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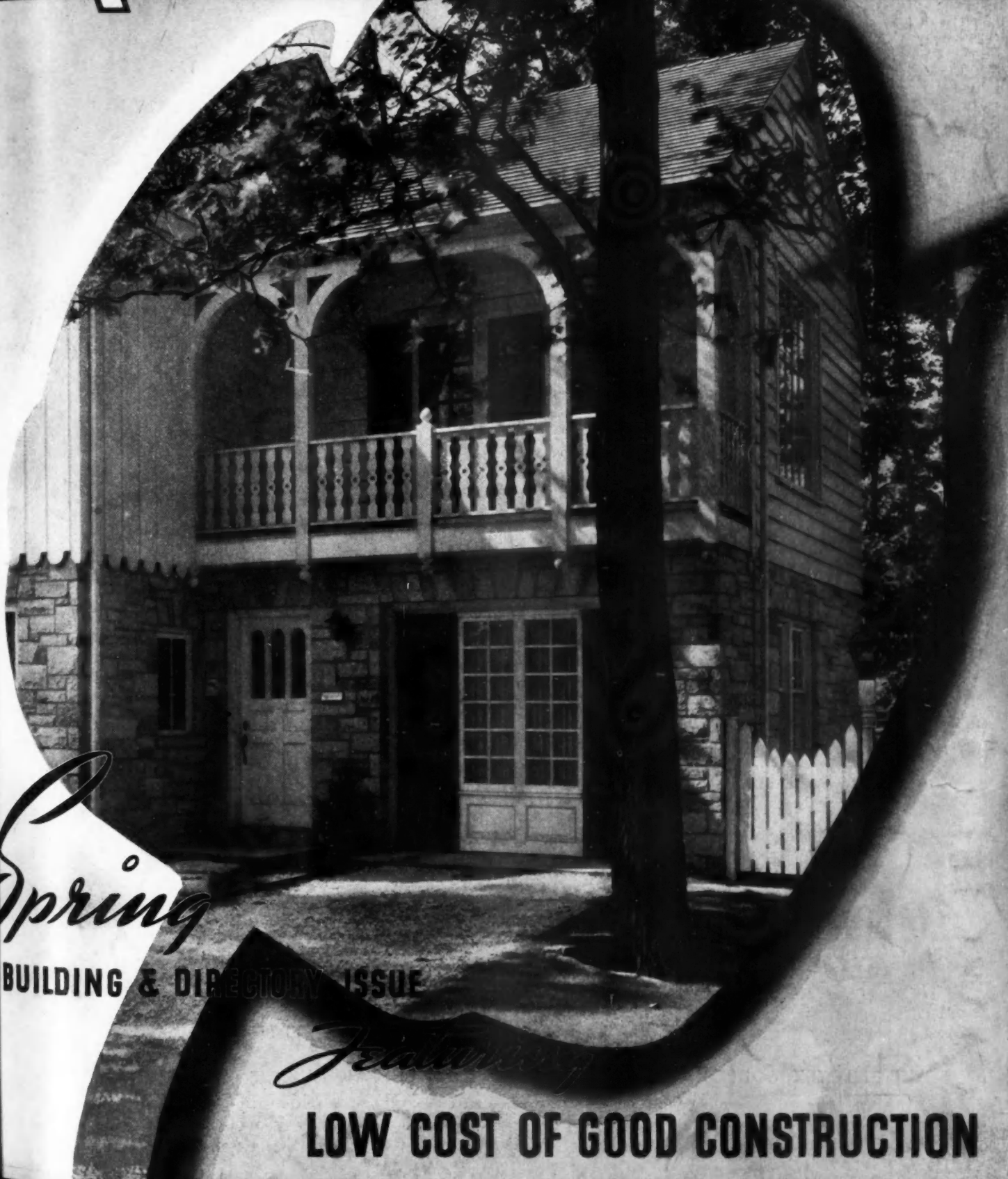
APR 14 1941

DETROIT

# AMERICAN BUILDER

AND  
BUILDING AGE

THE WORLD'S GREATEST BUILDING PAPER



*Spring*

BUILDING & DIRECTORY ISSUE

*Featuring*

**LOW COST OF GOOD CONSTRUCTION**

1941.

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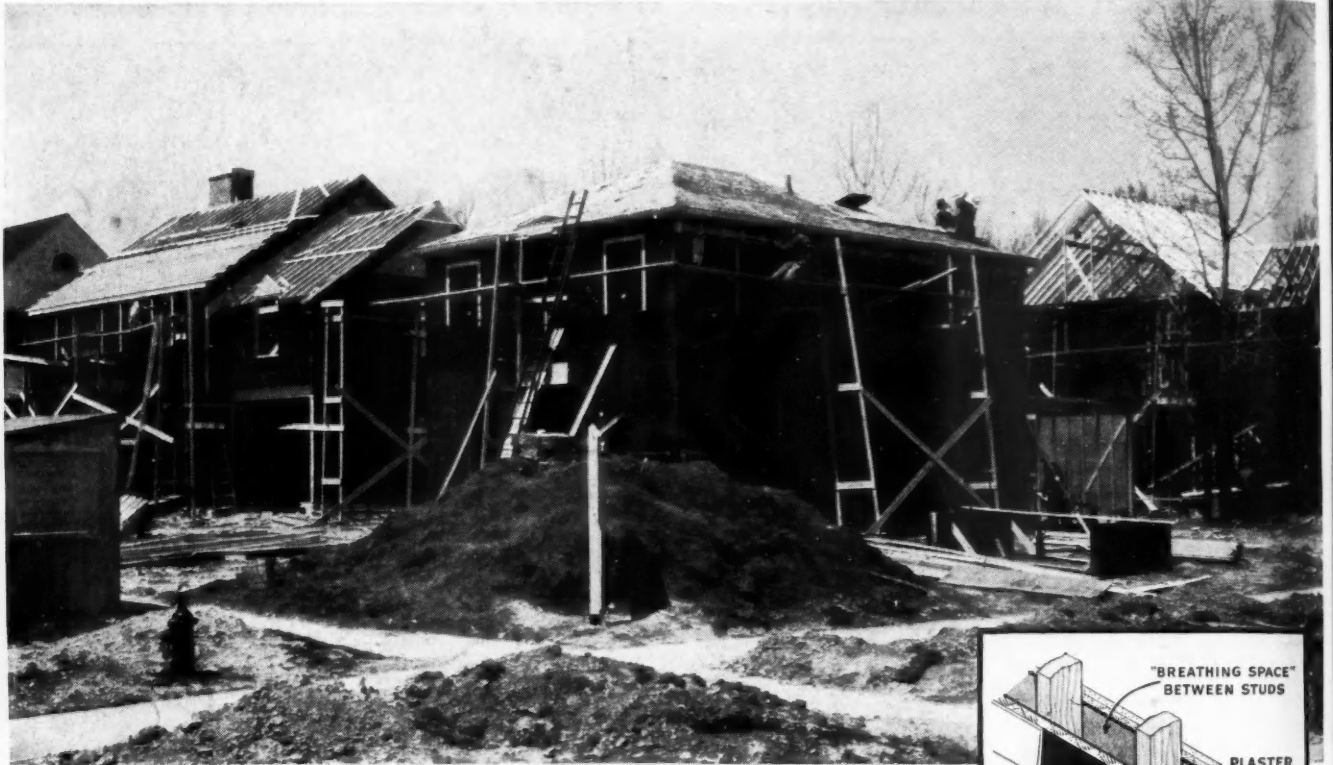
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TODAY MORE CONTRACTORS THAN EVER ARE GIVING OWNERS  
**MORE FOR THEIR MONEY**  
 WITH CELOTEX GUARANTEED INSULATION



Wilmette, Ill., C. A. Hemphill & Associates, Builders; R. F. Houlihan, Architect

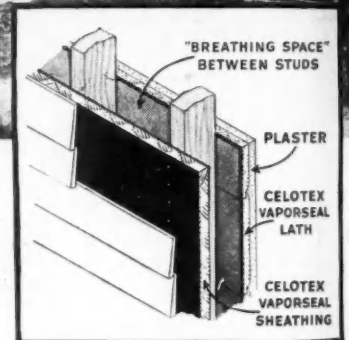
**Celotex Insulating Sheathing and Lath  
 Replace Other Materials—Do Two Jobs  
 at a Single Moderate Cost**

**T**HERE'S simple logic back of the increasing choice of Celotex Guaranteed Insulation. When you make one material serve two purposes well, *at less than the cost of the two materials* it replaces, you save money for owners.

Celotex Vapor-seal Sheathing replaces other sheathing and other insulation. Celotex Vapor-seal Lath replaces other lath and other insulation. Used together, these famous prod-

ucts *provide all the weather protection any house needs.* More than that, this protection is guaranteed in writing for the life of the building,\* safeguarding the owner's investment.

Celotex is common-sense insulation. It's worth your careful investigation. Write for latest specifications!



\*When issued, applies only within Continental United States.

**CELOTEX**

REG. U. S. PAT. OFF.

**BUILDING PRODUCTS**

**INSULATING SHEATHING, LATH, INTERIOR FINISHES**

**ASPHALT SHINGLES, SIDING, ROLL ROOFING**

**HARD BOARDS • ROCK WOOL BATTS, BLANKETS**

**GYPSUM PLASTERS and LATH and WALL BOARDS**

Sales Distributors Throughout the World

**THE CELOTEX CORPORATION • 919 NORTH MICHIGAN AVENUE • CHICAGO, ILLINOIS**

Published monthly by Simmons-Boardman Publishing Corporation, 105 W. Adams St., Chicago, Ill. Subscription price, United States, Possessions, and Canada 1 year \$2.00; 2 years, \$3.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter at Mount Morris, Ill. Address communications to 105 W. Adams St., Chicago, Ill.

# HOW FENESTRA HELPS SELL MORE HOUSES

## "YOU CLEAN BOTH SIDES SAFELY FROM INSIDE"



EASY OPENING  
NO STICKING



BETTER VENTILATION  
FROM 3 DIRECTIONS



SCREENED IN A  
JIFFY—SAFELY



STORM SASH  
COSTS LITTLE

"Think of it, Mrs. Home Buyer, you'll never have to sit backward on the sill to wash this Fenestra Package Window on the outside—you wash it on both sides safely from within the room."

Thus you point out to your prospects the important modern advantages offered by the new low-cost Fenestra Package Window, and sell more houses. See sketches at left.

A high-grade factory-built unit, the Fenestra Package Window comprises a Bonderized Steel Casement Window, already glazed, redwood cased and outside trimmed, with attractive, bronze-finish hardware. You install it easily, on the outside, in 5 minutes; on the inside in 8 minutes—COMPLETE . . . The first cost is amazingly low; and you save big money on installation. Also you save service calls—there's no warping, sticking or rattling . . . Get Fenestra facts and prices, and sell more houses. Use coupon.



INSTALLED OUTSIDE  
IN 5 MINUTES



INSTALLED INSIDE  
IN 8 MINUTES

# THE NEW LOW-COST Fenestra PACKAGE WINDOW

DETROIT STEEL PRODUCTS COMPANY  
2260 East Grand Boulevard, Dept. AB-4,  
Detroit, Michigan

Please send me the new Fenestra Package Window  
Catalog and Price List.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_





**SKILSAW GETS SAWING COSTS DOWN ... GETS JOBS DONE**

**EVERY** cut you make in **EVERY** size of building lumber . . . can be made quicker, easier, cheaper with these four models of **SKILSAW**—the best built, fastest cutting, easiest-to-operate electric saw on the market. Each of these four models has every engineering improvement to insure trouble-free service over a long stretch of years:

- Quick adjustment for depth of cut.
- Easy wing-nut adjustment for bevel cuts.
- Telescoping guard rotates on ball bearings.
- Blower keeps line of cut clear of sawdust.
- Oversize long-life gearing and finest quality ball bearings insure smooth operation, eliminate vibration.

Only **SKILSAW** has *all* of these quality construction features . . . that's why **SKILSAW** is *more* for your money and will make *more* money for you on every job!

**9 POWERFUL MODELS FOR WOOD, METAL, STONE, COMPOSITIONS**

**SKILSAW, INC. • 5031 Elston Avenue, Chicago**

36 East 22nd Street, New York—52 Brookline Avenue, Boston—182 Main Street, Buffalo—15 South 21st Street, Philadelphia—2902 Euclid Avenue, Cleveland—2124 Main Street, Dallas—918 Union Street, New Orleans—29 North Avenue, N. W., Atlanta—2645 Santa Fe Avenue, Los Angeles—2065 Webster Street, Oakland—1535 Grand Avenue, Kansas City, Mo.—1115 E. Pike Street, Seattle.

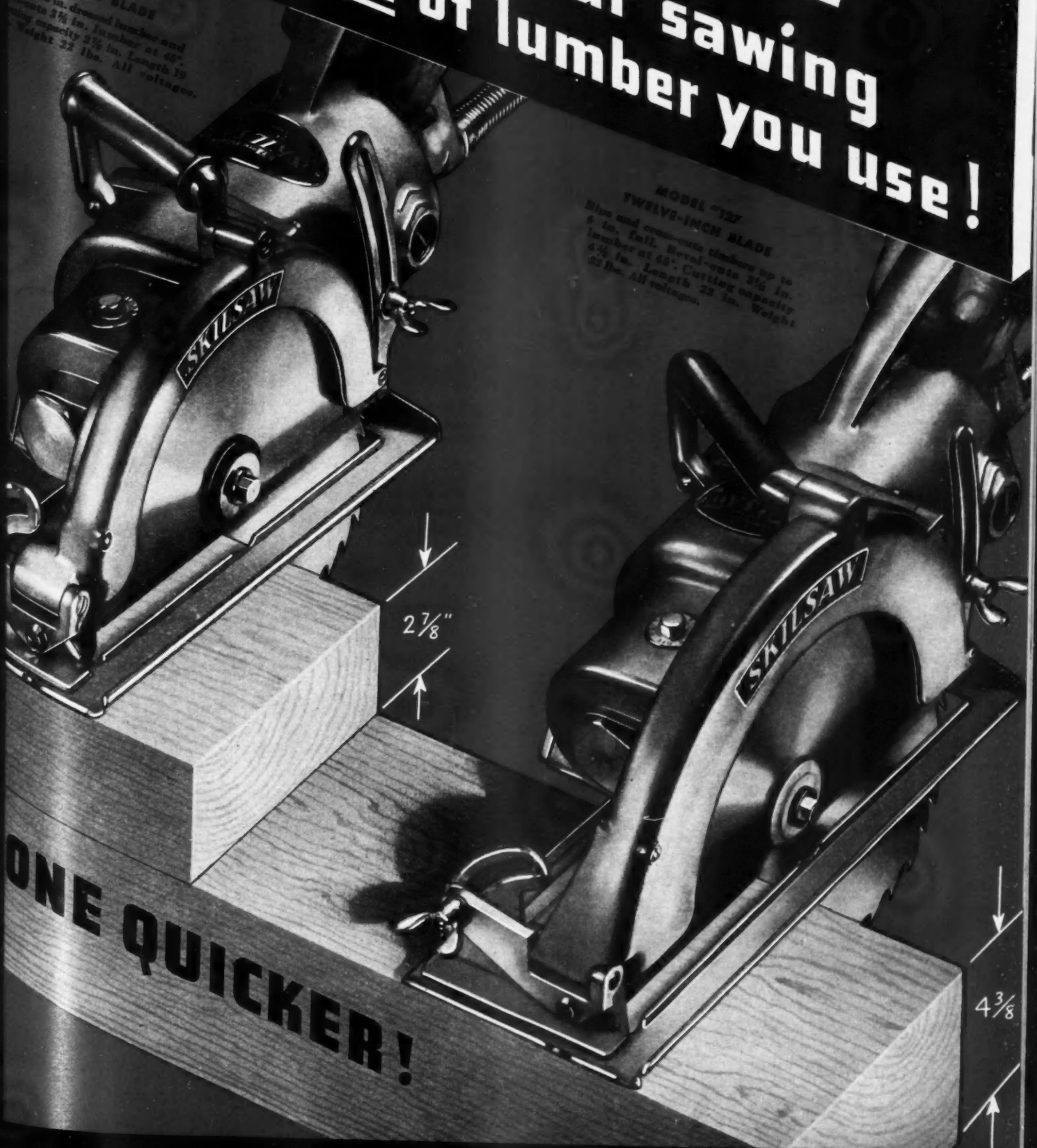
Canadian Branch:  
85 Deloraine Avenue, Toronto

# THERE'S A MODEL OF **SKILSAW**

to speed up your sawing  
on every size of lumber you use!

**MODEL "67"  
NINE-INCH BLADE**  
Cuts 3 in. dressed lumber and  
splits 3 1/2 in. lumber at 45°  
Cutting capacity 3 1/2 in. Length 19  
in. Weight 22 lbs. All voltages.

**MODEL "127"  
TWELVE-INCH BLADE**  
Saw and square timbers up to  
6 in. full. Splits up to 3 1/2 in.  
lumber at 45°. Cutting capacity  
4 3/8 in. Length 23 in. Weight  
32 lbs. All voltages.



↓  
2 7/8"  
↑

↓  
4 3/8"  
↑

**ONE QUICKER!**



# 3 LOW COST WAYS TO HEIGHTEN HOME APPEAL



● Better bathrooms—better kitchens—better heating—mean better home sales. Yet the plumbing and heating quality your prospects want—the quality that *sells houses*—can be LOW in cost, if you choose Crane. Here are 3 CRANE low-cost ways of making profitable home sales.



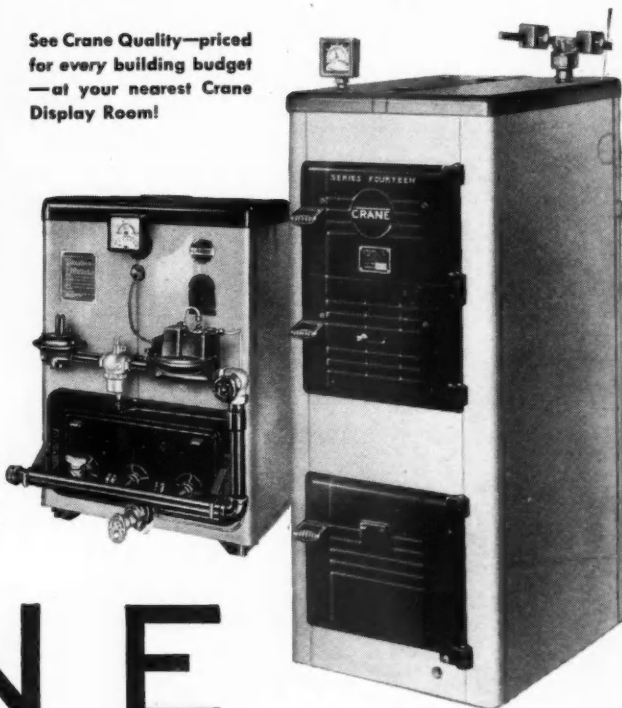
1 Customers know and want Crane Quality equipment—and you can give it to them. The Homemaker sink and cabinet unit shown above is compact—convenient—and is moderate in cost.



2 This LaSalle matched bathroom group has the eye appeal that makes your prospects stop and look—the quality that makes them stay and buy.

3 Here are two boilers that bring healthful, radiant warmth to the low-cost home. At the left is the 2WG gas-fired hot water boiler—completely automatic. At the right is the No. 14 boiler for steam or hot water systems—for hand firing of coal, oil-burning, or stoker firing.

See Crane Quality—priced for every building budget—at your nearest Crane Display Room!



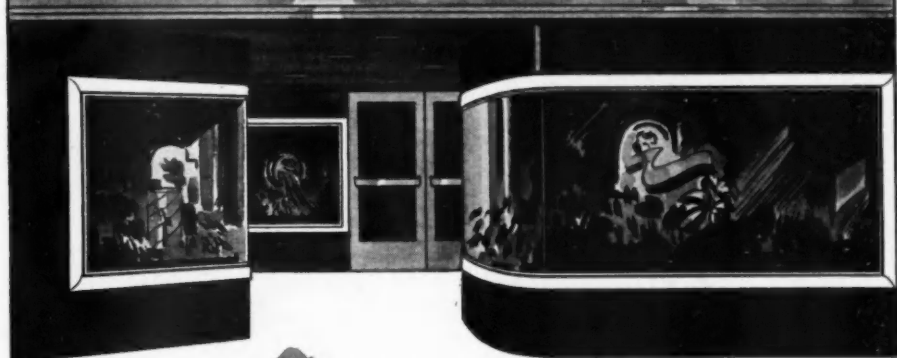
# CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVENUE, CHICAGO

VALVES • FITTINGS • PIPE • PLUMBING • HEATING • PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS

# delroe SHOES



## ANOTHER IDEA INSPIRED BY A Kawneer STOCK MOULDING!



JUST ONE INTERESTING SHAPE, like Kawneer Moulding No. 3835, illustrated at the left, can often go a long way toward solving the design problem of a store front!

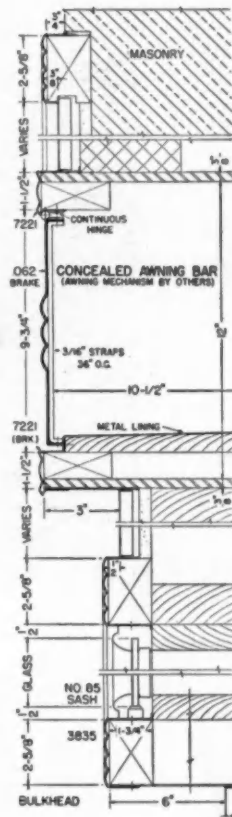
This moulding has been used, in the shoe store shown above, as the principal feature of the front—to supply the life and lustre that only Kawneer metal can give. Details show how Moulding 3835 has been combined with new No. 85 Rolled Sash and other standard Kawneer Rolled Construction in the complete front.

### DELIVERIES ASSURED

Fortunately for the store front industry, Kawneer is in a position to supply your requirements in this important store front year, with Kawneer Rolled Store Front Construction, including the famous fully resilient rolled sash which assures maximum protection for show window glass.

### FREE ILLUSTRATED MAGAZINE

The Kawneer Front is published for architects and builders interested in store front work. It includes pictures of new store fronts and data on new Kawneer products. Write today if you are not on our list. THE KAWNEER COMPANY, NILES, MICHIGAN.



IT'S EASY TO DESIGN AND INSTALL STRIKING

# Kawneer STORE FRONTS



WM. JOERN & SONS, Builders  
Edgewood Park Development

FIELD OFFICE - 900 OGDEN AVE., LAGRANGE - LAGRANGE 3511

3244 N. CICERO

Chicago, Ill.

AVENUE 55

May 14, 1940.

Read the  
EVIDENCE

Mr. McCray,  
Paine Lumber Company,  
Oshkosh, Wisconsin.

Dear Mr. McCray:

Our firm has been experimenting recently with the installation and finishing of Rezo doors. I thought you might be interested in knowing some of the results.

Although the carpentry involved in the installation of your doors shows practically no difference compared to the former six panel door that we had been using, there is a substantial saving in the painting of the doors. Figuring it on the basis of a three coat painting job, we found to completely finish the Rezo door, the time was 37 minutes, and on a six panel door, the time was 72 minutes, almost double. There also was a slight difference in the amount of material used, amounting to three-fourths of a gallon of paint less on the Rezo doors for sixteen doors.

Of course the reason that we had given up the six panel door originally was the question of service and maintenance after completion. On practically all of the panel type doors, where they were painted, we found that because of humidity desired in a modern house today, that this caused a contraction and expansion of the panels along the stiles, and practically every panel door job that we had required touching up by painters after completion. This annoyance and nuisance, together with the factor that our client will have lower maintenance cost in the future, was really the basis for our deciding to use Rezo type doors exclusively.

Hoping that this information might be of some interest to you, I am

Yours very truly,  
WM. JOERN & SONS

By Charles E. Joern

Mr. Chas. E. Joern is chairman of the taxation committee of the Chicago Real Estate Board—is a member of the Chicago Board of Underwriters and a director of the Chicago Building Congress.

Mr. Joern is nationally known as an important member of the real estate and building industry. His company was awarded the contract to build the LIFE Magazine fostered home in 1939 and also in 1940 in the Chicago Area.

CEJ:OJ

ESTABLISHED OVER A QUARTER OF A CENTURY

REZO FLUSH DOORS

the ONLY cell-type door, with YEARS of EXPERIENCE

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NC  
for  
ROOF

I PAINT TWO DOORS  
TO HIS ONE ...  
AND USE LESS PAINT

I HAVE TO  
CLEAN CORNERS-  
24 OF THEM ON  
EACH SIDE-  
THAT'S 48 CORNERS  
-IT TAKES  
TIME



**REZO**  
PATENTED FLUSH DOORS  
U. S. No. 1,887,814

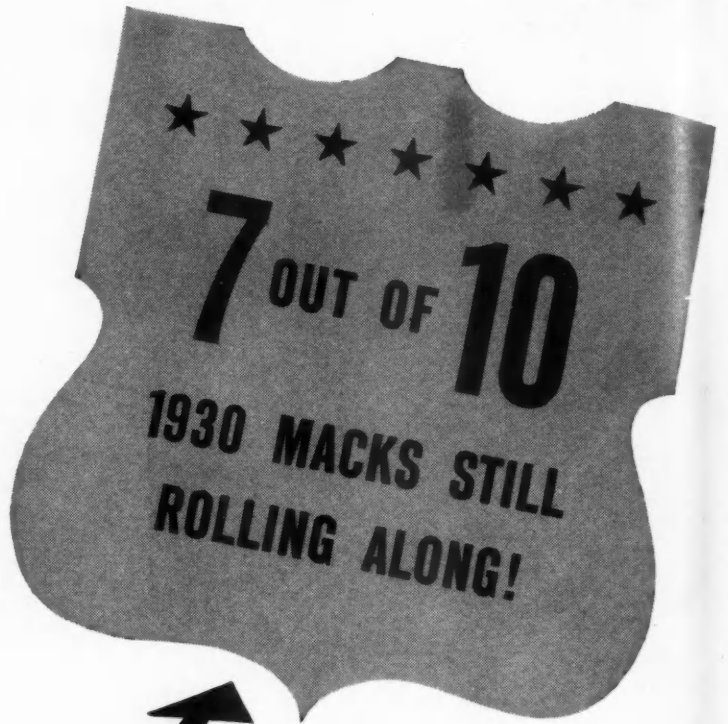
this *Saving* in LABOR  
and MATERIAL permits  
the use of guaranteed  
**REZO FLUSH DOORS**

at the same installed cost as common multi-panel doors

XPEN manufactured by PAINE LUMBER CO., Ltd., Oshkosh, Wis.



**OFFICIAL FIGURES PROVE  
MACK THE STURDIEST  
TRUCK GOING**



Illustrated: Mack Model EFU, Cab-over-Engine truck. Fast, reliable, highly manoeuvrable. Low Priced.

● State registration figures compiled by R. L. Polk & Co., recently published in *Automotive News*, show 72% of 1930 Macks in active service. *This record beats all other makes.* What's more — when it comes to trucks bought *before 1930*, Mack has 33% more units on the road than any other make! Easy to understand, in the light of these facts, is Mack's world-famous reputation for superior dependability, stamina, and long-term economy.

**MACK TRUCKS, INC., NEW YORK, N. Y.**

**Mack**

The Most Complete Line of Trucks in the World — 1 to 45 Tons and all "Heavy Duty"

**MAKE THIS TEST -**  
*Prove* **BRIXMENT is BEST!**



Take some Brixment mortar and some 50-50 lime and cement mortar. Try shoving a full head-joint with each mortar. You'll find that with the Brixment mortar



(1), it is much easier to shove the brick accurately into place, with a full head-joint, than it is to do the same thing with the other mortar (2).

## **BRIXMENT Makes a More PLASTIC Mortar!**

One of the most important characteristics any mortar can possess is *plasticity*. Within certain limits, plasticity is the greatest single factor not only in the *economy* of the brickwork, but also in its strength, its neatness and its resistance to the passage of water.

One of the most outstanding characteristics of Brixment mortar is its unusual plasticity. For nearly twenty-five years, bricklayers all over the United States have agreed that the working qualities of Brixment are comparable to those of straight lime putty. This exceptional plasticity makes it easy for the bricklayer to secure neat, economical brickwork, with the brick properly bedded, and

the joints well filled. And because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand and still make an ideally workable mortar.



# **BRIXMENT**

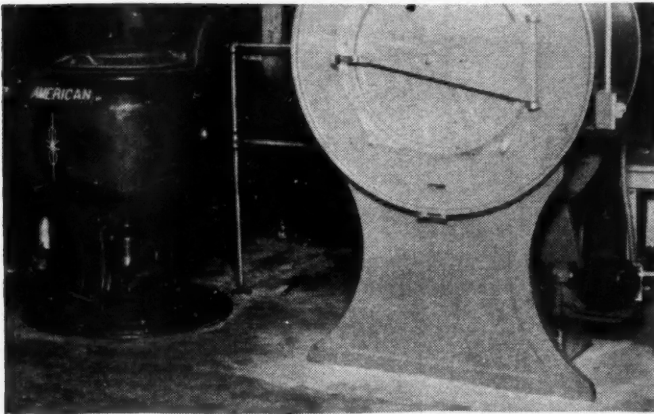
## **For Mortar and Stucco**

*Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.*



# Speed Concreting Jobs At Greater Profit!

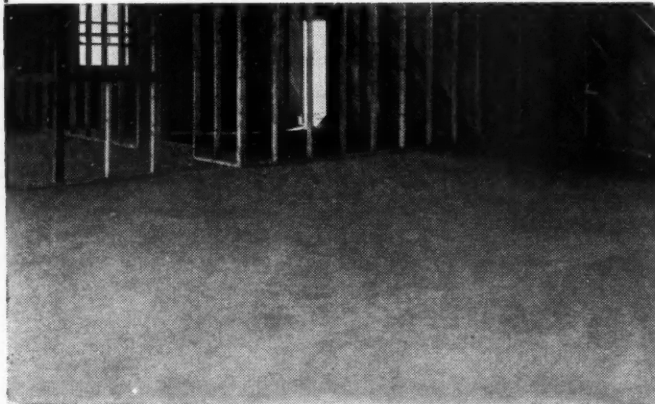
How builders save time and money on many kinds of work with **ATLAS HIGH-EARLY CEMENT**



**A QUICK MOVE** in this laundry was achieved with Atlas High-Early cement! A washer and dryer were removed and reset on a new base. At 12 noon, machines and old floor were taken out—a new concrete base 20 inches thick was finished by 3:00 P. M. Next morning the machines were bolted to the new floor and back in operation! Lima, Ohio.



**TIME AND MONEY** saved by paving the roadway of this filling station, Tracy, Minn., with Atlas High-Early concrete! Look at these dividends! Five days in time saved in protection and curing and 14 days business saved, as the station was opened that much sooner—thanks to Atlas High-Early.



**IT WAS WINTER** when this floor was installed, so Atlas High-Early concrete was used to speed the job. Three days were saved in setting the piers. Protection and curing costs, and the danger from freezing were reduced. The job went through without a hitch. Pittsburgh, Pa.



**RUSH REPAIRS** were called for at this Super Service Station, Waco, Texas, where the traffic through this driveway totals 200 cars and trucks every day! So Atlas High-Early concrete was placed one day and was opened to traffic within 72 hours afterward.

**O**N MANY A JOB Atlas High-Early cement will help you speed the job at greater profit. The pictures show how four builders in different parts of the country speeded construction and reduced costs with Atlas High-Early cement! These jobs are typical examples of how you can use this cement to your customer's advantage and your profit.

Here are the reasons why Atlas High-Early was a time- and money-saver on the jobs shown: it gains working strength rapidly, and so cuts time required for protection and curing as much as 60% to 70%—it often permits earlier stripping and re-use of forms, thus reducing form costs—and it produces serviceable concrete in much less than the usual time.

Specify Atlas High-Early cement. Write today for a copy of "Case Histories of Days & Dollars." Universal Atlas Cement Co. (United States Steel Corp. Subsidiary), Chrysler Building, N. Y. C. Offices: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

AB-H-30

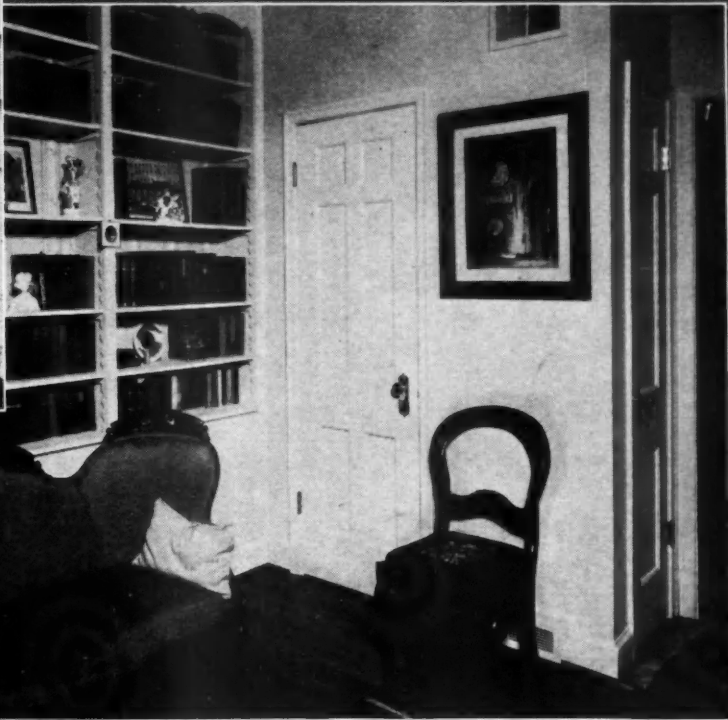
## ATLAS HIGH-EARLY CEMENT

A UNIVERSAL ATLAS PRODUCT





*It's a good  
old American  
custom!*



Perennial as springtime itself are spring weddings . . . and spring home building, so brides and grooms may have a place to live happily ever after. It's a good old American custom . . . and spring is here!

Here, at Bradley's, we're stocked and ready to help you meet this spring demand with premium quality, sure to make any bride proud of her home . . . and friend husband certain he's a smart buyer. Hardwood floors, for instance, dear to her heart and pride, in Bradley's famous straight-line strip or quaint plank, in fine-textured Oak . . . Gum, Oak and Pine trim, mouldings and finish for beautiful woodwork and paneling in painted or stained finishes . . . dimensions, boards, siding, window jamb and trim in well-seasoned Arkansas Soft Pine that works easily, stays put and doesn't bleed through paint on exterior surfaces.

*Bradley Brand Products are obtainable from local retail distributors anywhere in the United States.*

These are the extra values which provide enduring fine appearance and service with every Bradley installation . . . these, the reasons why builders who know ask for Bradley Brand.

**BRADLEY LUMBER COMPANY** *of Arkansas*  
WARREN, ARKANSAS





**The Certigrade  
Handbook FREE**

*The Certigrade Cedar Shingle Handbook, prepared by a wood technologist, will be mailed free on request. One hundred pages detailing the uses, application and technical data concerning Certigrade Red Cedar Shingles. Write Red Cedar Shingle Bureau, Seattle, Wn., or Vancouver, B. C., Canada.*

# DOUBLE COURSED CEDAR SHINGLE WALLS ★ NEED NO OTHER INSULATION

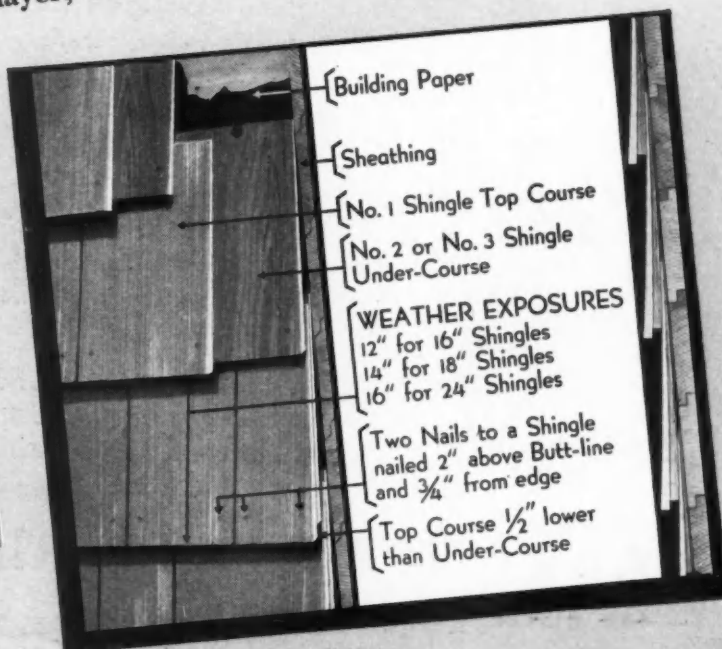
**T**ESTS made in the laboratory of the College of Forestry, University of Washington, on a roof section of No. 1 grade, 18-inch Certigrade Shingles, laid 5½ inches to the weather on solid wood sheathing, show that such construction is twice as effective in preventing heat transmission as the best grades of ½-inch insulation boards commonly used for this sheathing.

What is true of roof construction is equally true of side-wall construction. In double-coursing of side-walls with Red Cedar Shingles on solid sheathing you have a *sturdy wall of good insulative qualities*. The method of slightly lapping the outer course of shingles over the under-course produces beautiful, deep shadow lines, and this, with the economical wide weather exposure possible with double-coursing, is in keeping with modern design in home building.

This simple technique does not re-

quire specially trained craftsmen. Shingles are butt nailed with two rust resistant, 5 d., small headed nails for each shingle, driven ¾ inch from each edge, about two inches above the butt line. (See detail.) The lowest or beginning course should always be tripled in order to introduce the right tension into the succeeding courses. A piece of shiplap or other rabbeted lumber is used as a straight edge.

Because double-coursed shingles are face nailed at the butts, it is possible to use No. 2 shingles for the outer course with No. 3's for the concealed layer, effecting a remarkable saving.



Protect and Insulate  
LIKE FEATHERS ON A BIRD with...

**CERTIGRADE**  
Red Cedar Shingles

CERTIGRADE SHINGLES  
ALL GRADES

GENUINE CEDAR  
NOT IMITATION

SOLD EVERYWHERE BY LUMBER DEALERS





"Its soft texture  
nails without  
splitting"



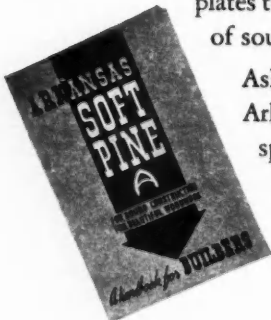
ANOTHER REASON YOU TURN OUT BETTER WORK with  
**ARKANSAS SOFT PINE**

Freedom from pitch in this all-purpose wood explains its remarkably soft texture through which you can drive every nail tight and know it will hold. That means each joist, stud, board and rafter will be firmly anchored in the framing, and stay put. By the same token, window jambs, sills, siding and outside trim of Arkansas Soft Pine hold snug at every joint and mitre.

Remember, too, that just as this soft texture safeguards sound framework, it also insures smooth, workmanlike finished surfaces; because it takes paint, enamel or stain and holds them, absorbing the primer evenly and carrying the intermediate and final coats uniformly, with *no risk of bleeding, discoloration or raised grain.*

These are the extra profitable values you get in the time-proved soft texture of Arkansas Soft Pine . . . values which protect your workmanship from foundation plates to picture moulding . . . qualities that insure your reputation as a builder of sound, lasting construction.

Ask for our Builders' Handbook, giving you complete information about Arkansas Soft Pine, including construction details, stress tables, grades to specify in all locations, painting and finishing instructions. Write today for YOUR FREE COPY.

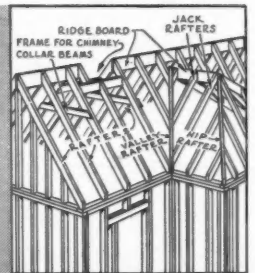


*Arkansas Soft Pine is trade and grade marked, qualifies for Federal Specifications and is sold by retail lumber dealers east of the Rockies.*

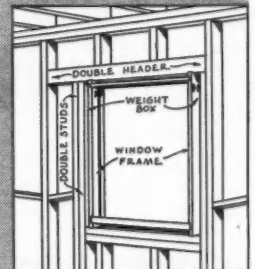
**ARKANSAS SOFT PINE BUREAU**

488 BOYLE BUILDING

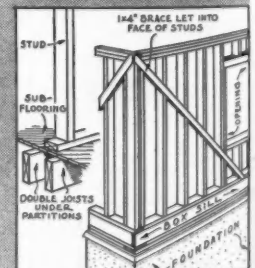
LITTLE ROCK, ARKANSAS



The nail-holding ability of Arkansas Soft Pine is



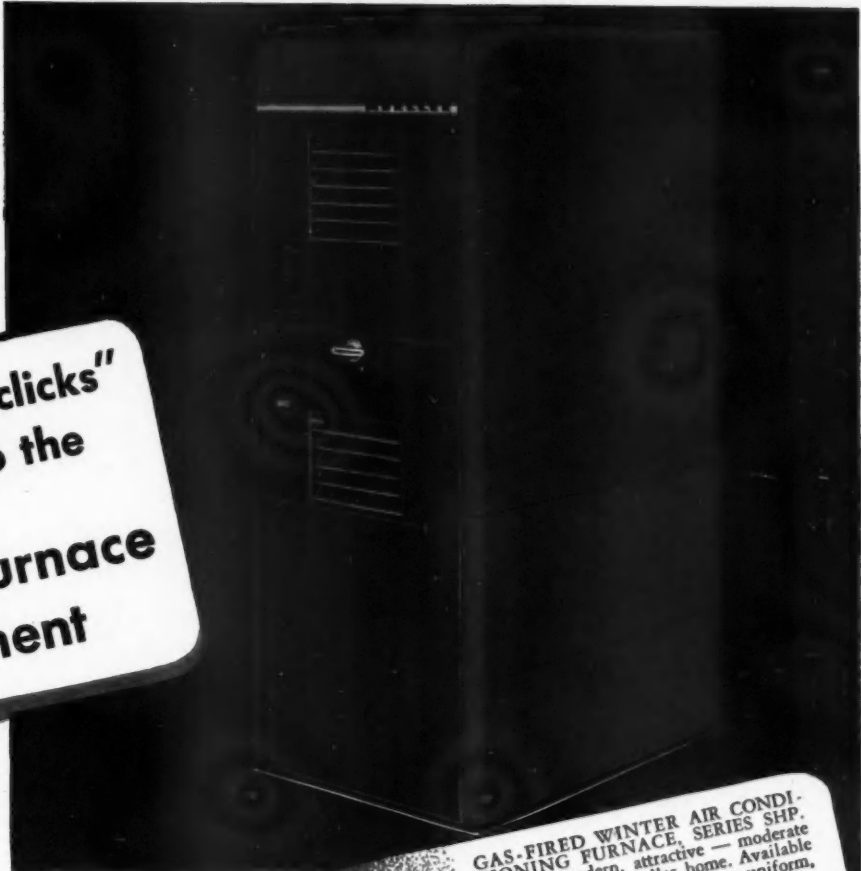
a feature which, in itself, insures additional strength of such typical



stress points and load-bearing units as shown here.



Your sales talk really "clicks"  
 — when you get to the  
**MUELLER** furnace  
 in the basement



**Eye appeal** starts you off on the right foot — for you can always depend on Mueller's handsome, modern, compact, space-saving designs to make a good impression on your prospect:

**Name appeal** makes your claims believable. Mueller, a manufacturer of heating equipment exclusively, for 84 years, advertises consistently to people interested in new homes. They recognize this well-known name — and make another mental note in your favor.

**Luxury appeal** gets them all. They want the extra comfort, convenience, healthfulness of a really modern heating plant. Mueller enables you to offer it, and still remain within the cost budget.

**Economy appeal** — Each Mueller furnace is designed to burn a specific fuel (coal-oil-gas) with maximum efficiency — so fuel bills are moderate, giving your houses a good reputation for low heating cost.

Make heating a live factor in your selling. Engineering service available on Mueller jobs. See your local Mueller dealer; send for Mueller's free illustrated literature.

B-2A

**MUELLER** Milwaukee  
 HEATING AND AIR CONDITIONING

**Gas**  
 GAS-FIRED WINTER AIR CONDITIONING FURNACE, SERIES SHP. Compact, modern, attractive — moderate in price, for the smaller home. Available with Heat Levelizer for more uniform, comfortable heating.

**Coal**  
 COAL-FIRED WINTER AIR CONDITIONING FURNACE, SERIES FB. Compactness and fine appearance. Available in oil and gas equipment. Economical.

**Oil**  
 OIL-FIRED WINTER AIR CONDITIONING FURNACE, SERIES 50. Remarkably efficient — practical for the moderate-priced home.

**It's MUELLER for all 3 fuels**  
 —for homes of any size or price  
 Specially designed for each type of fuel—therefore cost less to operate, bringing the benefits of modern heating and winter air conditioning within reach of even modest budgets . . . Unbiased — offering the industry's most complete range—Mueller is the logical source of information about home heating.

**TEAR OUT AND MAIL TODAY**

L. J. Mueller Furnace Company  
 2016 W. Oklahoma Ave., Milwaukee, Wis.

Please send me illustrated literature describing  
 Gas Furnaces  Oil Furnaces  Coal Furnaces  
 Gas Boilers  Gas-fired Unit Heaters

Name.....

Firm.....

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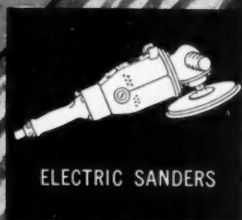
New *Free Handbook* shows



**How to C**  
**with Black & D**



ELECTRIC HAMMERS



ELECTRIC SANDERS



BENCH GRINDERS



SCREW DRIVERS & NUT RUNNERS



ELECTRIC DRILLS

et This Fr  
acked w  
howing  
Electric S  
and make  
n every t



# o Cut Days Off Jobs & Decker Electric Saws

**SEND FOR Black & Decker's Free "Saw Handbook" Today! Contains 28 pages on applications, construction and features of Black & Decker Saws and Accessories. Ten times faster than hand, Black & Decker Saws boost the sawing speed in cutting all structural lumber. Cut wood, metal, compositions—most any material. Operate from electric socket or portable generator. Are kept safe by instant-acting telescoping bladeguard. Easy adjustments for depth and angle of cut. Four powerful, speedy models for any type job—from fast trim work to extra deep sawing in heavy timbers. The most powerful, fastest Electric Saws on the market—whose performance and dependability are backed by the world's largest manufacturer of portable electric tools. No matter where you are, there's a B & D jobber near you, ready to demonstrate Black & Decker's famous speed and quality on your own sawing operations. The Black & Decker Mfg. Co., 766 Pennsylvania Ave., Towson, Md.**



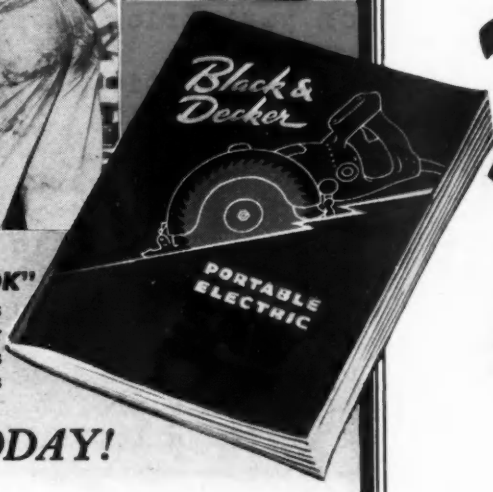
**AT LEFT**—Black & Decker No. 85 Electric QUICK SAW cutting off porch gable end. Note easy, one-hand operation of this popular model.

**BELOW**—Black & Decker Saw speeds up operations on heavy construction. B & D No. 95 (illustrated) has power and extra depth of cut to zip through heaviest lumber.



**Get This Free "SAW HANDBOOK"**  
Packed with facts and illustrations showing how Black & Decker Electric Saws speed up operations and make more profits for builders on every type job.

**Send for it TODAY!**



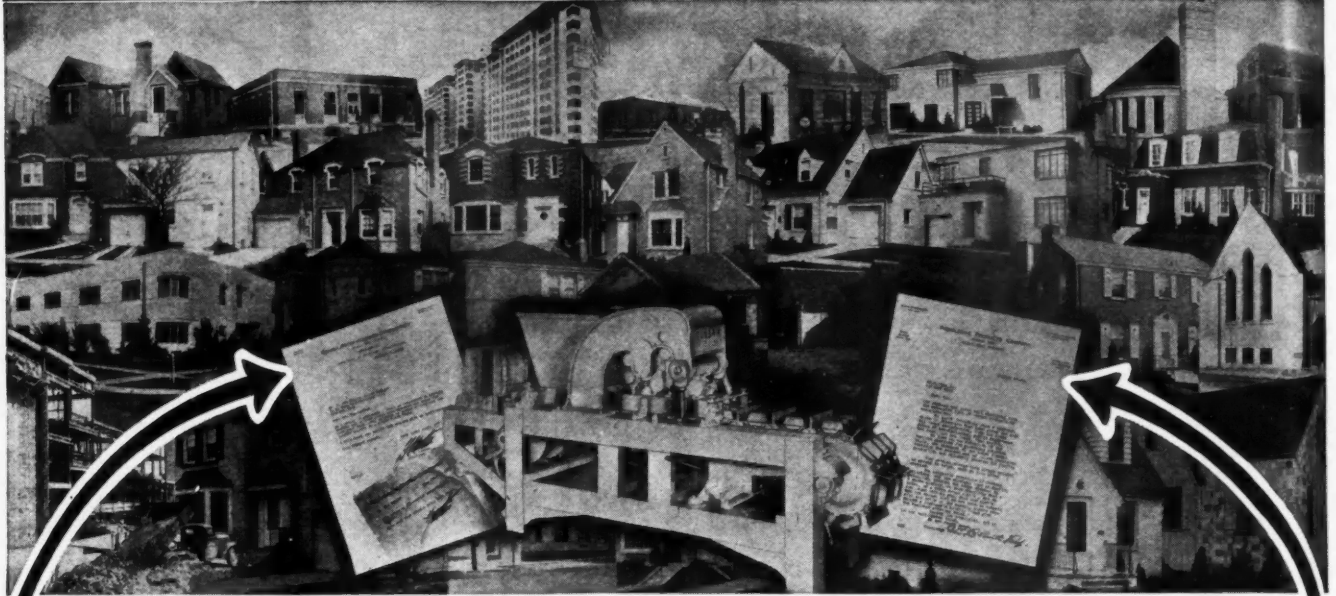
**LEADING DISTRIBUTORS EVERYWHERE SELL**

# Black & Decker

**PORTABLE  
ELECTRIC TOOLS**

**"ELECTRIC TOOL HEADQUARTERS"**

# Austin & Smith Prove THE OPPORTUNITY



*Mr. Austin of Atlanta says:*

January 3, 1940

As a matter of curiosity I would be interested in knowing whether any of your plants have exceeded our sales for last year which total slightly in excess of four and one-quarter million on a single brick basis.

January 6, 1941

Sold over four million again this year.

YOU owe it to yourself and your future to learn how you too can become an exclusive DUNBRIK Manufacturer like Mr. Austin or Mr. Smith. Learn how this automatic line production machine will produce quality products from local low cost raw materials—how these products are made in a full range of colors, shades and textures—how the multiple sizes reduce construction costs—how you too can become the owner of a profitable franchise protected business.

Write today for free books. They tell the complete story. No obligation.

*Mr. Smith of Portland says:*

You perhaps are quite well acquainted with the extensive line of cement products we manufacture.

We find in the operation of the various machines for producing concrete units the variation of the human element controls the output, and of course regulates production and ultimately governs the profit.

Our several checks have always brought us around to brick, made on your brick machine.

The automatic principle of feeding, palleting, and the straight line production principle, reduces the human element to a known quantity. We know absolutely what a brick or a dozen brick cost, and we don't mind telling you that our costs are low enough that we are able to compete with any brick on the market, insure ourselves a legitimate profit and give the customer a better brick.

**W. E. DUNN MFG. CO. 450 WEST 24th STREET, HOLLAND, MICH.**



# EVER WISH YOU WERE TWINS



construction enables you to build more houses and better houses in less time!



### CONSTRUCTION

...saves weeks—even months—from building schedules. This is because the 5 grades of Douglas Fir Plywood serve such a variety of building purposes . . . because the big panels minimize handling, cutting, fitting and nailing . . . because they eliminate the necessity of waiting for plaster to dry. You increase your capacity . . . and that of every one of your carpenters . . . when you Dri-Bilt with Plywood.



### CONSTRUCTION

is suited to the way you operate. If you build only one house at a time, use the standard Dri-Bilt method in which all construction is done on the job in the traditional manner. If you are a multiple-unit builder, use the DFP Dri-Bilt method which provides for the shop-fabrication of wall and ceiling sections, etc., from the proper grades of Douglas Fir Plywood. Many builders have found that this method enables them to have 4 and 5 room houses ready for occupancy in 2 weeks or less after they start them.



### HOUSES

can be readily financed through F.H.A.—are approved by the Uniform Building Code. They're more rigid . . . have proved that they can resist tornadoes and earthquakes. They're more attractive . . . have interiors that are both beautiful and mar-proof. Get complete information now. Send for free Dri-Bilt manual. Douglas Fir Plywood Association, Tacoma Bldg., Tacoma, Wn.

## NEW PRODUCTION CAPACITY

Four new Douglas Fir Plywood mills were completed in 1940; three more are or will soon be in operation in 1941; the capacity of many existing mills is being stepped up. This means that the monthly production of Douglas Fir Plywood will soon reach one hundred and fifty million feet a month. It is expected that the total 1941 production will exceed a billion and a half feet—or will be nearly triple 1938 production. The Douglas Fir Plywood industry will be able to take care of Defense orders and the orders of these regular customers whose increasing purchases have made this tremendous volume possible.

**1** EXT-DFPA, the type of Douglas Fir Plywood made with water-proof binder, builds smart, durable, wind-proof exteriors.

**2** Plyscord is the grade of Douglas Fir Plywood to use for sub-flooring, wall and roof sheathing. 5/16" Plyscord makes walls 5.9 times as rigid as 1" horizontal board sheathing.

**3** Use 1/4 or 3/8" Plywall or Plypane for puncture-proof interiors. Plywood is receptive to more finishes than any other material.



**SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS"**





# Important Announcement

*Johns-Manville*

**AMERICAN  
COLONIAL**

*Asbestos Shingles*

Based on over 80 years of manufacturing experience in roofing materials, we recommend the new J-M American Colonial Asbestos Shingle as the most satisfactory and economical shingle over a period of years any home owner can buy. We believe it is one of the finest roofing products we have ever manufactured and at its new low price we recommend its selection.

*Johns-Manville*



**JOHNS-MANVILLE**

ASBESTOS AND ASPHALT SHINGLES • SUPER-FELT  
ASBESTOS FLEXBOARD • ASBESTOS WAINSCOTING

# to Builders

Now the lowest price in history for a roof of J-M Asbestos Shingles! These new shingles are easier to apply—colorful—sure to help you sell houses faster!

HERE, we believe, is the most outstanding value in J-M's 80 years of experience in the manufacture of roofing materials... the Johns-Manville *American Colonial* Asbestos Shingle.

This new shingle combines all the permanence of stone with beauty such as you have never thought possible in a fabricated shingle! Consider these features—

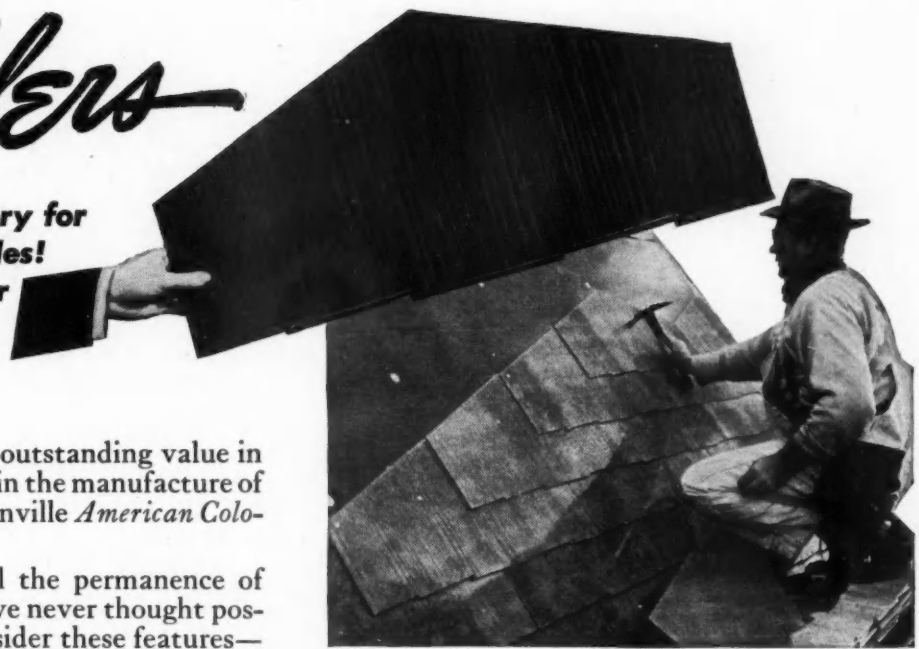
J-M *American Colonial* Shingles provide the texture and graining of fine weathered wood... clean-cut shadow lines.

And color! Handsome blends... a soft green, a warm red, a rich black. Also a natural gray and a white.

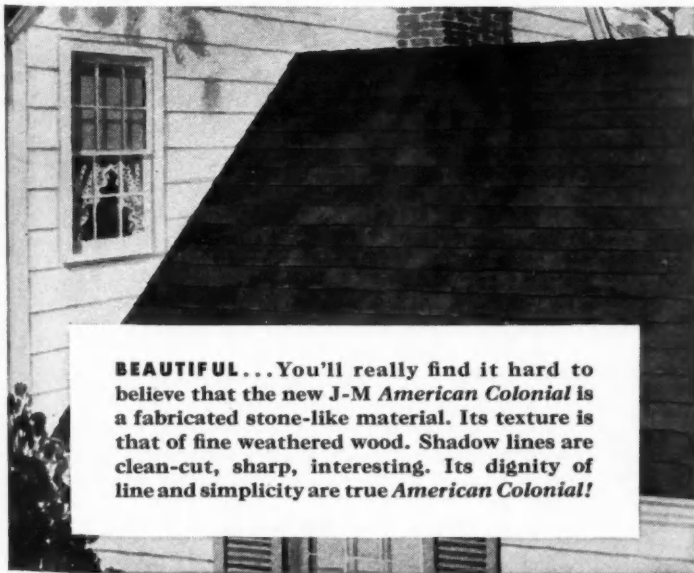
As for cost, this new J-M Shingle is priced so low, is so economical to apply, that roofs of this lasting material cost little more than roofs of less satisfactory materials.

Like all J-M Asbestos Shingles, this new shingle can't burn or rot, is practically impervious to weather. No periodic upkeep is needed... no preservative treatment.

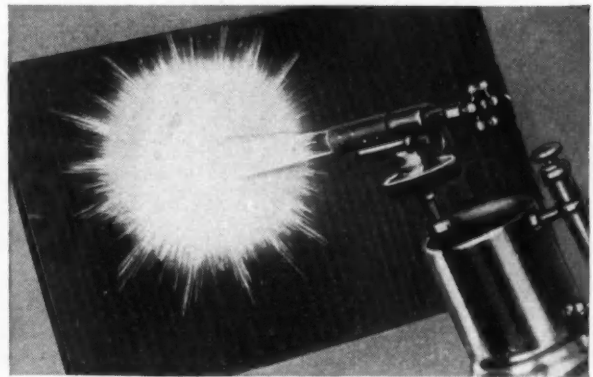
Think what selling advantages these features give you! And remember—home owners will be particularly grateful to you as years pass and they learn the economy of having a roof as lasting as the house itself!



**NEW DESIGN CUTS APPLICATION COSTS!** Out of the J-M Research Laboratories comes this fabricated asbestos-cement shingle in large units for low-cost application. In actual tests, it required less time to apply than any other asbestos roof shingle... approximately the same as the fastest laying asphalt strip! These savings, plus its low price, enable you to give your home owners an asbestos roof of pleasing American Method Style at the lowest cost in Johns-Manville history.



**BEAUTIFUL...** You'll really find it hard to believe that the new J-M *American Colonial* is a fabricated stone-like material. Its texture is that of fine weathered wood. Shadow lines are clean-cut, sharp, interesting. Its dignity of line and simplicity are true *American Colonial*!



**FIREPROOF...** Not just fire-resistant, the Johns-Manville *American Colonial* Asbestos Shingle simply cannot burn under any conditions! It even withstands the terrific heat of a blowtorch!

Send for beautifully illustrated full-color brochure on American Colonial Shingles. Just mail coupon.

JOHNS-MANVILLE, Dept. AB4,  
22 East 40th Street, New York, N. Y.

Without obligating me, please send me your new full-color brochure on J-M American Colonial Asbestos Shingles.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

## Building Materials

ROCK WOOL HOME INSULATION · INSULATING BOARD  
· HARDBOARD · ROLL ROOFINGS, etc.

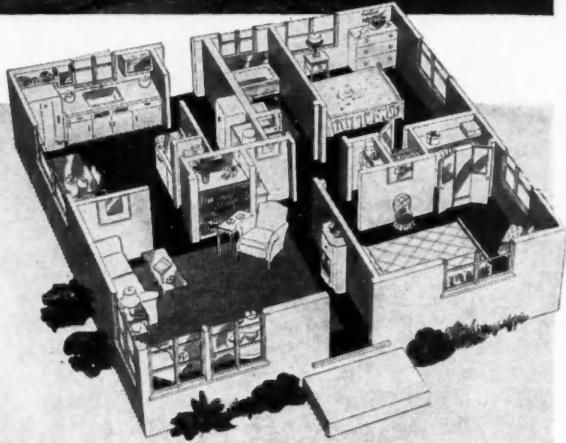
LE

R-FELT  
OTING



# Look INTO THESE DOLLAR·A·DAY

## "Design for Happiness" Homes!



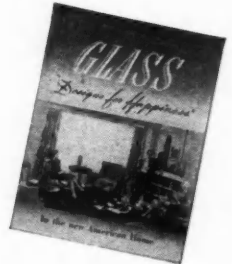
*Glass features like these add Sales-Appeal to the homes you build, give a "lift" to selling remodeling jobs.*

A new kind of home is attracting nationwide attention. And it's offering a profit for everyone—architects, builders, retailers of building materials and most of all, the homeowner.

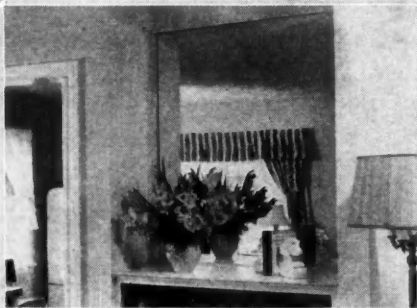
"Design for Happiness" homes are highly livable, made brighter and gayer with glass. Built-in glass features add "eye-appeal" and utility, giving these homes ready salability, quickly turning new home prospects into owners.

We invite you to look into the profit opportunities of the "Design for Happiness" national, low-cost home development program. Builders all over the country are tying their sales plans into this organized effort to offer greater values in small homes. Let us help you put families in your community into well designed, highly livable "Design for Happiness" homes.

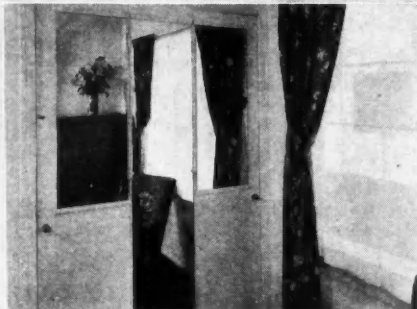
Write for this free, illustrated booklet describing "Design for Happiness" glass features, and for information about your part in this program. Address: Libbey-Owens-Ford Glass Company, Department AB-441, Toledo, Ohio.



## LIBBEY · OWENS · FORD GLASS COMPANY



Built-in mirrors of polished plate glass increase the apparent size of rooms, adding breathing space, beauty and utility.



In this novel inexpensive arrangement of 3-panel door mirrors, half panel mirrors swing out to give angle views.



Storm windows reduce drafts, increase home comfort and cut heating costs up to 30%.



Vitrolite (wall glass) protects bathroom walls. Easy to clean, it adds gay color that never fades.



# Announcing



## NEW DOUBLE VALUE BALSAM-WOOL

**NEW, Increased Thickness**

**NEW, Increased Moisture Protection • NEW, Increased Efficiency**

**NEW, Increased Values**

THESE DOUBLE ADVANTAGES  
HAVE MADE BALSAM-WOOL

### FIRST CHOICE IN 250,000 HOMES

**DOUBLE SEALING**—Balsam-Wool is completely protected by a tough, impervious, protective covering.

**DOUBLE WIND BARRIERS**—stop wind infiltration—prevent chilly drafts—provide greater warmth for floors.

**DOUBLE MOISTURE LINERS**—providing an efficient and lasting moisture barrier. A third moisture barrier added in DOUBLE THICK Balsam-Wool.

**DOUBLE AIR SPACES**—to increase insulation efficiency—to allow walls to breathe.

**DOUBLE BONDING**—Balsam-Wool is doubly bonded to inside of liners to prevent settling or packing down.

**DOUBLE FASTENING**—Balsam-Wool is doubly fastened in place to eliminate settling. Balsam-Wool is fire-resistant and termite treated.

—already the leader in the field.

### TWO NEW THICKNESSES

Balsam-Wool is now available in two new Double Value thicknesses—STANDARD (formerly 1/2") and DOUBLE THICK (formerly 1")—offering new benefits to builders and home owners. Complete information about the new Double Value Balsam-Wool is yours for the asking. Mail the coupon.

**BALSAM-WOOL**—long recognized by builders as "tops" in insulation—now takes another big forward stride! The new BALSAM-WOOL provides even greater values in a product already far ahead of its field. Today, Balsam-Wool offers new, increased thickness—new, increased efficiency—new, increased moisture protection—all at no increase in price! Here is new and greater value in Balsam-Wool

## BALSAM-WOOL BALSAM-WOOL . . . NU-WOOD PRODUCTS OF WEYERHAEUSER

WOOD CONVERSION COMPANY  
Dept. 119-4, First National Bank Bldg., St. Paul, Minnesota

Gentlemen:

Please send me complete information about the NEW DOUBLE THICK and STANDARD Balsam-Wool.

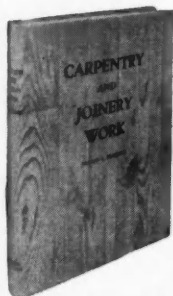
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City ..... State .....

# AMERICAN BUILDER BOOKS

## Carpentry and Joinery Work



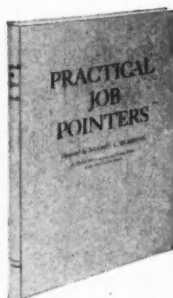
By Nelson L. Burbank

Designed as a trade school text and presenting the cardinal principles of present day dwelling construction with the related studies of architectural drawing, carpentry mathematics, business English, applied science, civics and first aid, this book furnishes the basis of a well rounded education in carpentry work. The technique of steel frame and sheet metal siding construction is explained in addition to the standard methods of wood construction.

### Contents

Tools and Equipment—Tool Boxes—House Plans—Excavations—Foundation Forms—Foundations—Sills—Girders—Floor Joists—Sub-Flooring—Outside Framed Walls—Inside Framed Walls—Plumbing Framed Work—Sheathing Walls—Ceiling Joists—Roof Framing—Roof Sheathing—Cornices—Roofing—Porch and Bay Framing—Exterior Wall Covering—Interior Wall Covering—Stairs—Interior Trim—Windows—Doors—Hardware—Closets and Shelving—Finish Flooring—Finishing—Index.  
1940. 3rd. 286 pages, 600 illustrations, 9 x 12, cloth, \$3.00.

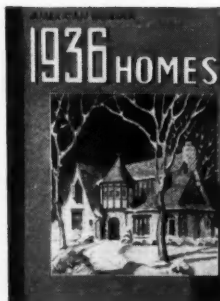
## Practical Job Pointers



Compiled by Nelson L. Burbank

Job pointers, kinks, short cuts and new methods of doing old jobs are described and illustrated. Some 600 ideas and modern methods of doing various jobs, as worked out by men in the building industry have been brought together and classified. They have appeared in the "Job Pointers" section of *American Builder and Building Age*.

The drawings are to scale. A seven-page index lists each item by its title and many are cross-referenced by subject. This enables quick reference being made to time, money and effort saving methods of doing all kinds of building jobs.  
1940. 2nd. 130 pages, 600 illustrations, 9 x 12, cloth, \$2.00.

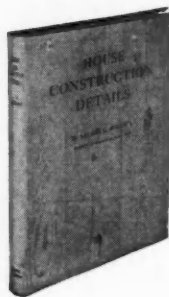


## American Builder Homes

The plan book contains 24 pages of modern homes, 34 pages of standard designs, 34 pages of low cost homes and 34 pages of country and farm buildings and structures. Some 28 pages are devoted to new ideas for restyling and modernizing kitchens, bathrooms, breakfast and dining nooks, recreation rooms, and dens and studies.

1936. 172 pages, 300 illustrations, 12 in full color, 9 x 12, paper, \$3.50.

## House Construction Details



By Nelson L. Burbank

Formerly Instructor, Building Vocational High School, Cincinnati, Ohio

Builders will find this book particularly helpful when making changes in a set of stock plans and when planning alterations. By referring to the detailed cross-index they can quickly locate construction details and photographs of the finished work for any part of a house. It shows the use of all modern building material. The layout of these details is in accordance with standardizations recommended by housing authorities wherever such have been established.

Many of these scale drawings and photographs have appeared in *American Builder and Building Age*. Step-by-step procedure is shown with just enough text to explain general principles. The various chapters are presented in construction sequence, from foundation to finish.

1940. 320 pages, 1,500 illustrations, 9 x 12, cloth, \$3.00.

## Simplified Carpentry Estimating



By J. Douglas Wilson

Formerly Head of the Building Trades Department, Frank Wiggins Trade School, Los Angeles, California

and

Clell M. Rogers

Mathematics Instructor, Venice High School, Venice, California

Explains as simply as possible how to "take off" from a set of plans and specifications a bill of material for a frame house. Rules and methods for making accurate building material lists are described and illustrated. Simple arithmetic methods are given for accurately estimating all costs. Helpful tables are included.

Much of this material originally appeared in a series of articles in *American Builder and Building Age* entitled "How to Estimate Accurately." Mr. Wilson's 12 years' experience in teaching the subject and his background as an estimator and builder during vacation periods was drawn upon for most of the data.

1940. 208 pages, 71 illustrations, 5 x 7, cloth, \$2.50.

### BOOK SERVICE DEPARTMENT

AMERICAN BUILDER and BUILDING AGE  
30 Church Street  
New York, N. Y.

*For*  
**SPEED** in Residential  
 and Commercial  
 Construction  
**Build with FIR-TEX**

► **Cuts Labor Time**

Fir-TEX goes up fast—it saves time in actual application. Fir-TEX speeds up the entire job, too—because there is no waiting for plaster to dry. Fir-TEX applicators can start work as soon as the plumbing and wiring are in. And as soon as the Fir-TEX interior finish panels are nailed on, the occupant can move in.

► **Cuts Material Costs**

Fir-TEX boards are *double-duty* boards. Each provides *insulation* and also does a *second job*. (See the installations at right). All Fir-TEX boards *build as they insulate*. Fir-TEX saves both on first cost, and also reduces fuel bills substantially. Fir-TEX is permanent; will last as long as the building; cannot sag or settle. Fir-TEX is a prime investment.

► **Made of Tough Wood Fibers**



Fir-TEX insulation board is composed of sound wood fibers. Tough long fibers from natural wood, grown in the heart of the great Pacific Northwest lumber area, are thor-

oughly sterilized and felted together into boards of maximum insulating qualities and tremendous bracing strength.



This room was ready for occupancy only a few days after the wiring was installed. The walls are built of Fir-TEX Colorkote panels and the ceiling of tile. When Fir-TEX is used, there is no waiting for plastering, plaster to dry, for wallpapering, or calcimining.



Use Fir-TEX Insulating Lath for a better plaster base to eliminate plaster wastage between lath, to reduce plaster cracks to a minimum, to eliminate unsightly lath marks.



Use Fir-TEX Firkote sheathing on all side walls and roof areas. It takes the place of ordinary sheathing and building paper and provides an unbroken area of insulation. It has greater bracing strength than wood sheathing.



**Send for NEW Builders' Catalog** 16 pages of helpful information; master specifications; full data on Fir-TEX products.

Mail to: FIR-TEX  
Porter Building, Portland, Oregon.

Name \_\_\_\_\_

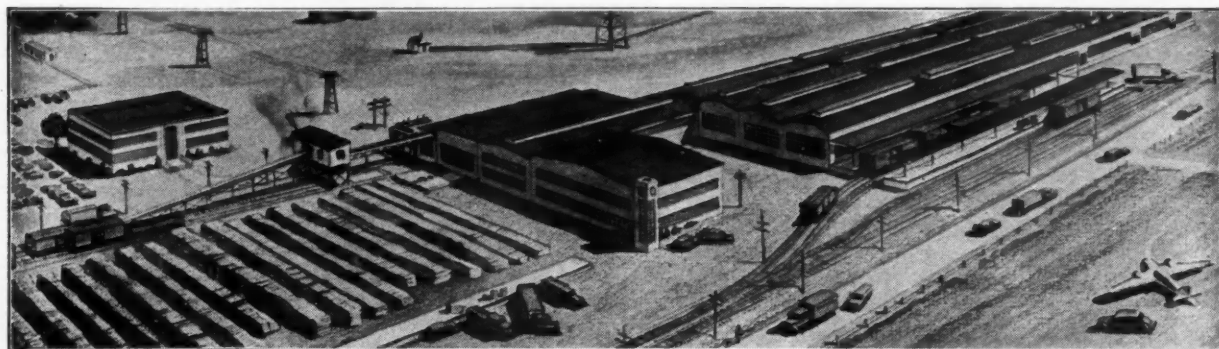
Address \_\_\_\_\_



AB-A41



# A NEW PLANT...

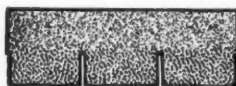


This efficient, new Flintkote plant at Meridian, Mississippi, will soon be producing a new, modern line of structural and decorative insulation boards to meet the rapidly growing demands of America's builders. Other strategically located factories with additional improved facilities, insure prompt delivery of all Flintkote building materials. More important than ever before, prompt delivery of time-proved products protects the profits of men who build with Flintkote.



## INSULATION BOARDS

A complete, new ultra-modern line of Flintkote structural and decorative insulation board products made from native Southern timber will soon be available. Structural materials include building board, asphalt-coated sheathing, insulating lath and Thriftex Wallboard. In decorative products, the latest, up-to-the-minute, highly styled tile, plank, panels and accessory materials. Efficient insulation and pleasing interior decoration at one low cost—in one fast, dry operation.



## ASPHALT SHINGLES

Builders and roofing contractors everywhere are familiar with the many innovations, improvements and distinctive colors in asphalt shingles pioneered by Flintkote. Flintkote Thikbuts, Tapered Strips, Hexagons, Giants and other types of strip and individual shingles give complete coverage of all types of private and public buildings. Flintkote asphalt shingles are styled and priced right — and backed by one of the world's oldest and largest roofing manufacturers.



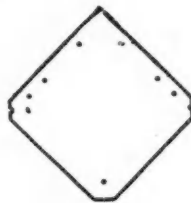
## ASPHALT SIDINGS

Attractive, mineral-surfaced asphalt sidings can be applied rapidly—need no painting. Ideal for low cost commercial buildings or housing. This famous line includes brick-type sidings in strips and rolls and many other distinctive designs in both strips and individual siding shingles. Flintkote makes colors and styles which have proved most popular with property owners and applicators in all types of markets.



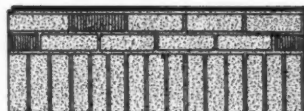
## ASBESTOS SIDINGS

Fireproof, good looking, quickly applied—Flintkote asbestos-cement is first choice siding on many Government and private housing projects. Three butt lines—Waveline, Shake and Straight-Edge; three surface finishes—Tapertex (illustrated), Woodgrain and Smooth; several attractive colors and two sizes make the Flintkote line one of the most versatile of all asbestos sidings.



## ASBESTOS SHINGLES

A necessity where the hazard of roof fires *must* be avoided. Flintkote asbestos-cement shingles are permanent ... made of two everlasting ingredients—fireproof asbestos fibres and portland cement. They are available with the distinctive Flintkote Woodgrain finish. Made in Flintkote's modern mills, these fire-safe asbestos-cement shingles offer top protection and long life.



## INSULATED BRICK SIDING

Flintkote insulation board—full 1/2" thick, saturated and coated with asphalt and surfaced with modernly styled mineral granules, "wire cut" to simulate expensive brick. Many contractors have discovered that these easy-to-apply panels provide lowest cost insulation *plus* finished siding.

# and IMPROVED SERVICE

## celebrate our 40th anniversary

# FLINTKOTE



### COLD PROCESS ROOFING

Introduced in 1940 after more than 10 years of careful development and field testing, Flintkote Cold Process, without fire or fuss, is already being widely used for new built-up roofing of bonded quality and for roof maintenance. Flintkote Cold Process Felts and Static Asphalt, utilized in this unique system of Roof Service, have been favorites for years. This new method of cold applied roofs supplements a complete group of standard Flintkote specifications for hot applied built-up roofings.

### ROLL AND BUILT-UP ROOFINGS

Available promptly in quantity or fill-in orders . . . rugged, durable roofings at popular prices. Rex Flintkote, Stalwart, Reliance and Guardian are respected names in the big, smooth, roll roofing field. Flintkote Mineral Surfaced Roll Roofings attract favorable attention by their rich coloring and fire resistance. Flintkote dealers stock a complete line of Flintkote Built-up Roofing Materials that offer bonded performance at low cost per year.



### ASPHALT PAINTS AND PLASTICS



Flintkote has long been famous for its Static and other asphalt roof and protective coatings, roof and plastic cements. Here is another instance where Flintkote dealers are especially helpful to you. Dampproofing and waterproofing to meet rigid specifications. Flintkote Static Asphalt coatings will not flow, alligator or crack . . . will outlast any known type of bituminous material exposed to the weather.



### ROCK WOOL

Flintkote dealers and factory branch stocks offer insulating materials in many forms. Flintkote Dura rock wool bats, with moisture-proof backing, for sidewalls and open attics, Pre-Pac wool in semi-bat form and long fibre wool for hand application, plus granulated

Flintkote rock wool for pouring or blowing.

● Flintkote dealers recommend and sell Flintkote nationally advertised building materials because they know every Flintkote product provides a bigger dollar's worth of protection, assures the lasting satisfaction which builds good will.

<b>ASBESTOS SHINGLES</b> Dutch Lap Hexagonal	<b>COLD PROCESS BUILT-UP ROOFING</b>
<b>ASBESTOS SIDINGS</b> Waveline Sidings Shake Siding Straight-Edge Sidings Tapertex Siding Woodgrain Sidings	<b>HARDBOARD PRODUCTS</b> Flintboard DeLuxe Flintboard RexBoard HardBoard HardBoard Tile Tempered HardBoards Tempered Flooring
<b>ASPHALT SHINGLES</b> Tapered Strips Thikbut Strips Cedartex Thikbut Strips Stalwart Strips Hexagon Strips Square Butt Strips Rextab Strips Flintlock Shingles Staple-Lox Shingles Dutch Lap Giant Shingles Super Giant Shingles	<b>INSULATED BRICK SIDING</b>
<b>ASPHALT SIDINGS</b> Embossed Brick Strip Siding Thikbrik Siding Strips	<b>INSULATION BOARD  </b> Asphalt-Coated Sheathing Building Board Insulating Lath Insulating Tile Insulating Plank Roof Insulation Board Thriftex Wallboard
<b>ASPHALT PAINTS &amp; PLASTICS</b>	<b>ROCK WOOL INSULATION  </b> Granulated Rock Wool Dura Bats (Paper-backed) Pre-Pac Rock Wool Long Fibre Rock Wool
<b>BUILDING PAPERS &amp; FELTS</b>	<b>ROLL ROOFINGS</b> Mineral Surfaced Smooth Surface
<b>BUILT-UP ROOFING MATERIALS</b>	<b>ROOFING ACCESSORIES</b>
<b>STATIC ASPHALT COATINGS</b>	

Products of the same high quality are sold by the Beckman-Dawson Roofing Company, and by the Richardson Roofing, affiliates of The Flintkote Co.

● Flintkote users save money, save worry, because Flintkote's modern factories and warehouses are conveniently located for quick shipments. Flintkote offers you friendly, practical help of field representatives who are not merely salesmen. Write for new catalogs. The Flintkote Company and its Sales Representatives are experienced in handling the details of Defense work . . . gladly offer their advice and consultation without obligation.

**THE FLINTKOTE COMPANY** 30 ROCKEFELLER PLAZA  
NEW YORK, N. Y.

ATLANTA . . . BOSTON . . . CHICAGO HEIGHTS . . . DETROIT . . . NEW ORLEANS . . . WACO . . . LOS ANGELES



# The AMERICAN HOME 10¢

IN 1940  
**373\*** PAGES OF PLANS AND IDEAS  
FOR HOME BUILDING AND REMODELING

**IN THESE PAGES** over two million families are shopping for building and remodeling ideas every month! Your manufacturers' advertising shows these active, prospective customers the advantages of the products you merchandise.

• • •  
You'll do a more complete selling job by following this advertising closely and noting the selling points. Feature the lines your customers know. Remind them of THE AMERICAN HOME advertising. It's a proven formula for ready acceptance and quick sales!



*ALL PLANNING PAGES*

*NO "PASS-TIME" PAGES*



**FOR BOTH MEN AND WOMEN**



\* 220 editorial pages which sold the ideas, and 153 advertisers' pages which sold the products; more of both kinds of "planning pages" in THE AMERICAN HOME than in any other major magazine!

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Raym  
Ruben  
Ratlar  
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Tile  
Timber  
Lum  
U. S. G  
Build  
U. S. S  
"U. S.  
Steel  
Westerr  
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Cutler-H  
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*Tile*  
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*"U. S. S." Steel Windows*  
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*Cutler-Hammer Multi-Breaker*  
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*Chronotherm*  
 Noblitt Sparks Industries, Inc.  
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*Bennett Fireplace & Equipment*  
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 Huntington Iron Works  
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 Superior Fireplace Company, *Fireplaces*



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*Pure Gum Turpentine*  
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*Eagle White Lead Paint*  
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*Varnish*  
 Lead Industries Association  
*White Lead Paint*  
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 Medusa Products Co., Div. Medusa  
*Portland Cement Co., Paints*  
 Muralo Company, Incorporated  
*Mural-Tone Wall Paint*  
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 National Lead Company  
*Dutch Boy White Lead*  
 Pittsburgh Plate Glass Company  
*Pittsburgh Paints*  
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*Red Metal Roof Paint*  
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*Sherwin-Williams Paints*  
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*Truscon Paratex*  
 U. S. Gypsum Co., *Paints*  
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 American Stove Company, *Magic Chef*  
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 Coppee, Incorporated  
*Napanee Furniture & Equipment*  
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 Curtis Companies Service Bureau  
*Kitchen Cabinets*  
 Edison General Electric Appliance Co.  
*Hotpoint Electrasink, Hotpoint Electric Range and Refrigerator*  
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*Florence Range*  
 Formica Insulation Co., *Dinette Tops*  
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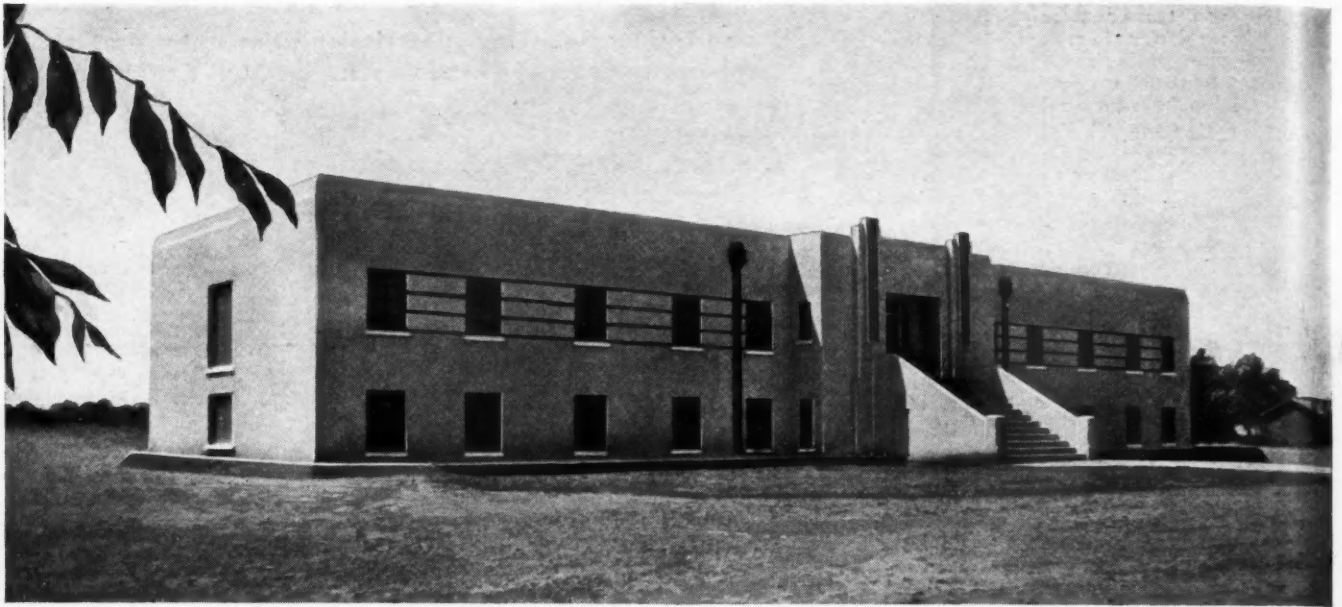
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## How to Get "SECURITY HOMES"

Glance through the Table of Contents for SECURITY HOMES as reproduced in part on this page and you will see a few of the designs and features contained in this valuable 1941 Plan Book. But there is much more than this small sample—SECURITY HOMES has 180 pages, 8½ x 11, packed from cover to cover with up-to-the-minute features, articles, and a wealth of low cost home designs to build today. Get your copy of SECURITY HOMES by returning the coupon with your remittance for a subscription or renewal to AMERICAN BUILDER at the rate of \$2 for one year, \$3 for two years. SECURITY HOMES is obtainable in this way only.



**ARTESIA MEMORIAL HOSPITAL:** Artesia, New Mexico  
**ARCHITECT:** Richard Gardner, Denver, Colo.  
**BUILDER:** B. G. Robinson, Artesia, New Mexico  
**DEALER:** Big Jo Lumber Co., Artesia, New Mexico



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Can you think of two better reasons for using a product than that it saves you time and money? In connection with his use of Lehigh products in the Artesia Memorial Hospital, Builder Robinson wrote us an unsolicited letter from which we lift three quotes.

*Quote No. 1:* “Walls, columns and outside stucco are of normal cement.”

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His comment on Lehigh Mortar Cement brings us to

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COLONIAL BLUE LINOWALL inset with a vine motif in heavy gauge blue linoleum gives this bathroom distinctive, practical walls. This is just one example of the countless design possibilities you have in Linowall. These walls are money-saving, too—easily washable, waterproof, permanent. The floor is Armstrong's No. 025 Marbelle Linoleum.

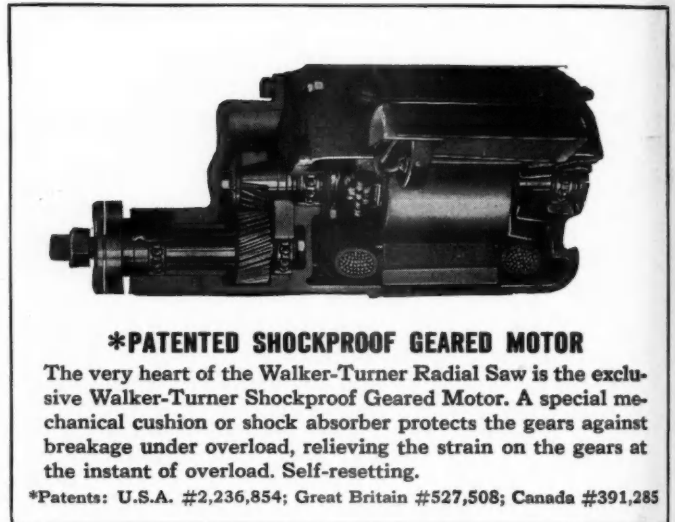
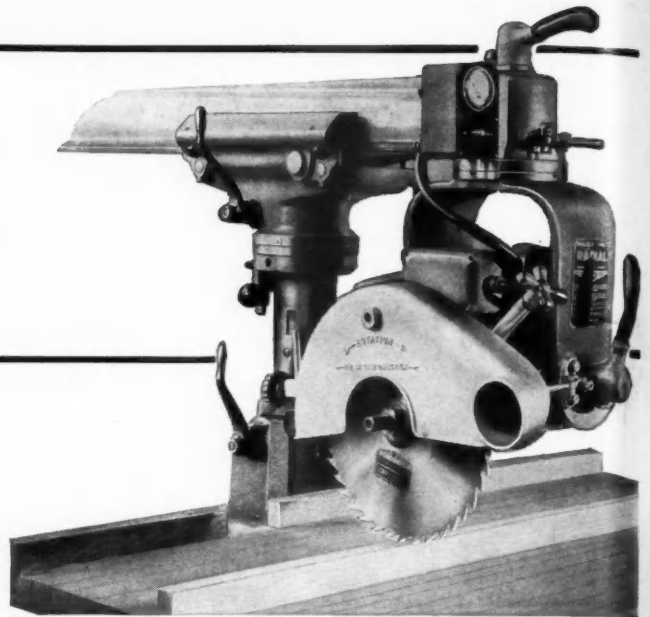
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INCREASES RIM FORCE**

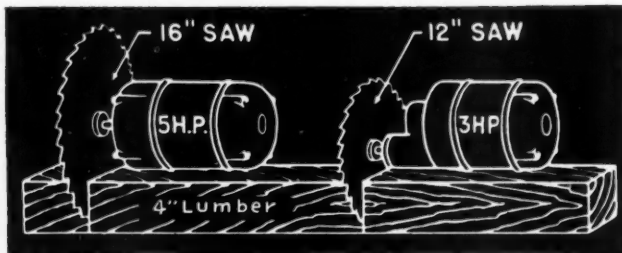
For more than three years we worked and studied to obtain one great mechanical advantage for a radial saw that has for many years been recognized as a vital need. This was the problem of getting the shaft down close to the work so that smaller saws, providing greater rim force, could be used. In the Walker-Turner Radial Saw we have succeeded beyond our most optimistic hopes. It is chiefly due to the Walker-Turner Miracle Motor—a shockproof geared motor of the most advanced design. As compared with the ordinary motor, having the saw blade direct-connected to the rotor shaft, the Miracle Motor can make equal cuts with much smaller blades and, therefore, with greater rim force. This is clearly illustrated in the drawing below.



**\*PATENTED SHOCKPROOF GEARED MOTOR**

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\*Patents: U.S.A. #2,236,854; Great Britain #527,508; Canada #391,285



**WHY THE W-T GEARED MOTOR INCREASES RIM FORCE**

The rim force of a saw equals torque divided by radius. Therefore, the smaller the radius of the saw, the greater the rim force. As an illustration of the efficiency of the Walker-Turner Geared Motor, note that in the drawing a 12" blade on the W-T Motor will make a 4" cut, which requires a 16" saw on the ordinary motor. And while the 3 h.p. Walker-Turner Motor delivers a rim force of 15.8 lbs. in., the ordinary 5 h.p. motor delivers only 14.7 lbs. in.

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<b>SASH-B</b>	NO	NO	NO	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	YES	NO	NO	<b>30%</b>
<b>SASH-C</b>	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	NO	YES	NO	NO	NO	NO	YES	NO	NO	<b>25%</b>
<b>SASH-D</b>	NO	NO	NO	NO	NO	YES	YES	YES	NO	YES	NO	NO	NO	NO	NO	NO	YES	NO	NO	<b>30%</b>
<b>SASH-E</b>	NO	NO	NO	NO	NO	YES	NO	YES	NO	YES	NO	NO	NO	YES	NO	NO	YES	YES	NO	<b>35%</b>

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## VEOS Porcelain Enamel on Steel TILE



• Veos is not offered as a substitute for conventional clay-bodied tile, nor is it in the price range or comparable with synthetic surface-painted wall boards and other inferior wall covering. Veos is an improved wall tile, moderately priced, that provides in a glass-smooth surface of genuine porcelain enamel, the same high glaze and delicate colors of fine ceramics.

Veos will last as long as the wall to which it is applied, and carries an unqualified 25-year guarantee against surface crazing, cracking, or color fading. Installation is simplified with Veos. A patented self-locating foundation sheet eliminates expensive wall preparation, insures perfect alignment of every tile and saves time in application. It also provides  $\frac{1}{2}$ " of standard thermal insulation.

A Veos installation saves 75% in weight. Ideal for ceilings as well as walls. Six standard sizes of tiles and ten pastel colors at no cost over black and white, permit unlimited use of color and ornamental design. In remodeling work, Veos is installed right over existing walls, without muss, fuss, or litter—and in less time than it takes to do a good paint job. Veos is proving its many advantages in millions of square feet of installations.

*If no Veos dealer is in your immediate locality (see classified telephone directory), write us for complete data.*

DAVIDSON ENAMEL COMPANY, Dept. B, CLYDE, OHIO

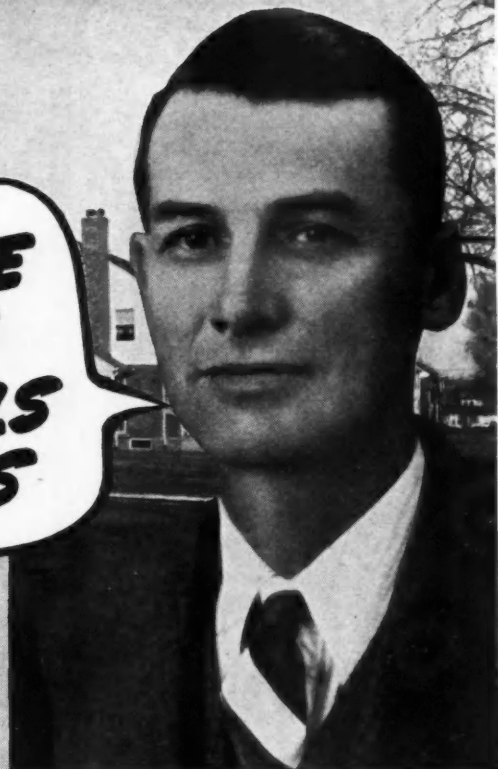
*The Artistry of Ancient Ceramics PLUS the Permanence of MODERN STEEL*



# "Sure, I Use Andersen Narroline Windows"



**THEN I DON'T HAVE  
TO WASTE TIME  
ON SERVICE CALLS  
AND COMPLAINTS**



That's What  
WM. E. KANNGIESSER,  
of Kanngiesser Bros.,  
Contractors in Columbia,  
Missouri, Reports.

## CUT COSTS ON INSTALLATION WITH ANDERSEN UNITS!



When you specify Andersen Narrolines set up, units are delivered, frames assembled with sash hung, flat weights and chains blocked in place, double action weatherstrip already applied.

Set units in wall, nail wide blind stop to studding, nail head and sill windbreaks to headers and plates. The job is done, all ready for trim.



## ONE ANDERSEN JOB SELLS ANOTHER

The word-of-mouth advertising that contractors get when they use Andersen Narroline lifetime windows in the homes they build is a powerful factor in bringing those same contractors additional contracts. One of the priceless assets of a contractor is the good will and advertising received from his satisfied home owners. Andersen Narroline Windows play a large part in winning this good will.

"There's nothing I hate worse than complaints and service calls on leaking or sticking windows. They cost me real money and besides, the owner of that house is a poor advertisement for me. So I install Andersen Narroline double-hung Window Units in every house I build. That means I just install 'em and forget 'em. And believe me, when a housewife learns what it is to have really good windows in her new home, she becomes a real booster for the contractor who put them in."

**JUST STOP** a minute and figure it out. It isn't what a window costs delivered on the job—it's the *installed cost* that you pay for. And that installed cost includes what you pay a man to service window complaints.

So more and more contractors are using factory fitted, precision built Andersen Narroline Window Units. They never need cutting, fitting, or trimming. Right now, they are priced the lowest in Andersen history. So when you consider their *installed cost*, chances are they'll save you real money. Hundreds of contractors who watch costs carefully have found that to be a fact.

**ASK YOUR LUMBER DEALER FOR DETAILS AND PRICES  
ON ANDERSEN NARROLINE COMPLETE WINDOW UNITS**

ANDERSEN  
CASEMENT UNITS  
NARROLINE UNITS  
BASEMENT UNITS

*Andersen Corporation*

BAYPORT, MINNESOTA

**ONLY THE RICH CAN AFFORD POOR WINDOWS**

ANDERSEN  
HORIZONTAL  
GLIDING UNITS  
MASTER FRAMES



# Majestic



## BUILDING PRODUCTS FOR THE MODERN HOME

### MISCELLANEOUS NECESSITIES



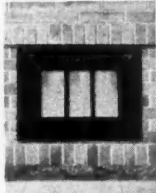
Majestic manufactures a wide assortment of high-quality castings and other metal building necessities. Such items as Access Doors, Ash Pit Doors, Ash Dumps, Flue Thimbles, Porch Column Bases, Cistern Rings and Covers, Stack Type Clean Out Doors, Ventilating Foundation Grates, Bell Trap Cesspools and Sewer Tile Strainers. For these items call Majestic.

Majestic Steel Basement Sash combines adjustable ventilation, weathertightness and other convenience features with durability.



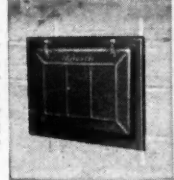
### COAL CHUTES

21 years of leadership makes "Majestic" synonymous with coal chutes—a valuable basement accessory that ends broken windows and ruined sash. A Majestic Chute is also burglar-proof and carefree in service.



A quality chute (at left) offered with solid or glass panels. Glass panels are set in rubber and protected by a steel shield that drops into place automatically when chute is opened. Gravity lock can be operated by convenient pull cord. Heavy steel, covered with asphaltum paint.

Majestic "Special" Chute (at right) has extra heavy rolled steel frame, electrically welded corners, sturdy hinges, automatic burglar-proof lock and heavy pressed steel door. Finished with asphaltum. A real buy in low-cost chutes.



Majestic Grade Line Chutes (at left) put the exterior opening on the grade line. Built for hard service. Special door flange makes this chute practically watertight. Gravity latches operate with chain and pull cord. Body angle iron re-enforced at edges and corners. Finished in rust resisting asphaltum.



### INCINERATORS

Majestic Incinerators offer the home the modern, healthful, safe and convenient way to dispose of garbage and rubbish. Offered in types to fit any pocketbook. Attaches to ordinary flue. Does not interfere with heating plant. Small, attractive and built to last for years. Fired only when filled. No odors in basement. Only infrequent ash removal necessary. Surprisingly low in cost.



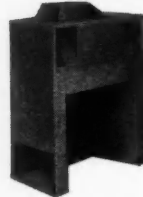
Model No. 30 (at left) requires no fuel other than the combustible rubbish that the average household places in it when filling. Fired only when filled. Burns wet and dry garbage. Costs nothing to operate. 3 bushel capacity. Low cost will astound you!

Gas fired model (at right) for those who prefer this type. Chimney draft dries garbage so requires only a few cents of gas per week. Other models for coal or wood fuel of similar design and rugged construction are also available.



Items shown on this page are but a few of Majestic's extensive line of quality building products fully described and illustrated in the Majestic catalog which will be gladly sent upon request. You'll find it a valuable buying guide because Majestic has been known to builders, dealers and home owners for quality and as reliable manufacturers for more than 35 years.

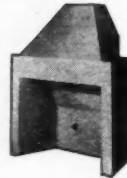
### CIRCULATOR FIREPLACES



Majestic "Master" Circulator (at left) has ingenious "Radiant Blades." Adds 91% more heat-generating surface. Also extra efficiency from enclosed smokedome. Constructed of heavy gauge steel; built in damper; angles at side and other quality features.

The Majestic Circulator works on same efficient principle as modern warm air furnace. Constructed of steel and enclosed in any desired mantel design it sends warm air to all parts of the room—can also be piped to other rooms. Cold air is taken in at bottom, heated, and then passes out at top. Choice of artistic opening grilles offered. A fireplace that will not smoke. Saves time, labor and material. Also saves fuel.

Majestic "Special" Circulator (at right) is a low cost quality unit. Heavily constructed; built in damper; and proportioned throughout for efficient operation. All joints are electrically welded. Offered in widths from 28 to 52 inches.



### FIREPLACE ACCESSORIES AND FIXTURES



Majestic also offers a selection of grilles for inlets and outlets in circulator fireplaces; cranes, fireplace ornaments, and various sizes of grate baskets. Above is Majestic's ingenious controlled-draft basket grate. Door at bottom regulates fire. Ideal for circulators! Regulates heat and saves fuel. Also check with Majestic for an attractive line of fireplace fixtures including screens, andirons, firesets, coal hods and wood holders in various designs and finishes. Attractively priced.

### UNDERGROUND GARBAGE RECEIVERS



A Majestic underground Garbage Receiver "buries" the garbage problem. It is completely hidden in the ground except for the cover. A tight fitting foot-operated lid prevents odors escaping and eliminates other unsightly, unhealthy features of the old garbage can. Garbage will not ferment or freeze.

SEND FOR FREE COPY OF COMPLETE CATALOG

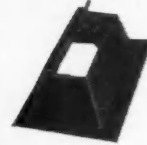
The MAJESTIC COMPANY

786 ERIE STREET

Huntington, Indiana

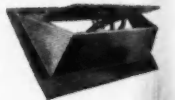
### FIREPLACE DAMPERS

Majestic Dampers assure top efficiency, prevent smoking, control draft, close almost air-tight, simplify construction—and feature Majestic quality throughout. Open damper valve forms deflector shield for down draft. Poker control is standard equipment . . . face control at slight

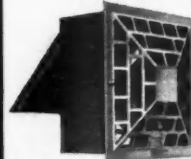


extra cost. Built-on lintels save time, materials, labor. Heat, smoke, soot and rust can't impair efficiency of damper or controls.

Above is the "quality" damper. Accurately designed, cast construction and with ingenious damper. A "Top" value. The "Special," shown at right, has a cast semi-steel body, steel plate valve and furnished with or without built-on lintel.

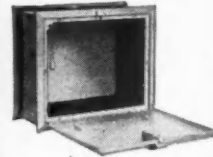


### KITCHEN VENTILATING FAN



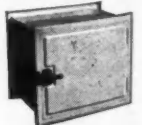
The Majestic Fan has a four bladed, 10 inch fan and a quiet operating, waterproof motor (A. C. current). Fan and motor quickly removed. Attractive grille is finished in white enamel. Insulated, weatherproof outside door opens or closes automatically when motor is turned on or off by inside pull chain. Square body is adjustable to various wall thicknesses.

### MILK AND PACKAGE RECEIVERS



Majestic's "Deluxe" Package Receiver is of extra heavy construction and beautifully designed. Interior door, when open, forms convenient shelf. Fully insulated. Automatic lock for outside door. Package deliveries can be safely made inside the house with Majestic Receiver. No tracking in dirt—no unexpected intrusions—no danger of theft. After delivery is made outside door automatically locks. Full insulation keeps out cold and noise and protects deliveries. Harmonizes with any interior. Attractively priced.

Model "P" (at right) a low cost, fully insulated receiver with easily installed adjustable body. Door opens at side. Automatic outside lock. Attractively finished.

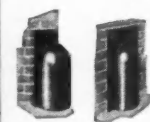


### OUTDOOR FIREPLACE EQUIPMENT



For building an efficient outdoor fireplace of any exterior design Majestic offers a full line of the required metal equipment; complete units, tops, grates, doors and accessories. Illustrated is a complete unit with adjustable grates for using coal, charcoal or wood. Offered in two sizes with bar type or solid top. Economical.

### WHEEL GUARDS



Majestic Wheel Guards deflect wheels and prevent hubs from striking masonry. Offered in corner and jamb type. Heavily designed and made in cast semi-steel. Height 22". Easy to install.

### WINDOW WELLS

Majestic Window Wells are guaranteed for 20 years. They save cost when windows are below grade line. Offered in round or straight type and a wide range of sizes. Built of 14 gauge steel with solid steel top edge. Smooth finish eliminates damage from settling and better reflects light.





WANT A SIMPLE RULE  
FOR A  
*Long-Wearing*  
PAINT?



PAINTERS SAY THE LEAD WE MINERS DIG MAKES PAINT TOUGH AND LONG-LASTING

Here's a fact that builders know from long experience:

*Paints mixed with pure white lead resist weather better. It's a pretty safe rule: the more white lead, the better the paint!*

White lead comes by its durability naturally. It is made from lead—a metal so tough it has few equals in combating the elements.

White lead, too, shrugs off heat waves, cold snaps, rain, snow—without cracking and scaling. It wears slowly, cleanly and evenly—keeping its good looks a long time.

So when ordering paint it's a good idea to remember this: *You can't get a more durable paint than one made with 100% pure white lead.*

But using white lead doesn't mean the paint itself must be white. You can tint white lead to almost any color you wish.

White lead assures a long paint life—something that prospective buyers are bound to like. When you consider that it costs no more than regular quality paints, this is one case where the best is really cheapest.

LEAD INDUSTRIES ASSOCIATION  
420 Lexington Avenue, New York, N. Y.

**HOW TO SAVE MONEY ON PAINT JOBS**  
You'll find this and other valuable information in a free booklet, "WHAT TO EXPECT FROM WHITE LEAD PAINT." Send for your copy today.



ASK YOUR DEALER ABOUT THIS. In addition to the regular paste form, pure white lead is now available as a ready-to-brush paint in convenient, popular-size containers at paint dealers' everywhere. You'll find this new paint a timesaver.

**Independent Survey Shows:**

# Users Prefer Iron Fireman Over Other Automatic Heat

You profit when you build homes for *low operating cost* . . . by installing Iron Fireman automatic coal heat.

*First*, you win the endorsements of purchasers. Here are the results of an independent survey made in nine states by one of America's largest research organizations (name on request):

**91% of the Iron Fireman users who formerly burned expensive automatic fuels say money-saving Iron Fireman gives them better heating.**

**An average fuel saving of 43%, in comparison with the automatic fuels previously used, was reported.**

*Second*, you make your homes more saleable, because Iron Fireman operating savings help pay the first cost on hundreds of dollars worth of additional modern conveniences.



## Don't let High Fuel Bills become a "2nd Mortgage" on the Houses you are building

If Iron Fireman saves one of your customers \$5 a month, in comparison with other automatic fuels, then this \$5 can be added to the FHA payment . . . *paying for another \$850 of modern conveniences.* These advantages are clearly outlined in an informative bulletin, "How to Build or Buy a House for Low Operating Cost." Use this bulletin in talking with prospective clients . . . it will help you build business. Mail coupon for free copies.

**IRON FIREMAN**  
Automatic Coal Stokers

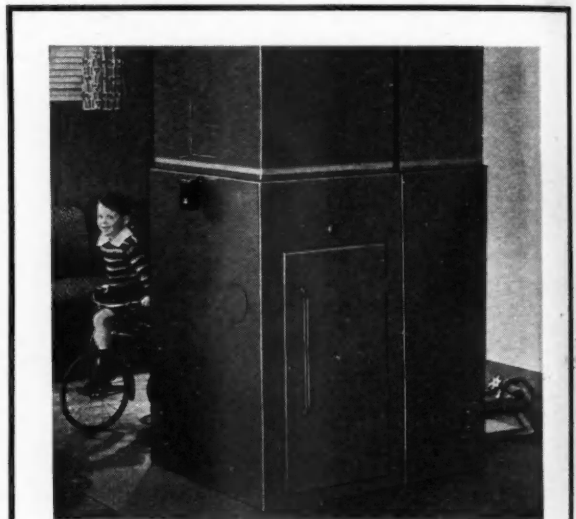


**FREE . . . copies of Folder for Your Customers.**

IRON FIREMAN MANUFACTURING CO. Portland, Ore.; Cleveland; Toronto.  
Mail to: 3132 W. 106th Street, Cleveland.

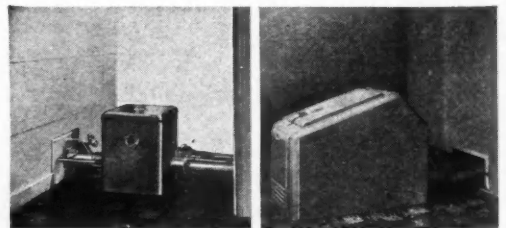
- Send me \_\_\_\_\_ copies of "How to Build or Buy a Home for Low Operating Costs."—  
No obligation.
- Send data on Iron Fireman stokers for new homes.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_



**Only \$389.50\* . . . Complete  
AUTOMATIC  
Winter Airconditioner**

**NO COAL HANDLING . . .** This new Iron Fireman Winter Airconditioner has a built-in "Coal Flow" stoker which feeds coal from bin. Full thermostatic control. Warms, filters, humidifies, circulates air.



**Coal Flow \$226\*      Standard \$179.50\***

The most popular bin-feed stoker. No manual coal handling. Quickly installed in any solid-fuel furnace or boiler.

Adds only \$1.20 to \$1.50 per month to FHA terms! Gives automatic heat with low first cost and low operating cost.

\*All prices include complete automatic controls; plus freight and installation. Slightly higher in Canada.

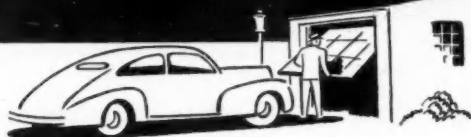




**IT'S THE**  
*Ups and downs*  
**THAT COUNT . . .**

*in the life of a*

**GARAGE DOOR . .**



Every car owner wants his garage door to open easily and safely regardless of the weather. The CARR-dor goes up and down easily and quickly—in all kinds of weather. Snow, ice or wind, do not affect the smooth, easy operation.

Your public now demands overhead acting garage doors, and the CARR-dor meets every requirement of quality, construction, performance and economy. Just as economical to install as its reasonable price, the CARR-dor with its simple construction provides trouble-free operation.

The CARR-dor only requires 1½ inches of clearance at the top, and only 2 inches at the sides.

Get more complete information, details and illustrations of actual installations. Mail the coupon today.

**CARR, ADAMS & COLLIER CO.**

DUBUQUE, IOWA

**BILT WELL  
 WOOD WORK**

*the* **CARR-dor**

CARR, ADAMS & COLLIER CO.,  
 Dept. AB-4, Dubuque, Iowa  
 Please send me, without cost or obligation,  
 literature and information on BILT-WELL  
 CARR-dors.

I am a  BUILDER  DEALER  ARCHITECT

Name \_\_\_\_\_

Address \_\_\_\_\_

State \_\_\_\_\_

City \_\_\_\_\_

SEE 14/51 IN  
 SWEET'S  
 CATALOG, 1941



PUT  
*Sales Appeal*  
 INTO YOUR  
**BATHROOMS WITH**  
**MIAMI** *CABINETS*  
*AND ACCESSORIES*

*Sparkling Models in*

- 1—All-Stainless-Steel
- 2—"Alumilited" Aluminum

They're new—exclusive—beautiful and decorative beyond anything you've seen—MIAMI'S latest achievement . . . irresistible in their appeal to home buyers everywhere.

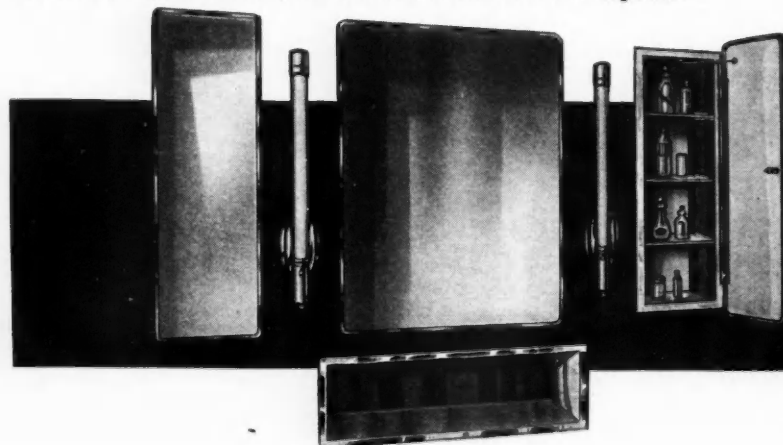
Two distinct new lines—one in All-Stainless-Steel—another in Aluminum with "Alumilited" lifetime finish. Both lines offer advantages of lasting, rustless metals that will never check, crack, craze or discolor—that harmonize with any color scheme—cabinets whose beauty will be undimmed by time. To see these new units is to know the public will demand them for unending service—for real economy—for more beautiful bathrooms.

MIAMI Bathroom Cabinets are known and used throughout the world. There are models to meet the requirements of every type of home, hotels and other private and public institutions. Make your homes more salable—build reputation for quality and value—*increase your profits*—by installing MIAMI Cabinets and Accessories.

(Below) *The Master's Ensemble: Chrome framed, mirror unit flanked by two fluorescent light brackets and two side cabinets. Chrome-framed, mirror-lined, recess shelf below center mirror.*

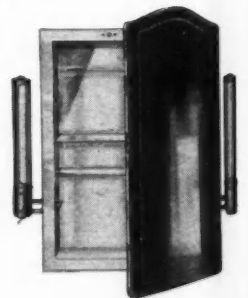
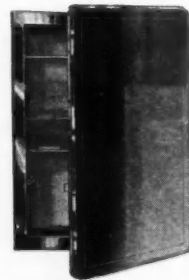


Write today for new Catalog—address Dept. AB.



(Above) *Venetian type cabinet with chrome-framed mirror and No. 5 light brackets.*

(Below) *All Stainless Steel Cabinet with framed mirror.*



*Aluminum Cabinet with stainless steel framed mirror and No. 5 light brackets. Nite Lite inside of cabinet.*

**MIAMI CABINET**  
 DIVISION  
*The* **PHILIP CAREY COMPANY**  
 MIDDLETOWN, OHIO.

..... it's on the  
**YANKEE STADIUM**



**IT'S ON CONNIE MACK'S HOUSE**



**IT'S ON THIS COAST GUARD STATION**



**IT'S EVEN ON THIS COTTAGE**



**AND ON THESE BASEMENT WALLS**



Yes, Medusa Portland Cement Paint is found on all types of concrete, stucco and masonry construction. For almost 20 years this paint has been used successfully on damp or dry, interior or exterior concrete, stucco, or brick surfaces, forming a colorful, washable finish. Because it has a cement base, it keys itself to the wall, making a permanent, hard, cement-like finish.

Economy is another big reason for the popularity of Medusa Paint. It is economical in first cost, it mixes with water instead of expensive oil or turpentine—it requires no undercoating and can be brushed or sprayed on the wall. This water-hardening paint properly applied, really sticks because it is unaffected by the chemical action of lime, alkalis or water and cannot chip or peel. It is available in eight colors, black and white.

For cement floors, we recommend Medusa Floor Coating, an abrasion, alkali and water resisting finish. Use these paints on your jobs this spring. Send the coupon below for your complimentary copy of the book "How To Paint Concrete, Stucco, Masonry and Other Surfaces." It gives complete details on these paints.

**MEDUSA**

**PORTLAND CEMENT PAINT**

**MEDUSA PRODUCTS COMPANY**

Division of Medusa Portland Cement Company  
1002 Midland Building, Department B, Cleveland, Ohio

Gentlemen: Please send me a copy of the book "How To Paint Concrete, Stucco, Masonry and Other Surfaces."

Name..... Address.....

City..... State.....

*Medusa Products also made in Canada by Medusa Products Co. of Canada, Ltd., Paris, Ontario*



# ALUMINUM, DEFENSE, AND YOU



# 1

**WE INTERRUPT** our regular messages to report what's what with aluminum.

**AT THE MOMENT** delivery for civilian use must make way for defense. Everybody knows the reason. Defense requires and is using more aluminum per month than peacetime America ever consumed.

**NEVERTHELESS**, we intend that no one shall have to forego the things aluminum can do best one minute longer than we can help.

**THERE IS NO SHORTAGE** of bauxite, nor of anything else, except time. And Father Time is being given the race of his life.

**WE ARE MOVING**, for example, 35,000 yards of earth a day at Alcoa, Tenn., to get 50 acres under a single roof by September. It will require 193 carloads of roofing felt. Some of the operations in that plant will start even before the walls are up. That's an annual rolling capacity for 120 million pounds of high strength alloy sheet coming along fast.

**LAST MARCH WE STUCK** the first shovel in a cow pasture near Vancouver, Wash. In September a 30 million pound plant was delivering metal. It has been doubled, already. A third 30 million pound unit starts delivering in April; a fourth in May; a fifth in June. From cow pasture to 150 million pounds annual capacity in 15 months.

**A SIDELIGHT:** To make that 150 million pounds of aluminum, we first have to build factories to make 120 million pounds of carbon electrodes. We have to obtain the equipment (transformers, rectifiers, and the like) to feed 162,500 kw. of electricity into the reduction furnaces. This is a generating capacity equal to that of the state of Delaware plus twice that of Mississippi.

**WHAT OF TOTAL PRODUCTION?** In addition to Vancouver, further installations are being made at other of our plants, so that in less than a year their total capacity will be more than double that of 1939, when 327 million pounds were produced.

**IN THE VERY MIDST** of this demand we have lowered the price of aluminum ingot 15%. We state, without reservation, our hope that the price can be still further reduced.

**DEFENSE APPLICATIONS** use aluminum for exactly the same reasons you do. Defense priorities on aluminum simply say that there are some fundamental things that aluminum does supremely well. It will do them still better as important lessons in production, fabrication, and application are learned from every additional pound being produced and used.

**YOU, SIR**, in planning that new house, had hoped to have aluminum windows; to paint it with Aluminum House Paint. We want you to know that we intend to make this shortage as short-lived as possible. Your aluminum is on the way. It is a promise.

**ALUMINUM COMPANY OF AMERICA**

# Here's How Lyon and Brown Sold 77 Homes Instead of 50!



← J. W. Lyon and Walter Brown →



Leaders in Oklahoma City and outstanding in the country, these builders believe in selling "better living" rather than "shelter."

Prices Range From \$4,000 to \$8,500



PHONE 2-2451  
314 N. ROBINSON  
OKLAHOMA CITY OKLA

March 1, 1941

Mr. H. W. Trekell  
General Electric Supply Corp.,  
Oklahoma City, Oklahoma

Dear Mr. Trekell:

On March 24, 1940, we opened new Douglas Place Addition and planned to build during the year a total of fifty G. E. equipped homes in the \$4,000.00 to \$8,500.00 price class. We were pleased to find that at the end of 1940, instead of fifty homes, we had built and sold seventy seven between April 1st and December 20th.

We attribute our phenomenal success in the sale of these homes to being able to offer in our houses the additional selling features that the G. E. equipment offers. We find in our selling that home buyers today want better living instead of just four walls and shelter. We are so thoroughly pleased with the acceptance of G. E. equipped homes that we expect to use G. E. equipment in every home we build in new Douglas Place Addition in the future. It might be of interest to you to know that we have sold these homes as fast as we could build them, many of them before they were completed.

We wish to take this opportunity to thank you and your organization for the splendid cooperation and service you have given us. With sincere thanks and appreciation, we beg to remain,

Very truly yours,

LYON & BROWN

By   
J. W. Lyon

JWL/lh

Read what these builders say about the SELLING FEATURES of GENERAL ELECTRIC Home Equipment

Lyon and Brown have built their success on firm ground — a combination of good construction and high-quality operating equipment. And note what they say about public acceptance — remarks typical of those made by other leading builders who use G-E heating plants, wiring systems, and kitchen appliances *because they help sell houses.*

Perhaps the G-E Home Bureau's House Merchandising Plan can be of help to you, too. It's a *plus service* that includes Architectural Engineering, Promotional and Advertising aids — all designed to increase your sales. Why not find out about it now? There's no obligation.

General Electric Home Bureau, Dept. AB-414  
1285 Boston Ave., Bridgeport, Conn.  
Please send information on your House Merchandising Plan to

I am an  Architect  Building Owner  Building For Resale

Name.....

Address.....

City.....

State..... County.....

GENERAL  ELECTRIC

# WHY DOORS AND WINDOWS OF *Ponderosa Pine*

## ARE SUPERIOR...

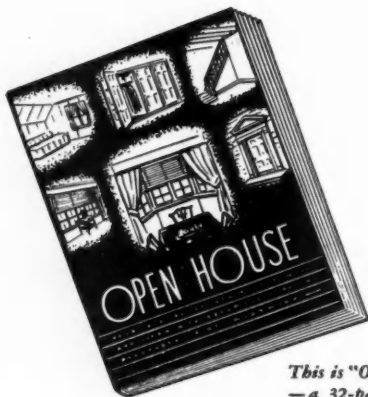
★ Now the public is being told where and how to use more doors and windows! People are being *shown* why Ponderosa Pine doors and windows are *better*.

You know where and how to use doors and windows. But now we are telling people who build and remodel *why* Ponderosa Pine has more to offer in superiority, service and satisfaction.

Here's why! First, "Ponderosa" is *pine!* That means a close and uniform grain that won't "raise." Edges don't splinter. "Ponderosa" is soft-textured, light in color. It has unexcelled smoothness and excellent appearance when worked by machine or by hand. Any architectural woodwork design can be beautifully executed in "Ponderosa." That's why doors and windows of it are popular *stock* items in so many retail lumber yards. Its ability to take paint or enamel, *to hold it better and longer*, is well known. Those are the main reasons Ponderosa Pine has been preferred for doors and windows for over 40 years. They are your best assurance for lasting satisfaction!

"Ponderosa" doors and windows give home builders, home buyers and home remodelers *ideas* for lighter, airier homes in a new book called, "Open House." See BETTER HOMES & GARDENS, AMERICAN HOME, HOUSE & GARDEN, and HOUSE BEAUTIFUL for May. In them begins *Ponderosa Pine's* national advertising campaign offering "Open House," the new idea book, *free*. It tells the story of Ponderosa Pine Woodwork excellence—gives your recommendations strong backing.

Write for your copy of "Open House" and full details about how this program can help you in your business.

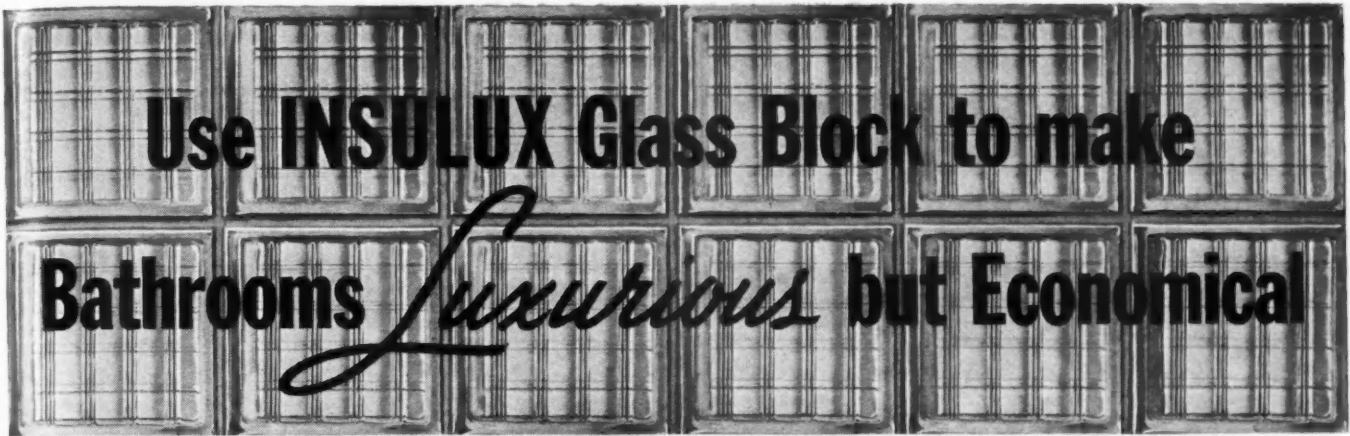


This is "Open House"  
—a 32-page book of  
exciting ideas. Write  
for a copy.

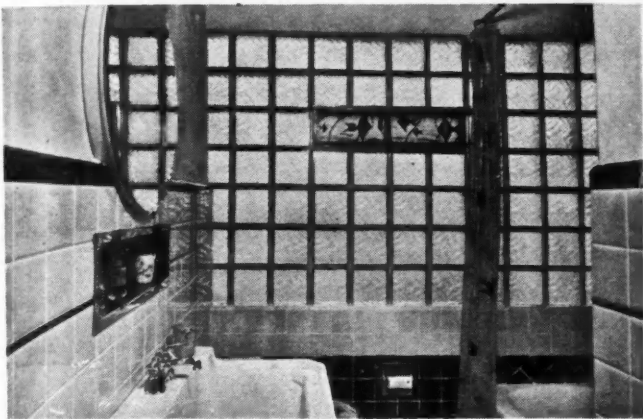
# PONDEROSA PINE WOODWORK

111 WEST WASHINGTON STREET • CHICAGO, ILLINOIS

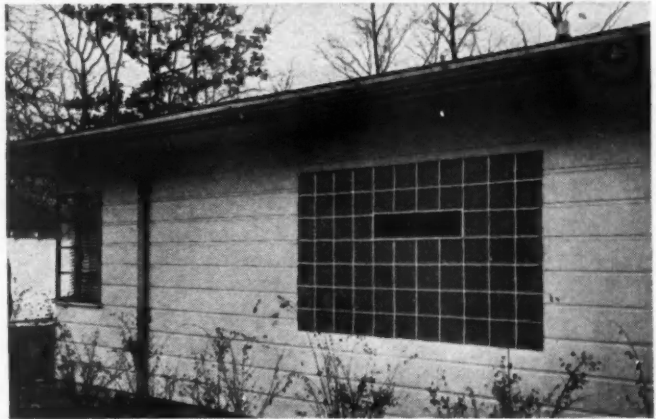




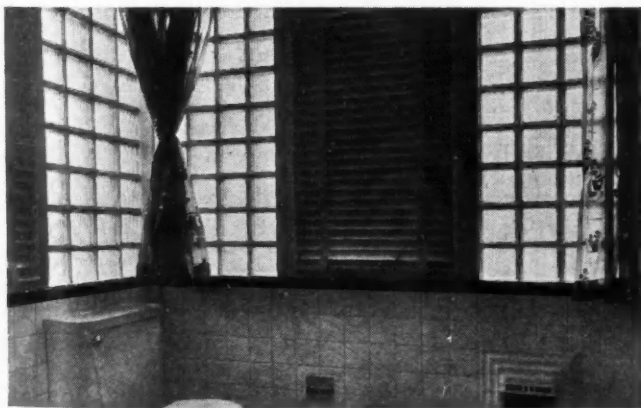
Use **INSULUX Glass Block** to make  
 Bathrooms *Luxurious* but **Economical**



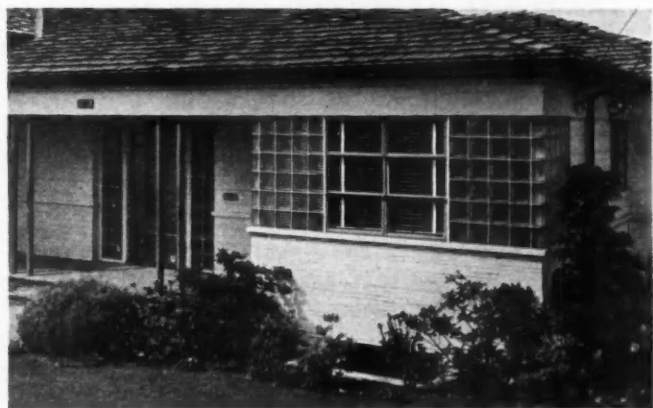
**A GLAMOROUS BATHROOM**—the kind that sells houses— but economical enough for popular-priced homes. The Insulux panel gives plenty of light . . . maintains privacy . . . insulates effectively. See exterior at right.



**ARCHITECTURAL BEAUTY** is added to exteriors by Insulux Glass Block panels. They harmonize with every type of home design—form a feature that helps you sell. Make your houses "brand-new" with Insulux Glass Block.



**MODERN BEAUTY** gained at low cost with corner installation of Insulux Glass Block. Women love a bathroom like this—well lighted, sparkling, easy to keep clean. You save tile costs when Insulux forms the walls.



**EYE-CATCHING** Insulux Glass Block panels tell prospects that your new houses are really *new*. Shown above is exterior of corner installation like interior at left. There's a place in every home you build for Insulux.

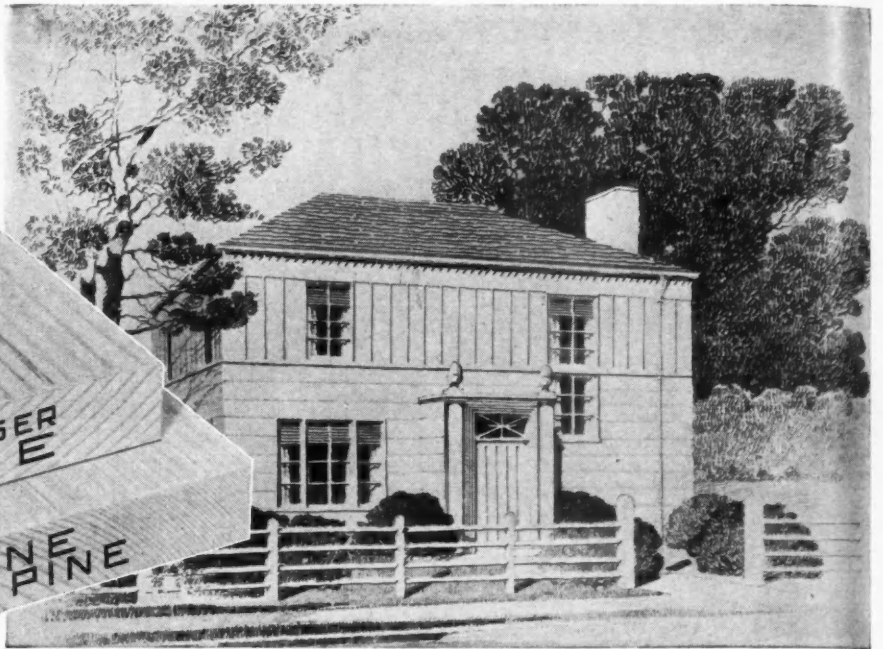
Use Insulux Glass Block to give buyers what they want in bathrooms—floods of light . . . real privacy . . . more comfort . . . modern beauty. Insulux Glass Block are economical for builders—save cost of sash, tile and

painting. And they do sell homes. Send coupon for other suggestions on using Insulux Glass Block in homes. Owens-Illinois Glass Company, Insulux Division, Toledo, Ohio.

**OWENS-ILLINOIS**  
**INSULUX**  
*Glass Block*  
 THERE ARE PLACES

IN EVERY HOME THAT NEED INSULUX

Owens-Illinois Glass Company, Insulux Division  
 15th Floor, Ohio Bldg., Toledo, Ohio  
 Please send free literature showing practical Insulux ideas that will help sell homes.  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_



*This is one of the 50 4-Square Homes. Complete plans, specifications, and material lists are available to contractors through 4-Square dealers.*

## *... Unsurpassed* **FOR EXTERIORS**



Ask your 4-Square dealer about Genuine White Pine for your next job. Look at his stock . . . every piece identified with the 4-Square trade-mark and the words "Genuine White Pine". You know it's "Genuine" when you get 4-Square . . . and so do your customers.

Your local 4-Square lumber dealer will supply you with an interesting Genuine White Pine booklet for your home prospect.

For the modest home or for the mansion, Genuine White Pine is the ideal wood.

The time-tested record of this superior wood for resisting the ravages of the elements under most severe conditions, is worth remembering when you select your lumber for exteriors.

When you point out the extra value of Genuine White Pine to your customers . . . and tell them why you use it, you build confidence which builds sales.

Tell your trade about the long life of White Pine, tell them about its resistance to shrinkage and twisting . . . tell them about its extra insulating value . . . tell them how it holds paint. Show them why it's true economy to use White Pine.

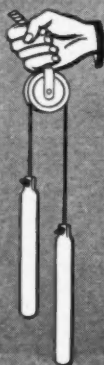
From your own point of view, Genuine White Pine is a beautiful wood to work with. It's easy to saw and nail. It resists splitting and stays put . . . and when the job is done, you can point to it with genuine pride.



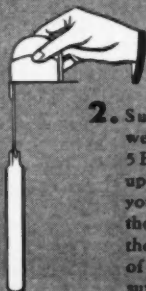
**WEYERHAEUSER SALES COMPANY**  
SAINT PAUL • MINNESOTA



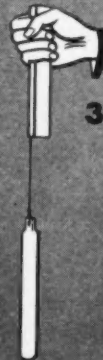
## THIS 30-SECOND EXPERIMENT WILL GIVE YOU THE KEY TO REAL SATISFACTION IN DOUBLE-HUNG WINDOWS



**1.** String a cord through a pulley. From each end suspend a five-pound weight. Move the weights up and down. Wherever you stop, the weights stay there. This is true counterbalancing, the time-proved method for supporting double-hung windows.



**2.** Suspend a five-pound weight from a Pullman No. 5 Balance. Move the weight up and down. Wherever you stop, the weight stays there. This demonstrates the true balancing action of the Pullman Balance in supporting without friction an easy-moving sash.



**3.** Suspend the five-pound weight from any of the "sash-holders" on the market. The weight will seek a level, will not stay in any other position. Windows using such a device are not balanced, but depend on friction and friction adjustments for support.

- What makes real satisfaction in a double-hung window? The thing which satisfies you best is that which satisfies your customer, the home owner. And aren't these the things looked for: 1. A window that operates smoothly and easily; that stays open or shut at any position; that never needs adjustment or attention; 2. A window actually weather-tight without possibility of leakage of cold air or dust; 3. Narrow mullions and trim; 4. A window that won't go wrong during the life of the building?

Windows built with Pullman Sash Balances are *balanced*—balanced as truly as though they were supported by a cord and weight exactly matched to the window. Yet they eliminate open weight boxes, leaky openings. You insulate right up to the plank frame. Every Pullman balance goes out with a written lifetime guarantee.

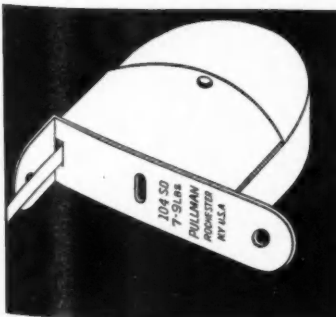
Millwork manufacturers in increasing numbers are offering economical, efficient window units Pullman-balanced. Ask your millwork dealer to place a full-size Pullman window unit on display, so you can bring your customer in for a demonstration that *shows* the difference.

*Pullman Balances are time-proved by a record of 54 years of service in schools, hospitals, office and public buildings. Guaranteed Balances built to the same design and workmanship standards are available to millwork manufacturers for use in window units for low-cost houses.*



### SHOW HOME OWNERS WHY A PULLMAN-BALANCED UNIT GIVES THEM EVERYTHING THEY WANT IN DOUBLE-HUNG WINDOWS

A demonstration unit of a Pullman-balanced window shows home builders *what* they're getting, *why* it will give best performance and service . . . wins for you their confidence and respect. Every dealer should have a demonstration unit permanently on display. Every prospective home-builder should be shown.



*Specify Window Units with*  
**PULLMAN**  
*Sash Balances*





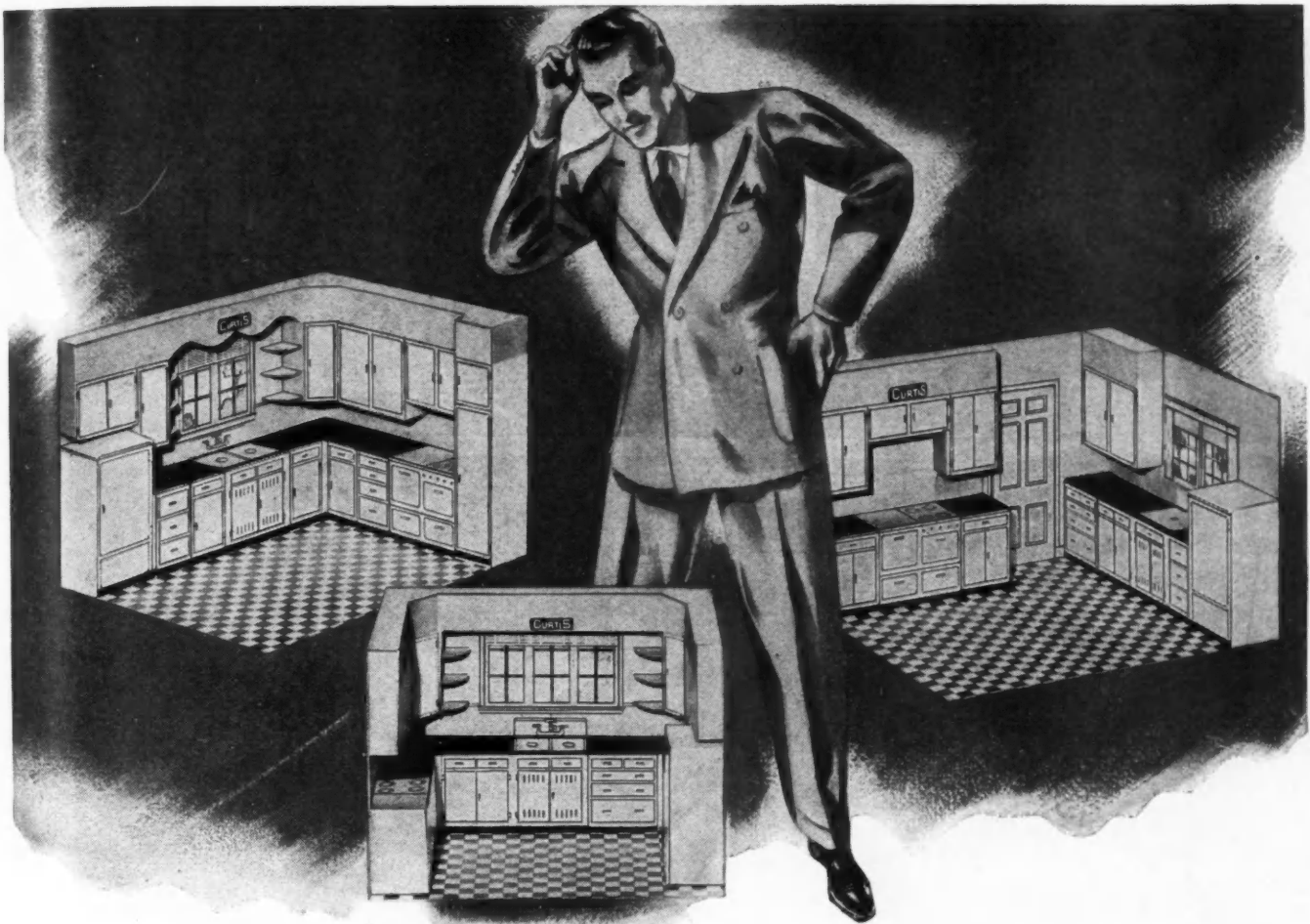
USE "PENNVERNON"  
 . . . NOT JUST "WINDOW GLASS"

There are varying degrees of quality in window glass, as in almost everything else. That's why the name "Pennvernon" has come to mean so much. It stands for uniformly high quality in window glass. It assures a freedom from distorting defects rare in sheet glass making. It identifies a glass that gives good vision, that is bright and reflective of surface on both sides of the sheet. And it marks a glass which is nationally known and nationally available through our many branches and thousands of dealers. Pittsburgh Plate Glass Company, Grant Bldg., Pittsburgh, Pa.

**PENNVERNON WINDOW GLASS**  
**PITTSBURGH PLATE GLASS COMPANY**

*"PITTSBURGH" stands for Quality Glass and Paint*





## What Can **YOU** do in a **KITCHEN?**

● You don't have to *cook* to build up a reputation as a kitchen specialist! Use the Curtis Kitchen Planning Service and be a kitchen authority!

Here are 4 big points that will help put *kitchen* profits in your pockets—*points that will help sell houses and remodeling jobs*—and get ready-to-buy prospects for you the year 'round.

**1.** Show prospects how they can use the Curtis Kitchen Planning Service. Show them that the satisfaction of nearly 60,000 housewives stands behind it.

**2.** Show "Mrs. America" how she can choose her kitchen color scheme *freely*—have walls, ceilings, equipment and cabinets *match or harmonize*. (An outstanding Curtis feature.)

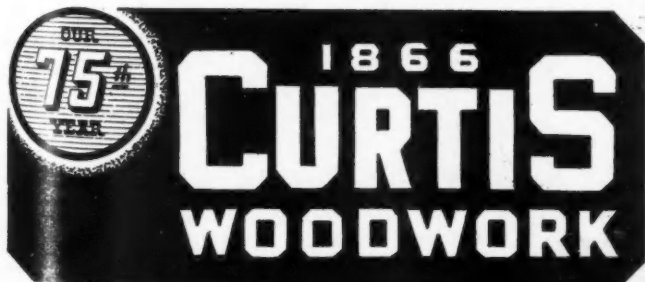
**3.** Demonstrate how well-designed Curtis Sectional Kitchen Cabinets are durable, *trouble-free* cabinets. Doors and drawers *work*—they are constructed like fine furniture.

**4.** *No other kitchen service offers so much.* The quality of Curtis cabinets is worth what it costs—*always* reasonable.

Have your Curtis Dealer tell you about Curtis Kitchens and other Curtis Woodwork. See how to be a kitchen specialist—at a profit. You can finance kitchens through FHA if desired.

Mail the coupon for our free kitchen planning book. If you live in Canada, write to W. C. Edwards & Co., Ltd., 991 Somerset Street, West, Ottawa, Canada.

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE



CURTIS MAKES A COMPLETE LINE OF STOCK ARCHITECTURAL WOODWORK  
75 YEARS OF DEPENDABILITY IS BEHIND THIS TRADEMARK

CURTIS COMPANIES SERVICE BUREAU  
Dept. AB-4K Curtis Bldg., Clinton, Iowa

Tell me about Curtis Kitchen Planning and send me your free book.

Name.....

Address.....

City..... State.....

Ruberoid brings you an amazing new shingle

# TIMBERGRAIN

.... a rugged, revolutionary, asphalt shingle with charming, two-tone colors and deep shadow lines!

**ALL SAY:**

"It's the most beautiful shingle ever made!"



No asphalt shingle in building history has received greater or more widespread acclaim than TIMBERGRAIN!

Wherever this amazing new Ruberoid product has been seen—its beauty has proved a sensation!

And it *is* outstandingly beautiful! Timbergrain's two-tone colorful surfacing is rough and rugged. The extra thick butts are further accentuated by deep black built-in shadow lines—providing a roof of unusual character, massiveness and beauty. This extra thickness also gives greater strength, more weather protection, more safety.

For new homes—for homes that you remodel or re-roof, show your clients Timbergrain. Built in this asphalt shingle is not only outward beauty, but inward long life and durability. Timbergrain is Time-Honored Ruberoid quality through and through.

Be sure to see this style leader, Timbergrain. Write for colorful folder and complete information. Address Dept. AB-4. The Ruberoid Co., 500 Fifth Avenue, New York, N. Y.

## Check These Extraordinary Features!

*Time Honored Ruberoid Quality*

*Rough Rugged Built-up Surfacing*

*Charming Two-Tone Colors*

*Deep Black Built-in Shadow Lines*

*Extra Heavy Thick Butts*

*Extra Strength and Weather Protection*

### SPECIFICATIONS:

Size each Strip . . . . .	12" x 36"
Av. approx. wgt. per sq. . . . .	250 lbs.
Strips per square . . . . .	80
Bundles per square . . . . .	3
Exposure . . . . .	5"
Headlap . . . . .	2"

Available in GREENTONE, REDWOOD, BLUETONE and SLATETONE BLENDS

# RU-BER-OID

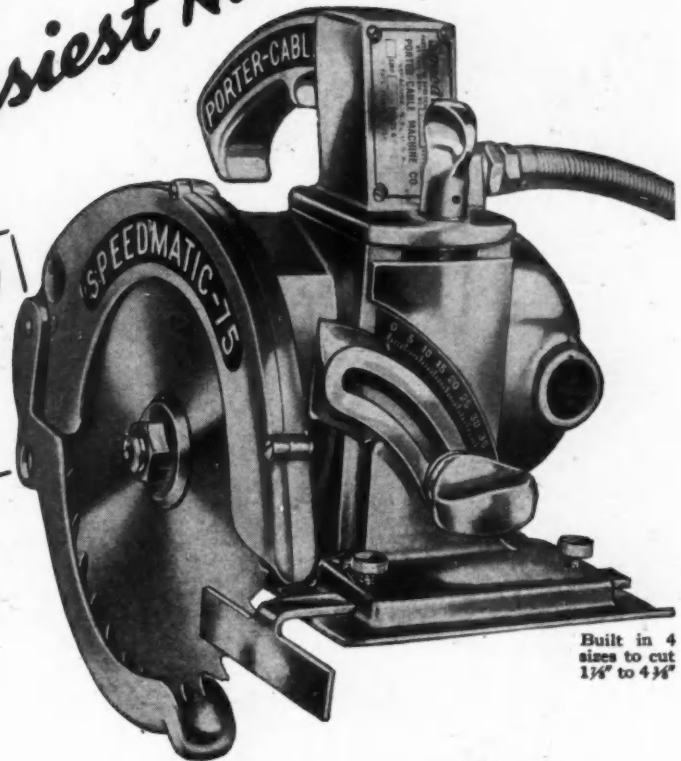
ROOFING AND BUILDING PRODUCTS





*Easiest Handling Saw  
in the Field!*

**Works with  
ONE HAND,  
...in any  
Position!**



Built in 4 sizes to cut 1 1/4" to 4 3/4"

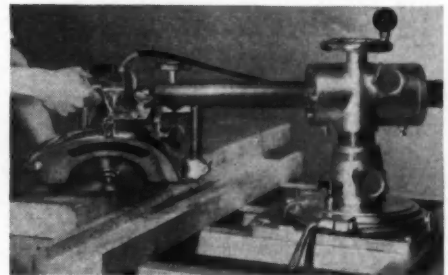
# **Speedmatic**

**ELECTRIC HANDSAWS**

Speed and Power—with EASY HANDLING—that is what counts in a day's work! And SPEEDMATIC is the one saw that has this all-important combination. Its light weight and perfect balance give you a saw usable in any position *without tiring!* The steadiness of its extra-wide shoe, the *natural* position of its handle, avoid arm tension and wrist cramping. Result—hour after hour of high-speed, tireless cutting. And SPEEDMATIC power itself never "gets tired"—because SPEEDMATIC helical gears transmit power with greatest efficiency. 11% more power usable for *actual* cutting!

See this time and effort saving saw work right on your own job, without obligation. Just call your local Porter-Cable representative (see phone book). Also write us for a FREE copy of "Newest Sawing Methods."

The Porter-Cable easy-slide, non-sag, ball bearing Radial Arm is a sure way to get double service out of your SPEEDMATIC saw. A big time-saver on duplicate cutting. Set it up in any part of the lot or building. Readily demountable when you need the SPEEDMATIC Saw for hand use.

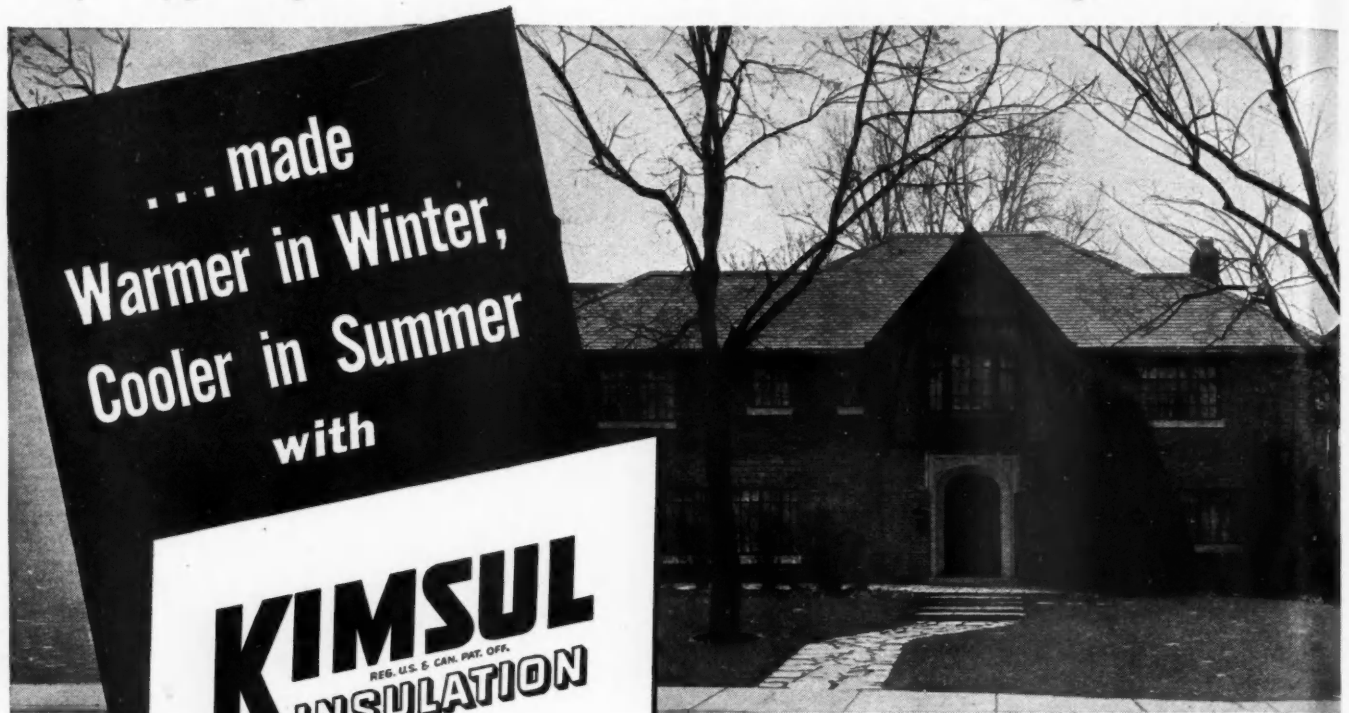


## **PORTER-CABLE MACHINE COMPANY**

1721-4 N. SALINA ST., SYRACUSE, N. Y.

Representatives in principal cities in U.S.A.

# Any Type of Home Can Be Built in "Comfort Street"



... made  
Warmer in Winter,  
Cooler in Summer  
with

**KIMSUL**  
REG. U.S. & CAN. PAT. OFF.  
**INSULATION**

KIMSUL—4,000 sq. ft. of it—insulates the second floor ceiling and roof of this home owned by D. F. McCarthy, Evansville, Ind. Architect Edward J. Thole used KIMSUL because it makes possible "a satisfactory installation and gives the owner the assurance of a permanent insulation for his residence."

• The desire for comfort is universal. That is why "Comfort Street" has a site for the modest bungalow as well as the stately mansion. "Comfort Street", you see, is any street where homes are insulated with KIMSUL\*. Whenever cost is an important factor, it pays to remember these exclusive advantages. First, the KIMSUL price per square foot is low. In addition, KIMSUL is one of the easiest and quickest insulations to install . . . saves time and man-power. Delivered compressed, KIMSUL further reduces costs by decreasing storage, handling, and shipping charges.

KIMSUL meets your most exacting requirements of efficiency and safety. KIMSUL conductivity is only .27 B. t. u./hr./sq. ft./°F./inch (Peebles). KIMSUL is moisture-resistant, non-burning, and lasting. Once in place, KIMSUL remains at proper density and does not settle. Specify KIMSUL for all your homes in all price ranges. Mail coupon and discover how much more KIMSUL does for the money.

\*Reg. U. S. and Can. Pat. Off.



**KIMSUL Quickly, Easily Installed**  
Usually a one-man job. KIMSUL fits standard stud spacing, can be easily cut for narrow spacing, corners, etc.



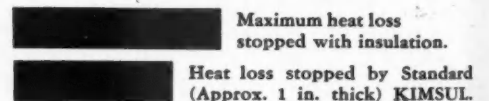
**KIMSUL Flexibility Solves Problems**  
KIMSUL comes compressed, is expanded when installed. Can be placed behind electrical outlets and pipes.



**KIMSUL Does Not Settle**  
Rows of strong stitching keep the expanded KIMSUL blanket at proper density. KIMSUL stays "put".

## DON'T JUDGE INSULATION'S EFFICIENCY BY ITS THICKNESS

### Heat Loss Stopped in Walls



KIMSUL is available in three thicknesses: *Commercial* (nominally 1/2 in. thick), *Standard* (nominally 1 in.), and *Double Thick* (nominally 2 in.). Standard KIMSUL stops the greatest proportion of heat losses in winter and of heat infiltration in summer.

In a normal frame wall, Standard KIMSUL stops 54% of the heat which would normally be lost through an uninsulated wall. Double Thick KIMSUL stops 65% of the heat loss. Wall-thick insulation stops 73%.

The first inch of insulation does the most work. Taking the maximum heat stoppage through walls as 100%, it is readily calculated that Standard KIMSUL stops 74% of all the heat that can be stopped with any insulation.

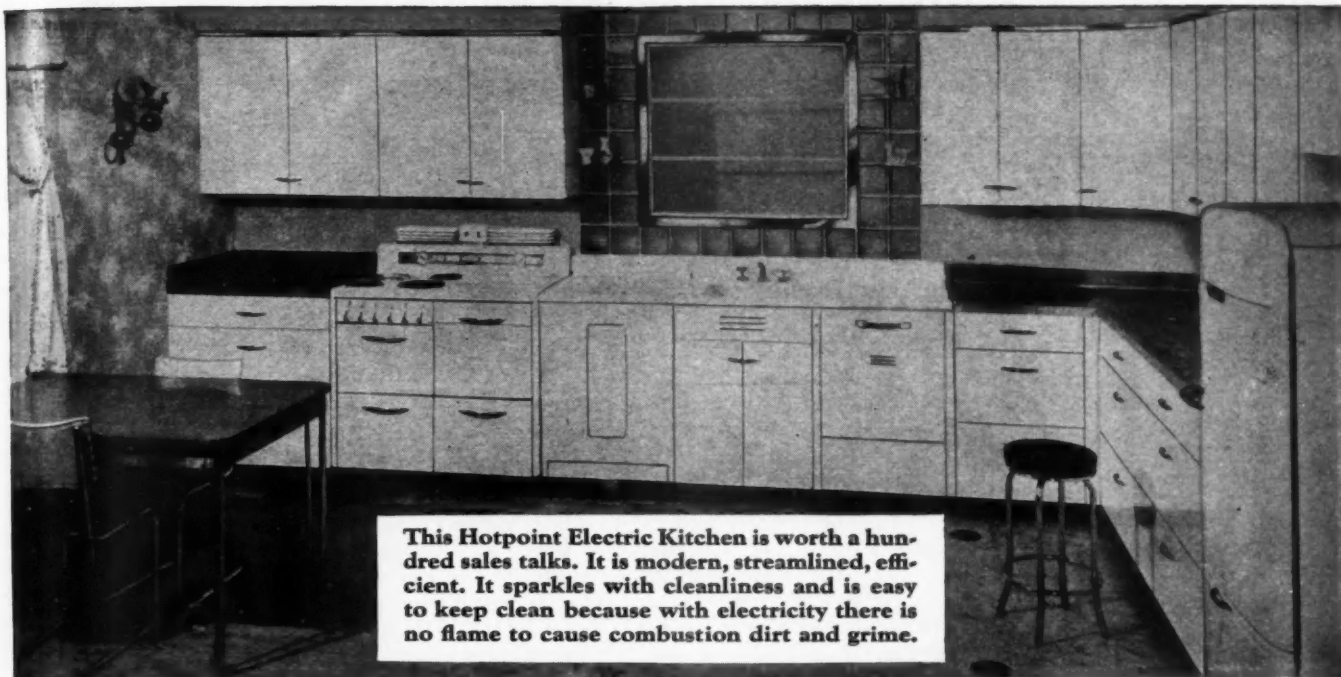
GOING TO NEW YORK? We invite you to see KIMSUL at the Architects' Permanent Exhibit, Architects' Samples Corporation, Park Avenue and Fortieth Street.

**KIMBERLY-CLARK CORPORATION**  
(Building Insulation Division) ABB-4  
Established 1872 Neenah, Wisconsin  
 Please send a representative  
 Please send free book, "Guide to Efficient Insulation"

Name.....

Address.....

City.....County.....State.....



This Hotpoint Electric Kitchen is worth a hundred sales talks. It is modern, streamlined, efficient. It sparkles with cleanliness and is easy to keep clean because with electricity there is no flame to cause combustion dirt and grime.

# The HOTPOINT ELECTRIC KITCHEN As A Powerful Sales Aid!



**HOTPOINT ELECTRIC RANGE** with new Calrod Units provides MEASURED HEAT cooking. Starts faster, cooks more economically, clean, safe, durable, dependable. Many other great features.



**AUTOMATIC HOTPOINT ELECTRASINK** banishes dishpan and messy garbage pail. Kitchen Waste Exit flushes food waste away quickly. Automatic dishwasher saves hands by washing dishes at the press of a button.

**W**HEN prospects step into the kitchen of one of your homes, what do they see—equipment that is destined to be outmoded in a few years?—or all-electric kitchens that will enhance the value of the property and save time, steps and labor for years to come?

A good way to sell prospects is to show them modern all-electric kitchen units with Hotpoint Range, Refrigerator, Water Heater, Cabinets, and Automatic Electric Dishwasher or Electrasink. Scores of leading realtors say that a truly modern Electric Kitchen is the first thing to attract a woman's eye—the surest way to cinch a sale—the logical way to get a better price. Hotpoint Kitchens are inexpensive; easy to install. We'll gladly cooperate with architects, contractors, and builders on planning. Edison General Electric Appliance Co., Inc., 5641 West Taylor St., Chicago, Ill.

# Hotpoint

REFRIGERATORS • RANGES • WATER HEATERS • WASHERS AND IRONERS • CLOTHES DRYERS • AUTOMATIC DISHWASHERS • ELECTRASINK • STEEL KITCHEN CABINETS



**HOTPOINT REFRIGERATOR** brings advanced features of electric refrigeration such as: 7 Food Storage Zones, New Butter Conditioner, Measured Humidity, and scores of other advantages.



**HOTPOINT WATER HEATER** can be installed anywhere; closet, kitchen or basement. Provides 24 hour hot water service for a few pennies a day. Clean because it's flameless. Completely automatic, dependable and safe.



# HERE'S AN EASY TO WORK WALLBOARD OF ASBESTOS-CEMENT



→ CAN BE CURVED AROUND A CONCAVE OR CONVEX SURFACE WITHOUT BREAKING

**Careystone**  
ASBESTOS-CEMENT

**WALLBOARD**

*Builders amazed-* NEW FIRE RESISTANT  
BOARD OF ASBESTOS-CEMENT—*a joy to work!*

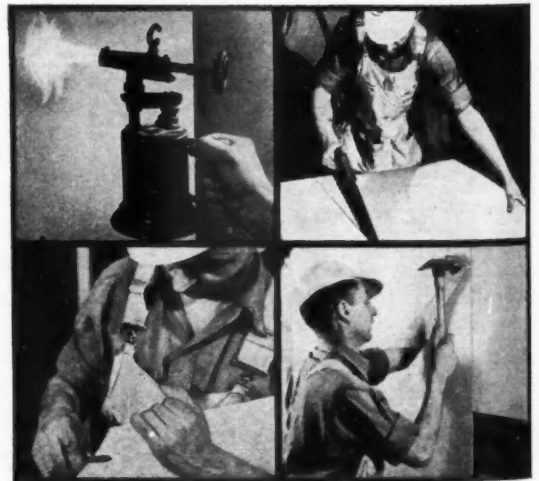
**THIS** sensational new Careystone Wallboard has workable qualities which completely overcome the usual objections to this type of board. It can be bent, sawed, cut, nailed and whittled. Rot-proof, rodent-proof, not affected or attacked by termites.

**CAREYSTONE** Wallboard is recommended for all purposes where an unfinished board ordinarily is used. Made of asbestos and cement, it is an effective firestop for walls and ceilings. Desirable for kitchens and bathrooms, as it may be painted and repainted, or papered, whenever desired.

**Careystone** WALLBOARD will save you money in time and labor; add extra fire-safety to your buildings; help you make sales. Write today for full details—address Department 10.

TRY TO BURN IT

SAW IT



WHITTLE IT

NAIL IT

Manufactured in sheets 48" x 48" and 48" x 96" and in thicknesses 3/16", 1/4" and 3/8". Also available scored in 4" x 4" squares to resemble tile.

**THE PHILIP CAREY COMPANY • Lockland, Cincinnati, Ohio**

Dependable Products Since 1873

IN CANADA: THE PHILIP CAREY COMPANY, LTD. Office and Factory: LENNOXVILLE, P. Q.

It pays to give a bathroom the

# "GLAMOR OF GLASS"



• YOU DON'T HAVE TO SPEND MUCH EXTRA to give the bathrooms in the homes you build the "glamor of glass." A Carrara wainscot like this is comparatively inexpensive . . . but it is a tremendous help in selling.

**B**ATHROOMS are among the most powerful influencing factors in selling or renting homes. That's why, when you're trying to sell the houses you build, it pays to show prospects bathrooms made beautiful with Carrara Glass walls or wainscots.

Carrara makes an immediate and strong appeal...especially to women. The soft, rich color of Carrara walls, their reflective, polished surfaces which make the room seem bigger, the

impression of luxury and "glamor" they create, are hard for prospects to resist.

And when you tell them that Carrara stays clean with nothing but an occasional wiping with a damp cloth . . . that it won't ever check, craze, stain, fade or absorb odors . . . and that it will be just as good-looking fifteen years from now as it is today . . . the chances are, you've gone a long way toward making a sale!

Use Carrara in the homes you build. For bathroom and kitchen walls, sill covers, shelves, powder rooms. You'll find its slight extra cost a good investment . . . for it helps to make prospects say "yes." Send the coupon for free literature—today.

**"PITTSBURGH"**  
*stands for Quality Glass and Paint*

## CARRARA

*The modern Structural Glass*  
PITTSBURGH PLATE GLASS COMPANY

Pittsburgh Plate Glass Company  
2102-1 Grant Bldg., Pittsburgh, Pa.  
Please send me, without obligation, your free literature on the use of Carrara Structural Glass in the home.

Name.....  
Address.....  
City..... State.....

# IRON and STEEL SHOULD BE BONDERIZED

**I**T IS EASY to write "Bonderized" into the specifications for steel building equipment, but rust is hard to explain away when the owner complains about it.

It is always more satisfactory to everyone concerned if Steel Windows, Air Conditioning Equipment, Radiator Covers, Bath Room Cabinets, and other steel units are Bonderized before finishing. Bonderizing holds the paint, and the effects of moisture and rust are defeated.

Bonderizing has been protecting America's finest products for many years. It is accepted by many industries as one of the most effective finishing methods. It saves refinishing costs and is a positive economy for the builder.

**PARKER RUST PROOF COMPANY**

2157 E. Milwaukee Avenue, Detroit, Michigan



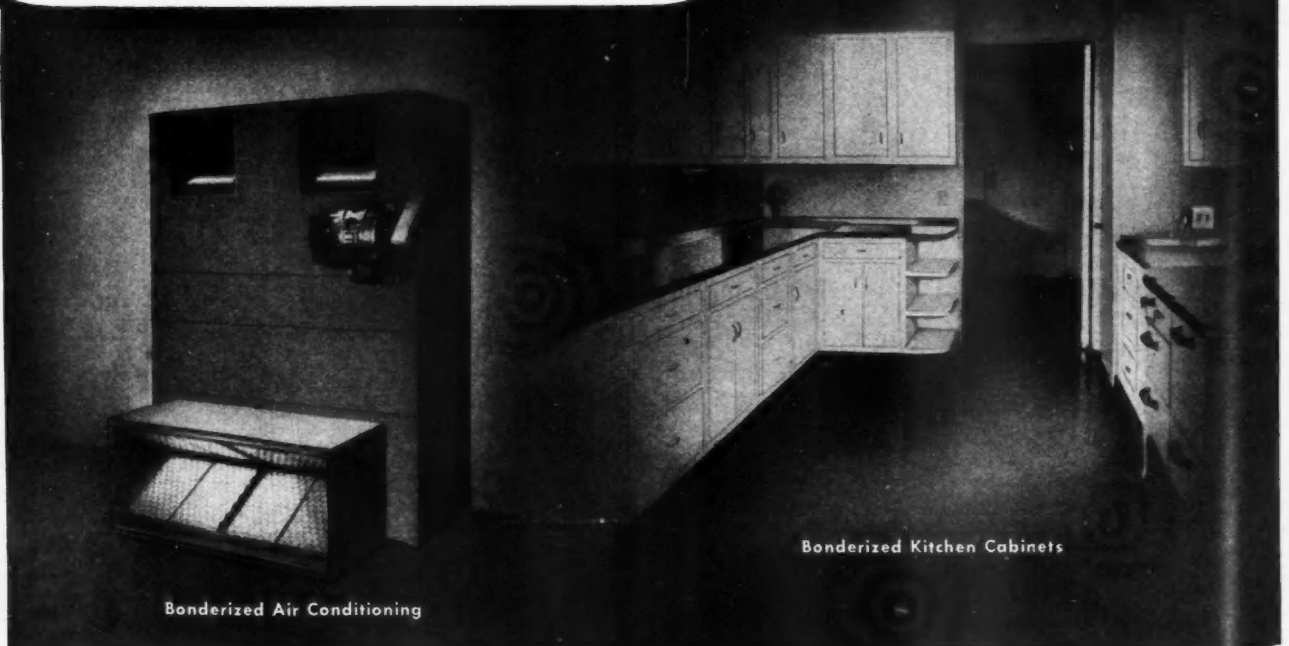
**SEND FOR THIS BOOK:**  
It gives you the information you want about Parker Processes, and tells how they are serving the building industry by protecting iron and steel building materials from rust.



Bonderized Steel Windows



Bonderized Radiator Cabinets

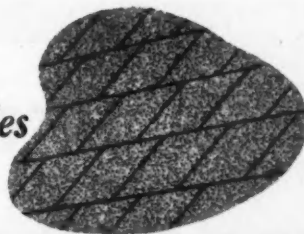


Bonderized Air Conditioning

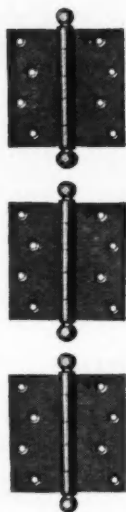
Bonderized Kitchen Cabinets



Good Construction Calls For Fireproof Shingles



# ... And Three Butts on Every Door



**VISIBLE MARK OF  
GOOD CONSTRUCTION**

Few prospects like to climb ladders, so your prospective buyer must take your word on the use of fireproof shingles. They are like so many other out-of-sight elements of good construction.

There is one *visible* mark of good construction that is easy for all to see and appreciate. It is *Triple Hinging* of doors. The use of the third butt will prevent warping, hold the edge of the door in alignment, keep latch and lock clicking to a perfect fit every time. And remember, thin doors warp much easier than thick ones—good construction calls for three butts on every door. It can easily cost you more to repair a warped door later than to put three butts on every door in the house. Be wise—build all your homes with this *visible* mark of good construction, Triple Hinging. The Stanley Works, New Britain, Connecticut.



## EXCLUSIVE Stanley Non-Rising Pin

JUST PUSH  
IT DOWN

PIN SNAPS  
INTO PLACE

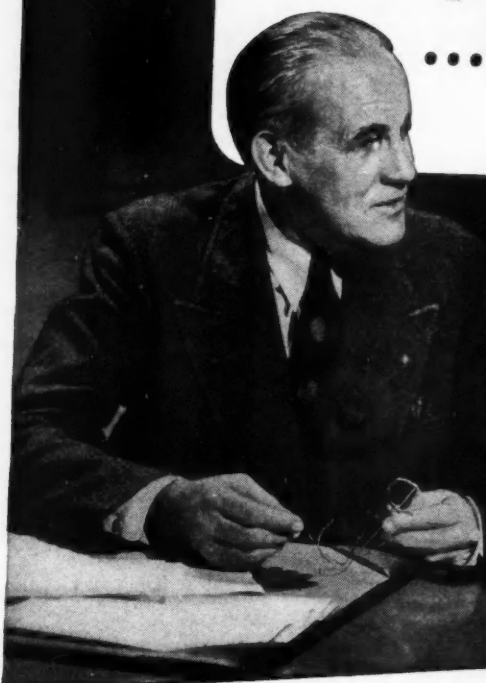
A split ring fitted to the pin automatically snaps into place to keep pin from working up. Just push it down—and it's down to stay. It's simple—it works every time. Be sure to get Stanley Butts for this exclusive feature. Send for Stanley Catalog No. 61 showing the complete line.

# STANLEY

Trade Mark

**REMEMBER... THREE BUTTS TO A DOOR**

**Take your choice, Mr. Builder**  
**... both give you White Lead's**  
**proven protection!**



**Your old friend**  
**DUTCH BOY PASTE LEAD**  
**has been Triple-Improved!**

Yes, Mr. Builder, your old standby, Dutch Boy Paste White Lead is now better than ever. Thanks to National Lead research it has actually been *Triple-Improved!* Now—on top of its acknowledged durability, its reputation-building beauty, its proven economy—there are 3 mighty important *new* reasons for using Dutch Boy:

1. *First*, it has been made *even whiter!* That means clearer, more sparkling whites; cleaner, crisper tints; brighter, more saleable homes . . .
2. *Second*, Dutch Boy has been given *improved body!* Today it actually makes a *heavier* paint—a sturdier home guard than ever before . . .
3. *Third*, Dutch Boy now has *increased hiding power.* It not only gives a more solid-looking job but *covers more surface per gallon.*

Remember its many other well known advantages: easy mixing and spreading, adaptability to varying jobs, freedom from cracking and scaling—and you'll agree, Mr. Builder, that they don't make 'em any finer than today's Dutch Boy Paste White Lead.

**... And its new partner**  
**DUTCH BOY PURE WHITE LEAD PAINT**  
**comes Ready-to-Brush!**

Yessir, now you can get Dutch Boy in *ready-to-use* form. It's pure white lead, all ready to spread! Offering you the lasting loveliness, the unquestioned sales appeal and economy of white lead—plus *ready-to-brush* convenience.

**2 COAT JOB — on New or Old Wood!**  
**FORMS — Exterior Primer and Outside White!**

The new Dutch Boy is "made-to-order" for builders who want extra-dependable, 2-coat painting. Its 2 pure white lead paints—are designed especially for 2-coat work on new or old wood. You've never bought an exterior primer that was easier to apply. You've never known a 2-coat combination with better sealing and hiding. And you'll put a big "O.K." on its leveling qualities, whiteness, gloss and finish.

**Extra Quality at Regular Quality Price!**  
 With all these big advantages, Dutch Boy Pure White Lead Paint doesn't cost any more per gallon than regular quality paint. And you can get it in any desired quantity: quarts, gallons, 5-gallon kits, 20-gallon drums.

**SO, MR. BUILDER,** whichever you use, the new Dutch Boy Paint or the Triple-Improved Dutch Boy Paste Lead, remember—you're money ahead when you paint with White Lead.

**DUTCH BOY PURE WHITE LEAD**



**NATIONAL LEAD COMPANY—**111 Broadway, New York; 116 Oak Street, Buffalo; 900 West 12th Street, Chicago; 669 Freeman Avenue Cincinnati; 1218 West Third St., Cleveland; 722 Chesnut Street, St. Louis; 2240 24th Street, San Francisco; National Lead & Oil Co., 800 Albany St., Boston; National Lead & Oil Co. of Penna., 1376 River Ave., Pittsburgh; John T. Lewis & Bros. Co., Widener Bldg., Philadelphia.

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# How to Treat Tough Customers and Turn Them into "Push-Over" by BARBER



**T**HE public's getting choosier every day . . . harder to please . . . harder to sell. But don't forget this—if the *outside* of a house is so attractive that prospects can't resist seeing what's *inside*, half the battle's over.

• That's one reason why so many builders are buying Barber Roofs this year. Because Barber Roofings really "have something" in the way of looks. The new Barber colors are as eye-appealing as a rainbow. They're the kind of colors that people want to see again and again. They make the roof a "beauty spot" instead of a "necessary evil."

• And Barber Roofings give you another hard-hitting sales weapon — PROTECTION! They're the only roofings using the native lake asphalt from Trinidad in the Caribbean — a remarkable natural weatherproof.

When you talk about a Barber Roof, you have an *added* talking point that helps turn prospects into customers.

• Find out about these Barber Roofings from your near-by Barber dealer. Look for his name in your local classified telephone directory. Or write direct to Barber Asphalt Corporation, Barber, New Jersey.



# BARBER

**MEANS A GOOD ROOF!**

SHINGLES • SIDINGS • ROLL ROOFINGS • BUILT-UP ROOFINGS

1 Broadway, New  
West 182d Street,  
Cincinnati; 1225 West  
Street, St. Louis;  
National - Boston  
National Lead & Oil  
Pittsburgh; John T.  
Co., Philadelphia.





The kitchen that can't grow old  
because it's built with  
*Stainless Steel*

**H**AVE you ever gone back to see the kitchens you put in ten years ago? Were they still bright and gay? Or were they stained and scarred — old before their time?

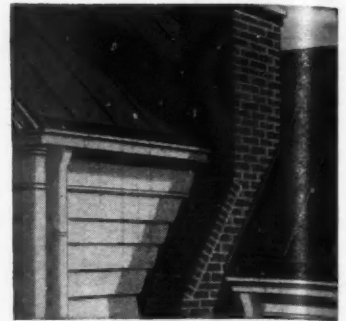
You said to yourself, "This can't be the beautiful kitchen I designed." But it is! Kitchen work surfaces take a beating that only the best of materials can survive.

If you want kitchens that will stay silver-bright year after year with a mini-

mum of care—plan them with U·S·S Stainless Steel. Stainless won't rust. Fruit acids won't stain it. Strong scouring powders and soaps merely make it look better. Stainless doesn't gouge, chip or crack. It's the nearest approach to the perfect metal.

Any good sheet metal worker can fabricate sinks and work surfaces with U·S·S Stainless Steel. Get an estimate on your next job and insist on U·S·S Stainless.

AMERICAN STEEL & WIRE COMPANY, *Cleveland, Chicago and New York*  
 CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*  
 COLUMBIA STEEL COMPANY, *San Francisco*  
 NATIONAL TUBE COMPANY, *Pittsburgh*  
 Scully Steel Products Company, *Chicago, Warehouse Distributors*  
 United States Steel Export Company, *New York*



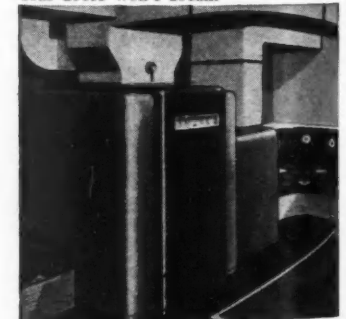
**Longer-lasting Roofing**  
 U·S·S Copper Steel terne roofing looks good — wears better. For rust-resisting gutters and down-spouts use U·S·S Copper Steel.



**Now, Ready-Made Steel Closets**  
 Complete with shelf, hooks and rod, in one unit ready to slip into place. No cracks or crevices. No plaster.



**Steel Area Walls for More Light**  
 Made from U·S·S Galvanized Copper Steel, these new walls reduce installation costs, look trim, resist rust. Steel coal doors won't break.



**Be Sure Your Heating Plant is Steel**  
 A firebox of U·S·S Copper Steel is smoke-tight, resists corrosion. Air ducts of U·S·S Galvanized Steel last as long as the house.



**SPECIFY U·S·S**  
 These initials appearing on the steel products going into your jobs advertise the high quality of your work.

**UNITED STATES STEEL**

*"I Thought I Knew All The Answers, Until..."*



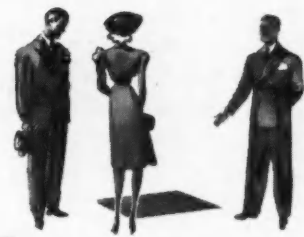
*my wife gave me the biggest money-making tip in years!"*



**1** *I Was Trying To Figure a Way To Move My Homes Faster. Guess I was in the "dumps" that day when Marg came home—excited as a kid! "Honey", she said, "I've found just what you want..."*



**2** *"Helen Has A New Kind Of Automatic Heat in her new home—a Coleman Floor Furnace! It doesn't have air ducts, but it circulates heat all over the house! And it costs so little!"*



**3** *Well, That's Just What I Needed All Right! My prospects go big for Coleman's automatic, circulating warm air! Coleman's low price gives me more profit on every sale! They're real money-makers!*

**Coleman Gives You What Your Prospects Want!  
...Fully Automatic, Circulating Furnace Heat  
at a low price that makes more money for you!**

Here's a money-making trend that's boosting profits on every house sale for thousands of builders all over America! It's the swing to automatic, circulating heat—with famous, low-cost Coleman Floor Furnaces!

Completely installed with thermostat controls, a Coleman costs about 1/2 the price of an average basement furnace! That means more profit for you right from the start.

Better yet, it gives you an edge over competition—furnishes you with fast-selling features that every prospect *wants* today!...

Guaranteed warm floors, uniform temperatures, health-conditioned air, and low fuel bills!

You have a Coleman size for every type of installation!... And a choice of furnaces—gas, where available, or oil!

See for yourself why builders, coast-to-coast, tell us, "We've been selling houses like hot cakes since we standardized on Coleman!" Get full facts now!

**FREE!** Write us today on your letterhead for free Builder's Catalog and installation data; also name of nearest distributor!

Address Dept. AB-12.

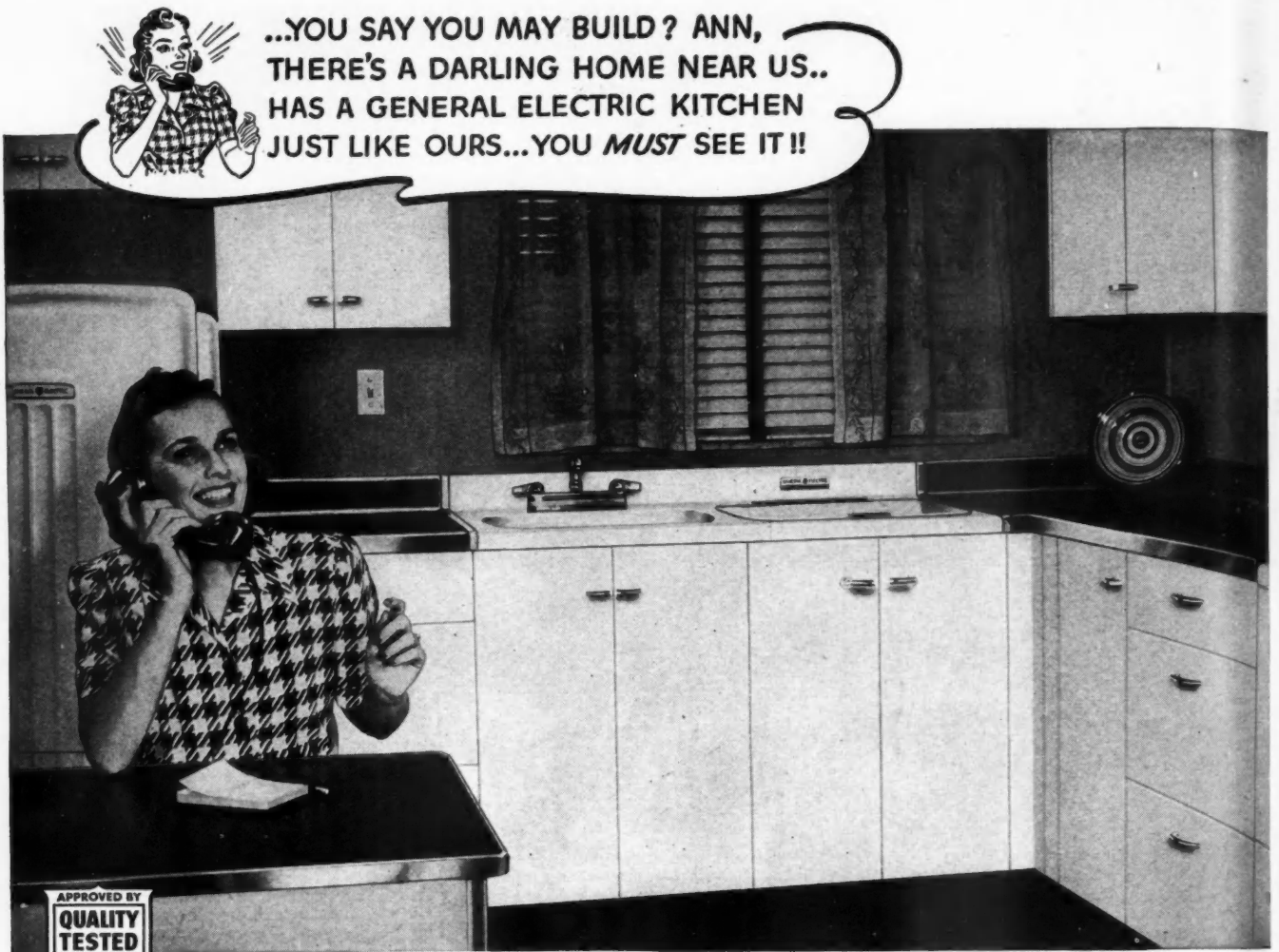
**THE COLEMAN LAMP AND STOVE COMPANY**  
Wichita, Kans. Chicago, Ill. Philadelphia, Pa. Los Angeles, Calif.



**NO BASEMENT Needed!**

**NO AIR DUCTS To Install!**

**Coleman**  
America's Largest Selling  
**FLOOR FURNACES**  
For Gas & For Oil



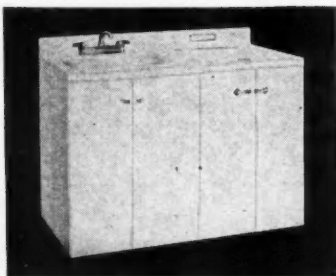
## Here's How You Can Be The Top Good Will Builder Of Your Community

Give your clients and customers something to remember you by! Install General Electric Kitchens — they're just about tops in good will building! The streamlined beauty and utility of G-E Steel Kitchen Cabinets and the G-E Electric Sink will be a source of owner pride and satisfaction for years

to come. And you'll reap the benefits of word-of-mouth advertising!

Your clients pay no premium of price for General Electric Kitchen equipment. G-E All-Steel Cabinets are *competitively priced* and are easy and inexpensive to install. Their many convenience features have real and *lasting* appeal. Why not get all the facts?

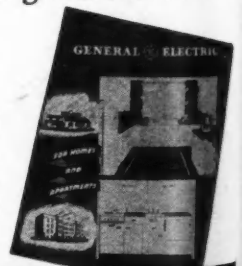
### SHE'LL THANK YOU EVERY DAY FOR YEARS



Here's one of the best "salesmen" you can hire . . . the G-E Electric Sink that washes dishes and disposes of garbage *electrically!* Make it a feature of your homes and you'll be remembered — and rewarded.

### SEND FOR THE NEW G-E CATALOG!

Gives complete information on G-E Cabinets, Electric Sink, and "Packaged" Kitchens for small homes and apartments. Ask your G-E Distributor for a copy or write direct to General Electric Co., Appliance and Merchandise Department S-1184, Bridgeport, Connecticut.



**GENERAL  ELECTRIC**



# MENGEL ★ FLUSH DOORS

## for Even the SMALLEST HOME!

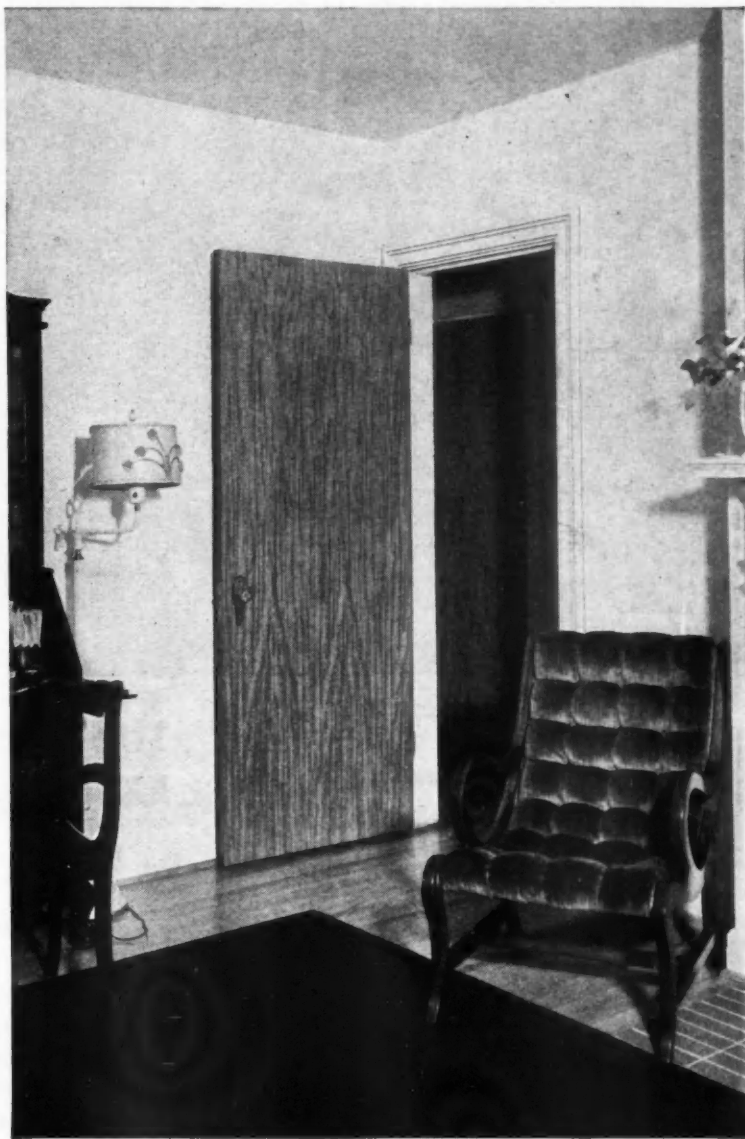
TALK to the average builder or layman and you'll discover that *most people* think flush doors are expensive luxuries, for big homes only.

That *used* to be true, but it isn't now! And that's an opportunity for smart home-designers to make a *big show* with *little money!*

Mengel Flush Doors are the finest, lightest, sturdiest doors on the market today—yet, thanks to immense production, are available at *very low* prices. Manufactured under the famous Johns-Manville patent, they are backed by the strongest guarantee in the industry:

*If any Mengel Flush Door warps in service, and does not straighten out within a reasonable time, it will be replaced free of charge, including the installation cost.*

Let us send you all the facts—*today*. Use the coupon below.



## MENGEL BORD

Here's an extremely fine, resin-bonded, 1/4" *hardwood* plywood that you can get in several grades, at lower prices than for any comparable plywood on the market. Made in big 4'x8' sheets, with *grain running the long way*, and with faces of Mahogany, Gum, Walnut, Birch or Oak! Use the coupon!

The Mengel Co., Incorporated  
Louisville, Ky.

Gentlemen: Please send me full facts about Mengel Flush Doors, and name of nearest supplier . Also facts about Mengel Bord, as described at left .

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# Things sure do move when CHEVROLET TRUCKS go to work



Inspect these  
**NEW 1941 FEATURES**

★ TWO NEW VALVE-IN-HEAD ENGINES . . . STANDARD: 174 FOOT-POUNDS OF TORQUE—90 HORSEPOWER . . . "LOAD-MASTER": 192 FOOT-POUNDS OF TORQUE—93 HORSEPOWER\* ★ NEW RECIRCULATING BALL-BEARING STEERING GEAR ★ NEW, MORE COMFORTABLE DRIVER'S COMPARTMENT.

\*Optional on Heavy Duty models at extra cost

**60 MODELS**  
ON NINE LONGER WHEELBASES  
. . . A COMPLETE LINE FOR ALL  
LINES OF BUSINESS

## They have **EXTRA** horsepower . . . **EXTRA** pulling power . . . **EXTRA** earning power

There's a lot of work to be done in this country this year—more material to be moved, and moved fast; more goods to be delivered, and delivered on schedule; more supplies to be hauled, and hauled promptly.

It's a year for heavy duty trucks with extra power—and that makes it a year for Chevrolets, because they are the most powerful trucks in the low-price field.

There are full 90 horsepower and the tremendous pulling power of 174 foot-pounds of torque in Chevrolet's Standard engine. If you need more, there are 93 horsepower and 192 foot-pounds of torque—extraordinary pulling power for extraordinary duty—in the special heavy duty "Load-Master" engine, optional at a small additional charge.

Be ready for peak loads—with the trucks that can carry them.

CHEVROLET MOTOR DIVISION, General Motors Sales Corporation  
DETROIT, MICHIGAN

# OUT-PULL . . . OUT-VALUE . . . OUT-SELL

1941.

# NO MORE "Thinking Twice"

## ABOUT PERMANENT COLOR FOR WALLS . . .

Here is a beautiful,  
long-wearing material  
. . . practical even for  
limited budgets

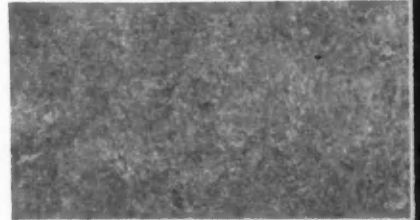


Illustration 1/4 scale.

Nairn Wall Linoleum, "Gladiolus Red,"  
No. 7952.

Nairn Wall Linoleum, "Parchment,"  
No. 7973.

Illustration 1/4 scale.



NO PATTERNS in Nairn Wall Linoleum, creamy "Parchment" and "Gladiolus Red," perfectly color-correlated, increase the lasting beauty of this cheerful modern kitchen. It is completely sanitary and easy to clean. And think that elimination of annual redecorating means to the housewife in the way of savings in time, expense and bother.

PLANNING distinctive decorative effects for any room, architects and builders need hesitate no longer about using permanent color for walls because of the price factor. Nairn Wall Linoleum—built to last as long as the house itself—is not only beautiful, but moderate in cost. . . . entirely feasible even for small residences.

Available in a wide range of patterns—delicate scrolls, rich dark tones, mottled and striated designs—Nairn Wall Linoleum will harmonize with every color scheme. And its extreme flexibility makes it adaptable to any structural design, permitting smartly rounded effects at inside and outside corners and openings.

When installed by Authorized Contractors, Nairn Wall Linoleum is fully guaranteed. Write for 16-page booklet, "Nairn Linoleum for Floors and Walls."

WALL LINOLEUM-NAIRN INC., KEARNY, NEW JERSEY

NOTICE HOW this flexible material completely eliminates the necessity for door jambs . . . contributes a modern "streamlined" effect. The use of Nairn Wall Linoleum on doors need not be limited to new construction. Old, panelled doors may be filled with plywood and covered with this modern wall material.



# NAIRN

U. S. Pat. 02.

## WALL LINOLEUM



# 4-SQUARE ENDLESS LUMBER

## Lowers Building Costs—and Produces a Better Building



Endless Lumber speeds up work and eliminates waste.



Diagonal application is easy with Endless and gives additional strength and rigidity.



Sawing is necessary only at ends of runs and openings.

The principle of end-matching, so successful in flooring, is now equally successful for sheathing, sub-floors, roofs and siding.

4-Square Endless Lumber helps you in many ways. It saves building time because sawing is necessary only at the ends of runs and openings. Trimming to join over framing members is entirely eliminated. It saves nailing because only two nails are required with Endless where four are needed when joints must break on the studs, joists or rafters. You also save material with Endless Lumber. There is no waste. The piece you saw off at the end of one course is used to start another.

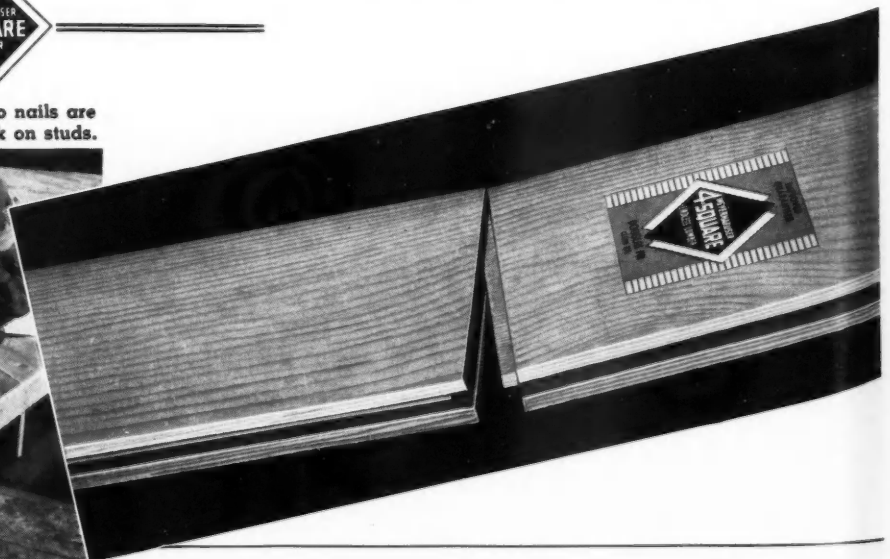
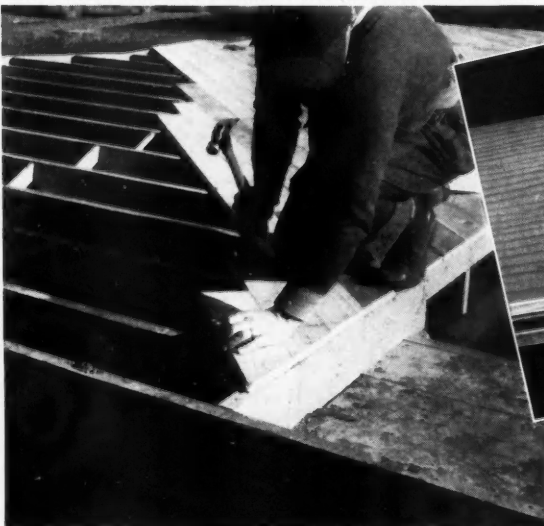
In addition to saving time and speeding up jobs, Endless Lumber gives you unusually strong construction. With every piece firmly joined by tongues and grooves on ends and edges, a continuous, solid covering is secured which adds to the rigidity of the frame.

When diagonal application is required for walls and sub-floors, the time saved with Endless is even greater. Rigid joints are formed by the tongues and grooves, thus greatly reducing application time.

This improved 4-Square Endless Lumber is produced in suitable grades for many purposes in Douglas Fir and West Coast Hemlock. It is delivered in ready-to-use bundles which carry the 4-Square label. Endless Lumber is helping many builders to get good, profitable contracts on the basis of better construction, economy and speed in erection. Write for complete catalog and descriptive literature.



Less nailing is required with Endless. Only two nails are used where four are needed when joints break on studs.



**WEYERHAEUSER SALES COMPANY**  
First National Bank Building • Saint Paul, Minnesota

**Send This Coupon!**  
 Learn How Builder Hangs 8  
 Times As Many Doors Per  
 Day With Equipment Costing  
 Only 2c Per Door . . . And  
 How You Can Do The Same

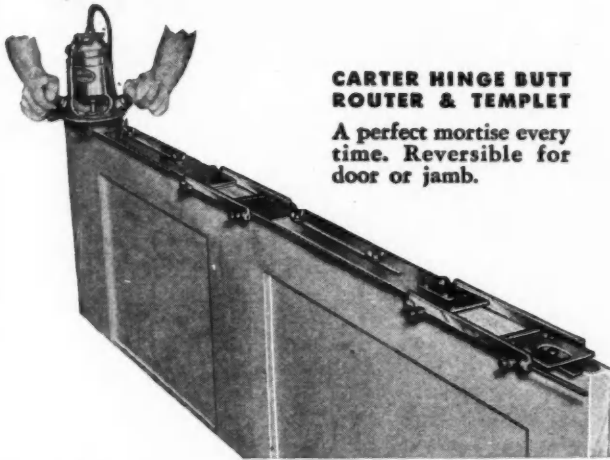
R. L. CARTER DIVISION, THE STANLEY WORKS,  
 133 Elm Street, New Britain, Conn.

Send me facts on the Carter Money-Making Tools that  
 will help me hang 8 times as many doors per day.

Name .....

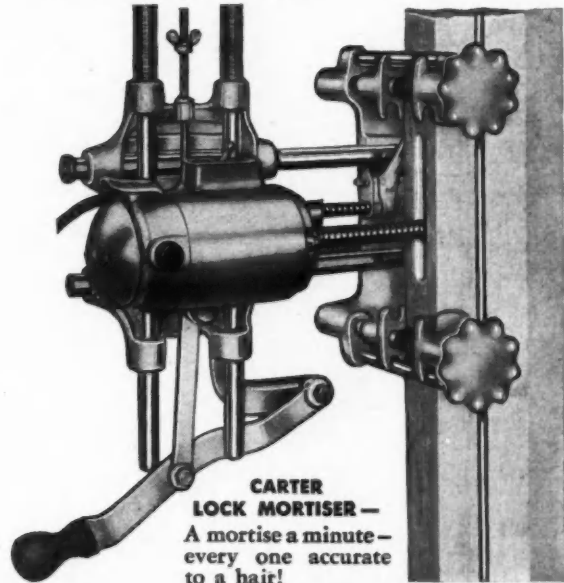
Address .....

If you erect only 10 houses a year, you can  
 make proportional savings with this Carter  
 equipment! This builder has hung over 100,000  
 doors on the largest housing job in the U. S. —  
 and his cost for 3 sets of Carter equipment,  
 including purchase, repairs and upkeep has  
 been only 2¢ per door! He has hung as many  
 as 600 doors per day! The coupon above will  
 bring facts on how this equipment can make sim-  
 ilar savings for you. Send it today! **R. L. Carter  
 Division, The Stanley Works, 133 Elm Street,  
 New Britain, Connecticut.**



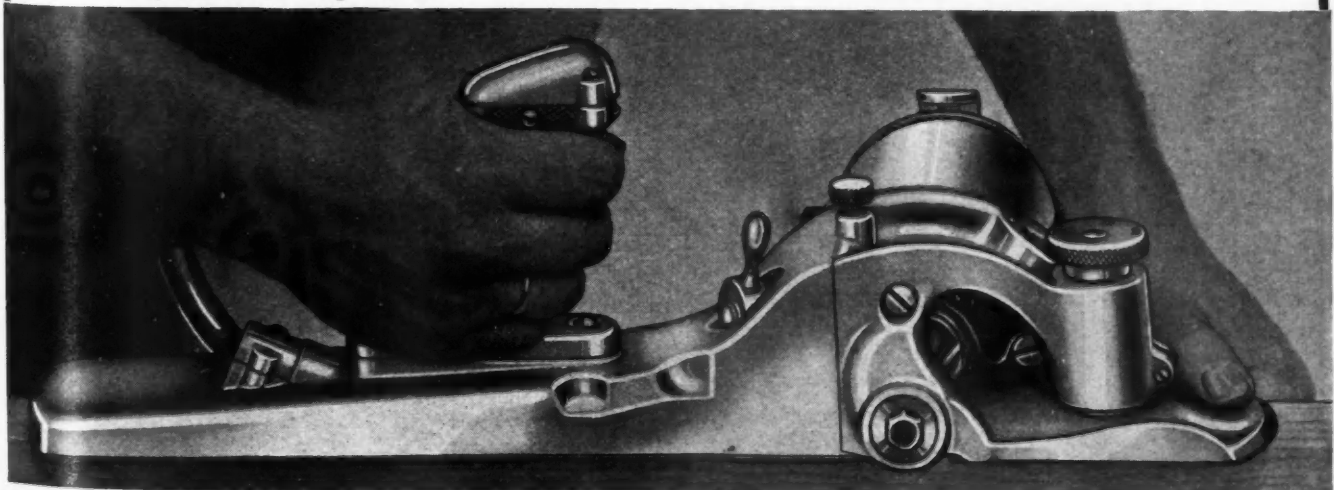
**CARTER HINGE BUTT  
 ROUTER & TEMPLET**

A perfect mortise every  
 time. Reversible for  
 door or jamb.



**CARTER  
 LOCK MORTISER —**  
 A mortise a minute—  
 every one accurate  
 to a hair!

(BELOW) **CARTER J5 POWER PLANE** — takes a satin-smooth  
 cut, thick or paper thin, across 2½". Quickly  
 adjustable. Full 1 h.p. motor.



**CARTER MONEY MAKING TOOLS**

*That's the window that helps me deliver*  
**MORE HOUSE FOR THE MONEY**

THE ORIGINAL AND GENUINE

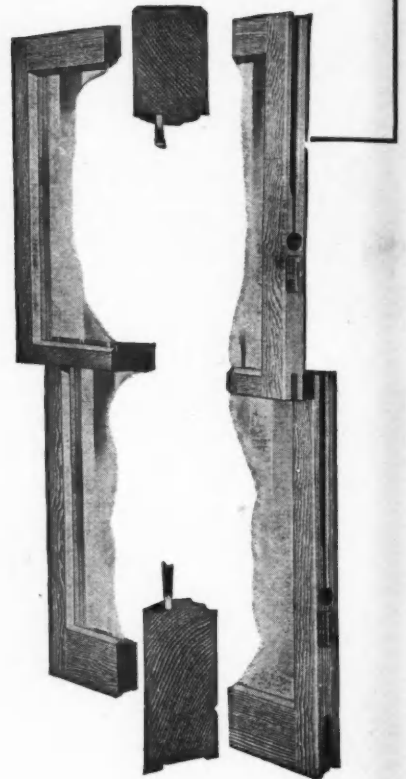
**RED-E-FIT  
 ROT-PROOF  
 -REZISTAL-  
 TREATED**

WOOD WINDOW



**SPECIFY  
 "REZISTAL"  
 TREATED**

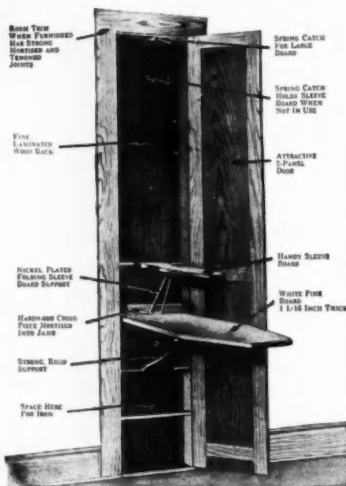
Identified By Above Brand Burned in the edge of each stile.



**REZISTAL PREVENTS**—absorption of excessive moisture—Protects against wet weather and high humidity — Prevents excessive swelling that causes "sticking" windows — Eliminates undue shrinkage and expansion — Prevents blue stain or black mould from developing — Protects against all types of decay, also Termites.

Painting cost is reduced because the "Rezistal" treat serves as a preliminary priming coat and gives full protection until regular paint coats are applied.

This wood window is made of soft textured kiln dried Western Ponderosa Pine, "Rezistal" treated—Guaranteed for 25 years against rot & decay



Ironing Board HM-1134

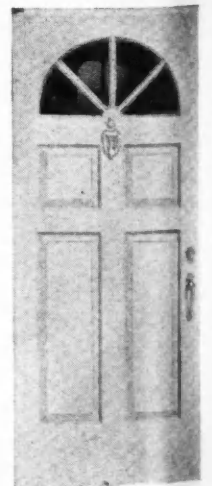


FOR ARCHITECTURAL BEAUTY, choose "Woodwork of Merit," the Nation's finest Sash, Doors, Frames, Screens, Cabinets, Trim, etc. Neat, convenient China Cases. "Modern Mode" Kitchen Cabinets. Huttig Doors are unsurpassed for beauty and construction. Illustration shows a popular Colonial front door. See your Dealer or write today for descriptive literature.

**HUTTIG MFG. COMPANY**

MUSCATINE

IOWA



Door HM-600



# A reinforcing steel expert



## *IN EVERY SALES OFFICE*

In each of Bethlehem's sales offices there are one or more men who have been intimately associated with every kind of reinforced concrete construction. These men are technically trained experts on reinforcing steel. With a full understanding of your problems they can give the complete and intelligent service you need.

To further this reinforcing steel service Bethlehem maintains 15 warehouses in key industrial areas; the one nearest your job can ship your steel economically. In addition, each Bethlehem warehouse has a shop staffed and equipped to cut, bend and fabricate the steel according to your specifications.

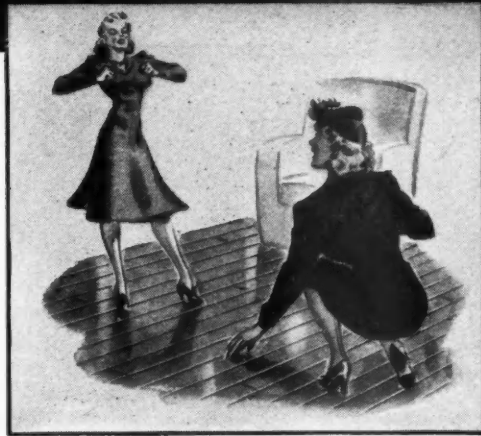
# BETHLEHEM STEEL COMPANY



# Use BRUCE STREAMLINE FLOORING Gives Home Owners Many Advantages!



**FACTORY-FINISHED!** Bruce Streamline Flooring comes finished and waxed—ready for use the instant it's laid. So it saves time, labor. Doesn't hold up the work of other trades. In remodeling jobs there's no mess, smell or waiting for finish to dry.



**FLOORS OF LASTING BEAUTY!** Everybody loves that smart "shadow pattern" effect of Bruce Streamline Flooring, with its extra wide strips and beveled edges. And the sealed in scratch-resisting surface is so easy to keep clean.



**A LIFESAVER FOR BUDGETS!** No wonder home owners are thrilled to get a really superior floor—with extra beauty and wear—at no greater cost than ordinary oak flooring finished in the home.



**MAKE THIS SCRATCH TEST!** Let prospects see the proof of how Streamline's amazing new finish withstands wear that would chip and mar ordinary "surface" finishes. Send for free "scratch test" panel.

● Bruce Streamline Flooring is available in Oak, Maple and Beech. Three sizes  $2\frac{5}{32}$ " x  $3\frac{1}{4}$ ",  $1\frac{1}{2}$ " x  $2\frac{1}{2}$ " and  $\frac{3}{8}$ " x 2". Laid like ordinary strip flooring. Nationally advertised. Mail coupon for complete information and free "scratch test" panel *today*.

**E. L. BRUCE CO., 1577 Thomas Street, Memphis, Tennessee**



**STREAMLINE**  
Trade Mark Reg. U. S. Pat. Off.  
**FLOORING**  
 FLOOR FINISHES • TERMINIX • LUMBER PRODUCTS

**FREE OFFER! — MAIL COUPON!**

E. L. Bruce Co., 1577 Thomas St., Memphis, Tenn. Gentlemen: Please send FREE "scratch test" panel and full details about Bruce Streamline Flooring.

Name.....

Address.....

City..... State.....

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(A Simmons-Boardman Publication)

# AMERICAN BUILDER

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*Jake's all set to cut your hair - - -  
paint your portrait - - - or embalm you!*



**W**E knew a fellow once named Jake who could do practically everything. He was a jack-of-all-trades. But somehow Jake never got to be very good at any one thing.

Now, we believe that this is a free country and a man does not have to specialize in any one line unless he wants to. But we've seen it pay.

*Take, for instance, the case of the National Gypsum Company.* National has specialized in wall and ceiling materials ever since its introduction (in 1925) of the first light-weight super-strength gypsum wallboard. Today as then National sets the quality standards for the entire plaster-board industry.

At the same time National has improved all wall and ceiling materials to the benefit of every factor in building. Plaster and lime quality has been stepped up. National has developed purer sources of raw materials . . . perfected new manufacturing methods . . . devised more efficient systems of construction.

An example is the Gold Bond 2"

solid partition system which has increased rentable floor space by thousands of feet on big housing jobs. Another is the Gold Bond arch bead, a base for plastered arches that is bent on the job to meet any requirement.

Gold Bond is the only manufacturer in the world specializing exclusively in wall and ceiling materials. The result is that today there is a better Gold Bond product for any type of interior whether it be lath and plaster, wallboard, insulation, cold-water paint or sound absorption. Today, when you do business with Gold Bond you are assured of three important things:

1. With Gold Bond research always on the job in this one field, you will be first to profit from the newest and the best improvements.

2. National's more than 300 representatives can help you select the best materials for any job—and tell you exactly how to use them.

3. When Gold Bond materials are used exclusively, one manufacturer is responsible for the result.

Write today for the 1941 Gold Bond Handbook, describing new methods of wall and ceiling construction. Address, National Gypsum Company, Buffalo, N. Y.

## Gold Bond

*related wall and ceiling products*

*Producing Units at:*

NEW YORK, N. Y. . . . CLARENCE CENTER, N. Y. . . . AKRON, N. Y. . . . PORTSMOUTH, N. H.  
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# PUBLISHER'S PAGE

## Excessive Taxes on Homes

**W**HEN local taxing bodies levy unfair and confiscatory taxes on homes and other real estate, they are taking a long step in the program toward state socialism and the public ownership of what is now private property. The socialist formula is to make private ownership of property unprofitable, then to take it over; and this formula is already in full operation in the housing field.

It is estimated that the gross annual income of privately owned real estate in the United States is about 7 billion dollars, which includes not only the gross rents actually collected but also the estimated annual rental value of all owner-occupied farms and all owner-occupied properties in the cities. According to an estimate made by the Department of Commerce, local real estate taxes are levied amounting to 4½ billion dollars, or 64 per cent of this total income. The National Real Estate Tax Conference, meeting last spring in Washington, concluded that this situation is "the key-log of our economic jam."

"**I**T IS our archaic tax system," the Conference declared, "which has put the brakes on progress and which is responsible in no small degree for much of the economic distress in our national life. Land distribution, which is the evidence of growth and progress, has been slowing down. Home ownership has been falling behind population increase, until today only 40 per cent of our citizens own property. We have permitted taxes to be levied on property in a cumulative manner without regard to income or value and without serious effort to shift unjust burdens to other forms of wealth. The economic effects are felt by every person in the community when real estate tax delinquencies mount as they have been doing in virtually every subdivision of every state in the Union. We must pull the key-log of the economic jam if we want to permit a better flow of business by increased building."

Real estate should pay its just and fair proportion of the cost of government, and no more. When taxes are paid on a value that does not exist you are actually liquidating the property. We cannot as a people afford to see the soundest of all values, the yardstick for all values, taxed until

it is no longer an asset, defaulting to the municipality. In a democracy, real property ownership is one of the great incentives to thrift. It is one of the privileges accorded us in the past by our form of government. The broad distribution of property ownership constitutes a real safeguard for the preservation of this form of government.

**B**UT while these unfair taxes have been laid on homes and other real estate, the government has pushed its own program of public housing in competition with private ownership. These publicly owned and subsidized houses are tax-exempt at a time when local governments are short of funds even in spite of high tax rates.

A current survey by the U. S. Savings and Loan League shows that lagging revenues of various governments will be bolstered by some \$34,062,000 annually as a result of the new homes built for private ownership in America this past year. The League's "Taxation Committee," making the report, estimated that the 386,300 single family homes built in the non-farm areas added \$1,362,508,000 to the value of taxable real property last year.

"While the private building industry was preparing this \$34,000,000 worth of oil to pour annually on the troubled waters of local government finance, public housing was stirring up the waters underneath," said Wendell C. Gates, Battle Creek, Michigan, chairman of the committee. "Estimating the taxes which housing built the past two years with public funds and subsidies would have netted to local governments if they had been built for private ownership on the same basis as the tax rate on those which were built privately, we find that tax exemptions on public housing projects are costing the cities and counties annually \$5,500,000. Only about \$250,000 of this was made up last year by the service charges which are so called 'payments in lieu of taxes.'"

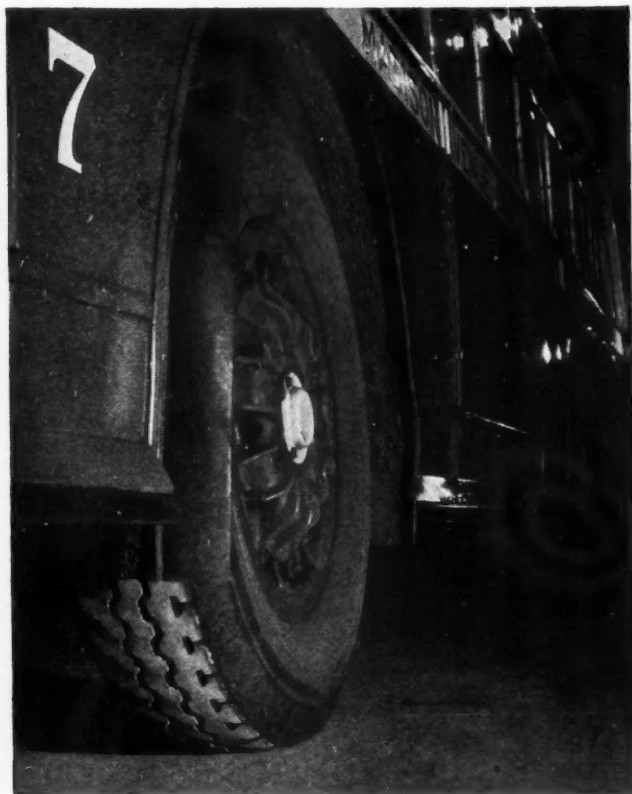
It's more of the regular socialist doctrine—tax and destroy, until public ownership is the only recourse.

*Samuel O. Dunn,*

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**24-HOUR CONCRETE SPEEDS  
GARAGE FLOOR REBUILDING  
—CUTS TIME IN HALF**

# 'Incor' Keeps 'Em Rolling!



**T**O ACCOMMODATE the increased weight of present-day buses, New York's Fifth Avenue Coach Company recently reconstructed the second and third floors of their East 102nd Street garage—Franklin Concrete Corp., New York, general contractor. Old floors were torn out, and 5 in. of 'Incor' concrete placed on the reinforced concrete arch. Work progressed in sections; 24 hours after the 'Incor' concrete was placed, it was opened to heavy bus service. The contractor had a month to do the job—but he finished it in two weeks, thanks to good planning and 'Incor' 24-hour service strength.

'Incor,\* the first high early strength Portland cement, is service-strong in one-fifth the usual time. That cuts costs all along the line—on forms, curing, overhead. And long-time durability, proved by 13 years' performance, saves money through expense-free service. Write for copy of "Cutting Concrete Costs." Lone Star Cement Corporation, Room 2232, 342 Madison Avenue, New York.

\*Reg. U. S. Pat. Off.



**LONE STAR CEMENT CORPORATION**  
MAKERS OF LONE STAR CEMENT . . . 'INCOR' 24-HOUR CEMENT



# AMERICAN BUILDER

## AND BUILDING AGE

### The Better Home Proves Less Costly

THE HIGH cost of poor construction is well known to experienced builders. If a building fails to stand up and give service for its reasonable life, extra expenses for repairs and maintenance have to be incurred; what was saved in first-cost by skimping quality is made up, and more, in later up-keep costs. By short-sighted buying, the property owner finally has all the expense, but neither the service nor the satisfaction, of the better home which just a little added percentage for quality would have secured.

These are facts that building industry men have long understood; but the average home buyer, inexperienced in construction matters as he usually is, continues to court disappointment and excessive operating costs by shopping around for "bargains," priced low.

But today the fallacy of this drive for "cheapness" is being exposed. Long-term financing for homes, with all costs amortized and paid monthly like rent, is revealing now, for the first time in popular terms, the actual facts of the economy of quality.

#### Three Factors in Total Cost

Take, for example, the typical modest home of today that is being paid for under the popular 15-, 20- or 25-year mortgage plan of the FHA and Savings & Loan type. The purchaser is not so much interested in the total first-cost of the home (the principal sum) as he is in the amount of the monthly payment. And he knows that his monthly cost for home ownership and home occupancy is made up of three parts: (1) his monthly payment on the mortgage contract (interest, principal, insurance, tax); (2) his average cost for repairs and up-keep; and (3) his average cost for heat, light and household service.

The sum of these three factors is the true cost of his home, and it very often is discovered that, after a very few years, increases in item (2), repairs and replacements due to shoddy construction and skimped equipment, are more than enough to outweigh the savings made in the mortgage payments, item (1).

Also, in regard to item (3), fuel and lighting cost and expense for necessary household help, the "cheap" house is usually found to be really the extravagant one, wasting fuel, wasting electricity and demanding excessive expense for cleaning and other household service.

On a 20-year mortgage payoff under present FHA regulations \$1,000 added to the first-cost of a house means only \$6.33 added to the monthly payments, item (1). Often that thousand dollars is more than the difference between a "cheap," skimped house and its dupli-

cate strongly built, well finished, thoroughly insulated and supplied with lasting equipment. Yet an average of \$6.33 monthly can very easily be spent repairing cracks, stopping leaks and replacing short-lived equipment—which turned out to be no "bargain" after all.

#### Aim for Low Occupancy Costs

Item (3), average monthly costs for fuel, light and service, also deserves more consideration than many home buyers and builders usually give to it. Insulation in walls and roof, storm sash, double glazing, weatherstrips—all pay for themselves in just a few years in reduced fuel bills; the added comfort both winter and summer is free, with greater family health and less medical expense as an extra dividend.

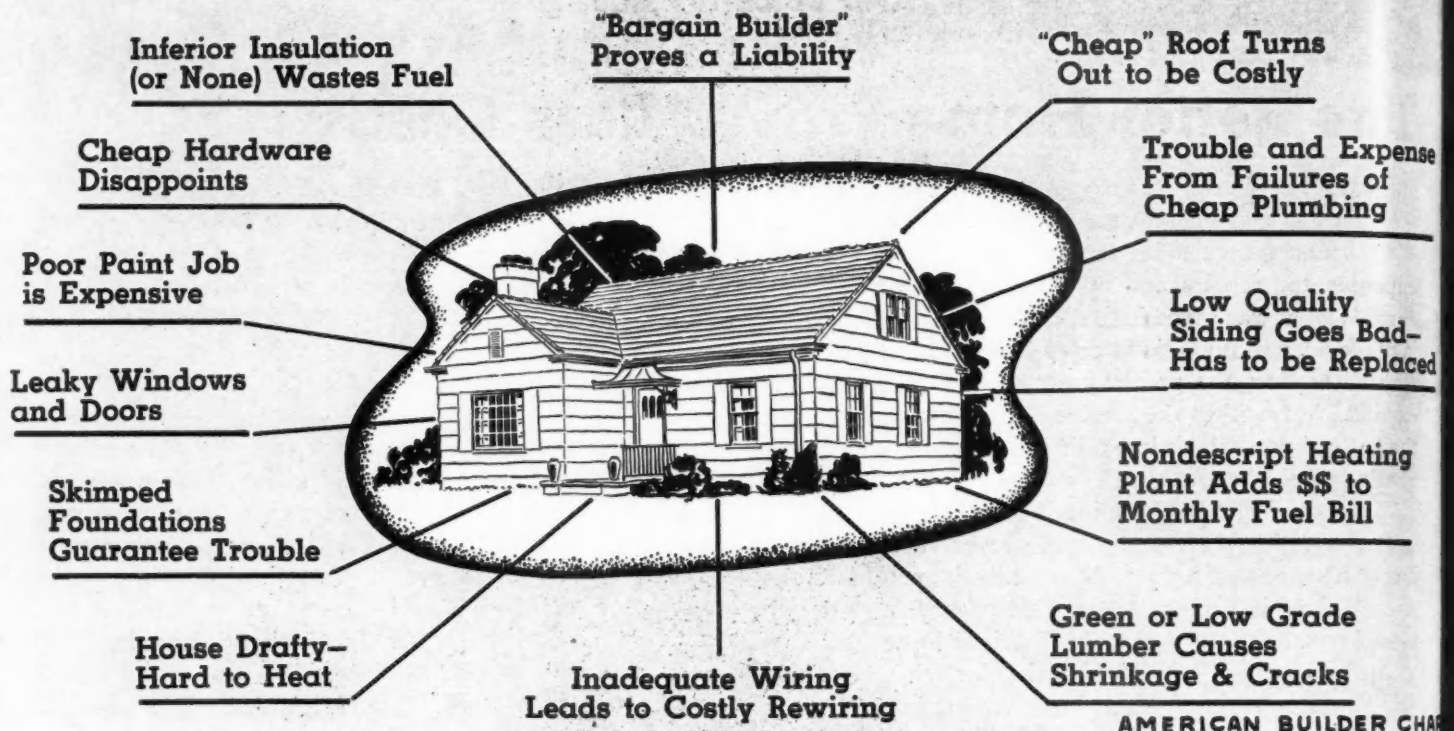
In the matter of lighting and labor-saving home power, real life-time economy favors an adequate wiring installation; no skimping is justified here. Wire that is heavy enough, plenty of circuits to prevent overloading, convenient outlets in every room, high safety standards maintained—these all can be had of good quality for a small percentage, and pay dividends over the entire life of the dwelling, reducing costs and increasing livability. The modern, small, well-planned, electrical home is a true servantless home—and \$10 per week saved on "help" amortizes in 20 years an extra investment for labor-saving comfort of \$6,846.

#### Quality Pays on Both Large and Small Homes

The "Low Cost of Good Construction" when figured on a long-time basis is just as real for the owner who pays all cash or finances on a small, short-term mortgage as it is for the owner who agrees to make monthly payments for 20 years. The advantages of quality and freedom from excessive repair and maintenance expense mean just as much to the one as to the other. But the owner who is paying off monthly perhaps sees the money advantage more clearly. He is working to a budget and he finds that the all-important thing for him is not to have his budget upset as he goes along by unexpected failures of the house or its equipment, leading to excessive repair and replacement costs.

The quality home gives him this assurance. The small extra premium added to the first-cost for something better than the cheapest turns out to be the best investment in the long run. The better home actually proves less costly when the consistently lower expenses of maintenance and of occupancy are figured in.

## Only the RICH Can Afford This CHEAP HOUSE



AMERICAN BUILDER CHAR

First Cost Was Less—But MONTHLY OWNERSHIP Cost is GREATER

## It's Not the First Cost but the UPKEEP—

**Lasting quality assures low yearly-cost—  
It pays to deal with efficient builders  
who use good products, skilled workmen.**

**W**HY is it that so many people, when they come to build or buy a house will cut, scrape, bargain and go to ridiculous extremes to beat down the price, or try to get something for nothing? If they were buying a suit they would willingly pay \$40 for a quality garment rather than \$16.50 to a peddler, although the two suits, while new, might look very much alike.

Houses look a lot alike, too, especially when they are new. The inner construction is not apparent to the casual observer or the inexperienced customer. *Hidden values*, which experienced building men know to be so important in the long life of a building, may or may not be present. If they are present, the buyer is very largely relieved of future costs for repairs and maintenance; if absent—if the job has been skimped—repairs and upkeep costs constantly grow larger, often endangering the buyer's entire financing program.

In the *American Builder* pictographs, illustrated above, are listed some of the more important hidden-value details in home building and home equipment. The "cheap"

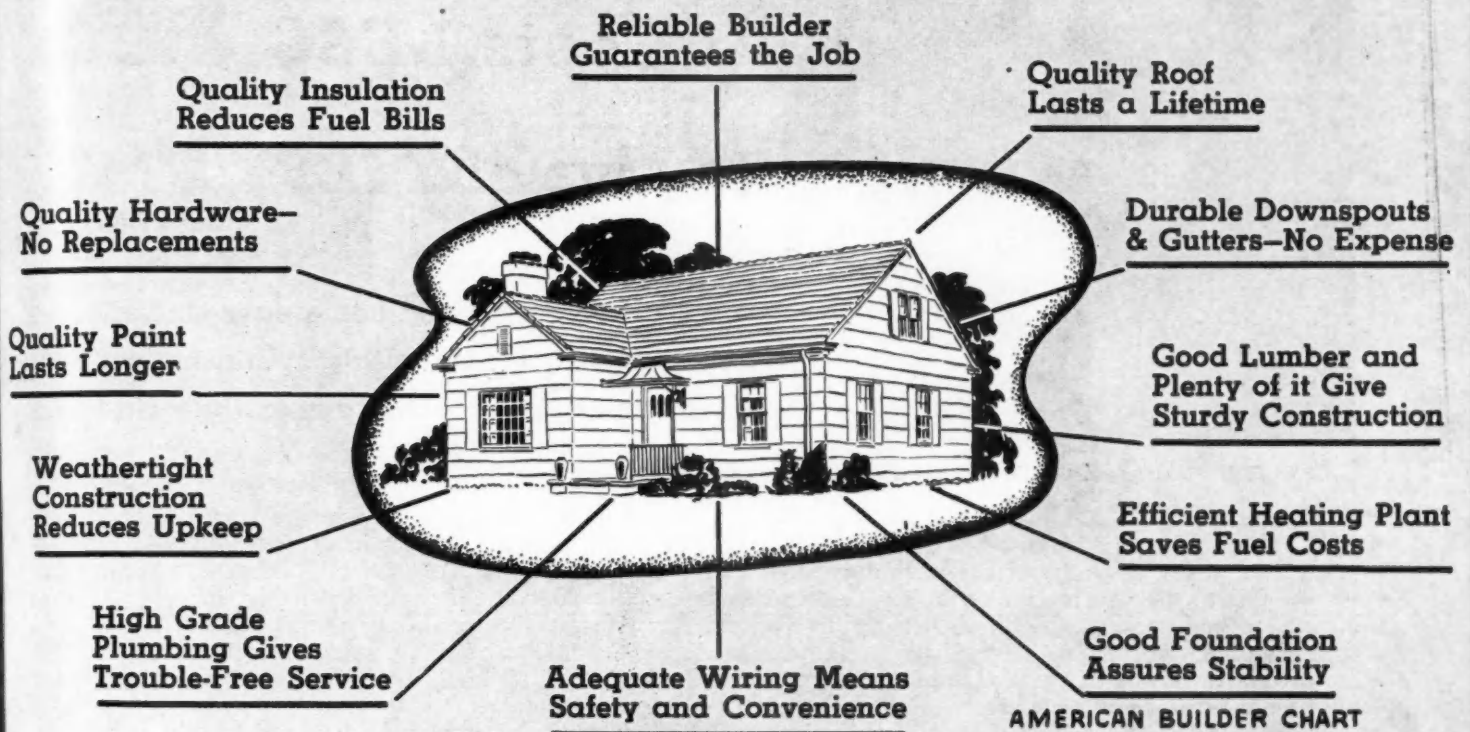
house in construction, finish and operating equipment is contrasted with a "quality" house of the same design. Only a *rich man*—that is to say, one who can afford to be careless of expenses—can afford to own and operate this "cheap" house. The "quality home," on the other hand, with lasting service built-in and provided with trouble-free equipment provides a safe investment for a *poor man*—one who has to control his expenses and work to a budget. For such a one—and practically *everyone* is in this class—the freedom from unexpected and unbudgeted repair bills and from excessive home operating costs more than makes up for the slightly larger monthly mortgage payoff payments occasioned by the better construction and better home equipment.

The items listed in the pictograph of the "cheap" house are well known to, and avoided by, most building industry men. They know the long-time value of good construction and equipment, and the shortsightedness and the disappointments inherent in the skimped job. The items listed in the "quality home" pictograph are, for the most part, simply the affirmative side of the negative items that characterize the cheap job.

Good lumber, good brick and stone work, good concrete, durable roofings, non-corroding sheet metal work, quality windows well fitted, storm sash, permanent weatherstripping, long-life paint, trouble-free plumbing, an



# Even a POOR MAN Can Afford This QUALITY HOME



Costs LESS to Own Because it is WELL BUILT

## EP—“Bargain Homes” Are COSTLY to Own

adequate heating plant properly installed, and safe electric wiring with safety panel, switches and outlets sufficient for today's expanding electric needs—all are marks of “quality” which sufficiently pay for themselves over years of service as compared with the first cost of the shoddy stuff that all too often is thought proper for the “cheap home,” but proves so costly in the long run.

Take just one item as a specific example to show what a small extra investment at the start will mean in cutting monthly operating costs throughout the entire life of the house—not to mention comfort and health for the occupants. We refer to *insulation* installed in side walls and under the roof to keep down the cold weather fuel bills and to promote comfort and health by keeping the heat out in hot weather. A leading manufacturer of insulating materials reports the following experience in connection with a one-story home in the Chicago area. This was a house of customary frame construction, 2 x 4 studs, 7/8" pine sheathing, clap boards, lath and plaster. No special insulating material was included either in the side walls or overhead. When first erected, 12.1 tons of coal per season were required to heat this uninsulated house. Later, two-inch thick insulation was added throughout the side walls and above all ceilings. As a result, the fuel required to heat this house was cut down to 6.4 tons, a saving of fuel cost of 47.1 per cent. This

saving in annual fuel cost completely paid, within a few years, the extra cost of the insulation and then continued to work for the owner to reduce his fixed monthly budget, set up for the combined purpose of retiring the mortgage and operating the home.

As illustrated in these *American Builder* pictographs, these two homes look a lot alike when new; and, unfortunately, the *builders* of houses must also look alike to many prospective buyers; for frequently they fail to distinguish between the man who is prepared to deliver a quality job and the man who will cut and chisel all along the line, just as much as the buyer forces him to.

Why is it that some people will try to get more in a house than their money can possibly buy—even to the extent of turning to a fourth-rate contractor or of dispensing with a contractor entirely and trying to do the job themselves?

(Continued to page 178)

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C. W. STUART, manager, G-E Home Bureau.

## It Costs LESS to Live BETTER

—in a quality-equipped home, says C. W. Stuart, describing how low monthly operating costs are more important to home owner than first cost

**A** MAN'S home is his castle, and many men who do not enjoy a kingly income have discovered that fact to their sorrow. When they first set about buying or building a house to shelter themselves and their families, the emphasis may have been on *home*, but after a few years of paying the bills, the true meaning of the *castle* became apparent. For castles are expensive things to live in, and if you don't think so, ask the man who owns one!

A friend of mine sat dejectedly across the office from me recently and announced that he was several kinds of a fool. Within the past year he had moved from one city to another, and in making up the family budget he and his wife had decided they would not—in fact, *could* not,—exceed the sum of \$75 rent per month.

This man was a good judge of values. He knew what he wanted in location and in number of rooms. Agents showed him houses at \$125 that had everything he wanted—but that was too much. They showed houses at \$110, not so many at \$100, a very few at \$90 and \$85—and as the rents went down, so did the desirability. But having made the decision not to spend more than \$75, my friend had stuck to his guns and finally was able to rent a house for that amount.

Of course it wasn't in just the right neighborhood, it wasn't quite large enough, he wasn't optimistic about the heating, and there were other drawbacks. But nevertheless he felt that he had done the conservative, wise thing. Now, several months later, he knew he had been wrong and the knowledge made him angry.

For one thing, his heating bill had run more than \$200

for the season. To obtain domestic hot water during the same time he had spent \$10 a month. And with his good knowledge of equipment it had suddenly occurred to him that he could have rented one of the more expensive houses after all, saved himself trouble and discomfort, lived much more conveniently—and *not spent any more money.*

"I rented a poor man's house that only a rich man could afford to run," he lamented, "when I should have realized that it is the man of limited income who *has* to have good equipment."

The importance of operating expense has often been overlooked, not only by homeowners, but by builders, house salesmen, financing agencies, and every one with an attractive stake in the home market. There has always existed a feeling on the part of builders that the factor of monthly operating cost meant little or nothing to a prospective buyer, but perhaps they have been deluding themselves.

The Customer Research Staff of General Motors asked more than a million car owners to tell them what they most desired in an automobile. The group surveyed was divided into three categories, by their ownership of low-, medium-, and high-priced cars. The results were astonishing when it is considered that most of us think such things as speed, power, streamlining, and glamour are the prime movers in car sales. The low- and medium-priced groups voted for *low operating cost* as the most desirable characteristic, and only the owners of the high-priced cars considered this item of secondary importance.

Just as automobiles are bought to be used—and not to



"His heating bill had run more than \$200—he had rented a POOR man's house that only a RICH man could afford.

"It's the man of limited income who HAS to have good equipment.

"The cost of home ownership is made up of two elements: the cost to buy, or capital investment, and the cost to operate or live in, which is operating expense.

"Operating equipment is one of the essential differences between a house and a barn.

"The cost to pay for a house and the cost to live in it come out of the same pocketbook."

### How Quality Operating Equipment Reduces Monthly Outlay

	ASSUMED FIRST COST		ASSUMED MONTHLY OPERATING EXPENSES	
	HOUSE A	HOUSE B	HOUSE A	HOUSE B
LOT, STRUCTURE, etc.	\$4000	\$4000		
FURNACE	350	495	\$800	\$600
WATER HEATER	(WATER HEATING INCLUDED ABOVE)			
WIRING	100	115	300	285
CABINETS	60	90	.50	—
CAB. SINK, DISHW'G, GARBAGE	60	375	375	.68
COOKING	75	130	330	240
REFRIGERATION	115	135	150	100
FAN and CLOCK		40	—	.12
<b>TOTAL</b>	<b>4760</b>	<b>5380</b>		
TAXES, INS., MAINT., DEP'N			1735	1748
DOWN PAYMENT	560	580		
REMAINDER	4200	4800		
MONTHLY AMORTIZATION	2440	2789	2440	2789
<b>TOTAL MONTHLY OUTLAY</b>			<b>6160</b>	<b>5842</b>

be parked in a garage for lack of gas and oil—so houses are built to be lived in. The responsibility and the interest of the architect, the builder, the house salesman, and the lending agency do not end with the sale. A house represents probably the biggest single investment the family will ever make, and architects and builders will serve the best interests of their clients, their professions, and themselves if they provide that customer with modern equipment to conserve the investment and set high living standards. With such house, a salesman finds that he has an opportunity, perhaps for the first time, to sell modern living and not just shelter-at-a-price. And certainly a house having high-quality equipment in respect to heating, wiring, lighting, and kitchen offers a much better mortgage risk, since what a house costs to live in has a direct bearing on both the owner's ability and his willingness to continue payments.

There is an additional point worth making in any con-

sideration of low-priced homes. As the overall cost of a house is reduced, the modern operating equipment which that house contains assumes greater importance in the eyes of the prospective purchaser, commanding his interest which otherwise might be lost because, perhaps, the size and appearance of the less-expensive home is disappointing.

In the last analysis, the new home market has to be a buyer's market. His interest is paramount, and if he is well-served, so are the architect, builder, salesman, mortgage-holder, utility company, and supplier of equipment. In approaching the subject from the angle of the customer, it is to be noted that the cost of home ownership is made up of two elements—the cost to buy, or capital investment; and the cost to operate or live in, which is operating expense. The capital investment is represented by land, structure, and operating equipment, and these all involve the factors of first (Continued to page 193)

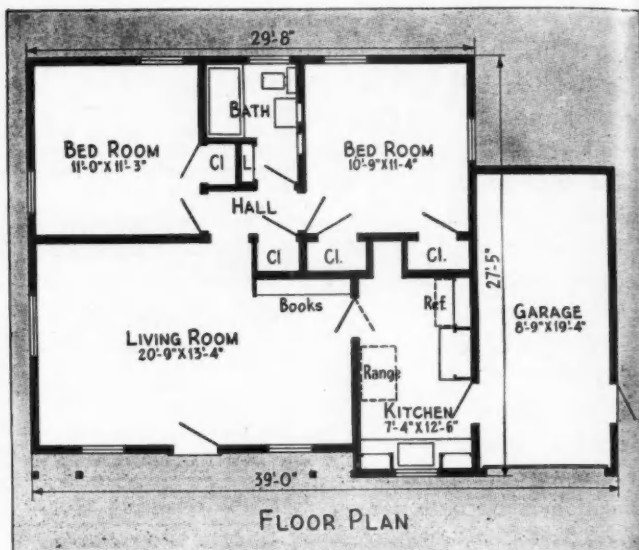


# Houston Clamors to Buy Well Built, Easily Maintained Garden Oaks Homes

## Texas Development Enjoys Phenomenal Success in Low Cost Home Field; Well Equipped Models Attract Many Prospects

**W**ITH designs so attractive that the houses sell before completion, the new 1941 model homes presented by Garden Oaks, Houston's smart but moderately priced subdivision, has enjoyed remarkable success in the sales of its new Fourth Section. So great has been the demand for these new 1941 models that the Garden Oaks Company was compelled to hold one off the market as a demonstration.

The demonstration home pictured here is one of a group of 16 houses constructed under the FHA Title I, Class Three classification, in which the purchaser buys only the improvements upon the property, and leases the home site at a moderate annual rental fee from the Garden



Oaks Company. The buyer has the right also to acquire the building site at any time during the 31-year tenure of the lease. This enables the purchaser, who has only \$195 with which to make a cash down payment, to acquire immediate possession of a beautiful, roomy, architecturally sound home, without the necessity of previously having acquired a building lot, or engaging in intricate financing schemes. The succeeding FHA payments may be as low as 99 cents per day, with a total cost for the house well under \$3000, including utilities, grading and landscaping.

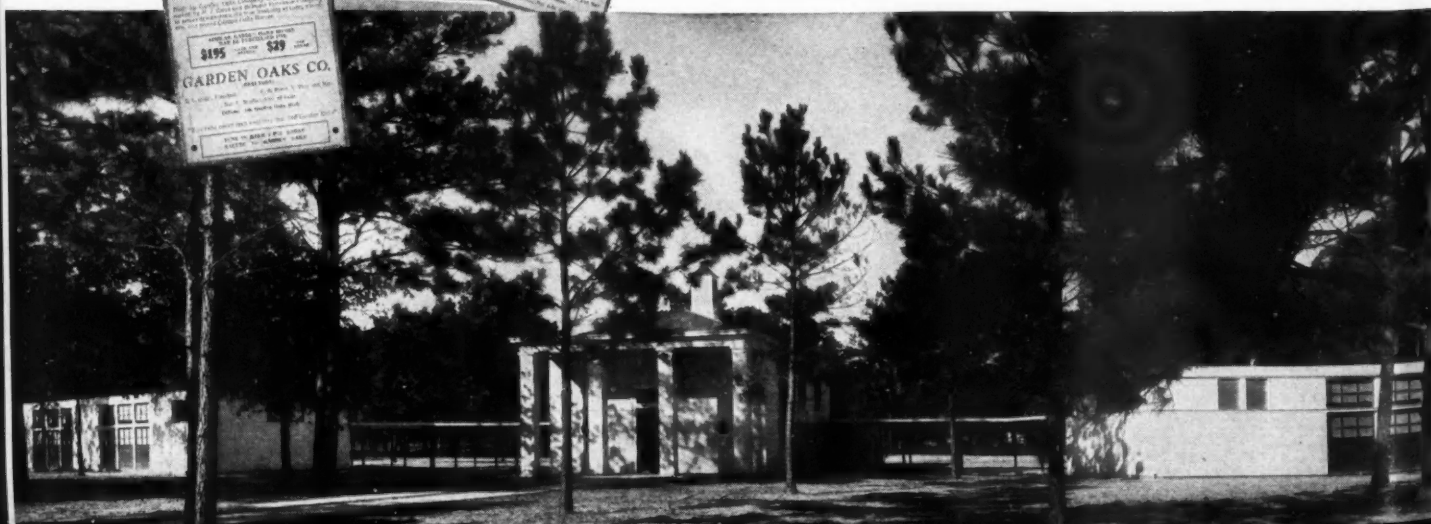
"We are opening and developing only one street at a time," said E. L. Crain, president of Garden Oaks Company, in an interview with *American Builder's* representative. "This enables us to concentrate our construction crews upon a relatively small area, and thus makes for greater efficiency and lower supervision costs.

"Building a fine home of this type at a low price involves much thought and planning, and is really only possible with an organization in position to erect a group of houses at one time."

### Believe in Low Cost of Good Construction

At Garden Oaks, it was further pointed out, "The homes we are building today cost more than many homes of the same square area, but since good construction is the least expensive on a living cost basis over a period of

**SAMPLES** of newspaper and direct mail advertising (left) which point out Garden Oaks advantages including large wooded home sites, permanent concrete streets, protective restrictions, parks, playgrounds, and the "most modern grade school in the south" (below).







years, we find buyers today appreciate such plus value. Set forth here are a few of the items that add to the cost, but also add proportionately more to the life of the structure:

1. *Solid concrete reinforced floating slab foundation.* Before pouring concrete into the forms, the ground is treated with creosote as a termite preventative. The floating slab also lends to the architectural attractiveness of the structure.

2. *All base or toe plates used in our construction of treated lumber, bolted to the concrete slab.* Before bolting, the plates, two layers of 15 lb. felt waterproofing are applied with mastic between and on the top and bottom. The bottom felt layer is embedded in the waterproofing for the floor inside, and the top layer is turned up against the wall, thus preventing any moisture seeping in.

3. *Bracing.* The frame of the building is not only braced in keeping with FHA minimum construction methods, but additional bracing is used. The roof is well braced to the ceiling joists over bearing partitions.

4. *In the group of Title I houses now being constructed, steel sash used exclusively.* In this climate, ordinary wood sash and frames deteriorate more rapidly than in a drier climate. We find the steel sash add attractiveness to the building, in addition to the saving over a period of years. A further advantage is that no trim is needed around the windows, and the shades or Venetian blinds are installed  
(Continued to page 192)



ABOVE: Garden Oaks 1941 demonstration home and, at right, a view of the combination living-dining room showing built-in cabinets with mirror back. The kitchen is seen looking across the counters and cabinet unit.

# PROFITS IN PAINT

## Skillful Color-Styling with Quality Paints Makes for Quick Sales

**Good materials and workmanship on original paint job win favorable attention and assure lasting buyer satisfaction**

**P**AIN'T authorities have for years stressed the importance of care, thoroughness and quality when painting a new house for the first time. They have urged, pleaded and threatened against cheap paints, skimpily applied, declaring—and truthfully—that the *first coats* determine the lasting quality of all future coats and that quality paints on the *original* painting of the new house would protect and preserve it.

These are facts well known to paint men; but, *up to now*, they have had a hard time converting home builders to the wisdom of spending the little extra required for careful priming, back priming and a good three-coat job of quality paint. The bill for painting, coming on top of all the construction expense, seemed too much; it had to be content with "what was left," which was usually little enough just to "get by." *First cost* loomed up as the one big consideration, regardless of what the cheap paint and the skimmed application might do to future values.

### Lasting Quality Now the Aim

Today, however, builders face an entirely different situation. With long-term financing running 20 years or more and the present system of getting all costs into the long-term first mortgages, to be paid off monthly, the *first cost* is no longer so important as length of life and freedom from upkeep and renewal expense, which make the more expensive item decidedly the cheaper in the long run. And so, as to paint; the old-time habit of skimping on the painting of the new house (Oh, we will let *that go!*) now shows up as very poor, short-sighted economy indeed. The little extra for quality paints and thorough workmanship adds but a trifle to the monthly pay-off payments; and the longer life of the better paint job actually saves money for builder and owner.

The buying public of 1941 is noticeably design- and color-conscious. "Model homes" that attract the biggest crowds are gems of the painter's art. The best selling subdivisions are those in which the houses have been skillfully color-styled; the homes decorated, both within and without, with individuality and character. The quality of their paint finish is so noticeable that buyers are quickly impressed. The confidence, created by the evident superiority of the painting and decorating, then broadens to include the unseen structural details of the building; and a creative buying atmosphere results.

So, from the point of view of the operative builder the small extra investment in good quality paints and attention to color-styling quickly pays out and gives the builder as well as the buyer an incentive to view the original paint job in its proper long-term, lasting-quality perspective. The better quality and care in painting assure the builder a quicker sale and the buyer a sounder 20-year pay-off investment.

"Save the surface and you save all" used to be a power-

ful slogan for good paints; and it still expresses a potent truth. Good lumber, properly dried, carpentered into place, and painted, stays put; it gives lasting service. The good paint protects it—it saves the surface and it saves all. And not only is the new house, properly and promptly painted, saved from warping, cracks, blisters, but also, when it finally does need repainting or restyling, it offers the painter a suitable surface for *another* quality job that will last and last.

Cheap paint, on the contrary, does not give proper protection; it cracks and scales, fades and lets in moisture. It soon has to be renewed, often at extra expense of completely burning off a paint job, necessitating two or three new coats of durable paint. As a result the builder is hurt in his reputation or business standing; and the owner is hurt in his pocketbook. Too much upkeep expense sours the customer, kills the market and may even overload the entire financial setup and lead to loss of the home through foreclosure.

Good paint, well applied, is certainly one of the home builders' best guarantees of lasting quality and permanent low cost—assuring final satisfaction and success in the home building and buying adventure. Good paint is (1) white lead paint, or (2) the highest grade prepared paint of reputable manufacturers. It is certainly a costly mistake to use substitutes in paint in place of high quality standard materials. Of high importance are the basic ingredients, pure white lead and linseed oil and dependable pure gum turpentine. Gum turpentine is an excellent solvent which penetrates the wood, anchors the paint and dries properly. It has special properties for absorbing oxygen and taking it to the oil, making for a long-lived paint. It is now widely sold in approved sealed cans which assure a pure, high quality product.

### Examples of Color-Styling

On the following 12 pages *American Builder* readers are offered a selection of some of the best current examples of color-schemes for home painting and interior decorating. Originality is expressed in these color treatments. They scintillate with brightness against backgrounds of conservative charm. Each has been tested for its popular sales appeal. Each has that mark of quality which rivets the attention.

With the entire building industry intent on delivering "more quality houses for the money" this year by taking advantage of the popular 20 and 25 year mortgages with monthly payoff and so putting the emphasis on lasting quality rather than on low first cost regardless of ability to stand up and give service—such high quality home painting as shown in these beautiful color plates should have a far-reaching effect—making for quicker sales, better satisfied home buyers and more lasting low cost satisfaction in home ownership.



# Color Styled Homes that Sell

PICKING THE RIGHT PAINT COLORS for a house is a tough job unless you know how to go about it. The builder who chooses the correct colors and blends them harmoniously attracts buyers. Too often poor taste or the unwillingness to take the advice of experts, scare prospects away . . . and spoil the salability

of well designed and well conditioned homes. In this twelve-page section of homes in brilliant, true-to-life colors, **AMERICAN BUILDER** presents color styling recommendations of experts. These are homes styled in colorful, modern fashion to make sales, and were selected by **AMERICAN BUILDER** from the new 170-

page "Paint and Color Style Guide" (Vol. 2) recently released by The Sherwin-Williams Company. These are the recommendations of expert color-stylists in the firm's Decorative Studios, who will offer, upon request, complete color-styling suggestions for a subdivision, a group of homes or an entire street.



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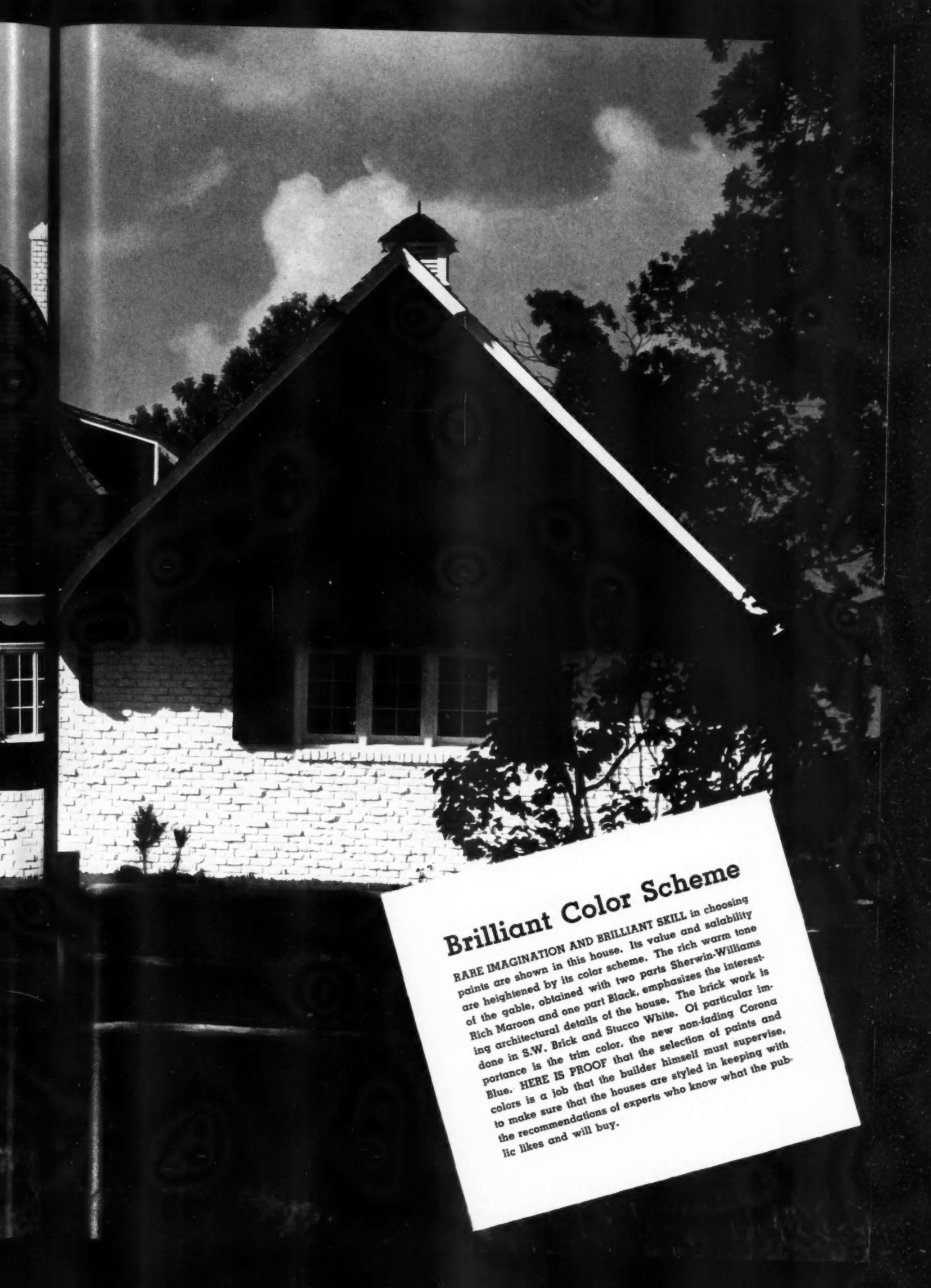
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## Brilliant Color Scheme

**RARE IMAGINATION AND BRILLIANT SKILL** in choosing points are shown in this house. Its value and salability are heightened by its color scheme. The rich warm tone of the gable, obtained with two parts Sherwin-Williams Rich Maroon and one part Black, emphasizes the interesting architectural details of the house. The brick work is done in S.W. Brick and Stucco White. Of particular importance is the trim color, the new non-fading Corona Blue. **HERE IS PROOF** that the selection of paints and colors is a job that the builder himself must supervise, to make sure that the houses are styled in keeping with the recommendations of experts who know what the public likes and will buy.



**Friendly Doorways  
Smartly Styled  
in Modern Colors**



**IVORY AND RED** are combined attractively in the doorway above. Its striking effect lends both individuality and charm. Color Styling can "lift" a doorway into one of the home's beauty spots.

**CASTILIAN BLUE** gives a bright, modern appearance to the doorway at right, when decoratively streamlined with white horizontal lines.

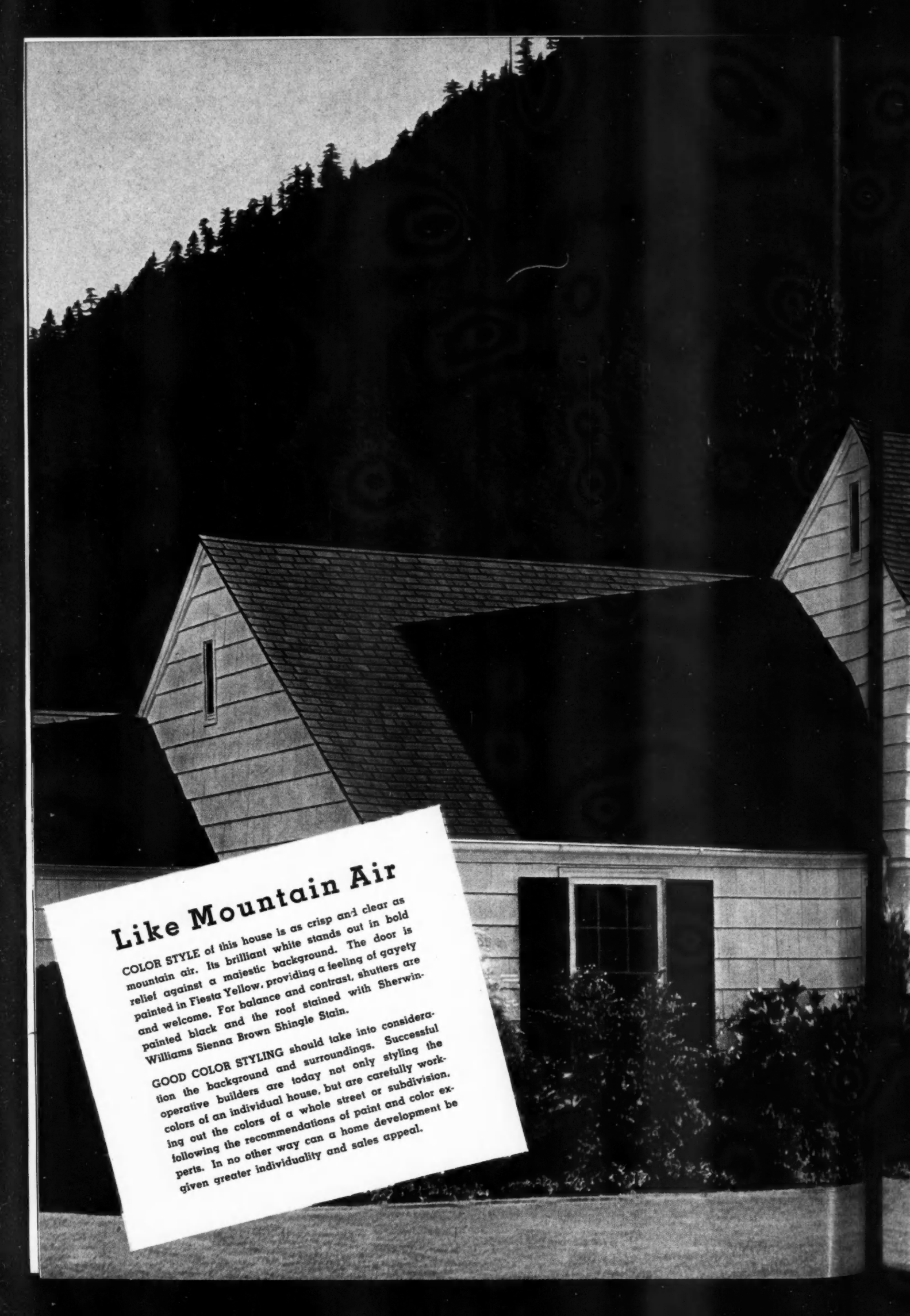


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**RICH MAROON SHUTTERS** of unusual charm set off the door above and contrast nicely with the gray shingle exterior and the white door. The inviting "open door" feeling of this entrance way attracts buyers as well as guests.

**SCREEN DOORS**—usually so prosaic—can actually *add to the decorative effect* with such imaginative treatment as shown above. This Corona Blue and White screen against a white door, is a close-up detail of the house on the preceding page.





## Like Mountain Air

COLOR STYLE of this house is as crisp and clear as mountain air. Its brilliant white stands out in bold relief against a majestic background. The door is painted in Fiesta Yellow, providing a feeling of gayety and welcome. For balance and contrast, shutters are painted black and the roof stained with Sherwin-Williams Sienna Brown Shingle Stain.

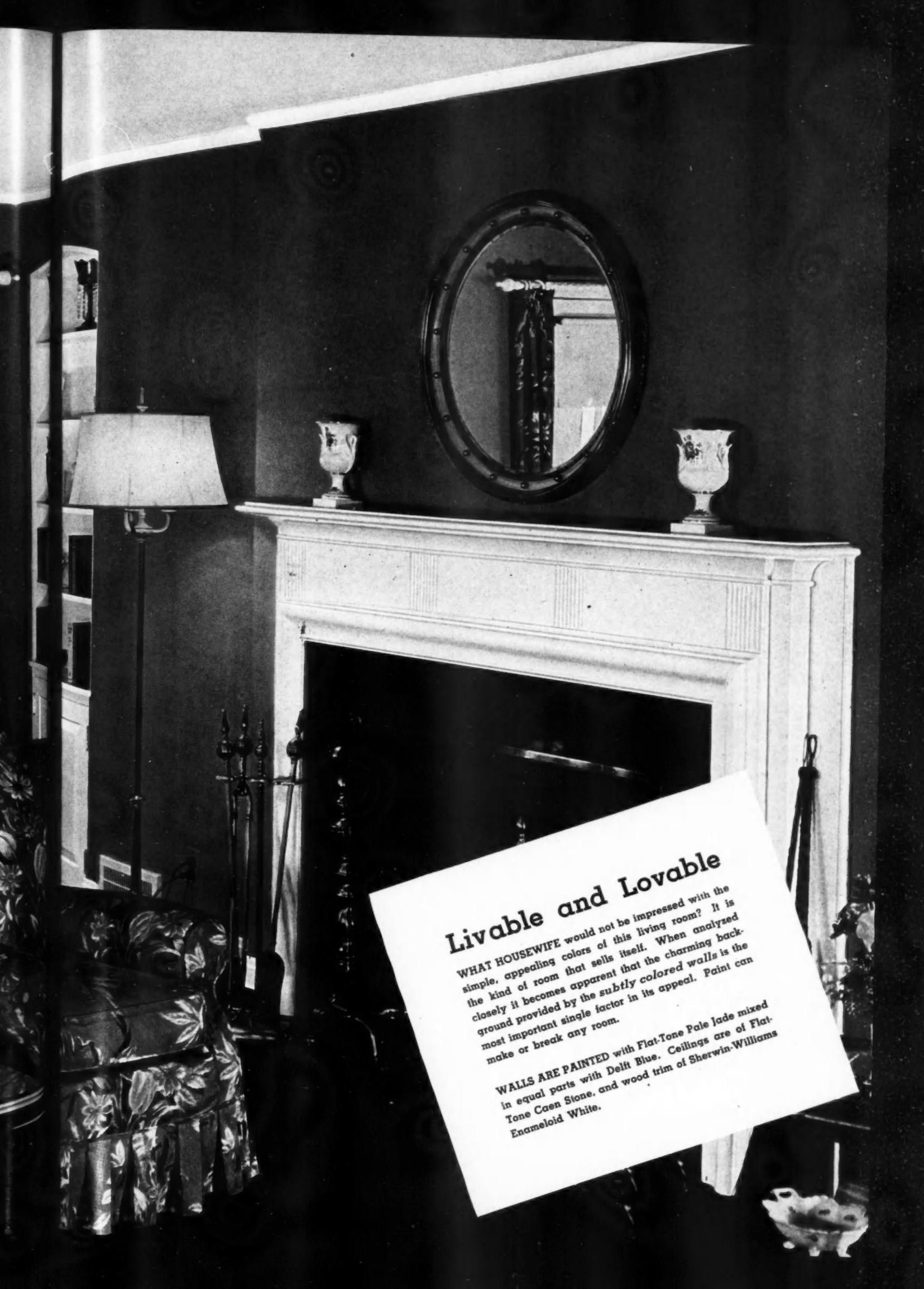
GOOD COLOR STYLING should take into consideration the background and surroundings. Successful operative builders are today not only styling the colors of an individual house, but are carefully working out the colors of a whole street or subdivision, following the recommendations of paint and color experts. In no other way can a home development be given greater individuality and sales appeal.











## Livable and Lovable

WHAT HOUSEWIFE would not be impressed with the simple, appealing colors of this living room? It is the kind of room that sells itself. When analyzed closely it becomes apparent that the charming background provided by the *subtly colored walls* is the most important single factor in its appeal. Paint can make or break any room.

WALLS ARE PAINTED with Flat-Tone Pale Jade mixed in equal parts with Delft Blue. Ceilings are of Flat-Tone Caen Stone, and wood trim of Sherwin-Williams Enameloid White.









## Color for Recreation

IT'S JUST A ROOM IN THE BASEMENT—but what a difference, due to the modern, inconspicuous heating equipment, good construction and modern *color styling*. The ceiling and brick walls in Flat-Tone White, are bright and cheery, and contrast well with the knotty pine walls finished with S-W Woodcraft Stain Maple. The floors are covered with gay Tile Red Floor Enamel.

BUILDERS ERECTING HOMES for sale can put color styling such as this to work in a powerful way. There is no need for a dingy basement. The extra room provides important extra value for the buyer.

# Color Styling For Kitchens

HERE ARE THREE different color schemes for the same kitchen—colors that are gay and irresistible enough to delight the heart of any housewife home prospect. While the kitchen equipment itself is direct, practical and efficient, the room has been given life and sales appeal through the decorations. The three kitchens shown indicate how easily the same kitchen *design* can be made to look entirely different merely through the variation of wall treatment—a technique which builders will find helpful and economical in duplicating plans from one house to another.

Ceiling and three walls painted with Enameloid Sunny Yellow. Left wall painted with Enameloid Lettuce Green.



Ceiling and three walls, Enameloid Sunny Yellow. One wall, figured wallpaper, that picks up the yellow tone and provides contrasting figures.



Ceiling and three walls painted with Semi-Lustre Canary Yellow. Wall at left painted with Semi-Lustre Vogue Blue.





O'DELL'S attractive Miami Avenue office is presided over by Mrs. O'Dell (below), who plays an important part in running the business. The handsome gentleman here is R. L. O'Dell himself.



## O'Dell Builds Well (and how they sell!)

**37-year old Miami Shores, Fla., builder sells lifetime, low upkeep houses for \$30 to \$40 a month. Rhyming want-ads help sales.**

**I**N Miami Shores, a suburb of Miami, Fla., R. L. O'Dell is building and selling fine small homes that effectively refute the charge sometimes made that Florida homes are flimsily built.

O'Dell realized, as more and more smart builders do, that home buyers are primarily interested in *houses that are inexpensive to live in*. He set out to build houses that are firesafe, termite proof, windstorm proof and free from upkeep expenses.

Due to the Florida homestead tax exemption, the taxes on his houses are very low, heating costs are practically nonexistent, and O'Dell goes still further to provide solar water heater systems that provide ample hot water heated by the rays of the sun.

Thus, on a typical \$5,500 house sold on a \$550 down payment, the total carrying charges on the 25-year mortgage are only \$35 a month, including F.H.A. insurance, fire and windstorm insurance, taxes, interest and amortization.

This really gets home ownership costs down to bed-rock, especially in view of the fact that these houses are so substantially built and well finished and equipped that the owner will be sure of a lifetime of low-cost operation.

Although he's only 37 years old, O'Dell has had an enviable record of success in Miami, having built several hundred homes in the past five years in a wide price range. A considerable part of his success is due, no doubt, to

the fact that he is ably assisted by Mrs. O'Dell, who runs the office and handles a good part of the work, specializing in details concerning the equipping and decorating of the homes. The firm's office is in a large, modern store and shop building in Miami Shores that O'Dell erected and just recently sold.

The O'Dells seem to get a lot of fun out of building and selling homes. They carry considerable display advertising in the local newspapers but have recently been getting good results from a series of want ads. Each day a new and clever want ad is carried—frequently in rhyme, and these have recently attracted much attention. Following are some of the more lively O'Dell-O-Grams:

### O'Dell-O-Grams

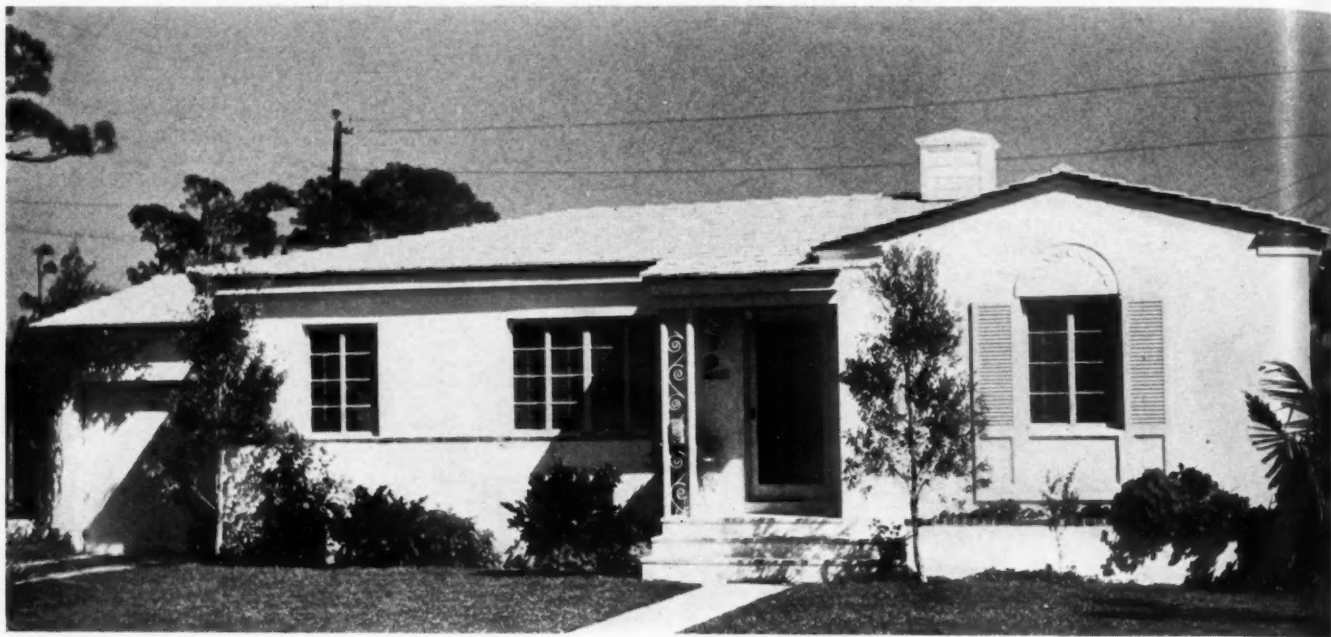
**YOU ALL KNOW** that George Washington cut down the cherry tree, but did you know that O'Dell has cut the cost of a house down 30 per cent and is passing the savings on to you? See model at 9314 N.W. Second Ave.

**A ROLLING STONE** gathers no moss. Buy an O'Dell home and be your own boss. See model home at 9314 N. W. Second Av.

**ROSES ARE RED**, violets are blue. An O'Dell house would be good for you. See model home at 9314 N. W. Second Av.

**I MAY BE CRAZY** to give away these nice homes in

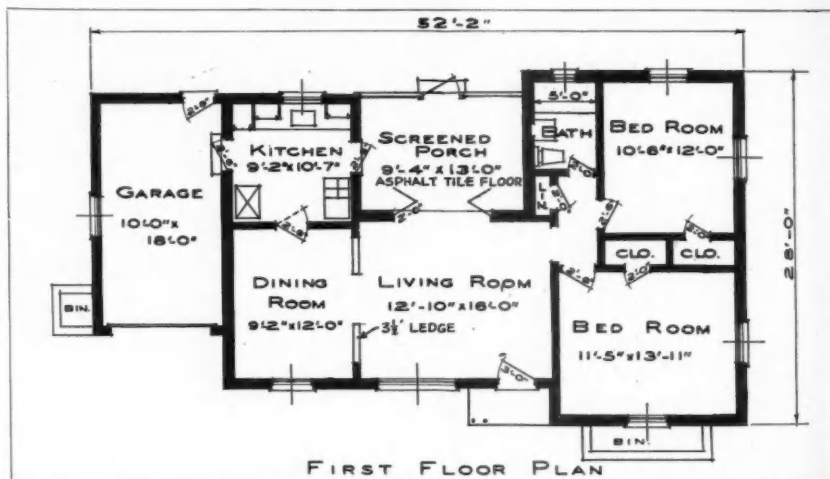




WHITE CEMENT TILE ROOF and pink or cream stucco walls give charm to this typical small O'Dell home in Miami Shores, designed by Architects Petersen and Wolz. TruCost Figures for this house will be found on page 199.



ON THE JOB, O'Dell points out metal rafter anchor to be imbedded in concrete beam.



O'DELL'S Florida floor plan has good cross ventilation and a screened porch off living room. Low ledge separates dining room.

Miami Shores for \$4,500. But it's lots of fun. See model home at 9314 N. W. Second Av.

NO SANTA Claus?—There's one in Miami Shores. I've built and practically given away 60 houses in the past 8 months. See O'Dell and save. Model home at 9314 N. W. Second Av.

WOULD YOU WALK UPSTAIRS to save \$500? If interested in a home, see my houses at 9314 N. W. Second Av. Then see R. L. O'Dell, 2118 N. Miami Av.

AN APPLE A DAY keeps the doctor away. This is an old adage, they say, but if you're in the market for a good place to park it, see O'Dell homes today—9314 N. W. Second Av.

CHAMPAGNE HOUSE—beer pocketbook? We have a house with champagne features and a beer price. Built by R. L. O'Dell, 9314 N. W. Second Av.

The O'Dell houses in Miami Shores are built on 75 x 125 foot plots with a setback of 30 feet from the street. The buyers are a good class of all-around residents who want substantial but attractive homes that are inexpensive to maintain and live in.

What do we mean by "well built" in referring to the O'Dell homes? In the first place, they rest on 10" x 30" reinforced concrete footings. All lumber that touches concrete is creosoted, even including the rafter plates. In addition, the foundations are covered with a continuous termite shield of Toncan metal with soldered joints.

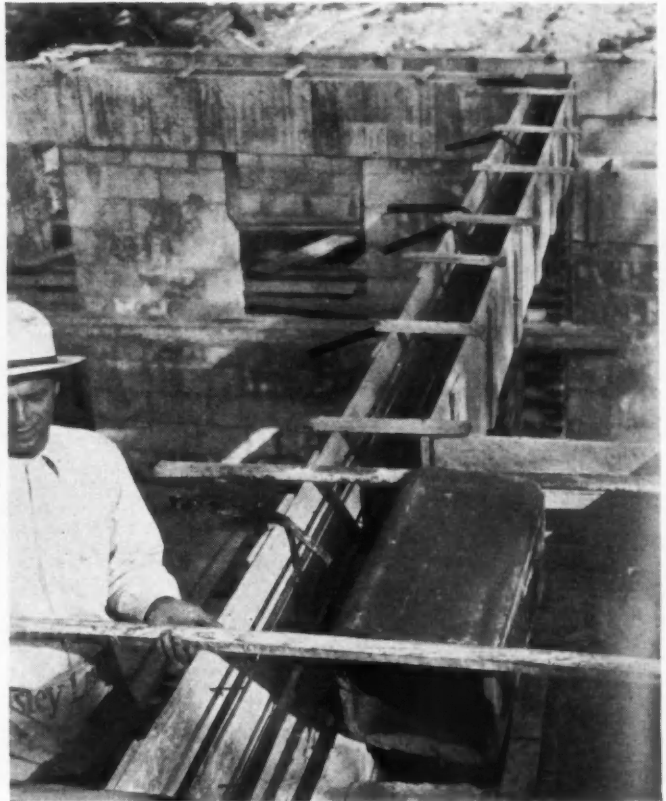
Walls of the O'Dell houses are of 8" concrete blocks, with a waterproof stucco exterior painted with cement paint in very attractive pastel colors, such as cream, pink and delicate shades of blue. We regret to say that photographs can only partly show the real beauty of such Florida homes as these as the effects of the attractive colors are lost. Inside, the concrete block walls are furred with 1 x 2 strips to which are applied gypsum board and two coats of plaster. Crittall steel windows are used, and all sills are of attractive tile.

An interesting feature of the O'Dell construction not commonly appreciated by northern builders is the 8" x 12" reinforced concrete beam built at the top of the masonry wall. This extends unbroken around the entire perimeter of the house and effectively reinforces the entire wall con-



CONCRETE BEAM

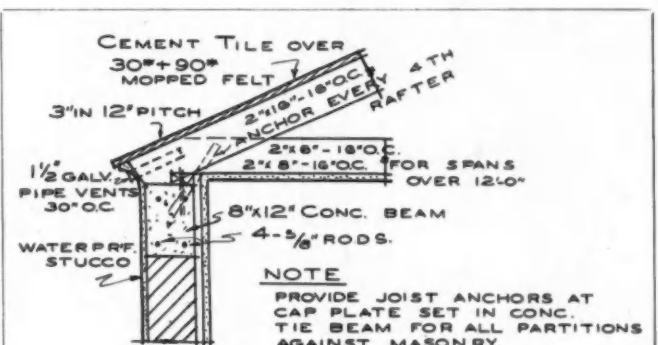
SUBSTANTIAL CONCRETE MASONRY, with 12" "hurricane proof" beam at top of wall, to which rafter plate is bolted.



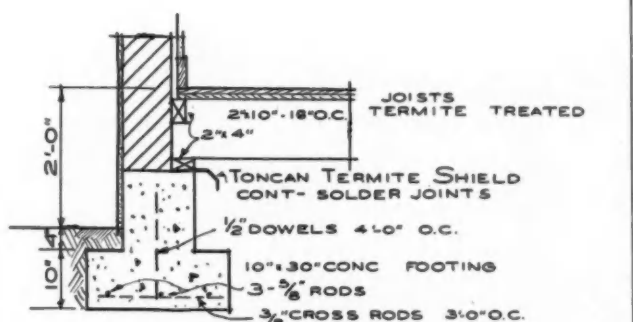
FORMS FOR CONCRETE BEAM at top of wall, showing reinforcement and metal rafter ties in place. (See drawing below.)



POPULAR MIAMI SHORES MODEL with white tile roof. Floor plan similar to house at bottom of page 191.



SECTION THRU STUCCO EAVES



SECTION THRU FOOTINGS

QUALITY FLORIDA DETAILS show reinforced concrete beam to which rafters are anchored, built-up roof with white cement tile surface, substantial 10" x 30" concrete footings, termite shields. Inside walls are furred and plastered over gypsum board.

struction (see accompanying drawing at the right). The concrete of this beam goes down into and becomes part of the upper layers of masonry. Anchor bolts are imbedded in the concrete every 32 inches, to which the rafter plate is securely attached. In addition, metal anchor strips are imbedded in the concrete and nailed to every fourth rafter. This type of construction is believed to provide an effective protection against windstorms.

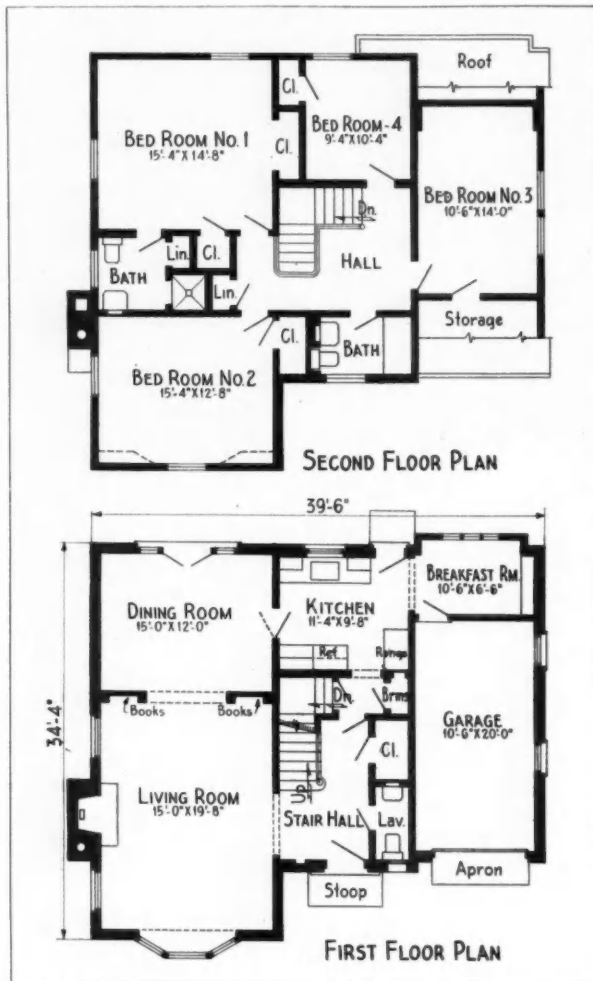
Another item of unusual interest to northern builders is the solar water heater system installed which produces ample domestic hot water from the heat of the sun. Made by the Solar Water Heater Company of Miami, this system consists of a light frame of copper tubing covered with special glass, with copper tubing leading to a 66-gal. water tank. The sun shining through the glass heats the water in the copper tubes almost to the boiling point. The tanks are equipped with an electric booster which raises the temperature of the water on those infrequent days when the sun does not shine in Miami.

O'Dell uses a clever system of building his storage

(Continued to page 190)

# Chicago Buyers of Better Homes Demand

**Irvin A. Blietz, Developer of Connecticut Village, on the North Shore, Where Houses Are Selling up to \$30,000, Finds Present Day Prospects Want Hidden Values in Structurally Sound Design**



Photos by Curt Gottschalk

**L**ESS than two years ago there was a deserted section of "no man's land" lying between two of Chicago's fine North Shore suburbs—so hopeless in appearance and seeming possibilities that neither would claim it—which today is one of the new home show spots of the metropolitan area. Irvin A. Blietz, builder in Wilmette, Ill., had the vision and showmanship which dared him to create here his Connecticut Village development.

The price ranges up to \$30,000 for the more recent eight- and nine-room houses (as illustrated opposite below), although the earlier speculative designs were six and seven rooms selling for considerably less. This rising price level was natural, as the property became more and more desirable as it was developed, and the winding streets, Colonial lampposts, beautiful landscaping and harmonious styling set the fine character of the section.

Today, on about three-quarters of the approximately forty lots into which it was divided, houses are complete or in the final stages of construction. Most people considering building on the North Shore have at least inspected the Blietz houses here, even if they did not finally buy. For this reason, the reactions of this class of buyers give a good index of how they are approaching today's market and what they are demanding in homes.

An interesting observation on the trend of what is wanted by these above-the-average-income buyers of well constructed homes indicates a desire to stabilize living costs, and the methods of financing selected by the purchaser substantiate this. According to Mr. Blietz, "Ninety per cent of recent buying inquiry is based on the use of real estate as a hedge against a possible future lower value of the dollar. Thirty per cent of actual sales are for all cash and 20 per cent for half cash. About 50 per cent of buyers take the longest terms and largest loans obtainable, figuring there's nothing like a big mortgage to stabilize one's finances through a possible period of inflation. In such times the debtor always has the advan-

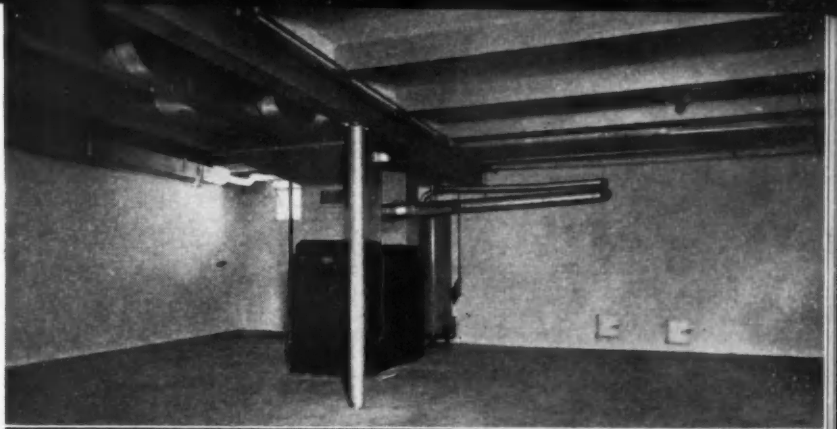


THE typical home pictured at the left, as seen in Colonial Village, Wilmette, Ill., has four bedrooms on the second floor, while the design on the opposite page has a first floor library which can be used as a fourth bedroom. Irvin A. Blietz, builder and designer, features the low cost of good construction in these houses. TruCost figures on page 199.



# and Good Construction

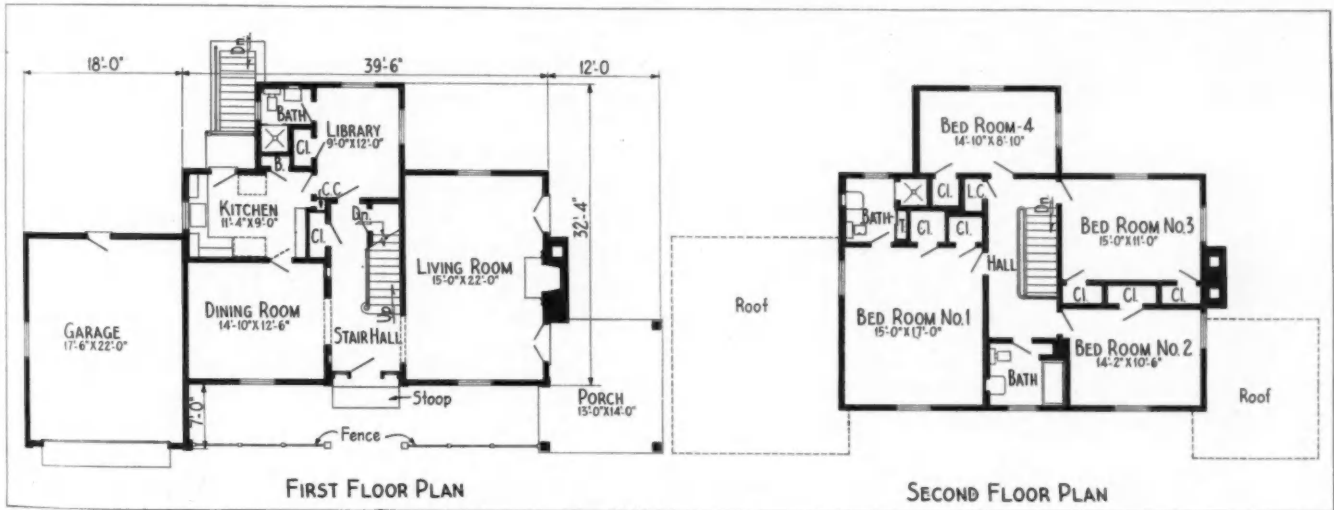
THE upper view at the right shows typical basement construction in a Blietz Connecticut Village home; poured concrete was used for foundation, basement and first floors, with steel beams. The lower view shows a smartly styled living room with paneled wall and built-in cases flanking fireplace.



tage. He may pay part of his obligation in dollars that are worth less than when he made the deal."

This type of buyer realizes that it is becoming more and more difficult for capital to earn an income to pay living costs and is regarding it as a surplus to be put to work. Naturally, a house bought on this basis must be structurally sound so as not to impair the original investment, and maintenance costs kept at a minimum.

For instance, the upper view at the right shows a typical Blietz Colonial Village basement with poured concrete footings and foundation, steel lally columns and beams supporting Jones & Laughlin Junior beams and poured concrete first floor slab. Other features of good construction which will return dividends in the form of low



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ABOVE: Two more Connecticut Village designs with typical modern classic detailing, one in stone veneer, the other in stucco and siding; both designed and built by Irvin A. Blietz, Wilmette, Ill., as described on the preceding pages.

maintenance costs are kiln-dried Y.P. framing; 3-coat plaster on USG Rocklath attached with resilient spring clips; Celotex Vapor-seal sheathing; Balsam-Wool in sidewalls, and rock wool above ceilings to give complete insulation for low heating costs with Bryant gas-fired winter conditioning units.

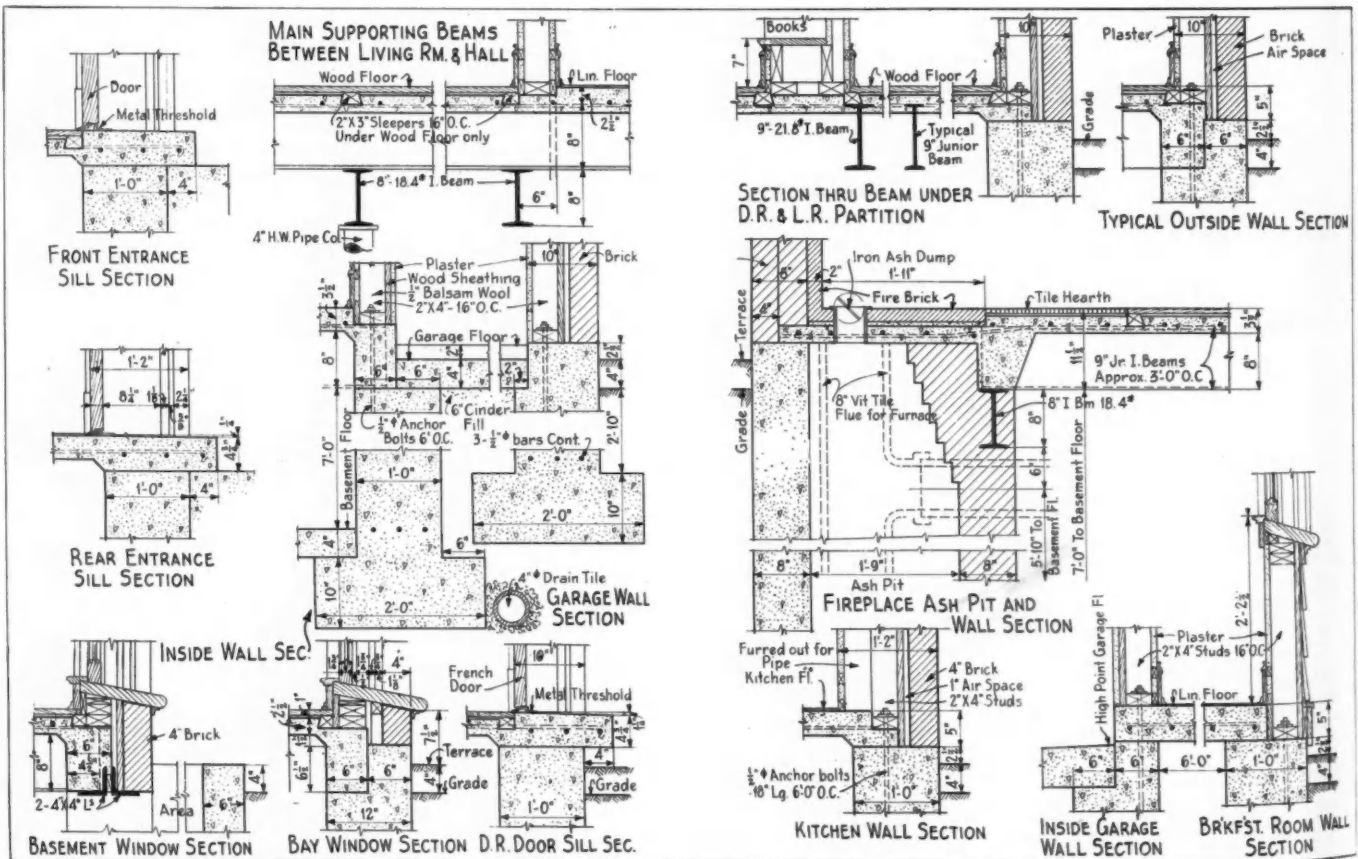
The first house shown in this article has an exterior of common brick painted with Cabot's Double-White on the first floor, cypress clapboard above, and a red cedar shingle roof.

The other house features cypress vertical boards and battens on the first floor, and hand-split red cedar shakes on upper sidewalls.

Interior birch trim, as well as exterior trim and siding,

is primed on all four sides. O'Brien paints, Pittsburgh glazing, copper screens and McKee upward-acting garage doors were used. Equipment items include Standard Sanitary fixtures, Corbin hardware, Franklin tile, Midwest kitchen ventilating fans, Lightolier fixtures, Imperial wallpaper and Armstrong linoleum.

Planning both the houses and grounds is carefully controlled throughout the development for the maintenance of values. Individual houses, as shown in the two typical plans with this article, are carefully engineered for modern living with special emphasis on closet space, kitchens, access, interesting views from windows, extra baths, etc.—all the much demanded features which make a house salable and keep it sold to a satisfied owner.



DETAILS of foundation and first floor construction; typical Blietz design using steel beams and concrete floor slab.



THIS front cover home by Arthur P. Swanson, architect, Des Plaines, Ill., was built in Park Ridge, Ill., on a finely wooded site. The Colonial exterior was inspired by California design trends.

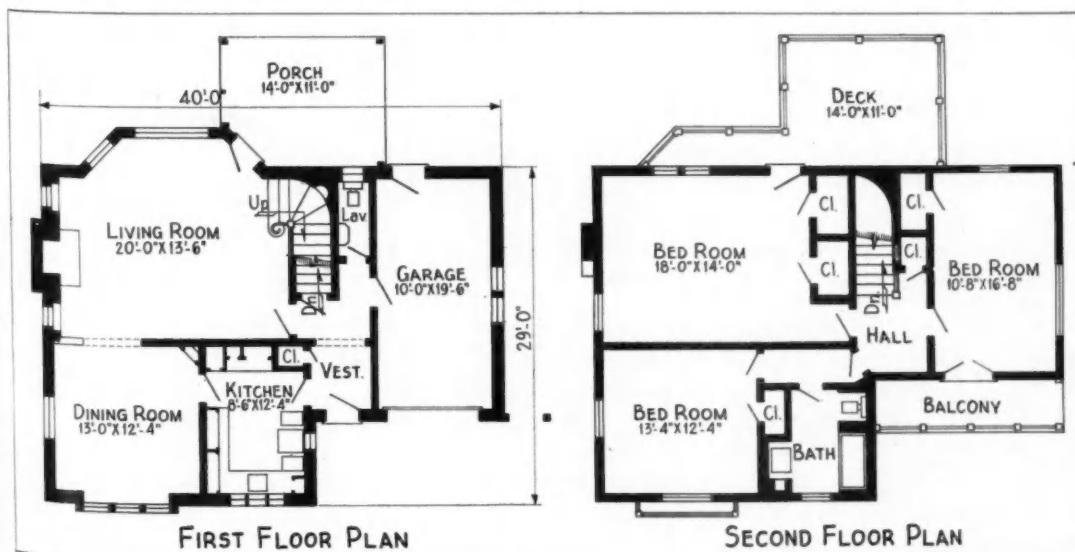
Photos by Ray E. Willis

## Planned for Low Cost Livability

**A**CTUAL dollars and cents to be saved in anticipated maintenance costs naturally appear very important to the home owner at the time his home is being planned, but over an extended period the added satisfaction and savings of a well engineered layout should be equally appreciated. Sometimes savings along this line amount to as much as average maintenance savings if the owner must alter certain portions of the structure to give him the livability needed to satisfy his ideas of comfort and convenience. Too frequently he feels that some change must be made before his house becomes the home he had hoped for—a little

more headroom at stairs, an inside door rehung to swing the opposite way when furniture arrangement hasn't been taken into consideration, an opening added for better circulation, a partition moved for additional necessary space in one room and less in another, etc. What builder hasn't been called back to make such changes after a house has been lived in for a year?—things which might have been foreseen in more carefully planned design. And the owner will blame the designer even when he has insisted on certain features, sizes and details that might later prove unsatisfactory.

(Continued to page 188)



THE six-room and built-in motor room layout is most novel and livable, with living room, porch, master bedroom and deck overlooking the rear. The studio bedroom over the garage has a timbered ceiling and private balcony.



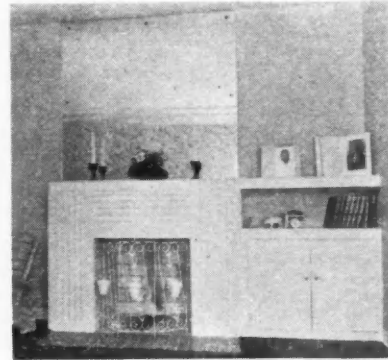
PITTSBURGH BUILDER FINDS

# "Luxury Items" Speed New Home Sales And So Add Nothing To Total Expense

**C**ARL BUCKHEIT and his associates operating the South Hills Company at Mount Lebanon, Pittsburgh's elite residential suburb, have found that it pays well to include *extra items* of value in their homes so that they will sell quicker. They figure that it costs at least \$50 per month to hold a house unsold after it is completed. By adding extra items of strong sales appeal, they are able to cut this lost time. In effect, they simply give the purchaser an extra incentive for quick action. If the house moves in one month instead of in three, there is \$100 for extra items that can be added without costing the builder a single penny.

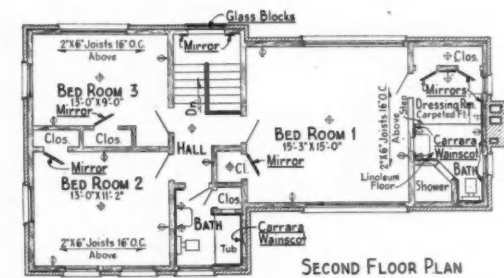
This idea of incorporating attractive luxuries of definite sales appeal has been carried still further by the South Hills Company in its current program of "Luxury Homes," which are being offered at a price range of from \$5,000 to \$20,000. The advertising, which dominates full page space in the prominent Pittsburgh papers, features a list of sixteen "luxury" items and the houses themselves make good on the promise of the newspaper announcements. Visitors, thronging these new home developments every weekend, find the actual homes more glamorous even than promised.

The Buckheit organization is building 300 houses in

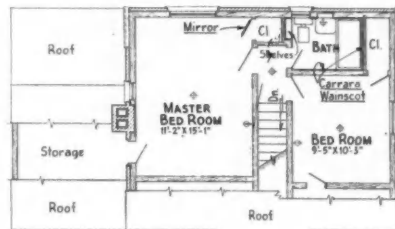


Mirror panels over mantel and Carrara mantel facings give style to South Hills homes.

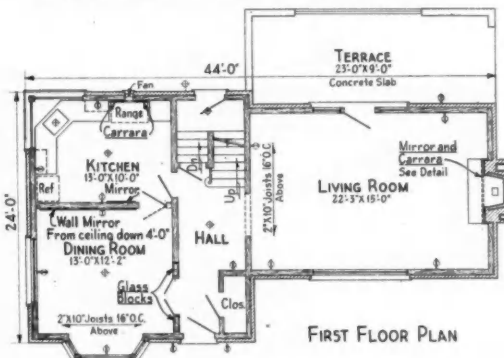
its current program, about half of these being sold before the work is started, about half after completion. Three different locations in Mount Lebanon are being built up as follows: Rolling Hills, with \$5,000 houses, Country Club Estates, ranging from \$6,000 to \$8,000, and Country Club Heights, from \$8,000 to \$15,000 and \$20,000. All are designed in the South Hills Company office where William A. Trimble, registered architect, is in charge of design. Several different building contractors do the ac-



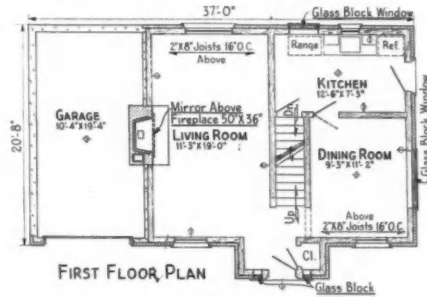
SECOND FLOOR PLAN



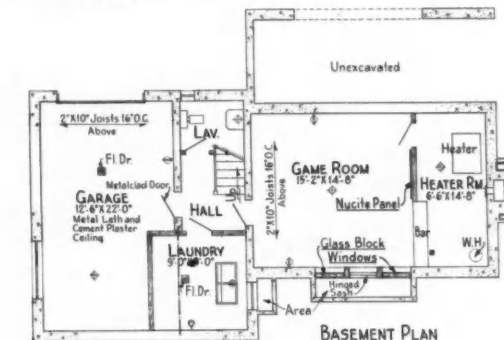
SECOND FLOOR PLAN



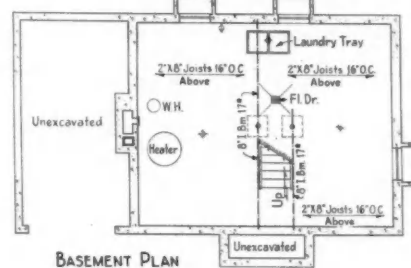
FIRST FLOOR PLAN



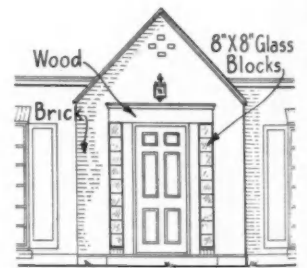
FIRST FLOOR PLAN



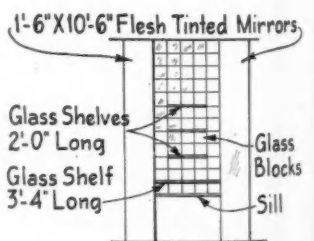
BASEMENT PLAN



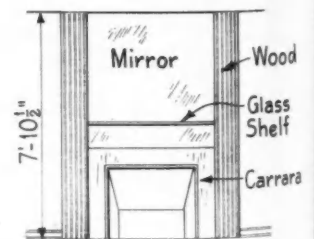
BASEMENT PLAN



FRONT ENTRANCE DETAIL



DETAIL OF WINDOW AT STAIR LANDING



DETAIL OF FIREPLACE IN LIVING ROOM

Plans of two featured "Luxury Homes"; to left, a \$12,000 home in Country Club Heights; above, a \$6,000 house in Rolling Hills; to right, details of glass and mirror special features.

tual construction, always on a contract bid basis.

Here is the list of "luxury" features promised for these "Luxury Homes" in the South Hills Company's advertisements:

"1. Wider use of Glass. For example, mantel and fireplace treatments of mirrors, Carrara structural glass and metal. Wall mirrors in dining, living and dressing rooms. New glass blocks in baths, game rooms, basement areas, stairwells, kitchens, bars. Larger windows. Picture windows. Built-in memo pads and movie screens of Nucite chalkboard glass. Full length door mirrors in bed and dressing rooms. Bathroom and dressing room walls of Carrara structural glass. Carrara glass splashboards in kitchens.

"2. Houses designed so all four exterior sides will be equally attractive in appearance.

"3. Houses carefully oriented on lots for best effect.

"4. Larger rooms, more usable space.

"5. More bathrooms for the size of the houses.

"6. Revamping of the bathroom off master-bedroom into a modern "dressing-room-bath."

"7. Increased closet space with accessories such as shoe, tie and hat racks built-in.

"8. Expert decoration, geared to suit the various rooms involved. Independent color and design experts have worked with us on this.

"9. Water-proofed foundation walls.

"10. More elaborately equipped kitchens, with more work space and better lighting.

"11. Improved lighting throughout the houses.

"12. All-gas, air conditioned heating systems for greater cleanliness and efficiency.

"13. Thorough insulation with glass wool or rock wool.

"14. More elaborate landscaping. Our idea is to landscape every lot in such a way as to make the home site complete and ready for immediate occupancy.

"15. All 'Luxury Homes' built with the best materials, many of them entirely new to this type of construction; up to the standards of the Mount Lebanon building code; and in excess of FHA standards. And built by Allegheny County's largest home builders, E. J. Ryan and John M.

(Continued to page 177)

\*\*\*  
 "NOW"  
 \*\*\*\*\*  
 "Luxury homes"  
 \*\*\*\*\*  
 at new low prices!

South Hills Company's new building policy gives you beautiful homes, richly provided with special luxury features previously available only at premium prices in the home you built yourself. And these "Luxury Homes" are priced lower than ever before in history!

HERE is the kind of home you dream about owning!

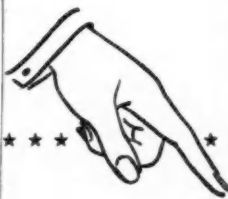
Built in accordance with South Hills Co.'s new policy which gives you true "Luxury Homes" at regular home prices. They are designed to include as many as possible of the extra-nice features, the special decorative and ornamental touches, the real luxuries of planning and construction which have never before been available in ready-built homes of this type.

They represent a cross-section of thousands of people's ideas of what they want in a home, gathered from our own experience. And they reflect the nationwide trend toward more pleasant and gracious living.

Yet with all their added luxuries and de luxe appointments, these homes still sell for prices comparable to other ready-built homes which lack their refinement.

These "Luxury Homes" range in price from \$7,000 to \$20,000 and offer you a choice of three fine "all gas" developments. Lynnwood Park . . . at the end of Vernon Drive off Washington Road. Country Club Heights . . . off Castle Shannon Boulevard. And Country Club Estates . . . adjoining Country Club Heights.

Read about the new, luxury features of these homes, listed below. Then come in and see us . . . or telephone today . . . for more complete information.



READ THIS LIST OF "LUXURY" FEATURES FOUND IN THE NEW "LUXURY HOMES"

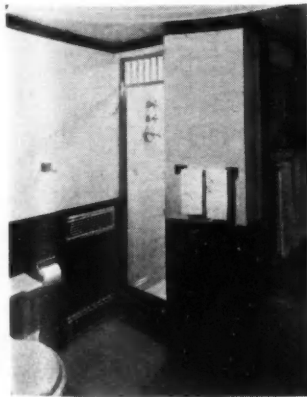
1. Wider use of Glass. For example, mantel and fireplace treatments of mirrors, Carrara Structural Glass and metal. Wall mirrors in dining, living and dressing rooms. New Glass Blocks in baths, game rooms, basement areas, stairwells, kitchens, bars. Larger windows. "Picture" windows. Built-in memo pads and movie screens of Nucite Chalkboard Glass. Full length door mirrors in bed and dressing rooms. Bathroom and dressing room walls of Carrara Structural Glass. Carrara Glass splashboards in kitchens.
2. Houses designed so all four exterior sides will be equally attractive in appearance.
3. Houses carefully oriented on lots for best effect.
4. Larger rooms . . . more usable space.
5. More bathrooms for the size of the houses.
6. Revamping of the bathroom off master-bedroom into a modern "dressing-room-bath."
7. Increased closet space . . . with accessories such as shoe, tie and hatracks built-in.
8. Expert decoration, geared to suit the various rooms involved. Independent color and design experts have worked with us on this.
9. Water-proofed foundation walls.
10. More elaborately equipped kitchens, with more work space and better lighting.
11. Improved lighting throughout the houses.
12. All-gas, air-conditioned heating systems for greater cleanliness and efficiency.
13. Thorough insulation with glass wool or rock wool.
14. More elaborate landscaping. Our idea is to landscape every lot in such a way as to make the home site complete and ready for immediate occupancy.
15. All "Luxury Homes" built with the best materials, many of them entirely new to this type of construction; up to the standards of the Mt. Lebanon Building Code and in excess of F.H.A. standards. And built by Allegheny County's largest home builders, E. J. Ryan and John M. Ditch. These homes will set a new standard for both quality and design.

SOUTH HILLS COMPANY "Luxury homes"

SOUTH HILLS COMPANY

723 WASHINGTON RD., MT. LEBANON, PA.

LEHIGH 7000



Carrara structural glass, plate glass shower doors and special dressing room mirrors put sales punch into the bathrooms.

RIGHT: Typical newspaper advertisement much reduced in size.

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DETAIL

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PLACE  
OM

**WINDOWS** of Green Park Estates overlook a peaceful Long Island garden environment.

**BELOW:** Frank Taylor, chairman of Taylor-Woodrow Estates, Ltd., London, who named Long Island development after this famous London park.



## “British Thoroughness”

**Long Island houses built by London firm set high standard for low upkeep. J. L. Turner reports interesting sidelights on English builders in war**

**W**HILE builders in England are temporarily devoting their time to more exciting and dangerous activities, there is an English firm doing an impressive job of home construction on peaceful Long Island, U. S. A., that offers one more example of British thoroughness.

Green Park Estates is a thriving 120-acre home community adjacent to Kew Gardens, on the site of the Queens Valley Golf Club. It is operated by William M. Noone and John L. Turner, who represent the Taylor-Woodrow Estates, Ltd., of London, England, one of that nation's largest home builders. Prior to the war, Taylor-Woodrow Estates had erected more than 11,000 houses in 11 years in England.

New home construction came to a halt at the start of the war, William Noone told *American Builder*, but his firm, as well as other British building firms, have been extremely busy in various types of construction, including government projects, defense works, repairing and reconstruction. One of the interesting sidelights of building activity “over there” is that employees of Taylor-Woodrow Estates have formed a rifle club and have to take frequent time out for rifle practice. Frank Taylor, chairman and managing director, gave the employees a piece of property for the range, and three British Army instructors have been giving the bricklayers, carpenters

and other workers thoroughgoing training in how to shoot. The club is known as the Taywood Rifle Club. “We have our defense problems here,” commented John Turner, “but at least our carpenters and bricklayers on Long Island are not taking time out to practice on a rifle range.”

Noone and Turner are young builders who came to the United States in 1937, attracted by the home building revival here. In their first year they built and sold more than 90 dwellings of the attached type in Queensborough. That trial balloon convinced Taylor-Woodrow that America offered as big a field in home building as England had after the last war.

Noone and Turner quickly acquired a shrewd insight into New York building practice, and in their Green Park Estates project are building attractive single-family homes, which, while more striking in their appointments than their English counterparts, still have the quality construction for which English builders have been famous. To date they have built and sold 160 houses in Green Park Estates, most of which are in the \$7,000 to \$9,000 range. The houses were designed by Architect Arthur E. Allen, now a Major in the U. S. Army.

Noone and Turner named their new community after Green Park in London. They invited Thomas G. Grace, New York State director of the Federal Housing Admin-



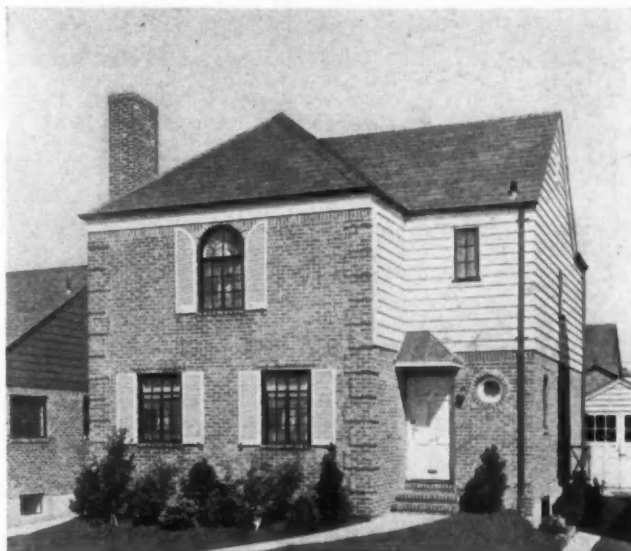


COMFORTS of home are dramatized in this living room view of Green Park Estates. There's more "flash" in the American homes than those built in England by same firm.

stration, to break the ground for their new homes. In view of the fact that the ground was a golf course, Mr. Grace scorned the use of a spade or a steam shovel and appropriately broke the sod with a niblick, declaring that he yearned to gouge out a divot which he would not have to replace.

Mr. Noone and Mr. Turner are so thoroughly British that they say "righto" as nimbly as an American might say "correct as hell." They were so imbued with the spirit of home building in England, where all communities are called "Estates," that they insisted upon the creation of a completely "gardened" community. With the cooperation of the FHA engineers, they submitted a community plan that required the changing of several of New York's sacred regulations. Rexford G. Tugwell, head of the New York City Planning Commission; Robert Moses, Commissioner of the Park Department, and other city officials had to get together and decide that curving streets and gentle grades, in conformity with the natural slope of the golf property, were more desirable than the time-honored grid-iron street plan. Thus Green Park Estates has become the first planned home community in New

(Continued to page 197)



ATTRACTIVE casement windows are featured in Green Park model.



NEW ORDER of the bath in Long Island features gold-colored brass fittings.



1941 GREEN PARK ESTATES plan has "no traffic" living room, fine dining terrace. Major Arthur E. Allen, architect.

## Miami Modern

Florida building boom has produced new highs in building construction and architecture. Forty-two hotels with 2,800 rooms built in Miami Beach last year

*By Joseph B. Mason*

**M**IAAMI and its flourishing suburbs are like some dream of a world of tomorrow come true—a place where architects and builders get together and do all of the interesting things they have always talked about, and where there are plenty of customers with enough money to say, "Go ahead—we want to move in next month."

The cumulative result of more and more tourists, of a growing number of year-round residents, of new industries and of new national defense activities has made the Greater Miami territory one of flourishing building activity. Its hotels, apartments, shops and stores and residential developments have set new highs in architectural styles and in speed of construction.

Scintillating modern structures in white, cream, pink and pastel tints create a New World effect that is beautiful although somewhat breathtaking. It is true that many of the newer structures are gaudy and overdressed, but it is also true that a higher percentage are done in excellent taste and are setting an architectural style that will have an effect on building in other parts of the country.

The record of recent years is truly fabulous. Where else in the world except in Miami Beach were 42 hotels with 2,803 rooms built in one year, as they were in 1940, in addition to 179 apartment buildings containing 1,771 units? In addition, Miami Beach builders erected 313 residences worth 3½ million dollars last year, 43 store buildings worth a million dollars, 5 bungalow courts at \$77,000, and 933 addition and



Photo by C. E. Goodridge

**SANDS HOTEL**, designed by Roy F. France and built by J. Albert & Son, is typical of striking modern design widely used in Miami.



**SUNSET ISLAND HOME** illustrates blend of Colonial and Florida elements in modern style. White cement tile roof contrasts with pastel tinted exterior sidewalls built of brick or stucco.



Photo by Manley Brower

**MOST OF THE MODERN** Miami homes are long and low, as this brick bungalow designed by Architect Stefan Zacher of Miami Beach.





FRESH, modern treatment of a small Miami Beach shop in the new 41st Street area, designed by Arnold Southwell. Exterior, creamy pink.

remodeling jobs worth \$1,700,000. In Miami Beach alone, the building permits last year totaled \$15,961,000.

With this type of concentrated volume of business, architects and builders have had a chance to try out new ideas and create new styles. The result has been what may be called, for lack of a better term, "Miami Modern."

Before getting into this topic further, let me hasten to say that all of the building is not being done in Miami Beach alone. Builders in the city of Miami itself erected some \$15,215,000 worth of structures last year, including a large number of fine small homes for permanent residents. That fast growing northern suburb, Fort Lauderdale, accounted for \$4,906,000 worth of work, including some of the most attractive modern apartments and apartment

(Continued to page 183)



SMALL NEW HOTEL on Collins Avenue illustrates many new design features, such as projections over windows. L. M. Dixon, architect; Prufert Constr. Company, builders. Materials by Lindsley Lumber Company.



EVEN THE FILLING STATIONS, such as this one in Miami Beach, are done in colorful, modern style.



FAMED LINCOLN ROAD in Miami Beach has the most beautifully designed group of shops and stores of any street in the world. Above is the I. Miller store, with typical canopy treatment.



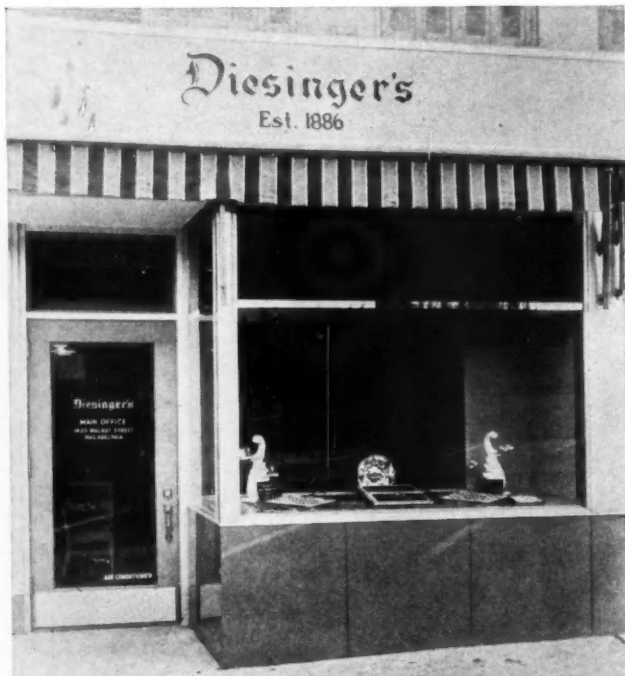


ARCHITECTURAL CONCRETE SLABS in attractive colors feature the front of this meat store in Baltimore, Md., designed by J. R. Kennedy.

## Flexibility Keynote of Modern Stores

How to build structures that keep in step with frequent tenant changes is told in 13 simple rules

By Jule Robert von Sternberg, R. A.



SIMPLE, flexible layout of a modern front in Ardmore, Pa., shopping center.

**F**AILURE to provide for many possible types of tenancy seriously handicaps much modern store construction. For the modern store is one of the most rapidly changing of all building forms. Big and little improvements in its form and function within recent years have revolutionized its construction. Although highly profitable the building of stores for rent or sale requires a new set of building skills; building knowledge.

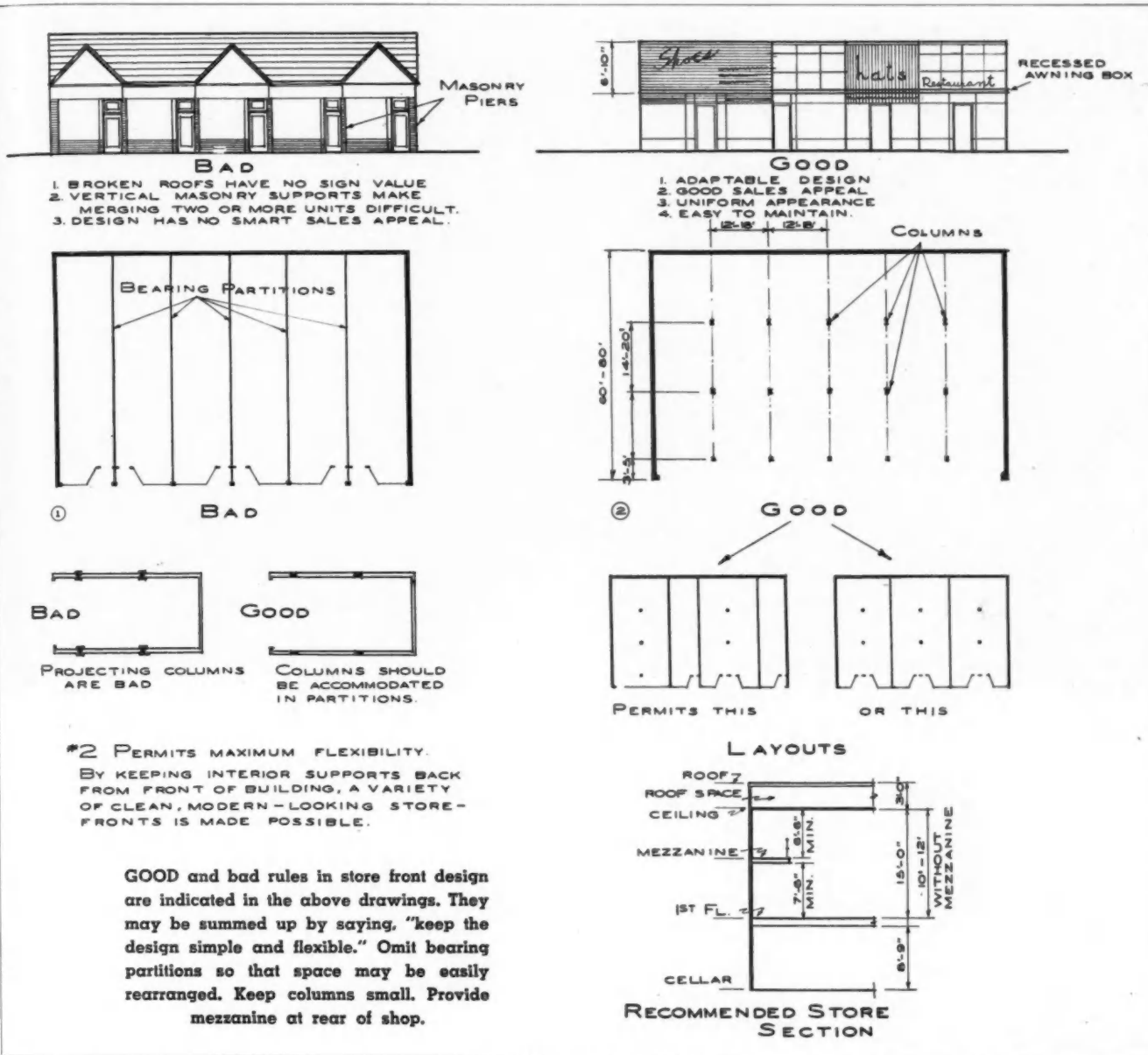
The chief cause of these changes has been the immense advances that have been made in modern selling. Stores were once very much alike—simple boxes with large public windows.

Today, however, the shape, size, architecture and equipment of every type varies. As a result, the builder of a group of Main Street shops must keep them as flexible and adaptable as possible, to the end that a tenant may rent a large or small space; may install a high, or low bulkhead; may use much, or little, electricity; may build his own front, or use the existing front.

Building "flexible" stores is not difficult. Some few simple rules should be followed:

1. Avoid uneconomical store widths and lengths. In small cities, practical unit widths average 15 to 18 feet. Lengths average 60 to 80 feet. In larger cities, with more expensive property, widths average 12 to 15 feet, lengths 50 to 60 feet.

2. If possible, where two or more store units are planned, the building should be constructed with non-



bearing partitions separating the units. Use columns as supports so that the space may accommodate any standard width store. Columns should be located 14 to 20 feet on center in parallel rows running from front to back of the building. The distance between rows should be determined by store widths as described above.

3. Side walls of each unit should be flat and unbroken, to make the installation of wall fixtures and other store equipment easier. Avoid the use of pilasters, column and plumbing breaks wherever possible. Side walls should meet the ceiling at right angles. Avoid plaster coves as they complicate the installation of curtain walls over fixtures.

4. First floors should be a minimum of two inches above the sidewalk level. This will keep out rain, yet permits mounting by means of a slight pitch in the vestibule floor. Breaks in floor levels, like wall breaks, are not advisable.

5. Ceilings should be flush and comparatively high for two reasons: (1) A high ceiling is better suited to a large store. (2) A 15 foot minimum ceiling permits the introduction of a service balcony in the rear of the store—a necessary addition in stores with large inventories, such as shoe stores; with complicated bookkeeping, such as credit stores; or with several departments, such as notion or department stores. Where balconies are not intended,

ten to twelve foot ceilings are sufficient.

6. Cellars should be dry, soundly built and with at least 8 foot ceilings. This permits their use as additional sales space, cooking, or storage space. Clothing stores, restaurants, furniture and radio stores are common basement users.

7. Cellar ceilings should have doubled joists on approximately 11 foot centers to provide for relocating cellar stairs for various tenants without ripping up the floor.

8. Roof space should be sized to accommodate future air conditioning and ventilating ducts. A 3 foot clear space above the ceiling permits easy installation of ducts, provides access for repairs, and permits installation of additional wiring, recessed lighting fixtures and sprinkler systems.

9. Cellar areas should not be located at the front of the building, in front of the store. They are dangerous, are slippery when wet and discourage window shopping. If possible, cellar entrances should be in the rear when alleys are available, or on a side street. If neither of these is possible, the entrance should be through the store.

10. Interior wall and ceiling finishes should be smooth, easily painted, papered or covered with other standard wall coverings. Floors should be smooth, well laid, and

(Continued to page 196)

# White Collarites Want Low Upkeep

So Concord Colony homes at Cedar Grove, N. J., sell quickly. Feature winter air conditioning

**M**ANY of the buyers of Concord Colony homes at Cedar Grove, N. J., are white collar workers in nearby industrial and defense plants, including engineering and technical people. Builder B. V. Zamore reports that this class of buyer is particularly interested in *low upkeep*. With competitive conditions as they are, Zamore has thus had to tackle the tough problem of building houses that are low in first cost and *also inexpensive to own*.

Zamore has been insulating the houses with 4 inches of mineral wool in the ceiling and gets a tight wall construction through use of U. S. Gypsum's Gyplap sheathing with the V-joint. Over the Gyplap he lays 1 x 2 furring strips and 24" Certigrade red cedar shingles. Zamore has been featuring Superfex 24-hour air conditioning furnaces made by Perfection Stove Co. of Cleveland. In the 5-room house he used the Model 83, with bonnet capacity of 70,000 B.t.u.; and in the 6-room house, Model 100AE, with 95,000 B.t.u. bonnet capacity. Houses like the snow covered home above have been running under \$60 a year for fuel, a real contribution to low upkeep. This photograph was taken several days after a storm and there was no sign of melting snow on the roof, showing that the tight insulated construction had kept the heat inside.

Houses of this type can be carried by Cedar Grove buyers for about \$42 a month, including taxes, interest

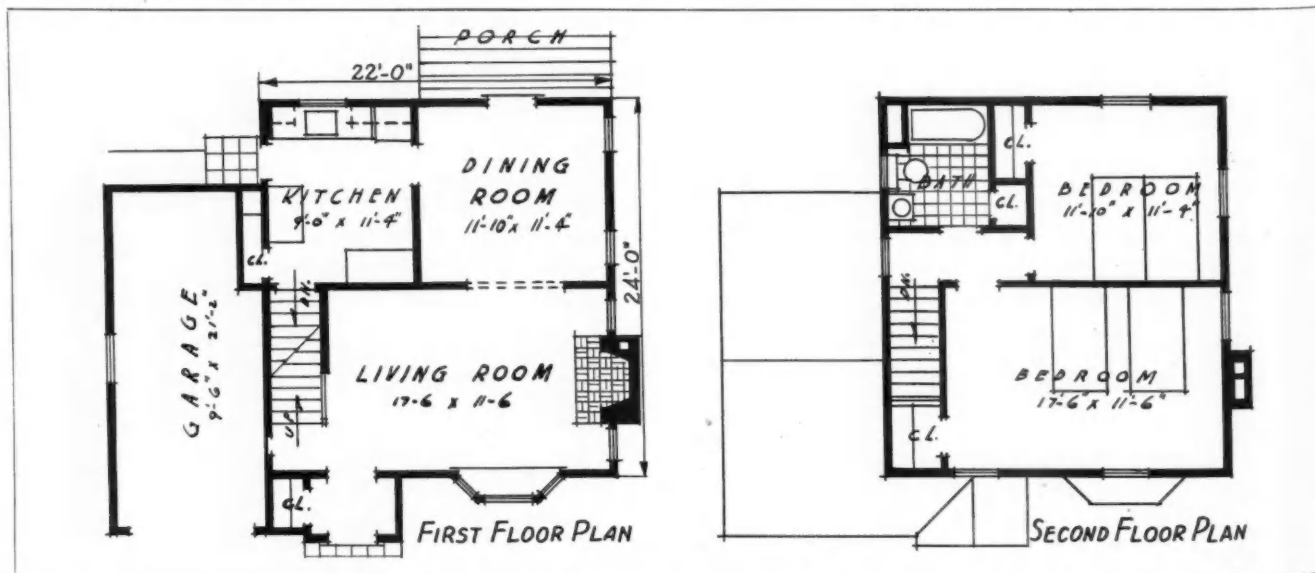


**SNOW DIDN'T MELT.** Insulation kept the heat inside this typical 5-room Concord Colony house, built by B. V. Zamore.

and amortization. Zamore sets a base price and then adds \$50 extra for a vestibule, \$35 for a bay window, \$160 for a fireplace or \$150 for a 9' x 12' porch. He uses power equipment to get the cost down, including a Stanley electric power saw and a DeVilbiss paint spray gun, using white lead and oil paint. Other products include U. S. G. 20-year guaranteed asphalt roof, Clark garage door, copper plumbing, full tile baths, double oak floors.

A house a week is Zamore's program for the coming year. In his advertising, which is prepared by United Service Advertising, of Newark, N. J., this theme is captioned "Stop Paying Rent—Start Real Living. Rents Go Higher and Higher *but Not Monthly Charges on a Zamore Home.*"

"You not only obtain real tangible values, you receive security, freedom from rent increases, peace of mind that comes with being independent of landlords."



**TYPICAL 5-ROOM PLAN** used by Zamore has 22' x 24' foundation, attached garage, 17' 6" x 11' 6" living room.





THIS trim little one-story Seattle home was designed by Architect Edwin Dofsen and built by Bernhard Dahl. Detail is clean-cut and generally well handled.

## Northwest 5-Room Design in Brick, Cedar

FROM the Pacific Northwest, there has been an increasing tendency toward the development of a style of home design which borrows many of the design and planning features of other sections of the country and combines them into a most livable and attractive structure. Above is shown an example of just such planning; it is built in Seattle, Wash., by Bernhard Dahl, and designed by Edwin Dofsen, architect. This five-room, rather extended layout has plenty of window area for good light and ventilation, a California-like modernization of Colonial detail, and efficiency of plan, with good storage area and separation of living, retiring and eating functions. The dining room can be used as a multi-purpose room since kitchen has plenty of space for dinette.

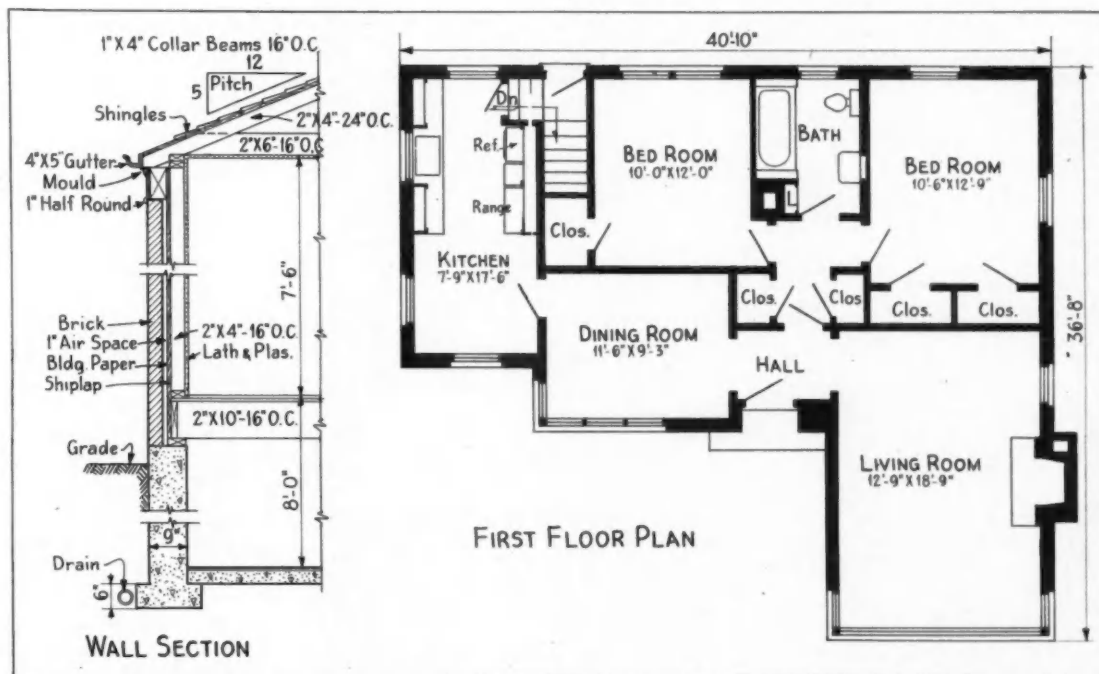
The exterior of durable materials has painted brick veneer on sidewalls with red cedar siding and shingles above. Hayworth winter air conditioning system is placed in the basement so that plenty of area is provided for knotty pine recreation room with open brick fireplace;

the plumbing fixtures used are Briggs Beautyware.

The first floor plan, as detailed below, shows two archways on either side of the entrance hall leading to living and dining rooms. Also from it, there is a door connecting with the passageway between bedrooms and bath, with handy storage closets on both sides. This arrangement allows access directly to all parts of the house. The master bedroom has twin closets extending across one end, and a linen cabinet is worked in alongside the heating plant flue in the bath. Kitchen equipment is placed in an aisle-type arrangement for compactness and efficiency, with sink and built-in cabinets on the outside wall, and range and refrigerator opposite. Door leads to grade entrance and basement.

In the wall section, framing and foundation details are indicated; framing at the cornice shows application of fascia and wood gutter. Generally, the construction of this house has been planned for modern living at low maintenance cost.

FEATURES of the plan include breakfast space at one end of well lighted kitchen, plenty of closets including two off the entrance hall, unusual window treatment extending across end of living room and turning corners to give sunroom effect.



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**LEFT:** The den of the English type model home built by George B. Thatcher, North Hollywood, Calif., (shown opposite) features a redwood plank and beamed ceiling, corner fireplace of native stone (on opposite side from this view), plaid paper above paneled wainscot, leaded glass cabinet doors which repeat casements, and louvered door to living room.



**THE** master bedroom in the Thatcher English style model has a group of attractive and salable built-ins in the dressing alcove. Wardrobes and drawer spaces flank the well lighted dressing table which also is provided with twin Lumiline lighting fixtures at the sides of the mirror as shown in view at left.



**LEFT:** The living room of another English type demonstration home (this one built by Severance of Burbank, Calif., and shown at the bottom of the facing page) also has many novel and attractive interior details—pine planking around the corner fireplace, glazed timber beams, wide horizontal board wainscot in hall beyond, cupboards and bookshelves.

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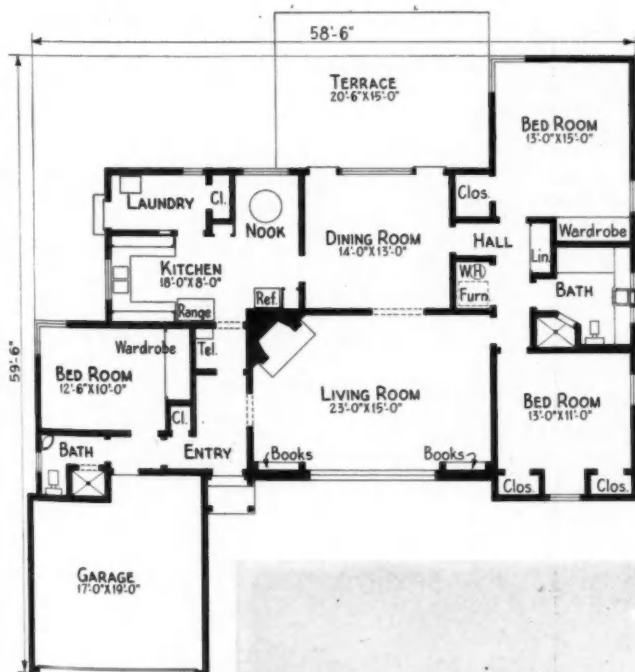
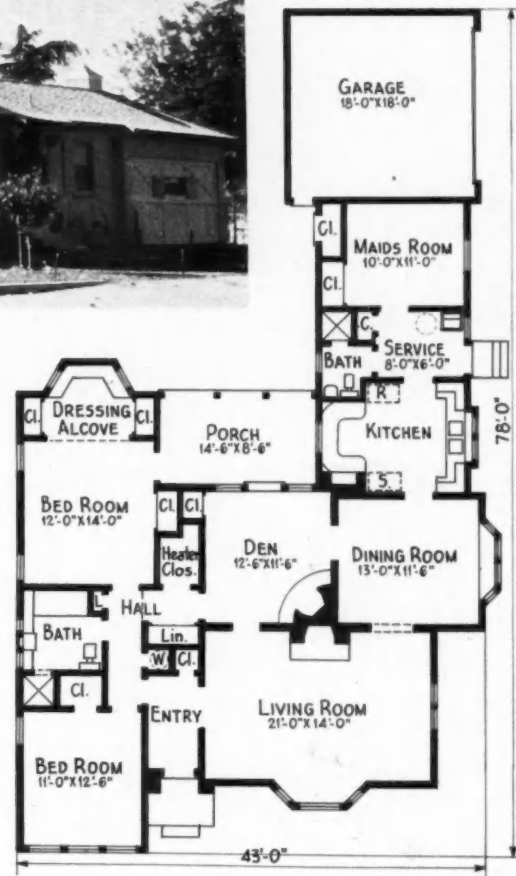


LOS Angeles model home built by George B. Thatcher, furnished by Broadway Dept. Store.

**I**N THE San Fernando Valley section, which is one of the most active building areas around Los Angeles, a number of very interesting model homes are being built by operative builders as demonstration projects; naturally, under such competitive conditions, such homes are packed with novel and attractive features which add to their salability.

Two examples of the present trend are shown on this page, together with several interesting interiors appearing opposite. They are both single-floor designs in English type styling. They have attached garages, two baths, space for outdoor living, heater closets and service porches—all in line with the popular appeal of this section.

The house at the top of this page was built by George B. Thatcher of Studio City, Los Angeles; it is seven-room size and occupies a choice corner lot setting in Hollywood Country Club Estates, with low hills in the



**ANOTHER** typical California model home built in North Hollywood by J. Byron Severance and furnished by Barker Bros. Floor plan is immediately above.

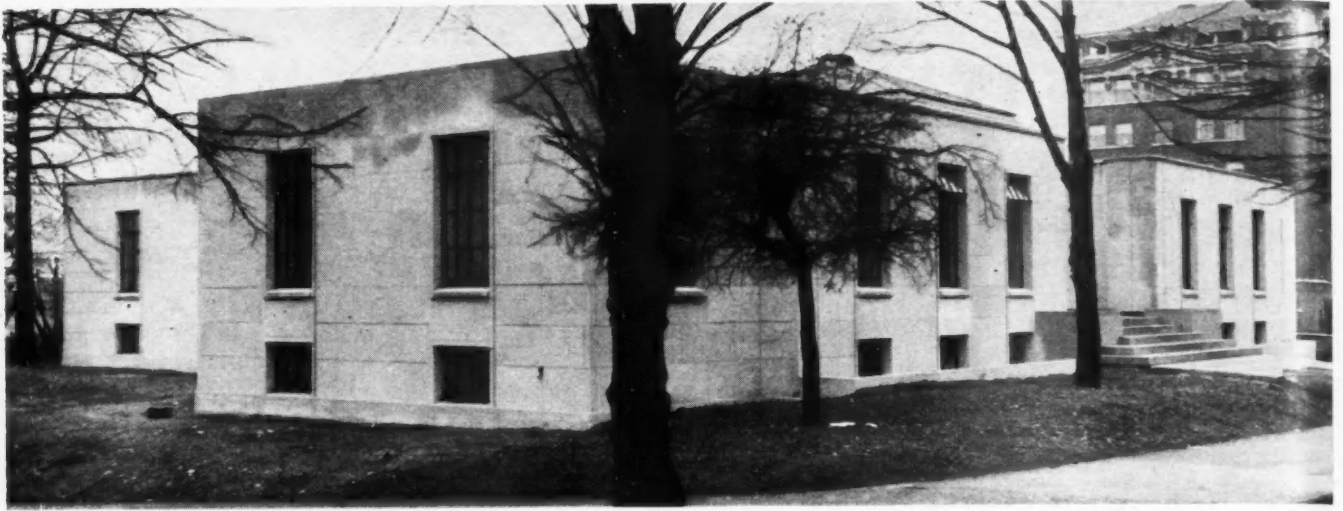


background. The grounds are plotted to allow for a badminton court behind the garage, this being another requisite in small home building in suburban Los Angeles. Also, in line with local practice is the use of wallpaper in all rooms except the living room, floral designs having been chosen mostly, suggestive of the small home to be found along the English countryside. Even the entry hall and breakfast nook have floral pattern wallpaper. Other interesting features of interior planning are the built-in dressing tables, the arrangement of wardrobe space, and the built-in window box in the dining room which is lined and drained to the outside by a copper tube.

Stucco is used over frame on the exterior, with redwood half timbering front and sides, and a partial base of stone veneer set on a reinforced concrete foundation.

*(Continued to page 198)*





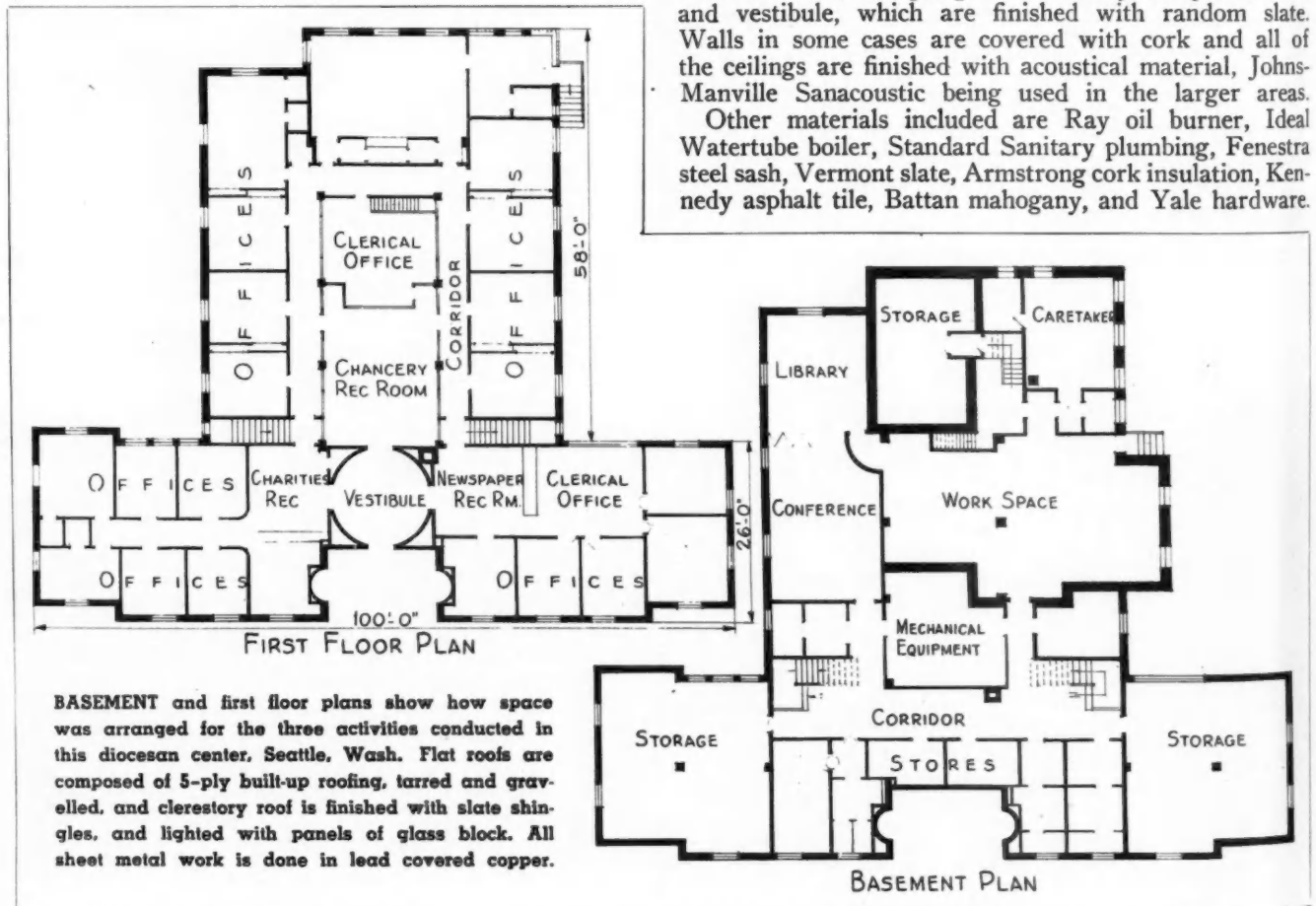
## Church Office Built on Old Foundation

**T**HE entirely fireproof Diocesan Center building erected in Seattle by W. A. Slate, was designed by Architects Thirty & Shay to utilize the foundation of an existing old house, which was incorporated into the new building. Architectural requirements were the housing of three separate activities consisting of the Chancery office headquarters for the Bishop; quarters for charity organizations; newspaper offices.

The entire building is made of reinforced concrete with hollow tile partitions. Concrete exterior walls, which are furred on the inside with tile, are finished with 2-inch thick Wilkenson cut stone.

In order to give flexibility to the entire office arrangement, so that it may be subject to alteration without affecting the structural part of the building, an isolated support was provided. Basement rooms for general use have a double slab with two-inch cork insulation between. Interior basement partitions are constructed of four-inch runner tile, left exposed. Interior partitions upstairs are made of 2 x 3 studs with 3-inch Thermax insulation between, surfaced with 3/8-inch plaster board so as to allow flexibility for future changes. Basement floors and the first floor are covered with flexible asphalt tile, and floors in the chancery wing rooms are covered with half-inch cork tile, excepting the chancery reception room and vestibule, which are finished with random slate. Walls in some cases are covered with cork and all of the ceilings are finished with acoustical material, Johns-Manville Sanacoustic being used in the larger areas.

Other materials included are Ray oil burner, Ideal Watertube boiler, Standard Sanitary plumbing, Fenestra steel sash, Vermont slate, Armstrong cork insulation, Kennedy asphalt tile, Battan mahogany, and Yale hardware.



BASEMENT and first floor plans show how space was arranged for the three activities conducted in this diocesan center, Seattle, Wash. Flat roofs are composed of 5-ply built-up roofing, tarred and gravelled, and clerestory roof is finished with slate shingles, and lighted with panels of glass block. All sheet metal work is done in lead covered copper.

# Prefabricated Houses Finally "Arrive"

Defense Housing Orders Furnish Needed Volume

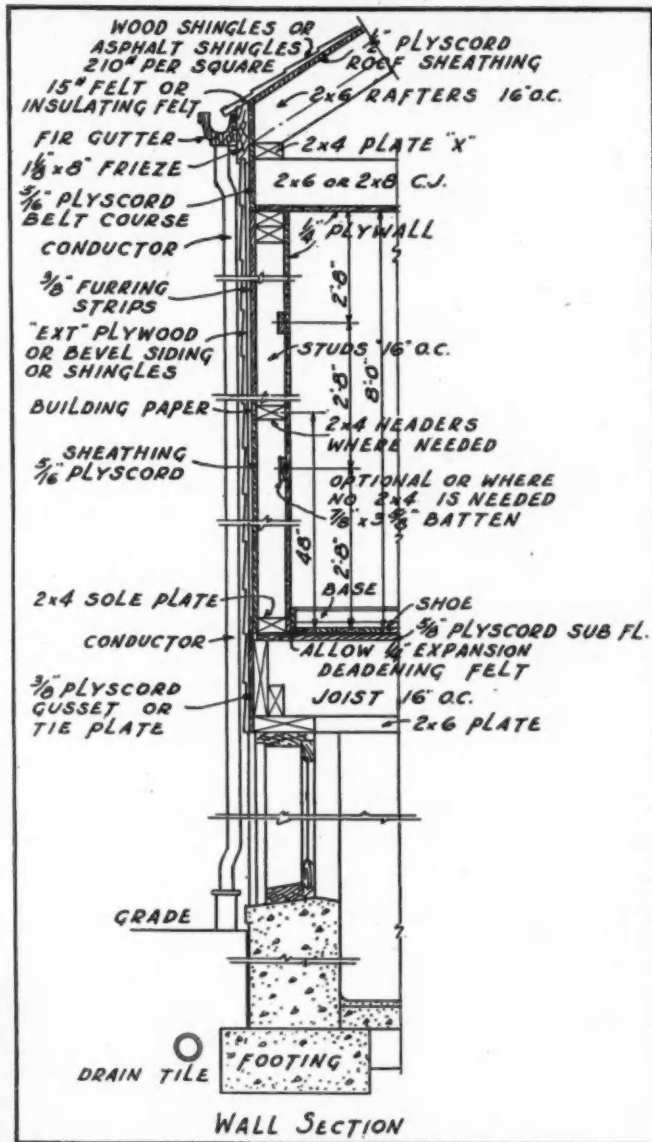
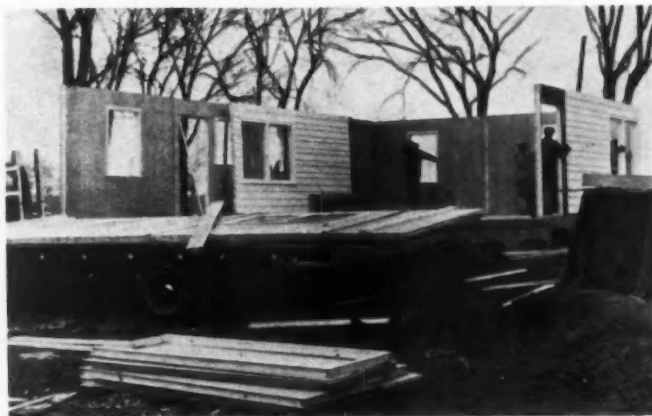
**T**HE STIMULUS of quantity orders from the government for defense housing is at last permitting the pioneers of the prefabricated house industry really to demonstrate what they can do. Having passed through the experimental stages, several house building shops were ready when the housing administrators at Washington called for bids for prefabricated, demountable houses for the Indian Head, Maryland, defense housing project.

Homes needed at Indian Head total 650. The Federal Building Administration announced on March 15 that it had already placed orders with five different concerns for a total of 220 of these prefabricated houses as follows: National Homes Corp., Lafayette, Ind., 50 houses at \$2,966 each; Standard House Corp., Chicago, 50 houses at \$2,831 each; Allied Housing Associates, Inc., Langhorne, Pa., 50 houses at \$2,692 each; Home Building Corp., Kansas City, Mo., 50 houses totaling \$127,000; and E. F. Hauserman Co., Cleveland, O., 20 houses totaling \$61,752. This Indian Head, Maryland, prefabricated house village is to accommodate industrial workers employed at the new Navy powder factory.

Douglas Fir Plywood panels have proved very serviceable for prefabricated house construction. Following in the main the details of construction and assembly worked out by the Douglas Fir Plywood Association for "Dri-Bilt," a number of concerns in addition to those mentioned above have set up assembly benches, have put out catalogs and circulars illustrating standardized plans and are delivering the shop-fabricated house walls, floors, roofs and partitions in panel form by motor truck to the building sites over a considerable area.

The Gunnison Housing Corp., New Albany, Ind., of which Mr. Foster Gunnison is the moving spirit, has literally gone through hell and high water (on the banks of the Ohio River) for the prefabrication ideal since 1930. He now has what is said to be "the largest housing plant in America," a truly impressive factory layout; and he offers a large selection of homes ranging from small and simple to large and elaborate.

The Pease Woodwork Company, Inc., Cincinnati, O., offering "Peaseway houses" is another concern set up in



D. F. P. "Dri-Bilt" details used by many of the successful prefabricated house companies; ABOVE, Goodwillie-Green Box Company delivers a truck load of house to the erection site.



Electric handsaw trims off gable end assembly in National Homes shop; later to be set in place as one piece.

a big way to manufacture house walls and room-sized panels in straight line production. Plywood enters largely in the shop-fabrication, with individualized exteriors added after assembly on the job, using any materials specified, such as red cedar shingles, asbestos siding or brick veneer. A 16 page plan book in full colors illustrates the Peaseway line.

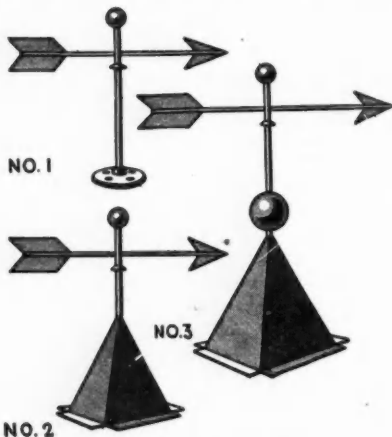
(Continued to page 180)

# SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 126 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to manufacturers at addresses given, mentioning your profession, occupation or business connection with building industry.

## WHAT'S NEW IN BUILDING MATERIALS

**AB445** The old-fashioned weather vane, so long a tradition on the American scene, is quite as much in style as ever, according to the Milcor Steel Co., Milwaukee. So, it has designed three rugged models for installations on homes, garages, flagpoles, playhouses and other buildings. No. 1 screws into a flat end



NO. 2  
THREE new models Milcor weather vane.

flange and is made primarily for mounting on flagpoles or projections with a flat surface. It stands 14 inches high. The No. 2 which stands 18 inches high and the No. 3 which is 24 inches high, are made for installation on ridge or hip ends and can be cut to accommodate any roof pitch. All Milcor weather vanes are equipped with solid steel shafts floating on a ball bearing pivot and lubricated with grease.

**AB446** Protex weather strips are presented in a 20 page portfolio known as, "The Blue Book of Weatherstrips." Large scale, well drawn details show how every important type of window and door is handled. A full line of edgings, bindings, nosings and brass thresholds is illustrated. Also, details of the Protex winter panes, a storm sash application, set in rubber and fastened directly to the regular window sash.—Protex Weather-strip Mfg. Co., Chicago.

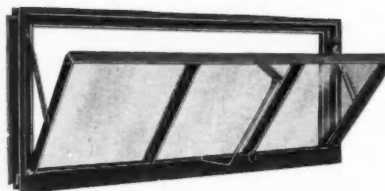
**AB447** Two-coat painting is discussed by The Eagle-Picher Lead Co., Cincinnati, in a meaty booklet of 12 pages under the title, "Quick Facts About Two Coat Painting," by F. L. Chinery, chief chemist of the White Lead Division. It is a discussion addressed particularly to painters and decorators and of interest to architects and builders.

**AB448** "Tracy Cabinet Sinks and Cabinet Tops For Modern Kitchens" is a valuable 12 page reprint from the current "Sweet's" offered by Tracy Mfg. Co., 3125 Preble Ave., Pittsburgh. It illustrates construction details for stainless steel and linoleum with special reference to modern home kitchens. Tracy custom-built cabinet sinks and tops for schools, hospitals, institutions, etc., are also covered.

**AB449** Steelmaster shingles, manufactured by the Tennessee Coal, Iron and Railroad Co., Birmingham, Ala., a division of United States Steel, are presented in a new two-color folder. Steelmaster shingles are galvanized sheet steel sized for eighty pieces to cover a square.

**AB450** Bruce streamline factory-finished hardwood floors are attractively illustrated in their full natural colors in a new 6 page brochure, "Floors That Stay Young." This flooring is completely finished at the Bruce plant, even to waxing and polishing. It is ready to use as soon as laid. This is strip flooring in red oak, white oak, beech and maple. Sizes:  $25/32" \times 3\frac{1}{4}"$ ;  $\frac{1}{2}" \times 2\frac{1}{2}"$ ; and  $\frac{3}{8}" \times 2"$ . Each comes in two grades, standard and prime.—E. L. Bruce Co., Memphis, Tenn.

**AB451** Vento's new champion basement window has an entirely new method of operation. It is virtually two windows in one in that it can be tilted in at the top to give the highly desirable



VENTO'S new champion basement window.

indirect ventilation, or if required the ventilator can be reversed and hooked to the ceiling to give a top hinged window. Ventilator can easily be removed from the frame for ease in glazing or any other purpose. Outside frame is of heavy channel cold formed section. Ventilator insert is made of hot rolled section, 2-point weathering contact, and arranged for puttyless glazing. This window is stocked by dealers in most centers.—Vento Steel Products Co., Muskegon, Mich.

**AB452** "Racolet" junction boxes for electric wiring are catalogued and priced in a 16 page data sheet from the All-Steel-Equip Co., Inc., Aurora, Ill. These are made of malleable iron and come in every needed size and style to meet all electric wiring requirements.

**AB453** "The Nu-Wood Color Harmonizer" is a deluxe color brochure of 32 pages illustrating many actual examples of Nu-Wood walls and ceilings. An ingenious cut out section offers six color scheme changes for wainscots combined with any one of six changes of upper side walls and six changes for ceiling treatment. The rooms analyzed in this way are dining room, bedroom, game room, living room, library and office. It is real fun to work this color and style selector.—Wood Conversion Co., St. Paul, Minn.

**AB454** Weatherite mason's lime and how to produce watertight masonry are covered in a little vest-pocket handbook of 16 pages by the Woodville Lime Products Co., Toledo, O. Good information from this company is also offered in architectural file form, one folder on Blubag superlime plaster and another on Blubag Doloroc stucco finishes.

**AB455** Fluresit waterproofing and building maintenance products are featured in a new three-color folder arranged for convenient reference. Fluresit Trico seal waterproofing for mild seepage and dampness and Fluroseal for severe waterproofing problems are well known products of the American Fluresit Co., Inc., Cincinnati, O. A third waterproofing material featured is Fluresit Quickset, a rapid hardening waterproofing compound. It is used for instantly stopping mild or severe water pressure or running seepage streams at the point of penetration. It becomes flint hard in less than 5 minutes. It is a dry, powdered material ready for use except for the addition of water.

**AB456** Armstrong's Temlok in attractive colors for walls and ceilings of a decorative character is illustrated in a 12 page color brochure from the Armstrong Cork Co., Lancaster, Pa. Double insulation value, by combining this colorful interior plank and paneling material with Temseal sheathing, is suggested and detailed. Armstrong's Monowall, a factory finished hardened wood fibre board for bathrooms and kitchens, is also illustrated. A companion brochure of 8 pages under the title, "Modern Walls at Low Cost," is devoted entirely to Monowall.

Readers Service Department Continued to Page 122

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 126





Now-a-days who wants to  
**"CRANK A CAR?"**

**NO ONE!—and what's more, no one now-a-days wants to operate a Garage Door that works hard**

—sticks, binds, or is noisy. Neither do they want a door where they have to "get out and get under." Today—you want a car that you can "step in, step on and go." That's the kind of operation you want in garage doors, too.

### **Rō-Way OVERHEAD TYPE DOORS**

—have kept pace with modern motor car developments. These quiet, trouble-free doors are really designed and built to enable a car owner to completely forget the mechanical parts just as he is able to do in operating his fine car. When he takes the car out or returns it to the garage, his Ro-Way Doors may be depended upon, day in and day out, to afford maximum protection with a minimum of attention. New refinements (exclusively Ro-Way) make even the rarely needed adjustment of a spring a matter of quick convenience.

### **5 EXTRA VALUES—NO EXTRA COST**

Be sure to investigate these Five Features that insure smoother operation and added years of service . . . "Crow's Foot" Outer Bearing Support . . . "Ro-To Live" Spring . . . "Zip-Lock" Adjustment . . . "Tailor Made" Springs . . . and Parkerized and Painted Hardware.

Write for Free Ro-Way Door Folders, Prices and Complete Information.

**ROWE MANUFACTURING CO.** 722 HOLTON STREET GALESBURG, ILL., U.S.A.

### **Rō-Way**

**Service is Nation-Wide**

Sales Offices with competent installation engineers, are located in principal cities. Write for name of one nearest you.

ROWE MANUFACTURING CO.,  
722 Holton St., Galesburg, Ill.

Gentlemen: Please send me Free Descriptive Folder and Price List on Ro-Way Overhead Type Doors.

Name.....

Address.....

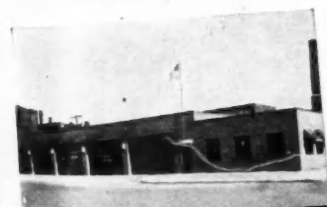
City.....State.....



Attractive three-car garage equipped with Ro-Way Overhead Type Garage Doors. Architects, Aldrich & Aldrich, Galesburg, Ill. Contractor, John Dahlberg, Galesburg, Ill.



Ro-Way Garage Doors especially designed for use in Modernistic Service Station.



Bus Station, Terre Haute, Indiana, using 12 Ro-Way Doors. Miller & Yeager, Terre Haute, Indiana, Architects.

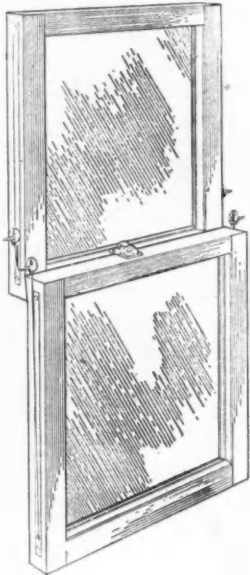
*There's a Ro-Way for every Door way!*

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### WHAT'S NEW IN BUILDING MATERIALS

**AB457** Metalbestos gas vent and flue pipe, manufactured by the Williams-Wallace Co., San Francisco, consists of an aluminum pipe placed within a galvanized steel casing which is one inch larger in diameter than the aluminum pipe. The two are held in centered positions by vitrified asbestos spacer rings and a one-half inch insulating air space is thus provided completely around the aluminum pipe. This keeps the burned gases hot, eliminating condensation; and the aluminum is immune to corrosion.



ABOVE: Metalbestos oval flue pipe with air insulated walls.  
TO LEFT: sash hung with National balances.

**AB458** Permitting window sash to be opened full height and eliminating any need for pulleys, weights, sash cords and box frame, this remarkable new National sash balance, recently introduced by National Lock Co., Rockford, Ill., comes pre-adjusted and ready for quick, easy installation. The balance is completely concealed inside the sash, presents a trim appearance, eliminates dust-collecting pockets and offers weather-tightness. Installation consists of simply hooking the stainless steel cable to a button which is screwed to the window frame. Oil impregnated wheels make the cables self-lubricating. No stops are required. Units are supplied to balance specific window sizes and weights. Complete details of recommended installations for the workmen and architects' drawings and specifications are available.

**AB459** Roofloy lead roofing, a new product of Revere Copper and Brass Inc., New York City, is presented in a 20 page catalogue reprinted from the current "Sweet's." Roofloy is an improved type of roofing sheet lead for which the advantages of lighter weight, greater tensile strength, lower installation cost and reduced tendency to creep are claimed. It weighs two pounds per square foot. Clearly drawn details for standing seam and batten seam roofing are included along with installation photographs and complete specifications.

**AB460** Catalog No. 37 of the Indiana Foundry Co., Indiana, Pa., is an illustrated book of 44 pages showing a very complete line of cast iron building specialties including fireplace dampers, ash dumps, doors, coal chutes, drainage traps, gratings, covers, guards, grate bars, heating stoves, etc.

**AB461** "Guide to Efficient Insulation" is a new 20 page data sheet from Kimberly-Clark Corp., Neenah, Wis., on the general subject of building insulation and with particular reference to Kimsul. Large clear photographs and drawings show how to handle difficult installations and fuel savings for various thicknesses of insulation are helpfully diagrammed.

**AB462** Catalog K from The Central Foundry Co., 386 Fourth Ave., New York City, is a book of 136 pages covering the complete line of "Nuhub" cast iron soil pipe and fittings. An 18 page appendix gives "Tables of Compound Discounts" reduced to simple net compounds computed to five decimal places. The table covers discounts ranging from 15 per cent up to 91 $\frac{3}{4}$  per cent with supplementary discounts ranging from 2 $\frac{1}{2}$  per cent to 10-10-10-7 $\frac{1}{2}$  per cent—a feature that will save a lot of figuring on many things besides cast iron soil pipes!

**AB463** Wingfoot Rubber Flooring and Wall Rubber is the title of a new brochure, from the Goodyear Tire & Rubber Co., Inc., Akron, O., illustrating these products for commercial buildings, public buildings and homes. The range of colors in which these floor and wall coverings are offered allows the architect and builder to devise countless designs. Border and feature strips increase the number of possible combinations. The colors retain their life through years of service and do not "walk off."

**AB464** "Dress Up Your Windows With Aldura Aluminum Screen Cloth" is the title of an attractive little folder issued by the New York Wire Cloth Co., 500 Fifth Ave., New York City. Aldura is non-rusting, self-cleaning and weathers attractively. It is woven 16 wires to the inch and comes in widths 18 inches to 48 inches.

**AB465** The Master no-draft sash balance, developed by the Master Metal Strip Service, Inc., 1720 N. Kilbourn Ave., Chicago, is illustrated and explained in an attractive 6 page folder in black, red and aluminum. It consists of a sash balancing spring in an aluminum alloy housing which acts as a positive weather-strip. Adaptable to both new and old windows.

**AB466** Ludowici early American shingle tiles are featured in an attractive folder from Ludowici-Celadon Co., 104 S. Michigan Ave., Chicago. This recently developed shingle tile (burned clay) has the characteristics of the shakes used on early American homes. Color is soft grayish green suggesting moss and lichens on the shaded sides of the roof.

**AB467** "Home Protection" is the title of a deluxe 24 page portfolio from the Red Cedar Shingle Bureau, Seattle, Wash. It presents a number of interesting small house designs and gives suggestions for old home modernizing. The right and wrong way of shingling is compared and "Six Steps In Over Roofing" are illustrated.

**AB468** "More Roof Value For Your Money" is an important little book of 20 pages describing the research which The Philip Carey Co., Lockland, O., has back of its "Asqu" asphalt roofing products. Extra saturation of asphalt and what it means for long life roofings are explained.

**AB469** "Shadowline" aluminized fir gutters, as produced by the Long Fir Gutter Co., Cadiz, O., are featured in an attractive 4 page data sheet. Details show how wood gutters are mitered at the corners and connected to metal downspouts.

**AB470** Wernco metal mouldings of aluminum, brass and stainless steel are attractively illustrated in a handbook of 24 pages from R. D. Werner Co., Inc., 21 E. 30th St., New York City. This is a valuable price list and specification book for builders and dealers.

**AB471** Yankee fiber tile wall boards in attractive colors, produced by Yankee Fiber Tile Mfg. Co., 3222 E. Jefferson Ave., Detroit, are offered in a well styled color folder illustrating numerous uses. Entitled, "Modern Luxury Walls at Low Cost," illustrations are presented showing results in a breakfast room, a bathroom, a food market. A wide color range is reproduced suggesting many striking modern effects.

Readers Service Department Continued to Page 124

**FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 126**



**THIS COMBINATION  
WILL SELL HOMES!**

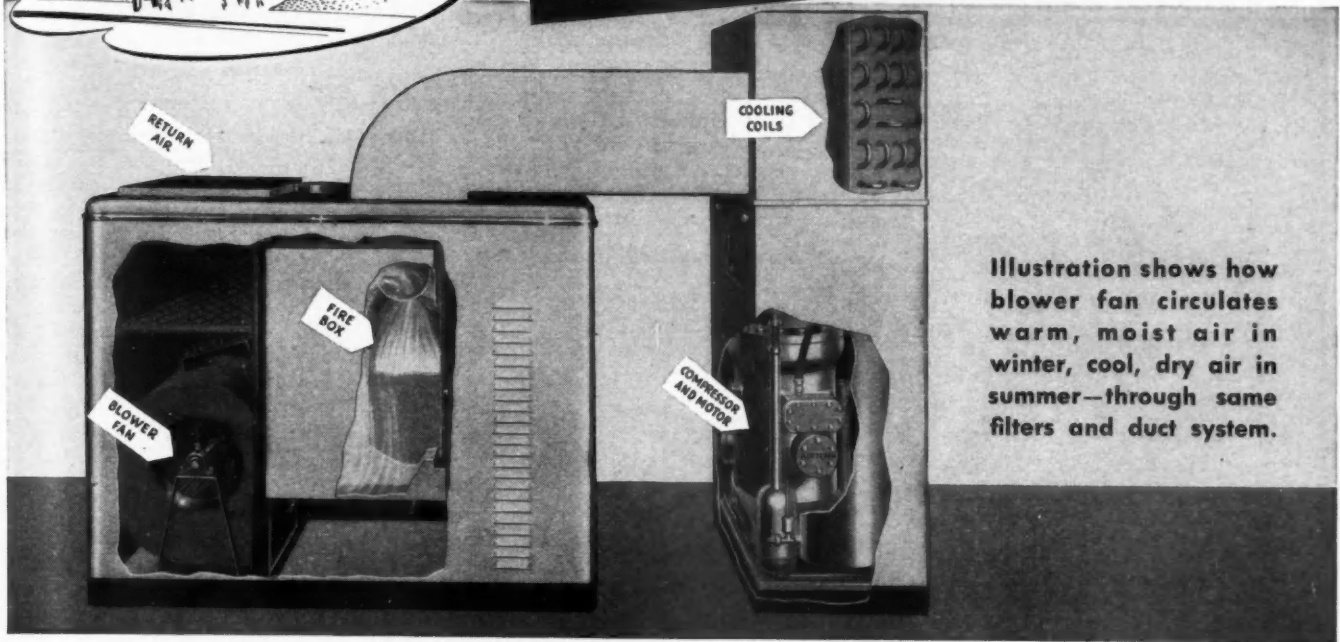


Illustration shows how blower fan circulates warm, moist air in winter, cool, dry air in summer—through same filters and duct system.

## Chrysler Engineering Has Produced Practical Heating and Cooling at Low Cost

**Sales Appeal!**—Now you can offer year-round air conditioning for medium-priced homes!

**Time-Tested Products**—The Airtemp heating and cooling unit is a combination of an air-conditioning furnace now in use in thousands of homes and a hermetically-sealed cooling unit used in stores, offices and restaurants for years.

**Cooling Costs Little**—On a 20-year, F. H. A. mortgage the matched cooling unit adds as little as \$2.69 to monthly payments.

**Airtemp Makes a Complete Line**—This

combination unit is typical of the Chrysler engineering in all Airtemp equipment—furnaces for all fuels, from 70,000 to 200,000 B. T. U. output.

**Prices Competitive**—Why not put equipment in your homes which bears a name nationally famous for engineering leadership and quality manufacture? It helps you sell yet costs no more.

**Mail the Coupon**—for complete information about the combination unit and the Airtemp line.

**Dealers!**—Airtemp has an unusual, profit-making proposition for you. Mail coupon for details.

**CHRYSLER AIRTEMP**  
AIRTEMP DIVISION OF CHRYSLER CORPORATION • DAYTON, OHIO

AIRTEMP DIVISION, CHRYSLER CORPORATION  
Department F, Dayton, Ohio

Gentlemen: Send me more information on the Combination Unit and the Airtemp line. Builder  Dealer

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

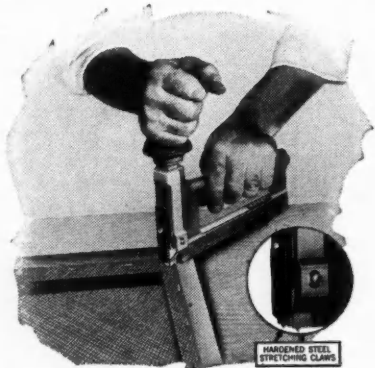


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## NEW MODELS, POWER EQUIPMENT & TOOLS

**AB472** The Markwell screen tackler is a useful device for securely attaching screen wire to windows and doors. Can be obtained as a free loan under company's current offer or can be



ABOVE, the Markwell screen tackler; to left, the Markwell insulation tackler.

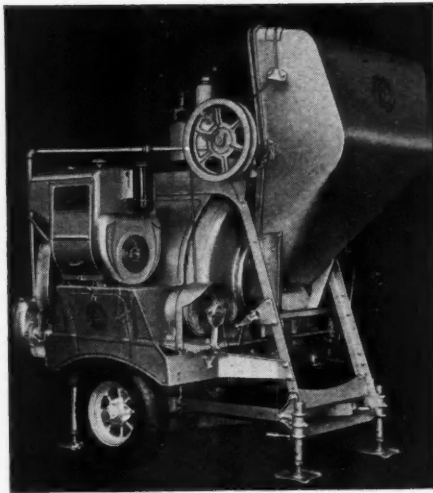
tried out on approval by writing A. Markwell Mfg. Co., Inc., 200 Hudson St., New York City. The new Markwell insulation tackler, also illustrated, has won acceptance for speedy fastening of all types of insulation. Its one-hand operation permits use of the other hand to hold insulation in place.

**AB473** The new "Whiz" electric tool, developed by Paramount Products Co., 48 W. 48th St., New York City, weighs 3½ pounds, comes in standard model and two-speed model utilizing up to 200 different accessories.



"WHIZ" electric tool "of one thousand uses," small in size, big in utility.

**AB474** The extensive line of CMC trailer mixers (Construction Machinery Co., Waterloo, Ia.) has been augmented by the new model shown here; it is equipped with V Type air cooled engine. This compact unit has all the proven features of portability, serviceability, and long life. The air cooled engine eliminates cold weather hazards.



NEW fast action CMC trailer mixers

**AB475** The Reid-Way Corp., Cedar Rapids, Ia., is now offering the industry the Reid-Way "8", the floor sander with the exclusive feature of "Only One Moving Part." The motor itself forms the sanding drum, and this is the only part in action. Another exclusive feature of the Reid-Way is that it works directly to the quarter-round on both sides of the machine.



REID-WAY 8 sander has "only one moving part."

**AB476** American Standard floor sanders, Models 8 and 12, developed by The American Floor Surfacing Machine Co., Toledo, O., are effectively illustrated and described in a new 6 page data sheet. This is so completely detailed that it is in itself a thorough education in flooring sanding equipment. These machines are available in either electric drive or gasoline engine drive. A special bulletin is included on the American gasoline powered floor sanders which will be particularly interesting on rush construction jobs for national defense, remote from power lines. The gasoline engine equipment is interchangeable with electric motor.

**AB477** "Porter-Cablegram, The Floor Contractors' Gossip Sheet" has been brought out by the Porter-Cable Machine Co., Syracuse, N. Y., and those interested should get on the mailing list. It is to be issued from time to time for the benefit of some 15,000 floor men in North and South America. Volume I, No. 1, recently issued, is a four page newspaper 11½ x 16 inches. S. S. Mellor is the editor and some mighty interesting features are launched that are bound to appeal to floor surfacing men. "Getting This Floor Business at a Profit," a leading article in this first issue, will be worth real money to many readers.

**AB478** Fir-Tex absorptive form liner, a product of Fir-Tex, Inc., Porter Bldg., Portland, Ore., is the subject of a 4 page illustrated data sheet which presents valuable test data. The use of this form liner produces a smooth, hard surface on concrete, eliminating pits. The fiber board liner produces a finer textured surface with absence of surface voids, less crazing and greater hardness and durability. By absorbing air bubbles and excess water, the Fir-Tex liner produces a case hardened surface.

**AB479** Babcock spruce ladders are standard equipment with many contractors and builders. A very extensive line is illustrated, described and priced in an 8 page folder from W. W. Babcock Co., Bath, N. Y.

**AB480** Mall contractors' equipment is featured in a new 8 page catalog from the Mall Tool Co., 7740 S. Chicago Ave., Chicago. Included are concrete vibrators, surfacers, drills, saws, etc., powered by gas engines, compressed air or electricity.

**AB481** Black & Decker 1941 catalog, contains 60 pages, fully illustrates the complete line of 132 portable electric tools. A pioneer in the field of portable electric tools, the Black & Decker Mfg. Co., Towson, Md., demonstrates in this new extensive catalog that it is right abreast of all modern developments.

**AB482** The Jackson concrete brick machine, developed by Jackson & Church Co., Saginaw, Mich., together with its products are presented in a new two-color 6 page data sheet.

Readers Service Department Continued to Page 126

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 126

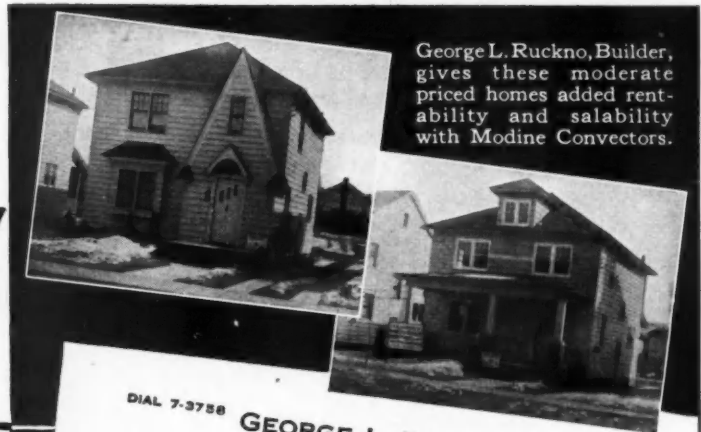
# "Our Clients have shown a Decided Preference"

## "MODINE CONVECTOR heating has given more satisfactory results than any other type..."

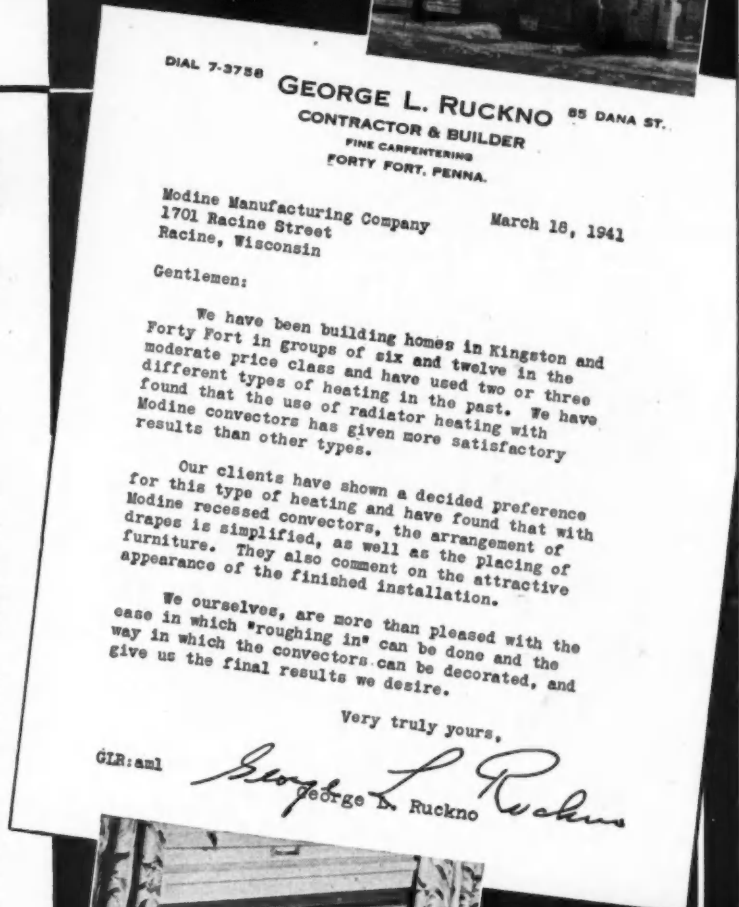
There's no mistaking the greater sales appeal of Modine Convector heated homes. You have Mr. George L. Ruckno's word for that. He builds moderate price houses, in groups of six or twelve, in Kingston and Forty Fort, Pa. And he speaks from long experience.

Having "used two or three different types of heating in the past" he *now* uses *Modine*. Why? Because his "clients have shown a decided preference" for Modine's modern smartness... beauty that's distinctive yet unobtrusive... space saving that combines convenience with building economy. All the added "luxuries" and greater *comfort* are theirs with Modine copper concealed radiation and a hot water or steam system. With Modine's standardization and lower cost installation *your cost* approximates that of a hot air blower system.

**MODINE MANUFACTURING COMPANY**  
1701 RACINE ST. • RACINE, WISCONSIN



George L. Ruckno, Builder, gives these moderate priced homes added rentability and salability with Modine Convector.



DIAL 7-3758  
**GEORGE L. RUCKNO** 85 DANA ST.  
CONTRACTOR & BUILDER  
FINE CARPENTERING  
FORTY FORT, PENNA.

Modine Manufacturing Company March 16, 1941  
1701 Racine Street  
Racine, Wisconsin

Gentlemen:

We have been building homes in Kingston and Forty Fort in groups of six and twelve in the moderate price class and have used two or three different types of heating in the past. We have found that the use of radiator heating with Modine convectors has given more satisfactory results than other types.

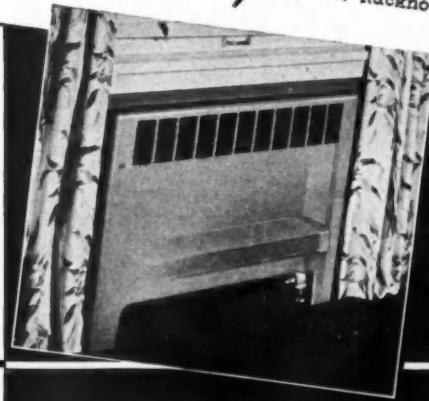
Our clients have shown a decided preference for this type of heating and have found that with Modine recessed convectors, the arrangement of drapes is simplified, as well as the placing of furniture. They also comment on the attractive appearance of the finished installation.

We ourselves, are more than pleased with the ease in which "roughing in" can be done and the way in which the convectors can be decorated, and give us the final results we desire.

Very truly yours,

GLR:aml

*George L. Ruckno*  
George L. Ruckno



Modine Convector showing copper heating unit as concealed behind Panel Front Recessed Type enclosure.



Look in your phone book for Modine representative's name—"Where to Buy It" section under Heating Apparatus

Write for Literature

# modine

THE *Convector* WITH THE  
MANUALLY REMOVABLE ENCLOSURE FRONT



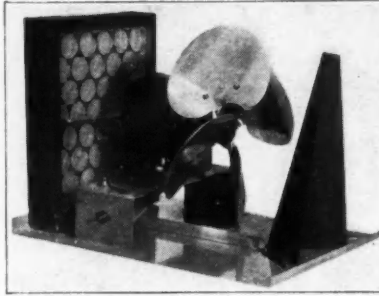
**NO BOLTS, NO SCREWS  
NO TOOLS TO USE**

# SERVICE TO READERS

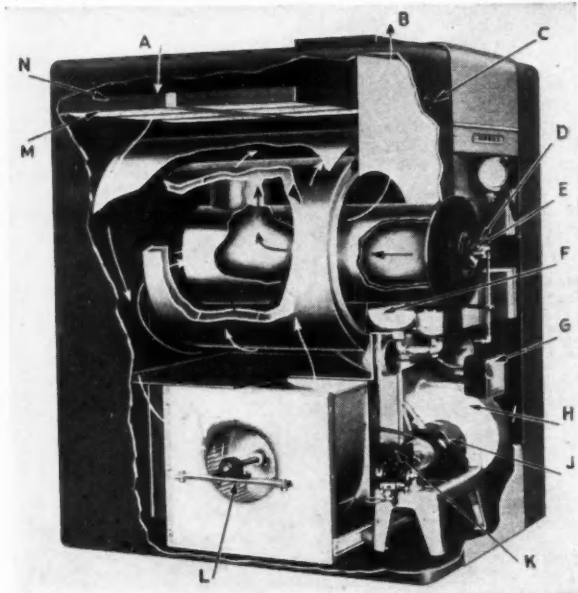
EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

## HEATING AND AIR CONDITIONING

**AB483** Illustrated is the largest of four new furnaces which Norge Heating and Ventilating Division, Detroit, has developed to provide modern heat and air conditioning at low cost for homes in the \$2,000-\$9,000 class. All are of the warm air type and all burn oil. Key to phantom view: A, cold air inlet; B, warm air outlet; C, "change filter" indicator; D, electric ignition; E, oil nozzle; F, humidifier; G, automatic safety controls; H, mechanical draft; J, single motor; K, oil pressure pump; L, blower; M, safety filter by-pass; N, air filters.



WAYNE air booster and conditioner unit for furnaces.



NEW low-priced Norge air conditioner.

**AB484** Wayne Automatic Relay Co., Fort Wayne, Ind., offers a combination air booster and conditioner unit. Normal gravity flow heating plants circulate only 1½ to 2 times per hour, but by adding this simple assembly a truly even heating temperature may be had regardless of the distance the rooms might be from the heating plant or how long or flat the duct-work might be. The two speed motor fan drives air through a filter and cleans the air as circulated. With a booster the heating plant is operated at 150-300 degrees instead of 400-600 degrees as in gravity systems. A mercury tube thermostatic control makes it automatic.

**AB485** "Byers Wrought Iron for Radiant Heating Installations" is a technical bulletin of 44 pages prepared by the Engineering Service Dept., A. M. Byers Co., Pittsburgh. A previous bulletin on this subject was put out by Byers about three years ago. Rapid developments within the last few months have made necessary this completely re-written and revised study.

**AB486** The Superfex "gas saver" gas burning furnace for small homes is attractively featured in a new 4 page data sheet. This is one of the extensive line of heating plants developed by Perfection Stove Co., Cleveland, O. This model is a fuel saver and a space saver occupying only approximately four square feet of floor space.

**AB487** Quiet May issues new architects and builders manual. A book of 20 pages entitled, "All Lines Point to Quiet May." It is a catalog of the air conditioners, oil furnaces and oil burners manufactured by The May Oil Burner Corp., Baltimore, Md.

**AB488** The Zephair completely automatic gas furnace, offered by the XXth Century Heating and Ventilating Co., Akron, O., is attractively illustrated in a new two-color 4 page data sheet.

**AB489** Two new Modine unit heater catalogs have been issued by Modine Mfg. Co., Racine, Wis. Catalog No. 140E, presenting horizontal delivery unit heaters, is an illustrated book of 32 pages. The other catalog, No. 140C, is devoted to vertical delivery unit heaters and is a 16 page data sheet. These unit heaters are particularly useful for industrial plants.

**AB490** Reznor gas-fired suspended unit heaters of the fan, blower and duct types are presented in a new 12 page catalog, No. U41, from the Reznor Mfg. Co., Mercer, Pa. Each type of unit is available in 5 different capacities ranging from an input of 55,000 B.T.U. per hour to an input of 200,000 B.T.U. per hour. Fully illustrated with drawings and photographs which show the important construction features of various types of units.

**AB491** Chrysler's Airtemp heating systems are presented in a series of 4 page circulars attractively illustrated. One shows the Airtemp oil-fired boiler, Model OS-30; another features the new Airtemp winter air conditioner, and a third, the Airtemp all-steel furnace, an economy heating unit—Airtemp Div., Chrysler Corp., Dayton, O.

**AB492** "Rexoil Accelerated Heat Coordinated and Certified" is the title of an impressive 30 page handbook on oil heating including the manufacture, design details and installation procedure of the Rexoil burners, boiler burner units and air conditioners that are now included in the line of this pioneer oil burner equipment manufacturer.—Reif-Rexoil, Inc., Buffalo, N.Y.

### CLIP AND MAIL TO CHICAGO

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

(April, 1941)

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

Numbers.....

Name.....

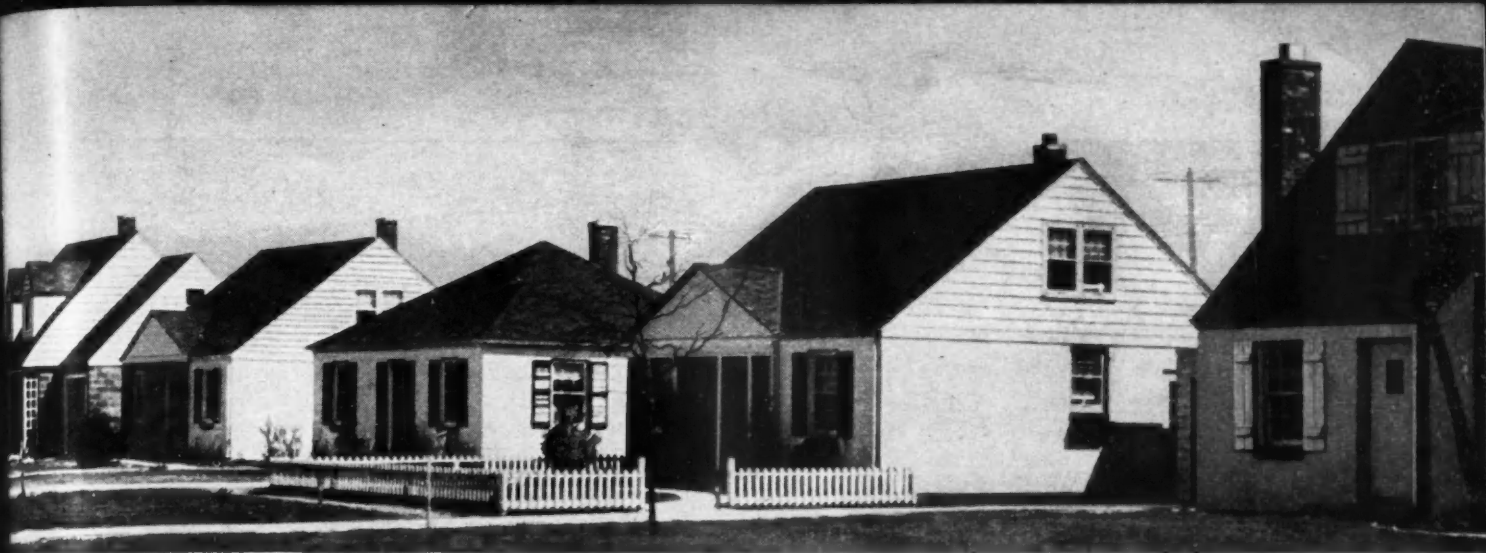
Street.....

City..... State.....

OCCUPATION\*.....

\*Please note that occupation must be stated if full service is to be given





# How \$600 Saved with JANITROL heat resulted in one of America's Finest Home Projects

R. C. Dewey of Buffalo, New York, has realized the hope of a lifetime in the building business. He can now deliver to a new home buyer about \$600 greater living space and equipment values than was possible before the development of his new type homes.

Dewey now puts into these beautiful small homes spaciousness, comfort and conveniences heretofore possible only in homes of larger size at greater cost. He has set a standard of "More home for the money" that builders throughout the land can well imitate both for quick sale and big value to the home owner. They are small homes but of quality and workmanship found generally in high-priced homes only.

### Entirely New Architectural Conception Really Gives "More Home for the Money"

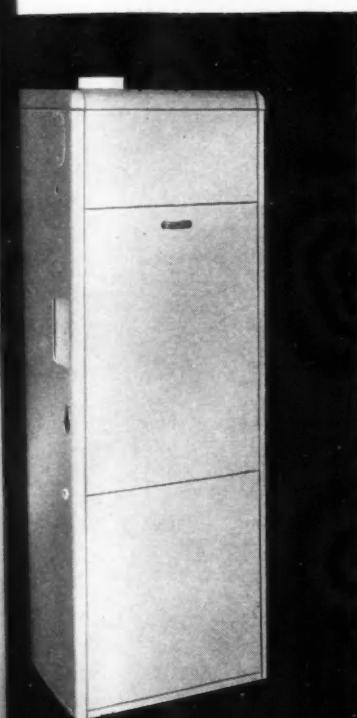
"It was Gas Fired Janitrol Heat," says Mr. Dewey, "that made that development possible." The Janitrol Unit, not much bigger than a steamer trunk, is tucked into a small closet under the stairway. Right there we completely eliminate all need for space-wasting heavy furnaces and fuel storage. By a new method of air circulation Dewey eliminates great amounts of pipe and conduit work. The heat in these homes is astonishingly even and uniform from floor to ceiling, from inner to outer wall. Eliminating basements saved \$500. Lower furnace and

installation costs saved \$100. That money went into more usable room, a model little laundry and other devices. Architecturally sound, beautifully constructed, these homes have really set a pattern for the small home builders of America.

### Use the Years of Heating Experience That Made These Homes Possible

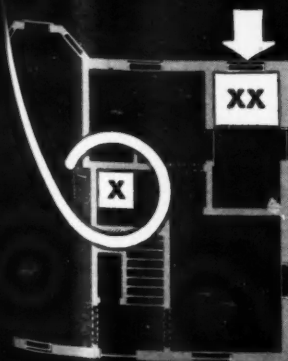
The heating unit around which the architects designed and Mr. Dewey built these homes was the result of years of space-heating experience. Trained men with benefit of that experience are available to builders or owners who build where gas for heating is available. Wire, phone or write for consultation with a Surface Combustion Heating Engineer. He will gladly advise you, whether your project is large or small, in home or commercial heating.

**SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO**



Area X, under stairway, contains entire heating plant where basement stairway used to be.

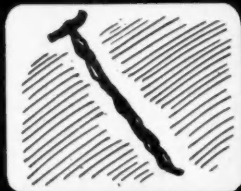
Area XX contains laundry and is only space required to replace entire basement.



# Announcing ZINCLAD WOOD SIDING STAYS

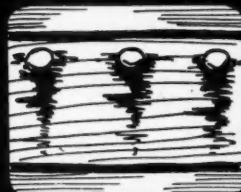


A sensational new design. Deeply anchored shank holds siding with bulldog grip. Checkered head holds paint neatly—eliminates shedding. And they're Zinclid. Positively rustproof!



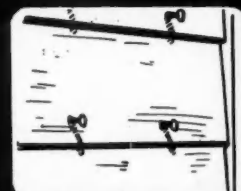
## RUSTPROOF

Hot-dipped in pure zinc! Carrying a heavy protective coating of pure zinc—thick and uniform. Will not rust or rot wood siding.



## NO STAINS

No rust . . . means no rust-stains leaking down on painted wood siding. Maze Zinclid Wood Siding Stays provide permanent beauty in wood siding.



## NO "POPPING OUT"

Deep anchor rings on the shank of Zinclid Stays hold wood siding fast—even the popular wide wood siding remains snug and trim when laid with these new stays. Nails do not work out.



## NO "SHEDDING" OF PAINT

A checkered head—an exclusive Maze feature—provides a perfect bond for paint. Paint will not shed, marring appearance of wood siding.

Write for free samples and literature on Maze Zinclid Wood Siding Stays. There's a Zinclid nail for every purpose . . . wood

shingles, metal roofing, asphalt shingles, asbestos shingles, etc.

W. H. MAZE COMPANY • PERU, ILLINOIS



## ON & OFF the RECORD

Views and Comments

by *Structor*

**HATS OFF:** Chrysler Corporation's recent advertisement, "Hats Off to Men of Steel," puts the spotlight on the superb job the building industry has done and is doing in defense work. When the Army or Navy or private industry wants something done well and **done in a hurry**, they call in men who can get results without waste motion. In this case it was Albert Kahn, architect, and O. W. Burke, general contractor.

The building industry gets kicked around and criticised by all sorts of people for its inefficiency so it's pleasing for a change to have an outfit like Chrysler paying tribute to the builders who in 70 days, through rain, sleet and snow, transformed a Michigan farm into a huge tank factory.

The Bethlehem Steel Company raised over 6,500 tons of steel in this period in constructing the quarter-mile long and 500 ft. wide building. Throughout the nation hard-driving, efficient, experienced building men are hanging up new records in defense construction, defense housing and in private building. It's a record the industry can be proud of.

Although the emphasis as far as housing is concerned has been on large-scale defense housing, the actual facts are it is private home building performed in thousands of widely spread communities throughout the nation that is accounting for the vast bulk of the present home building increase.

The number of government planned or financed housing units to be built this year may reach 50,000 or 60,000. This would be remarkable. Yet it's less than 10 per cent of the expected national total of 650,000.

**CHOICE WORDS**—A few choice words are all I can allow to describe the A.F.L. Electrical Workers Union in whose behalf the strike was called last month which tied up the Wright Field, Ohio, Army Air Corps Project—simply because four C.I.O. electricians were employed by a New York subcontractor. This union is the most high-handed, arbitrary, unreasonable and close to a racketeer set-up of any in the country.

In New York and Chicago it has achieved a particularly unsavory reputation and holds a dubious record for imposing the shortest hours, most restrictions on output and least regard for the progress of the job. The Wright Field tie-up caused the intervention of the War Department for the first time, and moved even the President to denounce the strike.

This strike against the government's defense program had nothing to do with wages, hours, working conditions or the right of union labor to be employed. It was simply the high-handed, arbitrary and, I believe, illegal attempt of a little group of electrical dictators to tell the government that it cannot employ members of another union or anyone else this group does not approve.

Surely the federal government must take a stand against this form of labor monopoly. Or will it have to resort to the practice often found necessary by private contractors of "slipping" somebody something to lay off?

**6-HOUR DAY ON THE FARM**—Home building is as seasonal as farming, and it is just as unsound to set a fixed work period for home building as it would be try to establish a 6-hour work day on the farm. It just won't work. The forces of nature are "agin" it.

The C.I.O. coal miners' approach to this subject may suggest a solution: they have been asking a 200-day minimum work year rather than a 30-hour week. That's because coal mining, like farming or home building, is a seasonal operation. The building industry might give some thought to a similar annual guarantee. If a building worker could be assured a minimum of 1,800 hours of work a year (equivalent to 225 8-hour days or 300 6-hour days) at \$1 an hour, he might not be so concerned about the fixed union work day restrictions that complicate building operations.



**SPEAKING OF COLOR**—Our four-color insert in this issue calls to mind the story about the builder who bought a new "color-styled" car, and was so uplifted he offered a ride to the first girl he saw on the street. As the car came to the first intersection he asked her to tell him the color of the traffic lights. "You see, I'm color blind," he said.

"You sho is, honey," she replied in a husky voice. "Ah knows you all's color blind!"

**BIRDSEYE BRAG**—Three thousand miles is a lot of territory to cover by car, as I did last month to get a quick birdseye picture of what *American Builder* readers are doing in important cities of the Southeast. **The vivid impression punched home was the vast impact of national defense on building.** In Charleston, a city of 71,000, more than 2,000 houses, public and private, are under way. Builder L. D. Long there has set a goal of 300 houses in 300 days, with a large thermometer in front of his office recording progress. He is also building a defense housing project. Savannah and Jacksonville are booming; Columbia looks like an army camp, with its streets full of soldiers and not a house available for rent. Builders, lumbermen and material dealers are busy on all kinds of work, in spite of higher prices and some material shortages. Mushroom communities are springing up around great new army camp centers. Certainly, the South is in *this* war.

The Carolinas, Georgia and Florida are not only booming as a result of the huge defense projects scattered all over these states, but they are feeling the effect of new industries and growth. This is a land with a future, and building men are playing an important part in its development.

**AMAZING MIAMI**—Of course, the wonder city of the Southeast is Miami and its flashy, flourishing offspring Miami Beach. The glistening array of fabulous new hotels, apartments and public buildings is something like a Florida world of tomorrow, and you can't help entertain some feeling that it may be all torn down next year and turned into an alligator park.

Nevertheless, the architects and builders of the Miami territory are doing some interesting and beautiful things. They aren't afraid to break with tradition. I believe that they have done many things that the building industry in other cities might well find worth studying.

**STILL SPROUTING**—Every jack-leg saw mill and portable outfit in the territory I drove through is apparently back in operation at full blast. Lumbermen predict that at this rate the temporary lumber shortage will be overcome soon—with a vengeance. Considerable green lumber is finding its way into new construction. **In one town where the government cleaned out all the seasoned material, some of the stuff being nailed in place was so green it was still sprouting.**

**WHITE ROOFS**—All through Florida the visitor from the North is impressed by the high percentage of white roofs in the newer houses, large and small. Builders claim the white roof reflects heat: they use cement tiles or asbestos cement shingles. One builder I talked to is planning to try out a coating of sea-shells imbedded in a heavy built-up base. Exciting, what!

(Continued to page 130)



White tile roof, pastel colored walls in Miami house.

**H**ERE are examples of Knapp Corner Beads—improved types—ideally suited to the home building requirements of today. Manufactured to the same quality and practical standards of other famous Knapp Products, they offer the advantages of quick and easy application . . . true and smooth corners . . . economy and rugged permanence.

You can depend on Knapp Corner Beads and profit on them too! They're available in a great variety of types and sizes to fit every job.

Write today for full details.

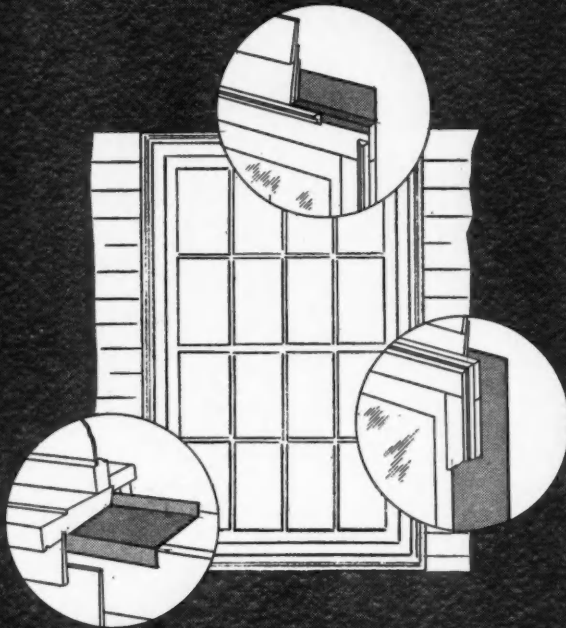
Knapp Corner Beads are made by the manufacturers of Knapp Casings.

**KNAPP METAL TRIM**  
KNAPP BROS. MANUFACTURING CO.  
GENERAL OFFICES - JOLIET, ILLINOIS



# Best by Test!

## for Concealed Flashing



Anaconda "Electro-Sheet" Copper, bonded to building papers, fabric or asphaltic compounds, gives concealed flashing the durability of copper at remarkably low cost. Extremely flexible and easy to install, these materials are available in rolls of various lengths, and in widths up to 60"—with the copper in thicknesses of .0013", .0027" and .004" (1 oz., 2 oz. and 3 oz. per square foot).

Examine Reinforced "Electro-Sheet" products for yourself. Just ask for free samples and names of manufacturers.



**"ELECTRO-SHEET"**  
**Anaconda Copper**

THE AMERICAN BRASS COMPANY  
General Offices: Waterbury, Connecticut  
In Canada: Anaconda American Brass Ltd., New Toronto, Ont.  
Subsidiary of Anaconda Copper Mining Company

### On & Off the Record—

(Continued from page 129)

**BARRACUDAS & SOLAR HEATERS**—Almost anything can happen in Miami. The builders equip their houses with window-like gadgets on the roof so the sun heats the domestic water supply free. They make their garage doors better looking than many front entrances I've seen. Houses are well built, low priced and right good looking. When there isn't enough land available they simply build an island in Biscayne Bay, plant a few thousand palm trees and put the houses on concrete piles. Two years later you'd think the island had always been there.

One note of unpleasantness:—As I examined one of the palatial island homes, I asked about the swimming in Biscayne Bay. "Fine," my builder friend said. "But it's a little dangerous. You might lose an arm or a leg. Barracudas."

(Chamber of Commerce note)—The swimming on the ocean beaches is perfectly safe and perfectly wonderful.

**LIVE DEALER**—One of the livest lumber dealers in Miami is Lindsley Lumber Company, who also can, with considerable reason, lay claim to being the largest dealer in Florida and the Southeast. An important feature of the service appreciated by builders is a complete building material catalog issued monthly with all items conveniently priced per unit. Forest V. Peaker, vice president, keeps an excellent file of photographs of every large building on which the firm supplied materials, and many of these may be seen in this issue of *American Builder*.

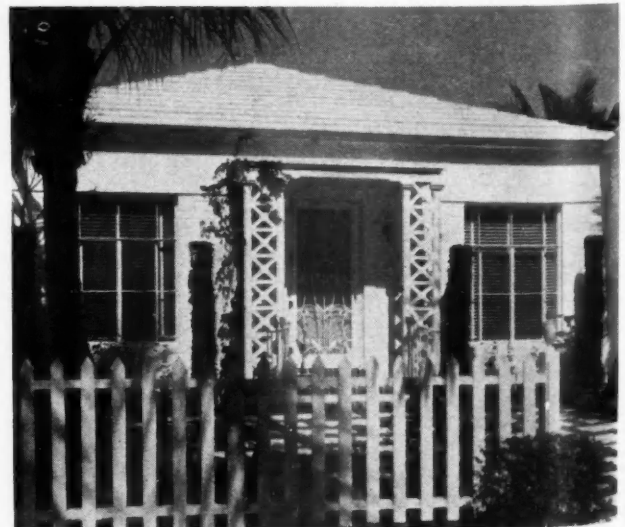
**FAIR SAILING**—In May this year a sturdy new 6,750-ton diesel-powered merchant vessel will start doing its bit for American shipping. Built in San Francisco by the Western Pipe and Steel Company for the U. S. Lines, at a cost of \$2,127,500, this little boat is one of a series bearing such names as American Manufacturer, American Packer and American Engineer. Its name? — American Builder.

Kenneth D. Dawson, vice-president in charge of Pacific coast operations for the United States Lines, explained the naming of the new C-1 cargo ship. "To maintain a democracy," he said, "it is imperative that its citizens be informed. We have seen democracies and human freedom disappear in Europe only after the sources of information in a free press were destroyed. It is fundamentally because of its uncensored newspapers that the American public can remain free—protected against tyranny and injustice."

Well, fair sailing, American Builder. This publication will watch your course with interest.

**FREE ENTERPRISE**—We hear much about free enterprise as applied to business men, but what about the free-enterprise privileges of nonunion building workers who have been trying

(Continued to page 133)



**DECORATIVE**—Fine details, such as the screen door, lattice and picket fence, feature this Miami island home.

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MADE BY



"I've always wanted a basement like this"

[ READ HOW ARMSTRONG'S ASPHALT TILE FLOORS  
HELP MAKE BUYERS OUT OF PROSPECTS ]

THERE'S no doubt about it. Smart-looking basement playrooms help sell houses *faster*.

You can give your houses the extra sales-appeal of basement playrooms or recreation rooms like the one shown above, *at low cost*, if you use Armstrong's Asphalt Tile. Floors are quickly and easily installed by hand—a block at a time.

There are 41 different plain and marble colorings from which to choose. These, with the variety of shapes and sizes available, permit almost unlimited design possibilities. Factory-cut insets—like the "four aces" shown here—cost little extra.

Armstrong's Asphalt Tile is a tough, long-wearing floor, too. Moisture and alkalis commonly present in concrete subfloors (on or below grade) won't harm it. The colorings can't wear off because they run right through the material. (All the attention an Armstrong's Asphalt Tile floor needs is daily sweeping, occasional washing and waxing to keep it fresh and bright for years.)

Write for informative book—"Low-Cost Floors for Modern Basements." Armstrong Cork Co., Building Materials Division, 1233 State St., Lancaster, Pa.



LOW-COST FLOORS like this one in the Warren Residence, Atlanta, Ga., enhance any basement. Colors here are Persian and Burgundy Marble with feature strip of white and border of black. Inset is A-520. Glover Linoleum & Carpet Co. made the installation.



ARMSTRONG'S

*Asphalt Tile*

THE LOW-COST  
FLOOR WITH  
THE LUXURY  
LOOK!

MADE BY THE MAKERS OF ARMSTRONG'S LINOLEUM • LINOTILE (OIL-BONDED) • CORK TILE • RUBBER TILE • LINOWALL



# ON TOP OF THE FIELD BUILDING

The Field Building, Chicago, Ill.,  
is Barrett-roofed.



# AND OVER A MILLION HAPPY HOMES

**I**T'S Barrett on America's biggest and most famous buildings—and it's Barrett on modest homes and farms all over the country. *Why?* Because it's a widely known fact that Barrett Roofs turn in a performance that can't be topped for durability and long term economy. Time-tested and time-proved quality has made Barrett "the greatest name in roofing."

When you recommend and sell Barrett Shingles you profit from the public confidence built up by Barrett through 87 years of roofing leadership. And because Barrett Shingles lead in good looks, dependable

service and long life, you're sure of satisfied customers—customers who will recommend you to others. That's the soundest basis on which any business can be built.

Get going with Barrett—for easier sales and more of them!

**BARRETT BROAD SHADOW SHINGLES.** The unusual deep shadow effect of this shingle is the result of double thickness of the shingle at the butt, *plus* the exclusive Barrett Shad-O Band built-in shadow feature. The Barrett Broad Shadow Shingle matches the beauty of much more expensive roof materials at a cost no greater than that of the average asphalt shingle.

*Barrett Broad Shadow Shingles protect this attractive home.*



**THE BARRETT COMPANY,** 40 Rector Street, New York, N. Y. 2800 So. Sacramento Avenue, Chicago, Ill. Birmingham, Alabama

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**On & Off the Record—***(Continued from page 130)*

to get a job helping Uncle Sam finish the defense program on time? If some small-time union big shot doesn't like the color of his hair, or if he refuses to shell out cash in advance, he can't get a job. Several southern states are considering legislation to prevent unions from extracting fees from would-be workers on government jobs. Also, Congress is threatening to give a much needed airing to the whole subject, but we wonder.

**WELL STOCKED MINDS**—Walter Lippmann in a recent column points out the value of minds "well stocked with the experience and wisdom" of history. He suggests that the best way to prepare for the understanding and handling of contemporary problems is to study the classics of human affairs of the past. The past is more intelligible than the present because "it is more available for the study of cause and effect of good and evil."

This appeals to me as particularly true in regard to architecture and to the planning and construction of houses. Temporary fads and notions come and go, and frequently the men who plan and build homes are misled by them. If our architects and builders have minds "well stocked" with a sound knowledge of planning and building methods that have withstood the test of time and human experience, they will be able to build homes that will be more soundly suitable over a long period of years.

**HOME AND TAXES**—Income tax time, which I hear quite a few builders enjoyed especially this year, is one time when home owners appreciate their high real estate taxes and interest payments. A friend of mine said gleefully, "My real estate taxes plus interest on the mortgage are the equivalent of two kids—and believe me, I appreciate the extra deduction."

He also remarked on the fact that a man who sells a house at a loss can claim a deduction only if the house had been rented prior to the sale—a fact you may want to bear in mind.

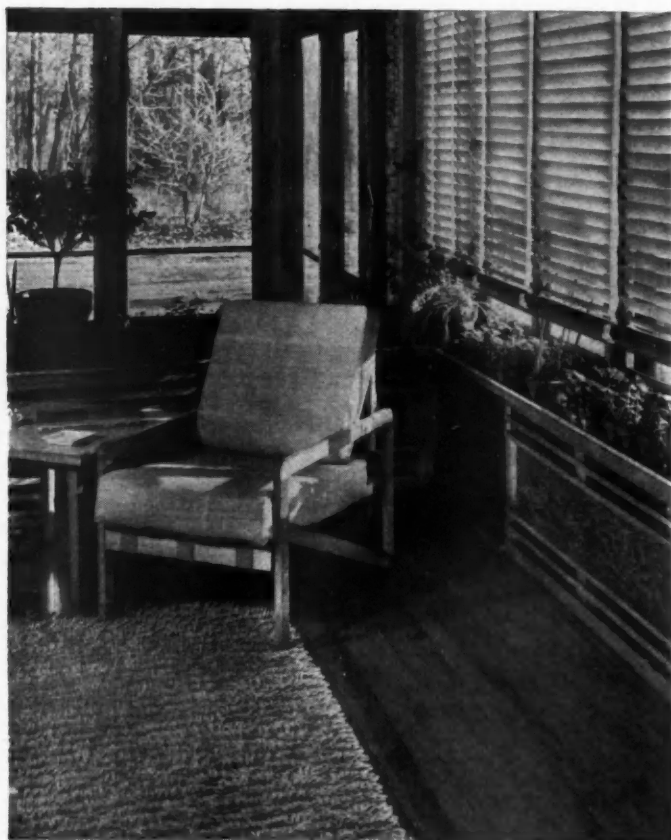
Other tax lore: Several builders we have talked to lately are hanging on to income property, such as shops and stores built in connection with a development, rather than sell it as had formerly been their custom. All of their leases are being made on a sales percentage basis. They feel it is wiser to spread income from such property over a period of years rather than to sell it now and take a profit which is subject to tax.

**FIX THE ROOF NOW**—Smart approach to building prospects right now is: **they'd better do their building or repairing now while times are good and thus fortify themselves against an insecure future.** Most people are worrying about what will happen after this synthetic, war-induced prosperity. Any building man can tell them the answer: buy a **LOW UPKEEP HOUSE** or fix up your old house now. Don't be like the fiddler of Arkansas Traveler fame, who said he never fixed his roof because when it was raining he couldn't, and when it wasn't he needn't.

**FAITH IN THE FUTURE**—It's a wonderful testimony to the soundness and sense of the American people that record thousands are buying or building homes this spring. They realize that this is an investment they'll be able to use and enjoy in bad times as well as good. As we said last month; it's an investment in "after-war security."

Many working men unable to afford everything they want are starting out small, and then adding to their house and increasing its value in their spare time. They don't seem to feel that they are "wage slaves" outlawed by the wage and hour law, although they are working in some cases 15 to 18 hours a day. Maybe this is something for Colonel Flemming to look into.

**GOLFER-BUILDER**—L. H. (Harry) Sprague, Jr., of Sarasota, Fla., is one of the youngest builders we know—33—but in addition to this claim to fame is undoubtedly the best golfer actively engaged in the building business. He's local champion and a close runner-up in state meets. He's good at other sports, too, including ping-pong. The result of this proficiency is that quite a number of his best customers come from among the sports-loving people who seem to congregate in Sarasota.

*(Continued to page 134)*

## The New Idea in flooring Homes

GET YOUR COPY  
OF OUR HELPFUL NEW FOLDER

Harmonize floor with furniture . . . that's the modern idea for homes! . . . In the living room above, note how the absence of heavy graining in the floor makes for pleasing harmony with the smooth and simple modern furniture. Modern furniture is *fine-grained* . . . so is Maple . . . and the two live peacefully with each other. Not only Blonde Maple, but other modern furniture looks at home on smooth floors of Maple.

Home-owners—the *whole family*—will thank you for recommending Hard Maple. It's the longest-wearing comfortable floor and the most ideally suited for modern homes.

**WRITE FOR** free copy of our new Home Builder folder—includes illustrations in color of maple floor sections in various patterns. Lay **MFMA Maple**—in strips or blocks.

**MAPLE FLOORING MANUFACTURERS ASSOCIATION**  
1781 McCormick Building, Chicago, Illinois

See our catalog data in Sweet's, Sec. 11/88.  
Write for folder on floor finishes suitable for homes.

Floor with  
**MFMA Maple**  
REG. U. S. PAT. OFF.  
(NORTHERN HARD)

**"I'LL TAKE WOOD"**

"I like the feel of a good hardwood level. It's warmer to handle, strong, and it stays accurate, so I'll stick to a genuine Stanley Cherry Level."



**"ALUMINUM for ME"**

"Why? Well, because it's light and easy to handle. And it's weather-proof. I'm working outdoors most of the time so I want tools that will stand wet weather. I have had a Stanley Aluminum Level for a long time."



**Wood or Aluminum  
BOTH say STANLEY**

**STANLEY No. 313  
Aluminum Plumb &  
Level**

Famous Stanley Truss construction—built like a bridge. Six accurate, window protected glasses. Four lengths: 12", 18", 24" and 28".

**STANLEY No. 0  
Cherry Plumb & Level**

The long time favorite with carpenters. Brass plates protects glasses. Five lengths: 18", 24", 26", 28" and 30".

Send for Catalog No. 34 describing the full line of STANLEY TOOLS.



**STANLEY TOOLS**

Division of The Stanley Works, 133 Elm St., New Britain, Conn.  
**THE TOOL BOX OF THE WORLD**

**On & Off the Record—**

(Continued from page 133)

**OUR DUTY IS PLAIN**—"In our business at the present time, extreme emphasis must be put on the general public interest. This country faces a crisis such as the world has never seen. Our duty, therefore, is plain. We must and should do everything in our power to give the greatest possible service quickly and well."

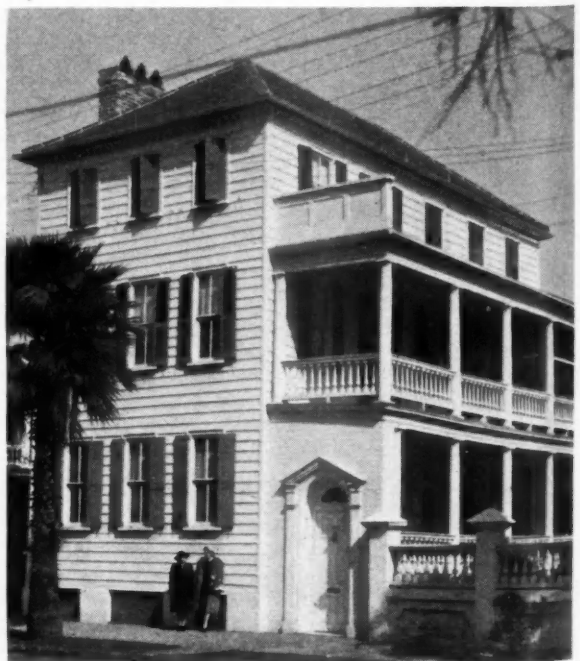
The above is an extract from a message from C. F. Bennett, president of Stanley Works at New Britain, Conn., to employees of the company. It's the sort of patriotic attitude that is going to make this nation's defense program succeed. President Bennett concludes his message: "Our very best may fall short of the needs of the hour—I would like to have every Stanley worker who in any way works on or moves items which are intended for defense, to do so with the feeling that he is privileged to strengthen America by each bit of extra thought and effort he can put into speeding on its way every article we are called upon to make."

"Good Americans will all pull together!"

**BUILDERS ORGANIZE—AND HOW**—For years *American Builder* has been urging residential builders to organize, and now within a short space of time two national groups have been set up. They aren't on what would be called loving terms with each other either. The National Home Builders Association is composed principally of members of large city builders associations, and the moving spirits are the Philadelphia, Detroit and Pittsburgh Associations. They invite individual home builders to become members in places where there is no local builders' association affiliated. It's difficult for these scattered members to have much to say.

The other new building group—The Home Builders Institute—is affiliated with the National Association of Real Estate Boards. The membership includes a small number of real estate builders with high professional standards, specializing for the most part in the higher priced homes. This group has a national program which includes a drive for state licensing laws for home builders. Its weakness is realtor domination, and few builders want that.

Ironical note: Neither group represents more than a tiny fraction of the nation's 100,000 plus residential builders, who last year erected more than 420,000 single-family homes. All the homes built by all the members of both groups last year amounted to less than a quarter of the nation's total.



**CHARLESTON FRONT**—That impressive Colonial doorway leads only to a side porch. Seems to have been an old Charleston custom.



for Enduring Beauty ~

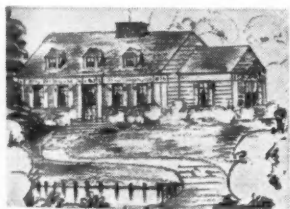


Christ Episcopal Church, St. Paul, Minn.  
 C. H. Johnston, Architect, St. Paul. P. O.  
 Navic, General Contractor, St. Paul. L. J.  
 Larson & Son, Plastering Contractor, St.  
 Paul. Ohio White Finish used on walls  
 and ceilings. Ohio Ritewall Fibered Lime  
 Plaster used for base coat.

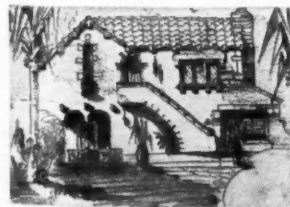
Builders who demand a really dependable finishing lime should use the original Ohio White Finish or its famous twin, Hawk Spread. Both are hydrated with scientific care from 99½% pure dolomite rock. Always fresh, they work fat and fluffy—spread far. Cost no more than other brands. If your dealer can't supply you, please write **The Ohio Hydrate & Supply Co., Woodville, Ohio.**

Always packed in  
 Red Zig Zag Bags

MANY DESIGNS TO FIT MANY HOMES



Cape Cod



Mediterranean



French

MAKES  
*McKinney* FORGED IRON  
 HARDWARE

EASY TO SELL!

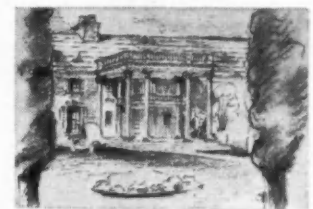
Show your customers McKinney and you show them hardware that *matches* any type of home in any price range.

McKinney Designs are definitely related to architectural style. Home owners, architects and builders alike will find that every piece of McKinney Forged Iron offers a pleasing proportion in size and weight and blends into the particular architecture for which it is intended.

**McKINNEY MANUFACTURING COMPANY  
 PITTSBURGH, PA.**



Cotswold



Southern Colonial



American Farm

OVER 75 YEARS DESIGNING AND MANUFACTURING GOOD HARDWARE





Planes Need

# LESS STONING

When You Work With  
**WESTERN PINES\***

Time saved on keeping tools in shape mounts into real money! And there's no doubt that the Western Pines are easy on tools. Chisels, for example, hold their edge longer when you work with these soft-textured, evenly grained woods!

Carefully milled . . . thoroughly seasoned . . . free from tendencies to sliver or split, the Western Pines handle readily, work up quickly, result in jobs a man can stand pat on! Ask for and get *Western Pines from Association mills!*

**WESTERN PINE ASSOCIATION**

YEON  
BUILDING



PORTLAND,  
OREGON

\*IDAHO WHITE PINE

\*PONDEROSA PINE

\*SUGAR PINE

*\*These Are The Western Pines*

## REVIEW of the NEWS

*Statistics, Associations, Agencies*

### February Building Volume Highest for That Month Since 1931; March Residential Level Well Above That of Last Year

IN February the construction industry, as measured by permits for new buildings, alterations, and repairs, was at the highest February level since 1931, despite a contra-seasonal decline from January.

The volume of permits issued during February in 215 cities of the United States, according to Dun & Bradstreet, Inc., amounted to \$93,602,664. This was 11.3 per cent less than the \$105,558,541 for the preceding month, but 3.4 per cent greater than February, 1940, with \$90,523,005.

The value of permits taken out in the five New York boroughs fell to \$13,675,776 in February from \$19,573,412 in January and \$21,109,022 a year ago. This represented decreases, respectively, of 30.1 and 35.2 per cent. The total for the 214 outside cities was \$79,926,888. Although this was a drop of 7.0 per cent under January's \$85,985,129, it indicated a gain of 15.1 per cent over the corresponding 1940 sum of only \$69,413,983.

According to F. W. Dodge statistics from 37 eastern states, the volume for the first half of March, in all classes of construction, was well above the same period of last year.

Statistics for the four classes of construction are as follows:

	37 Eastern States Mar. 1-15, 1941	Mar. 1-15, 1940	Feb., 1941
Residential .....	\$ 75,345,000	\$ 52,970,000	\$116,459,000
Non-Residential .....	107,391,000	29,777,000	90,058,000
Public Works .....	40,219,000	27,707,000	42,242,000
Utilities .....	20,685,000	6,069,000	21,614,000
Total .....	\$243,640,000	\$116,523,000	\$270,373,000

### John H. Fahey Warns of Jerry Building

A WARNING that evidences of the apparent renewal of jerry building of homes, such as occurred in the boom days of 1922-29, have been seen again in some sections of the country was issued early in March by John H. Fahey, chairman of the Federal Home Loan Bank Board.

"The prospective home buyer must be protected or an unpleasant situation worse than the boom days of the Twenties will result," Mr. Fahey declared. "In many communities the defense program has already brought about so great a demand for new houses that construction activity is approaching boom proportions. In boom times there is always a temptation for unscrupulous builders to use cheaper grades of material and workmanship. It is necessary, therefore, now, more than ever before, to guard against the evils of jerry building.

"During the boom days of the Twenties, there was much fake construction in this country; the home building industry rode the rising tide, but too often sacrificed permanent values for quick and easy profits. Many of the dwellings built during that period deteriorated so fast as to cause thousands of families to lose the savings they had invested in their homes.

"I sincerely hope that mortgage lenders will not allow the building industry to make the same mistake again. The experience of the Home Owners' Loan Corporation with over a million home mortgages showed conclusively that the flimsy building of the Twenties was a large factor in the foreclosure wave of the Thirties. In the interest both of the home owner and of the lending institution, such construction must be eliminated.

"Good homes don't just grow. A good design means little unless good materials are built into a house. The value of good materials is lost unless they are incorporated into an attractive and livable home. And design and materials can both be ruined by poor workmanship.

"The mortgage lender has a long-term interest in each home on which he holds a mortgage. If the house begins to crack up

speedily, or if the maintenance costs are excessive, the home owner will not or cannot keep up his monthly payments. That means that the lending institution must go to all the expense of taking over the property and we all know to our sorrow that foreclosure, particularly on a poorly built home, involves large losses to the lender as well as to the borrower.

"It is of the utmost importance to every lending institution that its borrowers have a real incentive to maintain their mortgage payments at all times and that their equities be protected against losses resulting from deflation. It is my firm conviction that mortgage lending institutions, by assuring the purchaser a sound, well built home and by refusing to finance the homes that prospective borrowers cannot afford, can do a great deal to guard against the ill effects of the real estate cycle."

### National Gallery of Art Dedicated

AT a formal dedication on March 17, President Roosevelt accepted for the nation the completed gift of the late Andrew W. Mellon, the National Gallery of Art, Washington, D.C. Costing \$15,000,000, this impressive building, art collection and endowment for maintenance represent a gift from Mr. Mellon of over \$50,000,000. It is the largest marble building in the world—782 by 303 feet. The builder was Vermilya-Brown Co., Inc.



NATIONAL Gallery of Art, gift of the late Andrew W. Mellon. Architect: John Russell Pope (1874-1937); associates, Otto R. Eggers and Daniel Paul Higgins. View shows the Mall front. It stretches for three blocks, is slightly longer than the Capitol and its wings.

## Home Builders Institute to Meet in Washington May 15 to 17

### All Operative Home Builders Invited

OPERATIVE home builders from all over the country will meet in Washington May 15, 16 and 17 for a three-day discussion of our whole machinery for home production. The meeting is called by the new Home Builders Institute of America, professional builders' branch of the National Association of Real Estate Boards. It will be the initial meeting of the new Institute's entire membership. Every bona fide home builder, whether or not he is a member of the Institute, will be welcome to attend the sessions, to be held at the Mayflower Hotel.

Heading the discussions from the agencies of government concerned with home building will be: Abner H. Ferguson, Federal Housing Administrator; Charles F. Palmer, Co-ordinator of Defense Emergency Housing; John Carmody, Administrator, Federal Works Administration; James F. Twohy, Governor, Federal Home Loan Bank system. Leading home builders taking part in the discussions will include Hugh Potter and E. L. Crain, Houston; George F. Nixon, Chicago; and Fritz Burns, Los Angeles.

F. Stuart Fitzpatrick, manager of the United States Chamber of Commerce, and chairman of the National Homes Foundation, will talk on the present movement for co-ordinate action in the building industry looking toward increasing new home construction, particularly in the low cost field. Roy Wenzlick, president of Real Estate Analysts, Inc., will trace present trends in building costs, home building volume, and financing.

M. L. Wilson of the Department of Agriculture, director of its extension service, will talk on home building needs and opportunities in villages and rural communities. Bernard L. Johnson, editor of *American Builder*, will discuss the "Low Cost of Good Construction on a 20-Year Basis."

Election of charter members of the Institute and discussion of its whole program for sound home production will be an important part of the work of the three-day meeting.

# ONLY THE BARCOL OVERdoor HAS...



**THIS EXCLUSIVE FEATURE ENTIRELY ELIMINATES STICKING... AND AT THE SAME TIME GIVES WEATHERTIGHT CLOSING**

To be satisfactory, an upward-acting type of garage door should close tightly, yet should be easy to open. The BARCOL OVERdoor accomplishes this result most effectively by use of a specially designed closing action.

### ROLLER-CRANK PRINCIPLE

As shown in the diagram, the rollers, instead of being fixed to the door, are hinged on cranks. These cranks are cam-controlled to swing into the "door-forward" position only in the last few inches of downward travel, and to move the door away from the stop strips quickly as soon as it starts to open.

### DOOR RUNS CLEAR OF STOP STRIPS

Thus the BARCOL OVERdoor runs free of and parallel to the stop strips during its entire travel, except just as it is closing or opening. The result—no sticking, easy operation, and a door that closes snugly to keep out dirt and drafts. Ask for a demonstration.

### ROLLER CRANK CLOSING ACTION



LOOK FOR THIS MARK OF QUALITY

SEE... our new 12 page Catalog in 1941 SWEET'S

REPRESENTED IN PRINCIPAL CITIES

**BARBER-COLMAN COMPANY**  
104 MILL ST., ROCKFORD, ILLINOIS

IN CANADA  
A. B. Ormsby Co.  
Toronto

## ESTIMATE FOR 1941

### Number Single-Family Homes To Be Built—Price Classes

(Based on FHA Figures)

**A**MERICAN BUILDER offers the following estimates for new single-family homes to be built in 1941 arranged according to cost or price.

Total number of residential units to be built.....	625,000
Number of single-family homes to be built.....	480,000
Single houses costing less than \$4,000—(19.2%).....	92,160
Single houses costing \$4,000 to \$6,000—(49.2%).....	236,160
Single houses costing \$6,000 to \$10,000—(29.4%).....	141,120
Single houses costing \$10,000 or more—(2.2%).....	10,560

#### VALUE OF NEW HOMES FINANCED BY F.H.A. INSURED MORTGAGES

Source: Federal Housing Administration Division of Economics and Statistics

F.H.A. Valuation of House and Lot	1936		1937		1938		1939	
	Per Cent of Total Number of Homes	Per Cent of Total Number of Homes	Per Cent of Total Number of Homes	Per Cent of Total Number of Homes	Per Cent of Total Number of Homes	Per Cent of Total Number of Homes	Per Cent of Total Number of Homes	
\$2,000 or Less	0.7	0.3	0.2	0.1	0.2	0.1	0.1	
\$2,000 to 2,999	5.8	4.8	3.5	2.6	3.5	2.6	2.6	
\$3,000 to 3,999	12.7	14.4	14.1	16.5	14.1	16.5	16.5	
\$4,000 to 4,999	16.6	20.1	22.8	24.9	22.8	24.9	24.9	
\$5,000 to 5,999	17.5	19.7	23.1	24.3	23.1	24.3	24.3	
\$6,000 to 6,999	12.2	14.4	17.9	18.6	17.9	18.6	18.6	
\$7,000 to 7,999	10.0	9.4	8.2	6.4	8.2	6.4	6.4	
\$8,000 to 9,999	11.6	9.0	6.1	4.4	6.1	4.4	4.4	
\$10,000 or more	12.9	7.9	4.1	2.2	4.1	2.2	2.2	

American Builder Chart

The above figures are based on an analysis by the Federal Housing Administration of homes built in 1939 under mortgages insured by FHA. A total of 115,500 new homes were covered by FHA insured mortgages in 1939 which was about 25% of the total number of new homes built that year. The FHA analysis shows that 19.2% of the new homes in 1939 were

valued at less than \$4,000; 49.2% were valued at from \$4,000 to \$6,000; 29.4% were valued at from \$6,000 to \$10,000; and 2.2% were valued at \$10,000 or more. Applying these percentages against the *American Builder* estimate for 1941 of 480,000 single-family homes, we obtain the estimated number in each of these price classes as shown in the table below: 92,160 houses costing less than \$4,000; 236,160 costing from \$4,000 to \$6,000; 141,120 costing from \$6,000 to \$10,000; and 10,560 costing \$10,000 or more.

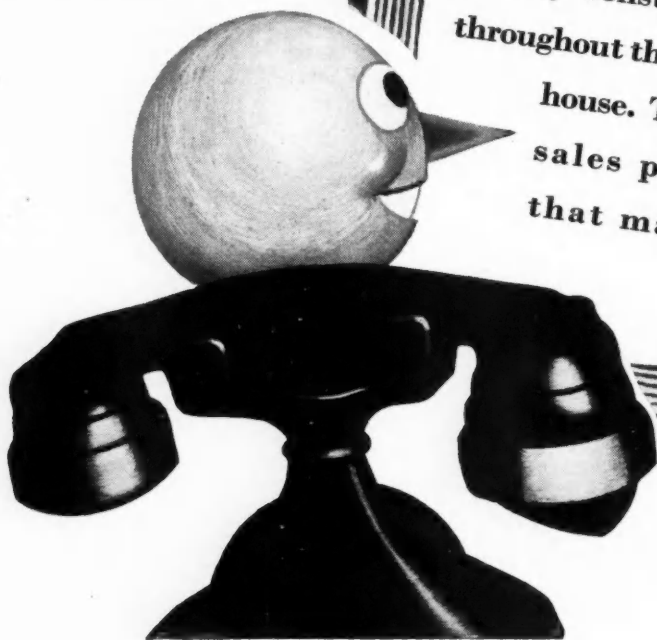
The Federal Housing Administration has made a similar study for the four years, 1936, 1937, 1938 and 1939, revealing facts as shown in the accompanying diagram. Note that the percentage of houses costing less than \$3,000 has steadily decreased; also, that the percentage of more expensive houses costing \$7,000 or more has decreased even more dramatically.

The greatest shrinkage has been in the number of homes costing \$10,000 or more; these amounted to 12.9% of the total in 1936 and declined to only 2.2% in 1939. The chart shows that the popular home today is in the price class \$3,000 to \$7,000. The percentage of the total represented by these four groups has steadily increased during each of these four years. The heaviest increase is in the two middle groups, \$4,000 to \$6,000, which price range accounted for almost half of FHA insured new homes in 1939.

In considering the above figures taken from FHA studies it should be remembered that FHA insured mortgages are most popular with the lower income group home builders who otherwise would not have satisfactory banking references for their well-to-do classes of people, are not so well represented in these figures.

Additional interesting data in regard to the size and style of

You'll find the "Architects' and Builders' Service" of your local telephone company ready at all times to help in planning efficient, economical telephone arrangements. Call your nearest Bell Telephone Business Office and get acquainted with this service.



**B**uilt-in telephone outlets are signs of quality construction throughout the whole house. They're sales points that make a

hit with prospective home buyers. Yet a telephone outlet costs no more than an ordinary electric outlet, if installed during construction.

America  
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the new homes built in 1939 under FHA auspices are revealed in this study. For instance, in the matter of *garage capacity*: 20.7% of the houses had no garage; 53.5% of the houses had a one-car garage; 25.6% of the houses had a two-car garage; and 2% of the houses had garages for three or more cars.

With reference to the *number of rooms*, the FHA analysis for 1939 shows that 18.1% of the new houses had 4 rooms; 49.1% had 5 rooms; 27.8% had 6 rooms; and 5% had 7 rooms or more.

The *exterior wall material* of these FHA houses was as follows: 40.8% wood; 29.6% brick; 20.4% stucco.

### "Cotton House" to be Exhibited

COTTON as a home building material will be demonstrated by the U. S. Dept. of Agriculture by means of a "Cotton House" to be exhibited in Washington beginning April 7. This house will be thoroughly demountable, one-story, and measure about 24 feet in width and 32 feet in length. It will be of box-girder construction, cotton covered plywood, both inside and out, will be cotton insulated, and will utilize cotton rugs and other interior cotton furnishings wherever practicable. The Speedwall Company, Seattle, has fabricated the house in its west coast plant and is shipping it to be erected in the patio of the Agriculture Department Building in Washington.



"COTTON House" set up in the Seattle Speedwall plant.

Using cotton fabric covered fir plywood for all walls and ceilings, it will utilize approximately 4500 square feet of the textile in the demonstration house. Cotton is affixed to the face of the panels by using waterproof synthetic resin adhesive, to provide a perfect base for decoration with paint, wallpaper, or texture, according to I. F. Laucks, head of the Speedwall organization. Such walls can be decorated immediately after erection, saving construction time, and they will not crack or check, it is pointed out. The cotton also helps provide a better insulation against wind, cold or vapor. Decoration, both on interior and exterior surfaces will be with synthetic resin bound plastic paints.

### Western Pine Elects New Officers

AT THE annual meeting of the Western Pine Association, held at the Portland Hotel, Portland, Ore., on Feb. 28, J. M. Brown of the Long Lake Lumber Company, Spokane, Wash., was elected president.

Other officers of the Association, elected for 1941 are: J. R. Gray, Diamond Match Co., Spokane, 1st vice president; T. S. Walker, The Red River Lumber Co., Westwood, Calif., 2nd vice president; and Truman W. Collins, Grande Ronde Pine Co., Pondsosa, Ore., was re-elected treasurer.

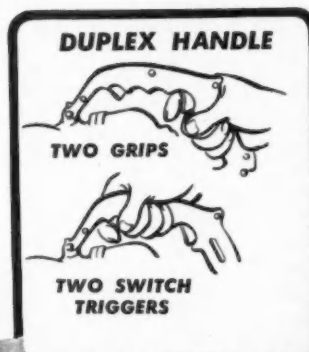
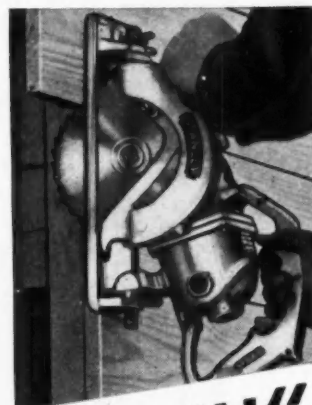
Representatives from the Western Pine Association to serve on the Board of Directors of the National Lumber Manufacturers Association are Swift Berry, Michigan-California Lumber Co., Camino, Calif.; president-elect J. M. Brown of Spokane; C. L. Isted, Shevlin-Hixon Co., Bend, Ore.; R. R. Macartney, Weyerhaeuser Timber Co., Klamath Falls, Ore.; and Walter Neils, J. Neils Lumber Co., Libby, Mont.



J. M. BROWN

# EVERY CUT IS EASY

With  
**STANLEY W8  
Electric Saw**



**"UPHILL"**



**"CROSS-HAND"**



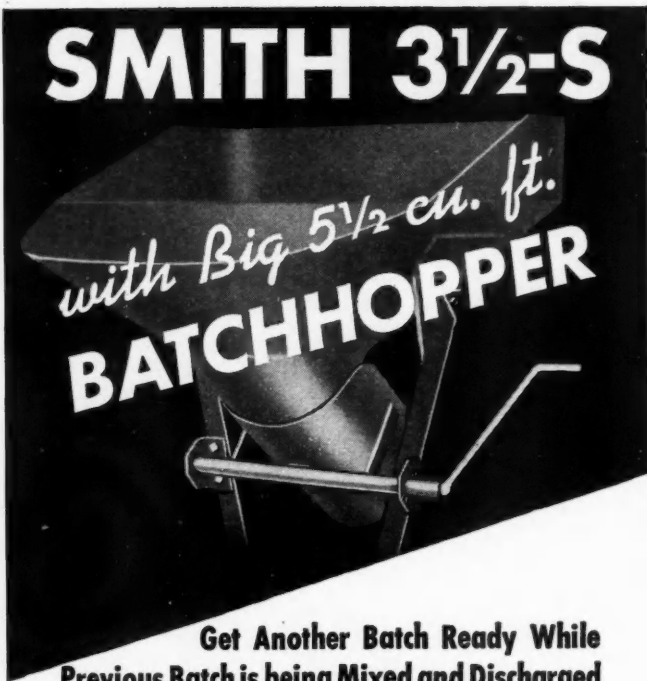
**"HEAVY CUTS"**



"Awkward" cuts or heavy cuts are easy and quick with the "Duplex" Handle and extra power of the Stanley W8 Saw! Saves time on every building job - cuts off sheathing, rips flooring, or zips through timbers 2 3/4" thick! Ask your Stanley distributor for demonstration, or write for new descriptive folder. Stanley Electric Tool Division, The Stanley Works, 133 Elm St., New Britain, Conn.

**STANLEY ELECTRIC TOOLS**

**"COST LESS PER YEAR"**



# SMITH 3 1/2-S

with Big 5 1/2 cu. ft.  
**BATCHHOPPER**

## Get Another Batch Ready While Previous Batch is being Mixed and Discharged

Now — you can put your small concrete jobs on a fast, production basis. This little Smith Half-bag Tilter, equipped with a big capacity, gated batchhopper, enables you to speed up the mixing operation. Each batch follows right on the "heel" of the preceding batch. No wasted moments. One man is kept busy all the time. Vertical water tank accurately measures the water requirements. Other Smith features include famous double cone drum with "End-to-Center" mixing action—"Tilt and Pour" discharge — Spring mounted axle — Roller bearings—Pneumatic-tired, disc wheels, etc.

Any Smith Tilter in the Field can easily be equipped with a Smith big capacity batchhopper and vertical water measuring tank. Investigate today. Write for literature.

**The T. L. SMITH COMPANY**  
2849 N. 32nd St. • Milwaukee, Wis.

**Water Tank —**  
vertical type — accurately measures water for each batch.



Mixer Manufacturers for More than 40 Years

instead of the 180° tilt required by other mixers. Discharges faster.

TILTS thru short 40° Arc

## 4% Money Offered by Bowery

**L**AUNCHING a movement to reduce the cost of home financing in New York City and in Westchester, Nassau and Suffolk Counties. The Bowery Savings Bank announced recently that it is prepared to give borrowers the benefit of a 4 per cent interest rate on new 3/4 per cent FHA-insured loans.

The new plan will enable borrowers to pay off 25-year FHA-insured mortgages in 22 years, and 20-year mortgages in 17 years, 11 months. Interest savings will be material.

The Bowery Savings Bank pioneered two years ago in reducing its rate on FHA-insured loans from the then legal maximum of 5 per cent to 4 1/4 per cent. Since then, the bank has made 4 1/4 per cent loans totaling more than 15 1/2 million dollars in cash and commitments.

The new plan, which has been approved by Federal Housing Administration authorities at Washington, may be used at the option of the borrower. The bank estimates that when a borrower pays off a 25-year mortgage in 22 years, he can save \$139.32 interest on each \$1000 of principal. Savings on a 20-year mortgage paid off in 17 years, 11 months, can be as much as \$101 interest on each \$1000 of principal.

The plan requires no larger down payments than at present and, except during the first years of a loan, no larger monthly payments. In explaining the plan, an official of the bank said:

"FHA regulations now require a mortgagor to pay at least \$5.42 a month to reduce principal and meet interest charges on each \$1000 of the original principal of a 25-year 4 1/4 per cent loan. If he wishes to use the new plan, he will pay 93 cents a month more per \$1000 of original principal for the first five years of the loan. The bank will apply this extra 93 cents toward reduction of principal and also will give the borrower the benefit of a 4 per cent interest rate, also applying against principal the 1/4 per cent interest which the mortgagor saves.

"At the end of five years, extra payments by the mortgagor cease but he continues to receive the benefit of the 4 per cent rate and the bank continues to apply against principal the 1/4 per cent interest which the mortgagor saves. The plan works in the same way on 20-year mortgages, except that the mortgagor pays 90 cents a month more on each \$1000 of principal for the first five years of the loan. As a result, for five years the mortgagor pays \$7.10 a month per \$1000 of principal instead of \$6.20, the regular FHA rate."

## Harrington Heads G-E Air Conditioning Sales

**E**LLIOTT HARRINGTON has been named sales manager of the General Electric air conditioning and commercial refrigeration department, with headquarters at Bloomfield, N.J. He has been connected with G-E air conditioning and automatic heating activities from their inception, and his early assignments on the development of an automatic oil furnace led directly to the formation of the department, in which he has served in various engineering and sales capacities. Under the new arrangement he will supervise distribution and policy matters, and under him will operate three separate sales sections. The automatic heating sales section will be under L. H. Hobson. The cooling equipment sales section will be headed by C. M. Rowland. E. B. McClelland will act as assistant sales manager.



ELLIOTT HARRINGTON



L. H. HOBSON



C. M. ROWLAND



E. B. McCLELLAND

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### Johns-Manville Holds Guild Management Institutes

TWO J-M Guild Management and Merchandising Short Courses for retail lumber and building material dealers were conducted this year: on March 17-22 at the Berkeley-Carteret Hotel, Asbury Park, N.J., and on March 24-29 at the Edgewater Beach Hotel, Chicago. Arthur A. Hood, director of Dealer Relations, was in charge.



ART. HOOD

According to Mr. Hood, this year's courses consist of an intensive analytical study of those retailing practices which have helped produce "better than average net profit" in the business of retailing lumber and building materials.

"Through exhaustive studies during 1940, Johns-Manville's Dealer Relations Division has analyzed the policies, techniques, methods and procedures of hundreds of retail lumber and building material dealers," Mr. Hood said. "We analyzed separately the methods of those dealers making 'average' and 'above average' net profits as a result of their 1939 operations, and on these findings have been based the curriculum of the 1941 National Housing Guild Management Institutes, as well as the book 'Net Profit Guide for Retail Lumber and Building Material Dealers' which was used as a textbook for the course."

Among the subjects studied at the Institutes were: Budgeting, Relation of Accounting to Profit, Estimating Building Packages, Monthly Payment Financing, Pricing for Profit, Sales and Personnel Management, Operating Control, Advertising and Promotional Techniques, Market Analysis, Securing the New Home and Farm Potentials, Estimating Profitable Selling Prices on Complicated Improvement Jobs in 45 Minutes, Selling Contractors at Profitable Prices against Cut-throat Competition.

Key executives of Johns-Manville took active part in each Institute, and Mr. Hood in addition drew upon nearly the entire building materials staff for instructors. L. M. Cassidy, vice president in charge of building materials, L. C. Hart, vice president and general manager, H. M. Shackelford, vice president in charge of sales promotion, R. L. Johnson, A. D. Lierman, H. D. Bates of the Sales Promotion Department; J. L. Wood, general credit manager, L. H. Morgan, time payment manager; C. F. Ames, Jr., E. W. Smith, H. F. Lotz, D. L. Pomerantz of the building materials staff, and J. F. Schaffhausen, agricultural engineer, were among the J-M men who participated.

### Insulite Reorganization Completed

ANNOUNCEMENT is made from Minneapolis that reorganization of the Minnesota and Ontario Paper Company, parent organization of the Insulite Company, is now complete as of March 1, terminating a receivership of ten years' duration. R. H. M. Robinson has been elected president of the reorganized company, and he has announced that there will be no change in policy in the operation of the new company, and that there would be no changes in the personnel staffing the key positions.

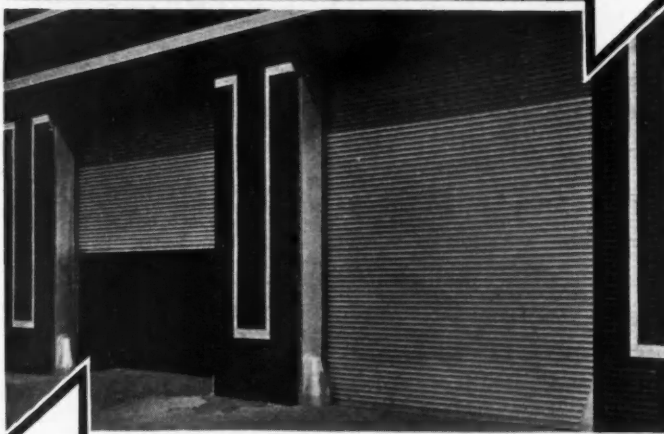
E. W. Morrill continues as general sales manager of Insulite, assisted by M. S. Wunderlich, assistant sales manager, technical; John H. Giles, assistant sales manager, merchandising; L. C. Monahan, Eastern sales supervisor; U. L. Plain, Western sales supervisor; M. C. Fairchild, merchandising manager; G. F. Hoppe, advertising manager; T. J. Lindstrom, manager of industrial sales; and A. S. Bull, chief sales engineer.

An era of development far more revolutionary than that experienced by the insulation board industry since its inception a quarter of a century ago lies immediately ahead for Insulite, General Sales Manager Morrill predicted in announcing this successful reorganization of the business. A pioneer in the field of fibre insulation boards, Insulite is carried in stock by most retail lumber dealers and is a widely used material for sheathing, lining, and general insulation purposes.

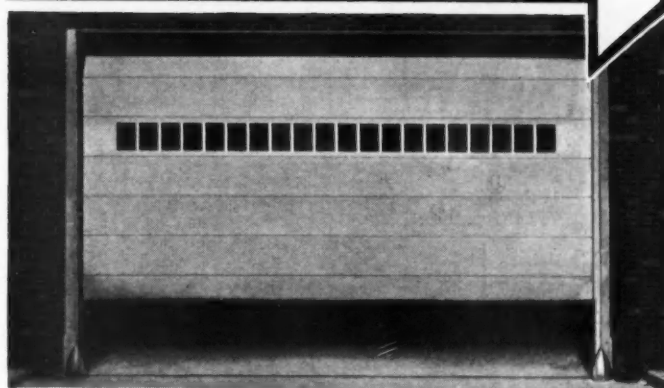


E. W. MORRILL

**GALVANIZED STEEL CONSTRUCTION, WHICH HAS PROVED ITS WORTH IN KINNEAR ROLLING DOORS**



**IS NOW OFFERED IN GALVANIZED STEEL KINNEAR ROL-TOP DOORS**



Builders everywhere acclaim this door—and it's easy to see why! It gives the "extra measure" of ruggedness and durability for which Kinnear's steel interlocking-slat door has been famous for almost half a century! Sections are heavily galvanized! They are rust resistant, and give maximum protection against the elements. Cut dollars off door maintenance cost! The rugged all-steel construction also means more thorough protection against fire, intrusion, wind, or accidental damage!

In addition, Kinnear Steel RoL-TOP Doors offer all the advantages of space-saving upward action. They are spring counterbalanced and ingeniously hinged for smooth easy operation. Strong continuous angle irons assure rigid jamb support. And they are as simple to install as they are economical in service. Built in any size, with motor or manual control, and with any number of light sections. For permanent satisfaction on service door requirements, install the Kinnear Steel RoL-TOP. Write today for complete details and latest catalog!



**The KINNEAR Mfg. Co.**  
1560-80 FIELDS AVENUE  
COLUMBUS OHIO

**KINNEAR ROLLING DOORS**



# RYBOLT



**GOOD CONSTRUCTION  
CALLS FOR...**

*Quality Heating Equipment*

● The wise builder resists the temptation to skimp quality in order to reduce initial cost because he knows that worthwhile customers appreciate that good construction costs less in the long run. That's why so many successful builders install RYBOLT automatic heating equipment. Its extra quality may add a trifle to the owner's monthly payments but the monthly savings in repairs, maintenance and replacements more than pay for the unit over the life of a long term mortgage. And RYBOLT extra efficiency, convenience and comfort are often the deciding factors in the sale of a home.

**A RYBOLT  
for every  
heating need**

**Series 157  
Cast Iron  
Coal-Fired**



### For Modern Automatic Heating Service

This RYBOLT Automatic Winter Air Conditioner has as its heating element the well known RYBOLT Series 15 cast iron coal-fired furnace. Has every advanced feature for modern efficiency, comfort, convenience and economy. Blower cabinet may be placed on either side of unit. Attractively finished in smooth baked enamel with aluminum finished front. 4 sizes.

Write for "The Complete Line" Folder



TRADE MARK

**THE RYBOLT HEATER COMPANY**  
619 MILLER STREET . . . ASHLAND, OHIO

## LETTERS from Readers on All Subjects

*Facts, Opinion and Advice Welcomed Here*

### Mortgage Money—Sources and Amounts Insured by FHA

Chicago, Ill.

To the Editor:

In the report of the "Hearings Before the Temporary National Economic Committee" (Part 11—Construction Industry) covering hearings from June 27 to July 14, 1939, as published by the Government Printing Office, there are included (page 5484) the following figures. The source of these figures, it is stated, is the Federal Home Loan Bank Board.

Exhibit No. 859 is entitled, "New Mortgage Loans on One-to-Four Family Non-farm Homes Made by Various Lending Agencies, Amount of These Loans Insured by the FHA and Percentage of Insured Loans to Total Loans." Figures are given for the four years 1935, 1936, 1937 and 1938. They show an increasing percentage of loans insured by FHA as follows:

1935 .....	4.5%	(of all home mortgages made)
1936 .....	14.8%	
1937 .....	17.6%	
1938 .....	20.0%	

Undoubtedly these percentages are showing a further increase for 1939 and 1940.

Taking the latest of the four years presented, we have the following figures on sources of mortgage money with the amount of loans made by each, the amount insured and the percentage insured.

Agency	Amount Loans Made	1938	
		Amount Insured	% Ins.
Commercial Banks.....	\$ 560,000,000	\$252,000,000	45.0
Life Insurance Cos.....	237,000,000	39,000,000	16.5
Mutual Savings Banks.....	105,000,000	11,000,000	10.5
Building & Loan Assns.....	705,000,000	49,000,000	7.0
HOLC .....	89,000,000	.....	.....
Individuals & Others.....	669,000,000	122,000,000	18.2
<b>Total .....</b>	<b>\$2,365,000,000</b>	<b>\$473,000,000</b>	<b>20.0</b>

THOMAS STRONG.

### Agrees Socialism Is Threat

Kansas City, Mo.

To the Editor:

I want to give my enthusiastic and sincere approval to the spirit of the editorial that appeared on the "Publisher's Page" of your March issue, "Socialism, Threat to Home Ownership."

I have been a periodical, but not a continuous, reader of your publication for the past ten years. Therefore, I do not know whether the editorial I am referring to is a follow up or whether this is the first such expression that has appeared in your columns. In any event, I believe such expressions should have been more vigorously made by newspapers and magazines in the spring of 1933 when the present wave of socialism first appeared on the horizon as a menace to our society.

The whole spirit of your editorial is crystallized in two sentences: "Socialism—towards which many leaders of public opinion now seem to be drifting—is at the core a system of public ownership. And already Uncle Sam has taken several long steps in that direction."

There has never been an instance that can be called to attention when the federal government made a success of operating a public business. It has not been successful in the operation of the Post Office so far as the finances of the department are concerned. I should not want to see it become the owner and operator of our telephone and telegraph systems, railroads and air transportation companies. I hope it will be unsuccessful in

taking over the control of the big insurance companies, but I am not sure that it will be unsuccessful.

The reason why I am somewhat pessimistic about the present trend is because I do not have enough confidence in the intelligent and unselfish patriotism of the average citizen; day-laborers and capitalists alike.

Another reason why I am somewhat pessimistic is because I believe our administration at Washintgon, and the Hitler administration in Germany are very intelligent about the reactions of the average individual and they are taking advantage of those human selfish reactions.

WILLIAM B. HENDERSON.

**American Builder Designs Much Copied**

Rutland, Vt.

To the Editor :

There is a letter in the March issue of *American Builder*, written by C. I. Cheyney, and picture showing house he built, after seeing the house of Mr. Cameron in Albany, N.Y.

I saw the plans you published in June, 1935, as the House of the Month. I secured plans and, with few changes, built it here in Rutland, Vt. I was careful to preserve the architecture, but widened the main house, as I thought some rooms were a little



FINE home built in Rutland, Vt., by Reader Ives.



TWO pages from "American Builder" that were the inspiration for the above house built by F. C. Ives.

small. I had heard there was a house in Albany built from these plans, and have been told of another one having been seen somewhere in Massachusetts.

It is a very attractive house and has received much favorable attention. It was sold before half finished. I suppose every builder who has built after these plans has made some changes to suit his own ideas, but I feel that I did a good job.

F. C. IVES,  
"Designer & Builder of Convenient Homes."

# WEISWAYS

## FOR EVERY NEED IN NEW AND REMODELED HOMES

BUILDERS find these guaranteed leakproof cabinet showers the answer to the present-day demand for more and better bath facilities in homes of all sizes. Foot-Grip, No-Slip floor of vitreous porcelain, in attractive sea-shell pattern, is safe and sanitary. Weisway's 4-way protection — bonderized galvanized metal beneath synthetic enamel, or porcelain enamel finish insures long life, trouble-free service.

### MASTER BATH

Vitreous porcelain walls and floor, available in choice of colors, add gleaming beauty in most luxurious surroundings. The separate stall shower is in increasing demand as essential equipment in finest modern bathrooms.

### EXTRA BATH

Corner entrance Weisways are readily combined with other fixtures to provide a complete bathroom in small floor area. Weisways make added bathing facilities possible and practical in inexpensive small homes as well as in large residences.

### IDEAL FOR MODERNIZING

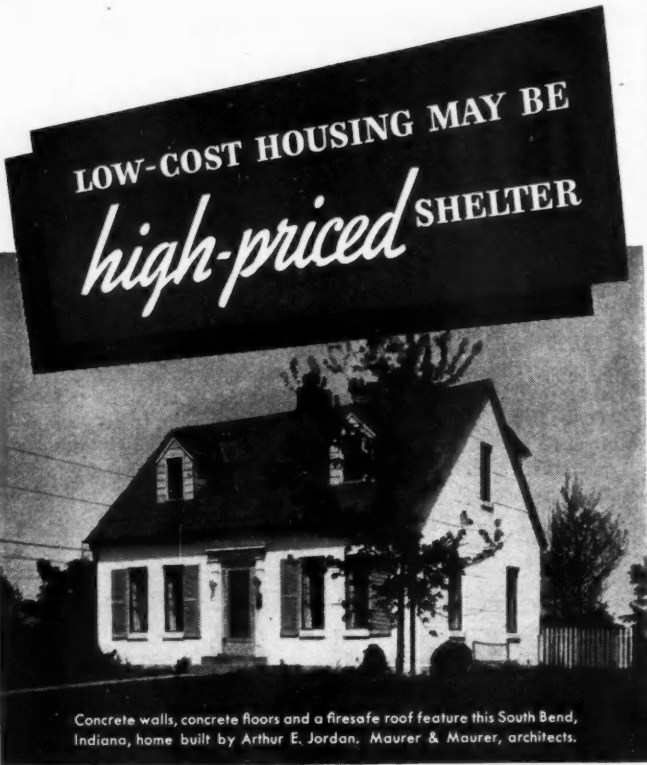
Weisways are complete, self-contained units, easily installed in present homes without special treatment of building walls or floor . . . guaranteed leakproof!

**MAIL COUPON NOW** for detailed information about the complete line of Weisways for homes of all sizes and cost; no obligation.



Henry Weis Mfg. Co., Inc., (Est. 1876) 401 Oak St., Elkhart, Ind.  
Without obligation send detailed information on Weisway Cabinet Showers.

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_



Concrete walls, concrete floors and a firesafe roof feature this South Bend, Indiana, home built by Arthur E. Jordan, Maurer & Maurer, architects.

**Sell more homes by featuring the true thrift of CONCRETE**

If you're tired battling for house jobs on price alone, try featuring the economy-through-the-years of concrete construction! It will win you a steadily-growing volume of business—as it has done for many others.

You can demonstrate to buyers that their maintenance bills will be lower, and the yearly cost of their homes less when walls, floors and foundations are concrete.

**More Reasons Why Concrete Homes Sell Quickly**

Concrete walls are firesafe . . . keep out cold, heat and dampness . . . take a wide variety of attractive patterns and finishes . . . keep their distinctive, beautiful appearance with very little maintenance. Concrete floors resist fire, termites, decay . . . can't warp, creak, shrink . . . make the home more comfortable and quiet . . . take any type of floor covering.

Build a firesafe concrete demonstration home this year. Write for booklet, "Suggested Designs for Small Firesafe Concrete Homes," sent free in U. S. or Canada.

**PORTLAND CEMENT ASSOCIATION**

Dept. A4-3, 33 W. Grand Ave., Chicago, Ill.

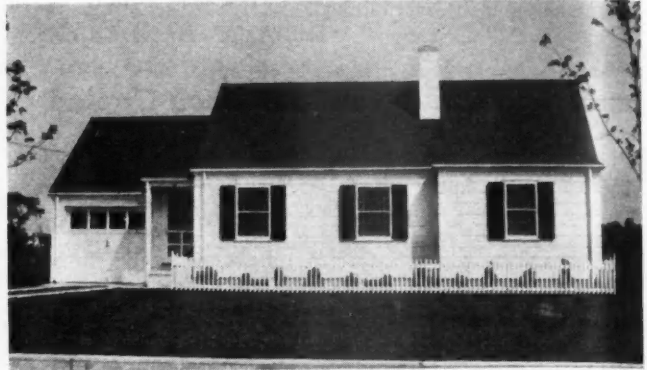
A national organization to improve and extend the uses of concrete . . . through scientific research and engineering field work

**Another Design "Marches On"**

Sea Girt, N.J.

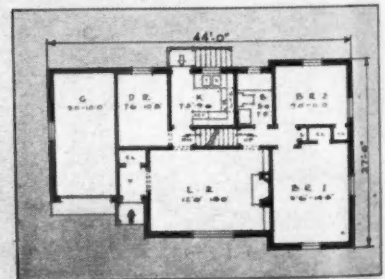
To the Editor:

Here is a picture of my house. I thought you might be interested in knowing that I chose this particular house from your 1939 Home Design Book, page 102, where it was presented as "Built to Last for a Lifetime." The house in the picture was built of concrete. A few changes were made from the original



**BUILT TO LAST FOR A LIFETIME**

PERMANENT MATERIALS. including both concrete walls and floors are prominent selling arguments used by Builder John W. Fries in connection with his Alden Estates houses. One of the most popular is illustrated above, featuring a large living room, 2 downstairs bedrooms and stairs to the attic where there is space for additional rooms. Exterior wall finish is white portland cement paint.



A PRACTICAL PLAN with excellent circulation. Kitchen arrangement is good, featuring a "U"-shaped efficiency plan. Attic and basement stairs are incorporated with a minimum of waste space. Garage is convenient.

**ANOTHER home and its "American Builder" source.**

plan; room size was increased, asbestos shingles were used instead of concrete; and double French doors substituted for the dinette window, opening on a flagstone terrace. This house is located in a new development, "Old Mill Farms Village."

We have also built one other house from your Design Book of 1938.

CHESTER T. GAGE.

**Wants to Use "Security" Theme**

Wyoming, Del.

To the Editor:

We are extremely well satisfied with our new copies of the American Builder and feel that they have paid for themselves already in their exposition of practical building ideas. In fact,

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we intend to keep the copies on top of our desks for some time as valuable reference material.

May we have your permission to print the following in a local paper (reprinting your editorial of last October)?

"The Only 'Indestructible Security'  
"A Home of Your Own for \$1.00 per Day

"We design your home, arrange the financing, prepare all plans and specifications and build that home complete in every detail at a predetermined cost which you are aware of before you commit yourself in any manner."

JOHN H. BROWN,  
T. R. Brown Company,  
Lumber, Millwork, Hardware, Paint.

### Enjoys Editorials

Seattle, Wash.

To the Editor:

I enjoy your practical magazine and especially your "safe and sane" attitude toward communism and the other forms of atheism that are grasping at the throat of everything worth while these days.

Your editorials are brief but certainly to the point. If we had had a few more men like yourself with the courage to stand for the truth we never would have gotten into the predicament in which we now find ourselves.

You have our wishes for your greatest success.

A. J. CARR, Building Contractor,  
Plans and Superintendence.

### Hoquiam Remodeling Stirs Interest

Hoquiam, Wash.

To the Editor:

Your March issue has just been received, and we wish to express our appreciation for the splendid display that you have given our Hoquiam story. We are sure that this article will do a great deal to further the use of outdoor plywood for store and service building modernizing.

At this time, also, we wish to express our appreciation for the privilege of purchasing preprints of the article. This printing has been received, and we are putting it into distribution.

You will be interested to know that the Hoquiam Chamber of Commerce is already receiving inquiries from various parts of the country as a result of a Chamber of Commerce story, on the same subject, told in the March "Nation's Business." The inquiries to the Chamber of Commerce, stimulated by the "Nation's Business" article, are usually from committees or public-spirited citizens. Such inquiries, of course, are answered by the Hoquiam Chamber of Commerce with as much information as they can give, including the fact that our company participated in the program. Then we follow up with an appropriate letter, supplying several preprints of the *American Builder* article for the use of the committee. We believe that this routine has prestige value for all concerned. We feel sure that this method has your hearty approval.

M. S. MUNSON,  
Harbor Plywood Corporation.

### "Best Book on Building"

Ottawa, Canada.

To the Editor:

Just a note to let you know how much I enjoy my *American Builder* each month. It is the best book on building and construction I have ever read and has helped me an awful lot.

Enclosed you will find my check for my renewal and would you please rush my copy of *Security Homes*.

JAMES W. DAVIDSON.

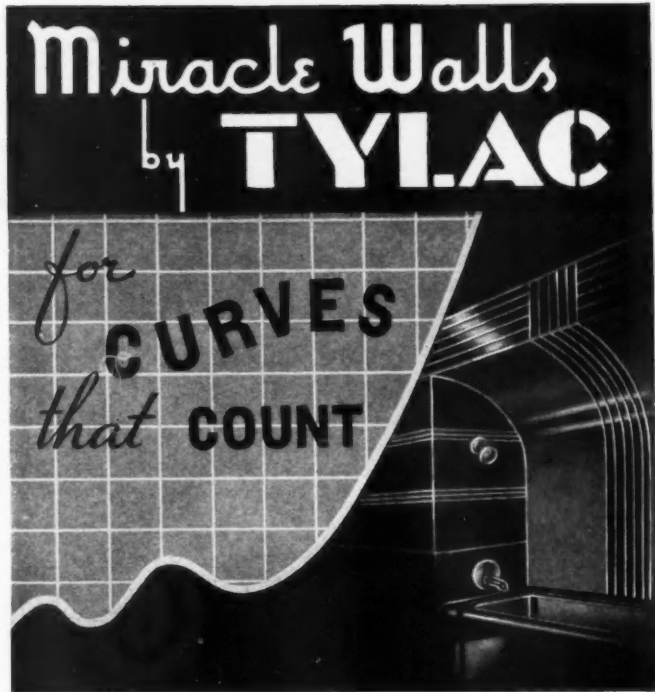
### Will Distribute Editorial

Wabash, Ind.

To the Editor:

In the February issue of the *American Builder* you present the subject, "Socialism the Principal Enemy." I would like to have a few pages if you can supply them to give to parties who never read *American Builder*. That article should be read by people of every occupation who wish to keep this country the land of the free and the home of the brave.

IRA ROBY.

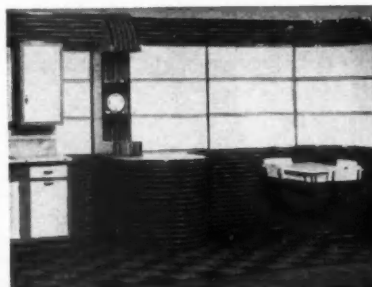


Beautifully curved, lustrous streamlined interiors of TYLAC result in an upward curve in the sale of homes. The distinctive touch provided by TYLAC in a home is "Showmanship" that closes the sale. In bath and kitchen, the two key points of interest to the prospective buyer, TYLAC gives appealing color and a wall surface that requires only simple washing to keep clean.

TYLAC gives the architect abundant latitude in designing—satisfying individual tastes in new homes and remodeling jobs. Easily adapted to the budget, TYLAC costs but little more than plaster and the initial decorating. TYLAC is PERMANENT, eliminating all future decorating costs.

TYLAC is equally well adapted to commercial interiors. The smart elegance which it provides attracts trade and helps the upward curve of retail sales.

Get full particulars now on this distinctive, lustrous wall covering for kitchens, bathrooms, play rooms, or for restaurants, stores, offices, hospitals, lounges—any interior where beauty, permanence and economy are prime factors.



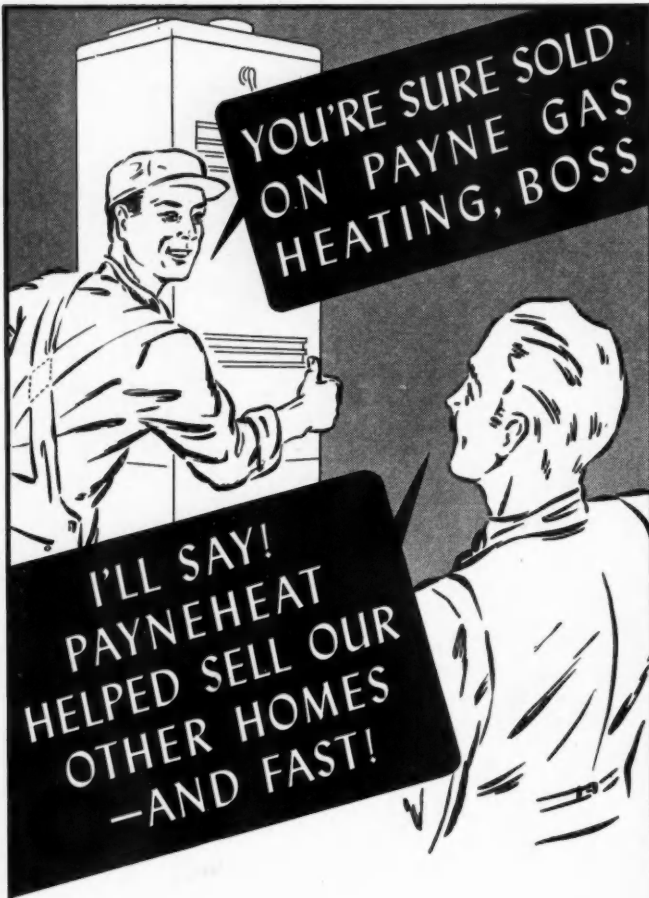
FOR FULL INFORMATION AND SAMPLES



TYLAC COMPANY, Dept. B-4, Monticello, Illinois  
Without obligation you may send me complete information and samples of TYLAC.

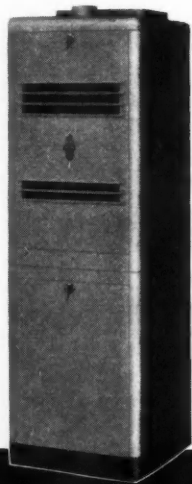
Name.....

Address.....



Yes, PAYNEHEAT is a top "salesman" for hundreds of builders. PAYNE provides everything the discriminating buyer wants in heating: gas fuel for speed, cleanliness and convenience—streamlined, clean-cut design—finest materials and craftsmanship—laboratory-tested dependability. ☆ PAYNE pioneered and perfected modern gas heating—and PAYNE quality costs little if any more.

Illustrated, Forced Air Unit. Also: Zoneair Units  
 • Gravity Furnaces •  
 Floor Furnaces • Duplex  
 Furnaces • Modern Con-  
 soles • Spacesaver Units  
 • PAYNE meets every  
 house heating need.



**PAYNEHEAT**

MORE THAN A QUARTER-CENTURY OF SPECIALIZATION

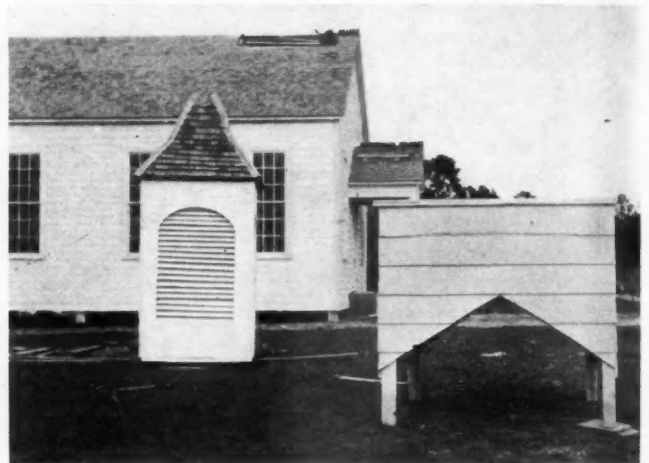
Payne Furnace & Supply Co., Inc., Beverly Hills, California

## PRACTICAL JOB POINTERS AND BUILDING DATA

### Sectional Cupola Simplifies Erection

DESIGNED in two sections, each erected completely on the ground before being hoisted into place on the small church which was to be adorned by the completed cupola, the building and painting of this portion of the edifice were completed in a fraction of the time and with much less effort than had the cupola been assembled and built in place.

The lower section was formed with the four corner timbers projecting, these being measured to fit snugly into recesses left when timbering the church roof. The siding, cut to the exact



SECTIONAL cupola simplifies problem of mounting atop church, base section being equipped with supporting legs which interlock with apertures in roof.

angle of the church roof, needed only the application of metal flashing to complete the water-tight job. The top or belfry section was formed to fit snugly within the squared top of the lower portion, and to be fastened there after being hoisted to the church roof.

Erection of the cupola in two sections reduced the amount of load to be lifted at any one time, the pieces being pulled into place with a shear frame and tackle carried to a winch on the rear of an oil field truck—ELTON STERRETT, Longview, Texas.

\* \* \*

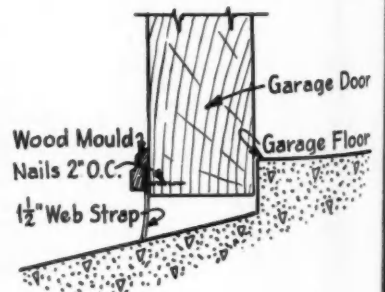
### Sealing Bottom of Garage Doors

HERE is a solution, time tested and proven, for closure at the bottom of garage doors. A wind tight closure is provided which is important in attached garages where heat loss is to be considered; it also allows compensation for sag in the doors and flexibility to accommodate dirt, small stones and snow and ice.

The web trunk strap can be purchased at any local store for about \$.30. The moulding may be wood or metal and is used as dressing.

I saturate the strap in place with linseed oil to increase the wearing qualities and to prevent saturation with water and sticking fast when freezing. It can then be painted to match the door. It is essential the nailing of the strap to the door be secure; to obtain this I use small nails and a close spacing.

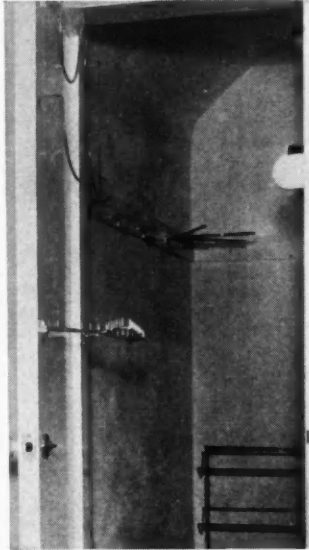
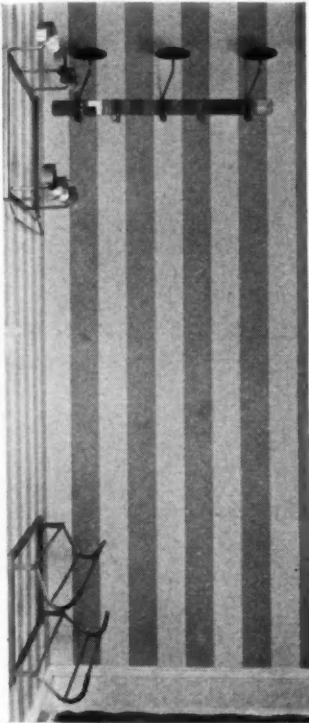
—EDWARD M. JENKINS, Scarsdale, N.Y.



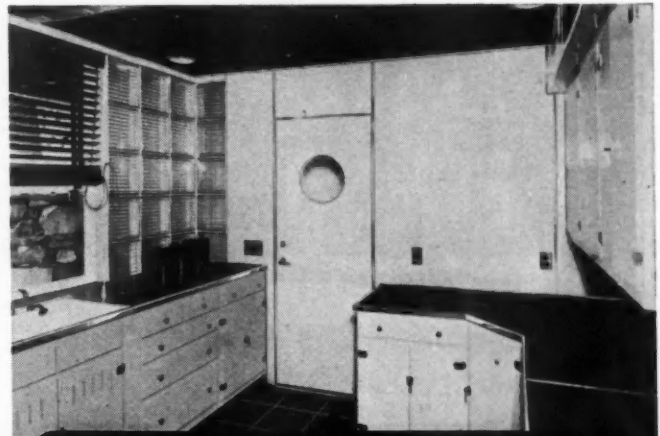
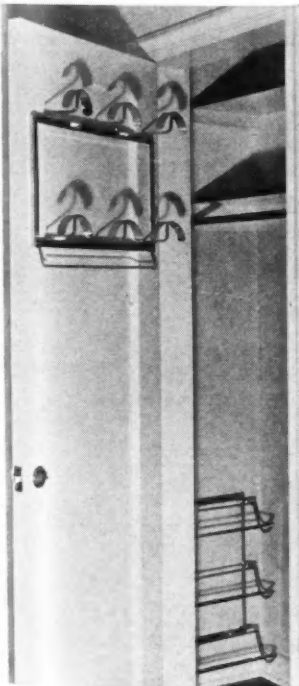


### Hangers Give Closets Sales Appeal

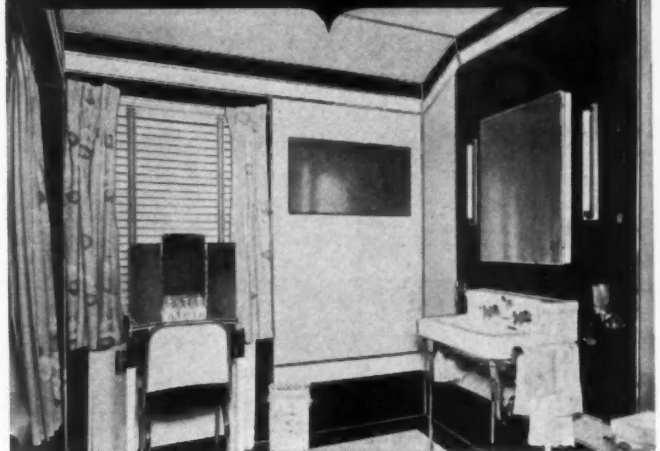
HERE are four closets that are helping prominent builders sell homes. Smart builders today are dressing up the closets and making them really attractive. Note that several of these have colorful modern wallpaper and also that the edges of the shelves are painted a contrasting, bright color—usually red or blue. Shelves are well fitted, sanded and given two coats of paint. Many builders are going still further in closet development and are installing the latest in convenience fixtures that make the closets do double capacity. These fixtures include shoe and tie racks, hat holders, towel bars, umbrella and cane holders, and others of substantial chrome finish construction, screwed in place so that they are permanent. These fixtures, plus the bright, colorful paints and wallpapers, put in new sales appeal.



LEVIIT & SONS, Long Island home builders, find it pays to equip bedroom closets. Here are examples of hat, tie and shoe racks, umbrella rack, and hat and shoe fixtures. Note also the gay striped wallpaper.



MORE "SALES PUNCH" THAN A THOUSAND WORDS OF SALES TALK  
*A Marlite* KITCHEN · BATHROOM



With Marlite, you can give your prospects extra quality and extra luxury at a very low cost. Both Marlite Deluxe (high polish mirror finish) and the new low priced Marlite Velvetex (velvet smooth finish) permit working out truly distinctive room treatments at a cost that pleases even the price-minded buyer. Marlite comes in prefinished wall-size panels readily cut to size and applied to old walls or new, by carpenters. Periodic renovating expense is eliminated. For Book on Home Interiors, see your lumber dealer, or write direct. See our Catalog in Sweet's 11/39.

**MARSH WALL PRODUCTS, INC.**  
43 Marsh Place • Dover, Ohio



*Marlite* FOR CREATING BEAUTIFUL INTERIORS  
WALL-SIZE PANELS IN LUSTROUS COLORS,  
TILE-PATTERNS, MARLITE GENUINE WOOD-  
VENEERS AND CARSTENITE PANELS



NEWS TIP FOR TODAY  
 \*\*\*\*\* EXTRA  
**STAPLE LOW-COST SINKS**  
 Styled for Modern Small Kitchens

New exclusive designs, with these special features:

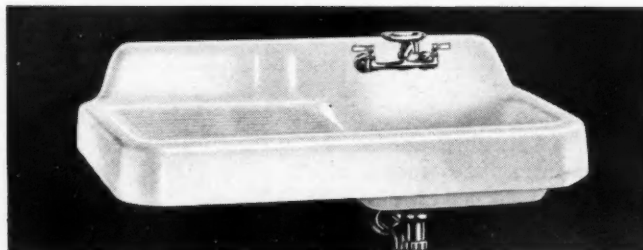
- Acid-resisting enamel *only*, for better service at lowered cost. . . . 8-inch-deep basins with Duostrainers. . . . Low backs (6½ inches) and square corners for building into wood and steel cabinets. Faucets with raised spouts.
- Keep in touch with Kohler for news of first-quality fixtures and fittings, designed for *service* and priced for *value*. Kohler Co. *Founded 1873*. Kohler, Wis.



New **DOUBLEDAY Sink**. Two 17-in. depressed drainboards. Size 54 x 22 inches. Width matches usual counter-top installations. With or without metal cabinet in baked enamel.



New **HOLIDAY Sink**. 21-inch depressed drainboard. Size 42 x 20 inches. With or without metal cabinet in white baked enamel.



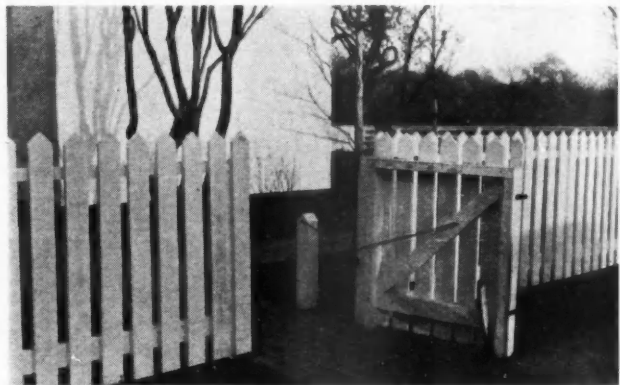
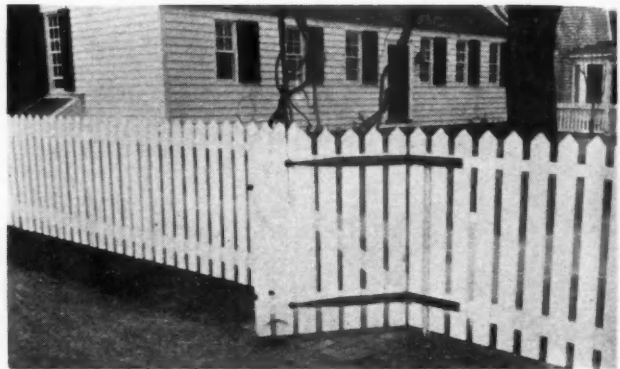
New **TRIMM Sink**. With 21¼-inch depressed drainboard. Beveled apron. Size 42 x 20 inches.

**KOHLER OF KOHLER**

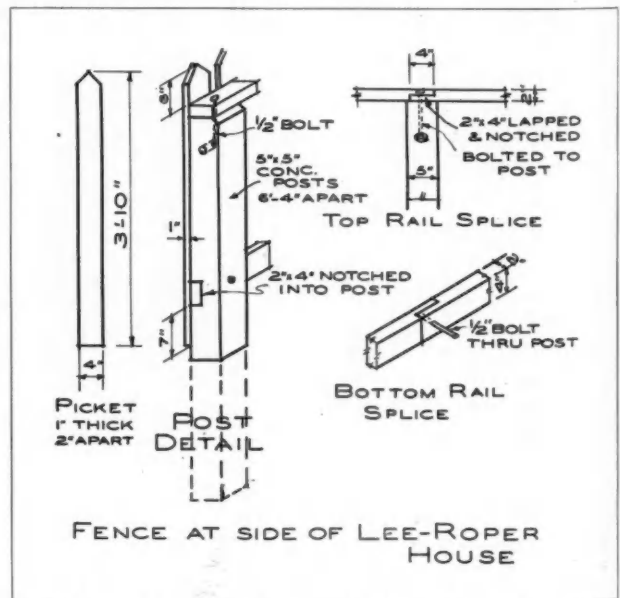
PLANNED PLUMBING AND HEATING

**How to Build Colonial Williamsburg Fences (Part II)**

THE Colonial gates and fences shown with this article were especially photographed by *American Builder* in the historic village of Williamsburg, Va., which abounds in Colonial lore and charm. In last month's issue, two of the fences of the famous Wythe house were shown. This month we are presenting several additional Wythe house fence details and also the front, side and back yard fences of the recently restored Lee Roper house. When one of the Williamsburg houses is rebuilt it is restored to its original Colonial beauty in every detail, and that includes the gates and fences. Since the Lee Roper house is one of the more



**STURDY WILLIAMSBURG** picket fence at side of famous Lee Roper house. Pickets are a full 1" thick and 4" wide spaced 2" apart. Two by four stringers are bolted to 5" x 5" concrete posts.



SLENDER gate of the high, and

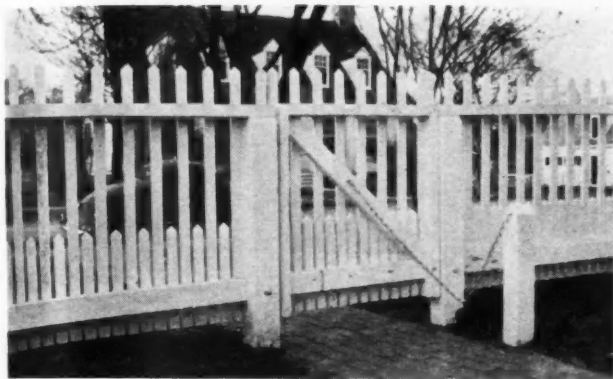
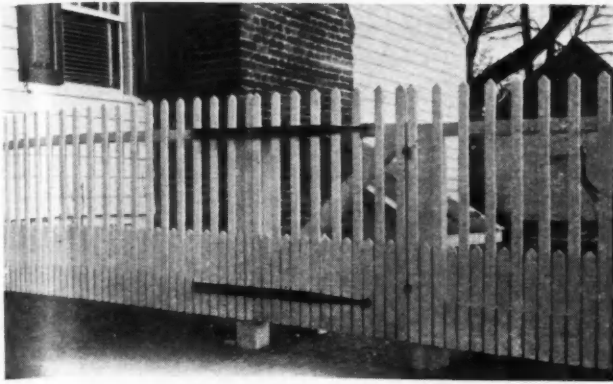
13 3/4 x 3-1/2  
 13 1/2 x 1-1/2  
 PICKET 5/8" APART

2" FULL SIZE

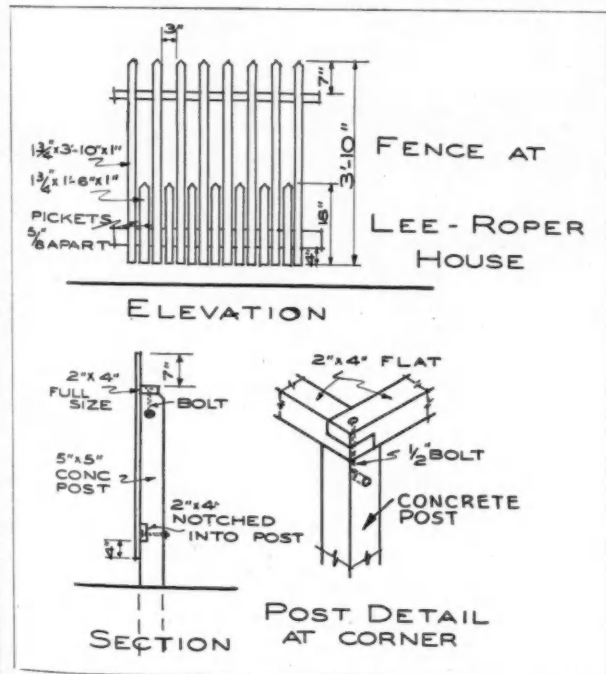
5" x 5" CONCRETE POST

FULL SIZE

recent rest  
 Like mo  
 Lee Roper  
 and closed  
 stringers a  
 square, po  
 the wood  
 they canno  
 When th



**SLENDER PICKETS** and long strap-iron hinges feature this front gate of the Lee Roper house. Pickets are 1 3/4" wide by 3' 10" high, and are spaced 5/8" apart at bottom. The fence is sturdily built as well as attractive.



**FULL SIZED 2 x 4 stringers** are bolted to the 5" x 5" concrete posts.

recent restorations the fences are of especial interest. Like most of the Williamsburg fences, the gates of the Lee Roper house are hung on broad wrought-iron hinges and closed with a ball and chain. The posts to which the stringers are attached are of concrete and are usually 5" x 5" square, poured in rough board molds so that the grain of the wood shows in the concrete. When these are painted they cannot be distinguished from wood without a knife. When the concrete posts are poured, the necessary bolts

*(Continued to page 150)*

# SPEED UP DEFENSE

Use  
**INSULATION TACKER**  
By **MARKWELL**

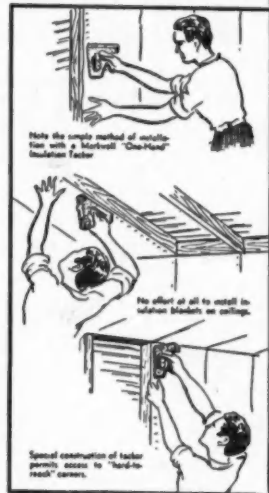
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- more SECURELY

ITS one-hand operation permits use of the other hand to hold insulation in place so that it can be tacked exactly in the position desired. No fussing, no fumbling, no "banged" fingers . . . just a trigger action and the insulation is tacked firmly. Staples driven flush . . . no tearing of the insulation.

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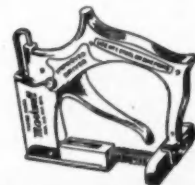
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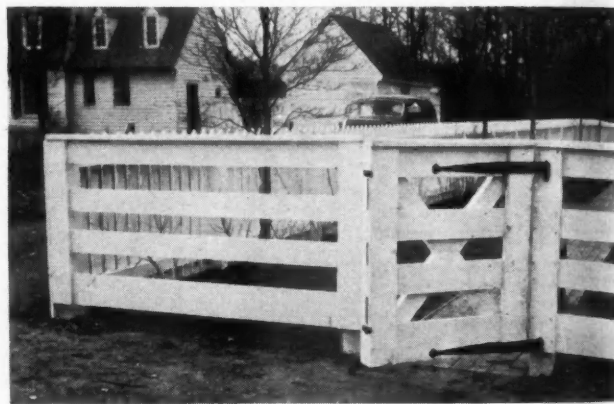
## Williamsburg Colonial Fences

(Continued from page 149)

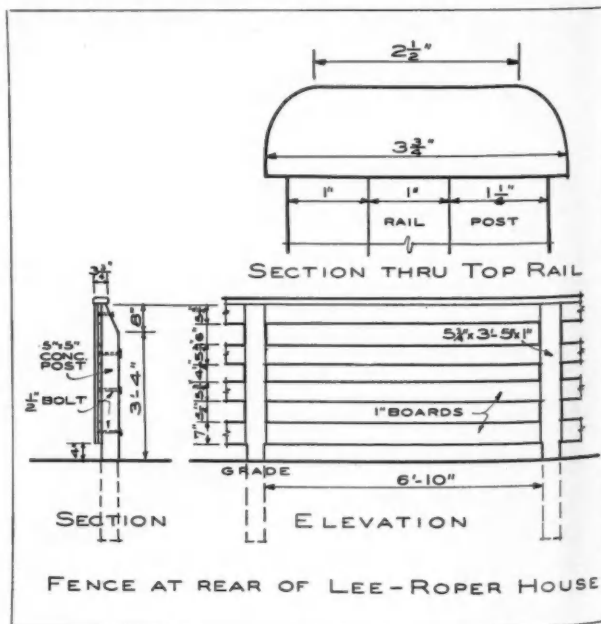
are imbedded in them, or provision made for notches for the stringers.

As a rule, the fence stringers are full 2 x 4's of rather rough lumber. In some cases the stringers are 2 1/4" x 4 1/4". Pickets also are of rough textured lumber and are a full 1" thick.

Study of the accompanying detailed drawings will show with what care the modern builders of Williamsburg have constructed these fences. We suspect that they are much



BACK YARD FENCE of Lee Roper house has charm and dignity, as well as great strength.

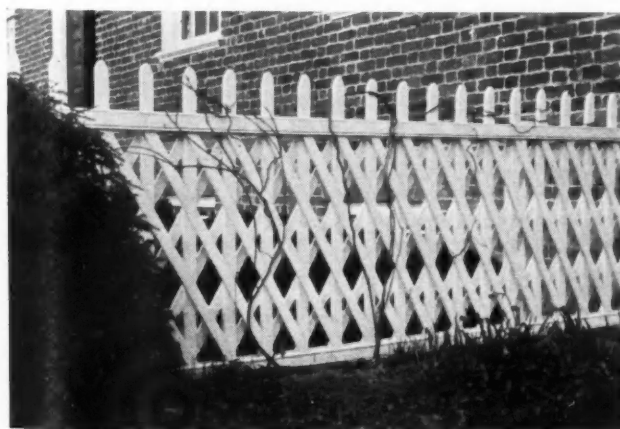
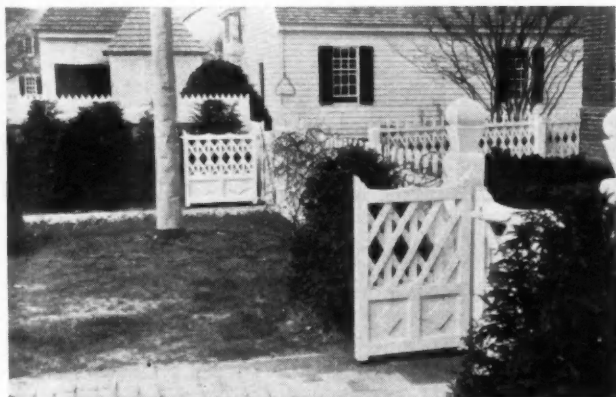
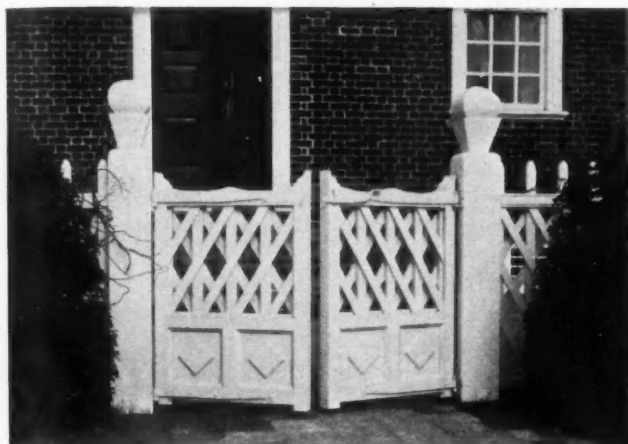


FENCE AT REAR OF LEE-ROPER HOUSE  
ONE-INCH BOARDS bolted to 5" x 5" concrete posts are used. Top is capped with a 3 3/4" rail. Bottom board is slightly wider than center.



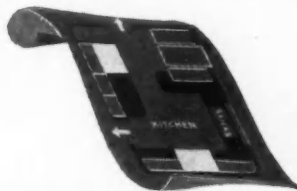
more substantially built than the originals were—certainly this is true of the concrete posts. In the case of the front yard Lee Roper fence, the top 2 x 4 stringers are laid flat on the concrete posts and attached to the post with a 1/2" bolt. The stringers are lapped and notched where they join. The lower stringer is placed with the broad face to the street and fits into a notch in the concrete post. These stringers are also notched and bolted in place.

The accompanying photographs of the gates and fences surrounding the formal garden at rear of the Wythe house are of unusual beauty and interest but are of such intricate construction that they cannot be detailed here. With spring coming on almost any builder should be glad of an excuse to go to Williamsburg to obtain the details first-hand.



THREE VIEWS of the gates and fences surrounding the formal garden at rear of Wythe house in Colonial Williamsburg. This charming garden is made still more beautiful by the intricate patterned fences with unusual cross latticing. Gates are hung on sturdy wrought-iron hinges. This garden with its fences is one of the beauty spots of Williamsburg.

## An architect shows how to have BEAUTIFUL TILE EFFECTS



OTTO TEEGEN, A.I.A., Architect ON A MODEST BUDGET



• Here's a kitchen designed by Otto Teegen, Director of Architecture of the Beaux Arts Institute, New York. All those luxurious tile effects . . . those smooth, smart upper walls and ceiling . . . that cozy breakfast nook . . . are made possible by two of today's most modern materials—Presdwood Temprtile\* and Tempered Presdwood,\* the Masonite\* wood-fibre hardboards. Counter tops and recessed cabinet base-boards are Black Masonite Tempered Presdwood.



• Wainscot of Mr. Teegen's Masonite kitchen is Presdwood Temprtile with four-inch squares. The board is also available with eight-inch and twelve-inch squares. Its marble-smooth surface can be painted or enameled before or after the board is applied by nailing or adhesive. Upper walls and built-in cabinets are all Tempered Presdwood, which is especially suited for cabinet doors, because it will not warp, split or crack when properly used. Both boards are economical to apply. They can be cut to fit odd-sized areas with ordinary wood-working tools. Mail coupon for free samples and details.



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And the public likes them—likes their good looks, likes the well-known, well advertised name NORGE because they've known it for years and they know it stands for quality.

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**NORGE**  
OIL-BURNING  
FASTEMP FURNACES AND  
WINTER AIR CONDITIONERS



BEFORE MODERNIZING, Allentown's Young Building had this archaic look.

**"Business as Usual" During Modernizing**

Allentown, Pa., Office Building Completely Rejuvenated in Miracle Change-Over

THE home office of the Lehigh Portland Cement Company, known in Allentown, Pa., as the Young Building, needed modernizing badly. Yet the company kept putting off the job because there was no convenient place to which it could move the staff.

But along came J. A. Turner, hero of this story, who assured Lehigh's president, Joseph S. Young, that he could do the job without interfering with "business as usual."

The results, as far as the exterior of the building are concerned, are interestingly shown in the photographs above. Working on plans prepared by De Young & Moscovitz, New York architects, Turner Construction Company did a remarkable job of transformation, without, it is said, getting a single particle of plaster in the hair of a single stenographer. But it took some clever organizing.

**How the Work Was Handled**

The new building was given a handsome exterior of architectural concrete, enlivened with equally handsome aluminum windows. The finished concrete exterior is not painted or surfaced in any manner. Concrete was extensively used throughout the building on walls, floors, foundations and columns. Glass blocks were also used extensively.

The old structure had to be extensively enlarged. The two upper floors of the Young Building did not conform in ceiling height to the other five floors. It thus became necessary to transfer the office occupants of the sixth and seventh floors to



**MODERNIZED VERSION** executed in architectural concrete, with aluminum corner windows.

other parts of the building and to demolish both these floors. A temporary roof was constructed on what was formerly the sixth floor level. The old elevator was lowered to serve the first to fifth floors and remained in almost continuous operation during the entire course of this particular phase of the building's construction.

A temporary partition was built four feet back of the original brick wall of the old building and the mechanics worked outside this partition on the construction of the new wing. Later, ten or twelve feet were also taken off the front of the old building and a similar partition erected, outside which the men worked during the time they were installing the new facade.

In the meantime, new columns had been set at separation points between the old and new sections of the building. As each new floor was finished, the partition was removed and the owner's operating force was shifted into the new section. Work was then started on the vacated areas.

**Building Fully Air Conditioned**

The building is fully air conditioned, affording a regular system of humidification and cooling for both the winter and summer seasons. Water required for the air conditioning is being obtained from an artesian well drilled to a depth of 450 feet below the basement mechanical room of the new section of the building.

A concealed, flush lighting system was designed to provide uniform light intensity throughout each department. Shadows have been reduced to a minimum. No hanging fixtures were installed.

Location of the lobby remains the same, although it has been completely reconstructed. Entrance doors are of Herculite unbreakable glass which obviates the use of metal door frames. The lobby floor is of Travertine stone with walls of Hauteville marble, and the ceiling is featured by a decorative lighting arrangement.

The new Young Building, it is pointed out, is in no sense a specialty building designed for a particular type of occupancy. It has been so planned that it can be easily converted into a general office building, if the Lehigh Portland Cement Company decides to move at some future time.

**NATIONAL ADVERTISING OF THESE DOES NOT PUT YOU "ON THE SPOT"**



• A typical YPS Kitchen ensemble —Enameled steel cabinet sink, base and wall cabinets.



When one of your clients points to a swell picture in a national advertisement and blithely says: "Gimme" —it's pretty tough to have to explain that the 'dream picture' is far above the contemplated cost of this job.

**YPS KITCHENS are nationally advertised and are priced to fit the budgets of ALL of your clients**

**Complete** YPS Kitchen ensembles are available at about the price of a good, family-size refrigerator; separate units at correspondingly low prices. Mass production makes these low prices possible. Furthermore, pre-assembled and factory finished YPS Kitchens can be delivered promptly and installed quickly, economically. Yes, YPS National Advertising helps you because it creates desire for the YPS Kitchen your clients can afford.



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**Mullins Manufacturing Corporation, Warren, Ohio.**

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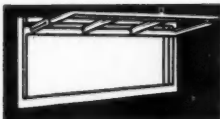


# ADD *Sales Punch* TO YOUR BASEMENTS

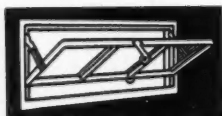
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Try VENTO CHAMPIONS in the next house you build. Then devote two minutes to demonstrating the superior operation and superior construction of this window to your first prospects. Watch them spark to the ideal ventilation it provides; the versatility of its two-way opening; its practical puttyless glazing; its smooth, effortless operation, positive cam lock and weather-tight construction. Like hundreds of other builders, you, too, will discover that with this window you can really capitalize on the present day interest in more livable basements, and create a favorable impression for the entire house. It's a valuable selling help that costs you nothing; for

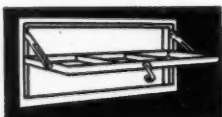
**VENTO CHAMPIONS** cost no more than other first line windows. See your dealer at once, or write for details. Why be satisfied with anything less?



Opens from either top or bottom. Ventilator may also be quickly removed.



Any degree of ventilation may be had by slight downward pull on ventilator.



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**VENTO** manufactures a complete line of windows for every type of building—all top notch products—backed by a firm with an enviable reputation for dealer cooperation.

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MUSKEGON, MICH.



## VENTO Champion BASEMENT WINDOWS

## Porcelain Enamel Panels Used to Sheath Stations

# ON THE PENNSYLVANIA TURNPIKE

**Designed for Quick Erection, Easy Maintenance and Simple Replacement**

**A**CCESS to the Pennsylvania Turnpike, or "Dream Highway" as it has been recently publicized since its opening the latter part of 1940, is provided at Carlisle, the eastern terminus, Irwin at the west, and at eight intermediate points. At these points of exit and entrance which were selected to serve the major north and south routes which cross the line of the new highway there are ticket booths of novel building construction.

In keeping with the ultra-modern design of the highway, these ticket booths are designed throughout of modern building materials, utilizing porcelain enamel, steel, concrete and aluminum. Various considerations led to the selection of porcelain enamel as the exterior finish for the ticket stations. Its high degree of permanence when exposed to weather conditions, plus the low maintenance required to keep it clean and in good condition, combine to make porcelain enamel an economical sheathing for structures of this type. It is readily adaptable to modern architectural design and is available in any desired color. Further, porcelain enamel panels may be erected quickly, and an ingenious design was developed for the units used on the turnpike ticket stations.

Designed by the staff of Captain Gerald R. Tyler, chief architect of the Pennsylvania Turnpike Commission, the ticket stations consist of a structural steel frame made of 3" channels, completely finished on the exterior with architectural porcelain enamel. The interior walls are finished with 18-gauge insulated steel sheets welded to the steel studs. These special "Paint-Bond" steel sheets are given two coats of oil paint after



erection to provide the desired neat, clean interior finish in the structures. Each ticket office consists of a utility building with the miscellaneous equipment necessary to the maintenance of the station plus necessary facilities for the collectors, and a huge canopy (shown in center illustration), 22 ft. wide and from 30 to 100 ft. long, depending upon the location, extending across the roadway. Between each incoming and out-going traffic lane is located a small ticket booth, 4 ft. wide and 12 ft. long, sheathed in porcelain enamel with the exception of a 4 ft. continuous window, designed to simplify the collection of tolls with a minimum of traffic delay. Provision is made for heating the ticket booths through ceiling grilles connected to the heating plant in the utility buildings by ducts running through the overhead canopies. Heat absorbing clear glass set in aluminum trim is used in the ticket booth windows. All windows in the utility buildings are equipped with projected steel sash made of special hot rolled steel sections.

The roof deck consists of 20-gauge copper-bearing Holorib steel roof deck, having 1½" deep triangular ribs spaced 6" on

RIGHT almost the f this ticket center weldin bonded The manuf Ohio, Beaver design Vitren steel f welded enamel The which the str the jo damag delay at the natural of the blue po ivory w Hori of 3 x the top and hea In addi the spec serve t sometin It wi replacer design. where One ty

## TURNPIKE

RIGHT: Panels almost cover the frame of this turnpike ticket booth.



center, and is attached to the structural framing by electric arc welding. Over this deck is applied 1" of insulation and a 20-year bonded built-up tar and gravel roof.

The architectural porcelain enamel panels were designed and manufactured by The Enamel Products Company of Cleveland, Ohio, and the Ingram-Richardson Manufacturing Company of Beaver Falls, Pa., respectively. The panels are unique in both design and application. Manufactured from 16-gauge U.S.S. Vitrenamel steel sheets, they are fastened directly to the structural steel frame of the buildings through 14-gauge steel plates tack-welded to the framing where four corners of adjacent porcelain enamel panels come together.

The panels are 1" in depth and have a special flange design which acts as a water seal, preventing moisture from entering the structure without relying upon the caulking compound to seal the joints. Further, the system of construction is such that damaged panels can be removed with a minimum of effort and delay. This new system of design, worked out by the Enamel

Products Company, answers the problem of making porcelain enamel panel joints weather-tight, as well as cutting down the time required for erection.

Soft blue and ivory, accentuated by the sil-

CONSTRUCTION view of framework; note canopy.



very aluminum trim, were selected by the Commission as the best colors for use on the ticket stations. These colors are in keeping with the state colors and

at the same time harmonize with the colors predominating in the natural settings of the stations. All vertical surfaces on the body of the buildings are finished in a "pebble finish" light powder blue porcelain enamel, while the canopy soffitt and faces are in ivory with a satin-matte finish.

Horizontal lines of the structures are accentuated by the use of 3 x 1/4" aluminum bands mounted on the porcelain enamel at the top and bottom of the 12" canopy faces as well as at the sill and head of the continuous windows used in the ticket booths. In addition to providing an absolutely maintenance-free exterior, the special enamel surface finishes developed by the manufacturers serve to eliminate highlighting, bowing, and irregularities that sometimes appear in high gloss surfaces.

It will be seen from detail drawings following that erection or replacement of enamel panels has been greatly simplified by panel design. This makes use of two basic types of panels, modified where necessary for corners and returns at windows or doors. One type of panel has turned-out flanges on three sides and a

(Continued to page 156)

# SAME SIZE BALANCE

for Both Top and Bottom Sash



## ANOTHER IMPORTANT ADVANTAGE OF THIS BETTER SASH BALANCE

There's no problem of odd sizes or split packages when "GRAND RAPIDS INVISIBLE" sash balances are used. Invisible balances are packed four to a carton. Same size fits both top and bottom sash. If top sash is stationary installation, the two extra balances can be used on another bottom sash. It's easier all around . . . for builder and dealer.

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10 sizes meet 95% of residential requirements. Frames require no machining . . . no cuts in sash except stile grooves . . . no blocks to fasten on jambs. Complete, easy-to-follow, illustrated installation instructions on each carton. Unconditionally guaranteed for smooth, effortless, dependable operation when properly installed.

Write for New "INVISIBLE" Catalog Section, No. 41-SB-1, showing detail drawings with and without weather stripping.

ALSO AVAILABLE — 1941 Sash Pulley Catalog, illustrating and describing narrow trim, standard, and heavy duty "GRAND RAPIDS" pulleys. Ask for Catalog K.

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# Defense Bottleneck

BUT IT'S ALMOST AS IMPORTANT



Don't make your clients wait in line to use electricity. Make your homes livable.

## THIS IS HOT NEWS

Here's an extra that will really sell homes. Electric outlets every 6 or 18 inches.

Investigate "Plug-In" Strip



*"Outlets by the yard"*

**National Electric**  
PRODUCTS CORPORATION

SIXTH STREET

PITTSBURGH, PA.

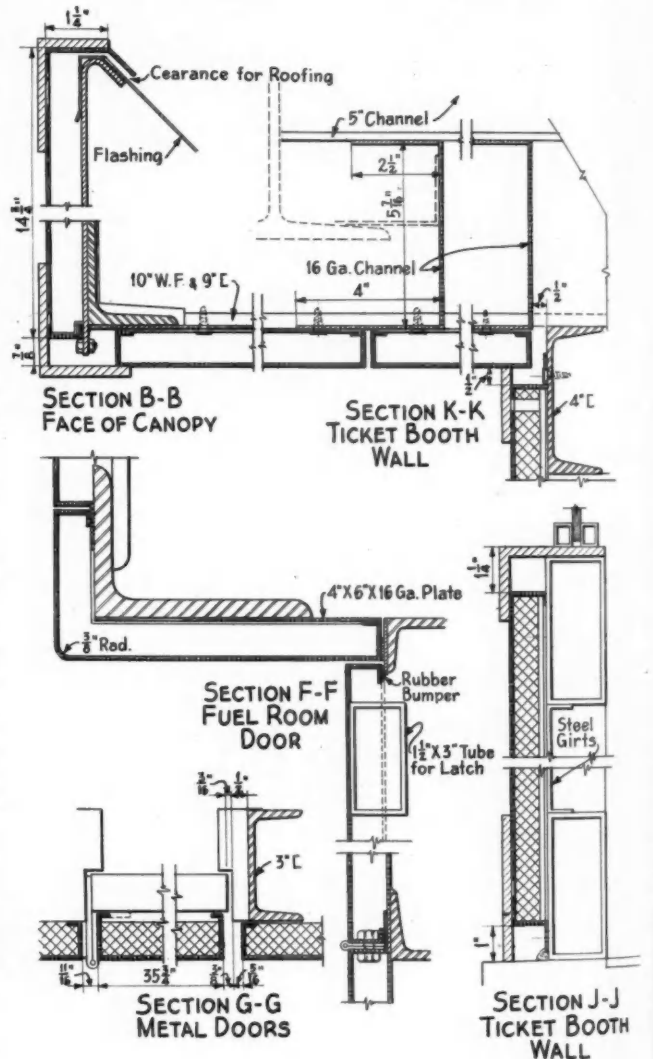
### Pennsylvania Turnpike—

(Continued from page 155)

turned-in flange on the fourth. The mating panel, which is used on the sidewalls in conjunction with the other type, and exclusively for ceilings, has turned-in flanges on three sides and a turned-out flange on the fourth.

The size of the job and the simplicity of the panel design made it possible to fabricate the panels to harmonize in size and shape with the architectural design of the stations. No panel exceeds 8 sq. ft. in area, and the average is approximately 4½ sq. ft. Panels are all individually formed on a press brake, working to an over-all flatness and dimensional tolerance of 1/16". Prior to enameling, all flange corners are welded tight and the positioning clips welded in place. The porcelain enamel consists of a ground coat fired on the Vitrenamel steel sheets at 1600° F. and two color coats, fired on at 1550° F. in electrically heated enameling furnaces.

In sheathing a side wall, panel erection starts at a bottom corner and proceeds in horizontal bands. The first step involves placing



a series of special clips in the concrete sill of the building. The lower turned-in flange of a panel is snapped in place under these clips, which holds the bottom edge of the panel firmly in place. The top flange is then attached to the 4 x 6" 14-gauge steel plates on the structural frame by means of 10-24 self-tapping metal screws.

The mating horizontal panel, which has three turned-in flanges with clips welded in place on the end flanges, is slipped under the base clips and slid sidewise to engage its clips with the outstanding end flange of the preceding panel, the upper turned-out flange being attached to the 4 x 6" plates by self-tapping metal screws. The third panel, another turned-out flange unit, slides in place in the same manner, the base being positioned by the base clips and the vertical edge by the end clips on the preceding panel.



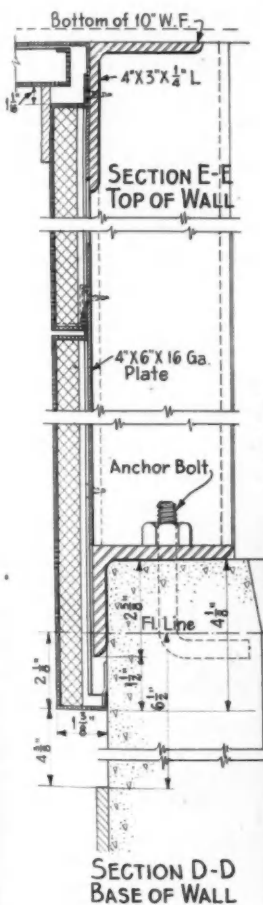
Succeeding rows of panels are positioned by the clips on their lower turned-in flanges, which establish the horizontal joints, and by the flanges and clips on the edges, which establish the vertical joints. This series of constant overlaps prevents the entrance of water in the unlikely event of caulking failure. Care in the shop attachment of the clips assures uniform joint widths and at the same time greatly facilitates panel erection.

All clips are positioned in the shop and welded in place, being so spaced as to avoid interference with screw heads and the wall plates to which the panels are attached. Screw holes in the turned-out flanges of the panels are  $\frac{1}{4} \times \frac{1}{2}$ " slots punched before the panels are enameled. Holes in the wall plates are hand punched as the panels are erected.

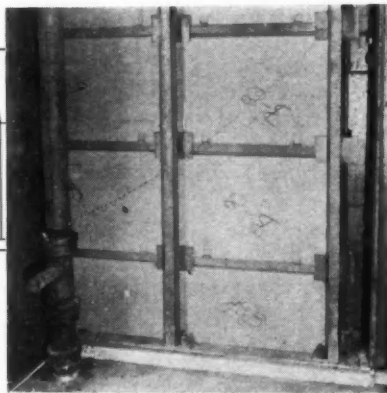
Porcelain enamel panels designed for application immediately beneath the window openings are formed with a 100° instead of the standard 90° bend at the upper flange to aid in securing the desired weather seal.

Window frames are installed after the porcelain enamel panels are attached. In every case at doors or window openings, provision is made in the panel design to assure neat corners and provide for

IN opposite column and below at left: Section details of outside face of canopy, fuel room door in utility buildings, wall of ticket booth, wall at roof, and base of utility house wall.



BELOW: View of wall from inside Pennsylvania Turnpike station showing how porcelain enamel panels are attached to steel frame; note overlapping flanges.



weather-tight construction. All joints are caulked with sealing compound to their full depth.

Effective insulation is provided in both the ticket booths and utility buildings by means of  $\frac{3}{4}$ " pulp boards cemented to the exterior enameled steel panels and to the interior, treated steel sheathing sheets at the factory.

Under normal working conditions it takes an eight-man crew about four days to erect the steel work for one of the ticket stations. A six-man crew can apply the porcelain enamel panels, which cover approximately 2500 sq. ft. of side wall and ceiling area in the standard station, in four days. Another day is required for completely caulking and washing down a building. Four men can install the aluminum trim on a station in three days. It is

(Continued to page 158)

# HOTSTREAM

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or Break Sales!**

Successful builders give special attention to the styling and arrangement of the bathroom. For when prospects go over the house, the woman studies this room closely.

When you've installed *Formed Iron Plumbing Ware*, you can please her with smartly designed fixtures in white porcelain enamel or in gay colors. The high-luster surfaces are lastingly beautiful, easy to clean, and are acid-resisting at no extra cost.

If your *Formed Iron Ware* is porcelain enameled on ARMCO Ingot Iron, you can assure your prospects of the finest basic quality. They will *know* it, because twenty-seven years of national advertising have created a ready acceptance for this "world's standard enameling iron."

And here is another "house seller"—a new hot-water tank porcelain enameled *inside* on ARMCO Ingot Iron. The smooth, hard glossy surface keeps clear water *clear*! Write for the facts. The American Rolling Mill Company, 1121 Curtis Street, Middletown, Ohio.



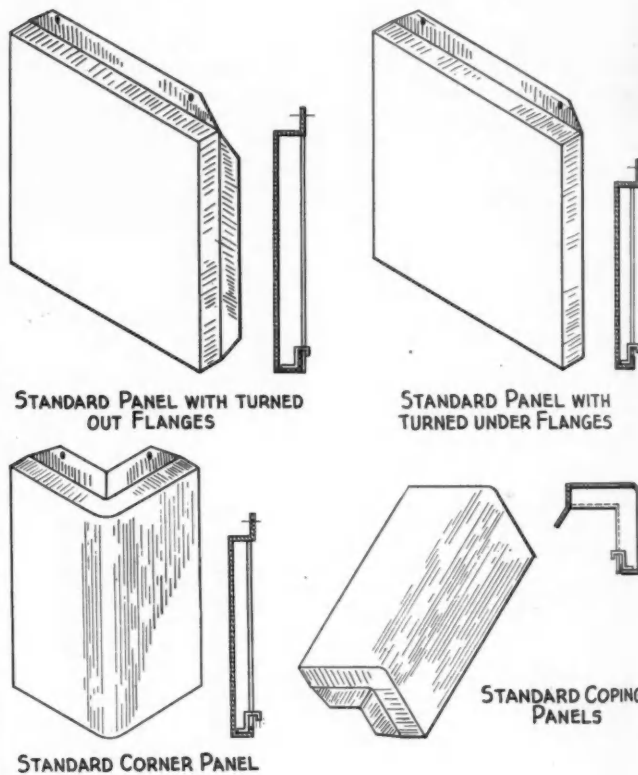
**Pennsylvania Turnpike—**

(Continued from page 157)

estimated that because of the simplicity of erection, due to the unique design of the standardized architectural porcelain enamel panels, it will cost about seventy-five cents a square foot "in place" for the porcelain enamel exterior finish as applied to the completed structures.

Although the porcelain enamel panels are highly resistant to damage, the fact remains that something may happen in almost any location which would necessitate replacing one or more panels. This factor was given careful consideration in designing the panels and, as a result, replacements may be made easily and quickly. All corner panels are removable from the top, by taking off the aluminum trim unit, removing the holding screws from the top up-standing flange and slipping the panel up about 1/2" so that the clips on the lower turned-in flange will disengage from the up-turned flange on the lower panel.

To remove a wall panel that has turned-out flanges on three



THE various types of porcelain enamel panel units used on the Pennsylvania Turnpike are detailed above in perspective and section.

sides, the nearest top corner panel is removed and then the top row of wall panels taken off until the row carrying the damaged panel is reached. Panels are then successively removed from the top down until the damaged panel is taken out. A new one may then be installed and the other panels replaced. In the case of panels with turned-in flanges, removal starts from the top and goes down the row to the desired unit. As it is only necessary to remove the two self-tapping metal screws from any panel to loosen it, one man with a screwdriver can handle a repair job without difficulty. Sections E-E and D-D, on the preceding page illustrate how erection or dismantling is provided for in the panel design.

Assuming that one of the inner panels in the bottom row of the roadway face of a utility building was damaged, it would require the removal of nine panels or less to replace a damaged unit. In the case of a damaged panel in one of the ticket booths, not more than three units at the most would have to be removed to permit replacing any damaged panel.

The ceilings on the under side of the canopies involve a slightly different type of construction than that utilized for wall surfaces. In place of the 4x6" plates welded to the wall frame members, special 16-gauge cold-formed steel channel sections are used on

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the canopies. These sections, which have a top flange of 2½", a web of 6" and a bottom flange of 4", are bolted to the canopy frame members at right angles to the roadway axis. The other difference lies in the fact that all porcelain enamel ceiling panels are of the turned-in flange type, with only one turned-out flange punched to receive the attaching screws. Holes for the self-tapping screws are marked and hand punched as in the case of the side wall units, using the bottom flange of the special channels as the supporting plate. Sec. B-B clearly illustrates this construction.

All panels were shipped by truck directly to the stations with the insulating material in place. Corners are protected by cardboard and packing pads and the panels are shipped on edge. Coping faces and enameled corner panels are wrapped in paper before shipping to prevent possible chipping or scratching.

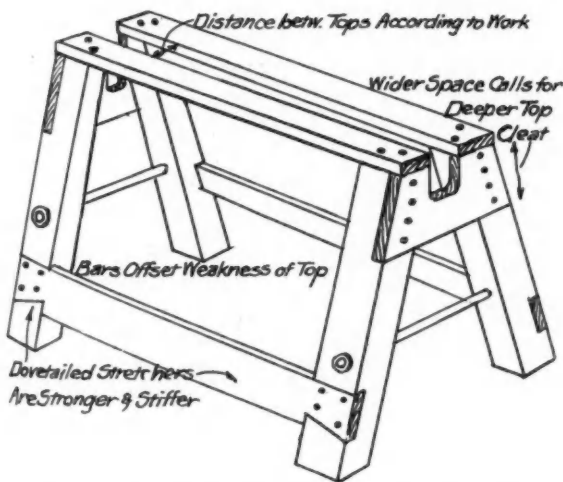
Moyer Brothers Construction Company, Altoona, Pa., were the general contractors for the ten stations. Fusion welding was used extensively in attaching connection angles to beams and in attaching the steel deck to the supporting roof steel, as well as in making various shop connections in the plant of Griffith-Custer Steel Company, Johnstown, Pa., which fabricated the structural steel for the ticket stations. Carnegie-Illinois steel was used throughout.

Porcelain enamel is being more and more widely used for architectural effects in structures of all types. The turnpike ticket stations represent another satisfactory instance of its adaptability. Erecting crews and engineers alike are well satisfied with the ease and accuracy of installation of the panels used in the stations, and the finished appearance of the structures is meeting with highly favorable comment. Particular interest is noted on the part of motorists using the turnpike at night, their comments on the freedom from glare which characterizes these structures being particularly favorable.

\* \* \*

### Divided-top Sawhorse Has Many Uses

RIP sawing a considerable quantity of lumber, boring a large number of holes in line, many similar jobs which are necessary will be done better, quicker and easier if you make a couple of these divided-top sawhorses to rest such work upon. The space between the two tops, that is, the width of the open division, depends upon the nature of the work to be done; it can be made quite wide, up to 3 or 4 inches, or it can be extremely narrow, on the order of 1 inch. The top end cleats are cut down for the same reason, and in building such a horse, this depth should govern the total depth of the piece; if it is made shallow, the piece need



DIVIDED-TOP sawhorse handy for shop or job.

not be so very wide but if given considerable depth the end cleat must be proportionately wider.

The two iron bars and the dovetailed stretchers on each side are aimed to compensate for the weakness at the top which the division brings, making the sawhorse stiff and strong despite the divided top. However, the same idea can be used for light work, without either of these. They represent refinements rather than necessities.—MORRIS A. HALL, White Plains, N.Y.

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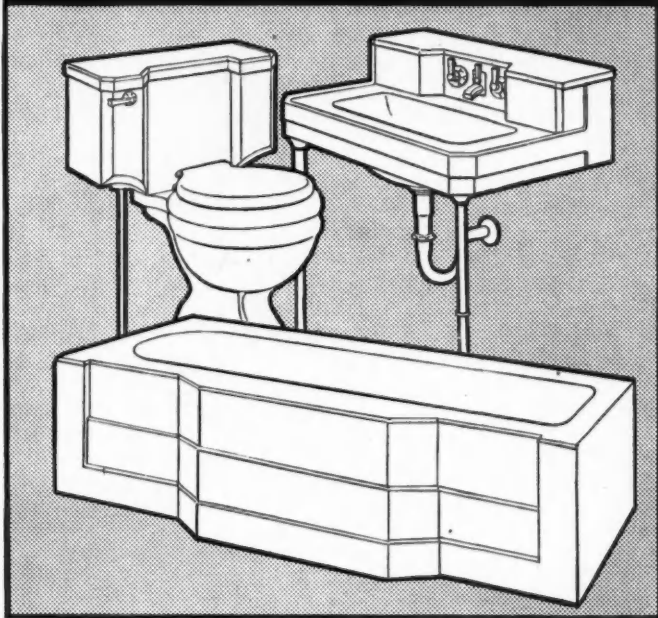
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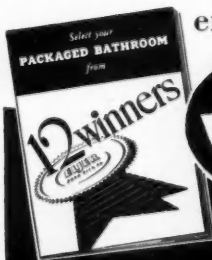




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STEEL PANELS bolted together are used in two-family buildings for marines at Quantico, Va., seen under construction.

## Panel Built Homes for Quantico Marines

ONE hundred enlisted men of the Marine Corps Base at Quantico, Va., and their families, will soon be occupying the first homes in the defense housing program to be built of a prefabricated, welded steel panel framework. Sidewalls of these homes are asbestos shingles applied over an insulation board sheathing. Fifty two-family dwellings of this type are under construction.

The same system is being utilized in the construction of 100 twelve-family apartment building units for shipyard employees at Newport News, Va.

The houses feature a demountable steel frame under a roof of sheet steel panels, and adapt themselves to the defense housing requirements of speed in construction, standardization of design, and high salvage values in the event it should become desirable to dismantle and reconstruct them elsewhere.

Resting on a foundation and floor slab of poured concrete, the steel panels need only to be bolted into position, and can be completely erected from floor to finished roof in 80 man-hours, meaning that a 10-man crew can complete the entire steel superstructure of a two-family dwelling in a single eight-hour day.

The floors will be finished with a one-eighth inch asphalt tile laid over the concrete. The houses are 48 feet wide across the front and 28 feet from front to rear. They are divided into two apartments having over-all dimensions of 24 by 28 feet. Each apartment consists of living room, combination kitchen and dinette, two bedrooms and bath. Each of the bedrooms has a large closet, with additional closet storage in hall and kitchen.

Each of the double housing units requires approximately six tons of steel, which is fabricated in the plant and protected from corrosion by galvanizing and baked-on finishes. The material reaches the job ready for erection, needing only to be bolted into place by the work crew.

At Newport News, Va., where increased housing facilities are needed for shipyard workers, the same steel construction, known as the Panelbilt system, is being used. One hundred apartment buildings, each having 12 units, will be erected, providing living quarters for 1,200 families. The buildings, two-story, will be 156 feet long and 32 feet deep. Each will consist of six one-bedroom and six two-bedroom apartments.

By utilizing the four-foot module steel panel design, high salvage values are provided, because the steel panels and frames can be re-erected at other locations in any arrangement of rooms having dimensions in multiples of four feet, after their usefulness at any one point has been achieved.

These houses, at Quantico and at Newport News, Va., are

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CLOSEUP of two-family Quantico home, showing asbestos cement shingles being applied to insulating board over steel frame.

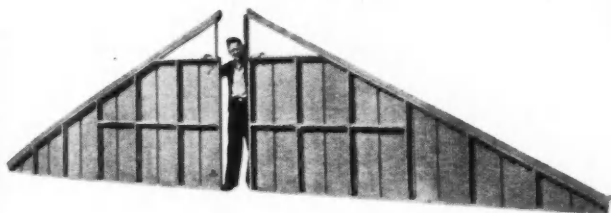
being built under a contract with the Bureau of Yards and Docks, Navy Department. The steel panel system being used in their construction is supplied by the Tennessee Coal, Iron and Railroad Company, United States Steel Corporation subsidiary at Birmingham, Ala., which developed the Panelbilt system of steel home construction.

Construction details include the following:

**STEEL FLOOR JOISTS**—Steel floor joists are spaced 4' on centers extending across the building at panel joints. Joists are bolted to the tops of the steel piers or other materials when used. The joists are two cold formed channels placed back to back and spot welded together and shop coated with a heavy asphalt paint. When concrete or other types of floor and foundations are desired, the steel foundations or floor joists are not used as the case may be.

**EXTERIOR WALL PANELS**—The wall panels are fabricated building units of standard 4' widths by 8' 7½" high and other heights as required. The steel frames are made of cold formed channels and angles with all connections shop welded. Panels are made solid; with door openings and with windows.

The door panels are provided with a steel casing ready to receive a wooden door. Window panels include steel casement windows welded into the panel, flashed and ready for erection; metal frames, screens and hardware are furnished with the window panels. There is a selection of door sizes and various sizes and types of steel windows. The exterior coverage attached to the frames by shop welding is 26 gauge galvanized box rib steel  
(Continued to page 162)



GABLE PANELS are of light steel. At left is wall section with steel window welded in place. In center is interior partition panel, and at right is shown typical door panel with steel frame.

Easier to install  
... longer lasting!

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One of the 27 Tru-Fit Entrance Door designs is exactly right for every style and size of house you build. These beautiful doors add both appearance and value to your homes . . . help make sales . . . give more customer satisfaction. Order from your dealer. And remember, the trade-mark is your guarantee of a genuine Tru-Fit Douglas Fir Entrance Door.

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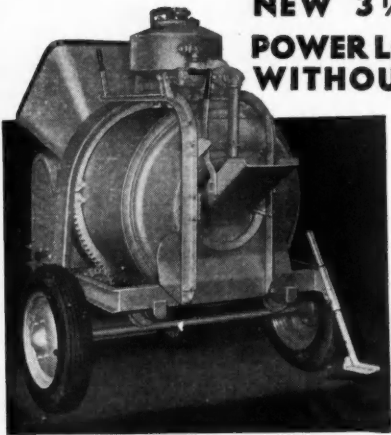
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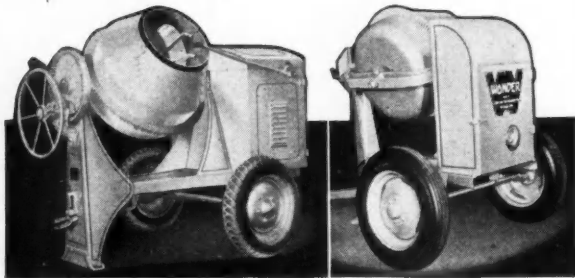
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**CONSTRUCTION  
MACHINERY COMPANY  
WATERLOO, IOWA**

**Panel Built Homes—** (Continued from page 161)

sheets with a cover rib at joints of panels and corners of the building. Wooden nailers are provided for baseboards. Gable panels of similar construction include a ventilating louvre at the peak of the gable with screen wire inside.

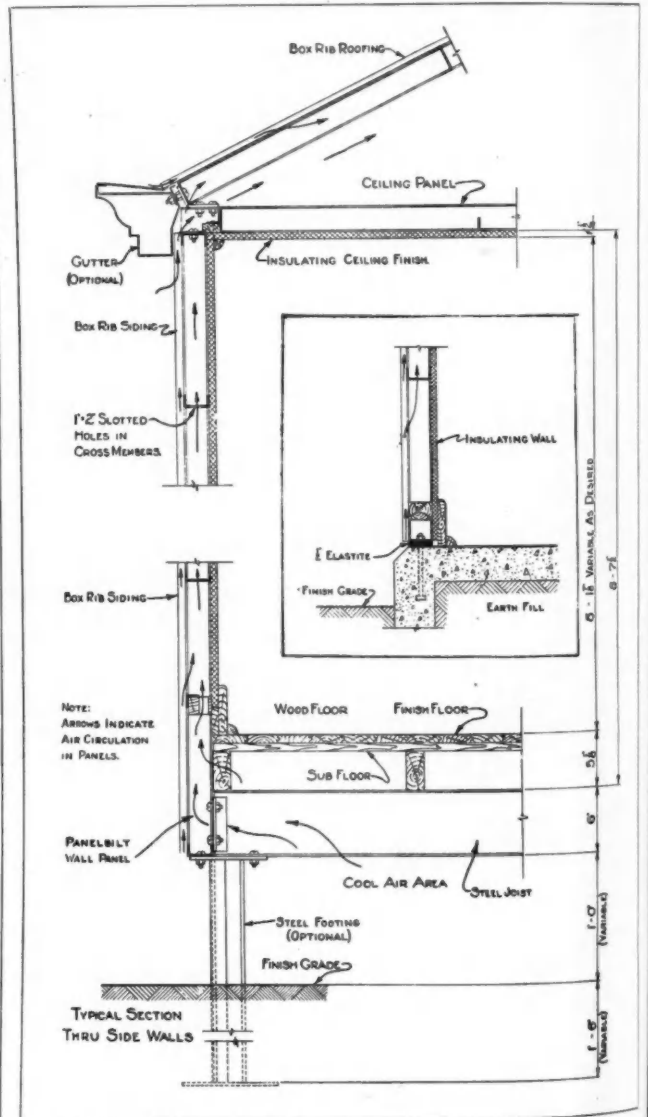
**PARTITION PANELS**—Partition panels are made of cold formed steel channels with connections spot welded. Door openings are arranged to receive wooden or steel frames. There are wooden nailers for the baseboards. Rooms are arranged to owner's convenience within standard limitations.

**GUTTERS**—Moulded gutters are attached by bolts to the eaves of the building with suitable down pipes. The gutters are a part of the house trim and decoration.

**PORCHES**—Porches of the same construction as the house are available as an extra. There are several designs and sizes which may be bolted on to the building at any location. Clips are provided for attaching screens to enclose the porch.

**STEEL CHIMNEYS**—Steel chimneys and steel flues are available as an extra in either single or double units. Flues may stop at the ceiling line to receive kitchen stove or circulating heater pipes, or may be used with a steel fireplace unit.

**STEEL FIREPLACE UNIT**—A complete steel fireplace unit is available as an extra. This cabinet is all metal with a steel fireplace set inside. The hearth is a steel tray lined with brick on which is set either grate basket or andirons. Grilles are provided in the base of the cabinet for the entrance of cold air which, when warmed, passes out of grilles at the top of the cabinet, thus circulating the air and heating the entire house.



**STANDARD PANELBILT construction details for use in typical homes. Inset shows concrete floor method as used at Quantico.**



## Revised Oak Flooring Commercial Standard

A RECOMMENDED revision of grading rules submitted by the National Oak Flooring Manufacturers' Association and endorsed by the standing committee was circulated on September 16, 1940, to the trade for written acceptance. The trade has since accepted and approved for promulgation by the United States Department of Commerce, through the National Bureau of Standards, the revised standard as follows in briefed form.

The standard became effective for new production on February 1, 1941.

### Purpose

1. This standard for white oak and red oak flooring is a basis for common understanding between manufacturers, distributors, and users of this product. By its general acceptance, use, and certification by labels, it is hoped to increase interest in the manufacture, sale, and use of oak flooring manufactured to standard grades to the mutual advantage of all concerned.

2. The service and satisfaction afforded by oak flooring, and consequently the success of the industry, depend on the use of universally recognized grades, and, therefore, the following commercial standard is provided for guidance in the manufacture, sale, and use of this product.

### Scope

3. This standard provides minimum specifications for three grades of quarter-sawed and four grades of plain-sawed white oak and red oak flooring. It covers standard dimensions for length, width, and thickness of tongued and grooved, and square-edge strip flooring. It also covers defects, bundling, inspection, and a method of certifying compliance with the standard.

### General Requirements

4. All commercial standard oak flooring, except square-edge strips, shall be tongued, grooved, and end-matched in accordance with the standard dimensions shown in Figures 1, 2, and 3. It shall be well manufactured and shall comply with the specifications herein contained.

### Detail Requirements Quarter-Sawed Grades

5. *Clear.*—The face shall be practically free of defects, except that  $\frac{3}{8}$  inch of bright sapwood will be permitted. The question of color shall not be considered.  $\checkmark$  Bundles shall be 2 feet and up in length, not to exceed 20 per cent under 4 feet. Average length 5 feet.

6. *Sap clear.*—The face shall be practically free of defects, but unlimited bright sapwood will be permitted. The question of color shall not be considered.  $\checkmark$  Bundles shall be 2 feet and up in length, not to exceed 20 per cent under 4 feet. Average length 5 feet.

7. *Select.*—The face may contain sapwood, and will admit pinworm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one to every 3 feet in length. Bundles shall be 2 feet and up in length. Average length 4 feet.

### Plain-Sawed Grades

8. *Clear.*—The face shall be practically free of defects, except that  $\frac{3}{8}$  inch of bright sapwood will be permitted. The question of color shall not be considered.  $\checkmark$  Bundles shall be 2 feet and up in length, not to exceed 20 per cent under 4 feet. Average length 5 feet.

9. *Select.*—The face may contain sapwood and will admit pinworm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one to every 3 feet in length. Bundles shall be 2 feet and up in length. Average length 4 feet.

10. *No. 1 Common.*—Shall be of such nature as to enable the laying of a sound floor without cutting. Bundles shall be 2 feet and up in length. Average length 3 feet.

11. *No. 2 Common.*—May contain defects of any character, but shall be of such nature as to enable the laying of a serviceable floor. Bundles shall be  $1\frac{1}{4}$  feet and up in length. Average length  $2\frac{1}{2}$  feet.

$\checkmark$  This applies to standard grades. Flooring separated for color can be obtained as a special by adding color requirements to above specifications.

(Continued to page 164)

You Can Afford  
to use this  
QUALITY SASH BALANCE

... Because You

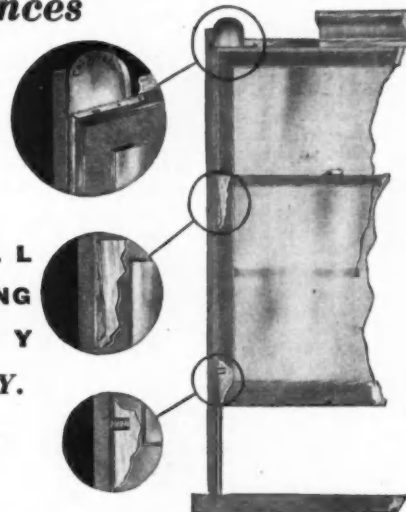
SAVE on Low Installation Cost

WHEN you use the CALDWELL 142FT SASH BALANCE, you not only equip your windows with the strongest and most compact balance on the market, but you effect a substantial saving in labor costs. This CALDWELL balance is fitted in *two-thirds* of the normal time. All you do is to lock the spring by pulling out tape and insert a nail in the face plate (an exclusive CALDWELL feature), then hook the tape to sash. Only one screw driven.

Expressly made for *unit windows*—such as the full jamb type illustrated—the CALDWELL 142FT comes with *kink-proof* tapes, enclosed mechanism, metallic lacquer finish, plus all the well-known CALDWELL features. Its durability and unique smoothness in operation make CALDWELL an easily demonstrated “plus value” that your customers will be quick to appreciate.

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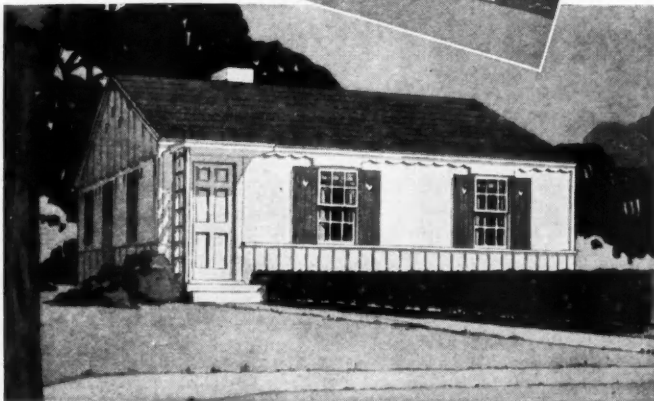
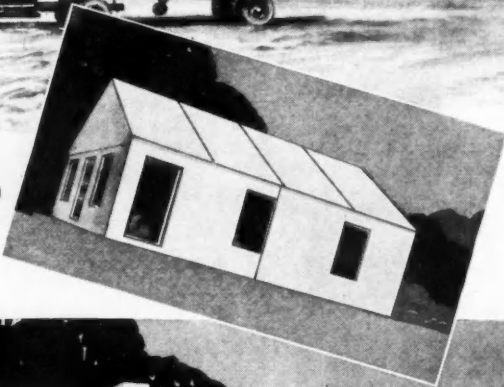
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Gentlemen: Please send me complete information about  
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73 fabricators can now furnish you with all the house parts, except utilities, on 24 hours' notice. The fabricator's truck delivers to you one package—which includes floors, walls, ceilings, roofing sections and all exterior and interior running trim and millwork.

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*Weatherproof*  
**HOMASOTE**  
*Insulating and Building Board*

## Oak Flooring Commercial Standard

(Continued from page 163)

### Square-Edge Strip

12. Square-edge strip flooring is manufactured in "Clear," "Select," and "No. 1 Common" grades. The grading requirements shall be the same as those for like grades of quarter-sawn and plain-sawn flooring, except that bundling and lengths shall be as follows:

*Clear.*—Bundles shall be 3 feet and up in length. Average length 6 feet.

*Select.*—Bundles shall be 3 feet and up in length. Average length 5 feet.

*No. 1 Common.*—Bundles shall be 2 feet and up in length. Average length 4 feet.

### Standard Thickness and Widths

13. *Tongued, grooved, and end-matched.*

Thickness (inch)	Face Width (inches)
25/32.....	1½; 2; 2¼; 3¼
15/32.....	1½; 2
11/32.....	1½; 2

14. *Square edge.*

Thickness (inch)	Face Width (inches)
5/16.....	7/8; 1; 1½; 1¼; 1-1/3; 1½; 2

Also made rough back 11/32 inch thickness; 1½ inch and 2-inch face.

All faces shown above in 5/16-inch square-edge flooring are finished 1/64 inch over face.

### Bundling

15. Oak flooring is bundled by averaging the lengths. A bundle may include pieces from 6 inches under to 6 inches over the nominal length of the bundle.

16. The percentages under 4 feet referred to in this standard apply on total footage (board feet) in any one shipment of the item.

### Measurement

17. *Thickness.*—In computing the footage of standard oak flooring, a thickness of one inch shall be used.

18. *Width.*—Tongued and grooved flooring 25/32 inch thick is counted as ¾ inch wider than the actual face width, while flooring 15/32 inch and 11/32 inch thick is counted as ½ inch wider than the actual face width. Square-edge strip flooring shall be measured as of the actual face width.

19. *Length.*—The length of end-matched flooring is counted as ¾ inch longer than the actual length.

### Inspection

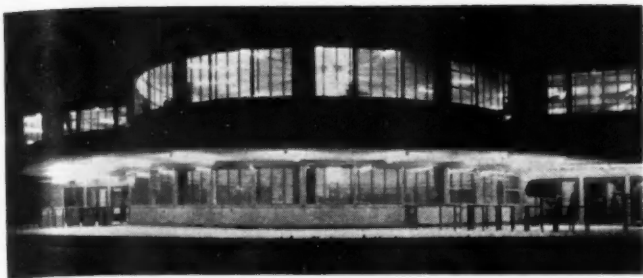
20. Utmost care is exercised in the manufacture and inspection of oak flooring and although the most capable grading experts are employed to assure constant uniformity of standard grades, it must be remembered that they are dealing with a product of nature in which there will occasionally appear marginal pieces on which the judgment of two equally competent inspectors might differ.

21. The purchaser may refuse any shipment in which the total footage of subgrade pieces is in excess of 5 per cent of the grade in question, as determined by official reinspection.

### Reinspection

22. If the reinspection results in a difference in favor of the purchaser of more than 5 per cent in feet (board measure), as shown on the invoice, then the shipper shall pay all the expenses of reinspection. If on the other hand the difference is only 5 per cent or less in feet (board measure), the purchaser shall pay all the expenses of reinspection.

23. The quality and condition of oak flooring as it leaves the manufacturer is held to govern the reinspection.



TOP: Front entrance to clubhouse and Turf and Paddock Club illuminated by fluorescent lights. ABOVE: Circular lounge in Club.

### Lots of Light on "Dark Horses"

IN what is believed to be "the best lighted horse racing establishment in the world," fluorescent lamps in new fluted translucent glass fixtures help to light the lounges, bars and club areas of the new Golden Gate Turf Club at Albany, Calif.

A total of 97 Westinghouse fluorescent lighting fixtures, each containing two 40-watt fluorescent lamps together with 40 others containing one lamp each, provide soft, even, glare-free light in the exclusive Turf and Paddock Club, the Clubhouse, lounges, dining rooms and promenades.

Grandstand, kitchen, second balcony, ground floor areas and several stairways are lighted by a total of 240 shallow dome reflectors, and 500-watt incandescent lamps; 70 similar but smaller reflectors and 200-watt lamps provide light for one promenade, men's rest rooms, jockey room, a group of betting booths and the first balcony. Offices are lighted by a total of 33 Westinghouse Magnalux luminaries with 500-watt incandescent lamps. Light for ladies' rest rooms, powder rooms and halls is provided by 24 similar fixtures with 200-watt lamps.

AT counter level, in Turf and Paddock Club, illumination averages 8 foot-candles.



TO MAKE IT A "COMPLETE HOME"  
give it a NUTONE DOOR CHIME!

The most effective "package selling" includes these beautifully designed, melodious Chimes right in the specifications

New small home prospects, from obsolete houses and apartments, long for the conveniences and modern equipment of an up-to-the-minute home. So—they're a big market for beautiful NuTone Door Chimes!

These easily installed, handsomely styled Chimes have everything to delight the prospective home owner. Suitability and decorative charm for any room in the house. Wonderful tonal resonance.

NuTone Chimes come in various designs. The popular *Mt. Vernon* is entirely of tarnish-proof brass. Others have long brass tubes and handsomely embossed covers of the new, unbreakable plastic. Still others are in baked enamel. Some have an interior light.

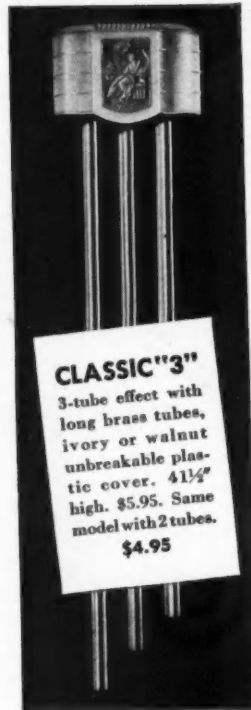
All NuTones are two-door Chimes—two melodious notes for the front door, one for the rear. Some have Westminster Chimes and sound an extra note for the side door. Shown here are a few NuTone models. There is one for every income, every type of home—priced \$1.95 to \$29.50.

We invite correspondence from specifiers of materials and equipment for small homes, and will gladly send catalog 4023E.

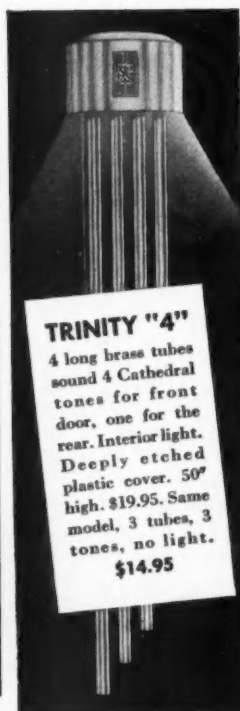
## NUTONE CHIMES, Inc.

CINCINNATI, OHIO

New York, 1150 Broadway Los Angeles, 637 Traction Ave.  
Chicago, Merchandise Mart Seattle, Terminal Sales Bldg.  
Toronto, Crown Bldg.



**CLASSIC "3"**  
3-tube effect with long brass tubes, ivory or walnut unbreakable plastic cover. 41 1/2" high. \$5.95. Same model with 2 tubes. \$4.95

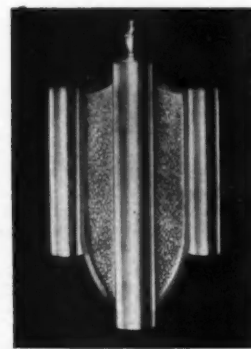


**TRINITY "4"**  
4 long brass tubes sound 4 Cathedral tones for front door, one for the rear. Interior light. Deeply etched plastic cover. 50" high. \$19.95. Same model, 3 tubes, 3 tones, no light. \$14.95

### MT. VERNON

Authentic American Colonial shield of hammered brass. 3-tube effect of satin brass. All tarnish-proof. 11 1/4" high.

\$5.95

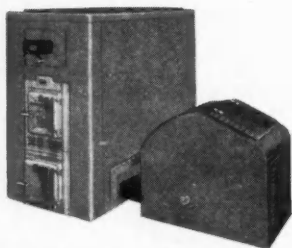




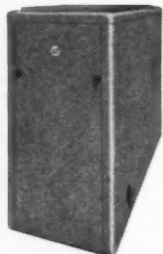


**YOU WILL DO YOUR CUSTOMERS  
A LASTING SERVICE  
IF YOU ...**

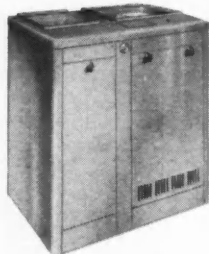
**Recommend and Specify  
ROUND OAK  
HEATING**



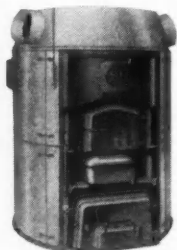
**"SPX" Stoker Furnace** and air conditioner. Extensions on either side for Round Oak stoker or any standard make.



**"XB" Oil Furnace** performs all functions of heating and air conditioning. Complete with Round Oak's oil burner.



**Gas Fired Winter Air Conditioner.** A neat, compact unit. Completely automatic. Quiet.



**Blended-Iron Gravity Furnace.** Low in cost, leader in the "small budget" home market.

**ALL TYPES OF FURNACES AND AIR  
CONDITIONERS FOR ALL TYPES OF FUEL**

Regardless of the size or cost of the homes you build.. no matter what type of fuel is preferred.. there's a Round Oak heating and air conditioning unit to meet every requirement. And the selection of Round Oak heating will be a lasting service to your customers, for this famous line (backed by an enviable 70-year record) is guaranteed to give satisfactory, trouble-free service year after year.. with minimum attention. It will pay you to learn *all* about Round Oak heating. See your Round Oak dealer or mail coupon.



**Rely On Your ROUND OAK Dealer**



**ROUND OAK**  
*of Dowagiac, Mich.*

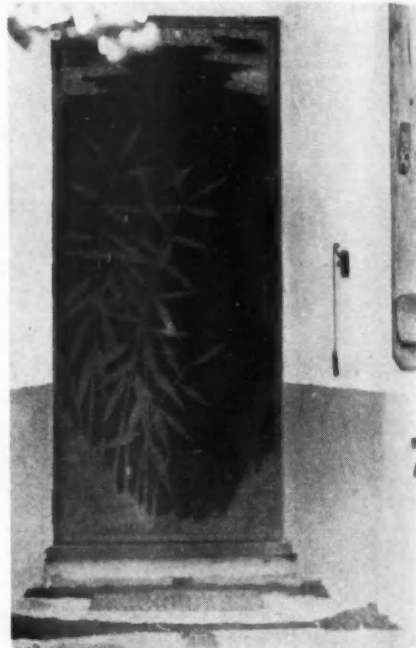
**STOVES • RANGES • FURNACES • OIL  
BURNERS • AIR CONDITIONERS • STOKERS**

The Round Oak Company, Dowagiac, Michigan — Dept. AB-4.  
Please send me complete information on Round Oak...  
 Stoker Furnaces       Gas Fired Air Conditioners  
 Oil Furnaces           Moistair Gravity Furnaces

Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_

**Decorative Entrances and Flower  
Boxes and Pot Holders  
from California**

**F**OR the builder or designer looking for the novel decorative touch on modern, rustic or traditional styled homes, some of the photographic details presented below and in the opposite column may offer just the idea to be adapted to some current job. This collection includes unusual doorways, flower boxes and flower pot holders found in California, and supplements the collection presented in the March issue of *American Builder*. For the most part, the construction is simple and uses a standard material for the base, such as the stock doors which have been decorated with a pattern in wood or metal; the boxes are easily built.—Hi Sibley.

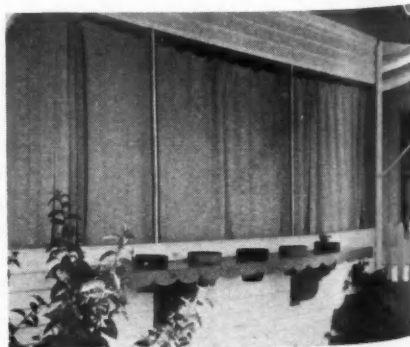


**RIGHT: A most interesting effect is secured with this screen door to which a graceful bamboo pattern of hammered sheet copper is attached.**



**DOUBLE brackets at each end support this dormer window box.**

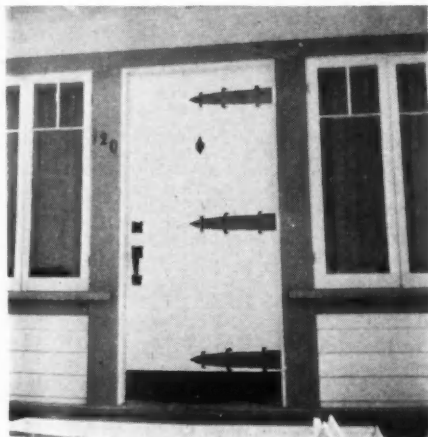
**RIGHT and on opposite page: A simple flower pot shelf for a modern window; brick sill ledge extends beyond bay window for pots; reduced to simplest elements, below-window flower pot holder.**



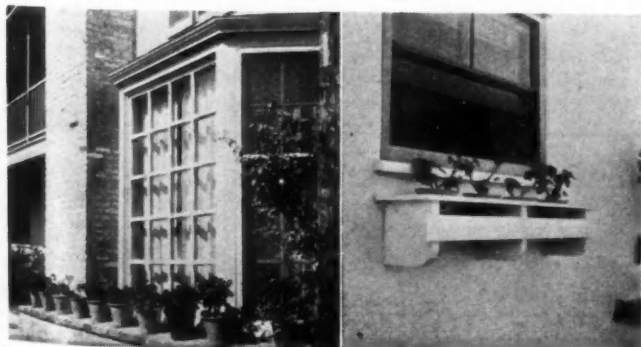


FOR a rustic beach home, the flower box at the left with a scalloped face board fits well into the design.

RIGHT: Giant spider web of round iron welded together and painted white, and 10 in. spider of hammered brass on entrance door of East Pasadena, Calif. home. The flies caught in the web are of wrought iron and are 4 in. long.



THIS door is decorated (not too successfully) with hammered iron hinge straps supplementing the other hardware.



# American HIGH SPEED Machines will make YOU MORE MONEY



## AMERICAN FLOOR SANDERS

There is a big demand for men with modern, high-speed American floor sanders and here is your chance to be your own boss and make big money. As much as \$25.00 a day is not an unusual amount for the floor surfacing contractor to make. American offers you the most complete line of floor machines from which to choose—high-capacity, powerful twelve inch sanders down to smaller sizes for occasional sanding during building construction. There are more American sanders being used in the Defense Housing Program than all others. Choose the favorite of contractors for years—AMERICAN time and money-saving floor sanders. Investigate the wonderful possibilities of this work today without fail.

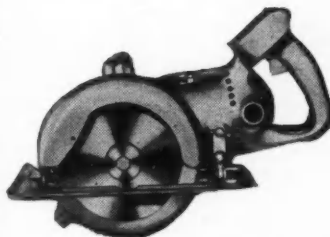
## AMERICAN SPINNER EDGER

Here's a real money-maker and time-saver—the American Spinner for edging and matching the borders with the body of floor work. This is also an excellent machine for stair treads, halls, closets, landings, display windows and other hard-to-get-at places. The patented design and construction of this disc type edger makes it a favorite with the professional floor trade.



## AMERICAN PORTABLE SAW

Slow hand methods on many jobs can be replaced by this speedy, electric portable American Saw. Labor saved by this saw will run into hundreds of dollars yearly.



## SEND COUPON NOW

If you are at all interested in getting into something for yourself and getting out of the "old rut", or if you want to increase your profits in your present business, sign and send in the coupon below. There is no cost or obligation to you. Be sure to check the kind of machine you are most interested in on the coupon below.

**AMERICAN FLOOR SURFACING MACHINE COMPANY**  
511 SO. ST. CLAIR ST. TOLEDO, OHIO

Gentlemen:

Without cost or obligation send complete prices on the following:

- American Floor Surfacing Machines.
- American Spinner Edger Machine.
- American Portable Saw.
- I want to get into something for myself.
- I already own one, quote trade in value (make and years old).....

Name .....

Street .....

City ..... State.....

# WORRIED ABOUT WALLS?



**TRY  
TEMLOK DE LUXE**

**N**EXT time you have a wall worry—when you want something different, something stylish, something practical . . . yet something that won't boost your building cost—try **TEMLOK DE LUXE!**

This permanent insulating interior finish will do several important jobs for you . . . *at one reasonable cost.* It *insulates* efficiently—a fuel-saving and comfort advantage your clients will appreciate. The

factory-applied, fadeproof colors, and the panels, planks, and boards available give you unusual scope for *decorative* expression! Then you get *high light-reflection* and a helpful degree of *noise-quieting*, too—both practical “plus” features of this versatile material.

Here's another advantage of Armstrong's Temlok De Luxe, especially vital nowadays—**IT SAVES BUILDING TIME!** Buildings are often finished *weeks sooner* because there's no waiting for new plaster to dry—no need to remove old

IT'S EASY TO CREATE customer-attracting wall beauty with Armstrong's Temlok De Luxe. In the Tots and Teens Shop, Dallas, Texas, 10" Temlok De Luxe Planks in three colors make a decorative, as well as a practical wall. The white Temlok Panels on the ceiling have unusually high light-reflection value. Temlok sold by: Nolan-Browne Building Materials Co. Architect: F. J. Woerner & Co., Dallas.

plaster in remodeling work. When Temlok De Luxe is erected your interior is ready for occupancy. Get the full facts now which prove it pays to *Try Temlok De Luxe.* See “Sweet's” or write to Armstrong Cork Company, Building Materials Division, 979 Concord St., Lancaster, Pa.



## ARMSTRONG'S TEMLOK INSULATION

De Luxe Interior Finishes • Lath • Sheathing • Hardboards • Monowall



## PRODUCERS TELL US— About Products, Personnel, Plants

### Advertising Campaign Announced by N. D. M. A.

AN educational campaign of advertising and publicity has just been announced by S. O. Hall, secretary-manager of the National Door Manufacturers Association, Chicago. The purpose of this program is to acquaint all trade factors with the N.D.M.A. Seal of Approval which signifies that woodwork bearing this seal has been given a toxic treatment meeting N.D.M.A. preservative minimum standards. The campaign emphasizes the fact that through the application of this treatment wood is even better able to resist the severe service conditions imposed by modern construction.

In a recent interview, Mr. Hall said:

"The Seal of Approval translates the work of many years in universities, research laboratories, and field-testing, into a practical device to protect the public interest. Many scientists and technicians have been engaged in this project. The Seal of Approval was developed in 1938 and offered to manufacturers of woodwork, who agreed to comply with these minimum standards of toxic-preservation-treatment. Licenses have been issued to approximately 50 manufacturers of doors, windows, frames, screens, shutters and blinds. Inspection of the mills and factories involved has been perfected by the National Door Manufacturers Association. Much progress has been made in the past three years to increase the durability and long life of these wood products which have long been so popular with both the trade and the home-owning public.

"A recent survey made by an outstanding statistician in the building industry, clearly indicated the public desire for knowledge on this point. The survey also showed that much confusion existed in the public mind—possibly as the result of claims by competitive materials, seeking to capture a part of the traditional market for woodwork.

"The advertising campaign which will begin in April is a continuing program, strictly educational in purpose and nature. It is designed to reach architects, contractors, builders, dealers, jobbers, financing agencies, and all factors which constitute the building trade."



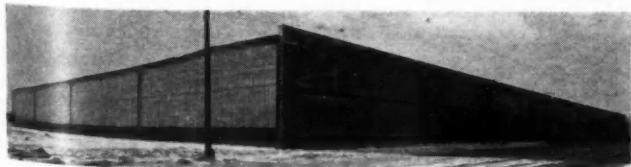
S. O. Hall, secretary of the National Door Manufacturers Association, and its Seal of Approval.



### Ceco Steel Products Expands

FOR the third time since its manufacturing plant was established in Chicago two and one-half years ago, Ceco Steel Products Corporation has completed an addition to its plant facilities to meet the growing demand for its products.

The latest expansion, an addition that increases its capacity 50 per cent, was made necessary principally because of the growing demand for Ceco steel windows and the recent addition of a Bonderizing plant for binding the baked enamel finish on steel windows. This process gives greatly added protection to the finish by tightly binding the enamel to the steel and materially reducing the need for repainting during the life of the structure.



FIRST three sections of Ceco's new plant addition.

# HOPE'S

BONDERIZED STEEL

# WINDOWS

1818 The Name Guarantees 1941



Residence, Norgate-at-Roslyn, L. I., N. Y.  
G. A. Mezger & Co., Builders

## HOPE'S WINDOWS

Make an Important Contribution  
To the Low Cost of Good Building

● In 46 low cost housing projects over \$900,000 was saved by using steel windows.

But it is still more important that years after the construction is completely amortized Hope's Windows remain in perfect condition and their maintenance costs nothing but their small share of ordinary painting.

The record of this company, covering more than a century of experience, is your assurance that these benefits are real.

Write for catalog 68ABA

HOPE'S WINDOWS, Inc,  
Jamestown, N. Y.



**That's why this overhead-type garage door is so popular!**

**USE IT ON NEW AND OLD GARAGES!**



**8-PANEL DESIGN SELLS FOR ONLY \$29 ANY U.S.A. JOBBING CENTER**

● Every car owner wants the convenience of an overhead-type garage door . . . one that costs him little to begin with . . . then presents no operating or servicing problems. The **Craw-Fir-Dor** gives him everything he wants . . . *and more!* This tested, approved door is built of durable Douglas fir. It comes packaged with extra strength hardware and a free-spinning automobile trunk-type lock. It is pre-fitted for an 8' x 7' opening and can be installed by any carpenter in less than half a day.

The 8-panel design retails for only \$29 in any U.S.A. jobbing center. The new flush design, which is reversible and comes with a bundle of moulding to be applied in any desired pattern, sells for just \$1 more. The two 16-panel designs are just slightly higher. See your dealer today. He handles **Craw-Fir-Dors** or can get one for you quickly. For **FREE BOOKLETS**, write **Fir Door Institute**, Tacoma, Washington.

*Now nationally advertised in American Home and Better Homes & Gardens*

**Craw-Fir-Dor**  
 SELF ENERGIZING • ONE PIECE • OVERHEAD TYPE  
 For special residential or industrial installations, write Crawford Door Co., Detroit, Mich., who make a complete line of sectional overhead-type doors.

**Trinity Portland Cement Co. Now Manufacturing White Portland Cement**

It has just recently been announced that the Trinity Portland Cement Company, Dallas, Texas, is now engaged in the manufacture of white portland cements, plain and waterproofed. These products will be manufactured at the company's Houston, Texas, mill and will be distributed throughout the entire country as well as to foreign markets.

Sales of these cements will be under the immediate direction of Paul F. Keatinge, long identified with the white cement business and well known to architects, contractors, and concrete products manufacturers. He was formerly a vice president of the Producers' Council, Inc.



**PAUL F. KEATINGE**

**Blow Torch Tests Concrete Block**

A DEMONSTRATION attracting a great deal of attention and creating considerable comment at the Concrete Industries Convention, held at the Sherman Hotel in Chicago Feb. 10-12, was a concrete block kept under the blast of a blow torch hour after hour, for the full three days, with no damage to the block itself and with very little perceptible heat within the core. Practically every visitor who passed the exhibit stopped to insert his hand into the core immediately behind the glowing surface just to convince himself it was no illusion, and that the heat from the outer surface did not pass through.

This block was an ordinary 8 x 8 x 16 unit cast with Celotex's Lightweight Aggregate, Pottscoc, which is made by expanding molten blast furnace slag. Since the expanding process begins with the slag at 2400 degrees Fahrenheit, there is no residue of combustible material left in the finished product. During expansion, millions of tiny, insulating, dead air spaces are formed.



**CONCRETE** block of "Pottscoc" Lightweight Aggregate resists blow torch heat at Chicago Concrete Convention.

**Two Water Heater Lines Announced**

TWO 1941 lines of electric water heaters, with double action automatic thermostatic controls, are now being produced by the Range and Water Heater Department of the Westinghouse Merchandising Division in Mansfield, Ohio; price ranges on both the

Olympian models and the new Special line have been reduced.

The Olympian line of square, round, and table-top models incorporates all the latest engineering advances in water heating construction. An exclusive feature of the Olympians is the handy cleanout opening for easy removal of sediment and lime deposits where there are difficult water conditions. All Olympian models are equipped with copper hot water lines, assuring dependable service for many years.

The thermostats have a double snap-acting structure to operate switching contacts, accomplishing high wattage switching whether the load is slight or great. Olympian square cabinet models come in 30, 40, and 52 gallon capacities; table-top Olympians have 15 and 30 gallon tanks, and the round Olympians 30, 40, 52, 66, 80, and 120 gallon capacities.

The Special line consists of round models with capacities of 10, 30, and 52 gallons, and a table-top 30 gallon model, all of which are designed to solve household water heating problems with the least capital outlay and maintenance cost. These heaters have standard Westinghouse thermostatic controls, Corox economizer heating units, Palco Wool insulation and a scientific cold water baffle which prevents temperature drops from incoming water. These Westinghouse water heaters combine beauty with maximum utility, being finished with high temperature Dulux baked on bonderized steel.

In conjunction with a new selling and advertising program to develop water heater sales prospects, Westinghouse distributors are

furnishing dealers with the X-Ray Visualizer Sales Presentation. This book enables the prospect to see what is inside the water heaters, and sales literature, display aids and a full explanation of the new Westinghouse Informative Label, the new consumer's buying aid, will accompany it.

**OLYMPIAN** square electric water heater, 52 gallon capacity, shown in a kitchen installation.

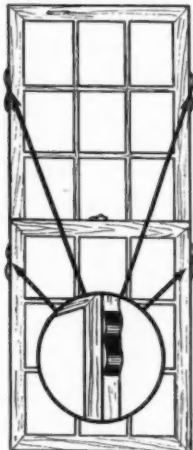


### New Window Spring Speeds Construction

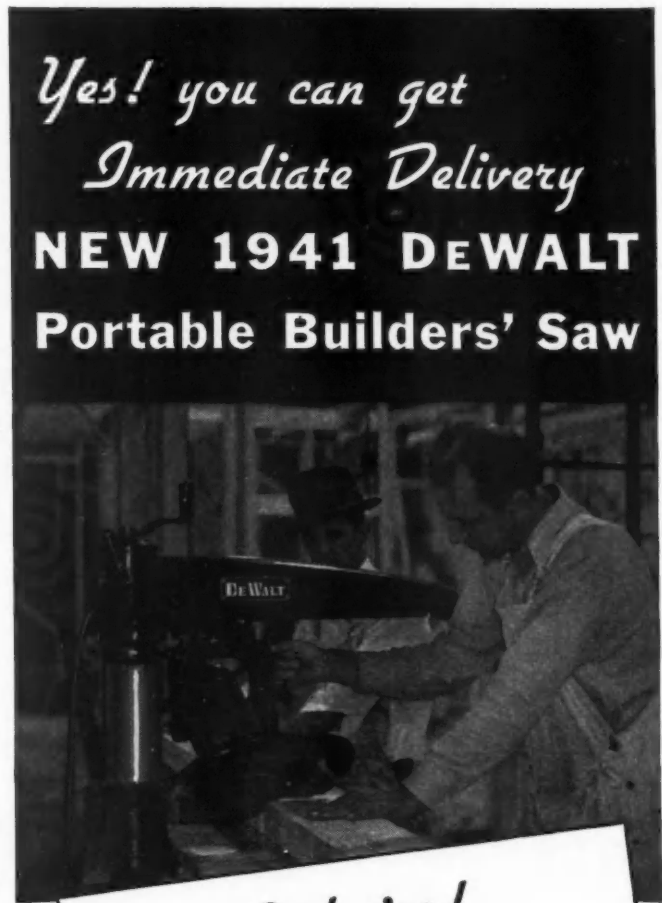
**M**ORE than thirty U. S. Army Camps, hospitals and airports are going up faster and at a lower cost to taxpayers because War Department engineers have approved the use of the Jiffy window control spring—an economical and efficient window spring which actually saves money on the cost and application of barrel bolts while allowing the same freedom of opening and closing for double-hung wood windows that weights and pulleys provide. It is distributed by Dodge Sales Co., 519 N. 66th Street, Milwaukee.

Army construction superintendents were quick to see that this simple device would help them fulfill their contracts on time. Approximately 16 minutes of labor time are saved on each window, 10 labor hours on the average barracks building, by the Jiffy window control spring.

The Jiffy window control spring can be applied on new construction by anyone able to drive two brads. Four Jiffy springs are applied to each window between the edge of the sash and the jamb—one on each side of both the upper and lower sash. They provide a constant pressure which holds the sash firmly in any position, but which permits easy raising and lowering. It is not necessary to plough out, mortise or recess to install these springs.



**WINDOW** control springs attach to sides of sash as shown.



*Yes! you can get  
Immediate Delivery*  
**NEW 1941 DEWALT  
Portable Builders' Saw**

### *Exclusive!*

- ★ FIBERGLAS MOTOR INSULATION does not "burn" . . . gives double protection
- ★ SEALED GREASE-PACKED MOTOR BEARINGS . . . need no lubrication on the job
- ★ BRUSHLESS DIRECT DRIVE MOTOR . . . no armature or gears to worry about
- ★ BALL BEARING ROLLER HEAD for tireless operation . . . gets more work done
- ★ BALANCED POWER on every cutting operation . . . fast and accurate

Try this new 1941 DeWalt and you'll get a portable builders' power saw which surpasses all previous levels of performance in the lower-priced field. It gives you the fastest . . . most accurate . . . and lowest cost method of cutting material on your job!

Let us help you earn greater profits! Call in your local DeWalt dealer for a demonstration on your job . . . make a thorough test of the finest builders' saw we ever built . . . give it a real trial on your work without obligation. Write, wire or 'phone . . .

**DEWALT PRODUCTS CORPORATION**  
443 FOUNTAIN AVE., LANCASTER, PA., U.S.A.

Please send more information on the 1941 DeWalt Builder's Saw.

Name \_\_\_\_\_

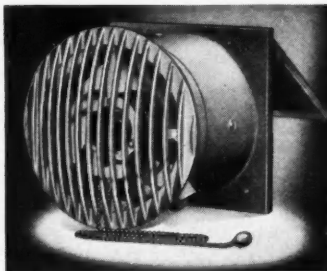
Address \_\_\_\_\_



**NOW YOU CAN**  
*End the "Grime Wave"*  
**IN EVERY HOME!**



... with a genuine ILG "Built-In" Kitchen Ventilating Fan—now available in complete range of sizes and prices.



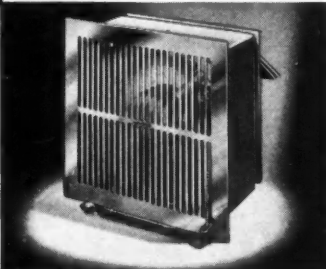
**◀ ILGVENT...350 C.F.M.**

... newest addition to ILG line—modestly priced—plenty of capacity for compact kitchens in modern homes. Telescopic cabinet ... weatherproof construction ... handsome streamlined styling ... quiet, trouble-free operation.



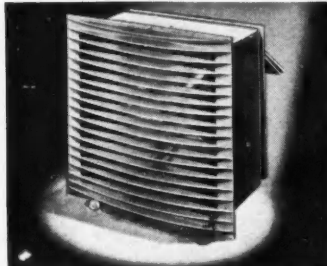
**ILGETTE...500 C.F.M. ▶**

... for medium-size kitchens. Telescopic cabinet and all other ILG features including self-cooled miracle motor that "breathes"—never "gums-up" from contact with foul air. Like all ILG "Built-In" models, unit becomes permanent, integral part of kitchen wall.



**◀ ILGAIK...1000 C.F.M.**

... for larger kitchens. Note new horizontal line treatment of mirror-finish aluminum grille, which, after installation, conceals fan mechanism. Either Ilgair or Ilgette may be equipped with auxiliary motor in place of pull chain for complete automatic operation by electrical wall switch.



*Nationally Advertised* to able-to-buy families throughout America. Write today—get details on ILG's new price schedule (F. A-1040) and 1941 program that helps you make money.



**ILG ELECTRIC VENTILATING CO.**  
 2852 N. CRAWFORD AVENUE, CHICAGO, ILL.  
 Offices in 43 Principal Cities



*Vitalized*  
**VENTILATION**  
 AND AIR CONDITIONING

\* AIR CHANGE... NOT JUST AIR MOVEMENT!

**New Flame-Proof Cotton Insulation**

THE Reynolds Metals Company of Richmond, Va., has begun production on a new insulation material to be called Reyn-O-Cell. It will make use of fire-resistant cotton especially treated to resist both water and fire, the fire-resistant qualities being obtained through a process that has been developed under the sponsorship of the United States Department of Agriculture. Cotton in itself is naturally water-repellant, with great resiliency, and its weight is practically negligible.

The insulation material will be supplied in blanket-form rolls of various widths and thicknesses, which can be cut to desired lengths. The material will be sold alone, or with asphalt-impregnated paper backing, or in combination with reflective metal insulation (aluminum foil). The largest use of this cotton-made insulation will be for walls, roofs, and partitions of residential and industrial buildings of all types.

Five of the six types of Reyn-O-Cell offered to the trade are produced in mounted form, provided with flanges for fastening to the rafters, joists, or studs of buildings. This new insulation does not tend to sag or settle, because cotton is one of the lightest and toughest of fibres. The flanges on the insulation hold the cotton blankets in the center of the wall construction, thus providing space on either side for the circulation of air. This increases the efficiency of the cotton insulation in resisting heat, as well as provides for the dissipation of any condensation, and minimizes structural decay.

**N.R.L.D.A. Board of Directors to Meet**

THE National Retail Lumber Dealers Association, Washington, D.C., has announced that the Annual Meeting of its Board of Directors is to be held in Washington May 14 to 16 at the Shoreham Hotel. This is to be primarily a meeting of the Board of Directors, but any dealers who wish to do so are invited to attend.

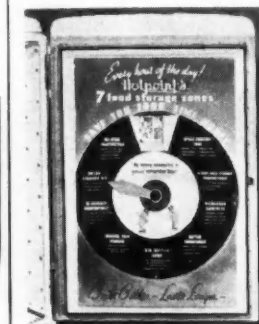
**New Six-Cubic Foot Refrigerator Added**

A NEW six-cubic foot refrigerator has been added to the Hotpoint 1941 line, which includes several features usually found only in much higher priced units. The exterior finish is two coats of baked Calgloss enamel on Bonderized steel, and the one-piece steel cabinet interior is finished in white porcelain enamel with acid-resisting reservoir bottom. The hardware is of heavy brass chromium-plated.

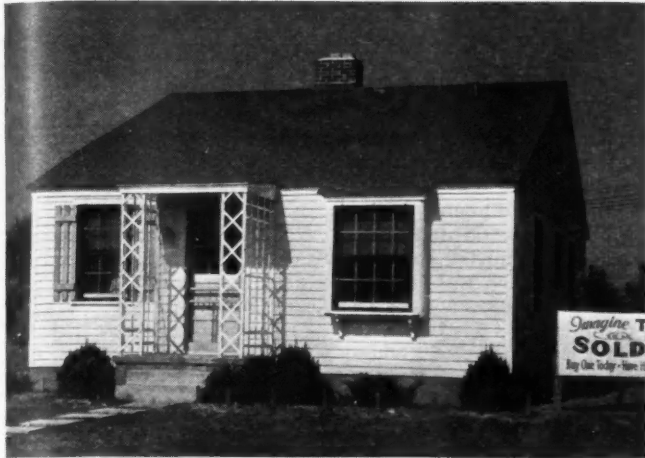
Interior features include stainless steel Speed Freezer with heavy gauge aluminum door, equipped with over-center spring which allows the door to remain open until manually closed. There are four Pop-Ice trays in the Speed-Freezer, designed for easy removal of both trays and ice cubes. Also included is the Hotpoint Six-Way cold storage compartment, which allows for flexibility in storing many different types of food in the coldest part of the cabinet, as well as the gliding vegetable pan with glass top.

As a sales aid, the new 1941 Hotpoint Refrigerator Door Visualizer shows the advantages of the storage zone by spinning the dial and pointer will automatically dramatize a particular feature. This is illustrated in the view below, to the left, which shows the device mounted on the refrigerator door.

**BELOW:** New refrigerator sales aid is mounted on door by simply pressing it in place. New refrigerator model at right.

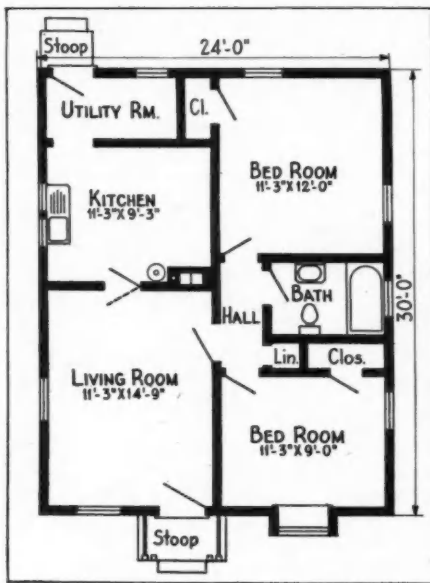


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ABOVE: A typical Sandidge - Murphy small home in its Owensboro, Ky., project is attractive and well detailed.

THE plan for this house presents four rooms, compactly arranged, within 24 by 30 feet over-all; has no waste space. TruCost figures for this house will be found on page 201.



## Owensboro, Ky., Small Homes Project Quickly Completed and Sold Out

Sandidge-Murphy's First 39 Units Find Ready Market

TO Owensboro, Ky., on the Ohio River 120 miles west of Louisville, during the past year has come unusual national recognition for having initiated one of the first large scale FHA insured operations in which prices are under \$2,000 for small homes that can be purchased for not more than \$15 a month. The Sandidge-Murphy Development Company is the firm which conceived the possibilities of this sort of enterprise under FHA insured Title I, Class 3 loans.

The company is a partnership between C. C. Sandidge and Gleason Murphy, Jr., who had agreed that if houses could be purchased for a very low down payment, they could be sold in sufficient volume so that they could be produced in quantities. Before the formation of the partnership firm, both partners had been considerably impressed with the possibilities of mass production in the housing field and had had their attention called to the unsanitary and almost uninhabitable shot-gun houses in Owensboro, which were renting for \$10 to \$15 a month. This fact was forced on Mr. Sandidge's attention through his insurance connection with real estate, and upon the attention of Mr. Murphy through his employment of labor at the Murphy Chair Company.

Thirty-year old C. C. Sandidge is the head of C. C. Sandidge & Company, general insurance agents, and was previously connected with the Ken-Rad Corporation in the sales department.

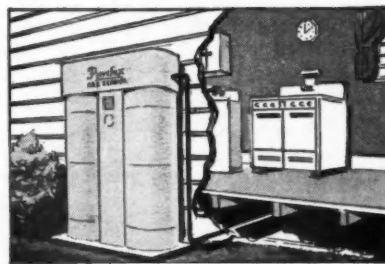
(Continued to page 174)

# OUT WHERE THE GAS MAINS END ...



## that's where "PYROFAX" Gas Service begins.

"PYROFAX" GAS SERVICE is the modern, clean, economical way to cook, heat water and make ice in homes beyond the gas mains. It's real gas—not a liquid fuel—and burns just like city gas, without soot or odor. It will make a hit with your clients because it makes cooking easier, quicker, cleaner, more economical. "Pyrofax" Gas Regulating Equipment is quickly installed without digging. Supply is guaranteed *in writing* by Carbide and Carbon Chemicals Corporation. Install "Pyrofax" Gas Service—and be sure of client satisfaction!



**DEPENDABLE! AUTOMATIC!**  
Two cylinders are delivered to the home—one for use—one for reserve—to prevent the user from running out of gas. Automatic equipment, available at slight extra charge, turns on supply from reserve cylinder as soon as cylinder in use becomes empty.

# PYROFAX

TRADE-MARK



**SUPERIOR GAS SERVICE**

COOKING • WATER HEATING  
REFRIGERATION

BEYOND THE GAS MAINS



MAIL COUPON NOW!

"PYROFAX" GAS DIVISION, Dept. A,  
Carbide and Carbon Chemicals Corporation,  
30 E. 42nd St., New York, N. Y.

Please send me all the facts on "Pyrofax" Gas and Specifications Sheets on installation.

Name \_\_\_\_\_

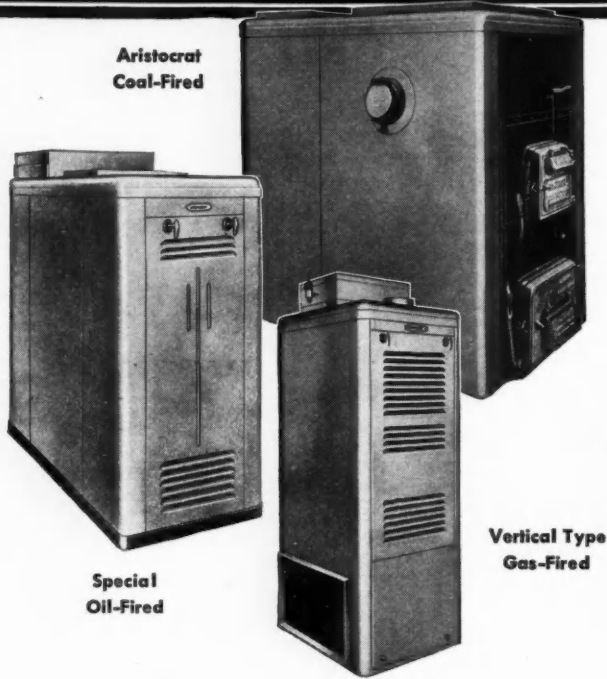
Firm \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

# MONCRIEF

## WINTER *Air* Conditioners



### Quality Equipment For Low Cost Homes

**Y**OUR Moncrief dealer can show a wide selection of quality built, attractively priced winter air conditioners and furnaces specially designed for low cost homes. They give all you can ask in compactness and style, and all produce high efficiencies with low fuel consumption. Moncrief units, adapted for burning coal, gas or oil, include features that make splendid sales points. Write for name of your Moncrief dealer.



**Our Engineering Department** is maintained to cooperate with builders and architects and assist in estimating and laying out plans. Do not hesitate to avail yourself of this service. It is free.

Write for catalogs and data sheets.

**THE HENRY FURNACE & FOUNDRY CO.**  
3479 E. 49th ST. • CLEVELAND, OHIO

### Owensboro Small Homes—

(Continued from preceding page)

Gleeson Murphy, Jr., the same age, is president of the Murphy Chair Company.

There were very few house builders in Owensboro with the exception of regular planing mills and contractors and none of them operating on a mass production basis nor selling under Title I, Class 3 financing plans.

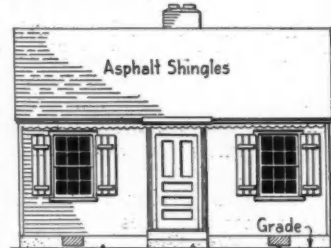
The Sandidge-Murphy Addition, where 39 three-room houses have been completed and occupied, was bought in January 1940. The land, which was previously used as a truck garden, was immediately adjacent to the city, and it was necessary to have it taken into the city limits. Five exterior designs were included in this project. All 39 houses were under construction at one time, all material orders and contracts being placed at one time; this brought about a 20 per cent saving from the mass purchase of material and the mass production of units, and lower overhead expenses per unit.

The down payment on all houses was \$100. A \$15 deposit reserved a location for a purchaser, while the additional \$85 was payable when the loan was closed with, of course, the proceeds of the loan. No purchasers have made a down payment larger than the \$100. All houses were financed under Title I, Class 3, 15-year loans.

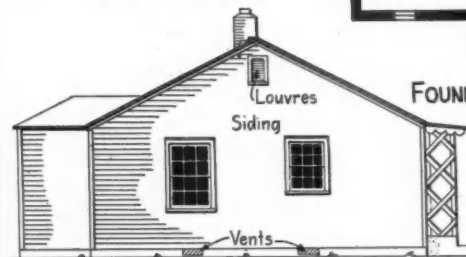
Cost breakdown of the three-room houses follows:



ABOVE: One of Sandidge-Murphy Development Company's three-room houses, Owensboro, Ky.



FRONT ELEVATION



LEFT SIDE ELEVATION



FOUNDATION PLAN

FLOOR plans of this three-room unit indicate complete facilities within 22 by 24 feet overall.

Ame  
Excav  
Concr  
Brick  
Lum  
Flas  
Lath  
Plum  
Carpe  
Elect  
Light  
Paint  
Sand  
Sub  
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Excavating .....	\$ 9.00
Concrete work .....	98.00
Brick work, fines .....	36.00
Lumber .....	631.00
Finish hardware .....	10.00
Flashing .....	2.00
Lathing and plaster labor .....	48.00
Plumbing and gas connections .....	226.00
Carpenter work .....	156.00
Electric wiring .....	26.00
Light fixtures .....	10.00
Painting .....	74.00
Sanding floor .....	8.00
<b>Subtotal .....</b>	<b>\$1,334.00</b>
Cost of lot .....	100.00
<b>Gross Profit .....</b>	<b>136.00</b>
<b>Total .....</b>	<b>\$1,570.00</b>

Considering their reasonable cost, these houses were well built and equipped, particularly from a structural standpoint; frames were braced, pipes, windows and joints carefully sealed, caulked and insulated against leakage and infiltration, frame shielded against termites, and other points properly flashed. Quality was maintained in equipment and fixtures throughout.

Since the original plot was developed, and completed, other units have been added to Sandidge-Murphy's fast-growing building business—over a hundred houses have been sold to date. In fact, so much interest has been created in these operations that builders from other cities have gone to Owensboro to study their methods.

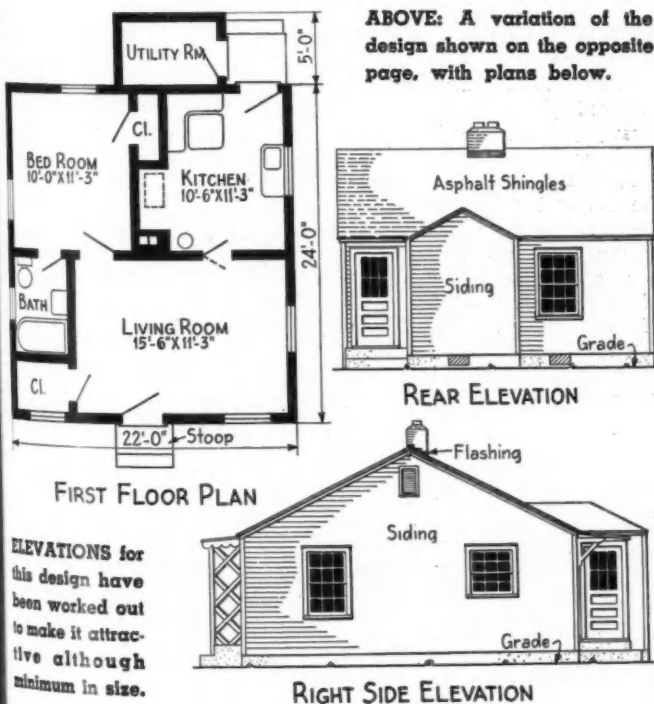


## HERE LUMBER GETS ITS *Plus*

It takes *punch* to drive a wood preservative down into the fibers where protection counts. That's why the *plus* in Wolmanized Lumber\*—protection against decay and termites—is actually pumped into it by the vacuum-pressure process.

Only by hydraulic pressure in closed steel cylinders can real penetration and diffusion of preservative be attained. That is why Wolmanizing adds a *dependable plus* to lumber. And the natural advantages of lumber—its cleanliness, strength, paintability, ease of handling and freedom from odor—are unchanged.

Wolmanized Lumber, the only product of its kind sold under one brand the country over, is distributed through retail lumber dealers. Write for samples of folders prepared especially for distribution to building prospects. American Lumber & Treating Co., 1645 McCormick Bldg., Chicago, Ill.



Wolmanized Lumber, used in the danger zone, gives reliable protection to the entire structure. Yet it adds less than 2% to the total cost. Banks and financing agencies approve its use.

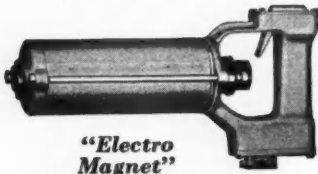
\*Registered Trade-Mark



# WOLMANIZED LUMBER

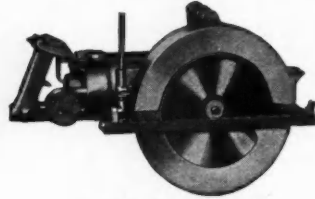
# SYNTRON

REG. TRADE MARK

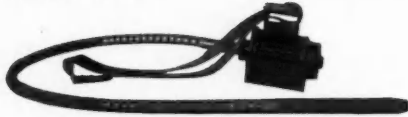


**"Electro Magnet"**  
**ELECTRIC HAMMERS**

For Drilling, Cutting, and Dressing Concrete



**"High Torque"**  
**ELECTRIC POWER SAWS**



**"High Speed"**  
**ELECTRIC CONCRETE VIBRATORS**

Syntron Tools carry two reputations—and are known by contractors all over the world—

First: As tools that can be depended upon to work through the job without breaking down.

Second: As labor savers that will pay for themselves on the first fair sized job.

Write for new booklet illustrating many ways these tools speed up jobs and save money

## SYNTRON COMPANY

295 Lexington Ave.

Homer City, Pa.

*new improved sash balance and weather strip*

### MAKES ANY WINDOW A modern WINDOW

Here is a "two-in-one" feature that helps sell houses and saves you money besides. Combines weather-stripping and balance, making any double-hung window easy to operate and weather-tight.

**SAVES UP TO \$1.00 PER WINDOW**

Use economical plank frames for new sash or cover up old pulley holes on old jambs with Master No-Draft Sash Balance and have a modern sash installation at low initial cost and minimum maintenance expense.

Send coupon today for complete information. It will pay you to learn about this unit.

MASTER METAL STRIP SERVICE, Inc.,  
1722 N. Kilbourn Ave., Chicago, Ill.

Gentlemen: Please send me information on the Master No-Draft Sash Balance.

Name.....

Address.....

## BOOKS on BUILDING

### A Review of Current Publications

FOR information about these building books, write American Builder, Book Service Department, 30 Church Street, New York City, or the publishers.

**THE CARPENTER'S AND BUILDER'S PRACTICAL RULES FOR LAYING OUT WORK**—by D. A. Rogers. 1940. 6th. 51 pages, illus. 4 1/4 x 6 3/4, flexible. D. A. Rogers, Minneapolis, Minn. \$1.00.

The new and revised edition of this handbook consists of short but practical rules for laying out octagons, ellipses, roofs, groined ceilings, hoppers, spirals, stairs and arches, and gives tables of board measure, length of common, hip, valley, and jack rafters, square measure, cube measure, and measure of length. Also presented are rules for kerfing, drafting gable moulding, getting the axis of a segment, laying off gambrel roof, and explaining the steel square. In the tables are given 2,700 different lengths of rafters, 300 different lengths of braces and the proper cuts for them.

**HEATING, VENTILATING, AIR CONDITIONING GUIDE FOR 1941—19th.** 832 pages; 312 page Catalog Data Section, illus. 6 x 9, flexible. American Society of Heating and Ventilating Engineers, 51 Madison Ave., New York City. \$5.00; thumb index edition, \$5.50.

In the new 19th edition of this Guide, recent authoritative and useful engineering data have been included, and all 46 chapters have been rearranged and grouped into seven sections to provide a more logical arrangement and to improve the correlation between the Technical and Catalog Data Sections of the book. Twenty-one chapters have been reviewed or rewritten, and many minor changes have been made in the other 25 chapters. An entirely new chapter on the Thermodynamics of Air and Water Mixtures is presented, based on the most recent information available on the subject. An important part of The Guide is the Catalog Data Section, in which much useful information has been supplied by the various manufacturers, and this section has been grouped into subdivisions for convenience in locating data. Also included are the Roll of Membership of the Society and complete indices to the Technical and Catalog Data Sections.

**THE STORY OF HARBOUR GREEN**—by Randolph Evans, A.I.A., and Kenneth F. Duncan. 1940. Part I—82 pages, illus. 8 1/2 x 11, paper, spiral binding. Kenneth F. Duncan, 140 Nassau St., New York City, \$12.50.

In this book constituting Part I of a "package," there are included photographs and floor plans of twenty-four of the most popular houses built at Harbour Green, typical successful Harbour Green advertisements, two sets of specifications—one a set that conforms to FHA requirements, the other a set of the original cost-saving specifications used when desired by the purchaser where FHA insurance was not desired—a sheet of cost data, and photographs and floor plans of six additional houses designed for a suburb of Washington, D. C. Part II of the package consists of full-size working drawings of twelve of the Harbour Green Houses and of the six Washington houses.

**COLORING, FINISHING AND PAINTING WOOD**—by Adnah C. Newell. 1940. 480 pages, illus. 6 1/4 x 9 1/4, cloth. The Manual Arts Press, Peoria, Ill. \$4.50.

A comprehensive book on wood-finishing materials, equipment and processes which contains numerous details regarding scraping, sanding, filling, staining, lacquering, enameling, varnishing, and painting wood; also analyses of stains and colors, compositions of various resins and pigments, and the best techniques for selecting, preparing, and applying all types of finishes to wood. Because the use of quick-drying varnishes and the coloring of metals have spread widely the last few years, the author has now added six chapters to the original text, as published in 1930.

## "Luxury Items" Speed New Home Sales

(Continued from page 107)

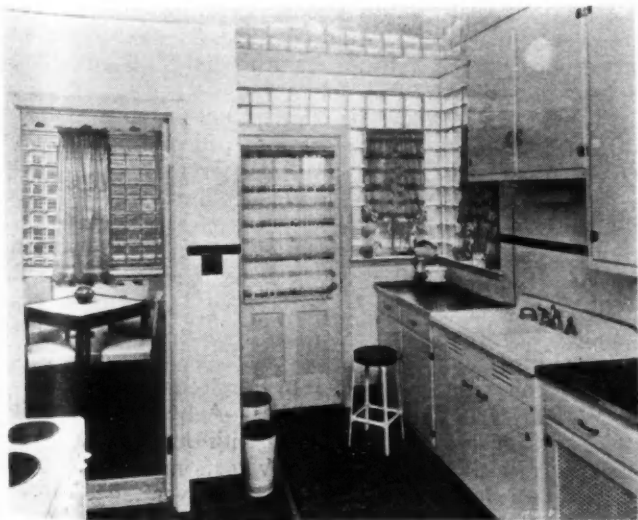
Dach. These homes will set a new standard for both quality and design.

"16. Built-in 'all gas' developments, where gas does the four big jobs—cooking, water-heating, refrigeration and home heating—making for cleaner, more healthful communities."

Architect Trimble, in discussing the unusual amount of structural glass, mirrors and glass blocks in these homes, paid tribute to the local dealer-distributor of the Pittsburgh Plate Glass Company. Installing costs have been materially reduced, he said, by the company's sending out a man to instruct some of the builder's men in the art of practical glass setting. Also, in figuring on a quantity of glass and mirror specialties to run all through these developments—300 houses—naturally considerable economy was achieved. Trimble further expressed the belief that the buying public is now so glass-conscious that these special glass features really do give them extra quick sales on these "Luxury Homes."

Quite a radically new and different idea for bathrooms of a luxury nature has been worked out by Mr. Buckheit and his associates. It is what they call a dressingroom-bathroom and is being used as a sales feature in practically all of the present program of houses. One of these dressingroom-bathrooms is shown opening from bedroom No. 1 on the second floor of the \$12,000 demonstration home in Country Club Heights, illustrated at upper left page 106. The bathroom fixtures are placed on an elevated platform, one step up. Tile flooring and Carrara wainscot are used only on this upper bathroom part of the room. The other half, the dressing room, is carpeted and the walls are plastered. A double wardrobe is part of the dressing room. The result is an extra large luxury-appearing bath that appeals greatly to the ladies; and the cost is very little, if any, greater than for the conventional bathroom, because the area to be covered with tile and glass is only a part of the whole.

This is an example of unusually attractive results secured by careful planning plus sufficient volume to merit low cost. Throughout the entire series of homes such quality items are included, but not in a way to penalize the buyer. Quality that guarantees individuality and production volume to standardized costs at an attractive level is the key to quick sales of homes in each of the three current Buckheit developments.

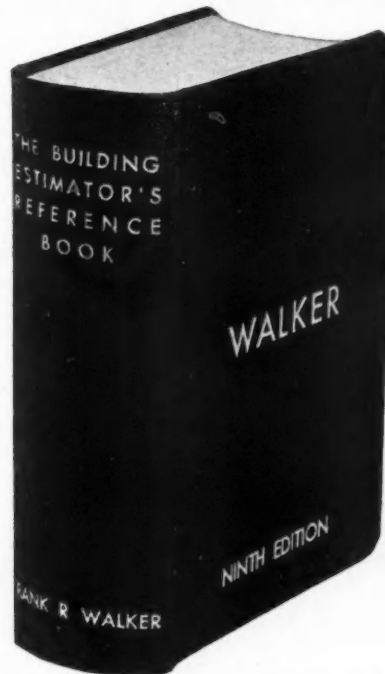


Glass blocks are used effectively in the kitchens of the South Hills Company "Luxury Homes."

## The Building Estimator's Reference Book

### Will Help You

1. Increase Your Profits
2. Stop Your Losses
3. Prepare More Accurate Estimates
4. Save Your Estimator's Time
5. Perform Your Work at the Lowest Possible Cost



This New Guide contains just the information you need to prepare your estimates quickly and accurately. It gives the correct method of measuring and listing quantities from the plans, together with accurate material quantities and the labor hours necessary to complete any class of work.

Regardless of whether you do alteration, remodeling or repair work; or whether you build houses, apartments, commercial or industrial buildings—large or small—it contains just the information you require to prepare money-making estimates in the shortest possible time and with the least possible effort.

1,678 pages, illustrated, index, 4½ x 6½, flexible, \$10.00.



### Vest-Pocket Estimator

Size 2½ x 5 Inches—Flexibly Bound

**FREE**

This popular little book (not sold separately) contains 220 pages of up-to-the-minute estimating and cost data in condensed tabular form for ready reference. Fits right in the vest pocket and is always with you on the job or in the office ready to help you with your daily problems: Worth its weight in gold to every contractor and estimator.

### Send for Your Copy Today!

You take no chances in sending for these new guides. Try them out for 5 DAYS FREE on your own work or when preparing your own estimates. If they don't more than prove their value to you, return them and the purchase price will be refunded at once.

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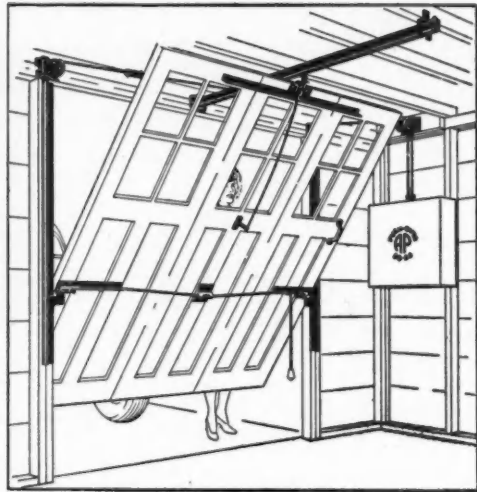
**AMERICAN BUILDER and BUILDING AGE**

30 Church Street,

New York, N. Y.



# ALLITH



## THE OWNER BLAMES YOU

He and his family will use the garage doors on rainy days—icy days—and cold, frosty, snowy days. If the doors give them trouble—they'll blame you.

The Push-over Stock Set is the answer. It is dependable, fool-proof and trouble-proof. It will fit all openings up to 8' 11" wide by 8' high. Sets for wider opening have two top tracks, only 5 1/2" headroom needed.

**ALLITH-PROUTY, INC.**  
DANVILLE, ILLINOIS

### 3 1/2-S NON-TILTING KWIK-MIX

Modern rubber tired roller drum drive—No ring gear—No countershaft—Less wear—Smooth running—Load while mixing—Increased production—End discharge.

### 3 1/2-S TILTING KWIK-MIX

End discharge—Air-cooled engine—Light weight—Welded construction—Anti-friction bearings—Spring mounting—High speed trailing.

Write for Bulletin AB

KWIK-MIX CONCRETE MIXER CO.  
PORT WASHINGTON . . . WISCONSIN

## Bargain Homes Costly to Own

(Continued from page 81)

We hear a great deal about the high cost of building materials and of high labor wage rates, but almost nothing of a much more important cause of high building costs, namely, inexperienced or inefficient management on the job. In this discussion and in the diagrams (pages 80 and 81) we are stating the case for *real economy* in home building, which results when good materials and equipment are used by skilled craftsmen under experienced management to create homes of lasting worth and of low monthly maintenance and operating expense.

The fact that most houses are now sold on the basis of monthly payments extending over a period of years gives a new opportunity for demonstrating the actual dollars and cents economy of quality construction. In buying a home the purchaser should consider not what the immediate outlay or the "principal sum" may be, but what will be the *total* monthly cost of acquiring full ownership *plus* the average monthly expense of occupancy.

These arguments for quality are just as valid on houses requiring little or no financing; but where amortization payments extend over a 20 to 25-year term, the costs are more readily seen. For instance, in addition to the monthly payments on the original cost of the home, the owner should include what it costs to heat and light the house and keep it in repair. Often an increase in the first cost results in substantial savings in operation.

To illustrate how, on this basis, a \$4,770 "bargain house" actually costs more per month than a quality built \$6,000 one, consider the accompanying table (see page 179). This is, of course, a hypothetical house in which the individual items are national averages and may vary widely in different communities and for different types. It does, however, definitely show that when monthly operating and maintenance costs are taken into consideration, cheap materials, equipment and services are *costly*. It clearly shows that *A Good Home Costs Less To Own*.

Let us consider some of the individual items in this table and the important part the contractor or builder plays in producing a low-upkeep job. Take ITEM 1, masonry and concrete work, for example. Sand is cheaper than cement, and cheap, dirty sand and gravel cost much less than clean, hard, well graded materials. If a "bargain job" is wanted, your "bargain contractor" might easily cut \$100 on this item, but the leaks, cracks and imperfections that would be sure to show up along about the "second winter" would cost a great deal more to repair than the 58 cents a month this \$100 adds to the amortization cost.

ITEM 2—It would be child's play for any contractor to cut \$200 on the cost of lumber and millwork by using green, ungraded lumber and cheaper millwork, improperly fitted or made from low-quality lumber. Also "wood butchers" cost a lot less than expert carpenters.

ITEM 4—Roofing—On a small home, \$60 can easily make the difference between a cheap roof and one that will give long years of satisfactory service. That \$60 amounts to less than 35 cents a month on the mortgage payments, but over a period of 25 years the cost of a cheap, leaky roof will run into hundreds of dollars.

WIRING AND FIXTURES—A house inadequately wired and insufficiently supplied with outlets not only has smaller resale value, but actually costs money, due to the excessive use of current caused by overloaded circuits.

HEATING—A quality contractor will use a soundly engineered, efficiently designed heating system with which he is familiar and which he knows from practical experience will deliver and assure low fuel bills. But a "bar-

**\$6000 QUALITY HOME COSTS 18% LESS TO LIVE IN THAN \$4770 "BARGAIN"**

	"BARGAIN" HOUSE		QUALITY HOUSE	
	First Cost	Average Monthly Operating or Maintenance Cost Over 25 Yr. Period	First Cost	Average Monthly Operating or Maintenance Cost Over 25 Yr. Period
1. Masonry and concrete work.....	\$ 600.00	\$ .75 & up	\$ 700.00	none
2. Lumber and millwork.....	1,400.00	1.25 & up	1,600.00	\$ .25
3. Plaster or wallboard.....	275.00	.75 & up	325.00	none
4. Roofing.....	150.00	1.00	210.00	none
5. Sheet metal.....	60.00	.25	90.00	none
6. Insulation.....	none	2.00 & up(1)	170.00	none
7. Wiring and fixtures.....	110.00	.20 (2)	150.00	none
8. Heating.....	290.00	10.00	375.00	6.00
9. Plumbing and fixtures.....	315.00	.50 & up	400.00	none
10. Painting and papering.....	175.00	2.00	225.00	1.00
11. Hardware.....	75.00	.25	125.00	none
12. Kitchen equipment, including range and refrigerator.....	200.00	9.00	400.00	4.20
13. Land and unspecified items.....	720.00		730.00	
14. Contractor's profit.....	400.00		500.00	
15. TOTAL COST.....	\$4,770.00		\$6,000.00	
16. Down Payment.....	470.00		600.00	
17. Monthly Mortgage Payment (25 year—\$5.81 per \$1,000)		\$27.61		\$1.97
18. Taxes and insurance.....		6.00		9.00
19. TOTAL Monthly Cost of Owning and Operating Home.....		\$33.55		\$51.82

(1) Increased fuel cost.  
(2) Loss of electric efficiency.

THE HIGH COST of cheap construction was never better illustrated than in the table above. The "bargain" house actually costs the home owner \$11.74 a month MORE to live in. The estimates on operating and maintenance costs are conservative national averages. Due to wide variation in local building practice, individual items may not apply locally and should be refigured by a qualified local builder to fit local conditions.

gain contractor" under the pressure of a bargain-seeking buyer can easily cut \$85—or much more—on a heating plant. Although this \$85 cut would mean only 50 cents a month less on the mortgage payments, it would almost surely result in high fuel bills and maintenance expenses that could easily cost from \$2 to \$10 a month.

CHEAP PAINT (Item 10) is another item where "pennywise" bargain hunters get into trouble. The difference in high quality paint over the very cheapest, unknown brands is very slight and amounts to only a few cents a month on the mortgage payments. But if the cheap paint has to be burned off or scraped off in a year or so, that "bargain buy" was a costly one.

ITEM 12—A large number of builders now sell their houses with kitchens fully equipped with the most modern and efficient range, refrigerator and other equipment. Does this pay out for the home owner? He probably has some old equipment that he hates to throw away. Actually, the properly equipped kitchen with an economical and efficient range and refrigerator will save far more in operating costs each month than the added payments to cover the new equipment.

When the average monthly costs of operating and maintaining various items listed in our table are totaled, it becomes immediately apparent that the cheap, "bargain house" costs much more to live in than the quality house. The buyer of the quality \$6,000 house not only has a better, more comfortable house, with higher resale value, but actually pays less per month for it.

"I Find the  
**HEATILATOR** Fireplace

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● Take this tip from a speculative builder. He says: "New features help to sell a house just the way they help to sell an automobile. That's why I always put a Heatilator Fireplace in every house I build. This new-type fireplace that circulates heat is the most important new feature you can add to a living room—warms every corner of the room, will not smoke. Gives the house extra value in the eyes of the purchaser. It makes the house easier to sell."

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WITH **PECORA COMPOUND**

**And Use This Gun—**

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Pecora Calking Compound is also available in bulk. It is the most economical calking material you can use, for it will not dry out, crack or chip when properly applied. First choice of leading architects and builders for 33 years.



With 3 Nozzles and 4 Cartridges of approx. 1 qt. each  
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Member of Producers' Council, Inc.  
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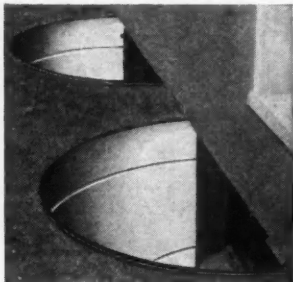


ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATING  
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## GOOD CONSTRUCTION AT THE FOUNDATION — WITH DONLEY AREA WALLS

SAVE **50%**



Get good area wall construction — good looking, long lasting, trouble free construction at low cost with Donley Area Walls. These ready-made, ready-to-install area walls take the place of expensive masonry walls. Donley Area Walls of steel are designed to offer least surface to the action of frost. Users report savings of up to 50%—you just set them in front of the window and backfill, (can be fastened to foundation if desired).

Arch formed and ribbed for strength, made of 16 ga. copper bearing steel, painted two coats (last coat special long life aluminum finish). Carefully crated for protection during shipment.

Send for 44 page catalog describing Donley Steel Area Walls and 50 other articles to improve and lower home building costs.



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#### Folding All-Metal Saw Horse Legs!

Easy to transport—never wear out—set up in seconds with any 2 x 4 or 2 x 6. Two heights, 24" and 30". Hundreds of uses. Thousands sold in airplane industry.

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New Scaffold Brackets, Roof Brackets, Ladder Brackets — speed up work and provide extra safety for carpenters, roofers, painters. Write for circulars and prices.

**WAGNER FOLDING SCAFFOLD BRACKET** →  
**SAVES TIME SAVES SPACE**



**WAGNER MANUFACTURING COMPANY**  
AB-441 Cedar Falls, Iowa

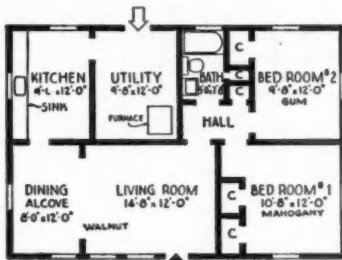
### Prefabricated Houses

(Continued from page 119)

The Goodwillie-Green Box Co., Rockford, Ill., has developed a substantial house business since 1934 under the sales and engineering direction of Messrs. H. L. and E. W. Green. The bulk of their houses range in price from \$2,500 to \$4,000 with an occasional larger assembly ranging from \$6,000 to \$11,000. The Goodwillie-Green house has been okayed by the Public Buildings Administration and a government order for demountable houses is in the offing. Describing the construction used, Mr. E. W. Green writes:

"First, I'll say that it is the same as conventional with the exception that wherever plaster is used we use plywood, and wherever subfloor, sheathing or roof board lumber is used we use plywood. Plywood, in all instances, is glued to framing lumber, which gives us what is known as box girder construction. It is seven times stronger than conventional construction, and the glue being used is urea resin, is waterproof and everlasting.

"Our specifications are very largely determined by public acceptance. Naturally, the plywood we purchase is graded and so is the lumber. The prefabricated house industry has spent a long time living down the extremely modernistic designs that at first were championed. I rather feel, now, that our specifications—in this geographical location—must give full basements in all houses. We must have hip or gable roofs; we must treat the exterior of all buildings with shingles, bevel siding, brick veneer, or some other conventional appearing product; the inside of our homes must be painted or papered and show absolutely no panel joints either in walls, ceilings or floors. In other words, we must learn to build in the factory the house that can be erected and completed in two or three days time and which, further, can be inspected minutely without anyone knowing that it is prefabricated."



**Size**  
**4 B**  
24 ft. by 36 ft.



A Gunnison home design with Mt. Vernon porch as erected in Indianapolis. Exterior reveals nothing of panel construction.



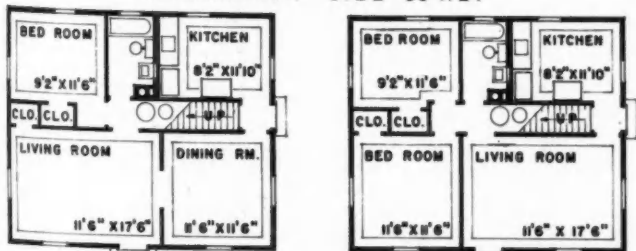
National Homes, Inc., Lafayette, Ind., is the creation of two old-time prefabricated house enthusiasts, Donald W. Lowman and D. C. Slipper. They have set up a real production line factory and are turning out "assembled houses." Precision jigs and power tools for the assembly line permit real efficiency. A number of standardized yet very attractive home designs are offered.

Other firms among the many that have been adapting the D.F.P. "Dri-Bilt" principle to their local needs with substantial progress of a commercial sort, are the I. N. R. Beatty Lumber Co., Joliet, Ill.; The Tolerton Lumber Co., Alliance, O.; Moore & Moore Lumber Co., Youngstown, O.; Ramsey Lumber Co., Altman, O.; Speedwall Co., Seattle; and Willis-Way Construction, Chicago.

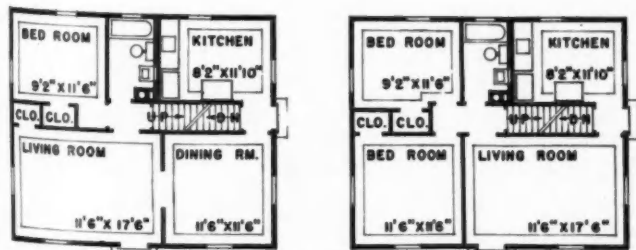
Credit should be given to the engineers of the Forest Products Laboratory, Madison, Wisconsin, for experimental work and scientific tests in utilization of plywood  
(Continued to page 182)



FOUNDATION SIZE 30'X24'



PLAN A-1 WITHOUT BASEMENT PLAN A-2



PLAN B-1 WITH BASEMENT PLAN B-2

Groups of Pease-Way homes erected at Ft. Wayne, Ind. Diagrams below show floor plans. Above, wall panels are delivered.

## GOOD CONSTRUCTION AT THE ROOF—WITH DONLEY ATTIC VENTILATORS

EASY TO INSTALL  
NO TRIM NEEDED



Get good attic space construction at low cost with Donley Steel Louver ventilators. These substantial, well-made steel ventilators are low in first cost and easy to install. In frame construction just cut an opening in the sheathing, nail flanges of ventilator to the sheathing and butt shingles or siding against ventilator body and that's all—no trim is required (installation in brick is just as easy).

Complete with bronze fly screen fastened to inside, made of 20 ga. steel, electrically welded, finished with two coats of special paint for double protection. Rectangular shapes in 10 sizes up to 18" x 36", also made in half round and quarter round shapes. Fully described in this folder which gives complete details. Send for your copy today.



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Framing  
Time  
**25%**  
WITH A  
*MallSaw*

Model 85  
Capacity 2 3/4"  
Balanced for  
Safe One-Hand  
Use

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Two men equipped with MALLSAWS can save two days on the usual eight days required to frame a 6-room house and protect the material from the weather by getting the roof on faster. MALLSAWS are powered beyond Builders' requirements . . . are light in weight . . . safe and easy to handle . . . quickly adjusted for depth and bevel cuts to 45 degrees and lubricated for life. They are readily adaptable for cutting metal, cutting and scoring concrete, stone and slate with abrasive wheel. You can make more money in 1941 with a time and labor-saving MALLSAW. Don't delay. Get the facts TODAY. Mail coupon below for full details and ask for a Free Demonstration.

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Start saving now. Operate your tools with a Homelite. No power installation costs. No delays. You have power on every job.

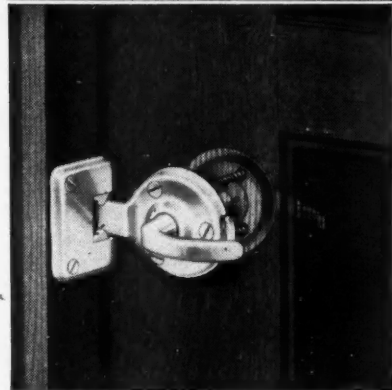
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In addition, maximum ease in latching is assured as the latches have an independent spring and pivoted action and there are no mortised working parts to bind.

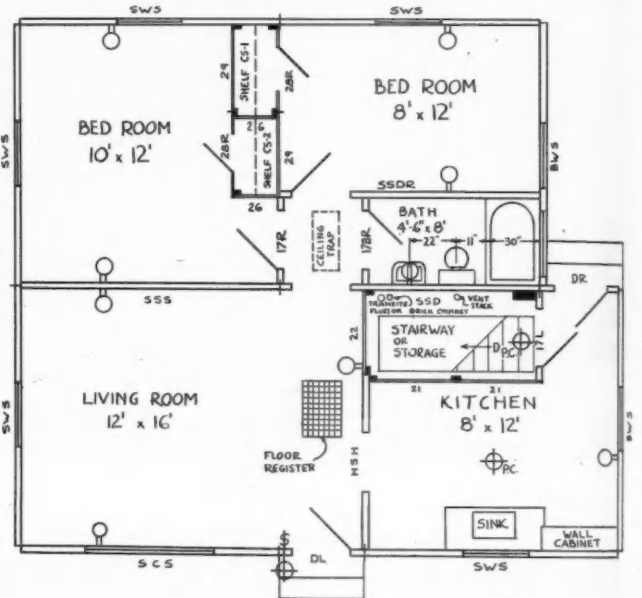
Handled by local dealers. Write Dept. A for specifications.

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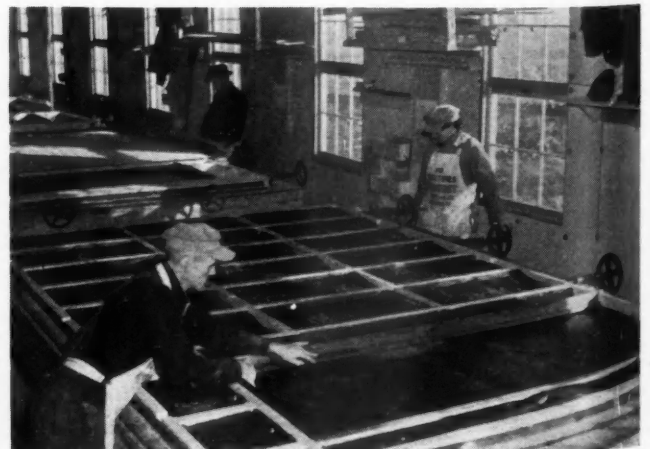
CONN.



### Prefabricated Houses

(Continued from page 181)

panels for prefabricated construction. Several demonstration houses were constructed there in the past decade and subjected to extensive field tests. The Fir Plywood Association subsequently based its work on these tests and promoted the panel type of construction in its "Dri-Bilt" handbook. Builders all over the country have gone on from that point until now shop-fabrication of large size house panels is generally accepted as practical and advantageous.



Production line in National Homes factory. ABOVE, one of the smaller National homes.

## Miami Modern

(Continued from page 111)

hotels I have seen anywhere. Other towns in the Greater Miami area include Coral Gables, \$1,750,000; Hollywood, \$1,765,000; Miami Shores, \$1,627,000; and North Miami \$227,000. This area accounted for some 8,000 new private houses, most of them in the low-priced bracket and including some of the most colorful, attractive and distinctively styled moderate-priced homes being built in this land of ours.

So when the various Greater Miami chambers of commerce say that there are plenty of hotel, apartment and home accommodations they are probably telling the truth. In fact, to be more than fair, it may be said that as far as

(Continued to page 184)



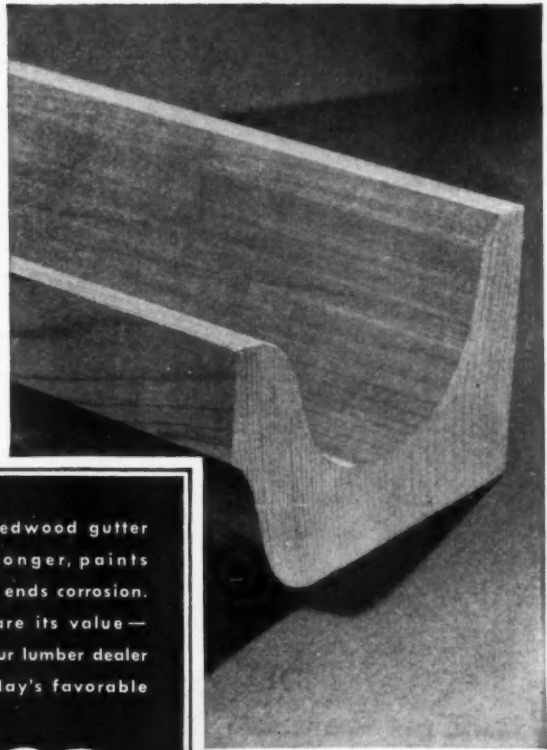
OCEAN COURT APARTMENTS, with screened porches, horizontal window overhangs.



BARBIZON apartment hotel, designed by John and Coulton Skinner; built by O'Neill and Orr.



THE LATEST STORE in Miami is Modernage, designed by George Farkas.

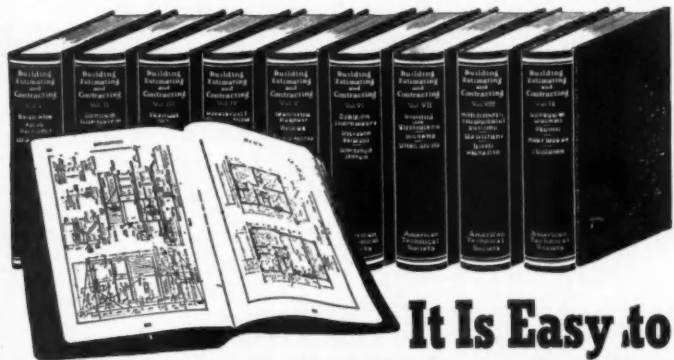


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Please attach a letter stating your age, occupation, employer's name and address, and that of at least one business man as a reference.



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- WALL HEATERS
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- WATER HEATERS
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## SIMPLIFIED CARPENTRY ESTIMATING

By J. Douglas Wilson

Head of the Building Trades Department, Frank Wiggins Trade School, Los Angeles, California

and Clell M. Rogers

Mathematics Instructor, Venice High School, Venice, California



Based on a series of articles by Mr. Wilson entitled *How to Estimate Accurately*, which appeared in *American Builder and Building Age* last year, the material has been revised and expanded into this book. Many of the original illustrations have been changed and the number of helpful tables and mathematical short cuts have been increased by Mr. Rogers.

This new book clearly explains the "taking-off" of a bill of materials required for the construction of a house and the rules and methods of making an accurate estimate of costs. The constructional order of quantity survey is used. Many skilled carpenters who have taken Mr. Wilson's evening school courses in estimating have helped in making the explanations given in this book clear and practical.

210 pages, 71 illus., 36 tables, 5 x 7, cloth, \$2.50.

Book Department

**AMERICAN BUILDER and BUILDING AGE**  
30 Church Street New York, N. Y.

## Miami Modern

(Continued from page 183)

hotel building is concerned, Greater Miami has overshot the mark, and quite a few people have their fingers crossed. But who knows what will happen in this most amazing of all American cities, where orange juice flows in the streets and man-made islands are dredged from the ocean to house the most exclusive home developments? It appears fairly certain, however, that the emphasis in the next few years will be more on single-family home buildings than on hotels and apartments.

In their hotel designs the builders of Miami Beach hotels have developed to a high degree the use of a series of setbacks with corner windows to give maximum view



NEW SEA ISLE HOTEL illustrates use of numerous setbacks to get maximum window view and ventilation.



CARLS SUPERMARKET is one of the newer Miami Beach stores with good modern design. Exterior is suntan pink.

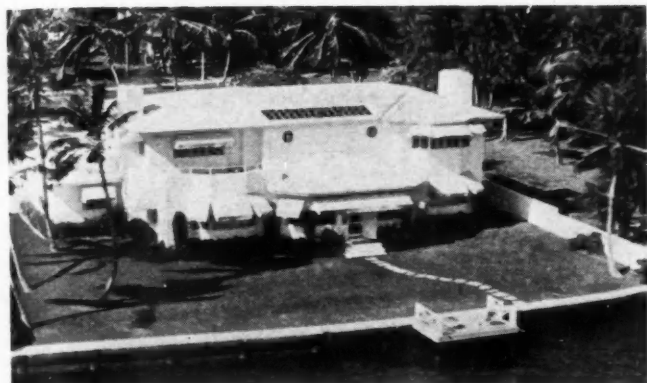


NEWLY FINISHED STORE on Alton Avenue, built by Patrick McCarl. J. J. DeBrita, architect.

and ventilation. Since most of the new and bigger hotels are built close to the beach it has been important to provide as many windows with an ocean view as possible. The Sea Isle and The Shelbourne are two interesting illustrations of this type of design. The designs are functional in nature, distinguished by a large number of windows, and in many cases curved corner windows. Horizontal lines are introduced into the designs of many of the structures through projecting overhangs over the windows, which reduce the amount of direct sun in the rooms.

Exterior treatments are in brick or stucco painted a brilliant white or in tints of cream, pink and other pastel tones, with occasional spots of bright color in contrast.

(Continued to page 186)



ONE OF MIAMI'S ISLAND HOMES with private dock. Note solar water heater on roof.



BARBECUE STAND on Alton Road is done in lively, contrasting colors of cream and red.



Photo by Manley Brower

ONE OF FINER Miami homes, featuring ornamental iron now widely used. Arthur L. Jones, architect; J. Y. Gooch, builder.

## KINGSTRIP

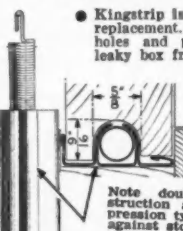
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- Here is the latest equipment for double-hung windows, an efficient, smooth, silent, easily installed spring sash-balance, integral with a protective-metal frame lining that provides a perfect weatherstrip seal for both upper and lower sash.

Reduces double-hung window installation costs by 1/2

Kingstrip Sash-Balance, designed for both new, factory pre-fit windows and replacement work is decidedly economical, saving as much as half the cost of old-fashioned pulleys, weights and cords and box frames. Permits use of weathertight plank frames. Special aluminum alloy metal. Double construction. Compression seal at stops. Made for standard round grooved sash.

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Note double construction and compression type edges against stops.

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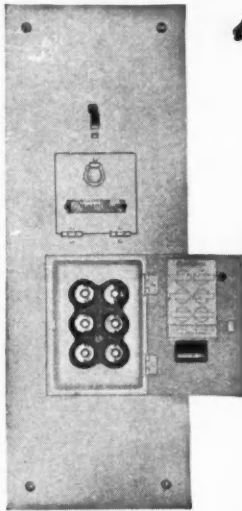
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contributes to the low cost of good construction. It is designed to give maximum protection. The box is of galvanized steel. The front, with its pearl gray lacquer finish, is neat and unobtrusive, and easily kept clean. Each unit is compact and pleasingly designed . . . Main switch and distribution circuits are combined in one unit. Space for bell transformer optional.

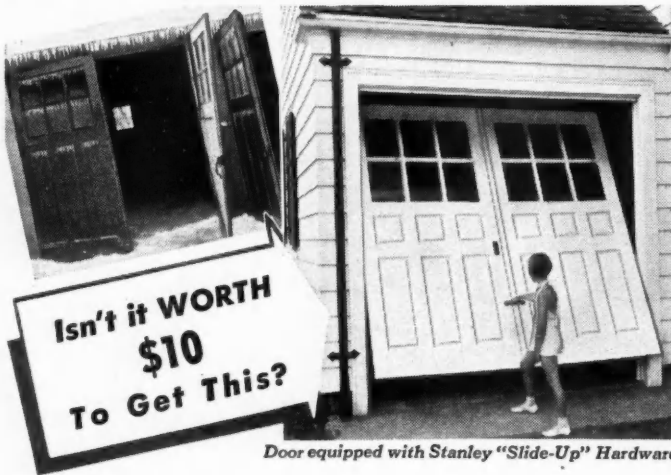
Ⓜ 6-Circuit Safety-type Service Equipment, with 60 Amp. Tumbler Main Switch and Fuse. Bell Transformer space optional.

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All the hardware comes complete in a handy package. Easy to install, and when you're through you have garage door equipment that will speed up any sale. Try it on your next house. Your dealer can supply you, or write for folder. The Stanley Works, New Britain, Connecticut.

**STANLEY**  
TRADE MARK

HARDWARE FOR CAREFREE DOORS

## Miami Modern (Continued from page 185)

Hotel owners have not been content with the unusual architectural effects and have added super-colossal neon signs that give a Coney Island effect which, while probably effective in drawing customers, doesn't add much to the dignity of the architectural design.

In small hotels, apartments and apartment hotels, some of the best designing is being done. Here again, the use of two or three-foot flat overhangs over the windows is a common practice, and these have been rather skillfully worked into the modern architectural design. The Tudor and Kent Hotels shown well illustrate this trend.

In shops and stores some of the finest current architec-



TROUVILLE tourist court in brick and stucco, built by George Jacobs.



JEFFERSON apartment hotel, designed by Roy F. France and built by W. B. Smith & Sons. Materials by Lindsley Lumber Co.



KENT HOTEL has striking modern lines, typical of many of the smaller Miami Beach hotels.

Photos by C. E. Goodridge



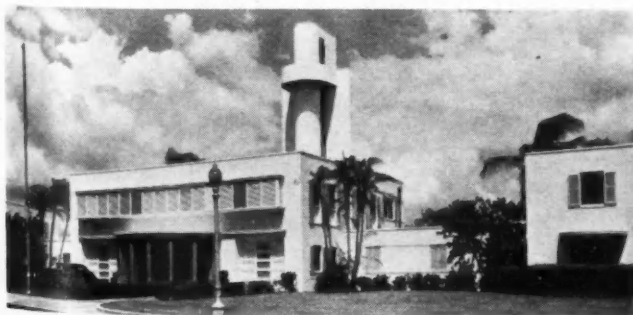
tural work is being done. Lincoln Road in Miami Beach is not only one of the most wealthy and well patronized shopping centers in the world today, but is one of the most beautiful architecturally. This wide, palm-studded street has an unbroken row of strikingly modern and attractive shops and stores. This is a subject which will be covered in a special article in a later issue of *American Builder*.

In home architecture, both in the small speculative cottages and in the expensive island homes, Miami architects and builders are doing extremely interesting and attractive work. The white roofs and pastel colored walls, for the most part in good taste, are of especial interest. The greater number of homes are built long and low, with low pitched roofs with fairly wide projecting cornices that keep out the summer sun but permit the winter sun to shine into the house. They are frequently modern Colonial with Bermuda, Monterey, or New Orleans characteristics.

The majority of Miami homes are of concrete masonry construction with reinforced concrete beams to which the roof rafters are bolted as hurricane protection. The universal practice is to treat all joists and timbers against termites or decay and also to provide metal termite shields.



STRIKING, new Shelbourne Hotel on Collins Avenue in Miami Beach, under construction.



EVEN THE Miami Beach fire house is of modern design and beautifully landscaped. It is rumored that the fire wagons are equipped with cocktail bars. Robert Law Weed, architect; G. F. Wheeler Co., builder.



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Pry your roofing business out of the rut of profitless competition with Edwards Metal Shingles. Sizes and styles for every purpose. High butts; weather-tight interlocking joints and extra storm beads; wide nailing flanges; nail holes completely covered. Easy to apply on new construction or over old wood or composition roofings.

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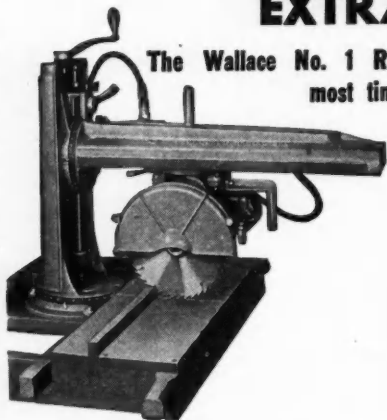
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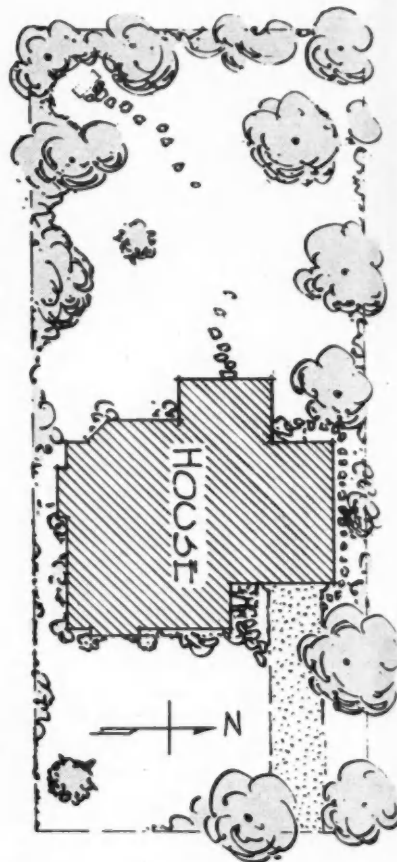
## Front Cover Home—

(Continued from page 105)

The house shown here and also on the front cover was planned by Arthur P. Swanson to combine plan features which are as up-to-date as today's newspaper—living to the rear, service to the front; compactness, accessibility and circulation, plenty of storage space and general livability. Of course, it isn't perfect, but it is excellent.

Besides being well designed, this house built in Park Ridge, Ill., features specifications which will contribute to low cost of physical maintenance. The frame construction of Douglas fir set on a poured concrete foundation is stone veneered on the first floor, with a combination of Lannon and Burlington Sunset stone; white pine boards and battens above and red cedar shingles laid in a staggered pattern will give good service. The exterior walls and area above ceiling are insulated with wall thickness of rock wool. This construction with the stone on the first floor assures comfort during the summer and low heating

THE plot plan of this Park Ridge, Ill., home, as designed by Architect Arthur P. Swanson, indicates how best use was made of narrow lot with principal view to the rear with landscaped garden and wooded background. Note outdoor fireplace location.



THE living room pictured below has built-in cupboards flanking the fireplace on paneled wall.







**NORTH ELEVATION** of front cover home features a large fixed sash in studio bedroom, which also has private balcony.

cost in winter. The large window areas, such as full length doors in dining and living rooms and large picture window in the studio bedroom, have L-O-F glazing and are equipped with copper screens and heat saving storm sash. Interior plaster is on Rocklath except bath and kitchen, living and dining room ceilings on metal lath; metal Cornerites protect against cracking.

The floors throughout are select oak, except Nairn linoleum in kitchen and powder room, and the tile floor and wainscot in the bath. Imperial washable wallpapers and Pratt & Lambert paints and varnishes were used. Heating is with a Richmond gas-fired winter air conditioning system; Kohler plumbing fixtures. Other quality equipment items include Lightolier fixtures, Midwest kitchen ventilating fan, Stanley hardware and McKee upward-acting garage doors.

The treatment of these "motor room" doors is most important and interesting since they are close to the front entrance. Notice how the glazed panels and blinds harmonize with the exterior design; the drive is used as an entrance walk. The finish on the fireplace wall of the living room picks up the exterior character with V-joint vertical white pine paneling. Living room bay and living porch reach through a door in this bay; both overlook a finely wooded section of a Forest Preserve, adding further to the enjoyment and livability of this home, planned for long life economy.

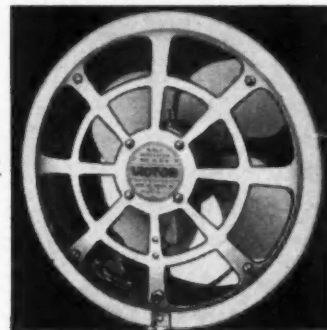


**A DOOR** (not shown in this view at the left) leads from the third side of living room bay onto the rear living porch.



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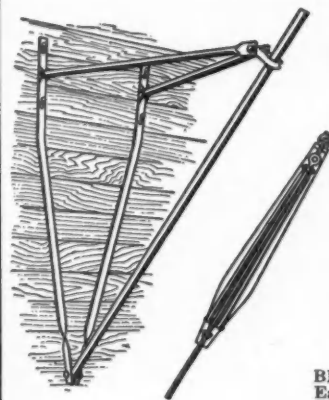
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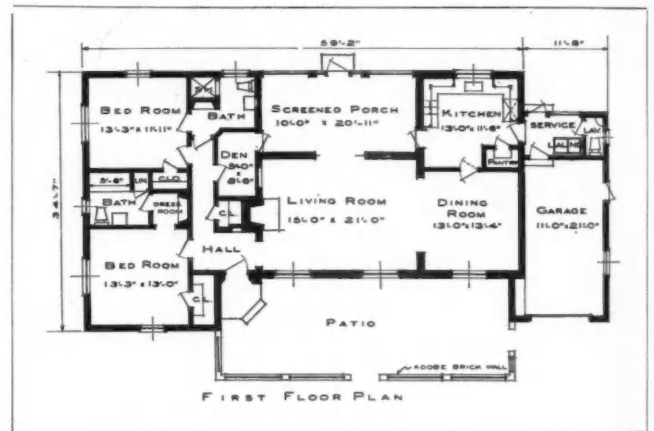
## O'Dell Builds Well (Continued from page 101)

water tank into the chimney.

An unusually attractive architectural style has been developed in O'Dell's houses by the architectural firm of Petersen and Wolz, 605 Lincoln Rd., Miami Beach. The houses cannot be described according to any Old World architectural period. They are "Florida Modern," with long low lines, low pitched roofs covered with gleaming white cement tile, and walls in soft pastel tints.



SEVENTY-FOOT LONG Miami Shores home with patio.



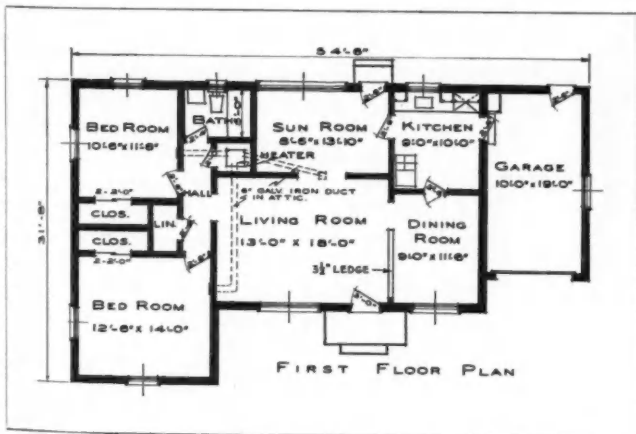
MODERN FLORIDA DESIGN with long, low lines.

In the opinion of your *American Builder* correspondent, such architects as Petersen and Wolz are creating a new style of American architecture that will undoubtedly spread north. Although the exterior of many of the O'Dell houses is stucco, they also make extensive use of brick painted white, and also of brick courses in other colors to create a contrasting effect.

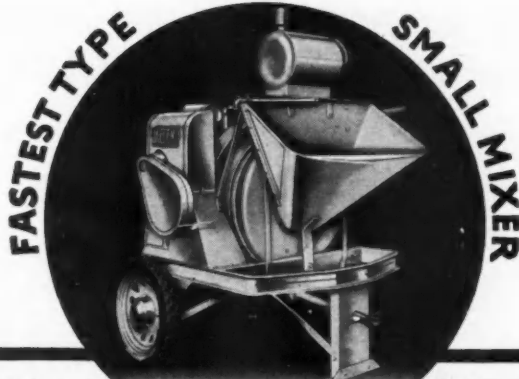
Noteworthy in the architectural decoration is the fashion in which the one-piece Frantz swing-up type  
(Continued to page 192)



ALL-MASONRY construction, white cement roof, two baths.

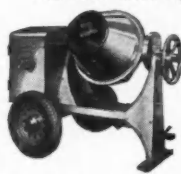


HEATER IN CLOSET, sun room at rear, ample open plan.



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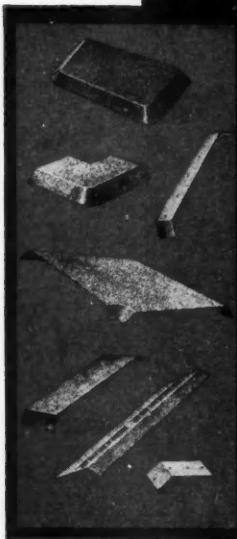
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## O'Dell Builds Well

(Continued from page 191)

garage doors are covered with mouldings and other decorative effects so that they are extremely attractive. Also interesting is the use of bits of ornamental iron and the decorative millwork employed in screen doors and entrance ways.

White cement tile, which has practically replaced the use of the old Spanish type red tile, is laid over a Barrett guaranteed roof built up of 30-lb. felt, mopped, and then covered with 90-lb. felt.

O'Dell's floors are unusually attractive, consisting of Bruce select oak strip flooring in all rooms except the kitchen, sun porch and bath. In the sun porch and sometimes in the dining room, O'Dell uses Armstrong asphalt tile, and he also uses Armstrong linoleum on the kitchen floor. All windows are equipped with Venetian blinds, with side tracks built into the window openings. Finish hardware throughout is Schlage's. Kitchen cabinets are factory-built Florida Maid. Moore's paints are used throughout, including Paqua special paint for plaster walls.

In his more recent houses O'Dell has been providing a small oil burning heater in a closet adjacent to the bathroom, with a short run of ducts over to the principal rooms (see plan on page 191).

\* \* \*

## Garden Oaks Homes—

(Continued from page 85)

so as to be flush with the inside wall and not project into the room, which is a decided advantage to the housewife or decorator.

5. *Crushed marble roofs.* The crushed marble or brick topping over built up roof costs more per square to install, but inasmuch as it is guaranteed for a period of years, it assures the purchaser of no maintenance, either for repairs or repainting. We do use some shingle roofs to change the appearance of the houses.

6. *Another item of saving over a long period of time, upward acting garage door installed in all our homes.* This area is subject to winds which always have caused a great deal of damage to garage doors attached by the ordinary hinge, and the cost of the upward-acting door is so little more than the cost of the other that we have adopted its use exclusively.

7. *Star Liner Board with canvas and paper treatment.* There is no question of the Sheetrock and Textoned walls being an advantage, but inasmuch as some purchasers object to the monotony, we have finished the last few houses in the following manner: We apply Star Liner Board direct to the studs instead of plaster-board, over which is applied a heavy canvas and then paper in the usual manner. A new tack has been perfected which applies easily and is very satisfactory for the purpose of attaching the canvas to the Star Liner Board. The various colors and patterns in the paper and the smoothness with which it may be applied if this procedure is followed make a very attractive room."

Other construction and equipment highlights of these Garden Oaks houses include No. 1 Perfection red cedar shingles for side-walls, individual gas room heaters, Richmond plumbing, Lawson hot water heaters, plenty of convenience outlets, Venetian blinds, Lucas paints, and attic roughed in for ventilating fan.

Regarding the selection of certain other accessories, Mr. Crain points out the following: "Just as in the case of 1941 model automobiles the buyer is permitted a large range of choice in the purchase of accessories, so in these 1941 model homes the buyer may, at a slightly extra cost, obtain additional accessories over and above the basic equipment of the \$2695 house. For instance, he may want the convenient Youngstown all-steel kitchen which is featured in the demonstration home. Or he may want an attic ventilating fan, the Libbey-Owens-Ford "glass package," or some other accessory which his budget may permit.

"This demonstration home, which has been beautifully furnished by one of the local stores, contains price schedules on all items in each room, so that prospective purchasers of other homes may, if they wish, easily duplicate all or any of the equipment they may want."

Following a popular trend, the living room and dining alcove are built as one unit, and the attractive furniture here is copied from that used in one of the homes at the New York World's Fair.

The first bedroom is finished in peach and white, and is equipped with ample closet space. The roomy bath is done in white and ivory, with green tile floor and Vitrolite glass trim on the wall. The second bedroom is finished in light cream, and has an interesting three-way mirror arrangement, used in conjunction with the



closet doors. The compact, efficient kitchen has an inlaid linoleum floor, and is equipped with a "trudgery-eliminating" Youngstown all-steel kitchen unit. The attached garage is completely sealed, and is equipped with a Hollywood overhead door. The beauty of the interior is enhanced by the use of the Libbey-Owens-Ford "glass package," and all rooms contain ample window space especially designed for this climate and to allow for plenty of natural light, and add further to the satisfaction of owning a well built small home that has low upkeep.

\* \* \*

### It Costs Less to Live Better

(Continued from page 83)

cost, maintenance, and depreciation. Operating equipment, however, also involves a fourth factor—monthly operating cost. It is this factor, so astonishingly often overlooked, which deserves close study.

If a house is to be lived in—and homes are built for no other reason—it must be heated, wired, lighted. The family living in it will require hot water, storage space for food and dishes, provision for refrigerating and cooking food, washing and drying dishes, disposing of garbage, and laundering clothes. These are the necessary acts of daily living and they cost money—day in and day out—the extent of the cost depending on the efficiency with which the operating equipment performs and the length of its life.

Let us take two houses, "A" and "B," for our study, assuming that the cost of the lot, structure, and similar items—with the exception of electrical and heating equipment—is identical. Let us set that cost at \$4000. Now we will add, to the first cost of each house, the retail price of the operating equipment—conventional equipment—or none at all—in one case; high-quality, modern equipment in the other case. At the same time, in adjacent columns, let us make a record of the *monthly operating costs for each house*. Obviously we'll have to resort to averages, approximations, and estimates—figures that may be either too high or too low for any specific house in a specific location. They'll be typical, however, and anyway it's the general picture or idea that's important.

#### Heating Heads the List

**Heating.** This is important, not only for the comfort and convenience of those living in the house, but as a major operating expense. Certainly everyone today prefers automatic heating in some form. A better-designed furnace, able to extract maximum heat from its fuel, will naturally cost more than a conventional heater. It has been demonstrated that some furnaces are as much as 50 per cent more efficient than others which may use the same type of fuel. For example, in a study of approximately a hundred homes on Long Island where high-quality furnaces had replaced less efficient ones, fuel savings ranged from 9 per cent to 64 per cent, with an average saving of 37 per cent. Notwithstanding such figures, it is often difficult for a builder or a prospective buyer to "see" this direct pocketbook relation, so let us put a conventional furnace in House A at \$350, and a high-quality furnace in House B at \$495. In the monthly operating expense column, we can conservatively put down \$8 as the fuel bill for House A, and \$6 for House B, with domestic hot water included in each case.

**Wiring.** A large eastern utility company surveyed 13,000 of its customers as to their "pet peeves" about houses. First choice was "not enough closet space," but second in importance was "insufficient electrical outlets." The time to do good wiring is when a house is built, since it is part of the construction job. To provide for today's and tomorrow's needs, good wiring should entail plentiful outlets in the right places, convenient control of lighting, and enough current at the proper voltage to eliminate flickering lights and inefficient operation of appliances. Wiring systems may be inadequate for two reasons: (1) using wire too small in diameter, resulting in voltage-drop, which means that electrical equipment is operated at under-voltage; and (2) insufficient outlets, which means inconvenience and hazards from temporary wiring. Most qualified technicians say that a wiring system containing adequate copper can be installed almost as cheaply as an inadequate system, and additional outlets installed at

(Continued to page 194)

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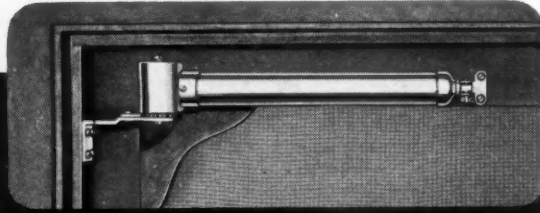
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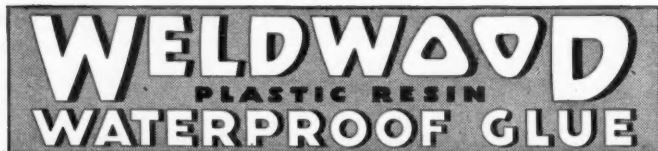
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## It Costs Less to Live Better

(Continued from page 193)

the time of construction add little to the cost. We can assume that \$100 covers the cost of an average wiring system for House A, while \$115 will give House B a really adequate system. It has been said that adequate copper can reduce some electric bills by as much as 20 per cent, but we shall conservatively use 5 per cent. Let's assume the average bill for lighting, radios, small appliances, home laundry, etc., in House A to be \$3.00, and using the 5% saving, in House B, \$2.85—items for the monthly operating expense column.

### Many Savings Possible in Kitchen

**Kitchen Cabinets.** In most kitchens builders supply storage facilities consisting of either factory-made steel cabinets, shop-made wood cabinets, or wood cabinets made on the job. The better cabinets are sanitary, have no-warp, no-sag doors, baked finish, toe-space, and a wide choice of such accessories as cup hooks, towel racks, vegetable bins, etc. The latter naturally costs more, so let us put the cheaper cabinets, costing \$60, in House A, and de luxe cabinets, costing \$90, in House B. Under monthly operating expenses, it is fair to say that some cabinets need periodic refinishing every three or four years, and kitchens are subject to temperature and humidity changes which cause warping and sticking, necessitating repairs or replacements. An allowance of \$24 every four years for these items would mean 50 cents a month expense for House A which would not be required for House B.

**Garbage Handling and Dishwashing.** These are the dirtiest and most disliked tasks in housekeeping, but although they can be eliminated by using an electric sink, many people feel that they cannot "afford" such a convenience. Therefore in House A we will put a cabinet sink, at \$60, and in House B an electric sink, with dishwasher and garbage disposal, at \$375. It is difficult to arrive at costs of doing these disagreeable jobs in the old-fashioned way, but we can make some reasonable assumptions for the monthly expense column. Let us call the monthly cost of outdoor garbage cans, indoor receptacles, sink strainers, dishrags, dishpans, and drying racks 40 cents. In many communities the cost of garbage and rubbish pick-up ranges from \$1 to \$3 per month or even higher. A disposal, doing away with food wastes, would mean fewer collections, saving say 75 cents a month. (If the community collects garbage, the increasing use of disposals should be a factor in reducing taxes.) Dish breakage resulting from soapy water and excessive handling may amount to \$6 a year, or 50 cents a month. There should be a saving in towels, laundering, and cleaning supplies from using the dishwasher of something like 35 cents a month. It's probable that the beauty parlor gets 75 cents a month in business because of steamy, greasy dishwater. In a dishwasher, dishes are made hygienically clean, reducing germ transmittal, and certainly the elimination of the garbage can is like health insurance—this might be worth \$1 a month. This adds up to \$3.75 monthly expense as a charge against House A, and it doesn't include the saving of 55 minutes a day, which at 30 cents an hour (and will your wife work for that?) would be \$8.25 per month. For House B, the bacteria-killing hotter water, which the dishwasher can use because no hands need be put into it, might cost 40 cents a month more, and the electricity for the sink might bring the total operating expense up to 68 cents. Let's put that down.

**Cooking.** The range is one of the most essential of kitchen appliances, and there are two general types—flame and flameless. In the past seven years the number of electric ranges sold has increased 580 per cent. Ranges vary greatly in price, depending on fuel used, size, accessories, etc. The average price level of electric ranges is higher than that of flame-type equipment, so for House A let us put down a flame-type range at \$75, and in House B a flameless range at \$130. An electric rate, applying to cooking, of 3 cents or less per kilowatt-hour is regarded as favorable to electric ranges, and would probably determine the type of range used. Several surveys averaged about 80 KWH per month consumption for electric cookery in the typical family of four, and at a 3c rate this would be \$2.40 fuel expense. This would probably be a fair figure for the flame-type too. Flameless cooking helps reduce redecorating expense, worth perhaps 30c per month; less scouring pads and cleaning powder are required when cooking without flame, say 10c a month; more home cooking because of convenience features and cleanliness might save



50c per month. This makes a total of \$3.30 for House A and \$2.40 for House B, without including any evaluation of automatic features, time saving, and safety.

**Refrigeration.** In House A is a conventional refrigerator containing minimum equipment, at \$115, and in House B a high-quality, better-equipped product at \$135. Compared with high-quality refrigerators, it is not unusual to find that monthly operating costs of less efficient machines run 50 per cent more. If we assume the operating expense of a high-quality electric refrigerator in an average location to be \$1 a month, the less efficient machine might approximate \$1.50, and these amounts are charged up to House B and House A respectively. No attempt has been made to evaluate the additional savings that are possible today with the larger capacity and added refinements in the way of food preservation and storage found in better-equipped machines.

**Water Heating.** No provisions need to be made here for either house, since under "Heating" we assumed that each furnace would provide domestic hot water. But it is pertinent to point out that, contrary to what many persons believe, furnace coils do not provide *free* hot water. The furnace to do this job may have to be larger in size and operate for more months than it otherwise would, and many times the water never gets really hot. As much as 20 per cent of fuel consumption may go for this purpose. In the case of a heating system that does not supply hot water, a separate heater is necessary, and efficiencies for this device vary from practically 100 per cent, in the case of an electric type where heat is applied directly to the water, to as little as 35 per cent, in types which allow most of the heat to escape. Where electric rates of 1¼ cents per kilowatt-hour or less are in effect for water heating, the dependability and safety of this type of service become available at satisfactory cost.

**Home Laundry Equipment.** More and more are architects and builders planning intelligent laundry space in homes—space that is readily convertible into use-area when not employed for laundry purposes. Laundry equipment, however, is not usually included as part of a new house, so we will not include it in either of our imaginary houses. Its cost of operation, however, would probably be covered by the electric bill we mentioned earlier. The same is true of the many small appliances which might naturally be found in each home.

**Fan and Clock.** The removal of cooking odors is a job for a high-quality built-in ventilating fan in the kitchen. It should be accompanied by a dependable electric wall clock. The fan might cost \$35 and the clock \$5—another \$40 for House B. Monthly operating cost for both might be about 12 cents. There is no entry here for House A since this equipment is often regarded as in the "luxury" class.

**How It All Adds Up**

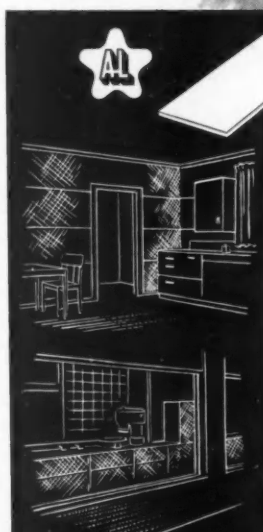
Now, if the first cost items are added up, we find that for House A, with just conventional equipment, the total is \$4760. For House B, with the best and most complete equipment we can provide, the total is \$5380—a difference of \$620. That may not seem like much, but it applies to just the kind of equipment that both a client and a builder often seize upon when trying to reduce overall cost. Would they be justified?

The answer lies in the columns of monthly operating expenses, which are not yet complete. According to a standard source, the taxes on a \$4800 house and lot average at \$11.19 per month, and although House B has a higher *cost* because of the completeness and quality of its interior equipment, it is probable that this equipment would not affect the appraisal for tax purposes. Actual taxes might therefore be the same as for the first house, or \$11.19. Fire insurance, based on a national average rate of \$2.50 per thousand of house valuation per year, would work out at 83 cents a month on the \$4800 house, assuming \$800 as lot value, and at 96 cents on the \$5400 house. Using 2 per cent as a fair figure for maintenance and depreciation (excluding equipment and lot valuation) the monthly charge for this factor, for both houses, would be \$5.33. For taxes, fire insurance, maintenance, and depreciation of the structure, then, House A should be charged \$17.35 per month, and House B, \$17.48.

Interest on investment in, and depreciation and maintenance of, operating equipment, although not considered monthly out-of-pocket expenses in most households, are nevertheless factors which should be taken into consideration in computing the cost of operation. Interest on the higher cost of the second house

(Continued to page 196)

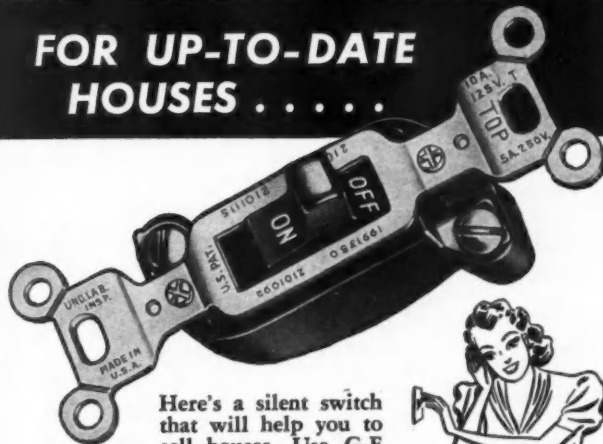
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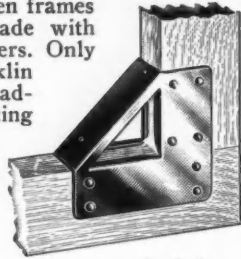
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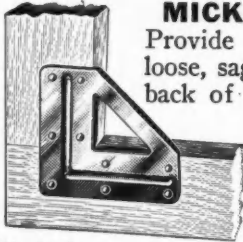
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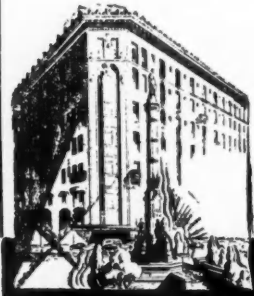
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Hotel **LAFAYETTE**  
BUFFALO, N.Y.

(Continued from page 195)

would be greater than on the first house. On the other hand, it seems reasonable to assume that high-quality equipment in the second house will have a longer useful life and require less maintenance expense than the cheaper products in the first house. Estimates for these three items would perhaps total about the same for the two houses, but their computation involves technicalities and assumptions which would be more confusing than enlightening, and they are therefore omitted for the sake of simplicity.

Mortgages such as those insured by FHA require a minimum down payment, on houses and lots appraised at \$6000 or less, of 10 per cent, plus enough to make the remainder in even multiples of \$100. In this case, if the mortgage appraisal coincided with our figures, the down payments would be \$560 for House A and \$580 for House B, leaving as remainders to be financed through mortgages \$4200 and \$4800 respectively. If these balances can be paid for from the proceeds of an FHA-type long-term single mortgage, the monthly payments on a 25-year basis (\$5.81 per month per \$1000) would be \$24.40 for House A, and \$27.89 for House B. In other words, all of the advantages of the complete high-quality electrical equipment would cost the buyer an additional \$3.49 per month—or less than the cost of a package of cigarettes a day!

Amortization payments, however, are like rent and should be included in a family's monthly budget. Therefore we will transfer the two amounts to the monthly outlay columns—and add them up.

For conventional House A, monthly outlay for heating, wiring, cabinets, sink, cooking, refrigeration, taxes, maintenance, depreciation, and amortization totals \$61.80.

For completely electrified House B, the total for the same items, plus dishwasher, garbage disposal, fan, and clock, is \$58.42. It actually costs less to live better.

As I said before, I make no claim for the intrinsic accuracy of the figures used here. I do maintain, however, that the results are typical of what's happening every day. If we'll recognize that "operating equipment" is one of the essential differences between a house and a barn; if we'll recognize that a house today consists of three elements, not two—land, structure, and operating equipment; if we'll recognize that cost to pay for a house and cost to live in it come out of the same pocketbook, then maybe we'll also recognize that only the rich can afford inefficient and poor operating equipment, and that high-quality equipment can right now contribute as much to lowering the cost of home ownership as a sizeable reduction in structural costs would effect—not to mention convenience, release from drudgery, saving of time, and the higher standard of living that comes with this type of equipment.

\* \* \*

## Modern Stores—

(Continued from page 113)

suitable for covering with linoleum, carpet, rubber tile, or left as they are.

11. Electrical wiring should, if possible, be completed only after the needs of the tenant are known. Many modern stores require the use of luminaries, recessed fixtures, lighting troughs, wall, column or cornice cove lights. In addition, floor and wall outlets for display cases, fan outlets vacuum cleaner outlets, counter lighting outlets and convenience outlets in varying locations may also be custom-located for the tenant. To enable him to obtain maximum flexibility with the electric system, a panel in the rear or basement may be provided with rough connections in the furred roof space. He may then bring his wiring through the floor or down through the ceiling.

12. The exterior of the store should be stripped of all ornament. Cornices, breaks, flutings, panels, and contrasting materials only make the installation of a tenant's signs, front and interior design more difficult. The exterior can be made attractive, however, by giving it good simple form and proportion. The height of the parapet above show windows should permit the application of a large sign. Eight to ten feet high above the window or transom is not too high for a Main Street store parapet.

13. Vertical supports between store windows—especially those of masonry—should be avoided, as they complicate the combining of two or more individual store units into one large store. They also become stained and are often misused by tenants. Light metal mouldings make the best vertical separators.

### "British Thoroughness"

(Continued from page 109)

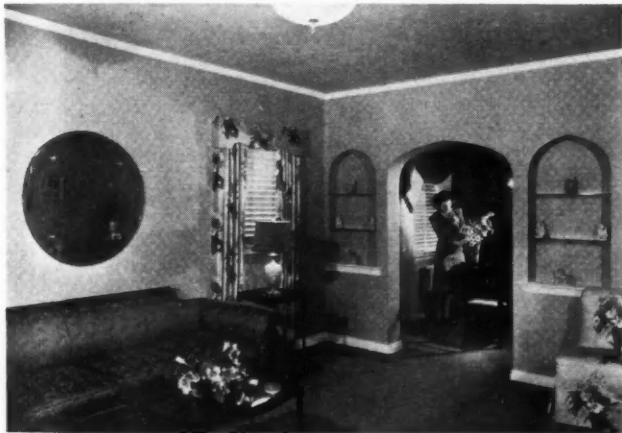
York City and brought many of the advantages of suburban environment right into the geographical center of the metropolis.

The typical Green Park home is a brick veneer structure, using Celotex sheathing on the side walls and U. S. G. Rocklath interiors with two coats of plaster. Second-floor ceilings are constructed with insulating Rocklath. The steam heating system features a Columbia steel boiler with oil burner, and the average heating bill for an \$8,500 home runs about \$10 per month or less.

An important feature of the quality construction that has been employed in recent years has been the use of Hope's Bonderized Holford windows equipped with redwood surrounds. The windows are extra large and have played an important part in the attractiveness of the homes, as well as contributing to low upkeep.

Foundations are of 12-inch concrete specially waterproofed and accompanied by a 5-year guarantee against leakage. Seasoned grade- and trade-marked lumber is used, as well as No. 1 Bangor slate roofs, durable oak floors and full tile baths.

Turner and Noone have adopted American ideas in building for the American public. They found that in order to sell homes in this country they had to equip them with the latest in comfort and convenience equipment. Most middle-priced houses in England do not have central heating, but instead use a number of fireplaces. If the fireplaces are used extensively to keep the house really warm, the cost of the coal would be greater than the fuel used by the efficient central system employed in Green Park Estates. However, Englishmen apparently like their houses a lot cooler than Americans.



COLORFUL Green Park living room, looking towards dining room.




ONE OF THE EARLIER Green Park Estates homes, designed by Architect Arthur E. Allen, with an unusual exterior design.

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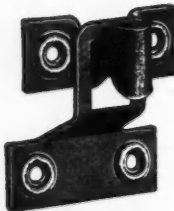


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**Two California Homes—**

(Continued from page-117)

Douglas fir trim includes the 1 3/4-in. entrance door. Cedar shingles are used on the overhanging ridged roof, and the leaded pane casement windows have redwood beveled sills. Floors are red oak throughout, except tile in the bath. Kitchen alcove has a built-in upholstered seat.

A Pacific forced air furnace heats and ventilates the entire house, and also serves as an air cooling unit with connections for each room of the house. "Standard" plumbing fixtures are used.

The second house shown is of a similar type, built in Hidden Village section, North Hollywood, Calif., by J. Byron Severance; it was furnished as a model home by Barker Bros., Hollywood branch. The exterior of this two-bath English type house is also of stucco and redwood half-timber trim, stained dark, with red brick veneer giving it an authentic English touch. The brick



ABOVE: Upper view, large floral design wallpaper was selected for the Thatcher model; note built-in window box in sill. Lower view, twin closets are separated by well lighted dressing table space in the Severance demonstration home, North Hollywood, Calif.

construction forms part of the exterior living room wall and entrance. Characteristic of this type of architecture are the steel casement windows with leaded panes of "B" glass and redwood all-around. The entrance door is of sugar pine with ovlo, the interior woodwork is of white pine, and the floors are 1/2 x 1 1/2 clear oak.

White pine planks were used above the corner fireplace and also for wall alcoves, as well as for the timbered ceiling with its dark-stained beams; ceilings in other rooms, however, are plaster. The fireplace, distinguished by a marble hearth and face and a Curtis mantel, gives the room a semi-formal tone.



## "TruCost" Estimating Figures for Home Designs in This Issue

**"TruCost"**

The Editors have prepared a 28-page explanation of *American Builder's* "TruCost" system of quick, accurate estimating and offer it to anyone interested at 25 cents per copy. Please enclose payment when ordering. Address *American Builder*, 30 Church Street, New York City.

### Page 84, April: Garden Oaks Co., Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 154 lin. ft.; Garage Floor, 175 sq. ft.; Outside Walls, 16.00 sqs.; First Floor, 7.54 sqs.; Ceiling, 9.25 sqs.; Roof Pitch, 6" rise per ft. run; Roof, 13.00 sqs.; Cornice, C & F, 142 lin. ft.; Cornice, 16", 78 lin. ft.; Partitions, 114 lin. ft.; Inside Finish OS Walls, 110 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 10 opgs.; Windows and Casements, 9 opgs.; Gable Sash and Louvers, 2 opgs.

### Page 100, April: O'Dell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 200 lin. ft.; Garage Floor, 180 sq. ft.; Outside Walls, 17.00 sqs.; First Floor, 11.00 sqs.; Ceiling, 12.80 sqs.; Roof Pitch, 4" rise per ft. run; Roof, incl. Porch, 15.00 sqs.; Hips and Valleys, 60 lin. ft.; Cornice, C & F, incl. Porch, 200 lin. ft.; Cornice, 6", 200 lin. ft.; Partitions, 126 lin. ft.; Inside Finish OS Walls, 140 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 10 opgs.; Windows and Casements, 9 opgs.; Porch Floor, 1.40 sqs.; Porch Ceilings, 1.20 sqs.; Porch Beam, 28 lin. ft.; Porch and Balcony Post and Newels, 4; Porch and Deck Rail, 10 lin. ft.

### Page 190, upper, April: O'Dell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 260 lin. ft.; Garage Floor, 232 sq. ft.; Outside Walls, 23.00 sqs.; First Floor, 17.00 sqs.; Ceiling, 19.32 sqs.; Roof Pitch, 5" rise per ft. run; Roof, incl. Porch, 20.00 sqs.; Hips and Valleys, 100 lin. ft.; Cornice, C & F, incl. Porch, 225 lin. ft.; Cornice, 12", 225 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 230 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 19 opgs.; Windows and Casements, 13 opgs.; Chimney, 16 lin. ft.; Porch Floor, 2.30 sqs.; Porch Ceilings, 2.30 sqs.; Porch Beam, 30 lin. ft.; Porch and Balcony Post and Newels, 4; Porch and Deck Rail, 16 lin. ft.

### Page 191, lower, April: O'Dell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 220 lin. ft.; Garage Floor, 190 sq. ft.; Outside Walls, 18.00 sqs.; First Floor, 12.00 sqs.; Ceiling, 13.90 sqs.; Roof Pitch, 5" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 80 lin. ft.; Cornice, C & F, 180 lin. ft.; Cornice, 4", 160 lin. ft.; Partitions, 152 lin. ft.; Inside Finish OS Walls, 152 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 10 opgs.; Floor, .36 sqs.

### Page 102, April: Blietz, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 128 lin. ft.; Trench Walls, 50 lin. ft.; Basement Floor, 800 sq. ft.; Garage Floor, 210 sq. ft.; Excavation per ft. deep, 40 cu. yds.; Outside Walls, 28.00 sqs.; First Floor, 8.75 sqs.; Second Floor, with fin. flg., 10.00 sqs.; Ceiling, 21.00 sqs.; Roof Pitch, 7" and 8½" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 32 lin. ft.; Cornice, C & F, 200 lin. ft.; Cornice, 6", 200 lin. ft.; Partitions, 270 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 2 opgs.; Rear

(Continued to page 200)

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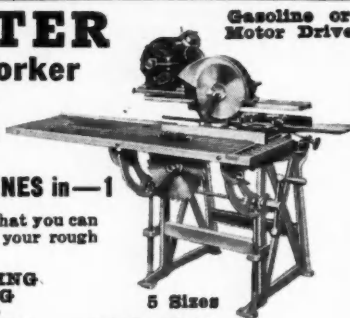
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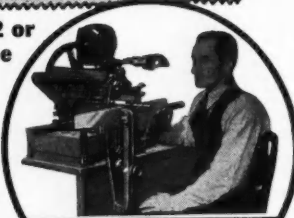
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**TruCost Figures—**

(Continued from page 199)

and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 25 opgs.; Windows and Casements, 30 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, .30 sqs.

**Page 103, April; Blietz, Bldr.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 160 lin. ft.; Trench Walls, 120 lin. ft.; Basement Floor, 1050 sq. ft.; Garage Floor, 385 sq. ft.; Excavation per ft. deep, 50 cu. yds.; Outside Walls, 35.00 sqs.; First Floor, 10.50 sqs.; Second Floor, with fin. flg., 10.50 sqs.; Ceiling, 25.00 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 21.00 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 350 lin. ft.; Cornice, 8", 200 lin. ft.; Partitions, 280 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 3 opgs.; Garage Door 14 ft. wide, 1; Inside Doors and Cased Opgs., 25 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 2.00 sqs.; Porch Ceilings, 1.68 sqs.; Porch Beam, 42 lin. ft.; Porch and Balcony Post and Newels, 5; Porch Roof, 2.60 sqs.; Porch Cornice, 60 lin. ft.; Porch Rail and Picket Fence, 42 lin. ft.

**Page 105, April; Swanson, Archt.**

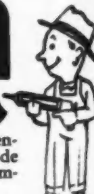
"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 120 lin. ft.; Trench Walls, 74 lin. ft.; Basement Floor, 825 sq. ft.; Garage Floor, 195 sq. ft.; Excavation per ft. deep, 44 cu. yds.; Outside Walls, 25.00 sqs.; First Floor, 8.25 sqs.; Second Floor, with fin. flg., 10.00 sqs.; Ceiling, 20.20 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 13.50 sqs.; Hips and Valleys, 24 lin. ft.; Cornice, C & F, 180 lin. ft.; Partitions, 175 lin. ft.; Inside Finish OS Walls, 264 lin. ft.; Front and OS French Doors, 4 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 18 opgs.; Windows and Casements, 28 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.46 sqs.; Porch Ceilings, 2.12 sqs.; Porch Beam, 56 lin. ft.; Porch and Balcony Post and Newels, 24; Front Balcony Floors and Rear Porch Roof, 2.50 sqs.; Porch Cornice, 50 lin. ft.; Porch and Deck Rail, 64 lin. ft.

**Page 114, April; Zamore, Bldr.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 100 lin. ft.; Trench Walls, 50 lin. ft.; Basement Floor, 484 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 22 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 4.84 sqs.; Second Floor, with fin. flg., 4.84 sqs.; Ceiling, 11.68 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 10.75 sqs.; Hips and Valleys, 10 lin. ft.; Cornice, C & F, 175 lin. ft.; Partitions, 150 lin. ft.; Inside Finish OS Walls, 190 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 20 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .36 sqs.

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**Page 115, April: Dolsen, Archt.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 154 lin. ft.; Basement Floor, 1000 sq. ft.; Excavation per ft. deep, 41 cu. yds.; Outside Walls, 14.00 sqs.; First Floor, 10.00 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 5" rise per ft. run; Roof, 12.00 sqs.; Hips and Valleys, 80 lin. ft.; Cornice, C & F, 160 lin. ft.; Partitions, 150 lin. ft.; Inside Finish OS Walls, 154 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 14 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 1 opg.; Chimney, 22 lin. ft.; Porch Floor, .14 sqs.; Porch Ceilings, .08 sqs.; Porch Beam, 4 lin. ft.

**Page 117, April: Thatcher, Bldr.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 260 lin. ft.; Service Rm. Floor, 84 sq. ft.; Garage Floor, 324 sq. ft.; Outside Walls, 32.00 sqs.; First Floor, 17.00 sqs.; Ceiling, 20.50 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 27.00 sqs.; Hips and Valleys, 100 lin. ft.; Cornice, C & F, 100 lin. ft.; Cornice, 12", 275 lin. ft.; Partitions, 236 lin. ft.; Inside Finish OS Walls, 260 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 3 opgs.; Garage Door, 15 ft. wide, 1; Inside Doors and Cased Opgs., 28 opgs.; Windows and Casements, 27 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 24 lin. ft.; Porch Floor, 1.75 sqs.; Porch Ceilings, 1.25 sqs.; Porch Beam, 15 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.50 sqs.; Porch Cornice, 15 lin. ft.

**Page 117, April: Severance, Bldr.**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 240 lin. ft.; Laundry Floor, 60 sq. ft.; Garage Floor, 325 sq. ft.; Outside Walls, 30.00 sqs.; First Floor, 17.00 sqs.; Ceiling, 20.25 sqs.; Roof Pitch, 9" rise per ft. run; Roof, incl. Porch, 28.00 sqs.; Hips and Valleys, 100 lin. ft.; Cornice, C & F, incl. Porch, 300 lin. ft.; Partitions, 260 lin. ft.; Inside Finish OS Walls, 240 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 16 ft. wide, 1; Inside Doors and Cased Opgs., 28 opgs.; Windows and Casements, 15 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 24 lin. ft.; Porch Floor, 3.25 sqs.; Porch Ceilings, .16 sqs.; Porch Beam, 8 lin. ft.; Porch and Balcony Post and Newels, 3.

**Page 173, April: Sandidge-Murphy, Bldrs.: 4-Room**

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Foundation Walls, 108 lin. ft.; Trench Walls, 20 lin. ft.; Utility Rm. Floor, 36 sq. ft.; Excavation per ft. deep, 31 cu. yds.; Outside Walls, 13.00 sqs.; First Floor, 6.84 sqs.; Ceiling, 7.20 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 8.75 sqs.; Cornice, C & F, 124 lin. ft.; Partitions, 98 lin. ft.; Inside Finish OS Walls, 110 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 10 opgs.; Windows and Casements, 10 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 28 lin. ft.; Porch Floor, .25 sqs.; Porch Ceilings, .15 sqs.; Porch Beam, 12 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, .15 sqs.; Porch Cornice, 12 lin. ft.

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 See Vises, Bench  
**BENCHES—SAW**  
 See Saw Rigs

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 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 National Door Mfrs. Assn., Chicago  
 —See page 224

**BLIND HINGES**  
 See Hinges, Blind and Shutter

**BLOCKS—GLASS**  
 See Glass Blocks

**BLOCKS—HOLLOW BUILDING**  
 Certain-teed Products Corp., New York

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 Modine Mfg. Co., Racine, Wis.  
 Pacific Gas Radiator Co., Huntington Park, Calif.

Round Oak Co., Dowagiac, Mich.

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 See Machines, Blueprinting

**BLUEPRINT PAPER**  
 See Paper, Blue Print

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 Congoleum-Nairn, Inc., Kearny, N.J.  
 Homasote Co., Trenton, N.J.  
 Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
 Masonite Corp., Chicago

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 Crane Co., Chicago  
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 Kitchen Maid Corp., Andrews, Ind.  
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 Flintkote Co., New York  
 Homasote Co., Trenton, N.J.  
 Insulite Co., Minneapolis, Minn.  
 Johns-Manville, New York  
 Masonite Corp., Chicago  
 National Gypsum Co., Buffalo, N.Y.  
 U. S. Gypsum Co., Chicago  
 Upson Co., Lockport, N.Y.  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
 Wood Conversion Co., St. Paul, Minn.

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 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
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 Pacific Mutual Door Co., Tacoma, Wash.

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**BOARDS—PLASTER**  
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 Johns-Manville, New York  
 National Gypsum Co., Buffalo, N.Y.  
 U. S. Gypsum Co., Chicago

**BOARDS—SHEATHING**  
 Arkansas Soft Pine Bureau, Little Rock, Ark.  
 —See page 224  
 Armstrong Cork Co., Lancaster, Pa.  
 Bradley Lbr. Co. of Arkansas, Warren, Ark.  
 California Redwood Distributors, Ltd., Chicago, Ill.  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Douglas Fir Plywood Assn., Tacoma, Wash.  
 —See page 224  
 Exchange Sawmills Sales Co., Kansas City, Mo.  
 Fir-Tex Insulating Board Co., Portland, Ore.  
 Flintkote Co., New York  
 Florida Louisiana Red Cypress Co., Jacksonville, Fla.

Frost Lumber Industries, Inc., Shreveport, La.  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Homasote Co., Trenton, N.J.  
 Insulite Co., Minneapolis, Minn.  
 Johns-Manville, New York  
 Masonite Corp., Chicago  
 National Gypsum Co., Buffalo, N.Y.  
 U. S. Gypsum Co., Chicago  
 U. S. Plywood Corp., New York  
 Western Pine Assn., Portland, Ore.  
 —See page 224  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
 Wood Conversion Co., St. Paul, Minn.

**BOARDS—SOUND DEADENING**  
 Armstrong Cork Co., Lancaster, Pa.  
 Certain-teed Products Corp., New York  
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 Fir-Tex Insulating Board Co., Portland, Ore.  
 Homasote Co., Trenton, N.J.  
 Insulite Co., Minneapolis, Minn.  
 Johns-Manville, New York  
 Masonite Corp., Chicago  
 U. S. Gypsum Co., Chicago  
 Wood Conversion Co., St. Paul, Minn.

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 Armstrong Cork Co., Lancaster, Pa.  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Certain-teed Products Corp., New York  
 Douglas Fir Plywood Assn., Tacoma, Wash.  
 —See page 224  
 Fir-Tex Insulating Board Co., Portland, Ore.  
 Flintkote Co., New York  
 Gibbs Boardtile Corp., Chicago  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Homasote Co., Trenton, N.J.  
 Insulite Co., Minneapolis, Minn.  
 Johns-Manville, New York  
 Marsh Wall Products, Inc., Dover, Ohio  
 Masonite Corp., Chicago  
 Mengel Co., Louisville, Ky.  
 National Gypsum Co., Buffalo, N.Y.  
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 Traco Division, Atlanta, Ga.  
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**BOILER CEMENT**  
 See Cement, Boiler

**BOILER COVERINGS**  
 See Coverings, Boiler and Pipe

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 See Hardware, Door

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**BOLTS—WINDOW**  
 See Hardware, Sash

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 See Machines, Boring

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 See Gas, Bottled

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 National Electric Products Corp., Pittsburgh, Pa.

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 Wagner Mfg. Co., Cedar Falls, Iowa

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 H. B. Ives Co., New Haven, Conn.  
 Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
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 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

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 Stanley Works, New Britain, Conn.

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 Cincinnati Iron Fence Co., Cincinnati, Ohio  
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 Kohler Co., Kohler, Wis.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**BRACKETS—WALL (Electrical)**  
 National Electric Products Corp., Pittsburgh, Pa.

**BREAKFAST NOOKS OR ROOMS**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 (Continued on next page)



**BRICK—FIRE**  
Johns-Manville, New York

**BRICK—VENTILATING**  
Majestic Co., Huntington, Ind.

**BRICK CARRIERS—**  
See Carriers, Brick

**BRICK COLORS—**  
See Colors, Brick

**BRICK WATERPROOFING—**  
See Waterproofing, Brick

**BRICKLAYERS CEMENT—**  
See Cement, Masons'

**BRIDGING—FLOOR (Wood)**  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Weyerhaeuser Sales Co., St. Paul, Minn.

**BRONZE DOORS—**  
See Doors, Bronze

**BRUSHES—PAINT**  
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Carr, Adams & Collier Co., Dubuque, Iowa  
Lowe Brothers Co., Dayton, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**BRUSHES—POLISHING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Hilger Co., St. Cloud, Minn.

**BUBBLING FOUNTAINS—**  
See Fountains, Drinking

**BUCKETS—HOISTING AND DUMPING**  
Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio

**BUILDERS' HARDWARE—**  
See Hardware, Various Kinds

**BUILDINGS—PORTABLE**  
American Rolling Mill Co., Middletown, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Harbor Plywood Corp., Hoquiam, Wash.

**BUILDINGS—STEEL**  
American Rolling Mill Co., Middletown, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
International Steel Co.—See adv. this page  
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

**BULKHEADS—RESIDENCE**  
Bilco Mfg. Co., New Haven, Conn.

**BURNERS—GABAGE—**  
See Incinerators

**BURNERS—GAS (Conversion)**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Crane Co., Chicago  
General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
L. J. Mueller Furnace Co., Milwaukee, Wis.  
Norge Heating & Conditioning Division, Detroit, Mich.  
Surface Combustion Corp., Toledo, Ohio

**BURNERS—OIL (Conversion)**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Calesco Corp., Lynn, Mass.  
Crane Co., Chicago  
General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
Iron Fireman Mfg. Co., Portland, Ore.  
Kohler Co., Kohler, Wis.  
H. C. Little Burner Co., San Rafael, Calif.  
Lochinvar Division, Dearborn, Mich.  
Norge Heating & Conditioning Division, Detroit, Mich.

**BUSDUCTS—ELECTRIC**  
Frank Adam Electric Co., St. Louis, Mo.

**BUTT GAUGES—**  
See Gauges, Butt

**BUTT HINGES—**  
See Hinges

**CABINETS—BATHROOM**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Crane Co., Chicago  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
F. H. Lawson Co., Dubuque, Iowa  
Miami Cabinet Division of The Phillip Carey Co., Middletown, Ohio

**CABINETS—DRESSING ROOM**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa

**CABINETS—KITCHEN**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Crane Co., Chicago  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
Kitchen Maid Corp., Andrews, Ind.  
Pacific Mutual Door Co., Tacoma, Wash.  
Youngstown Pressed Steel Div., Warren, Ohio

**CABINETS—MEDICINE—**  
See Cabinets, Bathroom

**CABINETS—RADIATOR—**  
See Enclosures, Radiator

**CABINETS—STORAGE**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Crane Co., Chicago  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Co., Dubuque, Iowa  
Kitchen Maid Corp., Andrews, Ind.

**CABINET HARDWARE—**  
See Hardware, Cabinet

**CABINET HEATERS—**  
See Heaters, Cabinet

**CABLES—ARMORED**  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
National Electric Products Corp., Pittsburgh, Pa.

**CABLES—ELEVATOR (Electric)**  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
National Electric Products Corp., Pittsburgh, Pa.

**CALCIMINE—**  
See Kalsomine

**CALCIUM CHLORIDE**  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
Solvay Sales Corp., New York

**CAPS—CHIMNEY**  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**CAPS—POST**  
Cincinnati Iron Fence Co., Cincinnati, Ohio  
Curtis Companies, Inc., Clinton, Iowa  
Donley Brothers Co., Cleveland, Ohio  
Majestic Co., Huntington, Ind.  
Pacific Mutual Door Co., Tacoma, Wash.

**CARPENTERS' TOOLS—**  
See Name of Tool Desired

**CARRIERS—BRICK AND TILE**  
Donley Brothers Co., Cleveland, Ohio  
Lansing Co., Lansing, Mich.  
Sterling Wheelbarrow Co., Milwaukee, Wis.

**CARRIERS—CLOTHES—**  
See Fixtures, Wardrobe

**CARRIERS—OVERHEAD**  
Allith-Prouty, Inc., Danville, Ill.  
Coburn Trolley Track Co., Holyoke, Mass.  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Wagner Mfg. Co., Cedar Falls, Iowa

**CARS—ELEVATOR**  
Sedgwick Machine Works, New York  
Wagner Mfg. Co., Cedar Falls, Iowa

**CARTS—CONCRETE**  
American Cement Machine Co., Keokuk, Iowa  
Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio  
Lansing Co., Lansing, Mich.  
Sterling Wheelbarrow Co., Milwaukee, Wis.

**CARTS—DUMP**  
American Cement Machine Co., Keokuk, Iowa  
Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio  
Lansing Co., Lansing, Mich.  
Sterling Wheelbarrow Co., Milwaukee, Wis.



## All-Steel BUILDINGS

Quick erection, lowest first cost. Firesafe, standardized. Delivery from warehouse stock.

**INTERNATIONAL STEEL CO.**  
1465 Edgar Street  
Evansville, Ind.

**CARTS—HAND**  
Lansing Co., Lansing, Mich.  
Sterling Wheelbarrow Co., Milwaukee, Wis.

**CASEMENT WINDOWS—**  
See Windows, Casement

**CASEMENT WINDOW ADJUSTERS—**  
See Hardware, Casement Window

**CASINGS—WINDOW (Metal)**  
Knapp Bros. Mfg. Co., Joliet, Ill.  
Mesker Brothers, St. Louis, Mo.  
Milcor Steel Co., Milwaukee, Wis.

**CASING—WINDOW (Wood)**  
Arkansas Soft Pine Bureau, Little Rock, Ark.—See page 224  
Bradley Lbr. Co., of Arkansas, Warren, Ark.  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries Inc., Shreveport, La.  
Pacific Mutual Door Co., Tacoma, Wash.  
Shevlin Pine Sales Co., Minneapolis, Minn.  
Southern Pine Lbr. Co., Texarkana, Tex.  
Western Pine Assn., Portland, Ore.—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.

**CATCHES—CABINET—**  
See Hardware, Cabinet

**CATCHES—DOOR—**  
See Hardware, Door

**CAULKING MATERIALS—**  
See Compounds, Caulking

**CEILING—METAL**  
American Rolling Mill Co., Middletown, Ohio  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**CEILING—SUSPENDED**  
Celotex Corp., Chicago  
Johns-Manville, New York  
Milcor Steel Co., Milwaukee, Wis.  
U. S. Gypsum Co., Chicago

**CEILING—TILE**  
Armstrong Cork Co., Lancaster, Pa.  
Celotex Corp., Chicago  
Davidson Enamel Co., Clyde, Ohio  
Flintkote Co., New York  
Gibbs Boardtile Corp., Chicago  
Insulite Co., Minneapolis, Minn.  
Fir-Tex Insulating Board Co., Portland, Ore.  
Johns-Manville, New York  
Masonite Corp., Chicago  
National Gypsum Co., Buffalo, N.Y.  
Tylac Co., Monticello, Ill.  
U. S. Gypsum Co., Chicago  
Wood Conversion Co., St. Paul, Minn.

**CEILING—WOOD**  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
Carr, Adams & Collier Co., Dubuque, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries Inc., Shreveport, La.  
Harbor Plywood Corp., Hoquiam, Wash.

Johns-Manville, New York  
Southern Pine Lbr. Co., Texarkana, Tex.  
U. S. Plywood Corp., New York  
Weyerhaeuser Sales Co., St. Paul, Minn.

**CEILING PLATES—**  
See Plates, Ceiling

**CEILING HOOKS—**  
See Hooks, Ceiling

**CELLAR DOORS—**  
See Doors, Cellar

**CELLAR WINDOWS—**  
See Frames, Basement Window

**CEMENT—BOILER**  
Barber Asphalt Corp., Barber, N.J.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Crane Co., Chicago  
Johns-Manville, New York  
Peccora Paint Co., Philadelphia, Pa.  
Ruberoid Co., New York  
L. Sonneborn Sons, Inc., New York  
Universal Atlas Cement Co., New York

**CEMENT—FLOORING**  
Armstrong Cork Co., Lancaster, Pa.  
E. L. Bruce Co., Memphis, Tenn.

**CEMENT—HIGH EARLY STRENGTH**  
Lehigh Portland Cement Co., Allentown, Pa.  
Lone Star Cement Corp., New York  
Louisville Cement Co., Louisville, Ky.  
Pennsylvania-Dixie Cement Corp., New York  
Universal Atlas Cement Co., New York

**CEMENT—HIGH TEMPERATURE**  
Armstrong Cork Co., Lancaster, Pa.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Johns-Manville, New York  
Peccora Paint Co., Philadelphia, Pa.  
Ruberoid Co., New York  
Universal Atlas Cement Co., New York

**CEMENT—MASONS'**  
American Fluoresit Co., Cincinnati, Ohio  
Lehigh Portland Cement Co., Allentown, Pa.  
Louisville Cement Co., Louisville, Ky.  
Medusa Portland Cement Co., Cleveland, Ohio  
Ohio Hydrate & Supply Co., Woodville, Ohio  
Woodville Lime Products Co., Toledo, Ohio

**CEMENT—NON-STAINING**  
Louisville Cement Co., Louisville, Ky.

**CEMENT—PORTLAND**  
Lehigh Portland Cement Co., Allentown, Pa.  
Lone Star Cement Corp., New York  
Louisville Cement Co., Louisville, Ky.  
Medusa Portland Cement Co., Cleveland, Ohio  
Pennsylvania-Dixie Cement Corp., New York  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
Universal Atlas Cement Co., New York

**CEMENT—PORTLAND (White)**  
Medusa Portland Cement Co., Cleveland, Ohio  
Universal Atlas Cement Co., New York

**CEMENT—ROOFING**  
American Fluoresit Co., Cincinnati, Ohio  
Armstrong Cork Co., Lancaster, Pa.  
Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Certain-tyed Products Corp., New York  
Donley Brothers Co., Cleveland, Ohio  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
Lowe Brothers Co., Dayton, Ohio  
B. F. Nelson Mfg. Co., Minneapolis, Minn.  
Peccora Paint Co., Philadelphia, Pa.  
Ruberoid Co., New York  
L. Sonneborn Sons, Inc., New York  
Texas Co., New York  
U. S. Gypsum Co., Chicago

**CEMENT—SLATE**  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Flintkote Co., New York  
Peccora Paint Co., Philadelphia, Pa.

**CEMENT—TILE SETTING**  
Armstrong Cork Co., Lancaster, Pa.  
Barber Asphalt Corp., Barber, N.J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Insulite Co., Minneapolis, Minn.  
Medusa Portland Cement Co., Cleveland, Ohio  
Ohio Hydrate & Supply Co., Woodville, Ohio  
Peccora Paint Co., Philadelphia, Pa.  
Tylac Co., Monticello, Ill.  
Wood Conversion Co., St. Paul, Minn.  
Woodville Lime Products Co., Toledo, Ohio

**CEMENT—WALLBOARD**  
Armstrong Cork Co., Lancaster, Pa.  
B & T Floor Co., Columbus, Ohio  
Tylac Co., Monticello, Ill.

**CEMENT ACCELERATORS—**  
See Accelerators, Cement

**CEMENT BRICK MACHINES—**  
See Machines, Cement Brick

**CEMENT COATINGS—**  
See Coatings, Cement

**CEMENT COLORS—**  
See Colors, Cement

**CEMENT GROUTERS—**  
See Grouters, Cement

**CEMENT HARDENERS—**  
See Accelerators, Cement

**CEMENT MIXERS—**  
See Mixers, Concrete

**CEMENT REINFORCING—**  
See Reinforcing, Concrete and Stucco

**CEMENT WATERPROOFING—**  
See Waterproofing, Cement

**CESSPOOL TRAPS—**  
See Traps, Cesspool

**CHAINS—DOOR**  
H. B. Ives Co., New Haven, Conn.  
Overhead Door Corp., Hartford City, Ind.  
Wagner Mfg. Co., Cedar Falls, Iowa

**CHAINS—SASH**  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.

**CHAINS—TRANSOM**  
H. B. Ives Co., New Haven, Conn.



**CHANNELS—STEEL**

Bethlehem Steel Co., Bethlehem, Pa.  
Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

**CHECKS—DOOR**

Frantz Mfg. Co., Sterling, Ill.  
Norton Door Closer Co., Chicago  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**CHEMICAL CLOSETS—**

See Closets, Chemical

**CHIMES—DOOR**

NuTone Chimes, Inc., Cincinnati, Ohio

**CHISELS—CARPENTERS'**

Landon P. Smith, Inc., Irvington, N. J.  
Stanley Tools, New Britain, Conn.

**CHISELS—HOLLOW MORTISING**

Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N. J.

**CHUTES—COAL**

Donley Brothers Co., Cleveland, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Gabriel Steel Co., Detroit, Mich.  
Majestic Co., Huntington, Ind.  
Mesker Brothers, St. Louis, Mo.  
Milcor Steel Co., Milwaukee, Wis.  
Vento Steel Products Co., Muskegon, Mich.

**CHUTES—CONCRETE**

Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio  
Lansing Co., Lansing, Mich.

**CHUTES—MAIL**

Donley Brothers Co., Cleveland, Ohio

**CIRCUIT BREAKERS—ELECTRIC**

Frank Adam Electric Co., St. Louis, Mo.  
Square D Co., Detroit, Mich.

**CIRCULATORS—FIREPLACE—**

See Fireplaces, Heat-Circulating

**CIRCULATORS—HOT WATER HEATING**

Crane Co., Chicago

**CLAMPS—CARPENTERS'**

Knap & Vogt Mfg. Co., Grand Rapids, Mich.

**CLAMPS—COLUMN**

Sterling Wheelbarrow Co., Milwaukee, Wis.

**CLEANOUT DOORS—**

See Doors, Cleanout

**CLIPS—CEILING AND WALL**

Armstrong Cork Co., Lancaster, Pa.  
Insulite Co., Minneapolis, Minn.  
National Gypsum Co., Buffalo, N.Y.  
U. S. Gypsum Co., Chicago  
Wood Conversion Co., St. Paul, Minn.

**CLOCKS—ELECTRIC**

General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

**CLOSERS—DOOR**

Barber-Coleman Co., Rockford, Ill.  
Frantz Mfg. Co., Sterling, Ill.  
Norton Door Closer Co., Chicago  
Wagner Mfg. Co., Cedar Falls, Iowa

**CLOSETS—CHEMICAL**

Crane Co., Chicago

**CLOSETS—WATER**

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
W. A. Case & Son Mfg. Co., Buffalo, N.Y.  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
Kohler Co., Kohler, Wis.

**CLOSET BOWLS—**

See Bowls, Closet

**CLOSET LINING—CEDAR—**

See Lining, Closet (Cedar)

**CLOSET TANKS—**

See Tanks, Closets

**CLOSET TANK FITTINGS—**

See Fittings, Closet Tank

**CLOTH—SCREEN**

Clinton Wire Cloth Co., Clinton, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Reynolds Wire Co., Dixon, Ill.

**CLOTH—TRACING**

Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**CLOTHES DRYERS—**

See Dryers, Laundry

**CLOTHES CLOSET FIXTURES—**

See Fixtures, Wardrobe

**CLOTHES POSTS—**

See Posts, Clothes

**COAL CHUTES—**

See Chutes, Coal

**COAL DOORS—**

See Doors, Coal

**COAL STOKERS—See Stokers, Coal**

**COAL STOVES—**

See Ranges

**COATINGS—CEMENT**

American Fluoresit Co., Cincinnati, Ohio  
Armstrong Cork Co., Lancaster, Pa.  
Barber Asphalt, Corp., Barber, N. J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Celotex Corp., Chicago  
Colorcrete Industries, Inc., Holland, Mich.  
Flintkote Co., New York  
Johns-Manville, New York  
Medusa Portland Cement Co., Cleveland, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
Ruberoid Co., New York  
L. Sonneborn Sons, Inc., New York  
Texas Co., New York  
U. S. Gypsum Co., Chicago

**COATINGS—ROOF**

American Fluoresit Co., Cincinnati, Ohio  
Barber Asphalt Corp., Barber, N. J.  
Barrett Co., New York  
Breinig Bros., Hoboken, N. J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Donley Brothers Co., Cleveland, Ohio

Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
Lowe Brothers Co., Dayton, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
Ruberoid Co., New York  
L. Sonneborn Sons, Inc., New York  
Texas Co., New York  
U. S. Gypsum Co., Chicago

**COLONIAL HARDWARE—**

See Hardware, Colonial

**COLONNADES**

California Redwood Distributors, Ltd., Chicago  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa

**COLORS—BRICK**

Colorcrete Industries, Inc., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**COLORS—CEMENT**

Colorcrete Industries, Inc., Holland, Mich.  
L. Sonneborn Sons, Inc., New York

**COLORS—MORTAR**

Colorcrete Industries, Inc., Holland, Mich.  
Pecora Paint Co., Philadelphia, Pa.

**L. Sonneborn Sons, Inc., New York**

**COLUMNS—BASEMENT (Metal)**

Donley Brothers Co., Cleveland, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio

**COLUMNS—PORCH (Iron)**

Cincinnati Iron Fence Co., Cincinnati, Ohio  
California Redwood Distributors, Ltd., Chicago

**Carr, Adams & Collier Co., Dubuque, Iowa**

**Curtis Companies, Inc., Clinton, Iowa**

**Farley & Loetscher Mfg. Co., Dubuque, Iowa**

**Pacific Mutual Door Co., Tacoma, Wash.**

**Weyerhaeuser Sales Co., St. Paul, Minn.**

**COLUMN BASES—**

See Bases, Column

**COLUMN CLAMPS—**

See Clamps, Column

**COMBINATION SQUARES—**

See Squares, Combination

**COMPOUNDS—ANTI-FREEZE**

American Fluoresit Co., Cincinnati, Ohio  
Solvay Sales Corp., New York

**L. Sonneborn Sons, Inc., New York**

**COMPOUNDS—CAULKING**

Allmetal Weatherstrip Co., Chicago  
American Fluoresit Co., Cincinnati, Ohio  
Armstrong Cork Co., Lancaster, Pa.  
Breinig Bros., Hoboken, N. J.

**Philip Carey Co., Lockland, Cincinnati, Ohio**

**Calbar Paint & Varnish Co., Philadelphia, Pa.**

**W. J. Dennis & Co., Chicago**

**Donley Brothers Co., Cleveland, Ohio**

**Flintkote Co., New York**

**Ford Roofing Products Co., Chicago**

**Johns-Manville, New York**

**Master Metal Strip Service, Inc., Chicago**

**National Lead Co., New York**

**Pecora Paint Co., Philadelphia, Pa.**

**L. Sonneborn Sons, Inc., New York**

**COMPOUNDS—GLAZING**

Breinig Bros., Hoboken, N. J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Donley Brothers Co., Cleveland, Ohio  
Pecora Paint Co., Philadelphia, Pa.  
L. Sonneborn Sons, Inc., New York

**COMPOUNDS—WATERPROOFING—**

See Waterproofing

**COMPRESSORS—AIR**

Homelite Corp., Port Chester, N.Y.

**CONCRETE BINS—**

See Bins, Concrete

**CONCRETE BLOCK MACHINES—**

See Machines, Concrete Block

**CONCRETE BLOCK MOLDS—**

See Forms and Molds

**CONCRETE CHUTES—**

See Chutes, Concrete

**CONCRETE INSERTS—**

See Inserts, Concrete

**CONCRETE MIXERS—**

See Mixers, Concrete

**CONCRETE VIBRATORS—**

See Vibrators, Concrete; also Machines, Tamping

**CONDUCTOR PIPE—**

See Pipe, Conductor

**CONDUIT—ELECTRICAL**

Aluminum Co. of America, Pittsburgh, Pa.  
American Brass Co., New York  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

National Electric Products Corp., Pittsburgh, Pa.

**CONNECTORS—METAL (Split Ring, Toothed Ring, Shear Plate)**

Timber Engineering Co., Washington, D.C.

**CONTRACTORS' EQUIPMENT—**

See also Hoists, Building Material; Pumps, Contractors' and Drain; Winches  
C. H. & E. Mfg. Co., See Adv. this page

**CH&E.** SAW RIGS  
PUMPS  
HOISTS  
MORTAR MIXERS  
BAR CUTTERS  
BAR BENDERS  
**CONTRACTORS EQUIPMENT**  
C. H. & E. MANUFACTURING CO.  
3845 N. Palmer St., Milwaukee, Wis.

**CONTRACTORS' HOISTS—**

See Hoists, Building Material

**CONTROLS—HEATING—**

See Regulators, Furnace; and Thermostats

**CONVECTORS**

Crane Co., Chicago  
Modine Mfg. Co., Racine, Wis.  
**CONVECTOR ENCLOSURES—**  
See Enclosures, Convector  
**CONVERTIBLE LEVELS—**  
See Levels  
**COOLERS—ROOM**  
Airtemp Division, Dayton, Ohio  
Ilg Electric Ventilating Co., Chicago  
International Harvester Co., Chicago  
Modine Mfg. Co., Racine, Wis.  
Norge Heating & Conditioning Division, Detroit, Mich.

**COOLERS—WATER (Ice)**

Modine Mfg. Co., Racine, Wis.  
**COOLING SYSTEMS—Central**  
Airtemp Division, Dayton, Ohio  
Ilg Electric Ventilating Co., Chicago  
International Harvester Co., Chicago  
Modine Mfg. Co., Racine, Wis.  
Norge Heating & Conditioning Division, Detroit, Mich.

**COOLING SYSTEMS—WELL WATER**

Crane Co., Chicago

**COPPER—ROLL AND SHEET**

American Brass Co., New York  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**COPPER FLASHINGS—**

See Flashings, Copper

**COPPER SHINGLES—**

See Roofing, Copper Shingles

**CORD—AWNING—**

See Rope, Awning

**CORD—SASH**

Allmetal Weatherstrip Co., Chicago  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Puritan Cordage Mills, Inc., Louisville, Ky.  
Samson Cordage Works, Boston, Mass.

**CORNCRIBS—PORTABLE**

B & T Floor Co., Columbus, Ohio  
Illinois Wire & Mfg. Co., Joliet, Ill.  
Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
Mid-States Steel & Wire Co., Crawfordsville, Ind.  
Tylac Co., Monticello, Ill.

**U. S. Gypsum Co., Chicago**

**CORNERS—METAL**

American Brass Co., New York  
Armstrong Cork Co., Lancaster, Pa.  
W. J. Dennis & Co., Chicago  
Donley Brothers Co., Cleveland, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Johns-Manville, New York  
F. D. Kees Mfg. Co., Beatrice, Nebr.  
Milcor Steel Co., Milwaukee, Wis.

**CORNER BEAD—**

See Bead, Corner

**CORNER BRACES—**

See Braces, Corner

**CORNICES—METAL**

Edwards Mfg. Co., Cleveland, Ohio  
Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
Milcor Steel Co., Milwaukee, Wis.  
Wilson Metal Products Co., Columbus, Ohio

**CORRESPONDENCE SCHOOLS—**

See Schools, Correspondence

**COUNTER TOPS—**

See Tops, Counter and Table

**COURSES FOR BUILDERS, ETC.**

American Technical Society, Chicago  
Chicago Technical College, Chicago

**COVE BASE—**

See Base Cove

**COVERINGS—BOILER AND PIPE**

Armstrong Cork Co., Lancaster, Pa.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Crane Co., Chicago

**Johns-Manville, New York**

**Ruberoid Co., New York**

**COVERINGS—FLOOR (Linoleum)**

Armstrong Cork Co., Lancaster, Pa.  
Congoleum-Nairn Inc., Kearny, N.J.  
**COVERINGS—FLOOR (Rubber)**  
Armstrong Cork Co., Lancaster, Pa.  
Wright Rubber Products Co., Racine, Wis.

**COVERINGS—FLOOR (Tile)**

Armstrong Cork Co., Lancaster, Pa.  
Congoleum-Nairn Inc., Kearny, N.J.  
Johns-Manville, New York

**Tile-Tex Co., Chicago Heights, Ill.**

**COVERINGS—WALL—**

See also Boards, Wall; Panels; and Paneling  
Allegheny Ludlum Steel Corp., Pittsburgh, Pa.

Armstrong Cork Co., Lancaster, Pa.  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
Celotex Corp., Chicago

Congoleum-Nairn Inc., Kearny, N.J.

Davidson Enamel Co., Clyde, Ohio

Flintkote Co., New York

Gibbs Boardtile Corp., Chicago

Homasote Co., Trenton, N. J.

Johns-Manville, New York

Marsh Wall Products, Inc., Dover, Ohio

Masonite Corp., Chicago

National Gypsum Co., Buffalo, N.Y.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Ruberoid Co., New York

Standard Coated Products Corp., New York

Tile-Tex Co., Chicago Heights, Ill.

Traco Division, Atlanta, Ga.

Tylac Co., Monticello, Ill.

U. S. Gypsum Co., Chicago

U. S. Plywood Corp., New York

Upson Co., Lockport, N.Y.

Wood Conversion Co., St. Paul, Minn.

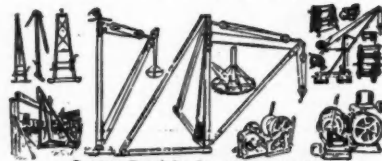
**COVERINGS—WATERPROOF**

American Fluoresit Co., Cincinnati, Ohio  
Armstrong Cork Co., Lancaster, Pa.  
Barber Asphalt Corp., Barber, N. J.  
Barrett Co., New York  
Breinig Bros., Hoboken, N. J.

(Continued on next page)

Donley Bros. Co., Cleveland, Ohio  
 Johns-Manville, New York  
 Medusa Portland Cement Co., Cleveland, Ohio  
 Sisalkraft Co., Chicago  
 Tylac Co., Monticello, Ill.  
**COVERS—CISTERN**  
 Donley Brothers Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
**COVERS—COAL HOLE**  
 Donley Brothers Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
 Wooster Products, Inc., Wooster, Ohio  
**COVERS—MANHOLE**  
 Crane Co., Chicago  
 Donley Brothers Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
 Wooster Products, Inc., Wooster, Ohio  
**COVERS—RADIATOR**  
 See Enclosures, Radiator  
**CRAYONS—LUMBER**  
 Warren-Knight Co., Philadelphia, Pa.  
 David White Co., Milwaukee, Wis.  
**CULVERT PIPE**  
 See Pipe, Culvert  
**CULVERT FORMS**  
 See Forms and Molds  
**CURTAINS—ASBESTOS**  
 Johns-Manville, New York  
**CUT-OUTS—ELECTRICAL**  
 General Electric Co., Appl. & Merch. Dept.,  
 Bridgeport, Conn.  
 Square D Co., Detroit, Mich.  
**CUTTERS—ASBESTOS SHINGLE**  
 Ajax Building Bracket Co., Cleveland Heights,  
 Ohio  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 U. S. Gypsum Co., Chicago  
**CUTTERS—DADO**  
 American Saw Mill Machinery Co., Hack-  
 ettstown, N.J.  
 Delta Mfg. Co., Chicago  
 DeWalt Products Corp., Lancaster, Pa.  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Walker-Turner Co., Plainfield, N.J.  
**CUTTERS—FIBREBOARD**  
 Kimball Mfg. Co., Royal Oak, Mich.  
**CUTTERS—GLASS AND TILE**  
 Landon P. Smith, Inc., Irvington, N.J.  
**CUTTERS—MITER**  
 A. Markwell Mfg. Co., New York  
**CUTTERS—MOULDING**  
 American Saw Mill Machinery Co., Hacketts-  
 town, N.J.  
 Delta Mfg. Co., Chicago  
 DeWalt Products Corp., Lancaster, Pa.  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Walker-Turner Co., Plainfield, N.J.  
 Wilson Metal Products Co., Columbus, Ohio  
**CUTTERS—PIPE**  
 Crane Co., Chicago  
**CUTTERS—SASH**  
 Delta Mfg. Co., Chicago  
 DeWalt Products Corp., Lancaster, Pa.  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Walker-Turner Co., Plainfield, N.J.  
**CUTTERS—SLATE**  
 Ajax Building Bracket Co., Cleveland Heights,  
 Ohio  
 DeWalt Products Corp., Lancaster, Pa.  
**CUTTERS—TILE (Electric)**  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Wodaek Electric Tool Corp., Chicago  
**DADO CUTTERS**  
 See Cutters, Dado  
**DADO HEADS**  
 See Heads, Dado  
**DAMPERS—FIREPLACE**  
 Donley Brothers Co., Cleveland, Ohio  
 Gabriel Steel Co., Detroit, Mich.  
 Majestic Co., Huntington, Ind.  
 Mesker Brothers, St. Louis, Mo.  
 Superior Fireplace Co., Los Angeles, Calif.  
**DAMPENING**  
 American Fluresit Co., Cincinnati, Ohio  
 Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Calbar Paint & Varnish Co., Philadelphia, Pa.  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Donley Brothers Co., Cleveland, Ohio  
 Flintkote Co., New York  
 Pecora Paint Co., Philadelphia, Pa.  
 Sisalkraft Co., Chicago  
 L. Sonneborn Sons, Inc., New York  
**DASH—STUCCO**  
 Colorcrete Industries, Inc., Holland, Mich.  
 U. S. Gypsum Co., Chicago  
**DEADENERS—SOUND**  
 See Board, Sound Deadening; Felts,  
 Sound Deadening  
**DERRICKS**  
 Sasgen Derrick Co.—See adv. this page.  
**DESIGNS**  
 See Home Designs, Plans and Sug-  
 gestions  
**DIMENSION STOCK**—See Stock, Di-  
 mension  
**DISAPPEARING STAIRS**—See Stairs,  
 Disappearing  
**DISHWASHERS—ELECTRIC**  
 Edison General Electric Appliance Co., Chicago  
**DIVIDERS**—See Instruments, Drawing  
**DOMES—STEEL**  
 Milcor Steel Co., Milwaukee, Wis.  
**HOME DAMPERS**—See Dampers, Fire-  
 place  
**DOORS—ACCESS**  
 Donley Brothers Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
 Milcor Steel Co., Milwaukee, Wis.  
**DOORS—AIRPORT**  
 Kinnear Mfg. Co., Columbus, Ohio  
 Mesker Brothers, St. Louis, Mo.

Overhead Door Corp., Hartford City, Ind.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—ALUMINUM and BRONZE**  
 Kawneer Co., Niles, Mich.  
**DOORS—ASBESTOS**  
 Johns-Manville, New York  
 Ruberoid Co., New York  
**DOORS—ASHPIT**  
 Donley Brothers Co., Cleveland, Ohio  
 Gabriel Steel Co., Detroit, Mich.  
 Majestic Co., Huntington, Ind.  
 Superior Fireplace Co., Los Angeles, Cal.  
**DOORS—CELLAR (Metal)**  
 Bilco Mfg. Co., New Haven, Conn.  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Mesker Brothers, St. Louis, Mo.  
**DOORS—CELLAR (Wood)**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
**DOORS—CLEANOUT**  
 Donley Brothers Co., Cleveland, Ohio  
 Gabriel Steel Co., Detroit, Mich.  
 Majestic Co., Huntington, Ind.  
 Mesker Brothers, St. Louis, Mo.  
 Milcor Steel Co., Milwaukee, Wis.  
 Superior Fireplace Co., Los Angeles, Cal.  
**DOORS—COAL**  
 Donley Brothers Co., Cleveland, Ohio  
 Gabriel Steel Co., Detroit, Mich.  
 Majestic Co., Huntington, Ind.  
 U. S. Gypsum Co., Chicago  
**DOORS—ELEVATOR**  
 Sedgwick Machine Works, New York  
**DOORS—FIRE**  
 Detroit Steel Products Co., Detroit, Mich.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Kinnear Mfg. Co., Columbus, Ohio  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—FIREPROOF (Metal Covered)**  
 Edwards Mfg. Co., Cincinnati, Ohio  
**DOORS—FOLDING**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—GARAGE (Metal)**  
 Barber-Coleman Co., Rockford, Ill.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Kinnear Mfg. Co., Columbus, Ohio  
 Mesker Brothers, St. Louis, Mo.  
 Overhead Door Corp., Hartford City, Ind.  
 Rowe Mfg. Co., Galesburg, Ill.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—GARAGE (Wood)**  
 Barber-Coleman Co., Rockford, Ill.  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Fir Door Institute, Tacoma, Wash.  
 —See page 224  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Kinnear Mfg. Co., Columbus, Ohio  
 Majestic Co., Huntington, Ind.  
 National Door Mfrs. Assn., Chicago  
 —See page 224  
 Overhead Door Corp., Hartford City, Ind.  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Paine Lumber Co., Oshkosh, Wis.  
 Rowe Mfg. Co., Galesburg, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—GLASS**  
 Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
**DOORS—GRILLED**  
 Curtis Companies, Inc., Clinton, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Pacific Mutual Door Co., Tacoma, Wash.  
**DOORS—HARDWOOD (Solid and Ve-  
 neered)**  
 American Plywood Corp., New London, Wis.  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Johns-Manville, New York  
 National Door Mfrs. Assn., Chicago  
 —See page 224  
 Pacific Mutual Door Co., Tacoma, Wash.  
 U. S. Plywood Corp., New York  
**DOORS—HOLLOW CORE**  
 American Plywood Corp., New London, Wis.  
 Paine Lumber Co., Oshkosh, Wis.  
**DOORS—HOLLOW METAL**  
 Detroit Steel Products Co., Detroit, Mich.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Mesker Brothers, St. Louis, Mo.



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**DOORS—IRON**  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Detroit Steel Products Co., Detroit, Mich.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Mesker Brothers, St. Louis, Mo.  
**DOORS—KALAMEIN**  
 Edwards Mfg. Co., Cincinnati, Ohio  
**DOORS—OVERHEAD**  
 Allith-Prouty, Inc., Danville, Ill.  
 Barber-Coleman Co., Rockford, Ill.  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Coburn Trolley Track Co., Holyoke, Mass.

Curtis Companies, Inc., Clinton, Iowa  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Fir Door Institute, Tacoma, Wash.  
 —See page 224  
 Frantz Mfg. Co., Sterling, Ill.  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Kinnear Mfg. Co., Columbus, Ohio  
 Majestic Co., Huntington, Ind.  
 Mesker Brothers, St. Louis, Mo.  
 National Door Mfrs. Assn., Chicago  
 —See page 224  
 National Mfg. Co., Sterling, Ill.  
 Overhead Door Corp., Hartford City, Ind.  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Rowe Mfg. Co., Galesburg, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—RESIDENCE (Entrance, Inter-  
 ior, etc.)**  
 American Plywood Corp., New London, Wis.  
 California Redwood Distributors, Ltd., Chi-  
 cago  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Fir Door Institute, Tacoma, Wash.  
 —See page 224  
 Huttig Mfg. Co., Muscatine, Iowa  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Mengel Co., Louisville, Ky.  
 National Door Mfrs. Assn., Chicago  
 —See page 224  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Paine Lumber Co., Oshkosh, Wis.  
**DOORS—ROLLING (Steel)**  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Kinnear Mfg. Co., Columbus, Ohio  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—ROLLING (Wood)**  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—SCREEN**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 W. J. Dennis & Co., Chicago  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 National Door Mfrs. Assn., Chicago  
 —See page 224  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Vento Steel Products Co., Muskegon, Mich.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
**DOORS—SHOWER STALL**  
 Crane Co., Chicago  
 Kawneer Co., Niles, Mich.  
 Henry Weis Mfg. Co., Elkhart, Ind.  
**DOORS—SIDEWALK**  
 Bilco Mfg. Co., New Haven, Conn.  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Curtis Companies, Inc., Clinton, Iowa  
 Detroit Steel Products Co., Detroit, Mich.  
 Majestic Co., Huntington, Ind.  
**DOORS—SLIDING**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Curtis Companies, Inc., Clinton, Iowa  
 Detroit Steel Products Co., Detroit, Mich.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Mesker Brothers, St. Louis, Mo.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**DOORS—SOFTWOOD**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 National Door Mfrs. Assn., Chicago  
 —See page 224  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Ponderosa Pine Woodwork, Chicago  
 —See page 224  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
**DOORS—STEEL**  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Detroit Steel Products Co., Detroit, Mich.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Kinnear Mfg. Co., Columbus, Ohio  
 Majestic Co., Huntington, Ind.  
 Mesker Brothers, St. Louis, Mo.  
 Overhead Door Corp., Hartford City, Ind.  
 Vento Steel Products Co., Muskegon, Mich.  
**DOORS—STORM**  
 California Redwood Distributors, Ltd., Chi-  
 cago  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Mesker Brothers, St. Louis, Mo.  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
**DOORS—STORM AND SCREEN COM-  
 BINED**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Pacific Mutual Door Co., Tacoma, Wash.  
**DOORS—TINCLAD**  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Overhead Door Corp., Hartford City, Ind.  
**DOORS—TOILET STALL**  
 Crane Co., Chicago  
**DOOR BOLTS**—See Hardware, Door  
**DOOR BUTTS**—See Hinges, Butt  
**DOOR CATCHES**—See Hardware, Door  
**DOOR CHAINS**—See Chains, Door  
**DOOR CHECKS**—See Checks, Door  
**DOOR CHIMES**  
 See Chimes, Door  
**DOOR CLOSERS**—See Checks, Door



**DOOR FRAMES**—See Frames, Door  
**DOOR GUARDS**—See Guards, Door  
**DOOR HARDWARE**—See Hardware, Door  
**DOOR HOLDERS**—See Holders, Door  
**DOOR JAMBS**—See Jambs, Door  
**DOOR KNOCKERS**—See Hardware, Door  
**DOOR LOCKS**—See Locks, Door  
**DOOR LOCK MORTISERS**—See Mortis-ers, Door Lock  
**DOOR OPENERS (Electric)**—See Open-ers, Door  
**DOOR PULLS**—See Hardware, Door  
**DOOR ROLLERS**—See Rollers, Door  
**DOOR SPRINGS**—See Springs, Door  
**DOOR STOPS**—See Stops, Door  
**DOOR TRIM**—See Trim, Door  
**DRAFTING ROOM FURNITURE**—See Furniture, Drafting Room  
**DRAINS—FLOOR**  
 Crane Co., Chicago  
 Donley Brothers Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
**DRAINS—ROOF**  
 Barrett Co., New York  
**DRAIN BOARDS**—See Boards, Drain  
**DRAIN PIPE**—See Pipe, Drain  
**DRAIN PUMPS**—See Pumps, Drain  
**DRAINERS—CELLAR**  
 Bilco Mfg. Co., New Haven, Conn.  
 Crane Co., Chicago  
 Majestic Co., Huntington, Ind.  
**DRAWER SLIDES**  
 Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
**DRAWING BOARDS**—See Boards, Drawing  
**DRAWING INSTRUMENTS**—See in-struments, Drawing  
**DRAWING PAPER**—See Paper, Draw-ing  
**DRILLS—BENCH**  
 Black & Decker Mfg. Co., Towson, Md.  
 Delta Mfg. Co., Chicago  
 Mall Tool Co., Chicago  
 Paramount Products Co., New York  
 Skilsaw, Inc., Chicago  
 Stanley Tools, New Britain, Conn.  
 Walker-Turner Co., Plainfield, N.J.  
 J. D. Wallace & Co., Chicago  
**DRILLS—ELECTRIC**  
 Black & Decker Mfg. Co., Towson, Md.  
 R. L. Carter Division, New Britain, Conn.  
 Mall Tool Co., Chicago  
 Skilsaw, Inc., Chicago  
 Speedway Mfg. Co., Cicero, Ill.  
 Stanley Electric Tool Division, New Britain, Conn.  
 Syntron Co., Homer City, Pa.  
 Walker-Turner Co., Plainfield, N.J.  
 Wodack Electric Tool Corp., Chicago  
**DRILLS—STONE**  
 Mall Tool Co., Chicago  
 Landon P. Smith Co., Irvington, N.J.  
 Syntron Co., Homer City, Pa.  
 Wodack Electric Tool Corp., Chicago  
**DRILLING MACHINERY**—See Machin-ery, Drilling  
**DRINKING FOUNTAINS**—See Fountains, Drinking  
**DRIVERS—BRAD, GLAZIERS' POINT**  
 A. Markwell Mfg. Co., New York  
**DRYERS—AIR**  
 Solvay Sales Corp., New York  
**DRYERS—LAUNDRY**  
 General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
 Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
**DUMBWAITERS**  
 Kimball Bros. Co., Council Bluffs, Iowa  
 Sedgwick Machine Works, New York  
**DUMPS—ASH**  
 Donley Brothers Co., Cleveland, Ohio  
 Gabriel Steel Co., Detroit, Mich.  
 Majestic Co., Huntington, Ind.  
 Superior Fireplace Co., Los Angeles, Calif.  
**DUMP CARTS**—See Carts, Dump  
**EAVES TROUGHS**—See also Gutters  
 American Rolling Mill Co., Middletown, Ohio  
 California Redwood Distributors, Ltd., Chi-cago  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Mid-States Steel & Wire Co., Crawfordsville, Ind.  
 Milcor Steel Co., Milwaukee, Wis.  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
**EAVES TROUGH HANGERS**—See Hangers, Eaves Trough  
**EAVES TROUGH OUTLETS**—See Outlets, Eaves Trough  
**EDGE PROTECTORS**—See Protectors  
**EDGERS—FLOOR**  
 Clarke Sanding Machine Co., Muskegon, Mich.  
 Skilsaw, Inc., Chicago  
 Landon P. Smith, Inc., Irvington, N.J.  
**ELBOWS—COPPER**  
 Crane Co., Chicago  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Milcor Steel Co., Milwaukee, Wis.  
**ELBOWS—SHEET METAL**  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Mid-States Steel & Wire Co., Crawfordsville, Ind.  
 Milcor Steel Co., Milwaukee, Wis.  
**ELECTRIC CUT-OUTS**—See Cut-outs, Electric  
**ELECTRIC DRILLS**—See Drills, Electric  
**ELECTRIC GENERATORS**—See Generators, Electric  
**ELECTRIC GLUEPOTS**—See Gluepots, Electric  
**ELECTRIC GRATES**—

See Furnishings, Fireplace  
**ELECTRIC HAMMERS**—See Hammers, Electric  
**ELECTRIC HOISTS**—See Hoists, Electric  
**ELECTRIC MOTORS**—See Motors, Electric  
**ELECTRIC OUTLETS**—See Outlets, Electric  
**ELECTRIC SAWS**—See Saws, Electric  
**ELECTRIC SOCKETS**—See Sockets, Electric  
**ELECTRIC WIRING EQUIPMENT**—See Wiring Equipment, Electric

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 Sedgwick Machine Works, New York  
**ELEVATORS—HAND-OPERATED**  
 Kimball Bros. Co., Council Bluffs, Iowa  
 Sedgwick Machine Works, New York  
**ELEVATORS—PUSH BUTTON**  
 Sedgwick Machine Works, New York  
**ELEVATORS—SIDEWALK**  
 Kimball Bros. Co., Council Bluffs, Iowa  
 Sedgwick Machine Works, New York  
**ELEVATOR ENCLOSURES**—See Enclosures, Elevator  
**ELEVATOR GATES**—See Gates, Elevator  
**ENAMELS**  
 Barrett Co., New York  
 Breinig Bros., Hoboken, N.J.  
 Calbar Paint & Varnish Co., Philadelphia, Pa.  
 Lowe Brothers Co., Dayton, Ohio  
 Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 L. Sonneborn Sons, Inc., New York  
**ENCLOSURES—CONVECTOR**  
 Crane Co., Chicago  
 Modine Mfg. Co., Racine, Wis.  
**ENCLOSURES—ELEVATOR**  
 Sedgwick Machine Works, New York  
 U. S. Gypsum Co., Chicago  
**ENCLOSURES—PORCH (Glass)**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
**ENCLOSURES—PORCH (Screen)**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
**ENCLOSURES—RADIATOR**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Majestic Co., Huntington, Ind.  
 Modine Mfg. Co., Racine, Wis.  
**ENGINES—DIESEL**  
 International Harvester Co., Chicago  
**ENGINES—GASOLINE**  
 International Harvester Co., Chicago  
 Mall Tool Co., Chicago  
**ENGINES—KEROSENE**  
 International Harvester Co., Chicago  
**ENTRANCES—HOUSE**  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Ponderosa Pine Woodwork, Chicago  
 —See page 224  
**EQUIPMENT—BARN**  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Frantz Mfg. Co., Sterling, Ill.  
 Milcor Steel Co., Milwaukee, Wis.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**EQUIPMENT—CLOTHES CLOSET**—See Fixtures, Wardrobe  
**EQUIPMENT—SPRAY PAINTING**  
 Colorcrete Industries, Inc., Holland, Mich.  
**EXPANSION BOLTS**—See Bolts, Expansion  
**EXPANSION JOINTS**—See Joints, Expansion  
**FABRICATED STEEL**—See Steel, Fabricated  
**FACTORY WINDOWS**—See Windows, Factory

**FANS—ATTIC VENTILATING**  
 Crane Co., Chicago  
 General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
 Ilg Electric Ventilating Co., Chicago  
 Majestic Co., Huntington, Ind.  
 Victor Electric Products, Inc., Cincinnati, Ohio  
**FANS—EXHAUST**  
 Ilg Electric Ventilating Co., Chicago  
 Shepler Mfg. Co., Pittsburgh, Pa.  
 Victor Electric Products, Inc., Cincinnati, Ohio  
**FANS—FURNACE**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Henry Furnace & Foundry Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Norge Heating & Condition Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Round Oak Co., Dowagiac, Mich.  
 Rybolt Heater Co., Ashland, Ohio  
 Victor Electric Products, Inc., Cincinnati, Ohio  
 Wayne Automatic Relay Co.—See adv. this page  
**FANS—KITCHEN**—See Ventilators, Kitchen  
**FARM LEVELS**—See Levels  
**FAUCETS**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Kohler Co., Kohler, Wis.  
**FELTS—ASPHALT-SATURATED**  
 Armstrong Cork Co., Lancaster, Pa.  
 Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Flintkote Co., New York  
 Ford Roofing Products Co., Chicago  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 Texas Co., New York  
 U. S. Gypsum Co., Chicago  
**FELTS—INSULATING**  
 Armstrong Cork Co., Lancaster, Pa.  
 Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Flintkote Co., New York  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 Texas Co., New York  
**FELTS—SOUND DEADENING**  
 Armstrong Cork Co., Lancaster, Pa.  
 Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Flintkote Co., New York  
 Ford Roofing Products Co., Chicago  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 Texas Co., New York  
**FELTS—TARRED**  
 Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Flintkote Co., New York  
 Ford Roofing Products Co., Chicago  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 U. S. Gypsum Co., Chicago  
**FENCE—BARBED WIRE**  
 Keystone Steel & Wire Co., Peoria, Ill.  
**FENCE—IRON (Plain and Ornamental)**  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Mid-States Steel & Wire Co., Crawfordsville, Ind.  
**FENCE—LATTICE**  
 California Redwood Distributors, Ltd., Chicago  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Illinois Wire & Mfg. Co., Joliet, Ill.  
**FENCE—ORNAMENTAL PICKET**  
 (Wood and Wire Combined)  
 Illinois Wire & Mfg. Co., Joliet, Ill.  
**FENCE—WOVEN WIRE**  
 Bethlehem Steel Co., Bethlehem, Pa.  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Keystone Steel & Wire Co., Peoria, Ill.  
 Mid-States Steel & Wire Co., Crawfordsville, Ind.  
 Tennessee Coal, Iron & R. R. Co., Birming-ham, Ala.  
**FENCE POSTS**—See Posts, Fence  
**FENCERS AND FENCE STRETCHERS**  
 Mid-States Steel & Wire Co., Crawfordsville, Ind.  
 Landon P. Smith, Inc., Irvington, N.J.  
**FIBRE BOARDS**—See Boards, Fibre  
**FIBRE TILE**—See Tile, Fibre  
**FILERS—SAW (Automatic Electric)**  
 Foley Mfg. Co., Minneapolis, Minn.  
 —See adv. this page  
 (Continued on next page)

**SAW-FILING**

**ONE Machine Files All Saws**

The Foley Automatic Saw Filer files all hand saws, hand saws and cross-cut circular saws with 3 to 16 points per inch. The Foley reduces filing costs, prolongs life of saws, and makes saws cut faster, truer, stay sharp longer. Patented jointing principle makes uneven teeth PERFECT and keeps them perfect. Any man or boy can run it—no experience necessary. Used by large contractors who have many saws to file, and by carpenters who make money filing saws for others. Write today.

**FOLEY MFG. CO.**  
 424-C Foley Bldg., Minneapolis, Minn.





**FILLERS—CEMENT**  
Barber Asphalt Corp., Barber, N.J.  
L. Sonneborn Sons, Inc., New York

**FILLERS—JOINT**  
Armstrong Cork Co., Lancaster, Pa.  
Barber Asphalt Corp., Barber, N.J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Phillip Carey Co., Lockland, Cincinnati, Ohio  
Certain-teed Products Corp., New York  
Johns-Manville, New York  
I. F. Laucks, Inc., Seattle, Wash.  
Lowe Brothers Co., Dayton, Ohio  
L. Sonneborn Sons, Inc., New York  
U. S. Gypsum Co., Chicago

**FILLERS—PAINT**  
Breinig Bros., Hoboken, N.J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Carr, Adams & Collier Co., Dubuque, Iowa  
Lowe Brothers Co., Dayton, Ohio  
Pecora Paint Co., Philadelphia, Pa.  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**FILLERS—WOOD**  
Breinig Bros., Hoboken, N.J.  
I. F. Laucks, Inc., Seattle, Wash.  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
L. Sonneborn Sons, Inc., New York

**FILTERS—WATER**  
Crane Co., Chicago

**FINISH—FLOOR—**  
See Coverings, Floor; also Flooring

**FINISH—WALL—**  
See Boards, Wall; Coverings, Wall; and Paneling

**FINISHES—FLOOR AND WALL—**  
See Paints; Plaster; Varnishes; Wax, Floor, etc.

**FIRE DOORS—**  
See Doors, Fire

**FIRE DOOR HARDWARE—**  
See Hardware, Fire door

**FIRE ESCAPES**  
Mesker Brothers, St. Louis, Mo.

**FIREPLACES**  
Curtis Companies, Inc., Clinton, Iowa  
Donley Brothers Co., Cleveland, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Heatilator Co., Syracuse, N.Y.  
Majestic Co., Huntington, Ind.  
Readybuilt Products Co., Baltimore, Md.  
Superior Fireplace Co., Los Angeles, Calif.

**FIREPLACES—HEAT CIRCULATING**  
Donley Brothers Co., Cleveland, Ohio  
Heatilator Co., Syracuse, N.Y.  
Majestic Co., Huntington, Ind.  
Superior Fireplace Co., Los Angeles, Calif.

**FIREPLACES—OUTDOOR**  
Donley Brothers Co., Cleveland, Ohio  
Hancock Iron Works, Pontiac, Mich.  
Majestic Co., Huntington, Ind.

**FIREPLACE DAMPERS—**  
See Dampers, Fireplace

**FIREPLACE FURNISHINGS—**  
See Furnishings, Fireplace

**FIREPLACE HEATING UNITS—**  
See Heating Plants, Fireplace

**FIREPROOFING—METAL LATH**  
Johns-Manville, New York  
Milcor Steel Co., Milwaukee, Wis.  
U. S. Gypsum Co., Chicago

**FITTINGS—CLOSET TANK**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
Kohler Co., Kohler, Wis.

**FITTINGS—COPPER TUBE**  
American Brass Co., New York

**FITTINGS—ELECTRIC CONDUIT**  
Aluminum Co. of America, Pittsburgh, Pa.  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
National Electric Products Corp., Pittsburgh, Pa.

**FITTINGS—PIPE**  
Aluminum Co. of America, Pittsburgh, Pa.  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Crane Co., Chicago  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Milcor Steel Co., Milwaukee, Wis.  
L. J. Mueller Furnace Co., Milwaukee, Wis.  
National Lead Co., New York

**FIXTURES—BATHROOM**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
B & T Floor Co., Columbus, Ohio  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Kohler Co., Kohler, Wis.  
F. H. Lawson Co., Cincinnati, Ohio  
Marsh Wall Products Inc., Dover, Ohio  
Miami Cabinet Division of the Phillip Carey Co., Middletown, Ohio

**FIXTURES—LIGHTING**  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
F. H. Lawson Co., Cincinnati, Ohio

**FIXTURES—MIRROR**  
Crane Co., Chicago  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
F. H. Lawson Co., Cincinnati, Ohio  
Miami Cabinet Division of the Phillip Carey Co., Middletown, Ohio

**FIXTURES—PLUMBING**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
W. A. Case & Son Mfg. Co., Buffalo, N.Y.  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
Kohler Co., Kohler, Wis.

**FIXTURES—STORE**  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.

**FIXTURES—WARDROBE**  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Stanley Works, New Britain, Conn.

**FLAGPOLES**  
Edwards Mfg. Co., Cincinnati, Ohio  
Weyerhaeuser Sales Co., St. Paul, Minn.

**FLASHINGS—COPPER**  
American Brass Co., New York  
Sisalkraft Co., Chicago

**FLASHINGS—WATERPROOF PAPER**  
Sisalkraft Co., Chicago

**FLASHING BLOCKS AND FORMS**  
Barrett Co., New York

**FLOOR BRIDGING—**  
See Bridging, Floor

**FLOOR COVERINGS—**  
See Coverings, Floor

**FLOOR DRAINS—**  
See Drains, Floor

**FLOOR EDGERS—**  
See Edgers, Floor

**FLOOR FINISH—**  
See Varnishes; Wax, Floor; Fillers, Wood, etc.

**FLOOR FURNACES—**  
See Furnaces, Floor

**FLOOR GRINDERS—**  
See Grinders, Floor

**FLOOR HARDENERS—**  
See Accelerators, Cement

**FLOOR MASTIC—**  
See Cement, Flooring

**FLOOR POLISHING MACHINES—**  
See Machines, Floor Polishing

**FLOOR REGISTERS—**  
See Registers, Floor

**FLOOR SANDERS—**  
See Machines, Floor Surfacing

**FLOOR SCRAPERS—**  
See Scrapers, Floor and Wall; also Machines, Floor Surfacing

**FLOOR SURFACING MACHINES—**  
See Machines, Floor Surfacing

**FLOOR TILE—**  
See Tile, Floor and Wall

**FLOOR WAX—**  
See Wax, Floor

**FLOOR PLATES—**  
See Plates, Floor

**FLOORING—ASPHALT MASTIC**  
Armstrong Cork Co., Lancaster, Pa.  
Barber Asphalt Corp., Barber, N.J.  
Calbar Paint & Varnish Co., Philadelphia, Pa.  
Phillip Carey Co., Lockland, Cincinnati, Ohio  
Flintkote Co., New York  
Johns-Manville, New York  
Tile-Tex Co., Chicago Heights, Ill.

**FLOORING—CORK**  
Armstrong Cork Co., Lancaster, Pa.

**FLOORING—FACTORY-FINISHED**  
E. L. Bruce Co., Memphis, Tenn.

**FLOORING—HARDWOOD (Oak, etc.)**  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
E. L. Bruce Co., Memphis, Tenn.  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Frost Lumber Industries, Inc., Shreveport, La.  
Maple Flooring Mfrs. Assn., Chicago  
—See page 224  
Perfection Oak Flooring Co., Shreveport, La.  
Southern Pine Lbr. Co., Texarkana, Tex.

**FLOORING—LINOLEUM**  
Armstrong Cork Co., Lancaster, Pa.  
Congoleum-Nairn Inc., Kearny, N.J.

**FLOORING—SOFTWOOD (Pine, etc.)**  
Arkansas Soft Pine Bureau, Little Rock, Ark.  
—See page 224  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
E. L. Bruce Co., Memphis, Tenn.  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Harbor Plywood Corp., Hoquiam, Wash.  
Southern Pine Lbr. Co., Texarkana, Tex.  
Western Pine Assn., Portland, Ore.  
—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.

**FLOORING—STEEL**  
American Rolling Mill Co., Middletown, Ohio  
Gabriel Steel Co., Detroit, Mich.

**FLOORING—TILE (Asbestos)**  
Tile-Tex Co., Chicago Heights, Ill.

**FLOORING—TILE (Asphalt)**  
Armstrong Cork Co., Lancaster, Pa.  
Phillip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Johns-Manville, New York  
Masonite Corp., Chicago

**FLOORING—TILE (Cork)**  
Armstrong Cork Co., Lancaster, Pa.

**FLOORING—TILE (Rubber)**  
Armstrong Cork Co., Lancaster, Pa.

**FLOORING—WOOD BLOCK**  
E. L. Bruce Co., Memphis, Tenn.  
California Redwood Distributors, Ltd., Chicago  
Maple Flooring Mfrs. Assn., Chicago  
—See page 224

**FLUE LINING—**  
See Lining, Flue

**FLUE PIPE—**  
See Pipe, Flue

**FOLDING DOORS—**  
See Doors, Folding

**FOLDING GATES—**  
See Gates, Folding

**FOLDING PARTITIONS—**  
See Partitions, Rolling and Folding

**FOOT BATHS—**  
See Baths, Foot

**FORM LINERS**  
Armstrong Cork Co., Lancaster, Pa.  
Celotex Corp., Chicago

**FORMS AND MOLDS—CEMENT BRICK**  
Colorcrete Industries, Inc., Holland, Mich.

**FORMS AND MOLDS—CHIMNEY**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**FORMS AND MOLDS—CONCRETE BLOCK**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**FORMS AND MOLDS—CONCRETE CONSTRUCTION**  
Colorcrete Industries, Inc., Holland, Mich.  
Detroit Steel Products Co., Detroit, Mich.  
Douglas Fir Plywood Assn., Tacoma, Wash.  
—See page 224  
Harbor Plywood Corp., Hoquiam, Wash.  
Jaeger Machine Co., Columbus, Ohio  
Masonite Corp., Chicago  
U. S. Plywood Corp., New York

**FORMS AND MOLDS—CULVERT**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**FORMS AND MOLDS—DRAIN TILE**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**FORMS AND MOLDS—FENCE POST**  
Colorcrete Industries, Inc., Holland, Mich.

**FORMS AND MOLDS—ORNAMENTS**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**FORMS AND MOLDS—SEWER PIPE**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**FORMS AND MOLDS—SILO**  
Colorcrete Industries, Inc., Holland, Mich.

**FORMS AND MOLDS—STEP**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**FOUNTAINS—DRINKING**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
Kohler Co., Kohler, Wis.

**FRAMES—BASEMENT WINDOW (Steel)**  
Detroit Steel Products Co., Detroit, Mich.  
Donley Brothers Co., Cleveland, Ohio  
Gabriel Steel Co., Detroit, Mich.  
Majestic Co., Huntington, Ind.  
Mesker Brothers, St. Louis, Mo.  
Milcor Steel Co., Milwaukee, Wis.  
U. S. Gypsum Co., Chicago  
Vento Steel Products Co., Muskegon, Mich.

**FRAMES—BASEMENT WINDOW (Wood)**  
Andersen Corp., Bayport, Minn.  
California Redwood Distributors, Ltd., Chicago  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
National Door Mfrs. Assn., Chicago  
—See page 224  
Pacific Mutual Door Co., Tacoma, Wash.  
Weyerhaeuser Sales Co., St. Paul, Minn.

**FRAMES—DOOR (Steel)**  
Coburn Trolley Track Co., Holyoke, Mass.  
Detroit Steel Products Co., Detroit, Mich.  
Donley Brothers Co., Cleveland, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Mesker Brothers, St. Louis, Mo.  
Milcor Steel Co., Milwaukee, Wis.  
Vento Steel Products Co., Muskegon, Mich.

**FRAMES—DOOR (Wood)**  
Andersen Corp., Bayport, Minn.  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
California Redwood Distributors, Ltd., Chicago  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Huttig Mfg. Co., Muscatine, Iowa  
National Door Mfrs. Assn., Chicago  
—See page 224  
Pacific Mutual Door Co., Tacoma, Wash.  
Ponderosa Pine Woodwork, Chicago  
—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.

**FRAMES—SASH (Steel)**  
Detroit Steel Products Co., Detroit, Mich.  
Edwards Mfg. Co., Cincinnati, Ohio  
Mesker Brothers, St. Louis, Mo.  
Milcor Steel Co., Milwaukee, Wis.  
Vento Steel Products Co., Muskegon, Mich.

**FRAMES—SASH (Wood)**  
Andersen Corp., Bayport, Minn.  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
California Redwood Distributors, Ltd., Chicago  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Huttig Mfg. Co., Muscatine, Iowa  
National Door Mfrs. Assn., Chicago  
—See page 224  
Pacific Mutual Door Co., Tacoma, Wash.  
Perfection Oak Flooring Co., Shreveport, La.  
Ponderosa Pine Woodwork, Chicago  
—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.

**FRAMES—WINDOW—**  
See Casings, Window; also Frames, Sash

**FRONTS—STORE**

Kawneer Co., Niles, Mich.  
 Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**FURNACES—FLOOR (Gas Fired)**

Coleman Lamp & Stove Co., Wichita, Kans.  
 Hotstream Heater Co., Cleveland, Ohio  
 H. C. Little Burner Co., San Rafael, Calif.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.

**FURNACES—FLOOR (Oil-Fired)**

Coleman Lamp & Stove Co., Wichita, Kans.

**FURNACES—GAS-FIRED**

Airtemp Division, Dayton, Ohio  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
 Henry Furnace & Foundry Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.

Payne Furnace & Supply Co., Beverly Hills, Calif.

Round Oak Co., Dowagiac, Mich.

Rybolt Heater Co., Ashland, Ohio

Surface Combustion Corp., Toledo, Ohio

**FURNACES—OIL-FIRED**

Airtemp Division, Dayton, Ohio  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.

Calesco Corp., Lynn, Mass.

Crane Co., Chicago

General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.

Henry Furnace & Foundry Co., Cleveland, Ohio

Iron Fireman Mfg. Co., Portland, Ore.

Kohler Co., Kohler, Wis.

H. C. Little Burner Co., San Rafael, Calif.

Lochinvar Division, Dearborn, Mich.

Majestic Co., Huntington, Ind.

L. J. Mueller Furnace Co., Milwaukee, Wis.

Norge Heating & Conditioning Division, Detroit, Mich.

Round Oak Co., Dowagiac, Mich.

Rybolt Heater Co., Ashland, Ohio

**FURNACES—PIPELESS—**

See Heating Plants, Pipeless Furnaces

**FURNACES—STOKER-FIRED**

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Henry Furnace & Foundry Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.

L. J. Mueller, Furnace Co., Milwaukee, Wis.

Round Oak Co., Dowagiac, Mich.

Rybolt Heater Co., Ashland, Ohio

**FURNACES—WARM AIR—**

See Heating Plants, Warm Air Furnaces

**FURNACE FANS—**

See Fans, Furnace

**FURNACE PIPE—**

See Pipe, Furnace

**FURNACE REGULATORS—**

See Regulators, Furnace

**FURNISHINGS—FIREPLACE**

Donley Brothers Co., Cleveland, Ohio  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Hancock Iron Works, Pontiac, Mich.  
 Heatilator Co., Syracuse, N.Y.  
 Majestic Co., Huntington, Ind.  
 Readybuilt Products Co., Baltimore, Md.  
 Superior Fireplace Co., Los Angeles, Calif.  
 Wooster Products, Inc., Wooster, Ohio

**FURNITURE—DRAFTING ROOM**

Warren-Knight Co., Philadelphia, Pa.

David White Co., Milwaukee, Wis.

**FURRING—WALL**

Frost Lumber Industries, Inc., Shreveport, La.  
 Milcor Steel Co., Milwaukee, Wis.  
 Weyerhaeuser Sales Co., St. Paul, Minn.

**GALVANIZED NAILS—**

See Nails

**GALVANIZED ROOFING—**

See Roofing

**GARAGE DOORS—**

See Doors, Garage

**GARAGE DOOR BOLTS—**

See Bolts, Garage Door

**GARAGE DOOR HANGERS—**

See Hardware, Garage Door

**GARAGE DOOR HOLDERS—**

See Holders, Garage Door

**GARAGE DOOR OPENERS—**

See Openers, Garage Door

**GARAGE WINDOWS—**

See Windows, Garage

**GARBAGE BURNERS—**

See Incinerators

**GARMENT HANGERS—**

See Fixtures, Wardrobe

**GAS—BOTTLED**

Pyrofax Gas Division, Carbide & Carbon Chemicals Corp., New York

**GAS BURNERS—**

See Burners, Gas; Furnaces, Gas-Fired; and Heating Plants, Gas-Fired

**GAS LOGS—**

See Furnishings, Fireplace

**GAS RANGES—**

See Ranges, Gas

**GATES—ELEVATOR**

Cincinnati Iron Fence Co., Cincinnati, Ohio

**GATES—FOLDING**

Cincinnati Iron Fence Co., Cincinnati, Ohio

**GATES—IRON**

Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Donley Brothers Co., Cleveland, Ohio  
 Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

**GATES—WOVEN WIRE**

Mid-States Steel & Wire Co., Crawfordsville, Ind.

**GATE VALVES—**

See Valves, Gate

**GAUGES—BUTT**

Stanley Tools, New Britain, Conn.

Wagner Mfg. Co., Cedar Falls, Iowa

**GAUGES—MORTISE**

Stanley Tools, New Britain, Conn.

**GAUGES—STEAM AND HOT WATER**

Crane Co., Chicago

**GENERATORS—ELECTRIC (Portable)**

Homelite Corp., Port Chester, N.Y.

**GLASS BLOCKS**

Owens-Illinois Glass Co., Toledo, Ohio

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLASS—PLATE**

Libbey-Owens-Ford Glass Co., Toledo, Ohio

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLASS—PRISM**

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLASS—STRUCTURAL**

Libbey-Owens-Ford Glass Co., Toledo, Ohio

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLASS—ULTRA VIOLET RAY**

American Window Glass Co., Pittsburgh, Pa.

**GLASS—UNBREAKABLE**

American Window Glass Co., Pittsburgh, Pa.

Libbey-Owens-Ford Glass Co., Toledo, Ohio

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLASS—WINDOW**

American Window Glass Co., Pittsburgh, Pa.

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Libbey-Owens-Ford Glass Co., Toledo, Ohio

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLASS—WIRE**

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**GLAZING COMPOUNDS—**

See Compounds, Glazing

**GLUE—SELF-BONDING**

I. F. Laucks, Inc., Seattle, Wash.

**GLUEPOTS—ELECTRIC**

Black & Decker Mfg. Co., Towson, Md.

J. D. Wallace & Co., Chicago

**GRAIN BINS—**

See Bins, Grain

**GRAIN TANKS—**

See Tanks, Grain

**GRATES—AIR**

Donley Brothers Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.

**GRATES—AREA**

Cincinnati Iron Fence Co., Cincinnati, Ohio

Donley Brothers Co., Cleveland, Ohio

Gabriel Steel Co., Detroit, Mich.

Majestic Co., Huntington, Ind.

Wooster Products, Inc., Wooster, Ohio

**GRATES—FIREPLACE**

See Furnishings, Fireplace

**GRATINGS—CELLAR WALL**

Cincinnati Iron Fence Co., Cincinnati, Ohio

Donley Brothers Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.

Wooster Products, Inc., Wooster, Ohio

**GRATINGS—IRON AND STEEL**

Cincinnati Iron Fence Co., Cincinnati, Ohio

Donley Brothers Co., Cleveland, Ohio

Gabriel Steel Co., Detroit, Mich.

Majestic Co., Huntington, Ind.

Wooster Products, Inc., Wooster, Ohio

**GRATINGS—WIRE**

Cincinnati Iron Fence Co., Cincinnati, Ohio

Edwards Mfg. Co., Cincinnati, Ohio

**GRILLES—ALUMINUM**

Aluminum Co. of America, Pittsburgh, Pa.

**GRILLES—BRONZE**

Edwards Mfg. Co., Cincinnati, Ohio

Kawneer Co., Niles, Mich.

**GRILLES—ROLLING STEEL**

Kinnear Mfg. Co., Columbus, Ohio

**GRILLES—STEEL AND WIRE**

Cincinnati Iron Fence Co., Cincinnati, Ohio

Edwards Mfg. Co., Cincinnati, Ohio

Kinnear Mfg. Co., Columbus, Ohio

L. J. Mueller Furnace Co., Milwaukee, Wis.

**GRILLES—VENTILATING AND HOT AIR**

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.

Barber-Colman Co., Rockford, Ill.

Donley Brothers Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.

L. J. Mueller Furnace Co., Milwaukee, Wis.

**GRILLES—WOOD**

Farley & Loetscher Mfg. Co., Dubuque, Iowa

L. J. Mueller Furnace Co., Milwaukee, Wis.

**GRINDERS—DISC**

R. L. Carter Division, New Britain, Conn.

Mall Tool Co., Chicago

Skilsaw, Inc., Chicago

Stanley Electric Tool Division, New Britain, Conn.

Walker-Turner Co., Plainfield, N.J.

Wodack Electric Tool Corp., Chicago

**GRINDERS—FLOOR**

American Floor Surfacing Machine Co., Toledo, Ohio

Mall Tool Co., Chicago

Walker-Turner Co., Plainfield, N.J.

**GRINDERS—PORTABLE ELECTRIC**

R. L. Carter Division, New Britain, Conn.

Stanley Electric Tool Division, New Britain, Conn.

**GRINDERS—SAW**

Foley Mfg. Co., Minneapolis, Minn.

**GRINDERS—TOOL**

Black & Decker Mfg. Co., Towson, Md.

Foley Mfg. Co., Minneapolis, Minn.

Mall Tool Co., Chicago

Skilsaw, Inc., Chicago

Stanley Electric Tool Division, New Britain, Conn.

Walker-Turner Co., Plainfield, N.J.

J. D. Wallace & Co., Chicago

**GROOVING SAWS—**

See Saws, Grooving

**GROUTERS—CEMENT**

Calbar Paint & Varnish Co., Philadelphia, Pa.

Mall Tool Co., Chicago

**GROUT MIXERS—**

See Mixers, Grout

**GUARDS—DOOR**

Cincinnati Iron Fence Co., Cincinnati, Ohio

F. D. Kees Mfg. Co., Beatrice, Nebr.

Stanley Works, New Britain, Conn.

U. S. Gypsum Co., Chicago

Wagner Mfg. Co., Cedar Falls, Iowa

Wooster Products, Inc., Wooster, Ohio

**GUARDS—JAMB AND CORNER**

Donley Brothers Co., Cleveland, Ohio

**GUARDS—RADIATOR—**

See Enclosures, Radiator

**GUARDS—SAW**

American Saw Mill Machinery Co., Hacketts-town, N.J.

Consolidated Machinery & Supply Co., Los Angeles, Calif.

De Walt Products Corp., Lancaster, Pa.

Master Woodworker Mfg. Co., Detroit, Mich.

**GUARDS—SKYLIGHT**

U. S. Gypsum Co., Chicago

**GUARDS—SNOW**

Edwards Mfg. Co., Cincinnati, Ohio

Milcor Steel Co., Milwaukee, Wis.

**GUARDS—WHEEL**

American Saw Mill Machinery Co., Hacketts-town, N.J.

Donley Brothers Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.

Sterling Wheelbarrow Co., Milwaukee, Wis.

Wooster Products, Inc., Wooster, Ohio

**GUARDS—WINDOW**

Cincinnati Iron Fence Co., Cincinnati, Ohio

Edwards Mfg. Co., Cincinnati, Ohio

Milcor Steel Co., Milwaukee, Wis.

U. S. Gypsum Co., Chicago

Vento Steel Products Co., Muskegon, Mich.

**GUIDES—LETTERING**

Warren-Knight Co., Philadelphia, Pa.

**GUTTERS—WOOD**

California Redwood Distributors, Ltd., Chicago

Weyerhaeuser Sales Co., St. Paul, Minn.

**HAMMERS—CARPENTERS'**

Stanley Tools, New Britain, Conn.

**HAMMERS—PORTABLE ELECTRIC**

Black & Decker Mfg. Co., Towson, Md.



Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Brass Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.

**HARDWARE—CASEMENT WINDOW**  
 Frantz Mfg. Co., Sterling, Ill.  
 H. B. Ives Co., New Haven, Conn.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Mesker Brothers, St. Louis, Mo.  
 National Brass Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.

**HARDWARE—COLONIAL**  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Stanley Works, New Britain, Conn.

**HARDWARE—DOOR**  
 Allith-Prouty, Inc., Danville, Ill.  
 American Cabinet Hardware Corp., Rockford, Ill.  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Frantz Mfg. Co., Sterling, Ill.  
 H. B. Ives Co., New Haven, Conn.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Brass Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HARDWARE—ELEVATOR DOOR**  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HARDWARE—FIREDOOR**  
 Allith-Prouty, Inc., Danville, Ill.  
 Coburn Trolley Track Co., Holyoke, Mass.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HARDWARE—GARAGE DOOR**  
 Allith-Prouty, Inc., Danville, Ill.  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Frantz Mfg. Co., Sterling, Ill.  
 Kinnear Mfg. Co., Columbus, Ohio  
 Majestic Co., Huntington, Ind.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Modern Steel Products Co.—See adv. this page

National Brass Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Overhead Door Corp., Hartford City, Ind.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HARDWARE—LAVATORY**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Eljer Co., Ford City, Pa.  
 H. B. Ives Co., New Haven, Conn.

**HARDWARE—SASH—**  
 See also Balances, Sash; Holders, Sash; Operators, Sash  
 American Cabinet Hardware Corp., Rockford, Ill.  
 Caldwell Mfg. Co., Rochester, N.Y.  
 Curtis Companies, Inc., Clinton, Iowa  
 Frantz Mfg. Co., Sterling, Ill.  
 H. B. Ives Co., New Haven, Conn.  
 F. D. Kees Mfg. Co., Beatrice, Nebr.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Brass Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.

**HARDWARE—SCREEN**  
 W. J. Dennis & Co., Chicago  
 Frantz Mfg. Co., Sterling, Ill.  
 F. D. Kees Mfg. Co., Beatrice, Nebr.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HARDWARE—SCREEN DOOR AND STORM DOOR**  
 W. J. Dennis & Co., Chicago  
 Frantz Mfg. Co., Sterling, Ill.  
 H. B. Ives Co., New Haven, Conn.  
 F. D. Kees Mfg. Co., Beatrice, Nebr.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Brass Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HARDWARE—SCUTTLE**  
 Stanley Works, New Britain, Conn.

**HARDWARE—SLIDING AND FOLDING DOOR**  
 Coburn Trolley Track Co., Holyoke, Mass.

**HARDWARE—STORM SASH**  
 Curtis Companies, Inc., Clinton, Iowa  
 Frantz Mfg. Co., Sterling, Ill.  
 F. D. Kees Mfg. Co., Beatrice, Nebr.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.

**HARDWARE—TRANSOM**  
 H. B. Ives Co., New Haven, Conn.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Stanley Works, New Britain, Conn.

**HEADS—DADO**  
 American Saw Mill Machinery Co., Hacketts-town, N.J.  
 Delta Mfg. Co., Chicago  
 DeWalt Products Corp., Lancaster, Pa.  
 Mall Tool Co., Chicago  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Walker-Turner Co., Plainfield, N.J.

**HEADS—JOINTER**  
 American Saw Mill Machinery Co., Hacketts-town, N.J.  
 DeWalt Products Corp., Lancaster, Pa.  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Walker-Turner Co., Plainfield, N.J.

**HEADS—SHAPER**  
 Consolidated Machinery & Supply Co., Los Angeles, Calif.

DeWalt Products Corp., Lancaster, Pa.  
 Master Woodworker Mfg. Co., Detroit, Mich.  
 Walker-Turner Co., Plainfield, N.J.

**HEAT CONTROLS—**  
 See Regulators, Furnace; and Thermostats

**HEATERS—BLAST**  
 Modine Mfg. Co., Racine, Wis.

**HEATERS—CABINET**  
 Locke Stove Co., Kansas City, Mo.  
 Majestic Co., Huntington, Ind.  
 Modine Mfg. Co., Racine, Wis.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.

**HEATERS—ELECTRIC**  
 Frank Adam Electric Co., St. Louis, Mo.  
 Shepler Mfg. Co., Pittsburgh, Pa.  
 Thermador Electrical Mfg. Co., Los Angeles, Calif.

**HEATERS—GARAGE**  
 Locke Stove Co., Kansas City, Mo.  
 Modine Mfg. Co., Racine, Wis.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Shepler Mfg. Co., Pittsburgh, Pa.  
 Surface Combustion Corp., Toledo, Ohio

**HEATERS—GAS**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Hotstream Heater Co., Cleveland, Ohio  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Payne Furnace & Supply Co., Beverly Hill, Calif.  
 Shepler Mfg. Co., Pittsburgh, Pa.  
 Superior Fireplace Co., Los Angeles, Calif.  
 Surface Combustion Corp., Toledo, Ohio

**“MODERN”**  
 OVERHEAD ACTING  
**GARAGE DOOR HARDWARE**  
 ONLY 2" HEAD CLEARANCE  
 Write for Folders and Prices  
**The Modern Steel Products Co.**  
 Columbus, Ohio

**HEATERS—ROOM**  
 Frank Adam Electric Co., St. Louis, Mo.  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Coleman Lamp & Stove Co., Wichita, Kans.  
 Edwards Mfg. Co., Cincinnati, Ohio  
 General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
 Henry Furnace & Foundry Co., Cleveland, Ohio  
 Hotstream Heater Co., Cleveland, Ohio  
 Locke Stove Co., Kansas City, Mo.  
 Modine Mfg. Co., Racine, Wis.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.  
 Round Oak Co., Dowagiac, Mich.  
 Surface Combustion Corp., Toledo, Ohio  
 Thermador Electrical Mfg. Co., Los Angeles, Calif.

**HEATERS—SCHOOLROOM**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Henry Furnace & Foundry Co., Cleveland, Ohio  
 Locke Stove Co., Kansas City, Mo.  
 Majestic Co., Huntington, Ind.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.

**HEATERS—TANK**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Hotstream Heater Co., Cleveland, Ohio  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Pacific Gas Radiator Co., Huntington Park, Calif.

**HEATERS—UNIT**  
 Crane Co., Chicago  
 Modine Mfg. Co., Racine, Wis.  
 Surface Combustion Corp., Toledo, Ohio

**HEATERS—WATER**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Coleman Lamp & Stove Co., Wichita, Kans.  
 Crane Co., Chicago  
 Edison General Electric Appliance Co., Chicago  
 General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
 Hotstream Heater Co., Cleveland, Ohio  
 H. C. Little Burner Co., San Rafael, Calif.  
 Lochinvar Division, Dearborn, Mich.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Round Oak Co., Dowagiac, Mich.

**HEATERS—WATER (Automatic)**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago

Edison General Electric Appliance Co., Chicago  
 General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
 Hotstream Heater Co., Cleveland, Ohio  
 H. C. Little Burner Co., San Rafael, Calif.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.

**HEATERS—WATER (Automatic)—**  
 Remote Control for  
 Savitime Devices, Inc., Rochester, N.Y.

**HEATING PLANT BOILERS—**  
 See Boilers, Heating Plant

**HEATING PLANTS—FIREPLACE**  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Heatilator Co., Syracuse, N.Y.

**HEATING PLANTS—HOT WATER**  
 Airtemp Division, Dayton, Ohio  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Caleco Corp., Lynn, Mass.  
 Crane Co., Chicago  
 Kohler Co., Kohler, Wis.  
 H. C. Little Burner Co., San Rafael, Calif.  
 Modine Mfg. Co., Racine, Wis.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Norge Heating & Conditioning Division, Detroit, Mich.

**HEATING PLANTS—PIPELESS FURNACES**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Henry Furnace & Foundry Co., Cleveland, Ohio  
 Majestic Co., Huntington, Ind.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.  
 Round Oak Co., Dowagiac, Mich.  
 Rybolt Heater Co., Ashland, Ohio

**HEATING PLANTS—STEAM**  
 Airtemp Division, Dayton, Ohio  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Modine Mfg. Co., Racine, Wis.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.

**HEATING PLANTS—VAPOR**  
 Airtemp Division, Dayton, Ohio  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Modine Mfg. Co., Racine, Wis.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.

**HEATING PLANTS—WARM AIR FURNACES**  
 Airtemp Division, Dayton, Ohio  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Edwards Mfg. Co., Cincinnati, Ohio  
 General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.  
 Henry Furnace & Foundry Co., Cleveland, Ohio  
 Iron Fireman Mfg. Co., Portland, Ore.  
 H. C. Little Burner Co., San Rafael, Calif.  
 Lochinvar Division, Dearborn, Mich.  
 Majestic Co., Huntington, Ind.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Norge Heating & Conditioning Division, Detroit, Mich.  
 Pacific Gas Radiator Co., Huntington Park, Calif.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.  
 Round Oak Co., Dowagiac, Mich.  
 Rybolt Heater Co., Ashland, Ohio  
 Superior Fireplace Co., Los Angeles, Calif.

**HINGES—BLIND AND SHUTTER**  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 Stanley Works, New Britain, Conn.

**HINGES—BUTT**  
 American Cabinet Hardware Corp., Rockford, Ill.  
 Frantz Mfg. Co., Sterling, Ill.  
 F. D. Kees Mfg. Co., Beatrice, Nebr.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HINGES—FLOOR**  
 Frantz Mfg. Co., Sterling, Ill.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.

**HINGES—GATE**  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Frantz Mfg. Co., Sterling, Ill.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Work, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HINGES—SCREEN DOOR**  
 Frantz Mfg. Co., Sterling, Ill.  
 F. D. Kees Mfg. Co., Beatrice, Nebr.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 McKinney Mfg. Co., Pittsburgh, Pa.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa

**HINGES—SPRING**  
 Frantz Mfg. Co., Sterling, Ill.  
 Knap & Vogt Mfg. Co., Grand Rapids, Mich.  
 National Mfg. Co., Sterling, Ill.  
 Stanley Works, New Britain, Conn.  
 Wagner Mfg. Co., Cedar Falls, Iowa



**HINGES—STRAP**  
Coburn Trolley Track Co., Holyoke, Mass.  
Frantz Mfg. Co., Sterling, Ill.  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Mfg. Co., Sterling, Ill.  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**HINGES—SURFACE**  
Allith-Prouty, Inc., Danville, Ill.  
American Cabinet Hardware Corp., Rockford, Ill.

Frantz Mfg. Co., Sterling, Ill.  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Mfg. Co., Sterling, Ill.  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**HOISTS—ASH AND FUEL**  
Sedgwick Machine Works, New York  
**HOISTS—BUILDING MATERIAL**  
American Cement Machine Co., Keokuk, Iowa  
American Saw Mill Machinery Co., Hacketts-town, N.J.

Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio  
Sedgwick Machine Works, New York  
Steel Scaffolding Co., Evansville, Ind.

**HOISTS—CHAIN**  
Sedgwick Machine Works, New York  
**HOISTS—ELECTRIC**  
Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio  
Sedgwick Machine Works, New York

**HOISTS—FRICTION**  
Construction Machinery Co., Waterloo, Iowa  
**HOISTS—GASOLINE**  
American Cement Machine Co., Keokuk, Iowa  
Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio

**HOISTS—ROPE**  
Sedgwick Machine Works, New York  
**HOISTING BUCKETS—**  
See Buckets, Hoisting and Dumping

**HOLDERS—DOOR**  
Coburn Trolley Track Co., Holyoke, Mass.  
Frantz Mfg. Co., Sterling, Ill.  
H. B. Ives Co., New Haven, Conn.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Mfg. Co., Sterling, Ill.  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**HOLDERS—GARAGE DOOR**  
Coburn Trolley Track Co., Holyoke, Mass.  
Frantz Mfg. Co., Sterling, Ill.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Mfg. Co., Sterling, Ill.  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**HOLDERS—SASH—**  
See also Balances, Sash  
McKinney Mfg. Co., Pittsburgh, Pa.  
Mesker Brothers, St. Louis, Mo.  
Stanley Works, New Britain, Conn.

**HOLLOW TILE MACHINES—CEMENT**  
See Machines, Hollow Tile  
**HOME DESIGNS, PLANS and SUGGESTIONS**  
American Home, New York  
Better Homes & Gardens, Des Moines, Iowa  
House & Garden, New York  
National Plan Service, Inc., Chicago  
Willard Walker (House of the Month Service), Chicago

**HOOKS—CEILING**  
H. B. Ives Co., New Haven, Conn.  
**HORSES—MASON—**  
See Trestles

**HOT AIR GRILLES—**  
See Grilles, Ventilating and Hot Air  
**HOT PLATES—**  
See Plates, Hot  
**HOT WATER HEATING SYSTEMS—**  
See Heating Plants, Hot Water

**HOUSES—STEEL FRAME**  
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

**HUMIDIFIERS**  
Hotstream Heater Co., Cleveland, Ohio  
**HYDRATED LIME—**  
See Lime, Hydrated

**INCINERATORS**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Donley Brothers Co., Cleveland, Ohio  
Gabriel Steel Co., Detroit, Mich.  
Hancock Iron Works, Pontiac, Mich.  
Majestic Co., Huntington, Ind.  
L. J. Mueller Furnace Co., Milwaukee, Wis.

**INCINERATORS—CHIMNEY FED**  
Donley Brothers Co., Cleveland, Ohio  
**INKS—DRAWING**  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**INSERTS—CONCRETE**  
Donley Brothers Co., Cleveland, Ohio  
Gabriel Steel Co., Detroit, Mich.  
**INSTRUMENTS—DRAWING**  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**INSTRUMENTS—SURVEYING**  
Bostrom-Brady Mfg. Co., Atlanta, Ga.  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**INTERIOR TRIM—**  
See Trim, Interior  
**INSULATION—ACOUSTICAL—**  
See Boards, Sound Deadening;  
Cement, Acoustical;  
Felts, Sound Deadening;  
Plaster, Sound Absorbing;  
Tile, Acoustical.

**INSULATION—COLD STORAGE—**  
See Boards, Insulating;  
Paper, Insulating;  
Felts, Insulating;  
Wool, Mineral.

**INSULATION—THERMAL—**  
See Blankets, Insulating;  
Boards, Insulating;  
Felts, Insulating;  
Paper, Insulating;  
Siding, Insulating;  
Wool, Mineral.

**INSULATION—ROCK WOOL—**  
See Wool, Mineral  
**INSULATING BLANKETS—**  
See Blankets, Insulating

**INSULATING BOARD—**  
See Boards, Insulating  
**INSULATING FELTS—**  
See Felts, Insulating  
**INSULATING LUMBER—**  
See Boards, Insulating

**INSULATING PAPER—**  
See Paper, Insulating  
**INSURANCE—LIFE—**  
Northwestern Mutual Life Insurance Co., Milwaukee, Wis.

**IRON—ARCHITECTURAL**  
Cincinnati Iron Fence Co., Cincinnati, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio

**IRON—BAR**  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
**IRON DOORS—**  
See Doors, Iron

**IRON FENCE—**  
See Fence, Iron  
**IRON GRATINGS—**  
See Gratings, Iron  
**IRONS—ANGLE**  
Donley Brothers Co., Cleveland, Ohio  
Gabriel Steel Co., Detroit, Mich.  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Majestic Co., Huntington, Ind.  
McKinney Mfg. Co., Pittsburgh, Pa.  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**IRONS—PLANE**  
Stanley Tools, New Britain, Conn.  
**IRONS—SOLDERING**  
American Brass Co., New York  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
Stanley Tools, New Britain, Conn.

**IRONING BOARDS—BUILT-IN—**  
See Boards, Ironing  
**JACKS—LADDER**  
Ajax Building Bracket Co., Cleveland Heights, Ohio  
Steel Scaffolding Co., Evansville, Ind.  
Wagner Mfg. Co., Cedar Falls, Iowa

**JAMBS—DOOR (Steel)**  
Mesker Bros, St. Louis, Mo.  
**JAMBS—DOORS (Wood)**  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
California Redwood Distributors, Ltd., Chicago

Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.

Frost Lumber Industries, Inc., Shreveport, La.  
Huttig Mfg. Co., Muscatine, Iowa  
Pacific Mutual Door Co., Tacoma, Wash.  
Perfection Oak Flooring Co., Shreveport, La.  
Shevlin Pine Sales Co., Minneapolis, Minn.  
Southern Pine Lbr. Co., Texarkana, Texas  
Weyerhaeuser Sales Co., St. Paul, Minn.

**JOINTER HEADS—**  
See Heads, Jointer  
**JOINTER KNIVES—**  
See Knives, Jointer  
**JOINTERS—WOODWORKING**  
American Saw Mill Machinery Co., Hacketts-town, N.J.  
Consolidated Machinery & Supply Co., Los Angeles, Calif.

Delta Mfg. Co., Chicago  
DeWalt Products Corp., Lancaster, Pa.  
Mall Tool Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
Parks Woodworking Machine Co., Cincinnati, Ohio

Porter-Cable Machine Co., Syracuse, N. Y.  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago  
**JOINTS—EXPANSION**  
Armstrong Cork Co., Lancaster, Pa.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Crane Co., Chicago  
Johns-Manville, New York  
Wooster Products, Inc., Wooster, Ohio

**JOINT FILLERS—**  
See Fillers, Joint  
**JOIST ANCHORS—**  
See Anchors—Joist  
**JOISTS—CONCRETE**  
W. E. Dunn Mfg. Co., Holland, Mich.

**JOISTS—STEEL**  
Gabriel Steel Co., Detroit, Mich.  
**KALSOMINE**  
I. F. Laucks, Inc., Seattle, Wash.  
Lowe Brothers Co., Dayton, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
U. S. Gypsum Co., Chicago

**KITCHEN CABINETS—**  
See Cabinets, Kitchen  
**KITCHEN CABINET HARDWARE—**  
See Hardware  
**KITCHEN SINKS—See Sinks, Kitchen**

**KITCHEN VENTILATORS—**  
See Ventilators, Kitchen  
**KITCHENETTES**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Kitchen Maid Corp., Andrews, Ind.

**KNIVES—JOINTER**  
American Saw Mill Machinery Co., Hacketts-town, N.J.  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago

**KNIVES—MOULDING**  
American Saw Mill Machinery Co., Hacketts-town, N.J.  
Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago

**KNIVES—PLANER**  
American Saw Mill Machinery Co., Hacketts-town, N.J.  
Mall Tool Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
Fred W. Wappat, Pittsburgh, Pa.

**KNIVES—PUTTY**  
Landon P. Smith, Inc., Irvington, N.J.  
**LACQUERS**  
Armstrong Cork Co., Lancaster, Pa.  
Breinig Bros., Hoboken, N.J.  
Lowe Brothers Co., Dayton, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**LADDERS—STORE (Rolling)**  
Coburn Trolley Track Co., Holyoke, Mass.  
**LADDER BRACKETS—**  
See Brackets, Ladder  
**LATCHES—**  
See Hardware, Door and Garage Door

**LATH—EXPANDED METAL**  
Milcor Steel Co., Milwaukee, Wis.  
U. S. Gypsum Co., Chicago  
**LATH—GYPSUM**  
Certain-teed Products Corp., New York  
U. S. Gypsum Co., Chicago

**LATH—INSULATING**  
Armstrong Cork Co., Lancaster, Pa.  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Fir-Tex Insulating Board Co., Portland, Ore.  
Flintkote Co., New York  
Homasote Co., Trenton, N.J.  
Insulite Co., Minneapolis, Minn.  
Johns-Manville, New York  
Masonite Corp., Chicago  
National Gypsum Co., Buffalo, N.Y.  
U. S. Gypsum Co., Chicago  
Wood Conversion Co., St. Paul, Minn.

**LATH—METAL**  
Johns-Manville, New York  
Milcor Steel Co., Milwaukee, Wis.  
National Gypsum Co., Buffalo, N.Y.  
Reynolds Wire Co., Dixon, Ill.  
U. S. Gypsum Co., Chicago

**LATH—WOOD**  
California Redwood Distributors, Ltd., Chicago, Ill.  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.

Perfection Oak Flooring Co., Shreveport, La.  
Rainy Lake Lumber Co., Chicago  
Shevlin Pine Sales Co., Minneapolis, Minn.  
Southern Pine Lbr. Co., Texarkana, Tex.  
Western Pine Assn., Portland, Ore.  
—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.

**LATHES—WOODWORKING**  
American Saw Mill Machinery Co., Hacketts-town, N.J.  
Delta Mfg. Co., Chicago  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago

**LAUNDRY TRAYS—See Trays, Laundry**  
**LAVATORIES**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
W. A. Case & Son Mfg. Co., Buffalo, N.Y.  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
Kohler Co., Kohler, Wis.

**LAVATORY HARDWARE—**  
See Hardware, Lavatory  
**LETTERING GUIDES—**  
See Guides, Lettering  
**LETTERS AND NUMBERS (Metal)**  
Colorcrete Industries, Inc., Holland, Mich.  
Edwards Mfg. Co., Cincinnati, Ohio  
H. B. Ives Co., New Haven, Conn.

**LEVEL SIGHTS—See Sights, Level**  
**LEVELS—CARPENTERS**  
Bostrom-Brady Mfg. Co., Atlanta, Ga.  
Stanley Tools, New Britain, Conn.  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**LEVELS—CONVERTIBLE**  
Bostrom-Brady Mfg. Co., Atlanta, Ga.  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.  
**LEVELS—FARM**  
Stanley Tools, New Britain, Conn.  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**LEVELS—LINE**  
Stanley Tools, New Britain, Conn.  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.  
**LEVELS—MASON**  
Stanley Tools, New Britain, Conn.

(Continued on next page)

**LIFTS—SASH—**  
See Hardware, Sash

**LIGHTING CONTROLS—ELECTRIC**  
Frank Adam Electric Co., St. Louis, Mo.  
Square D Co., Detroit, Mich.

**LIGHTING FIXTURES—**  
See Fixtures, Lighting

**LIGHTING PLANTS**  
Kohler Co., Kohler, Wis.

**LIGHTING SYSTEMS—ELECTRIC**  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
National Electric Products Corp., Pittsburgh, Pa.

**LIGHTNING PROTECTION**  
Independent Protection Co., Goshen, Ind.

**LIME—FINISHING**  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
National Gypsum Co., Buffalo, N.Y.  
Ohio Hydrate & Supply Co., Woodville, Ohio  
U. S. Gypsum Co., Chicago  
Woodville Lime Products Co., Toledo, Ohio

**LIME—HYDRATED**  
Certain-teed Products Corp., New York  
Louisville Cement Co., Louisville, Ky.  
National Gypsum Co., Buffalo, N.Y.  
Ohio Hydrate & Supply Co., Woodville, Ohio  
U. S. Gypsum Co., Chicago  
Woodville Lime Products Co., Toledo, Ohio

**LIME—LUMP**  
Louisville Cement Co., Louisville, Ky.  
National Gypsum Co., Buffalo, N.Y.  
Ohio Hydrate & Supply Co., Woodville, Ohio  
U. S. Gypsum Co., Chicago  
Woodville Lime Products Co., Toledo, Ohio

**LIME—PREPARED**  
Celotex Corp., Chicago  
Louisville Cement Co., Louisville, Ky.  
National Gypsum Co., Buffalo, N.Y.  
Ohio Hydrate & Supply Co., Woodville, Ohio  
U. S. Gypsum Co., Chicago  
Woodville Lime Products Co., Toledo, Ohio

**LIME WATERPROOFING—**  
See Waterproofing, Lime

**LINING—CLOSET (Cedar)**  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
E. L. Bruce Co., Memphis, Tenn.  
Frost Lumber Industries, Inc., Shreveport, La.  
Perfection Oak Flooring Co., Shreveport, La.  
Weyerhaeuser Sales Co., St. Paul, Minn.

**LINING—FLUE**  
Johns-Manville, New York

**LINING—WALL**  
Flintkote Co., New York  
Frost Lumber Industries, Inc., Shreveport, La.  
Homasote Co., Trenton, N.J.  
Johns-Manville, New York  
Masonite Corp., Chicago  
Standard Coated Products Corp., New York

**LINOLEUM—**  
See Coverings, Floor

**LINSEED OIL—**  
See Oil, Linseed

**LINTELS—STEEL**  
Donley Brothers Co., Cleveland, Ohio  
Gabriel Steel Co., Detroit, Mich.  
Majestic Co., Huntington, Ind.  
Vento Steel Products Co., Muskegon, Mich.

**LOCKS—DOOR**  
Frantz Mfg. Co., Sterling, Ill.  
Knape & Vogt Mfg. Co., Grand Rapids, Mich.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Brass Co., Grand Rapids, Mich.

**LOCKS—SASH**  
American Cabinet Hardware Corp., Rockford, Ill.  
Curtis Companies, Inc., Clinton, Iowa  
Frantz Mfg. Co., Sterling, Ill.  
H. B. Ives Co., New Haven, Conn.  
McKinney Mfg. Co., Pittsburgh, Pa.  
Mesker Brothers, St. Louis, Mo.  
National Mfg. Co., Sterling, Ill.

**LOCKS—VENTILATION**  
H. B. Ives Co., New Haven, Conn.

**LUMBER**  
Arkansas Soft Pine Bureau, Little Rock, Ark.  
—See page 224  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
California Redwood Distr., Ltd., Chicago  
Crosby Lumber & Mfg. Co., Crosby, Miss.  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Perfection Oak Flooring Co., Shreveport, La.  
Redwood Sales Co.—See adv. this page  
Rainy Lake Lumber Co., Chicago  
Walter G. Scrim, Los Angeles, Calif.  
Shevlin Pine Sales Co., Minneapolis, Minn.  
Smith Lumber Co., Red Bay, Ala.  
W. T. Smith Lumber Co., Chapman, Ala.  
Southern Pine Lbr. Co., Texarkana, Tex.  
Uranis Lumber Co., Uranis, La.  
Western Pine Assn., Portland, Ore.  
—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.

**LUMBER—ASBESTOS**  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Homasote Co., Trenton, N.J.  
Johns-Manville, New York  
Ruberoid Co., New York

**LUMBER—TREATED**  
American Lumber & Treating Co., Chicago  
Southern Pine Lbr. Co., Texarkana, Tex.

**MACHINES—BLUEPRINTING**  
David White Co., Milwaukee, Wis.

**MACHINES—BORING**  
Consolidated Machinery & Supply Co., Los Angeles, Calif.  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.

**MACHINES—CEMENT BRICK**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**MACHINES—CONCRETE BLOCK**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**MACHINES—CONCRETE JOIST**  
W. E. Dunn Mfg. Co., Holland, Mich.

**MACHINES—DISHWASHING**  
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
Crane Co., Chicago

**MACHINES—DRAIN TILE (Cement)**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**MACHINES—FENCE POST**  
Colorcrete Industries, Inc., Holland, Mich.

**MACHINES—FLOOR POLISHING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Hilger Co., St. Cloud, Minn.  
Porter-Cable Machine Co., Syracuse, N.Y.

**MACHINES—FLOOR SCRUBBING**  
American Floor Surfacing Machine Co., Toledo, Ohio

**MACHINES—FLOOR SURFACING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Clarke Sanding Mach. Co., Muskegon, Mich.  
Hilger Co., St. Cloud, Minn.  
Mall Tool Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
Porter-Cable Machine Co., Syracuse, N.Y.  
Reid-Way Corp., Cedar Rapids, Iowa  
Skilsaw, Inc., Chicago  
Landon P. Smith, Inc., Irvington, N.J.  
Stanley Electric Tool Division, New Britain, Conn.

**Wodack Electric Tool Corp., Chicago**

**MACHINES—HOLLOW TILE (Cement)**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**MACHINES—MITERING**  
American Saw Mill Machinery Co., Hackettstown, N.J.  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N.J.

**MACHINES—MORTISING**  
American Saw Mill Machinery Co., Hackettstown, Pa.  
Delta Mfg. Co., Chicago  
DeWalt Products Corp., Lancaster, Pa.  
Mall Tool Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
J. D. Wallace & Co., Chicago

**MACHINES—PAINT CONDITIONING**  
Landon P. Smith, Inc., Irvington, N.J.

**MACHINES—PAINT MIXING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Hilger Co., St. Cloud, Minn.

**MACHINES—PAINT SPRAYING**  
Colorcrete Industries, Inc., Holland, Mich.

**MACHINES—ROOFING TILE**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.

**MACHINES—SANDPAPERING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Delta Mfg. Co., Chicago  
Porter-Cable Machine Co., Syracuse, N.Y.  
Skilsaw, Inc., Chicago  
Landon P. Smith, Inc., Irvington, N.J.  
Walker-Turner Co., Plainfield, N.J.

**MACHINES—SAW FILING**  
Foley Mfg. Co., Minneapolis, Minn.

**MACHINES—SHAPING**  
American Saw Mill Machinery Co., Hackettstown, N.J.  
R. L. Carter Division, New Britain, Conn.  
Consolidated Machinery & Supply Co., Los Angeles, Calif.  
Delta Mfg. Co., Chicago  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago



**MACHINES—STAIR CUTTING**  
R. L. Carter Division, New Britain, Conn.

**MACHINES—STUCCO**  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.

**MACHINES—TACKING AND STAPLING**  
A. L. Hansen Mfg. Co., Chicago  
A. Markwell Mfg. Co., New York

**MACHINES—TAMPING**  
See also Vibrators, Concrete  
Colorcrete Industries, Inc., Holland, Mich.  
W. E. Dunn Mfg. Co., Holland, Mich.  
Jaeger Machine Co., Columbus, Ohio

**MACHINES—TERRAZZO RUBBING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Mall Tool Co., Chicago  
Reid-Way Corp., Cedar Rapids, Iowa

**MACHINES—WALL FINISHING (Cement)**  
Mall Tool Co., Chicago

**MACHINES—WALLPAPER REMOVING**  
Landon P. Smith, Inc., Irvington, N.J.

**MACHINES—WAXING**  
American Floor Surfacing Machine Co., Toledo, Ohio  
Hilger Co., St. Cloud, Minn.  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**MACHINERY—BANDSAW**  
American Saw Mill Machinery Co., Hackettstown, N.J.  
Consolidated Machinery & Supply Co., Los Angeles, Calif.  
Delta Mfg. Co., Chicago  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.  
Parks Woodworking Machine Co., Cincinnati, Ohio  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago

**MACHINERY—DRILLING**  
Delta Mfg. Co., Chicago  
Mall Tool Co., Chicago  
Walker-Turner Co., Plainfield, N.J.

**MACHINERY—WOODWORKING (Power Driven)**  
American Saw Mill Machinery Co., Hackettstown, N.J.  
Consolidated Machinery & Supply Co., Los Angeles, Calif.  
Construction Machinery Co., Waterloo, Iowa  
Delta Mfg. Co., Chicago  
DeWalt Products Corp., Lancaster, Pa.  
Mall Tool Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
Parks Woodworking Machine Co., Cincinnati, Ohio  
Porter-Cable Machine Co., Syracuse, N.Y.  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago

**MACHINERY—WOODWORKING (Universal)**  
American Saw Mill Machinery Co., Hackettstown, N.J.  
R. L. Carter Division, New Britain, Conn.  
Consolidated Machinery & Supply Co., Los Angeles, Calif.  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N.J.  
J. D. Wallace & Co., Chicago

**MACHINERY—WOODWORKING (Used)**  
Consolidated Machinery & Supply Co., Los Angeles, Calif.  
DeWalt Products Corp., Lancaster, Pa.  
Master Woodworker Mfg. Co., Detroit, Mich.  
J. D. Wallace & Co., Chicago

**MAIL BOXES—BUILT IN—**  
See Boxes, Mail (Built-in)

**MAIL CHUTES—**  
See Chutes, Mail

**MANHOLE COVERS—**  
See Covers, Manhole

**MANTELS—CONCRETE**  
Readybuilt Products Co., Baltimore, Md.

**MANTELS—WOOD**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Readybuilt Products Co., Baltimore, Md.

**MARBLE—ARTIFICIAL**  
Gibbs Boardtile Corp., Chicago  
Marsh Wall Products, Inc., Dover, Ohio  
Tylac Co., Monticello, Ill.

**MASONS CEMENT—**  
See Cement, Masons

**MASONS HORSES—**  
See Trestles

**MASONS LEVELS—**  
See Levels, Masons

**MASTIC—STRUCTURAL GLASS**  
Pecora Paint Co., Philadelphia, Pa.

**MEDICINE CABINETS—**  
See Cabinets, Bathroom

**MERCHANDISING—DISPLAYS**  
House & Garden, New York

**METAL—EXPANDED**  
Milcor Steel Co., Milwaukee, Wis.  
U. S. Gypsum Co., Chicago

**METAL—FABRICATED**  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.  
Sterling Wheelbarrow Co., Milwaukee, Wis.

**METAL CEILINGS—**  
See Ceilings, Metal

**METAL COLUMNS—**  
See Columns, Metal

**METAL CORNERS—**  
See Corners, Metal

**METAL LATH—**  
See Lath, Metal

**MILLWORK—WHOLESALE**  
See also name of product desired  
Bradley Lbr. Co., of Arkansas, Warren, Ark.  
California Redwood Distributors, Ltd., Chicago  
Cincinnati Iron Fence Co., Cincinnati, Ohio  
Curtis Companies, Inc., Clinton, Ohio  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Frost Lumber Industries, Inc., Shreveport, La.  
Huttig Mfg. Co., Muscatine, Iowa  
Pacific Mutual Door Co., Tacoma, Wash.  
Perfection Oak Flooring Co., Shreveport, La.  
Ponderosa Pine Woodwork, Chicago  
—See page 224  
Trimpak Corp., New York  
Weyerhaeuser Sales Co., St. Paul, Minn.

**MINERAL WOOL—**  
See Wool, Mineral



**MIRRORS—PLATE GLASS**

Libbey-Owens-Ford Glass Co., Toledo, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

**MIRRORS—WALL-HUNG**

F. H. Lawson Co., Cincinnati, Ohio

**MIRROR FIXTURES—**

See Fixtures, Mirror

**MITERS—COPPER**

Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**MITER BOXES—**

See Boxes, Miter

**MIXERS—BITUMINOUS**

Kwik-Mix Concrete Mixer Co., Port Washington, Wis.

**MIXERS—CONCRETE**

American Cement Machine Co., Keokuk, Iowa  
Colorcrete Industries, Inc., Holland, Mich.  
Concrete Equipment Co., Holland, Mich.  
Construction Machinery Co., Waterloo, Iowa  
W. E. Dunn Mfg. Co., Holland, Mich.  
Jaeger Machine Co., Columbus, Ohio  
Koehring Co., Milwaukee, Wis.  
Kwik-Mix Concrete Mixer Co., Port Washington, Wis.  
Lansing Co., Lansing, Mich.  
T. L. Smith Co., Milwaukee, Wis.

**MIXERS—GROUT**

Construction Machinery Co., Waterloo, Iowa  
Jaeger Machine Co., Columbus, Ohio  
T. L. Smith Co., Milwaukee, Wis.

**MIXERS—MORTAR AND PLASTER**

Colorcrete Industries, Inc., Holland, Mich.  
Construction Machinery Co., Waterloo, Iowa  
Donley Brothers Co., Cleveland, Ohio  
W. E. Dunn Mfg. Co., Holland, Mich.  
Jaeger Machine Co., Columbus, Ohio  
Kwik-Mix Concrete Mixer Co., Port Washington, Wis.  
T. L. Smith Co., Milwaukee, Wis.

**MIXING BOXES—**

See Boxes, Mixing

**MORTAR—BRICK**

Louisville Cement Co., Louisville, Ky.  
Medusa Portland Cement Co., Cleveland, Ohio  
Ohio Hydrate & Supply Co., Woodville, Ohio  
L. Sonneborn Sons, Inc., New York  
Woodville Lime Products Co., Toledo, Ohio

**MORTAR—LIME**

Ohio Hydrate & Supply Co., Woodville, Ohio  
Woodville Lime Products Co., Toledo, Ohio

**MORTAR—HOLLOW TILE**

Louisville Cement Co., Louisville, Ky.

**MORTAR BOXES, STEEL—**

See Boxes, Mixing

**MORTAR COLORS—**

See Colors, Mortar

**MORTISE GAUGES—**

See Gauges, Mortise

**MORTISERS—DOOR LOCK**

R. L. Carter Division, New Britain, Conn.  
Mall Tool Co., Chicago  
Stanley Tools, New Britain, Conn.  
Fred W. Wappat, Pittsburgh, Pa.

**MOTORS—ELECTRIC**

Delta Mfg. Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
Victor Electric Products, Inc., Cincinnati, Ohio  
Walker-Turner Co., Plainfield, N.J.

**MOTOR TRUCKS—**

See Trucks, Motor

**MOULDING—BASE**

Aluminum Co. of America, Pittsburgh, Pa.  
American Brass Co., New York  
Armstrong Cork Co., Lancaster, Pa.  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Gibbs Boardtile Corp., Chicago  
Knapp Bros. Mfg. Co., Joliet, Ill.  
Marsh Wall Products, Inc., Dover, Ohio  
Milcor Steel Co., Milwaukee, Wis.  
Pacific Mutual Door Co., Tacoma, Wash.  
Perfection Oak Flooring Co., Shreveport, La.  
Shevlin Pine Sales Co., Minneapolis, Minn.  
Tylac Co., Monticello, Ill.  
U. S. Gypsum Co., Chicago  
Weyerhaeuser Sales Co., St. Paul, Minn.  
Wilson Metal Products Co., Columbus, Ohio  
Wood Conversion Co., St. Paul, Minn.

**MOULDING—METAL**

Allmetal Weatherstrip Co., Chicago  
Aluminum Co. of America, Pittsburgh, Pa.  
B & T Floor Co., Columbus, Ohio  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
Knapp Bros. Mfg. Co., Joliet, Ill.  
Marsh Wall Products, Inc., Dover, Ohio  
Masonite Corp., Chicago  
Milcor Steel Co., Milwaukee, Wis.  
Tylac Co., Monticello, Ill.  
U. S. Gypsum Co., Chicago  
Wilson Metal Products Co., Columbus, Ohio  
Wooster Products, Inc., Wooster, Ohio

**MOULDING—PICTURE**

Bradley Lbr. Co. of Arkansas, Warren, Ark.  
Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Frost Lumber Industries, Inc., Shreveport, La.  
Knapp Bros. Mfg. Co., Joliet, Ill.  
Milcor Steel Co., Milwaukee, Wis.  
U. S. Gypsum Co., Chicago  
Weyerhaeuser Sales Co., St. Paul, Minn.  
Wooster Products, Inc., Wooster, Ohio

**MOULDING—TILE (Artificial)**

Gibbs Boardtile Corp., Chicago  
Marsh Wall Products, Inc., Dover, Ohio

**MOULDING—WOOD**

Armstrong Cork Co., Lancaster, Pa.  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
Frost Lumber Industries, Inc., Shreveport, La.  
Marsh Wall Products, Inc., Dover, Ohio  
Pacific Mutual Door Co., Tacoma, Wash.  
Rainy Lake Lumber Co., Chicago  
Shevlin Pine Sales Co., Minneapolis, Minn.  
Southern Pine Lbr. Co., Texarkana, Tex.  
Western Pine Assn., Portland, Ore.

—See page 224  
Weyerhaeuser Sales Co., St. Paul, Minn.  
Wood Conversion Co., St. Paul, Minn.

**MOULDING CUTTERS—**

See Cutters, Moulding

**MOULDING KNIVES—**

See Knives, Moulding

**MOVEABLE STAIRS—**

See Stairs, Movable

**NAILS—ALUMINUM**

Aluminum Co. of America, Pittsburgh, Pa.

**NAILS—CLAMP**

Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

**NAILS—CUT**

Aluminum Co. of America, Pittsburgh, Pa.

**NAILS—CUR**

W. H. Maze Co., Peru, Ill.

**NAILS—FURRING**

Keystone Steel & Wire Co., Peoria, Ill.

**NAILS—GALVANIZED**

Deniston Co., Chicago

**NAILS—LEAD**

Edwards Mfg. Co., Cincinnati, Ohio

**NAILS—LEAD SEAL**

Deniston Co., Chicago

**NAILS—ROOFING**

Aluminum Co. of America, Pittsburgh, Pa.

**NAILS—ZINC DIPPED**

W. H. Maze Co., Peru, Ill.

**NAIL SETS—**

See Sets, Nail

**NETTING—WIRE**

Keystone Steel & Wire Co., Peoria, Ill.

**NEWELS—WOOD**

Curtis Companies, Inc., Clinton, Iowa

**NUMBERS—HOUSE—**

See Letters and Numbers

**OIL—LINSEED**

Archer-Daniels-Midland Co., Minneapolis, Minn.

**OIL—SOY BEAN**

Archer-Daniels-Midland Co., Minneapolis, Minn.

**OIL BURNERS—**

See Furnaces, Oil-Fired; Also Heating Plants, Oil-Fired

**OPENERS—GARAGE DOOR (Electric)**

Barber-Colman Co., Rockford, Ill.

**OPERATORS—SASH**

Detroit Steel Products Co., Detroit, Mich.

**ORNAMENTS—CHIMNEY**

Majestic Co., Huntington, Ind.

**ORNAMENTS—SHEET METAL**

Edwards Mfg. Co., Cincinnati, Ohio

**ORNAMENTS—WALL**

Celotex Corp., Chicago

**ORNAMENTAL BRACKETS—**

See Brackets, Ornamental

**ORNAMENTAL IRON—**

See Iron, Ornamental; also Fence, Iron; and Railings, Iron

**OUTLETS—EAVES TROUGH**

Edwards Mfg. Co., Cincinnati, Ohio

**OUTLETS—ELECTRIC**

Frank Adam Electric Co., St. Louis, Mo.

**OUTLETS—TELEPHONE**

General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

**OUTLET BOXES—**

See Boxes, Outlet

**OVERHEAD CARRIERS—**

See Carriers, Overhead

**OVERHEAD DOORS—**

See Doors, Overhead

**PACKAGE RECEIVERS—**

See Receivers, Package

**PAINTS—ALUMINUM**

American Fluoresit Co., Cincinnati, Ohio

**PAINTS—ASPHALT**

Armstrong Cork Co., Lancaster, Pa.

**PAINTS—CEMENT AND STUCCO**

American Fluoresit Co., Cincinnati, Ohio

**PAINTS—HOUSE**

Breinig Bros., Hoboken, N.J.

**PAINTS—METAL PROTECTIVE**

See also Preservatives, Metal

**PAINTS—SYNTHETIC RESIN**

I. F. Laucks, Inc., Seattle, Wash.

**PAINTS—WATER**

American Fluoresit Co., Cincinnati, Ohio

**ORNAMENTS—WALL**

Celotex Corp., Chicago

Cincinnati Iron Fence Co., Cincinnati, Ohio

Majestic Co., Huntington, Ind.

**ORNAMENTAL BRACKETS—**

See Brackets, Ornamental

**ORNAMENTAL IRON—**

See Iron, Ornamental; also Fence, Iron; and Railings, Iron

**OUTLETS—EAVES TROUGH**

Edwards Mfg. Co., Cincinnati, Ohio

**OUTLETS—ELECTRIC**

Frank Adam Electric Co., St. Louis, Mo.

**OUTLETS—TELEPHONE**

General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

**OUTLET BOXES—**

See Boxes, Outlet

**OVERHEAD CARRIERS—**

See Carriers, Overhead

**OVERHEAD DOORS—**

See Doors, Overhead

**PACKAGE RECEIVERS—**

See Receivers, Package

**PAINTS—ALUMINUM**

American Fluoresit Co., Cincinnati, Ohio

**PAINTS—ASPHALT**

Armstrong Cork Co., Lancaster, Pa.

**PAINTS—CEMENT AND STUCCO**

American Fluoresit Co., Cincinnati, Ohio

**PAINTS—HOUSE**

Breinig Bros., Hoboken, N.J.

**PAINTS—METAL PROTECTIVE**

See also Preservatives, Metal

**PAINTS—SYNTHETIC RESIN**

I. F. Laucks, Inc., Seattle, Wash.

**PAINTS—WATER**

American Fluoresit Co., Cincinnati, Ohio

Breinig Bros., Hoboken, N.J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Carr, Adams & Collier Co., Dubuque, Iowa

Edwards Mfg. Co., Dubuque, Iowa

Flintkote Co., New York

Ford Roofing Products Co., Chicago

Lowe Brothers Co., Dayton, Ohio

Pecora Paint Co., Philadelphia, Pa.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Ruberoid Co., New York

L. Sonneborn Sons, Inc., New York

Texas Co., New York

U. S. Gypsum Co., Chicago

Wilbur & Williams Co., Boston, Mass.

**PAINTS—BARN**

Breinig Bros., Hoboken, N.J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Carr, Adams & Collier Co., Dubuque, Iowa

Ford Roofing Products Co., Chicago

Lowe Brothers Co., Dayton, Ohio

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

L. Sonneborn Sons, Inc., New York

Wilbur & Williams Co., Boston, Mass.

**PAINTS—CEMENT AND STUCCO**

American Fluoresit Co., Cincinnati, Ohio

**PAINTS—HOUSE**

Breinig Bros., Hoboken, N.J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Carr, Adams & Collier Co., Dubuque, Iowa

Edwards Mfg. Co., Dubuque, Iowa

Flintkote Co., New York

Ford Roofing Products Co., Chicago

L. F. Laucks, Inc., Seattle, Wash.

Lowe Brothers Co., Dayton, Ohio

National Lead Co., New York

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Wilbur & Williams Co., Boston, Mass.

**PAINTS—METAL PROTECTIVE**

See also Preservatives, Metal

**PAINTS—SYNTHETIC RESIN**

I. F. Laucks, Inc., Seattle, Wash.

**PAINTS—WATER**

American Fluoresit Co., Cincinnati, Ohio

Breinig Bros., Hoboken, N.J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Carr, Adams & Collier Co., Dubuque, Iowa

Edwards Mfg. Co., Dubuque, Iowa

Flintkote Co., New York

Ford Roofing Products Co., Chicago

Lowe Brothers Co., Dayton, Ohio

National Lead Co., New York

Pecora Paint Co., Philadelphia, Pa.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Ruberoid Co., New York

L. Sonneborn Sons, Inc., New York

Wilbur & Williams Co., Boston, Mass.

**PAINTS—SYNTHETIC RESIN**

I. F. Laucks, Inc., Seattle, Wash.

**PAINTS—WATER**

American Fluoresit Co., Cincinnati, Ohio

Breinig Bros., Hoboken, N.J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Carr, Adams & Collier Co., Dubuque, Iowa

Edwards Mfg. Co., Dubuque, Iowa

Flintkote Co., New York

Ford Roofing Products Co., Chicago

Lowe Brothers Co., Dayton, Ohio

National Lead Co., New York

Pecora Paint Co., Philadelphia, Pa.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Ruberoid Co., New York



I. F. Laucks, Inc., Seattle, Wash.  
 Lowe Brothers Co., Dayton, Ohio  
 Medusa Portland Cement Co., Cleveland, Ohio  
 Ohio Hydrate & Supply Co., Woodville, Ohio  
 U. S. Gypsum Co., Chicago  
 Woodville Lime Products Co., Toledo, Ohio

**PAINTS—WATERPROOFING**

American Fluoresit Co., Cincinnati, Ohio  
 Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Breinig Bros., Hoboken, N.J.  
 Calbar Paint & Varnish Co., Philadelphia, Pa.  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Donley Bros. Co., Cleveland, Ohio  
 Flintkote Co., New York  
 Ford Roofing Products Co., Chicago  
 Lowe Brothers Co., Dayton, Ohio  
 Medusa Portland Cement Co., Cleveland, Ohio  
 Pecora Paint Co., Philadelphia, Pa.  
 Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 Protection Products Mfg. Co., Kalamazoo, Mich.

L. Sonneborn Sons, Inc., New York  
 Wilbur & Williams Co., Boston, Mass.

**PAINT BRUSHES—**

See Brushes, Paint

**PAINT FILLERS—**

See Fillers, Paint

**PAINT REMOVERS—**

See Removers, Paint and Varnish

**PANELBOARDS—ELECTRIC**

Frank Adam Electric Co., St. Louis, Mo.  
 Square D Co., Detroit, Mich.

**PANELING—HARDWOOD**

Cadwallader-Gibson Co., Los Angeles, Cal.  
 Frost Lumber Industries, Inc., Shreveport, La.

**PANELING—WALL (Oak, Gum, Pine)**

Arkansas Soft Pine Bureau, Little Rock, Ark.  
 —See page 224

Bradley Lumber Co., of Ark., Warren, Ark.  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Western Pine Assn., Portland, Ore.  
 —See page 224

**PANELS—FIBREBOARD**

Armstrong Cork Co., Lancaster, Pa.  
 Gibbs Boardtile Corp., Chicago  
 Marsh Wall Products, Inc., Dover Ohio  
 Masonite Corp., Chicago  
 National Gypsum Co., Buffalo, N.Y.  
 Upson Co., Lockport, N.Y.

**PANELS—PLASTIC LAMINATE**

Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 General Electric Co., Plastics Dept., Pittsfield, Mass.

**PANELS—PLYWOOD**

American Plywood Corp., New London, Wis.  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Douglas Fir Plywood Assn., Tacoma, Wash.  
 —See page 224

Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Harbor Plywood Corp., Hoquiam, Wash.  
 Mengel Co., Louisville, Ky.  
 Pacific Mutual Door Co., Tacoma, Wash.  
 U. S. Plywood Corp., New York  
 Weyerhaeuser Sales Co., St. Paul, Minn.

**PAPER—ASBESTOS**

Philip Carey Co., Lockland, Cincinnati, Ohio  
 Johns-Manville, New York  
 Ruberoid Co., New York

**PAPER—BLUE PRINT**

David White Co., Milwaukee, Wis.

**PAPER—DRAWING**

Warren-Knight Co., Philadelphia, Pa.

David White Co., Milwaukee, Wis.

**PAPER—INSULATING**

Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Flintkote Co., New York  
 Ford Roofing Products Co., Chicago  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 Sisalkraft Co., Chicago  
 U. S. Gypsum Co., Chicago

**PAPER—ROOFING AND SHEATHING**

Barber Asphalt Corp., Barber, N.J.  
 Barrett Co., New York  
 Philip Carey Co., Lockland, Cincinnati, Ohio  
 Celotex Corp., Chicago  
 Certain-teed Products Corp., New York  
 Flintkote Co., New York  
 Ford Roofing Products Co., Chicago  
 Insulite Co., Minneapolis, Minn.  
 Johns-Manville, New York  
 Ruberoid Co., New York  
 Sisalkraft Co., Chicago  
 Texas Co., New York  
 U. S. Gypsum Co., Chicago  
 Wood Conversion Co., St. Paul, Minn.

**PAPER—SAND**

American Floor Surfacing Machine Co., Toledo, Ohio  
 Hilger Co., St. Cloud, Minn.  
 Porter-Cable Machine Co., Syracuse, N.Y.  
 Skilaw, Inc., Chicago  
 Landon F. Smith, Inc., Irvington, N.J.

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Johns-Manville, New York

**PARTITIONS—EXPANDED METAL**

Milcor Steel Co., Milwaukee, Wis.  
 U. S. Gypsum Co., Chicago

**PARTITIONS—HOLLOW TILE**

Certain-teed Products Corp., New York  
 U. S. Gypsum Co., Chicago

**PARTITIONS—METAL**

American Rolling Mill Co., Middletown, Ohio  
 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Henry Weis Mfg. Co., Elkhart, Ind.

**PARTITIONS—METAL LATH**

Milcor Steel Co., Milwaukee, Wis.  
 U. S. Gypsum Co., Chicago

**PARTITIONS—ROLLING AND FOLDING**

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 Cincinnati Iron Fence Co., Cincinnati, Ohio  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Kinnear Mfg. Co., Columbus, Ohio  
 Wagner Mfg. Co., Cedar Falls, Iowa

**PARTITIONS—WOOD**

Bradley Lbr. Co. of Arkansas, Warren, Ark.  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Exchange Sawmills Sales Co., Kansas City, Mo.

Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Southern Pine Lbr. Co., Texarkana, Texas  
 Weyerhaeuser Sales Co., St. Paul, Minn.

**PARTITION HANGERS—**

See Hangers, Sliding Partition

**PARTITION TILE—**

See Tile, Partition

**PASTE—ALUM. PAINT PIGMENT**

Aluminum Co. of America, Pittsburgh, Pa.

**PASTE—WATERPROOFING**

American Fluoresit Co., Cincinnati, Ohio  
 Calbar Paint & Varnish Co., Philadelphia, Pa.  
 Medusa Portland Cement Co., Cleveland, Ohio

L. Sonneborn Sons, Inc., New York

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Lead Industries Assn., New York

**PAVERS—CONCRETE**

American Cement Machine Co., Keokuk, Iowa  
 Jaeger Machine Co., Columbus, Ohio  
 Koehring Co., Milwaukee, Wis.  
 T. L. Smith Co., Milwaukee, Wis.

**PICTURE MOUNDINGS—**

See Mouldings, Picture

**PIPE—ALUMINUM**

Aluminum Co. of America, Pittsburgh, Pa.

**PIPE—CHIMNEY**

Milcor Steel Co., Milwaukee, Wis.

**PIPE—CONDUCTOR (Copper)**

Edwards Mfg. Co., Cincinnati, Ohio  
 Milcor Steel Co., Milwaukee, Wis.

**PIPE—CONDUCTOR (Sheet Metal)**

Edwards Mfg. Co., Cincinnati, Ohio  
 Mid-State Steel & Wire Co., Crawfordsville, Ind.

**PIPE—COPPER**

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago

**PIPE—CULVERT (Corrugated Iron)**

American Rolling Mill Co., Middletown, Ohio  
 Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
 Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

**PIPE—DRAIN**

American Brass Co., New York  
 Crane Co., Chicago

**PIPE—FLUE**

Johns-Manville, New York  
 Majestic Co., Huntington, Ind.  
 Milcor Steel Co., Milwaukee, Wis.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.

**PIPE—FURNACE**

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Henry Furnace & Foundry Co., Cleveland, Ohio

Majestic Co., Huntington, Ind.  
 Milcor Steel Co., Milwaukee, Wis.  
 L. J. Mueller Furnace Co., Milwaukee, Wis.  
 Payne Furnace & Supply Co., Beverly Hills, Calif.

Williams Wallace Co.—See adv. this page

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 Crane Co., Chicago  
 Eljer Co., Ford City, Pa.

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 Lead Industries Assn., New York  
 —See page 224  
 National Lead Co., New York

**PIPE—SEWER**  
 Crane Co., Chicago  
 Johns-Manville, New York

**PIPE—STEEL**  
 American Rolling Mill Co., Middletown, Ohio  
 Bethlehem Steel Co., Bethlehem, Pa.  
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 U. S. Gypsum Co., Chicago

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 Certain-teed Products Corp., New York  
 National Gypsum Co., Buffalo, N.Y.  
 Ohio Hydrate & Supply Co., Woodville, Ohio  
 U. S. Gypsum Co., Chicago  
 Woodville Lime Products Co., Toledo, Ohio

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 Ohio Hydrate & Supply Co., Woodville, Ohio

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**PLASTER—SOUND ABSORBING**  
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 National Gypsum Co., Buffalo, N.Y.  
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 National Gypsum Co., Buffalo, N.Y.  
 Ohio Hydrate & Supply Co., Woodville, Ohio  
 U. S. Gypsum Co., Chicago  
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 Crane Co., Chicago  
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 See Glass, Plate

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**PLUMBING PIPE—**  
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**PORCH RAILS—**  
See Rails, Porch

**PORCH SCREENS—**  
See Enclosures, Porch

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**PORTABLE POWER SAWS—**  
See Saws, Portable Power

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See Cement, Portland

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Parker Rust Proof Co., Detroit, Mich.

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Frost Lumber Industries, Inc., Shreveport, La.  
I. F. Lauks, Inc., Seattle, Wash.  
Lowe Brothers Co., Dayton, Ohio  
National Door Mfrs. Assn., Chicago  
—See page 224  
Protection Products Mfg. Co., Kalamazoo, Mich.

**PROTECTORS—EDGE**  
Mid-States Steel & Wire Co., Crawfordsville, Ind.

**PROTRACTORS—**  
See Instruments, Drawing

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See Valves, Radiator

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See Brackets, Rail or Track

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Curtis Companies, Inc., Clinton, Iowa  
Exchange Sawmills Sales Co., Kansas City, Mo.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Frost Lumber Industries, Inc., Shreveport, La.  
Weyerhaeuser Sales Co., St. Paul, Minn.

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General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
Norge Heating & Conditioning Division, Detroit, Mich.

**RANGES—GAS**  
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Norge Heating & Conditioning Division, Detroit, Mich.  
Round Oak Co., Dowagiac, Mich.

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See Boilers, Range

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Majestic Co., Huntington, Ind.

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Gabriel Steel Co., Detroit, Mich.  
Majestic Co., Huntington, Ind.  
Milcor Steel Co., Milwaukee, Wis.

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National Electric Products Corp., Pittsburgh, Pa.

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Frank Adam Electric Co., St. Louis, Mo.  
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
National Electric Products Corp., Pittsburgh, Pa.

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General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
National Electric Products Corp., Pittsburgh, Pa.

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Crane Co., Chicago  
Kohler Co., Kohler, Wis.  
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Norge Heating & Conditioning Division, Detroit, Mich.

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Majestic Co., Huntington, Ind.  
Pacific Gas Radiator Co., Huntington Park, Calif.

**REGISTERS—WALL**  
Barber-Colman Co., Rockford, Ill.  
Henry Furnace & Foundry Co., Cleveland, Ohio  
Majestic Co., Huntington, Ind.  
Milcor Steel Co., Milwaukee, Wis.  
Pacific Gas Radiator Co., Huntington Park, Calif.  
Payne Furnace & Supply Co., Beverly Hills, Calif.

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American Brass Co., New York

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Calesco Corp., Lynn, Mass.  
Crane Co., Chicago  
Henry Furnace & Foundry Co., Cleveland, Ohio  
Majestic Co., Huntington, Ind.  
Payne Furnace & Supply Co., Beverly Hills, Calif.  
Round Oak Co., Dowagiac, Mich.

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See Thermostats

**REGULATORS—WATER**  
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Milcor Steel Co., Milwaukee, Wis.  
Ruberoid Co., New York  
U. S. Gypsum Co., Chicago

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Calbar Paint & Varnish Co., Philadelphia, Pa.  
Carr, Adams & Collier Co., Dubuque, Iowa  
Ford Roofing Products Co., Chicago  
Lowe Brothers Co., Dayton, Ohio  
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

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Barrett Co., New York  
L. Sonneborn Sons, Inc., New York

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See Machines, Resaw

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Foley Mfg. Co., Minneapolis, Minn.

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Philip Carey Co., Lockland, Cincinnati, Ohio  
Flintkote Co., New York  
Johns-Manville, New York

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American Rolling Mill Co., Middletown, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**RIVETS—ALUMINUM**  
Aluminum Co. of America, Pittsburgh, Pa.

**RODS—ALUMINUM**  
Aluminum Co. of America, Pittsburgh, Pa.

**RODS—BRASS**  
American Brass Co., New York  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.

**RODS—COPPER**  
American Brass Co., New York

**RODS—HANGER—**  
See Fixtures, Wardrobe

**RODS—LEVELING**  
Bostrom-Brady Mfg. Co., Atlanta, Ga.  
Warren-Knight Co., Philadelphia, Pa.  
David White Co., Milwaukee, Wis.

**ROLLERS—DOOR**  
Allith-Prouty, Inc., Danville, Ill.  
Coburn Trolley Track Co., Holyoke, Mass.  
Frantz Mfg. Co., Sterling, Ill.  
Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Mfg. Co., Sterling, Ill.  
Stanley Works, New Britain, Conn.  
Wagner Mfg. Co., Cedar Falls, Iowa

**ROLLING DOORS—**  
See Doors, Rolling

**ROLLING PARTITIONS—**  
See Partitions, Rolling & Folding

**ROLLING SHUTTERS—**  
See Shutters

**ROOF INSULATION**  
Barber Asphalt Corp., Barber, N.J.  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Detroit Steel Products Co., Detroit, Mich.  
Fir-Tex Insulating Board Co., Trenton, N.J.  
Flintkote Co., New York  
Homasote Co., Trenton, N.J.  
Insulite Co., Minneapolis, Minn.  
Johns-Manville, New York  
Ruberoid Co., New York  
U. S. Gypsum Co., Chicago

**ROOF COATINGS—**  
See Coatings, Roof

**ROOF DECK (METAL)**  
Milcor Steel Co., Milwaukee, Wis.

**ROOF TRUSSES—**  
See Trusses, Roof

**ROOF VENTILATORS—**  
See Ventilators, Roof

**ROOF WINDOWS**  
See Windows, Roof

**ROOFING—ALUMINUM**  
Aluminum Co. of America, Pittsburgh, Pa.

**ROOFING—ASBESTOS**  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Flintkote Co., New York  
Insulite Company, Minneapolis, Minn.  
Johns-Manville, New York  
Ruberoid Co., New York  
L. Sonneborn Sons, Inc., New York  
U. S. Gypsum Co., Chicago

**ROOFING—ASBESTOS SHINGLES**  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Flintkote Co., New York  
Johns-Manville, New York  
Ruberoid Co., New York  
U. S. Gypsum Co., Chicago

**ROOFING—ASPHALT (Prepared)**  
Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
B. F. Nelson Mfg. Co., Minneapolis, Minn.  
Ruberoid Co., New York  
L. Sonneborn Sons, Inc., New York  
Texas Co., New York  
U. S. Gypsum Co., Chicago

**ROOFING—ASPHALT SHINGLES**  
Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
B. F. Nelson Mfg. Co., Minneapolis, Minn.  
Ruberoid Co., New York  
Texas Co., New York  
U. S. Gypsum Co., Chicago

(Continued on next page)



**ROOFING—BUILT UP**

Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Celotex Corp., Chicago  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Certain-teed Products Corp., New York  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
B. F. Nelson Mfg. Co., Minneapolis, Minn.  
Ruberoid Co., New York  
Texas Co., New York  
U.S. Gypsum Co., Chicago

**ROOFING—COPPER SHINGLES**

American Brass Co., New York  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**ROOFING—DRIP EDGE**

Barber Asphalt Corp., Barber, N.J.  
Edwards Mfg. Co., Cincinnati, Ohio  
Mid-States Steel & Wire Co., Crawfordsville, Ind.  
Milcor Steel Co., Milwaukee, Wis.

**ROOFING—METAL (Corrugated)**

Aluminum Co. of America, Pittsburgh, Pa.  
American Rolling Mill Co., Middletown, Ohio  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Mid-States Steel & Wire Co., Crawfordsville, Ind.

Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

**ROOFING—METAL (Sheets)**

Aluminum Co. of America, Pittsburgh, Pa.  
American Brass Co., New York  
American Rolling Mill Co., Middletown, Ohio  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Detroit Steel Products Co., Detroit, Mich.  
Edwards Mfg. Co., Cincinnati, Ohio  
Follansbee Steel Corp., Pittsburgh, Pa.  
Mid-States Steel & Wire Co., Crawfordsville, Ind.  
Milcor Steel Co., Milwaukee, Wis.  
National Lead Co., New York  
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

**ROOFING—METAL (Shingles)**

Edwards Mfg. Co., Cincinnati, Ohio  
Mid-States Steel & Wire Co., Crawfordsville, Ind.

Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

Williams Wallace Co., San Francisco, Calif.

**ROOFING—METAL (Terne Plate)**

Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Follansbee Steel Corp., Pittsburgh, Pa.

**ROOFING—ROLL (Composition)**

Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
Ruberoid Co., New York  
Texas Co., New York

**ROOFING—ROLL (Metal)**

American Rolling Mill Co., Middletown, Ohio  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Follansbee Steel Corp., Pittsburgh, Pa.  
Mid-States Steel & Wire Co., Crawfordsville, Ind.

Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

SYRACUSE GILDTOOL COMPANY

1741-12 N. Salina St., Syracuse, N. Y.

**ROOFING—SLATE SURFACED**

Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Certain-teed Products Corp., New York  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
Ruberoid Co., New York  
Texas Co., New York

**ROOFING—STAINED SHINGLES**

Weyerhaeuser Sales Co., St. Paul, Minn.

**ROOFING—TILE (Asbestos)**

Johns-Manville, New York

Ruberoid Co., New York

**ROOFING—TILE (Cement)**

Johns-Manville, New York

**ROOFING—TILE (Fibre)**

Fir-Tex Insulating Board Co., Portland, Ore.

**ROOFING—TILE (Gypsum)**

National Gypsum Co., Buffalo, N.Y.

U. S. Gypsum Co., Chicago

**ROOFING—TILE (Metal)**

Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.

**ROOFING—TIN**

Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Follansbee Steel Corp., Pittsburgh, Pa.  
Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

**ROOFING—WOOD SHINGLES**

California Redwood Distributors, Ltd., Chicago  
Exchange Sawmills Sales Co., Kansas City, Mo.

Florida Louisiana Red Cypress Co., Jacksonville, Fla.

Red Cedar Shingle Bureau, Seattle, Wash.

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Weyerhaeuser Sales Co., St. Paul, Minn.

**ROOFING BRACKETS**

See Brackets, Roofing

**ROOFING CEMENT—**

See Cement, Roofing

**ROOFING NAILS—**

See Nails, Roofing

**ROOFING PAPER—**

See Paper, Roofing and Sheathing

**ROOFING TILE MACHINES—**

See Machines, Roofing Tile

**ROOM HEATERS—**

See Heaters, Cabinet; also Heaters, Room

**ROPE**

Puritan Cordage Mills, Inc., Louisville, Ky.  
Samson Cordage Works, Boston, Mass.

Sedgwick Machine Works, New York

**ROPE—AWNING**

Puritan Cordage Mills, Inc., Louisville, Ky.  
Samson Cordage Works, Boston, Mass.

**ROUTERS**

R. L. Carter Division, New Britain, Conn.  
Consolidated Machinery & Supply Co., Los Angeles, Calif.

DeWalt Products Corp., Lancaster, Pa.

Walker-Turner Co., Plainfield, N. J.

**RULES—CARPENTERS'**

Stanley Tools, New Britain, Conn.

Warren-Knight Co., Philadelphia, Pa.

**RULES—SLIDE SCALE**

Stanley Works, New Britain, Conn.

Warren-Knight Co., Philadelphia, Pa.

**RULES—STEEL**

Stanley Works, New Britain, Conn.

Warren-Knight Co., Philadelphia, Pa.

**RUST PREVENTIVES—**

See Preservatives, Metal; also Paints, Metal Protective

**SAFES—WALL**

Brush-Punnett Inc., Rochester, N.Y.

**SALAMANDERS**

Construction Machinery Co., Waterloo, Iowa

Donley Brothers Co., Cleveland, Ohio

Edwards Mfg. Co., Cincinnati, Ohio

**SAND SCREENS—**

See Screens, Sand and Gravel

**SANDERS—FLOOR—**

See Machines, Floor Surfacing; also Edgers, Floor

**SANDERS—WOODWORKING (Belt)**

American Floor Surfacing Machine Co., Toledo, Ohio

DeWalt Products Corp., Lancaster, Pa.

Porter-Cable Machine Co., Syracuse, N.Y.

Skilaw, Inc., Chicago

Syracuse GuildTool Co., Syracuse, N.Y.—

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**SANDERS—WOODWORKING (Disc)**

American Floor Surfacing Machine Co., Toledo, Ohio

Black & Decker Mfg. Co., Towson, Md.

R. L. Carter Division, New Britain, Conn.

DeWalt Products Corp., Lancaster, Pa.

Mall Tool Co., Chicago

Porter-Cable Machine Co., Syracuse, N.Y.

Skilaw, Inc., Chicago

Stanley Electric Tool Division, New Britain, Conn.

Walker-Turner Co., Plainfield, N.J.

**SANDPAPER—**

See Paper

**SANDPAPERING MACHINES—**

See Machines, Sandpapering

**SANITARY CLOSETS—**

See Closets, Chemical

**SASH—BASEMENT—**

See Frames, Basement Window

**SASH—HOLLOW METAL**

Aluminum Co. of America, Pittsburgh, Pa.

Edwards Mfg. Co., Cincinnati, Ohio

Mesker Brothers, St. Louis, Mo.

**SASH—STORM**

Carr, Adams & Collier Co., Dubuque, Iowa

Curtis Companies, Inc., Clinton, Iowa

Detroit Steel Products Co., Detroit, Mich.

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Gabriel Steel Co., Detroit, Mich.

Huttig Mfg. Co., Muscatine, Iowa

Mesker Brothers, St. Louis, Mo.

National Door Mfrs. Assn., Chicago

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Pacific Mutual Door Co., Tacoma, Wash.

Stanley Works, New Britain, Conn.

Vento Steel Products Co., Muskegon, Mich.

Weyerhaeuser Sales Co., St. Paul, Minn.

**SASH—WINDOW—**

See Frames, Sash

**SASH BALANCES—**

See Balances, Sash

**SASH CHAINS—**

See Chains, Sash

**SASH CORD—**

See Cord, Sash

**SASH CUTTERS—**

See Cutters, Sash

**SASH HOLDERS—**

See Holders, Sash

**SASH LIFTS—**

See Hardware, Sash

**SASH LOCKS—**

See Locks, Sash

**SASH OPERATORS—**

See Operators, Sash

**SASH PULLEYS—**

See Pulleys, Sash

**SAWMILL MACHINERY—**

See Machinery

**SAWS—BAND**

American Saw Mill Machinery Co., Hacketts-

town, N.J.

Consolidated Machinery & Supply Co., Los

Angeles, Calif.

Delta Mfg. Co., Chicago

DeWalt Products Corp., Lancaster, Pa.

Master Woodworker Mfg. Co., Detroit, Mich.

Parks Woodworking Machine Co., Cincinnati, Ohio

Walker-Turner Co., Plainfield, N.J.

J. D. Wallace & Co., Chicago

**SAWS—CHAIN (Power-Driven)**

Mall Tool Co., Chicago

**SAWS—CIRCULAR**

American Saw Mill Machinery Co., Hacketts-

town, N.J.

Consolidated Machinery & Supply Co., Los

Angeles, Calif.

Construction Machinery Co., Waterloo, Iowa

Delta Mfg. Co., Chicago

DeWalt Products Corp., Lancaster, Pa.

Master Woodworker Mfg. Co., Detroit, Mich.

Parks Woodworking Machine Co., Cincinnati, Ohio

Walker-Turner Co., Plainfield, N.J.

J. D. Wallace & Co., Chicago

**SAWS—DRAG**

American Saw Mill Machinery Co., Hacketts-

town, N.J.

**SAWS—GANG**

American Saw Mill Machinery Co., Hacketts-

town, N.J.

DeWalt Products Corp., Lancaster, Pa.

**SAWS—GROOVING**

American Saw Mill Machinery Co., Hacketts-

town, N.J.

Mall Tool Co., Chicago

Wodack Electric Tool Corp., Chicago

**SAWS—HAND**

Consolidated Machinery & Supply Co., Los

Angeles, Calif.

Mall Tool Co., Chicago

Stanley Tools, New Britain, Conn.

**SAWS—JIG**

Walker-Turner Co., Plainfield, N.J.

**SAWS—PORTABLE (Electric)**

American Floor Surfacing Machine Co., Tol-

edo, Ohio

American Saw Mill Machinery Co., Hacketts-

town, N.J.

Black & Decker Mfg. Co., Towson, Md.

R. L. Carter Division, New Britain, Conn.

Clarke Sanding Machine Co., Muskegon,

Mich.

Consolidated Machinery & Supply Co., Los

Angeles, Calif.

Construction Machinery Co., Waterloo, Iowa

DeWalt Products Corp., Lancaster, Pa.

Mall Tool Co., Chicago

Master Woodworker Mfg. Co., Detroit, Mich.

Parks Woodworking Machine Co., Cincinnati,

Ohio

Porter-Cable Machine Co., Syracuse, N.Y.

Skilaw, Inc., Chicago

Speedway Mfg. Co., Cicero, Ill.

Stanley Electric Tool Division, New Britain,

Conn.

Syntroon Co., Homer City, Pa.

Syracuse Guild Tool Co.

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**SAW BENCHES**—  
See Saw Rigs  
**SAW FILERS**—  
See Filers, Saw  
**SAW GUARDS**—  
See Guards, Saw  
**SAW HORSE TRETTLES**—  
See Trestles  
**SAW RETOOTHERS**—  
See Retootherers, Saw  
**SAW RIGS**  
American Saw Mill Machinery Co., Hacketts-  
town, N.J.  
Consolidated Machinery & Supply Co., Los  
Angeles, Calif.  
DeWalt Products Corp., Lancaster, Pa.  
Walker-Turner Co., Plainfield, N.J.  
**SAW SETS**—  
See Sets, Saw  
**SAW SWAGES**—  
See Swages, Saw  
**SAW TABLES**  
American Saw Mill Machinery Co., Hacketts-  
town, N.J.  
Consolidated Machinery & Supply Co., Los  
Angeles, Calif.  
Construction Machinery Co., Waterloo, Iowa  
DeWalt Products Corp., Lancaster, Pa.  
Mall Tool Co., Chicago  
Master Woodworker Mfg. Co., Detroit, Mich.  
Walker-Turner Co., Plainfield, N.J.  
**SAW VISES**—  
See Vises, Saw  
**SCAFFOLDS—STEEL**  
Ajax Building Bracket Co., Cleveland  
Heights, Ohio  
Steel Scaffolding Co., Evansville, Ind.  
Wagner Mfg. Co., Cedar Falls, Iowa  
**SCAFFOLD BRACKETS**—  
See Brackets, Scaffold  
**SCALES—DRAFTSMEN'S**—  
See Instruments, Drawing  
**SCHOOLS—CORRESPONDENCE**  
Chicago Technical College, Chicago  
**SCRAPERS—FLOOR AND WALL**  
Landon P. Smith, Inc., Irvington, N.J.  
**SCREEDS—BASE**  
Bradley Lbr. Co. of Arkansas, Warren, Ark.  
Exchange Sawmills Sales Co., Kansas City,  
Mo.  
Frost Lumber Industries, Inc., Shreveport,  
La.  
Johns-Manville, New York  
Knapp Bros. Mfg. Co., Joliet, Ill.  
Milcor Steel Co., Milwaukee, Wis.  
Perfection Oak Flooring Co., Shreveport, La.  
U. S. Gypsum Co., Chicago  
**SCREENS—PORCH**  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
**SCREENS—SAND AND GRAVEL**  
Reynolds Wire Co., Dixon, Ill.  
**SCREENS—WINDOW AND DOOR**  
W. J. Dennis & Co., Chicago  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Detroit Steel Products Co., Detroit, Mich.  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
Gabriel Steel Co., Detroit, Mich.  
Mesker Brothers, St. Louis, Mo.  
National Door Mfrs. Assn., Chicago  
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Vento Steel Products Co., Muskegon, Mich.  
**SCREEN CLOTH**—  
See Cloth, Screen  
**SCREEN DOORS**—  
See Doors, Screen  
**SCREEN DOOR CHECKS**—  
See Checks, Door  
**SCREEN DOOR HINGES**—  
See Hinges, Screen Door  
**SCREEN DOOR SETS**—  
See Hardware, Screen Door  
**SCREEN HANGERS**—  
See Hangers, Screen  
**SCREEN HARDWARE**—  
See Hardware, Screen  
**SCREWDRIVERS**  
Stanley Tools, New Britain, Conn.  
**SCREWDRIVERS—ELECTRIC**  
Black & Decker Mfg. Co., Towson, Md.  
R. L. Carter Division, New Britain, Conn.  
Mall Tool Co., Chicago  
Stanley Electric Tool Division, New Britain,  
Conn.  
**SCREWDRIVER BITS**—  
See Bits, Screwdriver  
**SCUTTLES—ROOF**  
Bilco Mfg. Co., New Haven, Conn.  
**SEALERS**—  
See also Fillers, Wood  
I. F. Laucks, Inc., Seattle, Wash.  
Wilbur & Williams Co., Boston, Mass.  
**SEATS—CLOSET**  
American Radiator & Standard Sanitary  
Corp., Pittsburgh, Pa.  
Crane Co., Chicago  
Eljer Co., Ford City, Pa.  
**SEPTIC TANKS**—  
See Tanks, Septic  
**SERVICES—PLAN**—  
See Home Designs, Plans and Sug-  
gestions  
**SETS—CELLAR WINDOW**  
Frantz Mfg. Co., Sterling, Ill.  
Majestic Co., Huntington, Ind.  
McKinney Mfg. Co., Pittsburgh, Pa.  
National Mfg. Co., Sterling, Ill.  
Stanley Works, New Britain, Conn.  
**SETS—NAIL**  
Stanley Tools, New Britain, Conn.  
**SETS—SAW**  
Foley Mfg. Co., Minneapolis, Minn.  
Stanley Tools, New Britain, Conn.  
**SEWAGE DISPOSAL PLANTS**  
Aluminum Co. of America, Pittsburgh, Pa.

Crane Co., Chicago  
L. Sonneborn Sons, Inc., New York  
**SEWER PIPE**—  
See Pipe, Sewer  
**SEWER PIPE MACHINES—CEMENT**—  
See Machines, Sewer Pipe  
**SEWER PIPE MOLDS**—  
See Forms and Molds  
**SEWER PIPE STRAINERS**—  
See Strainers, Sewer Pipe  
**SHAKES**—  
See Roofing  
**SHAPERS—WOOD**—  
See Machines, Shaping  
**SHARPENERS—LAWN MOWER**  
Foley Mfg. Co., Minneapolis, Minn.  
**SHARPENERS—SAW**—  
See Grinders, Saw  
**SHEATHING**—  
See Boards, Sheathing  
**SHEATHING PAPER**—  
See Paper, Roofing and Sheathing  
**SHEETS—ALUMINUM**  
Aluminum Co. of America, Pittsburgh, Pa.  
**SHEETS—ASBESTOS**  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Johns-Manville, New York  
Ruberoid Co., New York  
**SHEETS—BRASS AND COPPER**  
American Brass Co., New York  
Sisalkraft Co., Chicago  
**SHEETS—COPPER ALLOY**  
American Brass Co., New York  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron and R. R. Co., Birming-  
ham, Ala.  
**SHEETS—GALVANIZED**  
American Rolling Mill Co., Middletown, Ohio  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Mid-States Steel & Wire Co., Crawfordsville,  
Ind.  
Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R. R. Co., Birming-  
ham, Ala.  
**SHEETS—IRON AND STEEL**  
American Rolling Mill Co., Middletown, Ohio  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.  
Tennessee Coal, Iron & R. R. Co., Birming-  
ham, Ala.  
**SHEETS—LEAD**  
National Lead Co., New York  
**SHEETS—LEADCLAD**  
American Brass Co., New York  
American Rolling Mill Co., Middletown, Ohio  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
**SHEETS—STAINLESS STEEL**  
American Rolling Mill Co., Middletown, Ohio  
**SHEETS—TIN**  
Bethlehem Steel Co., Bethlehem, Pa.  
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
Edwards Mfg. Co., Cincinnati, Ohio  
Milcor Steel Co., Milwaukee, Wis.  
National Lead Co., New York  
Tennessee Coal, Iron & R. R. Co., Birming-  
ham, Ala.  
**SHELF BRACKETS**—  
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**SHIELDS—RADIATOR**—  
See Enclosures, Radiator  
**SHIELDS—TERMITE**  
Timber Engineering Co., Washington, D.C.  
**SHINGLES**—  
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**SHINGLE NAILS**—  
See Nails, Roofing  
**SHINGLE STAINS**—  
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**SHINGLING BRACKETS**—  
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**SHOWER BATHS**—  
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**SHOWER RECEPTACLES**—  
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**SHOWER STALLS**—  
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**SHOWER STALL DOORS**—  
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**SHUTTERS—ROLLING**  
Edwards Mfg. Co., Cincinnati, Ohio  
Kinneer Mfg. Co., Columbus, Ohio  
**SHUTTERS—STEEL**  
Cincinnati Iron Fence Co., Cincinnati, Ohio  
Edwards Mfg. Co., Cincinnati, Ohio  
Kinneer Mfg. Co., Columbus, Ohio  
**SHUTTERS—WOOD**  
Carr, Adams & Collier Co., Dubuque, Iowa  
Curtis Companies, Inc., Clinton, Iowa  
Farley & Loetscher Mfg. Co., Dubuque, Iowa  
National Door Mfrs. Assn., Chicago  
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Weyerhaeuser Sales Co., St. Paul, Minn.  
**SIDEWALK DOORS**—  
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**SIDEWALK ELEVATORS**—  
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**SIDEWALK FORMS**—  
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**SIDING—ASBESTOS**  
Barrett Co., New York  
Philip Carey Co., Lockland, Cincinnati, Ohio  
Celotex Corp., Chicago  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Insulte Co., Minneapolis, Minn.  
Johns-Manville, New York  
Ruberoid Co., New York  
U. S. Gypsum Co., Chicago  
**SIDING—ASPHALT**  
Barber Asphalt Corp., Barber, N.J.  
Barrett Co., New York  
Calbar Paint & Varnish Co., Philadelphia, Pa.

Celotex Corp., Chicago  
Certain-teed Products Corp., New York  
Flintkote Co., New York  
Ford Roofing Products Co., Chicago  
Johns-Manville, New York  
B. F. Nelson Mfg. Co., Minneapolis, Minn.  
Ruberoid Co., New York  
Texas Co., New York  
U. S. Gypsum Co., Chicago  
**SIDING—IMITATION BRICK**  
Barrett Co., New York  
Flintkote Co., New York  
**SIDING—INSULATING**  
Homasote Co., Trenton, N.J.  
**SIDING—METAL**  
Milcor Steel Co., Milwaukee, Wis.  
**SIDING—ZINC AND COPPER**  
Milcor Steel Co., Milwaukee, Wis.  
**SIDING CLIPS**—  
See Clips, Siding  
**SIDING STAYS**—  
See Stays, Siding  
**SIGHTS—LEVEL**  
Bostrom-Brady Mfg. Co., Atlanta, Ga.  
Stanley Tools, New Britain, Conn.  
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**SILDO MOLS**—  
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Kitchen Maid Corp., Andrews, Ind.  
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I. F. Laucks, Inc., Seattle, Wash.  
**SKYLIGHTS**  
Aluminum Co. of America, Pittsburgh, Pa.  
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Milcor Steel Co., Milwaukee, Wis.  
**SKYLIGHT GUARDS**—  
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**SLIDING DOORS**—  
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**SLIDING DOOR TRACK**—  
See Track, Sliding Door  
**SLIDING PARTITION HANGERS**—  
See Hangers  
**SNOW GUARDS**—  
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 Henry Weis Mfg. Co., Elkhart, Ind.  
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 Edwards Mfg. Co., Cincinnati, Ohio  
 Sterling Wheelbarrow Co., Milwaukee, Wis.  
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 Carnegie-Illinois Steel Corp., Pittsburgh, Pa.  
 International Steel Co.—See adv. this page  
 Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.  
**STEEL DOORS**  
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**STEEL GRATINGS**  
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**STEEL PRODUCTS**  
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 Parker Rust Proof Co., Detroit, Mich.  
**STEEL SASH VENTILATORS**  
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**STEEL SQUARES**  
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 Bradley Lbr. Co. of Arkansas, Warren, Ark.  
 Exchange Sawmills Sales Co., Kansas City, Mo.  
 Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Perfection Oak Flooring Co., Shreveport, La.  
 Shevlin Pine Sales Co., Minneapolis, Minn.  
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 W. T. Smith Lumber Co., Chapman, Ala.  
 Southern Pine Lbr. Co., Texarkana, Tex.  
 Urania Lumber Co., Urania, La.  
 Western Pine Assn., Portland, Ore.—See page 224  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
**STOCK—TANK**  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
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 Allith-Prouty, Inc., Danville, Ill.  
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 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
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**STORM DOORS**  
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**STORM DOOR CHECKS**  
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**STORM SASH HARDWARE**  
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 Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
 Frost Lumber Industries, Inc., Shreveport, La.  
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 Congoleum-Nairn Inc., Kearny, N.J.  
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 Fir-Tex Insulating Board Co., Portland, Ore.  
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 Marsh Wall Products, Inc., Dover, Ohio  
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 E. L. Bruce Co., Memphis, Tenn.  
 Carr, Adams & Collier Co., Dubuque, Iowa  
 Curtis Companies, Inc., Clinton, Iowa  
 Exchange Sawmills Sales Co., Kansas City, Mo.  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Marsh Wall Products, Inc., Dover, Ohio  
 Perfection Oak Flooring Co., Shreveport, La.  
 Walter G. Scrim, Los Angeles, Calif.  
 Shevlin Pine Sales Co., Minneapolis, Minn.  
 Southern Pine Lbr. Co., Texarkana, Tex.  
 Western Pine Assn., Portland, Ore.  
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 Weyerhaeuser Sales Co., St. Paul, Minn.  
 Wood Conversion Co., St. Paul, Minn.  
**TRIM—WINDOW (Metal)**  
 Aluminum Co. of America, Pittsburgh, Pa.  
 Knapp Bros. Mfg. Co., Joliet, Ill.  
 Marsh Wall Products, Inc., Dover, Ohio  
 Milcor Steel Co., Milwaukee, Wis.  
**TRIM—WINDOW (Wood)**  
 Arkansas Soft Pine Bureau, Little Rock, Ark.  
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 Bradley Lbr. Co. of Arkansas, Warren, Ark.  
 California Redwood Distributors, Ltd., Chicago

Curtis Companies, Inc., Clinton, Iowa  
 Exchange Sawmills Sales Co., Kansas City, Mo.  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Florida Louisiana Red Cypress Co., Jacksonville, Fla.  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Pacific Mutual Door Co., Tacoma, Wash.  
 Ponderosa Pine Woodwork, Chicago  
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**TROLLEYS AND TRAMWAYS**  
 Allith-Prouty, Inc., Danville, Ill.  
 Coburn Trolley Track Co., Holyoke, Mass.  
 Wagner Mfg. Co., Cedar Falls, Iowa  
**TRUCKS—HAND**  
 Lansing Co., Lansing, Mich.  
 Sterling Wheelbarrow Co., Milwaukee, Wis.  
**TRUCKS—MOTOR**  
 Chevrolet Motor Division, Detroit, Mich.  
 Ford Motor Co., Dearborn, Mich.  
 General Motors Truck & Coach Division, Pontiac, Mich.  
 International Harvester Co., Chicago  
 Mack Mfg. Co., Long Island City, N.Y.  
**TRUSSES—ROOF (Steel)**  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Gabriel Steel Co., Detroit, Mich.  
**TRUSSES—ROOF (Wood)**  
 Weyerhaeuser Sales Co., St. Paul, Minn.  
**TRY AND MITRE SQUARES—**  
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**TUBS—BATH**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Eljer Co., Ford City, Pa.  
 Kohler Co., Kohler, Wis.  
**TUBS—LAUNDRY**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Eljer Co., Ford City, Pa.  
 Kohler Co., Kohler, Wis.  
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**URINALS**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 W. A. Case & Son Mfg. Co., Buffalo, N.Y.  
 Crane Co., Chicago  
 Eljer Co., Ford City, Pa.  
 Kohler Co., Kohler, Wis.  
**VALVES—RADIATOR**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Edwards Mfg. Co., Cincinnati, Ohio  
**VALVES—WATER MIXING**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 Eljer Co., Ford City, Pa.  
 Kohler Co., Kohler, Wis.  
**VAPOR SYSTEM HEATING PLANTS—**  
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**VARNISHES**  
 Breinig Bros., Hoboken, N. J.  
 Calbar Paint & Varnish Co., Philadelphia, Pa.  
 Ford Roofing Products Co., Chicago  
 Lowe Brothers Co., Dayton, Ohio  
 Pecora Paint Co., Philadelphia, Pa.  
 Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 L. Sonneborn Sons, Inc., New York  
**VARNISH REMOVERS—**  
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**VENEERS—WOOD**  
 American Plywood Corp., New London, Wis.  
 Curtis Companies, Inc., Clinton, Iowa  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Frost Lumber Industries, Inc., Shreveport, La.  
 Lowe Brothers Co., Dayton, Ohio  
 Marsh Wall Products, Inc., Dover, Ohio  
 U. S. Plywood Corp., New York  
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**VENTILATORS—KITCHEN**  
 American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 Crane Co., Chicago  
 General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
 Ilg Electric Ventilating Co., Chicago  
 Majestic Co., Huntington, Ind.  
 Shepler Mfg. Co., Pittsburgh, Pa.  
 Skuttle Sales Co., Detroit, Mich.  
 Victor Electric Products, Inc., Cincinnati, Ohio  
**VENTILATORS—ROOF**  
 Donley Brothers Co., Cleveland, Ohio  
 Edwards Mfg. Co., Cincinnati, Ohio  
 Ilg Electric Ventilating Co., Chicago  
 Johns-Manville, New York  
 Milcor Steel Co., Milwaukee, Wis.  
**VENTILATORS—STEEL SASH**  
 Mesker Brothers, St. Louis, Mo.  
 Victor Electric Products, Inc., Cincinnati, Ohio  
**VENTILATORS—TRANSOM**  
 Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 Ilg Electric Ventilating Co., Chicago  
 Victor Electric Products, Inc., Cincinnati, Ohio



**VENTILATORS—WALL**

Donley Brothers Co., Cleveland, Ohio  
 Ilg Electric Ventilating Co., Chicago  
 Majestic Co., Huntington, Ind.  
 Milcor Steel Co., Milwaukee, Wis.  
 Shepler Mfg. Co., Pittsburgh, Pa.  
 Skuttle Sales Co., Detroit, Mich.  
 Victor Electric Products, Inc., Cincinnati, Ohio

Wooster Products, Inc., Wooster, Ohio

**VENTILATORS—WINDOW**

Ilg Electric Ventilating Co., Chicago  
 Mesker Brothers, St. Louis, Mo.  
 Victor Electric Products, Inc., Cincinnati, Ohio

**VENTS—ROOF**

Barrett Co., New York

**VIALS—LEVEL**

Bostrom-Brady Mfg. Co., Atlanta, Ga.  
 Warren-Knight Co., Philadelphia, Pa.

David White Co., Milwaukee, Wis.

**VIBRATORS—CONCRETE—**

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Mall Tool Co., Chicago

Syntron Co., Homer City, Pa.

**VICES—BENCH**

Crane Co., Chicago

Stanley Tools, New Britain, Conn.

**WAINSCOTING—MARBLE (Artificial)**

Gibbs Boardtile Corp., Chicago  
 Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 Tile-Tex Co., Chicago Heights, Ill.

Tylac Co., Monticello, Ill.

**WAINSCOTING—TILE**

Celotex Corp., Chicago  
 Davidson Enamel Co., Clyde, Ohio  
 Gibbs Boardtile Corp., Chicago  
 Johns-Manville, New York  
 Masonite Corp., Chicago  
 National Gypsum Co., Buffalo, N.Y.  
 Tile-Tex Co., Chicago Heights, Ill.  
 Traco Division, Atlanta, Ga.  
 Tylac Co., Monticello, Ill.

**WALLS—AREA**

Majestic Co., Huntington, Ind.

**WALL ANCHORS—**

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**WASHERS—LEAD**

Deniston Co., Chicago

**WASHSTANDS**

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.

W. A. Case & Son Mfg. Co., Buffalo, N.Y.

Crane Co., Chicago

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**WATER MIXING VALVES—**

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**WATER SOFTENERS—**

See Softeners, Water

**WATER SUPPLY SYSTEMS**

Crane Co., Chicago

**WATER TANKS—**

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**WATERPROOFING—BRICK**

American Fluoresit Co., Cincinnati, Ohio

Barber Asphalt Corp., Barber, N. J.

Breinig Bros., Hoboken, N. J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Colorcrete Industries, Inc., Holland, Mich.

Flintkote Co., New York

Medusa Portland Cement Co., Cleveland, Ohio

Pecora Paint Co., Inc., Philadelphia, Pa.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Protection Products Mfg. Co., Kalamazoo, Mich.

L. Sonneborn Sons, Inc., New York

**WATERPROOFING—CEMENT**

American Fluoresit Co., Cincinnati, Ohio

Barber Asphalt Corp., Barber, N. J.

Barrett Co., New York

Breinig Bros., Hoboken, N. J.

Calbar Paint & Varnish Co., Philadelphia, Pa.

Colorcrete Industries, Inc., Holland, Mich.

Donley Brothers Co., Cleveland, Ohio

Flintkote Co., New York

Lone Star Cement Corp., New York

Marsh Wall Products, Inc., Dover, Ohio

Medusa Portland Cement Co., Cleveland, Ohio

Pecora Paint Co., Philadelphia, Pa.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

Protection Products Mfg. Co., Kalamazoo, Mich.

Ruberoid Co., New York

L. Sonneborn Sons, Inc., New York

Texas Co., New York

**WATERPROOFING—IRON**

Barrett Co., New York

Calbar Paint & Varnish Co., Philadelphia, Pa.

Flintkote Co., New York

Protection Products Mfg. Co., Kalamazoo, Mich.

**WATERPROOFING—LIME**

Ohio Hydrate & Supply Co., Woodville, Ohio

U. S. Gypsum Co., Chicago

Woodville Lime Products Co., Toledo, Ohio

**WAX—FLOOR**

American Floor Surfacing Machine Co., Toledo, Ohio

Armstrong Cork Co., Lancaster, Pa.

Breinig Bros., Hoboken, N. J.

E. L. Bruce Co., Memphis, Tenn.

Congoleum-Nairn Inc., Kearny, N.J.

Pittsburgh Plate Glass Co., Pittsburgh, Pa.

L. Sonneborn Sons, Inc., New York

Tile-Tex Co., Chicago Heights, Ill.

**WAXING MACHINES—**

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**WEATHERSTRIPS**

Allmetal Weatherstrip Co., Chicago

Andersen Corp., Bayport, Minn.

Curtis Companies, Clinton, Iowa

W. J. Dennis & Co., Chicago

Hilger Co., St. Cloud, Minn.

Master Metal Strip Service, Inc., Chicago

Monarch Metal Weatherstrip Corp., St. Louis, Mo.

Protex Metal Weatherstrip Co., Chicago

**WEATHERSTRIP TOOLS—**

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**WEATHERVANES**

Independent Protection Co., Goshen, Ind.

**WEDGES—HAMMER & AXE HANDLE**

Landon P. Smith, Inc., Irvington, N.J.

**WHEELBARROWS—ALL KINDS**

Construction Machinery Co., Waterloo, Iowa

Lansing Co., Lansing, Mich.

Sterling Wheelbarrow Co., Milwaukee, Wis.

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 NEW YORK CHICAGO NEWARK BOSTON

**WINDOWS—CASEMENT (Aluminum and Bronze)**

Kawneer Co., Niles, Mich.

**WINDOWS—CASEMENT (Steel)**

Detroit Steel Products Co., Detroit, Mich.

Mesker Brothers, St. Louis, Mo.

Vento Steel Products Co., Muskegon, Mich.

**WINDOWS—CASEMENT (Wood)**

Andersen Corp., Bayport, Minn.

Carr, Adams & Collier Co., Dubuque, Iowa

Curtis Companies, Inc., Clinton, Iowa

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Florida Louisiana Red Cypress Co., Jacksonville, Fla.

Huttig Mfg. Co., Muscatine, Iowa

National Door Mfrs. Assn., Chicago

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Weyerhaeuser Sales Co., St. Paul, Minn.

**WINDOWS—DOUBLE-HUNG (Aluminum and Bronze)**

Kawneer Co., Niles, Mich.

**WINDOWS—DOUBLE-HUNG (Steel)**

Detroit Steel Products Co., Detroit, Mich.

Mesker Brothers, St. Louis, Mo.

Vento Steel Products Co., Muskegon, Mich.

**WINDOWS—DOUBLE-HUNG (Wood)**

Andersen Corp., Bayport, Minn.

Carr, Adams & Collier Co., Dubuque, Iowa

Curtis Companies, Inc., Clinton, Iowa

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Huttig Mfg. Co., Muscatine, Iowa

N. S. W. Co., Detroit, Mich.

National Door Mfrs. Assn., Chicago

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Weyerhaeuser Sales Co., St. Paul, Minn.

**WINDOWS—FACTORY (Steel)**

Detroit Steel Products Co., Detroit, Mich.

Mesker Brothers, St. Louis, Mo.

Vento Steel Products Co., Muskegon, Mich.

**WINDOWS—GARAGE (Steel)**

Detroit Steel Products Co., Detroit, Mich.

Donley Brothers Co., Cleveland, Ohio

Mesker Brothers, St. Louis, Mo.

Vento Steel Products Co., Muskegon, Mich.

**WINDOWS—GARAGE (Wood)**

Andersen Corp., Bayport, Minn.

Carr, Adams & Collier Co., Dubuque, Iowa

Curtis Companies, Inc., Clinton, Iowa

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Huttig Mfg. Co., Muscatine, Iowa

National Door Mfrs. Assn., Chicago

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Weyerhaeuser Sales Co., St. Paul, Minn.

**WINDOWS—HOGHOUSE (Steel)**

Detroit Steel Products Co., Detroit, Mich.

Mesker Brothers, St. Louis, Mo.

Milcor Steel Co., Milwaukee, Wis.

Vento Steel Products Co., Muskegon, Mich.

**WINDOWS—HOLLOW METAL**

Donley Brothers Co., Cleveland, Ohio

Edwards Mfg. Co., Cincinnati, Ohio

Mesker Brothers, St. Louis, Mo.

**WINDOWS—HORIZONTAL SLIDING**

Andersen Corp., Bayport, Minn.

**WINDOWS—PUTTYLESS**

Detroit Steel Products Co., Detroit, Mich.

Donley Brothers Co., Cleveland, Ohio

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Gabriel Steel Co., Detroit, Mich.

Kawneer Co., Niles, Mich.

Majestic Co., Huntington, Ind.

Mesker Brothers, St. Louis, Mo.

Vento Steel Products Co., Muskegon, Mich.

**WINDOWS—REVERSIBLE (Metal)**

Detroit Steel Products Co., Detroit, Mich.

Mesker Brothers, St. Louis, Mo.

**WINDOWS—REVERSIBLE (Wood)**

Weyerhaeuser Sales Co., St. Paul, Minn.

**WINDOWS—ROOF (Steel)**

Detroit Steel Products Co., Detroit, Mich.

Mesker Brothers, St. Louis, Mo.

**WINDOWS—ROOF (Wood)**

Carr, Adams & Collier Co., Dubuque, Iowa

Curtis Companies, Inc., Clinton, Iowa

Farley & Loetscher Mfg. Co., Dubuque, Iowa

Huttig Mfg. Co., Muscatine, Iowa

Weyerhaeuser Sales Co., St. Paul, Minn.

**WINDOWS—WIRE GLASS**

Detroit Steel Products Co., Detroit, Mich.

**WIRE—INSULATED**

General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

National Electric Products Corp., Pittsburgh, Pa.

**WIRE—STOVE PIPE**

Reynolds Wire Co., Dixon, Ill.

**WIRE CLOTH—**

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**WIRE DOORS—**

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**WIRE GLASS—**

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**WIRE GRATINGS—**

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**WIRE NETTING—**

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**WIRING EQUIPMENT—ELECTRIC**

Frank Adam Electric Co., St. Louis, Mo.

General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

National Electric Products Corp., Pittsburgh, Pa.

Square D Co., Detroit, Mich.

# TRADE NAME INDEX

## A

ACME, ACME-TWIN Sash Balances, Acme Spring Sash Balance Co., Los Angeles, Calif.  
 ACOUSTILITE, Fiberboard Acoustical Treatment, Insulite Co., Minneapolis, Minn.  
 ADMIRAL Floor Sanders, Hilger Co., St. Cloud, Minn.  
 ADRIAN, STAR AND BEN HUR Fence, Mid-States Steel & Wire Co., Crawfordsville, Ind.  
 AIR SLAB, AIR-O-KORE, Veneered Doors, Farley & Loetscher Mfg. Co., Dubuque, Iowa.  
 AIRTEMP Heating and Air Conditioning Equipment, Airtemp Division, Chrysler Corp., Dayton, Ohio  
 AJAX, Ladder, Roof and Shingling Brackets, Ajax Building Bracket Co., Cleveland Heights, Ohio.  
 AKLO, Heat-Absorbing Plate Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 ALBRON, Pigments for Aluminum Paint, Aluminum Co. of America, Pittsburgh, Pa.  
 ALCOA, Aluminum, Aluminum Co. of America, Pittsburgh, Pa.  
 ALLEGHENY METAL, Allegheny Ludlum Steel Corp., Pittsburgh, Pa.  
 ALLITH, Hardware, Allith-Prouty, Inc., Danville, Ill.  
 ALLMETAL Weatherstrip, Allmetal Weatherstrip Co., Chicago  
 ALUMINA, Electro-Galvanized Screen Cloth, Reynolds Wire Co., Dixon, Ill.  
 AMBRAC, Copper Metals, American Brass Co., New York  
 AMERICAN, AMERICAN-PONTIAC, Gas-Fired Water Heaters, Hotstream Heater Co., Cleveland, Ohio  
 AMERICAN, Saw Mill Machinery and Contractors Hoists, American Saw Mill Machinery Co., Hackettstown, N.J.  
 AMERICAN, Floor Polishing, Sanding and Surfacing Machines, American Floor Surfacing Machine Co., Toledo, Ohio  
 AMERICAN FLUSH Solid Core Door, American Plywood Corp., New London, Wis.  
 AMERICAN, Heating Equipment, American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 AMERICAN PENETRA-SEAL, Penetrating Floor Finish, American Floor Surfacing Machine Co., Toledo, Ohio  
 AMERICAN SANDERPLANE, Belt Sander, American Floor Surfacing Machine Co., Toledo, Ohio  
 AMERICAN SPINNER, Disc Sander, American Floor Surfacing Machine Co., Toledo, Ohio  
 AMEROCK Cabinet Hardware, American Cabinet Hardware Corp., Rockford, Ill.  
 ANACONDA, Products of American Brass Co., New York  
 ANDERSEN, Basement Windows, Casement Windows, Horizontal Sliding Windows, Master Frames, ANDERSEN NARROWLINE, Double Hung Windows, Andersen Corp., Bayport, Minn.  
 ARISTO-BRIC Insulating Siding, Ruberoid Co., New York  
 ARKANSAS SOFT PINE, Interior Trim, End-Matched and Plain End Flooring, and Common Lumber, Arkansas Soft Pine Bureau, Boyle Bldg., Little Rock, Ark.  
 ARMO, Ingot Iron, American Rolling Mill Co., Middletown, Ohio  
 ARMCO PAINTGRIP, Galvanized Sheets, American Rolling Mill Co., Middletown, Ohio  
 ARMCO SEAL-KRIMP, Metal Roofing, American Rolling Mill Co., Middletown, Ohio  
 ARMCO, Stainless Steel, American Rolling Mill Co., Middletown, Ohio  
 ARMCO ZINGRIP, Galvanized sheets and coils, The American Rolling Mill Co., Middletown, Ohio  
 ARMORLITE, Bullet-Proof Glass, American Window Glass Co., Pittsburgh, Pa.  
 ARMORPLY, Metal-Covered Plywood, U.S. Plywood Corp., New York  
 ARMSTRONG, Linoleum, Armstrong Corp Co., Lancaster, Pa.

## B

BALSAM-WOOL, Insulating Blanket, Wood Conversion Co., St. Paul, Minn.  
 BARBER GENASCO, Roofings, Shingles, Sidings, Asphalt Coatings, Insulating Felts, Asphalt Mastic, Barber Asphalt Corp., Barber, N.J.  
 BARB-LOCK, Shingles, Barber Asphalt Corp., Barber, N.J.  
 BARCOL OVERDOOR, Barber-Colman Co., Rockford, Ill.  
 BARLIK, Wall Board, Tylac Co., Monticello, Ill.  
 BARRETT HOLT, Roof Rings, Vents and Connections, Barrett Co., New York  
 BEAVER, Wall Board; Gypsum Board; Gypsum Sheathing; Gypsum Plaster, Certain-teed Products Corp., New York  
 BECKMAN-DAWSON, Shingles and Sidings, Flintkote Co., New York  
 BESTWALL, Gypsum Wallboard, Certain-teed Products Corp., New York  
 BILDCOST Home Plans, Better Homes & Gardens, Des Moines, Iowa  
 BILDRITE, Sheathing, Insulite Co., Minneapolis, Minn.  
 BLENDTEX, Insulating Plank and Tile, U.S. Gypsum Co., Chicago  
 BLUBAG Finishing Hydrated Lime, and Lime Products, Woodville Lime Products Co., Toledo, Ohio  
 BLUE RIDGE Figured and Wire Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 BONDERIZING, Process of Metal Protection, Parker Rust Proof Co., Detroit, Mich.  
 BONDILITE, Interior and Exterior Oil Paste Paint, Wilbur & Williams Co., Boston, Mass.  
 BOSS, Mixers, Hoists, Concrete Carts, American Cement Machine Co., Keokuk, Ia.  
 BRIK-STRIP Asphalt Siding, Ruberoid Co., New York  
 BRILAC, 4 hour Enamel, Breinig Bros., Inc., Hoboken, N.J.  
 BRIXMENT, Masonry and Stucco Cement, Non-Staining Stone Mason's Cement, Louisville Cement Co., Louisville, Ky.  
 BRYCO-VAR, 4 hour All-Purpose Varnish, Breinig Bros., Inc., Hoboken, N.J.

## C

CADWALL-PHILIPPANEL, Solid Philippine Mahogany Paneling, Cadwallader Gibson Co., Los Angeles, Calif.  
 CAPITOL, Hot Water and Steam Boilers and Radiators, U. S. Radiator Corp., Detroit, Mich.  
 CAPITOLAIRE, Warm Air Furnaces, U. S. Radiator Corp., Detroit, Mich.  
 CAREYSTONE, Asbestos Cement, Shingles, Scored Sheathing, Philip Carey Co., Lockland, Cincinnati, Ohio.  
 CARRARA, Structural Glass, Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 CARR-dor, Overhead Acting Garage Door, Carr, Adams & Collier Co., Dubuque, Iowa.  
 CARSTENITE, Wall Covering, Marsh Wall Products, Inc., Dover, Ohio.  
 CEDALINE, Closet Lining, E. L. Bruce Co., Memphis, Tenn.  
 CEDARTEX Asphalt Shingles and Siding, Flintkote Co., New York.  
 CELLOWARE, Bathroom Fixtures, B & T Floor Co., Columbus, Ohio  
 CELL-U-BLANKET Insulation, Masonite Corp., Chicago  
 CELOTEX VAPOR-SEAL, Lath, Sheathing, and Roof Insulation Celotex Corp., Chicago

CELOTEX CEMESTO, Asbestos Cement Insulating Wall Board, Celotex Corp., Chicago  
 CELOTEX DOUBLE DUTY Shingles, Celotex Corp., Chicago  
 CELOTEX TEXTBOARD, Interior Wall Finish, Celotex Corp., Chicago  
 CELOTEX TRAFFIC TOP, Celotex Corp., Chicago  
 CELOTEX TRIPLE-SEALED, Roofing Products, Celotex Corp., Chicago  
 CEMCOAT, Filler and Dustproofing and Interior and Exterior Paints, L. Sonneborn Sons, Inc., New York, N. Y.  
 CEMENTICO, Masonry Paint, U. S. Gypsum Co., Chicago  
 CENTURY PROGRESS, Flooring, Masonite Corp., Chicago  
 CERTIGRADE, Red Cedar Shingles, Red Cedar Shingle Bureau, Seattle, Wash.  
 C. H. & E., Contractors Equipment, C. H. & E. Manufacturing Co., Milwaukee, Wis.  
 CHECK-MATE Wood Sealer and Primer, Wilbur & Williams Co., Boston, Mass.  
 CHROMEDGE, Metal Mouldings, B & T Floor Co., Columbus, Ohio  
 CLIMATOR Furnace Fans, L. J. Mueller Furnace Co., Milwaukee, Wis.  
 CLOS-TITE Casements, Carr, Adams & Collier Co., Dubuque, Iowa  
 CMC, Concrete Mixers, Hoists, Saw Rigs, Concrete Carts and Wheelbarrows, Construction Machinery Co., Waterloo, Iowa  
 CMC, Dual Prime Contractors' Pumps, Construction Machinery Co., Waterloo, Iowa  
 COLOR CLEAR, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 COLORCRETE, Brick, Cement, Stucco and Mortar Colors and Waterproof Coatings; Cement Brick, Concrete Block and Hollow Tile Machines and Molds, Colocrete Industries Inc., Holland, Mich.  
 COMET Radial Power Saw, Consolidated Machinery & Supply Co., Los Angeles, Calif.  
 COMMANDER, Fibre Boards, Upsen Co., Lockport, N. Y.  
 COPPER-BOUND Shingles, Ford Roofing Products Co., Chicago  
 CRAFTCORD COVER-DRI Building Paper, Flintkote Co., New York  
 CRAW-FIR-DOR, Fir Door Institute, Tacoma Bldg., Tacoma, Wash.  
 C-S-I, Certain-teed Structural Insulation, Certain-teed Products Corp., New York  
 C-S-I, Interior Finish; Tile Board; Finish Plank; Asphalted Sheathing; Asphalted Key Lap Lath; Roof Insulation, Certain-teed Products Corp., New York  
 CYCLONE Shingles, Ford Roofing Products Co., Chicago

## D

DAMPFOAT Enamel, Wilbur & Williams Co., Boston, Mass.  
 DANDIE Mixers, Koehring Co., Milwaukee, Wis.  
 DECOBLEND Insulating Plank and Tile, Flintkote Co., New York  
 DELTABESTON, DELTAGLASS, Insulated Wire, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.  
 DE LUXE, Kitchen Cabinets, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 DE LUXE QUARTRBOARD, Masonite Corp., Chicago  
 DENCO, Lead-Head Nails, The Deniston Co., Chicago  
 DENNING, Ornamental Picket Fence, Portable Corneribs, Illinois Wire & Mfg. Co., Joliet, Ill.  
 DEXTER Tubular Hardware, National Brass Co., Grand Rapids, Mich.  
 DIXIE, Gas-Fired Automatic Water Heaters, Hotstream Heater Co., Cleveland, Ohio  
 DRAFTITE, Weatherstrip, Hilger Co., St. Cloud, Minn.  
 DRAFT-O-STATS, Domestic, Commercial and Industrial Draft Controls, Hotstream Heater Co., Cleveland, Ohio  
 DREADNAUGHT, Floor Sanders, Speed Edgers, Whizz-ard Floor Surfacing Machines, and Portable Saws, Clarke Sanding Machine Co., Muskegon, Mich.  
 DUBBLESEAL Sheathing, Masonite Corp., Chicago  
 DUNBRICK, Cement Brick, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUNSTONE, Concrete Block Machine, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUNTEX, Roofing Tile Machine, W. E. Dunn Mfg. Co., Holland, Mich.  
 DUO-SEAL, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 DURACAL, Casein Powder Paint, U. S. Gypsum Co., Chicago  
 DUTCH BOY Red Lead and White Lead Paint Products, National Lead Co., New York  
 DYE-CRETE Concrete Floor Paint, Wilbur & Williams Co., Boston, Mass.

## E

E-Z-GLAZE, Puttyless Sash, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 E-Z-VENT, Storm Sash, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 ESSCO, Southern Pine; Southern Hardwoods; Ponderosa Pine; West Coast Woods; Oak Flooring, Exchange Sawmills Sales Co., Kansas City, Mo.  
 ETERNIT, Asbestos Roofing Products, Ruberoid Co., New York, N. Y.  
 EVERDUR, Metal, American Brass Co., New York  
 EVEREADY, Combination Woodworker, Porter-Cable Machine Co., Syracuse, N. Y.  
 EXTERIOR-D.F.P.A., Exterior Plywood, Douglas Fir Plywood Assn., Tacoma, Wash.  
 EXTRUDALITE, Extruded Metal Shapes for Store Fronts, Libbey-Owens-Ford Glass Co., Toledo, Ohio

## F

FA, Electric Wiring Equipment, Frank Adam Electric Co., St. Louis, Mo.  
 FARLITE, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 FARLO, FARLO-UNIQUE, FARLO-VENT, FARLO-KORE, Window Frames, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 FARLOEX, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 FEEDER BUSDUCT, Frank Adam Electric Co., St. Louis, Mo.  
 FENESTRA, Screens and Insulating Windows, Detroit Steel Products Co., Detroit, Mich.  
 FENESTRA, Steel Windows, Package Windows, and Doors, Detroit Steel Products Co., Detroit, Mich.  
 FENESTRA HOLORIB, Steel Roof Deck, Detroit Steel Products Co., Detroit, Mich.  
 FIBERDUCT, Non-Metallic Under-floor Duct, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.  
 FIBERLITE, Fiber Tile Board, Insulite Co., Minneapolis, Minn.  
 50-50, Garage Door Hardware, Allith-Prouty, Inc., Danville, Ill.  
 FIRZITE, Pretreatment for Fir, Breinig Bros., Inc., Hoboken, N. J.  
 FLAMENOL S. D. Building Wire, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.  
 FLEXBOARD, Asbestos Building Board, Johns-Manville, New York  
 FLEXCELL, Expansion Joints, Celotex Corp., Chicago  
 FLEXGLASS, Flexible Glass Wall Covering Cloth-Backed, U. S. Plywood Corp., New York  
 FLEX-I-SLAB, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 FLEXWOOD, Cloth-Backed Wood Veneers, U. S. Plywood Corp., New York  
 FLINTBOARD Hardboard, Flintkote Co., New York  
 FLINTLOCK Asphalt Shingles and Sheathing, Flintkote Co., New York



FLURESIT, Cement Waterproofing, Roof Coating and Foundation Damp proofing, American Fluresit Co., Cincinnati, Ohio  
 FLUROSEAL Brick Mortar, Cement, FLUROSTONE Cement Floor Hardener, FLUROCRETE, FLUROMASTIC Cement Floor Repairing Materials, American Fluresit Co., Cincinnati, Ohio  
 FOLLANSBEE SEAMLESS Terne Plate Roll Roofing, Follansbee Steel Corp., Pittsburgh, Pa.  
 4-SQUARE LUMBER, Weyerhaeuser Sales Co., St. Paul, Minn.  
 FORCE AIR Exhaust Fans, Victor Electric Products Inc., Cincinnati, Ohio  
 FORD-VNEER, Ford Roofing Products Co., Chicago  
 FROSTBRAND Oak and Beech Flooring, Perfection Oak Flooring Co., Shreveport, La.  
 FUNGISEAL, I. F. Laucks, Inc., Seattle, Wash.

## G

GALVANITE Roofing, Ford Roofing Products Co., Chicago  
 GAS ERA Furnaces and Boilers, L. J. Mueller Furnace Co., Milwaukee, Wis.  
 GIBBS DE LUXE Marbles and Wood Reproductions, Gibbs Boardtile Corp., Chicago  
 GILSONITE, Barber Asphalt Corp., Barber, N. J.  
 GLASTONE, Glass-Faced Masonry Units, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 GLIDE, Door Hangers & Track, Frantz Mfg. Co., Sterling, Ill.  
 GLOGAS, Fireplace Circulators and Grates, Superior Fireplace Co., Los Angeles, Calif.  
 GMC Motor Trucks, General Motors Truck & Coach Division, Pontiac, Mich.  
 GORILLA GRIPS, Solderless Mechanical Connectors, National Electric Products Corp., Pittsburgh, Pa.  
 GRAYLITE, Fiber Tile and Wallboard, Insulite Co., Minneapolis, Minn.  
 GUILDCUTTER, Electric Hand Saw, Syracuse Guild Tool Co., Syracuse, N. Y.  
 GUILDSANDER, Portable Electric Belt Sander, Syracuse Guild Tool Co., Syracuse, N. Y.

## H

HANDY SANDY STREAMLINER Floor Sanders, Hilger Co., St. Cloud, Minn.  
 HANSCO One-Hand Automatic Tacker, A. L. Hansen Mfg. Co., Chicago  
 HARBORSIDE, Plywood Siding, Harbor Plywood Corp., Hoquiam, Wash.  
 HARBORD, Plywood, Sheathing, Doors; PLYCRETE Concrete Form Panels, Harbor Plywood Corp., Hoquiam, Wash.  
 HARTILE, Exterior Plywood Panels, Harbor Plywood Corp., Hoquiam, Wash.  
 HAWK SPREAD, White Lime Finish, Ohio Hydrate & Supply Co., Woodville, Ohio  
 HAWTHORN, DEFENDER, ARROW, RUTHLESS, KICKAPOO, Barbed Wire Fencing, Keystone Steel & Wire Co., Peoria, Ill.  
 HEADLINE Sash Balances, Acme Spring Sash Balance Co., Los Angeles, Calif.  
 HEATEX, Wall Covering, Marsh Wall Products, Inc., Dover, Ohio  
 HERCULITE, Doors, Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 HILCO, "Handy Sandy," "Chief," "Commander," Floor Surfacing Machines, Hilger Co., St. Cloud, Minn.  
 HILO, Track, Frantz Mfg. Co., Sterling, Ill.  
 HOTPOINT Electric Appliances, Edison General Electric Appliance Co., Chicago  
 HYDROCID, Waterproofing and Dampproofing Products, L. Sonneborn Sons, Inc., New York

## I

IDAHO WHITE PINE, Western Pine Assn., Portland, Ore.  
 INCOR, High Early Strength Portland Cement, Lone Star Cement Corp., New York  
 INS-LITE, Building Board, Wall Board, Tile Board & Plank, Roof Insulation, Cold Storage Insulation, Insulite Co., Minneapolis, Minn.  
 INSULUX Glass Block, Owens-Illinois Glass Company, Toledo, Ohio  
 IN-THE-DOOR, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 INVISIBLE Sash Balances, Grand Rapids Hardware Co., Grand Rapids, Mich.

## J

JANITROL Gas Fired Heaters and Gas Conversion Burners, Surface Combustion Corp., Toledo, Ohio  
 JUNIOR OVER THE TOP, Door Equipment, Frantz Mfg. Co., Sterling, Ill.

## K

KAMKLAMP, Fuseholders, Frank Adam Electric Co., St. Louis, Mo.  
 KATHABAR Gas Fired Air Conditioners, Surface Combustion Corp., Toledo, Ohio  
 K-CEMO, Primer, U. S. Gypsum Co., Chicago  
 KIMSUL, Expanding Blanket Insulation, Kimberly-Clark Corp., Chicago  
 KOLORITE, Processed Red Cedar and Hand Split Shingles, Shingle Stain and Zinc Coated Nails, Weyerhaeuser Sales Co., St. Paul, Minn.  
 KOLOR-TRIM, Mouldings, Wood Conversion Co., St. Paul, Minn.  
 KORPAK Concrete Block and Block Machines, W. E. Dunn Mfg. Co., Holland, Mich.  
 KOST KUTTER, Saw Rigs, Construction Machinery Co., Waterloo, Iowa  
 KUEHN'S, Half-Round and Square Gutter, Lock Seam Roll Roofing, Milcor Steel Co., Milwaukee, Wis.  
 K-V HANDY-CLAMPS, Knappe & Vogt Mfg. Co., Grand Rapids, Mich.  
 K-VENIENCE, Clothes Closet Fixtures, Knappe & Vogt Mfg. Co., Grand Rapids, Mich.

## L

LAPIDENSIN Cement Waterproofing, American Fluresit Co., Cincinnati, Ohio  
 LAPIDOLITH, Liquid Concrete Floor Hardener, L. Sonneborn Sons, Inc., New York  
 LATITE, Shingles, Barber Asphalt Corp., Barber, N. J.  
 LAUXLITE, Synthetic Resin Paint (Water), I. F. Laucks, Inc., Seattle, Wash.  
 LAUXTEX, Plastic Paint (Water), I. F. Laucks, Inc., Seattle, Wash.  
 LAWCO, TIME-PROOF Bathrooms Cabinets, PIONEER, PURITAN, and ALL-AMERICAN Cabinet and Bathroom Fixtures, F. H. Lawson Co., Cincinnati, Ohio  
 L-C-H, Wood Windows, N. S. W. Co., Detroit, Mich.  
 LEAD-SEAL, Nails, Deniston Co., Chicago  
 LECTRO-LIFT, Electric Elevators, Sedgwick Machine Co., New York  
 LED-HED, Nails, Deniston Co., Chicago  
 LIGNOPHOL, Wood Preservative and Finish, L. Sonneborn Sons, Inc., New York  
 LITH-I-BAR, Concrete Joists and Joist Machines, W. E. Dunn Mfg. Co., Holland, Mich.  
 LITHO-WOOD, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 LITTLE AMERICAN, Floor Sander, American Floor Surfacing Machine Co., Toledo, Ohio  
 LOETEX, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 LOK-JOINT Lath, Fiberboard Plaster Base, Insulite Co., Minneapolis, Minn.  
 LOK-TITE Mitered Trim, Carr, Adams & Collier Co., Dubuque, Iowa  
 LOOMWIRE, Non-Metallic Sheathed Cable, National Electric Products Corps, Pittsburgh, Pa.

LOUISIANA Pecan Flooring, Perfection Oak Flooring Co., Shreveport, La.  
 LUCKE LEAK-PROOF, Bath Tub Hangers, Wm. B. Lucke, Inc., Wilmette, Ill.  
 LUDLITE, Stainless Steel Wall Board, Allegheny Ludlum Steel Corp., Pittsburgh, Pa.  
 LUSTRAGLASS, Ultra Violet Ray Glass; LUSTRABLU and LUSTRA-GOLD, Glass for Mirrors, Table Tops and Other Decorating Purposes, American Window Glass Co., Pittsburgh, Pa.

## M

MAGIC DOORS, Stanley Works, New Britain, Conn.  
 MAGNATAB, Shingles, Barber Asphalt Corp., Barber, N. J.  
 MALLSAW, Portable Electric Saws, MALLPLANES, MALLMORTISERS, Mall Tool Co., Chicago  
 MARCO, Folding Disappearing Stairs, Marschke Co., St. Paul, Minn.  
 MARLITE, Decorative Wall Panels, Marsh Wall Products, Inc., Dover, Ohio  
 MARVEL Sash Balances, Acme Spring Sash Balance Co., Los Angeles, Calif.  
 MASTAB, Shingles, Barber Asphalt Corp., Barber, N. J.  
 MASTER NO-DRAFT, Sash Balances, Master Metal Strip Service, Inc., Chicago  
 MASTITE, Masonry Mortar, Ohio Hydrate & Supply Co., Woodville, Ohio  
 MELOGLOSS, MELLOWTONE Wall Finishes, Lowe Brothers Co., Dayton, Ohio  
 MENGEL-BORD, Plywood Panels, Mengel Co., Louisville, Ky.  
 MFMA, Northern Hard Maple, Northern Beech, and Northern Birch Flooring, Maple Flooring Mfrs. Assn., Chicago  
 MIAMI, Bathroom Cabinets, Miami Cabinet Division of The Philip Carey Co., Middletown, Ohio  
 MILCOR EXPANSION, Corner Beads, Base Screeds, Door and Window Casings, Milcor Steel Co., Milwaukee, Wis.  
 MITERTITE, Trim, Curtis Companies, Inc., Clinton, Iowa  
 MONARCH, Woodworking Machines, American Saw Mill Machinery Co., Hackettstown, N. J.  
 MONARCH METALANE, Weatherstrip, Monarch Metal Weatherstrip Corp., St. Louis, Mo.  
 MONGRIEF Heating and Air Conditioning Equipment, Henry Furnace & Foundry Co., Cleveland, Ohio  
 MONOWALL, Decorative Wall Panels, Armstrong Cork Co., Lancaster, Pa.  
 MULTI-BREAKER, Circuit Protectors, Square D Co., Detroit, Mich.  
 MURALAC, Plain Mirrored Surface Wall Panels, Tylac Co., Monticello, Ill.

## N

NAIRN, Linoleum Floors and Walls, Congoleum-Nairn Inc., Kearny, N. J.  
 NDMA SEAL OF APPROVAL on Preservative-Treated Doors, Sash, Frames, and Woodwork, National Door Mfrs. Assn., Chicago  
 NEPCODUCT, Under Floor Wiring Systems, National Electric Products Corp., Pittsburgh, Pa.  
 NEW LONDONER Hollow Core Door, American Plywood Corp., New London, Wis.  
 NON-SAG, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 NON-STICK, Windows, N. S. W. Co., Detroit, Mich.  
 NUCITE Glass Chalkboard, Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 NU-STYLE Kitchen Cabinets, Carr, Adams & Collier Co., Dubuque, Iowa  
 NU-WOOD, Kolor-Fast, Sta-Lite, Interior Finish, Wood Conversion Co., St. Paul, Minn.

## O

OHIO RITEWALL, Fiber Lime Plaster, Ohio Hydrate & Supply Co., Woodville, Ohio  
 OHIO SANLIME, Plaster Finish and Interior Sand Finish (In Colors), Ohio Hydrate & Supply Co., Woodville, Ohio  
 ON-THE-WALL, Ironing Boards, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 OPTEX, Blackboard Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 OVERFOLD, Garage Doors, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 OVERHEAD DOOR WITH THE MIRACLE WEDGE, Overhead Door Corp., Hartford City, Ind.  
 OVER THE TOP, Door Equipment, Frantz Mfg. Co., Sterling, Ill.

## P

PANELBESTOS, Asbestos-Cement Wall Board, Ruberoid Co., New York  
 PARKERIZING, Process of Metal Protection, Parker Rust Proof Co., Detroit, Mich.  
 PAYNE SPACESAVER Cabinet Heater, Payne Furnace and Supply Co., Beverly Hills, Calif.  
 PC, Glass Blocks and Architectural Glass, Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 PENN-DIXIE, Portland Cement and High Early Strength Portland Cement, Pennsylvania-Dixie Cement Corp., New York  
 PENNVERNON, Window Glass, Pittsburgh Plate Glass Co., Pittsburgh, Pa.  
 PHOENIX, Solid Braided Awning Line, Sash Cord, Samson Cordage Works, Boston, Mass.  
 PIONEER Asbestos Sidings and Asphalt Shingles, Flintkote Co., New York  
 PIVOT LIFT, Door Equipment, Frantz Mfg. Co., Sterling, Ill.  
 PLASTEREZ, Synthetic, Resin-bound Interior Wall Coating, I. F. Laucks, Inc., Seattle, Wash.  
 PLASTICO, Latex Rubber, Moulage Materials, Warren-Knight Co., Philadelphia, Pa.  
 PLAX, Enamel Finishes, Lowe Brothers Co., Dayton, Ohio  
 PLEXITE, Safety Glass, American Window Glass Co., Pittsburgh, Pa.  
 PLUGIN BUSDUCT, Frank Adam Electric Co., St. Louis, Mo.  
 PLUG-IN STRIP, Surface Raceway Wiring Systems, National Electric Products Corp., Pittsburgh, Pa.  
 PLYFORM, Concrete Form Panel, Douglas Fir Plywood Assn., Tacoma, Wash.  
 PLYPANEL, Cabinet Paneling, Douglas Fir Plywood Assn., Tacoma, Wash.  
 PLYSCORD, Sheathing, Douglas Fir Plywood Assn., Tacoma, Wash.  
 PLYWALL, Wall Board, Douglas Fir Plywood Assn., Tacoma, Wash.  
 PONDEROSA PINE, Western Pine Assn., Portland, Ore.  
 POSITIVE, Latches, Frantz Mfg. Co., Sterling, Ill.  
 POTTSO, Lightweight Concrete Aggregate, Celotex Corp., Chicago  
 PRESWOOD, TEMPERED PRESWOOD, PRESWOOD TEM-PTILE, Wall Board, Plank and Tile, Masonite Corp., Chicago  
 PRESTO, Disappearing Stairs, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 PULLMAN UNIT, Sash Balances, Pullman Mfg. Corp., Rochester, N. Y.  
 PUL-TITE, Line Clamps, Stanley Works, New Britain, Conn.  
 PUSH-OVER, Overhead Door Hardware, Allith-Prouty, Inc., Danville, Ill.  
 PYROFAX Bottled Gas, Pyrofax Gas Division, Carbide and Carbon Chemicals Corp., New York

## Q

QUALITYBILT, Woodwork, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 QUARTRBOARD, Wall Board, Masonite Corp., Chicago



QUIKHETER, Built-in Electric Heaters, Frank Adam Electric Co., St. Louis, Mo.

R

RADIA, Electric Bathroom Heaters, Shepler Mfg. Co., Pittsburgh, Pa.  
 RED BRAND, SQUARE DEAL, AND MONARCH Fence, Keystone Steel & Wire Co., Peoria, Ill.  
 RED DEVIL, Glass Cutters, Paint Conditioners, Wood Scrapers, Glaziers Tools, Wallpaper Removers, Floor Edgers, LAD-R-SHU, Fencers, Landon P. Smith, Inc., Irvington, N. J.  
 RED TOP, Plaster, Metal Lath, Insulating Wool, Lime, U. S. Gypsum Co., Chicago  
 RED TOP Steel Fence Posts and Aluminum Top Posts, Keystone Steel & Wire Co., Peoria, Ill.  
 REID-WAY OSCILLATOR Floor Finishing and terrazzo rubbing, Reid-Way Corp., Cedar Rapids, Iowa  
 RELIABLE, Fire Door Fixtures, Barn Door Hangers, Rolling Store Ladders, Overhead Trolleys and Track, Allith-Prouty, Inc., Danville, Ill.  
 REPREX, Mantels, Readybuilt Products Co., Baltimore, Md.  
 REVOLAIRE Circulating Fans, Victor Electric Products, Inc., Cincinnati, Ohio  
 REX Roll Roofing, REXBOARD Hardboard, Flintkote Co., New York  
 REZ, Clear, Synthetic, Resin Sealer and Primer for Plywoods, I. F. Laucks, Inc., Seattle, Wash.  
 REZICOTE, Synthetic Resin Paste Paint, I. F. Laucks, Inc., Seattle, Wash.  
 REZITEX, REZITEX PRIMER, Wall Coating for Wood, I. F. Laucks, Inc., Seattle, Wash.  
 RICHARDSON, Sidings & Shingles, Flintkote Co., New York  
 ROBERTSON BONDED METAL, Wood Veneer Welded to Steel for Decorative Paneling, U. S. Plywood Corp., New York  
 ROCKLATH, Gypsum Lath, U. S. Gypsum Co., Chicago  
 ROLLAWAY, Door Hangers & Track, Frantz Mfg. Co., Sterling, Ill.  
 ROLL POINT Cabinet Catches, American Cabinet Hardware Corp., Rockford, Ill.  
 ROTO-VENT, Windows, Curtis Companies, Inc., Clinton, Iowa  
 ROTO-WAITER, Sedgwick Machine Works, New York  
 RO-WAY, Overhead Type Doors, Rowe Mfg. Co., Galesburg, Ill.  
 RUNWEL, Door Hangers & Track, Frantz Mfg. Co., Sterling, Ill.

S

SAG-NOTT Doors, Harbor Plywood Corp., Hoquiam, Wash.  
 SAMSON SPOT, Sash Cord, Samson Cordage Works, Boston, Mass.  
 SANITAS Fabric Wall Covering, Standard Coated Products Corp., New York  
 SATINCOTE LOK-GRIP JOINT Fiber Tile and Plank Interior Finishes With Washable Colors, Insulite Co., Minneapolis, Minn.  
 SATINOL Processed Decorative Glass in "Flutex," "Louvrex," "Luminox," "Reedex," and "Velvex" finishes, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 SAWMASTER Tile Cutting Machines, Master Woodworker Mfg. Co., Detroit, Mich.  
 SEAL-BAC, Shingles, Barber Asphalt Corp., Barber, N. J.  
 SEDGWICK, SEDGVERSAL, Elevators and Hoists, Sedgwick Machine Works, New York  
 SENTRY AND SENTRY JR., Wall Safes, Brush-Punnett Co., Rochester, N. Y.  
 SEQUOIA BRAND, California Redwood, Redwood Sales Co., San Francisco, Calif.  
 SERVEL ELECTROLUX, Gas Refrigerator, Servel, Inc., Evansville, Ind.  
 SHADOW-THIK Asphalt Siding, Ruberoid Co., New York  
 SHEDWEL, Track, Frantz Mfg. Co., Sterling, Ill.  
 SHEETROCK, Wallboard, U. S. Gypsum Co., Chicago  
 SHUTLBRAK Enclosed Switches, Frank Adam Electric Co., St. Louis, Mo.  
 SILENTITE, Windows, Curtis Companies, Inc., Clinton, Iowa  
 SILHOUETTE, Weathervanes, Independent Protection Co., Goshen, Ind.  
 SILVEND, TAMRES, Fuses, General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.  
 SLAM-TEST, Shingles, Barber Asphalt Corp., Barber, N. J.  
 SMOOTHCOTE, Fiber Tile Interior Finishes, Insulite Co., Minneapolis, Minn.  
 SOF-SHEEN, Semi-Gloss Paint, Breinig Bros., Inc., Hoboken, N. J.  
 SOLVAY AIR-DRYETTE, JR., Solvay Sales Corp., New York  
 SPAX, Casein Wood Filler for Fine Cracks, I. F. Laucks, Inc., Seattle, Wash.  
 SPEED, Portland Cement, Waterproof Portland Cement; Hydrated Lump and Pulverized Lime, Louisville Cement Co., Louisville, Ky.  
 SPEEDMATIC, Floor Sanders, Portable Electric Saws, Porter-Cable Machine Co., Syracuse, N. Y.  
 SPRUCE-UP, Wallboard, Wood Conversion Co., St. Paul, Minn.  
 SQUARE DEAL, Fibre Boards, Upon Co., Lockport, N. Y.  
 STAINCURE, White Sealing Paint, Wilbur & Williams Co., Boston, Mass.  
 STAIR TRAVELLOR, Residence and Invalid Elevator, Sedgwick Machine Works, New York  
 STANDARD, Plumbing Fixtures, American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 STA-RITE, Shingles, Barber Asphalt Corp., Barber, N. J.  
 STAY-PUT Fireplace Cleanout Doors, Ash Dumps, Superior Fireplace Co., Los Angeles, Calif.  
 STEELOX, Building Sections, American Rolling Mill Co., Middletown, Ohio  
 STERLING, Surveying Instruments, Warren-Knight Co., Philadelphia, Pa.  
 STOP IT, I. F. Laucks, Inc., Seattle, Wash.  
 STORMTIGHT, Roof Coating, L. Sonneborn Sons, Inc., New York, N. Y.  
 STREAMLINE, Factory Finished Flooring, E. L. Bruce Co., Memphis, Tenn.  
 STREAMLINE TYLAC, Scored Wall Panels, Tylac Co., Monticello, Ill.  
 SUCCESS MACHINERY, Cement Brick, Concrete Block, Drain and Roofing Tile Machines and Molds; Concrete Mixers, Concrete Equipment Co., Holland, Mich.  
 SUGAR PINE, Western Pine Assn., Yeon Bldg., Portland, Ore.  
 SUNBEAM, Warm Air Furnaces and Air Conditioning Units, American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.  
 SUN-RED EDGE, Wire Screen Cloth, Reynolds Wire Co., Dixon, Ill.  
 SUPER-HARBORD, Plywood and PLYCRETE Concrete Form Panels, Harbor Plywood Corp., Hoquiam, Wash.  
 SUPER-HARBORITE Weatherproof Plywood Panel Product, Harbor Plywood Corp., Hoquiam, Wash.  
 SUPERIOR Unit Window, Carr, Adams & Collier Co., Dubuque, Iowa  
 SUPREME Oak and Pine Flooring, Southern Pine Lbr. Co., Texarkana, Tex.

T

TAKE-ABOUT, Portable Belt Sanders, Porter-Cable Machine Co., Syracuse, N. Y.  
 TECO, Metal Connectors for Timber Construction, Metal Termite Shields, Timber Engineering Co., Washington, D.C.  
 TEMBOARD, TEMBOARD DE LUXE, TEMWOOD, TEMPERED TEMWOOD, BLOCKED TEMWOOD, Armstrong Cork Co., Lancaster, Pa.  
 TEM-CLIPS, Armstrong Cork Co., Lancaster, Pa.  
 TEMLOK, Lath, Adhesives, and Insulation; DE LUXE, Interior Finishes, Armstrong Cork Co., Lancaster, Pa.

TEMSEAL, Sheathing, Armstrong Cork Co., Lancaster, Pa.  
 TEN-TEN, Barn Door Hangers, Allith-Prouty, Inc., Danville, Ill.  
 TERMINIX, Termite Control, E. L. Bruce Co., Memphis, Tenn.  
 TEXACO, Asphalt Roofing Products and Asbestos Fibre Roof Coating, Texas Co., New York  
 TEKOLITE, Casein Paint, U.S. Gypsum Co., Chicago  
 TEX-TAB, Asphalt Shingles, Ruberoid Co., New York  
 TEXTOLITE, Laminated Plastic Panels, General Electric Co., Plastics Dept., Pittsfield, Mass.  
 TEXTONE, Plastic Paint, U.S. Gypsum Co., Chicago  
 THERMAX, Structural Insulation, Celotex Corp., Chicago  
 THERMOLUX Light Conditioning Unit, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 THERMOPANE, Double-Glazing, Libby-Owens-Ford Glass Co., Toledo, Ohio  
 THIKBUT, Asphalt Shingles, THIKBRIK, Asphalt Siding, Flintkote Co., New York  
 TI-BON, I. F. Laucks, Inc., Seattle, Wash.  
 TIMBERGRAIN Asphalt Strip Shingles, Ruberoid Co., New York  
 TIMBEREX, Asbestos Shingles, Ruberoid Co., New York  
 TOTALUME, TOTRUST, Metal Protective Paints, Wilbur & Williams Co., Boston, Mass.  
 TRANSITE, Asbestos Cement Sheathing, Roofing and Pipe, Johns-Manville, New York  
 TRIMIX, Integral Liquid Waterproofing, L. Sonneborn Sons, Inc., New York  
 TRINIDAD NATIVE LAKE ASPHALT, Barber Asphalt Co., Barber, N.J.  
 TRI-PHENOL-PLUS, Toxic Wood Preserver, Protection Products Mfg. Co., Kalamazoo, Mich.  
 TRIPLE LOCK, Lead Seal Nails, Deniston Co., Chicago  
 TROUBLE SAVER, Scaffolding Brackets, Steel Scaffolding Co., Evansville, Ind.  
 TRU-FIT, Douglas Fir Entrance Door, Fir Door Institute, Tacoma Bldg., Tacoma, Wash.  
 TUF-FLEX, Building Paper, Wood Conversion Co., St. Paul, Minn.  
 TUF-FLEX, Tempered Plate Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 TUFF-WOOD, Wood Conversion Co., St. Paul, Minn.  
 TYLITE, Plain Panels in Colors, Tylac Co., Monticello, Ill.

U

UNILITE, Flush Doors, U.S. Plywood Corp., New York  
 UNIPAK, UNIPAK-UNIQUE, Casement Windows, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 UNI-ROL Garage door, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 USG, Roofing, U.S. Gypsum Co., Chicago  
 U.S.S. COPPER STEEL, Sheets, Carnegie-Illinois Steel Corp., Pittsburgh, Pa., and Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.  
 U.S.S. PANELBILT, Prefabricated Steel Buildings, Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.  
 U.S.S. STORM-SEAL, Roofing; Roofing and Siding Sheets, Carnegie-Illinois Steel Corp., Pittsburgh, Pa. and Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.  
 UNIVERSAL, Roof Deck, American Rolling Mill Co., Middletown, Ohio

V

VELLO, Casein Paint (Water), I. F. Laucks, Inc., Seattle, Wash.  
 VEQOS Porcelain Enamel on Steel Tile, Davidson Enamel Co., Clyde, Ohio  
 VICTOR, Disappearing Stairs, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 VICTOR IN-BILT, Built in Ventilators, Victor Electric Products, Inc., Cincinnati, Ohio  
 VICTOR PANEL-AIRE, Panel Ventilator for Windows and Transoms, Victor Electric Products, Inc., Cincinnati, Ohio  
 VITROLITE, Structural Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 VISKALT Roofing Asphalt and Saturated Roofing Felt, Flintkote Co., New York  
 VITRAMIC Asbestos-cement Siding, Ruberoid Co., New York  
 VITROLUX, Color Fused Tempered Plate Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio  
 VULCANITE, Asphalt Shingles and Roofing; Roof Coatings and Cements; Asphalt and Tarred Felts; Brick-Tex Asphalt Siding, Certain-teed Products, Corp., New York

W

WALLBOARD 3/16" (Plain, primed and clothed) Masonite Corp., Chicago  
 WALLSHEEN, Flat Paint, Breinig Bros., Inc., Hoboken, N.J.  
 WALLWOOD Plywood Wallboard, American Plywood Corp., New London, Wis.  
 WARM MORNING Coal Heaters, Locke Stove Co., Kansas City, Mo.  
 WAYNE Metal Mouldings, Wooster Products Inc., Wooster, Ohio  
 WEATHERSEAL, Farley & Loetscher Mfg. Co., Dubuque, Iowa  
 WEATHERWOOD, Insulating Board, Tile and Plank, U.S. Gypsum Co., Chicago  
 WEISTEEL, WEISART, WEISALLOY, Metal Partitions, Henry Weis Mfg. Co., Elkhart, Ind.  
 WEISWAY, Shower Stalls, Glass Shower Doors and Shower Stall Receptors, Henry Weis Mfg. Co., Elkhart, Ind.  
 WELDBORD, Hardwood Plywood Panels, U.S. Plywood Corp., New York  
 WELDWOOD, Waterproof Plywood and Plastic Resin Waterproof Glue, U.S. Plywood Corp., New York  
 WHALE, Clothes Lines, Samson Cordage Works, Boston, Mass.  
 WHITE REZ, Pigmented Resin Sealer, I. F. Laucks, Inc., Seattle, Wash.  
 WHITE'S IMPROVED, Drawing Materials and Instruments, Surveying Instruments, David White Co., Milwaukee, Wis.  
 WILSON PRECISION-BENT Sink Rims and Metal Trim, Wilson Metal Products Co., Columbus, Ohio  
 WINTHROP Asphalt Shingles and Cement, Flintkote Co., New York  
 WINTITE Sash Locks, American Cabinet Hardware Corp., Rockford, Ill.  
 WOLMANIZED LUMBER, American Lumber & Treating Co., Chicago  
 WONDER, Tilting Concrete Mixers, Construction Machinery Co., Waterloo, Iowa  
 WOODGRAIN Asbestos Shingles and Sidings, Flintkote Co., New York  
 WOODLIFE, Toxic Water Repellent for Wood, Protection Products Mfg. Co., Kalamazoo, Mich.  
 WOODYOUTH, Water Repellent for Wood, Protection Products Mfg. Co., Kalamazoo, Mich.  
 WRIGHT-ON-TOP, Compression Base, Wright Rubber Products Co., Racine, Wis.  
 WRIGHTEX, WRIGHTFLOR, Rubber Tile, Wright Rubber Products Co., Racine, Wis.

Y

YPS, YOUNGSTOWN Steel Kitchen Cabinets and Equipment, Youngstown Pressed Steel Division, Mullins Mfg. Corp., Youngstown, Ohio

Z

ZEPHYRPLANE JUNIOR Belt Sander, Skilsaw, Inc., Chicago  
 ZINCLAD Rustproof Shingle and Roofing Nails, W. H. Maze Co., Peru, Ill.  
 ZIPPER Folding Stairways, Marschke Co., St. Paul, Minn.  
 ZOURI Store Fronts, Kawneer Co., Niles, Mich.





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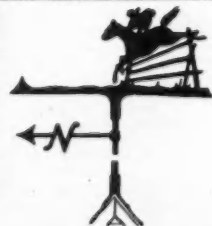
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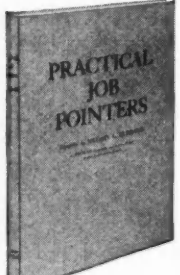
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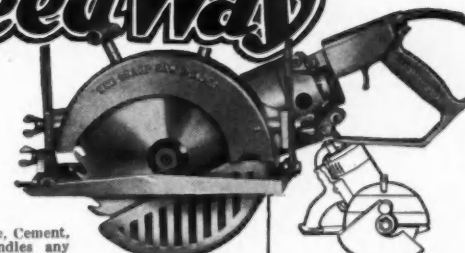


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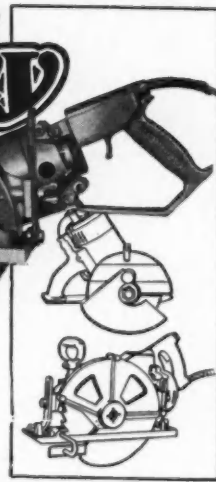
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