dependable.

This finer winter comfort which you can readily merchandise to great advantage is only available with Janitrol...it costs no more than ordinary heating equipment...so get all the facts...see your local Janitrol dealer or write us today.

*Surface Combustion Corporation • Toledo 1, Ohio*
This bottling plant — like countless other projects — has a competitive edge today, thanks to those sparkling walls and floor of genuine clay tile.

Walls like this keep their fresh, spic-and-span appearance for a lifetime... can be cleaned and kept clean as easily as a china dish. Colors won’t fade or darken because they are fired in.

And there’s never a worry about water on a clay tile floor — it rolls off without leaving stubborn, streaky blemishes. Soaps, acids and greases leave clay tile’s finish unimpaired.

Best of all, clay tile eliminates painting, polishing and refinishing. With no recurring charges for maintenance or replacement, clay tile means long-range economy, lower overall costs.

For specific information regarding available types, sizes and colors, see Sweets Architectural or A-E-C File. THE TILE COUNCIL OF AMERICA, Room 3401; 10 East 40th Street, New York 16, New York, Room 433; 727 West Seventh Street, Los Angeles, California.

The Tile Council of America was formed in January, 1945 to provide a central source of information about floor and wall tile, and to sponsor research and development projects designed to increase the usefulness of tile in all types of private and public building.

PARTICIPATING COMPANIES: American Encaustic Tiling Co. • Architectural Tiling Co., Inc. • Atlantic Tile Manufacturing Co. • B. Mifflin Hood Co. • Cambridge Tile Manufacturing Co. • Carlyle Tile Co. • General Tile Corp. • Gladding, McBean & Co. • Mosaic Tile Co. • Murray Tile Co., Inc. • National Tile & Manufacturing Co. • Olean Tile Co. • Pacific Clay Products • Pacific Tile and Porcelain Co. • Pomona Tile Manufacturing Co. • Robertson Manufacturing Co. • Sparta Ceramic Co. • Summitville Face Brick Co. • United States Quarry Tile Co.
No other siding material does as much as CREO-DIPT red cedar Processed Shakes to make new homes more saleable. They provide an interesting color variation between roof, sides and trim — make every home in a new row of houses look different.

Home owners like the rustic, hand-split look. No other siding material can duplicate the beauty and interest imparted by their long exposure and heavy butt lines. And, when they are stained, as the light hits their processed grooves, it produces a pleasing gradation of different shades.

Unlike substitutes and imitations that deteriorate, crack, chip and fade, CREO-DIPT Zephyr Shakes can be stained every five or six years and will outlast the house they cover.

**DOUBLE WALL METHOD provides greater INSULATION and an effective WINDBREAK**

Although CREO-DIPT Zephyr Processed Shakes can be applied by the Double Coursing Method, i.e., over an undercoursing of low grade shingles, we recommend the DOUBLE WALL METHOD, i.e., applying them over an underwall of Zephyr asphalt-treated, weather-resisting insulating board. The Double Wall Method saves labor — usually costs no more than double coursing and, on new homes, over wood sheathing, will save so much in fuel and re-painting costs that it is much more economical than clapboard per years of use. Furthermore, the dense, unbroken surface of the insulating board prevents the infiltration of air — is an effective windbreak.

**ANY CARPENTER CAN APPLY THEM**

No cutting, fitting or painting on the job. Butts and edges are trimmed so that edges are parallel and at right angles to the butt. The job is further speeded and simplified by the DOUBLE WALL METHOD. A template inserted in every third carton of shakes makes it easy to get tight, clean corners.

**100 SQUARE FEET UNITS**

Each unit includes outer wall red cedar Zephyr Shakes, a package of Zephyr backing board for Double Wall Construction or undercoursing shingles for Double Coursing Construction, plus sufficient special, small head, rust-resistant nails for recommended exposure.

Let your CREO-DIPT dealer show you the attractive colors and explain how easy it is to build more saleable homes with CREO-DIPT Red Cedar Processed Shakes.
EASY TO INSTALL

EASY TO ORDER—

TEXAS EASTERN BUILDING

TEXAS EASTERN BUILDING

... that's why builders favor
“Pittsburgh’s” factory-assembled
door-frame

UNTIRING research into ways and means
of helping to solve building problems
actually encountered in the field was re-
sponsible for the creation of this revolu-
tionary prefabricated door-frame assembly.
Its ease of ordering and installing — as well as its
uniform excellence of performance in ser-
vice — appeal to every builder. All you do is
indicate the name—“Herculite Door-Frame
Assembly”—and provide the style number and
size. It reaches the job completely assembled
and with everything needed for its immediate
installation, including the famous Pittco Check-
ing Floor Hinge, moldings for transom glass,
supports for sidelights, strikes for locks, sockets
for bolts.

“Pittsburgh’s” Herculite Door-Frame Assem-
bly is a handsome, simply designed and stur-
dily constructed unit. The frame is factory-
built of special shapes and of heavy extruded
aluminum, heavily reinforced with structural
steel. It’s built to high quality standards by
expert craftsmen who use special checking
gauges to make sure that all dimensions are
absolutely accurate.

There’s much more to the story. So
why not fill in and return the coupon for
our interesting and informative booklet?
It’s free and you’re under no obligation.
Do it now.

Pittsburgh Plate Glass Company
2159 9 Grant Building, Pittsburgh 19, Pa.
Without obligation on my part, please send
me a FREE copy of your booklet on “Pitts-
burgh’s” factory-built Herculite Door-Frame
Assembly.

Name

Address

City

State

Handsome, rugged construction is indicated by
this sectional view. Note extra-heavy extruded
aluminum, highly polished and anodized; also
steel channel and tie rod reinforcement.
FOR BETTER WALLS OF EVERLASTING BEAUTY CONSIDER

STAINLESS STEEL
STAINLESS — for Service and Long Life
Stainless Steel Tile has a natural finish that will withstand the hardest usage. It will never rust, discolor or stain—in fact, will outlive the house itself.

STAINLESS — for Beauty and Smarter Styling
Stainless Steel has a clean, fresh inherent beauty obtainable in no other metal. It reflects soft contrasting colors in the room—imparting a vitality which no other type wall covering can duplicate.

STAINLESS — for Design Flexibility
Stainless Steel Tile of standard sizes and shapes can be used in either the bright or satin finish or in combination with any color metal tile.

STAINLESS — for Easier Cleaning
Stainless Steel Tile is at its best behind ranges or over the sink where frequent cleanings are necessary. A damp cloth will remove the most stubborn grease and grime from the smooth, non-porous surface.

STAINLESS — for Any Installation
Kitchens, baths, game rooms, theaters, cocktail lounges, restaurants, tea rooms, yacht or boat galleys or interiors, club rooms, gas stations, creameries, hotel lobbies, bakeries, hospitals, soda or snack bars, beauty shops, etc.
for Dimension You Can Depend on
Buy Trade-marked
ARKANSAS SOFT PINE

Here's what you get:

Big-Mill Manufacture — Uniform Sizes
SPIB Revised Grades — New Stress Values
Kiln-Dried Stock — Correct Moisture Content
No Shrinking — No Swelling — Stays Put
Soft Texture — Works Fast
Holds Nails — Doesn't Split
50 Year Record of Better Value

WHERE TO GET IT
Trade-marked Arkansas Soft Pine is produced exclusively by big modern mills. It is well manufactured to standard sizes, scientifically kiln dried and seasoned to specified moisture content. Available to you at local lumber dealers and planing mills east of the Rockies. For complete information, data and how to specify, write for your copy of this useful handbook.

ARKANSAS SOFT PINE BUREAU
549 BOYLE BUILDING
LITTLE ROCK, ARKANSAS
Chicago’s most modern apartments choose the only refrigerator that—Stays Silent Lasts Longer!

Tenants enjoy noiseless, worry-free service year after year—Owners benefit from low operating and maintenance costs

In Chicago there’s a trend among smart apartments to the Gas Refrigerator. And that’s true of the trend all over the country. As residential building continues to boom, Servel preference among both tenants and owners increases.

It’s easy to understand why. Servel simply offers more. Not only does Servel have a cabinet full of modern conveniences like other refrigerators, but different from all others, Servel offers the operating advantages of a freezing system without moving parts. There’s no machinery to wear, cause noise, and lose efficiency... none to break down and need repair. A tiny gas flame does all the work. Thus, operating and maintenance costs are held to a minimum, and years of service are added.

Every up-to-date convenience. Of course, tenants are mostly interested in what a refrigerator has to offer once the door is opened. And here Servel offers plenty of features... including a big frozen food compartment, large ice-cube trays, two roomy dew-action fresheners, and adjustable Plastic-Coated shelves. Servel is made in four sizes—ranging from 4 to 8 cu. ft. capacities. For complete information, see your Sweets’ Catalog... or write to Servel, Inc., Evansville 20, Ind.

For example, in every one of the 82 apartments in this modern building now being completed at 4900 Marine Drive, tenants will enjoy the silent, efficient service of new Servel Gas Refrigerators in all-gas kitchens. Frank A. McNally & Associates are the architects and Samuels Construction Co., the builders.
A SMART AND CONVENIENT shower stall like this does a lot to impress prospective home buyers. It spells quality.

How PC Glass Blocks help you put up more SOLD signs

When you include PC Glass Blocks in the homes you build, you attract more buyers . . . your homes are sold much more easily. For PC Glass Blocks are truly “The mark of a modern home.” They are one of the “plus values” that prospective homeowners look for.

The shower stall illustrated here is only one of the many ways in which PC Glass Blocks can be utilized to give the homes you build this added “buy appeal.” Countless other applications are possible with these versatile products . . . to add more light, more beauty, more comfort. Around entrances; at stairwells; in bathrooms, kitchens, too, they admit daylight in abundance—keep out prying eyes.

And PC Glass Blocks perform other valuable functions. Being hollow, with a partial vacuum inside, they give twice the insulating value of ordinary single-glazed windows. Heat loss is reduced; they save on air conditioning. Besides there is no replacement, repair or painting problem with PC Glass Blocks. Storm sash isn’t needed. And these panels are as easily cleaned as a single pane.

So, include PC Glass Blocks in the homes you build. They’ll help you put up more “sold” signs. Right now, why not send for our free booklet? Just fill in and return the coupon. There’s no obligation.

Distributed by Pittsburgh Plate Glass Company; by W. P. Fuller & Co. on the Pacific Coast, and by Hobbs Glass in Canada.
Roddiscraft cupboard door stock is designed especially to eliminate wasteful cutting. This sturdy ¾” panel is manufactured in widths of 12”, 14”, 16”, 18”, 20”, 22”, 24” and 26”; and in lengths of 48”, 54”, 60”, 66”, 72”, 78”, 84” and 96”. All Roddiscraft warehouses carry a complete line of cupboard door stock. Order the sizes which will cut most economically for your installations. Prompt delivery to any location.

Roddiscraft cupboard door stock is a quality product in the well-known Roddiscraft tradition. Full length edge strips of Aspen or Yellow Poplar are bonded to a well-seasoned staved Aspen core. Hardwood 1/20” crossbands and sound Birch 1/20” faces complete the five-ply assembly which is bonded with water resistant resin glue by the most modern hot plate press methods. All stock is belt sanded to a smooth finish at the factory.
best for both!

AMERICAN-Standard
First in heating ... first in plumbing

You can depend on American Standard fixture and heating equipment. Whether it's a fixture that adds value to your home, or a heating system that gives you comfort, you can count on American Standard to back it up with service that makes a difference. For complete information on American-Standard fixtures, see your dealer, or write American Standard Co., 1220 East 77th Street, Chicago 19, Ill.
When it comes to heating and plumbing  
makes it AMERICAN-STANDARD all the way!

You will find that American-Standard is your most dependable source for both heating equipment and plumbing fixtures... for every product American-Standard makes is backed by research, engineering and manufacturing facilities that are second to none. Not only does American-Standard give you the widest choice of styles, types, models, and sizes, but it also is your assurance of the finest quality in both heating equipment and plumbing fixtures. That’s why more American homes have heating and plumbing by American-Standard than by any other single company. Yes, you’ll find that it pays to “make it American-Standard all the way”!

For detailed information about the complete range of products, contact your Heating and Plumbing Contractor. American Radiator & Standard Sanitary Corporation, P. O. Box 1226, Pittsburgh 30, Pennsylvania.

BASEBOARD RADIANT PANELS

Baseboard Radiant Panels by American-Standard represent an advanced form of radiant heating. Replacing the regular baseboard, they become an integral part of the room. They take up little more than an inch of floor space when recessed.

The ARCOLINER Wet Base Boiler

Designed exclusively for oil burning, the ARCOLINER provides the best in oil heating for smaller sized homes. Ideal for installation in utility rooms or other first floor locations, as well as in small basements.

Look for this Mark of Merit

Serving home and industry
Easy application SAVES you time and work...cuts costs

You save all along the line when you use K&M "Century" No. 5 Asbestos-Cement Roofing Shingles. You save work because they're so easy to apply. You save time and cut costs because units are large (24" wide), only two nails per shingle are required, and they're self-aligning...punched and notched for fast, accurate placing.

Being made of asbestos-cement, the shingles resist fire, are weatherproof and rotproof, never require protective paint and maintenance is at a minimum, in fact they grow tougher with age. They're attractive, too, with their weathered cypress texture, random thatched butts, and pleasing colors—white, black, Spanish red, surf green.

Use "Century" No. 5 Roofing Shingles for new and low cost housing...can also be applied over old wood shingle or composition roofs. See your K&M Dealer for further particulars, or write direct to us. We'll attend to your inquiry promptly.

K&ME "Century” NO. 5
AMERICAN METHOD TYPE
ASBESTOS-CEMENT
ROOFING SHINGLES

Section of "Century” No. 5 Shingles, snug-fitting, perfectly aligned.

KreasbeY & Mattison
Company • Ambler • Pennsylvania
How many operations to sheathe one wall?

With 6" material—16 pieces in 8' of wall height

With 4' x 8' material—3½ pieces in 14' of wall length

With 8' x 14' material—one piece covers 112 sq. ft. You handle many fewer pieces of material and drive several hundred fewer nails.

FOR APPEARANCE...Homasote Big Sheets insulate and cover the average wall in one piece, ceilings in two pieces. You have no batten strips, fewer wall joints...and the ideal base for paint or wallpaper...FOR STRUCTURAL ADVANTAGES...Homasote Big Sheets mean greater strength...As sheathing, for example, Homasote Big Sheets are 272% stronger than conventional horizontal wood sheathing...And with many fewer joints, the insulating value is far higher.

We invite architects and builders to send for illustrated booklet—giving physical characteristics, performance charts, specification data and application instructions.

HOMASOTE INSULATING AND BUILDING BOARD
HOMASOTE COMPANY, TRENTON 3, NEW JERSEY
NOW! An asphalt shingle with FIRE-CHEX

Underwriters Laboratories Inc.
INSPECTED
ROOFING MATERIAL
1/4 SQUARE
CLASS A
ISSUE No.

THIS LABEL HAS SELLING POWER
Be sure it is on the shingles you sell!

SPECIFICATIONS

12" x 36" • Square Butt 3 Tab • 2" Headlap
5" Exposure • Weight 325# per Square; 80 Shingles per Square—4 Bundles • Colors Available; Blue-Black and Chocolate Brown—Blends Available Shortly
highest fire-protective rating!

BY CAREY!

Carey FIRE-CHEX First and Only Asphalt Shingle ever awarded Underwriters' Laboratories, Inc.

Highest fire-protective rating — "Class A"!

YOU'LL be seeing a lot of FIRE-CHEX on homes everywhere. And for good reasons. FIRE-CHEX, made only by Carey, offer fire-resistance, beauty and durability never before available in any asphalt composition shingle. For dealers, FIRE-CHEX mean easier selling, better profits, greater customer satisfaction. For architects and builders, a material of greater permanence and "eye appealing" beauty. For owners, priceless fire-protection for families and investments—as well as fresh new beauty and housetime durability.

NEW COLOR-STYLEBEAUTY

Carey FIRE-CHEX are color-styled to blend harmoniously with any architectural plan. They are at home with modern or classical designs; come in a wide variety of pleasing colors and blends that are the last word in smartness and beauty. And an exclusive new manufacturing process, developed by Carey, gives these superb new shingles the desirable "deep shadow line" and thick appearance of costlier slate or tile—at a fraction of their cost.

ACCLAIMED BY FIRE PREVENTION OFFICIALS

Yes—fire prevention officials cheer Carey FIRE-CHEX! And no wonder! Many residential fires start when flying embers ignite the roof. But even a four-pound flaming brand can't burn through Carey FIRE-CHEX Shingles! No other asphalt shingle gives this amazing protection. That's why Carey FIRE-CHEX can be used even in areas requiring a rigid "Class A" fire-protective rating.

SEE AMAZING NEW FIRE-CHEX SHINGLES AT YOUR CAREY DEALER'S!

Get an eyeful of their fresh, new, lasting colors and extra overall-thick construction. See them at your Carey Dealer's today—or write direct to Carey for full information. Address:

Here is a shingle that gives greatly increased protection against wind, weather, and fire. It is the J-M Giant Strip, so named because it is extra thick and extra heavy. The entire surface has extra coating of selected weather-resistant asphalt, in which colorful, fireproof, mineral granules are uniformly embedded. This results in a thicker, more rugged shingle—one that "stays put" and lasts longer.

Sketch shows how extra protection is built into the J-M Giant Strip. Note that the entire surface—not just the exposed portion—is covered with an extra thickness of asphalt and fireproof granules. On the ordinary thick-butt type of asphalt shingle only the butts have the extra thickness.

When you sell J-M Giant Strip Shingles, you provide the homeowner with a product backed by 90 years of roofing experience. And it has the Johns-Manville name, recognized by millions as the mark of quality in building materials. For further details, write Johns-Manville, Box 290, New York 16, N.Y.
Only HONEYWELL ELECTRONIC MODUFLOW can properly control radiant panel heating

HONEYWELL Electronic Moduflow is simple and inexpensive, and because of its sensitivity and extreme dependability, is the only control system that will insure proper results from radiant panel heating.

You'll learn why when you read these 3 Honeywell books pictured at the right that give you factual information about Electronic Moduflow, Electronic Moduflow for Radiant Panel Heating, Zone Control and Individual Room Control for domestic applications.

Send for your copies today and learn all about Honeywell's newest control systems and why you'll want to use and specify them for all their many applications. Minneapolis-Honeywell, Minneapolis 8, Minnesota.

In Canada: Leaside, Toronto 17, Ontario.
BEAUTIFUL NEW INTERIOR FINISH
Here's a bright new interior finish that will give every room modern beauty and added insulation. The textured surface adds richness to its soft colors of buff and oyster white.

The NEW INSULITE Tileboard and Plank are not only decorative, but practical and durable. It is highly resistant to scuffing and rubbing...easily cleaned...easily painted. You get finished jobs that build new business and a reputation for perfection.

NEW IMPROVED METHOD OF APPLICATION
The ingenious new INSULITE Clip is easy to use...speeds up application...and helps give you an accurately aligned, level ceiling or wall surface. The joint and Clip are designed so that their use results in a more uniformly level surface. The design also provides ample clearance for the nail head. This, too, aids you in getting better results.

The long nailing slot accommodates a practical variation in the position of the nailing member. This variation also makes nailing easier and faster. Any position of the nail within the slot will hold the Clip securely.

The practical design of the Clip and joint combine to make it easy to work from either the tongue or groove side of the board. This makes it possible to start an application in the center of a ceiling or wall and come out even at the ends.

Besides being versatile and strong, the NEW INSULITE Clip is easy to handle. It is always grasped in the same manner whether being placed in either the tongue or groove side.

APPLIED JOB STAYS RIGID AND LEVEL
The new deep tongue and groove joint plus the rigid strength of the Clip add years to the appearance of a finished job. Its close, tight, interlocking joint stays trim and neat.

MANY USES — MANY VARIATIONS
Ideal for restaurants, taverns, lounges, stores, display rooms, and all the rooms in the house. For modernizing or new construction, use this new INSULITE Tileboard and Plank to save time, reduce finishing costs, produce a better job.

Both Tileboard and Plank are now readily available. PLANKS come in four widths: 8", 10", 12" and 16". Lengths: 8', 10' and 12' for interesting pattern arrangement. TILE in sizes 16" x 32", 16" x 16", 12" x 12" and 12" x 24" provides ample adaptability for ceiling treatment. INSULITE CLIPS are packed in cartons of 1,000.
WITH THE SPEEDS UP APPLICATION AND PROVIDES A MORE UNIFORM LEVEL SURFACE

INSULITE

The GENUINE

"Insulate" is a registered trade-mark, U.S. Pat. Off.
Everybody’s talking about the Beautiful Modine CONVECTOR

NEW... Convenient Air Venting that’s out of sight, yet instantly accessible.

NEW... Dual-Purpose Damper — for finger-touch temperature control — conceals outlet grille.

NEW... Snap-in Lower Grille conceals piping, simplifies floor and carpeting treatment, Optional.

NEW... 5-Second Removable Front for faster installation... easier cleaning.

ALL-COPPER Heating Unit gives you high capacity, great durability.

CUTAWAY VIEW OF MODINE TYPE F CONVECTOR.

BIGGEST NEWS IN CONVECTOR RADIATION HISTORY!

THAT’S the new Modine Convector. For new construction or remodeling, its entirely new features make it the better way to heat apartments, homes, schools, offices or hospitals. Choose from three types, many sizes, for one- and two-pipe steam and hot water systems. For the full story, call your Modine Representative. He’s listed in the “Where-to-Buy-at” section of your phone book. Ask to see a sample, or write direct. Modine Mfg. Co., 1501 Dekoven Avenue, Racine, Wisconsin.

Send for New Modine Convector Catalog Today! Special 1-Pipe Steam Convector Bulletin Also Available.

Modine CONVECTORS
CONTINUATION of residential building at the present high level depends on the extent to which favorable financing terms are available. For the last seven months starts of new houses have been under the corresponding period of a year ago. Latest official data shows a moderate decrease in January and February. A total of 50,000 units was started in January as compared with 52,600 a year ago, a decrease of 5 per cent. In February, 46,000 units were started, 3,000 units or 8 per cent under a year ago. Undoubtedly excessively high down payments limit the sale of houses in all price ranges.

During and immediately after the war, veterans who planned to buy new houses had expected as favorable or more favorable terms than prevailed prior to the war when down payments of 10 per cent could be made and interest rates were 4½ per cent. A spot check of 46 areas on mortgage financing terms has just been made by American Builder. In answer to the question—“What terms are available to good credit risks for housing at about $10,000?"—it was found that in more than half the areas a down payment of 25 per cent or more is required. In only seven of the 46 areas (6 per cent) could a down payment of 10 per cent or less be made.

The interest rate in about half the areas was 4½ per cent or less. In the other areas the rate ranged from 5 per cent to 8 per cent. As it has turned out, the easy financing terms that had been expected developed to only a small extent. Builders in localities where high down-payments are required, and where interest rates are high, find their market severely limited.

Franklin D. Richards, Federal Housing Administrator, says that "the greatest demand and capacity to pay for housing lies in the $6,000 price range." He states that "from every section of the country it has been possible to obtain examples of economy houses in this price range" and that the monthly carrying charges, including payments to mortgage principal, interest, mortgage insurance premium, hazard insurance, and taxes run under $45 in each instance.

Not only that but he shows pictures of well-designed houses in this price range. For example: Evansville, Ind., $6,500; Baltimore, Md., $6,000; Jackson, Tenn., $4,150; South Whittier, Calif., $4,500; Smithtown, L.I., N.Y., $4,300. He also shows multi-family rental units at from $47.50 to $75.00. Similar low-cost houses have appeared in American Builder from time to time.

The single family houses are the modern counterparts of the frame workingmen's cottages built in the last century, or in the early 1900's in all parts of the country—but better designed and better equipped. In the rush of apartment building in the Twenties and the building of picturesque suburbs this market was largely overlooked. In the late Thirties this type of small house began to be built in quantity again and a big housing market developed.

For continuation of big building volume, houses in every price range should be available in every community. If quantities of houses are built in the low-cost range, there will be a good market for new houses among the six or seven million families in the country who have incomes of $5,000 or more, because their prosperity depends on the maintenance of peak production in all segments of the economy.

A vast amount of savings are available for investment. Since the value of housing at present represents the largest single item in our national resources it is the logical outlet for future savings. The amount of individual savings, including bank and postal savings deposits, investments in savings and loan associations, United States Savings bonds, outstanding and life insurance reserves is almost three times the 1940 level.

The total was 60 billion dollars in 1940 and 172 billion dollars in 1948.

With new houses available in all price brackets in a community and realistic mortgage financing terms, a high rate of construction activity should result.
Announcing the New Shake Design

Take advantage of this new product's striking architectural beauty. It opens up a whole new market for increased siding business.

Here's another in the long list of Flintkote Firsts! Now you can get more siding business than ever. For here's a double-barreled value with a plus.

Call customers' attention to the well-known two-way value of Insulated Sidings: long-life protection by combining time-tested Insulation Board, durable weather-resistant asphalt and mineral granules.

Then point out the plus...the SHAKE DESIGN! You'll find that the new beauty and the new style bring new architectural beauty to the modernization market, expand its appeal. The SHAKE DESIGN panels are beautifully textured to simulate natural graining. They're in complete good taste, and add a neat, trim appearance to any house.

THE FLINTKOTE COMPANY
Building Materials Division
30 Rockefeller Plaza, New York 20, N. Y.

Now you can offer a Flintkote Insulated Siding to blend perfectly with any architectural style. With the addition of the new SHAKE DESIGN, there are four different designs available in a wide variety of beautiful colors.

Let your customers take their choice from:

SHAKE DESIGN...available in...
- Colonial Cream
- Cottage White**
- Silver Gray • Rustic Brown • Leaf Green

SHINGLE DESIGN...available in...
- Cottage White • Colonial Cream
- Rustic Brown • Leaf Green

BRICK DESIGN...available in...
- Red* • Buff • Tapestry Blend • Rustic Blend
- Silver Gray • Coral Blend • Coral**

*Available in East only
**Available in South & West only

A STONE DESIGN...available in...
- Graystone • Fieldstone Blend • Silver Gray**

A BRICK DESIGN...available in...
- Brick White • Colonial Cream
- Rustic Brown • Leaf Green

A SHINGLE DESIGN...available in...
- Cottage White • Colonial Cream
- Rustic Brown • Leaf Green

*Available in East only
**Available in South & West only
Insulated Sidings by FLINTKOTE

THESE BUSINESS BUILDERS WERE DESIGNED FOR YOU

...TO HELP YOU MAKE MORE PROFITABLE SALES

Here's a kit-bag full of hard-hitting, hard-selling material for you to use in your community. Every item upholds the traditions of quality and effectiveness that won Flintkote’s sales promotional material the Direct Mail Advertising Association’s “Best in Industry” awards in 1936, 1937, 1938, 1946, 1947, 1948.

Here’s outstanding help toward doing an outstanding, profitable job selling Flintkote’s complete line of Insulated Sidings. Get in touch, today, with your local Flintkote Sales Representative. He’s fully equipped to help you plan how best to use this material in your community.

FLINTKOTE...the extra years of service cost no more!
ANY PART of the kitchen is a good place for Insulux Glass Block . . . especially over the range, where unusual conditions make it tough on either walls or windows.

Insulux is unaffected by grease, cooking fumes or moisture, and does not rot, rust or corrode. No painting is needed. Thermal insulation value of Insulux Glass Block is approximately equal to an 8-inch brick wall.

At the same time, Insulux transmits plentiful daylight. Investigate the advantages of Insulux Glass Block for home construction. Send coupon today!
PUBLIC RELATIONS—Paul W. Watson, director of public relations, National Retail Lumber Dealers Assn., has prepared and mailed to the association's 20,000 or more members sample speeches for delivery before local church, civic, and veterans' organizations. There are also newspaper advertisements and material for use on radio stations. Subject: Public housing and what it really means. The material is excellent, and it is reported to be getting widespread and effective use.

GEORGE MILLER—He recently wrote to all members of Congress pointing out that government intervention in the building business is rapidly leading to complete chaos. Urged elimination of rent control and removal of the threat of government competition to save the country from a disastrous depression.

NEW HORIZON—A new horizon for American colleges has been established by Harding College at Searcy, Ark. The college held a seminar early this spring for business men. It was entitled, "How to Sell the American Free Enterprise Story to Americans." One hundred and nine top men in 55 major corporations from 21 states boosted the college's normal enrollment of 720 for the four-day seminar.

ANOTHER ONE—Next seminar was held April 25-29. Father of the idea is Dr. George S. Benson, president of Harding. Refreshing, to say the least, after the recent leveling of charges of communism at several major universities.

DR. BENSON—Once shocked a congressional committee by appearing uninvited, and representing no one but himself as a private citizen, to give evidence.

HARDING COLLEGE—Under Dr. Benson the college fights a continuous and relentless battle for private enterprise. Forty thousand people receive Dr. Benson's newsletter each week. About 25,000,000 Americans get his messages each week over 225 radio stations in 43 states, and through his column which is used by 3,600 publications.

REAL AMERICANISM—It is reported that Dr. Benson turns over all of his radio and writing earnings to the college, and keeps only a modest salary as college president.

RADIO STATIONS—Dick Hughes, Borger, Texas builder, owns two of them, one in Amarillo, the other in Borger. Currently, he is busy himself with a plan to do an extended public relations job in behalf of private enterprise via radio, and far beyond the limits of his own stations.

SIGNS—Now that builders have resolved the most critical part of the housing shortage in many areas, they should take time to inform people in their communities about the real implications of public housing. There are signs of an awakening to the danger. There is need for this all-out effort to thwart socialism before it is too late to do anything effective.

PUBLIC SPEAKING—Without being an orator, practically any dealer or builder can marshal a few facts, put them in order on a note pad, and stand before a local organization to give an informal factual talk. If the necessary facts are not available try Paul Watson. He has them.

EASTER—With the cost of clothing what it is, thousands found it difficult if not impossible to provide themselves with new Easter outfits, and did not join Easter parades, so they stayed home. What this country needs is a Public Wardrobe Bill, or at least a Public Shacks Bill, and preferably before summer. How can a man feel secure in a pair of pants with a shiny seat? If he has a new free house, he should have a new free pair of pants, and why not a new free coat, new free shoes and a selection of new free ties.
Many builders sell houses as fast as they can build them. One reason is that they realize home buyers want the most modern type of kitchen equipment—and that includes Electric Ranges. Proof is found in the actual sales figures. Another million American families switched to Electric Cooking last year. Conservative estimates indicate that the same thing will happen again this year.

To you, this means just one thing. To build houses that are modern today and will remain modern for years to come, you must include Electric Range wiring during construction. An Electric Range is a "must" in every modern home!
MAIL ADDRESSED to the editors in the past month has been particularly heavy. As usual, most of it consisted of inquiries, with commendatory letters second. Usually there are some mild protests, but this time there were a couple of letters containing loud howls.

ONE OF THESE flatly stated that the writer, an irate subscriber, knew that the editors were hired solely to dream up a lot of guff designed to protect the greedy vested interests. What he had reference to, of course, was American Builder's traditional stand for private enterprise. The answer to that, and the irate subscriber was answered at length, was that the editors are paid to dig up facts and print them. Disagreeing with the facts does not alter them.

ANOTHER JAB took at the editors accused them of having no idea of what it means to be an underpaid teacher, preacher, or doctor giving generously of spare time for community betterment.

THAT OPENED an interesting opportunity for a reply. Editors on business papers have to work at least 10 years familiarizing themselves with the publication business and the industry a given business magazine serves before they begin to make anything like attractive salaries. In that respect, editors are no different than members of the professions the reader named. Or, for that matter, they are no different than men in any walk of life who are reasonably successful.

GIVING TIME to community work is part of the stock in trade of any good editor. He cannot understand his readers unless he understands their counterparts in his own community. And the only way he can get that understanding is to give generously of his time in church, youth, and other civic work.

THE PARTING SHOT was one which amounted to an accusation that editors are economic royalists. That was really funny. Editors do not retire. They die in their editorial chairs for economic reasons.

WHAT RIGHT, asks another reader, have you to say that this country shall not go socialist if a majority of people want it to go that way?

(Continued to page 63)
TELEPHONE RACEWAYS
FIT INTO THE SCHEME OF THINGS

Most new homes today are a blend of beauty and utility—everything in its proper place. And the proper place for telephone wires is out of sight.

It's a simple job to conceal telephone wires within walls. A few lengths of pipe or tubing, installed during construction, will keep them from being exposed on walls and woodwork. All that shows are neat telephone outlets, located where they will be most convenient for the owner.

For homes of any size, 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."
THE SAME RIGHT, say we, that a handful of aroused colonists had in 1776 to declare independence from England. The fact that an uninformed majority drifts placidly toward destruction or misery is the best reason why an informed minority should sound a warning. There is not only a right to warn against the perils of the drift toward socialism—there is a patriotic obligation.

A SEATTLE READER reports that practically none of the home builders in his city are getting GI loans. Reason given is that VA is not appraising houses at figures for which the builders can afford to sell them. One house was appraised by FHA at $10,500. The VA field man appraised it at $10,400. But the VA office cut the field man's appraisal to $9,950. This is typical, says the Seattle builder, and that is the reason why Seattle vets have to have considerably more money with which to buy houses than vets in most other parts of the country.

RENT CONTROL, observes a builder in Portland, Ore., is causing run-down rental properties. Under controls, owners cannot afford to make repairs or to remodel. During business recessions when apartments are vacant, owners have no reason to remodel or make repairs.

IN HIS OWN CASE, continues the builder, when rent schedules on the apartments he owns were set, he purchased oil for 95 cents a barrel. Now, oil costs $2.95 a barrel. Renters, he adds, know this condition, and are about as unhappy as the owners. A recent newspaper poll in Portland, he said, revealed a big majority of renters stating that owners were entitled to higher rents.

ANOTHER READER says: "If the vets were getting the benefit of the low rents I wouldn't bother, but I have tenants getting $10,000 to $15,000 a year, and paying $70 a month, while the vets in nearby apartments hardly as good as mine are paying $90. Why don't the veteran organizations fight rent control?"

C. W. CHAPMAN, retail lumber dealer with headquarters in Waterloo, Iowa, senses a growing spirit among business men to refuse conscription.

(Continued to page 65)
PADLOCK PROTECTION STARTS WITH THE HASKP

Build client confidence—provide Stanley

SAFETY HASPS

On store, service station, stockroom, tool shed, garage or barn doors—wherever a padlock is likely to be used—the new Stanley Safety Hasp No. 917, with Click-Lock Staple, can be a good will builder for you. A padlock is only as safe as the hasp that holds it. And this hasp is designed for real protection, and built to endure.

The new 917 has three points that will appeal to your customers.

1. The staple clicks into position against spring action on each quarter turn (can't be rattled open). Can be used as a catch.

2. When hasp is in locked position, screws are completely covered and cannot be removed.

3. When hasp is closed, padlock lies flat.

The name Stanley on hardware, moreover, suggests quality construction clear through. So take advantage of every opportunity to use the Stanley 917 Safety Hasp—it builds client confidence in you. The Stanley Works, New Britain, Conn.

THE GREATEST NAME IN HARDWARE

STANLEY

makes it easier to make the sale!

HARDWARE • HAND TOOLS • ELECTRIC TOOLS • STEEL STRAPPING
promise and stand on principle. Mr. Chapman is no compromiser with socialism. He has fought consistently and unrelentingly for free enterprise, and at times has been a target for abuse.

AT A LUNCH TABLE the other day with the owner of a radio station, the radioman observed that it is no wonder the public thinks of successful business men as greedy tycoons. The movies, he points out, invariably portray business success with a heavy jowled, ugly tempered, broad-beamed gent that not even a tolerant audience could like.

WHAT, SOMEONE ASKED, can or should be done about it? Ask school teachers, replied the radioman. There was a time when the movies always represented school teachers with an ugly, bun-haired,ombiously clad female. Currently, they cast only glamor girls as school teachers.

ASTRIKING EXAMPLE of local level cooperation and co-ordination was afforded recently at Amarillo, Texas, when a dinner was served at the country club to 300 builders, dealers and members of the International Concatenated Order of Hoo-Hoo. In the audience were the heads of banks, public utilities, newspapers. Three radio stations recorded the principal speeches for recorded broadcast.

THE SPEECH had to do with the threat to our entire economy if the disease of public housing takes root.

AMARILLO, without a doubt, is overwhelmingly anti-public housing, and to the meeting of builders, dealers, and Hoo-Hoo goes no small share of the credit for crystallizing sentiment.

BUILDING is a local business, and the only effective way found thus far to offer a united front against such encroachments is through local meetings, like the one held in Amarillo, in which the local groups get together to fight for the common good.

DURING MARCH, our editors toured the entire Gulf, East and West Coasts, and stopped in dozens of cities between. Their impressions, added to those gleaned from the mail, indicate a general feeling of optimism in the future of home building.

For Radiant Heating: Authorities working with radiant heating and exhaustive tests pronounce Hasko blocks ideal for radiant heating installation.
It's A WaterHog

Yes sir! It handles anything from seepage to 15,000 gallons per hour. And it won't clog while pumping solids. Self-priming, of course, and fast. Has automatic seepage control, guaranteed 28 ft. suction lift, plenty of discharge pressure, and a built-in gasoline-engine that has the guts to keep going without fussing or babying under the toughest working conditions.

But Never A TruckHog

No sir! A Homelite Gasoline-Engine-Driven Pump is the last word in compactness. Fits in a corner of a truck or trunk of car. Requires no crew of men to unload it...no special planking to roll it on location. One man picks it up and carries it right to the spot you want it. Write, right now, for our new descriptive bulletin.

SPEED YOUR CONSTRUCTION WORK WITH Homelite Carryable Pumps

HOMELITE CORPORATION, 505 RIVERDALE AVE., PORT CHESTER, N. Y.
Manufacturers of Homelite Carryable Pumps • Generators • Blowers • Chain Saws
**HOW TO CUT DUCT AND FUEL COSTS**

(and retain desired B.T.U. delivery)

*Simply specify Kaiser Aluminum for all heating ducts!*

The above illustration is a simple example. It is a comparison of materials in ducts of a specific size, operating under identical conditions.

Note what happens to the initial air temperature of 175°: At the end of 100 feet, delivered air temperature actually varies from 128° to 147°.

Why? Because of different radiation losses from the surface of the ducts.

These comparisons were proved by actual tests conducted by Aladdin Heating Corp., under the direction of B. F. Raber, Professor of Mechanical Engineering, and Mr. J. T. Gier, Research Engineer.

With such proved facts, it's easy to see how duct systems of light, strong Kaiser Aluminum can be more economical! Only duct with 1/4" insulation can deliver more heat—but it costs far more.

Because bare Kaiser Aluminum radiates less heat, installation savings are possible through elimination of insulation. And fuel consumption is cut because of lower required B.T.U. input.

So, to cut duct costs and fuel costs—always specify ducts of Kaiser Aluminum!

*Name of university supplied on request.

Permanente Metals

**PRODUCER OF**

Kaiser Aluminum

*FREE BOOKLET* proves you can cut duct installation labor costs and offer clients lower fuel costs with Kaiser Aluminum. Write for "New Conceptions in Ductwork." Builders' Service Dept.: Permanente Products Company, Kaiser Building, Oakland 12, California.

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MODERN MANUFACTURING FACILITIES

A COMPLETE LINE OF VITREOUS CHINA AND ENAMELED CAST IRON

A GOOD NAME WITH EVER-GROWING ACCEPTANCE

A COMPLETE LINE OF RENEWABLE BRASS FITTINGS

ADVERTISING AND SALES HELPS THAT HELP YOU SELL

PLEASANT AND PROFITABLE BUSINESS RELATIONS

Six Good Reasons for Selling ELJER

Day by day, competition for the consumer's dollar is becoming stiffer. More and more, your merchandising and sales problems require right answers to assure profitable and progressive business operations.

Only a source of fine plumbing fixture supply that is aggressive in its methods and thoroughly experienced, can give you the service you desire in a manner that is profitable.

You'll find Eljer's policies are helpful and popular because they are carefully organized to ease your sales problems. You'll find Eljer Fixtures are sold by leading Distributors, actively interested in helping you make your business grow and prosper. You'll find now is a good time to see your Eljer Distributor . . . or write Eljer Co., Ford City, Pa.

It pays you, it pays us—because we specialize in Plumbing Fixtures and Brass
ONTHLY REVIEW
NEWS OF THE NATIONAL ASSOCIATION OF HOME BUILDERS AND AFFILIATED ASSOCIATIONS

Chicago Chapter Bi-Weekly Forum Luncheons Proving Good Association Activity

A local association activity which has proved to be both educational and entertaining to members of the Chicago Metropolitan Home Builders Association, and which might well be used as a pattern by other groups, is the program of forum luncheons held twice monthly at the chapter's headquarters in the Chicago Loop.

The purpose of the luncheon sessions, as outlined by Roy Healy, secretary of the forum committee, is to obtain interesting speakers with an outstanding knowledge of their field who will stimulate discussion. Although a number of the meetings have been filled to overflow, no special effort is made to attract sensational crowds nor publicity. The committee chairman is Edward G. Gavin, editor of the American Builder.

The programs begin with luncheon. The featured speaker then talks on the subject of the day, usually taking no longer than 15 to 20 minutes. Following the talk, the discussion is opened to the entire group, with the speaker replying to questions from the floor. Outstanding films on building industry subjects have also been used as program features; after the movies are exhibited, a period is allotted for a discussion of them.

A special demonstration forum was held at the Stevens hotel, Chicago, during the NAHB convention in February, at which visiting delegates were given an opportunity to observe and participate. At this meeting, Philip Creden, advertising and merchandising manager of the Edward Hines Lumber Co., Chicago, led a discussion on the merchandising of homes.

A recent speaker at one of the forum sessions was Dr. J. S. Long, recognized as an authority in the paint and plastics field. Other outstanding speakers during the past six months include Frederick W. Turner, Jr., general counsel of the Cook County Lumber Dealers Association; Joseph T. Merk, executive secretary of the Federation of Illinois Retail Merchants Associations; Carl G. Luns, director of the NAHB Technical Service Department; Everett H. Kineal, Community Planners, Chicago; Mrs. Henny Moellgaard, 31st street builder; and Kimball Hill, vice president of the Chicago Metropolitan Home Builders Association.

Movies have included the premier showing of “White Magic” by the U.S. Gypsum Co., and a film on the construction of the typical California Ranch home.

MEMBERS of the Richmond NAHB affiliate's board of directors (left to right): Ernest E. Mayo, president; C. G. Yagel, executive secretary; E. H. Wicker, national director; I. Norris Blake; John Toler, auditor; S. T. Massie; B. O. Orange; O. O. Williams, vice president; C. Stuart Duggins, Carl F. Robinson; and J. Edward Seay, treasurer.

Plan Aid for Low Income Home Buyers

A plan which would provide home ownership for a substantial number of the nation's low-income families, without resorting to public housing, has gained wide attention since it was proposed recently by the Home Builders Association of Richmond, Va.

The plan's purpose is to obtain government aid for financing the purchase by individuals of housing in older, poorly maintained sections of cities. Its framers say that, through repair and alteration, much of this property could be converted into comfortable homes which would last for years.

Backers of the Richmond plan point out that the reason millions of old homes, still structurally sound, are in

"Keys to Happiness" Used in Dayton

FIRST "Keys to Happiness" in Dayton, Ohio, are presented by Joe Haverstick, Montgomery County Builders Association, to young veteran and wife. Haverstick gives these keys to home buyers with informative booklet on building industry.

(Continued to page 70)
ELECTED to lead the New Jersey state group in its first full year of activity are (left to right, standing) B. W. Renninger, secretary; C. J. Von Drehle, executive secretary; R. E. Hanly, vice president; (seated) J. S. English, treasurer; E. M. Spiegel, president; J. S. Wright, executive vice president. Four sectional associations form the group.

Emanuel M. Spiegel of North Arlington was elected president of the New Jersey Home Builders Association in the group's first convention, April 1-3 at the Traymore hotel, Atlantic City. More than 600 builders and associates attended.

Spiegel succeeds William E. Closs, Summit. Other officers chosen to lead the organization, which was set up several months ago as the New Jersey Council of Home Builders Associations, are: vice president, Raymond E. Hanly, Camden; secretary, B. W. Renninger, Lavallette; treasurer, Edward J. English, East Orange; counsel, Alexander Feinberg, Camden; executive vice president, John S. Wright, New Providence; and executive secretary, Clarence J. Von Drehle, Hackensack.

The four sectional groups which met to form the state association are the New Jersey Metropolitan, North Jersey, South Jersey and Shore.

Speakers at the convention included Gov. Alfred E. Driscoll of New Jersey; Rodney M. Lockwood, NAHB president; Harrison L. Todd, president of the New Jersey Association of Real Estate Boards; and Warren J. Lockwood, assistant FHA director.

Spiegel, a member of the New York bar, practiced law from 1928 to 1941 when he entered the building field in New Jersey. Since that time he has built more than 500 homes and apartments in Bergen and Union counties. He is regional vice president and executive committee member of NAHB.

Hanly, a native of California, served in World War I and located in New York in 1919. He is a realtor in the Camden area, where he began operations in 1924. Renninger was planning supervisor for the Radio Corp. of America at Camden until three years ago, when he became a builder and, later, an NAHB director.

English, an NAHB delegate from New Jersey for three years, is president of English Brothers in East Orange and has been building homes in Essex county for 17 years.

Increase Size of Portland Publication

The March 26 issue of "The Portland Home Builder," official publication of the Portland, Ore., Home Builders' Association, Inc., was marked by an increase in size to eight pages and a new two-color layout. Larry W. Dome, Association executive secretary, is editor, and James L. Jordan, advertising manager.

At a special meeting of the executive board, March 14, it was decided to table final consideration for the time being on a proposed housing survey for Portland.

W. E. CLOSS, retiring president, receives watch in appreciation of his services.

NAHB Chapter Organized At Mason City, Iowa

The first meeting of the recently organized Mason City, Iowa chapter of NAHB was held March 21, when officers were installed and plans made for the support of several group projects.

Thomas C. Mcllvain was elected president; Edgar Payne, vice president; A. M. Habor, secretary; and Ernest Zerelle, director.

Among the projects sponsored by the new organization are a study of local and national building codes and the building of an economy experimental house which will sell at a price between $7,000 and $8,000.

1949 Program is Topic Of Fort Worth Meeting

Discussion of a proposed Home Builders program for 1949 highlighted the first of two important February meetings of the NAHB Fort Worth chapter. Members consolidated all available information about the various factors involved in building homes.

Low-cost housing was the topic of the industry-wide second meeting. Speakers at an Economy Housing Forum included representatives of the Veterans Administration, FHA, Home Builders and Mortgage Finance Agency.

The Richmond Plan

(Continued from page 69)

poor could not or have become slums is that financing for this type of housing is almost impossible to obtain.

After the property has deteriorated it is acquired, at a small part of its worth, by buyers with cash and is used for rental purposes. With no repair over a number of years, it becomes uninhabitable.

The plan, approved of which has been expressed by both Virginia senators in letters to the Richmond Association, proposes that such properties be converted into private homes in two ways, both requiring federal financing and cooperation by local governments.

A house could be sold to a prospective home owner, provided certain repairs were made, under government insured loans up to 95 per cent of the cost of the house, plus repairs and alterations. In the case of builders, loans could be made up to 85 per cent of the cost of building and repairs. In re-sale to individual purchasers, the 95 per cent loan would apply.

Local governments could encourage the plan by enactment of moratoriums on property tax increases in the affected areas. Installation of sidewalks, street resurfacing, etc., would help.

Thousands of good homes with ample-size rooms and bought at monthly payments of from $15 to $30 a month, according to an outline of the plan. It was also suggested that buildings beyond repair be wrecked and their space used for parks.
Niagara Builders Re-elect Entire Officer Slate

The Niagara Frontier Builders Association re-elected its entire officer slate for a second term in its annual election meeting March 8 at the Park Lane hotel, Buffalo, N.Y. Continuing his duties as president of the group is Frederick T. Williams, president of Frederick T. Williams Co., general contractors, designers and home builders. Williams also heads the Buffalo Better Homes Exposition, sponsored by the Builders Association, April 30 through May 7, and the Buffalo Real Estate Board.

Other officers re-elected were Oscar Giesecke, vice president, who is vice president of the O. H. Giesecke Co., a NAHB national director; David F. Hannah, secretary, a partner in the Border Building Co.; and treasurer FREDERICK T. WILLIAMS


urge Standard Municipal Code to Cut Plumbing Costs

 asserts that the absence of a uniform plumbing code added as much as $800 to the cost of a house in the state, delegates to the New Jersey Home Builders convention at Atlantic City April 1-3 urged the adoption of a standard set of regulations which they said would eliminate the extra cost. In a statement by a Newark plumber, Mrs. Mary E. Ireland, revealed that he is required to obtain thirty-four separate licenses in order to do plumbing in as many municipalities.

It has been said that each local government not only requires separate licenses, but all have different regulations, many of them specifically restrictive. He recommended a state examination, the satisfactory completion of which would entitle a plumber to work anywhere in the state, "Under the existing system, plumbing runs 20 per cent of the cost of a building," he said. "There is no reason for so high a charge."

Power Tools for Sales

In the past decade the most significant trend in the home building industry has been the mechanization of construction methods. Power tools have been brought into play and the entire process of building a home has undergone a thorough streamlining.

The natural results of this trend have been greater speed in home production and substantial economies all along the line.

Today, home builders in many parts of the country have begun the final phase in mechanizing home building from start to completion. As the home buyers market returns to a normal competitive condition, "power sales tools" must be brought into play in the field of sales. Old sales methods must be dusted off and new equipment for the sales machine be built.

There seems to be a general agreement among leading economists that consumer demand for many items is far more selective. Seldom are entire projects sold out before the first home is completed. Instead, we find definite evidence of new homes selling in a normal pattern. Progressive builders are showing the way by preparing to meet the situation before it arrives.

What then are the 1949 tools which the home builder can employ to bring his sales message forcefully and effectively before the prospective home buyer?

Even in the most competitive market a home that is tastefully and functionally designed, soundly built, well-located and aimed toward the strata of the buying market that is seeking new homes is half sold. The last factor of pricing is, of course, all important.

Once having solved the basic problems of price, location, design and construction, the home builder comes to grips with the current psychology that pervades the country. Through many sources, often high places in government, we have come warnings of deflation when everything will be selling for less.

This is unrealistic and a dangerous approach as men who are working every day with the problems of home building well know. Our economy has undergone a constant expansion and a glance at the trend line shows that this has been going on not just for years and decades, but for several centuries. We are on a new plateau of costs and prices.

Overcoming the fallacy that prices may go down is an Association job, on the national and local levels. Each home builder and each person in the allied segments of the industry have a job to do in their personal and business relations. In addition to the over-all publicity work of the Association, much can be done by the individual builder who, by modern sales techniques, recognizes that we are living in a new post warworld and new sales tools are simply one of the basic facts of life.

After the groundwork is laid, the big sales guns can be brought into action. Line up beside the old, they give a far more effective attack than ever before.

Direct mail pieces are a standby. This type of advertising offers a broad range of creative thought. Newspaper advertising has the proof of years behind it, too.

Publicity, placards, and special events to attract public attention will bring sales results, as will unique tie-ins with your sales offer.

Among the new methods that are now available is radio which has come into its own with big sales results for many industries. Pioneer merchandisers among home builders are getting splendid results over the air waves.

And who can deny the intriguing possibilities of television which can bring your product before the eyes of a great, buying audience?

Model homes are perhaps the best of all methods since home hungry buyers can experience the thrill of occupancy and possession.

The ceiling on sales is set only by the producers of homes today. With so many sales tools at hand, the market ahead need cause the home builder no concern.
NEW LEADERS HONORED AT DETROIT GROUP'S ANNUAL BANQUET

THREE of the Metropolitan Detroit Association's new officers for 1949 (left to right): Norman A. Burns, secretary; Samuel Hechtman, treasurer; Henry F. Fett, president. Bert C. Whitney is first vice president; Wallace A. Colwell, executive secretary, and Earl C. Doyle, general secretary. George Duke is retiring president.

DISCUSSING industry problems before the banquet are Edmund Kuhlman (left), who served as master of ceremonies; William K. Divers, chairman of the Federal Home Loan Bank Board, who was the featured speaker, and William J. Guinan, who is retiring as executive director. Guinan will continue to edit "The Bildor."

1949 Officers Installed at Jacksonville

NEWLY-ELECTED officers of the Jacksonville, Fla., Home Builders Association who were installed at the group's annual banquet: (left to right, seated) Walter J. Cowart, secretary; B. C. Buck, treasurer; George Wood, president; Lawrence C. Pearce; (standing) Fred Thelman, vice president; Joseph W. Davin and Victor Nihoul.

Mechanics Trained by Seattle Group

A SEATTLE Master Builders apprentice training class. Seattle builders stress these classes, look forward to having an adequate number of well-trained mechanics.

New officers of the Builders Association of Greater Detroit were installed at the group's 21st Anniversary Banquet, April 6, in the Statler hotel, Detroit. They are Henry F. Fett, president; Bert C. Whitney, first vice president; Norman A. Burns, secretary; and Samuel Hechtman, treasurer.

More than 800 persons attended the annual event. An address was made by William K. Divers, chairman of the Federal Home Loan Bank Board, on the "Function of Home Loan Bank and Housings." Edward Kuhlman, Detroit, was master of ceremonies and Edward G. Gavin, editor of the American Builder, served as toastmaster.

Other officers and staff members of the Detroit Association are Vice Presidents John Weinhart, public relations; Webb Cor. Education committee: Frederic Gerhardy, labor committee; W. W. King, legislation committee; Wallace A. Colwell, executive secretary; Earl C. Doyle, general secretary; and W. J. Guinan, editor of the "Bildor."

BUILDERS' REVIEW CONTINUED
ON PAGES 228 AND 236

See Record Attendance at 1949 Chicagoland Home Show

Plans for the third annual Chicagoland Home Show, which will be held at the Chicago Coliseum May 14-22, are nearing completion, it has been announced by Nathan Manilow, president of the Chicago Metropolitan Home Builders Association, sponsor of the event.

Among the features of the Show this year, the most comprehensive yet arranged by the Association, are a student contest in home designing with awards totaling $1,500; a free advisory service by representatives of builders, Veterans Administration, Federal Housing Administration and mortgage companies; and the "Home Seekers Supermart," a large composite display by a number of builders.

The student contest, held for the first time this year, is open to all students who have not graduated from high school. Competition is in three divisions: Designing of a small, one-story home; construction of models for a similar home; and designing of creation of household utilities or conveniences. Ten prizes are awarded in each division, first prize being $200.

The 1949 Show is again under the direction of Paul S. Van Antlen, NAHB convention and exposition director. Exhibits fall into the following major classifications: Building materials and building products; heating equipment, kitchen cabinets and equipment, gas and electric appliances, lumber and mill work, plumbing,

(Continued to page 236)
"We saved time, money and installation headaches on the Richland atomic-energy housing project with KWIKSET LOCKSETS"

...says JOHN L. HUDSON, president of John L. Hudson Company, Portland, Ore., builders of the 450-unit Richland housing project shown below.

GOOD HARDWARE MARKS GOOD CONSTRUCTION
...IN ONE HOME OR A THOUSAND

Front door hardware can give a good or a poor impression of the construction that's gone into a house. And handsome, lustrous Kwikset locksets give a good impression. Yet builders save up to 20% on hardware costs with Kwikset because of low first cost and fast, easy two-hole installation. Kwikset locksets are sturdy, too. All parts are of brass stampings or pressure-cast from high-test Zamak No. 5. Each lockset is unconditionally guaranteed against defects in materials or workmanship. Over 4 million in use. Available for all standard installations and in finishes of satin or polished chrome, brass or bronze.

Manufactured by KWIKSET LOCKS, INC., Anaheim, California

Distributed by PETKO INDUSTRIES, INC.
1107 East Eighth Street
Los Angeles, California

Please send me complete information on Kwikset locksets and name of my nearest dealer. NOTE: Openings for distributors are still available in a few select territories. Write for details.

Name ________________________ Company ________________________
Street & No. __________________ City __________ State ___________
How to get the MOST into a small kitchen!

*Kelvinator One-Width Appliances Provide Extra Space . . . Simplify Kitchen-Planning*

In today's small kitchens, every inch of space counts! That's why Kelvinator appliances, amazingly roomy inside . . . yet so compact outside . . . are the answer to many problems in design. In addition, Kelvinator offers the exclusive advantage of uniform widths. Six Kelvinator refrigerators, for instance, are 31 1/4" wide. Any model, chosen according to budget, will fit. You avoid last-minute changes in plans.

Your choice!

all
31 1/4" wide!

AMAZING NEW FEATURES, efficient use of space, greater convenience and economy for home-makers feature Kelvinator electric ranges. They are all one width. Freezer, too! Design around Kelvinator!

PUBLIC-SAVING PACKAGE

Get Kelvinator's 1949 "Space-Saver" refrigerator. It is full 6 cu. ft., but only 24 in. wide. Range is only 21 in. wide, with advanced design permitting installation flush against wall. Top-of-the-line quality throughout. For information, write Kelvinator Division, Nash-Kelvinator Corporation, Detroit, Michigan.
A Little Public Housing

A LITTLE public housing in an economy is exactly like a little cancer in a human body. Neither can be controlled. Once either takes root, complete and speedy removal is the only possible preventive against a spread that soon snuffs the life out of the body in which it is embedded.

Irrefutable medical evidence precludes any argument about how cancer develops, spreads, and kills. Equally irrefutable, but unfortunately less publicized, evidence exists to support the contention that public housing develops, spreads, and kills in the same way. The evidence is in New Zealand, Australia, and England, where limited public housing programs were started at various times. In New Zealand, all housing is now public housing. In Australia, unless something unexpected occurs to stop the spread, three years will see the end of private home building. In both cases confiscatory taxes to support socialistic states make it impossible for anyone, regardless of his income, to net enough to pay for his own home. England is well advanced toward the same end.

In all cases, the first housing bill limits the number of units to be built by government, and also places a limit on the incomes of families eligible to receive the alleged benefits of partially or totally subsidized public housing. It is soon found that there are more families eligible than there are units provided for in the bill. Lawmakers succumb to pressure for additional units on the basis of alleged discrimination against other eligibles. Another bill is passed authorizing more thousands of units.

Then the groups with incomes 10 to 25 per cent above the legal limit prescribed for occupation of the subsidized units either start working fewer days to diminish their incomes to eligibility levels or raise a strong cry of discrimination in favor of a selected minority. Another bill is passed increasing the income eligibility limits. From that point only 10 to 20 years is required for government to throw out all limits and take over the construction and ownership of all housing. That is the history of public housing elsewhere, and there is no reason to believe that it can or will operate otherwise here.

Even so, there should be no objection to public housing if it provided more and better houses for less money. The reverse, however, is true in every case where public housing is the rule. Houses are smaller, have fewer conveniences, are located where government wants them built, have less style, require infinitely more time to produce, and cost from two to two-and-one-half times as much to build. The cost probably is much greater, because it is impossible to discover what many hidden government costs amount to. Taxes have to be increased to staggering percentages of income to support hordes of non-productive payrollers, and the socialist Utopia has been achieved. It is the strangulation of incentive, the liquidation of producers, and perfect division of ever increasing poverty.
Labor-Saving Tool
and Equipment Mean
Much to the Builder
In Today's Market

EFFICIENCY and economy in every phase of home building is dominating the thinking of the industry. Two factors are responsible—the rapid rise in building costs since the close of World War II, and the gradual change from a sellers' to a buyers' market.

In attempting to achieve maximum efficiency and economy in home construction, the importance of utilizing all the newest in labor-saving tools and equipment should not be discounted by any builder—large or small. Progressive and forward-thinking manufacturers have studied the problems of the industry. They have come forward with a host of new devices plus improvements in those already developed. As a result, the home building industry today has been mechanized to a point not realized nor appreciated by the general public or the average home purchaser. While continuing to do more and more of the work of home erection with tools of all types, designers and builders have not been forced to sacrifice any of the attributes of the American home in consistent quality and permanence or in individuality of design. Builders are, in fact, able to do better, more precise and accurate work with the excellently machined equipment now offered by a host of tool and equipment manufacturers, who are listed on page 89.

This issue of American Builder features a few typical home builder operations where labor-saving tools and equipment are helping to hold costs down and step up efficiency. These were selected at random from various sections of the United States. There are thousands of others. Information and details on many of the devices mentioned in the articles in this issue can be found in the advertising pages.
GENTIL, affable Walter Bollenbacher is one of California's top home builders. His volume of sales in 1948 was close to $10,000,000. At one time last year he had 1,100 homes under construction simultaneously. With an operation of that size, planning, organizing and use of labor-saving equipment are of prime importance.

Bollenbacher lays great stress on advance planning. He feels that a tract development practically runs itself during the construction period and makes possible completions in 45 to 50 days—at the rate of 10 per day—if it is properly planned and co-ordinated in advance.

During the advance planning stage, all electric, gas, water and telephone layouts are co-ordinated so that when construction starts those in charge of various crews will know where all elements are to be located. Construction crews do not understand engineering plans. For this reason the various underground and overhead utilities are included in the plot plan. This is to prevent the unloading of lumber, sand or other material in the wrong spots on the subdivision site so crews coming on the job will not be confronted with a pile of sand or a stack of lumber right where work must be done. This plot plan is given to all material supply houses to guide unloading and the company checker double checks the unloading location. It is costly to move sand or lumber on the job.

Long before FHA made it standard procedure, Bollenbacher was grading his tracts. He found that grading may cost $10 per lot but saves up to $80 per lot on foundations. Rough grading is co-ordinated so the dirt will be equalized. A soil testing engineer is always on the job and a constant grade check is made.

The first use of power equipment in the actual building operation is in digging trenches for footings. This is done with a Cleveland trencher. In Southern California it is necessary to go down only 12 inches for footings. The foundation forms are simple—1-inch boards cleated together. James Nicely, the superintendent on Bollenbacher's largest projects, has used the same forms more than 100 times by carefully oiling them after each use and handling them with reasonable care.

As soon as foundations are stripped, gas, water, and sewer lines are installed and the rough plumbing assembly is put in place. These assemblies are put together in the plumber's shop on the site where jigs are set up for the purpose. A battery of four Oster machines (The Pipe Master) cut and thread the pipe.

ALLIED Contractor crews do the same specialized work day after day with the same tools. With this system foreman as well as individual workmen become especially proficient in doing certain operations with special tools. When men know they will use the same tool tomorrow they take better care of it today.
The homes are erected by specialized crews and foremen. These men do the same jobs day after day and become very proficient. They require little supervision. The crews are as follows: 1. Foundation; 2. rough plumbing; 3. mudsill and girders; 4. joist and subflooring; 5. layout; 6. framing—raising walls, applying ceiling joists, rafters and roof sheathing; 7. lathing; 8. plastering, exterior finishing and fixtures; 9. Carpentry work is done by the company's own men. All other work is sublet. Bollenbacher has some very definite ideas about subcontractors. He uses the best, not the cheapest. He points out that many subcontractors can submit low bids but too often they cannot pay their bills, get in trouble, and cannot finish the job. This creates a chain reaction series of delays and throws the whole schedule out of gear. Even more important than price, the main qualification of a sub must be that he has the men and materials to get the work out on time. This is important with Bollenbacher. On a recent job the plumbing contractor had 157 plumbers at work at the same time. An essential in all advance planning includes qualification and selection of subcontractors.

Lumber for each house is packaged by the lumber dealer and delivered to the lot, piled with the mudsills on top and roof sheathing on the bottom. The package does not include rafters. This stock is delivered to the shop, cut and notched there before being hauled to the site. Notching is done by attaching a Disston dado head to the regular power saws. The company uses four radial Comet power saws, which are moved from lot to lot to cut framing lumber to exact size required. Some builders cut all lumber with a Skil-Drill by men in mudsill and girders crew. Left, a Cleveland trencher digs foundation footings. By careful stripping, oiling and handling, foundation forms have been used more than a hundred times.
Los Angeles area for a generation with several thousand units to his credit. He constructed a major portion of the residential income property in Beverly Hills and has built dozens of luxury houses there. Kelton handles the office and promotion end of the business. He also spent his entire life in the building business. Before going to California, he was associated with Bing & Bing, Inc., in New York.

Until the last few months every tract this company promoted was sold out with spectacular speed. Last spring 254 homes were disposed of in Lynwood Gardens, Los Angeles, in three weeks. There was no advertising—not even a sign on the property. The streets and sidewalks were not in and there was no model home for buyers to examine. The firm had made arrangements for advertising and publicity and the furnishing of a model home, but the houses sold before these promotional helps could be put into action. Later, another group of 392 homes in the San Fernando Valley sold out in record time.

Today the situation is somewhat different. There is no longer any emergency shortage of houses in the Los Angeles area and houses must be sold. Buyers can take their choice of thousands of homes. But this transition from a sellers’ to a buyers’ market does not worry Bollenbacher and Kelton. They are prepared to sell their homes. Bollenbacher says he plans to build a “crying room” in his office for some of the younger builders who have known nothing but the lush market of the past two years. As far as he is concerned, he has been through competitive markets before.

The current development, Allied Gardens, is located in the southern part of Los Angeles about 12 miles from the heart of the city. It comprises 542 homes, all two-bedrooms, except for a few three-bedroom units.

A TEMPLET is tacked to door jamb so routing for butts can be done accurately with Stanley-Carter router. Radial saws are mounted on wheels so they can be moved around to each house site easily.
TO ACHIEVE efficiency and economy in the use of labor-saving tools and equipment requires more than an elaborate array of the best of these items. Best results can be achieved only if the builder and the men he employs have enough ingenuity to use the equipment so that maximum efficiency is obtained. Using the tools and equipment properly also means more than working with them. It means keeping each well-sharpened and in good repair, whether it be a small drill bit or a trench digger.

These are the thoughts of Conrad J. Gettler, president and treasurer of Sunnybrook, Inc., home builders of Glenside, Pa., a suburb of Philadelphia. He and his associate, John P. Henrie, vice president and secretary of the company, are firm believers in the savings that can be effected by using equipment to the limit on their building jobs. Gettler, who is in charge of building operations, which include a large, specially well-equipped woodworking shop, also feels that every man using a tool or machine of any type must have a certain amount of initiative and ingenuity to adapt the equipment to the job to which he is assigned. He should first of all know what the machine or tool will do when it is at its best. From then on he should strive to keep it working in that manner or even improve on it if possible.

In conformity with this idea, Gettler has in several instances suggested modifications in equipment to manufacturers so that the product could be even better adapted to use by builders. He was instrumental in getting some changes made in the Zern door jig, one of which he uses regularly in his woodworking shop. For some time he has been contacting manufacturers in an effort to get a power hand drill designed so that the moment power is shut off a brake would automatically stop the bit shaft from turning. He believes this would speed work measurably on many jobs around a woodworking shop or on the home building site.

Gettler reports difficulty in buying woodworking drills the exact length needed for a specific job. He believes it lowers efficiency to have a bit either too long or too short. In connection with this same subject he has found that it saves time and money to have a power hand drill of the right size for each bit used regularly to eliminate the need for workmen to stop and change bits in the same drill to do two different jobs. The policy here is always to have the proper tool or machine for the job to be done.

Because this firm insists on top efficiency in the operation of equipment, all saw sharpening and setting is done in the shop by employees. Practically all of the saw blades used are hollow ground to leave joints cut by them about the same as though they had been planed.

This is important in the Sunnybrook shop because of the great variety of fine work turned out to be used in the houses erected by the firm. Shop lumber is bought in carload lots and run through machines as required. All moldings, trim and baseboard are run there, cut to size, mitered and profit. A special template designed by Gettler and his superin
the Most Out of Power Equipment

LABOR-SAVING EQUIPMENT USED

- Acme saw filer
- Beach belt sander—2 H.P.
- Black & Decker electric drills
- Delta 24-inch band saw
- Delta table saw—5 H.P.
- DeWalt radial saw—1 H.P.
- DeWalt radial saw—5 H.P.
- DeVilbiss and Hovey-Binks paint spray equipment
- Handy glue press
- 2 Homelite pumps
- 5 Homelite generators
- Hutchinson shaper—3 H.P.
- O'Brien compressor—29 C.F.M.
- Parks planer—3 H.P.
- 22 Porter-Cable powered hand saws—all sizes
- Powers 18-inch jointer
- Sterling powered hand sanders
- Walker-Turner table saw—2 H.P.
- Zern door jig

1—NEW 5 H.P. table saw with 12-inch blade. 2—Mortising door and jamb at same time on jig. 3—Portion of paint shop. 4—Two H. P. belt sander. 5—Glue press used in assembling kitchen cabinets. 6—24-inch band saw. 7—Five H. P. radial saw, with blades all arranged on rack in orderly fashion. 8—Large paint compressor for the paint shop.

tendent makes it possible to miter four pieces of regular trim with one stroke of a one-horse DeWalt radial saw. All doors are prefit, drilled and mortised for hardware in the shop. Using a Zern door jig, routing for butts is done on the door and the jamb at the same time. With the jig, special drills for each bit, and the router, four doors can be prepared for hardware in the time it would take to do one by conventional methods—and the work is more accurate. All shutters used on Sunnybrook houses are made in the shop in bunches of 2,000 to 3,000 at a time, at a saving of about $2.00 a pair under regular cost.

The firm manufactures all kitchen cabinets installed in Sunnybrook homes. To do the job right with good equipment, a complete paint shop was installed, including a large compressor for spray guns. Because a great deal of gluing is involved in making good cabinets, a glue press was also added to shop equipment. Cabinet doors are faced with hardboard on both sides over a wood frame, all glued with the press, edges and faces finished and...
This is typical of 387 houses in one project. Prices ranged from $10,700 to $11,500 including the garage, sundeck and basic shrubbery. Lots average 60x130 feet then spray painted. The care taken to deliver a quality, unblemished product in the houses is demonstrated by the fact that all kitchen cabinets are carefully wrapped with corrugated paper before being hauled from the shop to the houses under construction.

Stairways, mantels, and special built-in cabinets for Sunnybrook houses are made by the firm's workmen in the woodworking shop. Gettler realizes this type of operation is unusual for a home builder, and freely admits that when regular millwork manufacturers can supply the same products of equal quality to him promptly at a lower price, he will be willing to discontinue much of the woodworking end of the firm's operation.

To assure adequate electric power on the building sites beyond power lines, Sunnybrook builders own and operate five Homelite generators, each capable of running a saw and sander at the same time. In cutting framing on the job, 22 Porter-Cable power hand saws of all sizes are used. In the more than ten years that Gettler and Henrie have been building houses, they have accumulated their power equipment little by little and the more they got the better their cost figures showed up until now they would have to revamped their entire operation if it became necessary to eliminate any of the equipment.

Since 1938 this firm has built about 4,700 houses in the Philadelphia area. The lowest-priced house they ever marketed was a $3,550 prewar row house and their largest houses were a few in the $27,000 price range in 1942. At the present time, prices range from $9,100 to $18,300. Operations are going on in three separate subdivisions. One of 387 houses is about completed. The Sunnybrook Country Club section, where the highest priced houses are being erected, is a beautiful subdivision with curvilinear streets, well landscaped and planted with trees.

CAPE CODS and Colonials were used throughout the Sunnybrook Country Club subdivision. Houses similar to the one below on lots varying in width from 65 to 94 feet and up to 135 feet in depth are priced in a range between $16,500 and $18,300, depending on the size of the lot, exterior and interior finishes and appointments.
Building With Power Tools

THREE years ago, ex-G.I.'s Roger and Robert Dooley were primarily real estate men, with limited experience in home construction. Today, as members of the father-son team, Mayfield Builders, Inc., Des Plaines, Ill., they are successfully building and selling well-constructed homes.

Roger, enterprising older son of the team, decided after the war that the best way to have good homes to sell was to build them. The idea was shared by Robert and their father, H. A. Dooley. They began to study operations of large builders throughout the country. They picked up ideas from the University of Illinois' Small Homes Council. In 1947, they built and sold 10 homes; 25 more were sold and occupied in 1948, and 15 are currently under construction. Now, their total project is planned for 95 houses with a shopping center.

Roger, who handles the construction end, has no fixed ideas about building or design. Instead, he maintains an open mind for new ideas, and continually adopts methods that he considers best for his work.

Various operations in construction are standardized so that precutting is profitable, and the father-son team uses power tools as much as possible to speed the job.

The main standardization element in their construction is a basic 24-foot unit, spanned by ceiling and floor joists. This is used in each house they build. To this unit additional rooms are added, and the floor plan of each house can be widely varied. Since the 24-foot unit always remains the same in each house, and since it constitutes the largest cubage of each house, precutting becomes profitable.

Precutting is done in one of the partially finished homes that is centrally located on the project. When all homes in the project are completed, the house used for the shop will be finished and sold. Framing members for the basic unit of each house are cut at the shop for length, and after the members arrive at the site, power hand saws are used to make the angle cuts.

Roger carefully worked out the
PARTIALLY finished house centrally located on site provides space for precutting equipment and storage. Lumber is stored under temporary tarpaulin roof until cut procedure of marking and cutting materials in the shop. He places emphasis on materials handling; and realizes that time is money: that handling, in the shop or on the site, must be kept at a minimum. His system in the shop is aimed at cutting down handling time. Throughout the project, Roger plans work ahead so that workmen will not have to remain idle. By holding labor costs to within 50 per cent of materials costs, he believes that he can make a reasonable profit on each house without additional extensive tabulation of costs other than labor and materials.

Roger Dooley finds that many ideas, successful for other operations, may not work on his project. When the firm first started building homes, they tried roof truss construction. With trusses, it was convenient to use short lengths of lumber which meant extra bolting of 2x4's, more materials handling and more labor, according to Roger. Now, they use 2x6's for ceiling joists that span the entire 24 feet in one piece, and roof rafters are framed independently of ceiling rafters.

The firm builds mostly two-bedroom, ranch style basementless houses that sell for $15,600 to $16,100. They build some three-bedroom homes to sell for $16,500 to $19,500. The homes are built on concrete slabs, heated by radiant forced warm-air.

An 8-inch wide trench, 3½ feet deep, is dug for foundations after the land around the area is well levelled off. Concrete is poured directly into the trench, and this wall on the inside is insulated with two inches of fiber glass, 12 inches deep, around the entire house. Over a fill of sand and gravel, a moisture barrier is placed. Then radiant heat ducts are laid around the inside of the perimeter. After the feeder ducts are installed, the concrete slab is poured. Warm air registers are installed in each room, with heat outlets from the outer perimeter.

GABLE ends are assembled on horses before being hoisted and put into place on site provides space for precutting equipment and storage. Lumber is stored under temporary tarpaulin roof until cut.
COMPLETE project, as now planned by Mayfield Builders, Inc., will include 95 homes and a shopping center. Homes range in price from $15,500 to $19,500, including lots, and are fully landscaped and decorated. Floors are oak and asphalt tile perimeter ducts. A return air duct is later arranged at the heating unit. Heat is supplied by a new type automatic gas-fired furnace which forces air down into the ducts in the slab. The heating unit occupies a small space in the utility rooms of the houses.

Exterior frame walls are constructed on the ground, then tilted into place. Load bearing interior partition walls of 2x4's are also tilt-up type, and they help support the ceiling joists which span the basic 24-foot width. Thus the total unsupported area of the span is reduced. Changes in the interior partitions can easily be made for customers, and no extra charge is made for this as long as the size of the walls remains the same. Mineral wool insulation is used for exterior walls and ceilings.

Mayfield Builders, Inc. maintains a sales force of two men on the job and four others in the realty office. H. A. Dooley, president of the firm, has been in the real estate business for about 12 years. He handles the financing of the homes the boys build. Robert E. Dooley is in charge of sales, and the model home which is kept open at all times at the project. The firm does some local newspaper advertising. They are rapidly establishing a good reputation for soundly-constructed homes in their community, and many prospective home buyers are becoming increasingly interested in work done by the Dooley father-and-son team.

ONE reason why roof trusses were discontinued in their houses, according to Roger Dooley, was so that additional space could be provided in attics, as it is in this two-bedroom model.
Modern Equipment Cuts Costs

HEAVY equipment like this moves dirt on the 210-acre Argo Village tract where Argo Homes, Inc. is completing 1,000 homes

Power tools play the leading role on this project. They are used in almost every operation from the time materials arrive until homes are completed.

LUMBER arriving at the Argo Village project in Elmont, L. I., N. Y., must run a complete gamut of power tools before it ultimately ends up, packaged, in front of one of the 400 homes under construction. Before the lumber finds its place in the finished home, it will again be subjected to time-saving power tools.

Precutting and materials-packaging constitute a large part of the power tool operations. In addition power equipment is used throughout the project.

When a carload of lumber arrives at the railroad siding, it is unloaded and then picked up by a Ross carrier to be delivered to the 210-acre Argo Village tract. This carrier unloads the lumber at the Argo yard, and a fork lift stacks it. From the stacks, the lumber is taken into the shop to be run through power saws, routers, shapers or sanders. In finished form, the lumber will be packaged and strapped—enough lumber in each package for one house.

Meanwhile, heavy power machinery prepares the site. Twelve Pans and 3 Turnapoles were used in breaking

ASSEMBLY line production made possible through standardization of plans and the use of modern power equipment is not far from a reality in the Argo mill. Rough lumber enters the mill, runs the gamut of saws, routers, edgers and surfacing tools, and emerges finished, ready for packaging. Packaging saves both time and cost by facilitating the handling of lumber and by conserving the time carpenters might otherwise spend searching for the proper lumber to be used in the home.
TWO-BEDROOM bungalow type home, with attached garage, is built in project to avoid monotony. Exterior of this five-room house is brick veneer and asbestos.

ground for Argo Village. Foundations were poured from powered cement mixers. Sewer pipes were laid by machinery. The rough framing is cut and erected by power tools, and the back filling is done with a Scoo mobile. After the homes are completed, a road grader goes to work.

Last year, 600 homes were completed in the tract. Besides the 400 more to be completed in 1949, a large shopping center, with specialty shops and super markets, is planned.

Two basic floor plans are used for the two-story homes in the project. A bungalow type is interspersed with the two-story dwellings to avoid monotony. Standardization of plans and materials permits assembly line production.

The two-story homes with attached garages are on 50x100-foot plots. Exteriors are of brick veneer and asbestos siding. These houses have full basements with automatic oil heat, copper tubing throughout, weather stripped doors and windows, and Venetian blinds. The color of the wall

SAVINGS over conventional methods have run as high as 50 percent through precutting and packaging material at Argo Village. Materials in one package include 52 rafters; 140 7-foot 9-inch studs; 20 7-foot 6-inch studs; 48 jack studs; 90 pieces of 2x5's 16 inches long for blocking down to window headers; 160 feet of 1x12 cornice, primed; 100 feet of 1x6 cornice, primed; 2x6 60/12; 2x4 moulded cornice 5/16. Other packages also go along to complete house. Interior trim is precut.
paper, bathroom tile, Formica sink top and kitchen floor covering is selected by the home buyers.

Face brick backed with cinder block is used to the height of the first floor. The second floor is of wood with asbestos cement shingles, wood siding or stucco finish. Roofing is of asphalt shingles.

Interior wall and ceiling finishes are gypsum lath and plaster. Plenty of cabinet space is provided in the kitchens as well as a combination sink and tub. Dining and living rooms have oak floors and ample electrical outlets. A large guest closet opens off the entrance foyer. Bathrooms have tile wainscots and ceramic tile flooring. An extra lavatory is provided on the first floor. The attic contains two inches of insulation. Garages have metal upward-acting doors. Selling price of these 6-room homes is $12,990.

John Aragona, president of Argo Homes, Inc., heads the project, and John J. Braglia is sales director. Although standardization has been used to speed construction, nothing has been sacrificed in good work. Landscaped lawns, playgrounds, parks and public beaches, plus some variation in floor plans of the homes provide a setting that appeals to prospective home owners.

Argo Village was made possible through the co-ordination of men and materials. But even with the best of co-ordination to complete so many homes in so short a time would be impossible without modern equipment. Argo Village is a success story of power tools.

**Power Equipment Owned by Argo Homes, Inc.**

| 4 Bulldozers | 1 Bend saw |
| 1 Ross carrier | 1 Table saw |
| 1 Fork lift | 1 Molder |
| 5 Trucks | 1 Automatic rip saw |
| 2 Jeeps | 1 Shaper |
| 4 Trailers | 2 Sanders |
| 3 Concrete mixers | 1 Router |
| 2 Scoopmobiles | 3 Skilsaws |
| 1 12-inch joiner | 3 Wapet saws |
| 1 De Walt saw, 7½ H. P. | 3 Gasoline portable generators |
| 3 De Walt saws, 3 H. P. | 1 Metal cut-off machine |
| 1 Air compressor | 1 Grind stone |

The following equipment is rented: 12 Pans, 3 Turnapoles, and 6 Bulldozers.
These Manufacturers Produce Contractors' Equipment and Labor-Saving Tools

The Fonde Co., Nunda, N.Y. (Concrete mixers)

A. F. Francine, Millard & Chapel St., New Haven 6, Conn. (Steel scaffolding)

Forsberg Mfg. Co., Minneapolis, Minn.

Minn. (Automatic saw rolls)

Florida Stamping Mfg. Co., Cedar Falls, Iowa (Cement block machine)


Florida Wire & Cable Co., Youngtown, Ariz.

Florida Steel & Wood Co., 4110 Wrightway Ave., Chicago 43, Ill.

Florsheim Bros. Co., 301 W. Randolph St., Chicago 62, Ill.


Florida Lumber & Steel Co., 804 E. Lake St., Minneapolis 14, Minn.

Florida Tool Co., 206 N. Main St., Kansas City, Mo.

Florida Traction Co., 301 W. Randolph St., Chicago 6. Ill.

Frac-Trol, Inc., 1010 North St., Los Angeles 8, Calif.

Frac-Trol, Inc., 2550 S. Decatur Ave., Chicago 16, Ill.

Frac-Trol, Inc., 123 W. Ontario St., Chicago 1, Ill.

Frac-Trol, Inc., 219 W. Madison St., Chicago 2, Ill.

Frac-Trol, Inc., 1000 E. Van Buren St., Chicago 7, Ill.


Frac-Trol, Inc., 332 N. Dearborn St., Chicago, Ill.


Frac-Trol, Inc., 143 E. Washington St., Chicago 2, Ill.

Frac-Trol, Inc., 101 S. Dearborn St., Chicago, Ill.

Frac-Trol, Inc., 1000 W. Madison St., Chicago 1, Ill.

Frac-Trol, Inc., 100 W. Jackson Blvd., Chicago 2, Ill.

Frac-Trol, Inc., 101 N. Dearborn St., Chicago, Ill.

Frac-Trol, Inc., 301 W. Randolph St., Chicago 6, Ill.

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Frac-Trol, Inc., 301 W. Randolph St., Chicago 6, Ill.

Frac-Trol, Inc., 301 W. Randolph St., Chicago 6, Ill.
A Blueprint for Better Living

This attractive one-story house, which belongs to Carl Stone of St. Paul, Minn., was designed by Norman R. Johnson, architect of the same city.

In the plan of this house, the architect has effectively used the space to promote the owner's idea of good living, which is to allocate the major portion of the home to the living, dining and service areas. Two bedrooms and two baths constitute the quiet area.

The exterior treatment of the house follows in general the pattern of design consistently used in the past by this architect with marked success. A shallow pitched hip roof with wide overhanging eaves that extend around the entire house establishes the theme for the whole. A combination of stone and shingles on wall surfaces, broken by window and door fenestration of varying sizes, produces a facade of great interest.

The house contains six rooms, two baths, ample closets and a twocar garage. The owner's bedroom and bath are located at one extreme end of the house. This is approached through a corridor lined with closets and cabinets on both sides. In this same wing is located the owner's private library. A guest bedroom with adjoining bath is located at the opposite end of the house.

Basement walls are constructed of concrete blocks 12 inches thick. The dividing walls are 8 inches thick. First floor framing, walls, and roof are of wood members. Interior walls and ceilings are plastered; the library walls are of finished plywood. All windows are Anderson casement type except where fixed sash is used;
Design No AB 142
American Builder Blue Print Series
Designed By
Norman R. Johnson  Architect
2055 Bayara  St. Paul, Minn.
Shingles

REAR ELEVATION

Wood Shingles

Stone

G.T.D'S

Overhead Doors
RIGHT SIDE ELEVATION

1st Floor

Shingles

Wd Shingles

Basement Floor

Wd Gutter

Rear ELEVATION

Shingles

Flashing

Wood Gutter

Screws

1st Floor Line

Grade

Basement Floor

SECTION THRU FRONT ENTRANCE

Front Door

Oak Sill

5/8 Rods 9" O.C.

4" Conc Slabs

Sand Fill

Grades

GOOD detail in entrance

contrasted with over-all frame.

Materials:

Concrete roof:

stone crete for ed glass

Section thru Front Entrance
GOOD materials and fine detailing characterize this entrance. Heavy members in lattice work are in direct contrast to the finely executed door, sidelights and frame, and cornice, yet over-all the units are in perfect harmony and scale. Materials used are slate on roof, wood shingles and stone on sidewalls; concrete for platform, and fluted glass in door sidelights.

SHELTERED ENTRANCES—Are Worth Sacrifice of Space

Entrances whether recessed into perimeter of house or attached to front wall are distinct assets to homes.

THE group of quality houses designed and built by Newell & Daniel in their Lake Success, L. I., development are characterized by the consideration given to the entrance motif in the over-all planning. The examples shown indicate a broad, sweeping effect that dominate the entire front of each house.

The long, low one-story, or ranch-type dwelling has popularized the recessed or sheltered entrance. It provides ample protection from the elements, and allows the designer greater latitude in practical architectural expression.

Another popular arrangement for the one-story house is the entrance porch which projects beyond the main wall. This porch should be generous in size to maintain proper balance with the house. Proper proportion can best be accomplished through the use of an adjoining bay that is
DOOR and sidelights of entrance at left are well protected from the elements by means of the extended roof overhang. The horizontal lines of this one-story house are further accented by the fluted glass and wood muntins in sidelights. The severity and plainness of the door combination is softened by the adjoining bay. Materials in this detail are slate roof, stone sidewalls, stucco soffit, steel casements, slab door, wood trim and brick platform integral with the sheltered entrance.

Entrances, whether they are recessed into the basic perimeter of the house, applied directly to the front wall as a form of ornament, or built out beyond the main wall line, are nevertheless, a distinct asset and a "must" to houses of distinctive character.

The cost of the entrance in relation to the house proper is in direct proportion to the amount of space allotted to it. Where a combination of features are employed, such as a sheltered entrance and adjoining bay, the cost should be appreciably reduced.

When the entrance and shelter occur within the perimeter of the house, the roof can be maintained in an unbroken line. The savings obtained by avoiding changes in roof contours to accommodate projections is somewhat offset by the loss of square feet of floor space within the area.

The type of entrance preferred by the builder will be determined greatly by the character of the plan and the design of the house, rather than by the cost of one type of entrance over that of another.

PROJECTING entrance porch shown below is best designed with an adjoining bay in order to properly proportion the unit with the balance of the house. An additional cost is generally involved because of the change in roof lines. Fluted glass is used in sidelights. Muntins are painted dark to conform to door.
SHELTERED entrance and adjoining bay are the predominant features of the front of house shown above. In this case a portion of brick wall with circular opening, recessed entrance, and floor-to-ceiling windows in bay, all contribute to the success of these features. Planting box in front of bay extends beyond wall line. Materials used are wood boards and battens and painted common brick on side-walls, slate roof, stucco soffit, steel awning type windows, glass block in door, sidelights, wood trim, and brick.

GLASS BLOCK is used effectively in sidelights adjoining moulded door in the entrance shown at right. Cornice above protects door from elements. Pattern is adaptable to a two-story house.
OPEN PLANNING—
The Answer to Small Houses

Illusion of larger rooms is obtained in houses of limited square foot area by Minneapolis builder through introduction of door height partitions.

**Chimney.** Bay and entrance as a featured assembly provide the interest to this basic "A" two-bedroom house.

**Plan of basic "A" house.** Rectangular periphery obtains economy in layout.

**Buyers** are style conscious regardless of the price range. Thus Paul K. Enghauser, president of Enaco, Inc., developers of the Noble Grove addition located on the outskirts of Minneapolis, Minn., sums up the attitude of purchasers of new homes. He maintains that it is necessary to produce houses that retain the advantages of standardization, insomuch as design does not become monotonous, in order to keep the price structure in line with demand.

In the design of the houses in Noble Grove, Enghauser and his architect-associate, G. W. Brandhorst, have held to simple, yet effective lines in their "A," "B," and...
ASSOCIATED together in the development of the "Noble Grove" project in Golden Valley, a suburb of Minneapolis, Minn., is the builder-architect team of Paul K. Enghouser at left, and G. W. Brandhorst, operating under the name of Esaco, Inc.

"C" types of homes. The first two are two-bedroom houses, and the last one a three-bedroom set-up.

Definite variations from the three basic arrangements are obtained through projecting bays, recessed areas and porches, and picture windows, plus the addition of breezeway and garage. Changes in wall materials and roof profiles, together with an undulating terrain offer additional opportunities for change.

This builder, in addition to changes in house designs, also employs unusual methods to avoid monotony in block planning. An entire project is laid out and platted. Then one house of a fixed design is selected and built in each block. Houses of different designs or positive variations are then placed alongside of the first. This process is repeated until each block is built up. The developers have found that this method has paid out well. It has sustained the interest of the home buyer and given assurance that the entire project shall be carried out as contemplated.

In the interiors, a number of novel arrangements have been introduced that have proven sound and practicable, and make for better living. These innovations, which include door height partitions between living room and the kitchen-dining area, elimination of doors for bedroom closets and in their place providing a track and curtain, have received the whole-hearted acceptance of the buying public. This is due primarily to the fact that these features in design and appointments take the house out of the competitive market should the new owner decide to sell at some futuro period. They also add interest and reduce costs, as well as give the illusion of additional space in the main rooms of the house.

Noble Grove is a subdivision located in Golden Valley, a suburb of Minneapolis. It consists of 80 acres fully subdivided and platted. Areas have been left within the plat for park purposes and the streets...
have been extended to connect to existing streets on either side of the project. The terrain of the entire area is rolling and wooded, thus making it ideal for home-sites. The lots average 85 x 135 feet.

The project was started in 1947 and, although planned for veterans, it was not contemplated that the houses would be kept under a $10,000 ceiling. The firm did plan to build a total of 190 houses on the project. Of this number 47 have been completed and 73 are now in various stages of construction.

There are three basic types of houses: A, B, and C. Basic “A” is a two-bedroom house containing 825 square feet. This house sells for $10,800 including land. Basic “B” is the same type of home as “A” except that it contains 875 square feet. Basic “C” is a three-bedroom house containing 1,050 square feet. It is priced at $13,750, including land. These basic types have a number of variations to avoid repetition and to conform to site conditions. The “A” type is built with basement garage where building site permits. This increases the cost of this house to $11,400, including land.

These houses include two fireplaces (one on the first floor and one in the basement), large sealed window in living room, Kitchen Maid factory fabricated cabinets (with all built-in features such as bread drawers, vegetable trays, flour bins, towel racks, etc.), kitchen ventilating fan, and operating windows which are weatherstripped. All of the houses have full basements, and are completely insulated and decorated. Conventional plaster is used throughout.

In preparation for construction, Enghauser precuts most of the dimensional lumber in a large barn located on the premises, which has been converted to use for this purpose. Recently, this builder found that it was just as economical to have all the material delivered direct to each individual site where the carpenters, equipped with Skilsaws and other labor saving tools, can do their own cutting as required. In this manner unnecessary handling of lumber is avoided. Besides having the distributorship for a number of items that go into their houses, such as Kitchen Maid cabinets, kitchen fans, window units, etc., this firm also has on hand a large volume of basic materials.

The work in the field such as layout and supervision of the construction is carried on by Hubert M. Nelson, a member of Enaco, Inc. Design is under the supervision of Gerhard W. Brandhorst, a registered architect. Offices of the company are located in a one-story building close to the downtown area of Minneapolis. Showrooms are available for display of materials and designs to prospective customers. All selling of the homes in the Noble Grove addition are conducted from this office. Very little advertising is done. Most of the contacts for sales have been made through present buyers.

This company employs about twenty carpenters, three masons or bricklayers, common laborers, and also men that install all outside sewer work. The painting, plumbing, heating, plastering, electrical wiring and sheet metal work are sublet.

Financing is handled either through a straight GI or combination FHA-GI loan. Down payment to a veteran is approximately 10 per cent. Monthly payment on the basic “A” two-bedroom house is approximately $65.00 per month including insurance and taxes.
BASIC "B" two bedroom house provides shelter for entrance and picture window. Plan of "B" house below

MATERIALS AND EQUIPMENT USED

- Balsam wool or Fiberglas insulation
- Imperial wallpapers
- Kitchen Maid cabinets
- Kohler plumbing fixtures
- Lightolier electric fixtures
- Miami medicine cabinet
- Nelson master slab shingles
- Patek paints
- R.O.W screens
- R.O.W spring cushion windows
- R.O.W spring cushion windows
- Rezo slab doors
- Rheem hot water heater
- Twindow picture windows
- U. S. Gypsum plaster base
- Ventrola kitchen fan
- Waterman-Waterbury warm air furnace
- Yale & Towne hardware
ITH a building site measuring 150 feet in width by 260 feet in depth and a hill extending upwards at rear, Allen F. R. Svensson, president of Sebco, Inc., builder of Minneapolis, Minn., had a rare opportunity of applying some of the more advanced ideas on house planning and design in the development of his new home.

The house is placed tight against the foot of the hill after having a portion of it cut away. The front lawn is raised and terraced above the adjoining gravel road. Thus a fine view is obtained of a boulevard, parkway, and small lake a short distance away. Orienting the house to the site is one of the fundamentals of good planning which has been fully carried out by this owner, even to the position of the living and dining room bay with relation to the small lake. Other portions of the house, such as open and screened porches, are likewise placed strategically with relation to view. The host of trees and shrubs that extend on up the hill provide a perfect background for this modern example of good living.

In common with all owners, Svensson made changes in the house after the work was in progress. This included the two porches at ground level on one side of the house, and the extension over the garage on the other side which is used for a den. These additions to the original scheme provide a balancing effect to the entire house.

When A Builder Builds His Own—

Many features he may have thought visionary when applied to operative building, are considered constructive when viewed in light of his own home.

The general character of the plan and design of house is a modified adaptation of the modern. The white trim of windows, doors, and bays are in striking contrast to the 12 inch face of stained redwood siding of second floor. The mottled stone veneer of the first floor and stained wood shingled roof lend a balance of color to the whole.

This house contains two floors but no basement. The first floor is devoted to service except for the dining room and entrance hall. A concrete mat is poured over the entire surface. Finished floors are rubber tile cemented to concrete.

The second floor contains a large living room which is approached from the floor below by a broad...
The plan of this house is open and the kitchen is combined with the living room. The entrance hall and the dining room are located centrally. The large stone fireplace with a raised hearth occupies the major portion of one wall. Position of the large bay, which is oriented toward a small lake in the distance, is responsible for the angular walls of this room and the bar.

View into kitchen-playroom from combination entrance-hall and dining room. Large stone fireplace with raised hearth occupies the major portion of one wall. Position of the large bay, which is oriented toward a small lake in the distance, is responsible for the angular walls of this room and the bar.

Opposite view in dining room toward bar and stairs in adjoining hall that lead to living room above. Modernfold doors permit opening to bar to be closed when not in use. Painted, papered, and wood paneled wall surfaces all occur in one room yet are in perfect harmony with each other.

View taken from children's playroom into kitchen beyond. Opening adjoining the door has a wide counter extending into kitchen which is used by family for informal eating. Counter can be extended by raising the dropleaf on playroom side for the use of the children. Walls are finished in painted, striated plywood with perforated Celotex blocks on ceiling for deadening sound.
MATERIALS AND EQUIPMENT USED

Crane Co. plumbing fixtures
Pratt & Lambert paints
Waterman-Waterbury warm air furnace
U. S. Gypsum rock lath, plaster base
Schlage, and Stanley hardware
Colonial Bronze Co. cabinet hardware
Geneva kitchen cabinets
Philip Carey medicine cabinet
Mosaic tile floors
Bruce hardwood blocks in den
Goodyear rubber tile floor
Certainteed Glass Wool Co. insulation
Rheem hot water heater
Pittsburgh Twindow picture window
Barcol overhead garage door
Hubbell Electric switches and receptacles
Modernfold doors
Libbey-Owens-Ford glass block
Celotex block ceiling

The irregular shape of the living room and the first floor dining room is an asset rather than a liability. A conversational area is established around the bay and fireplace with the portion between stair occupying one wall of the combination entrance hall and dining room. Balance of area, with the exception of den, is devoted to bedrooms, bath, and closets. Adjoining the master bedroom is a large dressing closet containing wardrobes, cabinets, and vanity.

DIRECT view of front of house shown at right. House is placed well back from the road with the rear walls abutting the foot of hill. Heavy foliage and trees at rear provide a perfect background.

TWO VIEWS of second floor living room. The one at left shows the approach to room from stairs. The vertical pattern of the wood paneling of stair wall contrasts with figured paper on adjoining wall. The other view shown below features the large bay overlooking the lake. The fireplace wall and hearth are finished in light colored pressed brick. Plastered walls are painted...
The first and second floor plans of this house were laid out to conform to the needs and requirements of a growing family. The layout is unusual in that the house is two stories high but has no basement. With the exception of the dining room and entrance hall, the entire first floor area is devoted to service and play. The large screened porch which contains a barbecue, adjoins the children's playroom. The second floor contains a large living room readily accessible from hall below, a den, three bedrooms, and bath. Layout of the house is adapted to the site.
Wood Flooring
Developed to Use With Radiant Heat

SECOND-floor living quarters characterize David E. Braun homes in Chicago, Ill., area.

SECOND FLOOR PLAN

FIRST FLOOR PLAN

CHARLES H. ANDERSON, Anderson Floors, Inc., worked with Higgins, Inc. to introduce new flooring.
A NEW type of wood flooring that may be successfully used with radiant heat installations has recently been developed by Higgins, Inc., New Orleans, La. Charles H. Anderson, president of the Charles H. Anderson Floors, Inc., Chicago, helped develop and introduce the flooring to the building industry. The flooring is a five-ply hardwood, bonded with waterproof glue impregnated with chemicals that resist moisture, termites and other vermin. It can be installed in basements, game rooms, and in all residence work where radiant heat is used with concrete slabs. The flooring maintains dimensional stability.

The flooring, 9-inch square blocks 3/4-inch thick, is grooved on the under side. The blocks are laid in mastic. Mastic is applied directly over the concrete slab, and when the flooring is laid the mastic is forced into the grooves to increase the holding strength of the flooring to the slab. The grooves, spaced two inches apart, are 3/8-inch deep. Each block of the flooring is tongued and grooved on each of its edges.

Typical installations of the new type flooring were made in two homes built by David E. Braun, Chicago. One home under construction in Skokie, Ill., will incorporate the flooring with radiant heating, and in the other home in Chicago, the flooring is installed with forced warm air heat. The two homes are alike except for the type of heating installed.

For radiant heat, Braun uses an 85,000 B.T.U. capacity Bell & Gossett unit. Radiant copper tubing is installed in a 4 1/2-inch concrete block slab placed over a 4-inch fill of sand or cinders. Foundations and footings extend four feet below grade, and the outside edge of the foundations below grade are insulated with a waterproof material.

Anderson, who has been in the flooring business for 24 years, heads a company that installs and works with hardwood flooring. Some of the larger buildings in which his organization has installed flooring are the Merchandise Mart building, Chicago; the Customs house, Denver, Colo.; the Studebaker Aviation plants in Chicago and South Bend, Ind.; Register Tribune building, Des Moines, Iowa; WGN Television building, Chicago, and the Fuchs bakery in South Miami, Fla. Besides industrial work, the firm installs flooring in residential units. They install the flooring and surface it. Surfacing equipment includes 20 to 25 sanding machines.
"It Pays To Be Careful——

TOGETHER"

By Larry Holmes

Insurance Manager, Chicago Metropolitan Home Builders Association

Reduction in insurance premiums is only one dividend that may be realized through cooperative effort on the part of builder groups. There are other advantages.

MARTIN CHARLES HUGGOTT, executive vice president of the Chicago Metropolitan Home Builders Association, boiled down all the arguments for industrial safety to the six words which title this article. He uses the slogan frequently in his weekly Bulletin as part of the Association's continuous effort to help reduce home building costs by cutting down the costs of accidents. And it is working.

Mr. Huggett coined the phrase from experience. The Chicago Association is one of the home builder groups which has discovered that concerted and cooperative effort to reduce accidents pays very real dollars-and-cents returns in addition to the intangible benefits it produces.

Direct savings are accomplished by reducing the costs of liability insurance, both workmen's compensation (employers' liability), and public liability (bodily injury and property damage). Rates for these coverages are based on the total amount of claims paid in relation to the total premiums paid by the insured. Each classification of operation has its own rate. These rates range from a few pennies per $100 of the employees' remuneration to as much as $25 per $100 of payroll.

Rates are determined by statistical agencies which compile data for the insurance companies. In

WARNING posters and safety suggestions are readily available, and they may do much toward cutting down accidents

ANALYSIS of home building accidents by cause is supplied by Kemper Insurance Co. engineering consultation service. Mishandling of objects causes most accidents.
some states this statistical work is done by an official state body. In other states it is done by a rating bureau to which the insurance companies all subscribe. A national actuarial body compiles the data nation-wide, state-by-state, also, and makes its findings available to insuring companies and their agents. These are the basic or "manual" rates and are the corner-stone of all rate making in the liability field.

The manual rate for each classification of employment is applicable throughout a given state, and only in that state. For instance, the rate for residential carpentry varies from as little as $1.86 per $100 of payroll in one state to more than $5 per $100 in another.

This is caused by two factors: (1) Variations in the benefits awarded; the state law says shall be paid to a workman injured or killed on the job. (2) The frequency and severity of the injuries and accidents in that particular employment in the particular state. This latter is by far the heavier factor.

It naturally follows that if accidents can be reduced, the cost of the insurance will be reduced. In the instance cited above, it is apparent that the state which pays only $1.86 premium for its residential carpenters must have a very careful bunch of carpenters and job superintendents, and probably has a state organization of some kind constantly checking on safety—a union, a contractors' association, or possibly an active state industrial commission.

In addition to reduction of the state-wide manual rates, there are other ways of reducing the total cost of liability insurance.

Entire industries sometimes carry on nation-wide accident reduction programs. Leaders of this type of activity are the railroads who have had an industry-wide safety program for more than thirty-five years. The railroad program was the inspiration for the formation of the National Safety Council which is the clearing house and leader of accident prevention in scores of fields today. The oil industry and the cement manufacturing group have active programs.

Early this year the heavy construction industry through the Associated General Contractors adopted a program for its chapters with the national body serving as co-ordinator and as guide. Such industry programs have sometimes reduced cost as much as 50 per cent.

There also is a possibility that an individual employer may earn a reduction in his rates by himself. There are several "ifs" in this plan. In the first place he must develop a sufficiently large annual insurance premium (the size of which varies from state to state). His record of claims must be above the state-wide average. He must submit authentic data on payrolls, losses, and premiums for a period of several years (usually three or four years). He must place his insurance with a company which will grant preferred rates. Also, in most instances, his operations will be very rigidly inspected by safety engineers from the insurance company to determine his eligibility.

A third method of reducing liability insurance costs is now coming into widespread use among home builders and other trade associations. Because of its immediate availability in most of the states, it appears to be the most practical plan at present or until an industry-wide program may be inaugurated by the national association. The plan can be operated by one large local association, by pooling all the associations within a state, or by combining several states in the project.

Basically the plan is to segregate the residential contractors and subcontractors who are members of the association from the others within the state, or states, and treat them as one big preferred risk group. It has been operating in California for thirteen years. In one year—an exceptionally safe year—insurance costs were reduced 83.3 per cent! The average saving to members over the thirteen years is between 40 per cent and 50 per cent for all three associations. Milton Morris, the San Francisco association's dynamics, passed the good news along to other local association secretaries at a national meeting of executives in Chicago in 1946. Since that time more than twenty other local associations have started safety-insurance programs.

The dollars-and-cents reduction in insurance premiums is only one of the dividends from the program. Reduction in human suffering; improved labor relations; good industry publicity; splendid sales talk for prospective members who can qualify; and a self-sustaining new membership service are among the others.

It has been the experience of those who have installed a safety and insurance program that the members "eat it up." The builders and their foremen are grateful for the expert guidance the program makes available to them. This guidance takes many forms. Probably most important is the service of professional safety engineers. When an insurance company is assured of a volume of business which the plan makes possible, it can afford to assign top-flight safety engineers to the home builders' operation.

The American Motorists Insurance Company, a nation-wide casualty insurance company and one of the big Kemper Insurance (Continued to page 182)
AN old barn provided space for precutting shop and materials storage. From here precut materials are delivered to the home site.

By studying cost and time saving methods used by large-scale builders, this father-sons team adopt ideas that pay dividends.

Precutting is the profitable phase of this building firm's operations, and to make precutting successful, the firm has carefully worked out materials handling procedures.

All lumber for several homes is cut to exact size at the cutting shop, which is located in a large barn near the site of the firm's operations. Precut materials include studs, rafters and headers. The shop workers pile each length separately. Then the man who delivers the lumber to the foundations is provided with a chart that shows exactly what lumber is required for each house. He loads the truck with the necessary pieces and when he arrives at the foundation of the home under construction, he places the lumber on the subfloor or on the ground, as near to the place where it will be used as is possible.

The firm, Arthur M. Gilbert & Sons, a father and sons building team of Eugene, Ore., makes a regular practice of studying large building operations and reading trade publications for ideas. Currently they are completing a 135-home project. The father, Arthur Gilbert, and his two sons, Kenneth and Archie, have made an extensive study of precutting methods. Precutting, they realize, can easily be an expense instead of a saving if the carpenters spend valuable time looking for lumber to use.

Archie Gilbert runs the precutting shop where he makes cabinets as well as moldings. Considerable storage space is provided in the barn that houses the shop, and the firm purchases some materials in carload lots.

Most of the homes built by Gilbert & Sons are two bedroom units. Their prices range from $8,850 for the smallest model containing 750 square feet to $11,900 for the home that contains 1,075 square feet. All homes have 14x20 one-car garages. The houses are financed through F.H.A. Down payments range from $1,800 to $2,000.

To facilitate precutting, the firm chose four of the most popular floor plans of the seven that had been in use. Then the men devised three sets of concrete forms which take care of the four plans they are now standardizing, as well as three other floor plans if they want to use them.

The larger homes have oil-fired forced warm air furnaces with registers in each room. Full-sized dining rooms plus breakfast nooks in the kitchen, utility rooms, fireplaces and concrete patios are among the features of the homes in the higher price brackets.
Handling Methods Make Precutting Profitable

Exteriors of the homes are wood siding or shakes. Interiors are plastered, and most living room ceilings are coved. Hardwood floors, linoleum drainboards with cove backsplash are provided.

Plaster receives one coat of oil paint, and three coats of paint are applied to the interior and exterior woodwork. Because of a prolonged rainy season in that area, many exterior materials used are primed on both sides for added protection.

Since sewers are not available to the project, the firm provides septic tanks. Asphalt streets with concrete curbs and gutters are standard.

The two Gilbert boys have grown up in the building business, learning much from their father who started out as a carpenter in 1925. Arthur Gilbert now does the buying and selling for the firm; Kenneth supervises construction from foundation to plastering, and Archie takes over the finishing, after the plastering is completed.

This father and sons team is doing a big job in Eugene, Ore. They have already completed 63 two- and three-bedroom homes and are now finishing up 13 more. The balance of the 135 homes in the program has been started.
CAREFULLY planned schedules of all operations enable Del E. Webb to erect houses at the rate of seven per day.

There is no sacrifice of quality in design, workmanship, or materials in this large-scale, low-cost housing project in Tucson.

MORE than 11,000 feet of 8 and 10-inch vitrified clay pipe go to provide sewerage facilities for the first 700 homes. Over 50 miles of pipe will be installed.

CREATOR of Pueblo Gardens, Del E. Webb, right, chats with Sid Taylor.
Housing With Style and Quality

ON A DESERT site in Tucson, Ariz., one of the largest housing developments in the nation is currently taking shape at the rate of seven homes per day. Known as Pueblo Gardens, the project was initiated last June by the Del E. Webb Construction Company of Phoenix. When completed, the $20,000,000 "city within a city" will provide its 10,000 residents with 3,000 low-cost homes and a $2,500,000 civic and shopping center, as well as churches and schools.

Webb, whose success in the highly competitive construction field is credited in large part to his willingness to use new materials and methods, brings to the Pueblo Gardens development all the skill and know-how acquired on several other big-scale construction jobs. A former carpenter, he heads a firm nationally known for its multi-million dollar projects, constructed from New Jersey to Oregon, from Florida to California. He is also vice president and part owner of the New York Yankees, having obtained his start in athletics as a minor league baseball pitcher prior to his carpenter days.

Careful preliminary planning and materials scheduling has enabled building activity to proceed at the present seven houses per day rate, and construction is now ahead of schedule. The first block of houses to be completed consists of 700 dwellings, calling for 5,500,000 feet of lumber which is precision cut and packaged on the site—at a Webb-constructed and operated mill. Over five miles of redwood patio fences are being erected, 120,200 square feet of glass installed, and six miles of surfaced streets laid.

Utilities and plumbing installations will require laying in excess of 50 miles of pipe. Sewage disposal is accomplished with mains connecting living units to the Tucson municipal system, with each block of houses being cut in simultaneously. Over 85 per cent of all sewer mains had been installed five months after the project got under way.

Due to Tucson's rapid growth and the consequent limitations of sewerage facilities, outlying districts have previously depended on septic tanks and cesspools. A cooperative sewer enterprise was recently initiated to provide sewerage facilities for the entire metropolitan area. Bonds for the project were approved by voters last fall. Under the new system an outfall sewer will collect sewage from four interceptor lines, conveying it to a new disposal plant.

Because of the size of Pueblo Gardens, and its status of construction, the subdivision was granted permission to cut into the new interceptor lines. Mains are of 8-inch and 10-inch vitrified clay pipe, 7,875 lineal feet of 10-inch and 3,130 feet of 8-
inch clay pipe going into sanitary installations for the first unit of 700 houses. The mains are laid at depths ranging from six feet to 14 feet. Several types of trenching machines were used, from blade excavation in the softest soil to heavily powered trenchers in the typical desert caliche—soil hard as sandstone, sometimes as impenetrable as rock. Analysis of soil conditions and assignment of equipment were under the supervision of J. N. McPhee, Webb's superintendent in charge of over-all construction.

Designs for the six different floor plans are the work of Architects Paul Williams and A. Quincy Jones. Far from sacrificing the quality so frequently absent in low-cost houses, the Pueblo Gardens' homes possess a luxurious appearance comparable to many individually designed and expensively built dwellings.

One of the outstanding features is the lavish use of glass, an infrequent application in low-priced houses. The dwellings are also characterized by exceptional insulation, necessary to offset desert temperatures. Wide roof overhang and use of double vapor barrier wool batts for ceiling insulation utilize the heat-reflection rule.

The window areas extend the living space beyond the physical boundaries of the home. To insure privacy for each owner, detached patio fences have been used, and these in turn make it possible to vary the appearance of each dwelling. In the small home the front window wall is seven feet high by 14½ feet wide while the rear door arrangement provides a glass door and adjoining window to give a daylight wall seven feet high and 6½ feet wide. The horizontal bands of windows have aluminum sash. A two-bedroom design has the entire end of the living-dining area glass from floor to ceiling providing a window wall 12 feet wide by 7½ to 9½ feet high, varied because of the pitched roof. Another two-bedroom design has a window wall 10 feet high by 12 feet wide. Aluminum-backed gypsum board provides wall insulation. The flat roofs, which eliminate hip and valley framing, are sealed and covered with crushed stone. This framing system permits sloping ceilings, which are used to architectural advantage by visually enlarging room areas. Door-height closets separate entryways from living room areas.

Although construction varies, the majority of the houses are frame with redwood siding or striated plywood exteriors. Where plaster or stucco is used, increased wall strength and the elimination of plaster cracks is achieved by the use of Gunite, which has also reduced plastering time.

Landscaping of the entire project is included in the price of the houses, which vary from $4,975 for a one-bedroom home to $7,975 for three-bedroom dwellings. The figures include a large landscaped lot, termite-proofed construction, paved streets and complete utilities, patio walls, backyard fencing, and outdoor storage.

Contractors Get Quick Service---

Whether It's a Small Item or Lumber for a Complete House

UNUSUAL design provides two tiers of display windows. Yard layout, right.

LUMBER dealers can sell almost anything connected with building or household needs, if they advertise and attractively display their merchandise.

This has been the experience of the Doud Lumber Co. of San Jose, Calif. When this company's store and yard were built in 1945, building materials and hardware were scarce and hard to get. F. J. Kincaid, the manager, decided to fill shelves and counters of his attractive store with any available merchandise related to the business. He secured housewares and cooking utensils, and such unusual items as bicycles, scooters and ice cream mixers, as well as tools, tool chests, small motors, power drills, gas heaters, underground garbage receivers, fireplace equipment, shower stalls, and lawn umbrellas. This miscellaneous assortment of goods sold well, and carried the new concern through the postwar period of shortages.

But the real business of the Doud Lumber Co. is selling lumber and building materials; the real objective, to serve contractor-customers in the best way possible. Now the store can obtain the type of merchandise needed for this purpose, and kitchen hardware and similar miscellaneous items are being replaced by builders hardware and Class "A" equipment used by carpenters and other mechanics.

The builders hardware department is designed for the use of architects and builders. They are welcome to bring their customers in and look around as much as they please. No pressure is put on them to buy.

The entire plant is laid out in such (Continued to page 200)

COMPLETE assortment of items for the home is offered in the Doud store
Construction Outlook for 1949

by Herman B. Byer

The forecast—A good building year marked by adjustment and stability rather than expansion, with a 6.1 per cent increase over 1948 in over-all construction expenditures

The construction industry entered 1949 after having established a remarkable postwar record. This has been a period of expansion in all respects. As I view the situation, 1949 will be a good year for the construction industry, but will be characterized by adjustment and stabilization, rather than continued expansion. I hope, and many others do also, that such will turn out to be the case. At this stage, further adjustments, continued improvement in the supply of materials, and an orderly price situation would be far more advantageous to the industry, and to all the users of its products, than would further expansion sufficient to maintain undue pressure on the industry's increasing capacity.

Within the past seven years, from the start of 1942 to the end of 1948, construction has gone through a complete cycle which, under more normal conditions, might have extended over a generation or more. Activity in 1942, when so much of the war plant and of military and naval facilities were built, was almost as great in physical terms as in the two highest years of the 1920's. But by 1944 the physical volume of construction activity had declined to almost the levels of the lowest year of the depression. By 1948, new construction in physical terms (as measured by construction expenditures adjusted to eliminate the effects of price changes) had increased by almost 170 per cent from 1944, and by almost 400 per cent from the somewhat higher level of 1945. It is interesting to compare this latter increase with that during the corresponding period at the end of World War I, from 1918 to 1922; for that period the increase in physical volume was about 40 per cent.

Last year our total expenditures for new construction, measured in current dollars without any adjustment for changes in construction costs, was almost 17.7 billion dollars—somewhat over 13.6 billion dollars for privately financed work, and slightly more than 4.0 billion dollars for public construction of all types. The largest item was privately financed non-farm residential building which made up almost 40 per cent of the total, and privately financed utilities constituted about 14 per cent of the aggregate.

In the public construction field, there has been a complete reversal of emphasis since 1942. In that year, military and naval facilities accounted for 37 per cent of all construction expenditures, but in 1948 less than one per cent of the new construction fell in this category. Publicly financed industrial construction made up a quarter of all expenditures in 1942, but last year was negligible in extent. These had been replaced by our normal peacetime public works—highways, school buildings, hospital and institutional buildings, sewer and water projects, and conservation projects.

During all of this postwar period, however, housing has received the greatest attention, and it is in this area that the most spectacular advances have been made. The number of new permanent units started in non-farm areas totalled 670,500 in 1946, 849,000 in 1947, and 928,000 in 1948. If we add those started between the defeat of Japan and the end of 1945, and those started during the opening months of 1949, we have a total of more than 2 million new housekeeping dwelling units put under construction since the end of the war, not counting units started on farms, temporary units provided in public projects under the Veterans' Emergency Housing Program, and units gained by alteration of existing buildings.

(Continued to page 212)
Dramatize Your Project—for National Home Week

For the home builder seeking the greatest benefits from National Home Week, there is one fundamental answer—dramatization.

It is dramatization that brings attention. It is dramatization that brings out the crowds. It is dramatization that helps any home builder put his story across.

National Home Week brings that opportunity! The casual observer passing a home building project last September probably did not remain casual for long. What met his eye in many leading cities were crowds of people thronging to see the new homes and building products that were on display during National Home Week.

In many cities home builders who were marketing entire communities of homes hung out the "sold out" sign before NHW had come to a close. These alert merchant-builders had the foresight to dramatize their homes and their projects in a way that made people want to come and see them.

Dramatization of new homes and products can be your keynote. The alert builder has plenty of chance in this direction.

This year National Home Week will be bigger and better because not only home builders but every segment of the industry is making preparations to join this report to the consumer.

The work that can be done in every city to build a big NHW campaign naturally falls into two general classes: That which should be done by the Association as a whole, and that which can be done by individual builders.

For example, the Association can dramatize the industry's achievements by building a model Economy Home in the Town Square during the Week, September 11-17. Plenty of publicity about the stunt should precede opening day. Then when the Big Week arrives the public will flock to observe modern construction methods and the completed project. In this model home can be posters and sales promotion displays putting up various modern materials and appliances.

It is also a wonderful place to put up bulletins and explanatory material about financing methods, supply problems, industry production records, and other facts and figures about the home building industry.

Building a sample home on the City Square is an Association project, just as tours of NHW building projects for mayors and city officials would be. But the individual builder need not rely entirely on the activities of the Association to bring interested customers to see his new homes. The Home Builder can merchandise his project for National Home Week in coordination with his Association and multiply the benefits.

Take the idea of building a model home. The individual builder with a flare for publicity could set aside a certain house under construction in a current project to be his special National Home Week House. The way to win friends and influence buyers is to keep visitors happy, it seems, so a grandstand might be in order to make kibitzing a pleasure, rather than a training hike through muddy conditions.

(Continued to page 224)
EVEN roof line maintains unity in over-all appearance of Delaware Park Shopping Center, Buffalo, N. Y.

Shopping Center For Established Community

BUILDERS of shopping centers realize that no store owner would like his place of business to be a duplicate of one his competition operates, yet most builders realize the importance of maintaining a uniform appearance of stores in a shopping center.

The shopping center, as a whole, must first attract clients to the area, then the buildings should offer each store owner the opportunity of adding individual appeal to represent the business he will conduct. How a shopping center was planned to appeal as a unit, allowing "individualism" on the part of each store owner, is shown in the Delaware Park Shopping Center in Buffalo, N. Y.

Completed in ten months, the 21 stores in the Center were immediately occupied, and are doing a large volume of business. Clients from the surrounding established residential areas are attracted by ample parking space, and by a layout which permits a free flow of pedestrian traffic. Architect G. Morton Wolfe, of Buffalo, in planning the Center achieved an appearance of spaciousness and unity by specifying comparatively low and even front elevations.

The Center, three miles from downtown Buffalo, faces busy Delaware Avenue, and when a customer drives into the Center from this main thoroughfare he can park in the large paved area immediately off the street, in front of the shops. Near the stores, the customer is impressed with the individuality of each unit. From Delaware Avenue he is impressed by the over-all appearance of unity in the shopping center.

Construction work, done by the Shirley-Herman Co., Buffalo general contractors, was speeded up by the use of power tools. This equipment included gasoline shovels, bulldozers, rollers, power saws, power concrete float machines, a concrete mixer, and gasoline pumps. A concrete slab was laid over concrete footings placed four feet below grade. Floor covering is asphalt tile, and ceilings are insulation tile. Wood sheathing and wood joists were used for the roof decks.

Interior walls received three coats of plaster. Exterior materials applied included granite, Indiana limestone, brick and concrete block.

David Bernant, New York, contracted with Wolfe and the Shirley-Herman Co. to plan and build Center.
COST of home with land was less than $23,000

Ranch Style in
Block and Brick

ALTHOUGH Richard Narrow of Williamsville, N.Y., is a newcomer to the building field, he is already a pioneer in ranch style home construction in the Buffalo, N.Y., area.

Completing one of the first ranch style homes in the area, Narrow has finished three others since September, 1948, and plans to build about 14 a year. The two- and three-bedroom houses, priced at $14,500 and up, found ready acceptance. When the first one was completed, as many as 1,800 people visited it in one day.

The home shown here, occupied by Narrow, is representative of the good design and construction he achieves. It is built on a concrete slab over the rough 3-inch concrete slab placed on a gravel fill, tar was poured and Sisalkraft building paper was laid. Wrought iron radiant heat pipes were installed with all joints are welded, then the finished concrete slab, four inches thick, was poured over that.

Two trenches, 38 inches deep, were dug for the inside and outside walls. At this depth, walls of concrete block and brick rest on solid rock. Concrete blocks used for the exterior walls are 8x8x16 inches; for the interior, 4x8x16 inches.

Inside walls and ceilings were insulated with 4-inch wool batts, and received three coats of plaster. Insulation around the outside walls is 1/2-inch fiber board. Millwork and trim is white pine. Floors are asphalt tile. Regular wood shingles were used as roofing.

BRANDED PRODUCTS USED

Amerwood paneling
Bryant water heater
Byers wrought iron pipe
Celotex concrete building units
Celotex insulating building boards
Crane, and American-Standard
bathroom fixtures
Gold Bond plaster
Hope windows
Kelvinator range and home freezer
Norge refrigerator
Pryne & Co. ventilators
Sisalation insulation
Speakman shower heads
Stanley, and Yale & Towne hardware
Tile-Tex asphalt tile flooring

CABINETS have sliding glass doors
NOTWITHSTANDING the numerous combinations and variations that are possible in the construction of a wall, there are only three basic types in use at the present time. These types are as follows:

1. FRAME. This type consists of all wood members being securely fitted and nailed together. The various kinds of framing are: The balloon frame, the modern braced frame, and the platform frame. The balloon frame is the most economical though least rigid method of light frame construction. The braced frame, called the combination frame, is a modification of the heavy timbered frame which was used until the middle of the Nineteenth Century. The platform frame is the type of construction in general usage today. The exterior framing extends up to each floor and rests on each respective floor. Sheathing is applied to the frame, and the exposed surface or skin which is placed against the sheathing may be one of a number of different materials that are adaptable to the design to be used.

2. MASONRY VENEER. Basically this system is similar to frame construction, except that the skin or surface material is of brick, stone, or some other material intended to give the appearance of solid masonry construction. Wall is built up of wood in the same manner as frame. Between the face of the wood sheathing and the back of the masonry veneer a one-inch air space is provided. The masonry veneer is then secured to the sheathing with metal ties. This type of wall construction is preferred by many builders and architects because it permits greater flexibility in the design of a house through the introduction of a number of different wall surfaces.

3. SOLID MASONRY WALLS. Perhaps this is the most common of all system of building construction. These walls vary in thickness from eight to twelve inches in their application to houses, depending upon height. They can be built with either common brick or concrete block back-up of four to eight inches in depth with four inches of face brick or stone facing. Inside face of solid brick or concrete block walls are furred to receive lath and plaster. Basement walls and foundations should be at least as thick as the walls above. In the case where basements are provided, however, the wall should be at least two inches thicker than the wall above. This compensates for the pressure of the earth against the wall, particularly in the case where no cross walls are encountered. If, however, upon investigation it is found that the stresses due to earth pressure and the superimposed building exceed the specified safe working stress, then the thickness of the basement wall must be increased to bring the stresses within the specified limit.

The subject of walls will be discussed again next month in this series on Engineered House Construction. This limited treatment on exterior walls will be treated further and in addition there will be a series of illustrations and explanations on interior walls.
THE BALLOON FRAME
This type of frame has many things to recommend it. The one-piece studs, extending the full height of wall and tied together by the ribband at the second floor line, reduce to the minimum the shrinkage factor. It is strong and rigid but requires careful fire stopping. It is more efficient when interior studding is set directly on girders or bearing walls.

THE MODERN BRACED FRAME
This type of frame is an outgrowth of New England solid timber post and girth construction. Instead of heavy posts, walls are built with 2x4-inch studs set 16 inches on centers. The second floor is carried on a double 2x4 plate. This type has several commendable features. Simple to build it has good provision for fire stopping at sill and second floor. Cut-in bracing used.

THE PLATFORM FRAME
The platform frame is extensively used. It is similar in principle to the braced frame but has boxed sill construction on each floor line. This makes for greater shrinkage but it is equalized on each floor when a similar type of construction is used under bearing partitions. Frame is more efficient when studding is set directly on top of girders or bearing walls.

Walls.
The addition of insulation is often omitted in the construction of walls. Formed from materials that may become waterlogged, it should be applied to both sides of the walls. The thickness of the insulation used may vary from 1 to 2 inches. This thickness depends upon the type of insulation, as it is the most efficient to use. Insulation of more than 2 inches in thickness is difficult to build up, as the thickness of the insulation that is applied to the building is not known until the building is completed. The wall is then insulated, after the exterior wall has been completed, and the excess mortar is put into the air space and thereby form a bridge. The exterior wythe is the exterior finish; the interior wythe can be used as the interior finish of the room. Due to the insulation value of the two-inch air space, plaster can be applied directly to the insulation of the interior wythe. Savings in construction work can be established after the bricklayer becomes accustomed to the movements required to lay this type of wall.

Another type of wall is reinforced masonry. This is used wherever there is the cavity wall. This is made up of two separate brick or tile walls which are separated by an air space about two inches wide. The two walls known as wythes, are held together by rustproof metal ties placed in the mortar joints at regular intervals (every six courses) as the walls are constructed. There should be no bridge between the inside and outside wythe. The term bridge, as used here, refers to materials that may become lodged within the two-inch air space, thus acting as a conductor for the transmission of moisture or cold air. In laying up this type of wall, the mason needs to be extremely careful to see that excess mortar does not drop into the air space and thereby form a bridge. The exterior wythe is the exterior finish; the interior wythe can be used as the interior finish of the room. Due to the insulation value of the two-inch air space, plaster can be applied directly to the insulation of the interior wythe. Savings in construction work can be established after the bricklayer becomes accustomed to the movements required to lay this type of wall.

CONVENTIONAL wood sheathing secured diagonally to wall studs for rigidity
is a heavy stress. The secret of a good reinforced masonry wall is that it must be solid. The reinforcing rods may be placed either in a vertical or horizontal position. Vertical reinforcing is recommended for any wall in which there is pressure.

Hollow concrete blocks of either heavy or light aggregates are now widely used in exterior wall construction. Stone and gravel were the original aggregates but now crushed and graded cinders are more generally used because they are highly cellular, light in weight, fire resisting, insulating and nailable. They also provide a good mortar and stucco bond. The cinder blocks are not as strong as the other type, but they will carry loads sufficient for use in most houses. When the exterior of light aggregate blocks are sprayed with a waterproofing compound it then makes a very desirable and attractive wall surface. By butting the blocks together and closing up the vertical joints, and then raking out the horizontal joints, some very unusual effects may be obtained. When care is used in laying up the blocks the interior surface of blocks can be exposed in the room and treated as an interior finish.

Other types of wall construction that are similar in concept to the three basic types mentioned are being developed through prefabrication methods. The all steel house, as represented by the Lustron Company, employs the use of steel channels for the vertical members and a skin of metal panels both inside and out. Insulation and other features are used to make it practical.

The stressed-skin principle is applied in the manufacture of wall panels for prefabricated frame houses. Reduction in the size of the vertical framing members has been made possible through increased structural strength that is obtained with the use of glued-on surface panels. Indications are that the demand for glues will increase in home construction. The new durable glues are ideal for the fastening of plywood and composition boards to studs and framing members.

With the introduction of large window openings in the exterior wall, of large open areas within the house where several rooms are combined in one, and of the use of movable partitions which destroy much of the rigidity of the house, the question of immobility in the exterior walls with relation to wind pressure becomes of prime importance. This rigidity can be obtained in frame walls through the use of sufficient diagonal bracing at the corners of the house or wherever a break occurs in a continuous horizontal surface. The use of large rigid sheathing materials in houses of this type is essential as far greater bracing resistance is obtained with this type than with the six or eight-inch wide boards.

With the advent of the basement-less house where a concrete slab is placed under the first floor area, the finished first floor line is usually placed from six to eight inches above grade line. Thus the wood members of the wall framing are placed dangerously close to the ground where they are subject to decay and termite attack. To guard against this condition it is well to adhere to the following practices:

1. Do not place wood in contact with soil.
2. Outside wood trim, water-tables, etc., should be eight inches or more above finished grade.
3. Provide damp proofing between wood and masonry where conditions may allow dampness to reach wood.
4. Avoid construction that permits condensation of moisture within the walls.
5. In basementless houses where a crawl space is provided, allow at least 18 inches between bottom edge of girders and joists and ground below.

6. Slope ground away from foundation walls to secure proper surface drainage.

7. Provide barriers in the form of sheet metal shields placed through masonry or between masonry and wood. To be effective the shield should be properly made and installed.

8. Lumber treated at the mill against decay should be used where danger of soil contact may be made.

The search for lower building costs and less expensive materials with which to produce houses continues unabated. Today builders are studying suggestions for adding to the quality while reducing costs. A type of construction that is regaining prominence under these conditions is stucco. Not the magnasite stucco of years ago, but reinforced Portland cement stucco, properly applied.

To build this type of wall standard 16-inch on center studs are bridged. Then 18 gauge galvanized wires are stretched horizontally on the outside face of studs. These are spaced approximately four inches apart. Over the wires a 15 pound felt is applied. Next a one-and-one-half inch 17-gauge mesh is put in position on the face of the paper. Furring nails hold the mesh 3/4-inch away from the paper permitting a good bond to be obtained. Three coats of stucco are then applied giving the exterior coat a thickness of about one inch. The result is an attractive exterior wall surface of reasonable cost. This is obtained without the use of exterior sheathing.

The advantages of gypsum or insulating board sheathing in the construction of houses are many. Large sheets make these materials economical to install. The large panels work to great advantage in the construction of the one-story ranch house where they impart added rigidity to the exterior walls where large openings are encountered that would normally weaken the structure.

Treated plywood for use as exterior sheathing is excellent. It offers the maximum protection from the elements because of its density, and makes for a rigid frame wall due to its tensile strength.
HOUSING hysteria is fast disappearing. So is the housing shortage. A calmer and far more sensible approach is taking form—at least on the part of the public. Only the dyed-in-the-wool bureaucrats remain to be convinced that the greatest political football of all time actually is not what it used to be.

Of course, there are those who insist that so far as they are concerned it is as difficult as ever to get a place to live. This no doubt is true. Furthermore, it may continue to be true for some time to come—individual tastes being what they are. Conceivably it is difficult to imagine a situation in which the housing needs of every family have finally been satisfied and the giant housing industry standing by with little if anything to do. That would indeed make tough going for everybody.

Shortages Produce Overages

However disastrous over-production of housing might prove to be to our national economy it is something that can easily occur as witness what has already happened in industry after industry. Housing alone is no exception to the rule.

It has been our contention all along that great shortages eventually turn into great overages with exceedingly serious results—not only to producers, but to consumers. When production facilities reach the point where they exceed demand someone is certain to take a beating. Unfortunately, this financial chastisement extends all the way down the line until it reaches the ultimate consumer. No one escapes.

It may seem more or less untimely to point to the dangers of over-production as applied to houses, but the subject is fresh in our mind following a perusal of two Sunday newspapers from different sections of the country—Newark, N.J., and Minneapolis, Minn. The home story, as revealed in the advertising sections of each publication, is pretty much the same and as different from a year ago as night is from day. Each week finds house buyers more firmly seated in their respective saddles.

Came the first week in March in Minneapolis, for example. With the arrival of certain unmistakable signs of spring, the classified columns headed “Houses For Sale” began to lengthen to such an extent, as compared with a year ago, that we finally took time out to make an accurate count of the offerings.

The “For Sale” total on the first Sunday was 1256 individual homes. "Sure thing," said a friend with considerable reassurance. "The home buying season is on. This is the time of the year when houses sell the most readily in these parts. Watch them disappear."

Three weeks later we made another check. By this time the number of single houses had increased to 1459. In addition, there were 602 residential units involved in apartment buildings and 240 in duplexes that were offered for sale.

Now it may be that there is nothing particularly heartening in the fact that 2300 families (10,500 people) are being offered homes in a single edition of a single newspaper. Whenever we mention the number someone promptly informs us that prices still are too high, or that the houses are undesirable, or that they are located in the wrong places. Maybe so! But this much we do know. A year ago it was a horse of a different color.

Perhaps there is no better evidence to indicate the extent of the change that is taking place than the account of the rental situation which appeared in the same publication. Last August in the metropolitan area of the Twin Cities there were 6500 “Wanted To Rent” advertisements compared to 5300 “For Rent” advertisements. By the following February the monthly totals had undergone a spectacular reversal when the “Wanted To Rent” ads had dropped to 3,250 and the number of “For Rent” offers had increased to 5500.

While it still may be exceedingly difficult for the average family to fit available living quarters to its individual needs and tastes, as we said before, once again it must be admitted that it is much easier to do so than it was a few months ago—if figures mean anything at all.

While this highly encouraging shift was taking place, FHA reported that more loan applications were received in its Minneapolis office during the first three weeks of March, 1949, than in any other three-week period in its history—a total of 1200 residential units, 750 of which were rentals.
Northern New Jersey seems to differ little from Minnesota, according to the recent twenty-page section in the Newark Sunday News devoted to home building, construction materials, mortgage financing real estate.

**Headlines Tell Story**

Despite the fact that the classified ads are not included in the supplement, 149 individual homes were featured in write-ups or display advertisements that leave little unsaid to convince home prospects that today's housing is not without its virtues. Putting aside the claims of the many companies which use generous advertising space to describe their offerings, we encountered these typical headlines in the articles which describe what is going on:

- "Builders Busy in Buyers Mart,"
- "Realtors See Sales Activity Continuing,"
- "Home Building, Construction Materials Supplies Appear Much Freer,"
- "Financing and Title Insurance Reach All Time High,"
- "Money On Hand in Good Leveling Off,"
- "Year in Building,"
- "Homes Opening New High in '49,"
- "Roselle's Biggest Up Wooded Districts,"
- "Construction Active in Suburban Areas,"
- "Economy Homes Mushrooming in Northern New Jersey seems to be more and more,"
- "It Way be said without fear of contradiction that homes will be built in sufficient quantities to satisfy such demand that exists within all price classifications."
- "In Minneapolis the president of the Home Builders Association was credited with the statement that about 300 houses (of which above the $10,000 figure) were standing idle at the time the nearly 1,500 individual homes were being advertised.

**Economy Homes Mushrooming**

It may be said without fear of contradiction that homes will be built in sufficient quantities to satisfy such demand that exists within all price classifications. In Minneapolis the president of the Home Builders Association was credited with the statement that about 300 houses (of which above the $10,000 figure) were standing idle at the time the nearly 1,500 individual homes were being advertised.

Now, 300 unsold new homes might well prove to be a retarding factor in the minds of many contractors. No doubt much was the case in this particular price classification. However, it merely meant that many builders dropped to the next price level where they will stay until that field has been exhausted. Some day there will be too many of the $8,500 to $10,000 houses. Then it will be necessary to seek new worlds to conquer in still lower-priced classifications.

Now, all this does not mean that no one has been building lower-priced houses. That particular field was by no means neglected even before we began to concentrate attention on an "economy house".

**Western Building, Portland, Ore.** points with justifiable pride to the fact that "during the first 11 months of 1948 the light construction industry of the West built 24.7 per cent of all the city dwelling units in the country, 23.6 per cent of all the single-family houses, 24.2 per cent of all the duplexes, and 29 per cent of all the multi-family units in the United States during that period." A commendable record to be sure, especially when it is known that "the average cost of all the dwelling units built from January through November, 1948, was $7,138."

Nor is the West the only section of the country where economy homes are available. The same thing is true in many metropolitan areas. Assuredly, it is even truer in smaller cities and towns where land and labor costs are lower.

An attractive 4-page folder from Griffin's, Hudson Falls, N.Y. describes and illustrates the much-publicized Industry-Engineered House which this progressive company makes available on the following attractive terms: "For ex-GI's. No down payment, $65 per month, including lot. For any family, $900 down, $60 per month, including lot. Payment includes principal, interest, insurance and taxes."

These are not exceptional cases. They merely happen to be examples of housing achievements that are before us as we pen these lines. You encounter them in almost every publication you pick up. They are the accounts of what a fighting industry has done and can do to meet a temporary emergency. Now it is settling down to the longer, and even harder, competitive pull.

It is highly significant that we, as a nation, now have more and better housing, and that a far smaller proportion of the population is living in substandard housing than ever before. This has been brought about as a result of rapid production of new homes and great improvement of old homes. We quote from a report of the Construction Industry Information Committee:

"In every respect—except one—we are better off than we were before the war in that last peace-time year, 1940. We still do not have as many vacancies in proportion to the total number of dwellings as we had then, which means we have less opportunity to shop around in buying or renting a home. But we are catching up fast."

**Record a Challenge**

This imposing record will not be good news to politicians. As a matter of fact, it probably will be hotly denied by the host of do-gooders now on the public payroll. At the time from 1,200 to 1,500 homes were being advertised for sale in the Minneapolis newspapers, the mayor of the city "learned during a trip to Washington that Minneapolis faces one of the worst housing shortage in the nation."

A tragic fire had occurred in a city-operated quonset hut project. Three little tots had lost their lives. "It's no secret that the quonsets do not comply with the city building code," the mayor is quoted as saying in the Minneapolis Tribune. "This was brought out at public hearings two years ago. But we had to do something to keep all these families off the street. We took what the Federal Government would give us."

What the Federal Government gave Minneapolis and what the city built with it added up to a housing project where "young people live like moles" according to the mayor's statement.

It is not our purpose to place any personal blame upon the shoulders of politically-minded bureaucrats, but merely to point out that such individuals are the last people in the world who are fitted by experience or anything else to handle anything as complex as housing projects, be they great or small. Only a casual reading of the Hoover reports can convince anyone that it is high time for Uncle Sam's overburdened, red-tape-ridden, overlapping agencies to undertake less and less instead of more and more.

As the housing shortage wanes and the building industry proceeds to build such homes as are needed in various price classifications, the Government has not been able to get ready to begin to step in and "do something about it" as its hopeful public housers and energetic expeditors promised.

It would be far more encouraging to the overburdened taxpayers of the land if Uncle Sam would first put his own house in order. Unless and until he can do that we are still betting on the industry that rolled up its sleeves and built the homes that broke the back of the emergency. Had it not been for its ability to perform under the exceedingly difficult situation created by acute shortages of materials and labor we would still be up to our necks in housing troubles.
INSULATION against heat is being very satisfactorily accomplished through use of a commercial product called Infra Accordion Insulation, a multiple sheet aluminum with a fiber separating partition.

The product, which has recently been strengthened in its construction, owes much of its effectiveness to a "compartmentation" which is maintained in the fiber partition after application to walls. This provides an additional reflective air space, increasing thermal values for resistance to the flow of heat rays. It also creates an additional air space, which is a non-conductor of heat.

It is a natural law in heat transfer that all materials, including all insulations, transfer or resist heat flow in the same way. The same laws of nature apply to all physical objects—aluminum, paper, cotton, wood, rock, glass, brick, et cetera. The only differences are in: (1) the degrees of conductivity; (2) the percentages of radiant absorption, and (3) the amount of convection.

The flow of heat by radiation and conduction, regardless of direction, is invariably from the hot surface to the cold surface; only in the case of convection and wind currents is it ever otherwise. The function of all insulation, fibrous or reflective, is to prevent heat from escaping or entering a structure.

Conduction, which is heat flow through matter, accounts for about seven per cent of all heat flow through wall spaces. It results from actual physical contact of one part of the same body with another part, or the contact of two separate bodies.

Because of its very low density the percentage of heat transferred through air by conduction is relatively small. The more dense a substance, the better conductor it is. Minerals, being very dense, are conductors of heat, but, by reducing their density through mixing air into the mass, their conduction is also reduced.

Radiation is the process by which rays are transferred through space. They emanate from the surface of every object whose temperature is above absolute zero—the sun, a stove, a radiator, a human being. Infra-red heat rays travel away from every point of the surface in all directions.

When these rays strike the surface of an object they are generally absorbed, and only then is heat engendered in the object. This heat spreads throughout the mass by conduction. The greatest amount of heat is engendered by the infra-red heat rays with their long wave-lengths.

In order to retard heat flow by conduction, walls and roofs are built with air spaces. Conduction through this air space which has slight but still some density, combines with convection currents to account for between 20 and 35 per cent of the heat which passes through the air space. All authorities are in agreement that 65 to 80 per cent of the heat that passes from the warm wall to the colder wall, summer and winter, is radiant heat.

In actual practice, nearly all materials used in building—brick, stone, wood, paper—are, regardless of their color to visible light, over 90 per cent black for infra-red radiation. Air spaces within building walls are usually bounded by materials which are good radiation absorbers.

The aluminum surfaces of the Infra accordion type of insulation transmit or emit by radiation only a negligible percentage of any heat actually absorbed by any or all of the three methods—three per cent of the 90 per cent absorbed. These surfaces have the property of turning back or rejecting 97 per cent of the heat rays which strike them. This is distinct from heat flow by conduction and by convection, which processes still go on.

A good example of convection, responsible for 15 to 28 per cent of all heat transfer through wall spaces, is the rising of air heated and expanded by contact with the surface of a warm radiator. Since the two aluminum sheets of the Infra insulation are non-porous and are impermeable to all gases, including heated air, they prevent the flow of heat by convection.

(Data and drawings furnished by Infra Insulation, Inc. 10 Murray St., New York, N.Y.)
The Right Way
to Get What You Want
Is to Get Ro-Way!

First choice today in Overhead Type Doors with so many leading architects and builders

- You get design that looks right
- You get engineering that has proved right
- You get construction that is guaranteed right
- You get exclusive features that work right
- You get operation and appearance that stay right
- You get sales service that treats you right
- You get installations you know are right

Whatever you want in Overhead Type Doors, the right way to get it is to get Ro-Way—for all commercial, industrial and residential applications.

ROWE MANUFACTURING COMPANY, 751 Holton Street, Galesburg, Illinois

Standard sizes available for prompt shipment. Good delivery on special sizes for commercial and industrial use.

There's a Rollway for every Doorway!
Installation Methods
For Roll-Type Screens

Through improvement in installation methods, it is now possible to adapt roll-type screens for use with most double-hung or casement windows of either wood or steel.

For wood or steel casements, the adjoining wood window stop can serve as a guide holder for either split stop or friction angle installation. Wood cover mould is applied to the face of metal box for finish directly under wood casing.

*ILLUSTRATION of method of measuring windows for installation of screens: Top, split-stop application and below, friction angle installation.*

An exception is shown in Diagram 2 where metal box for roll screen is inserted into head with bottom face of box flush with base of top frame. Builders should be careful to note that a change in position of supporting header is essential for the recessed method.

Window stops for split-stop installation may be cut in two or prepared with a kerf saw to receive the screen guide. In the event that the friction angle installation is preferred, then angle can be secured to face of stop. Basic difference between these two installation methods is that with the recessed method, a lesser amount of metal frame is exposed.

Two examples are given of the installation of this screen frame with the Andersen wood casement window. The method of applying the screen to this type of window is similar to the others, with some of the differences shown in the diagrams.

Advantages of the use of roll-type screens are that they require no seasonal removal or reinstallation, no storing, no painting and, in normal usage, seldom need repair. Their mobility provides better light and facilitates the washing of windows.

(Data and drawings furnished by the Rolscreen Co., Pella, Ia.)
THREE WAYS TO CUT BUILDING COSTS

BRAINARD
THE NAME THAT MEANS HIGHER QUALITY AT LOWER COSTS

A REAL "BEST for LESS" LINE

STEEL-STRONG
Fixed Length Steel Building Posts

BRITE-LITE
Hi-Quality Steel Arealwalls

TEL-O-POST
The Original All-Steel Adjustable Jack Post

HIGHER QUALITY — Because we make our own steel we can be certain that only the highest quality goes into our products. Higher quality because all Brainard Products are rigidly tested and inspected before they are marketed.

LOWER COSTS — Because we produce our own steel we eliminate extra costs. This saving is passed on to you.

Even greater savings result when purchases are made in volume. And Brainard Products are designed for easy installation which means a saving in time — further lowering costs. Write today for literature, price lists. State whether distributor, dealer, jobber or builder.

Brainard Steel Co.
BUILDING PRODUCTS DIVISION

Dept. 659
WARREN, OHIO
How To Make a Shingle Nail Stripper

This simply constructed nail stripper is very handy for persons who object to holding nails in their mouths. It is a metal box 3x3x8 inches with a slot in the base through which the nails slide. Nails can be removed two at a time, and their points are always down.

How To Make An Overhead Door

Since overhead door hardware sets are sold in various sizes according to the weight of the door, savings result when doors are kept as light as possible. This double overhead door can be built at a weight of from 220 to 240 pounds, depending on the type of lumber used.

This door may be installed without use of tapes or truss rods, and as a result, time is saved in installing it. The 2x6 on edge top and bottom pieces make construction of the door easy for the carpenter.

Pieces are glued with waterproof glue, and nailed together. The plywood is also glued and nailed to the framework.

How To Make A Wire Puller

In staking sites of building foundations of more than 100 feet, wire is preferred to twine because it may be more tightly stretched and will sway less in the wind. Here is a simple wire-tightening device: Inscribe a pentagon within a 5-inch circle drawn on a piece of paper. Use pattern of pentagon to cut two pieces of plywood, and nail plywood to a piece of 1½ inch closet pole. After wire is made taut, pentagon is placed against batter board. Stakes supporting batter board are then driven into ground.
American now offers the ideal all-around Saw for builders! It feels right...cuts right in any position...because it's balanced right! Big power G. E. motor develops 2 1/2 H.P.... zips right through wood, stone, tile, sheet metal, composition. Big capacity 8 1/2" blade will cut a 2 1/4" plank at 45°, or 3" straight cut. Blade speed 5300 R.P.M. New stability and strength provided by wide base of hard aluminum alloy...calibrated for ripping. Holds accurate depth of cut and angle adjustment. Complete with metal carrying case. Precision-built...sturdy for long life. Send coupon for details.
One-Motion Method of Casing Windows

In casing a double-hung window opening, casings and stops can be cut to rough length and mitered around opening, reducing the switching of the miter saw to a minimum.

Start the operation by swinging miter saw to right and cutting right on all stops (4). Mark long point of left cut on all stops. Tack casing No. 1 to window sill and mark both ends. Tack casing No. 2 in place and mark both ends. Make right cuts of casings No. 1, 2, 3 and 4. Moving saw to left, make left cut Nos. 1 and 2 on marks. Make left cut on all stops previously marked, and nail in place. Now nail casing No. 1 and bottom of casing No. 2. Tack No. 4 and mark left cut at top.

Cut and nail casing No. 4. Fit casing No. 3 against No. 4. Slip top of casing No. 3 behind No. 2, which has been left loose at top. Mark miter with knife and cut. Nail No. 3. Set all nails and sandpaper joints.

**Chart For Cutting Trim For Windows**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>SIZE</th>
<th>CUT</th>
<th>HEAD</th>
<th>SIDE</th>
<th>CUT</th>
<th>HEAD</th>
<th>SIDE</th>
<th>CUT</th>
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<tbody>
<tr>
<td>BED ROOM</td>
<td>3/6 x 4/6</td>
<td>2</td>
<td>58</td>
<td>2</td>
<td>54</td>
<td>2</td>
<td>54</td>
<td>2</td>
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<tr>
<td>BATH</td>
<td>2/6 x 3/6</td>
<td>2</td>
<td>46</td>
<td>2</td>
<td>42</td>
<td>2</td>
<td>42</td>
<td>2</td>
</tr>
<tr>
<td>KITCHEN</td>
<td>3/6 x 3/6</td>
<td>2</td>
<td>46</td>
<td>2</td>
<td>42</td>
<td>2</td>
<td>42</td>
<td>2</td>
</tr>
<tr>
<td>LIV. RM.</td>
<td>3/6 x 5/1</td>
<td>2</td>
<td>65</td>
<td>2</td>
<td>61</td>
<td>2</td>
<td>61</td>
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</tr>
<tr>
<td>BED # 2</td>
<td>3/6 x 4/6</td>
<td>2</td>
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<td>2</td>
<td>54</td>
<td>2</td>
<td>54</td>
<td>2</td>
</tr>
<tr>
<td>LAUNDRY</td>
<td>1/6 x 3/6</td>
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<td>46</td>
<td>2</td>
<td>42</td>
<td>2</td>
<td>42</td>
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</tr>
<tr>
<td>GARAGE</td>
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<td>48</td>
<td>2</td>
<td>48</td>
<td>2</td>
</tr>
</tbody>
</table>

(Continued on page 134)
Planning a comfortable home depends on a great many things... but high on every homeowner’s "must" list is an adequate heating system. An important part of that system is the method of heat distribution.

Convection Heating — as provided by Tuttle & Bailey Convectors — means constant circulation of room air, even temperature from floor to ceiling, in every corner. T & B heating elements — constructed entirely of copper (fins, tubes, headers) — assure fast response to thermostatic control, quick transmission of heat, raising room temperatures in about one-fifth the time required by cast-iron.

The results? More efficient heat distribution... more economical operation... real comfort! It will pay you to keep these performance facts in mind when your customers ask advice. Specify and install *CH... with Tuttle & Bailey Standardized Copper Convectors.

ASK YOUR JOBBER TUTTLE & BAILEY Inc

NEW BRITAIN, CONNECTICUT
Space-Saving Utility Closet

This utility cabinet which houses a water heater and an automatic washer can be a valuable addition to any home where the saving of space is important. Use of the cabinet keeps the appliances out of sight when they are not in use. Heater is ventilated by means of louvers in cabinet doors. The cabinet while shown as a separate unit, can be made an integral part of kitchen fixtures.

Another advantage of the cabinet arrangement is the situation of the water heater controls at eye level, which makes the adjustment of the thermostat easier.

Location of the water heater in the kitchen instead of the basement or utility room can result in appreciable fuel savings by avoiding temperature loss of water in the pipes. This is particularly true if the utility cabinet is installed in the kitchen wall adjacent to the bathroom.

Entrance Porch—Traditional or Contemporary

By R. J. Alexander

The entrance is designed for use with a two-story house; with a slight modification of the cornice it could be adapted for use on a one-story or a story-and-a-half house. The floor of entrance is brick laid on a concrete slab. The brick is arranged in an appropriate pattern with a border of headers and a field laid up in herringbone pattern. Hard common or reclaimed brick pavers would be in keeping with the design as well as the use of colored flagstone.

The stoop footings are of concrete, extending below frost line. The footings and the porch posts are anchored to the main foundation wall. Deck of entrance porch is covered with long-lasting copper sheets. Roof is pitched back to the wall line with drips or short rain-spouts at either side to exped the rainwater on to the ground close to the wall. Good workmanship is exhibited in every portion of the entrance. It is of the type that will be found most generally in top quality homes.
NO D-54. POPULAR ENTRANCE DESIGN

Veneer of reclaimed paving brick.

Copper deck flashing.

1 x 6 D & M sheathing.

3/4 x 2 1/4.

3/4 x 4 1/4.

3/4 x 9.

2 1/2 x 8 oak beam, boarding.

1/4 W.P. plywood.

3/4 x 3 1/2.

Angle iron lintel.

SECTION A.A.

1 1/4 door.

Oak threshold.

1 3/8 sash.

Studs.

Wood sill.

1 6.

10.

Line of opening.

FLAGSTONE BRICK BORDER

HALF PLAN

DETAIL AT B

ELEVATION OF ENTRANCE

SECTION

SIZE

ELEVATION
Dealer Conventions Continue to Draw Record Attendance and High Interest

Reports from annual conventions of state and regional dealer groups continue to indicate a determination by lumbermen in all sections of the country to cope, through concerted action, with the outstanding problems facing the industry.

Active opposition to federal housing legislation remained a leading discussion topic in the business sessions. Advertising and merchandising methods in connection with the returning “buyers’ market” received wide attention.

The conventions continued to follow a trend toward heavier attendance, increased interest in Association work. There were more exhibitors and a greater interest in this phase of activity.

More convention reports are given below:

Iowa

A total registration of 2,348, including 678 exhibitors, was recorded at the 16th annual convention of the Iowa Retail Lumbermen’s Association March 16-18 at the Des Moines Coliseum. G. W. Holman of Melbourne was elected president, succeeding Charles E. Goessling, Shenandoah. Roy C. Jansen, Auburn, was named vice president for Northern Iowa; and L. J. Deur, Missouri Valley, vice president for Southern Iowa. W. H. Badeau of Minneapolis was re-elected secretary.

Trustees are: G. W. Dulany, Clinton; A. F. Umhoefer, Ashton; Jansen; Deur; Frank Finkbine, Atlantic; John Haire, Fort Dodge; Mel B. Griffin, Algona; C. J. Spahn, Dubuque; B. P. Jepsen, Dyersville; Harold Weitz, Des Moines; James Weir, Mt. Pleasant; and Robert Duffus, Leighton.

Members of the executive committee are Holman, Weitz, Jepson, Umhoefer and Badeaux.

Independent

The Independent Retail Lumber Dealers Association—comprised of dealers from Minnesota, Wisconsin, Iowa, North Dakota and South Dakota—reported substantial progress during the past year at the group’s 10th annual convention at the Radisson hotel, Minneapolis, March 14-16.

Leonard J. Lee, Moorhead, Minn., dealer and former treasurer, was elected president for 1949. He succeeds Charles Lampland, vice president of the Lampland Lumber Co., St. Paul. Other new officers are: Philip B. Steiner, Sauk Center, Minn., vice president; John Broten, Minot, N.D., secretary; and Ashley Vye, Wheaton, Minn., treasurer.

Edwin W. Elmer, Minneapolis, was reappointed executive secretary of the association. Newly-elected directors are Vye, Henry Hess of Pine Island, Minn.; Clarence Scherer, Minneapolis; Leslie Olson, Mora, Minn., and G. A. Eddy of Swebalead, Iowa.

Eighty-five manufacturers and distributors were represented in the building supply exhibition on the mezzanine floor of the hotel. All spaces were occupied.

Carolina

The need for intensified sales effort at the retail level and for unified opposition to the proposed government housing program were emphasized at the annual meeting of the Carolina Lumber and Building Supply Association, which was held at the Radisson hotel, Minneapolis, March 14-16.

Leonard J. Lee, Moorhead, Minn., dealer and former treasurer, was elected president for 1949. He succeeds Charles Lampland, vice president of the Lampland Lumber Co., St. Paul. Other new officers are: Philip B. Steiner, Sauk Center, Minn., vice president; John Broten, Minot, N.D., secretary; and Ashley Vye, Wheaton, Minn., treasurer.

Edwin W. Elmer, Minneapolis, was reappointed executive secretary of the association. Newly-elected directors are Vye, Henry Hess of Pine Island, Minn.; Clarence Scherer, Minneapolis; Leslie Olson, Mora, Minn., and G. A. Eddy of Swebalead, Iowa.

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The need for intensified sales effort at the retail level and for unified opposition to the proposed government housing program were emphasized at the annual meeting of the Carolina Lumber and Building Supply Association, which was
Intermountain

The sixth annual convention of the Intermountain Lumber Dealers Association was held March 10-12 at the Hotel Utah in Salt Lake City. Nearly 800 persons attended the three-day session and there were 50 exhibits.

M. L. Horsley, Soda Springs, Idaho, 1948 vice president, was installed as president; and Melbourn Romney, Salt Lake City, was re-elected secretary-treasurer. New officers are W. A. Spear, Provo, Utah, and M. E. Ray, Elko, Nev., vice presidents.


Louisiana

Ivy C. Jordan of the Superior Lumber Co., Monroe, was elected president of the Louisiana Building Material Dealers Association at the group's 29th convention, March 16-17, in the Jung hotel, New Orleans. He succeeds J. Frank Carroll of Alexandria.

Attendance at the annual event was 645 and there were 66 exhibitors—both record figures.

The other new officers are Roland Privat, Rayne, first vice president; Thomas A. Harrell, Winfield, second vice president; George E. Knoop, New Orleans, treasurer; R. Needham Ball, Baton Rouge, secretary-manager; and Katherine F. Ball, Baton Rouge, assistant secretary.

Six new directors were named for a three year term. They are: Harry Balcom, J. E. Deen, Gilbert E. Derouen, Weldon W. Poole, J. M. Myatt, and Roosevelt Daigle.

President's Column

(Continued from page 136)

The emergency arising out of the unprecedented storms of the past winter furnished an outstanding example of private enterprise at work. The Union Pacific Railroad Company battled repeated blizzards for seven consecutive weeks. They fought winds up to 80 miles per hour, and snow drifts of 30 feet in height. It was a day and night task for 14,000 (private) employees using 15 large railroad rotary plows, 53 spreader plows, 180 carry-alls and 124 flame throwers. It was all privately managed and paid for, in the true American way. Don't you suppose private industry could take care of the rumored housing shortage in the same way Union Pacific licked the elements?

District directors for the Florida group are: A. J. Hayward, Pensacola; A. E. Thornton, Tallahassee; E. B. Smith, Neptune Beach; Virgil D. Wilder, New Smyrna Beach; H. M. Horton, Fort Pierce; L. D. Mullins, Jr., Riviera Beach; F. A. Davenport, Miami; Edward Simpson, Fort Myers; R. W. Addison, Sarasota; J. E. Griffin, Lake Wells; B. F. Edwards, Tampa; Rayond C. Hauk, St. Petersburg; Leonard E. Todd, Ocala; and T. A. Brotherson, Mount Dora.

Harry L. Lawson, Miami, is director-at-large and national director. James F. Mack of Hollywood was named member of the NRLDA executive committee.

Florida

The two-day convention of the Florida Lumber and Millwork Association, Inc., was held at the Sorrento hotel, St. Petersburg, March 21-22. Registration at the 29th annual event was approximately 300.

Elected president for 1949 was Robert D. Morris of the Carolina Lumber Co., Jacksonville. Vice presidents are Francis J. Igon, Orlando; Forace F. Holland, Panama City; and R. C. Tylander, West Palm Beach. Marie M. Bennett of Orlando was re-elected secretary-treasurer.

The show, directed by Philip Creden, Hines advertising and merchandising manager, has a "how-to-do-it" theme, designed to satisfy the urge of home owners and apartment dwellers to do practical "odd jobs" of building and repairing.

The setting of the program is a basement workshop equipped with work bench, tool cabinet and two saw horses. Walter E. Durbahn, director of vocational training at Highland Park, Ill., high school, acts as instructor and handyman.

Subjects selected for the telecasts are typical of odd jobs required at times of nearly all homeowners. The first program demonstrated the building of bird houses. At the conclusion of the show, listeners were directed to the sponsor's lumber yards for plans and materials which would enable them to build their own bird houses.

More than 800 letters and postcards, requesting plans, were received in the four days following the telecast, the sponsors said. Many persons sent requests for garage plans, remodeling ideas and plans for homes.
558—COMBINATION STORM SASH AND SCREEN—A new Bilt-Well unit introduced in a bulletin of Carr, Adams and Collier, Dubuque, Iowa. The unit, which will be built in 41 modular sizes, consists of the complete storm sash (upper and lower sections) and a screen section which interchanges with the lower section of the storm sash. Construction of the new product eliminates the wood surrounding frame.

559—COMBINATION STORM AND SCREEN WINDOWS AND DOORS—A folder distributed by the Alumatic Corporation of America, Milwaukee 4, Wis., illustrates aluminum door and window units which can be converted to either storm-type or screen by simple adjustments.

560—PORTABLE ELECTRIC TOOLS—A complete line of Thor electric tools, with illustrations and specifications, is listed in Catalog 38-A (second edition) of the Independent Pneumatic Tool Co., 600 W. Jackson Blvd., Chicago 6, Ill. Included are drills, tappers, grinders, Sanders, hammers, polishers, valve reamers and other tools, with accessories.

561—ELECTRIC PRODUCTS—A number of new, attractively illustrated brochures published by Hotpoint Inc., Chicago 44, Ill., gives specifications and features of their lines of electric refrigerators, ranges, water heaters, dishwashers, sinks, food waste disposers, washers, irons and home freezers.

562—THE MODERN POULTRY HOUSE—A booklet which discusses in detail and illustrates insulation and ventilation of the poultry house as a means of achieving healthier poultry and increased egg production published by the Universal Zonolite Insulation Co., 135 S. LaSalle St., Chicago, Ill. Also discussed are furnishings for the ideal poultry house.

563—ALL-STEEL GARAGE DOORS—A new folder which furnishes information about the three types of Strand all-steel garage doors has been published by the Strand Garage Door Division, Detroit Steel Products Co., 3101 Griffin St., Detroit 11, Mich. It includes instructions and diagrams on how to build a garage opening.

564—AIR FILTERS—The Technical Data Booklet recently published by the Air Filter Div. of Research Products Corp., Madison 10, Wis., contains details on the firm’s complete current line of air filters and related products. The booklet also has general information on air filters and air filtration and illustrated technical articles on phases of the subject.

565—OVERHEAD TYPE DOORS—A new pamphlet by the Raynor Manufacturing Co., Dixon, Ill., describes and illustrates the company’s wood sectional Up-and-Over Door used in residential, commercial, industrial, farm and rural buildings.

566—CHEMICAL PRESERVATIVES—are discussed in several new folders issued by the Protection Products Manufacturing Co., Kalamazoo 99, Mich. The subjects are “Wood Life,” a toxic water repellent; “Woodhealth,” for controlling termites, and other insects and vermin; “Raincheck,” a water and moisture repellent for masonry; and a water repellant aluminum finish for masonry, wood, canvas and metal.

(Continued to page 140)
Here's the Low-Cost Flooring to give you a lifetime of wear...

Today when every dollar counts, you'll find MA*TI*CO asphalt tile the most economical of all applied types of floor coverings!

LONGER LASTING
Over 150 million square feet of MA*TI*CO installations the country over are proving their endurance to wear under the most rugged conditions.

INSTALLS QUICKLY
Made to Federal specifications, MA*TI*CO is precision finished to make for a perfect-fitting job. Cuts down on installation time. Can be laid without disruption of normal store or plant operation.

EASY TO CLEAN
Daily dusting and an occasional mopping and waxing is all you need to keep your MA*TI*CO floor clean and beautiful. MA*TI*CO is odorless, sanitary, safe...will not wear slippery with use.

SAVES ON REPLACEMENTS
Should excessive abuse or accidents necessitate repairs, new MA*TI*CO tile units can easily be inserted. Expansion of a floor, as in remodeling, is just as simple with the addition of matching tiles.

BEAUTIFUL . . . COLORFUL
A range of 27 MA*TI*CO colors . . . both plain and marbleized . . . offer limitless design possibilities only possible in tile types of flooring. Thru-and-thru colors can’t rub off.

FREE!
Full-Color Literature Showing Complete Sample Tile Line and Design Patterns
Write to: Mastic Tile Sales Corp., Dept. E, 153 W. 57th St., New York 19, N.Y.

MA*TI*CO ADVERTISING NOW APPEARING IN LEADING MAGAZINES
AMERICAN DRUGGIST...INSTITUTIONS...AMERICAN BUILDER...THE SCHOOL EXECUTIVE...
STRENGTH CLEARING HOUSE...PROGRESSIVE GROCER...BUILDING SUPPLY NEWS...RETAILING...RUG PROFITS
American Builder, May 1949

CONNOR LUMBER AND LAND COMPANY

MIXED CARS—Northern Hardwoods, Pine and Hemlock

PHONE No. 3
Teletype No. 26
MILLS: Laona, Wisconsin and Connorville, Michigan

Behind The Mills—The Connor Timber Stands

Catalogs

(Continued from page 138)

567—"COLORS OF THE YEAR"—is a booklet published by the O’Brien Varnish Co., South Bend 21, Ind., which contains color charts and other recommendations for house decoration. Suggested color schemes for rooms are based on rug and floor colors. Another chart illustrates exterior paints and trim colors.

568—PLASTIC FLOORS—A new catalog by the Thos. Moulding Floor Manufacturing Co., 165 W. Wacker Dr., Chicago, Ill., covers the full line of the company’s floor and wall tile and accessories. Numerous illustrations include samples of the products’ colors and designs, and pictures of actual installations.

569—INSULATION VALUES—This 108-page handbook, which lists 12,852 FHA-approved heat transmission coefficients or “U” values of various walls, floors, and ceilings, is published by Silvercote Products, Inc., 161 E. Erie St., Chicago 11, Ill., manufacturers of reflective insulation materials. Numerous drawings of typical sections illustrate the proper position of the insulation to obtain stated “U” values.

570—ROOF COLOR IN HOUSE DECORATION—The importance of roofing colors in the exterior decoration of the home is featured in a new four-color book, “Putting Nature’s Colors to Work . . . with Roofs that Are Daylight Engineered,” published by The Flintkote Company, 3 Rockefeller Plaza, New York 20, N.Y. A comprehensive study of color as applied to roofing is clearly explained and illustrated in the book.

571—"AUTOMATIC ELECTRIC WATER HEATER—What It is—How It Operates"—is the title and subject matter of an 8-page booklet issued by the Electric Water Heater Section, National Electrical Manufacturers Association, 155 E. 44th Street, New York 17, N.Y. In American Builder’s New Product section, March issue, page 125, it is erroneously stated that the Association supplies a water heater. The Association supplies only information concerning the electrical water heating method, and some of this information is included in this booklet.

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.
YOU GET MORE BUILDING VARIETY WITH
STAINED SHINGLES AND SHAkes

Stained Cedar Shakes have grooved texture, invisible joints. They can be laid with any desired exposure between 8" and 16".

Stained Cedar Shingles have smooth texture, visible joints. They can be laid with any desired exposure from 6" to 16".

Handsplit shakes have rugged texture, luxurious appearance ideal for roofs or sidewalls. Use any exposure between 8" and 16".

VARIETY IN COLOR, EXPOSURE AND TEXTURE

PRESTAINED shingles and shakes give the builder an opportunity to make each home of a project look different in color, texture of wall surface, and width of weather exposures—without plan changes. Many colors available, and pre-staining eliminates finish coat painting after application.

EXPOSURES can be varied so that no house is the same as the homes on either side. Builders order the proper length shakes for each exposure, so as to get the most coverage for the money. Shingles and shakes provide the quality appearance and economy so much in demand today.

TEXTURE of shakes is grooved, altogether different in appearance from smooth-surfaced shingles. This added variety is obtained with no change in application. By alternating shingle and shake homes, using several colors, builders can make each house different, make projects distinctive.

ASSOCIATED MANUFACTURERS

- West Coast Stained Shingle Co., Seattle, Washington
- Portland Shingle Company, Portland, Oregon
- Wood Shingles, Seattle, Washington
- Colonial Cedar Co., Inc., Seattle, Washington
- Canadian Forest Products, Ltd., Vancouver, British Columbia
- The Cedar Shake Shingle Board Co., Ltd., Vancouver, British Columbia
- Snap Shingle & Shake Company, Everett, Washington
- Perma-Products Company, Cleveland, Ohio
- Capilano Timber Company, Ltd., Vancouver, British Columbia

FOR PARTICULARS, WRITE TO ANY MANUFACTURER LISTED BELOW
HERE'S A
THAT CUTS HOME-

Modern
Reinforced
Concrete
Stucco

Low Cost—Compare the price of Portland Cement with other siding materials. There's your answer to why stucco is lower in cost. Besides, modern stucco is applied quickly and easily—saves labor. These are reasons why stucco construction helps meet today's urgent demand for lower-cost homes.

Good Construction—Modern reinforced concrete stucco adds strength and durability. Stucco consists of 3 layers of concrete reinforced with steel—to 1-inch thickness. This is quality construction that boosts your reputation as a builder of good homes.

Attractive to Buyers—Modern reinforced concrete stucco gives you these additional selling features:

1. Lasting attractiveness—stucco is not only attractive when new, but also retains its good looks throughout the years.
2. Ease of maintenance—its durability, strength and crack-resistance means expense-free maintenance. No periodic painting required. Stucco is unaffected by rot and termites.
3. Fire protection—stucco protects home and family because it won't burn.
4. Good insulation—stucco walls keep out heat and cold, moisture and dust.
5. Suitable for all climates—stucco has proved its suitability in both extremely hot and below-zero climates.
6. Ideal for new homes as well as for overcoating older homes.

NOTICE HOW concrete stucco is rigidly reinforced with Keymesh deeply embedded in the scratch coat. Keymesh is made of tough, cold drawn, heavily galvanized steel wire, woven into open mesh design.

For stucco and overcoating, use Keymesh, 1½" hexagon mesh, 17-gauge wire, or 1" hexagon mesh, 18-gauge wire. For interior plaster and base for tile, use Keymesh, 1" hexagon mesh, 20-gauge wire.

KEYSTONE STEEL & WIRE
Manufacturers of Keymesh Reinforcing,

Durable, Low-Cost Stucco Calls
When you follow the Keystone System of Stucco Application you are assured of strong, durable construction. The houses you erect will be attractive, saleable and lower-priced, without sacrificing profit. Here's what the Keystone System does for you:

**Produces Stronger Stucco**—In the Keystone System of Stucco Application, strong galvanized steel Keymesh Reinforcing is deeply furred out ¼" to ½" away from the wall. The open mesh design of Keymesh allows the plaster to flow through—and around—the reinforcing, deeply embedding each steel wire. As a result, stucco reinforced with Keymesh possesses lasting strength and permanent crack-resistance. This has been proved on thousands of stucco homes erected the Keystone way.

**Easier, Faster, Smoother Lathing**—Keymesh Reinforcing unrolls flat, goes into place flat and lays flat. It forms around corners easily. Besides, it has no rough surfaces that cut lathers' hands. Lathers who are using the Keystone System of Stucco Application testify to the fact that it simplifies and speeds up work, and results in smoother lathing.

**Produces Quicker, Better Finished Job**—Plasterers find it easier to get a true wall when they apply stucco on Keymesh Reinforcing, because Keymesh is correctly furred out from the wall. The scratch coat goes on to even thickness. Consequently succeeding coats go on smoother, quicker and easier.

ASK YOUR DEALER for complete information about the Keystone System of Stucco Application. He can supply you with details and specifications. And, he has Keymesh Reinforcing for you in any quantity you need—in easy-to-handle 3' x 150' rolls.
NEW PRODUCTS
Offered by Manufacturers

CONCRETE BUCKET AB5906
Johnson Lo-Slump concrete bucket easily handles concrete of any stiffness. In 2, 3, 4 and 6-cubic yard sizes, the bucket discharges mass concrete with cement content as low as two bags per cubic yard and slumps down to ½-inch, using 6-inch aggregate. Double clam discharge gate can be operated manually or by compressed air. Operated by air, gates close instantly when supply hose valve is released or when nozzle is pulled from bucket air socket. Six-foot diameter 4-yard size weighs 4,000 pounds. Koehring Co., 3026 W. Concordia Ave., Milwaukee 10, Wis.

DOUBLE-BOWL SINK AB5903
Double bowl sinks, with or without faucet ledge, are eight inches deep, made of 14-gauge steel enameled with wet-process porcelain enamel. May use any regular trim. No crumb cups or other brass goods supplied. Complies with United States Bureau of Standards specifications for formed metal plumbing ware. Flat rim permits continuous tile or linoleum drainboard to run flush with edges of rim. Alliance Ware, Inc., Alliance, Ohio.

BUILDING LOGS AB5923
These pre-cut Douglas Fir logs are designed for construction of rustic type buildings. The log is square-cut on three sides, with the outside surface peeled of bark and treated to resist discoloration, termites, weathering and dry rot. The inside surface is planed smooth and may be finished to form a natural "knotty pine" interior. Log Structures of the Southwest, Inc., 344 W. Colorado Blvd., Glendale 4, Calif.

ELECTRIC WATER HEATER AB5911
Automatic electric water heater contains thermostat, heating element connections, controls and drain faucet behind single, easily removed front panel. Available in 10, 30, 40, 52, 66 and 80-gallon capacities, unit heats water by two patented immersion type elements. Nicrochrome spiral wire is embedded in refractory material under pressure and encased in copper sheaths. Copper sheaths are chromed and tested under high voltage for insulation breakdown. John Wood Manufacturing Co., Inc., Conshohocken, Pa.

HAND PALLET TRUCK AB5913
Battery powered hand pallet truck is easily maneuvered in close quarters. Incorporates safety handle with control buttons for either right or left hand operation, three-point suspension for smooth travel over uneven surfaces and differential-action trailer wheels that eliminate wheel scuffing. Automatic power cut-off instantly cuts off power supply to motor upon release of control handle, and applies positive quick-acting brake to drive shaft, immediately stopping truck. Towmotor Corp., Cleveland 10, Ohio.

ASPHALT TILE AB5910
New color-blends in yellows, greens and blues are achieved by this firm through introduction of new basic raw materials for Ma-Ti-Co asphalt tile. Colors blend well with other colors in traditional and modern types of interior decoration. Solid colors as well as marbled asphalt tile are available. Mastic Tile Corporation of America, Newburgh, N. Y.

ASPHALT SHINGLE SEALER AB5924
"Seal-All Clips," used to prevent the raising of asphalt shingle tabs, have four main parts: A point which holds the clip in place; a shoulder which enfolds the lower edges of overlaying and underlaying shingles; a lower leg which is inserted between the top edge of the second underlaying shingle section and the bottom edge of the first underlaying shingle section; and an upper leg which rests on top of and over the overlaying shingle, with the point in position to engage the overlaying shingle when set in place with a slight hammer blow. The clips do not require special tools for installation, and are not noticeable on the roof. Seal-All Clip Co., Box 302, Flint, Mich.

MASON'S LEVEL AB5922
All working edges of this mason's level are encased in an aluminum channel. It is made of mahogany and finished with clear lacquer. The level's six plumb and level vials are set solid at factory, and glass lenses protect the vials from dirt and moisture. Manufactured in 42 and 48 inch lengths. Royal Oak Industries, Grand Haven, Mich.

(Continued to page 146)
Big Indian speaks wise words. Short, sharp, direct, true! Several thousand Comet owners go along. Comets do everything any radial power saw can do but better! That’s a fact which has pushed these fine saws to the very top in popularity and acceptance among builders, contractors, lumbermen. Comets are so accurately and stoutly engineered and built that there is practically NO parts replacement cost after years of tough field service. Ask any Comet owner his opinion. It ought to sell you a Comet saw. Immediate delivery on Juniors, Clippers, Seniors, Senior 8, Timbercutters. Order from the nearest Comet dealer or write direct.

CONSOLIDATED MACHINERY & SUPPLY CO., LTD.
2029-33 Santa Fe Avenue, Los Angeles 21, California
Distributors of Davis and Wells Woodworking Machines
(Continued from page 144)

TRUCK TIRE \[AB5918\]
Currently being manufactured in three sizes — 12.00-24, 13.00-24 and 14.00-24 — this truck tire is especially designed for front wheel service in heavy construction, excavation and strip mining, and is expected to help to eliminate hard steering and vibration in these types of operations. It is known as the Hard Rock Rib. Tread design consists of three heavy circumferential ribs. Goodyear Tire and Rubber Co., Akron, Ohio.

RUBBER TUBE DUCT MOLDNER \[AB5925\]
A pneumatic rubber tubing designed for molding holes in concrete, Ductube is used to produce ducts for telephone, power, light and other types of installations. The tube is inflated on the job, and placed in desired position for pouring of concrete. When concrete has set, the tubing is deflated and removed. Ductube Co., 940 Shoreham Building, Washington 5, D.C.

REFRIGERATOR \[AB5902\]
Coolerator Space Saver Deluxe Model 9RD7 is available with left or right door hinges. Providing eight cubic feet storage space, refrigerator is 28 inches wide, 57 1/2 inches high. Full-width freezer locker holds 40 pounds of frozen foods, while simultaneously freezing 56 ice cubes. Holds 17 quarts of fruits or vegetables. The Coolerator Co., 128 W. First Street, Duluth, Minn.

METAL MOULDING SLOTTER \[AB5915\]
Slotting tool is designed for speeding up and improving bending and curving work on metal trims and moldings. Cutting edge is hardened tool steel blade. Free swinging handle operates with minimum pressure, adding finished and professional touch to the installation. Wooster Products Co., Wooster, Ohio.

VENTILATING FAN \[AB5921\]
A night cooling unit for apartments and small homes, this Silent Breeze window ventilator fits inside any window frame measuring 27 inches or wider. It extends into the room 3 1/2 inches, and is easily installed and removed. "Rubber float" 24-inch fan has four blades. Motor is two-speed, 115 volt, 2 amperes, 60 cycle, single phase AC. Holcomb & Hoke Manufacturing Co., Inc., Indianapolis, Ind.

VANITY—WASH BASIN \[AB5919\]
The "Vanette" is a combination dressing table, vanity and wash basin with underneath cabinetry. It includes "his" and "hers" drawers, removable compartmentalized trays, a medicine cabinet drawer with locking device, built-in toothbrush holder, removable tissue receptacle and linen and towel storage space. Briggs Manufacturing Co., 3025 Miller Ave., Detroit, Mich.

GLAZING COMPOUND \[AB5901\]
Armstrong’s "33" elastic glazing compound is used for glazing windows and doors, both wood and metal sash. Will not harden in container, and remains permanently elastic, expanding and contracting with temperature changes. Available in one, two, five and ten-pound metal containers. One-pound cans are packed in counter display carton, 24 per carton. The Armstrong Co., 4065 S. LaSalle St., Chicago, Ill.

PAINT BRUSH CLEANER \[AB5916\]
"Brush Flush," a liquid paint brush and paint roller cleaner, is used by immersing the brush in the liquid, agitating and dippin off the excess. Brush will be ready to dip into any new color in less than a minute. Recommended for all base paints, enamels and varnishes. Not harmful to bristles, hair or nylon. Cleaner may be used repeatedly by removing flushed paint from bottom. Elgin Plastic Products Co., 4011 W. Harrison St., Chicago 24, Ill.

MASONRY SEALER \[AB5904\]
Century Cement sealer protects concrete masonry by filling and sealing pores and voids. Sealing and water resistant properties protect against underground water seepage in below-grade masonry. They also protect against damage from alternate freezing and thawing of walls above ground. Pleasing, uniform texture and appearance. May be applied with stiff brush. Sealer sets in presence of moisture. E. D. Coddington Manufacturing Co., 5024-5042 N. 37th Street, Milwaukee 9, Wis.

AUTOGRAPHIC REGISTERS \[AB5907\]
Invoices, work orders, purchase orders, express and delivery receipts and bills of lading are a few of many types of business forms that may be handled with new line of autographic registers. Featherweight portable model ejects all copies and has concealed compartment for filing carbon copies; Manifold, large capacity counter machine, ejects all copies, and refolding Recorder model locks in file copies in serially numbered order and ejects the others. UARCO Inc., 141 W. Jackson Blvd., Chicago 4, Ill.

FACING TILE \[AB5909\]
Nine new colors of ceramic glazed structural facing tile offered by this firm are venetian cream, colonial mottle, blush coral, blush coral mottle, spring yellow, pewter gray, gulfstream green, glacier green and silver pine mottle. Trim shades are chocolate, fall red and ebony. Metropolitan Paving Brick Co., Canton, Ohio.

(Continued to page 148)
from the Crane bathroom story!

The Crane bathroom story is the story of a complete line—a style for every taste, a price for every budget.

For instance, there's the Neuday Group above, just right for the homeowner who has to watch his costs. Then for the man who goes "all out," there are such Crane style leaders as the Criterion group below. But whatever their price, all Crane bathrooms have the high quality and the lasting beauty that make Crane the best-known name in plumbing.

That's true in Crane kitchens, too, where Crane has the right sink for every possible requirement. And in home heating, Crane supplies everything needed for any system, any fuel.

See Sweet's Builders' File for selections from the Crane line—or get the complete story from your Crane Branch or Crane Wholesaler.

For moderate budgets, the Crane Neuday Group

For the best in bathrooms—the Criterion Group—leader in the Crane style parade. Here is the very latest in design, the most careful craftsmanship—a bathroom group with elegance in every line. (For those who prefer a countertop lavatory, Crane offers the Marcia, styled to blend with the Criterion bath and closet.) Controls are finger-tip, as in all Crane bathrooms.

CRANE CO., GENERAL OFFICES:
836 S. MICHIGAN AVE., CHICAGO 5
PLUMBING AND HEATING
VALVES • FITTINGS • PIPE
NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS
Fork Lift Truck  AB5914
An operator can load a truck with four cubes of blocks in five minutes, or a large trailer with 12 or 14 cubes in 20 to 25 minutes with the Service Motowlift. Equipped with air-expanding forks. Unit has capacity of 4,000 pounds on 24-inch load center.


Watertight Surface Tile 5926
Styron Bri-Tile, made of Dow chemical raw materials, has wide application where watertight surface is desired. Permanent color. Well-suited for areas around tub or shower stalls. Bright, jewel-like colors run full thickness of tile. Squares are 5x5 inches. Wide range of colors available. Acorn Plastic Engineers, Inc., Erie, Pa.

Ornamental Scrolls AB5917
“Scroll-ets” are aluminum scrolls with a baked-on white, bronze-tone, or polished aluminum finish, easily installed on screen or storm doors. Can be used as ready-made arches for built-in bookshelves, between kitchen cabinets and for other ornamental uses in the home. Howard A. Daum Co., 666 Washington Rd., Pittsburgh 16, Pa.

Gas Forced-Air Furnace AB5920
This 100,000 B.T.U. horizontally-designed Norman Southerner model gas-fired forced-air furnace measures 21x23x52 inches. Because of compact, horizontal design, it can be installed in attic or closet, under ceiling, floor or stairs or other small space.

Correction
In the April issue, page 168, the wrong address was given for the manufacturers of product AB4917. Correct address is: Delta Manufacturing Div., Rockwell Manufacturing Co., 600 East Vienna Ave., Milwaukee, Wis.

Product AB3929. March issue, erroneously intimates that the National Electrical Manufacturers Association produces an electric water heater line. The Electric Water Heater Section of this association promotes the electric water heating method, and information concerning it may be obtained from them.

Saw Filer AB5912
A.Z. saw filer is semi-automatic, hand-operated machine for precision-controlled filing of hand, band or circular saws. Operator can control depth, hook, bevel and feed of next tooth under file, making it possible to file teeth quickly and uniformly. Easily adjusted for size of teeth. No setup time required. Nu-Art Products, 607 47th Street, Brooklyn 20, N. Y.

Roof Edging AB5938
Galvanized roof edging, made in five different types, is electro-zinc-coated steel, combining maximum protection from weather. Material withstands 52-hour salt spray test. Firm also supplies gravel stop and ridge angle. Central Products Co., P. O. Box 118, Battle Creek, Mich.

Metal Awning AB5931
Perm-A-Vent is an easily installed steel awning, finished in baked enamel. To put in place, two angle brackets are screwed to the top of a window casing, side arms fastened to the lower side casings and pair of stair-like main brackets attached to these. Stripes are then snapped over “stairs” and finished with decorative side scallops. Yorkline, Inc., Union City, Pa.

Check Numbers and Mail Coupon for Information

American Builder, 105 West Adams Street, Chicago 3, Illinois

Name ____________________________ Address ____________________________

City ____________________________ State ____________________________

AB5901  AB5900  AB5917  AB5925  AB5933  AB5941
AB5902  AB5910  AB5918  AB5926  AB5934  AB5942
AB5903  AB5911  AB5919  AB5927  AB5935  AB5943
AB5904  AB5912  AB5920  AB5928  AB5936  AB5944
AB5905  AB5913  AB5921  AB5929  AB5937  AB5945
AB5906  AB5914  AB5922  AB5930  AB5938  AB5946
AB5907  AB5915  AB5923  AB5931  AB5939  AB5947
AB5908  AB5916  AB5924  AB5932  AB5940  AB5948

When you address inquiries direct to manufacturers concerning a new product described here, please mention that you saw it described in American Builder.
American Builder, May 1949,

The Strand all-steel one-piece door-leaf eliminates field assembly of single doors—receding or canopy type (8' x 7'). Receding-type doors for double garages (16' x 7') are quickly assembled from two 8' x 7' door-leaf units and splice channel.

Hardware comes already assembled, and serves as an installation templet. Only ordinary tools are needed—no "factory trained expert" is required and installation is surprisingly quick and easy.

Strand Doors are easiest to paint because they're galvannealed for rust-protection—with a heavy galvanized zinc coat, oxidized to provide an excellent base for paint without special priming coat. They can be painted to match any color scheme.

The strength of steel—that can't warp, sag, rot or shrink—assures lifetime durability and means a satisfied customer for you every time you install a Strand Door. Volume production, concentrated in one plant, and standardization on three models, make Strand doors an unequalled value! Order from your dealer, or

MAIL COUPON FOR INFORMATION AND DEALER'S NAME

STRAND GARAGE DOOR DIVISION
Detroit Steel Products Company
Dept. AB-5, 2250 E. Grand Blvd.
Detroit 11, Michigan

Please rush detailed description of Strand all-steel Garage Doors, for 8' x 7' and 16' x 7' garage openings.

I am a [ ] Builder [ ] Dealer [ ] Prospective Owner [ ] Other

Name

Address

City_________ State_________
BUILD YOUR STEPS TO
Standard 7” Rise—12” Tread

To help you in your use of wrought iron railings, Coffman has produced a standardized packaged line of step and straight rails of high quality at low cost. The step rails are designed for standard 7 inch rise—12 inch tread, and may be adapted to any number of steps. Step and straight sections are sturdy, of solid stock, rigidly welded. Combination of sections will fit most any condition. Installation is quick and simple.

SEND FOR FREE DIAGRAMS AND REFERENCE TABLE

A handy guide for applying standardized sections to any requirement is yours for the asking. Get the specifications of Coffman standard rails, with diagrams, illustrations, and reference table. Write P. O. Box 259, ask for Form 712 AB, also our complete catalog of ornamental iron if you wish.

Manufacturers of the Original "Complete Builders Line" of Hand-Wrought Ornamental Iron

IN building this addition, a combination concrete base and floor are used flush with the present garage floor. The floor and walls are integral and are designated as a thick edge slab, which is an extension of the slab into excavated portion at walls. A four foot opening, cut in the garage wall gives access to the annex. This opening should be placed to allow the car door, when fully open, to swing into it. The windows in the side and a corner window in one end admit plenty of light. Small screen openings in each end, under the extended roof, serve as ventilators. Roof of new addition is to extend under eaves of present roof, thus eliminating unnecessary flashing.

The extension to the garage need not be confined to the side of the building but can also be placed at the rear or front. This is sometimes necessary because the 18 foot garages built a number of years ago are not large enough for present cars.

If the present garage is covered with a hip roof, then the roof of the lean-to, regardless of where it is placed, can be extended under the present eaves. In the event that the old garage has a gable type roof, metal flashing will be necessary where new roof of lean-to abuts either front or rear wall of the old garage.
The soft touch...

with the snappy comeback

There's no foolin' when a duo-sprung Dexter Latch goes into action. First, there's the soft touch, gentle and easy-like, which offers just enough tension to make one aware that smoothness is something to appreciate in a door latch. Then comes the quick kick that sends the knob and latch bolt back into normal position — without faltering. And this goes on for years and years — a lifetime — with no change in the feel of the soft touch, nor in the sure comeback of the knob and bolt.

It's all done with springs — big ones, exclusive with Dexter Latches. A light, feathery one up front, and a husky, heavier one in the rear — each of the right size for the right action. That's the way it is with Dexter Latches all the way through — thoughtful engineering that has made the Dexter name stand for superiorities not to be found in any other latch.

NATIONAL BRASS COMPANY

Grand Rapids, Michigan

MAKERS OF BUILDERS, CABINET, SCREEN DOOR AND SHELF HARDWARE

In Canada: Dexter Lock Canada Ltd., Guelph, Ontario
Right Now

YOU CAN HELP
PRODUCE VITAL
LOW-COST
QUALITY HOUSING

BY USING
all three
SISALKRAFT PRODUCTS

1

SISALKRAFT
REINFORCED BUILDING PAPER
at about $15 per 1000 square feet

AS BUILDING-PAPER, over sheathing of frame, brick veneer, stucco or stone-faced houses . . . under wood, tile and other flooring . . . as a vapor-barrier . . . FHA approved over sub-fill, under concrete slabs . . . under floors with radiant heating . . . For curing freshly laid concrete driveways, walks, basement and garage floors, etc.

2

SISALATION
REINFORCED REFLECTIVE INSULATION
at about $25 per 1000 square feet

Costs 50% less than bulk or blanket types of insulation, and costs less to apply. Does two jobs: Acts as insulation and as a vapor-barrier (FHA-approved).

3

COPPER ARMORED SISALKRAFT
REINFORCED PURE COPPER FLASHING
at about $9.75 per 100 square feet

Costs 80% less than heavy sheet-copper, and less to apply for concealed flashing, foundation damp-coursing, etc.

For free samples and data, mail this coupon

The SISALKRAFT Co., Dept. AB,
205 W. Wacker Drive, Chicago 6, Ill.
Please send samples and data on all three SISALKRAFT products.

Name
Address
City, Zone & State

The SISALKRAFT Co., Chicago 6 • New York 17 • San Francisco 5

Eliminate COSTLY ACCIDENT HAZARDS with Strong, Safe Equipment

GOLD MEDAL LADDERS
In ladders, it's practical economy to buy the best . . . and that means the safest, the strongest and the best suited to service and maintenance work. GOLD MEDAL Ladders satisfy all conditions. In design, construction and safety, GOLD MEDAL Ladders are unexcelled . . . for nearly three-quarters of a century, they have met the rigorous test of on-the-job service. Inspected by Underwriters Laboratories. Use GOLD MEDAL Ladders to cut your accident rate and save costly lost time.

EXTENSION LADDERS—Top strength in design and construction. Equipped with steel rung braces, automatic safety locks, ropes and pulley. In sizes from 20' to 52'.

SINGLE LADDERS—Equipped with steel rung braces and tie rods. Lightest, strongest of the type. Standing and steps from 8 to 24.

UNDERWRITER STEEL LADDER—Heavy duty, rung back, knee braces and truss rods. Safety spreader. Sizes: 4' to 20'.

SAFETY PLATFORM LADDER—Ideal for general work with wide driveways, walks, basement and garage floors, etc. Heavy duty, rung . . . steel spreader. Sizes spreader. Sizes: 3' to 12'.

LADDER JACKS
Men do more and better work on safe equipment. ONE-MAN Ladder Jacks right adjust to any pitch on either side of a ladder. Weight is distributed through three rungs. New rail jack (left) provides added safety by using side rails of ladder for support.

SCAFFOLD BRACKETS
Simplify installation of safe working platforms for many types of sidewalk work. "TROUBLE SAVERS" are light, easy to handle and extra strong. Made of rolled metal, nail-attached, stud- ing and bolt-attached types. They do not bend!

Manufacturers of:
GOLD MEDAL Tubular Steel Scaffolding — Safety Scaffolding Machines — Junior Safety Swinging Scaffolds — Steel Sidewalk Bridges — Ladders, Light Ladders - "TROUBLE SAVER" Sectional Steel Scaffolds — Steel Scaffold Brackets — Adjustable Steel Trestles

Write for ladder bulletin, "Invest in Safety and Economy" for Greater Safety . . . Efficiency . . . Economy

THE PATENT SCAFFOLDING CO., Inc.
38-21 12th Street Long Island City 1, New York

BRANCH OFFICES: Atlanta • Boston • Chicago • Dallas • Detroit
Kansas City, Mo. • Los Angeles • Miami • Milwaukee • Philadelphia
Pittsburgh • San Francisco • Seattle • St. Louis
VERSATILE...competitively priced—

Mesker
STEEL CASEMENTS

Here's a line of windows you'll find designed to fit the need of every job, regardless of your cost limitations! Even we are amazed at the many ways in which architects and contractors adapt Mesker Steel Casements to so many different types of jobs. Standard sizes can be used singly or in combination to obtain any desired window effect for any style of architecture. Most important, if price is one of your problems, Mesker Steel Casements are the answer. One of today's lowest-priced lines, Mesker also offers appreciable discounts for quantity. Interested? You'll find the Mesker Catalog in Sweets—or write us!

MESKER BROTHERS METAL WINDOWS
4342 GERALDINE AVE., ST. LOUIS 15, MO.

THE MARK OF modern POST-WAR CONSTRUCTION

There's an efficient, low-cost Mesker Steel Casement to fit every window need in every size home!

- PANORAMA
- PICTURE
- ALL-PURPOSE
- KITCHEN
- CORNER
Manufacturers’ Products Hit New High in Readers’ Interest

Up to April 12 more than 15,000 inquiries had been received in the offices of *American Builder* seeking data on the building products and equipment illustrated and described in the February issue. Inquiries are continuing to pour in and because of this sudden upsurge in work in the Readers’ Service Department, there has been some delay in answering all requests for information. By the time this issue is read by subscribers, however, the department will be back on schedule and all requests for data about products mentioned in the February issue or any other issue will be disposed of promptly.

The “Building Products on Review” feature of the February issue contained 382 individual photographs of all types of material and equipment used by builders. The Columbia Protektoste Corporation’s new decorative plastic bricks for interior partitions, announced as item No. AB2901, drew the largest number of inquiries for any single product. With very few exceptions, however, there was an unusual amount of interest on the part of readers in all the products and equipment shown.

Actually the special February issue treatment of this material is merely an expansion of a regular monthly department carried in the *American Builder*, titled: “New Products Offered by Manufacturers.” except that the February presentation not only includes the newest developments announced by manufacturers, but reviews for readers some of the refinements and changes made by manufacturers in conventional products which may have already been described in earlier issues of the magazine.

Recent surveys indicate an unusually high interest on the part of *American Builder* readers in new product and equipment announcements by manufacturers and distributors. This record response to one department in one issue of the magazine double-checks with all the reports made by reader interest surveys in the field. The February “Building Products on Review” is an annual feature.

---

Use this sparkling, four-color booklet to assist clients in selecting their appointments. The presentation leads customers step by step to choices of Universal-Rundle fixtures for bathrooms, lavatories, powder rooms, and basements. Sinks and laundry plumbing equipment, too, are staged to suggest ideas for the kitchen.

Universal-Rundle promotional materials, backed by traditionally fine products, are designed to aid Architects, Builders and Contractors to make time-saving presentations and easy acceptance.

Mail the attached coupon today.

Typical pages from February 1949 *American Builder* “Building Products on Review” feature which drew 15,000 inquiries.
They Are Priced To Help You Make Money, Even on "203 - B - 2" Houses

You give value that buyers and lenders recognize—and make money, too, when you install Coleman Automatic Gas Water heaters. See the right models for the houses you are planning, at your Coleman dealer’s or distributors. Check them for value. See the features that make even low-price Coleman water heaters a real talking point, when you’re selling a house. And—get a quotation! Then you’ll see why so many successful builders are switching to Coleman Gas Water Heaters now.

These Coleman Features Give The Better Water Heating That Makes Customers Happy

1. 20-gallon model heats 28-gallons per hour. Larger sizes heat correspondingly fast.
2. New Coleman-designed "Blu-Arch" burner. It holds down gas bills.
3. Full Automatic Fuel and Temperature Controls.
4. Insulated top and sides with Fiberglass—it holds heat.
5. Tank tested to 300 lbs. per square inch—it’s long-lived.
6. Approved by AGA—it meets all requirements.
7. Gleaming white finish—it’s attractively styled.

Mail Coupon Today For Name of Your Nearest Coleman Distributor, and Details of Coleman’s Builders’ Co-operation Plan.

The Coleman Company, Inc., Wichita 1, Kansas
From the Western Pine Region

This fine general-purpose wood is now available in generous quantities. As manufactured by member mills to the high standards of the Western Pine Association, it comes to you carefully graded and well seasoned. Its cost is very attractive in these days when the market for more moderate priced homes is increasingly important.

If you are not familiar with the qualities, characteristics and uses of White Fir from the Western Pine region, ask your lumber dealer. And by all means, write for the White Fir Species Book. Factual, complete, profusely illustrated, including photographs of typical pieces of each grade. It's FREE. Write today to Western Pine Association, Dept. 30-B, Yeon Building, Portland 4, Oregon.

l**l**it**t**e...... BUT

**BIG**

**FEAT**e**U**RE

Here is an "automatic hand" that actually reaches out and pulls door shut. — Even warped doors ... obviously a boon to every home owner.

NO MORTISING • SURFACE ATTACHMENT CONCEALED OPERATION

Win-Dor Snugger is a simple fool-proof spring-activated automatic closing device that works like magic on any size door. There is a properly tensioned spring housed for horizontal or vertical installation (at top, bottom or sides in cabinets and cupboards). This spring activates a lever which projects out beyond the housing to engage a hook on the door. The two parts are easily adjusted at time of installation and require no future attention. On small, light cabinet and cupboard doors with a "whip" there is no rebound — just smooth positive closing.

On larger doors there is a Snugger with 8 lb. pull. Snugger does the work of a latch so the economies as illustrated, add up in mighty worthwhile savings on large building projects. You save plenty of labor and hardware, for with the Snugger, only a knob is required.

See Your Builder's Hardware Dealer

**WIN-DOR**

PULLS DOORS SNUG!

The Casement Hardware Co.

406 NO. WOOD ST., DEPT. A, CHICAGO 22, ILL.
Use a Black & Decker Quick-Saw Arm ($148.00) to make a positive set-up for repeated pre-fab cutting. Use its flexibility of adjustment to make many kinds of cuts. Either way you save plenty of building time and money! All 3 B&D Electric Quick-Saws (and most other makes) fit into its carriage in a jiffy. Ask your nearby Black & Decker Distributor for a free demonstration today. Write for detailed catalog to: The Black & Decker Mfg. Co., 666 Pennsylvania Avenue, Towson 4, Maryland.

Over 100 other cost-cutting tools
Drilling, sawing, screw driving, sanding—there's a speedy Black & Decker Electric Tool for practically every building job! More tools, more models to give you the right tool for every need. Make Black & Decker your "Electric Tool Headquarters." Select your tools from the world's most complete line!


LEADING DISTRIBUTORS EVERYWHERE SELL

Black & Decker PORTABLE ELECTRIC TOOLS
SPOT SASH CORD

Simplicity — no other device is as simple or as permanently efficient for balancing double-hung windows as the time-tested combination of Spot Cord, pulleys and weights. Perfect and permanent balance and noiseless operation are assured. There is nothing to get out of order.

The part that takes the wear is the cord — and Spot Sash Cord will last almost indefinitely. It is made of extra quality fine cotton yarn, firmly and smoothly braided, and guaranteed free from imperfections.

Identified by our trade-mark, the Colored Spots (Reg. U.S. Pat. Off.) Send for sample card with table showing right sizes for different weights.

SAMSON CORDAGE WORKS
BOSTON 10, MASS.
THERE IS A "right combination" for quality concrete on every job. It is achieved by applying methods and procedures established through years of painstaking research in the laboratory, years of practical construction experience on the job.

These simple, easy-to-follow methods and procedures are described in "Concrete Facts for Concrete Contractors," a non-technical free booklet answering such questions as:

How many gals. of water should go into a mix for public garage floors? (p. 9)

Can I save time—and money—by speeding up the rotation of the mixer? (p. 16)

Why does vibration produce quality concrete more economically? (p. 19)

To obtain quality concrete you must know the answers to these and many other questions covered in this booklet. Remember, delivering good concrete is just good business. A good job is your best salesman. It creates a satisfied customer, spreads your reputation as a quality builder and sells more jobs for you.

If your concrete work does not measure up to quality standards someone is failing to follow good design and construction practice. Often such failures can be traced to new men.

Should you want help in training such men, have them write for the free, 48-page, illustrated booklet, "Concrete Facts for Concrete Contractors," distributed only in the United States and Canada. It tells them about the importance of selecting materials, proportioning, mixing, placing, finishing, curing and many other subjects.
These Wires can choke electric service

They can choke sales, too!

When service entrance conductors are too few or too small they choke off what customers want—the necessary electric supply for modern living. They're apt to choke off sales, too!

In the houses you design or build, provide an adequate Electric Service Entrance, having three wires, large enough to bring in as much electricity as the home may need, now or in the future.

An adequately wired home sells readily at a good price, because home buyers nowadays have learned to look for Adequate Wiring.

An Adequate Wiring Certificate is your proof that each house you design and build has:

- Adequate electric service entrance equipment, fed by three ample size wires;
- Enough outlets, fixed lights and switches;
- Enough branch circuits and spares for present and future electrical needs.

The Sign of the Times

ANOTHER HOME with Adequate Wiring Certified

Use the services of the local Adequate Wiring Bureau in preparing a complete Adequate Wiring layout and specification, before you put the electrical job out for bids. Get the wiring into the plans for better appraisal—a better loan!

If there is no Adequate Wiring Bureau in your community, write us or your local electric utility for information on how to take advantage of Adequate Wiring in the homes you build.

USE THIS COUPON if there is no Adequate Wiring Bureau in your area

National Adequate Wiring Bureau, Dept. AB-5
155 E. 44th Street, New York 17, N.Y.

Please send me, without charge, information on how to take advantage of Adequate Wiring as a sales feature.

NAME...

ADDRESS...

CITY... STATE...

NEW PRODUCTS

WATER HEATING BOILER AB939
Because of compactness and provision for forced circulation, Kehm Master Boiler can be installed in basements, utility rooms, or attics. Can also be used for large jobs by zoning or cross connection. Models 100E, 125E and 150E have respective AGA ratings.

N S inputs of 100,000, 125,000 and 125,000 B.T.U.'s and outputs of 80,000, 100,000 and 120,000 B.T.U.'s. The Kehm Corp., 135 S. La Salle St., Chicago 3, Ill.

ATTIC FAN AB941
Designed especially for vertical operation in homes with low-bridge attics, the Ventura Packaged Attic Fan requires only 30 inches clearing space between blades and attic ceiling. Can be installed without appreciable alterations. Expels warm air through attic louvers or vents. American Blower Corp., Detroit 32, Ill.

CEILING TILE TACKER AB944
Duo-Fast staple tacker, Model CTX-850, is designed to tack up interior finishing material with tongued-joints. It is a one-hand tacker, driving a heavy 3/8-inch staple which toew-in when driven, resulting in strong holding power. Fastener Corp., 865-902 Fletcher St., Chicago 14, Ill.

(Continued to page 164)
The architect and builder gave costs a double-barreled jolt in remodeling this inviting restaurant. By using rugged Masonite brand hardboards, they made significant savings in both material and labor expense. And the result is quality construction that can’t fail to attract new clients to their door.

The old walls were quickly transformed with smooth, handsome Panelwood, selected expressly for this purpose. For the wainscoting, the architect utilized the exciting new Masonite Leatherwood—with the feel and appearance of finely worked Spanish-grain leather. To match the wainscoting, sturdy Leatherwood panels are used also for flush doors and booths. Strong, scuff-proof, moisture-resistant Masonite Tempered Presdwood goes around the gracefully curved counter fronts. And Masonite Temprtile, painted a spotless, enduring white, gives the kitchen walls that tile-like, hospital-clean look.

A full line of Masonite brand hardboards is available to you—one for every building purpose. These “wood-made-better” panel materials are tremendously strong and stable. Easy to work and quickly applied without fuss or muss. Take and hold almost any finish. Won’t split, crack or shrink. They help you get quality construction at down-to-earth cost—every time. Available at all lumber and building supply dealers. See our 24-page Specification & Detail Book in Sweet’s Architectural File. Masonite Corp., Chicago 2, Illinois.

GET SAMPLES!
MASONITE CORPORATION
Dept. AB-5, 111 W. Washington St., Chicago 2, Ill.

Please send me samples of Masonite hardboards and interesting literature about their application.

Name
Firm and Title
Address
Structural.
Reinforcing or
other Bldng Steel
Shipped from Stock

Write for Stock List—
your guide to over 10,000
different kinds, shapes
and sizes of steel for
quick shipment from ten
plants.

Joseph T. Ryerson & Son, Inc., Plants at: New York, Boston, Philadelphia,
Detroit, Cincinnati, Cleveland, Pittsburgh, Buffalo, Chicago, Milwaukee,
St. Louis, Los Angeles, San Francisco.

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Premium SHEET METAL
for the Better Trade

ERAYDO ALLOY is the ideal sheet metal for your customers
who want a “better than average” job.

It is weather-resistant, won’t red rust, won’t stain, and is
easily soldered. Yet, it is moderately priced . . . about midway
between galvanized steel and copper.

The real answer to your problem of high quality, quick
delivery, and bigger profits is ERAYDO ALLOY.

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The Asbestos Distributors Corp. 390-396 Lindley St. Bridgeport 6, Conn.
Slokey Brothers, Inc. P. O. Box 1048 Sacramento 6, Cal.
Sheet Metal Mfg. Co. 941-953 Myrtle Ave. Brooklyn 6, N. Y.
Bayonne Steel Products Co. Clinton & Jelliff Aves. Newark 8, N. J.
Tanner & Company 409 S. Pennsylvania Indianapolis, Ind.
Roofers Supply Co., Ltd. 335 Guy Street Montreal, Quebec, Canada
Republic Metals 4040 W. Lake St. Chicago 24, Ill.

New Electric Freight Elevator
is Self-Supporting

Inexpensive to Install

A new self-supporting elevator
has been designed to provide a
low-cost, electric elevator in-
stallation for every type of
business and institution that
requires vertical freight trans-
portation, but does not need
heavy-duty freight elevators.
It fills a long-felt need by mak-
ing materials handling con-
siderably easier and less costly
for small business. The elevator
is being made in three stand-
ard sizes of 1,500, 2,000 and
2,500 pounds capacity. Vertical
rise is limited to 35 feet—suf-
cient for a three story building.

As illustrated, the elevator is
installed as a complete unit
in a new or existing hoistway.
Only 11 feet of headroom is
needed above the top floor
landing. Expensive construc-
tion, such as a penthouse on
top of the building for the elec-
tric motors and other operating
machinery, overhead supports,
roof altercation and building
reinforcement, is eliminated.
As the elevator supports itself,
no heavy strain is placed on
the building. The weight of car,
load, hoist ropes and sheaves is
carried by three guide rails in
the hoistway and transferred
to the bottom of the shaft. The
elevator can be operated by any
employee without special train-
ing. For complete details, write
for Bulletin B-720H. Address:
Otis Elevator Company, 269
11th Avenue, New York 1, N. Y.

ERAYDO ALLOY
FOR
GUTTERS
DOWNSPOUTS
VALLEYS
FLASHING
and other Sheet Metal Work

AVAILABLE NOW!

ZINC
ILLINOIS ZINC
COMPANY
2959 W. 47th Street, Chicago 32, Ill.
630 Fifth Ave., New York 20, N. Y.

American Builder, May 1949
Model 40A, shown, is a cabinet-base machine with a rip capacity up to 3 1/2". Also popular with builders is Delta Multiplex Model 20A with cabinet base and a rip capacity up to 2 1/4". Either machine is easy to take right to the job; two men can carry and load it on your truck. Both models are widely used for cutting foundation forms, sheathing, roofing, cabinets, doors, frames, drawers, sills, stair treads, etc.

DELTA® Multiplex Radial-Arm Saw

has greater capacity...so it handles more kinds of jobs

You can get almost any cross-cutting, ripping, and mitering position, with a Delta Multiplex. The patented "Versatile Elbow" makes that quick and easy. It's a center-pivoted track that carries the cutting head and lets you put the blade at any angle. The cutting arm rotates 360°. You get 100° mitering capacity.

With a Delta-Multiplex, you cut the full length of the sliding arm—on difficult left-hand, as well as right-hand, miters from 0° to 90°. The saw blade moves through practically the center of the table. Thus, your work rests firmly on the full table—and you get full-capacity cuts.

Inspect the Multiplex models now on your Delta distributor's sales-floor. His name is listed under "Tools" in the classified section of your telephone directory. Ask him to point out the Delta Multiplex features that assure you of safety, speed, convenience, capacity, and economy. Also ask him about buying the Delta Multiplex with easy credit terms.

Model 20A — for cutting interior trim

Exceptionally low in cost. Portable — can be carried easily in the back of your car. Has rip capacity up to 2 1/2".

DELTA MANUFACTURING DIVISION

Conventional radial-arm saws pivot from the column. This old way, you have practically no mitering capacity at 45°, not much usable capacity at 30°, and almost none beyond 45° on left-hand miters.

Send coupon for descriptive literature on Delta Multiplex Radial-Arm Saws having rip capacities up to 6".
NEW PRODUCTS

(Continued from page 160)

STEEL CASEMENT WINDOWS AB523
Sections of billet, hot-rolled steel are used in new Copco residential windows. Hinges have supporting wrap-around leaves and offset faces. Smooth joints are provided by flash-welded corners. Ventilators are controlled by crank mechanism. Copco Steel and Engineering Co., 14035 Grand River Ave., Detroit, Mich.

VERSATILE MOVER AB5948
The Bell Prime Mover combines features of a motorized wheelbarrow, a 9 or 14 square-foot platform truck, and a snow plow. Bucket on unit holds 10 cubic feet of material, or 18 feet with sideboards. Mechanically dumps material by operation of foot pedal. Equipped with a 9 square-foot steel platform, it hauls half-ton loads. Powered by enclosed engine, climbs 20 per cent grade fully loaded. Three gallons of fuel provide 8 hours' continuous service for raising or lowering. Sticking is eliminated by the fast-freeing effect of the exclusive roller crank closing action.

FACTORY-TRAINED SALES and SERVICE REPRESENTATIVES in PRINCIPAL CITIES

BARBER-COLMAN COMPANY
104 MILL ST. • ROCKFORD, ILLINOIS

WEATHERTIGHT. Special roller crank closing action moves the entire door smoothly and evenly against the stop strips in the last few inches of its downward travel, effectively sealing the opening.

EASY WORKING. Tailored twin-torsion counterbalancing springs accurately support the weight of the door, so minimum effort is required for raising or lowering. Sticking is eliminated by the fast-freeing effect of the exclusive roller crank closing action.

Barcol OVERdoors assure satisfaction ... giving long, trouble-free service because they are strongly built, accurately assembled, and carefully installed by factory-trained men.

ADAPTABLE. The picture above shows a somewhat unusual installation, in that this garage has both a single width and a double width entrance. It is, however, an excellent illustration of the adaptability of Barcol OVERdoors. Suitable doors can be furnished for any design of building and for any size of opening.

ELECTRIC DOOR OPERATORS. Available for swinging, sliding, and overhead type doors, and for sliding gates. They offer the convenience and protection of switch control or the amazing Radio Control.

FOLDING RULE AB5947
Six-foot folding rule, unbreakable, is made of hardened and tempered alloy steel. Can be bent and twisted, yet will always spring back to normal shape. Joints pivot on bearing surface of hardened steel. Rivet is enclosed and protected from wear and rubber. Durell Tool Corp., Yonkers, N.Y.

SEE OUR CATALOG IN SWEET'S
JOSEPH E. MERRION
J. E. Merrion and Co., Chicago

Mr. Merrion has been in the building and real estate business in the Chicago area for 25 years. His firm has built several thousand housing units. Associated with him in planning Merrionette Manor were Earl Mux, architect, and William A. Dean, landscape architect. Mr. Merrion is a former president of the National Association of Home Builders.

J. E. Merrion Chooses Asphalt Shingles for His 542 Home Merrionette Manor

The fact that J. E. Merrion and Co. know that exactly 11,382 squares of asphalt shingles were used in roofing their homes in Merrionette Manor indicates how carefully they operate. The fact that they chose asphalt shingles indicates how carefully they plan. Because asphalt roofing is construction’s biggest dollar’s worth.

In deciding upon asphalt roofing, Merrion measured each basic advantage—one of which is the ability of asphalt shingles to provide a harmonious variety of roof colors and patterns. Colorful, clean-lined, fire-resistant asphalt shingles fitted perfectly into the plan to create a community of homes with individuality, yet in complete harmony with each other.

Match your requirements against the advantages of asphalt shingles—beauty, low cost application, weather resistance, fire resistance, durability—and you’ll find they’re your best buy.

WRITE FOR THIS NEW FREE BOOKLET

"Good Application Makes a Good Roof Better" is the message of the 24-page booklet now available. For everyone interested in roofing, it’s a helpful guide...or a reminder. Contains step-by-step information about good application practices—with diagrams. Get free copy from a member company or write direct.

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NEW PRODUCTS
(Continued from page 164)

FLUORESCENT LIGHTING FIXTURE
AB5934
Equipped with two joining white 16 watt half-circle fluorescent tubes, the Circle- unit provides a light circle 12 inches in diameter. Complete unit has outside diam- eter of 13 1/2 inches. Overall height, incl-uding adaptor, is 6 inches. Each tube has one inch diameter. Unit has 100 watt output; bulbs, a life expectancy of 2,500 hours. National Lighting Products, Inc., 4217 Harrison St., Chicago 24, Ill.

VENTILATING FAN
AB5932
A snap-on air injector grille is a feature of the Westinghouse Poweraire Home Ventil- ator fan. Fan is capable of complete change of air every two minutes in average


SINK AND CABINET UNIT
AB5920
Tracy Deluxe Porcelain Unit includes a 66-inch double bowl, double drainboard sink top fitted with crumb cup strainers, and faucet with spray attachment. Steel undersink cabinet has insulated doors and windows, concealed ventilation, and large storage space. Tracy Manufacturing Co., Pittsburgh 12, Pa.

(Continued to page 170)

High Speed Apartment Building With

Schroedel Construction Com- pany, Milwaukee, Wis., used modern equipment to speed erection of 200 high quality, steel frame apartments on their Estabrook Homes project. The Bucyrus-Erie Hydrocrane played an important part in stepping up the building pace as these pictures show. Hy- drocranes are available in two sizes — 1 1/2 yd., 2-ton H-2 and 3 yd., 3-ton H-3. For complete information write us today.

BUCYRUS-ERIE HYDROCRANE DIVISION
South Milwaukee, Wisconsin

The Hydrocrane lifted and placed these pre-assembled wooden roof trusses at the rate of 120 per day. Note how extension jib gives added reach to boom.

With hydraulic clamshell bucket the Hydro- crane digs and back fills utility trenches. Highly mobile, it travels at truck speeds — moves quickly from job to job.
INTRODUCING

The New and Improved RUSSELL PATENTED "CUSHION-SEAL" METHOD OF GLAZING Thermopane PICTURE WINDOWS

PATENTED THERMOLOK Closure Frame eliminates expansion, contraction and settlement problems . . . permits wider use of standard stock sizes of Thermopane and other types of dual glazing for picture windows . . . simplifies installation

KOROSEAL Cushion . . Acts as both insulator and shock absorber. Koroseal is molded at sides to provide for expansion and contraction through the thickness of the glass.

Compensating Spacers . . Used at bottom only. Permit centering of sash within Thermolok Frame. Prevent settling of picture window and maintain a perfect cushioned contact between Koroseal and glass.

Beautiful, Satin-finish Aluminum . . Harmonizes with any color scheme or architectural design; Beautifies any structure.

Now it is possible for you to specify or install heat-saving, comfort-giving, picture windows . . . glazed in a manner that simplifies installation . . . adds to its beauty . . . assures perfect, lasting satisfaction and performance. » See any F. C. Russell Co. distributor or write direct for details and specifications.

THE F. C. RUSSELL COMPANY
DEPARTMENT 5-AB59 • CLEVELAND 1, OHIO

World's Largest Manufacturer of Combination Windows
**Glass Shower Doors and Medicine Cabinets**

Add Extra Beauty and Salability to Your Building Project

- Add Beauty, Utility, and Economy with Glass Shower Doors or Tub Enclosures. Special Builders prices on request.
- Medicine Cabinets...of the highest quality and Beauty. All sizes and styles suitable for every type building from low income housing projects to fine Mansions and Hotels.

Write for Illustrated Brochure today!

**SOUTHERN**

SHOWER DOOR & CABINET CO.
Dept. ABMA - 4511 Kyle St. - Houston 6, Texas

**CONTRACTORS and BUILDERS**

Remember!

every cellar, at one time or another, will spring a leak if it is not properly THOROSEALED on the inside at points which cannot be reached from the outside.

WATERPLUG....to stop the leaks
THOROSEAL..to fill & seal the surface
QUICKSEAL....for a beautiful finish

Will take care of your water problems

Order through your Lumber and Builders' Supply Dealer

WRITE FOR CIRCULAR NO. 144 ON HOW TO KEEP WATER OUT OF YOUR MASONRY WALL

**STANDARD DRY WALL PRODUCTS**

Box X, New Eagle, Pennsylvania
Telephone Monongahela 67
BUILDERS SAY:

It's Brick first

FOR PRIDE OF OWNERSHIP

To give your customers maximum pride in the work you do, build with brick!

Take it from the men who actually do the building—you yourselves.

In a recent nationwide survey you builders rated brick first, among all materials, for “pride of ownership” in both residential and non-residential building.

You gave good reasons for this. You placed brick first... for fire safety... for permanence... for beauty... for structural strength... first 10 times on a list of 12 such qualities!

But the reasons for this pride of ownership go beyond brick’s many obvious structural advantages. They include, too, the warmth, the friendliness, and the feeling of security that are a part of any brick home.

For homes with all of these qualities—homes that your customers will be proud to own and you'll be proud to build—remember... BRICK FIRST.

NEW PLANBOOK TO HELP YOU BUILD BETTER HOMES AT LESS COST!

Get our brand new plan book—MODERN BRICK HOMES—featuring 20 labor-saving, cost-reducing house plans engineered for economy. Here are 56 pages of home building suggestions including such interesting discussions as location of site, selection of plans, financing, interior arrangements and exterior beautification. Send 50¢ with your name and address to Dept. AB-5 at address below.

TIPS ON GOOD MASONRY PRACTICE

TYPICAL METHODS OF ATTACHING TRIM • SHELVING • FIXTURES TO STRUCTURAL CLAY TILE WALLS

Various methods of fastening furring, grounds, picture molds or other surface fixtures to structural tile walls may be used. Those methods shown at the left are used after the wall is in place. During construction wood nailing blocks or metal nailing plugs may be built in the joint. Wood nailing blocks should be of seasoned soft wood creosoted to prevent shrinkage and rot. Metal nailing plugs are recommended as providing better construction. In installing the types shown here holes may be drilled directly through the face shells of the tile with hard steel or carbide tipped drills. In some cases where softer tiles are used, as in plastered partitions, small holes may be made by the use of ordinary 1/4 inch punch and hammer.

STRUCTURAL CLAY PRODUCTS INSTITUTE
1756 K Street, N.W.
Washington 6, D.C.
G. E.'s New Electric Heater
is easily built right into wall!

For Old Houses ... for New Houses!

Here's one of those extra, inexpensive luxury features that people look for when they're buying a house.

It's a Built-in Electric Wall Heater, manufactured by the General Electric Company—a wonderful selling feature for any house, old or new.

It was designed with the bathroom in mind, but is installed easily in any room in the house.

Complete, this heater makes any bathroom, any room look more modern.

With the snap of a switch, it circulates heat throughout the room by the radiant-convection principle.

And for a very little bit extra, a remote control switch can be attached, so that the heater can be turned on from the bedside or from another room.

Specifications for General Electric
Built-in Wall Heater

1. Comes completely equipped with tumbler switch as integral part.
2. Beautiful Hammertone gray finish—can easily be painted another color.
3. Fits flush with wall—guard projects only 5/8 of an inch.
4. Highly polished corrugated-aluminum reflector that radiates heat in wide zone.
5. Protective grille of high-quality steel wire—easily removed for cleaning.
6. Two long-life heating elements of nichrome wire—ceramic cords.
7. Rating—1320 watts, 115 volts, a-c/d-c, 4507 Btu.
8. Size: 17 1/4 inches high by 13 1/4 inches wide by 4 inches deep. Wall opening, 14 1/2 by 11 1/2 inches.
9. Shipping weight, 10 pounds.

Amazingly low-priced

General Electric Co., Section NNSX
1255 Boston Avenue
Bridgeport 2, Connecticut

Please send me complete information on General Electric's Built-in Wall Heaters.

NAME: __________________________

ADDRESS: _______________________

CITY: ___________________________

STATE: __________________________

NEW PRODUCTS
(Continued from page 166)

WATER HEATER AB5925
Designed to fill needs too small for larger commercial water heating units, the Smithway-Burkay Model 417 is for use in small restaurants, small apartment buildings, large homes, etc. Has over-all height of approximately 4 feet and diameter of 18 inches. B.T.U. input is 110,000. Features include high limit control, a finned heat exchanger for immediate response to hot water needs, and "waterwall" combustion chamber of tightly wound copper coils.

A. O. Smith Corp., Milwaukee, Wis.

GAS HEATERS AB5942
Cabinet styling of Temco gas heaters is designed for simplicity and compactness, incorporating Pyrex glass on fronts of radiant models. Mahogany porcelain enamel finish is not affected by heat. Unvented line is made up of three radiant models: 12,000, 20,000 and 30,000 B.T.U. capacities. Non-radiant circulators consist of units having 20,000 and 30,000 B.T.U. ratings. One vented model is rated as 12,000 B.T.U. Tennessee Enamel Manufacturing Co., Nashville 9, Tenn.

GARAGE DOOR LOCKS AB5946
Lock-O-Matic door locks, for upward acting garage doors, are positive spring lock type. Outside handle, with center tumbler lock, is chrome plated. When locked, handle turns freely, defeating any attempt to force the lock. Two keys furnished with each set. Inside door handle is never locked. All parts made of heavy gauge, cold rolled steel with black enamel finish. Three lock types provided for pivot type door, pivot or jamb type door hardware, or for jamb type hardware. Either type is easily installed. The Tavart Co., Clearwater, Calif.

(Continued to page 174)
Today's home buyers want something better, safer, than the ordinary window.

Which window has greater safety appeal?

Gate City Awning Windows answer today's demand for a window that is safe to leave open... safe to wash... and operate!

1. Open windows invite prowlers—unless they are Gate City Awning Windows. For these scientifically designed windows discourage intruders... provide safe ventilation night and day. They also provide safety against water damage. No danger of a sudden shower soaking floors or furniture; the tilted sash deflect the rain.

2. And—these windows are safe to clean. No sitting on window sills. No ladder climbing, either, when installing screens or storm sash, for these are indoors. And there's no pushing or straining to operate the sash. Just a turn of a small handle.

Your prospects will welcome this safe window... will be glad to pay a little extra for it. Get the facts about it today! Write to Gate City Sash & Door Co., Dept. B-5, Fort Lauderdale, Florida.
Bostitch H2 Self-Feeding Hammers
DO TWICE THE WORK
WITH HALF THE EFFORT

See what you gain when these Bostitch Self-Feeding Hammers replace hammer and nails for putting up insulation and building paper, laying roofing, and for other light nailing jobs. Every effortless flick of the wrist places and drives home a sturdy staple (up to 11⁄2" long) like a two-pointed nail. The other hand is free for closer control and faster placing of the work. No fumbling nails...no mouth infections...no finger injuries. The rubber grip protects the worker's hand. Quick and easy to load. Add up all these advantages and you'll agree that you, too, can do twice the work with half the effort with Bostitch H2 Self-Feeding Hammers. Try them and you'll agree with a big contractor who says: "We are able to bid lower on jobs and they have made a marked increase in our volume of work."

New Hammer for Roofing. Here's the new H4 version of the popular Bostitch Self-Feeding Hammer. Drives heavy wire staples up to 11⁄4" long with a single blow. Cuts roofing time in half or more. Its longer reach also cuts down staging needs. Many other uses in construction work.

LOOK INTO BOSTITCH

In building, as in other industries, you'll find Bostitch stapling tools faster and faster at lower costs. Fill in the coupon and get the proof.

Gerity’s Patented Self-Centering Backplate Makes Installing a Cinch!

GERITY bathroom accessories are superbly styled in brilliant chrome guaranteed not to chip, crack or tarnish. Install GERITY with confidence.

Gerity-Michigan Corporation
Adrian, Mich.
New Eagle-Picher Decorator Paints

simplify your interior painting problems

10 modern colors that harmonize with each other and with all colors in furniture, drapes, rugs

One word describes this new idea in interior paint—simplification. Eagle-Picher's new interior paints are pre-harmonized in color values...they simplify your interior decorating problems, color selection for your clients and tenants, application problems for painters.

First, the ten beautiful, modern colors in the line were formulated to harmonize completely with each other and with any color in furniture, drapes and rugs, old or new. They're extremely popular with homeowners across the country.

Result—both redecorating and planning color schemes for new homes are simplified. You can easily plan a modern, harmonious color scheme for every room, your clients can easily select colors that will harmonize with each other and with their present colors in room furnishings. Eagle-Picher's interior paints come in three matching finishes—flat, semi-gloss and gloss—so the line simplifies the buying and applying of interior paints, too. They're ready-to-use, oil-base paints—of the same high quality that has made Eagle-Picher White Lead outstanding for over a century.

A complete line of paints for all interior and exterior use

Eagle-Picher Company

General Offices: Cincinnati (1), Ohio

Makers of quality painting materials since 1843
MIGHTY SWEET ORDERS FOR ME IN ALL THIS NEW BUILDING THAT’S GOING ON!

HOW HARD-WORKING HAL SAVES MONEY MAKES MONEY!

by Your Local DODGE MAN

MIGHTY SWEET ORDERS FOR ME IN ALL THIS NEW BUILDING THAT’S GOING ON!

NEW CONSTRUCTION IS PROFITABLE BUSINESS, HAL!

BUT HOW CAN I KNOW WHO IS BUILDING WHAT, WHEN AND WHERE?

TIME TO PUT THE HEAT ON HAL AND LEAD HIM DIRECT TO BUSY BUILDERS WITH DODGE REPORTS.

WHERE HAVE I BEEN?

SURE, DODGE REPORTS TELL ME WHO NEEDS BUILDING SUPPLIES.

HEY HAL! YOU NEED ADVANCE CONSTRUCTION NEWS. DODGE REPORTS TELL YOU WHO TO SEE AND WHEN AND THE COST IS PEANUTS!

NOW MY STOCK IS REALLY MOVING!

...I SAVE MONEY...

MAKE MONEY WITH DODGE REPORTS!

DODGE REPORTS CAN HELP YOU TOO! MAIL THIS COUPON TODAY.

FREE...

Without cost or obligation, let me see some current Dodge Reports. I do business east of the Rockies.

NAME

FIRM

ADDRESS

STORAGE AND PROCESSES (Continued from page 170)

SUBMERSIBLE SUMP PUMP AB5930

The Kenko P-109 Sump Pump is completely submergible and capable of continuous operation. Pressure of rising water actuates diaphragm switch and subsequent pumping action keeps it in operation. Switch, located in discharge line, has no moving parts exposed to water. Pump is 9½ inches in diameter, weighs 45 pounds. In case of power failure, goes into operation as soon as current is restored. Powered with 1/3 HP, 115 volt AC motor, rated at 3,300 GPH at 10 feet. Will pump water to height of approximately 25 feet. Kenko Inc., Elyria, Ohio.

PLASTERING SURFACE KEYS AB5937

"Kifs," small, elastic button-like nobs, are nailed to wooden forms which support concrete when it is poured. When forms are removed nobs are pulled out, leaving cone-shaped cavities. When plaster is applied it squeezes into cavities, forming a keyed, mechanical bond between concrete and plaster. Keys remain on forms, ready for re-use. Buffalo Products, Inc., 315 Babcock St., Buffalo, N.Y.

VERSATILE CABINET AB5905

"Stor-In-Door" cabinet is a convenience for powder room, shower room and for storage in linen or clothes closets. Furnished without a mirror, it becomes spice extract cabinet in the kitchen or pantry. Surface and recessed types available. Made of one-piece seamless steel, with and without incandescent or fluorescent light. The Grote Manufacturing Co., Bellevue, Ky.

(Continued to page 178)
Mueller Climatrol
fuel-thrifty Furnace

... the compact Type 110 Gas-Fired Winter Air Conditioner

Designed to meet your requirements for modern comfort in low-cost homes and multiple-dwelling housing projects

This new Mueller Climatrol Furnace is tailor-made to your current activities. Look at the list of features — everything you want for the type of building on your board today.

The compact design is ideal for closet installation in low-cost homes and individually-heated apartments — either in the basement or in ground-level utility rooms. The space-saving dimensions of the hi-boy cabinet and the efficient forced-air circulation are ideal for utility-room installations, and ranch-type homes. And the optional white-enamel finish matches other appliances for smart, harmonious kitchen installations.

You don't have to look beyond the complete Mueller Climatrol line for the top-grade heating that makes each of your jobs a standout success. Whether you want gas, oil, or coal — warm-air, hot-water, steam, or vapor — a Mueller Climatrol Furnace delivers full comfort value for every fuel dollar your clients spend.

Insl-Cotton is from 4% to 36% more efficient than any other type of insulation on the market today — "K" factor 0.24. Only three inches of Insl-Cotton has the insulation value of a five-foot brick wall. Yet, the labor cost of installing Insl-Cotton in an open attic is only about $0.25 per square foot. Homes insulated with Insl-Cotton have greater sales appeal because comfort and fuel saving qualities are built in for all the years to come.

FROM HOMEOWNER TO ARCHITECT, TO CONTRACTOR AND BUILDER, EVERYONE IS MORE SATISFIED WHEN THE INSULATION IS INSL-COTTON, AND HERE'S WHY...

- Lightweight — weighs only 0.875 of a pound per cubic foot...less structural strain...less weight to handle.
- Easy to Install — requires no special tools, no blowers or spreaders. New labor can easily do the job.
- Harmless to Handle — has no shot, silica, fine glass or abrasive particles to irritate installer's skin, eyes or lungs.
- Flame-proof — under normal conditions, Insl-Cotton's flame-proofing lasts a lifetime.
- Won't Sag or Settle — expands with age and fills more closely.
- Uniform Protection — there are no high or low spots...Insl-Cotton gives uniform protection over every inch it insulates.
- All New Materials—no inferior materials or salvaged mattresses. Insl-Cotton is all new material. An excellent sound deadener.
- Insect Repellent...Moisture Resistant — thoroughly cleaned and borated...won't harbor insect life.

CERTIFIED — No other insulation except flame-proof, fire-retarding cotton insulation made under Federal supervision can make this claim. Insl-Cotton contains no second-hand material, Every lot is tested and certified to the U. S. Government, Exceeds Government requirements for FHA, FPHA, HHS-1-128 specifications.

All Cotton Insulation Is Not Insl-Cotton...Insist on the Original and Genuine Insl-Cotton.

INSL-COTTON DIVISION
TAYLOR BEDDING MFG. CO., TAYLOR, TEXAS & BELTON, TEXAS
Originators of Flame-Proof, Fire-Retarding Cotton Insulation

MAIL THIS COUPON TODAY!
TAYLOR BEDDING MFG. CO., Taylor, Texas

Gentlemen:
Please send specifications and full information on Insl-Cotton

Name:
Address:
City and State:
Check Here: [ ] Distributor [ ] Dealer [ ] Architect [ ] Building Contractor
...but this floor can take it!

IT'S Koroseal

THE WORLD'S FINEST FLOOR COVERING!

Yes, a million footsteps from now, this lovely Koroseal tile floor will be just as bright, just as lustrous, just as good as new!

Koroseal is the reason, of course! This miracle plastic is tough. It lasts 2 to 20 times longer than any other floor covering you've ever seen. It's grease and acid-resistant ... is unaffected by soap or moisture ... has no pores to clog with dirt or germs ... and is easily cared for by an occasional thin wax coating!

It's colorful, too. Koroseal comes in 18 mirror-brilliant hues, and matchless Marble-tone and Crystaltone designs that blend perfectly in any interior. So write today for free samples and further information about this new wonder plastic building material! It's a Sloane-Blabon exclusive.

Also ask to see samples of Cove Base and Cove Molding in Koroseal. This new building material saves time and money. Installation is quicker than wood base-board or molding, it keeps new-looking years longer, and needs no painting.

*® B. F. Goodrich Co.
RECESSED WALL HEATER AB5936
Series 230 KT of Fan-Glo Heetaires, thermostatically controlled, supplies heat both by radiation and convection. Elements providing radiant heat include tubes of refractory material which attain same heat intensity as wires which are coiled around them. Models of heater consume from 1,250 to 3,000 watts, and operate on 120 to 240 volts; produce from 4,265 to 10,236 B.T.U.'s, according to wattage of particular model. Markel Electric Products, Inc. and La Salle Lighting Products, Inc., Buffalo, N.Y.

PICTURE WINDOW FRAME AB5929
Fully modular for masonry, veneer, frame and block construction, Malta picture windows are produced for use with either casement or double-hung side windows. Although normally designed for Thermo-pane, plate or double-strength glass may be installed if wide stops are used. Glass may be set directly into frame where greater glass area is desired. Sash may be shop glazed. Malta Manufacturing Co., Malta, Ohio.

WATER CLOSET SEAT AB5945
Temple Model G-47 water closet seat, made of hardwood, is guaranteed against splitting, warping and cracking. White enamel finish is easy to keep clean, and will not yellow with age. Bar type hinges are solid brass, chrome plated on nickel. Oversize rubber bumpers protect seat finish and cover. Fits all standard bowls. Seat Div., Temple Lumber Co., Pineland, Tex.

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

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

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

THE PAINE COMPANY
2959 Carroll Avenue Chicago 12, Illinois

Spring Wing Toggle Bolts Expansion Anchors “Sudden Depth” Drills Wood Screw Anchors Pipe and Conduit Clamps and Straps

Hanger Iron, perforated Expansion Shells Star Drills Malleable Shields Special Hanging and Fastening Devices

WRITE FOR CATALOG

NEW PRODUCTS
(Continued from page 174)

PAINE
Spring Wing
TOGGLE BOLTS
cut fastening and hanging costs

IN NEW BUILDINGS OR OLD...
FAMOUS Tri-Tone asbestos-cement shingles are back! Once more you can offer your customers TRI-TONE asbestos-cement strip roofing shingles, newly designed, greatly improved! Original Tri-Tone Shingles were applied on thousands of roofs pre-war—and those roofs are as perfect today as the year they were applied. No wonder successful dealers urged Carey to bring back Tri-Tones!

TRI-TONES, made only by Carey, offer these unusual advantages: Full headlap for maximum weather protection . . . permanent color veneer . . . no slate granules to loosen and choke gutters . . . flat, rigid surface with no blowups in high wind areas. And add to all this—a new mechanical innovation to speed up application—nail holes placed for self-alignment!

Distinctive beauty with lifetime permanence, pleasing effect of random widths and staggered butts, easy application—and you see why TRI-TONES step up your sales. Order TRI-TONES from your Carey representative, or address Dept. AB-5A for new free literature.

HAR-VEY
ROLLING DOOR
HARDWARE

is now **Completely Rustproof**
--and more silent than ever!

CHAMPION quality Har-Vey Hardware has scored a permanent victory over rust, for use of new oilite bearings has made it completely rustproof.

And with this new feature, Har-Vey Hardware rolls even more silently, even more smoothly than ever before!

Rolling doors save space, time and money -- equipped with Har-Vey Hardware, they are simply installed and good for a lifetime of smooth, silent rolling.

Send today for folder showing varied uses & installation details of rolling doors & complete information on Har-Vey Hardware:

Address: Hardware Division H

**Metal Products Corporation**
807 N. W. 20th St. Miami, Florida

Please send me your free folder on rolling doors & Har-Vey Hardware

NAME
COMPANY
STREET
CITY STATE

YOUR DEALER'S NAME
Fairbanks-Morse name plate on heating equipment is a guarantee to you ... and to the home owner for whom you build ... of quality in design, materials and workmanship.

We share this responsibility gladly. In 119 years of diversified manufacturing, Fairbanks-Morse has enjoyed the confidence of the greatest names in business, engineering and industry; municipalities of every size; governments at home and abroad; and farmers and home owners everywhere.

Whether you plan and build one house at a time, or multiple units, write for complete information about Fairbanks-Morse furnaces, boilers, stokers, circulating pumps and other heating equipment—with specifications and recommendations for use. Mail the coupon today.
EMERSON-ELECTRIC KITCHEN FAN
...to her it's a sign of a modern kitchen

She doesn't need that sign! To every kitchen-conscious client of yours, the mere glimpse of an Emerson-Electric Kitchen Ventilating Fan is a sign of thorough, modern kitchen planning. Don't underestimate her influence... or the premium she places on comfort and efficiency in the kitchen. You'll please more clients, make quicker sales, if you plan to include an Emerson-Electric Kitchen Fan in every new home or remodeling job. Economically priced, easy to install in any construction, these sturdy fans whisk out heat and cooking odors... prevent spread of greasy vapors to walls and furnishings. Available for either wall or ceiling installation. For complete data, refer to Emerson-Electric Catalog in 1949 Sweet's Architectural File, or write for free Folder No. B-46.

THE EMERSON ELECTRIC MFG. CO.
St. Louis 21, Mo.
You can effect construction economies, make floor plans more flexible and attract buyers faster if your houses have Westinghouse Water Heaters. Because they’re electric, no flue is required. You can locate them anywhere—in basement, kitchen, laundry, bathroom, even in a closet or alcove. Locate them to save long pipe runs. And you don’t have to make provision for fuel storage of any kind.

Electric Water Heater installations have jumped 600% in the last seven years. People want the clean, safe, dependable and attention-free hot-water service they provide. And when they see the magic name, Westinghouse, on an Electric Water Heater, they know you are giving them the best.

Westinghouse Electric Corporation
Appliance Division—Mansfield, Ohio
Please send me a copy of your booklet, “How to Sell Houses Faster” which also contains information on the Westinghouse Water Heater.

Name _____________________________________
Address ___________________________________
City & State ________________________________
How to Invest

IN TOMORROW

Tomorrow will prove the worth of the buildings you create today... and the roof you specify plays a vital part in proving that worth.

A roof of Bird Master-Bilt Shingles is an investment worthy of your best building design. It is a roof that not only armors and protects; it adds inimitable beauty and texture in both design and rich color, for Bird Master-Bilt Shingles are available in a wide range of colors and blends, in more variety than is found in any other roofing material.

Crime wave sharpens interest of home seekers everywhere in the protection from theft as well as fire provided by Sentry built-in wall safes. Built into masonry walls, Sentry withstands heat of blast furnace intensity. Dial ring embossed in door, combination is meddle proof. Built-in precision machined lock is welded to one-piece 12-gauge insulated door, cannot be punched.

Perfect hide-away for valuables, Sentry can’t be carted off. Its on-the-spot protection is welcome relief from provoking safe deposit box restrictions. Have Sentry for a "talking point" in every home you build. See how little it costs, how much value it adds. Write now for complete information.

Bird experience since 1795 is reflected in the narrow cut-outs, the heavy shadowlines, the fire resistance, the thick-butt construction... the balanced composition and quality of Bird Master-Bilt Shingles. Every material is processed by Bird... that’s why Master-Bils are an investment in tomorrow: they’re first quality, uniform high quality today. Write us today for full information about Master-Bilt and Master-Bilt Weather-Tex designs. Bird & Son, inc., 12 High Street, East Walpole, Massachusetts.
**ZONOLITE* BRAND**

**ZONOLITE VERMICULITE**

**A Light-Weight Aggregate**

This feather-light aggregate mixes with gypsum to form an insulating, crack-resisting, fire-retarding plaster. Mixes with cement to form a light-weight permanent insulating concrete. As a concrete or plaster, it will never burn, rot or decompose.

---

**FOR ROOFS THAT INSULATE**

Can be used two ways. As a short span structural roof deck — combines insulation and deck in one operation. Apply over paper-backed wire mesh, ribbed metal lath, gypsum or asbestos board forms. Reduces cost. As Roof Insulation over concrete, wood, metal, and other decks. A highly efficient, rotproof insulation that never has to be replaced.

---

**FOR FLOORS THAT INSULATE**

The old enemy to ground level floors — decay, vermin, termites — won't effect Zonolite concrete. Use concrete made of Zonolite Aggregate and Portland cement for floors of basementless houses and for commercial buildings where a warm, dry floor is demanded. Blocks condensation, prevents heat loss. Ideal base for radiant heat coils — it can be poured right on the ground.

---

**FOR PLASTER THAT INSULATES**

Plasterers lift only one-sixth the usual poundage when mixing and applying Zonolite plaster — and they do a better job. Up to four times the fire resistance of ordinary plaster. Nails won't chip it, resists cracking. Zonolite Aggregate packed in clean, easy to handle bags. Unused aggregate can be taken to next job. It's the successor to the heavy, clumsy sand pile. No wonder builders like to work with it — and no wonder homeowners appreciate what it does.

---

**FULL INFORMATION MAIL THIS COUPON TODAY!**

ZONOLITE COMPANY
Dept. AB-59, 135 S. LaSalle St., Chicago, Ill.

*Zonolite is the Registered Trade-Mark of Zonolite Company*
"General Electric Equipped" VS

WHICH SIDE ARE YOU BETTING ON?
Bare-kitchen home building is already down for the knockout count!

Count 1: No house is truly up-to-date without a General Electric equipped kitchen-laundry!

Count 2: Thousands of home-hunters are enjoying the time-saving, worksaving, moneysaving advantages of a General Electric equipped home. Thousands more are learning to insist upon General Electric kitchens—in big and small homes!

Count 3: General Electric appliances help sell homes faster!

Count 4: General Electric equipped homes stay sold! The buyer doesn’t have to load himself down with short-term payments on kitchen equipment. So he’s better able to keep up payments on the house.

Count 5: General Electric equipped homes are within everybody’s reach—under the “packaged mortgage” plan. The price of the kitchen-laundry is part of the price of the house. Paying is easier—because the cost is stretched out over years instead of months—just by adding a few extra dollars a month to the home mortgage!

Count 6: Economical General Electric appliances often help the homeowner make up this slight extra payment in operating savings! A wonderful extra selling point for the “packaged mortgage”!

Count 7: People prefer General Electric appliances. In a recent survey, 51 per cent of the men and 53 per cent of the women said they prefer General Electric appliances!

Count 8: General Electric equipped kitchen-laundries in your present project will make your next project easier to sell!

Count 9: General Electric equipped homes cost you nothing extra!

Count 10: General Electric’s Home Bureau can help you with planning, promotion, selling!

Get on the winning side
Act today to include General Electric equipment in the next homes and projects you build.

GENERAL ELECTRIC HOME BUREAU
SUCCESS STORY OF THE MONTH

W. H. Weaver, Greensboro, N. C., builder, always includes General Electric equipment in his houses. He says: “My last 187 houses were rented prior to completion. My tenants enjoy dependable, economical and efficient G-E appliances. That helps rent my houses faster!”

Make your next project a fast-selling success! Let Home Bureau help—from foundation to sales campaign!

Write to the General Electric Home Bureau, Appliance and Merchandise Department, General Electric Company, Bridgeport 2, Connecticut.

You can put your confidence in—
Get Luxurious, Deeper Shadows

at a fraction of the usual cost
with

Double Coursing means low maintenance cost and a modern, attractive job

When you build or modernize with Dua-Lap Red Cedar Shingles, you achieve shadows and graceful lines in keeping with today’s best architectural thought. This double coursing has double insulation value and double beauty, offers homeowners double economy in maintenance.

Dua-Laps come pre-stained in eight handsome colors, can be laid with full 12” or 14” exposure over solid or spaced sheathing. Butted, squared and tapered perfectly for easier application. Specify Dua-Laps on your next job.

Write for free Dua-Lap full-color folder and name of nearest dealer.

It Pays To Be Careful
(Continued from page 182)

Warning posters are distributed for display on each job. In Chicago we send one of these to each member monthly. Scores of pamphlets are available from insurance company engineers, the National Safety Council and other sources. “Safety Suggestions for Construction Foremen” has been one of the most useful and popular. It lists some 71 sources of accidents on construction jobs, and can be followed up with detailed blueprints for safe construction of ladders, scaffolding, and so forth.

Also to help analyze the problem and thus learn where to put the greatest stress, the Kempe engineers made a study of the causes of 1,000 home building accidents. The results of this study were presented in chart form and sent to every member of the Chicago Association.

Home building accidents most frequently are caused by: Unsafe scaffolding—one 10-penny nail instead of three or four. Improper or insecure ladders—ladders made of 1 x 3 with 1 x 2 rungs have been seen. Unprotected openings—unfinished stairwells, excavations, and so on. Poor housekeeping—loose boards with nails in them, and shaky stacking of materials. Unsafe guards on power machinery. Ignorance on the part of workmen in handling materials, especially heavy items.

Members and foremen are grateful for the suggestions. What is seen on a job depends on whose eyes are looking at it. A mortgage man looks for one thing; an insurance man for another; the architect sees a different angle; the carpenter sees his problems. This safety engineer will look for items none of the others see, so he deserves a very real need, and his work is appreciated. It is his job to keep abreast of new developments and ideas in his field and to make these available to the home builders’ work.

In the Chicago Association we give, in addition to the savings on premium costs, an annual Safety Award. This is in recognition of those members who have had perfect safety records—that is, no accident which has caused a workman to lose one full day—during the policy year. For the policy year just past we have only one member who had more than one of these lost-time accidents, while over 75 per cent of our members (Continued to page 196)
How to support radiant heating

Simply...Economically

Fenestra* Building Panels combine, in one package, joists, bridging and subflooring. They lock together simply and compactly... without special skills or special tools. That saves time, money and costly skilled labor on job after job. It's been proven time and again in the field. For example, it took only 45 minutes for three men to lay the entire first floor for a Maryland house. Here's how to install the radiant heating:

1. Lay the Fenestra Type D Panels.
2. Put down the grid system of piping.
3. Imbed the grid in concrete.
4. Apply finished flooring of your choice.

That's radiant heating in a hurry... strong, attractive, noncombustible construction. A way to build better.

Fenestra Panels also are ideal for warm-air radiant heating. One of our engineering representatives will be glad to discuss the versatility of Fenestra Panels with you. For further information, please mail the coupon. Also ask about Insulated C Panels for walls, as well as famous Holorib Roof Deck.

*Trademark
WHY

Getty Casement Operators will not STICK, JAM, STRIP, or BEND! Because...

originated the angle drive operator and has specialized for more than a quarter of a century in the design and manufacture of the BEST Operators money can buy!

ONLY
GETTY MAKES ALL 3

GETTY No. 4703 W Internal Gear Angle Drive Casement Operator

GETTY No. 4715 ANGLE DRIVE External Gear Casement Operator

GETTY No. 4700 Horizontal Gear (reversible) Casement Operator

Remember - GETTY Operators are ALL equipped with heavy brass channel guides.
GETTY Specializes in the manufacture of casement operators...your guarantee of quality.
GETTY Operators - Best in any Case-Ment.

Write for descriptive literature.

H. S. GETTY & CO., INC.
3348 N. 10th ST., PHILADELPHIA 40, PA.

Revolutionary NEW RADIANT HEATING SYSTEM

Lower in First Cost - Lower in Operating Cost Than ANY OTHER Form of Automatic Heat

The MOST SIMPLE AND EFFECTIVE System Ever Devised

Automatically balances itself and heats ALL rooms evenly. No cold floors — no cold spots. If a cold wind is blowing on one side of the house, those rooms heat up quickly, while rooms on the sunny side do not over-heat. Automatically puts the heat where it is needed.

Can be installed in EXISTING buildings without alterations, as well as in any type of new construction.

Here is today’s greatest opportunity to satisfy the demand for the modern comfort of radiant heating—at low cost.

Why put up with cold floors, air stratification, drafty, dust moving, inadequate, out-of-date systems, when you can get Perfect Radiant Heating in ceilings, walls and hardwood floors, at Lower Cost?

IT’S SENSATIONAL. Thoroughly tested through 8 years of research and proven by 300 installations. Built by Scott-Newcomb (established 1917), pioneers of automatic heat.

Write for booklet — come and see display houses in Saint Louis area.

SCOTT-NEWCOMB, Inc.
1442 South Boyle Avenue
Saint Louis, Missouri

Some Scott-Newcomb territories are now open and are being assigned. You may be eligible. Phone, wire or write today.
SALESMAKER of The Month

TRUSCON PIVOTED STEEL WINDOWS
are adaptable to all types of industrial and commercial buildings

Warehouses, factory and storage buildings, garages, filling stations, and a wide range of other non-residential buildings can utilize the lighting, ventilating and economy features of these Truscon Windows. Use them in the structures you are building—they will build prestige and profits for you.

Wide Range of Types and Sizes

Truscon Pivoted Steel Windows are made of heavy, hot-rolled steel sections. The outside section is of angle shape, providing a ¼" anchorage at the masonry or mullion connection. The intersection of the horizontal and vertical members is a dovetail mitre rigidly interlocking the bars. All muntin bars, except where ventilators occur, are continuous from head to sill and jamb to jamb. Double contact weathering is provided on all four sides of ventilator.

A typical Truscon Pivoted Steel Window installation showing the extensive lighting and ventilating possibilities of this unit.

Write for free illustrated literature giving complete details of Truscon Pivoted Steel Windows, and describing the entire line of Truscon Steel Building Products. Their design and construction features can help you build prestige and profits.

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

Manufacturers of a Complete Line of Steel Windows and
Mechanical Operators • Steel Joists • Metal Lath • Steeldeck
Roofs • Reinforcing Steel • Industrial and Hangar Steel Doors • Bank Vault Reinforcing • Radio Towers • Bridge Floors.
FOR KITCHEN-MINDED
CUSTOMERS

Gor INSTALL....

PRYNE & CO., INC
American Builder, May 1949

The home owner is becoming increasingly critical about the kind
of ventilator she gets in her new kitchen. Just “a fan” is no longer
enough. Give her the best—install Blo-Fan—either in the ceiling
or inside wall, directly over the range, where a fan belongs.

How to be Sure About Costs
When You Estimate a Building Job

THE SIMPLE TAMBLYN SYSTEM OF ESTIMATING REDUCES
BUILDING MATERIALS and LABOR COSTS TO EASY-TO-USE FACTORS!
Do you get that creepy feeling about your estimates? Why take a chance
when you can be sure! Just multiply by our simple factors to determine
your labor and material costs. The Tamblyn System is simple, fast,
accurate, complete and dependable!

YOU MAY SAVE MANY TIMES ITS LOW COST IN ONE USE!
In order to get your share of profitable building contracts, you must be
able to figure jobs fast and accurately. You must be sure your estimate
is just right—low enough to get the jobs—high enough to give you a
reasonable profit.

USED BY SUCCESSFUL CONTRACTORS FOR OVER 40 YEARS!
Many of the largest and most successful contractors in the United
States and Canada—thousands of them—have used the Tamblyn System
of estimating. It is tried and tested—it has been used for more than 25
years. Forty years of experience in construction and building is behind
it. And you can study the system for 10 days without cost.

TEST THE TAMBLYN SYSTEM IN YOUR OWN OFFICE WITHOUT OBLIGATION
Send the coupon below for your complete Tamblyn System. Examine it
in the privacy of your own home or office for 10 days. Try it on new
jobs—check it against completed jobs. There is no obligation unless
you keep it.

SEND NO MONEY—TRY IT FOR 10 DAYS FREE!
THE TAMBLYN SYSTEM, 1115 So. Pearl St., A-29, DENVER, Colo.

To fasten screening neatly and quickly...

HANSEN ONE-HAND TACKERS
SCREENS—stubborn, curly and difficult to hold and
tack in place—are easily fastened with the HANSEN
one-hand Tacker. Screen is held in place with one
hand, stretched into position with prongs of Tacker,
and stapled firmly to wood member. (See illustration.)

Besides screens, the Hansen tacks various types of
insulation, building paper, etc. It tacks selvage
strips snugly, securely in place. It leaves no pockets
for air seepage. Saves time and ma-

HANSEN ONE-HAND TACKERS
A. L. HANSEN MFG. CO.
5055 RAVENSWOOD AVE. CHICAGO 40, ILL.

[Advertisement details]
How to build home-owner praise

There's one reason for putting oak floors in the homes you build that, in its importance to you, goes beyond the obvious advantages to a home-owner of beauty, durability, and economy.

This is the special pleasure people experience from oak grain's versatility in combining perfectly with other materials—from other woods to glass and metals, and with any motif from Victorian to modern.

Building with oak floors is bound to earn you the praise of home-owners who realize in their daily living those satisfactions you told them they would discover.

To help home-owners visualize the style and color adaptability possessed only by oak flooring, show them the new free 16-page booklet, "Planning and Decorating the most important side of a room." Send for your copies today.

NATIONAL OAK FLOORING MANUFACTURERS' ASSOCIATION
814 STERICK BUILDING • MEMPHIS 3, TENNESSEE
ANNOUNCING THE NEW

CHECK THESE EXCLUSIVE FEATURES...

SAFETY-LOCK SWITCH—positive protection against accidental starting.

UNIQUE SHOCK-ABSORBER GEARING harnesses the added power of these great new saws, gives extra life to motor, gears, spindle and blade.

EXTRA WIDE REENFORCED STEEL SAFETY BASE for better balance—easier to handle, far safer to use.

PROTECTED DEPTH AND BEVEL SCALES. In plain sight when you use them—out of the way when you don't. Always accurate.

LONG-SHAFT TRANSVERSE MOTOR-MOUNTING transmits as much as 25% extra power, supports blade on oversize ball bearings from one side of the tool clear to the other.

Silver Line "6" Max. Depth of Cut...2 1/2" 45° Depth of Cut...1 1/4"

Silver Line "7" Max. Depth of Cut...3 1/2" 45° Depth of Cut...1 1/2"
Silver Line Saws

with exclusive Long-Shaft Transverse Motor Mounting
for EXTRA POWER and LONGER TOOL LIFE

PLUS...

...the most powerful motor ever used in electric saws.
...the smoothest operating automatic ball bearing blade-guard ever designed. Rubber snubber.
...die-cast aluminum housings, fully reinforced and protected to withstand rough handling.
...steel inserts for bearings and threads to maintain critical parts in permanent alignment.
...finger-tip control for depth and bevel cuts—no wrenches needed.
...convenient handles, located for perfect balance and accurate control.

...complete ball bearing construction—with larger bearings than in any saws of this type—all grease sealed or easily accessible for greasing.
...built-in sawdust blower. Blows from the inside—out. Keeps cutting line clear, protects motor from dust.
...giant switches—size for size, the largest ever built into saws. Endless performance.
...steel rip guide, adjustable for any thickness of material being cut.

Ready now—after two years of laboratory and field tests. See the great new Silver Line Saws at your nearby Thor distributor.

INDEPENDENT PNEUMATIC TOOL COMPANY
Aurora, Illinois

Export Division 330 West 42nd Street, New York 18, N.Y.

Birmingham Boston Buffalo Chicago Cincinnati Cleveland Denver Detroit Houston
Los Angeles Milwaukee New York Pittsburgh Philadelphia St. Louis St. Paul
Salt Lake City Seattle San Francisco Toronto, Canada Sao Paulo, Brazil London, England

Silver Line "8"
Max. Depth of Cut...3½" 45° Depth of Cut...2½"

Silver Line "9"
Max. Depth of Cut...3½" 45° Depth of Cut...2½"

Silver Line "10"
Max. Depth of Cut...4½" 45° Depth of Cut...2½"

Silver Line "12"
Max. Depth of Cut...4½" 45° Depth of Cut...2½"
INSECT WIRE SCREENING

There is no screening like wire screening for lasting protection in window, door, and porch screens. Cortland Brand wire screening keeps the pests out and gives years of dependable service. Wire screening will not burn or sag; takes a minimum of tacking for a smooth, tight job; and it gives added security to windows left unlocked.

Cortland Brand wire screening has been tested under all conditions since 1873. For sure satisfaction specify Cortland Brand insect wire screening whenever you install new or replace old screens. There is a Cortland Brand wire screening for every purpose made to full compliance with U. S. Bureau of Standards specifications for steel, bronze, and aluminum wire:

Cortland Gray Wick - Popular all-purpose grade steel wire, electro-coated and enameled against corrosion.

Cortland Bronze - Special alloy wire, rustless, and not affected by salt air, acids, or gases.

Cortland Aluminum - Lightweight Al clad aluminum wire can't rust or stain.

Wire - Poultry Netting - Nails - Wire Screening

It Pays To Be Careful
(Continued from page 188)

have perfect records and will receive the awards. Also, some half dozen are entitled to special awards for two and three years without a lost-time accident. The Association is proud of this showing. The members are enthusiastic about it and the reduction it means in their costs. The newspapers and trade papers find it a good news and feature story. It is concrete evidence of the value and efficacy of the program and the work of our safety engineers.

The work of the safety engineer is specific and direct. But I have found it also beneficial to consult the National Safety Council officials. This organization is deeply interested in the problems of the home building field. It is recognized that our problems are not identical with those of any other industry. For one thing the construction of homes employs at least twenty trades and crafts. Few home builders maintain their own crews for all of the construction operations which go into a job. And even in those associations whose rolls are open to subcontractors it is not logical to hope that all will be brought into membership. We are not an integrated, vertically organized industry from surveyor to roofer.

It does seem, however, that each of the trades which are concerned could profitably conduct an accident prevention program to augment that which is available to them through membership in a home builders' association. This could be done through either the respective unions or through the various trade associations. Possibly it is a function of the home builders' associations to take the leadership in such a movement.

In any event the safety-insurance programs already in operation by local home builders' associations have proved their value on the thesis that "It pays to be careful together."

Flanders to Assist HHFA

WILLIAM D. FLANDERS of the Fred F. French Investment Co., Inc., New York City, will join the Housing and Home Finance Agency on a part-time basis to assist in the development of the Economy Housing program, it has been announced by HHFA Administrator Raymond M. Foley.

Flanders has assisted the government in its housing programs on two previous occasions.
Here's generous living space — not a cramped makeshift, built down to a low price! The PH Home is the real Economy Home — with supremely good design, expert craftsmanship, high quality materials. Home buyers are quick to recognize the real livability such a home assures.

1949 is the low-cost housing year! The PH Home is "made to order" for this market. It achieves low cost — not by sacrificing desirable selling features — but through modern production methods which make the most effective use of time, labor and materials.

Here is the Economy Home you can sell with confidence and enhance your reputation as a builder.

Saves Erection Time and Cost

P&H Homes come to you from the factory 83% complete — with finished walls and complete insulation. Only 169 man-hours or less are required to erect these soundly constructed homes. Your money is tied up for shorter periods.

For a profitable building year in 1949, get in touch with us immediately.

Look at These Profit Features

✓ Full size — 24 ft. wide x 32 ft. long
✓ Large living room — 11' 7" x 17' 4"
✓ Joint-free, crackproof walls
✓ Choice of 2 or 3 bedrooms
✓ Flush doors throughout
✓ Built with or without basement
✓ Choice of heating equipment
✓ Highly rated for F.H.A. financing

P&H HOMES
301 Spring Street
Port Washington, Wis.
Hidalift
the 100% concealed sash balance

Now Available
with either
Hidalift CUP TYPE
attaching bracket

Hidalift "L" TYPE
hinged bracket

Now you can get all of the advantages of Hidalift — the modern, 100% concealed sash balance — with the type of attaching bracket best suited to your own requirements. The new "L" type hinged bracket can be installed or removed with sash in frame. However, on installations with sash removed from frame you can use the cup type which eliminates rabbing on bottom rail of lower sash necessary to receive "L" type hinged bracket. Either type can be adjusted without removing from sash. Mail coupon for complete information, or samples of Hidalift.

THE BENNETT MANUFACTURING CO., ALDEN, N.Y.
CUSTOM METAL CRAFTSMEN SINCE 1906

Send complete literature and prices on Hidalift.
Send sample.  □ Cup type  □ "L" type
Send name of nearest distributor

La Belle
Industries, Inc.
OCONOMOWOC, WISCONSIN

WHY FLUORESCENT LIGHTED
MEDICINE CABINETS

Cost Less

Complete Bennett Bilt Fluorescent Lighted Medicine Cabinets cost less to buy and install than separate electrical wall fixtures and cabinets of equal quality. These cabinets increase the attractiveness of modern rooms by providing a more finished, self-contained, compact installation.

THE BENNETT MANUFACTURING CO., ALDEN, N.Y.
CUSTOM METAL CRAFTSMEN SINCE 1906

Security
Privacy
Good Looks
Low Price

All 4 IN La Belle Door knob Lock

Widen your markets with this new hardware staple that ends the need for lockplates and old-fashioned keyholes. The compact, attractively styled LaBelle, with a tumbler cylinder lock built into its outer knob, is non-jamming and spins like a bearing when locked. You can easily sell it for outside and inside doors of new building or remodeling projects — homes, schools, apartments and government jobs.

La Belle
Industries, Inc.
OCONOMOWOC, WISCONSIN

SPECIAL...
With your initial shipment of one dozen LaBelle Door knob Locks, you will receive, at no extra charge, a "use-it-yourself" display to help you sell. Order from your jobber or write direct.
let us prove that you can PROFIT by using YOUNGSTOWN KITCHENS

BUILDERS all over the country have discovered that it pays to talk to a Youngstown Kitchen representative when selecting their kitchens. They’ve found dollars-and-cents advantage in using the famous Youngstown Kitchens of white-enameled steel.

Why?

Because Youngstown Kitchens go in faster, need no finishing . . . and require no extras or after-installation adjustments. And, most important of all, they do not increase the cost of the home.

Youngstown Kitchens fit any floor plan . . . have the most modern work-saving features . . . and are sold to the builder in a package, with no hidden costs in labor or materials.

Youngstown Kitchens are known to most potential home buyers. Their beauty and work-saving features are immediately recognized. They’re often an important factor in closing a sale.

Whether you’re building multiple-dwelling units or individual homes, let your Youngstown distributor go over your plans and show you exactly how little it will cost to install this wanted, nationally advertised brand!

"... standard equipment!"
says Alabama contractor

One of the many builders who specify Youngstown Kitchens is R. G. Brasher, Birmingham, Alabama, contractor.

“Youngstown Kitchens are compact, sleek and modern in design, and adaptable to any type home,” says Mr. Brasher. “In the homes I build, they are standard equipment!”

Youngstown Kitchens
BY MULLINS
MULLINS MANUFACTURING CORPORATION • WARREN, OHIO

World’s Largest Makers of Steel Kitchens
Doud Lumber Co.  
(Continued from page 115)
a way that contractors can secure quick, convenient service, whether they come in their cars for small items or in trucks for heavy merchandise. There is plenty of parking space in front and on both sides of the store. There are driveways leading into the yard on both sides of the store, and two additional driveways are provided on the side street. Lumber racks and warehouses are well separated from each other so there need be no congestion. The yard is completely paved and is enclosed by a wire fence seven feet high, topped with barbed wire.

The store exterior is of unusual design, modern in treatment. On one side of the building, brick extends about 15 feet toward the center before floor-to-ceiling windows begin. The windows are eight feet high, and are placed below a 30-inch canopy. Above this, a similar row of windows extend up to a similar canopy. This unusual construction gives an impressive appearance to the store, and in addition provides a second tier of windows for display purposes. Another canopy, 12 feet deep, extends over the drive-way to a small building used for storage.

The balcony windows are used for special displays that are generally built on a turn table. Both tiers of windows are illuminated at night, with lights operated by a time clock.

The ceiling of the main store is 20 feet high and is lined with 4x8 ivory insulating board with beveled edges. Thirty round inset lights furnish the illumination. The floor is asphalt tile. Side windows are eight feet from the floor, thus providing additional wall space. They are equipped with Venetian blinds. Neon signs at the back of the store, visible from the entrance, direct visitors to the main departments—builders' hardware, building materials, and lumber.

The building was designed by Architect Leslie Nichols and built by Earl Heple, contractor, who, together with Kincaid, worked out many changes as they went along. They

BOICE-CRANE COMPANY  
966 Central Ave., Toledo 6, Ohio  
Please send FREE LITERATURE on Boice-Crane  
( ) Band Saw  ( ) Complete Line  
NAME  
FIRM  
ADDRESS  
CITY & STATE  

American Builder, May 1949. America
—says a Well-Known New York Contractor

"Here's something really hot! The first
POSITIVE 'LOCKING' nail that let me take
full advantage of all savings and con-
struction traits of non-wood sheathing:

"... LOWER UNIT COST ... FASTER APPLICATIONS
"... LESS WASTE ... ABSOLUTE WEATHER TIGHTNESS

"I use ES-nails for attaching wood
or asbestos shingles DIRECTLY to
gypsum or insulation sheathing—
and save money on both types
of construction."

Other practical reasons for using ES-nails in-
clude: their ease of application—no special tools
are required, use a regular shingling hatchet or
hammer... they are self-clinching... and they
can be driven at any convenient point—no need
to locate studs.

Use this modern construction method on your
next job—a method that other builders find
affords unquestionable strength and enduring
safety—at a saving.

For more information about the value of
ES-nail construction—and the savings it will
mean to you, call your supplier, or write:
Elastic Stop Nut Corporation of America,
2330 Vauxhall Road, Union, New
Jersey.

Accepted on FHA-Insured Houses

ES/nail

A Product of

ELASTIC STOP NUT CORPORATION OF AMERICA
you can see that

Trinity White

is the whitest

white cement!

Your trade will get fine results with this extra white cement. It's true Portland Cement made to ASTM and Federal Specifications. If you do not have it in stock, write the office nearest you: Trinity Portland Cement Division, General Portland Cement Co., 111 West Monroe St., Chicago; Republic Bank Bldg., Dallas; 816 W. 5th St., Los Angeles.

SURE SIGNS OF
GOOD BUSINESS!

NATIONAL LOCK

Points the Way to...

• More Consumer Acceptance
• More Profitable Sales

See Your Jobber Now

Distinctive Hardware
All from 1 Source

NATIONAL LOCK COMPANY

Rockford, Illinois  •  Merchant Sales Division

NORDAHL

Feather Glide

WARDROBE HARDWARE

• can't jump track
• silent & smooth

...overhead suspension does it

At last here is wardrobe door hardware that does the job! When you specify NORDAHL wardrobe door hardware, its overhead suspension principle guarantees efficient, quiet, and trouble-free operation. Aluminum extruded track and guide comes in lengths up to 18 feet—it can be used with any thickness of panel or plywood door. Cadmium plated steel hangers have phenolic rollers. Specify NORDAHL for new construction or replacing old.

write for our folder catalogue

180 W. ALAMEDA AVE., BURBANK, CALIFORNIA

ALSO SPECIFY NORDAHL SLIDING DOOR FRAMES
Never has it been our ambition to be known as the largest producer of plywood. But for 28 years we have had a more important objective—to be the best.

This adherence to quality extends not only to manufacture in modern mills. It has to do with long range product research programs, honest dealings with buyers, integrity of management, and the establishment of APMI sales service in major building areas.

A telephone call to any of the addresses below will bring you intelligent answers to your plywood requirements.

ASSOCIATED PLYWOOD MILLS, INC.
GENERAL OFFICE—EUGENE, OREGON
MILLS: Eugene, Oregon, and Willamina, Oregon

BRANCH SALES WAREHOUSES: Eugene and Willamina, Oregon; 925 Tebbet St., San Francisco 24, Calif.; 4814 Bengal St., Dallas 9, Tex.; 406 Utah St., St. Louis 16, Mo.

SALES WAREHOUSES: Bessonneau & Eckstrom, 2719 S. Compton, Los Angeles 11, Calif.; Pacific Mutual Door Co., 626 Tacoma Bldg. (Home Office), Tacoma, Wash.; 1407 Fleet St., Baltimore 31, Md.; 2141 Throop St., Chicago 11; 516 South Ave., Garwood, N. J.; Adams and Shawnee Sts., Kansas City; 2235 Territorial Road, St. Paul 4, Minn.
Doud Lumber Co.
(Continued from page 200)
designed and built the shelving, fixtures, and counters.

Kincaid has a department head for each of three divisions of his business.
In addition to house jobs and over-the-counter business, the firm does a lot of school work and a great deal of commercial work.

Advertising is conducted by radio, newspaper, and direct mail. The company sponsors weekly boxing matches at the San Jose State College, and, in addition, uses spot radio announcements before other athletic events. Ads are used in the Farm Section of the local Sunday paper.

Direct mail promotion is spearheaded by the mailing of the “Doud Report” once a week. It is mailed to a selected list of contractors with the best buys of the week. Among miscellaneous advertising, the placing of signs on all jobs where their material has been used is the most important. They use attractive fibre signs, 14x18 inches. It is the job of the truck drivers to put stakes in the ground and erect the signs.

The Doud Lumber Co. purchased this firm in 1948. Principals in the company are Lee L. Doud and Donald H. Doud of Tacoma, Wash.

General Sales Manager
Of Rubberoid Resigns
LOUIS HERSCOVITZ, vice president and general sales manager of The Rubberoid Co., has resigned to become associated in Chicago with his brother in a different line of business, it is announced by Herbert Abraham, Rubberoid president.

Herscovitz has been connected with the roofing industry since he was sixteen years old. Prior to joining Rubberoid in 1926, he was Western sales manager for the H. F. Watson Co., which was acquired by Rubberoid in that year. He was promoted by Rubberoid to the position of vice president and general sales manager in 1945 in recognition of his outstanding accomplishments as sales manager of the company’s western division with headquarters in Chicago.
Only the Remington Rand Printing Calculator gives builders and contractors PRINTED figure facts!

FROM ESTIMATING concrete block to checking your final invoice, this foolproof Printing Calculator automatically prints every factor and answer on the tape. Designed to meet every figuring need of architect, builder and contractor, it automatically divides, multiplies, adds and subtracts — and the printed proof proves you’re right.

The simple estimating problem at the left is just one example — the Printing Calculator is ideal for figuring payrolls including overtime and deductions, compiling compensation insurance data and even complicated trigonometric problems where higher mathematics are involved.

Best of all, with the printed tape, you have an electric adding-listing machine, too — two fine machines for your one modest investment.

But see for yourself. Call your local Remington Rand representative, or write for free booklet to Remington Rand Inc., Dept. AU-5, 315 Fourth Ave., New York 10.

the new Remington Rand automatic Printing Calculator
What do your Flooring Specifications call for on jobs like these?

RANCH HOUSE DEVELOPMENT...

Basementless, concrete slab construction. More and more cost-conscious operative builders are turning to Tile-Tex® Asphalt Tile as the all purpose flooring for a one story ranch house. It's low in cost, has an amazing record of long life ... and is the only type of resilient flooring which can be installed with perfect safety over a non-waterproofed concrete slab. No other sub-flooring required. Can be installed in gay, colorful patterns or solid tones. Appeals to home owners because it can be used with or without rugs or carpeting.

BLOCK OF STORES...

On the main street of town, where store traffic is heavy, and tenants require different decorative effects. With Tile-Tex Asphalt Tile you can offer the commercial user an almost endless variety of designs, patterns and custom accessories around which to plan colorful and functional floors. Yet your client pays no maintenance penalty for high style. Tile-Tex is exceptionally easy to clean and keep clean.

RESIDENCE...

Two stories and a basement, for upper income purchaser. For kitchen, bathroom, basement recreation room, foyer, children's bedrooms ... specify Tile-Tex Asphalt Tile, by all means. It's the right floor for heavily used areas. It brings bright, spirit-lifting color to many areas of the home. It lightens the cleaning burden. And it helps sell your homes


THE TILE-TEX DIVISION
THE FLINTKOTE COMPANY
CHICAGO HEIGHTS, ILLINOIS

Save up to $59 a day

JAEGER SELF-RAISING TOWER

with MATERIAL CAGE and CONCRETE BUCKET

Contractors everywhere are profiting with it! Saves scaffold erecting time — saves repeated loss and cost of scaffold material — handles and places materials faster and safer. Take the dis-assembled tower and 17-hp hoist to your jobs on a truck. Two men assemble it on the ground in two hours. Then the Jaeger “Hoister” raises it to 37' standard height — 67' with extra sections. Material cage accommodates two wheelbarrows or largest concrete cart — handles 1 ton loads with absolute safety. And, there's a Concrete Bucket available — easily interchangeable with the cage, on the job — water level capacity, 14 cu ft — working capacity, 11 cu ft (the full batch of an 11-S mixer!).

Write for bulletin and complete information

THE JAEGER MACHINE CO., Columbus 16, Ohio

Distributors sales and service in 130 principal cities

Pumps • Mixers • Compressors • Paving Equipment

Don't take chances

USE THE
PERF-A-TAPE
JOINT SYSTEM

IT'S the method perfected by the makers of famous SHEETROCK® gypsum wallboard, thus is backed by years of dry-wall know-how. So, play safe—use PERF-A-TAPE® reinforcement and cement... made exclusively by... UNITED STATES GYPSUM

Gypsum • Lime • Steel • Insulation • Roofing • Paint
Colors that mean Business!

PITTSBURGH INTERLOCK
PLASTIC WALL TILE

15 DECORATOR COLORS

SELECTED BY LEADING COLORISTS

GUARANTEED SALES APPEAL

Hundreds of Combinations

Jobbers! Dealers! Make new customers, bigger profits with PITTSBURGH INTERLOCK—the colorful plastic wall tile that brings you tomorrow's colors today! Actually hundreds of striking combinations can be created to meet individual tastes from the wide, luxurious range of plain, pastel and marbelized colors. Suitable for all bathrooms and kitchens—and for most business establishments. The sky's the limit on possibilities. Satisfied customers guarantee new customers and greater profit!

And PITTSBURGH INTERLOCK is the only interlocking plastic wall tile. This exclusive feature assures the life of the tile for the life of the wall. Self-aligning. No grout-joints. No clean-up problem. 25% faster installation.

Don't Miss This Opportunity
Mail this coupon TODAY!

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

Yes, I want to make new customers with PITTSBURGH INTERLOCK color-appeal. Please send full details.

Name
Address
City State
Tenth Edition . . .

The Building Estimator’s Reference Book

By Frank R. Walker

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

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

HELPS PREPARE BETTER ESTIMATES

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

SEND FOR A COPY TODAY

Send for a copy of the new Tenth Edition of THE BUILDING ESTIMATOR’S REFERENCE BOOK today. Take advantage of the many opportunities it offers for increasing your profits through better estimates. Money back if not entirely satisfactory.

FILL OUT THIS GUARANTEED ORDER FORM

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

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Address __________________________

City __________ Zone __ State ________ A.B. 5-49

American Builder
Simmons Boardman Publishing Corp.
30 Church Street, New York 7, N. Y.

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

The Douglas fir door industry is proud to have designed, tested and produced the BP door.

This year it expects to again produce this exceptionally fine Interior fir door in quantity—a door ideally suited, and designed, for paint or enamel finish.

The Fir Door Institute, in a series of important laboratory tests, found this Multiple-Piece Stile (Finger-Jointed) door:

1. Strong and Durable in Construction.
2. Possessing a life span equal to, if not greater than, the life span of a door of One-Piece Stile construction.
3. Having joints so snug and well-manufactured the finished paint job is smooth and unbroken.

Write now to the Fir Door Institute for your free copy of a booklet showing the results of these laboratory tests.

And, when you specify Interior Douglas fir doors, for paint or enamel finish, be certain to include the FDI-BP door in your order file.

FIR DOOR INSTITUTE
Tacoma 2, Washington

When you see the Fir Door Institute grade trade-mark—FDI-BP—on a Douglas fir door, you know that door comes from a mill regularly inspected by the FDI for quality control.
No wonder Architects and Builders are swinging to Devoe One-Coat House Paint for exterior repainting. This new, but thoroughly use-tested Devoe paint is designed for its job—to give full protection and a better-appearing job at a substantial saving over conventional two-coat work. It has twice the hiding power of ordinary house paint—levels beautifully—and dries to an enamel-like gloss that is fume-resistant and self-cleansing.

FHA Approved For 2-Coats on New Work

TRIAL OFFER TO ARCHITECTS AND BUILDERS ONLY

You or your painter can take this coupon to nearest Devoe Agent—buy one case, 4 one gallon cans, of Devoe One-Coat White House Paint, use according to directions, and if not entirely satisfied after applying first gallon return remaining 3 gallons and receive full credit for all 4.

OFFER EXPIRES MAY 15, 1949

Devoe & Reynolds Company, Inc., Dept. AB-6

787 First Ave., New York 17, N. Y.

DEVOE PAINT

Devoe & Reynolds Company, Inc., 787 First Avenue, New York 17, N. Y.
NOW! Richmond offers you
4 China Ledgeback Lavatories!

The Richmond BROMLEY—NOW available in two sizes: 22" x 19" and 20" x 18". Richness and style are yours with the beautiful Bromley. This shelfback, square bowl lavatory features a front overflow, anti-splash rim, and recessed soap dishes. The handsome, modern design of the Bromley makes this lavatory at home in mansion or cottage—apartment or powder room. To be sure of customer satisfaction—specify or install the beautiful Bromley. Plate #G-132.

The New Richmond RICHLEDGE—NOW available in two sizes: 19" x 17" and 18" x 15". A compact lavatory for your space-saving jobs. Small in size and price, this top quality unit is long on big lavatory features: raised shelfback, recessed soap dishes, anti-splash rim, integral front overflow and Richmond high-gloss finish. This wall hung lavatory, punched for center set fittings, is ideal for the modern home where space is a problem. Plate #G-152.

For Ledgeback Lavatories at their very best—Specify or Install Richmond Vitreous China

Ledgeback lavatories for any location—for any type of installation—are in the Richmond line of fine vitreous china. Bathrooms or powder rooms—if it's ledgeback lavatories you want—Richmond has the best you can get—and in the size you want. Check these sizes against your current jobs.

Richmond's complete line has all other types, too—enameled cast iron or vitreous china—slab or highback—wall hung or pedestal. When you recommend or install a Richmond, you are picking the best. The best in design—in beautiful, lasting finish—and in customer acceptance.

Richmond Radiator Company
19 East 47th Street
New York 17, New York

Please send me further information and details on the new additions to the Richmond line of fine Vitreous china lavatories. No obligations, of course.

Name: ____________________________
Company: __________________________
Address: __________________________
That's Why PARANITE PARA-THERM (Type RH)
BUILDING WIRE Saves You Dollars

You get more for less when you choose Paranite Para-Therm (Type RH) wire and cable. This wire carries a bigger pay-load. Saves on initial cost. You also save through being able to use smaller conduits in most instances. And you save in the ease of handling lighter materials.

Paranite Para-Therm (Type RH) building wire has higher heat-resistant qualities: 75° C permissible operating temperature compared with 60° C for Type R. That's why it has greater current carrying capacity. Where voltage drop is not a problem, as in industrial feeder circuits, Paranite Para-Therm does a better job and will last longer because of superior heat-resistant insulation. You also get the plus of $Q.C. in Para-Therm.

Construction Outlook
(Continued from page 116)

We have no way of estimating with any accuracy the number of units added by alteration, but there seems no question but that over the period the number was substantial, probably several hundred thousand. The housing shortage is certainly not over, but the crisis has passed its peak. The rate of family formation is far below what it was two years ago or even one year ago; and buyers who are able to pay the price have more opportunities for selection than they found a few short months ago.

It is against this background that the joint construction forecast of the Bureau of Labor Statistics and the Commerce Department was made for 1949. We predict total expenditures of $18,750 million for all types of new construction, in comparison with $17,666 million last year, an increase of about 6.1 per cent. In physical volume the increase will be considerably less, with comparatively little difference between the two years. The reason for this is that construction costs rose steadily through most of 1948, although small decreases from their highest points appeared in a number of the construction cost indexes by the end of the year. Despite some recent price cuts in building materials, we feel that construction costs will be higher on the average in 1949 than in 1948. Our present expectation is that 875,000 permanent dwelling units will be started in non-farm areas during the year, in comparison with 928,000 during 1948 and 849,000 during 1947.

For privately financed construction, little overall change in expenditures is expected: an increase from $13,631 for 1948 to $13,750 for 1949. Increases are expected for commercial buildings, and for the three non-profit types of private buildings which have already increased so greatly: churches, educational buildings, hospitals, and institutions. In contrast, a decrease of almost 7 per cent is expected for non-farm residential building, and a decrease of about 6 1/2 percent in industrial building.

The course followed by industrial building in the last few years is very similar to that which was observed after the First World War. The peak was in 1920, and was not exceeded until 1929. During the intervening years of high general prosperity the volume of industrial construction was well below the 1920 figure, although the
New York City's Universal Pictures Building

a Schlage installation of heavy-duty cylindrical locks... Architects: Kahn and Jacobs

The Schlage lock illustrated is Mercury Design
BIG SALES ASSET IN HOMES
H.C.LITTLE—THE SELF LIGHTING OIL FLOOR FURNACE

You'll be amazed at the magic sales appeal...

...of H. C. Little, the only oil floor furnace that AUTOMATICALLY LIGHTS ITSELF, with 100% electric ignition and control. NO PILOT LIGHT to waste oil. NO matches, no fuss, no muss. Just carefree comfort without attention, around the clock!

The homes you're building can have this feature—AT SURPRISINGLY LOW COST!

Write for brochure A-3

SAN RAFAEL, CALIFORNIA

THAT ACCURATE TOUCH...

with the
FINEST
IN STEEL TAPES

It's easy to be right the first time—it's easy to get "that accurate touch"... if your measuring instrument is the Master Streamline. This fine tool simplifies and speeds measuring and cuts down time-wasting errors. Its outstanding features are Streamline's guarantee of better measuring...graduations on both sides of blade...new lever brake to hold reading...direct reading inside measure...extra long tip holds blade steady...and many others found only in the Master Streamline. See your local hardware dealer or use the coupon.

MASTER
REG. U.S. PAT. OFF.
WOOD AND STEEL TAPE RULES

When Selling Steel Kitchen Cabinets

For your Protection

When you see this seal on a kitchen cabinet it means that the cabinet has successfully passed 21 different tests. It's good insurance for the dealer and makes his selling easier to the hard-to-please customers.

Write for a copy of bulletin Number A-5

STEEL KITCHEN CABINET INSTITUTE
140 PUBLIC SQUARE • CLEVELAND 14, OHIO
NOW—Install **American** Kitchens
At New Low Prices!

Now you can equip your houses with the prestige and easy-to-see advantages of nationally-advertised American Kitchens at new low prices. For stepped-up production now makes it possible for American Kitchens to offer you two great new economy sinks that materially lower your kitchen costs. Almost identical to our de luxe models on the exterior, these new economy models permit you to equip your houses with the kitchen literally millions of women prefer to all others—at a real savings. See panel at right for illustration and details. Place your orders now.

FREE! Architects-Builders File . . . gives blueprints of outstanding kitchen treatments, equipment specifications, etc. Ask your nearest American Kitchens supplier. If you don't know his name, write us today.

**NEW ECONOMY MODEL SINKS**

**MODEL ES-4200**
42" wide over-all. Drainboard available either right or left.

**MODEL ES-5400**
54" over-all. Single bowl, 2 drainboards, 2 drawers.

**ALL BASE CABINETS NOW AVAILABLE LESS TOPS, IF DESIRED**
Construction Outlook

(Continued from page 212)

Construction activity exceeded the 1920 level. The recent post-war peak for industrial building was reached in 1946.

In the field of public construction, we expect an increase of almost 25 percent from 1948 in expenditures, to 5.0 billion dollars. The largest item, as in most normal years, will be highways, roads and streets, with non-residential building next. Educational building will make up about half of non-residential, with a gain of a third from last year’s expenditures. Other important items are hospital and institutional buildings, sewer and water projects, and conservation and development projects. Public housing will be well above 1948, because of non-Federal projects almost certain to proceed, but it still is expected to be less than one per cent of total construction. Whatever housing legislation may be enacted by Congress, it is hardly possible for public housing expenditures by the end of the year to be as great as in any of the years from 1941 through 1943, or in 1946.

Employment Forecast

We expect construction contractors to employ about 2½ million workers at the year’s peak, which will probably be in September. Note that this estimate does not include the many thousands of small contractors who work on their jobs in person, or the much larger number of self-employed workmen who do maintenance and repair jobs and very small new jobs directly for property owners. Neither does it include those employed by firms outside of the construction industry for force-account work on new construction or maintenance.

The anticipated total is not greatly different from the 1948 peak of approximately 2½ million in August and September, but otherwise is quite the highest figure since the wartime construction program of 1942. It indicates excellent employment conditions for construction workers as a whole.

At the same time, because of continued growth of the skilled labor force there are likely to be fewer labor shortages than last year. The construction labor force is increasing slowly through apprenticeship training, and no doubt to some degree through informal training as well. Despite losses from death or retirement, the number of workers should continue to increase slowly, and because of the

(Continued to page 220)
SHEETROCK
Fireproof Gypsum Wallboard
is doing an outstanding job for me in 5,000 buildings

Standard Building Co.

April 14, 1949

H. B. Gypsum Company
Chicago 4, Illinois

Gentlemen:

During the past ten years we have used SHEETROCK extensively for walls and ceilings in more than 5,000 homes, apartments and commercial buildings. It is one of the most outstanding materials so far developed by the building industry.

SHEETROCK is permanent, builds smooth seamless surfaces; goes up quickly. However, we have been particularly impressed with its fire-resistant qualities.

From experience, we can heartily recommend SHEETROCK to any builder in any part of the country.

Yours very truly,

STANDARD BUILDING COMPANY

Carl Gellert
President

Another chapter in THE AMAZING SHEETROCK STORY
ONE APPLICATION - NOT A COATING — IT PENETRATES

Brick, stucco, concrete blocks, pre-cast stone is rendered lastingly water-repellent by one application of Crystal. Low cost —

Quickly flushed on with "stucco" brush or with low pressure spray. One gallon covers 100 to 200 square feet.

Send this convenient coupon for PROMPT ACTION

WURDACK CHEMICAL CO., 4956 Fyler Ave., St. Louis, Mo.

☐ Ship to me, one gallon con of CRYSTAL — for which I will pay $5.35 if I am satisfied ... otherwise there will be no charge or obligation on my part.

☐ Send me literature and prices on CRYSTAL.

Name

Firm

Address

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

My supplier's name is:

LEMCOMonumental
Series 62
EXTRUDED ALUMINUM
AWNING WINDOWS

The result of 30 years of research and experimentation
Available — May, 1949

THE WORLD'S FINEST WINDOW — FOR THE WORLD'S FINEST BUILDINGS

Write today for descriptive literature and price list.

CROFT STEEL PRODUCTS, INC.
14 MARKET STREET · JAMESTOWN, N. Y.

CHOOSE KEYSTONE
INSECT WIRE CLOTH

FOR

NEW INSTALLATION

Write for free catalog and estimating tables today.

KEYSTONE Aiclad Aluminum Screen Cloth can be sold by you with confidence. Will not stain or discolor woodwork or masonry. Red rust is eliminated, appearance improved ... light, strong, durable and pleasing to the eye.

KEYSTONE Bronze Cloth — both Bright and Antique finish, woven from highest quality commercial bronze wire of 90/10 analysis. Combines beauty, hardness, strength and resistance to atmospheric conditions.

KEYSTONE Galvanized Steel Wire Cloth, made of specially selected analysis copper bearing steel, gives strength and rust resistant qualities. (Due to present critical steel situation, this type of cloth is woven only in limited quantities.

Keystone Wire Cloth Co., Hanover, Pa.
NOW! AMAZING NEW STEEL CASEMENT BORN OF REVOLUTIONARY MANUFACTURING METHOD . . .

BETTER 11 WAYS!

CHECK THESE 11 BIG ADVANTAGES:

1. Deeper Sections . . . 1¼" . . . Mean Added Strength, Rigidity.
2. Double Weathering Water-Tight Contact All Around.
4. Cold Rolled Steel Surfaces Make Better Painting Surfaces.
6. Deeper (1¼") Muntins Add Greater Strength to Entire Casement.
7. 1¼" Section Depth Permits Double, Thermopane, or Insulation Glazing.
10. Larger Bottom Slots for Condensation Drainage.
11. IMMEDIATE DELIVERY FOR YOU!

You Are Assured Prompt Delivery . . . and Complete Home-Owner Satisfaction!

This is it . . . clearly the first major improvement in the casement window industry since the introduction of the under-screen geared operator 20 years ago! Now, after months of intensive research, STEELCRAFT has developed a standard casement window to make the once exceptional product even better than ever before. Here is truly a revelation in casement manufacture—a cold rolled steel sash with deeper sections, that makes the most economical use of materials, that becomes strongest, most adaptable, most perfectly constructed casement in building history.

The combined viewpoints of contractors, glaziers, engineers and architects formed the groundwork for the design of this new casement. On that STEELCRAFT'S top-skilled engineers built this new standard type casement, embodying all the advantages of the far more costly custom-built window . . . and then some — yet staying well within the economy-priced bracket of standard casements. Send now for complete construction and installation details of the brand new, ALL-NEW STEELCRAFT Standard Type Casement . . . as well as information on the complete line of STEELCRAFT Casements.

Write Now for Catalog on Complete STEELCRAFT Casement Line . . . Showing Construction Details, Typical Installations, Best Adaptations for Your Needs!

Mail This Coupon TODAY!

STEELCRAFT MANUFACTURING COMPANY,
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(in Greater Cincinnati)

Please send me your free new catalog on the Complete Steelcraft Casement Window Line.

Name

Business Address

City State

My Position Type of Business
Yes, every job is better when you use AZPHLEX DUOTONE — because it gives every job the premium quality and premium looks that you want it to have, without running the flooring cost sky high. Whether it’s a multi-unit apartment, a shopping center, a public building or a private house, AZPHLEX DUOTONE gives you:

- EXCEPTIONAL BEAUTY — is your choice of 10 AZPHLEX colors.
- LIFETIME DURABILITY — 1/8" AZPHLEX equals 3/16" regular asphalt tile.
- CLEAR, SHARP COLORS — pigments and marbleizing through and through — won’t wear off or become “muddy”.
- FAST INSTALLATION — AZPHLEX DUOTONE is 1/8" or 3/16" by 12" x 12", with 6" x 6" die-cut centers. Dimensions are always uniform.
- LOW COST — Despite its premium quality, AZPHLEX DUOTONE costs very little more than regular asphalt tile — and is worth a great deal more!

Before you design your asphalt tile floors, get your AZPHLEX-AZROCK dealer to show you DUOTONE. In addition to its low-cost, long-lived good looks, this unique floor in AZPHLEX is extremely resistant to animal, mineral and vegetable greases, alcohol, alkalis and mild acid solutions — has a very smooth, highly polished surface that offers maximum resistance to indentation by foot traffic, rolling or standing loads. It’s the tile that’s tops on any floor!

DUOTONE IS SIMPLE TO INSTALL

COMES LIKE THIS — LAID LIKE THIS

For complete information about Duotone, see your Azphlex-Azrock dealer — or write direct to

UVALDE ROCK ASPHALT CO.
Makers of AZROCK and AZPHLEX Asphalt Tile
P.O. BOX 100, SAN ANTONIO, TEXAS

Construction Outlook

*(Continued from page 216)*

strong emphasis on formal apprenticeship training. I think that average ability will rise also.

Building wage rates have increased steadily. Our index of union wage rates for all building trades showed an increase of 63.5 per cent between July 1, 1939 and July 1, 1948. The overall increase in wage rates has been greater than the index indicates, as in 1939 there was a very considerable amount of non-union work at lower rates not reflected in the index for that year.

Nobody knows just how much non-union work is done now, but there is little doubt that it is much less prominent than in 1939, and also little doubt that the difference between union and non-union rates has been greatly reduced, if not eliminated. Another measure of compensation of building workers is that of average hourly earnings in private contract building construction. This is not a wage rate at all, but is gross earnings divided by the number of hours worked.

Thus, it takes account of overtime premiums and all other premiums, such as above-scale rates where these are paid. For building construction as a whole, this figure was about twice as high in 1948 as in 1939, increasing rather steadily during the year. The annual average for 1948 was about $1.87; this is a combined average for building workers of all occupations, skilled, semi-skilled and unskilled.

Whatever happens to building material prices or to the indexes of construction cost, I think it very likely that the present levels of wage rates will be sustained and may rise further. The figures for average hourly earnings will be held down somewhat by reduction in overtime and in premium rates, but apart from this they will, of course, follow the trend of wage rates.

Construction Costs

I have mentioned wartime and postwar increases in construction costs, and these cannot be ignored. Our wholesale price index for building materials was at its highest in September, and has come down very little. The index for lumber prices reached a peak in August, and has since decreased by almost 6½ per cent. A rather large part of this decrease has, however, been offset by increases for other materials. It is entirely possible that there will be some further re-

(Continued to page 224)
BONDERIZED AFTER FORMING is an important new feature added to all Lawson Bathroom Cabinets! The bonderizing process is applied after all shearing, drilling and forming is completed. It provides 100% BONDERIZED protection against rust and corrosion... assures longer life for all Lawson Cabinets!

AND... Lawson Cabinets, BONDERIZED AFTER FORMING, cost no more!

ARCHITECTS SPECIFY
LAWSON BATHROOM CABINETS... BECAUSE they have:
one-piece drawn steel body, stainless steel hinge and shelf supports, first-quality mirror... and now, they are BONDERIZED AFTER FORMING!

Write today for catalog of bathroom cabinets and chrome accessories.

WORLD'S LARGEST BUILDERS OF BATHROOM CABINETS

THE F. H. LAWSON CO.
823 EVANS ST.,
CINCINNATI 4, O.

You'll recognize the smooth satiny-finished floor above as Northern Hard Maple—finest flooring on the market today.

This year, emphasis is on economy, plus solid investment value. In laying MFMA Northern Hard Maple, Beech and Birch Flooring, in any grade, you're sure of fine, enduring floors.

For effective savings, we recommend use of "Second Grade" or "Second and Better Grade" Northern Hard Maple. Use it for stores and warehouses; for school classrooms, gymnasiaums, shops, cafeterias; for industrial plants, textile buildings, bakeries, offices, housing projects and residences.

MFMA "Third Grade" Northern Hard Maple, Beech and Birch Floorings, too, are perfectly satisfactory for a great many uses. Give them serious consideration for manufacturing spaces, farm buildings, mills, as well as for bedrooms and recreation rooms in residences.

Remember, all grades of MFMA flooring are good grades, association-supervised.

Write for free folders: "Where Second Grade Means Excellent," "Use Third Grade—for Economy" and "Finishing Northern Hard Maple the MFMA Way."

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A complete and up-to-date explanation of house carpentry estimating by two experienced instructors. Short cut methods, helpful illustrations and tables, and material check list safeguard against errors and oversights. 4th Ed., 288 pages, 123 illus., 60 tables, index, 5 x 7¼, solid binding.

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Construction Outlook

(Continued from page 220)

duction in construction costs during the year, but I do not expect it to be great. In previous periods of downward price movements construction has been more resistant to readjustment than have commodity prices.

Dramatize Your Project...

(Continued from page 117)

ground. Putting up a unique platform for "sidewalk supers" is one way to gain good will and also get publicity. Railings, signs, and placards which direct the movement of the crowd all add up to good results.

Once the public sees what a complicated job the building of a home really is, there will be less talk about antiquated methods and "a horse and buggy industry."

Here are a half-dozen ideas open to any builder to dramatize his job:

1. Fundamental methods of bringing public attention to focus on a project are newspaper advertising and publicity which highlight the most desirable features of the houses. Direct mail folders to a good list of prospects is an effective follow-up.

2. Signs and placards are also basic and should be used on the job site and on the avenues of traffic leading to the area.

3. Bringing the ladies into the NHW limelight should increase sales. A decorating contest would appeal to the fair sex and serve as a means of drawing visitors to the new houses to qualify for the contest.

4. To show how houses are constructed, home builders should set up a cross-section of a wall as a special exhibit in a model home. Each part of the wall can be labeled and described, thus pointing up good construction.

5. For the promotional builder who wants to make a real "splash" there is the "old versus new" drama. This involves building two houses on adjoining lots. On one lot, the modern building crew under modern supervision works with power tools and site fabrication methods. On the other lot, ancient tools, old methods, and old time customs are used.

This is a sure-fire way to bring out the press and photographers to cover your story. It's also an occasion when the individual builder can draw crowds to his project, and set up an important event by having a city official on hand to witness the drama of progress. This is a perfect time for the home builder to deliver a talk on the progress of the industry.

Attention DEALERS, BUILDERS, AND CONTRACTORS

The most beautiful all chrome finish fluorescent medicine cabinet with plate engraved Everlac mirror, all General Electric equipment, plans and Underwriters' approved, retail at $15.50. This medicine cabinet unit is built for the purpose of saving all wiring and fixture necessary for the bathroom as it contains all the wiring and switches necessary and also a convenient outlet for electric razor or any other use. Each fixture has a separate switch so that you may light one or two lights as you desire and will provide sufficient light for any bathroom without any extra fixtures. The only thing necessary to connect the cabinet with the main line. The price of this cabinet is very reasonable at the same time it covers all the cost of wiring and fixtures for the bathroom.

Manufacturers representatives and distributors invited. Manufactured by FLUORESCENT LIGHTING CO. MONTICELLO, N. Y.

Construction Outlook

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Models Illustrated: Above, Southerner FUB-100; Left, Gas Conversion Burner.

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The Southerner fits in attic, closet, under floor, ceiling or stairs, on service porches or any small space. Brings new heating convenience to all types of homes and commercial buildings. Ideal for replacement because it fits in any small space without major alteration.

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Best tool you can buy

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DO YOUR OWN SURVEYING

Builders are buying this new, simple, patented, precision-built BURT QUADRANT-TRANSIT. Especially developed for the ordinary requirements of architects, contractors, carpenters, nurses and others, who have no time to run, grades to set or gettling to do. Previous experience and knowledge of higher mathematics not needed. Pay for itself many times over!

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It is not intended as a replacement for conventional surveyors or the drafter's work of registered surveyors, but as an invaluable addition to any engineer's equipment, because of its light weight and

BurT QUADRANT-TRANSIT, complete with 5½ inch extension tripod and universal stand for 36° horizontal and 120° vertical range, postpaid $19.75

BURT QUADRANT, transit, complete with 5½ inch extension tripod and universal stand for 36° horizontal and 120° vertical range, postpaid $11.00

QUADRANT base, removable and pocket size, very portable, designed for competition, two-way floor leveling, frame squaring, etc., postpaid $10.00.

Add state sales tax, if any, to check or money order. Made and sold (by mail only) by

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Please send complete details on the Norman Southerner and its 101 applications to low cost installation in new single and multi-unit home construction.

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What it is

The Associated Business Papers is a national association of business publications devoted to increasing their usefulness to their subscribers and helping advertisers get a bigger return on their investment.

How the reader benefits

Through the constant exchange of editorial and publishing ideas with fellow ABP members, each individual editor and publisher is able to give his readers the benefit of the best experience in publishing.

One interesting result of this cooperative affiliation has been a program, sponsored by ABP publishers, wherein they work with advertisers to help them make their messages more informative and useful to business magazine readers. American Builder, as an active participant, has interviewed many of its readers to find out from Builders and Dealers themselves what some of their problems are that are also opportunities for manufacturers who know something that will help.

How the advertiser benefits

The more helpful a business publication is to its readers—the more avid and constant its readership; hence, the more assurance the advertiser has that his message, if as helpful and informative as the editorial pages, will be read, understood and acted upon. Advertising can be more interesting and useful to readers because it can talk more specifically of user benefits than is generally possible in editorial material.

A number of our advertisers have expressed interest in applying specifically to the building field some of the "Tell All"* principles brought out in ABP's crusade to help advertisers get a bigger return on their investment.

To dig up material that might reveal angles of interest to advertisers, we employed a Field Reporter to call on Builders and Dealers. He is specially trained by ABP in the art of "drawing out" readers. His field reports are being passed along to manufacturers with the thought that this first-hand, up-to-the-minute picture of reader problems and viewpoints might reveal opportunities for them to step up the interest and usefulness of their advertising. We believe that those manufacturers of building materials and equipment who do this will get a greater value for their money and, of course, it will make American Builder more interesting and valuable to the readers.

And what does American Builder Get out of it?

These benefits of ABP membership help us build a better business publication for our special group of "fan" readers, hence a better vehicle for the messages of manufacturers who have something of interest to say to those same readers. It's a matter of record that fruitful advertising usually means more advertising. And that means more income with which to improve our publishing business.

*Definition of "Tell All" Advertising: Each and every advertisement should be given a specific and sufficient objective and should tell all that the business minded business paper reader must know before the advertisement can attain that objective.
Response to Ads Proves Continued

High Interest In Home Construction

A PHENOMENAL flood of inquiries in response to the first two consumer advertisements in The Celotex Corporation’s 1949 campaign proves the continued eagerness on the part of the consuming public to build homes. The advertisements, appearing in the March 26 issue of Saturday Evening Post and in the April issue of Better Homes and Gardens, pictured an attractive home and described the Celotex “Three Key Plan” to a charming, enduring home at common price ranges. As of April 15, approximately 15,000 prospective individual home builders had sent for this information, and the stream of inquiries continued strong three weeks after the first appearance of the ads. The messages created so much interest that a number of individuals in the Chicago area took the trouble to travel to the downtown area and visit the Celotex offices in person to get additional details.

A series of advertisements in American Builder and other building trade publications is carrying the story of the successful Celotex program to builders and material dealers throughout the nation. The firm has received reports of actual building activity that is resulting from its campaign, just getting into full swing. A second series of ads will appear in the April 30 issue of Saturday Evening Post and in the May issues of Better Homes and Gardens, Successful Farming and Progressive Farmer. These will be followed by others.

Convinced of the existence of a great immediate market for homes, but realizing that a real selling job must be done to tap that market, Celotex designed its 1949 advertising and sales program to be of maximum help to builders and material dealers in accomplishing the required selling job. The entire program—largest in the history of the company—spotlights the builder and dealer. Each ad tells its readers that even in these days of higher prices for everything, the family of modest means can build a good, strong, attractive home at a sensible cost. The ads point out that modern builders, through such advancements as improved planning that saves building time and work, use of quality multiple-function materials, and use of standard millwork and lumber sizes, can assure high value for each building dollar.

The set of Celo Charts which is sent to inquirers consists of three individual pieces, each featuring a specially designed moderate cost home. Each chart contains a floor plan of the home, elevation drawings, areas, dimensions, specification and structural index, general building pointers, and a suggested interior decorating scheme prepared by one of the country’s leading experts in this field. The prospective builder is urged to take the Celo Chart to his local Celotex dealer, who, in cooperation with a local builder he can recommend, will be able to estimate the cost of the house in his community from the details contained in the chart. The dealer can provide, through National Plan Service, Chicago, complete working plans, specifications, and list of materials at a nominal cost.

Celotex provides its dealers with a wide variety of selling helps which tie-in with its national campaign, and to date nearly 5,000 dealers and builders have co-ordinated their efforts with the Celotex program. Dealers are given the names and addresses of inquirers in their localities and are urged to follow up prospects and refer them to local builders.

REDUCE STRESS

with Alumitile... the featherweight wall tile.

The tons of structural weight that you save when you specify HASTINGS Alumitile on large structures is but one of your many savings. You also save hundreds of man hours and thousands of dollars. For HASTINGS Alumitile is low in cost, fast to install, and easy to handle. Yet it offers all the advantages of wall tile—enduring beauty, easy-to-clean surfaces, brilliant decorator colors.

For complete information see Sweet's Catalog or MAIL THE COUPON.

Metal Tile Products, Inc.
Hastings, Michigan

Please send me complete facts on Alumitile including prices, discounts without obligation.

Name:

Business:

Address:

City:

State:
MONTHLY REVIEW
(Continued from page 72)

Texas Group Hears Address on Dangers of Public Housing

More than 200 persons representing the Panhandle Plains Hoo-Hoo Club (lumberman's social fraternity) and the Texas Panhandle Home Builders Association heard Edward G. Gavin, American Builder editor, speak on the public housing threat to private enterprise in a joint meeting at Amarillo, Texas, March 24.

Pointing out that a united front by all branches of the building industry could exert a powerful influence at the local, state, and national levels, Gavin urged every builder and lumber dealer to join and support their trade organizations.

John Armstrong, general chairman; William F. Ford, Hoo-Hoo president; and G. W. Maguire, home builder president, presided at the meeting.

No Drop in Material Prices Seen by Fort Worth Dealers

Almost unanimous belief that there would be no immediate drop in the prices of lumber, building materials, millwork and trim was expressed by 51 Fort Worth, Texas, material supply dealers recently surveyed by the Home Builders Association of Fort Worth. Thirty-five saw no possibility of a decline in prices and only seven felt that prices might fall.

Those who believed no decline in prices was likely based their opinions on: (1) the fact that the demand for lumber remains relatively high; (2) the outlook for extensive building; (3) the fact that the quality of lumber will be higher this year; (4) an expected increase in freight rates; (5) the continuing high cost of lumber; and (6) belief that, since prices did not drop during bad weather, they would not fall during spring and summer, when building is at its peak.

Building Trades Commended For Work Record in 1948

Pointing out that only 7,500 building trade workers were involved in strikes during the first six months of last year compared to 153,000 for the same period in 1947, Kimball Hill, vice president of the Chicago NAHB chapter, and chairman of the committee on labor relations, commended the building trades for their splendid work record during 1948 in a recent statement. He said that there was not a single work stoppage on Chicago area projects last year.

Hill expressed the hope that "labor ... would also do its part in keeping down housing costs in 1949 by 'holding the line' on further wage demands."

He added that builders, bankers, subcontractors and materials men must do their part to stabilize market.

The Sensationally NEW Low-Priced

PARKS No. 20
20" PLANER

Here is a modernly designed, rugged, high-speed, low-priced planer that is ideally suited for every shop and industrial plant requiring a quality surfacer. The Parks No. 20 Planer has a four-knife cutterhead with a speed of 3600 R.P.M. and offers two feed speeds — 20 and 40 F.P.M., and 40 and 80 F.P.M. Write for complete descriptive literature.

The PARKS Heavy-Duty 12" x 4" Planer

A compact, sturdy, thickness planer that offers mill planer precision and ruggedness at a sensationally low price. Write for descriptive catalog sheet.

The PARKS WOODWORKING MACHINE CO., Dept. 30-U, 1546 Knowlton St., Cincinnati 23, O.
KIMBALL ELEVATORS

Since 1883 KIMBALL has made good ELEVATORS

KIMBALL BROTHERS COMPANY
Box 301 Council Bluffs, Iowa

SPECIAL OFFER

FOR MAKING OR REPAIRING
SCREENS Guaranteed

1—No. 760 SCREEN TACKER
1—Box-10,000 No. 760 STAPLES
1—STAPLE REMOVER
ALL FOR $10.90

Write today for a 5-day free trial.
1 S. CROFOOT CO.
217 Evergreen Ave. Mt. Prospect, Ill.

We ship postpaid if C. O. D. or when check is sent with order.

STEEL LINTELS

3 x 3 x 1/4" angles, cut to length and painted one shop coat...
24c ft.
4 x 1 x 1/4" angles, cut to length and painted...
41c ft.
5 x 3/16" angles, cut to length and painted...
61c ft.
6 x 4 x 5/16" angles, cut to length and painted...
86c ft.

Maximum order 100 pcs. in any combination. Slightly higher for smaller quantities. All angles brand new, cut to exact length.

We also fabricate beams, columns and trusses to order. Materials e.g., cars or motor freight, Camden, New Jersey.

CAMDEN IRON WORKS
28 So. 4th St. Camden, N. J.
Phone: CAMden, 4-1237

Where Wood Needs Protection from DECAY and TERMITES

WOLMANIZED PRESSURE-TREATED LUMBER

Makes Lasting Customers for You

Foundations Sills and Joists Sub-Floors

Humidified Buildings Roof Decks Other Moisture Traps

Here are six common, unsafe conditions where WOLMANIZED* Pressure-Treated Lumber provides protection from wood decay and termites:

1. Where excessive ground moisture, rain or thaws cause early decay failures.
2. Where wood near the ground is open to termite attacks.
3. Where wood is in contact with concrete or masonry.
4. Where steam and vapor from industrial processes promote wood decay.
5. Where walls, floors, ceilings are subject to condensation from refrigeration.
6. Where wood is exposed to moisture in humidified buildings or farm buildings.

Investigations by qualified technologists prove that on installations where decay and termites ordinarily shorten lumber life, WOLMANIZED Pressure-Treated Lumber lasts THREE TO FIVE TIMES LONGER than untreated wood.

Such lasting protection is assured because penetrating preservative solutions are forced, by vacuum-pressure treatment, deeply into the wood fibres of WOLMANIZED Lumber. And, WOLMANIZED Lumber is clean, odorless, paintable, non-corrosive, non-leaching and glueable. Only WOLMANIZED Lumber offers all these extra advantages.

For Better Building—
Read This Booklet

Get all the facts on how WOLMANIZED Pressure-Treated Lumber stops wood decay and termites. See how it can help you and your business. Write today for this valuable booklet.


AMERICAN LUMBER & TREATING COMPANY

Get FREE BOOK
About Complete Home Building Course

Get Future in the Building Business

Course Covers:
Estimating
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Keeping Costs
Keeping Sub-Contracts
Supervising
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AMERICAN LUMBER & TREATING COMPANY
Invizie says:
"I'M ALWAYS AT YOUR SERVICE—NEVER IN YOUR SIGHT!"

Double hung windows of every type open and close at the slightest touch of the finger, smoothly and quietly, when Grand Rapids Invizible Sash Balances are installed. That's because "Invizie" (the ingenious mechanism that operates this modern spiral sash balance) does practically all the work of lifting or lowering the window. Completely concealed in the sash itself, there are no exposed tubes, tapes or cables. Ideal for windows with the modern narrow trim—easy to install, with savings on material and installation more than paying their cost—laboratory tested and proved for lifetime service in any climate, they are first choice of home owners and home builders alike.

BALANCE 100%
concealed in the sash... no tapes... no cables...

EASY TO INSTALL
... just drive in two fasteners... screw in one screw.

10 SIZES FIT 95%
of all new and old windows... completely interchangeable.

INVIZIBLES ARE EASY TO SELL BECAUSE THEY ARE WIDELY ADVERTISED IN NATIONAL AND TRADE MAGAZINES

WRITE for Illustrated 1949 catalog
40-5-B-P

THE NEW PERMANENT WATERPROOFER—FOR BLOCK COATING

MARVA-SEAL!

U. S. PAT. APPLIED FOR
FOR EXTERIOR WALL SURFACES

FOR CEMENT & CINDER BLOCKS OF ALL TYPES, CEMENT WALLS, STUCCO, STONE AND BRICK

BLACK AND ALUMINUM ASBESTOS ROOF COATINGS; EXTERIOR AND INTERIOR PAINTS, ENAMELS AND VARNISHES; FLOOR PATCHING AND RESURFACING MATERIALS; TANK COATINGS.

For complete information write for detailed literature.

Manufactured by
THE AMERICAN ASBESTOS PRODUCTS CO.
8001 FRANKLIN BLVD.
CLEVELAND, OHIO
"Alwintite Fin-Trim makes installation a matter of seconds"

BIL THE BUILDER SAYS:

... and that's all there is to it!
"Believe it or not, mister, when I put in these windows, the boys time me with a stopwatch!
"You can do it that fast yourself with this new Alwintite Fin-Trim. And you won't need any special training or complicated instructions either.
"Yes sir, when you get America's most popular aluminum window and this easy, money-saving installation in the bargain, you've got something!"

True enough, but look at all Bill didn't say. With Alwintite Fin-Trim your windows are completely flashed... no special sills, exterior wood trim or casing to buy or apply... no painting needed.

Your Alwintite windows come with hardware, balances and stainless steel weatherstripping all built-in and adjusted—ready for quick, easy, 100% weathertight installation.

Easy to see why Alwintite is the quality aluminum window with the low installed cost!

Distributors in all areas carry Alwintite in 25 stock sizes, 8 styles, with screens and storm sash to fit. You can also get mullions for multiple window arrangement, picture and basement windows. For details write Dept. A-5, THE ALUMINUM WINDOW CORPORATION, a subsidiary of General Bronze Corp., 605 Stewart Ave., Garden City, N. Y.

ALWINTITE DOUBLE-HUNG ALUMINUM WINDOWS

COMPLETE—PREFABRICATED
PARLOR FURNACE-FIREPLACE
Combinations
New Type Central Heating...
for LOW COST HOMES
HEATS UP TO 7 ROOMS
You build low cost homes for less money...sell them faster for more money...when you install a Firedaire Combination Furnace-Fireplace. Here's another big pay-off for prefabrication...a pay-off for you and your home buyers!
The buyer gets a wonderfully efficient furnace that supplies radiant heat, circulating warm air heat, for up to 7 rooms on one or two floors. Burns any fuel economically. Holds fire overnight. Will not smoke. Saves space...enough for a dinette, or other extra half-room. With doors off, he gets a beautiful open fireplace in the living room—a fireplace that would cost you $500 to $600 to build the old-fashioned brick-by-brick way.

QUICK and EASY TO INSTALL
You get a complete, packaged central heating plant for about $100 less than you'd pay for an ordinary furnace with the same heating capacity. Connects to an ordinary stove chimney with an 8 in. x 8 in. flue—quick and cheap to build. And, one semi-skilled laborer can install a Firedaire in two to three hours. You save plenty. You give a lot more house for the money. And, you add the conspicuous extra sales appeal of an open fireplace.

PROVED BY 10 YEARS USE,
U.S. AND CANADA
Hundreds of users testify to Firedaire's capacity to keep homes comfortably warm when it's 10 to 20 degrees below outside. Not a novelty, but a practical, efficient, warm air pipeless furnace that gets enthusiastic acceptance wherever it is shown.

WRITE FOR BUILDERS
PRICE LIST
Contractors and builders earn substantial discounts on nationally advertised list prices of Open Fireplaces ($89.50 up) and Parlor Furnace - Fireplace Combinations ($139.50 up). Sizes and styles to fit every home. Write at once for style book, specifications, and price list. A post card will do. Firedaire can help you sell homes faster for more money this season!

WEATHER — BLOC
THE ORIGINAL ULTRA MODERN
INDIVIDUAL UNIT
VENTILATOR FOR GLASS BLOCK
in HOMES, STORES, OFFICES.
Easy to install in new or old glass block installations. Stainless steel body. 3 sizes to replace 3 standard sizes of glass block. Inside glass louvers easily adjustable.

Real Estate News:
Cost Analysis Disproves Advice
Basementless Home Cuts Costs

Basement 45 Pct. Cheaper Than Utility Room Substitute, Gives Additional Space

Thousands of basementless homes built today to cut costs, as advised by a Government housing agency, could have been constructed with full basements at a saving of at least 45 per cent on what was paid for a substitute utility room.

This was revealed yesterday in a cost analysis of foundations, released by the Atlantic Speed Forms division of the Irvington Form & Tank corporation of Irvington, N. Y.

The analysis showed that a basement for a house 26 feet by 32 feet, the same size used by the Federal Housing and Home Finance agency in determining that it is cheaper to build a utility room instead of a basement, can be built at a cost of $146. On the other hand, a utility room of similar construction in the basementless house the cost is $1,460, and there is 4,768 cubic feet less in actual space.

WEATHER - BLOC
THE ORIGINAL ULTRA MODERN
INDIVIDUAL UNIT
VENTILATOR FOR GLASS BLOCK
in HOMES, STORES, OFFICES.

Easy to install in new or old glass block installations. Stainless steel body. 3 sizes to replace 3 standard sizes of glass block. Inside glass louvers easily adjustable.
Millwork accuracy and speed right on the job

Time is important in building today. The Stanley-Carter Hinge Butt Router and T3 Templet will save time and costs for you, and will give you a better job. This equipment is at least six times faster than handwork.

And every door is hung more truly with uniform opening all around. No recutting, shims or hinge driving. Weight is evenly distributed over the recess so that the hinge screws won't have to carry the full load. Lasting satisfaction.

Easy to use on any size door. Merely reverse the templet for mortising the jamb. For round or square cornered butts. Depth of cut adjusted by turning motor in base... full turn for \( \frac{3}{8} \), \( \frac{1}{4} \) turn for \( \frac{1}{8} \) and \( \frac{1}{4} \) turn for \( \frac{1}{8} \). Operates on any lighting circuit, AC or DC.

Write today for full information. Stanley Electric Tools, Stanley-Carter Sales Dept., 534 Myrtle St., New Britain, Conn.
KEEP POSTED—read the American Builder every month. The highly competitive building business demands that you keep abreast of the times. Be informed on the latest techniques of building—keep posted on the new and improved products, materials and equipment—get the benefit of tried and proven methods of selling homes, new ideas on financing and land development.

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☐ Contractors specializing in Heavy Building Construction.

☐ Builders and Contractors engaged in both Residential or Light Commercial or Light Industrial Building and Heavy Building Construction, not specializing in either.

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☐ General Contractors engaged in Heavy Construction of both Buildings and other than Buildings, and specializing in either.

☐ Special Trade Contractors, contracting for only such parts of Building Construction as carpentry, masonry, plumbing, roofing, heating, ventilating, electrical, painting, concreting and excavating.

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Type of Business
WHEN SHE SAYS "YES"
THE HOUSE IS SOLD

GIVE HER WHAT SHE WANTS!

- It's not the joists and studding that attract the one who really decides which house to buy—the woman in the case. She looks for the "dress-ups"—added refinements that cater to her pride and pleasure.

See that she gets them—such "dress-ups" as tuneful NuTone door chimes (with trouble-free transformers), luminous push buttons, and kitchen ventilating fans. And you might add a handsome NuTone door knocker.

RAISE THE FIXTURE ALLOWANCE!
Include this NuTone "Profit Package" in your estimate—to be added to the mortgage. It will tip the balance in your favor. Get full information on the NuTone line by writing to NuTone, Inc., Dept. A-59, 801 E. Third St., Cincinnati 2, Ohio.

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THE JEWEL, STYLE PB-4
A luminous push button, glowing at night. List, $1.00. One of 6 styles—35¢ to $2.50.

THE CONTINENTAL, STYLE K-32—A beautiful chime, with ivory-plastic cover and satin-brass tubes. List, $12.95. One of 14 models—$3.95 to $69.95.

MODEL NV-18L—An efficient kitchen ventilating fan. List, $24.95. Four other models, to $34.95.

THE BEACON, STYLE DK-200—Brass door knocker with spotlight for keyhole illumination. List, $4.95. Another type door knocker lists at $2.95.
Are Insulation Values Permanent?

READ WHAT AUTHORITIES SAY:

"Many loose insulations settle down from year to year, producing areas that are eventually without insulation."


- "Conductivity may vary by several hundred per cent, depending entirely on the arrangement of the fibers."
  

- "For each grade of fibrous material, a certain optimum density exists. For densities greater and less than this density, the conductivity will increase."

  Dr. J. L. Finck, in "Industrial & Engineering Chemistry."

- "Aluminum foil exposed in a vertical position since 1929 to the dust and fumes in the Heat Measurement Laboratory, M.I.T. Samples of this foil have been removed from time to time over a period of 10 years, no appreciable change in emissivity was found."

  Prof. Gordon B. Wilkes, of Massachusetts Institute of Technology

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Multiple Accordion Aluminum Triangular Reflective Air Cells

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INFRA INSULATION, INC.

MONTHLY REVIEW

Chicagoland Home Show

(Continued from page 72)

ing equipment, air conditioning equipment, washing machines, ironers and dryers, power tools and paints.

With a more varied and complete program, intensified promotion, and greater interest on the part of producers and the public, the sponsors predict a substantial increase over the previous year's attendance figure of around 110,000.

Concurrent with Home Show arrangements, the Chicago group is making plans for a permanent display in its home building center at Association headquarters in downtown Chicago.

Kansas City Association To Stage Home Show in May

The Greater Kansas City Home Show, to be held May 21-28 in Exhibition Hall of the Municipal Auditorium, will be the most comprehensive display of home building materials, equipment and services ever shown in Kansas City, according to an announcement by John A. Kroh, president of the Home Builders Association of Greater Kansas City, sponsor of the exhibition. It will be the first show of its kind to be held in Kansas City since 1941.

Among the features of the exhibition will be model home displays, examples of good and bad construction in home building and demonstrations of plastering and wet and dry wall construction. Several trade unions will demonstrate their crafts and their employment of the apprentice system. Several series of rooms in the exhibition hall will be decorated by leading Kansas City firms. A fashion show is also planned.

A project of considerable interest is the construction of a building portraying solar orientation employed in home heating by harnessing the rays of the sun. The building will be erected by the University of Kansas Department of Architecture. Representatives of the American Institute of Architects will give information about the architect and his work.

Ralph Wells is chairman of the Association Home Show committee. Serving with him are: John C. Taylor, A. C. Langworthy, Ralph O. Taylor, Charles E. Vawter, Charles B. Neal, Jack Bear, A. L. Huber, Jr., Paul Darling, Donald Drummond, George Siemens, Jr., and George W. Miller. Management of the show is under the direction of Damon Elder of Paul S. Van Aukens and Associates, Chicago.

75 Attend Dayton Meeting

More than 75 builders and associate members attended a general membership meeting of the Montgomery County (Dayton, Ohio) Builders Association held March 15 in the salesrooms of the Miami Valley Distributing Co., Dayton. The meeting was sponsored by the Miami Valley Co.

Seal-All Clips

A simple sturdy clip designed to interlock shingle sections and prevent raising of asphalt shingle tabs. The perfect clip for hexagonals, 3 in 1 strips and individuals laid-up Dutch Lap method.

- Made of solid copper wire—pliable yet strong enough to anchor single sections.
- Cannot rust out.
- Hammer is only tool necessary.
- Easy to handle.
- Beauty of roof unmarred.
- Perfect on repair jobs to correct leaky, unsightly roofs.
- Millions in use since 1935.

Seal-All Clip Company

BOX 302A
FLINT 1, MICH.
READYBUILT
(REG. U.S. PAT. OFF.)
FIREPLACES
Lends unsurpassed beauty and charm to homes—old and new. The modern fireplace that fulfills all modern day requirements—used with gas or electricity.
Large variety of attractive models in brick, stone, wood, etc., available.
Furnished complete—ready to be installed in hour’s time of handy man—shipped anywhere.
DEALERS, BUILDERS AND HOMEOWNERS write for catalog and full information.
THE READYBUILT PRODUCTS CO.
1705-23 McHenry St.
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ROYAL EAGLE RULES
Are Precision Made
For Precise Measurement
ONLY EAGLE RULES
HAVE RIVETED
STRIKE-PLATE JOINTS
FOR THE MAN
WHO IS Fussy
ABOUT HIS
TOOLS
AT BETTER DEALERS EVERYWHERE
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Superior Sash Cutters
Superior Double Hung Sash Cutters, Moulding Cutters, Woodworking Machinery and Tools, Shaper Spindles.
Write for catalogue.
WOODWORKERS’ TOOL WORKS
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CONTRACTORS! Save time, labor and expensive lumber
Steel wall forms for garages and houses. Steel forms for steps, sidewalks, footings, garage slabs and driveways.

POLLMAN
ADJUSTABLE STEEL FORMS
Send-up concrete work...easy to set up and remove. Time saved means more profit to you.
POLLMAN Adjustable Steel Forms are instant made. Replacement parts are available.
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FREMont RUBBER TILE
FOR ANY SITUATION
THE IDEAL FLOOR
FLOORS BY FREMont
ARE FLOORS OF BEAUTY
FOR ANY TYPE OF USE

FREMont...POLKA DOTS...STARS
Duo-cuts...
14 beautiful solid and marbleized fade-resistant colors permit an endless variety of patterns. It is easy to select or originate a pattern which takes into consideration the elements of room size, location, temperature, lighting, traffic, furnishings, business aims and desired psychological effects.
Colors go all the way through, can’t show wear.
Extremely long wearing. Resists heavy traffic, resists denting and scratching. Here’s distinctive, lasting beauty.
Fire-resistant. Even burning cigarettes leave no blemish.

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Impervious to all types of grease, oil, gasoline, vegetable and animal fats, citrus juice, alcohol, glucose, ink and paint. Ideal for restaurants, industry, auto show-rooms, bakeries, filling stations, etc.

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Please send full information on Fremont Rubber Tile.

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**Sell Alumatic**

The ONLY complete combination storm and screen window on the market!

There's a reason why Alumatics are "storming" America — they're the only complete all-weather combination windows!

A few territories available for direct distributorships!

Alumatic is recognized as the leader because only Alumatic can offer ALL of these important features!

- The only spring-action storm combination
- The least expensive window in the long run
- Complete automatic-mechanical weatherstripping
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- Removable sill — aluminum screen wire
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- Complete self-storage features — no changing

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ARE BACKED BY NATIONAL ADVERTISING!

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BETTER HOMES & GARDENS
AMERICAN HOME
GOOD HOUSEKEEPING

Alumatic products include a matching combination door and America's only all-aluminum screen door!

Write, Wire, or Phone!

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**Mix 12 to 15 more yards a day with JAEGER 3½S "AUTO-LOADER"**

- Gated hopper loads while previous batch mixes—big time savings!
- "Dual-Mix" drum—more mixing, fast discharging!
- Open the gate and hopper automatically shakes load into drum—fast, clean!
- Machined steel drum tracks ride on car-wheel rollers.

You cut costs and boost profits when you mix 12 to 15 yards more concrete daily with no more manpower. And, you can do that with the Jaeger 3½S "Auto-Loader."

It's the fastest half-bag mixer made. Catalog M-8 tells why — shows the complete Jaeger line. Write for it.

THE JAEGER MACHINE COMPANY
Columbus 16, Ohio
Leading Distributors in 136 cities sell and service Jaeger equipment.

PUMPS • COMPRESSORS • HOISTS • PAVING EQUIPMENT

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**BUILDERS • CONTRACTORS**

**CUT COSTS**

With MULKEY'S All-Steel PORTABLE ELEVATOR
It's Balanced

- For bricks, blocks, mortar in buckets, sand, roofing, lumber, boxes, dirt, sacks, etc.
- One man can handle and operate...easily trailed up to 35 miles per hour.
- Clutch and Brake Assembly own design (Extra)

Write for FREE Literature and Prices!

SAM MULKEY COMPANY
1621-KG Locust
Kansas City 8, Mo.
Gas-Fired Furnaces

Built-in draft diverter—external diverter is not required.

Super efficient "Vee-Sectional" heat exchanger provides ultra fast heat transmission through use of Jet-Type gas passages.

Easy access to all controls and blower assembly.

THE GREAT SPACE SAVER

Space Saver—only 12 1/4" deep, 32" wide, and 88" high—requires less than 3 sq. ft. of floor space.

Safely installed anywhere—in wall, closet, utility room, or basement.

One piece 12 gauge steel combustion chamber and heat exchanger.

Integral plenum chamber—built into the furnace—cuts installation costs—delivers heat in any direction through ducts, or direct delivery.

100% Safety shut-off—combination automatic pilot valve and manual main-control and pilot valve—pressure regulator—solenoid for L.P. gases.

--NOTHING MORE VERSATILE--

- Factory assembled—designed for utility room, closet or basement installations. Factory finished boot available for basement installation.
- Drilled, raised-port cast iron burners are approved by A.G.A. for all gases—Natural, Manufactured, Mixed, L.P. and Butane Air.
- Standard equipment includes automatic pilot valve, manual main control and manual pilot valve, gas pressure regulator, and magnetic type solenoid—100% safety shut-off controls for L.P. gases.
- Built-in draft diverter—external diverter is not required.
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NOW AVAILABLE IN TWO MODELS

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<th>F-500-110</th>
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<tr>
<td>Input—AGA Rating</td>
<td>93,750 BTU</td>
<td>109,375 BTU</td>
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<tr>
<td>Bonnet Output</td>
<td>75,000 BTU</td>
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<td>Blower Size</td>
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Drilled raised-port, cast iron burners—AGA approved for Natural, Manufactured and L.P. Gases.

New Vee-Sectional type heat exchanger gives rapid, thorough heat recovery.

Fully automatic controls—thermostatic operation—easily accessible.

Provides filtered summer ventilation.


--NOTHING MORE VERSATILE--

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Fully automatic controls—thermostatic operation—easily accessible.

Provides filtered summer ventilation.

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Home Builders have a vigorous, hard-hitting National Association working for them. It reaches the public, the government, and the industry with their story.

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Send this Coupon Today!
What's the COST of "low-cost" hauling?

The cost of any truck is the total amount of money you invest in it... as long as you own it. That cost is usually far different from the truck's original price!

It can be far higher, for example, when you buy a truck that's too big or too small for the hauling job it has to do.

In such cases, costs go up rapidly... in wasted gas and oil, in repairs, in shortened truck life, in time lost on the job.

It's important, therefore, that your truck be engineered and built... to fit your job! That's what is meant by a "Job-Rated" truck!

Only Dodge builds "Job-Rated" trucks. Every one of these trucks has the right one of 7 truck engines... "Job-Rated" for top efficiency and maximum economy. Every Dodge has the right chassis unit... from engine to rear axle... "Job-Rated" to fit your job, to save you money.

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For the good of your business...
Measure a TEMCO GAS FLOOR FURNACE
for EASY INSTALLATION
- LOW COST
- CONSUMER ACCEPTANCE

A TEMCO'S EASY TO INSTALL!
No costly excavation needed to install a Temco. Temco's shallow 25 1/2" construction means it will fit right in the space between the house and the ground.

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GARAGE DOOR HARDWARE

Heavy duty, well-engineered garage door hardware. Result: a quickly installed, easily operated, overhead door. Designed to insure customer satisfaction.

Standard set fits any opening up to 9' wide x 7'6" high when doors do not exceed 275 lbs. Other sets available for openings up to 10' wide x 10' high.

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The Original Mengel Flush Door
with the Patented
"INSULOK" GRID CORE

It's more than just a beautiful door! It's an approved way of building durability and utility into any interior... regardless of period and decorative scheme.

For Mengel Flush Doors are engineered and built by skilled craftsmen to give your customers beauty with a purpose... beauty with finger-tip lightness, long, trouble-free life, easy upkeep.

Only the Mengel Flush Door has the patented "Insulok" Grid Core. Made of sturdy insulation board strips halved together, it ends expansion and contraction headaches... makes Mengel Flush Doors much lighter than standard panel hardwood doors.

Built Like Fine Furniture! Framing is hard, even-textured poplar. Corner connections have dovetailed lock-joints, securely wedged, to give dimensional stability and seal moisture out. And the 3-ply faces are permanently bonded to frame and core.

No wonder Mengel Doors stand a 25,000-slam test. And every door is "cured" before it leaves the factory to assure warp resistance.

Mengel Flush Doors come faced with beautiful veneers of Birch, Mahogany, Oak, Walney, Gumwood (and other hardwoods to order).

And they stay beautiful! Their smooth, unbroken surfaces are easy to clean... offer no place for dust to cling. No panels to shrink... no moldings to come apart.

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For new construction or remodeling, push Mengel Flush Doors... the doors with years of performance behind them. For full information call your regular supplier or mail the coupon today!

The Open-and-Shut Case for Mengel Doors

1. An Engineered Door... with patented "Insulok" Grid Core, hardwood frames and faces, and dovetailed lock-joints.

2. 3-Ply Faces Bonded to Core... with moisture-resistant resin glue by hot-press method.

3. 40% Lighter in Weight... than standard panel hardwood doors.

4. Warp-Resistant... "cured" before leaving factory.

5. Slam Tested... 25,000 times by powerful machine.

6. Flame-Resistant Core... made of 3/8" insulation board.

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7. Sealed Construction... prevents entrance of dirt, vermin or moisture.

8. Over-sized Lock Block... centered on edge of stile, permits reversing door.

The Mengel Company
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Please send me complete information about the Mengel Flush Door and name of my supplier.

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Company Name: __________________

Street: ____________________________

City: __________________ Zone: _____ State: _______

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When you place your forms for the foundation, nail a wood strip on each side of your opening to provide vertical rebates. Strip forms, lower attached fins of Ceeconomy Basement Window into rebates. Plumb and level. Grout with concrete.

After the window has been erected, it is a simple matter for the home owner to affix his basement window screens with only two screws. The screen goes on the outside, does not interfere with the operation of the ventilator.

The storm panel is placed on the outside over the screen, making the screen self-storing. Two simple clips hold the storm panel rigidly in place. Interchangeable—no matching of storm panel to window, no fitting each season.

In construction products CECO ENGINEERING
4 WAYS...

with CECO’S CECONOMY Basement Window

You get four-way economy from start to finish with Ceco’s famous Ceconomy Basement Window and the new Combination Screen and Storm Panel. Here’s a case where low original cost is matched by savings in installation, performance and maintenance:

1 ECONOMICAL TO BUY—Engineered quality at a price—about $3.60 for the 2 light 15" x 12" window alone. About $5.00 for the Combination Screen and Storm Panel. Slightly higher west of Mississippi and in South.

2 EASY TO ERECT—The masonry guide and fin make the window easy and inexpensive to install. Guide quickly aligns masonry. Fin ties window rigidly to construction.

3 SAVES FUEL—The window closes tightly because it has double contact weathering. Then, too, the Combination Screen and Storm Panel provides added comfort, saves additional heat.

4 LOW MAINTENANCE—The window is engineered in hot rolled steel, bonderized and painted. Can’t rot or swell. Screen frame is painted, wired with 18 x 14 bronze mesh. Storm panel is insulated with rubber seal and aluminum edging.

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makes the big difference
ALPHABETICAL INDEX TO ADVERTISERS, MAY, 1949

A
Adapto Corporation 237
Air Rectifiers, Inc. 232
Allen & Osten, Inc. 223
Allith-Proty, Inc. 242
Aluminum Corporation of America 241
American Window Corporation 231
American Adhesives Co., The 235
American Builder 208-222, 226-234
American Central Division 213
American Easycast Tiling Co. 35
American Floor Surfacing Mfg. Co., The 12
American Lumber & Treating Company 229
American Radiator & Standard Sanitary Corporation 44
American Radio Tees Co. 231
American Stained Shingle Co. 188
American Structural Products Company 58
American Telephone & Telegraph Corporation 62
American Wire Fabrics Corporation 18
Anderson Stove Co. 213
Anheuser-Busch 12
Architectural Tiling Co., Inc. 35
Arkansas Soft Pine Bureau 40
Armstrong Cork Company 29
Asbestos Roofing Industry Bureau 165
Atlantic Roofing Mills, Inc. 230
Atlantic Tile Manufacturing Co. 35
Avo Manufacturing Corporation 28-215

B
B. Millfin Hood Co. 35
B & T Metals Co., The 203
Barber-Colman Company 164
Bennett Manufacturing Co., The 199
Bird & Son, Inc. 18
Black & Decker Mfg. Co., The 157
Boise-Cascade Corporation 110
Borg-Warner Corporation 219
Boston
Box-Brady Mfg. Co. 165
Bradley Lumber Company of Arkansas 11
Brannon Steel Co. 129
Brown Company 61
Brown & Co., Co., 204
Bruce Co., E. L. 184
Bucyrus-Erie Company 166

C
Cabet, Inc. Samual 59
Cambridge Tile Manufacturing Co. 235
Camper Manufacturing Co. 239
Carey Manufacturing Company, The Philco 49-147
Carlyle Tile Co. 35
Carter Div., J. H. 232
Cassawood Hardware Co., The 230
Cove Steel Products Corporation 214
Cycles Corporation, The 230
Chase Farm & Clover Inc. 160
Chrysler Corporation 541
Chipper Manufacturing Co. 216
Collins Co., Inc., The R. G. 150
Comline Corporation, Inc., The 155
Colorado Fuel and Iron Corporation 18
Colorado Mills Inc., The 14
Commercial Trade Exposition 279
Connor Lumber and Land Company 140
Continental Machinery & Supply, Co., Ltd. 141
Construction Machinery Co. 184
Croce Corp. 147
Crate Corp. 36
Crow 

D
Delta Manufacturing Division 163
Dexter Steel Products Company 3-149
Dey & Raymonds Company, Inc. 210
Dwalt, Inc. 21
Dodge Corporation, F. W. 174
Dodge Division, Chrysler Corporation 241
Douglas Fire Flywood Association 16

E
Eagle-Picher Company 173
Eagle Valve Mfg. Corp. 237
Eaton Company, The 238
Eaton Tool Company 204
Economy Mfg. Co. 68
Emerick Electric Mfg. Co., The 182
Ewen Mfg. Co. 212
Eversley Bristol Mfg. Co. 15

F
Fairbanks-Morse & Co. 181
Fant Euton Crafts 275
Fire Door Institute 209
Flirteskite Company, The 26
Fluorescent Lighting Co. 241
Foley Mfg. Co. 211
Forney Rubber Company 217

G
Gate City Sash & Door Co. 171
General Bronze Corporation 231
General Controls, Inc. 235
General Electric Company 33-170-186-187
General Portland Cement Company 209
General Tile Corporation 35
Grout-Michel Corporation 127
Grundy & Co., Inc., H. S. 190
Gulding, Melbau & Co. 35
Gran Rapids Hardware Company 230

H
Hansen Mfg. Co., A. L. 192
Harney-Moyer Corporation 196
Haslerich Manufacturing Corporation 65
Hearth-Aire Company 228
Hell Co., The 228
Hinesmice Company 47
Holmeite Corporation 66
Hopkin Inc. 32
Horse Beautiful 30
Illinois Zinc Company 162
Incorporator Products Co. 236
Independent Pneumatic Tool Company 194-195
Infra Insulation, Inc. 216
In-Sink-Erator Mfg. Co. 204
Ins-Cotton Division 176
Institute for the Mineral & Metal Industry Minnesota & Ontario Paper Company 52-53
International Oil Burner Co. 172
Irvington Form & Tank Corp. 232

J
Ike Belt Machine Co., The 206-238
Ike Belt Sander Company 228

K
Kingfisher Corporation 46
Keller Products, Inc. 74
Kelvinator Division 142-141
Keystone Steel & Wire Co. 218
Keystone Wire Cloth Co. 218
Kimball Brothers Co. 231
Kimberly-Clark Corporation 20
Kohler Co. 231

L
La Belle Industries, Inc. 198
Lawton Co., The F. H. 224
Lobby Hardware, Ford Glass Company 224
Little Barber Company, H. C. 214

M
Mackinaw-Dunham Co. 230
Mall Tool Corporation 168
Maple Flooring Manufacturers Association 217
Markwell Mfg. Co., Inc. 201
Masonite Corporation 182
Master Mfg. Co., Inc. 214
Master Tile Corporation of America 8
Molena Portland Cement Company 33
Mengel Corporation, The 153
Metal Arts Mfg. Co., Inc. 142
Metal Products Corporation 180
Metal Tile Products, Inc. 229
Minneponic-Honewell Regulator Company 51
Mirro-Glo Cabinet Co., The 121
Moline Manufacturing Company 54
Montez Mfg. Co. 226
Mueller Furnace Co., L. J. 175
Mueller Company, Sam. 75
Mueller Machinery, Inc. 220
Mueller Manufacturing Corporation 199
Murray Mfg. Co., Inc. 35

N
Nash-Kelvinator Corp. 74
National Adequate Wiring Bureau 160
National Division of Home Builders 240
National Brass Company 181
National Electric Products Corporation 60-61
National Electrical Manufacturers Association 60-61
National Gypsum Company 242
National Lock Company 202
National Manufacturing Company, 4th Cover
National Oak Flooring Mfg. Assn. 193
National Tile & Manufacturing Co. 35
Necchad 262
Norge Division 259
Norman Mfg. Co. 233
Nu-Tone, Inc. 235

O
Ohio Steel Co. 210
Ohio Elevator Company 162
Overhead Door Corporation 3rd Cover
Owens-Illinois Glass Company 58

P
Pacific Clay Products 21
Pacific Tile and Porcelain Co. 21
Parisian Wire and Cable Division 21
Paintwood Corporation, The 21
Pantin Co., The 215
Patent Scaffolding Co., Inc. 11
Permanente Metals Company 21
Percol Manufacturing Co. 21
Perriello Manufacturing Company 21
Philadelphia Plate Glass Company 21
Ponoma Tile Manufacturing Company 21
Portland Cement Association 15
Pruyn & Co., Inc. 21
R
Readilift Products Co., The 227
Red Devil Tools 222
Remington Rand Inc. 231
Republic Steel Corporation 215
Reynolds Metals Company 212
Richmond Radiator Company 211
Robertson Manufacturing Co. 211
Rockwell Manufacturing Company 215
Rolph Plywood Company 215
Rowe Manufacturing Company 212
Russell Radio Mfg. Co. 15
Ryan & Son, Inc., Joseph T. 62

S
Samson Corrugate Works 218
Schrage Lock Company 211
Scott-Newcomb, Inc. 231
Sel-All Chip Company 218
Sharon Steel Corporation 36
Sheffield Steel Products Co. 219
Shilbain, Inc. 21
Shoise Building Products 215
Shoreline Building & Cabinet Co. 218
Sierra Ceramic Co. 218
Spencer Heater Division 218
Standard Sanitary Mfg. Co. 218
Standard Dry Wall Products 218
Standard Stamping & Perforating Co. 218
Stanley Tools 212
Stanley Works, The 214
Steel Kitchen Cabinet Institute 215
Steel Scaffolding Company, Inc. 215
Steelcraft Manufacturing Company 219
Sunbeam-Mohawk, Inc. 211
Superior Garage Door Division 219
Surplus Products Institute 219
Summitville Face Brick Co. 218
Surface Combination Corporation 21

T
Tembly System, The 192
Tennessee Enamel Mfg. Co. 292
Terry-Coblentz Company, The 193
Tiling Division, The 219
Tinkham-Detroit Aid Company, The 219
Trinity Portland Cement Division 216
Turfe Lumber Company 216
Turner & Spear Co., Inc. 219
Tuttle & Bailey, Inc. 130

U
United States Gypsum Company 286-287
United States Quarry Tile Co. 292
United States Steel Corporation 202
Universal Atlas Cement Company 202
Universal Rundle Company 202
Urvalde Rock Asphalt Co. 220

V
Van-Packer Corporation 210

W
Waller & Company, J. D. 217
Wallace Rock & Steel Mfg. Co. 192
Wallingford Electric Corporation 210
Washinghutn Electric Corporation 210
White Company, David 216
Wickliffe Mfg. Co. 216
Wickliffe Successor Division 216
Wilson-Abrecht Co. 216
Woodworkers Tool Works 216
Wurdel Manifolds Company 216

Y
Young Radiator Co. 224

Z
Zondolite Company 185
Users of The "OVERHEAD DOOR" with the Miracle Wedge are assured perfect performance year in and year out. Durability of tracks, hardware, and all working parts qualifies the door for the most rugged service. Weathertight closure affords added protection for costly equipment which must be kept in good working condition. This door adds to the appearance of any structure — industrial, commercial or residential — and increases its usefulness. Any "OVERHEAD DOOR" may be manually or electrically operated.
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