

# AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

Vol 41.

CONTENTS FOR SEPTEMBER, 1926

No. 6.

COPYRIGHT, 1926, BY AMERICAN CARPENTER & BUILDER CO.

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PROTECTION FOR OUR READERS—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit on other building products, machinery, equipment or tools.

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

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# 122 Gurneys Here



*The Patio Apartments*  
5812-60 W. Lake St.,  
Chicago.  
Owner, Geo. H. J. Haas.  
Architect,  
Paul Hansen.

THE beautiful Patio Apartments, Chicago, are equipped throughout with Gurney Refrigerators, 122 in all.

Why—just why in this big purchase should Gurney be chosen?

Reasonable first cost was one big reason.

Long, economical, trouble-free service was an even more important consideration.

Those two features found in all Gurney Refrigerators—wood and steel models for ice and ice machine service—have made these refrigerators outstanding favorites.

## Engineering Service

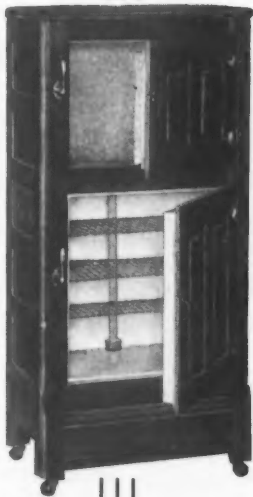
Gurney refrigeration engineers are available to study your requirements. They will make recommendations and submit estimates of cost without obligation.

*Write today for complete information.*

## Gurney Refrigerator Co.

*General Offices and Factory: Fond du Lac, Wisconsin*

Chicago	New York	Dallas
308 N. Michigan Ave.	206 Lexington Ave.	2625 Elm St.
Los Angeles	San Francisco	
747 Warehouse St.	180 New Montgomery St.	



# Gurney

REFRIGERATORS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# Door-

*with ordinary hard-*  
Slide the doors *inside*  
through with



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# Ways ware are a problem! and you are trouble for all time

THE trouble with ordinary garage doors is: they shrink or swell, stick, sag and the hardware gets rusty. That's because the doors and the hardware are unprotected from weather—the equipment was not designed by experts who know garage door requirements.

*All of these annoying, inconvenient features are impossible when the doors are equipped with Slidetite hardware.*

By sliding and folding inside, *Slidetite* equipped doors leave a clear, unobstructed,

full-width opening. Wind cannot blow them shut. Ice and snow cannot impede their operation. Dampness cannot directly reach the hardware. Simple, easy adjustments are complete assurance that doors will always fit snug.

*Slidetite* equipped doors are ideal for any garage, 2 to 10 doors, openings up to 30 feet wide, and *no center post*.

Consult R-W door experts freely. Richards-Wilcox hardware is the largest and most complete line of door hardware manufactured.



When a garage is not deep enough to fold the doors inside—*Slidaside* is the correct hardware. Doors so equipped slide around the corner, flat against the wall.

*Slidaside* can be used for two car garages by sliding doors to both walls, and is adaptable to any garage, regardless of distance from jamb to side wall.

Both *Slidaside* and *Slidetite* equipment provide for an entrance door—does away with expense of a separate entrance.

## Richards-Wilcox Mfg. Co.

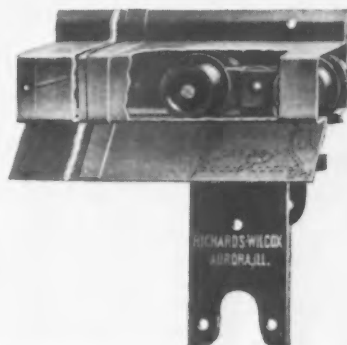
"A Hanger for any Door that Slides."

AURORA, ILLINOIS, U.S.A.

New York Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans  
Chicago Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit  
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

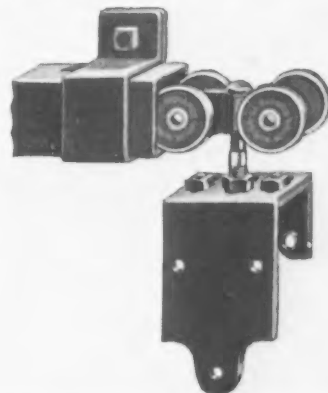
### Barn Door Hardware Protected from Weather

Working parts of R-W barn door hardware shown here are completely enclosed



*Fault-Proof* trolley door hanger (above) requires no loose brackets. You attach it directly to side of building. Track is in two pieces riveted together. Front extends down below top of door making it weatherproof and bird proof. Steel roller bearings. Made for sliding doors weighing up to 300 pounds.

*Stayrite* barn door hanger (below) is made of hardened steel frames and ball bearing forged steel wheels 2 1/2 inches in diameter. Lateral and vertical adjustment. All exposed parts are galvanized or baked enamel. Made for doors 1 1/4 to 2 1/2 inches thick and weighing approximately 300 pounds.





# TRUSCON STEEL COMPANY

YOUNGSTOWN OHIO ~ WAREHOUSES AND OFFICES IN ALL PRINCIPAL CITIES

Foreign Trade Division, New York. The Truscon Laboratories, Detroit, Mich. The Trussed Concrete Steel Company of Canada, Ltd., Walkerville, Ont.



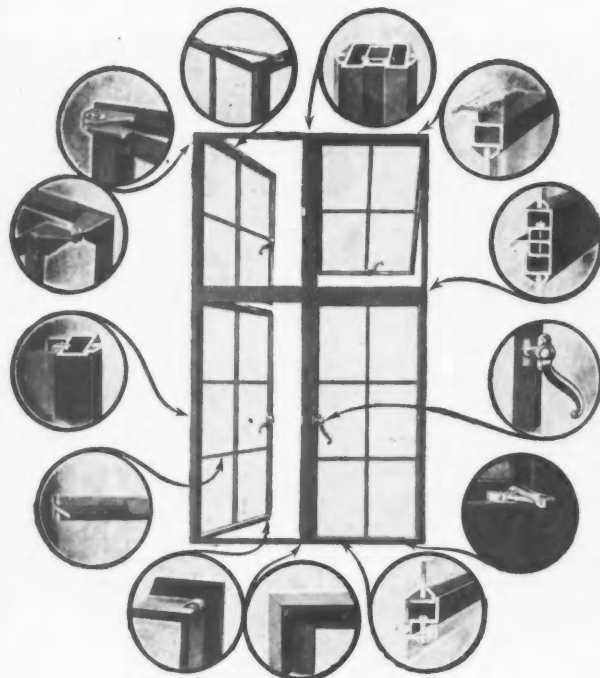
## Truscon Metal Lath for Permanent Crackless Walls and Ceilings

Truscon 1-A Hy-Rib Metal Lath has consistently demonstrated its outstanding superiority. Not only is it quickly applied and quickly and easily plastered with utmost economy of plaster materials—but it assures a fire safe crackless job that reflects lasting credit on you. Truscon has designed this special lath to help you meet the demand for permanent crackproof walls and ceilings.

Further information free  
on request

**TRUSCON**  
1-A HY-RIB  
**METAL LATH**

\*A complete line of Steel Buildings, Steel Windows, Metal Lath, Steel Joists, Steel Poles, Concrete Reinforcing for Buildings and Roads, Pressed Steel Specialties, Waterproofing & Technical Paints. Truscon maintains Engineering and Warehouse Organizations thruout the Country.



## Beautiful Windows Practical and Economical

Truscon New Type Casements will satisfy the owners for whom you build homes better than any other windows you could use. These Casements are durable, rust-proof, fire-safe, fine-appearing and have all the practical advantages of easy operation, complete weathertightness and ease of installation in masonry or in wooden frames. With all their superiorities Truscon New Type Casements are low in cost.

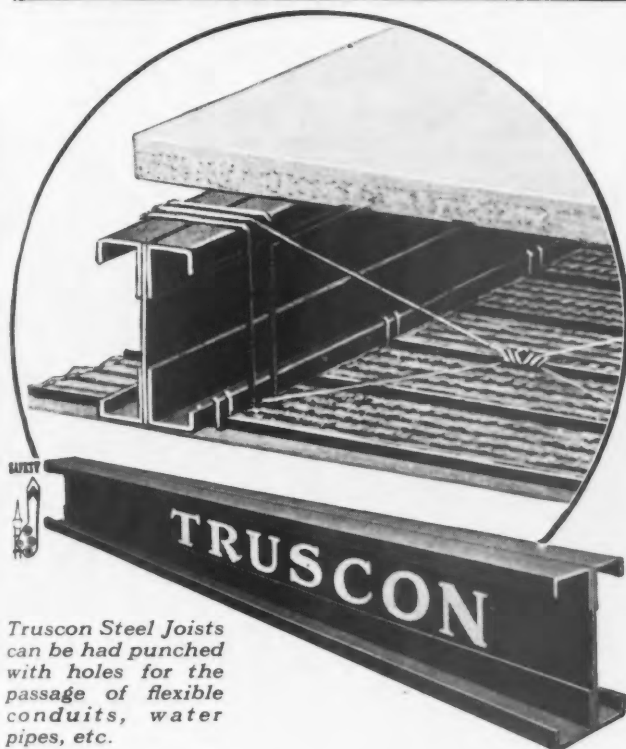
Write for illustrated literature

**TRUSCON**  
COPPER STEEL  
**STANDARD CASEMENTS**

# TRUSCON STEEL COMPANY

YOUNGSTOWN OHIO ~ WAREHOUSES AND OFFICES IN ALL PRINCIPAL CITIES

Foreign Trade Division, New York The Truscon Laboratories, Detroit, Mich. The Trussed Concrete Steel Company of Canada, Ltd., Walkerville, Ont.



Truscon Steel Joists can be had punched with holes for the passage of flexible conduits, water pipes, etc.

## STEEL JOIST Floor Construction

Fire safety at low cost. The utmost permanence. Soundproof floors. Minimum dead weight. Swift erection in any season. Lighter supporting members. Most simple construction. Easy inspection. Elimination of form work. Minimum field labor. Erection of any number of floors at once. Easy installation of plumbing and wiring. Reduced cartage and freight costs.

Catalog free on request

# TRUSCON

STEEL JOISTS

## Truscon Roofs of Security

(STEELDECK ROOFS)

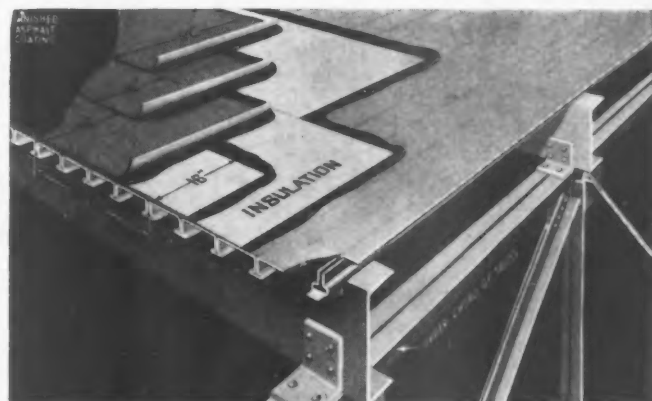
For Light Weight and Permanence



**TRUSCON**  
*Ferrodeck*  
INSULATED & WATERPROOFED

Trademark Reg. U. S. Pat. Off.

Ferrodeck roof plates are fabricated with one-inch flanges along the two edges. Substantial I-shaped sub-purlins support the roof plates every two feet, providing unusual strength and rigidity. In Truscon Ferrodeck you secure a permanent roof construction that can be quickly erected in any season of the year without delay.



**TRUSCON**  
**I**  
**PLATES**  
INSULATED AND WATERPROOFED

TRUSCON I-plate roof construction offers in one unit both roof plate and I-shaped support members. Rapid construction, absence of nuts, bolts and rivets, fire-safety, weather-tightness, lightweight and low cost recommend this type of roof deck.

Catalogs free on request



*Typical homes in the beautiful English showing how successfully beauty and homes, like many others in Hollywood,*

## "...a community of beautiful,



*Clyde H. Nelson, President of the Nelson Real Estate & Investment Company, Birmingham, Alabama. In Hollywood, Birmingham's newest and finest subdivision, Mr. Nelson has carried out a successful experiment in modern building methods, probably without equal in the entire country. In the past year over \$1,000,000 has been invested in Nelson homes.*

"THE most beautiful homes possible—homes built to last, and at a reasonable cost, too." Thus

Clyde H. Nelson, the man who conceived this great project and carried it through, described the idea back of Hollywood in Birmingham, Alabama—one of the most widely discussed real estate developments of its kind in the country.

"Hollywood, as we have planned it," continued Mr. Nelson, "not only means a business enterprise, a community of beautiful, permanent, fire-safe homes, but in a larger sense it typifies the best efforts of modern building science. Upkeep and depreciation have been cut to the minimum.

"We believe we have done something in the interest of better, more livable homes. And we expect our community thus founded to flourish even more beautifully one hundred years from today, because of the principles we have followed in building it."

**Carey**  
ASFALTSLATE  
SHINGLES

THE PHILIP  
Lockland,

THE





*Circle of Hollywood, Birmingham, Ala., permanence have been combined. These are roofed with Carey Asfaltslate Shingles.*

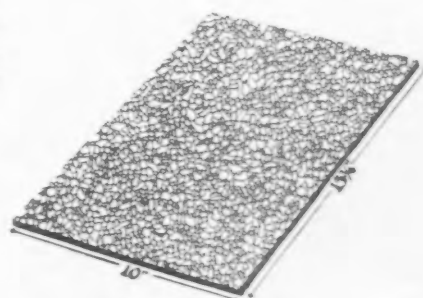
## permanent, fire-safe homes"

*The selection of a roofing material suitable for these splendid Hollywood homes was a matter which received much thought and study. As with everything else, attractiveness, durability and reasonable cost were the deciding factors. And the fact that many Hollywood homes are covered with Carey Asfaltslate Shingles is a remarkable tribute!*

*Sturdy, rugged, good-looking, Carey Asfaltslate Shingles are justly entitled to such tributes. The BIG SIZE—much thicker than any ordinary shingle, and half again as large—provides a three-thickness covering, 300 pounds to the square, when laid a full five inches to the weather. Quicker and easier to apply, and once on, it STAYS on—for this is "The Shingle that Never Curls". A choice of handsome colorings.*

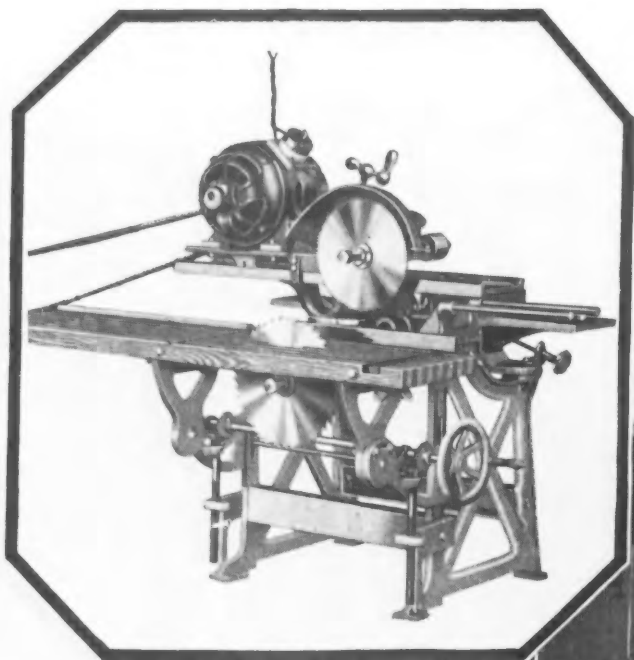
*Write, and we'll send you complete information.*

**CAREY COMPANY**  
Cincinnati, Ohio



*The big size Carey Asfaltslate Shingle measures 10" x 15 3/4". Goes on quicker and easier.*

## SHINGLE THAT NEVER CURLS



### MASTER WOODWORKER

The Master Woodworker illustrated and used on this job is the No. 12. They are also made in two larger models for job and mill work and in one smaller size.



## How's This For Real Saving—

### Cutting Time Saved By Master On Each House

Material	Cutting Time By Hand	Cutting Time On Master	Hours Saved
185 Pcs. 2" x 4"	10 hrs.	2 hrs. 30 min.	7 hrs. 30 min.
200 Pcs. Bridging 18" long	2 hrs.	25 min.	1 hr. 35 min.
2000 Board feet Shiplap	6 hrs.	1 hr. 7 min.	4 hrs. 53 min.
25 Valley Rafters 20 Jack Rafters	2 hrs. 30 min.	50 min.	1 hr. 40 min.
250 Pcs. Cornice 16" long	2 hrs.	20 min.	1 hr. 40 min.
Basement Stairs Attic Stairs Back Steps	4 hrs. 30 min.	1 hr. 45 min.	2 hrs. 45 min.
22 Window Frames 2 Door Frames	20 hrs.	4 hrs. 42 min.	15 hrs. 18 min.

Total Time Saved on Each House 35 hrs. 21 min.  
Total Time Saved on 42 Houses 1484 hrs. 42 min.

**MASTER WOODWORKER**  
MANUFACTURING COMPANY  
612 Brush Street  
DETROIT, MICHIGAN

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## 1484 Hours On One Job!

Instead of trying to describe the Master—telling what remarkable work it will do for you and how much it will save, we will just let these figures tell the story.

It is an exact record of what one Master Woodworker did for the Ideal Home Company who recently completed a block of forty-two houses in Detroit, all the materials being cut on the ground by a No. 12 Machine.

And remember you can buy a Master on an easy monthly payment plan. The machine will more than pay for it self as you use it.

### MASTER WOODWORKER MANUFACTURING COMPANY

Brush and Congress Streets

Detroit, Michigan

Send me your catalog of all Master Woodworker machines.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_





## Storm Sash cut coal bills 15% to 20%

**I**N Northern climates, the cost of heat in winter is an important item. It has been proved that storm sash will reduce the coal bill from 15% to 20%.

Storm sash, like the accessories on an automobile, give visible evidence that complete equipment is included in the selling price, and can be used to advantage in selling the houses you build.

The most important consideration in installing storm sash is the hardware used. Poor hardware can make the sash clumsy, hard to ventilate, and difficult to attach or remove. *Correctly-designed* hardware can make the sash

easy to attach, easy to remove, and easy to open and close for ventilation.

Stanley Storm Sash Hardware is of the best type. We have developed several unique designs that simplify the hanging and operation of storm sash. This hardware is inexpensive, too, although in keeping with the general high quality of Stanley products.

A glance at the pictures on the opposite page will show you why you should insist on Stanley Hardware for the storm sash you put up.

THE STANLEY WORKS, NEW BRITAIN, CONN.  
New York Chicago San Francisco Los Angeles Seattle

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---

# STANLEY

---

---

# Stanley Storm Sash Hardware

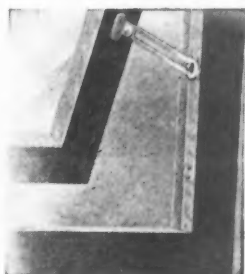
Easy to install. Made of Wrought Steel which is light and yet unbreakable. Furnished in the Japanned and Sherardized (non-rusting) finishes.



No. 1719

One of these fasteners should be applied to each side of the window casing.

When the sash is closed the fasteners are firmly locked by engaging with the pin in the casing. Made in two lengths—5" for windows four feet high and under, 10" for windows over four feet.



No. 1718

One of these fasteners should be applied to each side of the window casing.

When the sash is closed the fasteners are firmly locked by engaging with the pin in the casing.

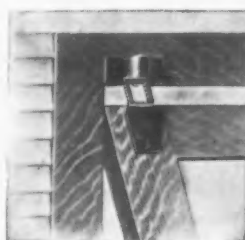


No. 1716

Designed for use on Storm Sash hung flush with the casing.

Will hold the sash snugly to the window frame and prevent rattling.

It is adapted to carry the heavier types of Storm Sash.



No. 1717

This is also designed for use on Storm Sash hung flush with the casing and will hold the sash snugly and prevent rattling.

The shape of the hook allows the sash to be hung from inside the building.

The sash can be easily removed without holding it far from the building.

Extra eyes can be furnished when desired to allow the interchanging of Storm Sash and Screen without removing the hook.



Stanley makes a complete line of wrought hardware of the highest quality. Look for this trade-mark as a means of identification.



# HARDWARE

# There is a dependable Sash Cord

You can identify it by means of  
the Colored Spots

**R**E-HANGING the windows should be a task for the *next* generation. For if they are hung with dependable sash cord, the job is done for at least twenty years.

What is "cheap sash cord?" The less it costs you the more it will cost somebody else. One of the favorite methods employed to cheapen sash cord is to use poor cotton yarn braided over a large center core, made of short staple, soft yarn, heavily sized with paraffin, clay paste, or other adulterant.

A cord constructed in this manner may look all right from the outside, but it is practically useless for any purpose. It is not really strong. It is seldom flexible. It will not remain smooth. It soon becomes lumpy, and often stretches so much immediately after the windows are hung that the job has to be done over again.

Furthermore, some adulterated cords have been found to breed vermin.

The chief expense in hanging windows is labor; the cord doesn't cost much. A few cents more for each window will mean years of satisfactory service. It may mean a big saving for the contractor, since Samson Spot Cord does not stretch when the weights are hung.

It certainly means a talking point in selling the house, for Samson Spot Cord is easily identified by the colored spots, our trade-mark, and has been known as the best cord for over 33 years.



**Y**OU can identify Samson Spot Cord by the colored spots. They are our trade-mark, and indicate our best product, made from fine cotton yarn spun in our own mills.

We guarantee Samson Spot Sash Cord to be free from *all* imperfection.

It is made of fine cotton yarn, spun in our own mills. It contains no loading, no adulteration. It is firmly and evenly braided, smoothly finished, and guaranteed free from imperfections. And it's all first quality cord—there are no "seconds."

Let us send you our catalog, and samples, showing the complete line. We make braided cord in all colors, sizes and qualities for every purpose.

*Made by*

## SAMSON CORDAGE WORKS

88 BROAD STREET

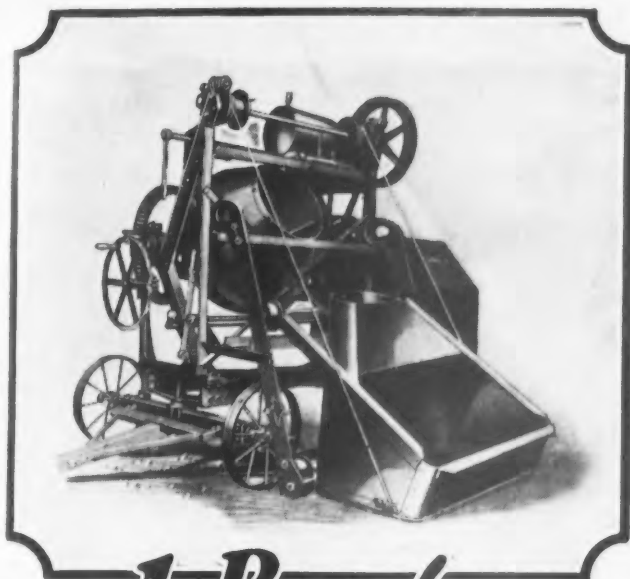


BOSTON, MASS.

TRADE

MARK





**1-Bag**



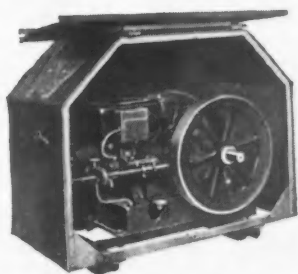
**2-Bags**

# WONDER MIXERS

*for the big jobs!*

## Wonder "7"

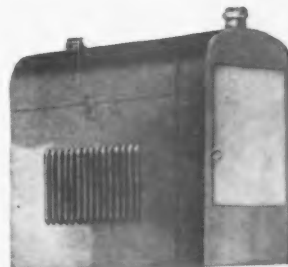
Here's one of the best all 'round sizes in the WONDER line. It has an approximate capacity of 10½ cu. ft. of unmixed material or 7 cu. ft. of mixed concrete. It's a speedy, sturdy one-bag machine, and is guaranteed to give many years of economical and profitable mixer service. It's extreme simplicity combined with rigid construction insure low operating costs, continuous service and long life. It will speed up your work, increase your daily output, and earn more profits for you.



The Fuller and Johnson engine is standard equipment on the WONDER "7". It's a horizontal, single cylinder, hopper cooled four cycle engine that will give dependable power at all times.

## Wonder "10"

Popular demand for a dependable two-bag mixer produced this newest WONDER design. It has a capacity of 10 cubic feet of mixed concrete and will handle a 2 bag batch or proportions up to and including 1-2-5 mix. The "10" has all the WONDER features, many of them exclusive, such as the perfectly balanced mixing drum—a track type of loader with its extension advantages—a thrust screw type of loader clutch with an automatic knockout and Alemite lubrication.



The four cylinder, Le Roi engine is furnished with the WONDER "10". It's a light-weight, heavy-duty industrial engine, built for continuous full-load service. Guaranteed absolutely.

**S**END today for complete information and new low prices on either of the two WONDERS pictured above or any size mixer you are interested in. Our complete catalog is Free for the asking. It illustrates the entire WONDER line—WONDER exclusive fundamental features and all 1926 improvements.

# Construction Machinery Company

**WATERLOO, IOWA, U.S.A.**

Western Office  
455 East 3d St., Los Angeles, Cal.

Central Office  
315 W. Maryland St., Indianapolis, Ind.

Eastern Office  
Widener Bldg., Philadelphia, Pa.

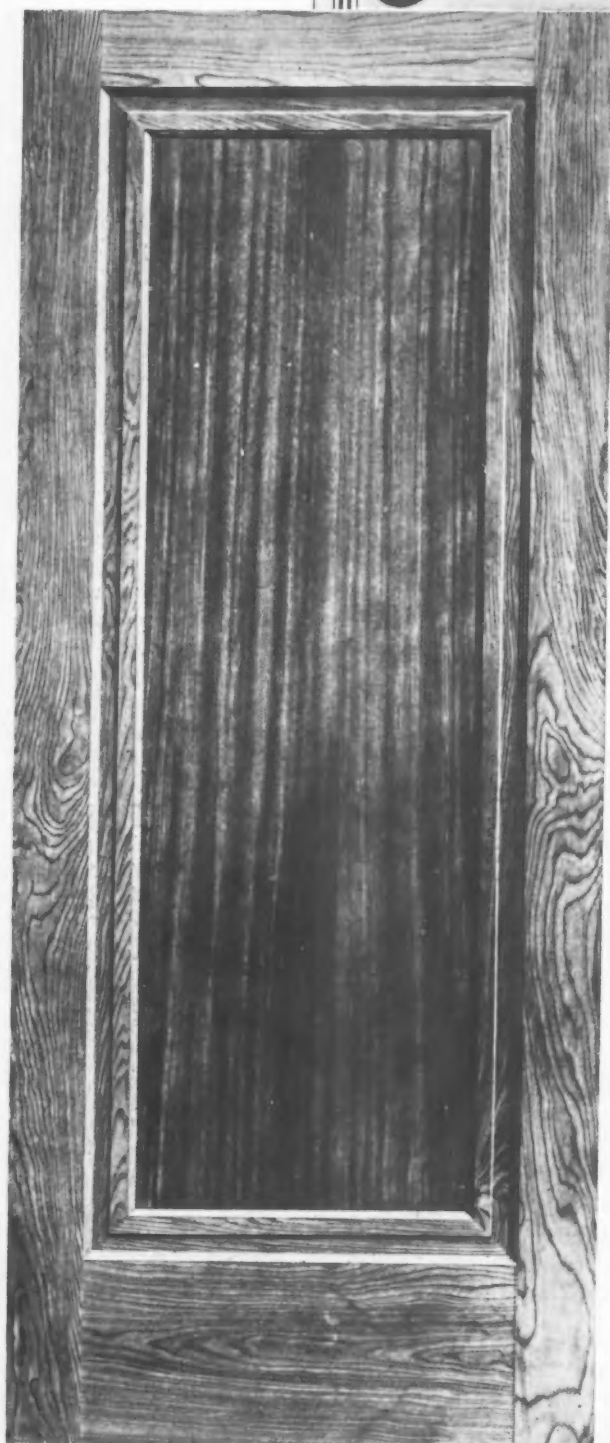
**THE  
ARISTOCRAT**  
A RADFORD DOOR

*Branded on top  
of every genuine  
Aristocrat Door*

# A NEW DOOR

## *The* ARISTOCRAT

The Radford Aristocrat Door illustrated here has Genuine Striped African Mahogany Panel with Unselected Birch frame and insert. A combination that gives the magnificence and dignity of genuine Mahogany at a most reasonable price.

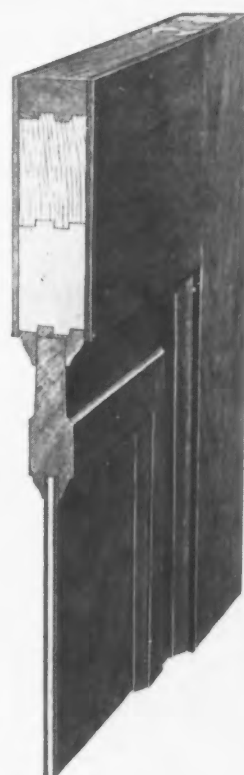


### *The Aristocrat Door*

is made with solid sticking, thus doing away with countless nail holes and possible unsightly joints. The insert frame is accurately mitered at the corners and substantially made. A special feature of the ARISTOCRAT DOOR is the raise around outer edge of the insert, which vastly improves the design, and makes possible the use of heavy sticking on stiles and rails.

### *This Cross Section*

clearly shows the deep, rich sticking that results—and the added strength is equally apparent. Our Colonial or Pilgrim sticking is used both on frame and insert, producing a richness and depth of light and shadow impossible with flat mouldings. And in spite of its charm, the ARISTOCRAT DOOR is sold at a price little higher than the old stock designs. Made in all hardwoods. Also with Pine Frame and Birch, Gum or Fir Panels.

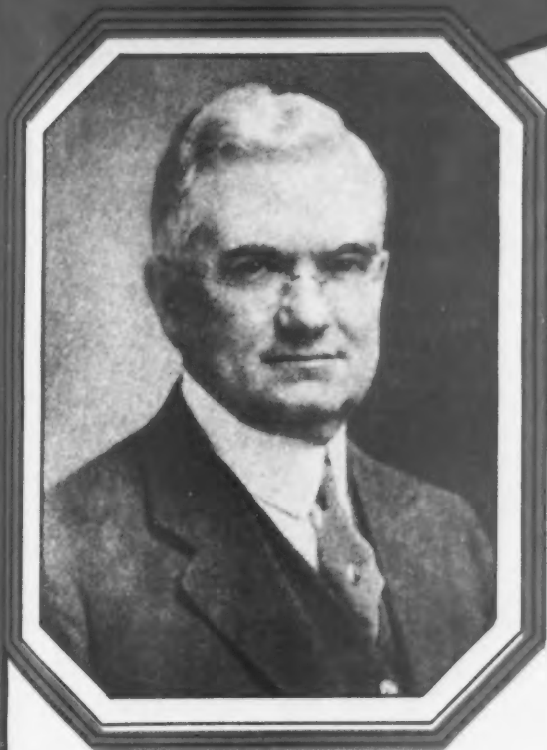


### *A New Catalog for You*

Richly illustrated in colors showing many woods and finishes. Complete layouts and descriptions. The popular Radford Pilgrim Door also shown in this New Catalog.

*Write for your copy today.*

**Radford & Wright Co.**  
Oshkosh, Wisconsin, U. S. A.



WILLIAM A. RADFORD  
Pres. and Editor in Chief Radford Publications

# I've Let Down the Bars on HoltBid!

I'll Send it To You for Only \$ **1<sup>00</sup>**

SO tremendous has been the response to my first offer of the famous HoltBid Method of Estimating that I have decided to make it **so easy** for every member of the building industry to become a HoltBidder that no one need hesitate one moment longer.

Here's the good news!:

I've let down the bars on HoltBid for you.

I will send it to you for only \$1.00 down—regular price \$15.00 down.

At so small an outlay I know that if you want to gain the many advantages that HoltBid will bring you—and who doesn't want to make **more money?**—you will snap up this opportunity at once and start on the HoltBid course this week!

I have so much confidence in the men who constitute the great building industry that I do not hesitate to expend thousands of dollars in placing the HoltBid Method in their hands at so insignificant a price as \$1.00 down. I know that the HoltBid System will win wherever it is used by those who have mastered its principles.

This announcement tells the story of HoltBid and what it can do for you. **Read it—study it.** Then all you have to do is pin a dollar bill to the coupon on the last page and mail both to me. By return mail you will receive the diagrams, instructions and material that will start you on the biggest thing in the building field today—the HoltBid Method of Estimating.

ENDORSED BY THE



*HoltBid*  
30 to 50 minutes  
to estimate  
**ANY HOUSE**

Radford Publications, Inc.  
Added to the File

**RADFORD**



"We have used HOLT BID a year and feel free to recommend it."—Illinois

"I had not put in more than seven or eight hours' time before I made my first HOLT BID and sold the job."—Indiana



How many times have you been worried like this? Estimating the old way we all know is drudgery.

## Let Us Answer Your Questions

**Question**—Do you mean to say that with the HoltBid System I can figure from any rough sketch or ordinary picture?

**Answer**—Positively yes! We first instruct you in the analysis of pictures and how to determine their major factors of proportion, after which you can answer any question that can be answered from complete, scaled drawings. Furthermore you will be in a position to make more practical use of your plan books as a HoltBidder.

**Q.**—How can the HoltBid do all that and be accurate?

**A.**—Because it is a combination of a material list process and the old square system—the square method modernized. HoltBid forms preclude omissions. "The HoltBidder's Key" is an actuary that gives accurate square costs for whatever size building you are figuring—any construction, all materials, at any price. It is almost unbelievable, but the square cost of any desired wall can be accurately determined in forty seconds. Think of it—less than a minute!

**Q.**—But how are you to know how many "squares" there will be in that picture?

**A.**—Can you figure how many square feet there are in a floor 30x30? If you can, you can figure any wall or roof just as accurately from mere pictures after we ex-

plain them to you. No matter how complicated it may seem, we absolutely guarantee to make walls, roofs, ceilings for one and one-half story houses, dormers and all units just as easy to figure as a floor.

**Q.**—Can you figure other materials besides lumber?

**A.**—Yes, brick, tile, cement blocks, concrete—anything but structural steel and reinforced concrete, and the HoltBid System will help you in many ways to figure that.

**Q.**—Can you figure labor as well as materials?

**A.**—Certainly. Part 17 of the HoltBidder's instructions deals entirely with labor records and labor accountancy. The HoltBidder's Memo gives time records in hours for any ordinary building.

**Q.**—Where do you get your material list?

**A.**—From your HoltBid, after you know it will not be a "peddler's list." It's simply a matter of how fast you can write. No omissions—no losing count—no headaches—and you will enjoy seeing how easy it is, no matter how expert you now may be. The HoltBid holds many valuable time-saving ideas for you.

**Q.**—Can I learn to HoltBid if I know nothing about building or construction?

**A.**—Many have, and you can if you can read, write and figure. Higher mathematics and geometry are not in-

Another Important Unit Added to the Big Radford Organization





The Holtbidder has the jump on everyone when making sales. Customer can get accurate estimate in 30 to 50 minutes.

involved in HoltBidding. You may ask us any number of questions about that which is not clear to you. Your questions will receive individual attention.

Q.—Will it help one who has had much experience and is good at figures?

A.—Yes. How much we cannot say, because you alone know what you know. Many experienced men are keeping up-to-date by becoming HoltBidders. We know you do not want to step down or let others pass you.

Q.—What is the time limit on HoltBidder's service?

A.—Your life. You may consult Mr. Holt and his staff of Master HoltBidders any time you wish. You will appreciate the value of being a registered HoltBidder if you ever relocate in another section of the country where construction is new to you.

Q.—How can you give me such training for so much less than any educational institution?

A.—Why are Ford's so reasonably priced? Remember the HoltBid System is a part of the world's greatest organization for building information—The Radford Publications.

Q.—Will HoltBid help me get a better job if I am an employee?

A.—Yes, by making your present job pay you better. Your added ability as a HoltBidder will attract more opportunities and your trial demonstrations will carry conviction. We will not solicit a position for you, but will

bear witness to your ability as a HoltBidder. Many have found the HoltBid a "job insurance" policy.

Q.—How do I know that HoltBid is not "old stuff" to me?

A.—Because much of the HoltBid system was developed by Mr. Holt and his collaborators in practical experience and has never been published or otherwise made generally known before.

Q.—Can I afford the HoltBid?

A.—Yes, absolutely. As a HoltBidder your earnings will increase. And the time-payment plan permits you to pay as you progress.

Q.—How soon can I begin?

A.—Immediately! All you need do is fill out the coupon on the next page, attach your check, money order or currency for \$1.00, and mail to me. By return mail you will receive the study units and materials enumerated on next to the last page of this booklet.

Q.—Is the HoltBid difficult to learn?

A.—No, but like everything else, you must apply yourself to the work in hand to gain your goal. You can master the principles of the HoltBid Method of Estimating if you make up your mind to do so.

Q.—How long will the present down price of \$1.00 hold good?

A.—The special introductory price and the \$1.00 down-payment plan are for immediate acceptance. You must act at once.

"We recommend HOLTBID, especially where contact is had with owner who is contemplating building."—Indiana

# HoltBid Will Figure This House

*from this*



Only 30 to 50 Min-  
utes are Required  
to Accurately Es-  
timate the Cost of  
an Ordinary Build-  
ing by the Tested  
and Tried HoltBid  
Method.

Your Order—  
\$1.00 Down  
—Includes a  
Year's Sub-  
scription to The  
American  
Builder Maga-  
zine.

## In An Hour!

## Only 1000 Sets Available At This Bargain Price!

I WANT to place 1,000 HoltBid Systems in the hands of the representative men in the building industry as advertising for the HoltBid Method and the Radford Organization behind it.

To bring about this result immediately I have reduced the original down payment price from \$15.00 to \$1.00, and as further inducement I have fixed the monthly payments at only \$5.00 each, until the special introductory price of \$85.00 has been paid. Moreover, your order for HoltBid will include a year's subscription to the American Builder magazine, which becomes effective immediately upon receipt of your acceptance. Without the American Builder we shall deduct \$1.00 from the total purchase price.

I know that the 1,000 men who will become HoltBidders through this special offer will forever attest to the great value of the HoltBid Method of Estimating. Their use and endorsement of the HoltBid Method will be the finest stamp of approval of HoltBid I could ask for—the best testimony in the world of HoltBid merit.

### You've Got To Act At Once

I urge you to take advantage of this offer immediately. I not only give you an opportunity examine and study the HoltBid method, but also guarantee to refund you the \$1.00 down payment if you are not satisfied. Obviously, I have limited this offer to the 1,000 sets and therefore cannot emphasize too strongly the necessity of prompt action.

Merely pin a \$1.00 bill to the coupon below and mail to me. It will bring you the first of the HoltBid system as well as a copy of the American Builder magazine each month for a year. I shall look for your response by return mail and shall send you my personal acknowledgment of your order.

William A. Radford, President, HoltBid Service Company,  
1827 Prairie Avenue, Chicago, Ill.

\$ **1**<sup>00</sup>  
**DOWN**

## PIN A DOLLAR BILL TO THIS COUPON AND MAIL TODAY

WILLIAM A. RADFORD, President,  
HOLTBID SERVICE CO.,  
1827 to 1901 Prairie Ave., Chicago, Ill.

Please send at once HOLTBID SERVICE of accurately estimating building costs. Enclosed find \$1.00. If I keep HOLTBID more than thirty days, it is understood that I wish to keep the service and I will pay you \$5.00 per month until the balance of the SPECIAL INTRODUCTORY Price of \$85 has been paid. The HOLTBID SERVICE includes all units, as well as a year's subscription to American Builder, the World's Greatest Building Paper. (Without the American Builder, we shall deduct \$1.00 from the total purchase price. If you already are a subscriber, we can readily extend your subscription for a year.)

Name .....

Town ..... State .....

Street Address ..... Occupation .....



# *New Standards of Popularity and Approval*

National Demonstration Model Homes  
Campaign Will Erect 360 Better Built  
Homes in 28 Important Cities

34 LEADING MANUFACTURERS AND  
ASSOCIATIONS CO-OPERATE TO SHOW  
HOW BETTER HOMES SHOULD BE BUILT

## ALL BUILDERS WILL BENEFIT

~ by L. PORTER MOORE ~

PRESIDENT HOME OWNERS SERVICE INSTITUTE

FOR the first time in the history of the building industry a group of non-competing manufacturers of materials and equipment such as would properly combine in the construction of typical American better homes, together with several associations, have banded together with the Home Owners Service Institute to sponsor the erection of a series of demonstration "model" homes throughout the United States during the next six months. This co-operative educational movement should be of great significance and much benefit to all building contractors and prospective home owners everywhere.

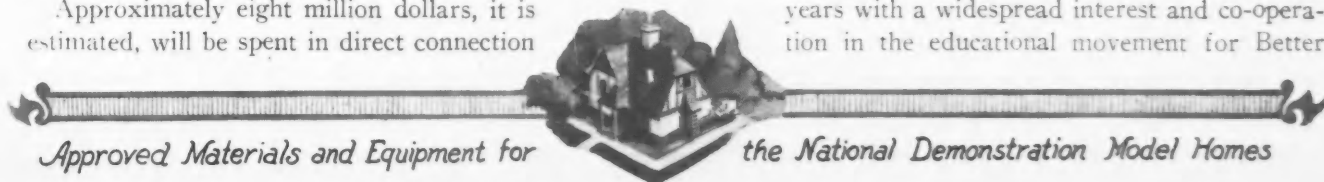
A minimum total of 360 houses will be constructed in connection with this 1926 National Demonstration "Model" Homes Campaign. These are to be built and opened for public inspection in 28 cities, as shown on the accompanying map.

Approximately eight million dollars, it is estimated, will be spent in direct connection

with the campaign. The construction cost and property valuation involved in the building of these standardized houses is about \$5,000,000. In newspapers and magazines, the co-operating manufacturers and associations will be spending a sum in excess of \$3,000,000 for advertising, the copy in full or in part written to focus public attention upon better building, with these demonstration "model" homes as the typical examples.

This is in support of the Better Building Campaign of the American Construction Council and in line with the program directed by Herbert Hoover as chairman of Better Homes in America, and the efforts of the Department of Commerce to improve home building methods and standards. President Coolidge, who is honorary chairman of Better Homes in America, recently said:

"I have been much impressed during the past three years with a widespread interest and co-operation in the educational movement for Better



*Approved Materials and Equipment for*

*the National Demonstration Model Homes*





## Approved Materials and Equipment for

homes in America. . . . To raise standards of the American home is, therefore, a substantial contribution to national well being."

D. Everett Waid, of New York, retiring president of the American Institute of Architects, and one of the foremost authorities on housing conditions, says of the program for the National Demonstration "Model" Homes Campaign:

"In my opinion this campaign should do more toward educating the American public in its conception of standards in home building than has any unified effort heretofore undertaken."

The first of the demonstration "model" homes will be completed and opened for public inspection early this fall. For six months the intensive campaign will continue—into the spring. In further co-operation with the program of the American Construction Council and in support of the drive of the Department of Commerce, Division of Building and Housing, to better stabilize the building industry by endeavoring to eliminate the seasonable speaks and valleys, the demonstration houses will be built and featured during the late summer, fall and early winter. This has been done so as to bring forcefully to the attention of the home building and buying public that spring and early summer are not necessarily the season when house construction and moving must be done,

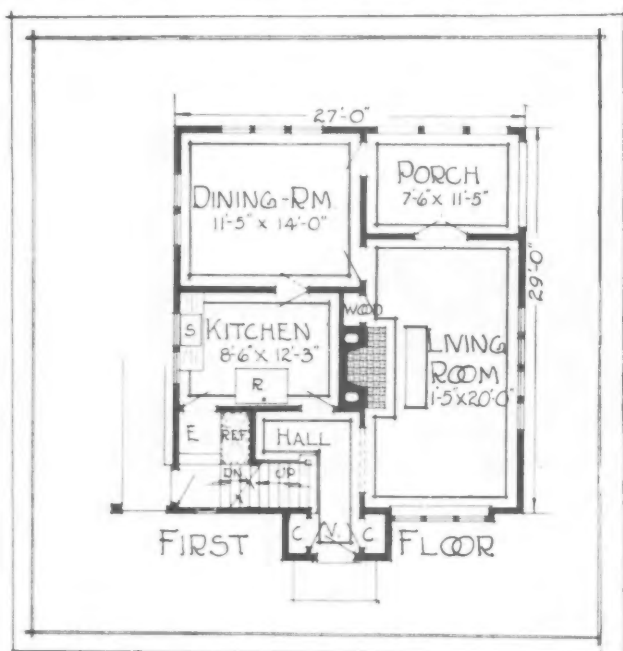


One of the Exterior Designs for the 36 National Demonstration "Model" Homes. Other attractive exteriors using other outside wall materials have been developed without much change in the basic floor plan.

but that all-year-round building has been proven to be the most economical for all concerned—building contractor and prospective home owner, and the entire industry.

### A Campaign of Education

The campaign, as organized, is entirely educational in its scope. The actual construction and demonstration to the public of properly planned and built homes, completely furnished and equipped, in 28 city-centers



Here Is the Basic Floor Arrangement for the First Group of the National Demonstration "Model" Homes. It is a practical, well tested and very popular size and arrangement.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# the National Demonstration Model Homes



of population throughout the United States, within easy motoring distance of practically 60 per cent of our entire population, forms the backbone of this campaign of education, backed up by newspaper, national magazine, radio broadcasting and other paid-for forms of advertising and publicity.

## Home Plans of Proven Worth

The architectural plans from which these demonstration better homes are being constructed throughout the United States are prize-winning plans that resulted from the "National Small House Architectural Competition" in which more than 1,200 architects and architectural draftsmen competed five years ago, during 1921, in connection with the "Own Your Home" expositions in New York and Chicago under the rules of the American Institute of Architects. The competition was directed by Henry K. Holsman, of Chicago, at that time President of the Illinois Chapter, American Institute of Architects.

The best six of these plans have been selected for the 1926 demonstration series. Each plan selected has been built from, time after time, during these five years. To my actual knowledge one has been constructed 73 times by home seekers, including its erection in New York City as the demonstration home in connection



This Shows the "Model" Home with a Brick Exterior.

with the first annual observance of Better Homes in America Week in 1922 (which, by the way, was the first "model" house I ever supervised).

## Best Architecture and Materials

I am telling you all this to impress upon you that each house to be constructed is a proven practical home—economical to build, pleasant to live in, basically right as to room arrangement and for convenience and step-saving for the woman of the house, and architecturally correct as to exterior design. There will be no experimenting with plans. That is past with us.

Under the supervision of Henry Atterbury Smith, Architect, of New York City, additional facades for each of the six basic plans have been designed. This has created additional exteriors, differing architecturally in period style, and structurally as well, but with the same identical interior arrangement and floor plans, which in itself is educational. Various elevations include brick, stucco, frame and combinations of these materials, some of stucco and



A Quaint Old English Flavor Is Given the National Demonstration "Model" Home in This Rendering, Which Will Be Used in Several of the 36 Demonstrations.



## Approved Materials and Equipment for

brick to veneer hollow building tile, each material receiving proportionate use.

### Advertising to Tell Public

Thus, a showing of all types of American house architecture, with the practical demonstration of different good basic materials and equipment for better building over the six months intensive period of the campaign will be definitely accomplished. Each demonstration house will be virtually a laboratory where the prospective builder of a better home may go to study and experiment to his or her heart's content. And, remember, three million dollars will be spent for paid-for advertising to educate those who cannot visit one or more of the demonstration houses as to what better building means.

In all, 36 demonstration "model" houses will be constructed for this purpose during the intensive campaign, one each month in each of six geographical sections of the country. Therefore, over the span of six months, with six demonstration better built homes each month, the total of 36 "models" will result, in 28 cities. On the schedule, Chicago and New York are each to have three; Boston, Atlanta, Philadelphia and San Francisco, two each, and 22 other cities will have one demonstration home during the campaign.

### In All 360 Houses

A grand total of 360 houses is arrived at by making

it one of the conditions with each builder selected in each city, that nine other houses be constructed by him along the same better building movement lines. Local architectural supervision to safeguard is also a requirement. These houses will represent a total investment



The 28 Cities Where the 36 National Demonstration "Model" Homes Will Be Erected This Year.

in property and construction of approximately five million dollars.

Thus the campaign will not only result in the actual building and demonstrating of featured "model" houses where the home seeker may study better building and equipment—as well as good furnishing, interior decoration, and landscaping—but the contractor and realtor, building under the conditions and terms of the program, must use good standard materials, under proper architectural supervision. This should go far toward educating many builders of groups of houses that inferior or shoddy construction of homes to sell does not pay.

It will help to educate the prospective home builder and home buyer as an individual to demand better building. It is my opinion that only by educating the home seeker to the vital necessity of demanding better building, will those so largely responsible for inferior construction in the housing field today be brought more hurriedly to time.

In each demonstration city a leading newspaper will sponsor the undertaking, recording the progress of construction, featuring the opening of the houses and giving to the enterprise publicity worth many thousands of dollars. In addition,



Here Is the "Model" Home as a Wood Sided Colonial Farmhouse.

# the National Demonstration Model Homes



the members of the Home Owners' Service Institute have appropriated more than \$100,000.00 to be spent in educational national advertising, to back up the building of these houses and provide educational features for those people who are unable to visit any of the houses.

The three national trade associations and manufacturers, members of this group, will also use local advertising during the campaign in each city. Local electric and gas companies are co-operating to show modern electric wiring and adequate gas installation, together with demonstration of their labor saving devices, and are also aiding the publicity program by mailing educational literature on good construction to hundreds of thousands of their customers. In Chicago, the People's Gas Light and Coke Company will mail out 864,000 pamphlets each month to customers for a period of several months. Local home furnishers and interior decorators will furnish these homes in a manner that will add to their charm.

Another feature of this elaborate and far-reaching program is that all the houses built will be covered with the "Home Owners' Institute Safeguard Policy."

originated by the Master House Bureau, and approved in principal by the National Association of Real Estate Boards, the United States Chamber of Commerce, the American Bankers' Association, the United States League of Local Building and Loan Associations, and many other organizations. This "Safeguard Policy" which is now owned by the Home Owners' Service Institute for exclusive use of members, provides for sworn affidavits on the part of contractors and builders and all sub-contractors as to the merits of the material and processes used by them in the construction of a residence. These policies will be distributed to the home buying and building public through thousands of dealers throughout the country who are allied with the national members of the Institute. The "Safeguard Policy" and additional pieces of educational literature will be distributed as described above, simultaneous with the demonstration house program, as another method of getting over to the public, object lessons in good construction.

See October  
AMERICAN BUILDER  
for further details  
of this campaign.

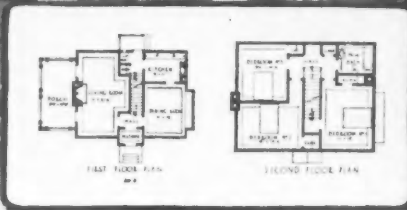
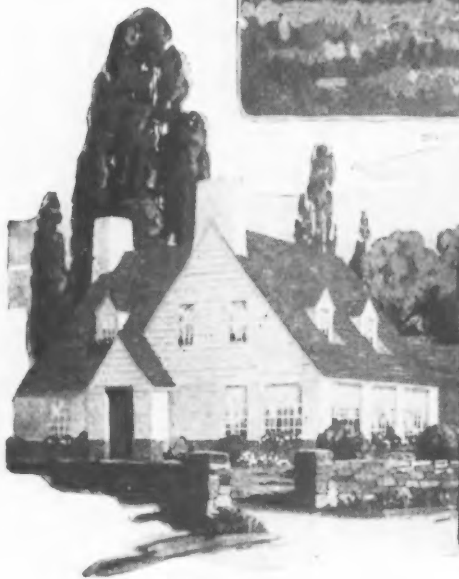


This Photo of a Demonstration Home Promoted and Built Under the Direction of Mr. L. Porter Moore and the Home Owners' Service Institute, Shows the Popular Interest That These Homes Always Create. Millions of home buyers and builders and their professional advisers will see, study and be influenced by these 36 "model" home demonstrations this year.





# Approved Materials and Equipment for



© HOME OWNERS'  
SERVICE  
INSTITUTE,  
1926

## There is more profit in building better specified homes

These Model homes built and equipped with

**Blue Star Installation Domestic Gas Appliances**  
AMERICAN GAS ASSOCIATION  
**Anaconda Brass Pipe, Copper Gutters, Leaders, Flashings and Bronze Wire for Screens**  
THE AMERICAN BRASS COMPANY  
**Corto Radiators—Ideal Arco Boiler—Arco Hot Water Tank**  
AMERICAN RADIATOR COMPANY  
**Muralia Wall Papers**  
BAECK WALL PAPER COMPANY  
**True-Tye Bridging and Steel Forms for Concrete Construction**  
BLAW-KNOX CO.  
**Celotex Insulating Lumber**  
THE CELOTEX COMPANY  
**Brick**  
COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA  
**Nairn Gold Seal Inlaid Linoleum**  
CONGOLEUM-NAIRN, INC.  
**Locks and Builders' Hardware**  
P. & F. CORBIN  
**Plumbing Materials**  
CRANE CO.  
**Radio Receiving Sets and Equipment**  
THE CROSLY RADIO CORPORATION  
**Fenestra Casement and Basement Steel Windows**  
DETROIT STEEL PRODUCTS CO.  
**Tontine Window Shades, Duco Furniture Finish, Rug Anchor**  
E. I. DU PONT DE NEMOURS & CO., INC.  
**Fairfacts China Bathroom Accessories**  
THE FAIRFACTS COMPANY, INC.  
**G-E Wiring System**  
GENERAL ELECTRIC COMPANY  
**Graybar Clothes Washer**  
GRAYBAR ELECTRIC COMPANY, INC.

**The Greater Hoover Suction Sweeper**  
THE HOOVER COMPANY  
**Tiger Finish (Hydrated Lime) Walls**  
KELLEY ISLAND LIME & TRANSPORT CO.  
**Kernerator Chimney-Fed Incinerator**  
KERNER INCINERATOR COMPANY  
**Lehigh Portland Cement**  
LEHIGH PORTLAND CEMENT COMPANY  
**Long-Bell Trade-Marked Lumber and Oak Flooring**  
THE LONG-BELL LUMBER COMPANY  
**The Minneapolis Heat Regulator for Coal, Gas, Oil**  
MINNEAPOLIS HEAT REGULATOR CO.  
**Natco Hollow Building Tile**  
NATIONAL FIRE PROOFING COMPANY  
**Dutch Boy White-Lead for Interior and Exterior Painting**  
NATIONAL LEAD COMPANY  
**Miracle Doors**  
PAINE LUMBER COMPANY, LTD.  
**Richardson Multicrome Roofs**  
THE RICHARDSON COMPANY  
**Riddle Decorative Lighting Fixtures**  
THE EDWARD N. RIDDLE COMPANY  
**Servel Electric Refrigeration**  
THE SERVEL CORPORATION  
**Smoothtop Gas Range**  
STANDARD GAS EQUIPMENT CORP.  
**Valspar Varnishes, Varnish Stains, Enamels**  
VALENTINE & COMPANY  
**Kitchen Maid Standard Unit System of Kitchen Equipment**  
WASMUTH-ENDICOTT COMPANY

THE PURPOSE of this nation-wide movement is to educate the home seeker toward the value of specifying the best in building materials and equipment. Standard products, always available locally, of known value, trade-marked and advertised, please your home building clients. Build well from such specifications, for greater success.

It will pay you to visit the nearest home, if possible, and see for yourself how this movement is helping you. There are thirty-six "model" homes, each publicly demonstrated, and nationally advertised to millions. Watch the newspapers for details.



HOME OWNERS'  
SERVICE INSTITUTE, INC.

Dept. T-15 441 LEXINGTON AVE. NEW YORK CITY

I enclose ten cents in stamps for one copy of "A Manual of Home Building."

I enclose \$3.00 in cash, check or money order, for Vol. 1, "The Books of A Thousand Homes."

Name .....

Address .....

Under the supervision of  
HOME OWNERS' SERVICE INSTITUTE • INC.  
L. PORTER MOORE, President





# Honor Roll of Manufacturers



## Quality Materials and Equipment Chosen for the National Demonstration Model Homes



- |   |   |
|---|---|
| AMERICAN BRASS COMPANY—See pages 32 and 33<br>Anaconda Brass Pipe and Bronze Screen Wire                                | GRAYBAR ELECTRIC COMPANY, INC.—<br>Graybar Clothes Washer   |
| AMERICAN GAS ASSOCIATION—<br>Gas Burning Domestic Appliances  | THE HOOVER COMPANY—<br>The Greater Hoover Suction Sweeper   |
| AMERICAN RADIATOR COMPANY—<br>Corto Radiators—Ideal Arco Boiler—Arco Hot<br>Water Tank—See pages 30 and 31; 226 and 227 | KELLY ISLAND LIME & TRANSPORT CO.—<br>Tiger Finish (Hydrated Lime) Walls<br>See page 44             |
| ANACONDA COPPER MINING COMPANY—<br>Anaconda Copper Gutters, Leaders and Flash-<br>ings—See pages 32 and 33              | KERNER INCINERATOR COMPANY—See page 45<br>Kernerator Chimney-fed Incinerator                        |
| BAECK WALL PAPER COMPANY—See page 35<br>Muralia Wall Papers   | LEHIGH PORTLAND CEMENT COMPANY—<br>Lehigh Portland Cement—See page 46                               |
| BLAW-KNOX COMPANY—See pages 242 and 243<br>Tru-Tye Steel Bridging and Steel Forms for<br>Concrete Construction          | THE LONG-BELL LUMBER COMPANY—<br>Long-Bell Trade-Marked Lumber and Oak<br>Flooring—See page 47      |
| THE CELOTEX COMPANY—See pages 36 and 37<br>Celotex Insulating Lumber  | MINNEAPOLIS HEAT REGULATOR CO.—<br>The Minneapolis Heat Regulator for Coal,<br>Gas, Oil—See page 50 |
| COMMON BRICK MANUFACTURERS' ASSN.—<br>Brick—See pages 38 and 39   | NATIONAL FIREPROOFING COMPANY—<br>Natco Hollow Building Tile—See page 51                            |
| CONGOLEUM-NAIRN, INC.—<br>Nairn Gold Seal Inlaid Linoleum   | NATIONAL LEAD COMPANY—<br>Dutch Boy White-Lead for Interior and Ex-<br>terior Painting              |
| COPPER & BRASS RESEARCH ASSOCIATION—<br>Copper and Brass Products—See page 34   | PAINE LUMBER COMPANY, LTD.—<br>Miracle Doors—See pages 48 and 49                                    |
| P. & F. CORBIN—<br>Locks and Builders' Hardware   | THE RICHARDSON COMPANY—See page 52<br>Richardson Multicrome Roofs                                   |
| CRANE CO.—See page 40.<br>Plumbing Materials  | THE EDWARD N. RIDDLE COMPANY—<br>Riddle Decorative Lighting Fixtures                                |
| THE CROSLEY RADIO CORPORATION—<br>Radio Receiving Sets and Equipment  | THE SERVEL CORPORATION—See page 54<br>Servel Electric Refrigeration                                 |
| DETROIT STEEL PRODUCTS COMPANY—<br>Fenestra Casement and Basement Steel Win-<br>dows—See page 42                        | STANDARD GAS EQUIPMENT CORPORATION—<br>Vulcan Standard Smoothtop Gas Ranges                         |
| E. I. DuPONT de NEMOURS & CO., INC.—<br>Tontine Window Shades, Duco Furniture<br>Finish, Rug Anchor—See page 41         | VALENTINE & COMPANY—<br>Valspar Varnishes, Varnish Stains, Enamels                                  |
| THE FAIRFACTS COMPANY, INC.—<br>Fairfacts China Bathroom Accessories  | WALLPAPER MANUFACTURERS' ASSOCIATION<br>OF THE UNITED STATES—<br>Wallpaper Guild                    |
| GENERAL ELECTRIC COMPANY—See page 43<br>G-E Wiring System   | WASMUTH-ENDICOTT COMPANY—See page 53<br>Kitchen Maid Standard Unit System of<br>Kitchen Equipment   |

*I have designated The AMERICAN BUILDER as the publication to make the complete official record of this campaign and to pass along its better home building lessons to contractors and builders everywhere. See the pages following for detailed specifications and instructions on all the materials and equipment for these "Model Homes".*

**L. PORTER MOORE**

*President Home Owners Service Institute.*



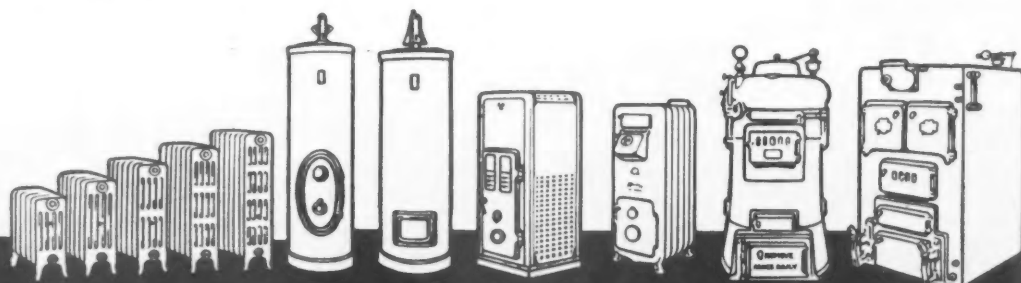
*Typical scene at the opening  
of a model house*

## WHY are model homes equipped with IDEAL Arco Boilers?

Model homes are built and equipped to make people buy them. And in them, products are installed which builders know will interest prospects immediately.

For 20 years Ideal Arco Boilers have been the standard. Prospects know that they will furnish dependable, healthful warmth always.

That is why they have become the standard equipment for model homes, too.



**An IDEAL Product for Every**



# Everyone wants RADIATOR WARMTH

Everywhere everybody wants radiator warmth, because everywhere everybody knows that the house equipped with radiators will be comfortable, no matter how cold the weather or how fiercely the wind howls.

Builders everywhere have found that the home equipped with Ideal-American Radiator Warmth sells easier and for more money.

## Here are the reasons

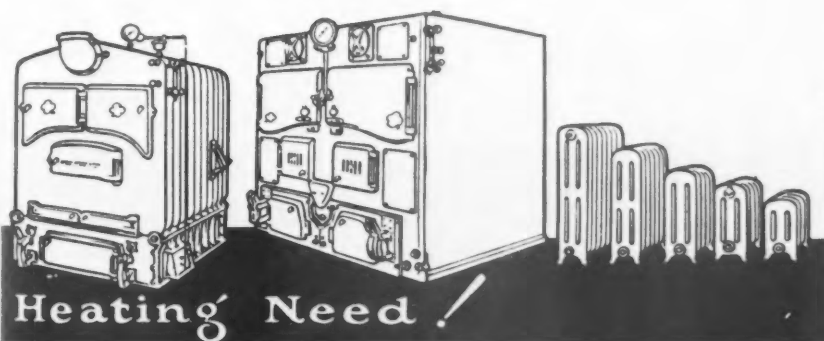
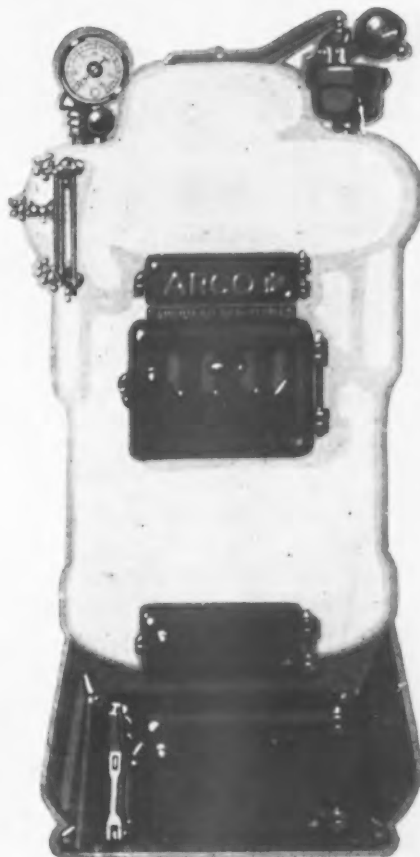
- 1 Radiator warmth is even warmth. Every corner of every room is filled with healthful comfort. There are no cold spots and no hot spots.
- 2 Ideal-American Radiator Warmth is clean warmth. Dirt, dust and ashes do not pour up to soil curtains, draperies, etc.
- 3 An Ideal-American Radiator Heating System adds much more than its cost to the value of any home.
- 4 Ideal-American warmth is a real salesman if people ever want to sell their homes.

The coupon below will bring you a booklet describing Ideal Arco Boilers and their use.

## AMERICAN RADIATOR COMPANY

Showrooms and sales offices: New York, Boston, Providence, New Haven, Newark, Philadelphia, Baltimore, Washington, Richmond, Buffalo, Pittsburgh, Cleveland, Detroit, Cincinnati, Atlanta, Chicago, Milwaukee, Indianapolis, St. Louis, St. Paul, Minneapolis, Omaha, Kansas City, Denver, San Francisco, Los Angeles, Seattle, Toronto, London, Paris, Milan, Brussels, Berlin

Makers of IDEAL BOILERS and AMERICAN RADIATORS and other products for heating, ventilating and refrigeration



### AMERICAN RADIATOR COMPANY

Direct Mail Advertising Dept. 125  
1807 Elmwood Ave., Buffalo, N.Y.

GENTLEMEN: Please send me your booklet on Ideal Arco Boilers.

Very truly yours,

Name \_\_\_\_\_

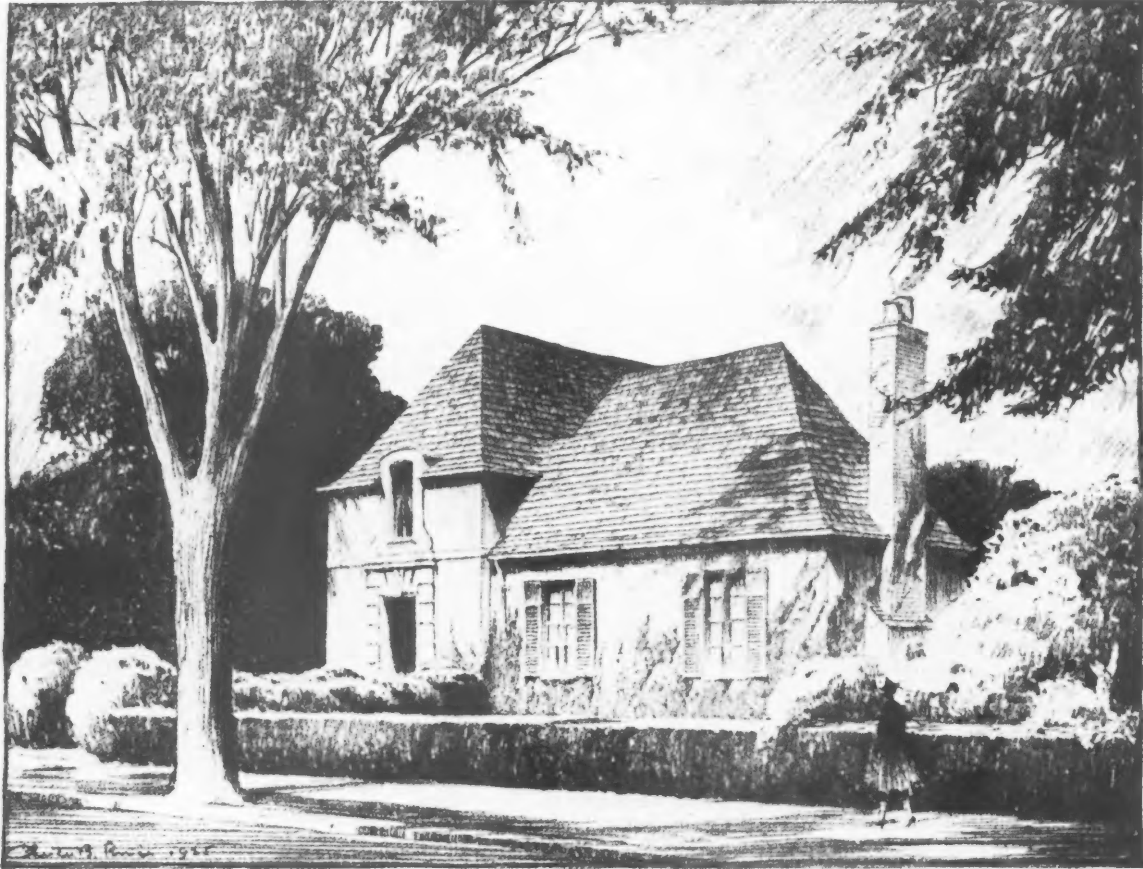
Address \_\_\_\_\_

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



# Approved Materials and Equipment for

ANACONDA COPPER, BRASS AND BRONZE HAVE BEEN



©House & Garden

## RUST-PROOFING THE HOUSE INSIDE AND OUT

*Why the Use of Anaconda Copper, Brass and Bronze  
Results in Readier Sales, Justifies Higher Prices, and Satisfied Buyers*

IT actually pays, in dollars and cents, to rust-proof the home. It pays the builder for the simple reason that it pays the buyer.

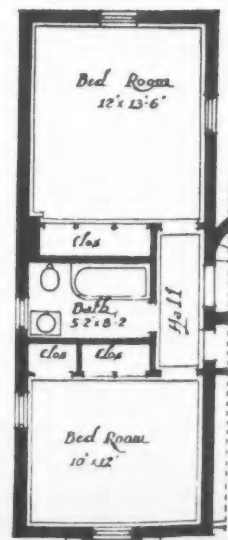
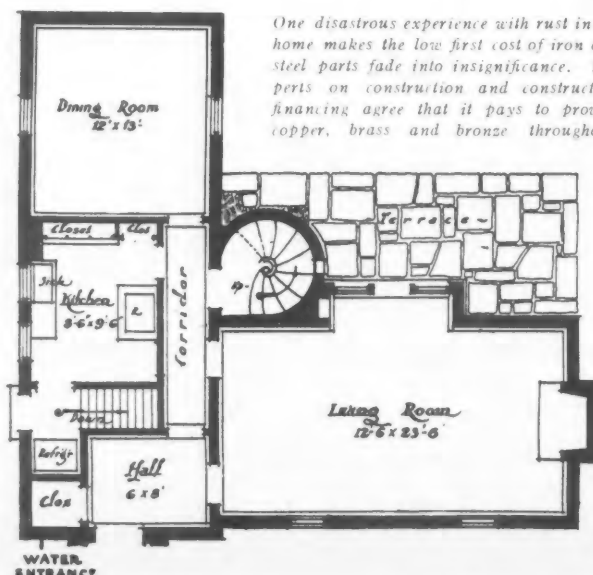
The home buyer of today is being educated to the fact that rust, and the resulting short life of exposed iron or steel, are unnecessary. He will pay more for a rust-proofed house because he knows that the slight additional cost is returned in savings, many times over.

The buyer of a new house has the right to expect that it will last for years without major repairs, but when the exposed metals are iron or steel they soon rust, and give the house an effect of premature age.

This aging by rust may be very expensive. It frequently entails not only the replacement of leaders, gutters and flashings, but also of water pipe and hardware. Ripping out rusted metal,

whether water pipes or flashings is particularly inconvenient and expensive to the owner, and creates anything but good will for the builder.

These facts are becoming so well established in the building industry that the character of the metals speci-





# the National Demonstration Model Homes



## SELECTED for ALL EXPOSED METAL IN 36 MODEL HOMES

fied for a house is having a decided effect on the loan appraisal. Many building contractors have found that the use of Anaconda Copper, Brass and Bronze is justified because of the higher loan values they secure—quite apart from the readier sale of the completed house, and the quicker profit which it brings.

From the point of view of the buyer, the rust-proofed house has many convincing points of advantage—which constitute effective selling points for the builder.

During the entire time that the house is occupied, the rust-proof exposed metal parts will contribute unobtrusively to the comfort of its owners. They will serve through several lives of corrodible metals without once levying the pocketbook for paint, repairs or replacements.

Flashings, gutters and downspouts of Anaconda Copper will protect the house as long as it stands, and will perform their function without any maintenance cost whatever. The table of relative costs, printed here, shows that these items, providing rust insurance for the roof of the house illustrated, cost only \$102 more than flashings, gutters and downspouts of galvanized iron.

Hardware of solid Anaconda Brass or Bronze will repay well in satisfaction as well as in service. It promises faithful performance in spite of moisture and the wear and tear of years. It assures freedom from the annoyance of locks that stick, and hinges that squeak, and window catches that bind—with rust. The additional cost for this protection against rust, as shown in the table of costs, is \$126.

Screens of Anaconda Bronze Wire are as rust-proof as copper and 50% stronger. The slight additional cost

of \$18 over galvanized iron screens represents an investment rather than an expense, for the bronze wire screens, under normal conditions, will last for a generation. They will never require painting, they will not bulge or sag, and throughout their long life they will be easy to see through.

The most important rust protection for the house is insurance against rusty water, and rust-clogged water pipes. Rusty water, ugly stains on porcelain enamel, a diminishing flow of water, and imminent danger of burst pipes, with expensive repairs or replacements—these are the results of installing iron or steel water pipes which, by their very nature, are bound to rust when they come in contact with water.

True economy demands water pipes which will give satisfactory service as long as the house stands, and which, under normal conditions, will never require repairs nor attention of any kind. Anaconda Brass Pipe meets all these conditions, and yet can be installed in this particular house, with all necessary fittings, at a cost of only \$58 over the cost of galvanized iron pipe.

The total cost of rust-proofing this house, inside and out, is only \$304. In estimating the cost of rust-proofing any house, 3% of the total cost is an accurate general figure to use. In view of all the facts—and their constantly wider acceptance by the home-buying public—can the builder afford not to rust-proof his houses with copper, brass and bronze?

Detailed information on copper, brass and bronze for the home is yours for the asking. Please address our "Building Service Department."

### A COMPARISON of COSTS

for the metal equipment of the house shown on the opposite page. The cost of labor for installing is included only where specifically stated.

#### CORRODIBLE METALS

Brass-plated Steel Hardware throughout	\$47. 00
Galvanized Iron Flashings, Downspouts and Gutters, including labor of installing	\$210. 00
Galvanized Iron Water Pipes (Hot and Cold), including labor of installing	\$276. 00
Screens of Galvanized Iron	\$143. 00

\* \* \*

#### RUST-PROOF METALS

Hardware of Solid Anaconda Brass or Bronze	\$173. 00
Flashings, Downspouts and Gutters of Anaconda Copper, including labor of installing	\$312. 00
Anaconda Brass Water Pipe (Hot and Cold), including labor of installing	\$334. 00
Screens of Anaconda Bronze Wire	\$161. 00

<b>Total cost for complete protection against rust, inside and out</b>	<b>\$304. 00</b>
--	------------------

## THE AMERICAN BRASS COMPANY

GENERAL OFFICES: WATERBURY, CONNECTICUT

Offices and Agencies in Principal Cities

Canadian Mill: ANACONDA AMERICAN BRASS LIMITED, New Toronto, Ontario

# ANACONDA COPPER

# BRASS ANACONDA BRONZE

from mine to consumer



*This moderate priced house at Scarborough, New York, has BRASS pipe plumbing and COPPER sheet metal work.*

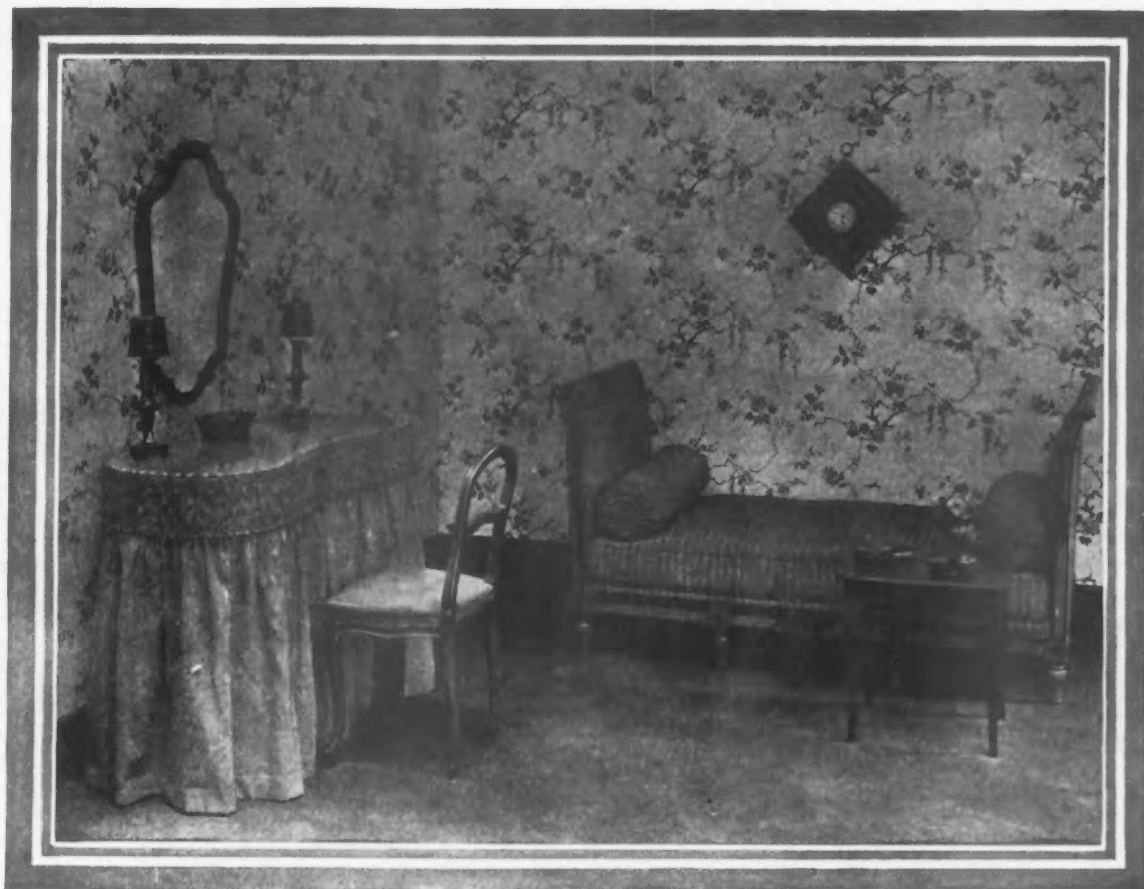
*Building to last  
means  
building to sell*

**COPPER & BRASS**  
RESEARCH ASSOCIATION  
25 Broadway, New York

Prospective buyers may be finicky about "this" or "that" in a new house. But they never find fault with lasting construction. When a builder installs BRASS pipe, COPPER sheet metal work and BRASS or BRONZE hardware and lighting fixtures he is giving his houses a fine start toward ready sale.

# the National Demonstration Model Homes

TO SIMPLIFY THE DECORATION OF YOUR HOME



## A Guide to Beautifying the Model Home

**F**INE wall paper—well designed with its colors in exactly the right proportion—suggests to the prospective buyer just how the decoration of the home can be completed, including the arrangement and color of furniture.

It can also help to harmonize and draw together all the rooms—giving the small room a sense of space, or the larger room a livable and homelike appearance. It can brighten the dark room and subdue the glare in the over-bright room.

"The Simple Art of Wall Decoration" by the well-known writer on decoration, Miss Lucy

Taylor, is a book that will give you a hundred and one hints on this new use of wall paper in increasing the salability of model homes.

It is profusely illustrated both in color and halftone, and has actual samples of many of the finest modern Muralia papers, such as used in the model homes now being built and nationally advertised under the supervision of the Home Owners' Service Institute—an extremely helpful book for architects and builders. Just send us the coupon below and ten cents to cover postage.

**BAECK WALL PAPER COMPANY**  
233-271 Thirty-Seventh Street, Brooklyn, N. Y.

*If your own dealer does not have Muralia papers, we will be glad to give the name of one who does have them*

In the above picture, fabrics exclusively by F. Schumacher & Co., Other furnishings by Mercier Frères, Inc., and Fay-Durbrow Carpet Co.

**Muralia**  
WALL PAPERS

Baeck Wall Paper Company 1-5  
233-271 Thirty-Seventh Street, Brooklyn, New York

Please send me without charge—other than the ten cents enclosed for postage costs—Miss Taylor's book on "The Simple Art of Wall Decoration"

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

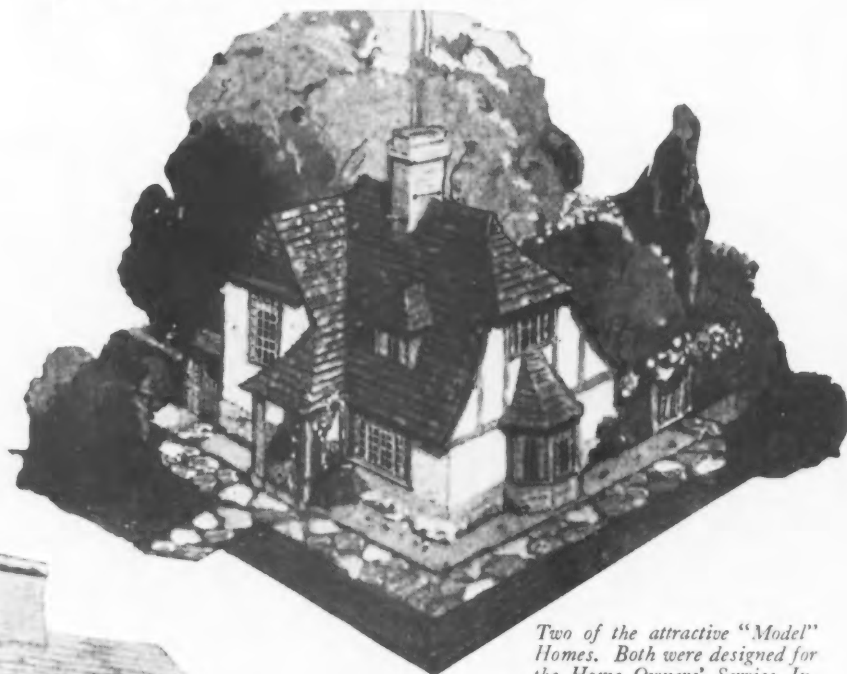




*Approved Materials and Equipment for*

# *An Amazing Lumber used*

[[Not cut from trees]]



Two of the attractive "Model" Homes. Both were designed for the Home Owners' Service Institute by John Floyd Yewell and Arthur Bates Lincoln, Consulting Architects, of New York City.

Celotex is being used in all the brick and masonry "Model" Homes on inside walls and ceilings under plaster (replacing lath)—and as roof insulation over the roof rafters. In the homes of frame and stucco construction, Celotex is being used as sheathing in addition to its use under plaster and in the roof.

The plans and "model" specifications of these homes can be obtained by writing to The Celotex Company.

## *A nation-wide project to stimulate building*

**T**HIRTY-SIX of these "Model" Homes will be built this year in 28 principal cities by the Home Owners' Service Institute. In each city these homes will also be sponsored by one of the leading newspapers. They will be advertised by the Home Owners' Service Institute with full-page, 4-color advertisements in *House Beautiful*, *House and Garden*, *Good Housekeeping* and *Liberty*. Millions will see this advertising . . . millions will see these homes.

They are within easy motoring distance of practically 60% of the entire population of the United States.



This map shows the 28 cities chosen for these "Model" Homes. Six homes will be built in each of the 6 zones shown above . . . 36 in all. Furthermore, each building contractor GUARANTEES to build 9 more homes with the same specifications and equipment as the first . . . making a total of 360

This great campaign to create interest in building and the desire for better homes will also be backed up by newspaper and radio advertising and other forms of publicity.

To you as a builder, it is one of the most significant projects ever attempted. It can not help but create business for those who tie in with it.



# the National Demonstration Model Homes



## in these "Model" Homes

**CELOTEX was chosen by Home Owners' Service Institute for ALL its "Model" Homes. This amazing lumber stops heat and cold . . . saves about 1/3 fuel money . . . is stronger in walls than wood . . . and costs little or nothing more to use. It will help you get more business!**

THE greatest need in the building industry today is something that will stimulate building activity. This nation-wide "Model" Home project is doing much that will increase your business.

But in Celotex itself the builder and lumber dealer are finding one of the greatest business stimulators the industry has ever had.

Today this amazing lumber is changing our standards of building practice. For it has made insulation available at a saving in every home. Already more than 90,000 have been built this modern way.

Celotex is not cut from trees. It is manufactured from the long, tough fibres of cane. It is enduring . . . scientifically sterilized and water-proofed. Because of the greater bracing strength of the broad boards, Celotex is stronger in walls than wood lumber . . . and many times better as insulation. It stops heat and cold . . . wind and moisture can not penetrate it . . . it quiets noise.

### How it stimulates building

By featuring the great advantages and economies Celotex brings, you can make people who live in houses that are not comfortable all year round—houses that waste fuel—dissatisfied with their present homes . . . anxious to build new ones.

It is this new standard of home comfort and economy that is helping the builders who take advantage of the situation to get more of the dollars in their communities that have been going into automobiles, radios, furniture and other items.

This amazing lumber offers you more selling points than any other building feature.

### Little or no extra building cost

Unlike ordinary insulation, Celotex is not an extra item in building.

It replaces wood lumber as sheathing (see illustrations), eliminates building paper. It builds a more rigid wall than wood, because of the greater bracing strength of the broad Celotex boards. It adds insulation back of wood, brick or stucco exteriors *at no extra cost.*

Under plaster, replacing lath, Celotex costs a few cents more per yard at first, but is a great economy. It means less upkeep expense because of no lath-marks . . . fewer cracks. With Celotex in the walls and in the ceilings or roof of a house a smaller, less expensive heating plant and smaller radiators will keep it comfortable. *And year after year it will save about 1/3 fuel.*

### Saves labor and material

Celotex is exceptionally economical to apply—it saves labor as well as material. Celotex is sawed and nailed just like wood lumber and with less waste in trimming. Stock sizes: width 4', lengths 8' to 12', thickness 7-16", weight about 60 lbs. per 100 sq. ft.

Every builder who sells Celotex insulated homes has a remarkable opportunity to make money.

Ask your architect or lumber dealer to tell you more about Celotex. All lumber dealers can supply it. Leaders in these lines advise its use. And send the coupon below for complete details.

THE CELOTEX COMPANY, CHICAGO, ILLINOIS

Mills: New Orleans, La.

Branch Sales Offices in principal cities (See telephone books for addresses)

Canadian Representatives: Alexander Murray & Co., Limited  
Montreal, Toronto, Halifax, Winnipeg, Vancouver

# CELOTEX

INSULATING LUMBER



**AS SHEATHING**  
Celotex supplies the insulation needed back of brick, wood or stucco exteriors. Here it replaces the rough boards formerly used, gives greater strength to the house walls and makes building paper unnecessary.

### UNDER PLASTER

On inside walls and ceilings, plaster is applied directly to the surface of Celotex. This eliminates the use of lath and gives stronger, insulated walls: less apt to crack and free from lath-marks.

### IN THE ROOF

Most heat beats into houses through roofs in summer, causing hot attics. Most heat leaks out through roofs in winter, causing high fuel bills. Celotex applied over or under roof rafters gives the needed protection. For best results both uses are recommended.

THE CELOTEX COMPANY, Dept. T-149  
645 No. Michigan Ave., Chicago, Ill.

Send the Celotex Building Book and Specification Book, free.

Name

Street

City  State

American Builder, Sept. 26



## Approved Materials and Equipment for



Common Brick has been selected wherever brick is used—in all the houses of the National Demonstration Model Homes series. The house shown here is Plan No. 309X—a six room Georgian house with Common Brick walls.

# Easy to Sell—this Model Home of Common Brick

**EASY TO SELL**—because the use of Common Brick gives real brick construction at lowest cost. A Common Brick house can be attractively—yet profitably—priced.

**EASY TO SELL**—because Common Brick builds walls of real beauty. Send for the books that tell how.

**EASY TO SELL**—because brick construction has more “talking points” than any other kind. Permanence,

comfort, low upkeep and painting cost, fire-safety—all these arguments help sell the brick house.

Especially *now*—when the Common Brick advertising campaign in the *Saturday Evening Post*, *House Beautiful*, and other magazines is telling people why they should find out “What’s in the Walls”—before they buy. Watch for this advertising. It will be a real selling help to the builder who uses Common Brick.

### THE COMMON BRICK MANUFACTURERS' ASSOCIATION OF AMERICA

#### AT YOUR SERVICE

These District Association Offices and Brick Manufacturers Everywhere

Chicago	611 Chamber of Commerce Bldg.
Denver	1735 Stout St.
Detroit, Mich.	400 U. S. Mortgage Trust Bldg.
Hartford, Conn.	226 Pearl St.
Los Angeles	717 Douglas Bldg.
New York City	1719 Grand Central Term. Bldg.
Norfolk, Va.	112 West Plume St.
Philadelphia	303 City Centre Bldg.
Portland, Ore.	901 Lewis Bldg.
Salt Lake City	301 Atlas Bldg.
San Francisco	912 Monadnock Bldg.
Seattle, Wash.	914 Arctic Bldg.
Springfield, Mass.	301 Tarbell-Waters Bldg.

2131 Guarantee Title Building  
Cleveland, Ohio

Ask us to put you on our “Builders’ Register”—so that we can refer local brick house prospects to you. This Association refers thousands of such inquiries to builders each year.

BEAUTY and ECONOMY  
Burned in  
**Common  
BRICK**



#### SEND FOR THESE BRICK BOOKS

- “Your Next Home”—37 homes in picture and plan (10c) ☐
  - “The Home You Can Afford”—62 homes (10c) ☐
  - “Brick, How to Build and Estimate”—(25c) ☐
  - “Skintled Brickwork”—(15c) ☐
  - “Farm Homes of Brick”—(5c) ☐
  - “Brick Silos”—(10c) ☐
  - “Multiple Dwellings of Brick”—(10c) ☐
  - “Hollow Walls of Brick”—(Free) ☐
- Check above and send for the books you need to use brick with economy.  
Write plainly your name and address here

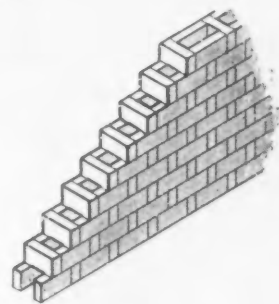


# Low Cost Walls are Built with Common Brick

**THIS LOW-PRICED MATERIAL MAKES THE LOWEST COST SOLID MASONRY AND HOLLOW MASONRY WALLS**

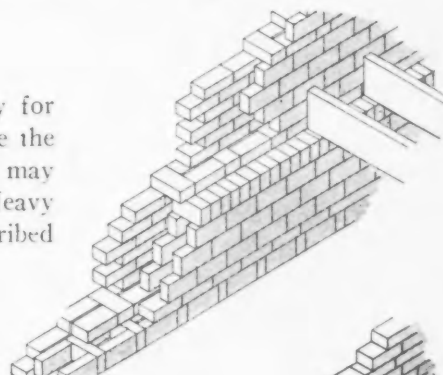
## *Ideal All-Rolok Walls*

There have been more and greater developments in brick construction during the last five years than in any type of material. One of these developments is in the many types of brick hollow walls. The 8" All-Rolok wall illustrated at the right is one of these. This type of wall may also be built 12" and 16" thick.



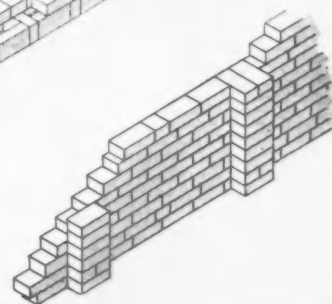
## *Ideal Rolok-Bak Walls*

This type of wall is a general utility wall. It may be employed not only for exposed walls, but for unexposed walls and basement construction. Since the exterior courses are laid flat, the brickwork has the usual appearance and may be faced in any bond desired. The wall shown at the right is the 12" Heavy Duty Rolok-Bak wall. 8" and 12" Standard Rolok-Bak walls are also described in our free book—"Hollow Walls of Brick."



## *Economy Walls*

This is a newly developed type of 4" brick wall representing a saving of 41 per cent in the amount of brick required for 8" solid walls. It is the lowest cost masonry construction yet devised. This wall is designed primarily for one and two story houses and garages. The wall is reinforced by pilasters and blanketed by back mortaring.



## *Skintled Brickwork*

Chicago architects took the lead in developing this entirely new and distinctive use of Common Brick. A variety of effects are obtained by setting the brick roughly at different angles, projecting and recessing them beyond the wall line, and even permitting the squeezed out mortar to remain in place. Sometimes these "skintled" brick walls are whitewashed. The illustration at the right cannot do justice to this development. Send for the book "Skintled Brickwork," which shows large photographs from which the brick mason can work to produce any of the effects illustrated.



**THE COMMON BRICK MANUFACTURERS' ASSOCIATION OF AMERICA**

2131 Guarantee Title Building, Cleveland, Ohio

Send for the FREE  
Book  
"Hollow Walls of Brick"

BEAUTY and ECONOMY  
Burned in  
**Common  
BRICK**



Send 15c for the  
Book  
"Skintled Brickwork"





## Build an unfailing hot water supply into your homes

ASSURING the labor-saving, comfort-giving delight of an unfailing hot water supply, Premier or Keystone automatic, insulated, gas water heaters will help to sell or rent the homes you build and to keep the occupants always grateful for your thoughtfulness of their convenience.

A thermostat that automatically turns the gas on and off, keeping the tank always full of piping hot water without wasting gas; a heat-retaining insulating jacket that makes the tank a giant "Thermos" bottle; these are two of the many Premier and Keystone advantages to the user.

Lasting service, pleased customers, prices extremely low when the value which brings readier sales or rentals is considered, are a few of the benefits to you.

By a national advertising campaign in the Literary Digest, Cosmopolitan and newspapers, public demand for these heaters is being continually enlarged, a fact which redounds to your advantage when you install them. Ask your plumbing contractor.

## Instant Hot Water

REG. U.S. PAT. OFF.



**The PREMIER**—The best water heater Crane offers. No. 2, 23-gallon capacity \$125 for average homes, f. o. b. factory

WITH COPPER TANK \$225

**The KEYSTONE**—A good water heater, reduced from \$90. No. 2-20, 20-gallon \$70 capacity, f. o. b. factory . . . . .

WITH COPPER TANK \$180

Write for booklet, A. D. 27R, interesting and illustrated. Packed with valuable water heater information.

# CRANE

Address all inquiries to Crane Co., Chicago

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

Branches and Sales Offices in One Hundred and Fifty-five Cities

National Exhibit Rooms: Chicago, New York, Atlantic City, San Francisco and Montreal

Works: Chicago, Bridgeport, Birmingham, Chattanooga, Trenton, Montreal and St. Johns, Que.

CRANE EXPORT CORPORATION: NEW YORK, SAN FRANCISCO, MEXICO CITY, HAVANA

CRANE LIMITED: CRANE BUILDING, 386 BEAVER HALL SQUARE, MONTREAL

CRANE-BENNETT, LTD., LONDON

C<sup>IE</sup> CRANE: PARIS, BRUSSELS

for

# the National Demonstration Model Homes



**QUESTION:** Seeking the best in equipment, which Shade Cloth did the Home Owners' Service Institute choose for the 360 Model Homes?

**ANSWER:** Du Pont TONTINE — because Shades of Tontine combine beauty with unusual service. They do not fade, crack, flake, or pinhole, and — most important — they're washable!

*Houses equipped with Shades of TONTINE sell more easily!*

## WASHABLE DU PONT TONTINE WINDOW SHADE CLOTH

*Send for swatches today  
for testing, and to show  
color harmonies. No  
obligation whatever.*

E. I. du Pont  
de Nemours & Co., Inc.,  
Newburgh, N. Y.

Please send testing  
swatches and other data  
about Tontine Shade Cloth.

Name.....

Address.....

AB-8



*Approved Materials and Equipment for*

# *Home Owners' Service Institute Chooses Fenestra*



*One of the model homes designed by the Home Owners' Service Institute.*



*Other Fenestra-equipped homes designed by the Institute.*

**F**OR these 360 "better built" homes—36 of them model houses—Fenestra Steel Casements have been selected as standard equipment—the one steel casement that met the requirements of these beautiful homes.

This nation-wide movement for better homes, fully described in this magazine, is now under way. Some of these Fenestra-equipped homes have already been completed, many others

are under construction, and all of them will be ready during 1926.

Model homes must be modern—that's why you'll find Fenestra in "better built" homes everywhere—homes that sell quickly and profitably.

There is a Fenestra dealer near you who is prepared to speed your building program by giving you prompt deliveries of Fenestra Casements along with your other building materials.

DETROIT STEEL PRODUCTS COMPANY  
C-2260 East Grand Boulevard, Detroit, Mich.

Factories at Detroit, Mich., Oakland, Calif., and  
Toronto, Ont., Canada.

## *Fenestra*

*for* homes, large and small  
shops and small factories  
garages and service stations  
stores and other buildings

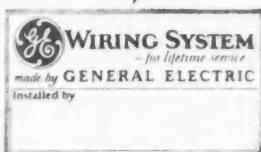
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# the National Demonstration Model Homes



## Is "advertised wiring" profitable to the builder?



This sign on a building definitely indicates a quality wiring job.

Merchandise Department  
General Electric Company  
Bridgeport, Conn.



**WIRING SYSTEM**  
—for lifetime service

The best and surest answer to this question is the number of G-E Wiring System installations being made today in thousands of houses built for sale all over the country.

Builders find that there is a great demand—continuously fostered by G-E advertising—for an electrical installation of high quality and comfort, insuring completeness.

They find, too, that the G-E Wiring System is a particularly good investment because people know such an installation means completeness and low upkeep—that it means all materials guaranteed by one company—General Electric.

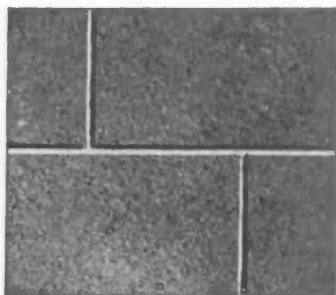
# GENERAL ELECTRIC



*Approved Materials and Equipment for*

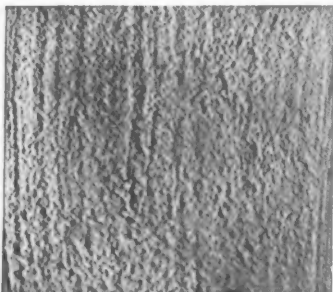
# Lime Plaster Wall Finishes

*A Wide Choice for the Builder*



## *Sand Finish*

This stone-like effect is one of the many attractive sand finish surfaces



## *French Texture*

An antique finish produced by the stippling brush



## *Spanish Texture*

"Pulled" with the cork float, lime plaster yields interesting textures like this

GOOD old lime plaster, the standard plaster material since building began, still offers the widest opportunity to the builder who realizes that good plastering sells houses.

There is no limit to the variety of effects possible through the use of lime plaster.

## *Smooth Finish*

The most common surface is the smooth trowel finish—used when the surfaces are to be papered, painted, or canvassed. Lime plaster will always be standard for this style—because of its sound absorbing qualities and the perfection it makes possible.

## *Sand Finishes*

When the surface is to be tinted or painted, the sand finish is a favorite. It yields a variety of interesting effects—from smooth to rough—attained by the use of wood float, cork float, and carpet float. The builder should not overlook the opportunities in sand finish.

## *Antique Finishes*

With a mixture of two parts *Tiger Finish* and one part plaster paris, any desired effect can be obtained.

Cover all brown mortar with *Tiger Finish* in the usual way, then with a 4-inch brush, sponge, cloth, stippler or trowel—apply more of the mixture to the white surface—working to the effect desired. A good plasterer will prepare samples from which you can select the appropriate antique finish for the job on hand.



## *Italian Texture*

A highlight antique effect produced with the pointing trowel



## *Old English*

Lime plaster — highlighted with the small trowel—yields a variety of such effects



## *Spanish American*

"Sucked" with the cork float. Such rough textures are best for some interiors

The Kelley Island Lime & Transport Company

*World's Largest Producer of Lime*

including Tiger Finish, Tiger Mason's, Tiger Agricultural and Lump Limes for All Purposes

Leader-News Building, Cleveland



**TIGER FINISH**  
"SPREADS LIKE WARM BUTTER"

for  
es

*the National Demonstration Model Homes*



# No Garbage Cans in the Model Homes!

Garbage cans are out of keeping with the *modern* home. So decided the Home Owners' Service Institute which is constructing a series of 360 model homes in 28 principal cities throughout the country.

The Kernerator was a natural selection—standing as it does for the time-tried, highly satisfactory method of garbage disposal. Years have been spent in developing the principal of flue-fed incineration, but results have more than justified the effort.

*Costs nothing to operate—  
No gas or other fuel required*

The Kernerator is a brick combustion chamber, built into the base of the regular chimney, with a separate flue, having hopper doors located in or near the kitchen. All waste—not only garbage, but tin cans, bottles, papers, all discarded trash—is dropped through the handy hopper door and falls to the brick combustion chamber in the basement. An occasional lighting (a match does it) burns everything but metallic objects and such non-combustibles, which are flame-sterilized for removal with the ashes. No fuel of any kind is

used—the waste itself is fuel for its own destruction.

See Sweet's Twentieth Edition pages 2800-01. For additional information, phone your local Kernerator representative (25 of whom are listed in the telephone directories of that number of principal cities) or write to us.

The beautiful homes *you* build also deserve something better than the out of date garbage can—a tiresome, unsanitary method of garbage disposal that should have disappeared with the outdoor pump. The greater satisfaction assured by the Kernerator will do much in creating goodwill among your clients.

THE KERNER INCINERATOR CO.  
753 East Water St., Milwaukee, Wis.

**KERNERATOR**  
REG. U.S. PAT. OFF.  
THE CHIMNEY-FED INCINERATOR

*Garbage and Waste Disposal  
without Leaving the Kitchen.*

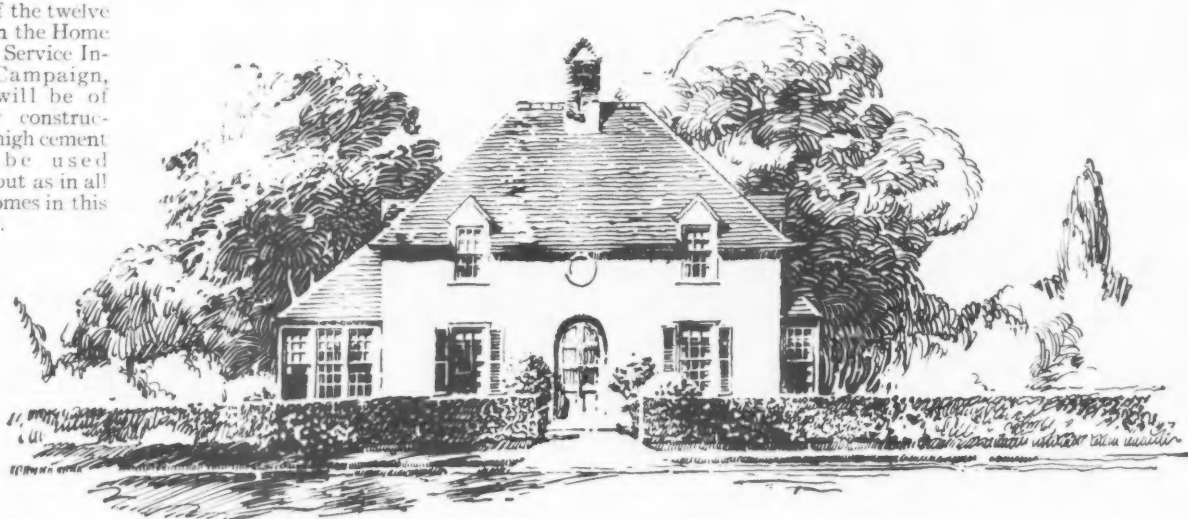






## *Approved Materials and Equipment for*

One of the twelve homes in the Home Owners' Service Institute Campaign, which will be of masonry construction. Lehigh cement is to be used throughout as in all of the homes in this program.



# You will be thanked in years to come by the buyers of such homes

**H**OWEVER happy the owner of one of your homes may be at the time he takes possession, it is in later years when he decides that it has been a wise investment.

A masonry home, such as the one pictured above, assures an almost complete avoidance of painting and repair bills. These savings, as you know, mean a great deal to the man of moderate means.

Twelve of the homes in the Home Owners' Service Institute Campaign, described in the accompanying pages, will be built of this permanent, fire-safe construction.

Consider what the present buyers of the homes you build will think of their investment twenty years from now. Masonry construction promises permanent satisfaction — and that is what they hope for.

## LEHIGH PORTLAND CEMENT COMPANY

Allentown, Pa.

Birmingham, Ala.

Chicago, Ill.

Spokane, Wash.

New York, N. Y.

*Other offices in principal cities throughout the United States*



Buy from the dealer who displays the Blue-and-White Lehigh Sign to be sure of prompt deliveries of this uniform, quality cement.

## 20 MILLS FROM COAST TO COAST

# for the National Demonstration Model Homes



## Long-Bell Products In 36 Model Homes

IN selecting the lumber and the oak flooring to be used in the 36 model homes sponsored by the Home Owners' Service Institute, Long-Bell trade-marked products were specified exclusively.

# Douglas Fir Facts

of No. 2

### Advantages

Douglas Fir is practically impervious to water, holds nails firmly, is strong, takes stains well in any shade or color, and combines beauty, utility and durability.

### Edge Grain

Rift sawed or edge grain stock is most serviceable. The amount of edge grain stock produced in Douglas Fir is many times that obtainable in any other wood.

### Stacked Without Sticking

Douglas Fir timbers may be stacked solid for storage; being practically all heart, no harm results.

### Variety

Douglas Fir is suitable for a greater variety of uses than any other wood.

### Kiln-Dried

Long-Bell dry kilns at Longview, Wash., are of the latest design, having the largest capacity in the Pacific Northwest, and the kiln drying is scientifically controlled, which assures properly cured lumber.

### Straight Dimension

Long-Bell trade-marked Douglas Fir dimension stays straight, and flooring, ceiling and siding do not have to be forced to make tight joints.

### Trade-Marked

Long-Bell Douglas Fir lumber and timbers are trade-marked as identification of unusual thoroughness in manufacture—plus more than fifty years' experience as lumbermen.

# Long-Bell

Trade-Marked LUMBER

Douglas Fir Lumber and Timbers; Southern Pine Lumber and Timbers;  
Creosoted Lumber, Timbers, Posts, Poles, Ties, Guard-Rail Posts,  
Piling; Southern Hardwood Lumber and Timbers; Oak  
Flooring; California White Pine Lumber; Sash  
and Doors; Box Shooks

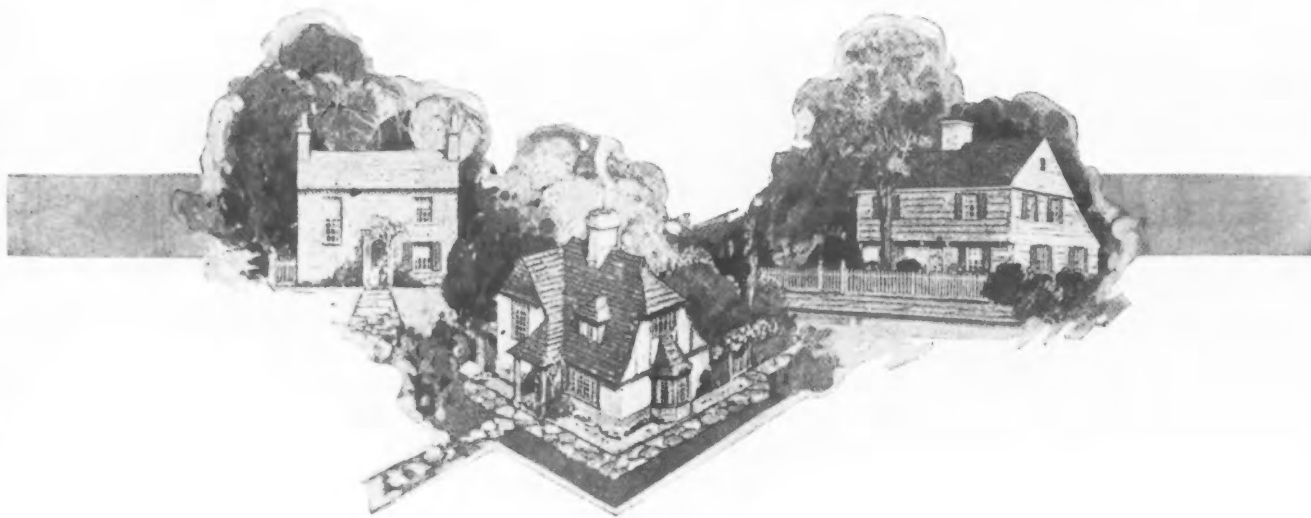
KNOW THE LUMBER YOU BUY



*Approved Materials and Equipment for*

# THE PAINE MIRACLE DOOR

*Installed in These  
National Demonstration Homes*



## Meets All the Exacting Requirements

The Miracle Door is the greatest improvement in doors ever made. Patented standards of precision in wood manufacture have made Miracle doors possible. They are made either in veneered or solid woods. These doors are modeled after the artistic, but expensive, raised panel doors. Artistry is here combined with moderate cost by the modern and economical methods used in their manufacture.

The contours of the solid sticking around the

panel and the special flush moulding blend into one another to such an extent that many architects and others in the building field have said that the originators have produced an article that was not only structurally correct, but very artistic in its lines.

The Miracle Door is produced and guaranteed by an organization that operates from tree to finished product with facilities without a parallel in the woodworking industry.

Paine Miracle Doors have been endorsed and specified by architects and welcomed by the entire building industry as the popular priced door of exclusive design. They are adapted to all types of buildings, including homes, apartments, hotels, hospitals and office buildings. Over three million Miracle doors in all varieties of woods are in satisfactory use throughout the United States, Canada and foreign countries serving in all types of buildings and under all climatic conditions.

Wholesale stocks of Miracle Doors are carried in over 100 cities. If your dealer does not carry Miracle Doors write us.

A 56-page catalog showing representative installations of Miracle Doors and giving numerous complete ideas in color for finishing Miracle Doors, together with the floors, walls and woodwork in connection, will be mailed you free upon request.

*Miracle Doors Cost Very Little More than Ordinary Doors*

**PAINE LUMBER COMPANY, Ltd.**  
**OSHKOSH, WISCONSIN**



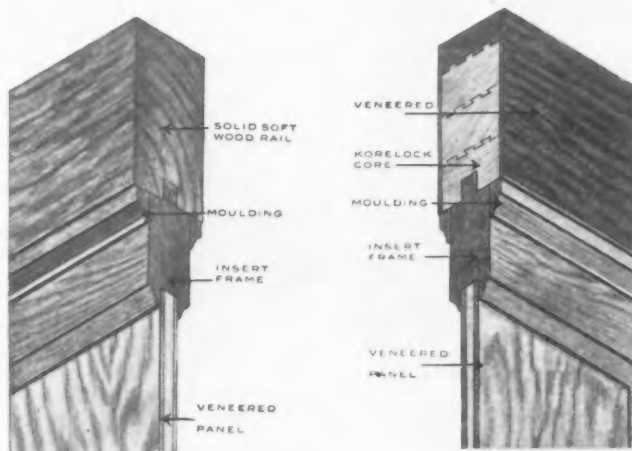
**THERE IS NO EQUAL — DEMAND THE GENUINE PAINE MIRACLE DOOR**

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





## HOW IT IS MADE



Miracle Solid Softwood Door

Miracle Hardwood Veneered Door

The Miracle door with the insert frame surrounding the panel and anchored in the door by a tongue and groove and strengthened by a flush moulding on two sides produces a reinforced door that is far more substantial than any other stock door.

## How to Write Specifications for Paine Miracle Doors Into Your Contracts

### Specifications for "Miracle" Hardwood Doors

All doors, both exterior and interior, except metal and metal covered doors, shall be "Miracle" veneered doors as manufactured by the Paine Lumber Company, Ltd., Oshkosh, Wis. The veneers to be as follows (Give here a list of kinds of woods to be used at the different parts of the building). Interior Doors shall be . . . inches thick with standard eighth-inch veneer and of designs shown or noted. Exterior Doors shall be . . . inches thick with . . . inch veneer (not less than 3/16 inches) and of designs as shown and noted. All exterior doors shall be painted with a good grade of oil paint, top and bottom, to prevent absorption of moisture.

### Specifications for "Miracle" Softwood Doors

All doors both exterior and interior except metal and metal covered doors shall be "Miracle" softwood doors as manufactured by the Paine Lumber Company, Ltd., Oshkosh, Wis. These doors shall be of (mention kind of wood desired). Exterior doors . . . inches thick. Interior Doors . . . inches thick.

All doors shall be paneled as shown on the drawings. Sash doors shall have lights as shown.

**GUARANTEE**—Like all of the products of our plants, Paine "Miracle" Doors are fully guaranteed. This guarantee does not protect purchaser against defects due to damage in transit, rough handling, inferior painters' finish, or unreasonable exposure to moisture.

*Miracle Doors Cost Very Little More than Ordinary Doors*

**PAINE LUMBER COMPANY, Ltd.**  
**OSHKOSH, WISCONSIN**

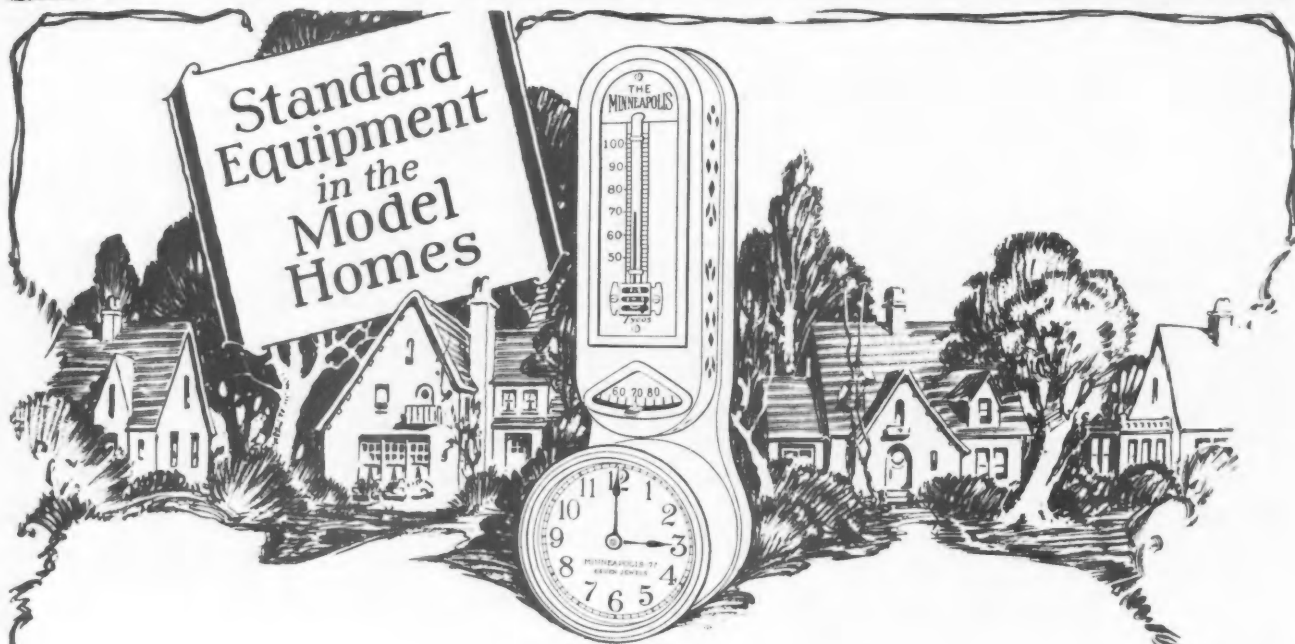


**DEMAND THE GENUINE PAINE MIRACLE DOOR — THERE IS NO EQUAL**

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Approved Materials and Equipment for



### Install the Minneapolis in your homes! Tieup with the Big Model Homes Campaign— *of the Home Owners' Service Institute*

The Minneapolis Heat Regulator is one of the big features of the Model Homes being constructed by the Home Owners' Service Institute.

These Model Homes are holding the attention of home buyers everywhere. The big, national advertising campaign back of them is reaching millions, telling them about the Minneapolis and other equipment. And, when the Model Homes are completed, hundreds of thousands of people will visit them and inspect the ingenious device that insures heating comfort, convenience and safety while saving one-fifth to one-third on fuel.

The homes you build will be compared to the Model Homes. Install the Minneapolis in every house you build and tie-up with the Model Homes campaign. Show your pros-

pects the Minneapolis on the wall—the same equipment they will find in the Model Home.

#### Quicker, Easier Sales

The Minneapolis has proved a profitable investment for operative builders in the past. The big, national advertising support that proved so effective in other years is back of the Minneapolis now. The Model Homes campaign is simply additional help for you.

Make the most of this great combination. Write for full information and plan to install the Minneapolis in every home you build.

#### Minneapolis Heat Regulator Co.

Established 1885

402 E. 28th St., Minneapolis, Minn.

**The "MINNEAPOLIS"**  
**HEAT REGULATOR**  
for COAL - GAS - OIL

# the National Demonstration Model Homes



## NATCO HOLLOW BUILDING TILE

has been selected for use in the construction of a number of the "Model" homes of the Home Owners Service Institute

### Because

It is the ideal backing for brick or stucco.

Dovetailed scorings on exterior and interior surfaces grip and hold firmly the exterior stucco and interior plaster. There is no cracking, scaling, crazing, or peeling off.

The exclusive double shell design eliminates through mortar joints—resists passage of cold, heat and moisture.

Large, sturdy units are light in weight—easily handled and laid—saves time, labor and mortar—no painting, repairs or replacements necessary.

Conveniently located factories make Natco Hollow Building Tile available in any quantity on short notice.

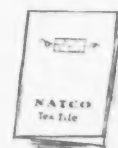
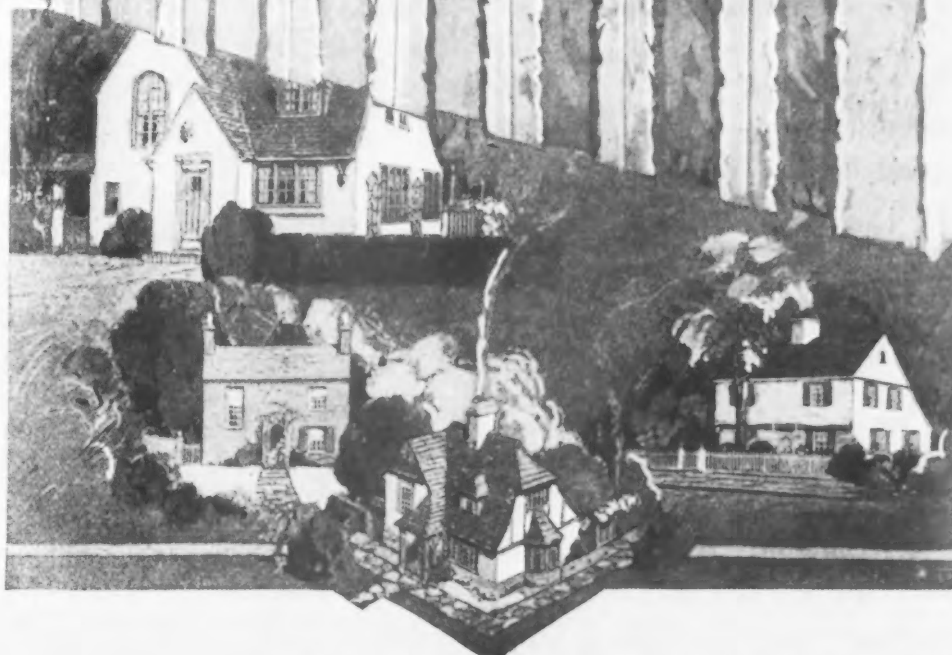
Every builder and architect should have a file copy of Natco Bulletin 174. It shows various ways to construct sills, lintels, frames, arches, and other openings of Natco Hollow Building Tile.

### NATIONAL FIRE PROOFING COMPANY

General Offices: 621 Fulton Building, Pittsburgh, Pa.

#### IN CANADA:

National Fire Proofing Company of Canada, Ltd.  
Dominion Bank Building, Toronto, Ont.



November 14 is the date set for the opening of the model home at Wantagh, Long Island. This is a home constructed of Natco Hollow Building Tile, and is worth a visit during construction.



## When your prospect asks “What color for my roof?”

Will you be able to give the expert advice that will lead straight to a sale?

The new Richardson Booklet and Harmonizer will enable you to do it.

Booklet containing page after page of interesting homes, showing attractive color combinations of roof, walls and trim.

Harmonizer gives 108 different color effects. You can show your prospect *in advance* exactly how any Multicrome roof will look upon *his particular house*.

“The most powerful selling help ever devised,” say hundreds of builders. Regular price 25 cents—*free to you*. Send for yours now. Use coupon at right.

### The RICHARDSON COMPANY

Lockland (Cincinnati) Ohio  
250 W. 57th St., New York City Chicago Atlanta  
New Orleans Dallas 63 Albany St., Cambridge (Boston)

Pacific Coast Distributors  
Zellerbach Paper Co., San Francisco



© 1926  
The Richardson Co.

### MAIL THIS COUPON

The Richardson Company  
Dept. 35-F, Lockland, Ohio

Please send me without charge your new Booklet and Harmonizer.

Name \_\_\_\_\_

Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

# RICHARDSON ROOFING



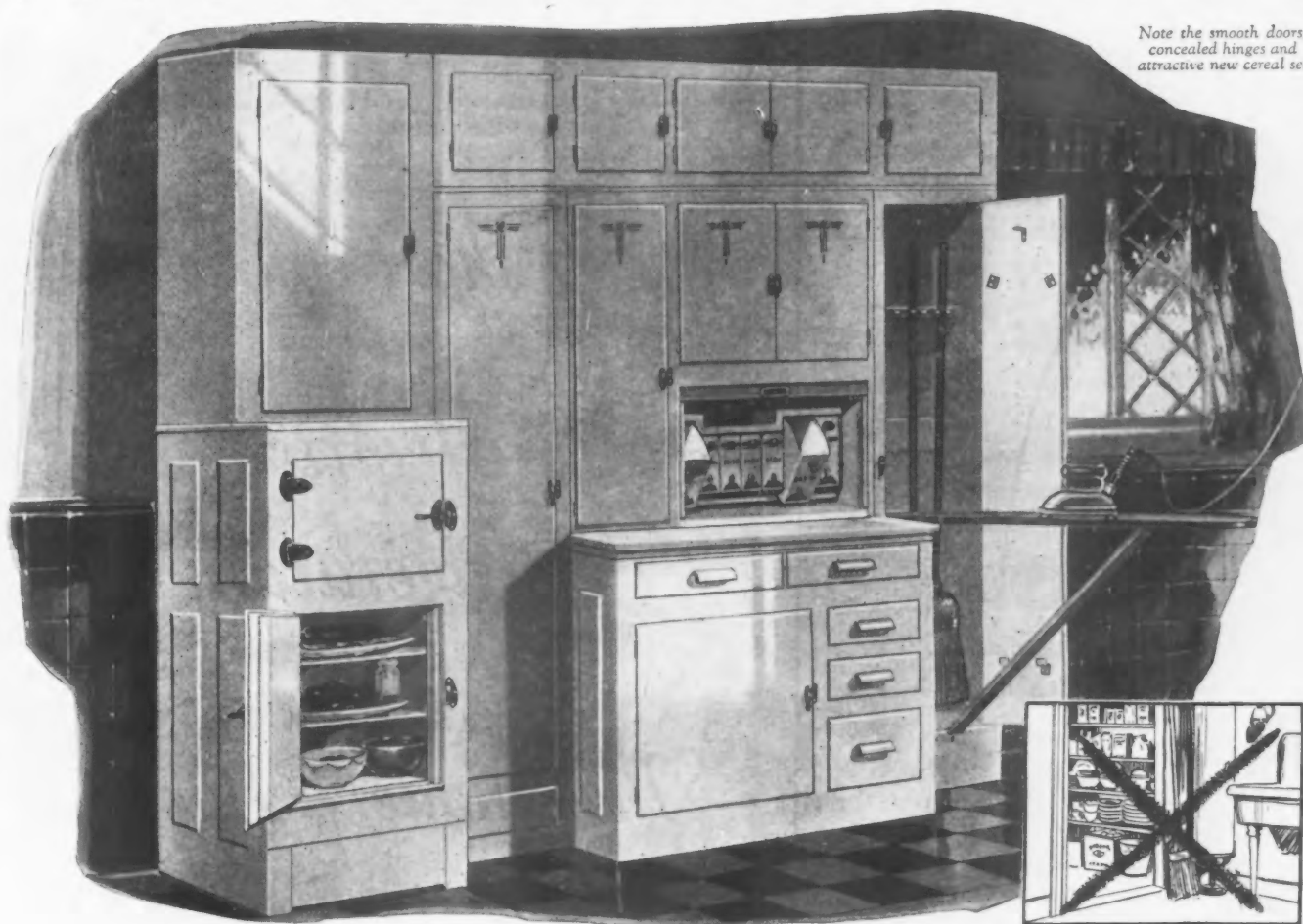
for

the National Demonstration Model Homes



# KITCHEN MAID

S T A N D A R D K I T C H E N U N I T S



Note the smooth doors,  
concealed hinges and  
attractive new cereal set

## These units replace the pantry... completely!

Never has the completeness of the Kitchen Maid line meant more in kitchen planning than today. With the latest trends eliminating the pantry these units have become the simple efficient, logical solution of the modern kitchen equipment problem.

Kitchen Maid Units include everything from kitchen cabinet to Pulmanook; from refrigerator to broom and dish closets; from folding ironing board to linen cupboards. Each unit is complete in itself; it can be used alone or in combination with any other units. Beautiful in design, substantial in construction, built with sanitary rounded inside corners and smooth panel doors—these units are a real source of satisfaction to every woman owning them.

Fine as they are, Kitchen Maid Units cost no more than old-fashioned cupboards. You will profit, in money and good will, by installing them in your kitchens. Mail coupon for catalogue, dimensional drawings, special prices.

WASMUTH-ENDICOTT COMPANY

1309 Snowden Street, Andrews, Indiana

"Let the Kitchen Maid Be Your Kitchen Aid"

**KITCHEN MAID**  
STANDARD UNIT  
SYSTEMS

WASMUTH-ENDICOTT CO.

1309 Snowden St., Andrews, Ind.

If in Canada, Address Branch Office, Waterloo, Ont.

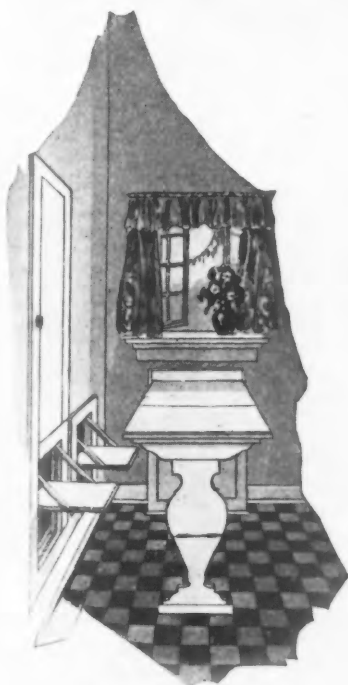
Please send catalogue and full information about Kitchen Maid Units to:

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_



**The Pulmanook**

Consists of table and two or four chairs. Folds easily and quickly into wall

KITCHEN MAID EQUIPMENT USED IN ALL MODEL HOMES BUILT BY HOME OWNERS INSTITUTE

# *Approved Materials and Equipment for* *the National Demonstration Model Homes*

## Beginning in the October issue

*What does electric refrigeration mean to the builder?*

**B**EGINNING in the October issue of American Builder, Servel will present some of the new practices and possibilities.

The advertisements will be based on interviews with household management experts such as: Eva Wilson, B. A., M. A., Columbia University; Elizabeth Condit, Pratt's Institute.

Real estate and housing experts will discuss the market aspects.

Prominent architects will give their views on design and planning.

There will be much meat. Electric refrigeration makes possible more scientific routing, better grouping of kitchen equipment. It eliminates the ice-box entry, permits more light in the kitchen, encourages built-in units.

### *Advisory Service*

There is a right way, and a wrong way to install electric refrigeration.

In built-in units, for instance, space must be allowed for air circulation, provision must be made for removing, monthly, the defrosting drip.

To answer questions on these and other points, Servel maintains a Commercial Engineering Department. Builders are invited to use it as their own Service Bureau.

### *Choice of Equipment*

Only a handful of electric refrigerators are generally accepted as having proven nationally successful. Only a few are passed by the National Board of Fire

6131-33

*A short course  
on*

*Electric  
Refrigeration*

*in*

*The Modern Home*

Underwriters. Among these few are differences which architects should investigate.

Servel, for instance, uses the coldest refrigerant. All Servel models have double compressor and simple, natural pressure control. In performance, Servel starts and stops less frequently. All this means more enduring service and efficient operation.

As a result, Servel is sold by more electric light and power companies than any other electric refrigerator. Its sales have increased 2000 per cent in the past year.

THE SERVEL CORPORATION  
51 East 42nd Street, New York  
Chicago Boston Detroit Minneapolis  
Salt Lake City Denver Atlanta  
San Francisco Los Angeles Seattle Dallas  
London, England, SERVEL, LTD  
Factories: Evansville, Ind.  
Carteret, N. J. Newburgh, N. Y.



Trade Marks  
Reg. U. S. Pat. Off.

# SERVEL

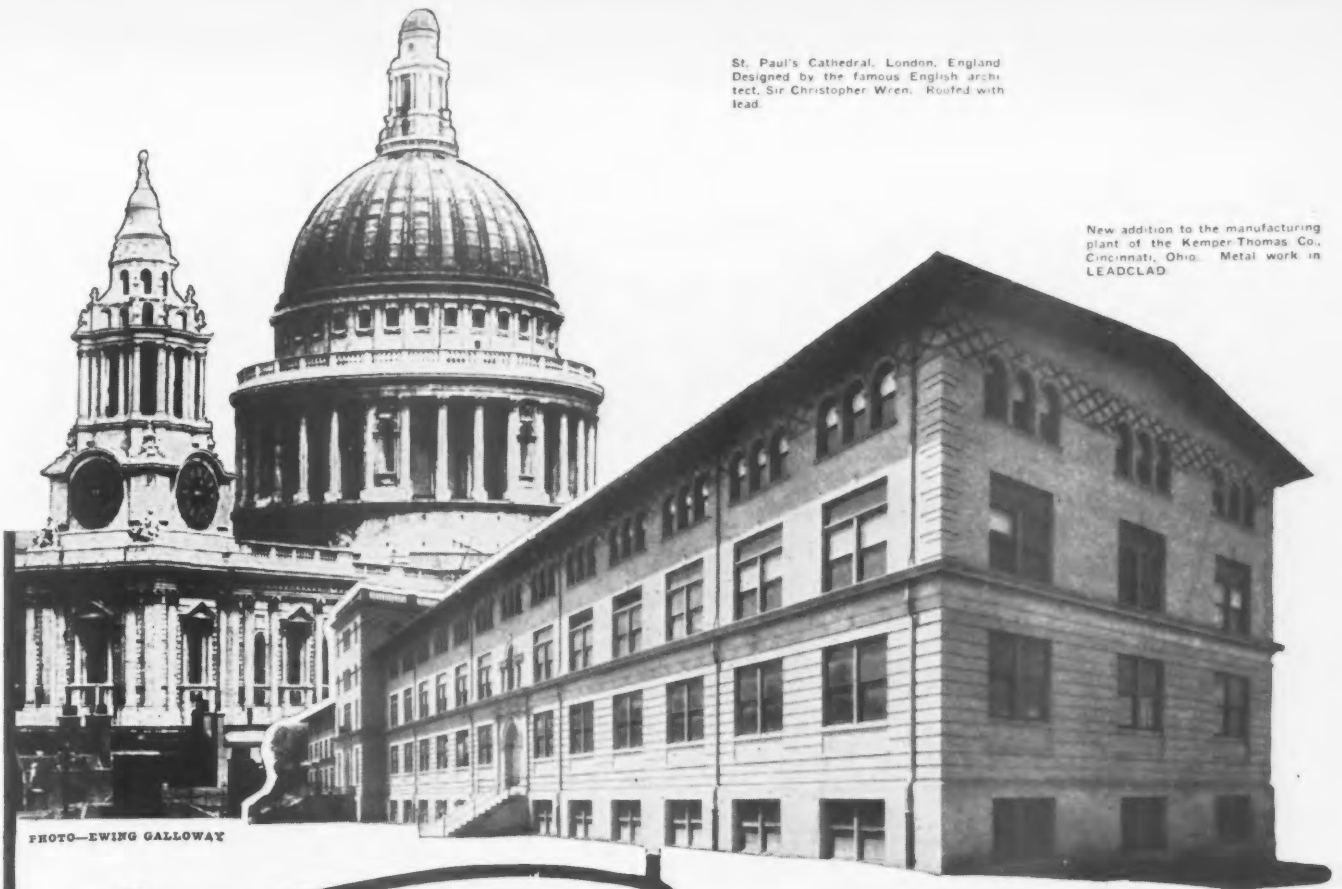
## AUTOMATIC REFRIGERATION

Sold and recommended by more Electric Light and Power Companies than any other electric refrigerator—also by franchised dealers everywhere

or  
STANDARD  
E

St. Paul's Cathedral, London, England  
Designed by the famous English archi-  
tect, Sir Christopher Wren. Roofed with  
lead.

New addition to the manufacturing  
plant of the Kemper-Thomas Co.,  
Cincinnati, Ohio. Metal work in  
LEADCLAD



PHOTO—EWING GALLOWAY

# Cincinnati takes a leaf from London



THE Kemper-Thomas Company of Cin-  
cinnati in search for a material for the  
metal work on their new building, fol-  
lowed the same course that Sir Christo-  
pher Wren adopted when he built the  
famous St. Paul's Cathedral.

When the last solid lead slab was put into  
place on the great dome of St. Paul's,  
Wren predicted that it would be two hun-  
dred years before this great monument to  
Christianity would require repairs.

Wren specified lead because its weather  
resisting qualities and its permanency had  
been recognized for centuries.

The Kemper-Thomas Company chose  
LEADCLAD for the same reason.

Wheeling Metal & Mfg. Company,  
Dept., A.B. Wheeling, W. Va.

LEADCLAD is the modern development  
of the time-tried lead roof of old. LEAD-  
CLAD is pure lead, reinforced with steel.  
It is rust proof and smoke-acid proof.  
LEADCLAD is manufactured in light  
workable sheets, and is as convenient, as  
inexpensive, as easy to handle as any  
form of metal roofing. It affords lead  
surface protection without the weight or  
weakness of solid lead. LEADCLAD is  
the durable, economical roofing for your  
buildings. Get the full information  
about it.

If your dealer cannot supply you with  
LEADCLAD information, write to us di-  
rect and we will send you samples of  
LEADCLAD, together with reports of  
actual tests and full details.

LEADCLAD is manufactured  
in all standard forms of eaves,  
trough, conductor pipe, roofing and  
siding, and can be obtained in all  
standard sizes and gauges.

Valuable territory is still open  
in some localities. For par-  
ticulars, write.



# LEADCLAD

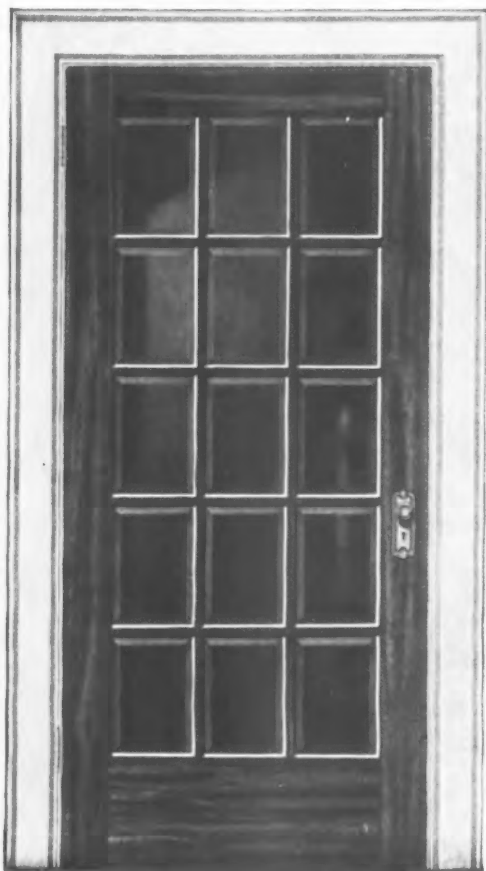
REG. U.S. PAT. OFFICE 1923

PURE LEAD—REINFORCED AND STRENGTHENED WITH STEEL

# RODDIS

of GENUINE

## *offer a guaranteed everlasting*



**Roddis No. 700**

This charming French Door will add elegance and dignity to any home. Illustration is shown with the beautiful grain of African Mahogany. This and many other designs are also carried in stock in Unselected Birch and Plain Red Oak.

The doors of a building get little rest—always working. That's why the best doors are common sense economy.

Roddis doors are made to work with the same smooth efficiency and to look just as beautiful when the building is old as when it is new. They put an end to door problems.

These features are exclusive with Roddis doors—

***Permanent:*** Cannot warp, sag, shrink, swell, check or separate—no danger of later trimming.

***Sound-Proof:*** No thin, vibrating panels to carry or transmit sound and objectionable noise.

***Sanitary:*** No unsightly panels and moulding to provide lodging places for dust, dirt and germs.

***Fire-Resisting:*** Requires over one hour for blow-torch to burn through a Roddis door—less than three minutes to pierce an ordinary panel door.

***Finish:*** Can be finished in any color to harmonize with woodwork, furniture and decorations.



# DOORS

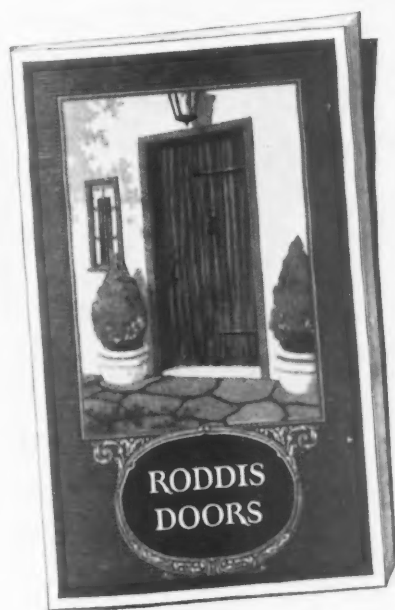
*African* MAHOGANY

*permanence and-  
beauty!*

*Enduring Beauty:* A permanent investment in beauty and service. African Mahogany survives all changing vogues in woodwork and improves with age. Today mahogany costs less than ever.

*Low-Priced:* Manufactured in large quantities and carried in stock so that prices are extremely low.

RODDIS LUMBER & VENEER CO.  
MARSHFIELD, WISCONSIN



## *Ask for This Book*

*It contains the most popular designs of Roddis doors (illustrated in colors) with sizes and prices.*

*A copy will be sent to you on request.*



**Roddis Type B**

The door above is illustrated in African Mahogany inlaid with Holly and Ebonized wood — also furnished either plain or inlaid with any conventional design. Carried in stock in African Mahogany, Unselected Birch and Plain Red Oak.

# PREDOMINATES

*Wherever Economy is Appreciated and  
Permanent Beauty is a Requirement*

## GF Herringbone Doublemesh Metal Lath

BETTER PLASTERING  
ON METAL LATH



*In Homes—Beauty and safety, the parallel requirements of home walls are both secured with GF Herringbone Rigid Metal Lath.*

BETTER PLASTERING  
ON METAL LATH



*In Commercial Buildings—For ably mirroring the greatness of modern commercial life GF Herringbone Rigid Metal Lath is unequalled.*

BETTER PLASTERING  
ON METAL LATH



*In Theaters—The finest achievements of the plasterer's art GF Herringbone Rigid Metal Lath stands behind for safety and endurance.*

THIS small mesh, plaster-saving lath has won a firm place in the esteem of the country's builders. Its use in buildings of every type from coast to coast is ample evidence of the reputation it has gained. And there is every reason for such universal approval of *GF Herringbone Doublemesh Metal Lath*. In its design and manufacture no effort has been spared to make it a faultless material for modern firesafe plaster construction. Its special *Herringbone Doublemesh* offers a bond tenacious of plaster, yet remarkably economical of plastering material. The use of rust-resisting Armco Ingot Iron in its manufacture is typical of the GF care for quality. A copy of the *Herringbone Handbook* sent on request. *Write for your copy now.*

THE GENERAL FIREPROOFING BUILDING PRODUCTS  
Youngstown, Ohio

*Branches in all Principal Cities*

*Dealers Everywhere*

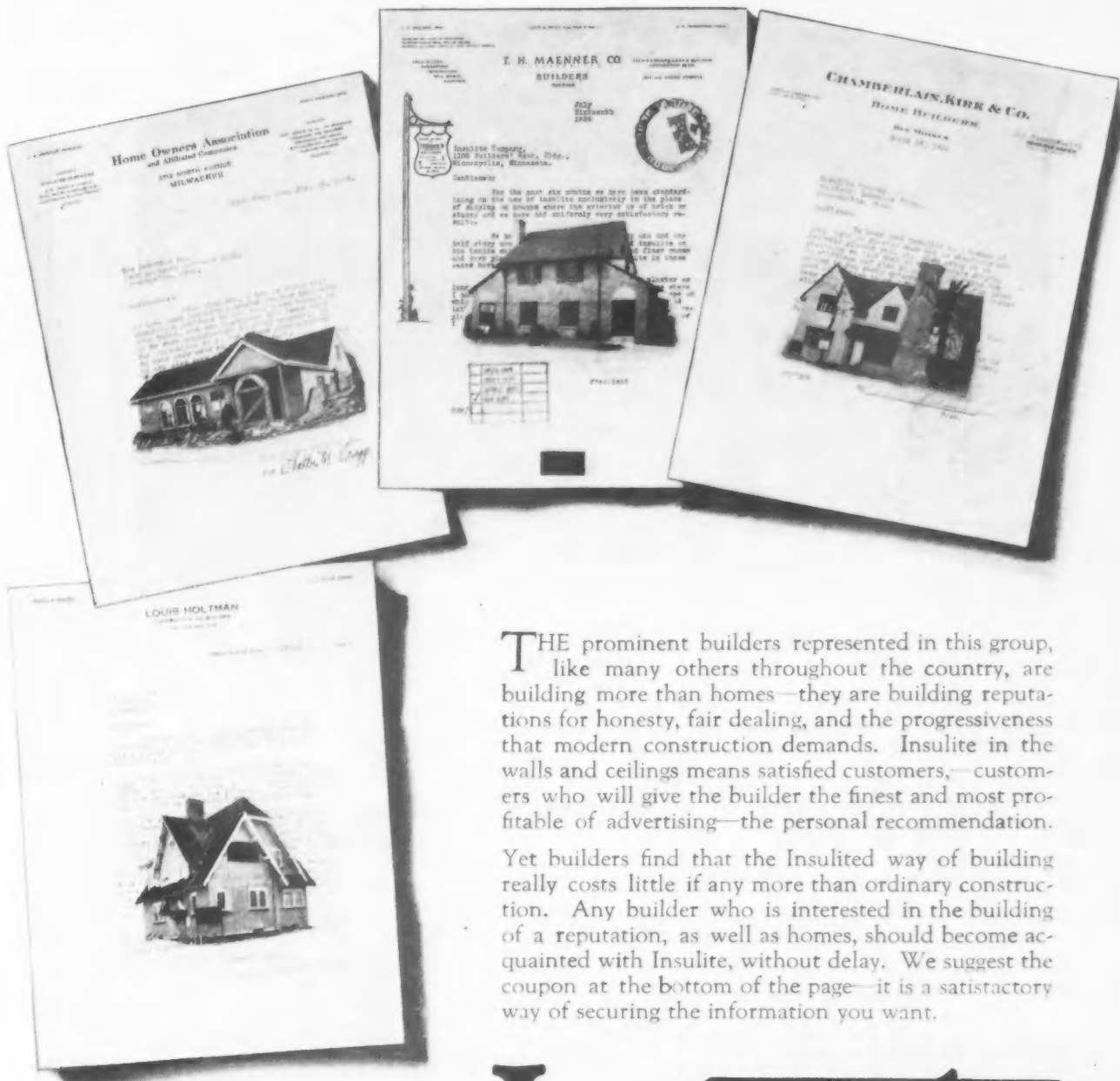
### GF PRODUCTS

Steel Tile	Road Forms
Steel Joists	Diamond Rib Lath
Steel Channels	Steel Sash
Peds	Basement and Case-
Key Lath	ment Windows
Self-Sentering	Industrial
Corner Beads	Steel Doors
Trussit	Wire Mesh
Expanded Metal	Concrete
Herringbone	Reinforcements
Lintels	Waterproofing
	Compounds



*GF Herringbone Metal Lath was the pioneer metal lath made of Armco Ingot Iron. This world-famous iron with its high rust-resistance assures the utmost durability in GF Herringbone Metal Lath.*

# Building More Than Homes



THE prominent builders represented in this group, like many others throughout the country, are building more than homes—they are building reputations for honesty, fair dealing, and the progressiveness that modern construction demands. Insulite in the walls and ceilings means satisfied customers,—customers who will give the builder the finest and most profitable of advertising—the personal recommendation.

Yet builders find that the Insulited way of building really costs little if any more than ordinary construction. Any builder who is interested in the building of a reputation, as well as homes, should become acquainted with Insulite, without delay. We suggest the coupon at the bottom of the page—it is a satisfactory way of securing the information you want.

# Insulite

SHEATHING—PLASTER BASE—WALL BOARD

Progressive dealers will also find it of value to learn of Insulite. Just write "dealer" below the coupon.

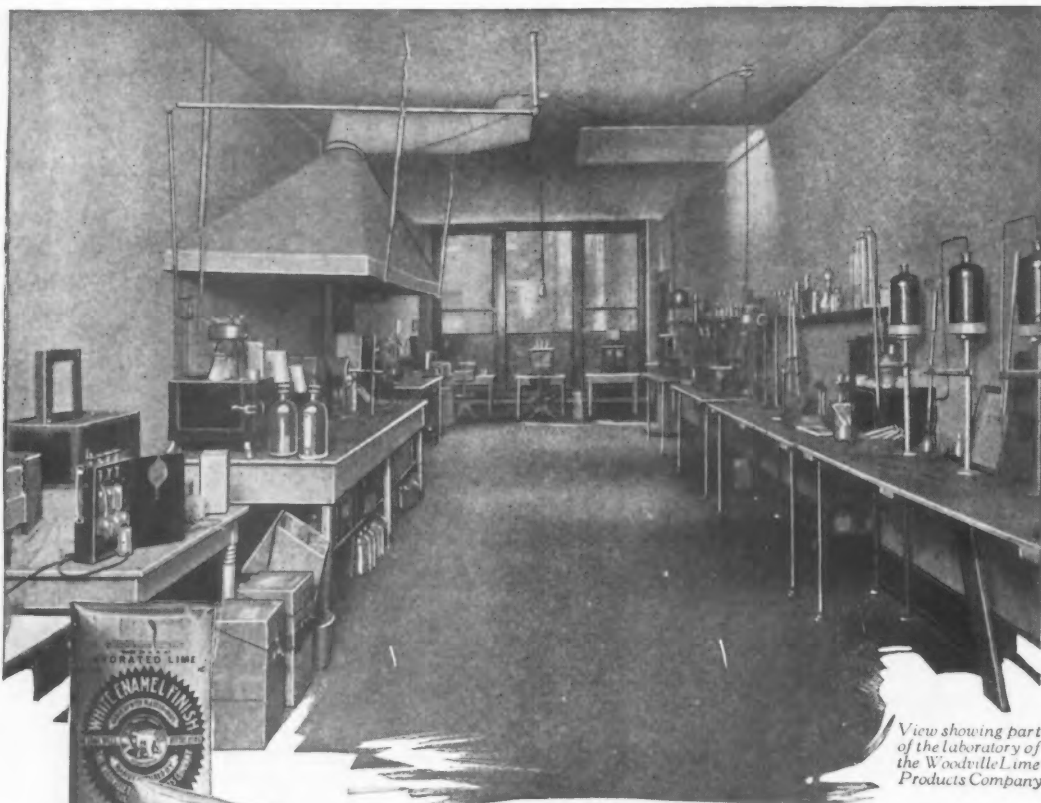
The Insulite Co.  
Builders Exchange Building  
Minneapolis, Minn.

Without obligation, tell me about the "Insulited" way of building.

Name \_\_\_\_\_

Address \_\_\_\_\_

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



View showing part  
of the laboratory of  
the Woodville Lime  
Products Company

## The Watchful Eye

Regardless of the fact that our quarry is a deposit of the highest grade limestone for making finishing lime, and—

Regardless of the fact that our lime-making experience extends over an unbroken period of a quarter century—

We realize the importance of uniformity to the extent of maintaining a watchful eye—a modern and fully equipped laboratory—to carefully observe, check and test our lime production to insure maximum uniformity as well as quality.

It is always safe to specify White Enamel, Gold Medal or White Lily brands of Finishing Hydrated Lime.

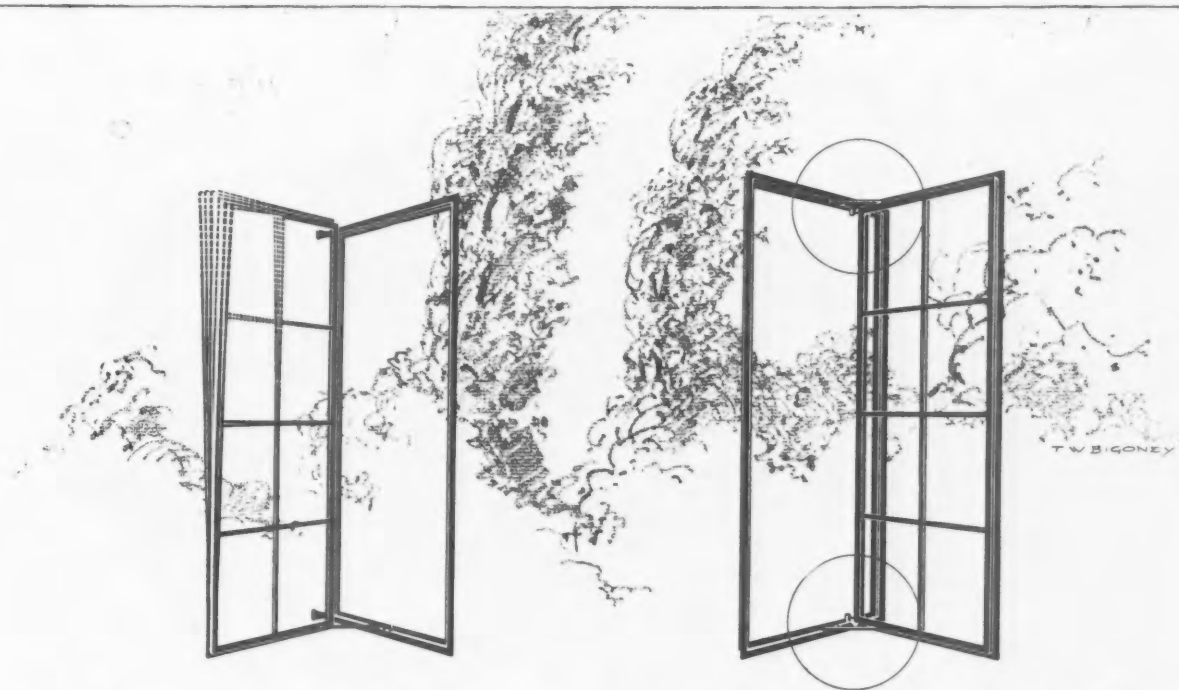
"Quality from  
stone to finish"

THE WOODVILLE LIME PRODUCTS COMPANY  
TOLEDO, OHIO

**WHITE ENAMEL ~ GOLD MEDAL  
AND WHITE LILY  
FINISHING ~ HYDRATED ~ LIME**



## LET THE BREEZES BLOW!



### but choose a casement that can't shake or rattle when they do!

You don't have to be an engineer to know that an open casement, held in position *at one point only*, will vibrate and shake at the top as the wind sweeps past.

The best job of installation you can do looks faulty after this constant shaking causes joints to open and the casement leaf becomes even slightly loose.

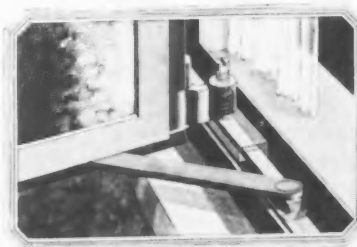
A Thorn casement is held *at both top and bottom* with a patented friction holder. Blow high or low, the wind cannot rattle and shake loose such a casement. It is secured at two points against the twisting strain of wind-pressure. Your judgment tells you that means tight hinges, a true-fitting leaf and no sagging.

A casement job must be very good to be any good at all. Thorn hand-

makes an all-steel casement that stands the stresses and strains of year-after-year service but sells at a price scarcely more than quantity-produced casements too weak to stand the gaff.

Five years from now, casement windows will be universally used, *provided* such soundly constructed all-steel casements as Thorn are installed today.

Thorn has a booklet available which gives all the essential structural facts. A letter, or the coupon below, will start it along to you. Write for it today.



**THORN**  
Casements  
of Solid Steel

J. S. THORN COMPANY  
2011 West Allegheny Ave., Philadelphia, Penna.

RETURN THIS COUPON FOR BOOKLET

J. S. THORN COMPANY  
2011 West Allegheny Ave., Philadelphia, Pa.  
Gentlemen, I would like to know more about Thorn Casements. Kindly send me your free booklet.

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

# The 20th CENTURY WOODWORKER

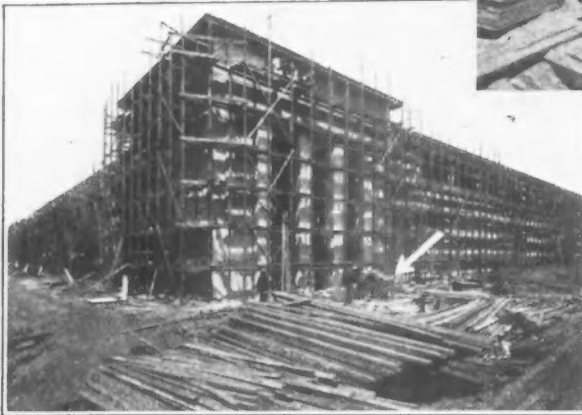
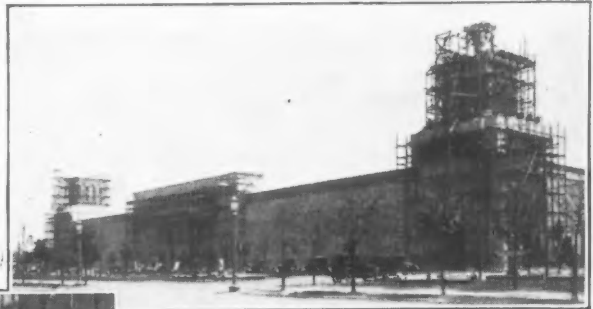
## Helps at the Sesqui-Centennial

by Cutting **1,000,000** ft. of Lumber  
more than

**I**F you have 1 ft. or 1,000,000 ft. of lumber to cut, it will pay you to become personally acquainted with the 20<sup>TH</sup> CENTURY.

Your woodworking problems are ours. Let us help you solve them by putting you in touch with our nearest representative.

**Send in the coupon for  
Illustrated Catalog.**



No job too large or too small for the 20<sup>TH</sup> CENTURY WOODWORKER.

The arrow shows the machine at work on the Palace of Transportation, Machinery, Mines and Metallurgy.

The 20<sup>TH</sup> CENTURY was first used on the Palace of Liberal Arts. The speed and efficiency of the machine enabled the contractors to use it consecutively on both buildings. Read what the contractors, Michael Melody & Son Company, say about the performance of the 20<sup>TH</sup> CENTURY.

### MICHAEL MELODY & SON COMPANY

INCORPORATED

#### BUILDING CONTRACTORS

1322 RACE STREET  
PHILADELPHIA, PA.

MEMBER  
ASSOCIATED  
PENNSYLVANIA CONSTRUCTORS



July 13, 1926.

Cresson-Morris Co.,  
18th & Allegheny Avenue,  
Philadelphia, Pa.

Gentlemen:

Regarding 20th Century woodworker Saw Rig which we purchased from you recently for use on Sesqui-Centennial Construction Work, we wish to express our complete satisfaction with the operation and service quality of this saw. We used this rig on the Palace of Liberal Arts and the Palace of Transportation, Machinery, Mines and Metallurgy on which buildings upwards of one million feet of lumber was used.

The Woodworker is still in excellent condition and we expect it to perform much profitable service for us in the future.

Yours truly,

MICHAEL MELODY & SON CO., INC.

WJD:AD

Per *U. J. Shaw*  
Secretary

### CRESSON-MORRIS COMPANY

Manufacturers

EIGHTEENTH STREET AND ALLEGHENY AVENUE  
PHILADELPHIA, PA.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Cresson-Morris Company  
Allegheny Avenue and 18th St., Philadelphia  
Name \_\_\_\_\_  
Please send full particulars on the 20th Century Woodworker.

P. O. \_\_\_\_\_

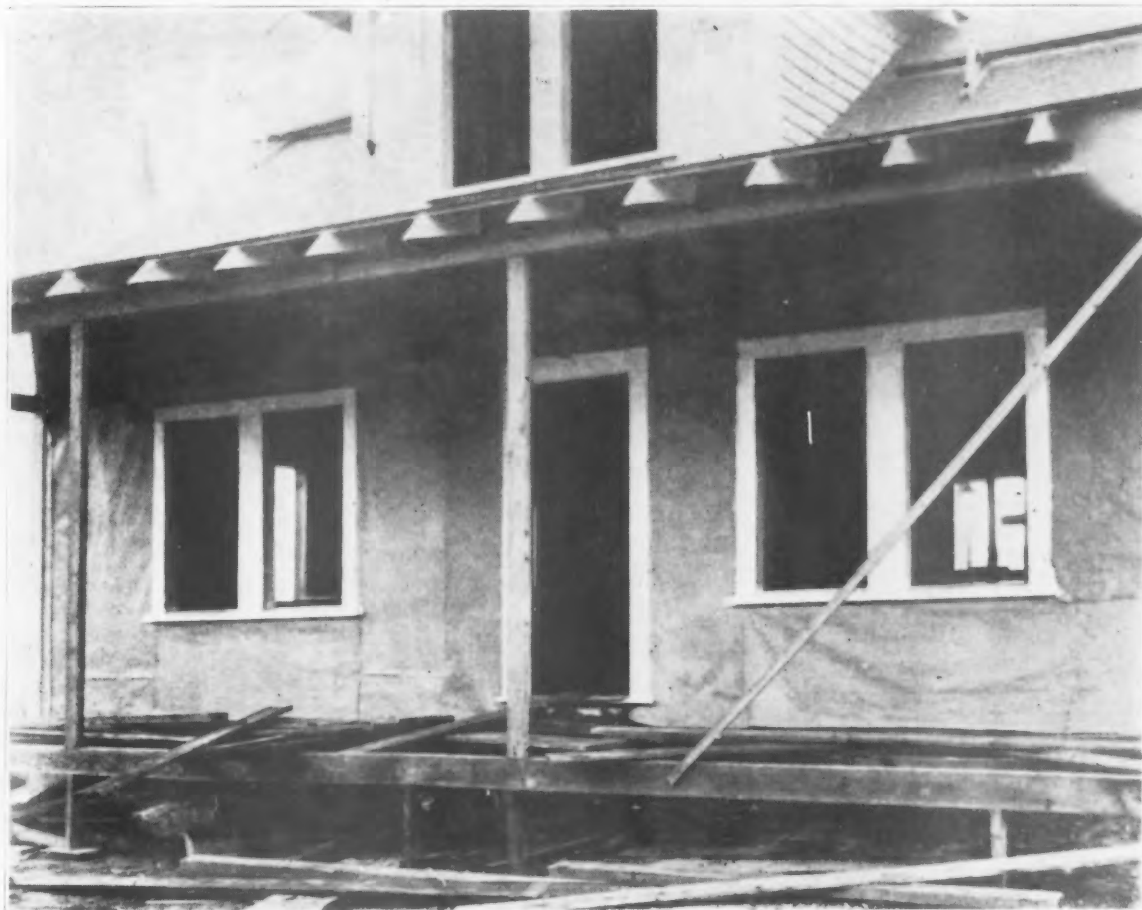
St. or R. D. \_\_\_\_\_

State \_\_\_\_\_

# HERE IS A **SISALKRAFT** House

Reg. U. S. Pat. Office

The 20th Century Building Paper



Notice how the outside of this house is being sheathed with **SISALKRAFT**. Note also that no battens were used in putting it on. **SISALKRAFT** is being used throughout on this house—under roofing, under floors, on outside walls. It will make the house much easier to heat, and will preserve it for many extra years.

Merritt Lumber Yards, Inc., Reading, Penna.

Gentlemen:—

Attention Joseph H. Aubrey.

Replying to your letter of June 4th, reference to our experience in handling **SISALKRAFT** Building Paper.

We think it is going to be the leading building paper on account of its many uses. In the short time we have been handling this product we have the the opportunity of seeing it used in many ways. About 8,000 feet of this paper was used over floors in a hotel which is undergoing extensive repairs; another lot was used as a temporary roof on a building which is being remodeled. On another job where canvas was to have been used in closing in the front of a building during repairs the contractor, after seeing **SISALKRAFT**, decided it could be used in place of the canvas and is very well pleased with the results.

However, we do not expect to sell **SISALKRAFT** where Red Rosin Paper will answer but the **SISALKRAFT** can be put to many more uses.

Our customers who have used **SISALKRAFT** recommend it very highly.

Trusting this information will be profitable to you, we are

Yours very truly,

W. E. STUBBS & SON

**American Reenforced Paper Co.**  
ATTLEBORO, MASS.

**American Reenforced Paper Co.**  
Attleboro, Mass.

A.B. 9-26

Please send me a free sample and other information  
of your Building Paper

☐ Architect ☐ Contractor ☐ Dealer ☐ Owner

Name .....

Address .....

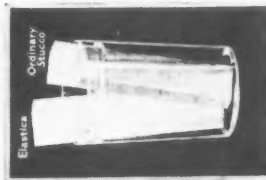
City .....



# There's Just As Much Profit In Overcoating Old Buildings As in New Business—And Far More Prospects

Every frame house in the land is eventually a prospect for an overcoat of stucco. And statistics show there are practically eighteen million of these frame buildings standing. Sixteen million are over five years old. Yet more than half the owners of these buildings do not know what they can gain through overcoating with a lasting stucco and haven't the slightest idea of the remarkably low cost involved.

You can add thousands of dollars to your profits by overcoating only a small number of such buildings. The business is all around you—clamoring for attention. And the wonderful part of it is that when you overcoat one job with Elastica you'll find other jobs coming your way—all unsolicited.



Take a sample of Elastica's first or second grade stucco and apply it to a concrete or masonry surface. Or write us direct. Allow the sample to set for two weeks or more. Then immerse it in water or any water containing acid. The sample with Elastica will remain unchanged while ordinary stucco obtained in the same way.

Elastica not only is the highest quality stucco obtainable but its very appearance on a building SHOWS its quality. And its varied finishes—everything from rock dash to the new French Finishes—are strikingly beautiful.

Elastica is thoroughly and lastingly Waterproofed. It is crack-proof, fire-proof and immune to heat and cold.

Elastica saves labor on the job, too, because it spreads so easily and quickly. Although the highest quality stucco obtainable, it costs you no more to use than ordinary stucco because of its greater covering capacity and ease of application.

The buildings reproduced in this advertisement are from actual photographs of homes remodeled, and improved with Elastica.

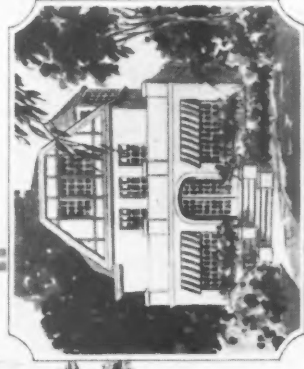
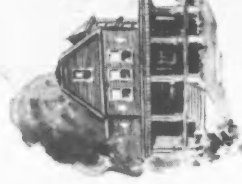
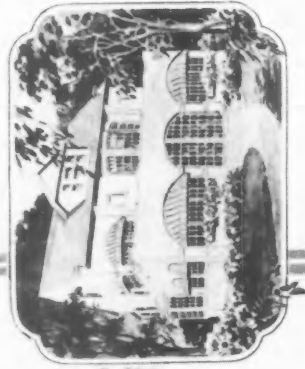
The Waterproofed Plastic Magnesia Stucco

# ELASTICA

THE WATERPROOFED STUCCO

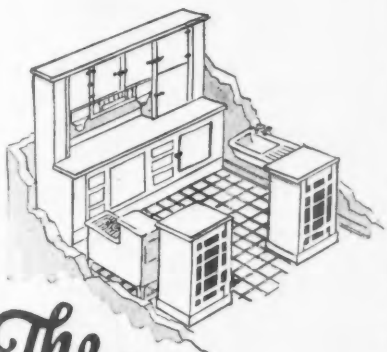
Manufactured by  
U. S. MATERIALS CO.  
Chicago  
AMERICAN MATERIALS CO.  
New York  
NORTH WEST MATERIALS CO.  
St. Paul

PLASTIC  
ENDURING BEAUTY  
IN STUCCO  
MAGNESIA





Let us show  
You how  
"WHITE"  
KITCHEN CABINETS  
make every foot  
pay



## The "WHITE" Kitchen Cabinet

With  
Refrigerator

Pin this to your Letterhead

"White" Door Bed Company,  
130 N. Wells St., Chicago.

Yes, I am interested in how "White"  
Cabinets make every foot pay. Give  
me full information (without any obli-  
gation) for

☐ Apartments    ☐ Homes  
☐ Hotels

A

I am also interested in.....



"MAKE every foot pay" is the keynote of the "White" Kitchen Cabinet. It combines in one unit a refrigerator, work table and kitchen cabinet! Makes small kitchens more convenient than large ones—saving floor space.

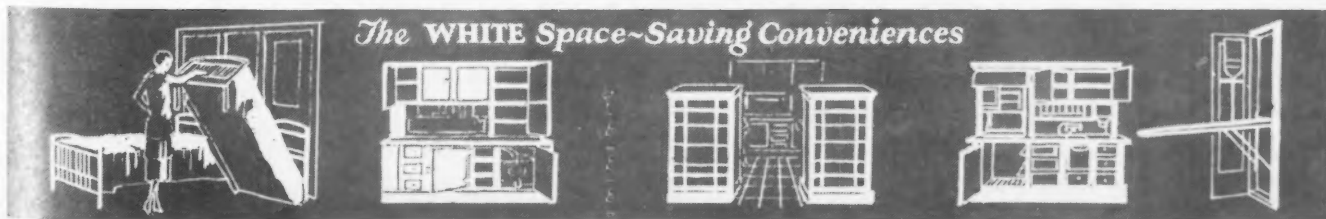
Architects and builders are enthusiastic about the "White" Space Saving Cabinet. They plan their kitchens around it—reducing building costs and increasing comfort.

We will gladly show you how. Check and send the coupon. No obligation at all.

The "WHITE" Door Bed Company

130 North Wells St., Chicago

Sales Agents in the Principal Cities



# ALLITH

While all mules have long ears and look something alike you'd have a hard time trading a span "sight unseen" to a Connecticut Yankee.

Garage Door Hangers look something alike, too. But when you trot 'em out and look 'em over it's not hard to see the difference.

## "1180 and 1189" Garage Door Hangers

have the round track we originated 25 years ago. This, with the machined cast hanger wheels that barely touch the track, forms a free-running, quiet combination that has no side friction whatever. They don't balk, or jam, or stick and can't jump the track.

Swivel type; reversible; vertical adjustment. Hardened steel axle; lubricated roller bearings.

"1180" is for 3, 4, 5, or 6 door openings. "1189" is the same except it is made for "round-a-corner" doors. Both are adjustable for old or new doors and provide extra wide openings.

Best of all, they cost no more than the ordinary flat track type. They are the kind you can sell and then forget—which is a hard claim for a garage door hanger to make good on.

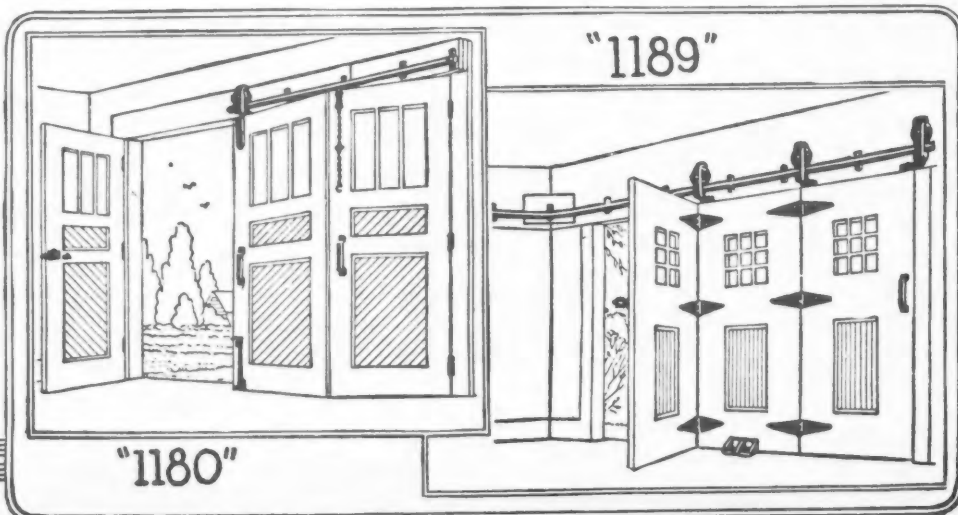
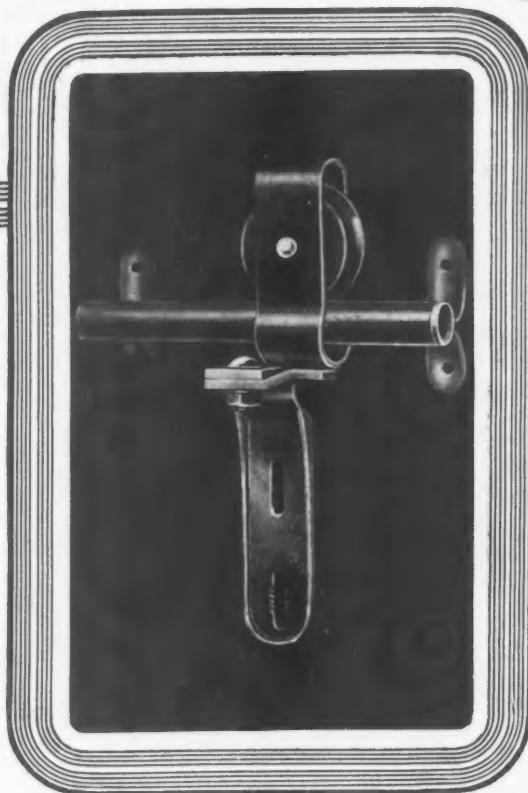
Handy carton. Attractively priced. Write for catalog.

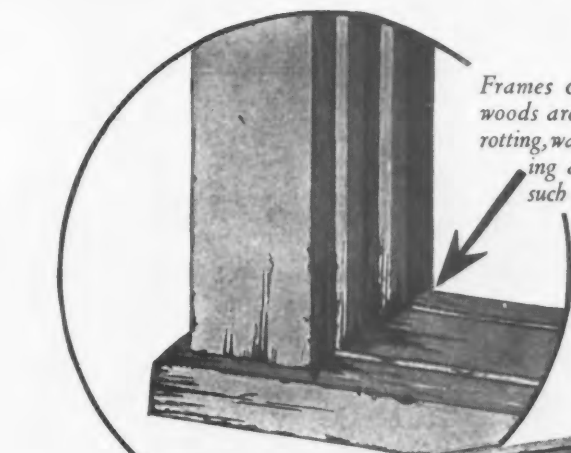
**ALLITH-PROUTY COMPANY**  
DANVILLE, ILLINOIS

*Manufacturers of*

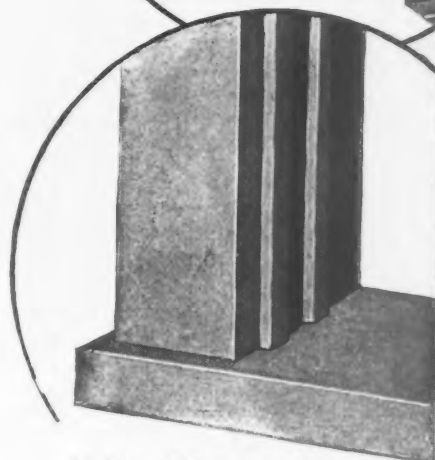
Garage Door Hardware  
Fire Door Hardware  
Spring Hinges

Overhead Carriers  
Rolling Ladders  
Door Hangers





*Frames of ordinary woods are subject to rotting, warping, cracking and splitting such as this.*



*Michigan White Pine (Pinus Strobus) Frames endure for the life of the house.*



## Here's Where Frame Quality Shows Up

THE two illustrations above show very plainly why quality builders insist on frames of Michigan White Pine.

They know that a frame is no better than its wood, and there's no better frame wood than Michigan White Pine (Pinus Strobus). Once in place Bradley-Miller Michigan White Pine Frames are there to stay. You get freedom from frame rotting, splitting, warping and checking.

Just ask your dealer for Bradley-Miller Michigan White Pine Frames. He'll supply you immediately with a frame for any opening regardless of construction, and in your favorite pattern. Remember that Bradley-Millers save time and money for you. Your dealer will show you.

*Send for booklet on frame facts and construction details.*

**BRADLEY-MILLER & CO.**  
1200 Marquette St. BAY CITY, MICH.

**Bradley-Miller**  
*Michigan White Pine*  
*Frames*

# Plan Your Heating With a **HESS** *Welded Steel* **FURNACE**

For Hard or Soft Coal, Coke, Slack or Wood

or with a

**HESS  
BLUE FLAME**  
OIL  
BURNER



With any fuel the Hess Furnace excels.

**Everlastingly leak proof**, because every seam is welded tight with melted steel. Huge radiating surfaces mean economy with any fuel.

Simple in arrangement—powerful in operation.

Free plans for the asking. Send us a sketch of your home and let us show you. Buy direct from our factory or through your preferred local dealer or contractor.

**HESS WARMING AND VENTILATING COMPANY**

1220-Q South Western Avenue, - Chicago

NEW YORK CITY

DETROIT

CINCINNATI

MILWAUKEE

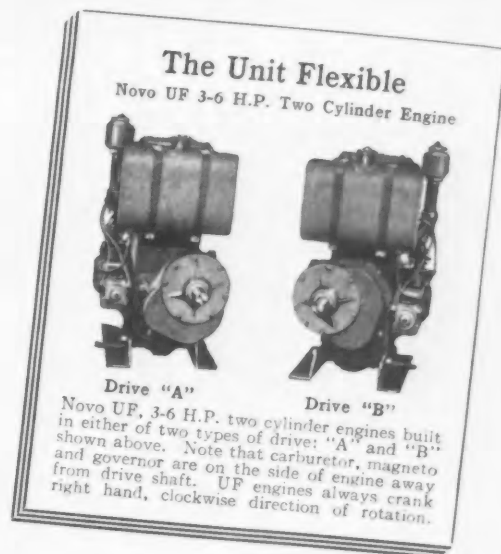
MINNEAPOLIS



# The Mixer's Master

THE business end of a 5S Mixer must be a steady operating power unit, when *eighty-five yards* of concrete is handled in a day's time.

And that is what Mr. Robert Butke's, (Omaha, Nebr.) superintendent claims for their Novo UF, 3-6 H.P. two cylinder Timken Roller Bearing Engine. *It's the Mixer's Master.*



This *new* Novo Industrial Power unit is the most wonderful development made in multi-cylinder gasoline engines. Powerful, Balanced, Economical, Light weight, Drive on either side of Engine—and in either direction of rotation. *Always cranks right hand.* No other engine like it on the market!

Twelve types of drive—the engine adaptable. Complete information will be sent promptly.

## NOVO ENGINE CO.

Clarence E. Bement, Vice-Pres. & Gen. Mgr.

LANSING, MICHIGAN

Distributors Throughout the World



# Engines • Hoists • Pumps

# at last—the name:

## Masonite

MANUFACTURED LUMBER FOR  
STRUCTURAL INSULATION

**H**ERE and there, head and shoulders above and apart from the commonplace, certain few products earn a high place through the greater service they render to mankind.

Masonite will be one of these. The name Masonite is destined to be known well among architects. Masonite the product will be respected by all who use it. For this is truly the **STRUCTURAL INSULATION** of the Future! It is **ALL WOOD**, not a substitute.

With scientists pausing at the very brink of a great new discovery, it remained for one inventive genius to develop the process of exploding wood by firing it from guns under high steam pressure. This man is **W. H. Mason**, after whom Masonite is named.

By Mason's process, a perfected all wood manufactured lumber is now being made, ideally suited to

**STRUCTURAL INSULATION.** Architects already endorse it.

Two important factors will make Masonite a leading building product: (1). Its merit. (2). The men\* behind it.

Let us send you a sample. See how its greater structural strength makes Masonite *ideal sheathing*. Examine the smooth, grainless surface, ready for interior decoration; and the somewhat rougher reverse surface, a perfect plaster base. Send for sample and the whole story—today.

### Mason Fibre Company

Dept. 109. 111 W. Washington St.  
Chicago, Illinois

The men behind Masonite, officers and directors of the Mason Fibre Company, are listed below:

S. B. BISSELL, Treas. Wausau Southern Lumber Co., Treas. Marathon Lumber Co.; W. H. MASON, inventor of the process; BEN ALEXANDER, Vice-Pres. Silver Falls Timber Co.; AYTCH P. WOODSON, Sec. Yawkey-Bissell Lumber Co.; Sec. B. C. Spruce Mills, Sec. Wausau Southern Lumber Co., Sec. Marathon Lumber Co.; BROWN KATZENBACH, C.P.A.; CHARLES GREEN, Pres. Eastman, Gardiner & Co.; M. P. McCULLOUGH, Vice-Pres. Brooks & Ross Lumber Co., Vice-Pres. B. C. Spruce Mills; A. J. GLASSOW, Mgr. Wausau Southern Lumber Co., D. C. EVEREST, Sec. and Gen. Mgr. Marathon Paper Mills Co.; R. G. WALLACE, Gen. Sales Mgr. formerly Vice-Pres. and Gen. Sales Mgr. National Fireproofing Co.

## Send for a sample *TODAY!*

# Speed and Profits on JOBS Big or Little

## CONTRACTORS

large and small, use

### SKILSAWS

#### ILLINOIS

Avery Brundage  
Dahl Steadman Co.  
Hageman Harris Co.  
Geo. A. Fuller Co.  
McLennon Construction Co.  
Mid-Continent Const. Co.  
Paschen Bros.  
Wells Bros.  
R. C. Wieboldt Co.  
and many others

#### INDIANA

Foster Engineering Service  
Hoffman Construction Co.  
Rath Construction Co.  
and many others

#### MICHIGAN

Albert A. Albrecht Co.  
J. W. Butler Construction Co.  
Longacre Construction Co.  
Walbridge & Aldinger  
Otto Misch Construction Co.  
and many others

#### MISSOURI

Hall-Mackay Construction Co.  
Murch Brothers  
Wells Brothers  
and many others

#### NEW YORK

The Foundation Co.  
Henry C. Steers Co.  
Turner Construction Co.  
Todd Shipyards  
James Stewart Co.  
and many others

#### OHIO

The Austin Co.  
The H. K. Ferguson Co.  
The Lundoff-Bicknell Co.  
and many others

## JOBBERS

Desired

One big contracting firm in Chicago has a dozen *Skilsaws* on one job. A carpenter in one of the suburbs has one *Skilsaw*, upon which he depends to keep his work easy for his increasing years.

You can take *Skilsaw* right to the job. Wherever you can plug in on current, direct or alternating, there you can use *Skilsaw* to cut at twenty times your fastest hand sawing.

*Skilsaw* is a sturdy, compact and dependable tool,

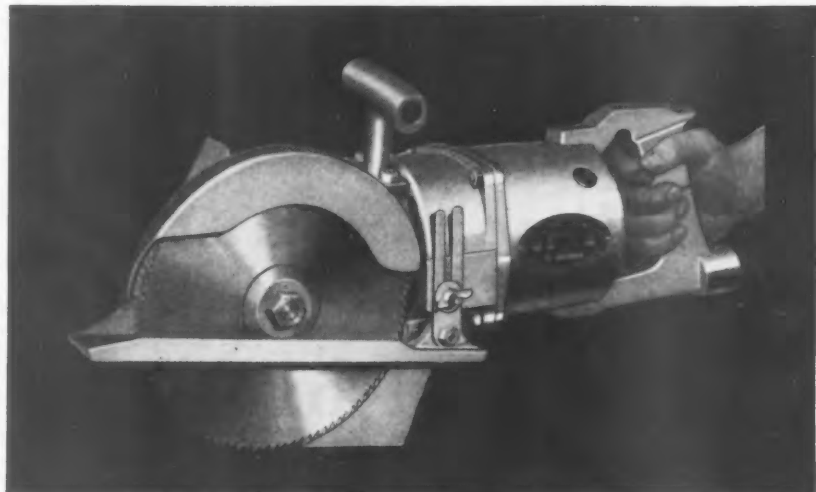
weighing about 22 pounds. It will cut boards up to 3 inches. The motor is a G.E. Universal and the saw is the fine product of a famous saw maker.

Cut your costs, finish your job ahead of schedule.

Put *Skilsaw* on the job now. Be equipped to win the next contract on a lower bid.

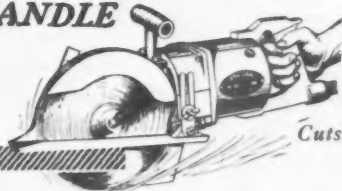
Send the coupon for illustrated circular and price. Don't wait.

MICHEL ELECTRIC HAND SAW CO.  
3818 Ravenswood Ave., Chicago, Ill.



# SKILSAW

PUTS HORSE POWER AT THE SAW HANDLE



Cuts Right to the Line

MICHEL ELECTRIC HAND SAW CO.

3818 Ravenswood Ave., Chicago, Ill.—Send me your descriptive circular AB 9 and price of *Skilsaw*.  
No obligation incurred.

Firm Name

Your Name

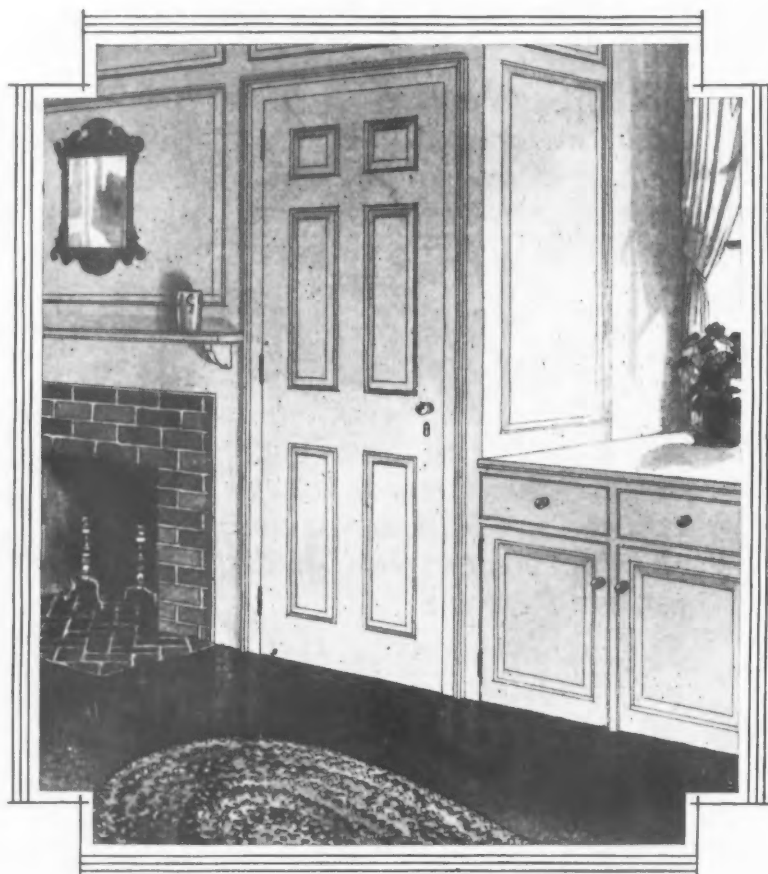
Street

City & State

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# SARGENT

## LOCKS AND HARDWARE



## No other hardware is so widely approved as that of solid brass or bronze

BRASS, bronze, copper. Look at the use of these enduring metals in homes today. Not only in expensive homes, but in the operation type built to sell for as low as nine or ten thousand dollars, or even less.

Certainly locks and hardware are as important as down spouts, roof gutters or plumbing pipes. Home buyers have come to think so! They realize that door and window equipment must be solid brass or bronze if it is to retain its beauty, convenience and security. Builders are following the popular demand. Many of their

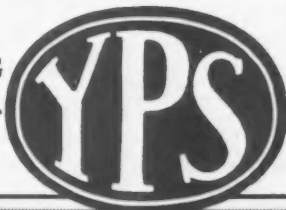
prospectuses list prominently: "Hardware of genuine brass and bronze!"

Sargent locks and hardware of solid brass or bronze are the choice of so many architects, builders and home owners because they have proved their worth in years of service, because they are adapted to every requirement, because they insure greater satisfaction at but little increase in building cost. Choose them. Representative dealers in all cities. Sargent & Company, *Hardware Manufacturers*, 51 Water Street, New Haven, Conn.

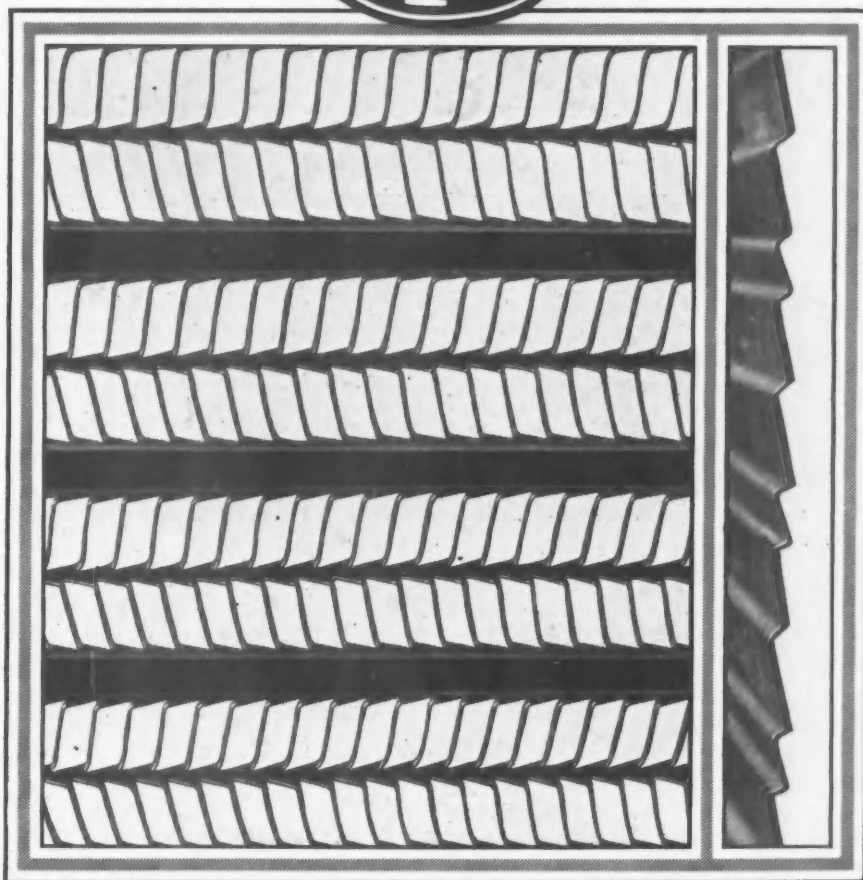




FIREPROOFING



PRODUCTS

*The new***YPS Z-RIB LATH***for economical good plastering*

Z-Rib Lath answers your three demands for flat rib lath improvements—rigidity, smoothness in handling and under the trowel, and ability to hold wet mix where it belongs—all with a minimum of mortar.

YPS Z-Rib Lath is ideal for *economical good plastering*. Let us send you sample and prices.

THE YOUNGSTOWN PRESSED STEEL COMPANY

169 University Road, Warren, Ohio

New York Philadelphia Detroit Chicago Los Angeles San Francisco

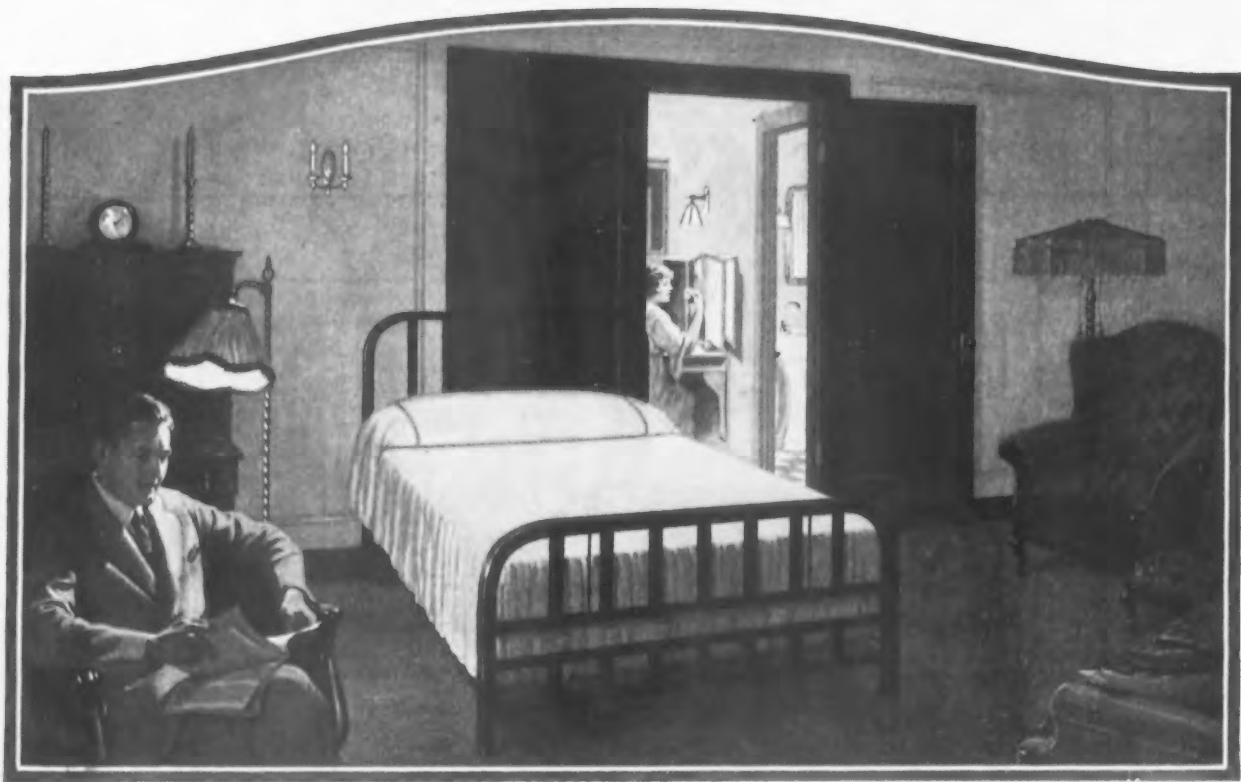
Manufacturers of a Complete Line of Fireproof Building Products, Including

Metal Lath—Corner Bead—Channel—Expanded Metal—

Basement Windows—Coal Doors—YPS Economy

Stucco Nails—Stuccomesh

THE YOUNGSTOWN PRESSED STEEL CO.  
Warren, Ohio.  
Please send me a sample of YPS Z-Rib Lath.  
Name.....  
Street.....  
City.....  
Business.....  
State.....  
A-11 9-2-35



## Here's a Plan That Saves Floor Space and Money

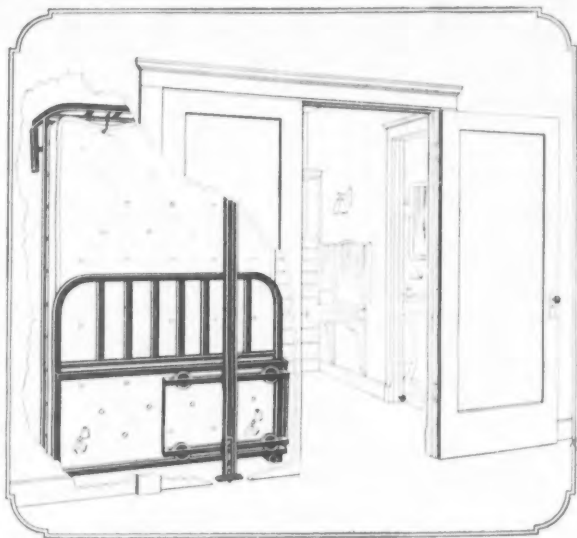
With this new Holmes Concealed Bed (Model 47), and our exclusive method of installation, you can have a pivot bed entirely concealed in the dressing room, and yet have clear passage through 2'6" door to dressing room and bath, whether the bed is in the closet or in sleeping position in the living room. The bed is concealed behind the other door entirely.

This installation enables you to plan a complete unit—living room, bed room, dressing room and bath, in surprisingly small space—in reality a home within a home.

You will be surprised to know the small space required for this complete unit and the small door space necessary for a full-size bed. You will be amazed how economically and satisfactorily this new Holmes Plan works out.

*Write for Floor Plan and Complete Details*

DISTRIBUTORS WANTED FOR OPEN TERRITORY



*Illustration shows how bed slides out of way on ball-bearing carriage, when in closet.*

# HOLMES concealed BEDS

HOLMES DISAPPEARING BED COMPANY, Manufacturers, 17 Madison Street, Woodstock, Illinois  
 CONCEALED BED CORPORATION, 58 East Washington Street, Dept. 817, Chicago, Illinois  
 Distributors for MARSHALL & STEARNS CO., HOLMES DISAPPEARING BED CO.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# CHATFIELD

## SKY LINE

The color mixture shown above is "Red Tone", combining red, brindle-brown, purple and tile. Other color mixtures are Green Tone and Tan Tone.

Without any obligation on my part, send me your new booklet and samples showing color combinations and coverage.

The Chatfield Mfg. Co.  
Third & Plum Sts.  
Cincinnati,  
Ohio

# Judged by the Furnace ~and the House is sold

*See that your furnaces are installed in accordance with The Standard Code for the Installation of Warm Air Furnaces. Then you are sure of a satisfactory job.*

**P**ROSPECTIVE buyers of completed houses must base their judgment on what they see.

That's why an International Economy Warm Air Furnace helps sell houses.

Its oversize casing promises plenty of heat, and it keeps its promise. Its distinctive blue front bespeaks quality, and the quality is there, inside as well as out.

The large casing houses an oversize radiator with large radiating surface and air-passing capacity.

The air space between the radiator and dome is greater than usual. This construction deflects uprising currents of air over the hottest part of the castings. The Economy is lavish with heat.

And yet the Economy is low in price. This is accomplished only by volume production and carefully worked out foundry methods. The measure of quality is unskimped!

The International Economy helps sell houses to satisfied buyers.

Builders, contractors, architects—send for Catalog 1752-B, which gives full details. We will include a copy of the Standard Code.

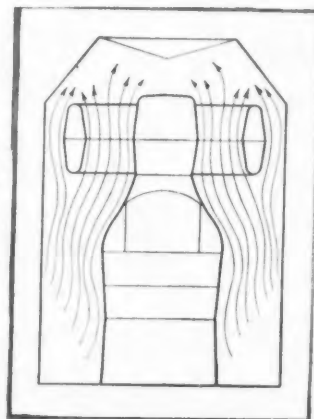
## BLUE FRONT ECONOMY



## INTERNATIONAL HEATER COMPANY Utica, N. Y.

Cleveland      Chicago      Detroit  
Nashua, N. H.      Philadelphia      New York City

*Notice the large air space between the radiator and the dome in this view of the International Economy. Large volumes of air rising here, rub the hottest parts of the castings.*



# INTERNATIONAL

REG. U.S. PAT. OFF.

STEAM AND HOT WATER BOILERS, WARM AIR FURNACES AND ONEPIPE HEATERS



# Build better with <sup>Durable</sup> Douglas Fir

AMERICA'S PERMANENT  
LUMBER SUPPLY

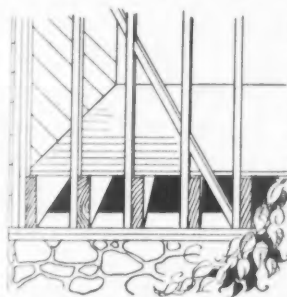
You will be proud to have Douglas Fir delivered to your jobs — it is so flat, straight and bright—an invitation to do good work. And you can get Douglas Fir in all sizes, shapes and quantities from your local lumber yards, because Douglas Fir has nation-wide distribution and is available in every important lumber market.



Douglas Fir is famous for its beauty of grain. Look at the flat grain panels in a Douglas Fir door, surrounded by vertical grain Douglas Fir rails and stiles. You can turn out perfect panel jobs with satin-figured Douglas Fir plywood—at a reasonable price. Stains, varnish and wax take and hold on Douglas Fir over shellac primer.

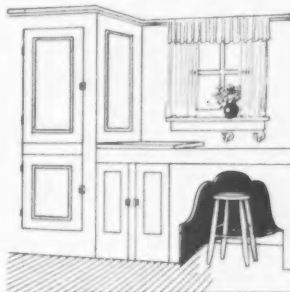


## Better framing and sheathing



Douglas Fir is light, stiff and strong — easy to handle — makes your framing rigid and safe — often permits wider center-to-center spacing of joists, rafters and studs. Light Douglas Fir sheathing, roof boards and under-floors save dead weight yet give greater strength — nails hold tight so siding, shingles and floors stay put.

## Interior woodwork and flooring



Interior trim, built-in fixtures, steps and floors of Douglas Fir stay as built — straight and tight. Douglas Fir floors resist wear, look good and lay quickly. Douglas Fir cabinet work and trim takes enamel smoothly over shellac primer. Hardware stays firmly attached to Douglas Fir woodwork because Douglas Fir grips screws tightly.

## The easy wood to work

The uniform texture of Douglas Fir makes it easy to work. Carpenters do faster and better jobs with Douglas Fir. Saws cut quick, without binding or constant resharpening. Planes and chisels keep their cutting edges. It is clean wood to handle, too. Doesn't gum up tools or make hands sticky. There is only a very small amount of pitch or resin in Douglas Fir.



## Heartwood for better exterior trim

High percentage of weather-resisting heartwood in Douglas Fir makes durable window sash and frames, exterior trim, gutters, columns, porch floors and other exposed woodwork. Warping, shrinking and swelling need never bother you with comebacks for minor repairs. Paint holds tight and is easily applied to Douglas Fir over an oil priming coat. Nails stay driven — don't work loose.



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Mail the coupon or a postcard today for the new, illustrated booklet, "Durable Douglas Fir—America's Permanent Lumber Supply." You need the authentic information this free booklet contains. No other book tells so much about Douglas Fir and the Douglas Fir industry. Send for your copy today.

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Gentlemen: Please send me a copy of your free booklet, "Durable Douglas Fir—America's Permanent Lumber Supply."


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PLACE \_\_\_\_\_

Important West Coast Woods — DOUGLAS FIR • WEST COAST HEMLOCK • WESTERN RED CEDAR • SITKA SPRUCE

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*zouri key-set store front construction*  *zouri key-set store front construction*



*That small shop in the middle of the block can be made a thing of beauty and so attractive that it will simply compel passers-by to look*

## *Zouri Key-Set Store Front Construction*



*The Reinforcing Bracket, a heavy, rigid brace, prevents distortion during setting. It supports the copper gutter as the indirect pressure of the Zouri Key draws the moulding into alignment*

**I**T'S completed! Your merchant client stands critically viewing the store front that represents half of his advertising effort. Then is when Zouri's copper beauty, substantial and enhancing, begins to look like a profitable investment for him—and for you.

But you've known from the beginning that Zouri's safety and permanence guaranteed profit. You have been insured against loss from the time Zouri was specified. Against pressure during setting, and breakage due to wind, shocks, temperature changes, and settling, Zouri's exclusive structural features stand guard.

It is this that has won more and more contractors to Zouri during the 14 years in which it has built up the largest body of distributors in the field.

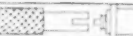
*You will find our detail sheets and data book useful. Send for them.*

# **Zouri Drawn Metals Company**

Factory and General Offices

1608 East End Avenue, Chicago Heights, Illinois

DISTRIBUTORS IN PRINCIPAL CITIES—NAMES ON REQUEST

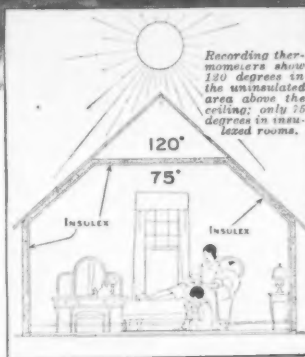
*zouri key-set store front construction*  *zouri key-set store front construction*

# On the hottest afternoon — the bedrooms under the sloping roof can be as cool as downstairs



*Insulex is poured between rafters, in the walls, under the floors, filling every crevice with expanded gypsum, containing millions of tiny air cells formed in the mixing. It is sound-deadening, will not burn, and makes frame construction practically fireproof. Vermin and rot-proof.*

**I**NSULEX ends summer discomfort, and transforms hot, sweltering bedrooms, long accepted as a necessary summer evil, into ideal sleeping quarters. No more need to lower shades as soon as the rising sun begins to beat against walls and roof. Never again will children or parents be forced to take to cots downstairs, or seek relief on the floor. Restless stifling nights are a thing of the past in an Insulexed home. Even one-story bungalows are cool, if Insulexed.



the day in the roof, from radiating down into rooms during the night, the real cause of hot bedrooms long after the sun has gone down.

### Saves its cost

In winter, this same thorough insulation keeps cold out, and permits 70° temperature day and night, with normal heating. The cost of material and labor may be saved in the smaller heating plant and less radiation required, with further saving year after year in fuel bills. Recording thermometer records, both summer and winter, taken in typical homes under ordinary living conditions, are available to builders.

Thick gypsum insulation has revolutionized building construction. It not only shuts out the heat from direct rays of the sun, but prevents heat, stored up during

**INSULEX**  
GYP SUM INSULATION  
REG. U. S. PAT. OFFICE



*Ashland street house, Chicago America's best insulated home*

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

UNIVERSAL GYPSUM COMPANY, 111 W. Washington Street, Chicago

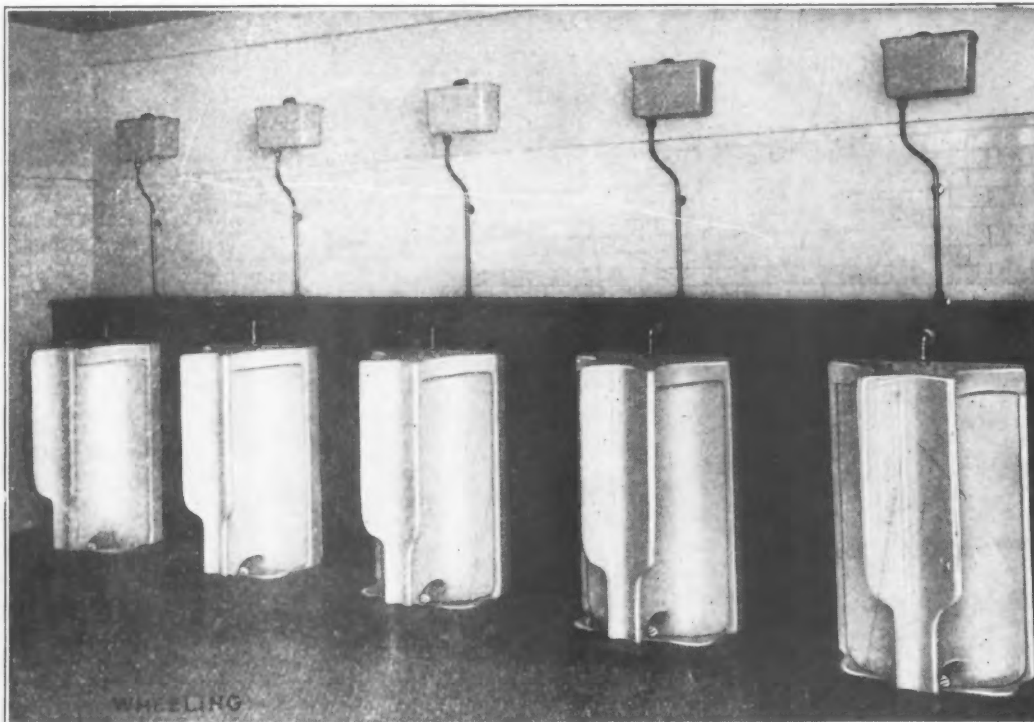
INSULEX IS FUNDAMENTAL COMFORT. NO HOME WILL BE MODERN A FEW YEARS FROM NOW, UNLESS IT IS INSULEXED

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# The DUPLEX — Something New in Urinal Stalls

"AVON" SEMI-VITREOUS PORCELAIN WARE



*This installation at*

**Quigley Seminary**  
Chicago, Illinois

**Joseph W. McCarthy**  
*Architect*  
139 North Clark St.  
Chicago, Illinois

**5-Plate 79E**  
**Duplex Stalls**  
(Double Wing)  
with

**3 gallon automatic**  
**Flush Tank**  
**Nickel plated**  
**1 inch supply**

*These five stalls have*  
*same capacity as ten*  
*regular porcelain*  
*stalls.*

#### DIMENSIONS

Width over all, 28 inches  
Height over all, 48 inches  
Floor line to top, 43½ inches

The cost of the Duplex Stall, and installing the same, is considerably reduced where a battery of two or more urinals is involved. Only one waste strainer is required; while no inlet spreaders are needed, as the spreaders are made integral with the top of the Duplex Stall, and flush thoroughly every part of the surface. The roughing cost is reduced 50% over a battery of two regular old style stalls.

Exact spacing of two or more Duplex Stalls is not essential; the distance apart is optional with architect and owner.

**SOLD THROUGH JOBBERS OF PLUMBING SUPPLIES. WRITE US FOR DESCRIPTIVE CIRCULAR.**

*This installation at*

**Scottish Rite**  
**Cathedral**  
Wheeling, W. Va.

**Fred F. Faris**  
*Architect*  
1117 Chapline St.  
Wheeling, W. Va.

**5-Plate 78E**  
**Duplex Stalls**  
(Single Wing)  
with  
**Nickel plated**  
**Flush Valve**

#### DIMENSIONS

Width over all, 24 inches  
Height over all, 46 inches  
Floor line to top, 41½ inches



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J. J. HICKEY, Office, 185 Devonshire St., Boston, Mass.;  
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Kitchen Sinks.

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The unusual thickness of the Massive Weight creates the definite shadow line that architects demand. Hence this roofing lends an impressive tone of distinctiveness to any house. Not only does the extra thickness of these shingles contribute an important architectural feature, but it adds many years to the life of the roof.

The striking colors of these shingles are produced by the natural tints of the slate and stone particles with which they are surfaced.

Preston Shingles are made in two designs—Rectangular and Hexagonal, and in four colors—Red, Blue-Black, Green, and Sunset. They are available in three weights—Heavy Standard, Extra Heavy, and Massive.

We will be glad to send you Samples of Preston Roofing and an architect's file card. Write to Dept. G-4.

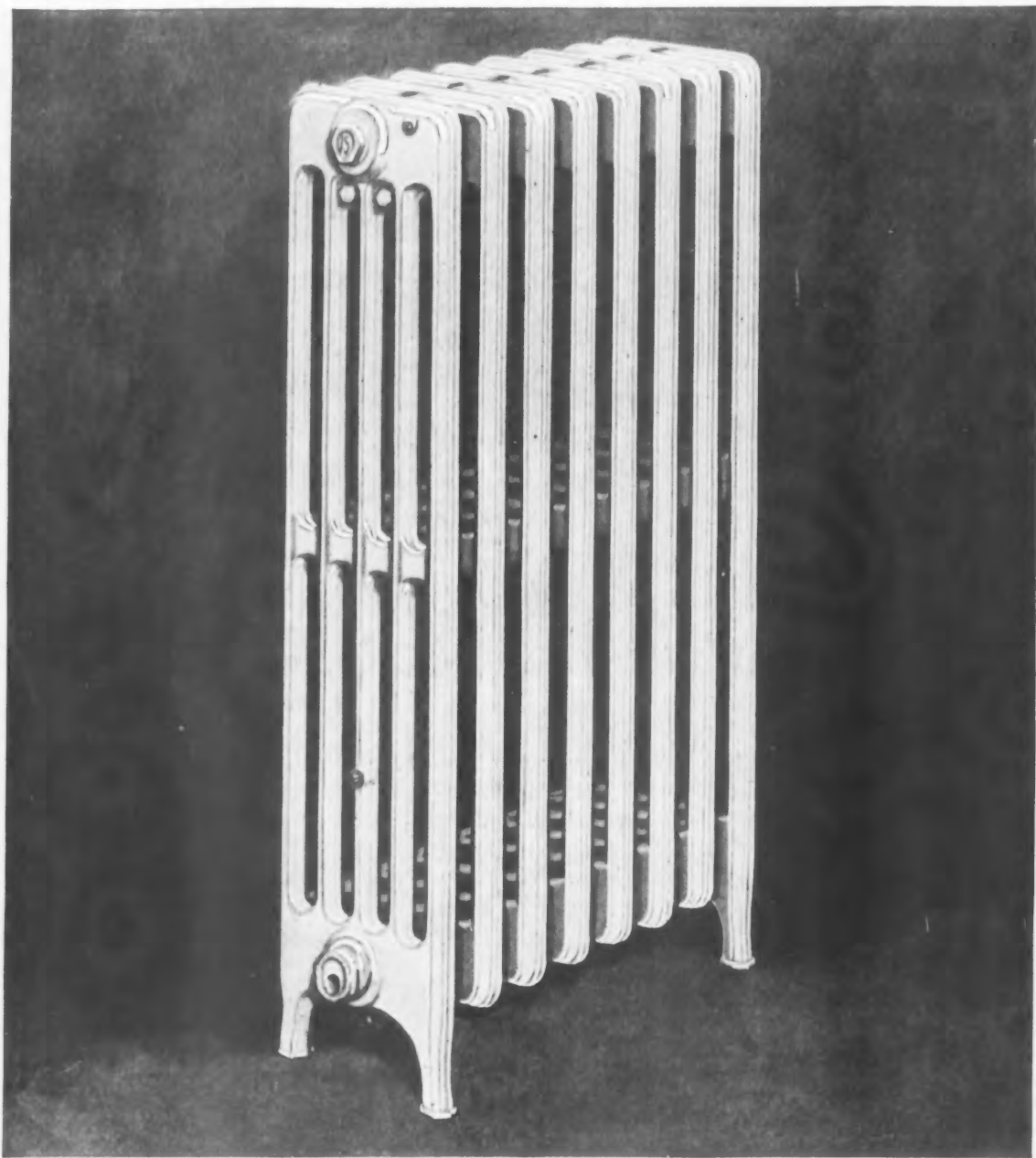


*The wearing qualities of Preston Shingles are dependent not only on the quality but also on the quantity of asphalt which each shingle contains. If you examine the edge of a Preston Shingle you will notice that it is practically a solid body of asphalt. This feature of Preston Shingles accounts for their remarkable wearing qualities.*

KEYSTONE ROOFING MANUFACTURING COMPANY  
York, Pennsylvania

# Preston

 **ROOFING**



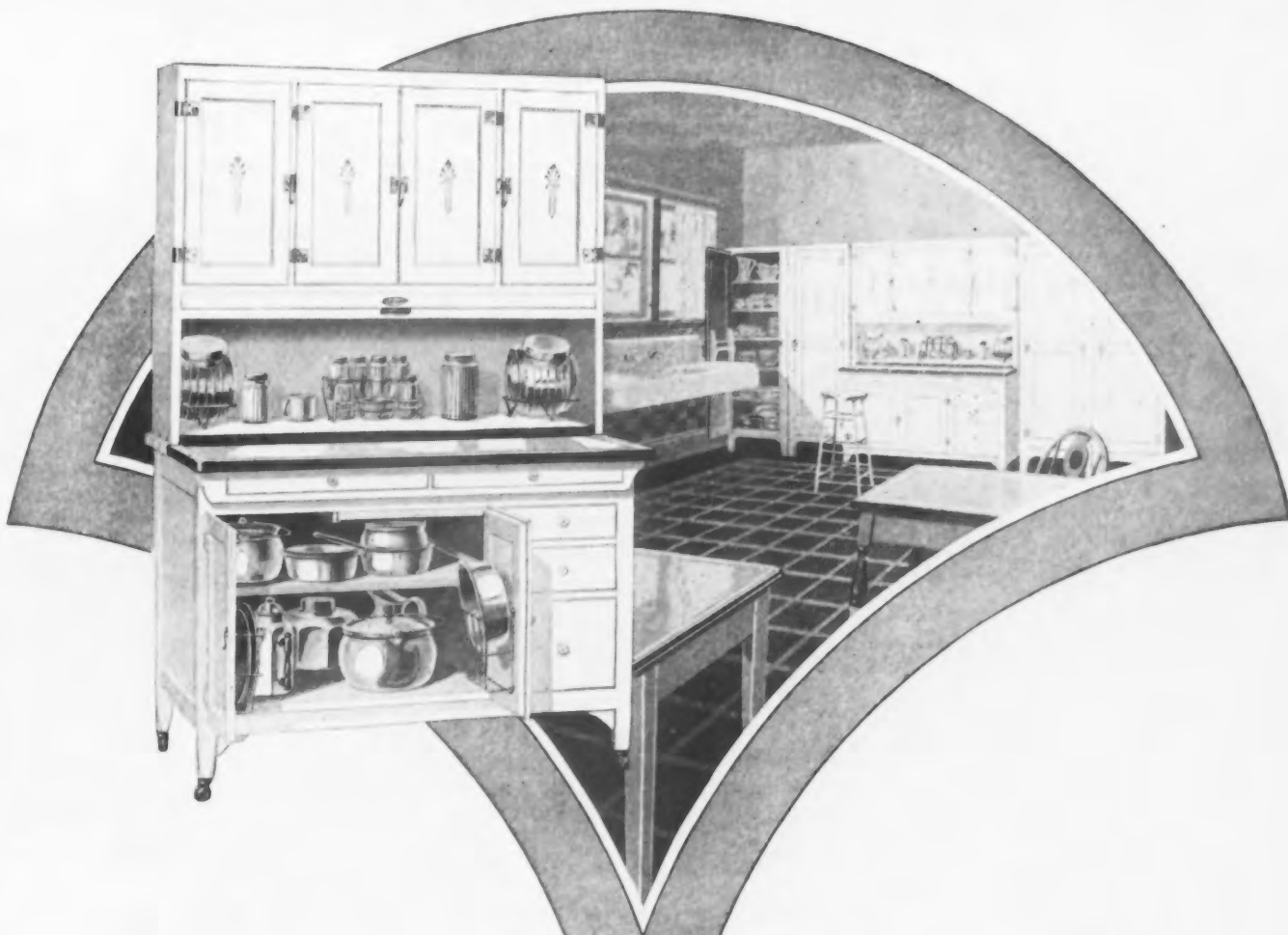
*A NEW radiator! The Capitol. With classic beauty and harmonious grace that will instantly impress prospective buyers or renters. With strength that is the perfected result of unhurried experiment and careful development. With heating ability approved as superior in tests made by the engineer-*

*ing laboratories of a great university. In every detail it is what you would confidently expect of the United States Radiator Corporation. We believe it*

## THE NEW CAPITOL RADIATOR

*is the radiator masterpiece. We suggest its use in constructions you contemplate this Fall.*

UNITED STATES RADIATOR  
CORPORATION  
Detroit, Michigan



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Our straight-forward and thought-stimulating booklet, setting forth the kitchen cabinet idea in its relation to the work of architects and builders has been received as a real contribution to the literature of the builder. It points the way to a new order in kitchen efficiency, and shows how some of the perplexing problems of the architect can be quickly and inexpensively solved. It will be gladly sent on request, without cost and without obligation. Write for it today. G. I. Sellers & Sons Company, Elwood, Ind.

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SELLERS  
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**MASTER TEC BRAND**

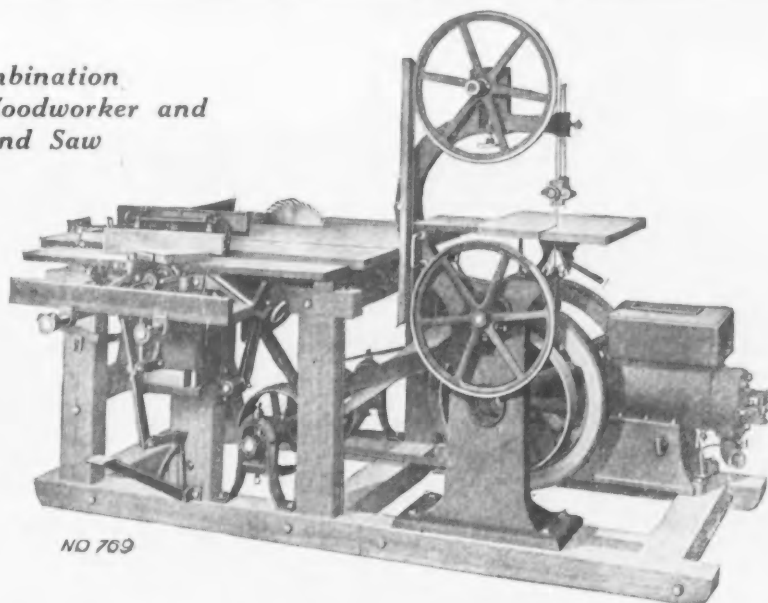
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**FOR SERVICE**

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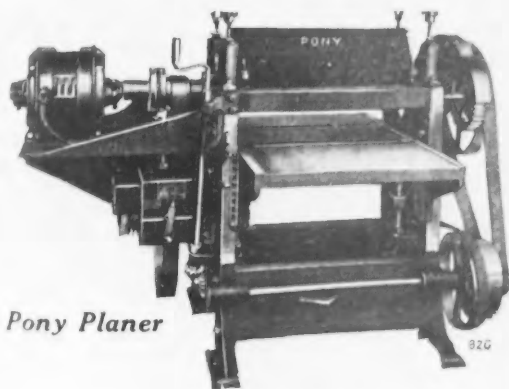


*Combination  
Variety Woodworker and  
Band Saw*



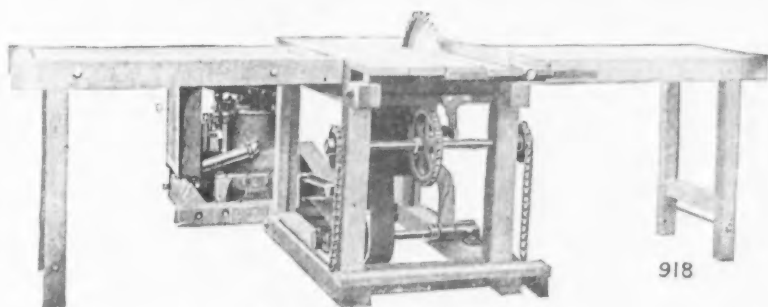
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82G



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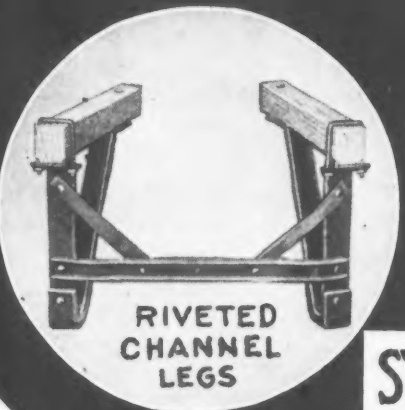
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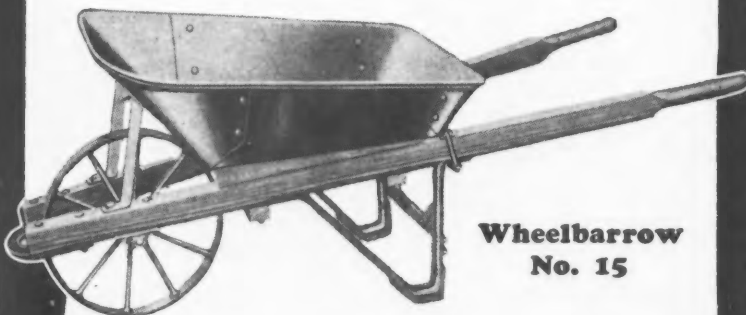


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No. 15

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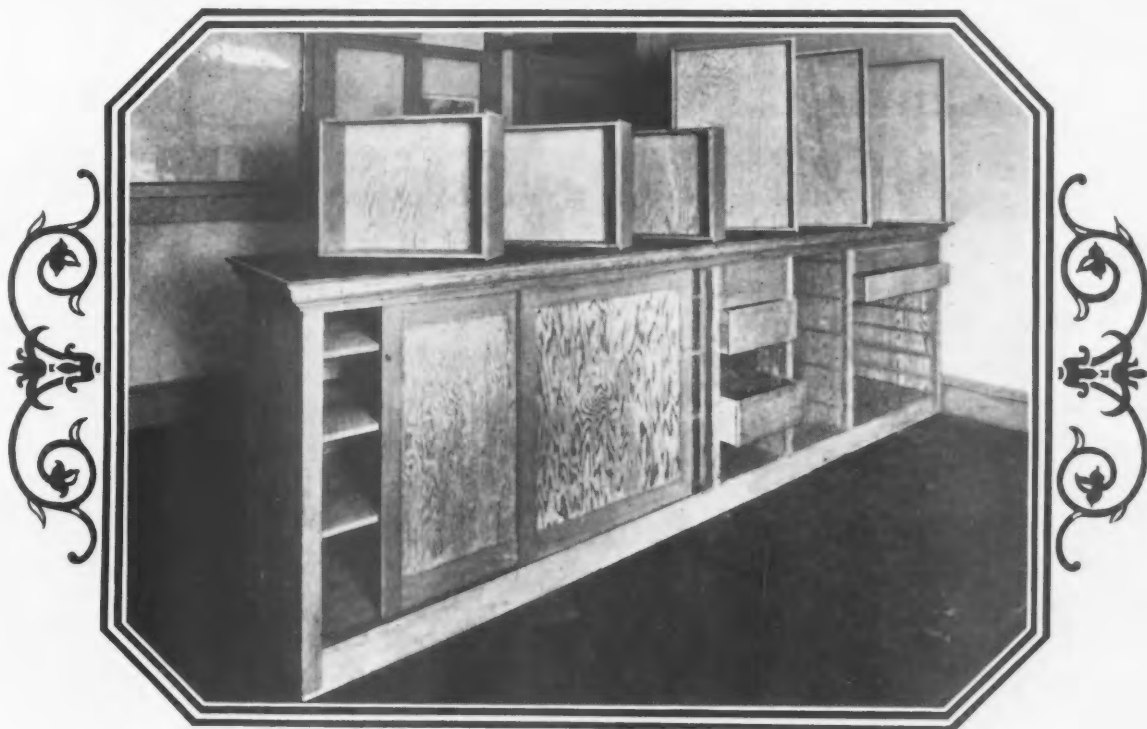
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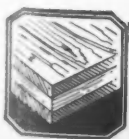
Where natural finish is desired, its beautiful grain is exceptionally striking, but it also takes paint or enamel wonderfully. It is real wood---just thin layers cemented closely together with the grain opposed, making a board many times stronger than a single board of the same thickness.

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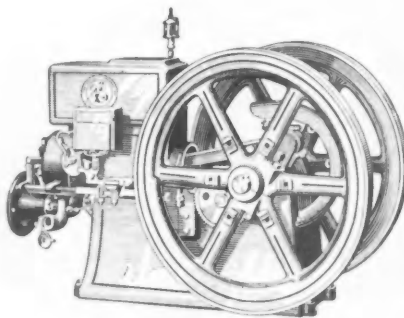
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Contractors in need of labor-saving and time-saving equipment may buy with perfect safety the machinery powered with Hercules Engines. A letter to us will bring you information and the names of nationally prominent manufacturers who rely upon Hercules to uphold the dependability of their products.



## THE HERCULES CORPORATION

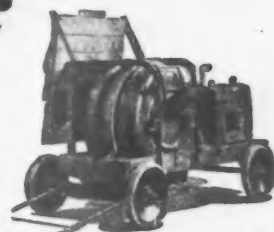
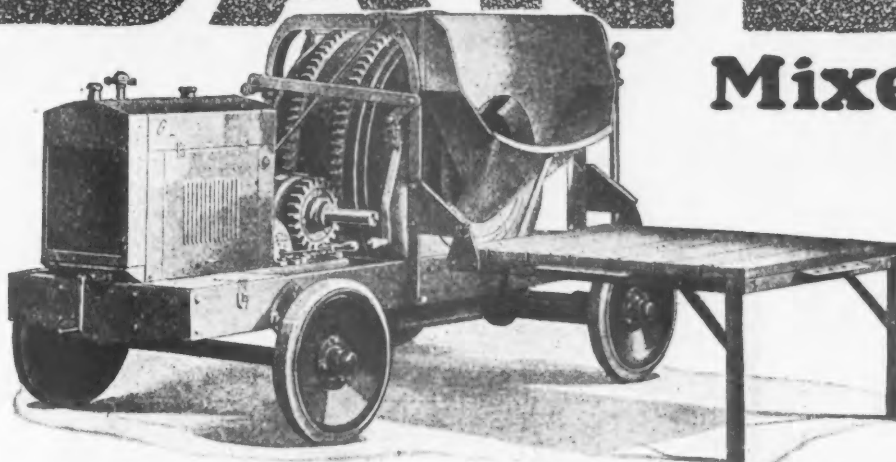
Evansville, Indiana

U. S. A., Established 1894

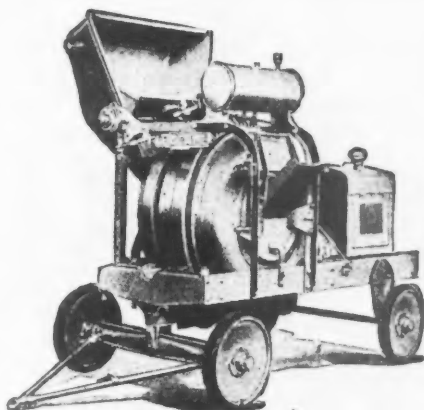


WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

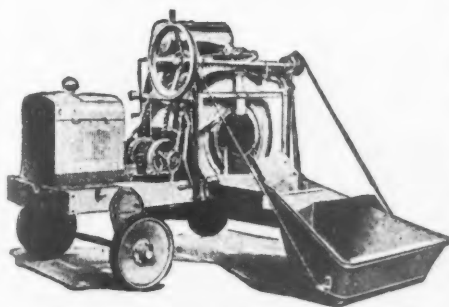
# KOEHRING 7-S DANDIE Mixer



Low charging platform, steel frame of which is hinged to mixer, and can be folded up against mixer-frame for hauling from job to job! Wide, capacious charging hopper makes charging easy.



Charging Skip goes to high angle charging position—shoots materials into drum without pounding skip! Note low automatic water measuring tank and Disc Wheels! Liberal drum dimensions!



Engine completely enclosed in dust-tight steel housing, sides of which raise for fullest accessibility to engine! Discharge operated from either side of mixer.

**LOOK** at the Dandie Drum—narrow, high, big openings, and suspended low in the frame!

That's a drum for fast work! Low in the frame, it is easy to charge direct from wheelbarrows. Big wide hopper takes the full charge, and no danger of spilling! Platform is hinged to mixer, and can be raised in hauling from job to job.

*If you want a power charging skip*, you will win with the Koehring for speed! Throw in the clutch—watch how materials begin to tumble and get into action the moment the skip leaves the ground! No chance for settling, wedging and choking at the throat of the skip! Into the drum they go in one clean swift slide!

*Ready to discharge?* All right, throw the lever — and say—that's an **EASY** lever! No need to break your back on that lever. Watch that discharge! That's the secret of the high narrow Dandie drum. It pours a big volume of concrete down on the discharge chute. This, together with the big pick-up buckets, makes the Dandie the star performer for fast discharge.

**Value as never before built into a mixer of its size**

You've got a fast money-making mixer in the Dandie—and you've got one that's going to stand up and take all the work you'll give it. It's staunch, strong and sturdy. Take your choice of a 4 cylinder radiator-cooled engine, or 2 cylinder hopper-cooled engine! Remember you get enclosed transmission in dust-tight oil bath with shaft on roller bearings! Worm gear drive, bronze bushed drum rollers pinned to the shaft and turning in big bearings same as on the big Koehring paving mixers! Double gear drum drive!

Automatic water measuring tank — light duty hoist — rubber tires and disc wheels or steel rimmed wheels. Complies fully with A.G.C. standards. **GET THE DANDIE CATALOG** —and know all the features of the Dandie. If you know mixer construction, you'll know the Dandie for the remarkable fast, money-making mixer, the unusual outstanding value and still within the price range for good one bag mixers. Send back the coupon today!

A 3202-1

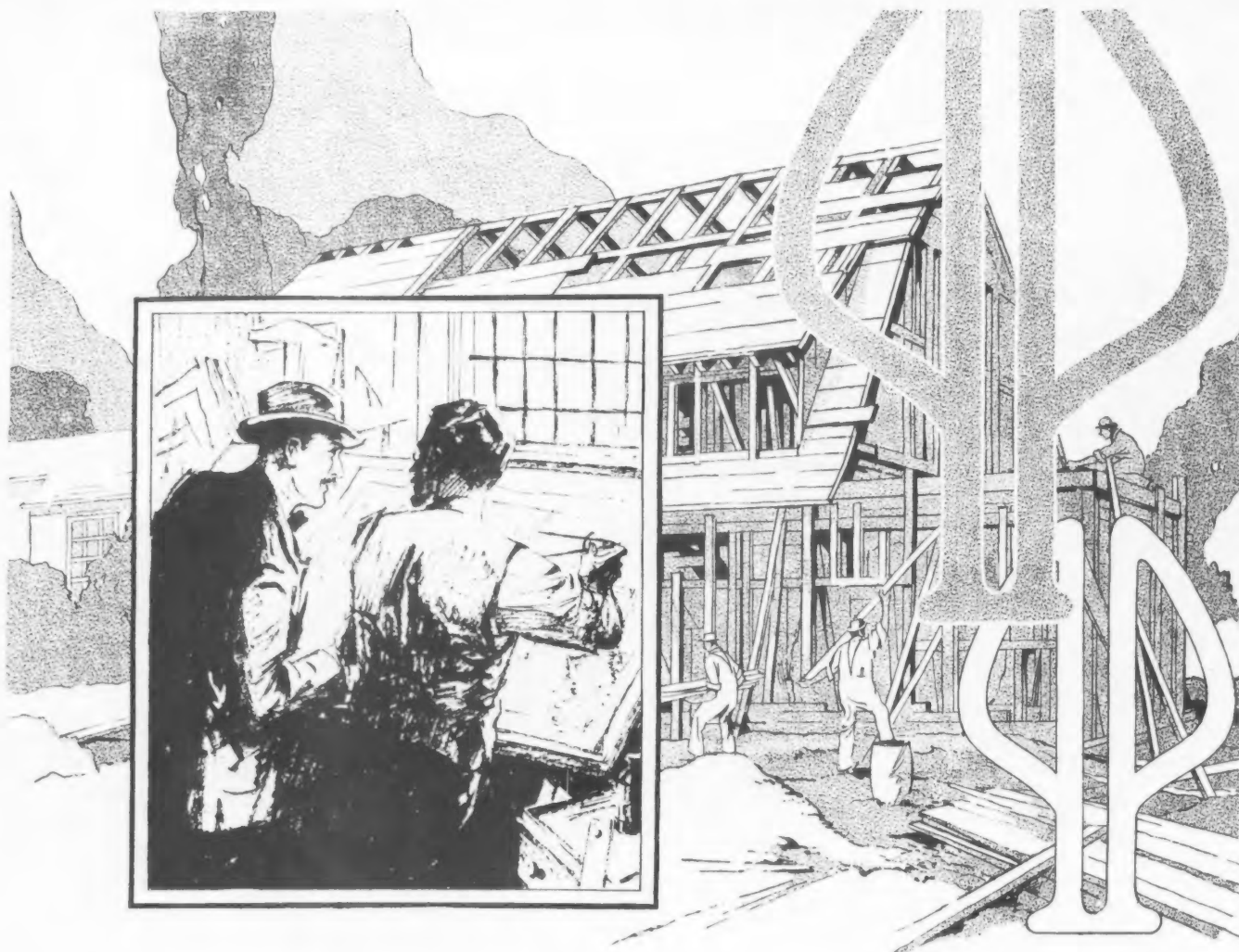
**KOEHRING COMPANY** MILWAUKEE WISCONSIN

PAVERS, MIXERS—GASOLINE SHOVELS, CRANES AND DRAGLINES  
Sales Offices and Service Warehouses in all principal cities  
Foreign Department—Room 1370, 50 Church St., New York City.  
Canada—Koehring Company of Canada, Ltd.,  
105 Front Street, East, Toronto, Ontario.  
Mexico—F. S. Lapum, Cinco De Mayo 21, Mexico. D. F.

KOEHRING COMPANY, Dept. D-1 MILWAUKEE, WIS.  
No obligations to me, but let's have a "show-down" on speed, construction and value in a one bag mixer. Send me the Dandie catalog

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

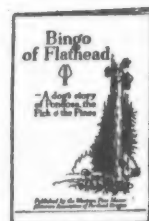




## Pride of the Inland Empire choice of those who build

Pondosa Pine! Sovereign of softwoods. The ideal lumber for building and repair. Light in weight, yet strong. Saws, planes, nails just the way you want your lumber to. You'll like working with Pondosa. It's always beautiful, economical, and mighty adaptable. Every trade-marked stick is rigidly *graded*, thoroughly *seasoned*, carefully *milled*.

Millions of acres of Pondosa grow in the Inland Empire of the Great Northwest, and new growth is added every year. There's more than enough to supply the needs of all those who build. For sale by good lumber yards. Ask for it by name. Write for booklet. Address Dept. 22, Western Pine Manufacturers Association of Portland, Oregon.



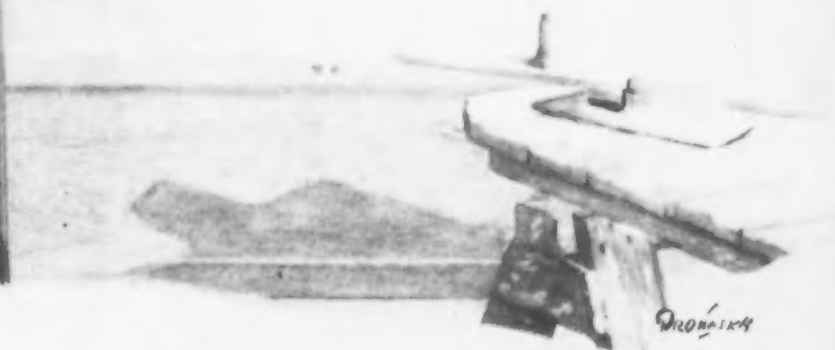
Write for  
this booklet

Pondosa Pine   
*The Pick o' the Pines*

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# Damp plaster is the most frequent cause of warped doors



LANNOM BROTHERS MANUFACTURING COMPANY  
Cabinet & Mill Work  
Saw and Door - Veneered Doors & Panels - Handmade Finish  
FIFTH AND MAGNOLIA STREETS  
OAKLAND, CALIF.

Feb. 4, 1924

The Wheeler, Osgood Co.,  
Tacoma, Washington.  
Gentlemen:

Referring to our recent order for a carload of "Laminex" fir doors, would ask that you ship this car at the earliest possible moment as our stock is badly broken.

You no doubt would be interested in our experience with your built-up doors which we have been using for the past several months. These doors have proven entirely satisfactory and have met with instant favor with our customers, having so many advantages over the regular type of door.

The feature that appeals to us most is the fact that we have found our old trouble of warped doors eliminated. While, of course these Laminex doors have been hung in a freshly plastered building, but, to our surprise and pleasure, the doors showed no tendency to warp, or be affected in any way.

It is with pleasure that we recommend your product most highly.

Yours truly,  
Lannom Bros. Manufacturing Co.

*John Lannom*

"...we have seen cases where these Laminex doors have been hung in a freshly plastered building, but, to our surprise and pleasure, the doors showed no tendency to warp..."



The famous soaking test, as originated by Prof. Bror L. Grondal, proving that Laminex is unaffected by moisture. Under this sensational test, repeated in all parts of the country, no Laminex door has ever warped or come apart.

"WHY is the usual solid door so apt to warp and wind?" We questioned architects and contractors in numerous cities. We asked for statements of actual happenings.

Some 1900 experiences were told... instances of doors that warped... and practical opinions giving the reasons. Nearly every one named *wet plaster* as the most frequent cause of warped doors. Other frequent causes given were: "Doors facing dampness on one side and artificial heat on the other"; "Houses closed up for long periods while damp"; "Doors warping through dampness in transit."

There are many other causes, as every builder knows—causes that cannot always be prevented—natural conditions that are bound to do damage to ordinary doors.

To withstand these conditions a door needs more than plywood panels. The mischief is found in stiles and rails which, in ordinary doors, have no supporting "back-bone." This is notably true in the one- and two-panel doors now so widely used.

In every Laminex door, the stiles and rails are built-up on a core of interlocking blocks with the grain crossed in adjoining sections. All parts are welded with a wonderful waterproof cement; then placed under tremendous hydraulic pressure for 24 hours.

# LAMINEX DOORS

WILL NOT SHRINK, SWELL OR WARP



# Laminex advertising is making the American public "door conscious"

*Advertisements will appear during 1926 in 23,000,000 copies  
of leading national magazines*

AS the world's largest door manufacturer we first produced, in Laminex, a trouble-proof door and then adopted a permanent policy of letting the whole world know about it. And all down the line of merchandising we have taken the initiative in revolutionizing the method of marketing a door.

With the necessary equipment and ability to standardize and produce on a huge scale, we have leveled the price of Laminex doors to compete with doors made the common way. Thus leading jobbers in every center are able to maintain adequate stocks for instant delivery.

Laminex fills a definite need for a trouble-proof door. It is accessible through distributors everywhere for quick delivery. It is being advertised nationally to all the peo-

ple. As a consequence, millions of Laminex doors are already in use. These are satisfying owners and helping builders and realtors to sell their houses. Mr. E. P. Janes, large building operator of Altadena, California, said, when ordering Laminex doors for 309 houses: "A nationally advertised and widely known product like Laminex, greatly assists in making sales."

Laminex doors in all popular styles with vertical grain stiles and rails or all-flat grain, may be had at leading jobbers. Write for our "Help-You-Sell" plan and sample of Laminex wood to test. Sales Offices: New York, Chicago, Memphis, Los Angeles, San Francisco, Spokane. Foreign: Woco Door Company, London; E. J. Van de Ven, Paris; Paul Solari & Co., Genoa.

*All genuine Laminex doors bear the  
Laminex guarantee label*

THE WHEELER, OSGOOD COMPANY  
TACOMA, WASHINGTON

THE WHEELER, OSGOOD COMPANY  
TACOMA, WASHINGTON

Gentlemen: I would like to know more about Laminex Doors. Please send catalog and sample of Laminex Wood, so that we can make our own tests.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

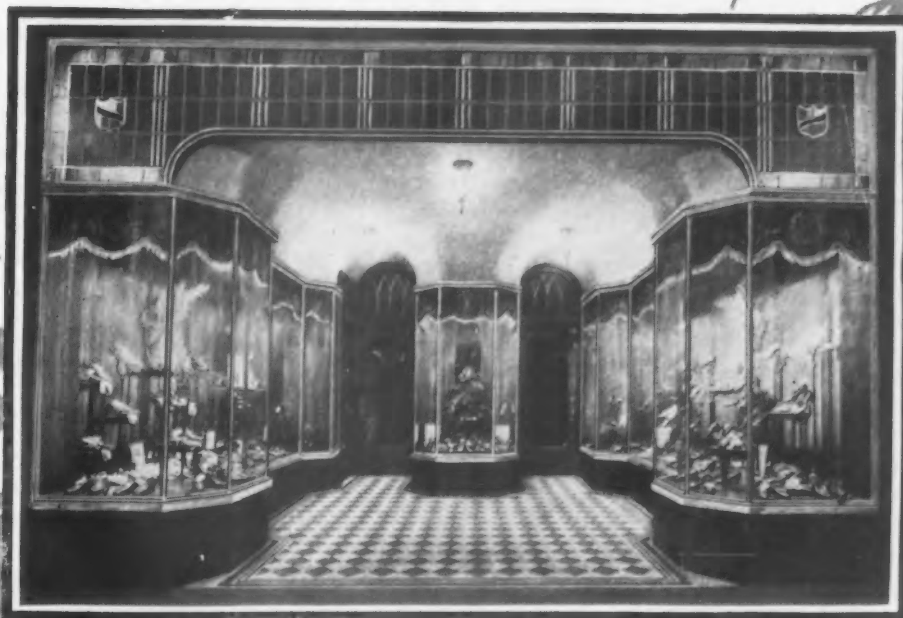
I am a dealer ☐

contractor ☐

architect ☐

# LAMINEX DOORS

*Will not shrink, swell or warp*



## Permanent Business for Contractors

**I** NSTALLING a complete store front construction of patented design is the Contractor's only safe choice. Constructions assembled from parts made here and there cannot be fully satisfactory—the architectural beauty is missing, the front lacks staying power.

The complete manufactured Brasco store front is built for its specific purpose. It has its patented features of design, which give the Contractor his required assurance of glass safety, long service, permanent beauty, adequate ventilation and drainage, and other essentials.

The story of Brasco merit is written in the thousands of installations everywhere—from the individual shop to chain stores, from automobile showroom to industrial building. It has proven its claim in actual service to thousands of Contractors, architects and owners.

To Contractors who have never taken the occasion to go into the merits of Brasco, either as a store front construction or as a means to safe, steady profits, we urge an immediate investigation. Let us send you full information on Brasco so that you can realize and benefit by the splendid opportunity it offers for substantial business.

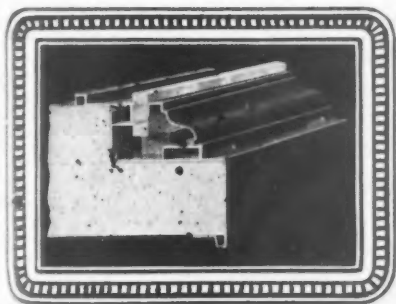
Mailing the coupon below does not obligate you, but simply makes it easy for you to get the details. Send it in now while it's before you.

### BRASCO MANUFACTURING CO.

5029 WABASH AVE., CHICAGO

*Eastern Sales Office and Warehouse*  
28-14 Wilbur Ave., Long Island City, N. Y.

Brasco  
"Series 500"  
All Copper  
Construction.



# Brasco

**COPPER STORE FRONTS**

BRASCO MFG. CO., 5029 Wabash Avenue, Chicago.

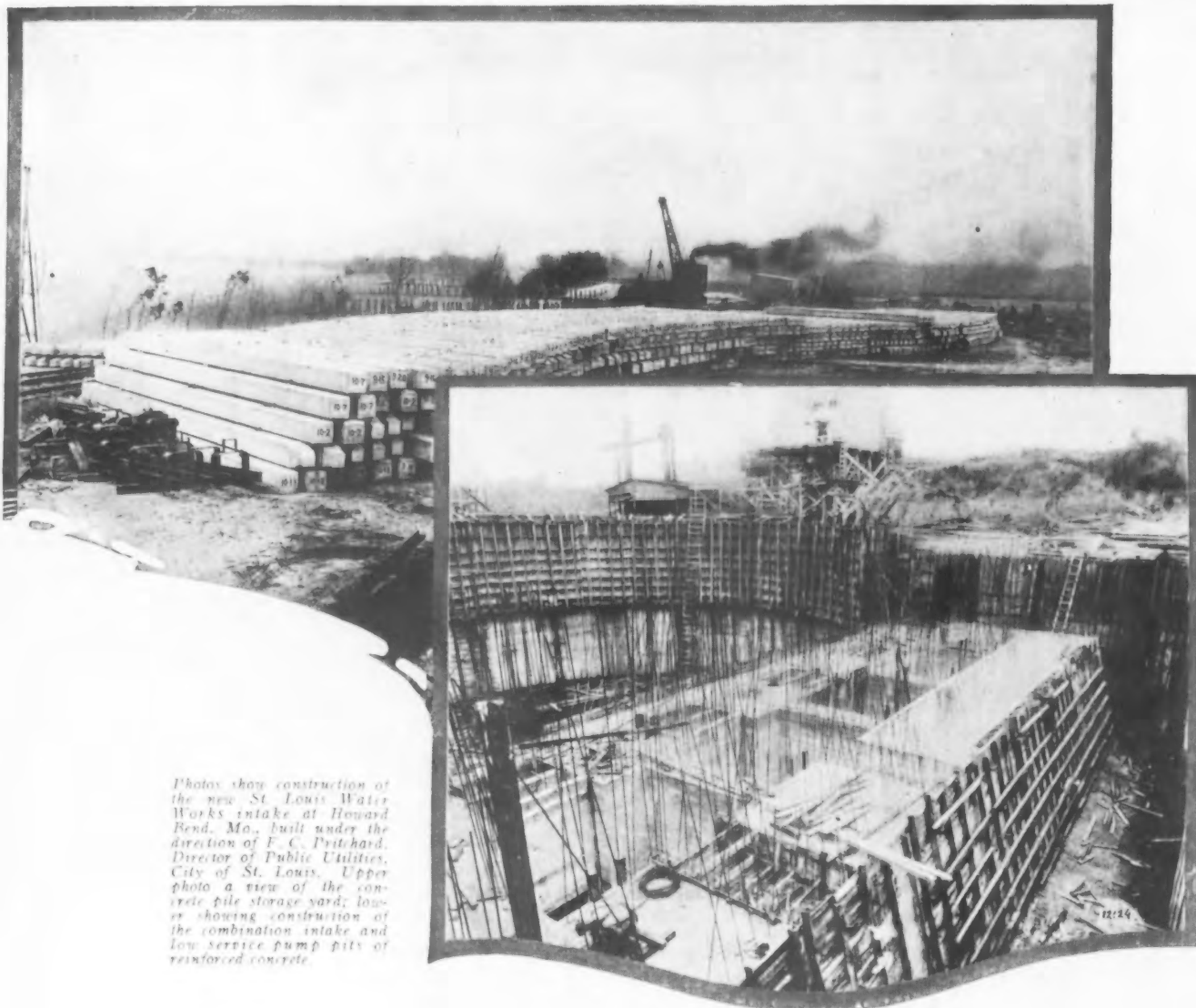
AB 926

Send me your free information on profitable store front work.

Name.....

Address.....





*Photos show construction of the new St. Louis Water Works intake at Howard Bend, Mo., built under the direction of F. C. Pritchard, Director of Public Utilities, City of St. Louis. Upper photo a view of the concrete pile storage yard; lower showing construction of the combination intake and low service pump pits of reinforced concrete.*

## ALPHA CEMENT IMPROVEMENTS at the St. Louis Waterworks

Typical of the use of Alpha Portland Cement on large projects is its employment on this outstanding development in modern waterworks practice. From Missouri to the Eastern seaboard, Alpha Service insures the engineer and contractor a dependable source of cement supply. And the 35 years of experience behind the Alpha name is a guarantee of quality and satisfaction.

**ALPHA PORTLAND CEMENT COMPANY**  
EASTON, PA. CHICAGO, ILL.

New York

Boston

Philadelphia

Pittsburgh

Baltimore

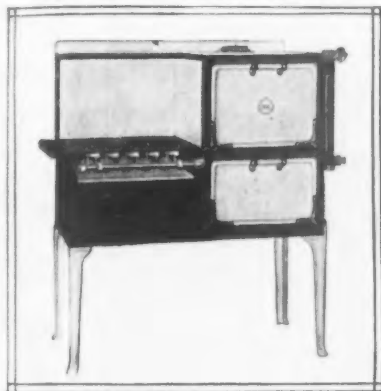
St. Louis

Battle Creek, Mich.

Ironton, Ohio



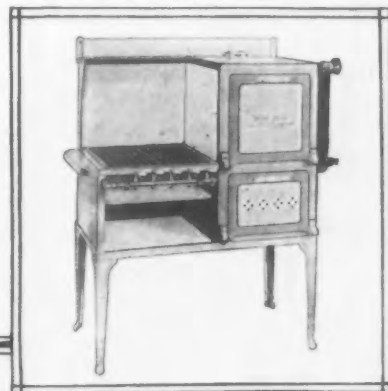
Clark Jewel No. R260 Lorain  
Extreme width with shelf, 48". Oven  
16½" wide, 18½" deep, 12" high.



Dangler No. 2024 EF Lorain  
Extreme width with shelf, 41". Oven  
14" wide, 18" deep, 14" high.



Direct Action No. 114 ARHR Lorain  
Extreme width with shelf, 47". Oven  
14" wide, 18" deep, 14" high.



## Stoves DO make a Difference

**A**n old-fashioned, box-like stove that requires stooping or a range without a Lorain Oven Heat Regulator lowers the selling- or rental-value of any dwelling. It pays to consider home-buyers and tenants who recognize the Lorain Red Wheel as a guarantee of easier, better cooking.

Thousands of women have learned to cook in the Lorain-equipped laboratories of more than 1800 schools and colleges. Millions see the Lorain advertisements that appear continually in thirteen big, national publications.

These women look for the Red Wheel that identifies Lorain, the original Oven Heat Regulator, completely made and unconditionally guaranteed by American Stove Company and found only on these six famous makes of Gas Ranges: Clark Jewel, Dangler, Direct Action, New Process, Quick Meal and Reliable.

The illustrations show six popular-priced Lorain-equipped Gas Ranges designed especially for compact kitchens. Red Wheel Ranges are made in all sizes, styles and finishes—for any building where cooking is to be done. For additional information, see Sweet's Catalog, 20th Edition, Pages 2769-2778, or send for our "Handbook" for Architects and Builders.



One easy turn of the Lorain Red Wheel gives the housewife a choice of any measured and controlled oven heat for any kind of oven cooking or baking.

Unless the Regulator has a **RED WHEEL** it is **NOT a LORAIN**

### AMERICAN STOVE COMPANY

*Largest Makers of Gas Ranges in the World*

233 Chouteau Avenue ∴ ∴ St. Louis, Mo.

# LORAIN OVEN HEAT REGULATOR



New Process No. R-40XX Lorain  
Extreme width with shelf, 48". Oven  
16½" wide, 18½" deep, 12" high.



Reliable No. 6931 Lorain  
Extreme width with shelf, 44". Oven  
16" wide, 18" deep, 12" high.



Quick Meal No. 5-414 Lorain  
Extreme width with shelf, 45½". Oven  
14" wide, 18" deep, 14" high.



**T**HE house and adjacent buildings of the late Col. John C. Coolidge at Plymouth, Vt., covered with No. 9 non-fading Green Ambler Asbestos Shingles, placed there after his thorough investigation and inquiry for a permanent, fireproof roof to protect the building made famous by the fact that his son had taken his first oath of office here as President of the United States, after the death of President Harding.

*Some of the reasons for this decision were:*

#### **THEY WEAR FOREVER**

AMBLER ASBESTOS SHINGLES are fireproof, permanent, good-looking and entirely free from upkeep expense.

They provide a roof or sidewall that will practically last forever, without repairing or patching—a roof that will never require either paint or repairs and can never wear out.

#### **THEY ARE FIREPROOF**

The fire protection that Ambler Asbestos Shingles give is one of the strongest reasons for their growing popularity, particularly in the country and suburbs, where adequate provisions for fighting fire are generally limited.

#### **THEY ARE WEATHERPROOF**

To construct a roof or sidewall that is weatherproof, one that will not admit rain or moisture, that can not burn or carry fire, and is not affected by sudden and violent changes of weather.

#### **THEY ARE ARTISTICALLY ATTRACTIVE**

A roof that combines all these wonderful points of superiority with the possibility of unusual decorative treatment. The non-fading Ambler Asbestos Shingle roofs are beautiful roofs, the lines are clean-cut and uniform, and they retain their original beauty for many years without any further attention being given to them.

*Send to Department A. B. for free booklet giving a story of this application*

#### **Branches**

Boston, Mass.  
Buffalo, N. Y.  
Chicago, Ill.  
Cleveland, Ohio  
Detroit, Mich.

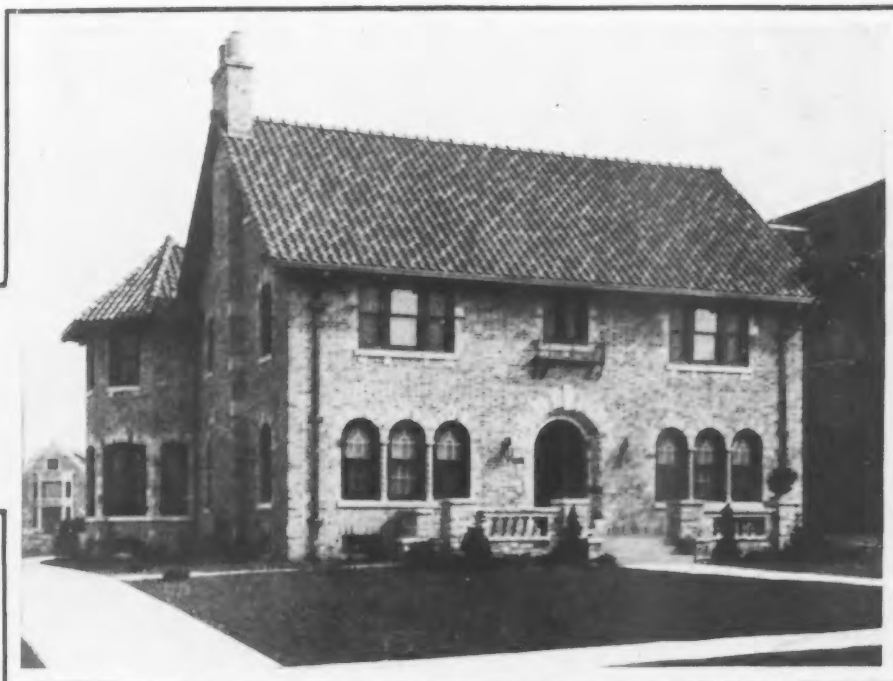
### **ASBESTOS SHINGLE, SLATE & SHEATHING COMPANY AMBLER, PENNSYLVANIA**

#### **Branches**

Minneapolis, Minn.  
New York, N. Y.  
Philadelphia, Penna.  
Pittsburgh, Penna.

Milwaukee, Wis. Washington, D. C. Wilkes-Barre, Penna. Omaha, Nebraska  
Southwestern Distributors: R. V. Aycock Company, Kansas City, St. Louis, Tulsa, Houston  
Southern Distributors: Dixie Asbestos Company, Birmingham, Ala.; J. T. Mann & Co., New Orleans, La.  
Pacific Coast Distributors: H. G. Sperry Co., San Francisco, Calif.; Seattle, Wash.; Salt Lake City, Utah; Globe, Arizona  
J. A. Drummond, Los Angeles, Cal. Mountain States Machinery Company, Denver, Colorado  
Berry Asbestos Company, Atlanta, Ga.

Residence of Louis M. Laue,  
Milwaukee, Wis., C. F. Rin-  
ger & Son, architects. Aug.  
Filter & Co., contractors. Flax-  
li-num in side walls, in ceilings of  
first and second floors and in roof.



#### for CEILINGS

Smaller heating plants can be installed when Flax-li-num is correctly used. Try it in just one house. You'll be amazed at the readiness with which the buyers show their preference for Flax-li-num insulated homes. A full inch thickness should be used for ceiling and roof insulation.



#### for SIDE WALLS

Flax-li-num comes in semi-rigid sheets, easy to handle and flanged to fit between studs. It is made from pure flax fibre. It cannot rot and repels vermin and rats. Convincing proof of its supremacy is that Flax-li-num is used to insulate the majority of the refrigerator cars now in service. For side walls use one-half inch sheets.

## You Can Safely Guarantee FLAX · LI · NUM for the Life of the Building

**T**HE superb, unequalled record of Flax-li-num was made in that greatest test of all — *years of actual service.*

In buildings 10 to 15 years old, Flax-li-num is still as efficient as when first installed. In refrigerator cars so long in use that the wood sills had rotted, Flax-li-num was found to be exactly in place and in perfect condition.

No other insulation has had so many long, severe tests — nor so many triumphs.

There is no risk in using Flax-

li-num. You can be sure that 15 or more years from now it will be just as efficient, for heat insulation and sound control, as the day it is installed.

Architects who specify Flax-li-num can point to an unequalled record of performance — of *reliability* — of *proven efficiency.*

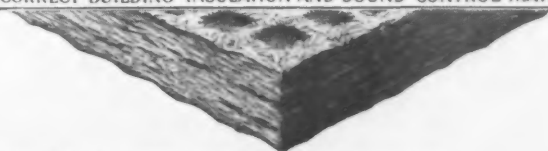
Builders who use Flax-li-num are building *proven permanent comfort* and *proven permanent goodwill.* They can safely guarantee Flax-li-num for the life of the building.

A copy of "Heat Insulation for Houses" is yours for the asking. Send for a copy.

FLAX-LI-NUM INSULATING COMPANY  
ST. PAUL, MINNESOTA

# Flax-li-num

THE CORRECT BUILDING INSULATION AND SOUND CONTROL MATERIAL



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





## *Birmingham, St. Louis and Philadelphia Agree*

There is money in the building business today, if you supply today's demands.

The present call is for well built homes which will be economical in upkeep. This demand points immediately to Better Plastering on metal lath. Just as an indication of this nation-wide trend, look at the following:

In Birmingham, Ala., the Nelson Real Estate and Investment Co. is using Better Plastering on metal lath in forty-three houses ranging in price from \$15,000 to \$40,000.

In St. Louis, Mo., the Davis Realty Company is building and supervising the construction of approximately seventy-five duplex homes ranging in price from \$30,000 to \$65,000 each. Better

Plastering on metal lath is used throughout.

In Philadelphia, John H. McClatchy is building literally hundreds of homes ranging in price from \$5,750 upward in which Better Plastering on metal lath is used.

Whatever the price—whatever the geographical location—the public wants Better Plastering. Whether you build on contract or for sale, this offers you a wonderful opportunity to not only do better work, but to "cash in" on the national good will toward Better Plastering on metal lath. If you feature Better Plastering on metal lath to prospective home builders and buyers, you can get more jobs—and more money for those jobs.

**Tie up to Better Plastering!**

### THE NATIONAL COUNCIL FOR BETTER PLASTERING

1305 Madison Square Building, Chicago, Ill.

#### *In which are co-operating:*

The Berger Mfg. Co.  
The Bostwick Steel Lath Co.  
The Consolidated Expanded Metal Cos.

The General Fireproofing Building Products  
The Milwaukee Corrugating Co.  
The Northwestern Expanded Metal Co.  
The Youngstown Pressed Steel Co.

The Penn Metal Co.  
The Truscon Steel Co.  
The Wheeling Corrugating Co.

# BETTER PLASTERING ON METAL LATH



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





A charming

## HARTMANN-SANDERS \$190\*

entrance for - - - - -

Happily blending rich dignity with warm hospitality, this beautiful entrance harmonizes perfectly with almost any type of architecture.

Its turned urn, hand carved rosettes, classic entablature and trydeglyphs, fluted pilasters, raised panels, moulds and leaded glass—all are eloquently expressive of the artistic, and create a delightful ensemble. Built complete, ready to set in place.

Scores of other Hartmann-Sanders Entrances can be built to your specifications or ours. All are stabilized by patented Koll Lock-Joint Columns. They add value to any home far beyond their low cost.

Investigate. Address Hartmann-Sanders Co., 2171 Elston Ave., Chicago, Ill.; Eastern office and showroom, 6 E. 39th St., New York City.



### SEND FOR FREE BOOK

New 32-page book shows the above entrance and many others. Catalog Y-52 sent free on request. Or send 30 cents for additional catalog Y-34 of pergolas, lattice work and garden furniture.

\*Price f. o. b. Chicago, without iron railing, lamps and hardware.

## HARTMANN-SANDERS

Pergolas  
Rose Arbors  
Garden  
Equipment



Colonial  
Entrances  
Koll  
Columns



Metzger, Fisher &amp; White, Builders



Mr. Herbert Hoover laying the "corner brick" of the "Better Homes in America" house at the Sesqui-Centennial International Exposition in Philadelphia.

## *A Face Brick House is a "Better Home"*

THIS is the house built at the Sesqui-Centennial Exposition in Philadelphia for "Better Homes in America" of which Mr. Herbert Hoover is President. It is headquarters for the Girl Scouts and thereafter will remain as a permanent home demonstration center.

President Coolidge in a letter to Mr. Hoover says: "The American home is the foundation of our national and individual well being. Its steady improvement is, at the same time, a test of our civilization and of our ideals. \* \* \* We need attractive, worthy, permanent homes that lighten the burden of housekeeping. We need homes in which home life can reach its finest levels, and in which can be reared happy children and upright citizens."

Build of Face Brick. It pays both you and your customer, because Face Brick preeminently makes the home house permanent and attractive.

### *Full information on Face Brick is available in these booklets:*

"Story of Brick" shows modern homes and discusses comparative costs. Sent free.

"A New House for the Old" shows savings effected by veneering old houses with beautiful Face Brick. Sent free.

"A Manual of Face Brick Construction," 116 pages, a text book on the three types of Face Brick wall construction, giving the contractor all the information he needs in building Face Brick houses. Sent for one dollar.

"Face Brick Bungalow and Small House Plans," a series of 128 designs of Face Brick houses, distinctive in design, convenient in floor plan and economical to build, issued in

four booklets showing 3 to 4-room houses, 5-room houses, 6-room houses and 7 to 8-room houses. The set, one dollar; single booklets, 25 cents each.

"The Home of Beauty," fifty 6-room houses selected from a nation-wide architectural competition. Sent for 50 cents.

"Two Apartment and Double House Plans," 14 attractive designs of duplex and double houses, showing 28 plans of 5 and 6-rooms each. Sent for 25 cents.

For all of the houses shown in these booklets complete working plans, specifications, etc., are available at nominal prices.



**THE AMERICAN FACE BRICK ASSOCIATION**

1763 Peoples Life Building · Chicago, Illinois





Ten classical designs with stopped flutes, apophyge and entasis, with diameters from 8" to 42" and heights of 5' to 42', give ample selection.

## They Defy Time, Itself

No longer is it necessary to worry about the columns you install in homes or monumental buildings! No longer need you fear the old rotting and cracking difficulties where inexpensive columns were used! That day is past.

Builders who have tried Union Metal Columns are using them more and more in their work. Pressed from enduring copper bearing steel, galvanized inside and outside, it is literally impossible for a Union Metal Column to rot or crack. Ten, twenty, thirty or more years, they last,—and as to cost, it averages about the same as the best wood columns.

Be rid of your columns worries. Use Union Metal on the next job and see the difference.



*Book No. 50—Ancient Beauty for Modern Buildings—should be in the hands of every builder. Send for your copy.*

**THE UNION METAL MANUFACTURING CO.**

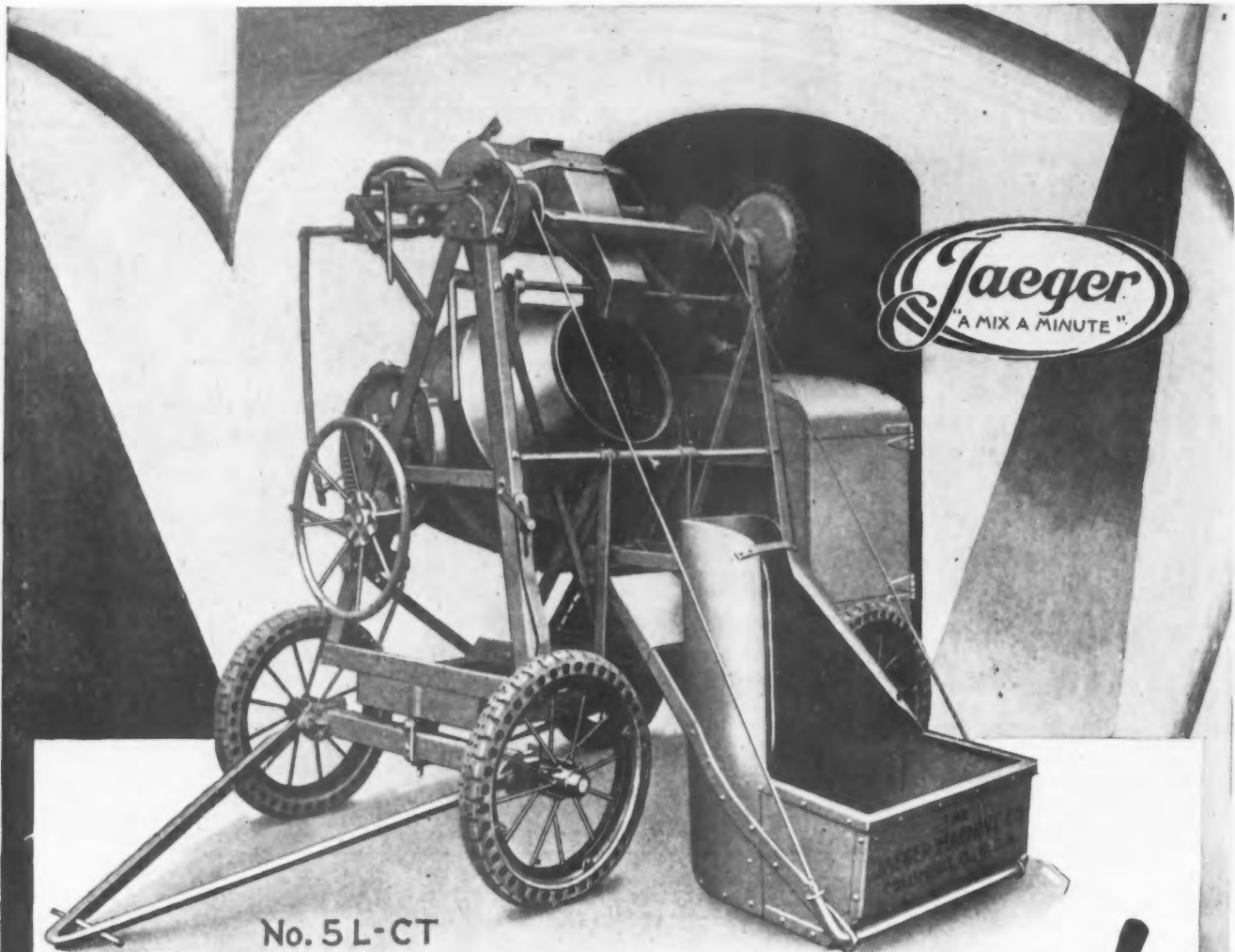
**General Offices and Factory, Canton, Ohio**

**Chicago Office — 230 South Clark Street**

# UNION

## METAL COLUMNS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



No. 5 L-CT

# RELIABILITY!

**T**HAT is the one big quality of Jaeger Mixers. The quality that has earned for them world-wide popularity and unquestioned reputation for positive efficiency. It is **RELIABILITY** and Jaeger low prices that assure every contractor that in a Jaeger he secures the outstanding mixer value on the market.

Jaeger Mixers—built in 36 different models—offer you a complete line. Every mixer in the line is equipped with the original Jaeger Tilting Drum with the flat spots inside. Mounted on skids—or on steel wheels—or cushion or pneumatic tires—with or without Power Loader and Automatic Water Tank—Jaeger Mixers can be furnished in the model exactly suited to your needs.

Write us direct for catalog or see our dealer for full information on the Jaeger line.

THE JAEGER MACHINE COMPANY, 318 Dublin Ave., Columbus, Ohio

# JAEGER

THE ORIGINAL JAEGER TILTING-DRUM MIXER





*Modernized and reshingled home of  
Frank Watkins of Scranton, Pa.  
Perwein & Seal, Contractors.*

## Modernize Old Homes Quickly —Double Their Value—

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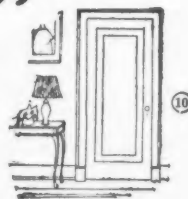
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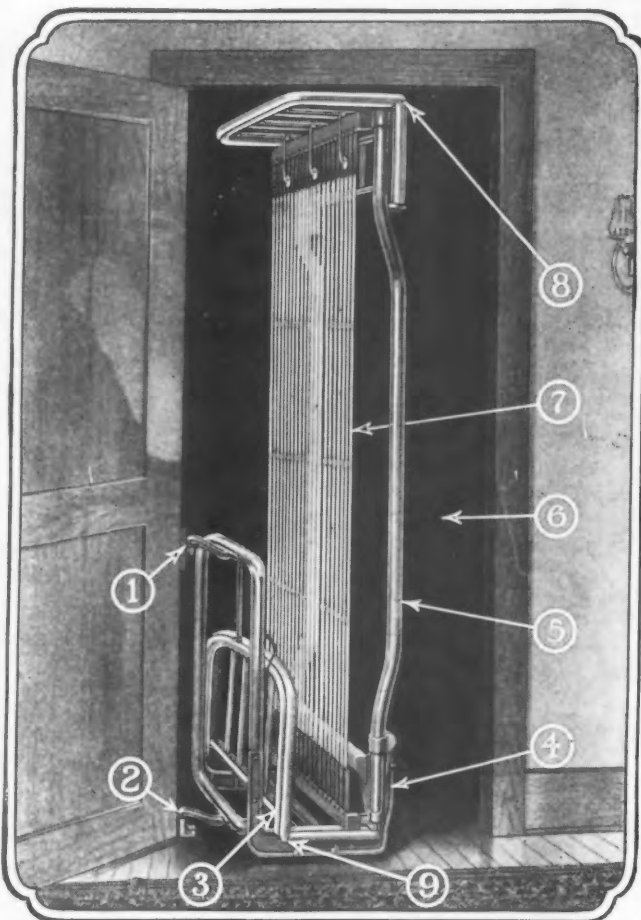


In those words was a magic that opened, to Ali Babi, the treasure cave of the Forty Thieves. There are, in apartments and houses, today, certain magical doors. In appearance, they are ordinary, standard, three-foot doors, Open one, and through it swings a luxurious, full-sized bed — built for pleasant dreams.

This bed—The Murphy In-a-Dor Bed — transforms comfortable, living room into cheery bed chamber, changes sun porch to open air sleeping place, doubling the usefulness of floor areas.

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- ⑧ Ball and Socket Hinge closes tube ends.
- ⑨ Ball and Socket Hinge closes tube ends.
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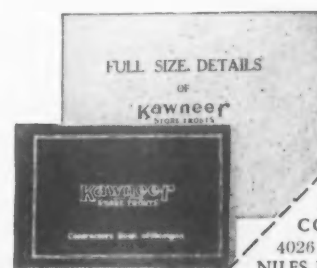
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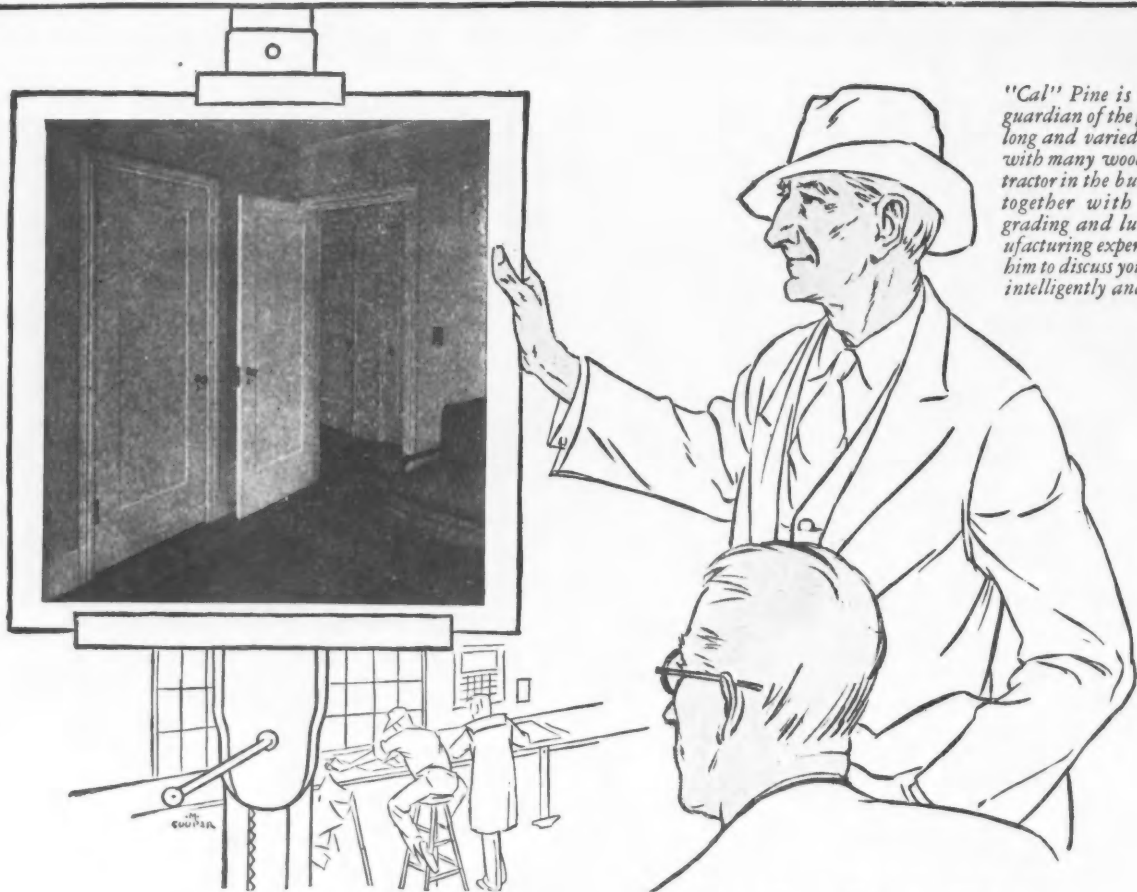
Instead of replacing entire fixtures as soon as the *seat* is worn, water-cut, or reamed away, you substitute a new seat (it costs only a few cents), and the fixture is as good as it ever was.

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Let us send you complete information and a cut-out sample showing this unit construction. Write

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# **CHICAGO FAUCETS**



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"You say California White and Sugar Pines make fine doors, most inexpensive to install. Why is this so?"

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"But how about service-qualities, and the cost of installation of California Pine doors?"

"That's the real test of door-value, I believe. And California White Pine and Sugar Pine have an enviable record on door-service and installation costs. These woods take and hold glue remarkably well, which is immensely important in holding fast together the

various parts of the doors, so that they can be depended upon to give permanent service under hard usage. Also they have great freedom from tendency to shrink or swell under variable conditions. And the costs of installation are lowest. Carpenters save time cutting, fitting and hanging California Pine doors."

"To what extent do door manufacturers use California Pine lumber?"

"More than any other wood. Millions of California Pine doors are made every year. Most door manufacturers prefer California Pine because of its ideal working qualities, ample supply and the high-class finished product it makes."

"My illustrated book of grading rules covers the entire subject of grades, sizes and uses of California Pine. You'll find this book very useful in the drafting room. A postcard will bring you a copy gratis."



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# california PINE

California White Pine (trade name)

California Sugar Pine



# The Man Who Stood Still

**T**HE man who stood still! You pass him on the street every day. If you take one moment now, you can easily recall at least one man who reminds you of this picture. Day after day he follows in the same groove. In good health and in bad he has got to work. Growing older and older, he sees ahead no relief from the ceaseless toil that he has known all through his life. There is no opportunity for him to cease for a single day the everlasting "humdrum" that he has known for so long. He is the man who stood still.

When he had the chance he failed to seize it. He allowed other men, no smarter, no abler, no better than he, to crowd him out. One by one his fellow workers passed him by to better and more profitable work. They left him always standing on the threshold of success. But they left him behind. He heeded not the beckonings of opportunity. He is the man who stood still.

And now at sixty, at seventy or at eighty years you may see him any day if you care to look—a good carpenter, a good builder, a good contractor perhaps—but that's all; good in the sense that he can do certain things simply because he has done the same thing over and over again—but not good enough to try the new difficult work, the modern up-to-date jobs; the kind that pay good money. No, he cannot do these things—he never learned how. He is the man who stood still.

You don't want to stick to the plane, the saw and the hammer all your life. If you are a contractor or a builder don't you want bigger work than just barns, sheds and now and then a house or two?

If you are a draftsman, an apprentice or assistant in an architect's office you don't want to remain in your present position any longer than you have to; you want to make your present work the stepping stone to a bigger position, which will be your life's work.

You don't want to stand still and see your friends step ahead to enjoyable, well paid, independent work simply because they "snap up" the same opportunities, the same chances that are offered you. It is the natural ambition of man to want to keep up with his fellows.

The only way that you or any other man can keep up is through study—study of your chosen work. If there is a certain part of your work that you don't thoroughly understand then some time when that kind of work has got to be done some other man is going to step up ahead of you and do it. He learned how. **KNOWLEDGE IS THE GREAT LEVELER.** There is no true independence where there is lack of training.

You have the chance now within your grasp to get this necessary training. This advertisement is an absolutely direct appeal to you. No matter how good a position you hold now—no matter how much work you are getting—no matter how well you are paid for it—this advertisement holds as much interest for you as the man who is actually looking for work.

At no risk to you—without the slightest obligation on your part—we offer you the really great opportunity of perfecting yourself in your life's chosen work. Don't pass this page by until you have made up your mind to give the rest of this advertisement careful study. Look at the picture again at the top of this page—look at it carefully. You owe it to yourself and to those who may be dependent upon you to take advantage of every possible chance for bettering yourself.

You cannot afford to be the man who stood still

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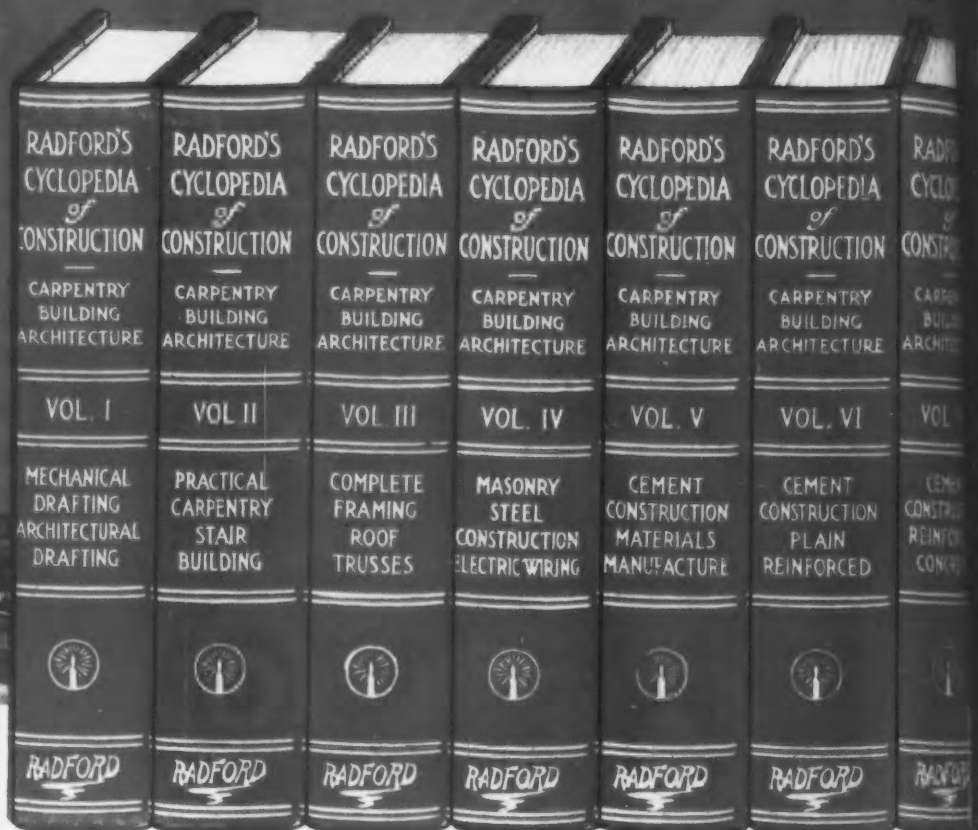
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as it  
Lights*

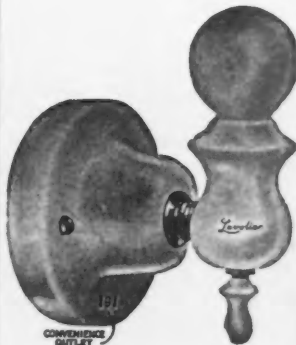
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and  
All Right*

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The Lever control at the bottom of the socket is new and most convenient. Heavily insulated for safety against shock. A slight push or pull in any direction with the finger will turn the switch on or off. Can be furnished with keyless socket that has no lever but has a button to preserve symmetry of line.

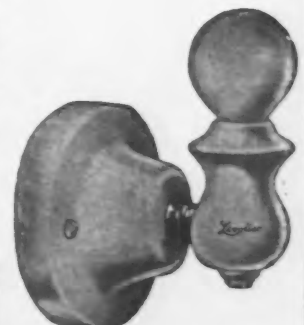


The convenience outlet or receptacle built into the base or canopy is an economy feature. It saves the price of an extra circuit run to baseboard receptacle. Brackets can be furnished with or without convenience outlet. They can also be inverted with the lamp illuminating downward.

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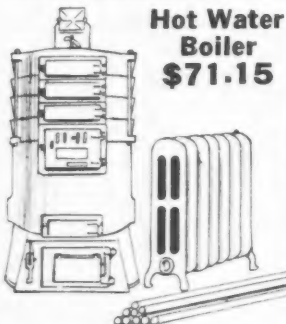
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**Peerless Bath Room Outfit \$114.** Beautiful—Complete, without shower. Bath tub: Built-in apron pattern 30 in. x 5 ft. Enam. inside and out. **Tub comp. \$64.50.** Closet: deep seal syphon, wash down type with jet. Large high grade solid porc. tank. Heavy interior fixtures. **Lavatory**—square ped. type. High grade porc. enam. 20x24 in. slab. Nickel plated fixt. and pipes. Pop-up waste fixture. China knobs. Singly \$30. Shower equipment \$12 extra.

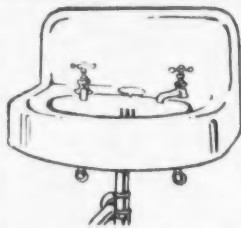
**Electric Automatic Water System complete \$87.50.** Furnishes abundance of running water in homes or institutions. Absolutely dependable and made of finest materials. Runs itself. Requires no attention. Everything furnished complete at this price, including 42 gal. tank. Larger tanks at slight additional cost.



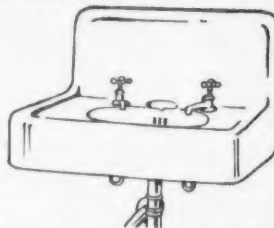
**Karol Hot Water Boilers**—deliver every ounce of heat and are very economical on fuel. Corrugated sections with back and forth fire travel. 700 ft. rating boiler \$71.15. Other sizes at low prices.



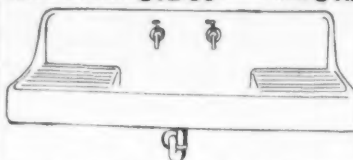
**Hot Water  
Boiler  
\$71.15**



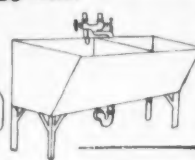
**Lavatory comp. \$11.70.** Newest style, porc. enam. cast iron. 17x19 in. 6 in. back. Nickel plated cocks, trap and pipes, 18x21 in. size with 8 in. back \$12.50.



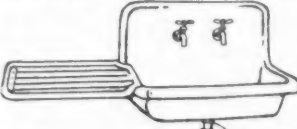
**Square Lavatory only \$11.90.** Porc. enam. cast iron. 18x24 in. 10 in. back. Equipped with China indexed nickel plated compression cocks. Nickel plated trap and supply pipes to floor or wall \$4.20 extra.



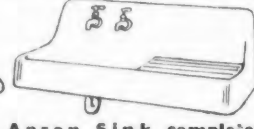
**Apron Sink complete \$51.** Porc. enam. 62 in. Double drain board. Nickel plated faucets and trap. Supported on wall hangers.



**Granite Laundry Tub complete \$12.55.** Two comp., 48 in. This tub is specially made and can be depended on. \$2.25 mixing faucet free with each tub.



**Sink with Reversible Drain Board complete \$18.25.** Porc. enam. with reversible drain board. Nickel plated faucets and trap. Size 18x24 in.



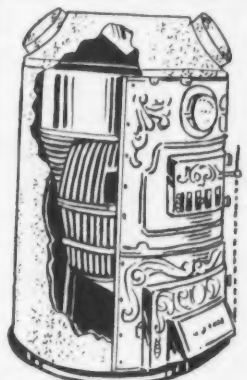
**Apron Sink complete \$30.70.** Porc. enam.

42 in. R or L. drain board. Nickel plated faucets and trap. Supported on wall hangers. Roll rim sink \$26.

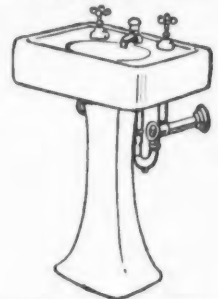
**Solid Vitreous China Closet complete \$19.80.** Heavy cast brass parts. Syphon, wash down type with jet.



**Pedestal Lavatory complete \$34.** Porc. enam. with heavy brass nickel plated fittings. Size 20x24 in., 32 in. high. Equipped with newest hot and cold water mixing valve.



**Karol Hot Air Furnace** with double heating surface. Cannot leak, smoke or gas. Solid gas fire pot, radiator and base plate. Burns any fuel, gives intensive heat. Send for full description. 18 in. fire pot seven room size \$56.98. Other sizes at low cost. **Karol Pipeless Furnace** seven room size \$69.00.



**Galvanized Range Boiler.** 30 gal. size complete with stand, fittings and circulating tube \$8.50.

**Combination Gas Boiler complete \$20.** Economical. Keeps hot water in tank at all times.



## B. Karol & Sons Co.

Dept. 12, 800-802 So. Kedzie Ave.  
Chicago, Ill.



# Firesafe . . . easily, profitably



With the first touch of frost comes the inevitable crop of private garage work—complete buildings or simple lining jobs. And for this purpose, Sheetrock, the *fireproof* wallboard, is unequaled. In suggesting and using it, you do both yourself and the owner a favor.

You'll like the clean, easy way Sheetrock goes on—saves time and work. Standard size sheets span joists and studs exactly. Cuts easily—saws like lumber.

Sheetrock's firesafety and remarkable insulating value please the owner. And the finished job looks workmanlike and tidy.

There's always a Sheetrock dealer near. Insist on the genuine Sheetrock—the full 3/8-inch, gypsum core board, with the patented, reinforced nailing edges. Every board branded.

Sheetrock is inspected and approved by the Underwriters' Laboratories, Inc., as an effective barrier to fire.

UNITED STATES GYPSUM CO.  
General Offices  
Dept. 1, 205 W. Monroe St., Chicago

# SHEETROCK

## The **FIREPROOF** WALLBOARD

Made by the United States Gypsum Company

. . . . . **Clip and mail this coupon today!** . . . . .

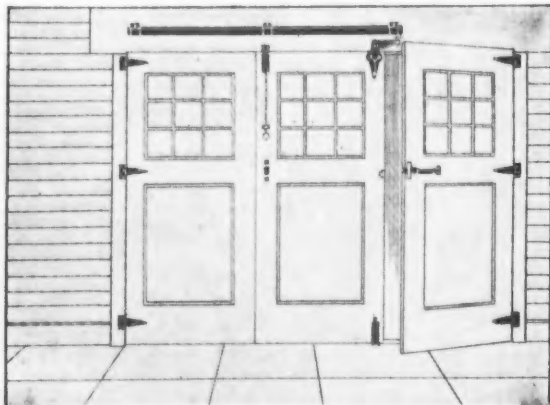
UNITED STATES GYPSUM COMPANY, General Offices: Department 1, 205 W. Monroe Street, Chicago, Ill.  
Please send me your data on the new Sheetrock Reinforced Joint System and other special information on Sheetrock.

Name \_\_\_\_\_

Address \_\_\_\_\_

Sheetrock comes in standard sizes: 3/8 inch thick, 32 or 48 inches wide and 6 to 10 feet long

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## WAGNER Hangers



**Used the World Over**

*Illustrated at the left is the Wagner 3-Door Clozite Set, widely used for one car garages.*

# They Guard Your Reputation

**Wagner Clozite Garage Door Sets  
Keep the Owner Satisfied After  
Your Work Has Been Completed**

**W**HENEVER you or your men build a garage, your reputation as a contractor depends to a great extent on the hardware that operates the door. And to get unfailing service from garage doors year after year, thousands of builders use Wagner Clozite Garage Door Sets on every garage job.

The patented stop—the smooth, self-cleaning track—the simple adjustment to overcome any tendency to sag—these are fundamental Wagner advantages. Be sure of having garage doors that will meet the owner's continued approval. Specify Wagner whenever ordering the door hardware.

## Wagner Building Hardware Makes Better Farm Buildings

The remarkable strength of Wagner hangers makes them unusually well adapted to farm construction. Wherever a sliding-door is to be installed, there is a Wagner Hanger exactly suited for the purpose.

In constructing a corn crib, or any building with a concrete floor, use Wagner Studding Sockets. Made of heavily galvanized steel, which is embedded securely in the concrete foundation, they make a firm support for the side walls.

*Write for the Wagner catalog showing the complete line of Wagner building hardware. Full of detailed suggestions on all types of installations. Send for it today.*

**WAGNER MFG. COMPANY**  
Cedar Falls, Iowa

# WAGNER

## CLOZITE Garage Door Sets



## The Wagner Clozite Hanger

The Patented arm stop absolutely prevents the hanger arm getting on dead center or swinging to reverse position.

## Wagner Studding Sockets



The Wagner Studding Socket is an extra-strong, yet economical means of fastening studdings to a cement floor.

# *The J & L JUNIOR BEAM IN USE*



**Blaw-Knox Company Office Building, Blaw-Knox, Pa.**

Architects and engineers, Hunting, Davis & Dunnells, Pittsburgh  
Contractor, J. P. Halderman, Pittsburgh

**I**LLUSTRATION shows blending of J & L Junior Beams with standard structural steel during erection of the Blaw-Knox Office Building, Blaw-Knox, Pa. The type of construction shown is shelf angles with coped Junior Beams in place. The picture illustrates the true section of Junior Beams, the fine, level floor created by Junior Beam construction and details of small openings. It demonstrates conclusively that the Junior Beam can be erected at the same time that the structural steel of the building is being erected.

The Junior Beams are accurately spaced and held in place by shelf angle clips. The next step of construction is the placing of the J & L Junior unit bridging, making the floor construction amply safe.

Temporary planking can be used until the Junior Beams are all in place in the structure, making a safe working platform on each floor until such time as the wire lath and concrete floor are to be put in position.

The J & L JUNIOR BEAM is a light-weight, rolled steel structural section, not formed, fabricated, welded or otherwise worked upon after the initial rolling. Its use will aid in reducing fire losses. Its cost is within the reach of all. An exclusive Jones & Laughlin product.

*ILLUSTRATED FOLDER No. 1, will be sent on request.  
It contains additional details, tables and illustrations of  
the J & L Junior Beam and accessories.*

## **JONES & LAUGHLIN STEEL CORPORATION**

*American Iron and Steel Works*

**PITTSBURGH, PA.**



# BEAUTIFUL HOMES



## DE LUXE PLAN BOOK

Illustrating 200 Homes that represent the newest ideas, the latest treatment in Colonial, Spanish and English design.

These homes have been built and have met the test. They cover all types of construction.

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*Things you should know about construction*  
Two story homes (80 plans)  
Story and one half homes (40 plans)  
One story bungalows (80 plans)  
*Charming entrances*  
*Built-in Features of the Home*  
*Casement Windows*  
*Treatment of Walls*  
*Floors and their care*

"Beautiful Homes" is a *real* plan book of 200 Homes. Contains 278 pages. It is well bound in a heavy cover with title embossed in color. A beautiful De Luxe edition.

### THREE GOOD REASONS

#### Why You Should Have This Book

Because it will give you a wealth of expert information about building a home.

### SPECIAL OFFER

KEITH'S  
Minneapolis, Minn.

A. B. [MAIL THIS]  
COUPON

[ ] Send me Keith's Beautiful Homes Magazine for one year, also your 278 page De Luxe edition, "Beautiful Homes" Plan Book, postage prepaid, for which I enclose check (or money order) for \$3.25.

[ ] Send me as above C. O. D., for which I agree to pay the postman, upon delivery, \$3.25 plus a few cents for postage.

Name .....

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Because you will find nowhere else, a finer lot of high class, well planned homes in the latest architectural design.

Because an investment of three dollars in "Beautiful Homes" plan book and magazine will bring you a large return for your money.

## KEITH'S BEAUTIFUL HOMES MAGAZINE

In the new, enlarged 8½x11½ page size, containing a wealth and variety of ideas and plans for the builder.

### 16 PLANS EVERY MONTH

Each number contains a design section showing sixteen plans of homes and garages, a total of about 200 for the year.

This magazine was established in 1899 and today is a recognized, national authority on designing, building and decorating artistic homes. You will like "Keith's."

The subscription rate is \$2.00.

### GET THE 400 PLANS

To any subscriber to the American Builder we will mail a copy of KEITH'S Big De Luxe Plan Book and will enter a year's subscription to Keith's Beautiful Homes Magazine, both publications giving a total of 400 plans, all for \$3.00, plus 25 cents mailing charge, or sent C. O. D. by parcel post plus a few cents postage.

**KEITH CORPORATION, Architects**  
100 North 7th Street      Minneapolis, Minn.

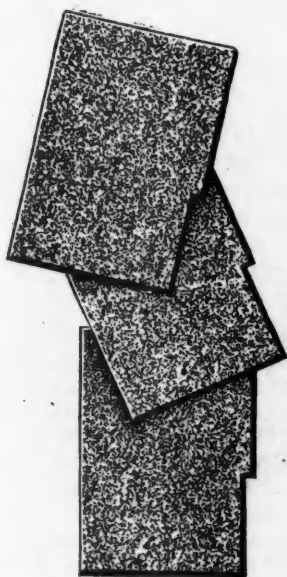




## Builders!

Send for a Copy of this Folder

**Y**OU who are interested in building *salable* houses—should not fail to write for a copy of the Ruberoid Giant-shingle folder.



This folder contains valuable suggestions regarding the proper blending of color on the roof. Printed in four colors, it illustrates tonal values of tapestry effects which harmonize perfectly with any architectural style or scenic surrounding.

Ruberoid Giant-shingles afford you a medium for the expression of individuality without departing from good taste. They are surfaced with natural crushed slate granules in rich

shades of sage-green, tile-red, steel-blue, and purple. Extra size, weight and thickness enhance their appearance and ensure durability. A *closed channel* provides absolute protection even during abnormal storm periods. As they are easy and economical to apply their all round advantages make them ideal for your usage.

Your request will bring a copy along with samples and full information regarding Ruberoid Giants. The coupon is for your convenience.

The RUBEROID Co.  
New York

Chicago

Boston

# RU-BER-OLD

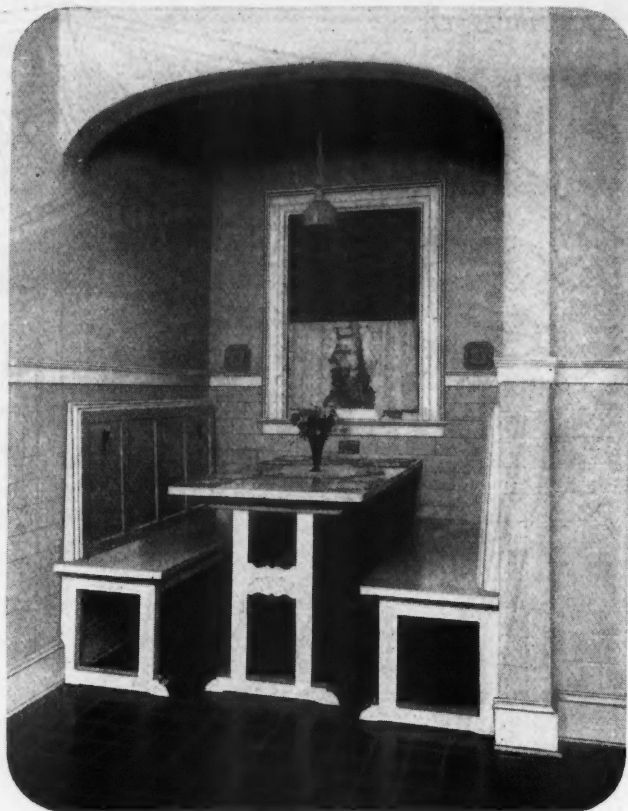
## SHINGLES AND ROOFINGS

The RUBEROID Co. Amer. Builder  
95 Madison Ave., New York, N. Y.

Gentlemen: Please send me samples—also a copy of the folder on Ruberoid Giant-shingles which shows how different colors may be attractively used on roofs.

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

WHEN you build *permanent* furniture like this Curtis dining alcove (C-742) into a house, you are building-in beauty. This dining alcove includes one table and two seats, for a space not less than 5' 6" or more than 6' 0" wide. The table top is 2' 6" x 4' 6" and is 2' 6" high. The overall dimensions of each seat are 3' 6" high, 1' 6" wide and 4' 6" long. The set is furnished in either white pine or yellow pine, set up or K. D., completely machined and fitted. You can buy it for less than you can make it. The photograph here is from a house built to sell by Frank J. Miller, at 18 Norwood Ave., Albany, N. Y.; Blakeslee Lumber Co., dealers.



# Charming Interiors . . . .

*are built-in, and the contractor or  
builder is the man to build them in*

## How Curtis Woodwork helps

MUCH of the beauty that every new home should possess ought to be in it before a single piece of furniture is moved in or a single curtain hung. When the contractor or builder turns over a house to his client, it should already have a charming interior.

The one element that does most for the beauty of a house is the woodwork—the doors, windows, trim, stairway, built-in cabinetwork. If these *permanent* things are beautiful, then decorating and furnishing will be simple matters, because the woodwork is the background for all interior decorative effects. It is the connecting link between the architecture of the house itself and the decorative scheme.

Leading contractors and builders know the importance of the right woodwork in building successful houses. That is why so many of them use Curtis Woodwork exclusively.

They know that in Curtis Woodwork they get designs that are *right*. Curtis designs are the work of architects of

highest standing, and are suitable for houses in all architectural styles.

They know that Curtis Woodwork has no equal in quality of materials used, methods of construction employed, or workmanship.

Yet in spite of authentic design and superior quality, they know from experience that Curtis Woodwork costs no more than ordinary millwork. Indeed, it often actually costs less when such on-the-job expense items as cutting and fitting and sanding are taken into account.

These leading contractors and builders understand that the reason why Curtis Woodwork can offer them more

beauty and better quality at no more cost, is because it is produced in advance of orders in large quantities.

Therefore they are glad to confine their woodwork requirements to Curtis stock designs, sizes and woods, in order to enjoy these advantages.

Everywhere that the best houses are being built, contractors and builders are having the co-operation of Curtis dealers. The leading dealer in woodwork in your community (if you are east of the Rockies) is probably a Curtis dealer. He will be glad to show you his stock and to give you full information about the opportunities for profit that Curtis Woodwork offers up-and-coming contractors and builders. Or write us for details.

*The Curtis Companies Service Bureau*  
496 Curtis Bldg., Clinton, Iowa

Curtis Bros. & Co., Clinton, Iowa; Curtis-Yale-Holland Co., Minneapolis, Minnesota; Curtis & Yale Co., Wausau, Wisconsin; Curtis Detroit Co., Detroit, Michigan; Curtis Sash & Door Co., Sioux City, Iowa; Curtis, Towle & Paine Co., Lincoln, Nebraska; Curtis, Towle & Paine Co., Topeka, Kansas; Curtis Door & Sash Co., Chicago, Illinois; Curtis Companies, Inc., Eastern Sales Office: 25 W. 44th St., New York City.  
*Curtis Companies, Incorporated, Clinton, Iowa*

1866  
**CURTIS**

Curtis Woodwork is sold by Curtis dealers east of the Rockies. Make sure the woodwork you buy bears this trademark. The makers of Curtis Woodwork are proud to identify their products by it.

# Sal-Mo Hex



## WILL PROTECT YOUR HOME

**S**AL-MO HEX will provide the best protection for any home no matter what the weather may be. Their special construction gives greater resistance against blowing up, flapping or curling.

The hexagonal shape formed when the roof is laid, together with the natural permanent color of Sal-Mo Hex makes for a more beautiful roof. By far a superior shingle.

More quickly and easily applied; self-aligning and self-spacing are other superior features of Sal-Mo Hex strip shingles. Only the best of raw materials are used in the manufacture of these shingles.

Full details regarding the application of Sal-Mo Hex strip shingles as well as costs will be supplied promptly. Write!

## SALL MOUNTAIN COMPANY

**Sal-Mo  
All Purpose  
Roofing Materials**

**CHICAGO  
SCRANTON  
BOSTON**



Sal-Mo Products have been in the building field for 34 years. We are manufacturers of all kinds of roofing and asbestos products. Full information on our entire line will be sent you Free upon request.

**SALL MOUNTAIN COMPANY,  
140 So. Dearborn St., Chicago, Ill.**

Gentlemen: Please send me without obligation full information on ☐ Sal-Mo Hex ☐ Other roofing material ☐ Asbestos products

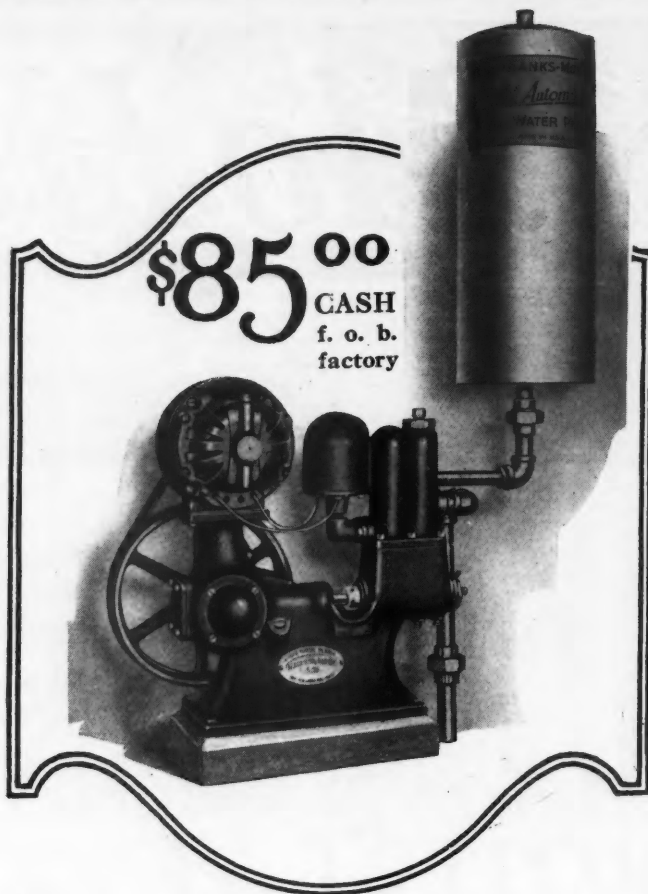
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Address .....

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



200 gallon per hour  
Fairbanks-Morse Home  
Water Plant, complete with  
4 gallon galvanized tank.



## A Leader in a Line of Leaders

From every standpoint—capacity, quality and price—the Fairbanks-Morse Home Water Plant is unquestionably the greatest value ever offered. It is a *leader* in a line of leaders. Fairbanks, Morse & Co. are recognized as the leading manufacturers of water systems for every purpose—municipal and industrial as well as domestic.

This plant is sold complete for only \$85.00 cash f. o. b. factory—a price that permits you to offer your customer a *real*, big capacity home water plant at a minimum cost. It is indicative of the other values in the complete line of Fairbanks-Morse home water systems, ranging in size from 120 to 5000 gallons per hour, either electrically or engine driven.

This plant consists of the standard Fairbanks-Morse 200 gallon automatic electric pump com-

plete with two-pole switch and four-gallon tank. The pump has the same high grade finish, the same speed, and the same capacity as has been furnished in connection with the self-contained tank combinations.

The four-gallon pneumatic tank of special design is heavily galvanized inside and out and is tested to 125 pounds working pressure. To avoid any strains on the pump—the tank is placed in the discharge line in such a manner that the weight of the tank and water is not supported by the pump itself.

Like all Fairbanks-Morse Products, you can use or recommend this plant with absolute confidence as it is backed by the strong Fairbanks-Morse guaranty. Write for full particulars. Address Dept. H-9.

FAIRBANKS, MORSE & CO., *Chicago*

# FAIRBANKS-MORSE

## HOME WATER PLANTS

Fairbanks-Morse  
Products



"Every Line a  
Leader"

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# Sixteen Years' Service

and still  
giving  
Satisfaction

Milwaukee, Wis., July 7, 1926

Sidney Machine Tool Co.,  
Sidney, Ohio.

Gentlemen:-

I've noticed your ads in the American Builder for some time but never took time to write until today.

I would like one of your new catalogues illustrating the Jr.30 model.

My dad and myself have become "Sidneyized" on woodworking machinery.

Our first machine was bought about sixteen years ago and is still giving us good service. Our only expense was new babitt bearings in those sixteen years.

However, since the day this machine was built, great improvements have been made. We, therefore, would like to have one of your catalogues on these new models, especially your Jr.30.

Our machine number is 642 to give you an idea how old it is and still giving satisfactory service.

Yours for better service, I remain,

Yours truly,

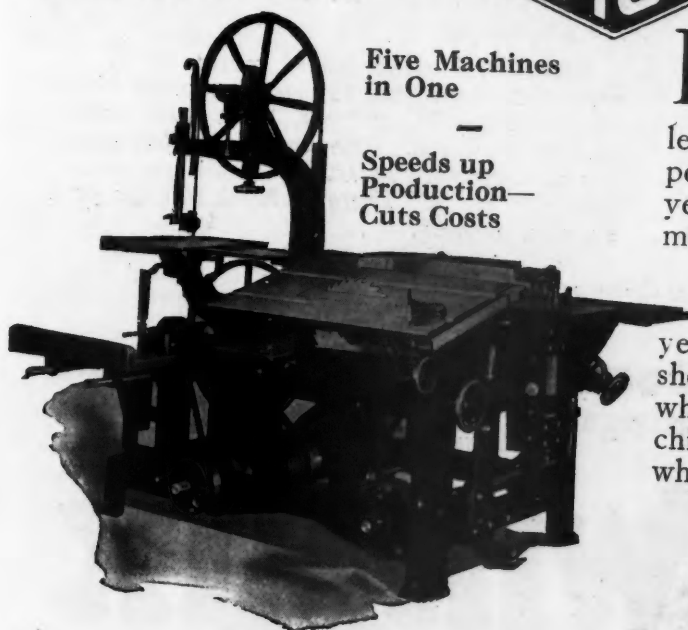
Henry C. Dorn,  
37th. and Janesville Road,  
Milwaukee, Wis.

Sta. "D"

This is the machine  
Mr. Dorn purchased  
in 1910 and it's  
still running.



## The FAMOUS Junior "30" Woodworker



Five Machines  
in One

Speeds up  
Production—  
Cuts Costs

FOR sixteen years the Dorns—father and son—have been making money with a Famous Universal Woodworker. Their letter tells the story—read it. Their "only expense was new babitt bearings in those sixteen years"—and yet, that was one of our first machines.

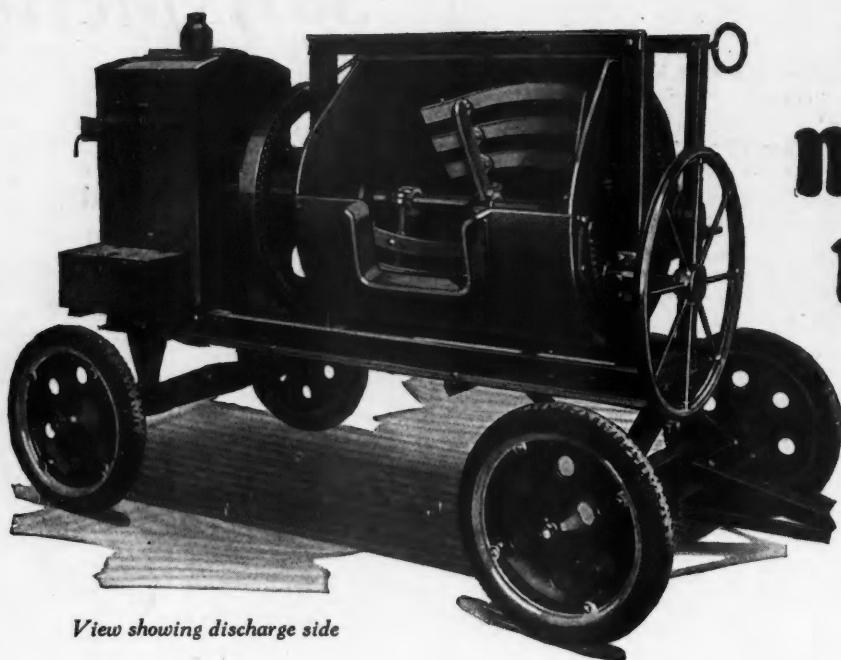
The same policy that made possible the quality—and performance—of that sixteen-year-old machine, is still in effect today in our shops at Sidney. That is one of the big reasons why Sidney-Built Famous Woodworking Machinery brings satisfaction to the users everywhere.

Profit by the experience of the Dorns. Sidneyize your shop. Make two profits grow where only one grew before. Let the Famous Jr. "30" help you to "cut corners." Some interesting facts about Woodworking Profits will gladly be sent on request. Address Dept. 109.

The Sidney Machine Tool Co.  
Sidney, Ohio

# Saves

# men materials money



*View showing discharge side*

*Kwik-Mix  
Model 5-P  
Mortar and Plaster Mixer*

**M**ASON and plaster contractors everywhere find that the Kwik-Mix Plaster and Mortar Mixer soon saves enough to pay for itself. It entirely eliminates costly hand mixing—saving the wages of from one to four men. It saves material—Kwik-Mix kneading-hoeing action is so thorough that a larger percentage of sand can be used. Plaster is smooth and spreads *thinner*. Kwik-Mix insures more yardage per man, per day.

Sturdy all-metal construction—hot riveted frame. Large hand wheel tilts

drum to either side with fast, clean discharge. Positive locking clutch requires no adjustment. Self-aligning, double bearings—inside bearings carry 2 in. shaft with blades—outside carry drum weight. Heavy duty 3 H. P. engine—reinforced steel housing.

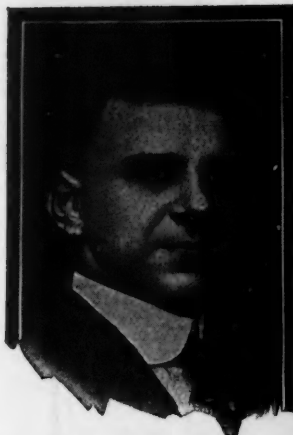
Capacity: 5 cu. ft. mixed mortar or plaster per minute—will keep 15 plasterers or 30 bricklayers busy. Water tank, hoist and loading platform optional. The *unusually low price* is a most attractive feature. It will pay you to write for details. There's a Kwik-Mix for your every mixer need.

*34 Kwik-Mix Distributing Centers assure immediate deliveries. Consult them concerning your mixing problems.*

**The Kwik-Mix Concrete Mixer Co.  
Port Washington, Wis.**

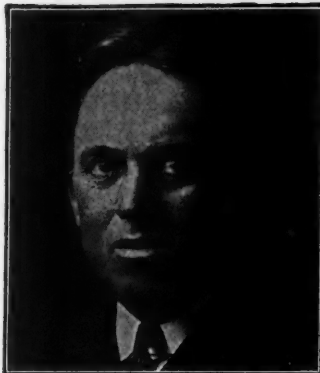
# KWIKMIX

**CONCRETE MIXER**



Frank A. Lind and brother launched the Altoona (Pa.) Duntile Products Company with little capital and immense faith. Their courage paid big dividends, for in 18 months their profits turned a \$3500 investment into a \$30,000 business.

Join  
this  
Prosperous  
Nation  
Wide  
Group of  
Alert  
Men



Like many other successful contractors, Wm. A. Hummel and Wm. B. Hillebrand saw their opportunity in Duntile. Today the wheels are humming in their Toledo, Ohio, Duntile Plant, earning big profits for these partners. An album of their Duntile buildings would show some of the finest structures in Toledo.

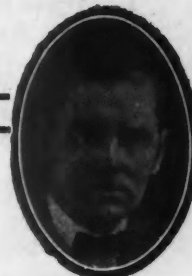
Lind Brothers' success is realistically shown by the above pictures. From their temporary plant, little more than a shed, earnings resulted which in 16 months paid for the splendid factory designed for 8 complete production units. Wouldn't you like to own such a business?



Architects and Contractors Insistence upon Duntile calls for More Alert Men to Join this Nation-Wide Organization.

Duntile—the perfected, all-purpose masonry unit—has reached out and captured the markets that other building units can't touch. It has done so on the strength of its benefits and economies—because it actually builds better buildings cheaper. The hundreds of Duntile manufacturers enjoy an independence not equalled by any other business in the building realm. More Duntile Plants are needed. Men of ambition are needed to own and manage them. The big earnings you can make, the definite assurance of your success, and the ease with which you can enter this profitable business is convincingly told in a book called "Basic Facts". This same book has been the passport to manufacturing independence for over 350 men from all walks in life. Send coupon for copy—today.

MAIL- TODAY -  
the COUPON to  
W. E. DUNN MFG. CO.  
415 W. 23d St.  
Holland, Michigan



Duntile Gave Mr. Lyons  
a \$50,000 Business.

Mr. W. J. Lyons of Norwalk, Conn., is one of the many former contractors now making a double profit through Duntile. In his modern plant is made the Duntile he uses for his own contracting business. Mr. Lyons—in a short time—has seen his small investment grow to fifteen times its original amount—all because of Duntile profits.

You have exactly the same opportunity as Mr. Lyons and 350 others. You can equal their records. "Basic Facts" tell how.

MAIL THE COUPON!

Show  
me

through your book, "Basic Facts," how average ability and some capital wins manufacturing independence for those supplying Duntile in each community. Also show me how I can manufacture Duntile in a plant of my own at a profit of 30% to 60%.

NAME.....  
ST. ADDRESS.....  
CITY.....STATE.....  
OCCUPATION.....

So complete and so valuable is the information given in this free book that it has been the gateway to independence and prosperity for hundreds of men. Let this interesting book tell YOU the story of Duntile. Mail coupon for free copy.

"HOW YOU CAN WIN MANUFACTURING INDEPENDENCE"  
—told by over 350 Successful Duntile Manufacturers





## *Selects Winthrops for homes he plans, builds, and finances*

Howard A. Ullrich of Maywood, Illinois, specializes in homes in the western suburbs of Chicago—homes ranging from \$20,000 to \$40,000. He plans and builds them and finances their purchase by the owners.

For these homes Mr. Ullrich selects Winthrops. As an architect he knows that, with the range of beautiful non-fading colors of Winthrops, he can secure the effect he wants. He can harmonize the roof with any style of architecture. He can fit the house into any surroundings.

As a builder he knows Winthrops lay easily, rapidly and smoothly. As a financial man he knows the safety of his loans to purchasers of homes with permanent roofs—roofs proof against sparks, roofs that do not rot, crack, split, rust—roofs of low upkeep and long life.

The home above, in River Forest, Illinois, is roofed with the Stonefield Blend of Winthrop Tapered Asphalt Shingles—a blend

of heather blue, heather green and purple.

There can be no monotony about colors as blended here, and in addition there are the shadow lines cast by the thick butts of Winthrops, which are built up of extra coats of everlasting asphalt on both sides the heavy felt cores.

For other houses, other colors. Twelve in all. In blends or solid colors. All permanent, non-fading crushed slate.

### *Samples of All Colors Free*

Most lumber dealers sell Winthrops, but you should have a complete set of full size shingles to show your prospects. Write, on your letterhead, today for the set. They are free. They are convincing.

BECKMAN-DAWSON ROOFING COMPANY  
1032 Brooks Building, 223 W. Jackson Boulevard, Chicago, Ill.

*Also Manufactured by*

LOCKPORT PAPER CO., Lockport, New York

 **Winthrop**  
**Tapered Asphalt Shingles**



# 19 Years of Growth-

**H**OLLAND growth has come very largely from the recommendation of a million or more warm friends in Holland Heated Homes.

After nineteen years, Holland service reaches from Coast to Coast: from Boston to Portland and from Hancock, Michigan, to Atlanta, Georgia. In more than 500 Branches you'll find the same Uniform Service that means added health and comfort in the homes of thousands of families.

Holland Engineers in every branch follow carefully the same procedure which has built the Holland business in other territories. Holland Engineers put both a practical and theoretical experience at your service; they accept full responsibility, relieving you of all details. Builders and contractors will find it well worthwhile investing in a Holland Heating system, to offer a home with a guaranteed heating service.

Call up the Holland branch and ask the Holland man about the Holland Service Bond, the guarantee that helped build this national organization.

The Holland Chart illustrated here indicates how every year has been a growing year—showing the growth of the World's Largest installers of furnaces.

## HOLLAND FURNACE COMPANY

General Offices: Holland, Mich.

### Three Great Factories:

Holland, Mich. — Cedar Rapids, Iowa — Bethlehem, Pa.

### Central Chicago Office:

Straus Building, Michigan Ave. and Jackson Blvd.



### SEND FOR THIS BOOK

"The Whole House Comfortable and Clean" is an attractive book—a guide you should have in furnace buying. Write for this book at once.



# Holland Furnaces Make Warm Friends

# Plywood Used for Building *and* PERKINS VEGETABLE GLUE

A great deal of plywood is used in manufacturing doors, panels, casings and other trim used in the construction of all buildings. Of course, a glue has to be used in manufacturing this plywood and here are just a few reasons why you should consider favorably plywood glued with Perkins Vegetable Glue:

- 1—Perkins Vegetable Glue has been used successfully for the construction of high grade plywood for over twenty years.
- 2—Perkins Vegetable Glue is always uniform, thereby insuring the same uniform, dependable glue being used at all times in plywood glued up with it.
- 3—The glue joint of plywood glued with Perkins Vegetable Glue is very strong.
- 4—The glue line does not cause dulling of tools used in building.
- 5—Perkins Vegetable Glue combined with high grade fancy veneers gives you a product of durability and beauty—something to be proud of.

The durability of all plywood panels, etc., is determined by the glue used in its construction.

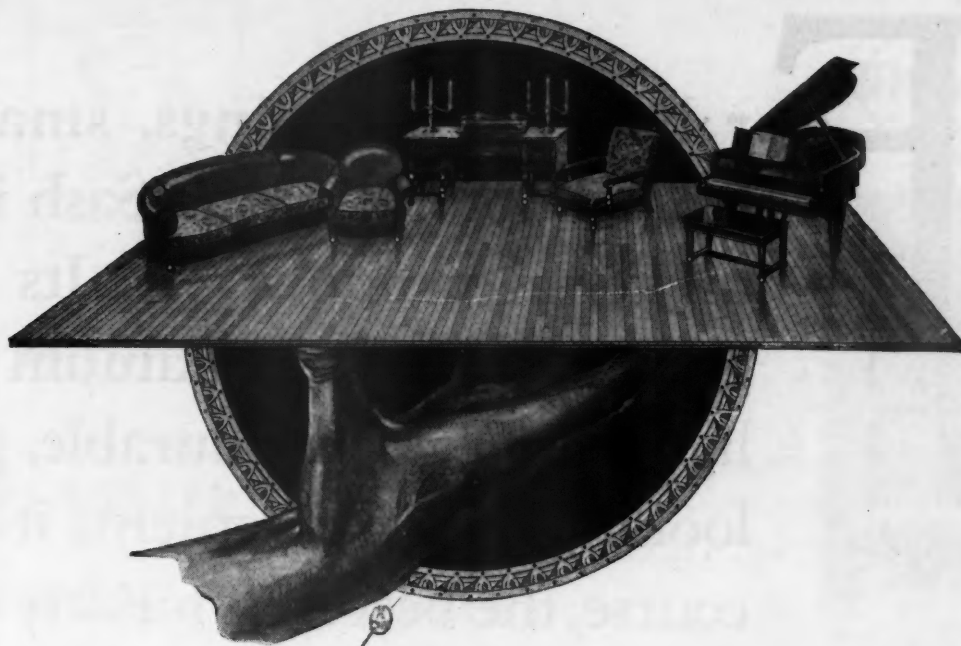
Therefore, it behooves you to investigate the glue used in the plywood which you specify for use in your buildings.

---

## PERKINS GLUE COMPANY

*Factory and General Office:*  
Lansdale, Pennsylvania

*Sales Office:*  
South Bend, Indiana



## *If a giant lifted a Maple floor—*

It would rise like a great, smooth, one-piece area of hardest wood—because every piece is side and end-matched to perfection—made for comfort, wear and beauty.

Maple is remarkably hard, tough-fibred and tight-grained. It does not sliver, splinter or develop ridges. Years of wear simply make it smoother and more polished. Maple, therefore, brings not only lasting beauty but unusual cleanliness as well.

Beech and Birch, two kindred woods closely like Maple in qualities of wear, are richly beautiful when given a natural finish and also readily take an even stain.

In homes and apartments, in office buildings, hotels, assembly

halls—wherever wear and beauty are essential—use Maple, Beech or Birch.

*Let our Service and Research Department assist you with your flooring problems. Send us your questions or write for any of these booklets you wish.*

- ☐ The Floors for Your Home.
- ☐ New Floors for Old.
- ☐ Color Harmony in Floors.
- ☐ Three Native Hardwoods of Sterling Worth.
- ☐ How to Lay and Finish Maple, Beech and Birch Floors.

MAPLE FLOORING MANUFACTURERS ASSN.  
1053 Stock Exchange Building, Chicago

### *Guaranteed Floorings—*

The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve every particle of these remarkable woods. This trademark is for your protection. Look for it on the flooring you use.

**MFMA**

# Floor with Maple Beech or Birch

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER





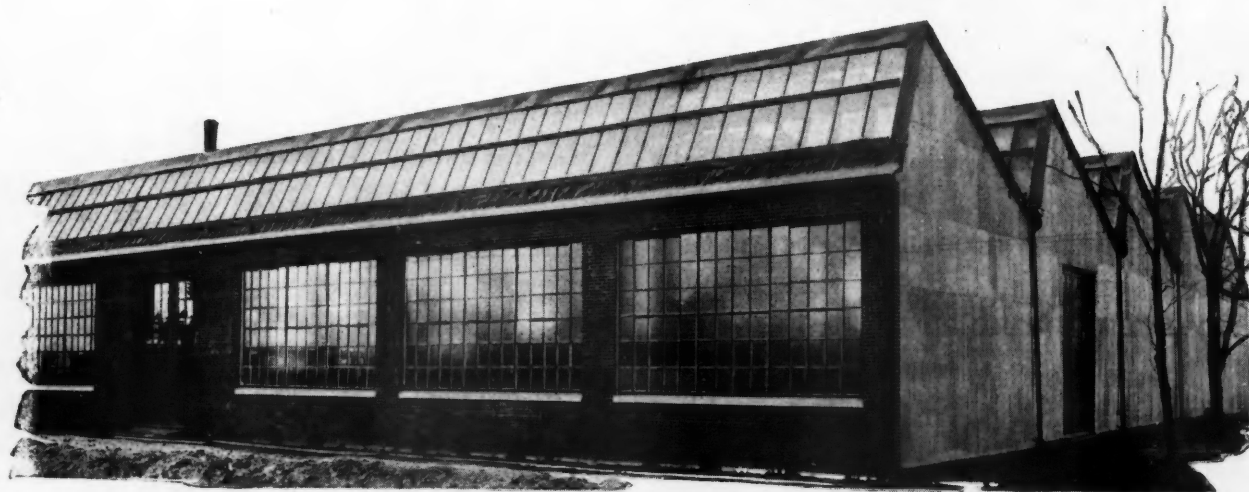
Lupton Pivoted Sash set around Lupton  
Standard Steel Doors in a large  
Philadelphia plant.

**F**or business buildings, small or large, Lupton Pivoted Sash is the universal window . . . Its large glass area gives maximum daylight . . . Rigid and durable, good-looking and convenient, it is, of course, the best sash for any structure in which people work . . . 25 stock sizes of Lupton Pivoted Sash are carried by dealers everywhere, for immediate delivery . . . Easy to buy and easy to install . . . Write for Catalogue 12-A.

**DAVID LUPTON'S SONS COMPANY**

2203 East Allegheny Avenue, Philadelphia

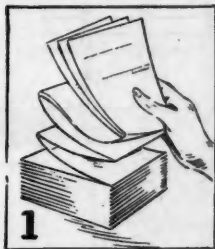
Branches in all Principal Cities



Lupton Pivoted Sash in sidewalls, Pond Continuous Sash in roof of a Texas factory

# LUPTON PIVOTED SASH

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



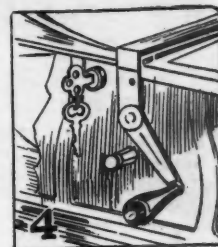
1  
Only one flatpakit for any number of copies. No bothersome rolls. Each slip can be a different color.



2  
A complete copy of every original automatically refolds in the front compartment in one unbroken strip—no lost slips. It is a perfect binderless file, always in numerical order.



3  
Wiz can be loaded for use in one-half a minute.



4  
A locked compartment in the front of the register protects a complete record of every transaction ready for immediate reference.



5  
Wiz slips are issued from machine flat. They file flat. They make auditing easy, as the slips are turned over like the pages of a book.

# Keep your Business Records ACCURATE

in this *Fastest* and *Easiest* way

Every wise business man realizes the importance of keeping a written record of every transaction. Only in this way can loss of profits and costly errors be prevented.

Let us tell you, therefore, of the most accurate, the fastest and the easiest method of keeping these handwritten records—it is the Wiz Register with its Flatpakit forms.

Wiz with Flatpakit forms eliminates bothersome rolls that take too long to insert in the machine. Wiz has but one Flatpakit load for any number of copies. You can load the machine in 30 seconds.

Wiz slips always lie flat. This is an exclusive feature. Reference and auditing is made as simple as turning the pages of a book.

There is a front locked compartment in which one or more sets of slips refold automatically in an unbroken file. In this way you have record of every transaction ready for immediate reference and locked up so that it cannot be tampered with.

Let us tell you more of the Wiz Register and how it can be applied to your business problems. We will let you examine forms used by others in your line of trade. Send the coupon or write us a letter.

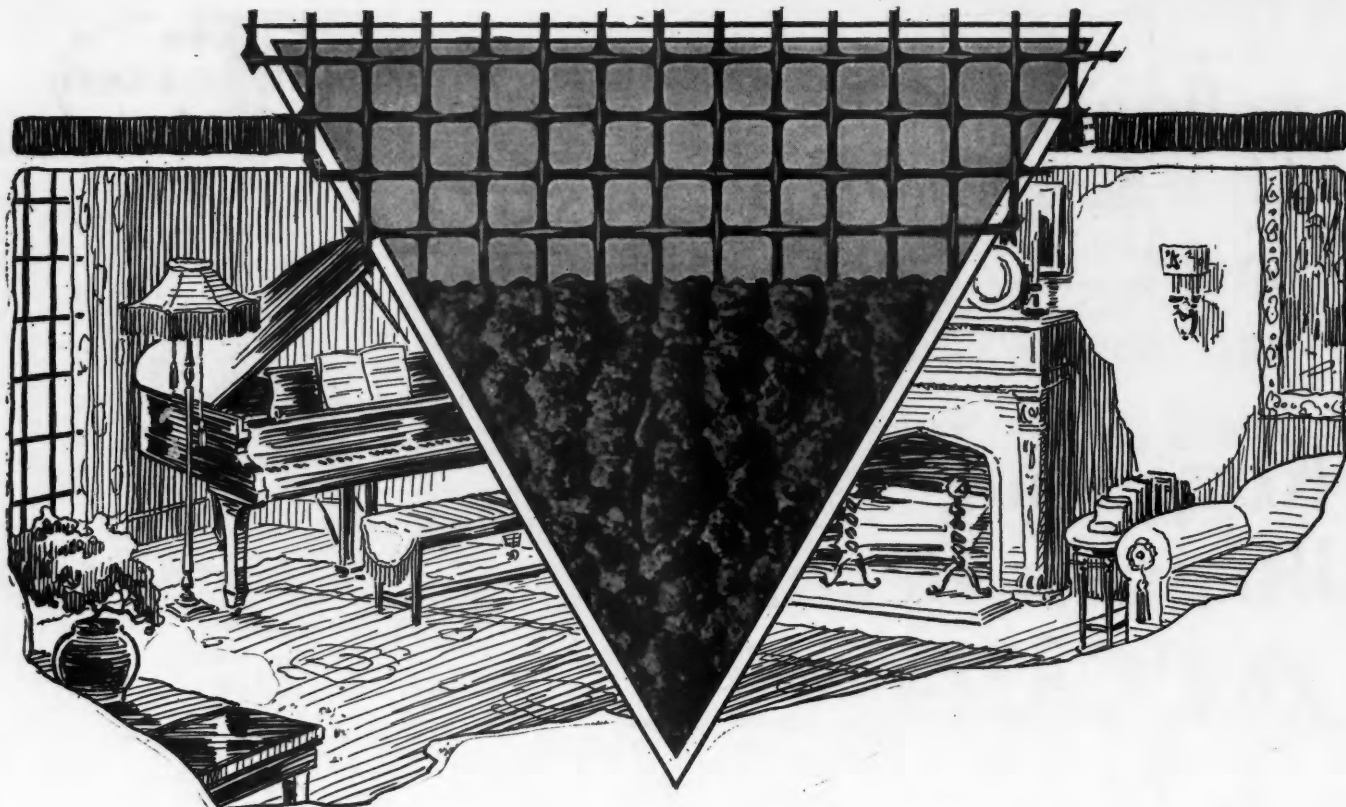


★ **WIZ**  
REGISTERS  
WITH  
**FLATPAKIT**  
FORMS

American Sales Book Company, Limited  
Dept. 229, Elmira, New York

Name.....  
Street.....  
City..... State.....

© A. S. B. Co



## Clinton Wire Lath— The Perfect Key

A GOOD name is a difficult thing to build and a valuable thing to keep.

That is why successful builders and contractors use Clinton Wire Lath. It is the highest grade of lathing material obtainable, yet its price is moderate.

The drawn steel wire of which Clinton Wire Lath is made is stronger than sheet metal and a perfect key is provided by the even wire mesh.

To make certain that Clinton Wire Lath will add to your reputation as well as its own, the Wickwire Spencer Steel Company has carefully conducted every process of its manufacture even to mining the ore.

Write for our booklet of useful information on permanent plastering with specifications on various grades of Clinton Wire Lath.

### WICKWIRE SPENCER STEEL COMPANY

*General Offices:*

41 East Forty-second Street, New York  
Worcester Buffalo  
San Francisco

*Western Sales Office:*

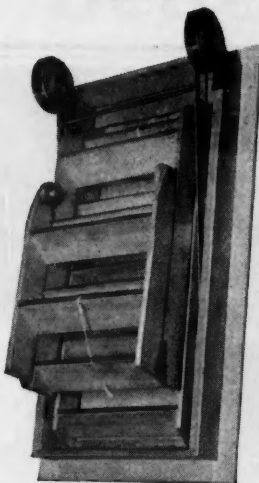
208 South La Salle Street, Chicago  
Cleveland Detroit  
Los Angeles Seattle

# WICKWIRE SPENCER PRODUCTS





**THE MARSCHKE  
COLLAPSIBLE  
STAIR**  
folded up ready for  
shipment



With jambs, casings and panels put on at the factory. When installing, no bolts or screws are needed—a few nails driven where directed per instructions and the stair is ready for use. Shipping weight, 120 lbs.

**Price, \$45.00**

## The MARSCHKE



### TO ROOF OR ATTIC

Those rooms in the attic can be readily made accessible with the Marschke Collapsible Stair. Easily operated—a slight pull on the cord opens the stair and unfolds it ready for use. It will operate in small hallway or closet. Ceiling panel only 26x56 in. **Write for folder.**

**STAIRWAY PRICE, \$45.00**

**LADDER PRICE, \$25.00**

**THE MARSCHKE CO.**

1413 Pioneer Bldg., St. Paul, Minn.

**Branch Offices**

Chicago, 20 East Jackson Blvd.  
New York, 1560 Broadway

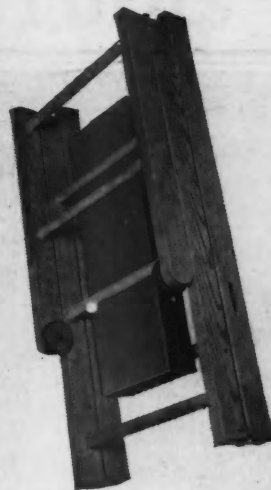
E. St. Louis, 13th & Walnut Sts.  
Los Angeles, 2320 Oceanview Ave.

### ATTRACTIVE CEILING PANEL



**Note how easy it works**

**THE MARSCHKE  
FOLDING LADDER**  
folded up ready for  
shipment



Complete with a box of specially designed hardware and full instructions for installing.

Shipping weight, 40 lbs.

**Price, \$25.00**

**Express brings it to  
your door.**

Simplicity of design and volume of production have made possible the low price at which we are able to offer these stairs.

Our stairs can be opened and closed from above as well as from below and do not obstruct the attic floor while closed as they fold over their own panel. We make them to fit any ceiling height.

**When ordering give ceiling height**

**Above Prices are F. O. B. Factory, St. Paul**

No cables, pulleys, shafts or drums;  
No bolts or screws for installation.  
Not only attics can we reach,  
But roofs as well for recreation.

**Write our nearest office**

**THE MARSCHKE CO.**

1413 Pioneer Bldg. — St. Paul, Minn.

The Marschke Co.—

1413 Pioneer Bldg., St. Paul, Minn.,

AB-9

Please send full particulars and prices on the Marschke Collapsible Stair and Folding Ladder.

Name \_\_\_\_\_

Address \_\_\_\_\_

☐ Contractor

☐ Dealer

☐ Home Builder

# Armstrong's Linoleum *for every floor in the house*

PLAIN

INLAID

JASPE

PRINTED



Office of J. R. Outwater, Inc., realtor and builder of Bergenfield, N. J., floored with Armstrong's Embossed Inlaid No. 6005. Note the unusual and interesting heraldic figures in the linoleum pattern.



Teaneck Tavern, in the Outwater Building, Bergenfield, N. J., has this black-bordered floor of Armstrong's Embossed Tile Inlaid Linoleum No. 6006, a beautifully figured pattern in brick reds.

## "Different from any floor I ever saw," says builder, of new Embossed Linoleum

"Can this be linoleum? It's so different from what I always have thought of as linoleum! It's as far removed from the old-fashioned floor covering of grandmother's kitchen as is the 1926 automobile from the horseless carriage of twenty years ago. This linoleum is a real floor, fine enough for any room."



Some such thought as that ran through the mind of Mr. J. R. Outwater when he was first shown the new Armstrong creation—Embossed Handcraft Tile Inlaid Linoleum. Mr. Outwater was quick to see the value of installing this unique floor material in his real estate offices, as well as in the Teaneck Tavern, both in the Outwater Building which he recently erected in Bergenfield, N. J.

In both the restaurant and realty office, handsome, quiet floors are a decided asset. Add to that the ease of cleaning linoleum—a smooth, grainless, non-porous surface that takes a beautiful wax finish—and its remarkably long life, and you have a floor of permanent beauty for any business room.

To get better acquainted with this New Embossed Linoleum, and with other unusual patterns in the Armstrong Line, write for a free copy of our book, "Enduring Floors of Good Taste." It's a 48-page book of photographs and colorplates, with full information on laying and care, just off press, and it tells the whole story. **Armstrong Cork Company, Linoleum Division, Lancaster, Pa.**

B-39

# Better Work—Bigger Profits For Floor Sanders

You can do a quality job with less effort and in less time with the **Master Floor Sander**.

Simplest, fastest, easiest to operate and most durable of any Sander on the market.

A one-man machine that can be operated even with one hand and can be easily carried up and down stairs.

A wonder for close work in closets and around sinks.

Few working parts to wear out—Motor detachable.

Does a smoother, better job and does it faster.

Satisfied users are enthusiastic over the results they are getting with the Master, reporting more and better work done and larger profits.

## The Master Floor Sander

Get all the facts about the Master. Clip and mail the coupon below and all information about this wonderful machine, including terms of purchase, will be sent you. No obligations.

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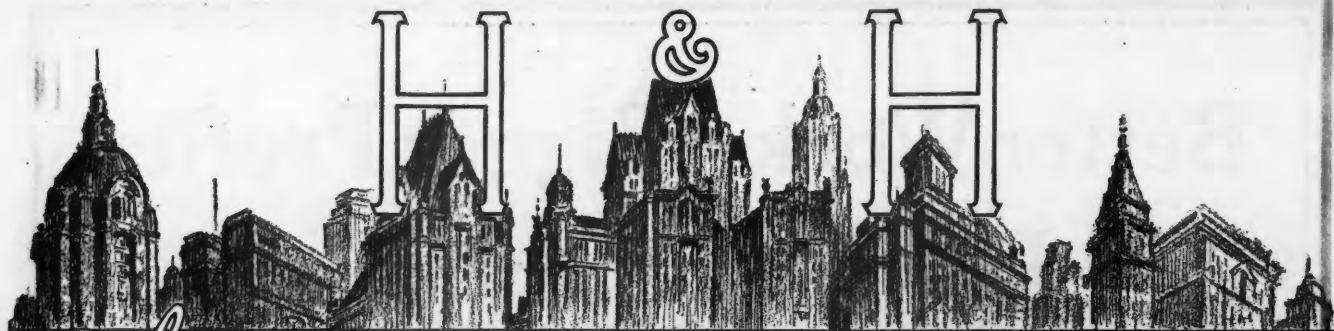
**MASTER WOODWORKER MANUFACTURING CO.**  
BRUSH AND CONGRESS STREETS                      DETROIT, MICHIGAN

Send me your floor surfacing information showing me how I can buy a Master Floor Sander on small payments, allowing machine to pay for itself.

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

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





# *The* SKYLINE of Fine Switch-dom



*Do your Jobs Stand Out  
on the "Good-Wiring" Horizon?*

PICTURE in one group the finest buildings you've put up. Bunch together your best jobs, and take a "skyline" view of your Reputation. There it is—in your outstanding work; the jobs you can point to with pride and with absolute confidence.

What of the *wiring*—the control of the lighting—the electrical service—does that *stand out* too? Will it always function smoothly, dependably at the owner's touch?

The "functioning" part of the job being the Switches, we make them stand for your building standards in three distinct price-levels. For the costly edifice, the GOLD STAR Push—or the "8901" Tumbler. For the medium-price job, "2081" Push—the friendly OLD RELIABLE. For competitive-price jobs, NUTMEG Push or "8601 Square" Tumbler.

More than anything else you install, the *Switches* put your electrical work on the upper level of good construction and sound Reputation.

*Have you started using the new Catalogue "S" in specifying for Fall contracts? Have us mail you a copy if you haven't one.*

**THE HART & HEGEMAN MFG. CO. HARTFORD, CONN.**  
*Makers of Electric Switches since 1890*

# BATES-TRUSS JOISTS

BATES-TRUSS JOISTS ARE OF ONE-PIECE STEEL CONSTRUCTION. THE TRUSS IS EXPANDED. NO RIVETS, BOLTS or WELDS



Architect:  
Karl D. Norris, East Chicago, Ind.  
Contractor:  
H. B. Olney, East Chicago, Ind.



**T**HE Bates-Truss Joist, with its expanded open web, offers many readily appreciated advantages to the engineering and architectural world.

Its light weight and its sturdy design are features of great importance.

One Piece Steel Construction is a point of marked advantage. The Bates Joist does not rely upon rivets, bolts or welds in shear or tension. Welds are employed only as tacking to hold the stiffener rods and bearing plates in position.

Bates Joists are furnished in depths from 8 inches to 18 inches, varying by inches, and in any desired length up to 35 feet. Each joist has an 8 inch variable length.

The wide acceptance already afforded the Bates-Truss Joist is evidence of its merits and suitability for the purpose.

Your inquiries will have our careful and prompt attention.

*The expanded section is covered by basic commodity and process patents, owned, controlled and operated under exclusively by this company.*

**Bates Expanded Steel Truss Co.**  
General Offices and Plants  
EAST CHICAGO, INDIANA, U. S. A.

# Free Information for Our Readers

THE AMERICAN BUILDER has an Information Bureau for the benefit of its readers. It places those in need of appliances, machinery, tools, building materials and supplies of every description directly in touch with reliable manufacturers.

## No Charge is Made for This Service

Upon receipt of a request for information, the name of the inquirer and the product he is interested in is sent to concerns who can supply him.

## How it Works

If you are interested in any kind of building materials, contractors' equipment and machinery, power shop equipment, heating systems, plumbing supplies, water supply systems, lighting systems, elevators, school or church or theatre equipment, farm building equipment, building hardware, home conveniences, or anything that is used in constructing or equipping any kind of building—fill out the coupon below, send it to the AMERICAN BUILDER and we will take the matter up at once with the proper parties who will send you their catalogs, prices and any other information you desire.

## Help for the Benefit of Our Readers

If you need anything that is or is not advertised in the AMERICAN BUILDER or want something that is not used in building just let us know and we will gladly help you.

## HELP US TO HELP YOU

In order to get the best and quickest results please be sure to print or write your name and address plainly and also check your occupation in the coupon below. Remember—This service is ABSOLUTELY FREE to American Builder readers.

-----  
American Builder, 1827 Prairie Ave., Chicago, Ill.

Gentlemen: I am in the market for the following items: Please put me in touch with manufacturers whom you know to be reliable and can furnish goods promptly:

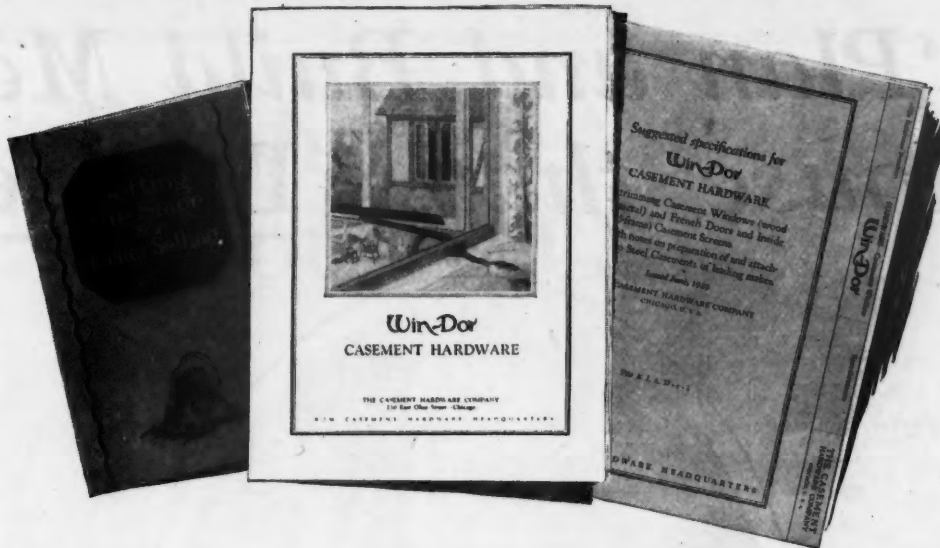
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

☐ Building Contractor    ☐ Dealer in Building Materials    ☐ Architect    ☐ \_\_\_\_\_?





# Is it because you don't know?

**R**ECENTLY we made an investigation among builders in California—not a selling campaign, merely a series of calls.

Hardly any of them knew much about Win-Dor to start with, but *almost every one* was enthusiastic after he had heard our story.

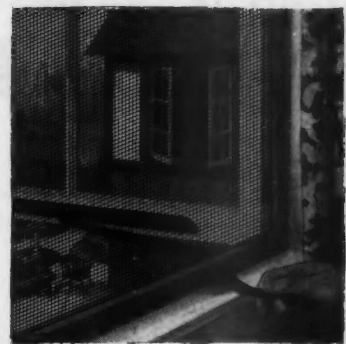
The chances are very great that you'd be enthusiastic, too, if you knew what Win-Dor can do towards increasing your sales and lowering your costs.

Is it because you don't know about it that you're not using Win-Dor?

We believe we've got a proposition that you can use to great advantage if you'll take a few minutes to look into it.

Drop this coupon in the mail and let us send you our catalog, specification data on wood and metal casements and our popular new book "Setting the Stage for Easier Selling." The last is a mighty interesting selling idea, written up by a practical and very successful builder.

Send for these booklets, look them over, and if you're not convinced that you can use Win-Dor to advantage on most of your buildings, you'll be different from 90% of the builders we've talked to.



## Here are some typical responses made by builders

(Had been using another make.) "Am glad to have seen your samples and consider them superior to what we have been using. The prices are right. We have your catalog and will certainly use Win-Dor in the future."

(Have been using two other makes.) "Your samples are very interesting and I have enjoyed the demonstration. We should have known about Win-Dor before but didn't bother to look into it. You can be sure, however, that Win-Dor will get our future business."

(Have been using Win-Dor Stays only.) "We have been using your Stays on all our steel sash but didn't know much about your Operators and Bolt-Fasts. In the future we shall use both your No. 7 Surface Operators and your No. 24 B Flush Operator for all our casement work. We wish we had known sooner that your line was so reasonable in price."

**Win-Dor**  
**CASEMENT HARDWARE**  
 THE CASEMENT HARDWARE CO.  
 402-A North Wood St., Chicago  
**CASEMENT HARDWARE**  
**HEADQUARTERS**

CASEMENT HARDWARE COMPANY  
 402-A North Wood St., Chicago

Gentlemen:

Please send me a copy of "Setting the Stage for Easier Selling" together with a copy of your specification data and your catalog.

Name \_\_\_\_\_

Address \_\_\_\_\_

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

# "Plan and Build Me a House that's Different"

RESIDENCE OF MR. GENE SARAZEN, the noted golf champion, located at Pondfield Crossway, Bronxville, N. Y. Mr. D. A. Summo, New Rochelle, N. Y., Architect. General Contractor, Richard Marchione. Medusa Waterproof White Cement was used for exterior stucco finish.



**A**LMOST every house design nowadays is a *better* design for the use of White Stucco. First, of course, is the all-stucco home, giving you the opportunity to create a beautiful structure that *keeps* its beauty through the years.

Then there is a great variety of pleasing combinations: stucco-and-brick; stucco-and-wood; half-timber with stucco; and many others.

Quality of materials is the first ingredient in successful stucco construction, and one of the most important. Medusa White Cement is the product of one of the oldest and most successful Companies in the Industry.

Your dealer sells Medusa White Cement—plain and waterproofed. Ask him for prices and full information, or write us direct.

**THE SANDUSKY CEMENT COMPANY**  
Engineers Building Cleveland, Ohio

*Manufacturers of Medusa White Portland Cement (Plain and Waterproofed); Medusa Waterproofing (Powder or Paste); Medusa Gray Cement (Plain and Waterproofed); and Medusa Cement Paint.*

# MEDUSA WHITE CEMENT



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# Evolution of the Clothes Closet



Here is a typical old-fashioned clothes closet, with valuable garments hanging in an untidy manner from hooks or nails. Notice the space going to waste! Consider the wear and tear, the disorder. And yet, this same closet, equipped with a K-V fixture, could contain two or three times as many garments—and keep them clean and orderly.

**Get This**



**KNAPE & VOGT MFG. CO.**  
Dept. 49, Grand Rapids, Mich.

Send me your booklet, "Space Saving House Plans," with full information about how the K-V Clothes Closet Fixture reduces closet space, cuts construction costs, and makes it easy to sell houses so equipped.

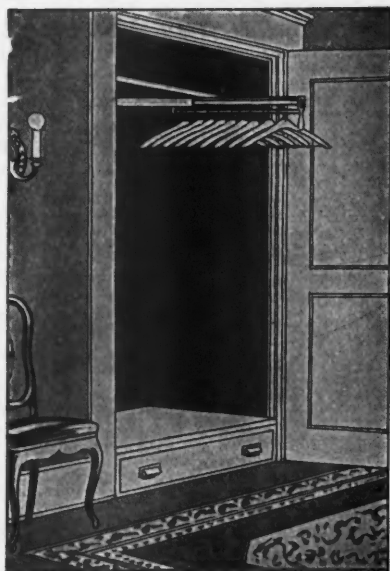
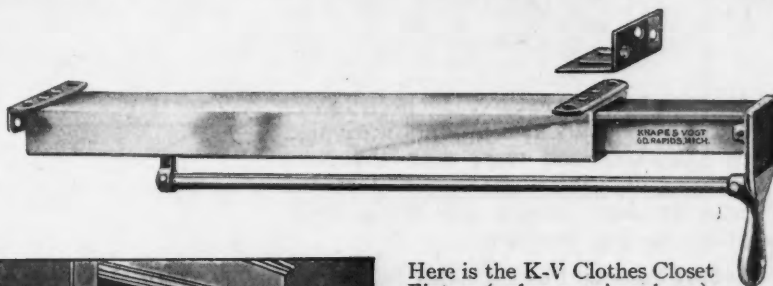
Signed .....

Address .....

City and State .....

CLOSET space looms just as big in building costs as the same amount of space devoted to living rooms, dining rooms, or bedrooms. K-V Clothes Closet Fixtures have made the big closet obsolete. By their use, 20% to 30% can be salvaged from the over-all dimensions of the ordinary house. Better yet, it's easy to *sell houses with K-V equipped modern closets*. May we tell you more? Fill out the coupon and send it in—we have a real story for you!

**KNAPE & VOGT MFG. CO.**  
Dept. 49 GRAND RAPIDS, MICHIGAN



Here is the K-V Clothes Closet Fixture (a close-up view above), and as it appears installed at the left. Made of heavy steel, nickel plated, it is built for service, and presents an attractive appearance. Its convenience speaks for itself—a powerful sales feature for the K-V equipped home! K-V fixtures come in sizes from 12 to 60 inches long. They cost little—but save thousands of cubic feet and hundreds of dollars in building costs!

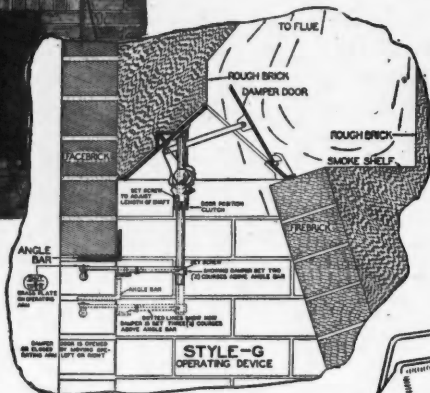


The K-V fixture has made the modern closet as compact and convenient as a wardrobe trunk, with the capacity of a closet two to three times as large. Every inch of space is used. Clothes are suspended from the center. Wrinkles are eliminated, pressing bills reduced. Each garment is instantly available.





Showing the position of the new COLONIAL DAMPER, Style G, when set three courses above the fireplace opening; may be set even higher with a longer rod.



## new

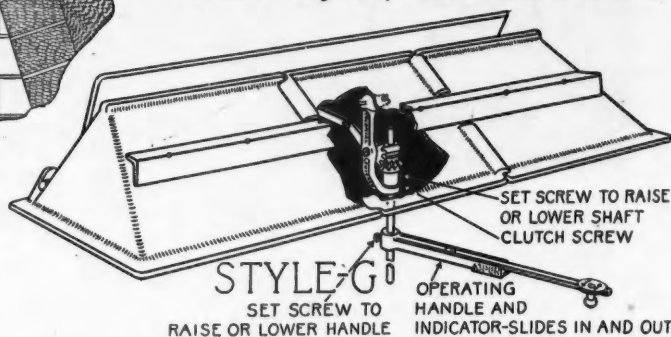
### Style G Operating Device of the COLONIAL DAMPER

—to the Left

Sectional view of COLONIAL DAMPER, Style G, showing method of operation and possible adjustments. With this device the COLONIAL head may be set as high up in the throat as desired, so necessary to a proper working fireplace.

—below

Detail of Style G, COLONIAL DAMPER



THE COLONIAL DAMPER has been recognized for many years as a product unrivaled for its purpose,—and now, with the New Style G operating device (patent applied for) you have at last a fireplace damper that works right in any position—in any fireplace.

Leading Colonial Dealers Listed below—Hundreds of others have the Colonial Damper in stock.

If your regular dealer cannot supply you, please write us.

**ALABAMA**  
Albany—Decatur Iron & Steel Company.  
**ARKANSAS**  
Little Rock—Arkansas Foundry Co.  
**CALIFORNIA**  
Los Angeles—Harris Bros. Hdwe.  
Fresno—Fresno Hdwe.  
Sacramento—Scott Plumb. & Elec. Co.  
San Fernando—San Fernando Hdwe.  
San Bernardino—San Bernardino Hdwe.  
**COLORADO**  
Denver—Denver Mantel & Tile Co.  
**FLORIDA**  
Jacksonville—L. Smith Steel Company.  
Boise—Idaho Hdwe. & Plumbing Co.  
**ILLINOIS**  
Aurora—G. W. Baxter.  
Chicago Heights—John Michalek.  
Chicago—Beckwith Iron Works.  
O. E. Brooks & Son.  
D. H. Carlson & Son.  
J. H. Clark & Barlow Hdwe.  
Great Lakes Supply Co.  
John C. Gustafson.  
Hough Hdwe. Co.  
C. A. Londelius & Son.  
Wayne Moore.  
Crystal Lake—W. F. Reddersdorf.  
Decatur—Mississippi Valley Structural Steel Co.  
De Kalb—Claus Collin.  
Des Plaines—B. F. Kinders & Son.  
Elgin—H. McBride Coal Company.  
Ziegler Bros.  
Elmhurst—Fiebrandt Bros.  
Soukup Hdwe. Company.  
Evanston—Central Coal & Material Co.  
Evanston Bldg. Material Co.  
Forest Park—Pease Hdwe.—7342 West Madison.  
Glen Ellyn—Alexander Lumber Co.  
Hazelcrest—Darr Coal & Supply Co.  
Highland Park—Meierhoff Hdwe. Co.  
Hinsdale—Hinsdale Lumber Co.  
Joliet—Barret Hdwe. Company.  
Kewanee—Kewanee Mfg. Company.  
La Grange—E. A. Keller & Son.  
Ed. Montgomery.  
Lake Forest—Wells & Copithorne.  
G. L. Blanchard Co.  
Lombard—Harry D. Fleege Hdwe.  
Mattoon—Estate of J. D. Andrews.  
Murphysboro—Burton Supply Co.  
Egyptian Iron Works.  
North Chicago—S. A. Zickerman.  
Oak Park—Nicholas Hdwe. Company.  
Ottawa—Geo. T. Ruge.  
Park Ridge—John H. Roloff.

Rockford—Skandia Hdwe., 327 7th St.  
Carlson & Son Hdwe., 404 7th St.  
Rock Island—Rock Island Bridge & Iron.  
Rock Island Hdwe. Company.  
St. Charles—Geo. A. Essig.  
South Chicago—Great Lakes Supply Co.  
9342 Ewing Ave.  
Waukegan—Larson & Miller Lbr. Co.  
James A. Watrous Hdwe.  
Silver Hdwe. Co.  
Wheaton—F. E. Wheaton & Co.  
F. A. Roadrum Lbr. Co.  
Wilmette—Meyer Coal & Material Co.  
Winnetka—E. C. Weisenberg.  
**INDIANA**  
Fort Wayne—Old Fort Supply Co.  
Edw. M. Baites Company.  
Hammond—Hammond Machine & Forge Works.  
J. J. Ruff.  
Hobart—Wm. Scharbach Sr. Sons.  
Indianapolis—Van Camp Hdwe. & Iron Company.  
La Porte—Hilgendorf & Shrader.  
Michigan City—Stalger Hdwe. Co.  
South Bend—Edwards Iron Works.  
Valparaiso—Foster Lumber Company.  
Smith & Smiths Company.  
Wilson Lumber & Coal Company.  
**IOWA**  
Cedar Rapids—Iowa Steel & Iron Works.  
Charles City—Scottfield-Hull Company.  
Des Moines—O'Dea Hdwe. & Paint Co.  
Iowa City—J. H. Hunzinger Company.  
Ottumwa—Fullmer's Builder's Sup. Co.  
Oskaloosa—Harry H. Phinney.  
**MICHIGAN**  
Fennville—S. J. Beagle & Co.  
Marquette—N. G. De Haas.  
Newaygo—Henry Lumber Co.  
Pentwater—Williams Hdwe.

Saginaw—Morley Bros.  
Sawyer—Zeigler Lbr. & Coal Company.  
Watervliet—Rosenberg & Forbes.  
West Branch—Ed. H. McGowan.  
**MINNESOTA**  
Duluth—Thomson-Williams Company.  
**MISSOURI**  
Maryville—Phares Lumber & Hdwe.  
St. Louis—Schurk Iron Works.  
**NEBRASKA**  
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**NEW JERSEY**  
Wildwood—Creco & Julian.  
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Jamestown—Clark Hdwe.  
Dan'l Elander.  
C. A. Lundquist & Company.  
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Olean—J. W. Miller & Son.  
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**PENNSYLVANIA**  
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Ebensburg—Schettig Bros.  
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Harrisburg—Harrisburg Hdwe. Co.  
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Warren—Pickett Hdwe. Co.  
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Spokane—Washington Brick Lime & Sewer Pipe Co.  
**WISCONSIN**  
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Beloit—Gordon's Hdwe.  
Eagle River—F. G. Hall & Company.  
Fond du Lac—John Hughes Hdwe. Co.  
Madison—Wolf, Kubly & Hirsig.  
Manitowish—J. J. Stangel Hdwe.  
Weinecke & Schmitts.  
Worrel Hdwe. Company.  
Mercer—E. C. Wilson Lbr. Co.  
Merrill—E. E. Howland.  
Milwaukee—Ricketson & Schwarz.  
Minocqua—Minocqua Lbr. Co.  
J. E. O'Leary.  
Monroe—Alvin F. Rote.  
Neenah—Wm. Krueger Co.  
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Racine—F. H. Haumergen & Son.  
Rhinelander—Oneida Retail Yds., Inc.  
Rhinelander Builders' Supply Co.  
Rhinelander Lbr. & Coal Company.  
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Richland Center—H. Krouskop.  
Sheboygan—F. Gele Hdwe. Co.  
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Wausau—Bell Bros. Hdwe. Co.  
Wausaukee—Laur Hdwe. Company.  
**WYOMING**  
Buffalo—Buffalo Hdwe. Company.  
**CANADA**  
Vancouver—Wm. N. O'Neill Company.

Blue Print on Style G Colonial Head, Throat and Damper, with new operating device, showing common mistakes in fireplace construction, sent free on request.

COLONIAL FIREPLACE CO., 4604 Roosevelt Rd., Chicago, Ill.

# Colonial Head-Throat and Damper

# SARGENT

*Tools & Hardware*



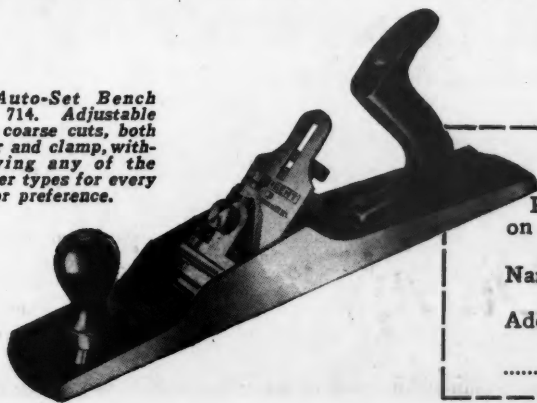
## 3 ways to get better and quicker results

USE—first, a Sargent framing square—second, a Sargent Auto-Set Bench Plane—third, a Sargent steel block plane. These are three of the most convenient tools ever built for professional carpenters.

Calculations are unnecessary when you use a Sargent framing square. It is the most completely scaled and tabled square made—the only one which requires no figuring

by the carpenter. Sargent Auto-Set Bench Planes, because of their light weight and the keenness of their thin chromium steel cutters, require less effort and are much less fatiguing than the older type of planes. They are self-setting when parts are replaced after sharpening. The Sargent steel block plane can't be beat for end work or the smaller jobs of finishing. You should own these three great tools. See them—try them—at your hardware dealer's. Mail coupon today.

*Sargent Auto-Set Bench Plane No. 714. Adjustable for fine or coarse cuts, both as to cutter and clamp, without removing any of the parts. Other types for every need or preference.*



**SARGENT & CO., Manufacturers**  
51 Water Street, New Haven, Conn.

Please send me, without cost, the booklets on Sargent planes and squares.

Name.....

Address.....

# Announcing~

the consolidation of eighteen cinder concrete manufacturers (controlling nineteen plants) into one company, to be known as the

## National Building Units Corporation

Headquarters: Insurance Co. of North America Building, Philadelphia

*The officers of the National Building Units Corp. are as follows:*

President: Leroy A. Goodwin . . . . . Concrete Specialties Co., Camden, N. J.  
 Vice-Presidents { F. J. Straub . . . . . Inventor of the Straub Patented Building Block  
                           Geo. L. Benbo . . . . . Of Rufus Waples & Co.  
 Treasurer: Horace P. Griffith . . . . . President H. P. Griffith & Co., Philadelphia  
 Secretary: Charles L. Pierce . . . . . Rochester, N. Y.  
 Chairman of the Board of Directors Charles F. Conn . . . . . President of Giant Portland Cement Co.



*The plants comprising the National Building Units are as follows:*

FLINT CINDER BLOCK & PRODUCTS COMPANY . . . Flint, Mich.  
 DETROIT CINDER BLOCK & TILE COMPANY . . . Detroit, Mich.  
 THE STRAUB PATENTED BLOCK COMPANY . . . Warren, Ohio  
 STRAUB BLOCK COMPANY OF NEW CASTLE . . New Castle, Pa.  
 STRAUB BLOCK CO. OF NEW KENSINGTON . New Kensington, Pa.  
 STRAUB BLOCK COMPANY OF PITTSBURGH . . Pittsburgh, Pa.  
 ERIE PATENT BLOCK COMPANY, Inc. . . . . Erie, Pa.  
 JAMESTOWN BLOCK & TILE COMPANY, Inc. . . Jamestown, N. Y.  
 GENESEE BRICK & SUPPLY CORPORATION . . Rochester, N. Y.  
 CINDER TILE COMPANY, Inc. . . . . New York, N. Y.  
 GENEVA BRICK PRODUCTS COMPANY, Inc. . . . Geneva, N. Y.  
 ELMIRA BUILDING UNITS, Inc. . . . . Elmira, N. Y.  
 HARRISBURG BUILDING BLOCK COMPANY . . Harrisburg, Pa.  
 PENNA. CON. ROOFING TILE & CEMENT PROD. CO. Lemoyne, Pa.  
 LANCASTER CONCRETE TILE COMPANY, Inc. . . Lancaster, Pa.  
 WASHINGTON CONCRETE PRODUCTS CO. . Washington, D. C.  
 PHILA. PARTITION & BLDG. BLOCK CO. . . . Philadelphia, Pa.  
 CONCRETE SPECIALTIES COMPANY . . . . . Camden, N. J.  
 CONCRETE SPECIALTIES COMPANY . . . . . Trenton, N. J.

It is the intention of this company to add new plants to the organization from time to time, in sections of the country where territorial rights have not yet been assigned . . . All plants comprising the consolidation will manufacture and sell for building purposes

## CINDER CONCRETE BUILDING BLOCK

*Manufactured under Straub and Bo Patents*

# NATIONAL BUILDING UNITS CORP.

## 1600 ARCH STREET-PHILADELPHIA





## The New Box Frame for Solid Walls

The Andersen Box Window Frame this year has new features which greatly aid in making weather tight homes. It is now a frame for all solid walled construction that appeals to the most exacting architect and builder.

A mortar caulking groove prevents air leakage under the sill. A groove under the front edge of the sill provides a water drip and a caulking rabbet for elastic cement. A rabbet to receive a wind stop is another improvement.

These features are added without increased price to the customary good materials, fine construction and excellent workmanship of Andersen Genuine White Pine Frames. Most lumber dealers carry them.

The new catalog describes other new features. When writing for it state whether you are an architect, builder or dealer.

Andersen Lumber Company

Bayport, Minnesota

**Andersen**  
**FRAMES**

*Fire takes 15,000  
lives yearly*

# **Concrete Building Units Establish New Masonry Standards**

Once the masonry home was considered beyond the means of the average purse. That is no longer true.

Concrete building units have introduced new economies in masonry construction. Everywhere today you see homes being built with concrete tile or concrete block. These express fully the inbuilt value always recognized as characteristic of masonry.

Concrete building units assure you a home of enduring strength, firesafeness and economy.

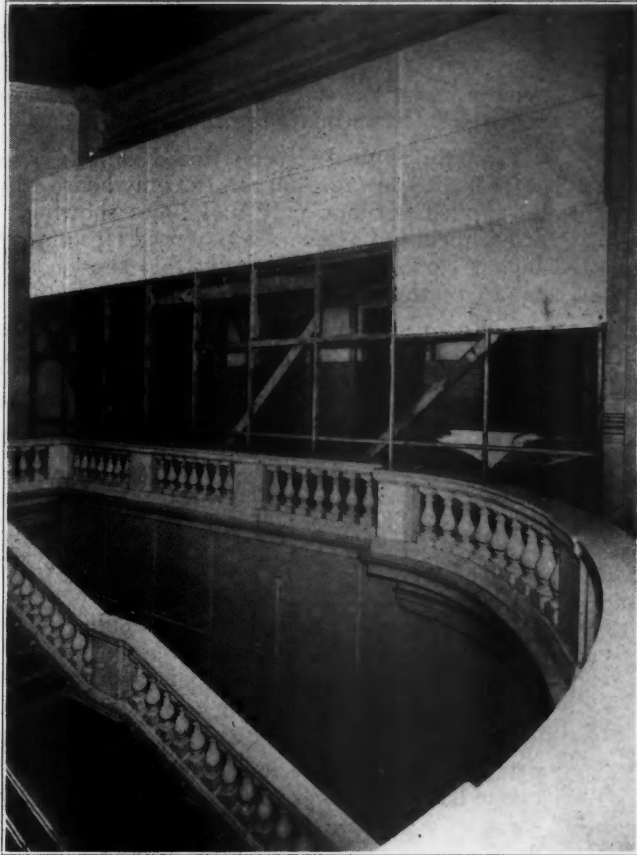
With portland cement stucco exterior finish in any one of a wide variety of colors and textures, the beauty of any admired type of architecture is easily secured.

*Ask for your free copy of "A Book of Beautiful Homes"*

## **PORTLAND CEMENT ASSOCIATION**

*A National Organization to Improve and Extend the Uses of Concrete*

Atlanta	Denver	Lincoln, Nebr.	Oklahoma City	Salt Lake City
Birmingham	Des Moines	Los Angeles	Parkersburg	San Francisco
Boston	Detroit	Milwaukee	Philadelphia	Seattle
Chicago	Indianapolis	Minneapolis	Pittsburgh	St. Louis
Columbus	Jacksonville	Nashville	Portland, Oreg.	Vancouver, B. C.
Dallas	Kansas City	New Orleans	Richmond, Va.	Washington, D. C.
		New York		



Many thousands of feet of Cornell-Wood-Board were used in partitioning off the working space from the rest of the building in the recent joining of the First National Bank Building, Chicago, to the one next to it. Dirt and dust were effectively kept from the occupants of both buildings and annoying noise greatly subdued. Leonard Construction Company of Chicago had the work in charge under the supervision of Frank G. Guthridge, architect for the First National Bank Building.

Note the finished Cornell-Wood-Board partition below the railing as well as that nearing completion above. It makes an air tight wall, light in weight, quickly constructed and taken down.

## CORNELL-WOOD-BOARD

### *A Practical Modern Building Material For 165 Time and Money Saving Uses*

Builders and contractors should keep Cornell-Wood-Board constantly in mind in all kinds of building operations because of its many uses.

In making alterations, such as in the First National Bank in Chicago, illustrated above, it is the ideal material to keep out dust and dirt and subdue disturbing noise.

Cornell-Wood-Board is being used more and more for insulating purposes, lining garages, attics, store rooms and the like.

#### ***Beautiful Effects Possible***

Cornell-Wood-Board has an even, uniform surface decidedly pleasing in appearance. It takes paint, calcimine,

or any of the new decorative finishes and coatings with beautiful art effects at low cost.

#### ***Application Easy***

Light in weight, its application is only a one man job requiring but ordinary skill. Takes little time—no muss or fuss.

#### ***A Time and Money Saver***

It comes in a wide range of convenient sizes, is quickly and easily procured. Progressive dealers and lumber yards everywhere carry it.

For aid in solving new problems, new uses, write us direct. Effective co-operation will be accorded you. No charge.

## CORNELL WOOD PRODUCTS COMPANY

190 North State St., Chicago, Ill.



# Every old building a new prospect

A timely suggestion from Jack the Builder

"THE OLDER a house the harder it falls!" declared Jack the Builder.

"Too many builders think that once a house is built, it is built for good. But they never were further wrong.

"Every old house is a new prospect. If it has been up for more than ten or twelve years, it's due for a general overhauling.

"Maybe the man's family has enlarged since he built or bought it. Maybe he makes more money and wants to add a sleeping porch or a breakfast nook or a sun porch. Maybe the house is in such shape that repairs have to be made, whether he wants them or not.

"In any case, there's a remodeling job for me. And the beauty of those jobs is that they go on month after month, whether new building is fast or slow. If more



Upson Board is fittingly adapted for use in the finest of homes

builders realized the possibility in remodeling business, there'd be far less crying because new building happens to be slackening up a little."

## Big money from little jobs

Certainly, Jack's suggestion offers something to think about. There are old houses—hundreds of them in every community—that need repairs. And Upson Board furnishes just the handy material you need to do the work.

The big panels of Upson Board make an almost perfect material for all kinds of interior repairs and remodeling.

But don't confuse Upson Board with ordinary wallboards.

Upson Board is *different*. First of all, Upson Board weighs only  $\frac{1}{3}$  as much as plaster board. One man can apply it, even on ceilings. And impartial laboratory tests prove Upson Board from 40% to 150% stronger than other boards tested, including plaster boards twice as thick.

Further tests prove Upson Board an excellent insulator, the equal of 11 sheets of building paper. Then, Upson Board is waterproofed to resist moisture, steam,

even ordinary leaks. And dozens of letters in our files prove that Upson Board retards fire.

Properly applied, Upson Board *will never warp or bulge or crack or fall*. And it is the only board which can be applied without ugly nail holes showing. Upson Self-Clinching Fasteners, a patented Upson invention, anchor Upson Board securely from the back without a mark on the surface.

You can always identify genuine Upson Board by the Blue Center showing in each panel edge.

## A hundred uses in a thousand places

Think of the possible jobs with Upson Board!

Nothing better for re-covering cracked plaster ceilings.

In the attic, Upson Board builds in three to four useful rooms, and at the same time insulates the house against heat or cold.

In the cellar, Upson Board will build in a bright, clean laundry, a cool fruit closet, a quiet work room—even a furnace room to keep coal dust from seeping all through the house.

And for store or business, Upson Board builds in partitions, window backgrounds, built-in offices, telephone booths, ceilings—a hundred other necessities.

Upson Fibre-Tile, which is Upson Board with permanent tile-marking on panel surfaces, will build snow-white wainscoting for kitchen, bathroom or shop—at 1-10th the cost of porcelain tile.

## How to get the business

Your town—every town—has dozens of buildings where these Upson Board installations are needed. And it's so easy to get the work.

The Upson Company, Upson Point, Lockport, New York, is eager to help you—without one penny's expense to you. Simply drop them a post card and ask for details of their famous Sure Fire Plan for getting business for carpenters and contractors.

Their advertising experts will write all your prospects—help you get the orders—give you all the available data that has made hundreds of dollars for other carpenters situated just like yourself.

Write The Upson Company now—so you can get started today—in time for the big remodeling season this fall and winter.

**No warping, if properly applied . . .** Use in over a million buildings proves that, properly applied, Upson Board should never warp or bulge or crack or fall.

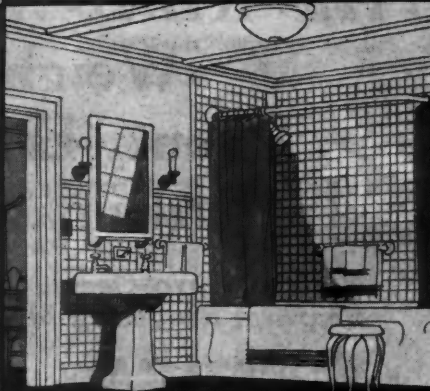
**No ugly nail holes . . .** Upson Board is the only wallboard that can be applied without ugly nail heads or marks on the finished surface. Upson Self-Clinching Fasteners, a patented, exclusive Upson invention, anchor Upson Board panels invisibly from the back.



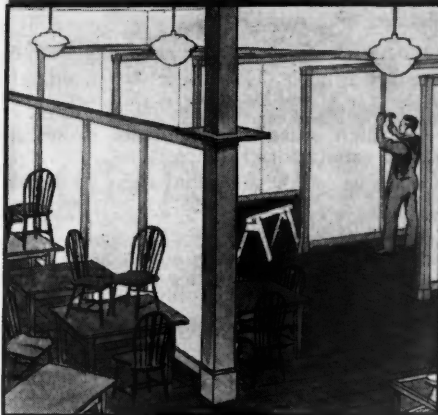
for ceilings  
all through  
the house



for a  
tiled kitchen  
bath or  
shop



for insulating  
and  
reclaiming  
attics



for business  
and  
factory uses  
everywhere



## Write for free, full-sized blue print

WE WANT you to try this quick, modern material for yourself—to see that it is as far ahead of old-fashioned methods as the modern automobile is ahead of the horse and carriage.

We invite you to write for a full-sized

blue print of any of the Upson Board jobs pictured above. Get in on this profitable work today—now. The new Upson Blue Print Service makes it easier than ever before. Ask your dealer or write us for full-sized blue prints and samples *free*.

FOR BLUE PRINT, ADDRESS THE UPSON COMPANY, 905 UPSON POINT, LOCKPORT, N. Y.

# UPSON PROCESSED BOARD

## for walls..ceilings..partitions..insulation

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

**THE MOTOR**

The heart of the machine is also the sanding drum

# ONLY ONE MOVING PART

## THE REID-WAY SANDER

**Weights Only  
Twenty-Eight Pounds  
Including 20 lb. Motor**

***No Belts, No Gears, No Chains, Just a Ball-Bearing, Revolving Motor as a Sanding Drum.***

Put a Reid-Way Sander on the job and see how it speeds up your work. It is a little money maker and will save you many backaches. Does the work as quickly as many of the high priced machines.

The Reid-Way Sander is really three machines in one. It does bench work, floor surfacing and jointing and edging. Can also be used as a grinder.

Does the work quicker because the 6" x 7" high speed sanding drum makes it unnecessary to remove as much wood to obtain a satisfactory surface.

Pushed like a plane, it is a speedy bench machine. Takes material right from the saw and makes it ready for finish.

Inverted in a special base, the Reid-Way serves as a jointer or edger.

We furnish a long detachable handle which makes the Reid-Way adaptable to floor work. Can be used in the smallest closet with ease and will surface right up to the baseboards.

The motor can be removed at will for changing the sandpaper. Nothing to wear out. Plugs in any A. C., 25 to 60 cycle light switch.

***Why pay more? Buy the Reid-Way Machine now and save half.***

***Full details sent on request.  
Use the coupon.***

## THE REID-WAY COMPANY

1295 Elmhurst Drive,

Cedar Rapids, Iowa

THE REID-WAY CO.,  
1295 Elmhurst Drive, Cedar Rapids, Iowa.

Gentlemen: Please send me full information on the Reid-Way Sander. (Made in 110 volt A. C., 25 to 60 cycle.)

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Street \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_



Used as a bench machine



Used as a jointer



Applying the abrasive



# The swift, sure, profitable way to insulation and FIRE PROTECTION

You can guarantee firesafety, cool comfort in summer and easy heating in winter, in any frame house you build—whether finished in brick, wood or stucco. All you need to do is use the system shown here, to make the building a "USG Fireproofed-Insulated House."

Your dealer has these USG Insulating-Fireproofing materials. Let us send you full details—mail the coupon.

UNITED STATES GYPSUM COMPANY  
General Offices: Dept. 901, 205 West Monroe Street, Chicago, Illinois




**OUTSIDE** Nail Gyp-Lap, the fireproof sheathing, on the *outside* of your framework. Broad, thick sheets of pure gypsum rock—brace the entire structure—and make it wind-tight, weather-proof, fireproof.




**INSIDE** Nail Rocklath, the fireproof lath, on the *inside* of your framework. Sheets of pure gypsum rock, instead of inflammable wood lath. No warping, streaks or stains; uniform; perfect bond for plaster.

FIRE **US** PROOF



**BETWEEN** Fill the spaces between the Gyp-Lap and the Rocklath on the sidewalls with Thermofill, The Dry Fill Insulation. Low-cost, fireproof, flaky gypsum product, comparable to cork as an insulator.



**ABOVE** Put Thermofill, The Dry Fill Insulator, between the rafters or over the top-story ceiling. With Gyp-Lap, Rocklath, and Thermofill you blanket the entire house with a solid wall of gypsum—insulated, fireproof.

UNITED STATES GYPSUM COMPANY  
Dept. 901, 205 West Monroe Street, Chicago, Illinois

Please send me complete information about the USG Fireproofed-Insulated House System.

Name .....

Address .....

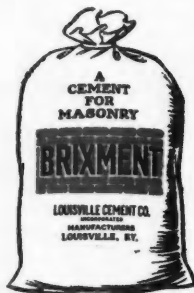


## The Bag for Extra Profits

**T**RY BRIXMENT just once—on your very next job—and you'll know to your own satisfaction how thousands of contractors are cutting the cost of masonry every day in the year. You'll know how BRIXMENT can save you time, labor and money on every job and assure you a wall of uniform strength. No lime, no slaking. Mix one part BRIXMENT with three parts sand and you have the easiest-working mortar you ever knew—ready as soon as mixed. Contractors report savings of \$1.50 to \$2.50 per thousand brick.

### BRIXMENT for All the East

Brixment has been used for mortar in many of the most prominent buildings in the United States. The U. S. Mail Terminal in Chicago, the New York Times Annex in New York, the Miami Biltmore Hotel—these are just a few examples. . . . Now the demand from eastern contractors has grown to such an extent, we have had to build another large-capacity mill to meet their needs. . . . This new mill, located at Brixment, N. Y. (formerly Akron Falls), now assures prompt delivery anywhere in the east.



### Economies of BRIXMENT

BRIXMENT is a mason's cement of unusual strength and economy. . . . No lime. No slaking. No time lost. Ready as soon as mixed. Your concrete mixer can be used. . . . Works easier on the board and produces better work in less time and at less cost. Does not fade mortar colors.

### Ask Your Dealer

BRIXMENT is regularly sold through dealers. If your dealer is not yet supplied, write us direct for quotations and details. LOUISVILLE CEMENT CO., Incorporated, Louisville, Ky.

*Cement Manufacturers for Nearly a Century*

# BRIXMENT *for Perfect Mortar*

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Things Are Moving Fast These Days—Are You Keeping Up?



IN traveling around the country we see a world of change in the style and design of the homes and other buildings that are being put up. The homes are more attractive, more graceful in design, and evidently more attention is being given to the finer details of home planning.

We see entire subdivisions that look as though they had been taken bodily out of the American Builder HOMES IN COLORS Department—they are so appropriate to their setting and so full of charm.

### Advertised Goods Are Favored

We also notice that builders are using new methods to save labor and speed up the work, at the same time producing a good job. We notice a great tendency to use nationally advertised, well known building materials and equipment. In fact a survey of many of the new homes and of the buildings we have inspected of late reminds one strongly of the American Builder advertising pages.

It is very evident that our readers are making use of the designs we are illustrating and are also incorporating into their work the building materials which they see advertised in the American Builder.

### The Advantage of Being Posted

The American Builder is the great market place of the building industry, both for ideas and for the materials and equipment to carry them out. Our readers have every advantage because it is so easy for them to keep in touch and informed as to the latest and best in the building field.

Some, of course, are better posted than others; but the same opportunity is freely offered to all of our readers.

Take time right now to study over thoroughly all the advertising pages and drop a line to every concern whose product interests you, or where you feel you ought to have more recent information. Many of the old time standard lines are being improved or changed, and last year's catalog will not be good enough for this year's business.

### What a Few Cents Will Do

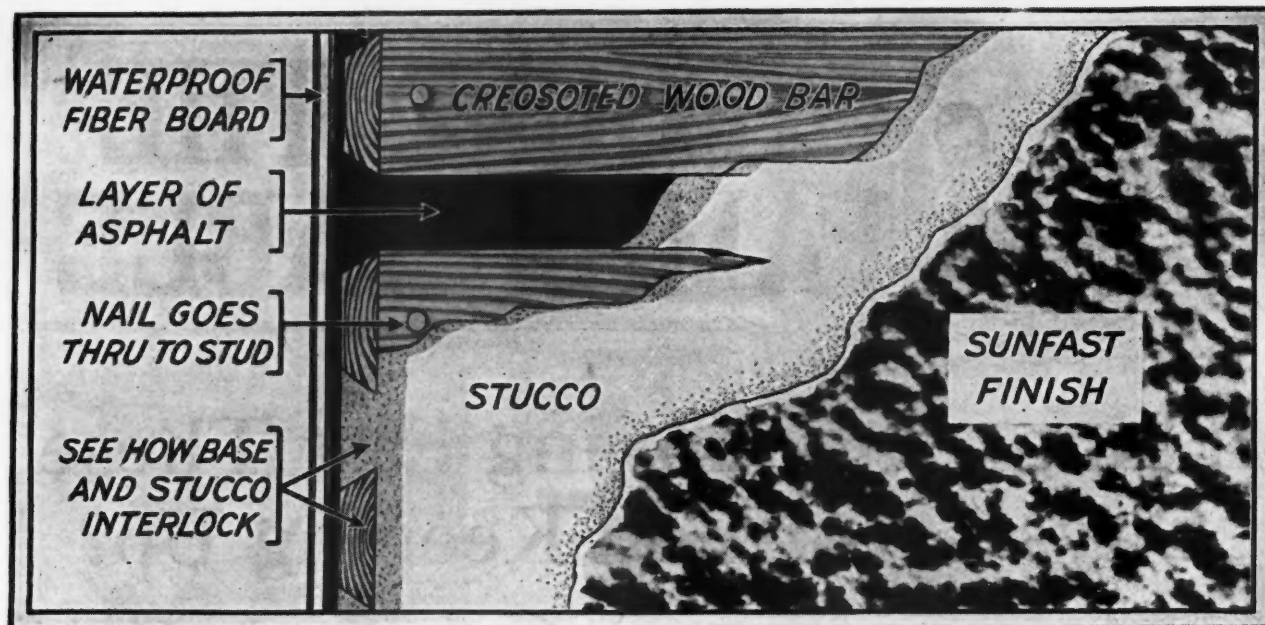
Write to our advertisers for their illustrated catalogs and hand books, detail sheets, samples, etc. If you have not already done so, start a business reference library of your own so that you will have right at hand all the information you will need to conduct your business and keep up to date. A little time and a few cents spent for postage will bring you information that will be worth hundreds, perhaps thousands, of dollars to you. Our advertisers are ready to serve you and are eager to co-operate. Get acquainted with them and get acquainted with their local dealer representatives. Very often dealers will be glad to stock goods which you see advertised in the American Builder if you will call such goods to their attention.

Builders, dealers and manufacturers have much in common, as all are benefited by building activity. Through the medium of the American Builder all are brought together and we are glad at this time to renew our invitation for our readers and advertisers to get together and work together.

Very cordially,

Editor AMERICAN BUILDER.





See how the stucco keys itself into the dove-tail grooves, and is supported between the studs.  
The result is a solid UNIT WALL.

## 25% saving in labor and materials with this improved reinforcement

When you build with Bishopric Reinforcing Base, you save in labor and materials one-fourth the usual cost. This is possible because of the *scientific construction* of the Base itself.

Into finest quality fibre board, heavily coated with asphalt mastic, bone dry creosoted wood bars are embedded under great pressure. The wood bars are bevelled, providing dove-tail keys into which the stucco is firmly locked.

Less material is required with this reinforcing base. First, because the dove-tail construction requires less stucco or plaster; second, because the heavy fibre board prevents the stucco from going through and falling down the spacing between the inner and outer walls. This feature also makes Bishopric Base excellent for interior walls under plaster.

Less labor is required, because Bishopric Base, coming complete to the job in rolls, is

quickly cut to size and can be laid by one man.


Finally, Bishopric Base may be laid direct to studs, requiring none of the sheathing and lath used to reinforce ordinary constructions. Bishopric Base is *its own* reinforcement. Actual tests show that it will stand far greater strains than it will ever be subjected to.

### Send for NEW BOOKLET

If you want the most up-to-date information on how to get excellent results with stucco every time, send for our new booklet, "Looking Behind the Stucco".

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<p>THE BISHOPRIC MFG. CO. 709 Este Avenue, Cincinnati, Ohio.</p> <p>Please send me without charge your new booklet, "Looking Behind the Stucco."</p>	 LOOKING BEHIND THE STUCCO	<p>PRINT NAME AND ADDRESS PLAINLY</p> <p>.....</p> <p>.....</p> <p>.....</p>
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# B I S H O P R I C

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

# AMERICAN BUILDER

Formerly AMERICAN CARPENTER AND BUILDER

1827 Prairie Ave., Chicago—250 Park Ave., New York City

## Building "Livability" Into Homes

IN this day of competition—with the American people becoming more and more acutely convinced of the necessity of getting a full dollar in value for every dollar expended—it is essential that the builders and contractors who are putting up the homes of these American people pay increasing attention to the importance of giving these clients the utmost for the money they are spending.

Today, the era of universal buying and the impetuous demand for homes is slackening down, and no longer does the prospective home-owner buy as rapidly, or even, one might say, as unthinkingly as he did but a few short months ago.

The contractor today is facing a critical demand, by what might develop into a very fickle public. The demands of the prospective home-owner today include far more than merely the requirements embodying utility of design, and attractiveness in appearance—these requirements also include a hitherto unconsidered element—"Livability."

Unless the builder of today establishes a reputation by giving his clients homes that mean economy, comfort, healthfulness, as well as beauty and utility, this same builder will find his public has deserted him and gone over to the builder who has established himself as one who erects homes which include this permanent quality of "Livability."

By "Livability" we mean a home that is attractive, that is efficiently designed, that will be cool in summer and warm in winter, that will be easily and economically heated, that will be quiet, healthful, and, all in all, combine those elements which go to make a home comfortable and appealing to the physical and mental well-being of its inhabitants.

New standards of construction have been established in the past few years. One of the most outstanding is the demand for insulated homes, because proper insulation means that any structure can have those factors which are described above as creating a "Livable" home.

It behooves the contractor of today to look to his business and to realize that unless he furnishes homes that are insulated—that give these comforts—his reputation as a modern, progressive builder will be not only seriously hurt but will be so jeopardized that the standards of construction as established by builders erecting insulated homes will cause his business to fall by the wayside.

We urge these builders to realize these facts—to study building methods that will permit of the construction of an insulated home without adding anything—or but little additional cost to the home buyer. It is our opinion that if a builder will advertise and feature the fact that he is offering insulated homes for sale, he will gain prestige and establish himself in a position that will not only help obtain further business for himself, but create dissatisfaction among home-owners of non-insulated houses. Because, these owners will soon realize that their homes are no longer up-to-date, and naturally that will tend to make them consider the building of a new home, or the improvement of their present home.

It is up to the builders of America to create a wider appreciation of this new standard of building, just as the manufacturers of other products—notably, automobiles, household equipment manufacturers, and others—have pointed out that old-fashioned products are no longer acceptable nor desirable.

The building boom is not on the wane, but is certainly not on an upward trend.

We can maintain good business and serve home-owners more satisfactorily if we believe in this new Standard of Insulation, and urge everyone to improve his present home by insulation, in such ways as lining attics with insulating material, lining basements with the same product, and also doing miscellaneous work, such as building extra rooms, lining of garages, etc.

A home that is "Livable" is a permanent monument to the builder who erected it, and so again we urge the Contractors and Builders of America to Build Reputations by Building "Livable" Homes.



## Building Record Shows Gain

THE record of contracts awarded during July, as reported by F. W. Dodge Corporation, shows the usual seasonal decline, but an increase for the year, to date.

The total reported in thirty-seven states is \$518,931,900, estimated to equal \$583,798,300 with all states included.

The figures for July of this year are 5 per cent less than for the same month last year. The seven months' record, however, shows a 10 per cent gain over the 1926 total for the first seven months. Taking the Dodge figures for thirty-seven states and increasing them to represent all states, shows the following comparison:

Seven months of 1925.....\$3,707,695,350  
Seven months of 1926.....4,082,726,700

A feature of the July figures is that decreases in other sections of the country were largely offset by a 45 per cent gain in the Central West. The figures for the Central West were as follows:

July, 1925.....\$106,471,000  
July, 1926.....154,383,000

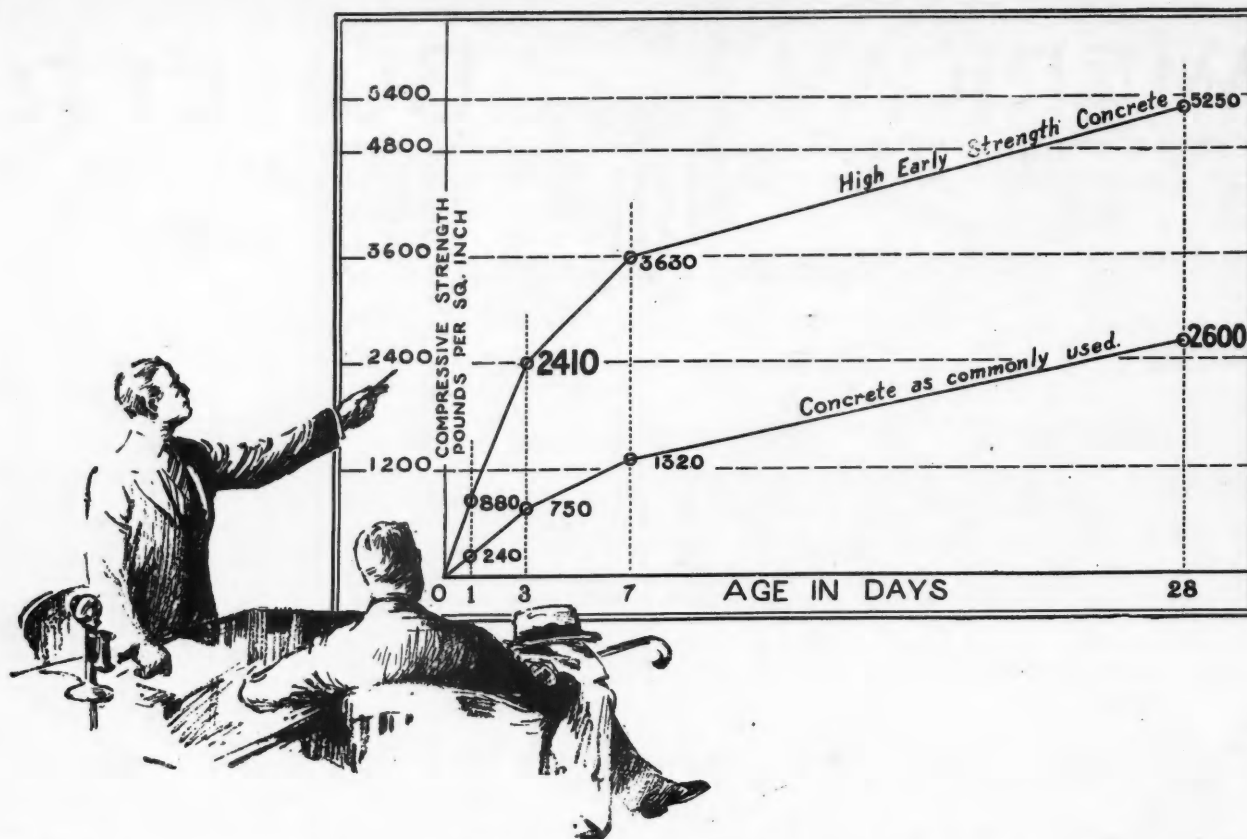


## Labor and Material Costs

THE August number of the National Lumber Bulletin points out that in 1925 the cost of building materials was relatively lower and labor costs relatively higher than before.

The survey gives the following index numbers of costs of constructing a typical building, amount of building done and the ratio of the cost of material to the cost of labor:

Year	Cost of Constructing a Typical Building	Amount of Building Done	Ratio of Cost of Material to Labor
1914	100	100	44.1
1915	102	102	44.3
1916	115	114	49.7
1917	137	64	54.9
1918	152	36	54.3
1919	176	95	54.8
1920	235	76	54.0
1921	189	113	41.9
1922	183	178	44.1
1923	204	194	44.3
1924	207	198	40.5
1925	212	224	39.8



## When Your Rush Work Demands High Early Strength Concrete

You want to rush a job to completion. Among other things you do not want to wait the weeks usually required for concrete to gain the desired strength. You do not need to.

By using well-authenticated methods and standard *Universal* cement, the same quality *Universal* regularly used, you can obtain *strong* concrete in 3 days and at the same time get a concrete that is much better and much stronger forever after.

The chart tells the story. In 3 days, concrete made this new way, with standard *Universal* cement, has a strength equal to ordinary 28-day concrete. In addition, its 28-day strength is double the 28-day strength ordinarily obtained and it is much better and much stronger concrete forever after.

Detailed information on the methods for obtaining this time-saving, high early strength concrete will be furnished promptly on request to

### Universal Portland Cement Co.

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

### Concrete for Permanence

UNIVERSAL PORTLAND CEMENT CO., 210 South La Salle Street, Chicago.

A.B. 9-26

Please send me details on how to obtain *strong* concrete in 3 days with standard *Universal* cement.

Name \_\_\_\_\_

Address \_\_\_\_\_

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# Selling Furnished Homes on Easy Payments

**Texas Builder Makes It Possible for Customers to Finance the Furnishings for the New Home Over a Five Year Period**

**H.** C. THORMAN, San Antonio, Texas, who is largely responsible for the prevailing easy terms by which a home may be purchased in that city, has adopted another innovation in home financing that is proving highly satisfactory to himself and the customers who avail themselves of his plan.

Mr. Thorman came to San Antonio from Toledo, Ohio, only a comparatively few years ago, with fifty dollars capital. He built chimneys and fireplaces until he had saved enough money to build his first house. He sold this one, and with the line of credit he established, built two more; they sold, and others were built. Since then he has built and sold considerably more than a million dollars' worth of medium priced homes. Recently he began construction of a hotel to cost well over a million dollars, and he heads the company that is building it. Thorman has made a signal success in home-building; and the secret of that success lies largely in his easy payment plan.

This latest idea of Mr. Thorman's has been accepted with a degree of eagerness by prospective home owners for the reason that it helps them over one of the problems that stand between them and home ownership—that of



**H. C. Thorman, San Antonio, Texas, Builder, Has Established a System of Including Complete Home Furnishings in the Original Financing of New Houses.**

furnishing the new home.

"There are a considerable number of people," Mr. Thorman explains, "who, I find, are able to make the necessary cash payment on a home and can continue their monthly payments with comparative ease; but some of these people do not have their own furniture, or what they have is not suitable for the home they want to buy. They have enough money to pay the cash necessary to taking charge of the house, but they have nothing left with which to buy furniture, or if they did have the necessary down payment for the furniture, they would find it almost impossible to meet the usual monthly installments on the furniture."

The usual terms on the purchase of furniture in San Antonio, where credit is granted, is about 20 per cent cash and the balance in twelve equal monthly payments; in some cases special concessions are made, permitting customers to string out their payments over a period of 18 months. But in either case, where a home buyer purchases \$1,000 or \$1,500

worth of furniture on credit, the monthly installments run into considerable proportions; so large, in fact, that many an earner of good wages cannot meet them and the payment on the house also.



**A Typical House Built and Furnished Under the Thorman Plan, Which Enables Many Salaried People to Build Homes Who Would Otherwise Be Unable to Do So Because of the Added Burden of Furnishing Them Under the Usual Short Terms of Payment.**



Here Is a Whole Row of Thorman Homes. With the aid of Thorman's system of selling completely furnished homes, the owners of these houses were able to spread the cost of furnishing over a period of five years and thus build a suitable house with suitable furnishing.

Mr. Thorman had found capitalists not only willing but rather eager to buy his mortgages against the homes he sold on the partial payment plan; and he believed that they would just as eagerly buy mortgages on good furniture owned by the same people whose homes the capitalists bought the mortgages upon. So he outlined his plan, and it was accepted as a sound, safe investment.

The plans complete, Thorman furnished several of his new houses with the sort of furniture that ought to go into them. Then he advertised the houses for sale furnished. If a customer wanted the house without the furniture the change was made to suit him.

The cost of the furniture was merely added to the selling price of the house, thus arriving at a selling price for the house as furnished. Previously Mr. Thorman had sold unfurnished new homes at 10 per cent cash and one per cent per month, with interest at the rate of eight per cent until the total was paid, the monthly payments going to pay interest charges and the remainder to apply on the principal. So he offered the furnished homes on the same basis, ten per cent of the total selling price of house and furniture. Under this plan a home that cost \$6,500 furnished required \$650 cash.

Thorman pays the furniture stores for the furnishings as he buys them, thus earning the ten per cent discount usually allowed by the stores for cash within 30 days of purchase. If the furniture cost one-tenth, let us say, of the total cost of the complete house, then one-tenth of the cash payment went to the payment of the furniture. This tenth, the men who bought the mortgages considered, was sufficiently large to make the remaining sum due a safe risk, especially backed by Thorman.

This amount allotted to the furniture then was deducted from the total cost of the furnishings and the balance was divided into 60 equal payments. Thus the home owner was given five years in which to pay for his furniture, rather than one year, as the stores allow. Even with the balance drawing eight per cent, the usual rate of interest in Texas, the monthly payments are so small as to be almost negligible when divided by 60.

Notes and mortgages are made entirely separate for the furniture and for the house, but the customer pays for both at the same time by a single transaction, thus eliminating any extra detail.

"This idea permits salaried people to furnish their new homes a great deal better than they ever could hope to do through the usual terms offered by the stores," Mr.

Thorman declares. "An investment in good furniture is one of the soundest a man can make, next to his investment in a home; and the person who spends money on good furniture is not extravagant. Stretching the payments for furniture out over a five-year period simply means giving ambitious, home-loving men and women an opportunity to realize their dreams of an ideal home and surroundings years before they could hope to get it otherwise.

"I have not yet lost anything on a furnished home financed in this way."—RUEL MCDANIEL.

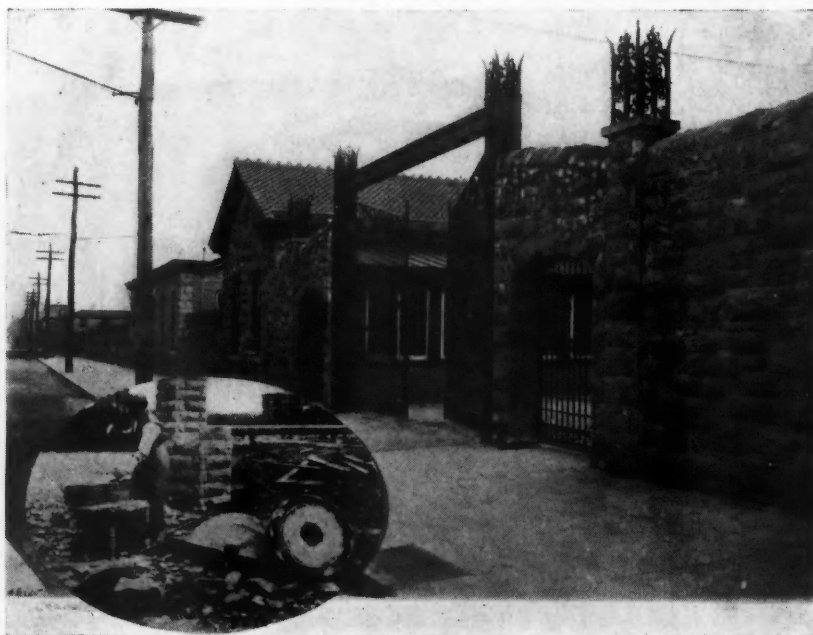


### A Wall of Grindstones

GRINDSTONES are the unusual material used in building a wall several blocks long around two sides of the 65-acre tract in Philadelphia occupied by the plant of Henry Disston & Sons, Inc. Along a third side which fronts on the Delaware river is a massive retaining wall also constructed of grindstones. Then, just for good measure, still more grindstones were used to build the Tacony Baptist Church nearby.

All these stones were worn out in grinding saws and other tools in the Disston plant. More than 2,500 of them were used in building the church alone.

In addition to these walls, grindstones serve as the foundation for roads within the area occupied by the 68 factory buildings that compose the Disston works.



In Constructing a Retaining Wall Old Grindstones Were Used Just as Discarded, but for the Plant Wall and Church They Were Squared and Do Not Reveal Their Origin.

# Color on the Roof

## How Well Blended Colors Make for Roof Harmony

**I**T was at one of the finer developments of the South that we met him. Bill Jameson was his name. The townsfolk called him "Quality Bill," and the homes he built reflected his nickname.

"Thought I would have every roof different," he was saying to the dealer, "but I guess those two asphalt shingle roofs on the hill are too gay. I never realized how much roof harmony really meant until one of my prospects remarked, 'Jameson, take off that calico roof and put on one that blends with the surroundings and I'll buy.'"

Perhaps Bill Jameson's problem of having capital tied up because of "calico" or "crazy-quilt" roofs, is yours. Even if it is not, you will at least be interested in this vital question of colored shingles and roof harmony, which is today such an important factor in the building and selling of homes.

There was a time when roofs were not necessarily artistic. They were thought of more in the terms of protection than of beauty. Today, attractiveness is the paramount issue. The durability of any good roofing material is taken for granted.

Architects and specifying contractors have for some years shunned hidden roof areas. In their place are roofs with long, sweeping lines that accentuate the beauty and grace of the structure as a whole.

They have gone further. They have chosen colorful materials or have painted or stained the dull, drab, commonplace roofing. In this development came the asphalt slate-surfaced shingle with its natural non-fading tints as nature developed them.

You can remember the time when slate granules in the colors of red and green were practically the only surfacing of asphalt shingles. The popularity of the asphalt shingle later led to extending the range of colors to include blues, browns and purples.

By extending the scope of finish, new color combinations were frequently seen and hailed as distinctive, only later to become discarded in the clamor for something more popular and pleasing. As a result, color combinations ran riot and in many cases the basic ideas of color harmony were forgotten.

Today, however, in the better grade asphalt shingles, nature and science have joined hands in providing for you a roof perfect in balance of color. The choicest color slate granules from New England quarries as well as those from the West and South are carefully blended according to their color values.

Two methods are employed:

1. The scientific mixing and embedding of the slate granules on the shingle during the process of manufacture.
2. The use of a pre-determined percentage of solid colors on the roof to harmonize with the architectural design and scenic surroundings.

You will be interested in the method employed successfully in applying solid color shingles in the proper proportions to obtain harmonious effects. The method is a time-saver, cutting down the cost of assorting to the mini-

mum. It also eliminates the possible chance of roofs being laid in blotches, which so frequently mar the appearance of an otherwise beautiful roof.

Simply lay out your bundles of shingles on the basis of your selected color proportions. Alternate the different bundles so that at no time two colors of the smallest percentage are together. Then pick one shingle off of each bundle and stack up in series of tens or twenties, and take them up on the roof. Your applicator can lay them just as if they were from the original bundle, which saves his time of assorting and assures the roof being harmoniously blended.

The correct use of color in the roofing of homes is becoming more and more a sales factor, with conservatism yet distinctiveness as the chief aim. By the use of colored shingles now on the market and the exercise of good judgment you can be assured that every home you build has a roof in perfect harmony with the architectural and scenic surroundings—a sales factor that no prospective home owner or builder should overlook.



## Standardization Savings

**R**EPORTS of great savings effected by standardization of construction equipment feature a statement recently issued, by the Associated General Contractors of America, on the cost of machinery purchased by contractors. Even the most enthusiastic advocates of the standardization movement are being surprised by the results obtained from a movement that has been actively under way less than two years.

Within one year a direct reduction of prices on concrete mixers has been accomplished by elimination of several useless and duplicated types of machines, it is stated. This reduction is seen as only the forerunner of the campaign's ultimate results, a number of other benefits are expected.



The Correct Use of Color in the Roofing of Homes Is Becoming More and More a Sales Factor, with Conservatism Yet Distinctiveness as the Chief Aim. By the use of colored shingles now on the market and the exercise of good judgment you can be assured that every home you build has a roof in perfect harmony with the architectural and scenic surroundings—a sales factor that no prospective home owner or builder should overlook.



# Quality and Beauty at Low Cost

WILLIAM W. STICKNEY, Architect



Cream Colored Stucco Walls and a Roof Shingled in Tones of Green, Pink and Gray, Give a Harmonious Effect Which Is Set Off by the Brick Work of the Chimney Top and About the Windows.

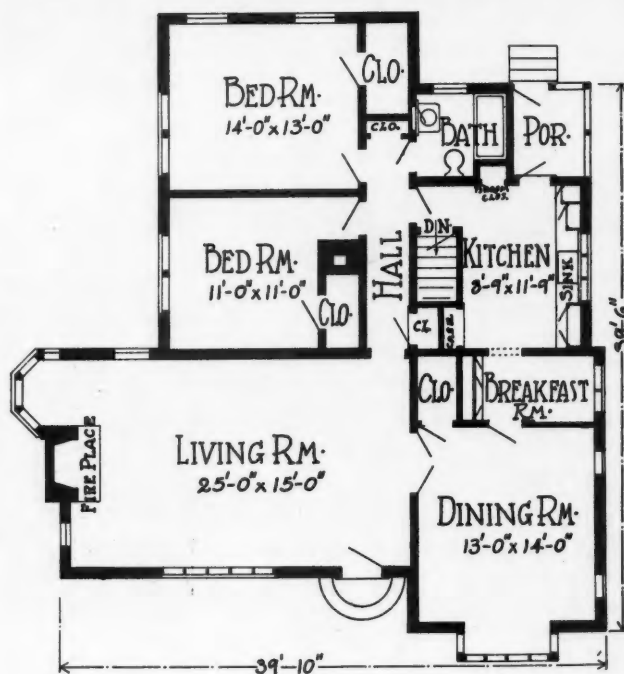
**A** CREAM colored stucco has been used for the exterior finish of this attractive and well constructed home in Pueblo, Colorado. The studding is 2 by 6, sheathed and papered, and the stucco is applied on metal lath. Stained shingles, in tones of green, pink and gray, were used on the roof while the window frames are painted a dull green and the sash ivory.

The interior woodwork is all of fir with a waxed oak finish and the floors are of flat grained oak, except in the kitchen and bathroom where they are covered with linoleum.

A glance at the floor plan shows a large living room, 15 by 25 feet, with a cast stone fireplace and beamed ceiling. Between the dining room and kitchen is found the popular breakfast nook, a feature of so many of the more modern homes. To the rear there are two bedrooms, one 11 feet square, and the other 13 by 14 feet. There are large closets off of each of these rooms and a bathroom close by.

The basement is almost fully excavated and here are the usual furnace, coal, laundry and storage rooms and also a large room, at the front, which will later be finished as a social room, with a floor for dancing. The heating is from a hot air furnace and in-swinging casement windows have been used.

While this is one of the most interesting and well planned homes recently built in Pueblo, its cost was quite reasonable, amounting to about 25 cents a cubic foot for approximately 32,000 cubic feet of content.—THEODORE M. FISHER.



A Large Living Room and a Breakfast Nook, Typical Features of the Modern Home, Are Conspicuous in This Plan.



The Entrance of This Attractive Home in Pueblo, Colorado, Is Worthy of Particular Note. Though quite simple, each detail has been handled in an effective manner, from the grill above the heavy plank door to the flagging of the approaching walk. William W. Stickney, architect.

# Outlying Chicago Bank a Model

Design by A. Epstein, Chicago Architect, Suitable for Any Thriving City; Junior High School, Tall Apartment Hotel, and a Theatre Office Building  
Also Presented in Duo-Tone

By BERNARD L. JOHNSON

Editor, *American Builder*

## The Chicago City Bank & Trust Company

A. E. Epstein, Architect

The ground area of this bank, located on the corner of Sixty-third and Green streets, Chicago, is 125 by 125 feet. The bank will occupy basement, first and mezzanine floors. There will be four floors of offices above.

Indiana limestone was used as a solid front on both street elevations, with pressed brick on alleys. There are safe deposit vaults in the basement, with capacity for 15,000 boxes. Cash vaults are also in the basement, but there will be additional vaults for various departments on first and mezzanine floors.

The entire interior will be furnished in Tavernelle marble with bronze and glass cage fronts. The offices are to be modern in all respects. The corridors are to be lined with rubber tile flooring. The trim throughout is of American walnut.

Each office will have individual lavatory, also connections for gas, refrigerating water, air, etc. Entire building will be mechanically ventilated with modern induction exhaust fans, as well as air washers and purifiers. Heating system will contain latest improvements in the way of the temperature controls, etc. Radiators on banking floor will be set in wall behind grilles.

Entire structure will be of reinforced concrete type of construction—100 per cent fireproof. In addition to two passenger elevators, there will be freight elevator and electric money lift for bank purposes. Cost is approximated at \$1,000,000.00. Construction work started March 1, 1926, to be completed March 1, 1927.

## Wilson Junior High School

W. W. Meyers, Architect

The Wilson Junior High School, located at Twenty-eighth and Reed streets, is of the box shaped, enclosed court type, two and three stories as determined by the topography of the site with well lighted corridors extending entirely around the building on each floor; four main stairways conveniently located conjoin the corridors of each floor, forming a continuous line of travel to each and every department throughout the entire building.

On the ground floor there are three general shops with separate store room in connection with each; four class rooms; cafeteria with capacity of 400;

On the first floor there are eleven class rooms; two sewing rooms, two cookery rooms and music room with separate store room in connection with each. The gymnasium, not including spectators' gallery which has seating capacity of 320.

The auditorium is in the center of the building with entrances on a level with the first floor. The seating capacity is 725; it is equipped with picture booth, adequate stage and two dressing rooms.

On the second floor at the front of the building, over the offices, is found the library with separate work room and separate store room and book stacks with a capacity of five thousand volumes. We find also eleven class rooms with drawing room and art room and a combined drawing and art room with separate store room for each. There are also on this floor two laboratories for general science and biology with separate store rooms.

The student capacity of the building is 1,394, based upon

the capacity of the instructional rooms. The cost of the building, including general work, plumbing, heating and ventilating, electric work, clocks, bells and telephones, is \$613,951.00. The number of cubic feet in the building is 2,200,000 and the cost per cubic foot is 27.9c.

## Apartment Hotel at 10 East Eighty-Sixth Street

Arthur Paul Hess Architect

A \$3,000,000 twenty-two story apartment hotel 100 by 102 feet will be erected at 2-10 East Eighty-sixth Street, just off Fifth Avenue, overlooking Central Park, New York City. The last word in spacious, luxurious accommodations for exclusive tenancy will be provided.

There will be suites of one, two and three rooms with baths, and provision will be made for combining them as desired. Each suite will have serving pantry and automatic refrigeration. Public and private dining rooms will be provided for the convenience of the guests.

The design of the facade is distinctive and dignified in character. The splendid location, spacious rooms, and service unexcelled will attract to this hotel the most desirable tenancy.

The owners are Arthur Paul Hess and Samuel Kahn, of 345 Madison Avenue, New York City.

## New Balaban & Katz Theatre and Office Building, Detroit, Mich.

C. W. & Geo. L. Rapp, Architects

The dimensions of the entrance lobby of the new Detroit Theatre are 60 feet, extending back 200 feet and adjoining the auditorium proper, the size of which is 140 by 200 feet.

At the end of the grande lobby is the grande marble staircase, 20 feet in width, extending up to all levels, including mezzanine floor, up mezzanine promenade, intermediate promenade, up balcony promenade, as well as the top portion of the balcony. This entire staircase is in view of the main floor of the grande lobby so that all patrons have a view of the main floor lobby at all levels.

The lighting effect is produced by large torchere standards, also suspended crystal fixtures from main ceiling, as well as colored cove lighting. This cove lighting in grande lobby is of the three-color system, amber, red and blue, in which colors are independently controlled by dimmers. This bank of three dimmers is operated by a motor which, as an example, mechanically dims the red and throws on the amber, and in turn dims the amber and throws on the blue. In other words, you have a perfect blend of one tone into the other and at periods of 20 minutes there will be a complete change of the three colors. At all times the diffusion will be so gradual as not to be perceptible.

In the grande lobby there is a promenade at the mezzanine floor level extending around all sides a width of 15 feet. This promenade is richly furnished with divans and accessory furniture.

The exterior on the two intersecting streets embraces high grade twelve story office building of monumental design carried out on the French treatment, to be faced with terra cotta. The large window on one facade indicates somewhat the height of the grande lobby as this window opens directly into the same.

Refrigerating system is provided for reducing the temperature of the auditorium to 72 degrees when the outside temperature is 96 degrees.



# ART SUPPLEMENT *of* NOTABLE ARCHITECTURE



PLATE 101

*The CHICAGO CITY BANK AND TRUST CO. BUILDING, 63rd and Green Streets, Chicago;  
A. Epstein, of Chicago, Architect.*

*The AMERICAN BUILDER, September, 1926*



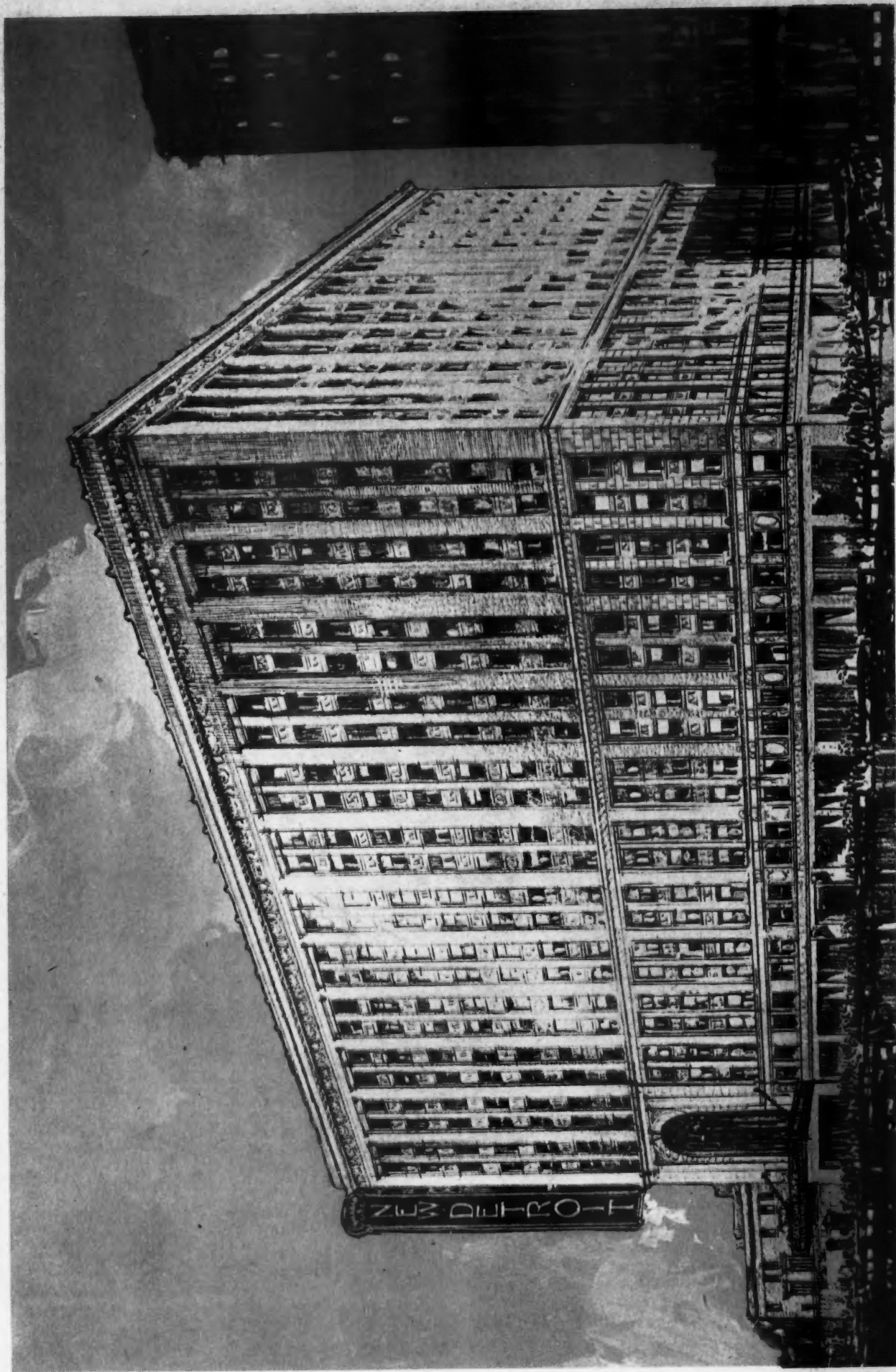
The WILSON JUNIOR HIGH SCHOOL, Erie, Pa.;  
W. W. Meyers, Architect.





NEW APARTMENT HOTEL at 10 East 86th St., New York City;  
Arthur Paul Hess, of New York, Architect.





*The New Detroit Theatre and Office Building for Balaban & Katz, Detroit, Mich.;*  
C. W. & Geo. L. Rapp, of Chicago, Architects.

# A Windmill Filling Station In Holland—Michigan



This Dutch Windmill Filling Station on the Highway Leading Out of Holland, Michigan, Instantly Catches the Eye of the Passing Motorist Who, if He Stops, Will Find a Very Complete Service at His Disposal.

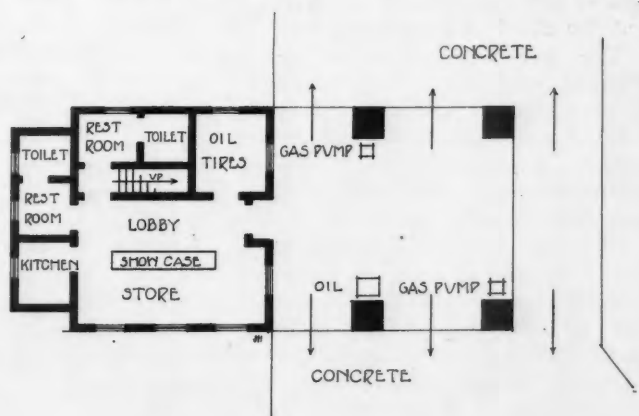
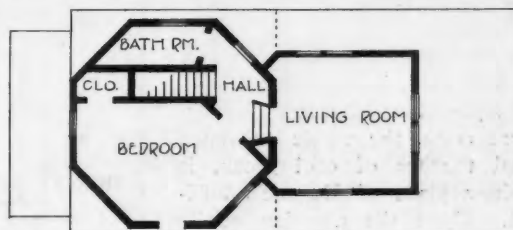
NO doubt, in old Holland, the windmills are, and always have been, used for the purpose of pumping water, but in a newer Holland (Michigan) the characteristic outline of the old Dutch windmill looms on the motorists' horizon with a different message. Nor is it too difficult to imagine that the towering blades will actually pump gasoline at our bidding, and so we veer our course to the more practical gasoline pumps under the wide canopy of this unusual service station.

Once the attention is captured, however, and the mind of the passing motorist is made up to stop, there are yet many things necessary to make a service station successful. A satisfied and pleased customer is the "proof of the pudding," and to create that feeling on the part of the motorist is the last word in service.

At the Dutch windmill station there is a lack of unsightly advertising signs to mar the feeling of harmony that the station and grounds create. The gas and oil and water are handy for quick service. Air for tires is located conveniently at one corner of the concrete apron. About the whole place there is a feeling of roominess; no danger of running into anything. Sharp turns are not necessary. One enters and leaves with a smooth, level and gradual turn.

Inside the service station building, with doors leading from the lobby, are two sets of rest rooms and toilets, as the only exterior sign on the service station states. A long show case separates the lobby from the store part of the large room. A corner room, with its door convenient to the front door, is devoted to the storage of oil and tires.

In one end of the rear wing is located a kitchen. So equipped, the proprietor is able to not only replenish the tanks of the automobile, but to also furnish fuel for the occupants. Coffee and sandwiches on cold days, and sandwiches and cold drinks on hot days being the usual order



A Store Is Combined with the Usual Services While the Living Accommodations Above Make Possible the 24-Hour Service Which Has Been Found Profitable.

of things. The kitchen also serves as the family kitchen for the occupants of the living quarters above.

J. HAROLD HAWKINS.



# A Retail Store Experiments with Period Architecture

L. L. DOUGAN, Architect



Italian Renaissance in Style, the Weatherbee-Powers Store at Eugene, Oregon, Is a Striking Example of the Effective Use of Period Architecture in the Designing of a Retail Store Building.

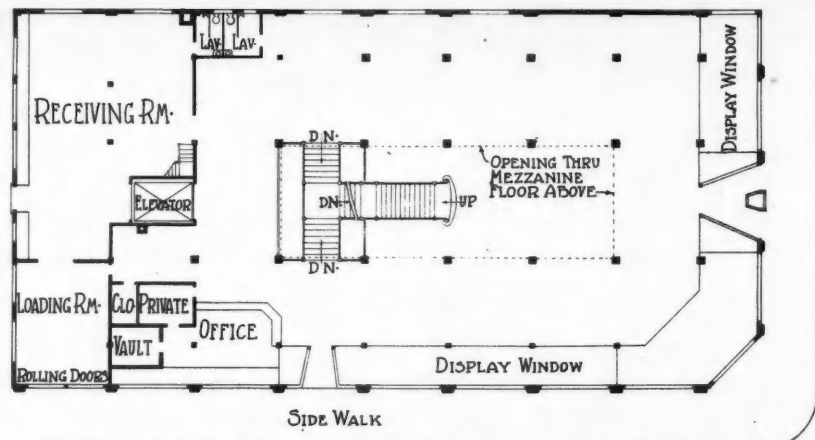
**A**RCHITECTURAL beauty will win its way, even to the heart and purse of the practical retail merchant, as has been shown in the erection of the new Weatherbee-Powers furniture store at Eugene, Oregon.

The new store building with its warmly glowing red tile roof, its romantic Italian Renaissance style of architecture done in rich tan terra cotta, the whole enlivened by occasional touches of cool green, is easily the show place of Eugene's business district. Upon the occasion of its recent opening celebration it is said that half of the town's entire population turned out for the house warming.

The store was designed by L. L. Dougan, of Portland, a prominent West Coast architect. The plan and design was worked out from notes, suggestions and sketches gathered by Ira F. Powers, one of the partners of the new store, in his country-wide search for the newest and best ideas in up-to-date retail store buildings.

The best of it is, according to Mr. Powers, that this structure, with all its novel features and striking departure from the conventional in business building construction, has cost no more than an ugly building without character or individuality. The beauty, harmony and atmosphere achieved through the investment of the extra thought and time has an actual commercial value to the merchant, particularly in a community like Eugene, Oregon's university town, with a population of some 15,000 conservative, home-loving, cultured people. The favorable attention the store has already attracted has proved the very best kind of advertising and the store offers the ideal setting for the fine type of merchandise it handles, a permanent feature of unquestioned value.

From the unique show windows, shaded by bizarre striped awnings, to the ideal arrangement of the interior



The Interior Arrangement Is in Accord with the Best Modern Conception of Store Construction and Affords an Excellent Floor for the Display of Furniture.

of the store, the single aim has been to adapt the building to the distinct needs of a furniture store, to set off furniture as nearly as possible in its own natural and proper sphere. The result throughout has been singularly unified and harmonious, simulating home-like, lived-in room effects that make the strongest appeal to the buyer of furniture.

There are three large windows on one street, six on the other with a great, deep corner window between measuring 31 feet across the back and with a depth of 19 feet. All the windows are designed with dignified neutral backgrounds of rough plaster delicately mottled in rose and green with floors carpeted in rich taupe velvet. Italian arches are the feature of every window and afford plenty of opportunity for display of the store's drapery and curtain materials in their most natural and at the same time, most attractive setting. The windows have been further treated by replacing the conventional flat valances with straight-hanging marquisette lending a most home-like appearance to the windows.



Inside, the arrangement of the store faithfully carries out the Italian Renaissance feeling with its broad, richly carpeted, 10-foot stairway, with its light green, wrought iron spindles topped with polished mahogany rails. Walls are done in restful gray, delicately mottled in gold and blue, while the floors of the main floor are done in taupe covering, with the exception of the aisles which are treated in a block design of gray and black linoleum which lends a marble-like appearance.

While the main floor is given over almost entirely to displays of living room furniture, the extreme right hand side is divided into other departments, including three phonograph rooms, back of which is the drapery, bedding and linen section. Behind this is the drapery workshop, while to the rear of the entire salesroom is the loading and shipping section.

The balcony, however, is exceptionally interesting, divided into series of "rooms" where half a dozen or so rooms may be furnished to the last detail with the store's own stock to display it to the very best advantage and in the most natural setting. The back of the balcony is occupied by the rug and linoleum section. On the balcony, too, is the women's rest room, a feature that no progressive store, today, dares neglect. This one is delightfully appealing in its color scheme of orange and faun, and serves a very considerable purpose in winning the approval of feminine buyers and prospective customers for the institution.

Upstairs the Thrift Cottage is to be a big drawing card for the store and will take the form of a perfectly appointed five-room bungalow, bringing into play a representation from every department of the store, from the basement up.

The basement store has been designed along unusually cheerful and attractive lines. With apple green walls and floors gaily carpeted in red, it houses the crockery, cooking utensils, stoves, refrigerators and unpainted furniture. A model kitchen and a special lecture room are also available in the basement. The walls here are 10 feet high.

The modern facilities of the Weatherbee-Powers store, combined as they are in a building at once beautiful, distinctive and convenient, ideally adapted to the particular merchandising purpose for which the store is intended, have made this institution one of the outstanding stores on the Pacific Coast, practically without a rival in any town of



A Broad Stairway, with Wrought Iron Rails, Gives Direct Access from the Main Floor to the Mezzanine Balcony, and Is Approached by a Long Central Aisle in the Weatherbee-Powers Furniture Store at Eugene, Ore.

its size, and with few approaching it even in the larger cities up and down the coast. Worth the effort? Mr. Powers thinks so. It is an age of individualism. What the other fellow has done is no longer good enough. What used to be good enough no longer sells the goods. Merchandise today demands a proper and harmonious setting and according to Mr. Powers, with a little planning and the help of a competent architect, this can be accomplished without an elaborate outlay of money. In fact, he claims that the beautiful building that houses this newest of the Powers chain of furniture stores cost no more than many of the nondescript structures that blindly complete for the market's business.

Beauty in business buildings is now a practical possibility. It is something at least worth thinking about and bringing to the attention of the prospective builder of business structures.—NAOMI SWETT.



### To Eliminate Waste

THE Committee on Wood Utilization, of the U. S. Department of Commerce, not long ago commissioned the Department of Research in Lumber Retailing, of Antioch College, Yellow Springs, Ohio, to make a series of studies in conjunction with the committee, having for its purpose more complete utilization of odd and short lengths of lumber.

The problem upon which it is hoped that the investigation will throw some light is the most complete utilization of those odd and short lengths of lumber which are unavoidably produced in the process of manufacture and which are now either going to waste at the mill or are not being used to the fullest advantage.

Just how important this study may prove to be to all who are interested in the use of wood is indicated by an estimate, made by Secretary Hoover, that from \$200,000,000 to \$300,000,000 annually could be saved by more intelligent manufacturing and merchandising and, above all by awakening the public to the necessity of calling for short lengths where these may be used, thereby creating a market for the vast footage of short lengths which is now going to waste.

This committee presumably will work with the retail lumber dealers and the builders and very practical results are expected.



Display Windows Are Designed to Make Possible a Complete Arrangement of Furniture as An Effective Aid to Selling.

# A Combination of Gothic and Spanish Architecture

San Antonio's New Medical Arts Building Embodies a Number of Distinctive Features and Is Set Against a Rich Architectural Background

RALPH H. CAMERON, Architect

**Y**OU will go a long way, and return, before you find a spot that offers a more pleasing variety of architecture in a single city block than that found in San Antonio, Texas, since the completion of the Medical Arts Building there. And this is not the only outstanding feature to be found in this beautiful 13-story office building. It contains 76 per cent rentable area, a record well above a good average.

The new building carries out a Spanish-Gothic architectural theme, with just enough of each to make it outstandingly impressive. It casts its tall shadow out over the shrubbery-covered, flower-bedded court of the old Alamo Mission, so close by that you can stand in the tower of the new structure and almost "step" onto the flat roof of the Alamo.

The historic Alamo, erected more than 200 years ago, stands as a perfect example of basic Spanish-Colonial architecture, or Splatresque. The Alamo's battered walls, torn by the rude cannon balls of Santa Anna's attacking army, the innumerable tiny bullet holes, inside and out, pierced by defending and attacking battalions, stands as a sort of silent sentinel of protest against the advance of modernity into the avowed home of quaint and historic art. One's imagination can without effort picture the conflict between the old and the new, the stubbornness and tenacity of the old, the aggressiveness of the new.

Diagonally across the street from the new building is the postoffice. Here, too, is rare contrast. Erected nearly a half century ago, the old postoffice building is an excellent example of Romanesque architecture; and it is said that the building is the work of H. H. Richardson, the leader of this style of architecture in America.

In the same block with the Medical Arts Building is the new Scottish Rite Cathedral, a \$1,000,000 example of excellent modernized Greek design.

Gothic-Spanish, old Spanish-Colonial, pure Romanesque, modernized Greek, each represented in an outstanding building, an architectural treat in itself. That is architectural contrast for you!

The Medical Arts Building cost upward of \$1,000,000; it contains 13 stories, basement and a tower that brings the



At Night This Lighted Profile of the New Medical Arts Building, in San Antonio, Texas, Presents a Sight the Beauty of Which Would Be Difficult to Surpass.

uppermost point to 16 floors from the street level. Ralph H. Cameron was the architect.

The building stands at a point where three streets come irregularly together, at the head of Houston Street. The structure is erected in a perfect V shape, on a triangular site, with the V shape running regularly at the front point and inverted in the rear.

This shape is responsible for the exceptional efficiency of floor arrangement which affords 76 per cent rentable area. The odd shape means that near the center of the building is the point of origin, as it were, for layout in every direction. Here, obviously, is the place where waste space would be found.

Therefore, here are located all service units, thus utilizing the otherwise inefficient space for service. The elevator shafts are here. In the same zone are the stairs, leading from floor to floor. There are two lavatories on every floor, a feature not found in many office buildings working for efficiency; but these are located in rooms too small for regular offices and otherwise would have been waste space. Yet they are amply large, and though there are two lava-

tories to the floor, they actually utilize less live space than one would ordinarily.

The building was literally made to order, a major portion of the space being leased before the structure was ever designed. Thus it was possible for the architects to bear in mind the individual and specific needs of the tenants already under lease contract. Every floor is different in design and arrangement; and each floor was laid out to serve a specific type of physician. This factor also added to the efficiency of floor space and office arrangement.

One floor, for example, is given over entirely to men specializing in X-ray work; another for dentists of general practice; another for extracting specialists, and so on.

On the top floor are a complete hospital and operating rooms. There are overnight sleeping rooms for patients and every other feature that makes the floor a complete, modern hospital for all types of operations and general treatment.

RUEL MCDANIEL.

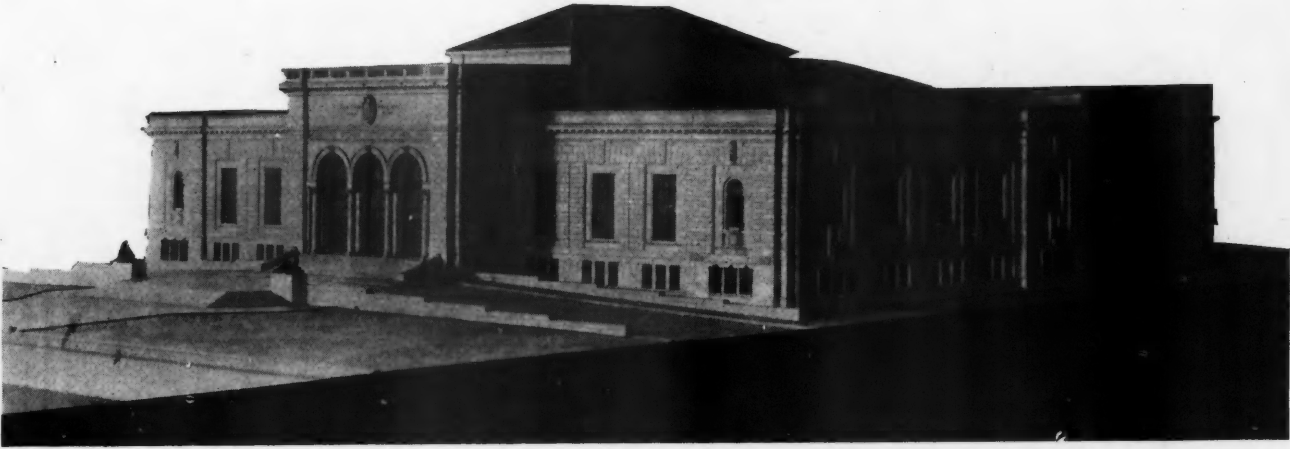


The New Medical Arts Building, in San Antonio, Texas, Is a Real Achievement on the Part of the Architect, Ralph H. Cameron, and Is an Outstanding Example of the Modern Development of Combined Utility and Beauty in Large Office Buildings.



# Utility and Beauty Blend in Detroit Institute of Arts

By ROBERT F. SALADE



The New Detroit Institute of Arts as It Will Appear When Completed. It is designed to harmonize with the Detroit Public Library building which faces it on the opposite side of Woodward Avenue, and the design was actuated by the Italian Renaissance style.

IT has been well said that nothing can be beautiful without being at the same time useful. This adage admirably applies to the new Detroit Institute of Arts which is being erected on Woodward Avenue in the City of Detroit, and which is rapidly nearing completion. This splendid edifice is not only one of the most beautiful structures of its kind in the world, but it also possesses remarkable utility.

To some extent, the character of the Detroit Institute of Arts was predetermined by the Detroit Public Library, which faces it on the opposite side of Woodward Avenue. This handsome building—the new library—was erected after plans by Cass Gilbert, and its architecture of the Italian Renaissance style actuated the architects of the Institute to seek in this style for the motives which dominate the design of the Institute. Not that both buildings are of exactly the same style of architecture, but there is a harmony of material, of height, and of general appearance, all of which have helped to produce two magnificent civic buildings of harmonious design. The architects of the Detroit Institute of Arts are Paul P. Cret and Zantzinger, Borie & Medary, of Philadelphia.

The public library has a frontage of 210 feet on Woodward Avenue, while the Institute has a frontage of 306 feet on the same boulevard. The two structures are on an axis, and the treatment of the landscape gardens surrounding them is in keeping with their architectural design. With the erection of these notable buildings the city of Detroit now has a center of arts and letters which compares well to such centers in New York, Chicago, Philadelphia and other large cities of America.

In the new Institute of Arts, not only have the architects planned a great museum which will adequately house the extensive art collections which the City of Detroit already possesses, but provision has also been made for future expansion. With the coming of Dr. William Valentiner, last October, as Art Director of the new Institute, a brilliant period in the art development of Detroit has undoubtedly begun. The recent important accessions made by the purchasing staff of the museum include an entire fifteenth century Gothic chapel which was shipped in mammoth cases to Detroit from the Chateau du Lannoy at Herberbillier,

France. From Philadelphia has arrived the woodwork stairway and mantel taken from a fine, old Colonial home. Another classic exhibit consists of a Louis XV drawing room with panelings from a sixteenth century Italian room.

As to the great utility of the Detroit Institute of Arts, this is outlined in an illuminating manner by Paul P. Cret, the chief architect, as follows:

"What are the solutions adopted in the new Institute of Arts? First, the mingling of exhibits, paintings, small statuary, tapestries, etc., in the same room of each section, which will do away with the monotony of long lines of paintings in rooms bare of furniture, a condition as tiresome in a museum as it would be in a residence.

"Then, an attempt to harmonize the architecture of a room with its contents. In the exhibition hall of Italian art, for instance, the whitewashed walls, the windows similar to those of the Florentine palaces, and the beamed ceiling, are the frame for paintings grouped with credences, cassonni, brocades and glazed wares.

"The American Colonial collections are grouped in small rooms, the woodwork for which has been taken from a historic mansion of Philadelphia which had to be torn down owing to the growth of that city. The modern paintings will be placed in rooms lighted by large windows like those of the studios where they were painted. The same care has been taken to produce an atmosphere most favorable for works of the near and far East. The general grouping, studied by the Arts Commission with the collaboration of Dr. Valentiner, provides for three large sections: America, Europe, Asia and classic antiquity. In each of these the collections are arranged in an order which allows the visitor to follow the development of each art, and the reciprocal influence of each country on another. Each one of these sections forms a whole which, starting from an important artery of circulation (vestibule, hall or garden), returns to another artery, making it independent of the other two.

"The administration floor of the Institute contains a large hall for lectures and concerts, accommodating five hundred persons; an exhibition hall of the prints department; a study room for research work; the children's museum; a club room for art organizations of Detroit; a

lecture room for small groups, and several other departments. The main auditorium, seating twelve hundred persons, has been planned to be used as a theater, a concert hall, or for motion pictures in connection with lectures. This auditorium includes all the appointments of a first-class theater and of a fine foyer which may also be used as an exhibition hall. The foyer is in direct communication with the indoor garden.

"Still another innovation is the arrangement of the special rooms for temporary exhibitions. These exhibitions, which have become an important part in the community life of Detroit, in other museums are usually installed in the same rooms which contain the permanent exhibits. This means a frequent moving of the valuable exhibits, a closing of parts of the museum, and possibility of damage to the exhibits. Here, on the contrary, it will be possible to arrange a temporary exhibition in the special rooms without interfering with the permanent collections."

The main floor of the Institute will not only contain all the principal exhibits, but also gives access to a delightful indoor garden and an outdoor quadrangle of singular beauty of design. The main hall leads directly to the indoor garden, and at the rear of this garden is the loggia which also connects with the main auditorium.

Broadly speaking, the right wing of the museum is devoted to European art, the left wing to American art, and the rear wing to Oriental art. The period rooms will contain all the art objects of a period, including painting, sculpture and the decorative arts, and will be so arranged that the visitor entering the first room will come in contact with art of the present time with which he is naturally most familiar.

In the right half of the building he will enter the room of European painting and sculpture of the nineteenth century. Then, by well-planned sequence, he will pass through the French of the nineteenth century, the French of the eighteenth century, the Dutch of the seventeenth

century, English art of the sixteenth, seventeenth and eighteenth centuries; Flemish of the seventeenth century, Spanish of the sixteenth century, German and French of the sixteenth century; two Italian rooms of the fifteenth and sixteenth centuries, early Christian and Romanesque, Gothic, Greek and Roman. Thence by way of Egypt, the visitor logically enters the Oriental rooms.

In the rooms of the left half of the museum he finds a most interesting history of American arts, beginning with the painting, sculpture and decorative arts of today, and then passing backward through the years until a series of American Colonial rooms is reached. By way of the primitive arts of the American Indian, the Aztec and the Peruvian he is again led into the Oriental department and to the Chinese art which has a rather close relationship to primitive American art.

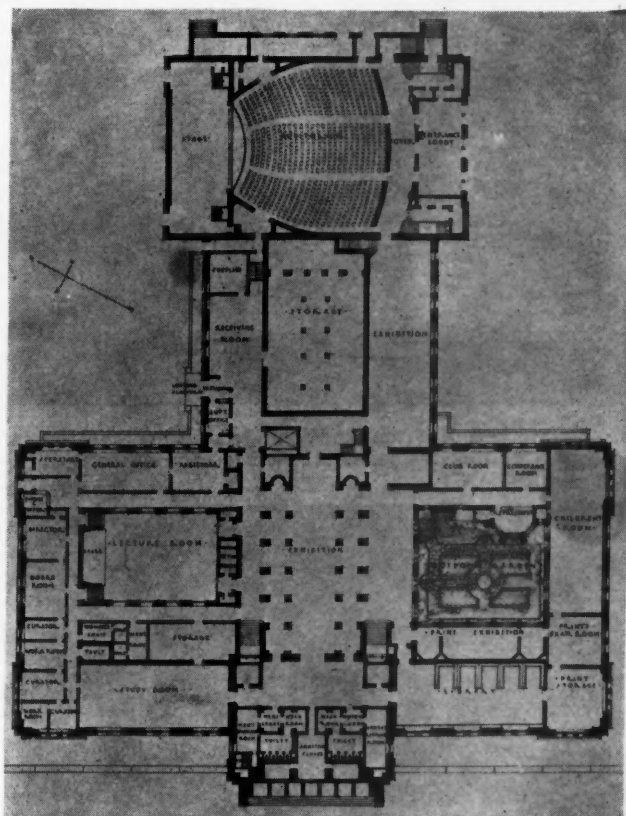


## Economy in Zoning

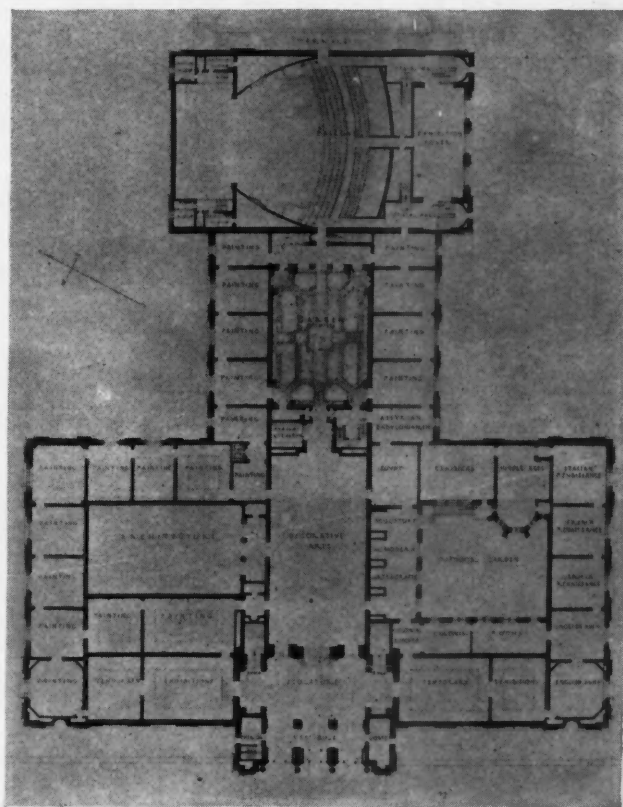
MORE than half of the urban population of the United States now lives in zoned cities, according to the Division of Building and Housing of the Department of Commerce. In 1916 the figure was only about one-tenth. There are now 436 municipalities, with a population of exceeding 27,500,000, that have zoning ordinances in effect as against six cities, with a population of less than 6,000,000, in 1916.

Zoning seeks to so regulate the use to which buildings may be put, the area of the lot that may be covered and the height of the buildings in different sections of the city, that the land in each district may be used for the purposes to which it is best suited.

This is true economy, insuring as it does not only against undue depreciation of residential districts, but also that there shall be satisfactory industrial and commercial sites and that buildings shall not be erected only to be torn down before they have served their time solely to meet unforeseen changes in the neighborhood.



Ground Floor Plan of the New Detroit Institute of Arts Showing the Location of Auditorium, Lecture and Study Rooms, Offices and the Outdoor Garden.



Main Floor Plan. Here are seen the regular exhibit rooms, which are arranged in a naturally progressive order, and also the special temporary exhibit rooms.



# Pointers on Framing Wood Joists to Steel Beams

IT has become common practice now to use steel floor girders in small buildings. Steel beams have the advantage over heavy wood sections in that they may be depended on to carry heavy loads and at the same time be of comparatively small cross section. Steel columns have come into favor also for the same reason.

Where clear spans of large area are required and it is permissible to block the clear space with an occasional column, the ideal type of framing, unless fireproof construction is to be used, is the wood joist floor supported on steel columns and girders. When this construction is used, some means is necessary to hold the wood joists to the steel beam, and here the contractor has the choice of several different methods.

Probably the least expensive method for seating the joists is that shown in the illustration in Fig. 1, and the sketch in Fig. 5. This is the use of a wood cleat bolted to the web of the beam. When the beam is ordered from the shop the specifications should call for a certain number of holes in the web, and the spacing and location of the holes should be given. Then when the beam comes on the job it is delivered with the holes already punched, and the wood shelf angle may be bolted to it by the carpenters on the job.

Another method commonly used is to carry the joists on a shelf angle attached to the web of the beam in the fabricating shop. This is illustrated in Fig. 2 and Fig. 7. The size of the angle to be used depends upon the weight the floor is called upon to carry, in other words, the heavier the floor load the larger the shelf angle should be. It is good practice to use an angle with unequal legs allowing the long leg to project from the face of the beam web, thus affording a larger bearing surface for the joists than if equal leg angles are used. Nothing less than a three inches by three inches angle

should be used, however, or the joists will not have sufficient bearing.

In situations where there is plenty of headroom, and it is considered advisable to take headroom from the lower floor instead of the upper, the method shown in Fig. 3 and Fig. 6 may be used. This consists of attaching a steel plate to the lower flange of the beam and allowing the joists to rest upon the plate.

When this is done the plate should be allowed to project for at least three inches beyond the edge of the flange so that three inches of bearing may be assured for the joists. It is never safe to assume that the joists will take bearing both on the flange and on the plate. To make this possible careful cutting would be required, and even then, shrinkage of the joists would cause them to bear too much on the flange or too much on the plate, with insufficient bearing on each.

It is safe, however, to assume that the joists take bearing on the flange if at least three inches of bearing is provided on the plate, for then, if the joists do not take bearing on the flange of the beam there is sufficient bearing for them on the plate. If they do take bearing on the flange, well and good, they will be so much more stable.

When extremely heavy beams are used for the girders, it is possible that their flanges may be so wide as to furnish sufficient bearing for the floor joists without providing any auxiliary means of support for seating them. In this case the joists may be carried upon the flanges of the beams as illustrated in Fig. 9. As in the other cases, at least three inches of bearing should be provided.

When joists stop at steel beams and it is possible to allow the beam to project into the room below, they should be treated as illustrated in Fig. 8. These joists are notched,



Fig. 1. Method of Framing Wood Joists to a Steel Beam by Means of a Wood Shelf.



Fig. 2. Method of Framing Wood Joists to a Steel Beam. Note that the joists are tied to each other.



Fig. 3. Floor Joists Framed to a Steel Girder by Resting Them on a Plate Attached to the Under Side of the Bottom Flange of the Girder.



Fig. 4. This Is Not a Good Way to Frame Wood Joists to a Steel Beam for Reasons Which Are Fully Explained in the Text.



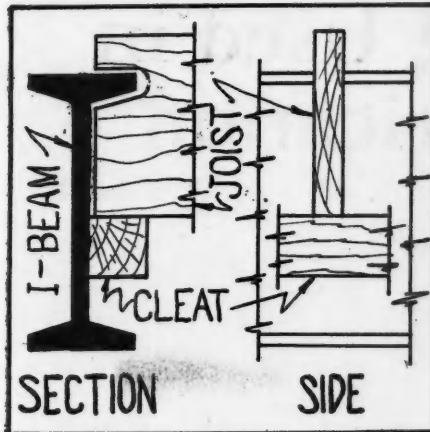


Fig. 5. Wood Joists Resting on Wood Cleat Bolted to Web of Steel Beam.

to fit over the top flange of the beam instead of merely being set down on the beam without any further consideration. Notching the beams in this fashion provides a means of locating them permanently in place with the assurance that there will be not further danger of their shifting.

Joists which are supported at some point in their length by steel beams may be handled as shown in Fig. 10, but where two joists, which are carried on the upper flange of a beam, lap at the beam they should be framed in the manner shown in Fig. 11. The lap should be at least six or eight inches long and several nails should be driven into the joists at the lap in order to tie them together.

Joists should never be framed to steel beams in the fashion illustrated in Fig. 4. Here a notch was cut in the end of the joist and set to engage the shelf angle on the web of the beam. It would have been just as easy to have ordered the beam with the shelf angle placed low enough so that the joists could have their lower edges resting upon it. Fig. 4 illustrates a dangerous condition. The joists are very liable to crack at the point where they are attached to the beam thus weakening the entire

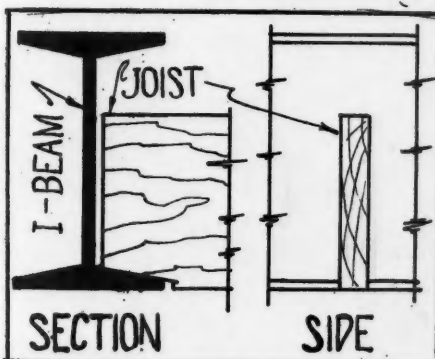


Fig. 9. Wood Joist Resting on Flange of Steel Beam Where Heavy Beams with Wide Flanges Are Used

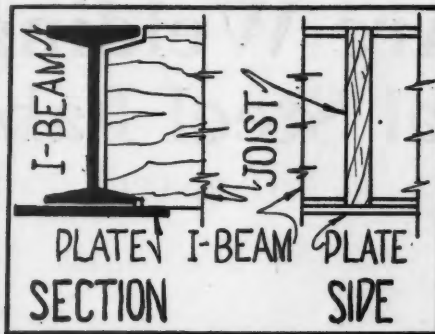


Fig. 6. Wood Joist Resting on Steel Plate Attached to Under Side of Lower Flange of Steel Beam. This method is suitable for situations where there is considerable head room that can better be spared from the lower floor than from the upper.

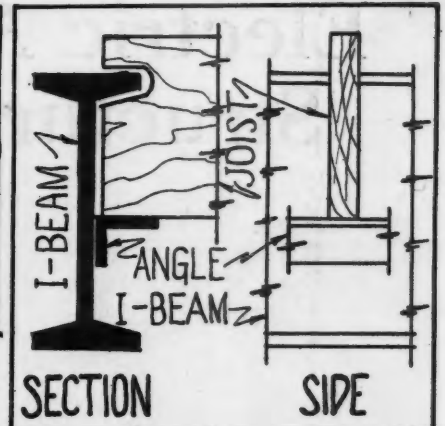


Fig. 7. Wood Joist Resting on Steel Shelf Angle Riveted to Web of Steel Beam.

floor system.

It may be well also to give a word of caution regarding the method of cutting the joists at the ends when the type of framing used demands that they project above the top flanges of the beam as is the case in Figs. 1 and 2 and illustrated by the sketches in Figs. 5 and 7. Refer to Fig. 5, which is a typical case and note how the joist is cut where it fits over the top flange of the beam.

There should be plenty of room (at least one-fourth inch clearance) between the beam and the end of the joist in order that provision be made for expansion and settling, two factors often overlooked. If sufficient clearance is not provided the expansion of the joist or settling of the building may result in a cracked joist or a warped floor. This kind of cut is best made by drilling



Fig. 8. Joists Coming to an End at Steel Girder Should Be Handled in This Fashion to Provide Greatest Stability.

an auger hole at the proper distance back from the end of the joist and making two saw-cuts to the hole.

Where steel shelf angles or plates are ordered they should be riveted to the beams in the fabricating shop rather than bolted

to them on the job, as riveting makes a much stronger job. When wood shelf cleats are used they should be tightly bolted to the beam, and washers used on the bolts so that a good, tight job is assured.

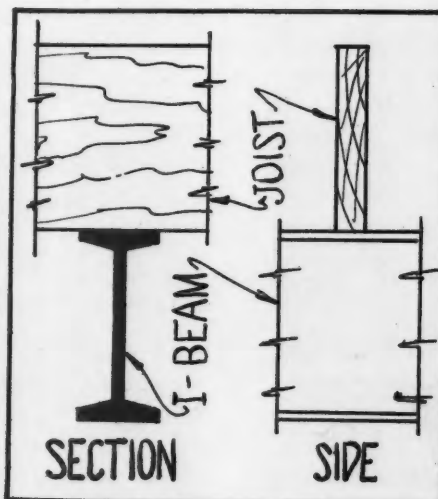


Fig. 10. Wood Joist Resting on Steel Beam. In this case the beam is an intermediate support.

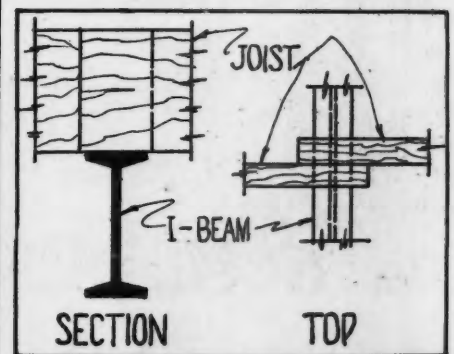


Fig. 11. Wood Joist Resting on Top of Steel Beam. The joists are lapped and fastened together with a few nails.

# Electric Arc Welding Used in Structural Steel Fabrication

By A. G. BISSELL



Fig. 1. An Electrical Arc Welded Building Under Construction by the Chicago, Burlington and Quincy Railroad. At the same time another building of the same size was constructed by riveting and a comparison of the costs of the two is contained in this article.

THE fabrication of structural steel work by electric arc welding at present is of greater interest to the manufacturer who is using this material in his work than to the builders of large buildings and bridges. However, in the construction of small buildings and bridges where most of the work is assembled in the field, arc welding is of great value. In this class of work and in fabricating structural steel racks, frames, trucks, etc., arc welding permits of decided saving in materials and labor.

During and since the late war many have seen the advantages of joining structural material by arc welding. Up to date there have been numerous applications of this nature. One interesting application of arc welding in the erection of a structural steel building was made at Eola, Ill., where the Chicago, Burlington and Quincy Railroad Com-

pany erected a one-story mill-type building, 60 feet by 40 feet, using scrap steel such as shown in Fig. 1. It is interesting to note that this railroad company erected two buildings of the same size—one riveted and one arc welded. Data furnished by Mr. W. T. Krausch, engineer of buildings of the railroad company, shows the following comparison in erection costs:

	Arc Welded	Riveted
Preparation cost including material and shop fabrication.....	\$381.71	\$1,000.50
Field erection cost.....	404.49	339.00
Grand total.....	\$786.20	\$1,339.50

From the above figures it will be seen that the saving in favor of the arc welded building lies in the preparation.

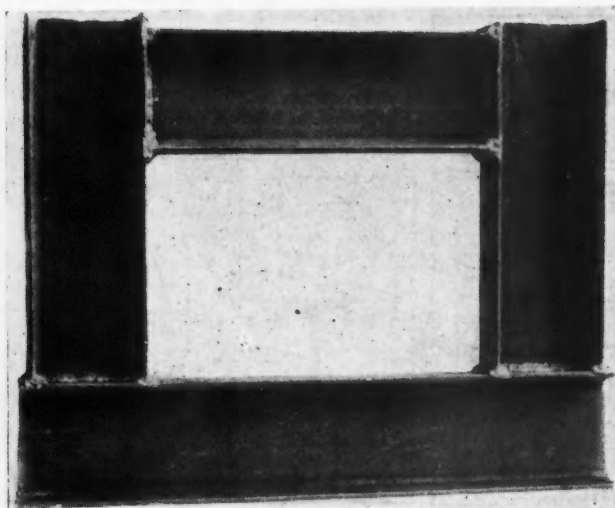


Fig. 2. Welded Test Piece for Static Test Before Loading.

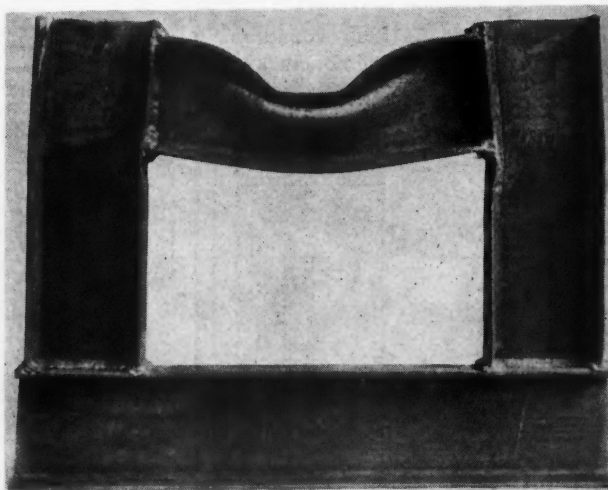


Fig. 3. Welded Test Piece for Static Test After Loading.

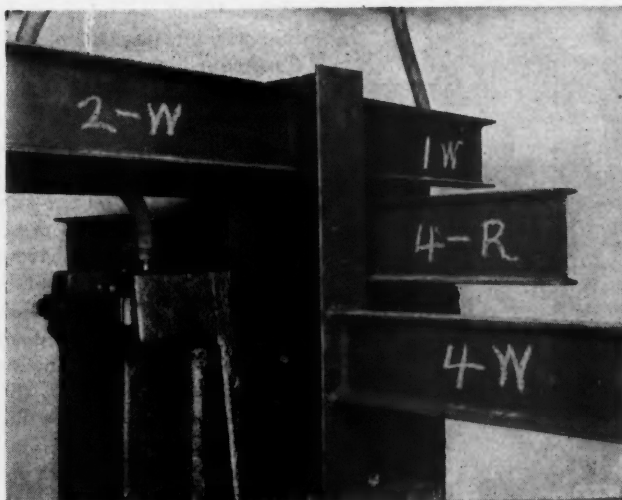


Fig. 4. Vibration Test Piece Showing Arc Welded Connections.

The only preparation required for arc welding is to produce the steel and cut it to the required length. No clip angles, gusset plates or butt straps are required. Preparation necessary for the riveted job involves shop details and layout, punching, painting, reaming and shop fabrication. The reason that the field erection cost of the riveted structure is less than the welded structure is because all the welded joints were made in the field while much of the fabrication of the riveted structure was done in the shop. Twenty-seven thousand one hundred pounds of steel were used in the riveted structure, while 25,619 pounds were used in the welded structure, a reduction of about 5½ per cent in the amount of steel used in favor of welded building. The saving in steel and the reduction in the total erection cost in this case resulted in a saving of 41.3 per cent in the final cost of the arc welded building.

Even though there have been many applications of electric arc welding in the fabrication of structural steel, the test data involving welded joints has not been complete. Tests have been made on the metal deposited by the arc but the most logical tests to prove the value of this method of fabricating structural steel, it is thought, should be made on joints made by this process. With this idea in view, some tests were made on actual welded joints under varying loading conditions and stresses.

In determining the tensile strength of a welded joint, the following procedure was followed:

A butt joint was made between two pieces of ½-inch

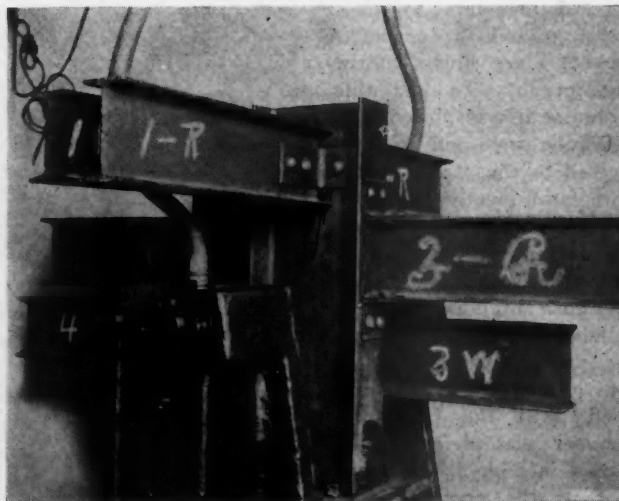


Fig. 5. Vibration Test Piece Showing Riveted Connections.

plate and two ¾-inch plates, beveled 60 degrees. The metal was deposited in two layers, using 160 to 175 amperes current and 5/32-inch electrodes. There was no backing behind the seam and the plates were held rigidly in position. Test pieces were cut from these plates and tested for their tensile strength.

The results of these tests showed that the joint made in the ½-inch plate developed an average tensile strength of 64,400 pounds per square inch, with an elongation of 4 per cent in one inch across the weld. The ¾-inch test pieces developed an average of 57,100 pounds per square inch with an elongation of eight per cent in one inch across the weld. Failure in both cases occurred in both base and deposited metal. The steel in which the joint was made had a tensile strength of between 65,000 and 70,000 pounds per square inch. The welding wire was a hard-drawn, mild steel of about .17 per cent carbon and .55 per cent manganese.

To determine the shear value of an arc welded joint, a test piece was made up. Pressure was applied to the horizontal member in a testing machine through a heavy bar that extended within ½ inch of the welded joint. The weld was deposited in two-inch by ¾-inch heads which developed a shear strength of 50,550 pounds per square inch.

A test piece to show the resistance of arc welded joints to a static load was made by uniting four six-inch by 12.25-pound beams, shown in Fig. 2. In this test piece the 18-inch horizontal cross-member was attached to the flanges of the

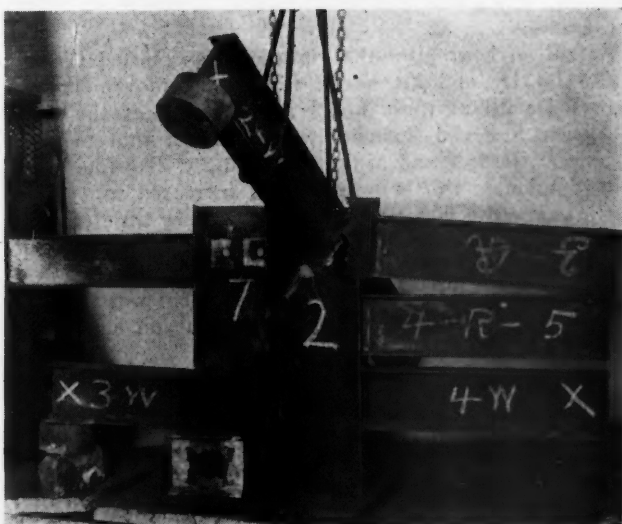


Fig. 6. Welded Vibration Test Piece After the Second Test.

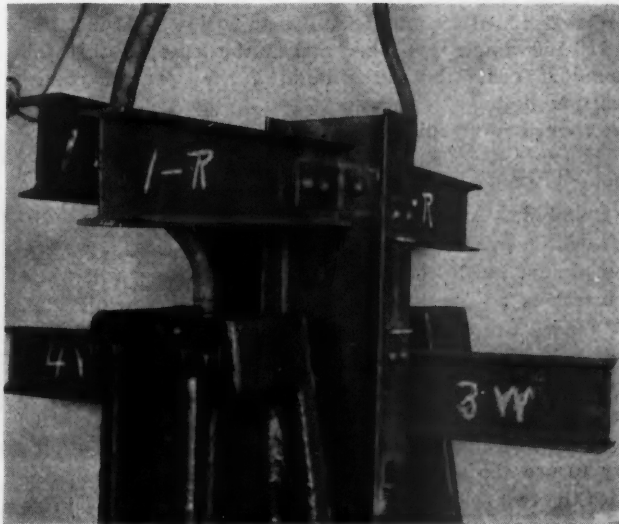


Fig. 7. Riveted Vibration Test Piece After the First Test.



vertical members by fillet welds around the contracting parts are shown in the photograph. To test this structure it was placed in a hydraulic press and pressure applied to the center of the horizontal member through the end of a piece of 3-inch shafting.

At a pressure of 40 tons the horizontal and vertical members began to deform, the pressure falling to 35 tons. This pressure was applied until the horizontal member was deformed as shown in Fig. 3. The extent of the crushing was limited by the base "I" which deformed, causing the test piece to slip out of the press. An examination of all the joints in this test piece after the test, failed to show any evidence of failure in the welded joints, proving that a joint of this nature will hold even though the connected members may be badly deformed.

To determine the effect of vibration on arc welded joints in structural steel, a test piece was constructed of two 10-inch, 25-pound beams, to one of which were arc welded four six-inch, 12.25-pound I-beams 24 inches long. To the other was riveted four six-inch, 12.25-pound I-beams 24 inches long.

As can be seen in Fig. 4, the six-inch I's are attached to the web and flanges of the 10-inch beam by a fillet weld. The only preparation required in making these joints was to clean the scale from the parts to be welded. These welds were made by an average welder working under the same conditions that might be expected in actual practice. Each joint required approximately 6/10 pounds of metal and from 12 to 15 minutes to weld, using 5/32-inch wire at 150-160 amperes. This makes the cost of this joint around 35 cents for the welding if the operator receives \$1.00 per hour.

A riveted joint uniting the members in a similar manner is shown in Fig. 5. Two six-inch, 25-pound I-beams 24 inches long were riveted to the web of the 10-inch by 25-pound I. A standard beam connection was used as specified on page 246 of the Carnegie Steel Company Pocket Companion, Twentieth Edition, 1919. This shows that beam connections for seven-inch, six-inch and five-inch I-beams are made, using two L's, six inches by four inches by 3/8 inch, 3 inches long, with two 3/4-inch rivets through the four-inch leg of each clip holds it to the web of the other member. In this test piece, in order that the six-inch I might be attached to the web of a 10-inch I, it was necessary to use six-inch by 3 1/2-inch by 3/8-inch angle clips and space the two 3/4-inch rivets 4 1/2 inches instead of 5 1/2 inches. Otherwise the joint was standard.

In order to have a six-inch I-beam attached to the flange

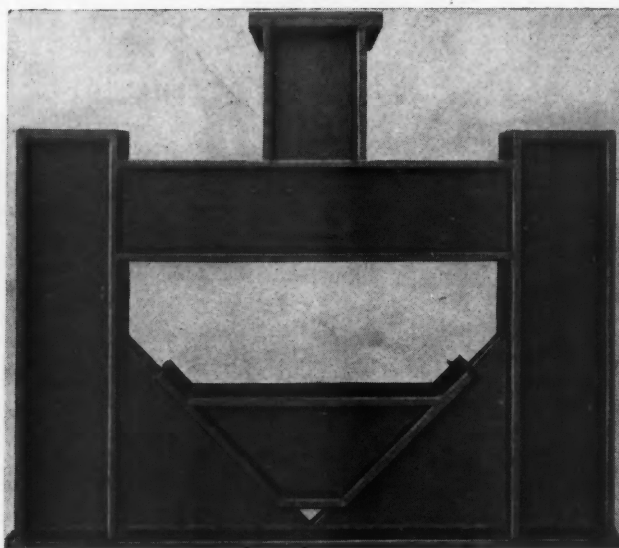


Fig. 8. Shock Test Piece Before Testing.

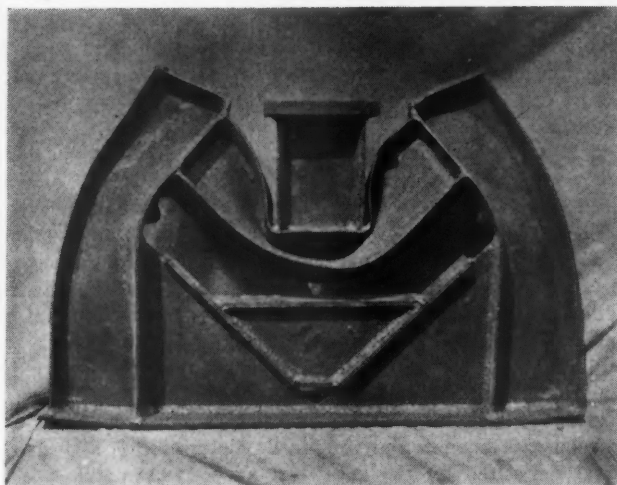


Fig. 9. Shock Test Piece After Testing.

of the 10-inch beam by riveting, a joint was calculated. Two four-inch by four-inch by 1/4-inch L-pieces three inches long were riveted to the flanges of the two members by 5/8-inch rivets, two through each leg of the clip angles. In both of these riveted test pieces the rivets were driven hot by hand.

Both riveted and welded test pieces were mounted on a one-inch plate 14 inches by 22 inches by uniting the 10-inch I-beam and this plate with a fillet weld. This combined test piece was securely bolted by four-inch bolts to the bed plate of a vibratory test machine and subjected to a vibration, or vertical movement, of 1/16 inch at the rate of 1,760 complete cycles per minute.

In order to identify the members of these test pieces, they were marked as follows:

1R and 2R—Riveted to opposite sides of web on the 10-inch I-beam.

3R and 4R—Riveted to the flanges of the 10-inch I-beam.

1W and 2W—Arc welded to the opposite sides of the web of 10-inch I-beam.

3W and 4W—Arc welded to the flanges of the 10-inch I-beam.

The first test period lasted 18 hours and 20 minutes. At 24 minutes of vibration the lower clip angle on

specimen 3R failed. At 42 minutes the lower clip angle in 4R failed. At one hour the upper clip angle on 3R failed, removing the member. 4R was removed when the remaining clip angle failed at two hours and four minutes. The nature of the failures can be seen in Fig. 7. It will be seen that the failure was due to the fatigue of the metal in the clip angles.

Within an hour after the vibration was started the clip angles on 1R and 2R began to show a movement that increased until at three hours and 45 minutes the rivets had been loosened sufficiently to allow a movement of 1/4 inch at the free end of both 1R and 2R. By four hours and 15 minutes this movement had increased to 1/2 inch. By this time the vibration was exerting very little effect as these members were so loose that they received but few of the shocks—simply bouncing up on about every fifth or sixth vibration. The result of this movement was to swage the rivet down to a reduced cross section and enlarge the rivet holes.

During this time the arc welded test piece attached to the same base was receiving the same vibrations. At all times during the 18 hours and 20 minutes of vibration the arc welded members gave a clear ring when struck with a hammer, showing that no failures had started in or about the welds in the first period of the test. It might be mentioned here that all four of the holding-down bolts through the base of the test piece failed from fatigue, illustrating

to some extent the severity of the test.

As it appeared that it would require considerable time to produce a failure in any of the arc welded members it was decided to attach a load to the end of each member and thus accelerate the test. Twenty-five-pound sections of six-inch shafting were arc welded to the members, and vibration continued for 22 hours and 10 minutes.

At the end of an hour on the second period the web surrounding the section to which members 1W and 2W were attached, failed. It will be noticed in Fig. 6 that these members are still securely attached to each other through a section of the web. After 20 hours and 40 minutes on the second period and a total of 39 hours and five minutes, the flange and web of the 10-inch I-beam to which 3W was attached, gave way as shown in Fig. 6. This failure was probably due to the web of the 10-inch I cracking down from the top. Had this crack not occurred, 3W probably would have held indefinitely, because at the end of this period 4W was intact and there was no evidence of failure in the weld in the surrounding metal. After 3W was removed the vibration was continued for an additional hour, but owing to the damaged condition of the 10-inch I-beams, both being badly cracked, the test was discontinued.

After having found that the arc welded joints in structural steel were capable of withstanding as much static and vibratory loading as the structural members themselves, the only remaining test data to be obtained was the effect of shock in these joints.

The test piece to be subjected to a sudden shock was made by arc welding two six-inch, 12.25-pound I-beams 24 inches long to a ½-inch by three-inch base-plate. These vertical beams were joined near the tops by a similar beam of the same length. This was attached to the flanges of the vertical beams by a fillet weld having approximately ¾-inch contact on each member. To receive the blow, an eight-inch piece of six-inch I-beam, capped with a piece of one-inch plate, was attached to the center of the upper flange of the horizontal member.

To prevent the vertical members from collapsing and the base from buckling, the bracing shown in Fig. 8 was installed. Since the horizontal member was attached quite near the tops of the vertical members, caps were welded to the top ends of the vertical beams to prevent them from splitting through the web.

This test piece was placed on a solid foundation consisting of a heavy plate supported by the anvil and two 12-inch by 12-inch timbers under a 2,000-ton steam hammer. First a light blow was delivered upon the plate on the extended I to settle the set-up. The effect of this blow was not evident, so a blow of approximately one-third the capacity of the hammer, or about 700 tons, was delivered on the one-inch plate that capped the extended beam.

The impact of this blow drove this short piece into the horizontal member, which, in collapsing, drew in the vertical I-beams bending them at the top of the cross braces as shown in Fig. 9. There is no doubt that a very severe shock strain was transmitted through the welded joint that connected the vertical and horizontal members, more severe, in fact, than any structure would be expected to stand in practice, and yet the welded joints did not fail.

In summarizing the data obtained, the following points indicate the stability of arc welded joints. The deposited metal in an arc welded joint develops an average of 60,000 pounds per square inch in tensile strength, and 50,550 pounds per square inch in sheering strength. Such joints proved

strong enough to remain intact while the structural steel members were badly deformed under a static load of 40 tons. When subjected to vibration of 1,760 reversals per minute, arc welded joints surpassed standard riveted joints in permanence, and showed a longer life than the structural material joined by it.

Under a sudden shock produced by a blow of approximately 700 tons, the arc welds in a test piece did not fail, even though the structural steel members were severely strained and deformed.

From the results of the foregoing tests it is concluded that arc welded joints in structural steel are capable of withstanding any stresses that the structural members will withstand without deformation and will remain intact even after the structural members are deformed or broken. Under both a steady pressure and under shock, the welded joints are capable of remaining intact, even though the structural steel members that they unite are badly deformed. Under vibration, contrary to the expectation of many, arc welded joints do not fail, nor do failures in the beams appear to be due to re-arranged structure in the surrounding steel resulting from the welding.

In regard to the cost of making arc welded joints, it may be said that a ¾-inch fillet weld, as used in the described tests, can be put in for from 15 cents to 20 cents per linear foot of bead, depending upon the position of the work. This is based upon labor at \$1.00 per hour, wire at 10 cents per pound and electrical energy at .02 cents per kilowatt-hour.

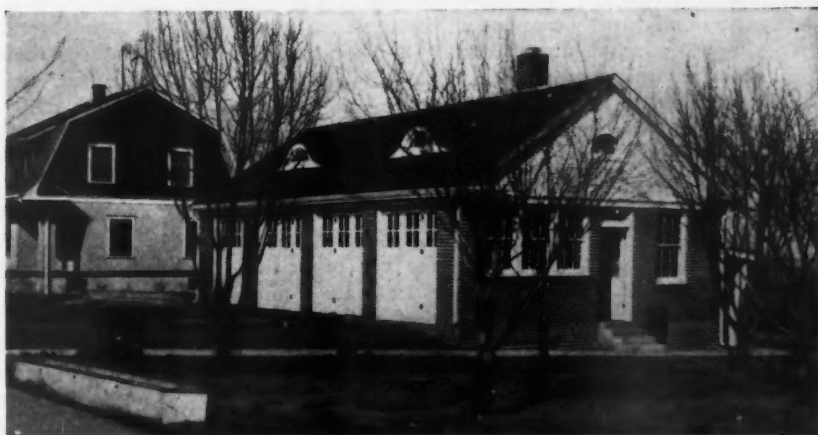


## Community Garages

**N**OW and then three or four families in a good neighborhood will pool together toward one garage instead of building single car garages on each lot. Where ground is at a premium, this gives more space for garden and back lawn and it also enhances civic value.

A community garage, accommodating from four to six cars and maintained by from three to six families, would not only house all of their vehicles, it would provide living quarters for a gardener who would divide his time between the places to everyone's satisfaction. A small shop could be partitioned off, either in one end, as is the case in the garage shown, or in the basement. A small heating plant might be installed to insure car protection through cold weather.

Probably this garage actually costs more than three or four small single car stalls, but three side walls are saved at least, and the result is a building of good enough quality to stand in self-respect in any community. It is a thought too valuable to overlook.—DALE R. VAN HORN.



The Community Garage May Be Made Quite an Attractive Addition to the Neighborhood When Properly Designed to Harmonize with Its Surroundings.





# DETAILS OF HOME BUILDING

## The House of Brick

By V. L. SHERMAN,  
*Lewis Institute of Technology*

A RECENT article by a critic of critics bewails the constant superlative praises. It might be imagined from the trend herein that the writer never saw a faulty building, and that all building methods are alike wonderful. To the first the answer would be that poorly built houses are not under discussion, and to the second that, considered fairly and deeply enough, all sound building methods are really wonderful.

In the same periodical which housed the salty critic was another wail by a returning American; this one visioning the present bedlam to be followed by chaos. Evidently blind and deaf and receiving the vibration on super-sensitive nerves. But it is this so-called "bedlam" which should be discussed.

Count over how many sound, new methods have grown up in the building business in the last twenty years without loss of the old ones. Go into any new home which uses all the arts to appear ancient, and then contrast its modern comfort and more intricate construction with the ancestral house which it nearly equals in mellowness. That is not prattle; there are lots of houses just like that.

This warped wailer turned my attention to our own vicinity. In point of time it is pretty new, but like thousands in this country I am blessed with "the house across the street." This house is invariably built by the couple who think that money and children should be invested, not spent. And in return the couple are a sound investment for the community, a vertebra in the building industry, and a source of irritation to the codgers.

This particular house is brick and stucco, a deep red brick which sets it back beyond the actual distance. It has no particular lines but is reasonable, a chief asset. Building in brick is becoming more common, but to me it is strange that there is not more building in common brick. Perhaps it is a peculiarity with me, but I like to see a house wall of common brick and blue mortar.

The variation in tone in individual brick tells a story. Brickyards hold as much attraction for me as collections of Indian flints. Now common brick isn't the weak stuff many imagine nor must it be hidden with paint. Common brick of good quality—that is, with the proper ingredients, mixing and baking—is sometimes more durable than face or stock brick.

One of the present features in the use of brick is the modern system of wall structures. In Figs. 1 and 2 the hollow wall is shown and I think that, with the exception of some few who did not like to see wall area increase at the expense of so many brick per day, this wall can be accepted as sound.

This wall is really a bonded wall as compared to the older hollow wall which was tied, and it has one disadvantage, the possible absorption of moisture. "Good" brick will absorb 10 per cent of their weight of water. But in such a wall, in this country, it seems highly improbable

that the wall is very much at a disadvantage. At A and B, Fig. 1, consistency might call for proofing, and at F some recommend a trough and outlet.

The first floor joists rest on the foundation wall. The second floor joists rest on the headers. How about venting and possibility of moisture at C. These joists might be tied in at the bottom (not the top), and free at the top to allow falling away without injury to the wall. But with the hollow wall some stiffness at the joist end should be guaranteed by bridging.

In Fig. 2, at D, it will be noticed the wall is closed above the lintel, but not at E. The arch may be carried through the wall and, according to some, should be carried through and the top of it proofed with asphalt. It will be seen in each of the E's that the framing is entirely open and unprotected from above.

But it is a question whether in this hollow wall a covered and water proofed window or door frame would endure more than an open one. If the frame is given a little more painting than the back of trim should get I question the advantage of a complete covering because moisture is a condition in wood from which we are freed only by penetrating the wood itself with a moisture proofing.

Solid wooden lintels are often used to good effect with brick if they are protected against shrinkage. They should be laid carefully and should not extend so far into the wall as to affect the distribution of wall loads. The same, of course, applies to stone lintels and sills. In the case of sills slip sills are apt to be the choice, but, in the latter case especially, enough pitch should be given the top surface to develop a good wash away from the joints.

While on the subject of water and moisture we might remark that bricks should be laid wet except in freezing weather when they should not be laid. Dry brick absorbs too much water except from the thinnest of mortars and produces the same effect that dry lath does in plastering.

In furring there is another point that is remarked as regards moisture. Wooden plugs inserted in masonry, or the equivalent course in wood, are apt to dry and shrink as the house dries out. Metal plugs and expansion screws do not, and are said to hold fast. These should be coated, and can be placed flush or extended to take metal lath.

Figs. 5, 6 and 7 indicate three of many types of walls. The economy wall with its minor pilaster has given great satisfaction in certain classes of walls. The different walls recommended by the brick associations have shown to advantage in their respective aims and need only supervision. But then some say any wall does need that, certainly a foundation wall or a footing for brick work.

I've had to dispose of a chimney footing from my own house which a keen-eyed foreman had broken up and "tossed out." (I think I'll make a rock garden of it.) But a wall of brick must have a sure footing.



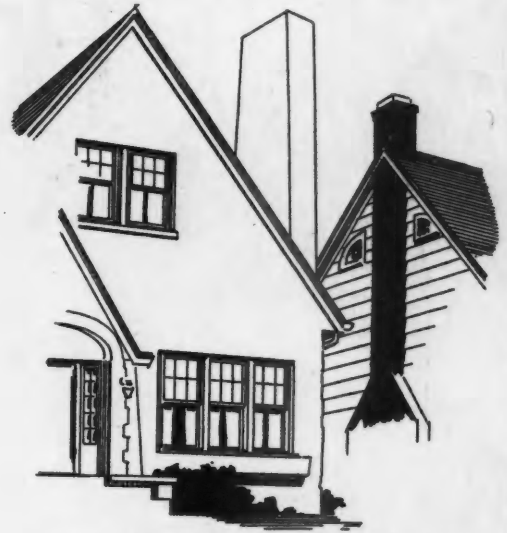
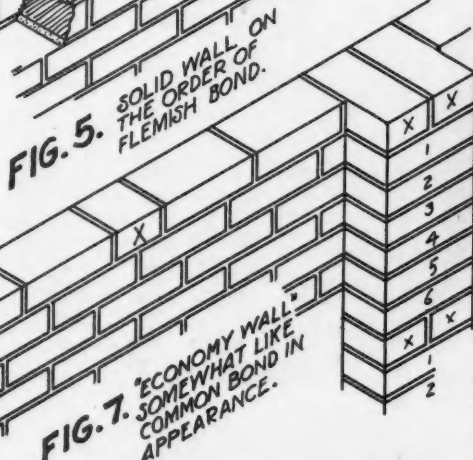
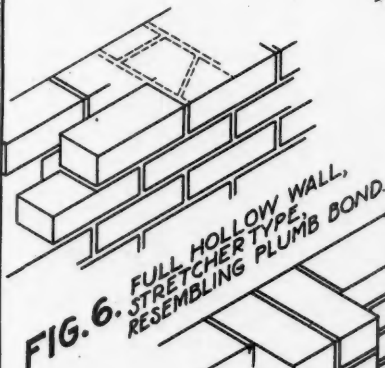
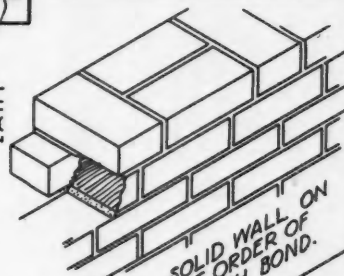
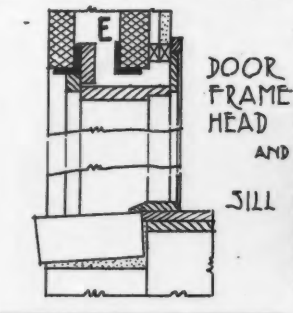
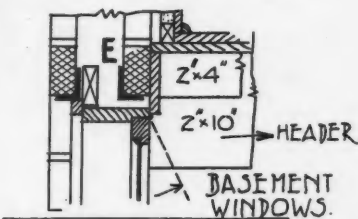
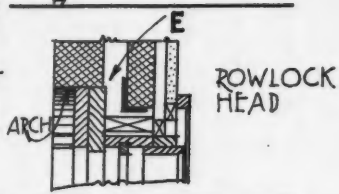
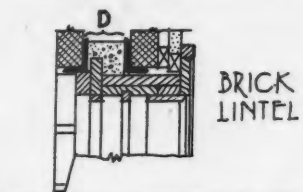
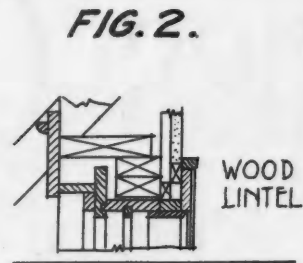
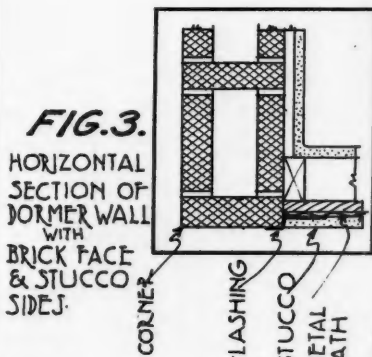
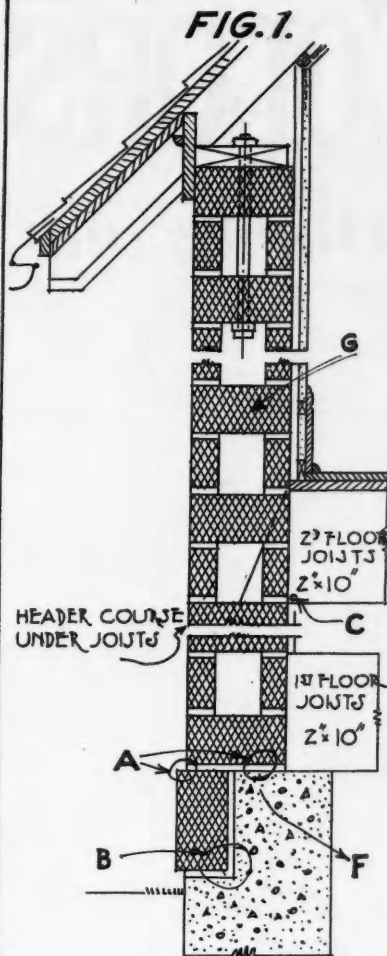


FIG. 8.



V.P. Sherman 8-4-26.



# Homes in COLORS

## Modern Homes and Motor Cars

By WILLIAM A. RADFORD

President and Editor-in-Chief of the American Builder

**R**ECENTLY, in a popular weekly of very large national circulation, the manufacturer of a popular automobile presented a full page advertisement entitled "Progress" and bringing out the point that the art of automobile design and manufacture has undergone wonderful changes in the past twenty years. To illustrate this point and make it vivid to the readers, this motor car advertisement used home building as the example of radical change in design and stated that a similar development has occurred in automobile circles.

This advertisement, so prominently displayed, interested us for several reasons.

In the first place, it made us wonder if the men of the building industry are as conscious of the changes that have been taking place in home designing and in what constitutes a modern home as are these men of the automobile industry. Perhaps we are too close to our business and fail to see what is going on around us and what is so prominent to the outsider.

Thousands of homes are still being built that are far from modern in exterior design and interior labor-saving equipment. Such houses are back numbers before they are finished. They never can command a top market price. They may meet the ideas of the builder or of the original owner but they can never command a high resale value as a modern home.

The fault lies with the men of the building industry who have not kept in touch with the times but have been satisfied with going along in the old way. They are cutting up good materials and building them into old-fashioned, unattractive houses simply because they are too close to the business to realize what the people really want.

The same applies also to the remodeling of old homes. In practically every community there are

thousands of old-fashioned houses well built and substantial but entirely lacking in modern charm and modern convenience. The men of the building industry should get busy and arrange to modernize these old buildings. The owners don't realize how bad they are nor how easy a matter it is to fix them up.

Dealers and builders *must be salesmen*. Follow the lead of these automobile manufacturers and *sell* your commodities and service.

Have the new ideas yourself—and you can get them by studying this magazine, more particularly the advertising announcements and our Home Design in Colors—and then go out and aggressively sell these ideas to the home owning public in your community.

If home building is to be taken as a standard of what is modern in design, don't permit your work to be classed as a back number.

The other thing that struck us forcefully when reading this motor car advertisement was the great service which motoring has rendered in educating all of the people in every community regarding modern homes.

The farmer and his family drive into town and to the neighboring city fifty, seventy-five or one hundred miles away of a Sunday afternoon; and they see the well-designed, modern homes going up; and they get these new ideas. They are no longer satisfied with the old home and when they come to build they are no longer satisfied to build in the old way. They want style and it is up to the building industry to deliver it.

In selecting the designs to illustrate each month in our Homes in Colors, sixteen-page section of the AMERICAN BUILDER, we have given preference to the modern artistic designs, at the same time not overlooking the practical, modest home which can be built at small expense. In the more than two hundred designs presented in a year's subscription there is something to suit every taste and every purse.

AMERICAN BUILDER readers are recognized as the leaders in the building industry and as such can set an example for modern high grade, up-to-date work that will be accepted and followed.



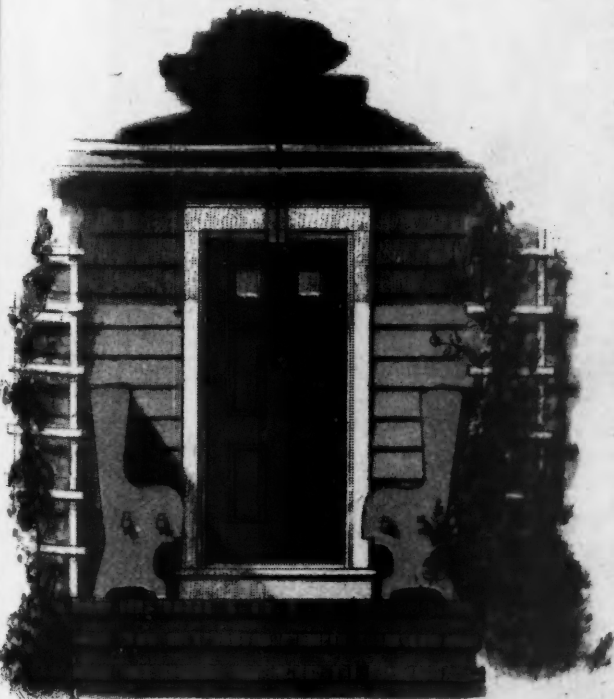
Home Building a Conspicuous Example of Progress.



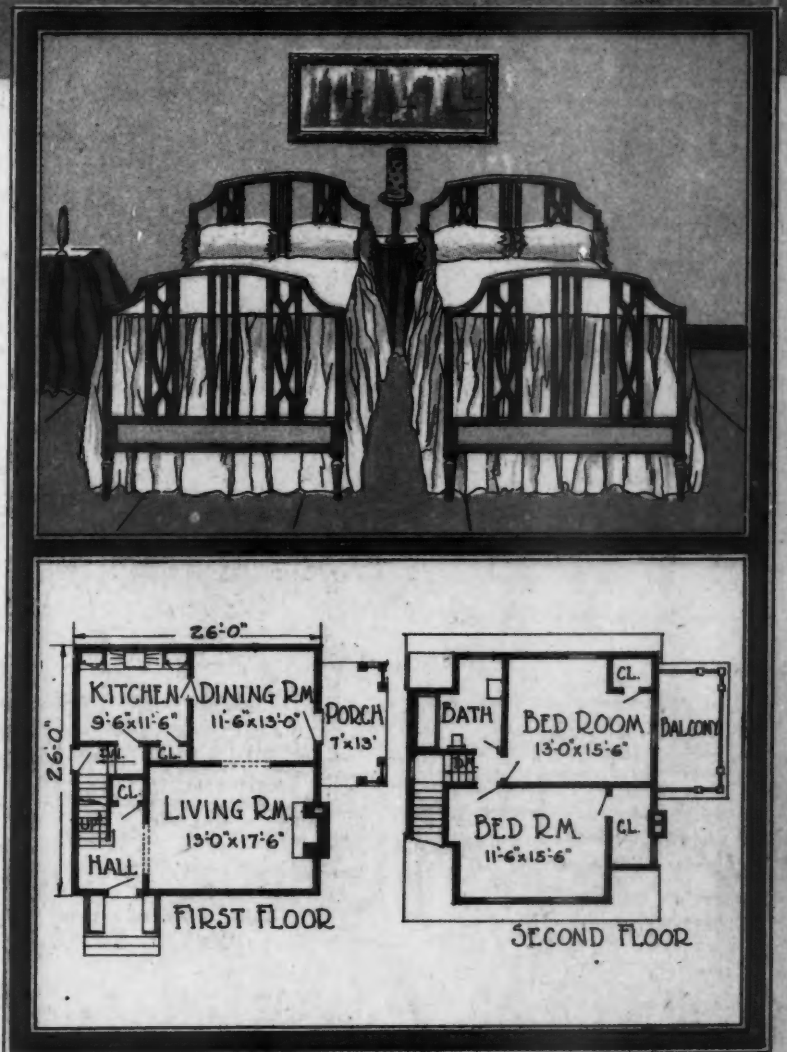
## The YONKERS

A DELIGHTFUL little Dutch Colonial home of five rooms and bath, 26 feet square not counting the front and side porches. Color sketch shows twin bed furnishings for one of the bedrooms.

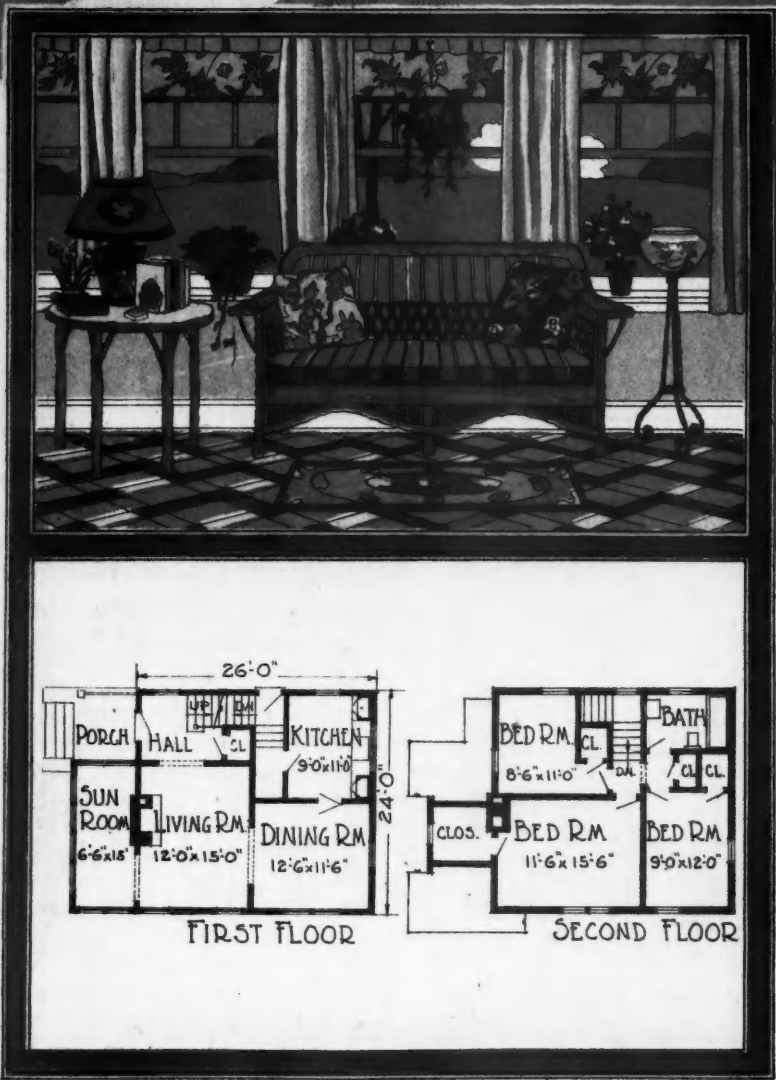
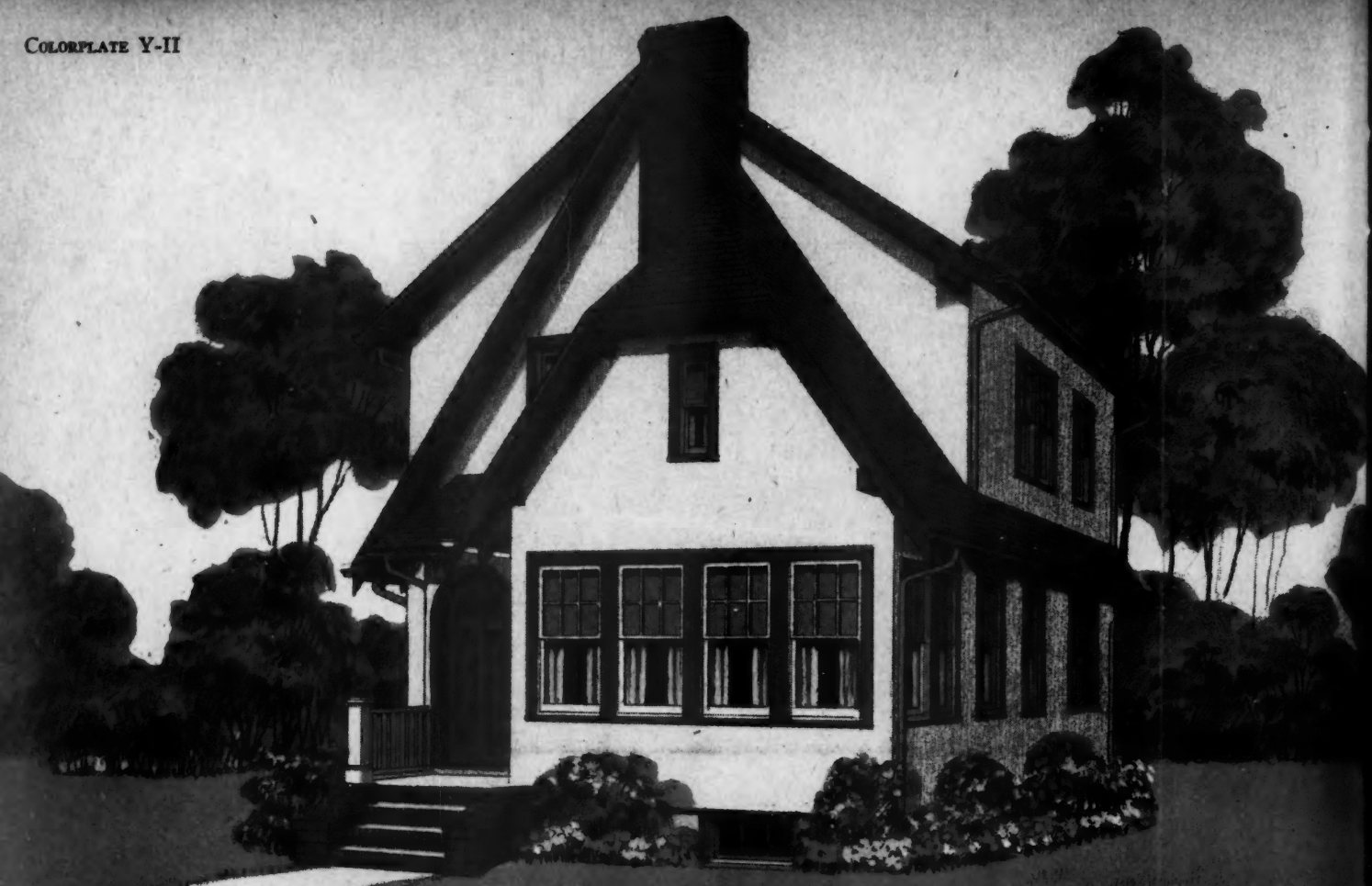
Pat. March 15, 1921 and Sept. 30, 1924.  
Copyright 1926, Wm. A. Radford, Chicago.



Detail of Front Entrance.







# The YARBORO

A VERY artistic little stucco house of English lines containing six rooms and bath plus the big front sun room. Color sketch to left suggests attractive furnishings for this sun room.



Detail of Front Entrance.

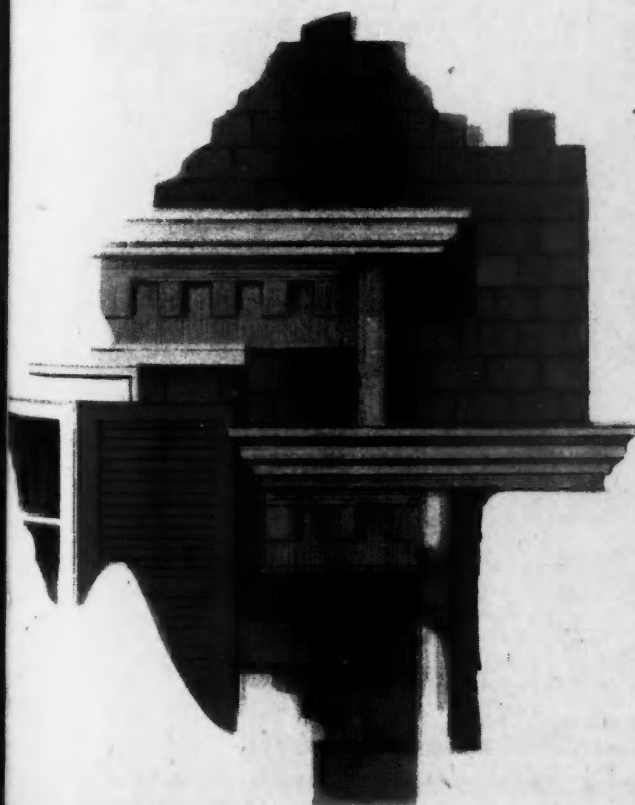
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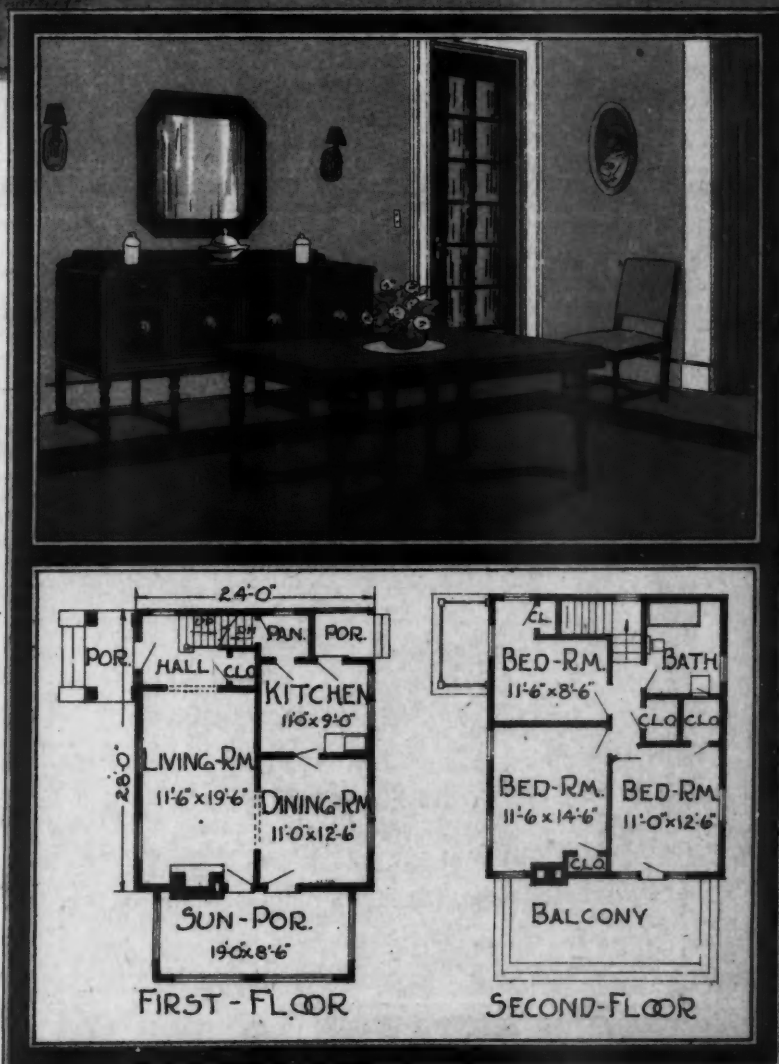


## The YALE

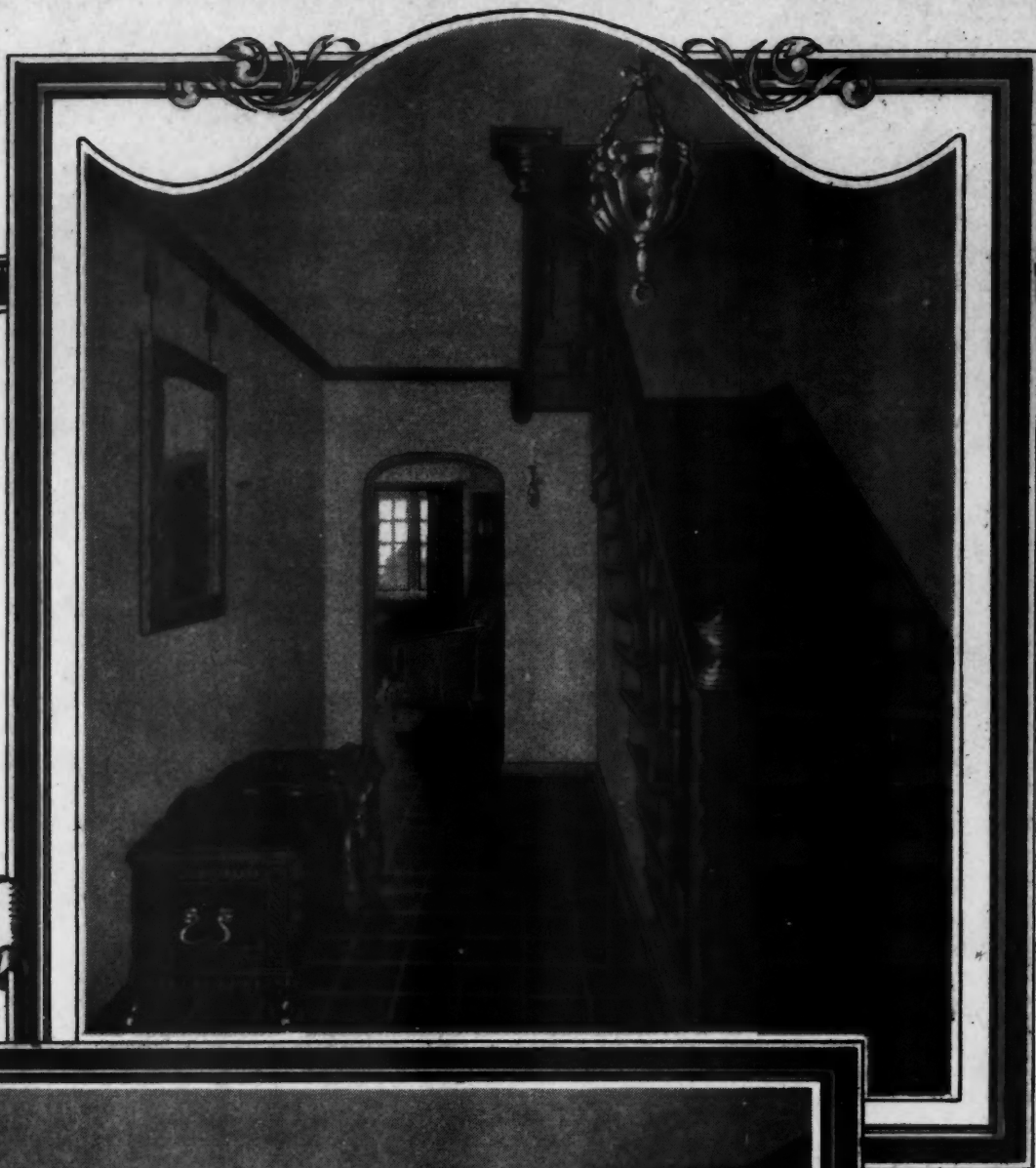
A Colonial home of six rooms, bath and sun porch, perfect in its details. Color sketch to right shows the very attractive dining room.



Detail of Novel Roof Cornice Which Lowers the Lines of This House.



Stairhall and Living  
Room in the Well De-  
signed Home of Fred  
M. Dean, Beverly  
Hills, California.  
Marshall P. Wilkin-  
son, Architect.



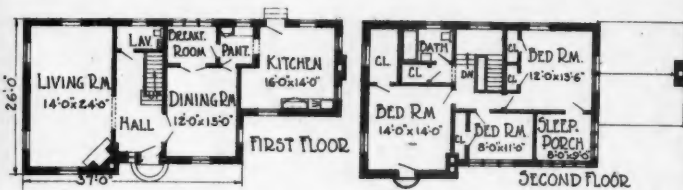




To the Left, a Spanish Style Living Room in Pasadena; Reginald Johnsen, Architect.

Below, a Modern Dining Room in Los Angeles; Henry Withey, Architect.





## The YUBA

A VERY practical and delightful home in Spanish style containing six rooms, breakfast room, bath and sleeping porch. Color sketch to left shows window treatment and furnishings for the small bedroom.



Detail of Wrought Iron Balcony for Full Length Window in the Large Front Bedroom.

A VE  
A room  
living r

Detail

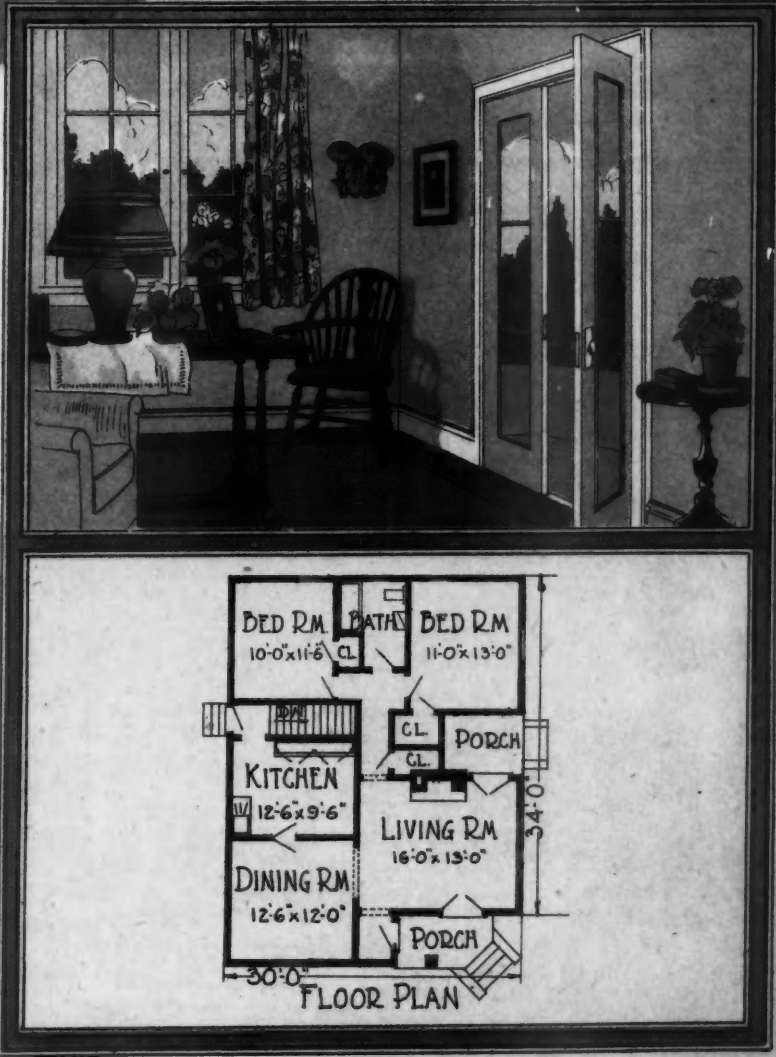


# The YOSEMITE

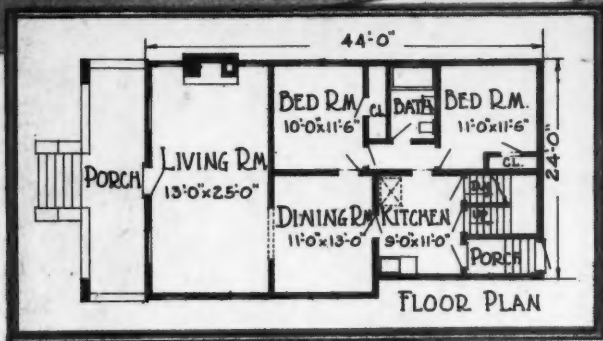
A VERY interesting French stucco cottage of five rooms. Color sketch to right glimpses the cheerful living room.



Detail of Ornamental Window and Balcony for the Front Gable.





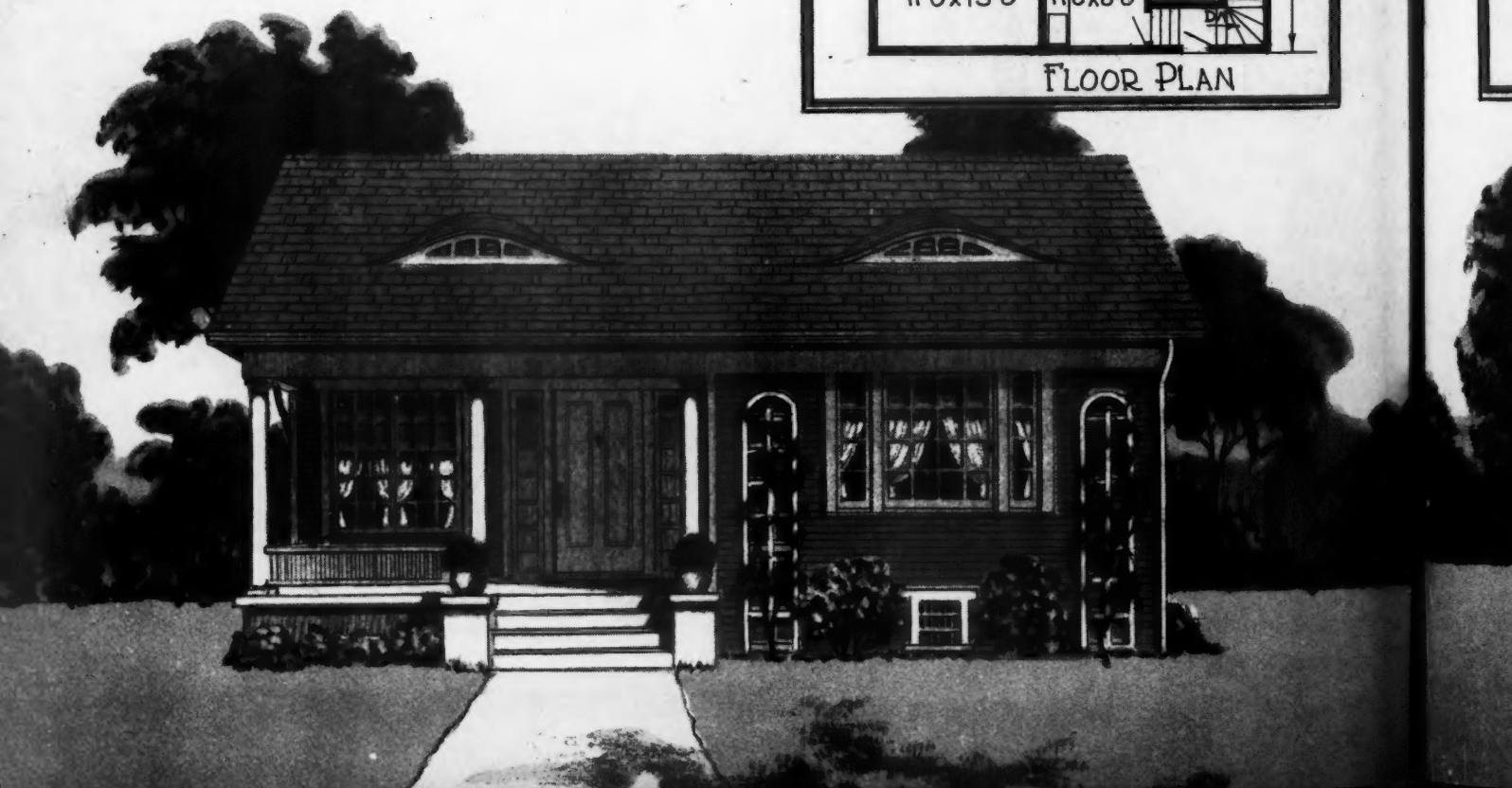
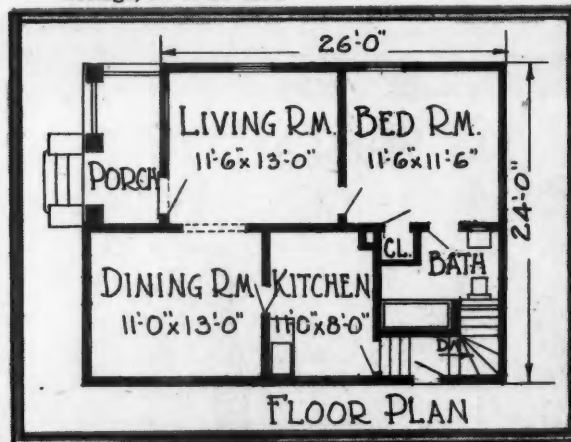


### The YANTIC

Above is pictured a popular Western bungalow, 24 x 44 feet.

### The YERKES

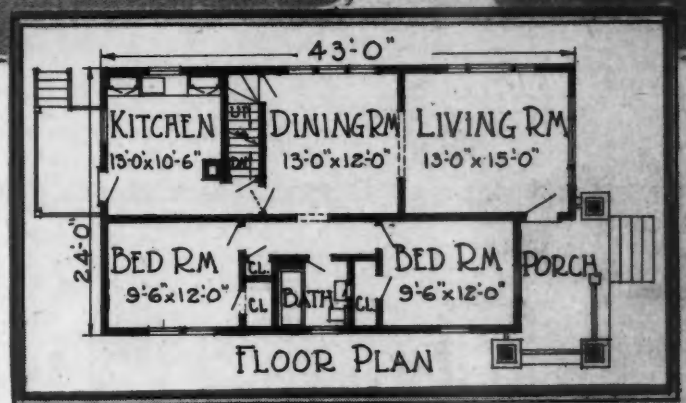
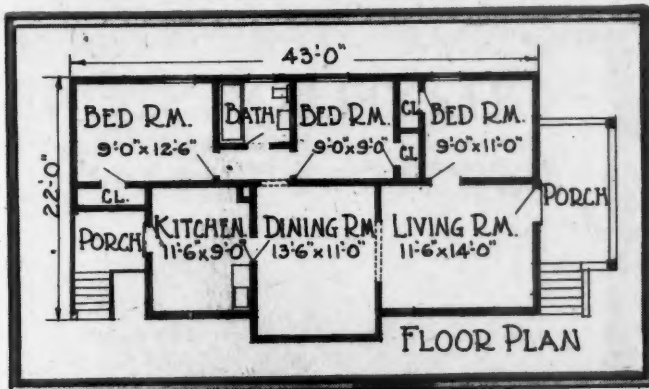
Below is presented a delightful four-room cottage, 24 x 26 feet.





## The YUKON

Below is presented an economical narrow lot cottage of six rooms, size 22 x 43 feet.



## The YEDDO

Above is an artistic bungalow of five rooms and bath, dimensions 24 x 43 feet.

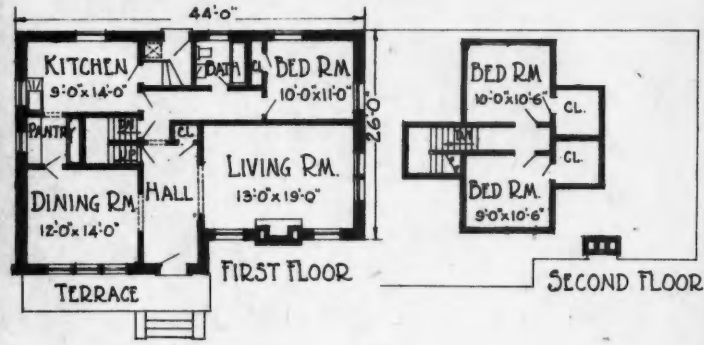
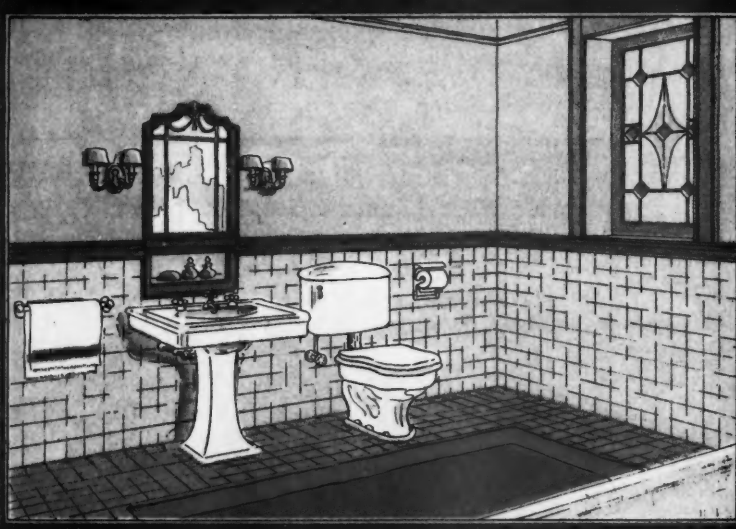






# The YELLOWSTONE

A very attractive high-grade brick home of English lines containing six rooms and bath. Color sketch to left shows the bathroom tiled to the window sill.



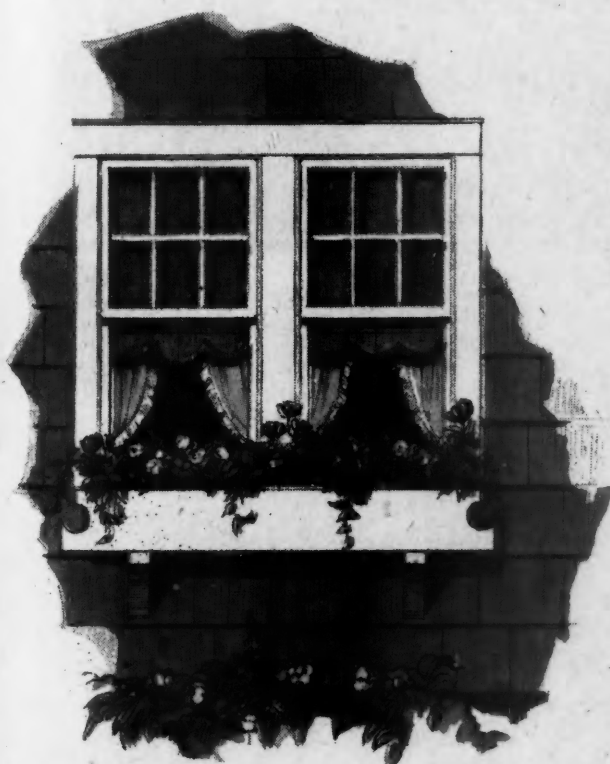
Detail of Pair of Casement Windows Under Gable Dormer.



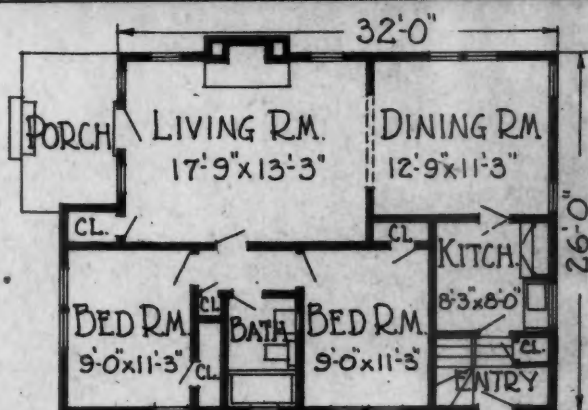


## The YARDELLE

A cute little cottage of Colonial lines containing five rooms and bath.



Detail of Attractive Window Group with Flower Box.



FLOOR PLAN



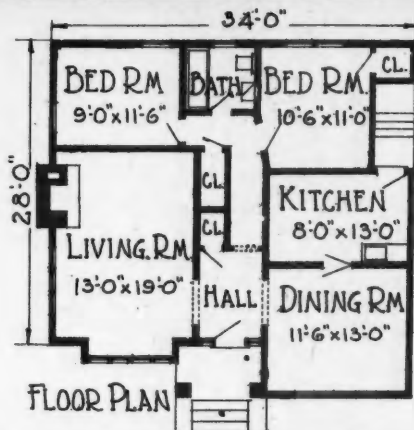
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## Autumn Beauties in the Garden and Around the Home

FOR the nature-lover the Fall season with its brilliant colorings and its generous harvest yields has a very strong appeal. Then is the time that the distant suburbs and the home sites far out among the farm lands seem most interesting and attractive.





## The YOLANDE

A STUCCO home of English design with Elizabethan panelling in the gables. The floor plan shows five well arranged rooms in 28 x 24 feet. Color sketch suggests a linoleum floor in tile effect for the living room.



Detail of Entrance.

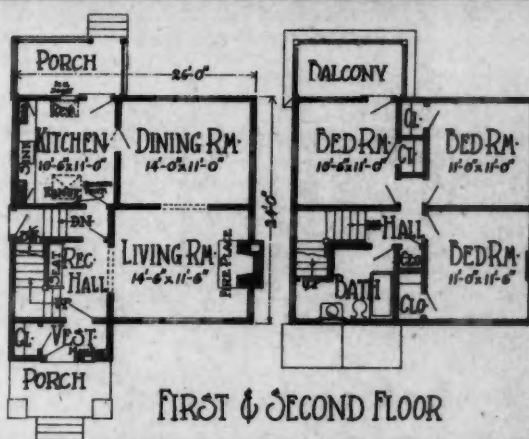


## The YARMOUTH

An English design of imposing appearance containing six rooms and bath. Color sketch to right shows richly panelled stairhall.



Detail of Entrance Terrace and Door.

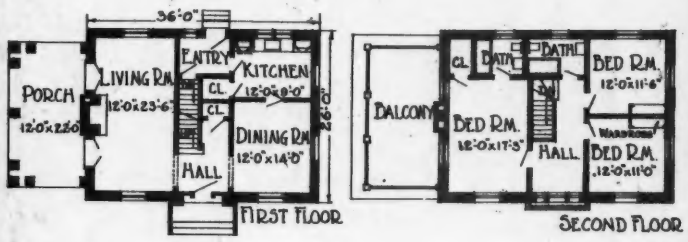
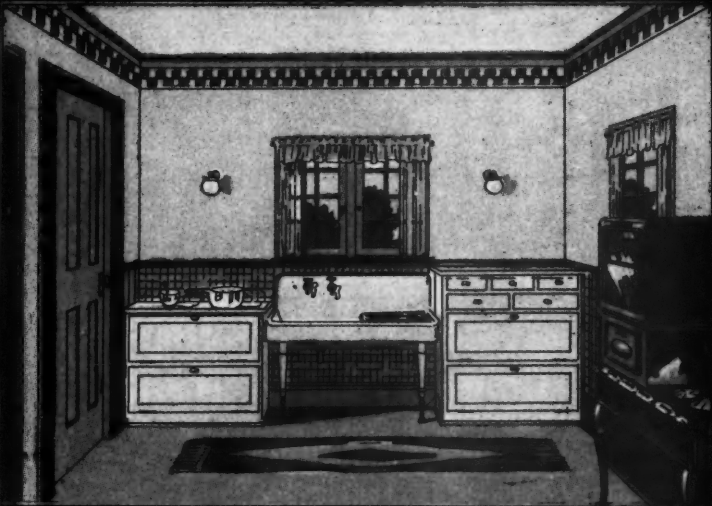






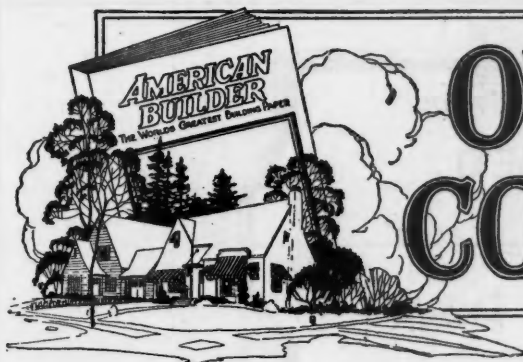
# The YORKTOWN

A VERY dignified Colonial home of brick construction perfect in its Colonial details. Six rooms and two baths are contained. Color sketch shows the cheerful, efficient kitchen.



Detail of Window Shutters Hung On Hand-Forged Hinges.





# OUR FRONT COVER HOME

***A Brick House in English Style Set Off with Patterned Brickwork, Stucco, and Rough Hewn Timbers in Effective Combination***

A NUMBER of very interesting and attractive features are to be seen in the adaptation of English architecture used in Our Front Cover Home. Conspicuous among these are the rough hewn timbers, so effectively exposed in the stucco of the gable end and entrance detail and the patterned brickwork which ornaments the walls about the entrance and terrace porch. There is a rugged tone about these timbers which harmonizes well with the solid brick walls while the patterned brickwork forms a pleasing relief for the plain bond of the remainder of the brickwork.

No less effective, though not so conspicuous, is the

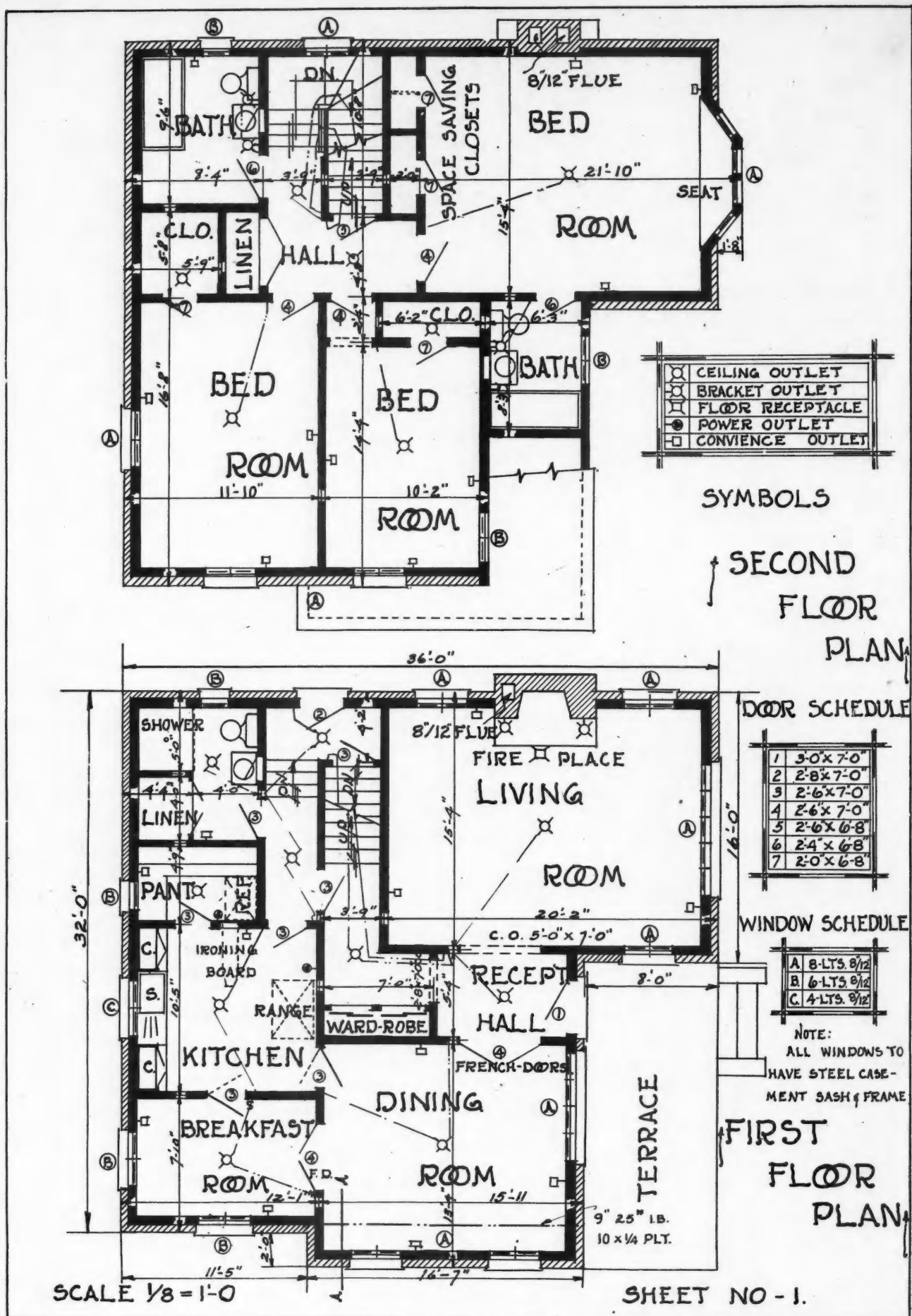
window treatment, steel casements with small rectangular panes on the lower floor and diamond-shape panes in the windows of the upper floor. The use of brick for the window sills also adds its bit to the whole effect.

Nor should the entrance be overlooked in speaking of the more striking points about this home. The entrance detail is simple in the extreme, but the lines are so perfectly proportioned that they merit special mention and the heavy planking of the door, finished in natural grain and with its small window placed in an unusual but effective position, is particularly satisfying.

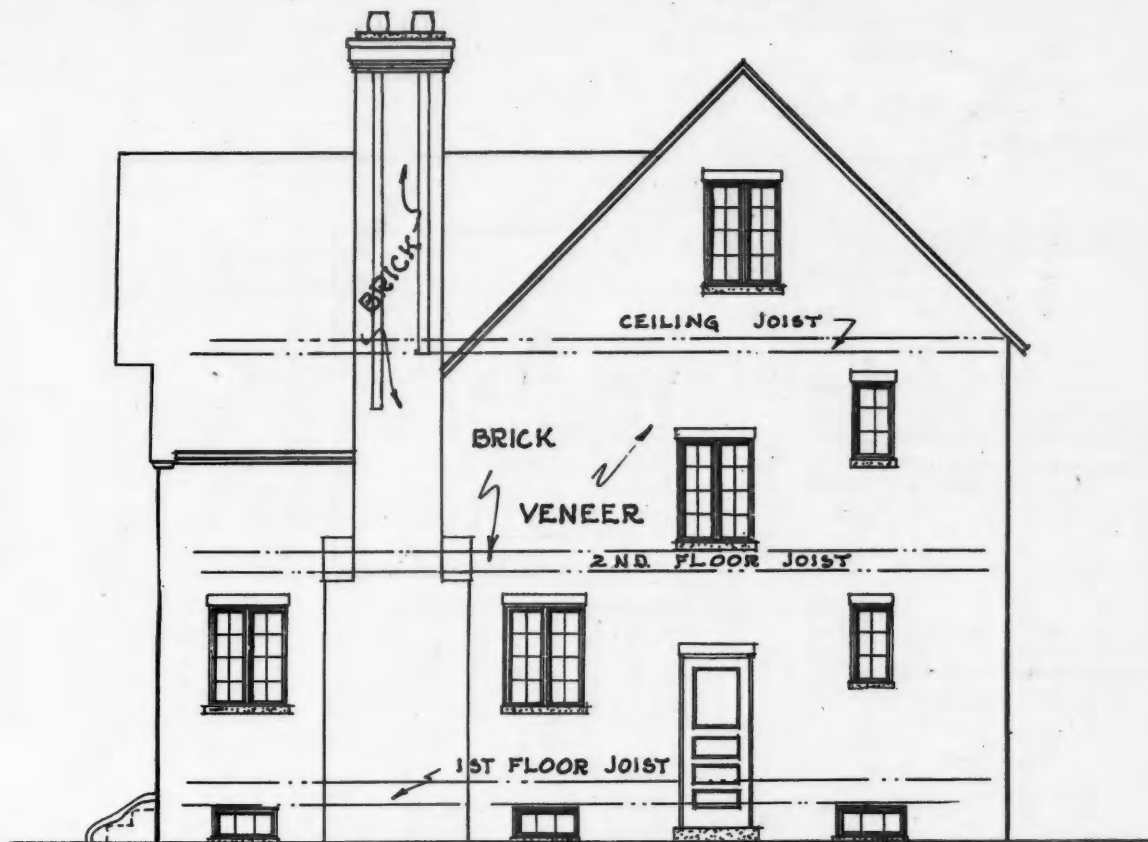
All these things join to form a picture of true beauty.



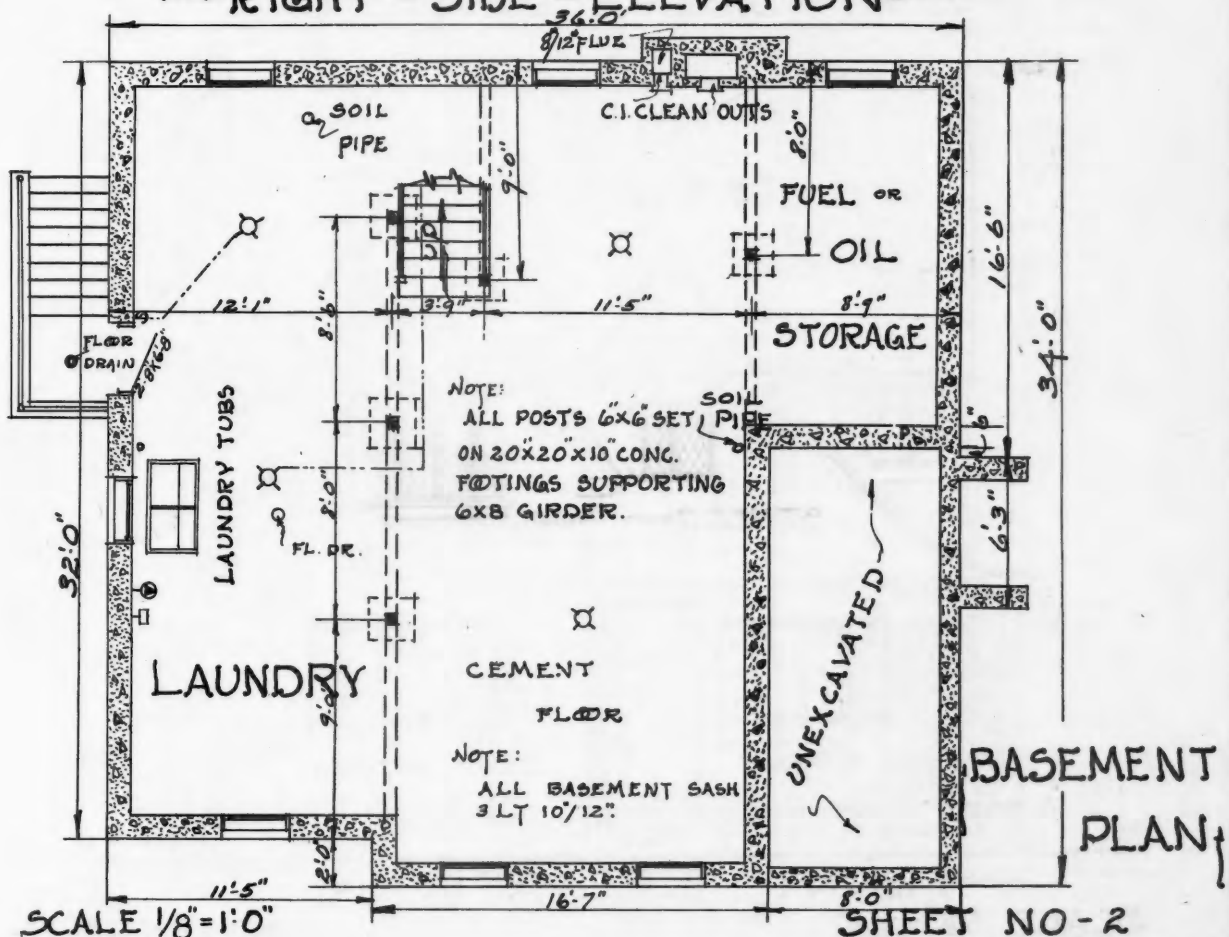
An English Type of House, with Solid Brick Walls, Rough Hewn Timbering in Stucco and Small Paned, Casement Windows, Is the Distinctive Piece of Architecture Which Is Illustrated, in Colors, on Page 1, as Our Front Cover Home. Complete plans are to be found on the following pages.



Our Front Cover Home Displays a Floor Plan Which Recommends Itself as Being Commodious and Convenient but Far Enough from the Strictly Conventional to Possess a Highly Desirable Individuality.



→ RIGHT - SIDE - ELEVATION ←

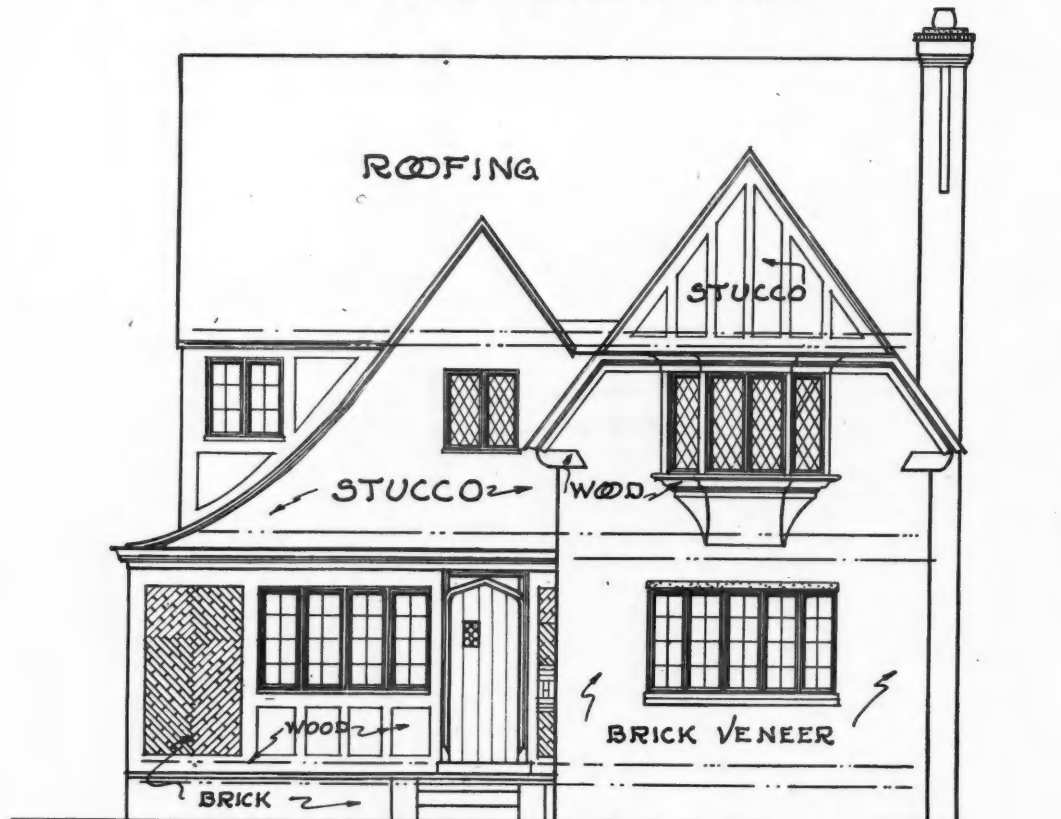


The Right Side Elevation and Basement Plan Present Some of the More Prosaic but Highly Practical Facts About Our Front Cover Home and More of These Will Be Found on the Pages Which Follow.





→ LEFT - SIDE - ELEVATION ←



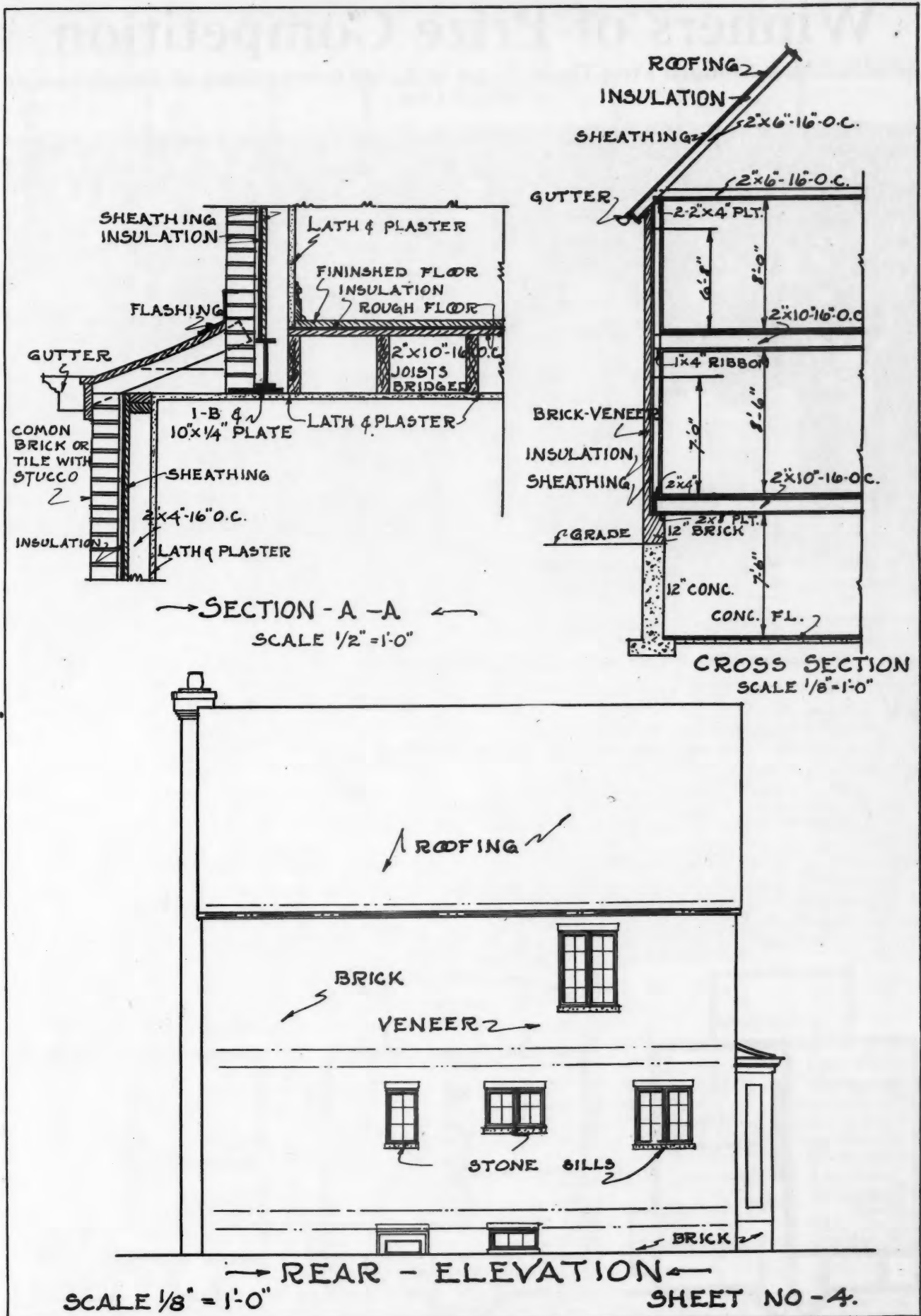
→ FRONT - ELEVATION ←

SCALE 1/8" = 1'-0"

SHEET-NO.-3.

Elevations of the Left Side and Front Tell Still More of the Construction of This House, Including the Pattern of the Ornamental Brickwork Used About the Entrance and Terrace.

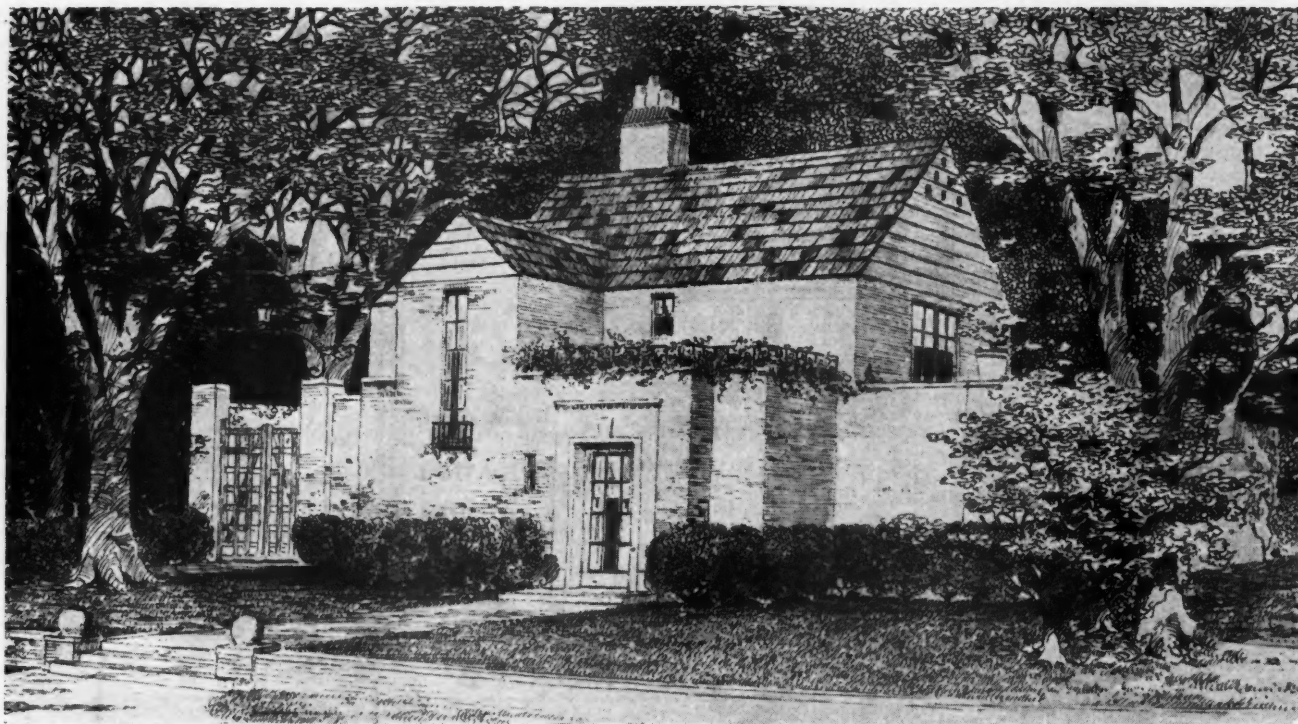
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Plans of Our Front Cover Home Are Completed with This Rear Elevation and Detailed Sections Showing the Brick Veneer Treatment, the Insulation of Walls and Roof and the Treatment of the Gutters.

# Winners of Prize Competition

Cleveland Men Awarded First Three Prizes in \$2,500 Competition of American Gas Association



This Design by Russell S. Simpson, Cleveland Heights, Ohio, Was Awarded the First Prize of \$1,000.

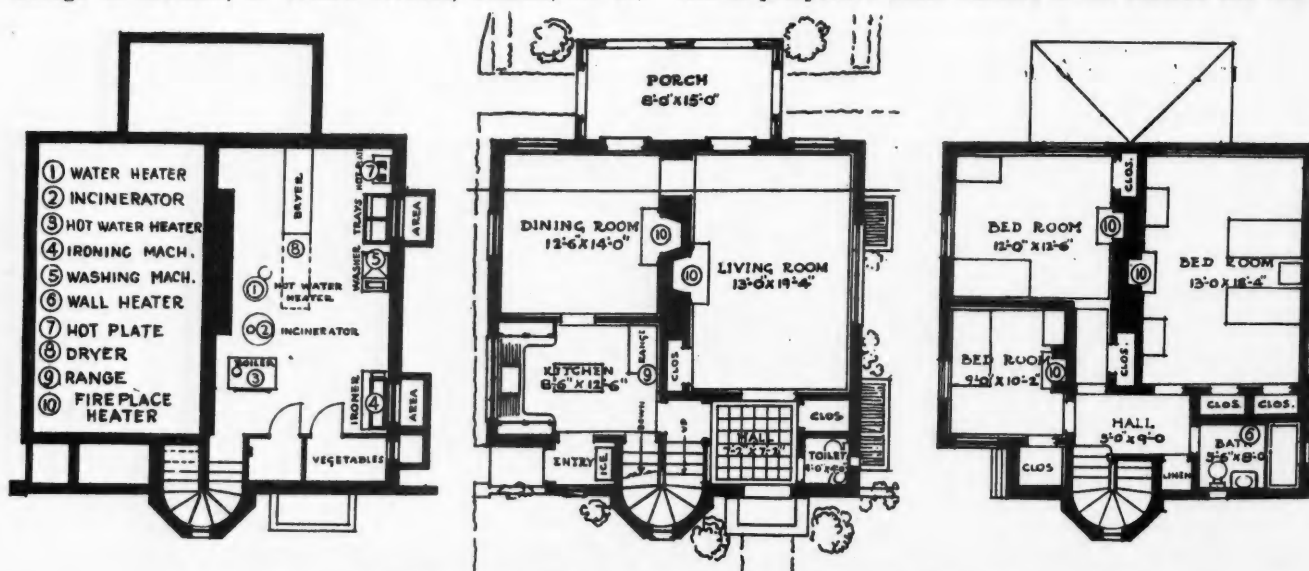
**W**INNERS in the \$2,500 prize competition of the American Gas Association for plans for a six-room suburban house have been announced. By an odd coincidence, the first three cash prizes were awarded to Cleveland, Ohio, architects.

The winners are as follows: First prize, \$1,000, Russell S. Simpson, 3293 Silsby Road, Cleveland Heights, Ohio; second prize, \$500, F. S. Hopkins and P. C. Bohanon, 9314 Miles Avenue, Cleveland, Ohio; third prize, \$250, Antonio di Nardo, 1836 Euclid Avenue, Cleveland, Ohio; fourth prize, \$250, Harold A. Rich, 23 Newell Road, Auburndale, Mass.; fifth to 9th prize, inclusive, \$100 each, Alfred Cookman Cass, 101 Park Avenue, New York City; George C. Crockett, 67 Willow Avenue, Pelham, N. Y.;

Walter J. Thies, Carl H. Martin and Erskine A. Hart, 1406 Third National Bank Bldg., Dayton, Ohio; Otho McCrackin, Hutchinson, Kansas; Charles W. Cleary and James N. Holden, 177 State Street, Boston, Mass.

Honorable mention was awarded the following: Carl C. Tallman, Seward Bldg., Auburn, N. Y.; Russell E. Yates, 1000 Marquette Bldg., Detroit, Mich.; R. Schofield Morris, 264 McNab Street South, Hamilton, Ontario, Canada; Ernest Irving Freese, 6247 Pine Crest Drive, Los Angeles, Calif.; Frank C. Burke, 76 Spruce Street, Watertown, N. Y.

The competition was open to all architects, draughtsmen and students in architectural schools in the United States and Canada. One of the objects is to bring to the attention of prospective house builders in the suburbs and resi-



Floor Plans of the First Prize House Shown at the Top of This Page.



## Prize Winners in Gas Competition

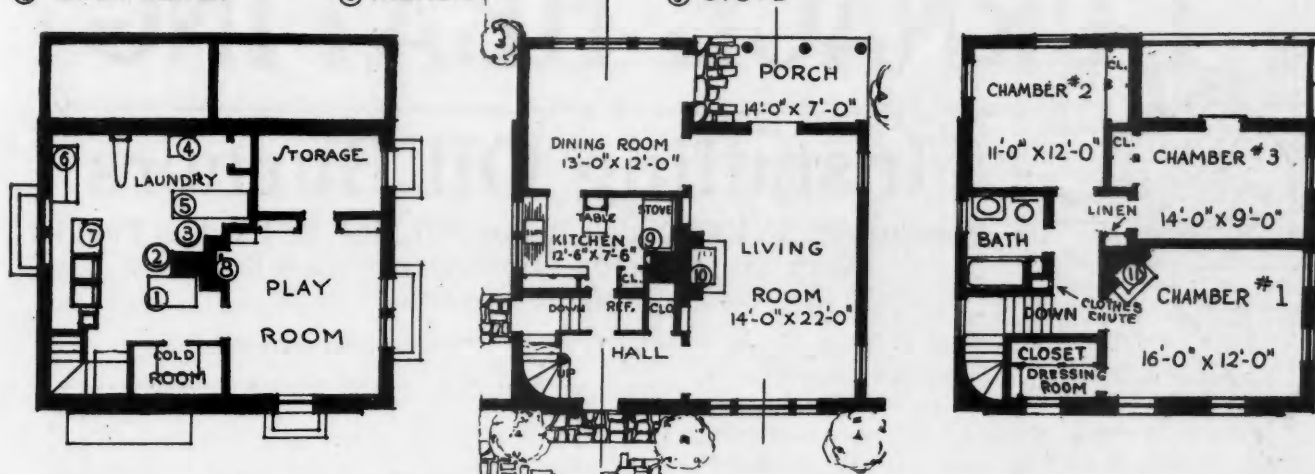
207

- ① BOILER
- ② INCINERATOR
- ③ WATER HEATER

- ④ LAUNDRY STOVE
- ⑤ CLOTHES DRYER
- ⑥ IRONER

- ⑦ WASHING MACHINE
- ⑧ FIRE PLACE
- ⑨ STOVE

- ⑩ FIRE PLACE
- ⑪ FIRE PLACE



Second Prize Went to F. S. Hopkins and P. C. Bohanon, Cleveland, Ohio, for This House Plan.



Sketch of the Second Prize House.

dential districts and to architects and draughtsmen the many ways in which manufactured and natural gas may be advantageously and economically employed in the small house.

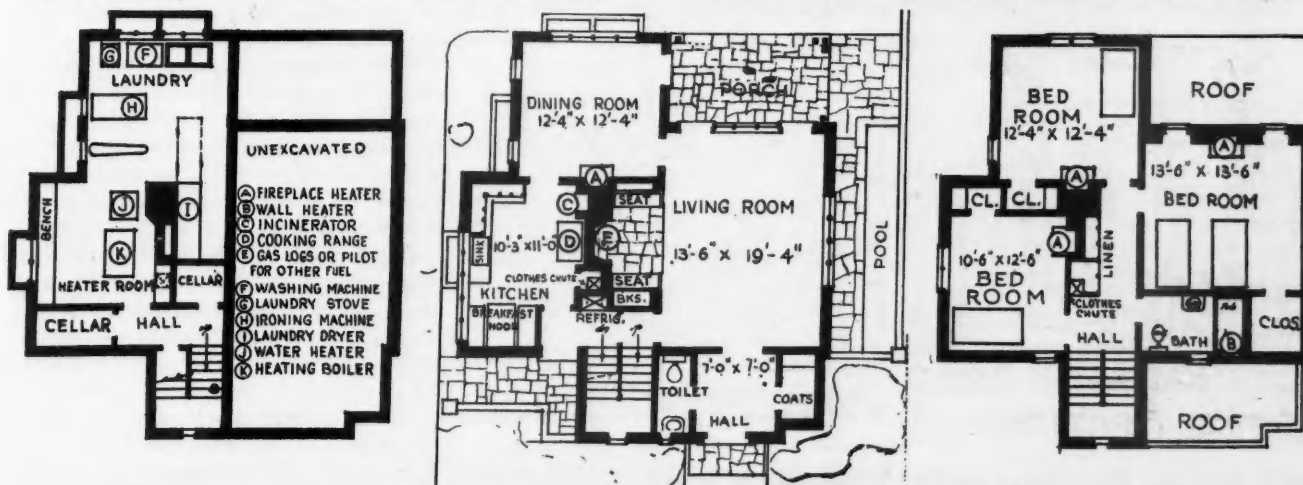
Judges of the competition were Aymar Embury II, and Dwight James Baum, of the American Institute of Architects, and Alexander Forward, secretary-manager of the American Gas Association. The architectural advisor for the competition was William Adams Delano, of New York.

In commenting on the competition, Mr. Forward said:

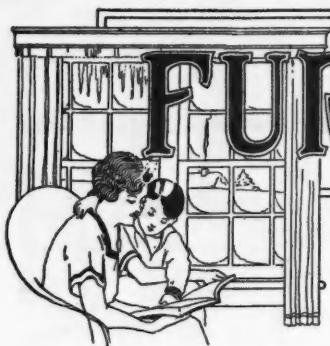
"The interest shown in this contest throughout the United States and Canada was almost unprecedented and it became the duty of the judges to examine and pass upon no less than three hundred and sixty-three plans. The judges were unanimously of the opinion that a decision was about the most difficult task of their lives. For the most part, the plans showed genuine merit and originality of thought. The offerings were examined and re-examined and thoroughly discussed at extended sessions."



The Third Prize Winner, Plan of Which Is Shown Below.



Plans for the House Taking Third Prize as Submitted by Antonio di Nardo, of Cleveland, Ohio.



# FURNACE HEATING

## Installing Oil Burners

**Precautions to Be Heeded Before Oil May Be Used as Fuel in Warm Air Systems—How Satisfactory Results May be Obtained**

*This Department by R. C. Nason, Heating Expert, appears every month in American Builder*

**A**S combustion temperatures are higher when oil burners are used it is essential that only the highest grade apparatus be selected. Firepots are subjected to rapid changes in temperature, which imposes greater strain on the castings and section joints than when coal is the fuel. Whereas a coal fire maintains more or less even temperature within the combustion area this is not true in oil burning.

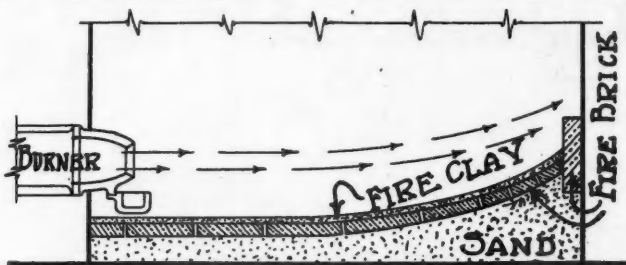
There are usually automatic thermostats installed in the rooms being heated and these are set at predetermined temperatures, usually 68, 69 or 70 degrees Fahrenheit. When the desired room temperature is exceeded the oil supply is stopped at the burner and combustion ceases. Naturally, at this time firepot temperatures drop rapidly.

When the room temperature falls below that for which the thermostats have been set, the oil supply, fired by a pilot light or electric spark, bursts into flame and firepot temperature rises quickly, until the cycle of operation occurs again.

Quick temperature changes exert a sort of trip hammer action on heater castings or steel plate pieces, causing them to contract and expand hundreds of times daily. It is this action, more than any other force, which makes it essential that furnaces shall be only of the best, for poor, cheap castings or plates, whether in boilers or furnaces, cannot long withstand the rapid temperature changes without loosening of joints or cracking.

Varied and widely different opinions exist among heating installers as to whether atomizing (power operated) or gravity burners are the more satisfactory. As this much mooted question appears unsettled as yet it can be safely asserted at present that both types may be installed with satisfaction. The author knows of many cases to substantiate this position and adherents of both sides are prepared to offer a long list of satisfied customers to prove their claims.

Some furnace installers, again, main-



**Fig. 1. Sectional View Showing a Suggested Construction for Lining Ash Pits When Oil Burners Are Installed.**

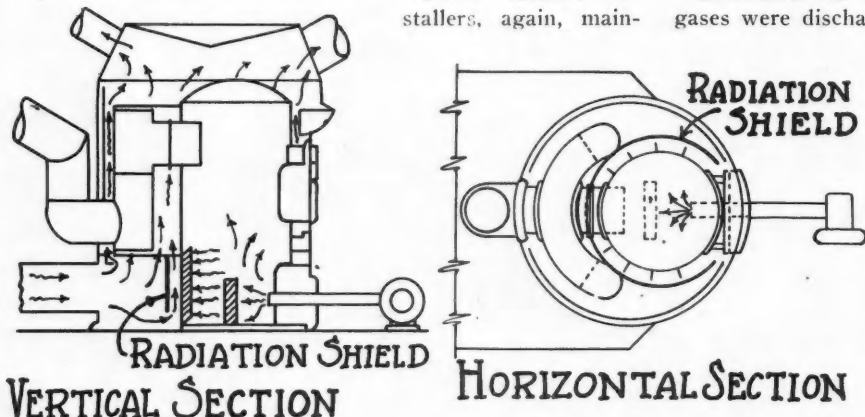
tain that oil burners work out best in cast-iron heaters, while others assert that furnaces of steel plate only are suited. In both designs of furnace the critical point appears to be making joints between castings or sections tight. In the case of cast-iron heaters only the best grade of furnace cement should be used. If tightness is disregarded with either type dissatisfaction is likely to result.

Firebox temperatures with oil burners are often as high as 2,000 degrees Fahrenheit, and are rarely below 1,200 degrees. As the temperatures of escaping gases of combustion are correspondingly higher than with coal burning plants extreme care should be taken with oil burners that smoke pipe joints be made tight.

Tightness of the plant should never be taken for granted, as this may result in extra expense later. This is ably demonstrated in an instance which came to the attention of the author not long ago wherein the owner ordered an oil burner installed in his furnace, which had been in use only a few months. As the plant was completely assembled and piping in place considerable labor would have been involved in removing the casing for a thorough inspection prior to installing the oil burner.

Soon after the burner was placed in operation, however, gases were discharged through the warm air registers and the new equipment came in for severe criticism. Obviously there was only one thing to do and that involved dismantling the plant without delay.

The oil burner had to be disconnected first, then the furnace casing and bonnet were removed and search for the point of leakage instituted. This was found in the cement between the combustion dome and the radiator. Although probably only a tiny crack when the burner was first lighted, the intense heat and flame pressure, characteristic with oil burners, had forced out additional cement and opened a hole about 1 inch long. The radiator then was removed, fresh



**Fig. 2. Plan and Elevation Illustrating Method of Installing Radiation Shields in Oil Burning Installations.**

cement applied and the apparatus reassembled.

Had the inspection been made before the burner was installed it is unlikely that the expense of the repair would have been nearly as great as that necessary under the circumstances, not to mention the discomfort to which the occupants were subjected.

So essential is the feature of inspection that most responsible manufacturers and dealers will not guarantee satisfaction unless a thorough inspection is made in advance of installation.

### Radiation Shields

Direct impingement of the oil flame against the sidewalls of furnaces should be prevented by lining firebox sections with fire clay or fire brick in a manner similar to that shown in Fig. 1. A number of burners are equipped with special, bowl-shaped, steel firepots within which combustion is confined. Although it is desirable to line firepot sections of the furnace in addition, manufacturers who offer combustion pots assert that these make further lining unnecessary.

It will be noted in Fig. 1 that the burner is of the horizontal discharge type. With this style of burner, when the flame extends beyond the center of the combustion chamber, it is advisable to install a radiation shield of fire brick. A specimen of one kind of shield is offered in the illustration and it will be noted that the bottom of the firepot has been rounded to give the flame and its heat an upward turn, forcing the point of impingement to occur at the fire brick shield at the back.

An elevation and plan of another design of shield is shown in Fig. 2. The arrows at the left indicate the course normally taken by the air supply as it enters the furnace casing and passes upward to the bonnet and warm-air leaders. At the right are shown the heat waves and flame from the burner.

The furnace is in this case constructed of steel plate and there are two radiation shields, one at the back and an intermediate shield near the center of the firebox. The flame impinges first against the intermediate shield and is then forced over it and against the back plate, or shield, thence upward to the combustion dome. The plan view shows that the rear shield extends about the sides over a circumference of about 300 degrees.

Another method of lining the ashpit and firebox in oil burning is shown in Fig. 3. A fire brick floor is first laid and upon it bricks, on end, line the sides. In front of the upright brick there are special pieces of fire clay having concave fronts. All brick and special pieces are cemented together with high temperature fire clay, care being taken that no openings exist on completion of the work.

The desirability of providing a tight joint between bottom of the ashpit furnace section and the inner galvanized iron casing was demonstrated recently in a large residence said to have cost over \$125,000. An oil burner of a well-known manufacturer was installed and everything appeared to be signally satisfactory.

But like most mechanical appliances periodical failure appears almost impossible of prevention at times and often occurs when least expected. In this case, although there was a receptacle provided for retaining oil drippings when the fuel supply was cut off, for some unknown reason the flame became extinguished, the mechanical trip failed to function and the oil supply continued to flow.

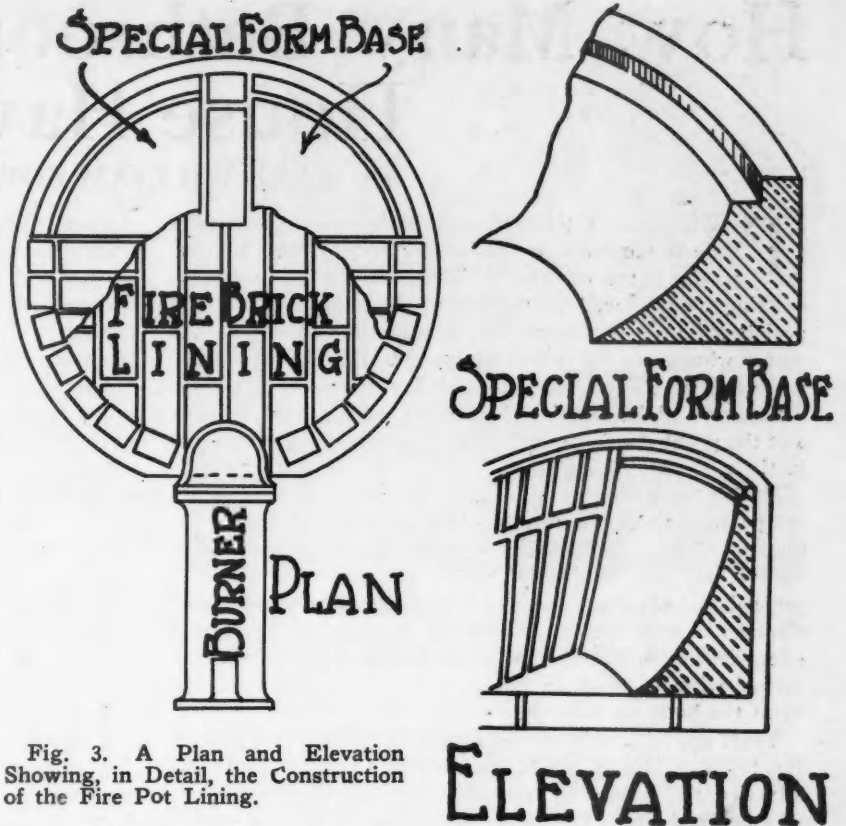


Fig. 3. A Plan and Elevation Showing, in Detail, the Construction of the Fire Pot Lining.

The supply overflowed to the bottom of the ashpit and ignition then occurred. As the installer had not been careful to make a tight joint between ashpit and casing the oil, which had flowed beneath the bottom of the casing, became ignited. Smoke and foul odors were discharged to the rooms above together with the warm-air supply.

Although the overflow fire was extinguished in a few minutes from lack of additional supply, the accident produced an impression on the owner which was far from complimentary to the oil-burning method. Had the bottom of the exterior furnace casing not been tight there might have been a dangerous fire with severe consequences. Use of only the highest grade fire clay and furnace cement will prove economical in the long run.

### A Word About Noise

Objections to oil burners in warm-air furnaces on account of noise of operation are sometimes raised. While this is often valid as to pressure systems it is less frequently a factor with those of gravity type, nor is noise entirely absent whether the installation is made in boiler type heaters or warm-air plants.

Manufacturers are constantly at work on the problem and several now offer burners asserted to be free from noise. A peculiar fact about noise of any kind is that sound which may annoy one person will not disturb another. If installers refrain from discussing the matter of noise and decline to make guarantees on this point no difficulty should be experienced.

An especially good point about the use of oil burners is the fact that their installation usually involves automatic heat regulators. In warm-air heating practice thermostats are installed in all, or critical, rooms and when the desired temperatures have been exceeded combustion of fuel ceases.

There is usually another thermostat, installed in the heater bonnet, which is set at 200 to 225 degrees Fahrenheit, or may be set for any desired temperature. When the air going to the warm-air leader pipes has reached a temperature not in excess of 225 degrees, the check damper is opened or combustion is stopped. Double regulation is

(Continued to page 214)



# How Many Bathrooms Should a House Have?

By KARL WILLIAM ZOELLER

**T**HERE was a time when a bathroom was of very little importance to the builder and for that matter, to the home owner. Builders were concerned with erecting strong, well-built houses. Perhaps a room was designated as a bathroom, but it was the concern of the owner whether or not it was equipped to function as a bathroom. That was in the good old days when bathing was a Saturday night function, before we were taught hygiene and the prophylactic necessities in which every one indulges in these modern times.

Health authorities, hygienists and physicians began a campaign for cleanliness—the chief item of which was frequent bathing. The idea took hold slowly at first as all innovations do. Suddenly, within the past ten years, it seemed that all at once everyone had the idea that we must all take a daily bath. The result has had a widespread effect on health and efficiency but we are here mainly concerned with its effect on industry, and to be more specific, upon the building industry.

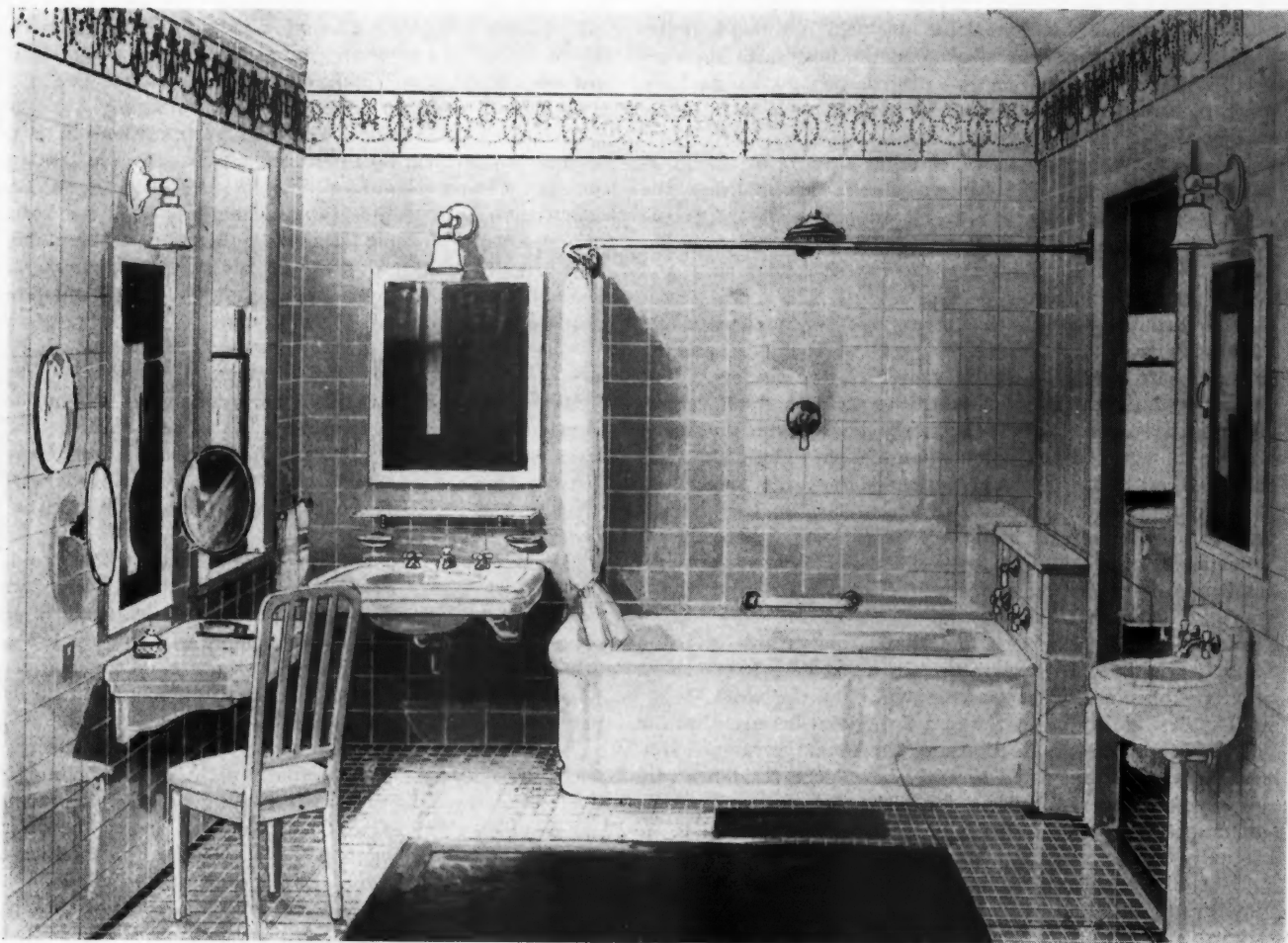
Years ago in a ten-room house one bathroom was plenty—the tub was idle all week, the members of the family had adjusted themselves to a regular bathing time and there was no confusion. In a large family, some of them had to wait over until Sunday morning for their turn. But con-

sider a ten-room house now, with only one bathroom and let us visualize an ordinary family of four people; father, mother and two children. All arise at the same time and consequently the morning ablution period is considerably cramped. Everyone wants to use the bathroom at once. It simply cannot be done.

Therefore we must have more bathrooms to keep peace in the family and to permit each person the necessary time to bathe. There is not any set standard for the number of bathrooms a house or apartment shall have. It is largely in the hands of the builder and the disposition of the owner. But it is safe to say that there should be one bathroom for every three people; or, to put it another way, one bathroom for each two bedrooms.

Sometimes it happens that either the building or the budget will not permit the cost of an extra bathroom. There is a substitute which grows in favor, that already has a widespread use. That is an extra lavatory.

There is always an odd corner or perhaps a space under a stairway in which a lavatory or wash-basin, with hot and cold running water, may be installed. It helps out immensely as, first aid to a crowded morning bathroom and it has other uses just as important. In a two or three-story house, a lavatory on the first floor saves many steps and is



The Modern Bathroom May Be Made as Sumptuous and Complete as the Budget Will Allow for Modern Bathroom Equipment Has Been Developed to the Most Elaborate Luxury but Excellent Fixtures Are Obtainable to Fit Any Space or Pocketbook.

a great help to the housewife, as it reserves the kitchen sink for culinary purposes exclusively and permits members of the family who need a wash-up to perform their ablutions without climbing the stairs to the bathroom.

In previous articles in this magazine we have dealt with the equipment and types of general plumbing equipment. And while the subject was briefly touched upon, it is believed that it will be valuable information to discuss here again, some essentials. It may seem expensive or extravagant to add bathrooms in houses that already are loaded up with modern conveniences and therefore it is well to know that additional bathrooms need not cost prohibitive sums.

The master bathroom should, of course, be as sumptuous and complete as the budget will allow. It's one of the most important rooms in the house and will stand the best equipment possible. Other bathrooms, however, need not be so elaborate—in fact all the larger manufacturers of plumbing fixtures now feature compact units that fit into extraordinarily small space.

Recently one of the largest manufacturers ran a series of newspaper advertisements showing how a large clothes-closet could easily be converted into a well-equipped bathroom. Tub on one side, closet and lavatory on the other, can be put into compact space and still make a practical and inviting bathroom.

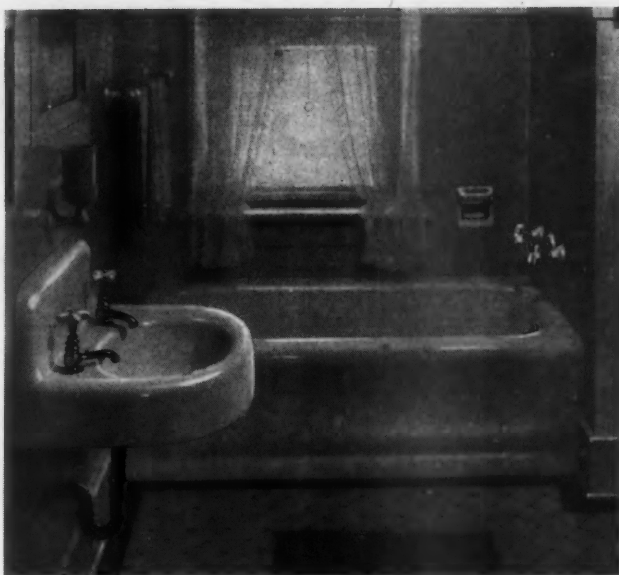
In the larger cities where the old houses are being made over into apartments, contractors have learned how to produce some wonderfully fine bathrooms in unbelievably small areas, and when it is realized that these small bathrooms function quite as well as the larger ones why not take a leaf from the book of their experience.

We will have lots of bathrooms. The more we pay for our house, the more we want. Contractors and builders should carefully study the conditions and like all other business men who are successful, give the public what it wants.

And there is also the basement where the extra lavatory, and a closet, too, will pay for itself many times over.



Manufacturers of Plumbing Fixtures Are Now Featuring Compact Units That Fit Remarkably Small Spaces and Make Possible More Bathrooms in a Limited Space.



Even the Less Expensive Type of Bathroom Equipment Today Shows a New Degree of Refinement Marking a New Realization of the Importance of the Bathroom.

Homes that have a yard or employ servants should invariably have this extra plumbing equipment. And if we can't have bathrooms we must at least have an extra lavatory or two. Recently in a survey of American homes, by the Industrial Survey and Research Service, it was found that in a large percentage of homes (nearly 25 per cent) automobiles and telephones were provided before sufficient running water was used. Thus, it is up to the builder to offer this vital need before the prospect's money goes into other channels.

What about the cost of all this addition to home building? Plumbing equipment can be very expensive and it can be very modest. It is one item upon which careful thought must be expended. Much depends upon the plumbing supply house or the man who designs the plumbing floor plans. It is a good idea to keep in mind that from 50 to 100 per cent of a plumbing installation cost is for labor. When the job is finished it is rather difficult to see where the money went, as much of the work is covered by flooring or plaster. The compact bathrooms, or additional lavatories described, have the advantage of being easily installed, use less supplies than a large room and hence the labor and incidental costs are small.

Plumbing supply houses and branches of plumbing fixture manufacturers all maintain a service that is helpful to builders. These people are interested in selling their materials and fixtures of their own manufacture and can be depended upon to co-operate with you for making suggestive layouts that cut labor costs to a minimum. When you have made a friend of the representative of one of these distributors you will obtain good advice from a practical source.

To conclude, cleanliness is daily growing in demand. The public wants it and must have it. It is a mark of the advance of civilization, and the homes we live in are the monuments to our interpretation of that progress, just as builders are the artists who transfer these interpretations into being.



“THE outstanding characteristic of the modern house is compactness, the elimination of useless rooms. Rooms are fewer in number and the rooms most frequently used are larger. The ‘back-parlor,’ the small den, the sewing room and intricate hallways are not included in the well planned small house of today.”



# SAVE THE SURFACE DEPARTMENT

"Save the surface and you save all" — Paint & Varnish

## Save the Surface Home

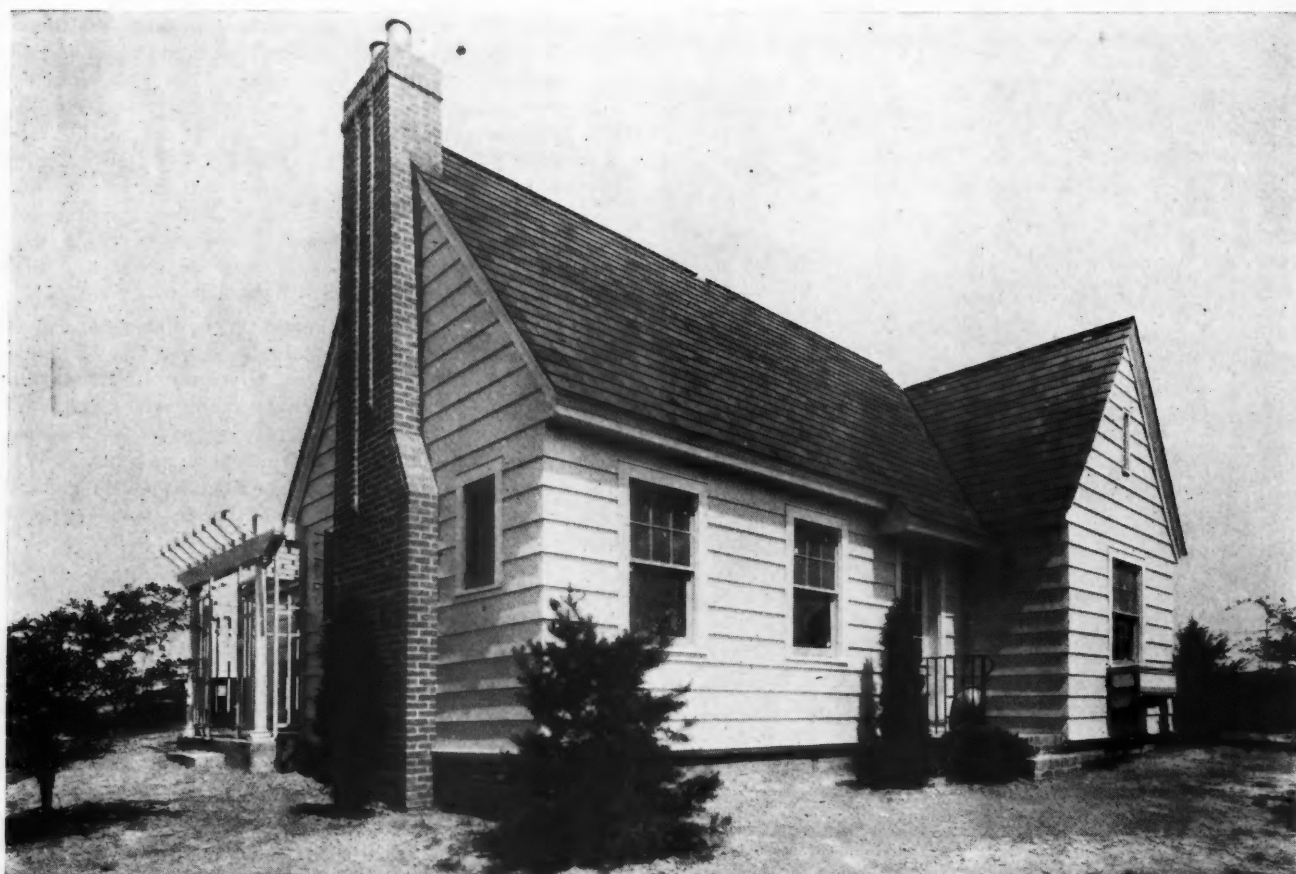
Model House Erected at Sesqui-Centennial Exposition by the Paint and Varnish Industry

A MODEL house in which paint and varnish are used in the most approved manner is one of the features of the Sesqui-Centennial Exposition at Philadelphia. Floors, walls and woodwork are a vivid example of what these materials will do to enhance the appearance and durability of an average small house. The utilitarian and aesthetic functions of paint and varnish have been displayed with the result that the little house looks well, looks as though it will wear well, and has an air of sturdiness and distinction, so uncommon to houses of modest cost, that it is difficult to conceive of its being well within the \$10,000 limit which many people find necessary to set for their home building projects.

In erecting this exhibit, the paint and varnish industry has done much to clarify popular impressions of the uses of paint and varnish. Much has been said and written

about how paint enhances and protects a house. Here is an ocular demonstration and proof of these claims. The builder, as well as the layman, can find many things in this building to convince him of the investment value of a liberal and intelligent use of paint and varnish. Too many new houses, especially those of modest price, have a raw, skimpy, unfinished look that relegates them on sight to the "cheap" class. This model house demonstrates emphatically how proper use of these materials can transform an inexpensive little house into a charming and distinctive home.

Color has been used tastefully but not academically. The kitchen, for instance, is painted bright blue with orange trim instead of the conventional white and blue arrangement. The result is an attractive, unusual room that prompts women visitors to exclaim, "How nice!"; and to



Save the Surface Home at the Sesqui-Centennial Exposition Is a Modest Colonial Bungalow of Pleasing Design and Interesting Detail.



think derogatively of their own kitchens at home. Surely the color is responsible, for that is the only unusual thing about the room.

New ideas in color schemes have been carried out in the dining room and bedrooms. The walls of the former are painted a tint of blue-green, and the woodwork ivory with striping of salmon pink. Since the two bedrooms have dormer-windows they lend themselves to a quaint and dainty decorative scheme. One has walls tinted shell pink and woodwork of ivory, striped with sky blue, while the other is tinted pale green and the woodwork painted cream.

The living room, which occupies one wing of the house and is a story and a half high, has heavy beams and woodwork. These have been given a dignified Flemish color, while the walls are cream colored in a rough texture finish.

These color schemes will be changed from time to time as the summer progresses. The wall colors now in place will be used as foundation colors for various two and three-tone finishes. Visitors will gather some impression of the flexibility and variety of paint as a decorative medium from these changes in the interior treatment of Save the Surface Home.

True to tradition, the exterior of the house is painted ivory with trim of light green and roof of moss green. This color scheme, although universally accepted as proper for all houses designed in Colonial style, may be varied within itself, so to speak. The wide siding of Save the Surface Home is painted ivory; but the color of the trim is unusual in its tone and hue. Another distinctive touch is the color of the window frames and mutins—light green to match the shutters! A red brick chimney breaks the severity of one side of the house, while dormer-windows add charm to the other.

Not the least attractive points are the three separate entrances, each with a distinctive treatment, but all of the same architectural family. The little entrance that opens

into the kitchen through the laundry has a plain little porch with a white painted railing. The side entrance or terrace, onto which French windows open from the little dining room, has a pergola of white lattice work over a brick floor and steps. The front entrance has a nicely designed Colonial door, showing strap hinges and an old-fashioned door latch. There is a red brick stoop and iron railings, also a charming little iron lantern to light the steps.

Save the Surface Home was designed by Alfred N. Dobbins, a Philadelphia architect, and erected by the paint and varnish industry of the country under the auspices of the Philadelphia Paint, Oil and Varnish Club. It stands on a knoll overlooking Gladway Lagoon and the Fine Arts Building. A three-car garage is part of the exhibit.

The house may be built for about \$10,000. It is excavated under the living room, dining room and kitchen. The foundation walls are of concrete with concrete footings under all walls and piers and a bathroom floor bed of 3-inch cinder concrete. The chimney is of common brick. Exterior finish is white pine siding and interior trim throughout the house is of clear white wood for paint. All exterior doors of white pine and interior doors of birch. Finished flooring throughout the house is oak with a sub-floor-



Strap Hinges, Lantern and Hand Rail Carry Out the Spirit of the Save the Surface Home.

ing under all finished floors and a layer of deadening felt under the finished flooring.

The plastering is two-coat work applied to insulating material which is also used as sheathing. The exterior metal work, including gutters, leaders, down spouts and flashing, is of copper. All roofs, inclosing rooms are covered with one thickness of 7/8-inch lumber and one layer of building paper and shingled with stained wood shingles.

A complete plumbing system and fixtures ready for use has been installed and complete wiring for electric lights and service outlets provided. The heating plant is thermostatically regulated.

## Hints for Merchandising Lumber and Building Supplies

ALL of the great activities of industry—production, advertising and merchandising—are aimed at the ultimate consumer; the purchasing public. Business has no other proper function than to make a legitimate profit. And the public pays this profit. They it is who really enable any establishment to do business. Too often this fact is lost sight of.

While elaborate national advertising is planned to push sales, extensive research is conducted in the interest of production, and great care and attention are directed toward reaching the consumer in a broad, general way,

entirely too little attention is bestowed upon reaching the individual consumer in an interesting, human and purely personal way.

It is just at this point, that the one who is last to reach the consumer, the dealer, finds his greatest opportunity. If the dealer would realize the extreme importance of the part he plays as the last link in the chain of industry, he would devote more time to his window and shelf displays. For these are what make the final, direct appeal to the consumer.

If they are interesting and have been planned with suffi-



Each New House Is a Paint Prospect Not Only When Built but Periodically Through the Years to Come.

cient care, with due consideration to the needs of the home owner, and due account taken of his viewpoint and psychology, they will often have more real influence on a prospective customer than millions of dollars spent upon elaborate national advertising and sales promotion conducted in a purely impersonal and general manner.

All merchandising, to be successful, must be done in terms of the desires and requirements of the average purchaser. This is the final tribunal from which there is no further appeal. A product or a trade brand is either won or lost, depending upon its appeal to the public. And there is no surer way to win public demand than to court individual approval.

Window displays must be made interesting and attractive enough to challenge the attention of the passerby, and shelf displays should be so arranged that they will appeal to the casual customer. This means that any "line" which is submerged in some out of the way corner, or so overshadowed by other goods that it will not be noticed, is merely taking up space. It is better not to attempt to display any goods that cannot be given enough space, or a good enough position, to insure them against being overlooked.

After all, there are only two things which advertising can tell about any product, namely, what it is and what it does. The consumer is far more interested in what a thing will do; what services it will render him, than in what it is. In many cases the functions of a product are common knowledge. But in the case of products of fairly complex composition, such as paint and varnish, where their functions are not sufficiently understood to make them sell readily, to a greater number of otherwise enlightened people, it is best to bear in mind their particular functions and those services.

Bear in mind labor saving, sanitation and durability, promotion of morale through cleanliness and beautification, decoration, etc., which paint and varnish are peculiarly able to perform, and place the selling emphasis on these services rather than merely describe the particular product one wishes to sell. If the dealer can succeed in getting this lesson across to the consumer, he will have no trouble in keeping his paint stock on the move.

Paint is now a scientifically prepared product. Since it has been recognized as the supreme protective agency for all construction, it is no longer regarded as something to

apply in any old fashion merely as a decorative agent. As it is used on practically all construction it must be so designed that it will be able to meet all of the varied demands that are made upon it.

A customer may buy poor or inappropriate paint once, but he will not repeat his mistake, and once a customer's confidence in his dealer has been destroyed, his patronage is seldom won back. It is best for the dealer to be scrupulously honest, therefore, and sell only paint and varnish of known quality and suited to the particular use to which it is to be put.

The dealer frequently has an opportunity to guide his customers, for the average person thinks that paint is paint, and what is good for his porch is good for his bedroom. Where the dealer's knowledge is inadequate to meet all of the unusual problems he may be called upon to solve the promotion departments and service bureaus of manufacturers will be glad to help him in every way to serve his customers.

Another profitable practice is to keep a well assorted, rather than a large paint stock. The larger, responsible manufacturers are always in a position to fill orders quickly. Usually the customer wants some particular product, and no other will do so far as he is concerned, so that it is well to have a little of all kinds always on hand, since there is nothing which is so helpful to a dealer as a really satisfied customer, who usually wants only a little material, but that of a particular kind.

As numerous property surveys conducted by the paint and varnish industry have disclosed the fact that three out of every four houses are suffering for paint, thus leaving a large potential market as yet untouched, there is always a market for paint and varnish wherever there are homes. The building supply dealer, however, must make the purchases of these materials logical.

Only by displaying them properly and presenting them as integral parts of his stock of building materials, not as extra adjuncts, to be thought of later and economized on if possible, only by suitable, seasonable and attractive window and shelf displays, as the final adjunct to all of the other forms of advertising of any product, can the dealer hope to reach his greatest potential market, the average home owner.



## Installing Oil Burners

(Continued from page 209)

thereby offered. Fuel economy of about 15 per cent accompanies the use of thermostats in either coal or oil fuel furnaces.

When the oil burner is started or stopped its influence on the warm air supplied to the rooms above is felt at once. It should be recalled that only a thin sheet of galvanized iron or tin separates the warm-air supply space from the hot surfaces of the heater. This results in great flexibility, for cooling of the castings on stoppage of combustion acts on the heating effect at once.

Whereas heat is maintained in drums of water for long periods in steam and hot-water heaters, this is not true of furnaces. Thus, in oil-burner practice, as applied to furnaces, generated heat begins to function at once and ceases to function as rapidly when burners are stopped.

Service must be provided, incident to all installations, and is best handled through a special service department. As trouble calls mean lost time and profit, selection of only the highest grade apparatus will prove economical.

# Prize Winning Kitchen Layout

Design That Won \$500.00 in Nation Wide Competition

**S**TRAIGHT line production has at last reached the kitchen.

Efficiency methods which placed American industries far ahead in world leadership have released the American wife from household drudgery.

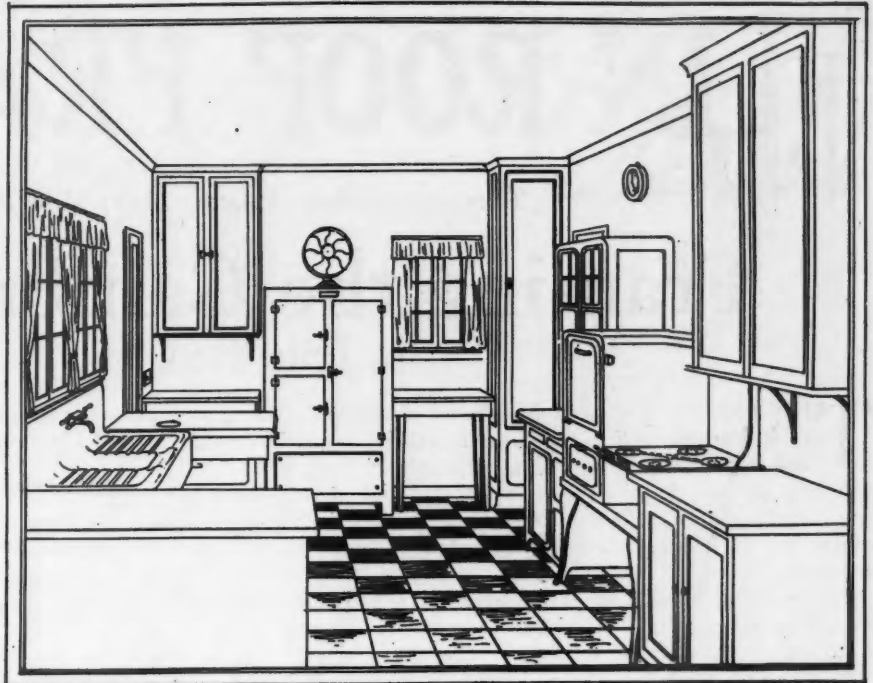
Kitchens are not what they used to be. Builders who have been watching the change during the past few years agree, for they have found the new type kitchens are providing excellent selling features.

Convenience is the prime consideration today. In a recent kitchen plan competition, held by a prominent manufacturer of electric refrigerators, to obtain the best thought of America on kitchen planning and layout, routing was assigned 50 points in the determination of the award.

The judges were unanimous in agreeing that the large old-fashioned kitchen, which so often served as a living room as well as a workshop, is not well adapted to the modern home.

Harry P. Braisted, New Haven, Conn., was awarded the \$500 first prize, Edward B. Hussey, Jr., Berkeley, Calif., won second place, and William D. Sherman, Elizabeth, N. J., was given third place in the contest. Nearly forty others were given honorable mention by the judges.

In judging the designs submitted the judges felt that the dimensions of the model kitchen should be in the proportion of two to three and that the total area should not be excessive. Storage and preparation of food and the clearing



A Sketch of the Kitchen for Which the First Prize of \$500 Was Awarded to Harry P. Braisted, New Haven, Conn.

away of the dishes were each given equal importance in the allotment of space.

In length the model kitchen, as designed by Mr. Braisted, is 15 feet and nine inches and the width is approximately 11 feet. This gives a room large enough for the many modern appliances of today yet compact enough to save steps and eliminate useless duplication of effort.

By referring to the floor design it will be seen that it is one that can be of practical use to nearly every builder. It is laid out in such a manner as to fit in almost any set of plans and its simplicity lends itself to economical construction.

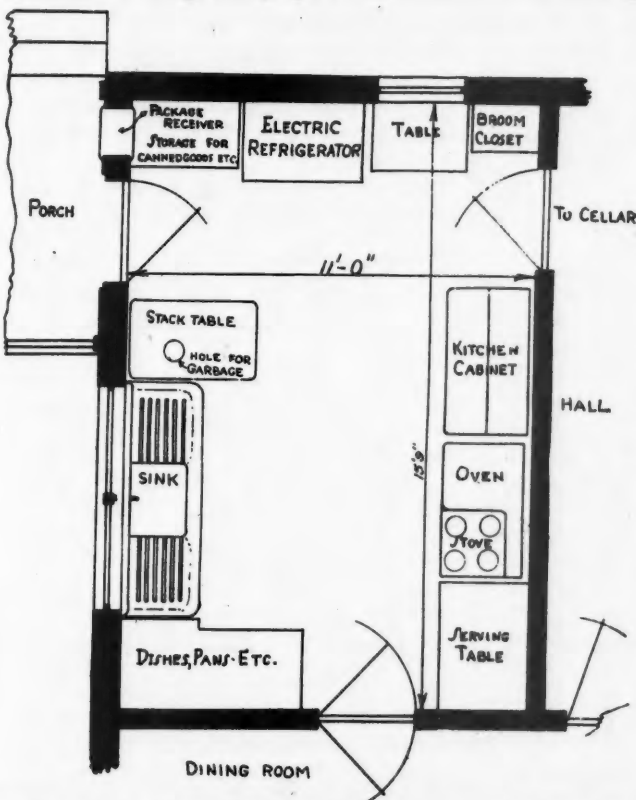
Various foods enter through the porch, the package receiver or are brought up from the cellar. Canned goods are stored in built-in cupboards just inside the porch door. Fresh foods and vegetables are placed in the electric refrigerator located in the center of the east wall half way between the porch and cellar doors.

In the preparation of the meal the foods are taken from the canned goods storage or the refrigerator and taken to either the sink or the kitchen cabinet. It is only a step from one side of the room to the other and with all foods on either the sink or kitchen cabinet excess walking is eliminated.

The range is next to the kitchen cabinet and opposite the sink. The baking or cooking processes can be watched with the minimum of effort while other work is being done. Prepared foods are placed on the serving table to the right of the range and adjacent to the swinging door into the dining room.

After the meal the dishes are placed on the work space to the right of the dining room entrance and then as they are cleaned and the garbage deposited through a hole in the table connected with the refuse pail, they are placed on the stack table. After washing in the sink they are returned to the work space to the left until they are stored in the overhead cabinet.

(Continued to page 220)



A Plan of the Prize-Winning Kitchen, Showing the Arrangement for "Straight Line Production" in Housework.





# INSTRUCTIONS IN ROOF FRAMING

*This Department Appears Every Month in American Builder—Editor*

## Framing the Gambrel Roof

By JOHN T. NEUFELD

**T**HE problem illustrated here is of a gambrel roof. It is interesting for the reason that it shows how any roof framing problem, although it may seem complicated, may be analyzed. Thus the roof shown, at first seems somewhat complicated, but if each rafter is studied by itself, we find that only ordinary principles are involved.

The framing illustrated is of standard construction as recommended by the National Lumber Manufacturers' Association.

In analyzing the problem, we divide the processes into several parts. The first is finding the pitch or slope of each rafter. The second is finding the length of each rafter. The third is obtaining the cuts for each rafter. The fourth is finding the cuts for the end studding and the collar beams.

### Finding the Length of Rafters

In this case we have found the length of rafters by the "length per foot run" method. We obtain the length per foot run from a table and then multiply by the total number of feet in the run. This method is the general, the most convenient and the most accurate.

The lengths of these rafters may also be found by other methods similar to those explained previously. For example: We may find the length of the rafters by the square root method. Thus the length of the lower rafter would be equal to the square root of 4 squared plus 6 squared, which is equal to the square root of 16 plus 36, or the square root of 52 equals 7.211 feet. Changing 7.21 to feet and inches we have 7 feet and 2½ inches.

We may also use the method of measuring across the square. If we measure across the square between the number 4 on one arm of the square and 6 on the other arm, we will obtain approximately 7¼ inches. This means that the length is 7¼ feet. This is perhaps as accurate a measurement as can be obtained by measuring across the square.

### Top and Bottom Cuts

To obtain the cuts for these rafters we use the numbers representing the rise per foot run. Thus for the lower rafter we have a rise of 18 inches per foot run and, therefore, we use the numbers 18 and 12. For the upper rafters we have a rise of 6 inches per foot run, therefore the numbers 6 and 12 are taken to lay out the cuts for the upper rafters.

These same numbers taken on the square will also give the cuts for the upper end of the gable studs and for the collar beams, of course, the gable studs do not always frame to the same rafter; thus those framing to the lower rafter have a cut corresponding to the lower rafter,

and those framing to the upper rafter have a cut corresponding to the upper rafter.

### Difference in Lengths of Gable Studs

From the rise per foot run of the rafter we can figure the difference in the lengths of the gable studs. For example, the gable studs framing to the lower rafter if set 16 inches O. C. would have a difference in the length of  $1\frac{1}{3} \times 18$  inches = 24 because the rise per foot is 18 inches and they are set  $1\frac{1}{3}$  feet apart.

The difference in the length of the studs framing to the upper rafters would be  $1\frac{1}{3} \times 6$  = 8 inches. This is based on the fact that the rise of the rafter is 6 inches for each foot of run on each foot of horizontal distance and as the studding is placed  $1\frac{1}{3}$  feet apart, the difference would be  $1\frac{1}{3} \times 6$  inches = 8 inches.

### Problems

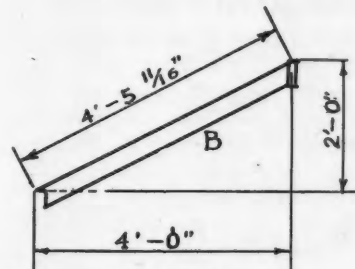
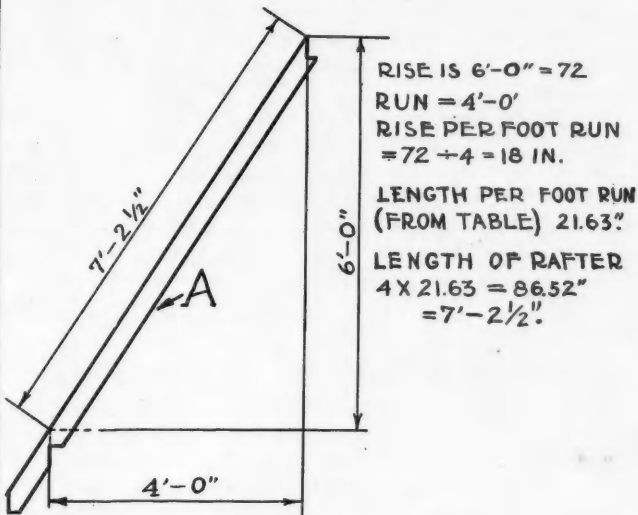
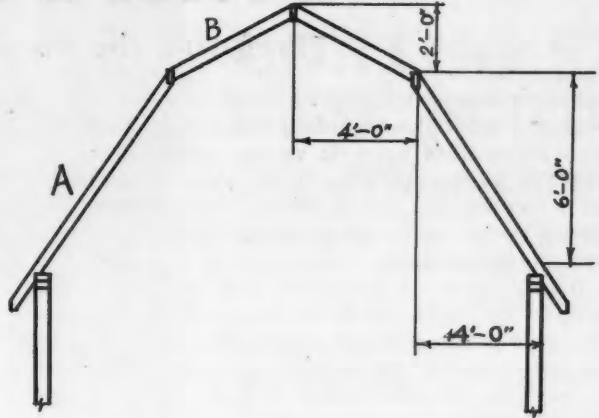
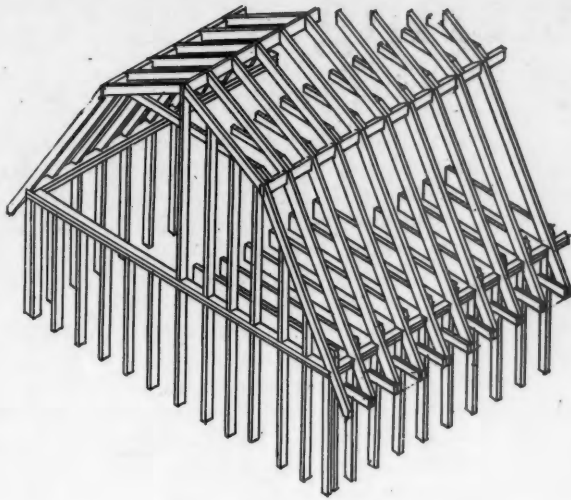
1. Assuming that the rise of the lower rafter shown in the illustration is changed to 5 feet 0 inch, what would be the rise per foot run?
2. Express the pitch of a rafter having a 15-inch rise per foot as a ratio of the rise to the span.
3. The length per foot run is given in the tables as 19.21 inches for a rafter having a 15-inch rise per foot run, what would be the length of the lower rafter for this pitch if the run is 4 feet 0 inch?
4. What numbers on the square would be used to lay out the cuts for the rafter referred to above?

### Answers

1. The rise in this case would be 5 feet 0 inch = 60 inches and the rise per foot run would be 60 divided by 4 equals 15 inches.
2. If the rise per foot run is 15 inches, then the rise is 2 feet of span would be 15 inches or the rise for each foot of span would be 7½ inches if the building had a gable roof. The rise compared to the span would be 7½ inches divided by 12 or 15 inches divided by 24 equals 5⁄8. We would therefore call this a 5⁄8 pitch roof when comparing the rise to the span.
3. The length of the lower rafter in this case would be  $4 \times 19.21$  = 76.84 inches or 6 feet 4⅞ inches.
4. The numbers 15 and 12 taken on the square would give the top and bottom cuts for this rafter.



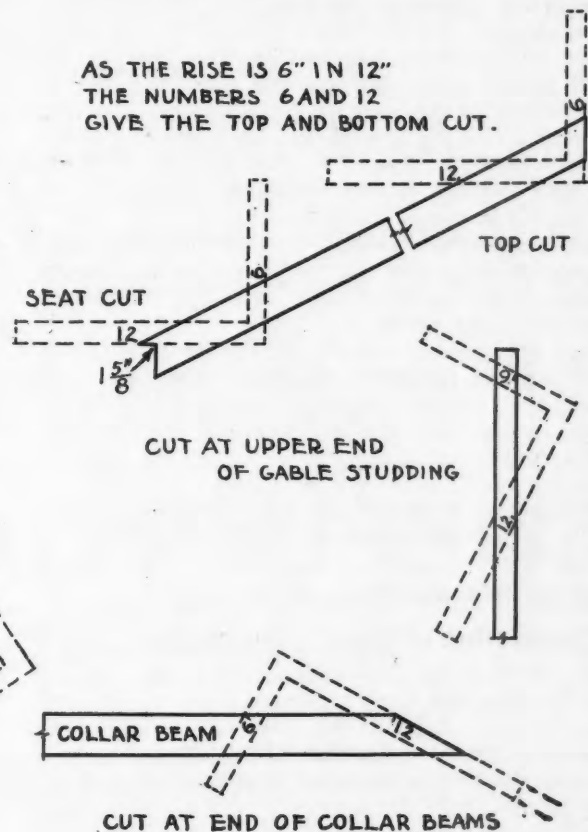
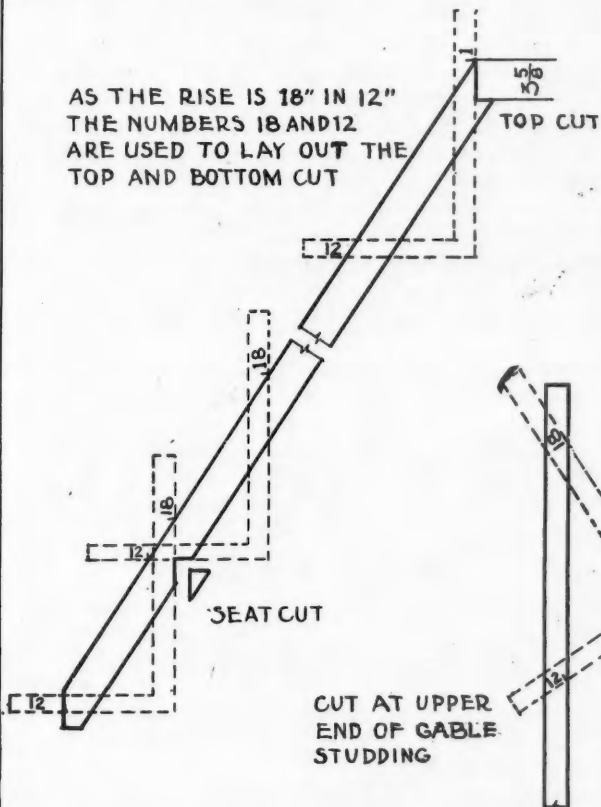
**"T**HE natural conditions of the lot must be taken into consideration before determining the plan and style of the house. Grade, permanent trees, exposure to the sun and wind, street frontage and the types of homes in the neighborhood are important factors."



RISE IS 2'-0" = 24"  
 RUN IS 4'-0"  
 RISE PER FOOT RUN IS  $24 \div 4 = 6"$   
 LENGTH PER FOOT RUN 13.42" (FROM TABLE)  
 TOTAL LENGTH =  $4 \times 13.42" = 53.68" = 4'-5 \frac{1}{16}"$

AS THE RISE IS 18" IN 12"  
 THE NUMBERS 18 AND 12  
 ARE USED TO LAY OUT THE  
 TOP AND BOTTOM CUT

AS THE RISE IS 6" IN 12"  
 THE NUMBERS 6 AND 12  
 GIVE THE TOP AND BOTTOM CUT.



# Better Plastering

## Preparing the House for Overcoating

**I**N the preceding article, we discussed at some length the general principles regarding overcoating old buildings. We touched upon its various aspects from the standpoint of saving painting cost, eliminating repair expense, conserving fuel and of adding to the re-sale value of the house because of its greater attractiveness.

Overcoating is applicable to houses of all types, whether they be frame, face or common brick, or stone walls, which, as time goes on, sometimes deteriorate to such an extent that the cost of pointing up and painting becomes a burdensome expense. In this article, we propose to discuss the various steps in the overcoating of a house, beginning with an examination of its condition to determine its suitability for this purpose.

### Examination of Old Foundation

For the frame house, it is most important to ascertain the condition of the foundation. If it is some form of masonry, the problem is quite simple, as such foundations are most permanent and generally in excellent condition as far as load bearing is concerned. However, if settlement has occurred unequally, and it is serious enough to detract from the appearance of the building, it will be good policy, if the building is valuable, to call in an experienced building mover and raiser or foundation expert who can suggest ways and means of shoring and raising up the settled portions.

### Repairs to Old Masonry Foundation

If stone or brick has been used, it sometimes happens that, although it is amply safe as far as load-bearing is concerned, it has weathered, the stone has chipped, or the mortar has worked out of the joints, presenting an unsightly appearance. This can be remedied by filling all the bad joints with mortar or by placing a new concrete base face over and bonded to the masonry for a distance of about twelve inches above the ground, and for a depth of about six to nine inches below ground. It need extend downwards no more than this, but to take care of the uplifting effect of the frost, the bottom of the extension should be beveled up and away from the foundation. Bonding of the new concrete to the old is best effected by raking out the old joints and driving into them heavy spikes at intervals of about two feet along the wall.

When an old masonry wall extends more than twelve inches above grade, the new masonry base added need not be carried higher than the twelve inches, as the stucco on metal lath overcoating, over the siding or old masonry above, can be carried downward to the top of the new masonry base and thus present a uniform appearance for all of the stucco. In this event the metal lath can be attached to the masonry by nailing into wood plugs, driven at intervals into the joints, or with heavy brick staples, or by the new hardened masonry nails.

### Foundation of Wood Sills and Posts

Where a building has been built on wood sills or posts it is very essential that these be examined to see that they are in satisfactory shape before proceeding. Charles E. White, member American Institute of Architects, has written instructively on this important phase of the problem. He says in part:

"Make a complete examination of the house from cellar to garret. If you haven't confidence in your own judgment, get a practical architect or builder to make the inspection for you.

"There are several vital spots where decay is apt to

begin. First in the sill. This is that timber, resting on the masonry underpinning, which supports the first-floor joists and wall studding. It is the undermost timber of the house, and bears the same relation to the house that a pair of shoes does to a man. The entire weight of the building above ground rests upon it. For this reason the sill should be carefully inspected. Dig a knife blade into it to see if the fibers show signs of dry rot or decay. Sound timber will resist a blade like new wood. If the wood is decayed a blade will easily enter its soft substance.

"It isn't often that the sill is in bad shape; but sometimes, when the water-table outside (that lowermost board just above the underpinning) has not been kept in good repair, water runs in and dampens the sill. The alternate dampening and drying of the timber causes it to rot.

"If the sill is decayed in spots, and not through its entirely (the latter is rarely the case), it may be repaired as good as new.

"Simply saw out the soft places and insert new sound pieces. After sawing out the decayed wood, 'halve' the joints or cuts. That is, saw out the bad place, but, instead of leaving the cuts vertical, trim them to a wedge shape or half joint so the new timber when inserted will bond with the old. Spike the ends well, and your sill will be as strong as it was originally. Any first-class carpenter can do this work without disturbing the floor joists or studding above."

### Condition of Old Exterior Wall Studding

With the foundation repaired in good shape, the outside studding should next be inspected carefully. Especial attention should be paid to the ends of the studs where they rest on the sill to see that these ends have not rotted. The same test can be applied as that given by Mr. White in the examination of the timber sills. Splicing the bottom of decayed studs with new timber is done by nailing or "scabbing" on new studding for a distance of two feet or so, then cutting off all the decayed end of the old stud and replacing with a new piece driven to a driving fit between the cutoff and the sill, and nailing to the "scabbed" on piece.

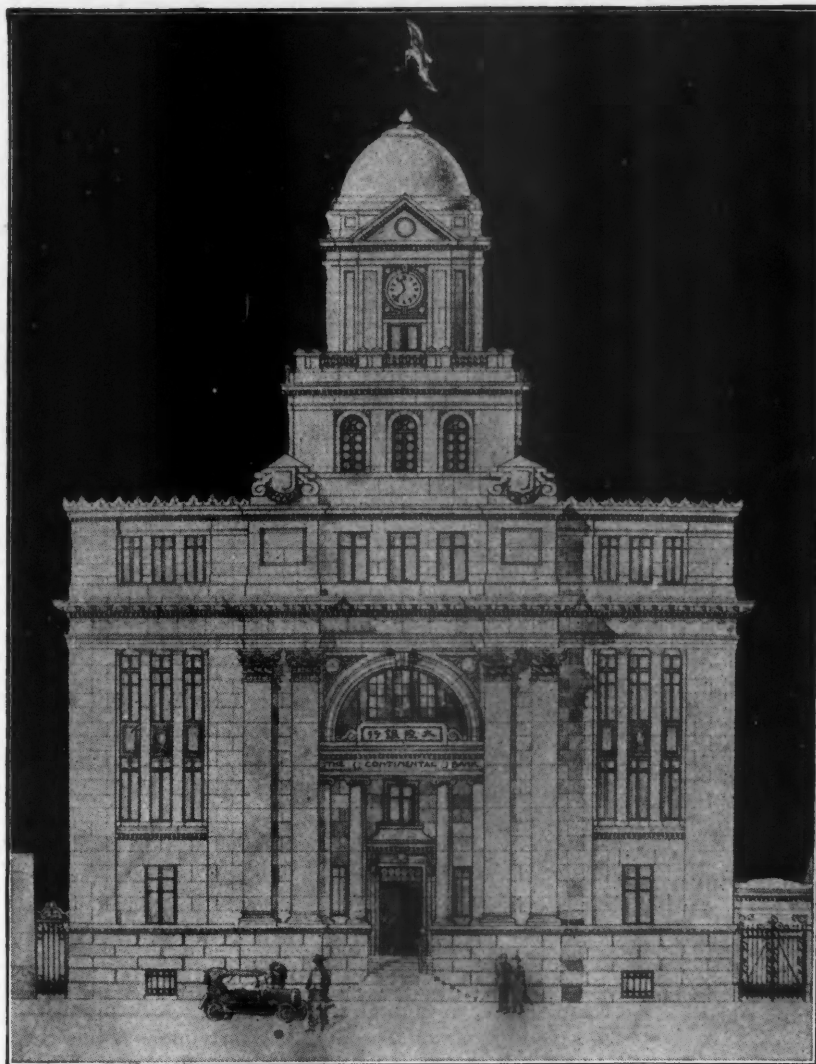
Another essential point is to be sure that the outer wall studs have not buckled or sagged out of line. This can be determined by taking a straight edge ten or twelve feet long and applying it to the inner and outer faces of the wall. Surfaces out of plumb and line will show up quickly. Deformations such as this are generally caused by the unequal settlement of the foundations or by rotting and consequent giving away of the studding. In order to have the stucco present a plane surface and, therefore, one most economical of stucco materials, it is quite important to have the studding line up. Methods of bringing this about are frequently very simple and the practical architect or builder can be depended on to devise an economical solution in each case.

### Condition of Interior

Before proceeding with the discussion of the other details concerned with overcoating the exterior, it might be well to touch on some of the other aspects of the remodeling problem, which are of sufficient importance, as they affect the general problem, to warrant a slight mention here.

Specifically, the condition of the interior details of the old house should be inspected, in connection with that of the exterior wall, to determine whether they warrant the expenditure required to improve the building. Unless the building is in fair shape so that extensive alterations and repairs are not required to remedy fallen plaster, sagging





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.....(Signed)

floors, marred doors, worn-out woodwork, bad plumbing and ancient lighting fixtures, it is hardly advisable, unless for sentimental or special economic reasons, to spend money on overcoating, when a new building is really needed.

### Taking Sag Out of Floors

The reliable building constructor, however, can correct many common ills which old houses are heir to by simple and inexpensive expedients. A sagging floor can be remedied by building a new girder under the sagged part and supporting it on new masonry or wooden posts or piers in the basement. Each sagged joist should then be brought to a common level by driving wedges between its bottom edge and the top of the new girder. If jackscrews are available, the method indicated is to jack up the sagged joists to a position slightly above level (say,  $\frac{1}{2}$  inch or less, depending on the span) place the girder on its supports tightly under the joists in their raised position and then remove the jacks when the floor will settle down to a level position tight against the girder.

Sagging of upper floors is more difficult of correction and in general it is not practical to attempt alteration of the supporting joists.

Floors normally have reached their final position in old buildings and further settlement need not be looked for. Remodeling is best effected by laying a new finished floor on top of the old one, placing in between them thin strips of thickness to correspond to the sag at the various points on the floor. The desirability of having new hardwood floors, when a general remodeling of an old house is contemplated, is quite universally recognized, as with the exception of lighting and plumbing fixtures, no parts of a building show obsolescence and depreciation more than do the floors.

### Metal Lath and Plaster Used for New Ceiling Construction

A suggested method to eliminate unsightly ceilings which have sagged and where large quantities of plaster have fallen, is to construct a new ceiling of lath and plaster attached direct to ceiling joists after the old lath and plaster have been torn off. Where the ceiling joists are considerably out of level it may be advantageous to construct an entirely independent suspended ceiling below the original one, which will hide the unevenness. The use of metal lath in remodeling interior walls and partitions is recommended because of its adaptability in reinforcing the plaster to prevent cracking.

In well built buildings the cost of remodeling is materially lower than for those of flimsy construction, and in conjunction with a new stucco overcoated exterior the remodeling will in the degree commensurate with its thoroughness add measurably to the appearance, desirability, and value of the entire building. Remodeled buildings have many times made fortunes for their owners, whereas, in their previous dilapidated and antiquated condition they have been a source of constant loss and increasingly high cost for upkeep and repairs.

Having discussed at some length a few of the elements entering into the consideration of the problem of remodeling and overcoating, we are now prepared to go further in the discussion of overcoating details in the next article in this series.



### Prize Winning Kitchen Layout

(Continued from page 215)

Thus the preparation of the meal has been a straight line process. The efficient housekeeper, by the exercise of good judgment, can cut down to half the number of steps ordinarily required in the preparation of a meal.

The raw materials pass straight through the kitchen into the dining room and the dishes and garbage pass straight to the stack table and then back through the washing process to the shelves. There is no back-tracking in any particular operation.

The equipment that would be built in the kitchen would be the electric refrigerator, package receiver, canned goods storage, drawers for supplies, broom closet, serving table and the storage space above and below it, the dish closet and the storage for pots and pans, and the sink with double drain boards.

The table, stool, kitchen cabinet, range, stack table and garbage receiver are all items that the housewife now expects to have furnished her by the builder.

The electric refrigerator finds a place in this model kitchen because of its convenience, economy and appearance. The modern housewife knows that this type of refrigeration keeps all kinds of foods in first class condition for a long time. With it, too, she is able to prepare many delicious frozen dainties and desserts. It obviates the necessity for her remaining at home waiting for an outside ice supply. And what is even more to the point, the electric refrigerator is now so low in cost that it is well within reach of the average purse.

Because electric refrigeration is clean, efficient and certain it is possible to have it in the kitchen. The saving of steps, decreased food waste and better protection, increased "dressiness" of the kitchen and the general appeal to the eye of the woman buyer will prove a strong selling point for the builder who seeks his buyers after the houses are completed. It will be an additional selling point for the builder or architect who is designing or building on commission from the owner.



### The New Steel Construction

A NEW era of structural steel erection, which promises to save millions of tons of steel yearly and heralds the death of the nerve-racking riveting hammer has made its appearance with the development of arc-welded structural steel buildings.

Contracts have been let for two such buildings by the Westinghouse Electric & Manufacturing Company. The five-story building at Sharon will be the largest arc-welded or rivetless building in the world and is the first practical application of arc-welding to the building of multiple-storied structures. It will be the first building in the world with all joints and members designed for arc-welding. It is a radical departure from previous practice in that practically none of the members could be joined except by arc-welding. Its cost will be about \$275,000. The one-story East Pittsburgh structure is notable in that it is being erected partly of scrap roof trusses, a feat economically unfeasible heretofore.

Arc-welding as applied to the erection of structural steel has been in process of development by Westinghouse engineers co-operating with the American Bridge Company for some time during which tests conducted in the Carnegie Institute laboratories of material prepared by Westinghouse arc-welding engineers has developed the fact that arc-welded joints were stronger than riveted joints, and were, in fact, stronger and more resistive to pressure and stresses than the adjacent beams. It was also found that the saving in steel effected in arc-welded structures was considerable, because of the elimination of the thousands of plates and angles necessary in riveted buildings and because lighter beams could be used. In the Sharon building, where approximately 700 tons of steel will be used, there is 100 tons less steel than would be necessary if the structure were to be riveted. This alone means a saving of about 12 per cent in steel cost.



## Here They See Baths That Sell Them New Homes

Many a dream of a new home starts with a longing for beautiful and up-to-date bathrooms—a longing often inspired by "Standard" Showrooms.

At these inviting displays you will find all that is newest and best in Plumbing Fixtures

and Fittings. Cordial representatives welcome visitors and answer questions.

The most up-to-date built-in baths, lavatories with "tempered water" fittings, overhead showers, quiet and dependable water closets—all are seen there.

In principal cities from coast to coast are "Standard" Showrooms, where you can make selections, bring customers, keep in touch with new styles and prices.

Write for "Standard" Catalogue.

**Standard Sanitary Mfg. Co.**

General Offices: PITTSBURGH



"Standard" Promotion or Showroom Men will gladly prepare specifications like this for your Plumbing Fixtures.

# "Standard"

**PLUMBING FIXTURES**



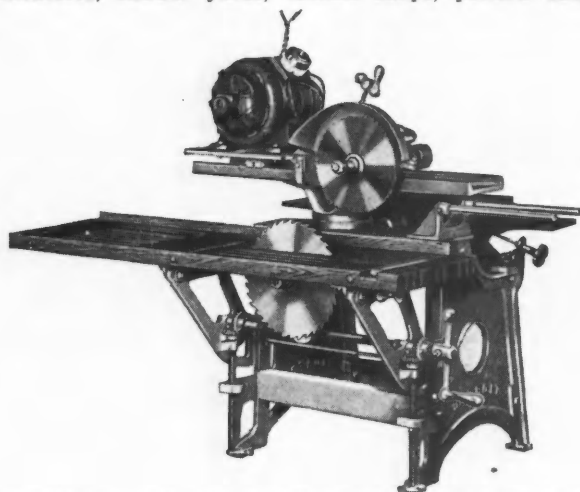


# WHAT'S NEW ?

**EDITOR'S NOTE:** *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 1827 Prairie Ave., Chicago.*

## New Machine in Two Sizes

**T**WO new models have been added to a well-known line of woodworkers, and are being built of the same high standard of material and workmanship which has been a part of all past production. These two models are identical except for size and capacity and they are designed especially to meet the requirements of general building contractors, lumber yards, cabinet shops, pattern shops,



**Two Machines, Identical Except for Size, Have Been Added to a Well-Known Line of Woodworkers.**

general woodworking shops, repair shops and schools.

The machine is a complete woodworking shop in itself, according to the description of the manufacturers, and combines the work of twelve machines in one. It does routing, planing, rabbeting, boring, ripping, grinding, stair routing, jointing, moulding, cross-cutting, tenoning, mitering, plowing, sanding, dadoing, and jack rafter cuttings.

Either machine is portable and can be taken right out onto the job where it is operated by a one or two horsepower motor taking current according to specifications and from the ordinary house lighting circuit. The larger machine is 63 inches long, 42 inches wide and 51 inches high, while the smaller is 57 by 38 by 47 inches.



## Will Produce Acoustical Plaster

**O**NE of the largest manufacturers of gypsum products has arranged for the exclusive right to manufacture and market an acoustical plaster, perfected by Dr. Paul E. Sabine, at the Riverbank Laboratories, Geneva, Ill. The Riverbank laboratories is a scientific organization founded and maintained by Colonel George Fabyan and the researches completed by Dr. Sabine are a continuation of the work begun by his late cousin, Professor Wallace C. Sabine of Harvard University.

This acoustical plaster was perfected more than five years ago but has been withheld from the market by Riverbank Laboratories until actual job tests should prove or disprove the results obtained in laboratory tests.

School rooms and auditoriums and radio broadcasting rooms in various parts of the country were plastered with it and, according to Dr. Sabine these test jobs are all in perfect condition and the material has performed identically on the job as it did in the laboratory.

The acoustical plaster comes to the job already sanded and requires only the addition of water. It is porous in composition and instead of reflecting virtually all the sound that strikes it, as does ordinary plaster, it absorbs a great proportion of the sound which it transforms into heat energy by friction. Its covering capacity is greater than ordinary plaster and its application involves no greater problems than ordinary plaster.



## Small Blue Print Outfit

**T**HE blueprinting machine and sheet washer shown in the illustration were designed particularly for use in drafting rooms where only a small quantity of blueprints is required or where emergency prints are wanted in a



**This Blueprint Machine and Sheet Washer Was Designed for the Drafting Room Which Does a Limited Amount of Blueprint Work.**

hurry. It will also be found valuable in vocational schools and high schools. The blueprinting machine is constructed in a thorough mechanical manner throughout and requires only a small floor space. The framework is so rigid that it is shipped set up.

This machine consists of a half cylinder of glass supported in a metal frame, coated with acid-proof paint. The tracing and blueprint paper are held in contact with the glass by a curtain mounted on a spring roller. It is equipped with an electric arc lamp which is provided with a satin finish aluminum reflector, giving the best possible distribution of light. With a clear tracing and good quality blueprint paper an excellent 24 by 36-inch blueprint can be made, using a 220-volt direct or alternating current lamp, in one minute, with one drop of the lamp.

# There is money



## in Triple Insulated Homes

CUT short the life of your "For Sale" signs. Put Triple Insulated Homes behind them. Many builders tell us that some of these houses never need a sign—they sell before completion. They bring quicker sales at better prices, thereby saving interest charges and releasing money for new enterprises.

The reason is built-in home-comfort, registered and trademarked by Johns-Manville. Built-in with



This "trademark" built into the cellar wall identifies a Triple Insulated Home.

(1) the economy of an Improved Asbestocel insulated heating system, (2) with the warmth of Housline insulating felt and (3) with the permanence, beauty and fire-safety of an asbestos shingle roof.

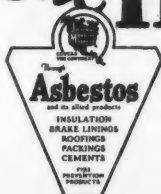
That's what customers want.

That's what you sell them in a Triple Insulated Home.

This coupon puts the complete story on your desk.

# The Triple Insulated Home

## A Johns-Manville idea



JOHNS-MANVILLE Inc., 292 Madison Ave., at 41st St., New York City  
Branches in all large cities

For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

I want more information about Triple Insulated Homes

Name

Address

### Detachable Light Fixture

**A** NEW electric light fixture and convenience outlet which can be attached or detached whenever desired, has recently made its appearance. The outlet is similar to



Attaching a Removable Light Fixture to the Convenience Outlet Which Gives a Double Purpose Outlet.

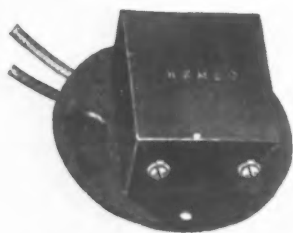
the familiar convenience outlet but is provided with hooks for attaching the fixture as shown in the illustration. The fixture is constructed to simply hook over the outlet, being connected by means of a short wire and plug, as any electric appliance is connected. When connected there is nothing to indicate any difference from any other light fixture. There are no loose wires and no soldering or tapping is required. When the fixture is removed the outlet

can be used as an ordinary convenience outlet.—R. G. THACKWELL.



### Bell Ringing Transformer

**T**HE new type, bell ringing transformer, shown in the illustration, has recently been placed on the market and is especially designed for use in residences and small apartments. It is mounted on a round, outlet box cover and can be furnished mounted on either a 3¼ inch or 4-inch cover. The 4-inch cover is equipped with a knock-out for drop cord installation to the same outlet box. The smaller cover is not equipped with the knock-out.



A Bell-Ringing Transformer Designed for Residences and Small Apartments.

single or three-circuit secondary, 110 volts, 60 cycles.



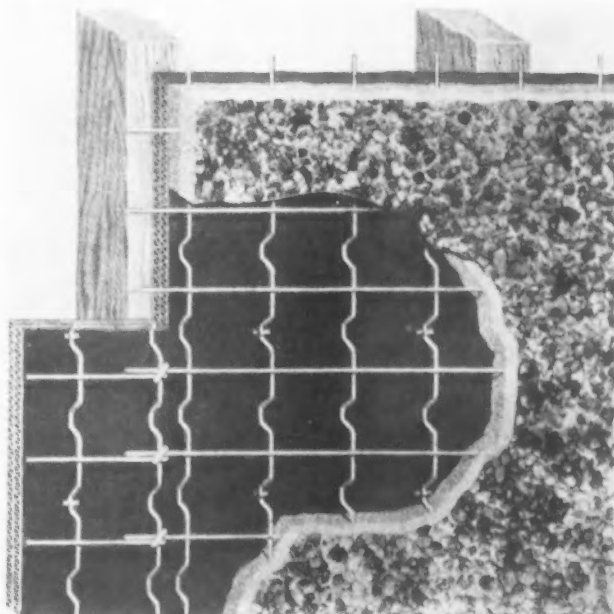
### Sheathing' Insulation and Lath Combined in One Base

**S**OMETHING entirely new in the field of stucco and plaster bases has made its appearance and is now being placed on the market after being thoroughly tested out on hundreds of actual structures, in all parts of the country, for three years. This base is suitable for either interior

plaster or exterior stucco and combines the qualities of wire lath reinforcing with insulation against heat, cold, sound, dampness and frost. It entirely replaces all sheathing and lath.

It consists of alternate layers of wooltex fiber and asphalt, forming by corrugations, a multiple dead air cell sheet through which, it is said, water, dampness and hot or cold air cannot pass. Because it is incapable of reproducing sound waves it serves to break these up and forms a highly effective sound insulation. This sheet, though possessing all the necessary strength for its functions, is neither tense, hard, dense or rigid. It assimilates its own contraction and expansion and generates no stresses, is stainless and durable and because it is chemically treated is sanitary and entirely free from the attacks of rodents.

Over this base a zinc clad metal fabric, with 3¼-inch meshes is placed. This is made of 14-gage cold drawn steel, electrically welded at intersections and has a tensile strength of more than 85,000 pounds per square inch of



A Stucco and Plaster Base Which Is Entirely New and Incorporates Insulation and Lath in One Unit.

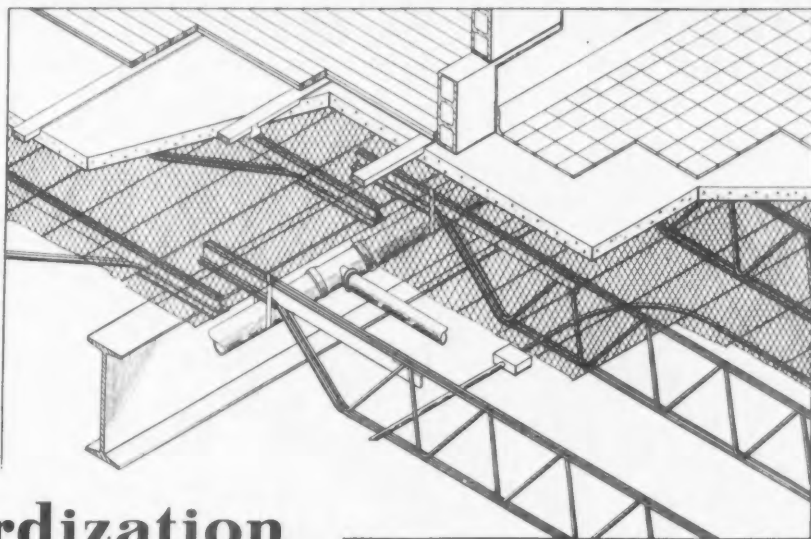
steel. It is self-furred to the correct distance from the base and has a 1½-inch overhang of wires at left edge and bottom for uniting the joints.

When applied to the wall, directly to the studding, the joints of the sheets are laid tight. The base comes in 7/16-inch thickness for the usual uses, 1/4-inch for overcoating old houses, and in special thicknesses up to two inches. The plaster or stucco is applied solid, right up to the base, completely imbedding the wire mesh in a solid slab and protecting it against all corrosion. It is supplied in sheets 24 by 32 inches and 24 by 48 inches for application to the standard, 16-inch center to center, studding.

As a plaster base for interior walls the same base material is supplied in thickness of 7/16 and 13/16 inch, sewed with flat copper wire at eight-inch intervals. Because of its fibrous content it is said to form a perfect bond with the plaster and to permit of a complete set of the gypsum plaster.

These same base material is also used, in thicknesses of 1/4, 7/16, 7/8, 1 1/4 inches as an insulating material between floors, under roofs, for lining garages, attics and basements. For this purpose it is prepared in sheets 32 and 48 inch-wide by 4 and 4½ feet long, with special lengths up to 10 feet.





## Standardization is Revolutionizing Building Industry

*Fireproof Construction Now Economically Available  
for Smaller Buildings*

**N**OW the same fireproof floor construction used in skyscrapers is available for smaller buildings. Steel roof trusses, shop fabricated and ready for installation, can be shipped promptly for buildings where clear floor space is desired. Even vault reinforcing steel can be furnished in sections, tagged and with full directions for quick, easy installation.

Massillon Steel Building Products have been used over a period of years in all classes of buildings from coast to coast. They are well known to the architectural and building professions. They are scientifically designed to provide strength with lightness and are easily and economically installed.



**Massillon Bar Joists** are scientifically designed steel members made up of round bars welded into a single unit and are used for fireproof floor and roof construction in all classes of buildings. They are made in 18 standard sizes and carried in stock ready for immediate shipment.

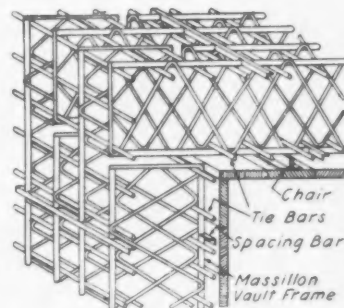


**Massillon Roof Trusses** are standardized, shop fabricated trusses especially adapted to garage and

factory roof construction or any place where clear spans are desired. Made in 10 standard sizes for spans from 40 to 60 feet.

### Massillon Vault Reinforcing

A specially designed reinforcing frame which economically secures the maximum protection in vault construction for Banks — Offices — Oil Stations — Hotels — Stores — Homes. Shipped, properly tagged, and with layout drawings for quick, easy erection.



**Massillon Metal Lath**—furnished in both Rib and Diamond mesh. Also complete line of corner beads, base screeds and furring channels.

**Other Massillon Products** include reinforcing steel, fabricated structural steel and miscellaneous iron and steel building materials. Send us sketches or plans of proposed buildings for quotations on steel requirements. Special attention given to small orders. Send for descriptive literature. Use the coupon.

*Some good territory still open for active dealer connections*

**THE MASSILLON STEEL JOIST COMPANY**  
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# MASSILLON

## Steel Building Products

**The Massillon Steel Joist Co.,  
Canton, Ohio**

Gentlemen: Please send me literature on materials checked below.

☐ Steel Joists ☐ Vault Reinforcing  
☐ Roof Trusses ☐ Metal Lath, etc.  
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Name \_\_\_\_\_

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read advertisements

... they'll want

## RADIATOR WARMTH

### WINTER IS COMING!

And winter brings real discomfort to homes that must depend upon old-fashioned heating. But to the home that is warmed by radiators, winter has no terrors.

The people who will buy your homes know this.

They know this through the experience of their friends and also because for years the advertising of this company in magazines and

newspapers has been telling the story of radiator warmth, has been spreading abroad the fact that Ideal-American Radiator Warmth is comfortable, healthful, even — and that it actually adds more than its cost to the value of any home.

This year millions of advertisements like the one on the opposite page are continuing to tell the story of how American Radiators and Ideal Boilers make a "fairy-tale of winter."

### *Hundreds of builders have proven this fact*

It has come to be an established fact among builders and realtors that everyone wants radiator warmth. That is why so many of them have made it a standard of practice to equip every house that they

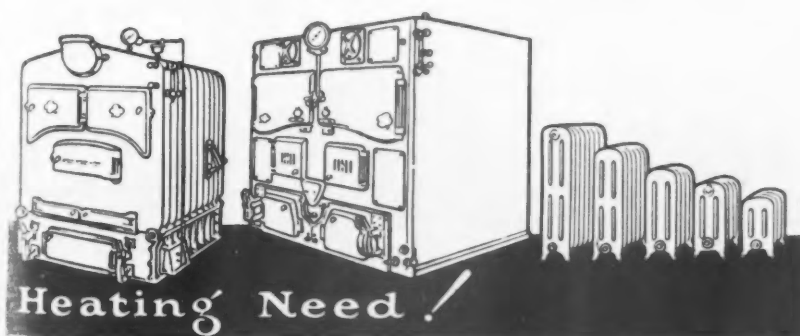
build with Ideal Boilers and American Radiators.

The coupon below will bring you authoritative book of facts.

## AMERICAN RADIATOR COMPANY

Showrooms and sales offices: New York, Boston, Providence, New Haven, Newark, Philadelphia, Baltimore, Washington, Richmond, Buffalo, Pittsburgh, Cleveland, Detroit, Cincinnati, Atlanta, Chicago, Milwaukee, Indianapolis, St. Louis, St. Paul, Minneapolis, Omaha, Kansas City, Denver, San Francisco, Los Angeles, Seattle, Toronto, London, Paris, Milan, Brussels, Berlin

Makers of IDEAL Boilers and AMERICAN Radiators and other products for heating, ventilating and refrigeration



### AMERICAN RADIATOR COMPANY

Direct Mail Advertising Dept. 125  
1807 Elmwood Ave., Buffalo, N.Y.

Gentlemen: Please send me your booklet, "Ideal Warmth and Comfort."

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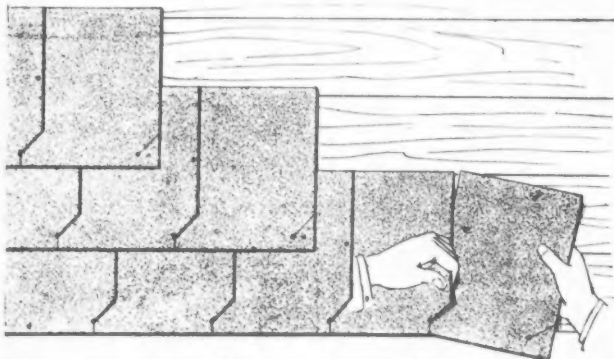
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### A New Locking Shingle

THE illustration shows the method of laying a new type of composition shingle for which a number of advantages are claimed. This shingle, in standard size, is 14 inches wide and 12 inches deep and is made in a variety of permanent colors which offer wide possibilities for the popular color effects. It is made with a locking device which assures safety and protection and permits the laying of many styles including the thatch type roof which is now so frequently seen.

This shingle is made of asphalt and crushed slate. It may be laid either on new construction or over old wood shingle roofs, affording a large degree of fire protection



Here Is a New Type of Composition Shingle with a Locking System Which Makes It Exceptionally Weather-tight.

and increased insulating effect. The locking system makes a completely weathertight roof, proof against both rain and blizzard and the shingles will not curl or blow off. Because of their first cost and long life they are economical in providing both maximum beauty and maximum protection.

These shingles may be laid with varying exposures of from two to eight inches, depending in part upon the slope of the roof. They may also be laid in reversed position to give the effect of the usual composition shingle.



### Form Clamps for Concrete

CONCRETE form work can be greatly simplified by the use of a form clamp which eliminates all wires and permits of perfect alignment by most simple means. One of these clamps consists of a spreader or tie rod onto which a nut is threaded at each end with a 2½-inch thread; this permits of a 5-inch adjustment so that the rods need not be cut to exact length. Small, taper cones are then slipped over the ends of the rod and these bear against the inside of the form, thus providing an all metal spreader.

A small hole is bored in the form for the end of the spreader rod to pass through and the waler rod is screwed over the end of the spreader. The walers are then placed and securely locked with a wing nut and bracket. The work can be done by unskilled labor with a minimum of supervision.

When the form is removed, no tools being required either for placing or removing, the wing nut and bracket are unscrewed and after the form is taken down the cone is pulled by means of a cone puller furnished with the clamp sets. It is said that the whole operation is more rapid than any other method and that the cost of the ½-inch spreader rods is less than that of equivalent wire. One rod is equal to 10 No. 12 wires in strength.

The cones are of malleable iron, very light in weight, and they act merely as a housing so, not having any threaded or rough surface, are easily and quickly removed, and will not break. Because of the shape of the cone a small permanent patch is possible with a good bond for



Using Form Clamps Which Eliminate All Wires and Permit Perfect Alignment of Forms by a Most Simple Means.

the patch. These clamps can be used equally well for vertical or battered work.

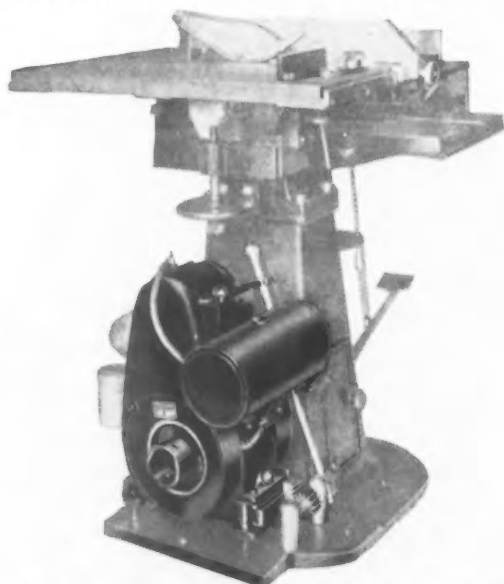


### Gasoline Driven Woodworker

ONE serious objection raised against portable combination machines in the past has been that electricity is not always available for the electric motor. The manufacturer of a combination woodworking machine of well-known standing has adapted a small, powerful gasoline engine to his machine, in order to meet this objection.

The new gasoline engine is only slightly heavier than an electric motor and does not in any way impair the portability of the woodworker. Rather it increases the portability since the machine may now be used right on the job even before the building or house has been wired for electricity. In some cases users have both the engine and motor for this woodworker. The mounting is so designed that the engine may be changed quickly for the motor, or vice versa.

The gasoline engine is of the newest and most efficient type. It is the result of three years of experimentation and tests and is especially adapted to the conditions met in woodworking. It is guaranteed to develop ample horsepower for the machine and, since it is high speed, it can be connected direct without intermediate gears or belts, the same as an electric motor. It is air-cooled, starts without battery and generates its own spark. This engine may be used indoors by attaching a piece of tube to carry off the exhaust.



A Well-Known Woodworker Which Is Now Equipped with a Gasoline Engine and May Be Used Even Where no Electricity Is Available.

*And now—*

## TAPESTRY *Sani Onyx*

### *Six Standard Colors*

SANI ONYX, in tile pattern sheets and plain slabs, is now available in six standard colors—Ivory, White, Blue, Gray, Green and Black. Also, it may be had, to order, in any special color or combination of colors.

SANI ONYX is supplied in six surface textures—Flame Glaze, Semi Matte, Matte, Tapestry, Polychrome and Embossed. Special designs, including any desired trademark, emblem or symbol, may be cut in SANI ONYX slabs to your order.



**I**T is possible, in this picture, to give only a hint of the decorative possibilities of SANI ONYX. New and colorful designs in Tapestry, in Polychrome and in Embossed SANI ONYX open a world of inspiring decorative possibilities.

SANI ONYX, you know, is not a makeshift material. It has come to *supplant*,

not to substitute. SANI ONYX possesses all of the good qualities of marble, tile or plaster, with distinct and exclusive advantages of its own. It will not crack, check, or discolor. May be readily cleaned with a damp cloth, and will outlast the building itself. Adds a distinctive touch to the finest home or public building.



## MARIETTA MANUFACTURING CO.

Office and Works—91 BROOKSIDE, INDIANAPOLIS, INDIANA

Canadian Factory—Sani Products Co., Ltd., 155 Richmond Street, West, Toronto

*Distributors in principal cities throughout the United States and Canada*

Architects and builders are urged to make liberal use of our Advisory Service. We will gladly send samples of SANI ONYX and make up blue prints to your specifications.

**SANI ONYX**  
**A VITREOUS MARBLE**  
A PRODUCT OF THE MARIETTA MANUFACTURING COMPANY

Register your name with our Sales Promotion Department for a copy of the beautiful new book, illustrating actual SANI ONYX installations in full color. Write us at once.

### Inexpensive Copper Roofs

**C**OPPER has long been recognized as a superior roofing material, in part because it is easily workable, but most of all for the fact that it is practically indestructible and copper roofs require few if any repairs after even centuries of use. Copper roofing, however, is expensive and for years scientists have attempted to solve the problem of integrally combining copper with asphalt, another material possessing superior qualities for roofing.

This has finally been accomplished and a strip shingle has been developed, patented and put into commercial production, which is an asphalt shingle coated on the surface, edges and along the edges on the under surface, with pure copper. This is done by means of an electrolytic process. The shingle consists of an asphalt back coating, a layer of asphalt impregnated felt, a second asphalt coating, a



Applying Copper Coated Composition Shingles Which Bring a Copper Roofing Within the Means of the Average Home Builder.

mineral surface and over all the pure copper. The copper is locked into the crevices of the mineral surface.

The resulting shingle is semi-rigid and can be applied easily to any type of roof, forming to curves and lying flat at all points. It is applied with large headed copper nails in much the same way as asphalt strip shingles. It is furnished either in the natural copper color or with an artificial green copper finish. The former, when exposed on a roof, changes from the natural copper red to russet brown, and then to the natural green of weathered copper. This color is the result of the formation of copper carbonate, the only chemical action which takes place, and it will remain permanently protecting the copper against all conditions. With the artificial green color the same action will also take place without the intermediate stages.



### Better Incinerators

**T**HE outstanding feature of an incinerator, adapted to garbage and refuse disposal in homes, apartments, hotels, schools, hospitals and institutions where chimney feed is practical, is a step grate which greatly improves combustion. This grate is similar to stairs without risers and eliminates by-pass grates and drying arches. The draft is introduced through the fuel bed and a high temperature is provided, which makes possible the burning of a greater amount of refuse and garbage per square foot of grate area.

Because of the high combustion temperature it is possible to employ a smaller incinerator and thereby effect an economy of installation. Also because of this high temperature there is a complete combustion of gases, with result-

ant absence of odors, it is said. In fact, this incinerator is guaranteed to be odorless.

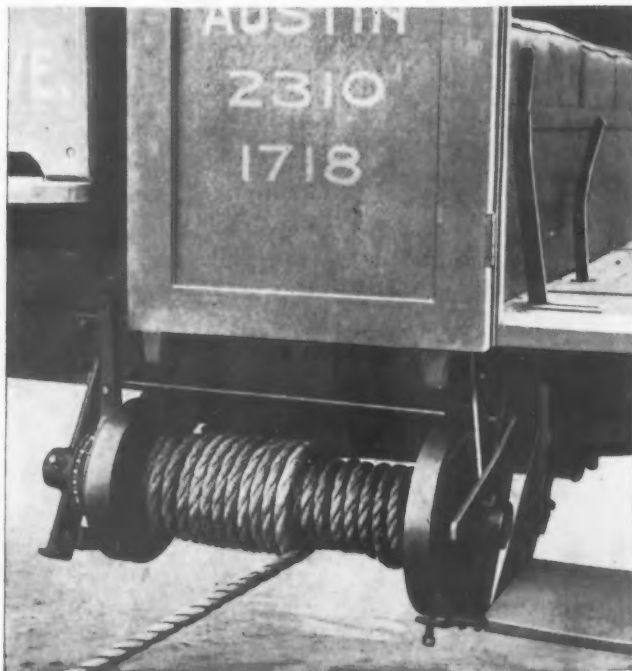
The same chimney is used for smoke outlet and for depositing the refuse. An opening for depositing refuse is provided on each floor and there is no limit to the number of floors from which this can be used. The waste matter acts as its own fuel and burns entirely from the bottom to a fine ash. Bottles and cans are not destroyed but are thoroughly sterilized before removal with the ash. Occasionally, when the incinerator is required to burn waste having little or no fuel value, it is desirable to use gas for fuel and a gas burner can be procured at a small cost.

Because of the step grate, this incinerator has no dumping or rocking grates. This eliminates the sticking of grates in an unworkable position. There are no moving parts to get out of order.



### Truck Mounted Power Hoist

**W**HEREVER quick, efficient hoisting is demanded, a power winch, designed for mounting on a truck and operated by a power take-off, will be appreciated. It is particularly adapted to meet the requirements of the general contractor, roofer, plumber and steamfitter and obviates the necessity of expensive and laborious hand hoisting.



This Power Hoist, Mounted on a Truck, Is Designed for Use Where Quick Efficient Hoisting Is Required.

cutting the ordinary time by 50 to 75 per cent, it is claimed. It may be applied to almost any type of motor truck.

The operation is smooth and noiseless as it is mounted on large ball bearings and the power is derived through chain and sprockets attached to the transmission.

This winch is easily installed and is easily operated so that anyone can use it effectively. It has a hoisting speed of 200 to 300 feet per minute and the rated pull of 750 pounds may be increased by the use of suitable block and tackle or other mechanical means for increasing power.



The Step-Like Grate of This Incinerator Is a Feature Which Greatly Improves Combustion.



# FRED LYON has used 199 carloads



# of CARNEY

**WHEN** a man uses 199 carloads of one mortar cement, he must have definite, well founded reasons for using it. Mr. Lyon, General Superintendent of McClellan & Junkersfeld, St. Louis, has used Carney for sixteen years. He used it for such outstanding projects as the Field Museum, Chicago; Power Plant and Sub-Station buildings of the Commonwealth Edison Company; Shell Plant of the Symington Corporation, the Cahokia Power Plant, and many others.

"It is with a great deal of satisfaction that I express my approval of the use of Carney Cement for brick and tile mortar."

During the past sixteen years, it was my experience to have used the cement on numerous buildings, such as the Field Museum of Natural History, and a number of other buildings and power stations in Chicago; also on the Cahokia Power Plant here at St. Louis, the Carney Cement was used, and has given satisfaction in every respect."

FRED D. LYON,  
General Superintendent,  
McCLELLAN & JUNKERSFELD,  
St. Louis, Mo.

There are two reasons why builders stay everlastingly with Carney. In the first place, Carney forms a perfect bond. Secondly, Carney saves a whale of a lot of money. You don't need to pay a big crew of mixers for soaking, slaking and adding lime to Carney. Carney comes ready to use—just add four parts sand and water. Besides, the masons do faster work with Carney Mortar. Tamping and tempering on the boards are not necessary. All the mason's time is spent doing the thing you are paying him to do—laying bricks.

Make up your mind to cut your mortar and masonry costs—use Carney.

## THE CARNEY COMPANY

District Sales Offices: Cleveland, Chicago,  
Detroit, St. Louis and Minneapolis.

### Specifications:

1 part CARNEY  
to 4 parts sand.

*Cement Makers* **CARNEY** *Since 1883*



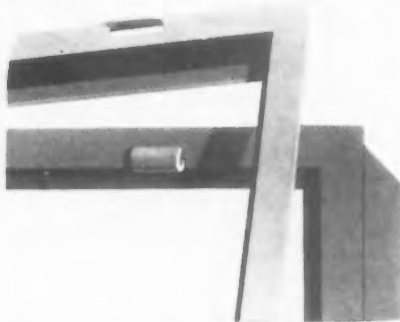
# CARNEY

*for Brick and Tile Mortar*

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

### Improved Steel Windows

**P**INLESS hinges, permitting instant removal of the sash, are the latest improvement in a well known steel basement window. This hinge is quite simple in construction



and operation as can be seen from the illustration. It can be unhinged from the inside only, after the window has been unlocked and opened, as shown in the picture.

In the same window the ne-



**Instant Removal of Steel Basement Sash Is Possible with Sash Having This Painless Type of Hinge. The upper view shows the simple construction of the hinge.**

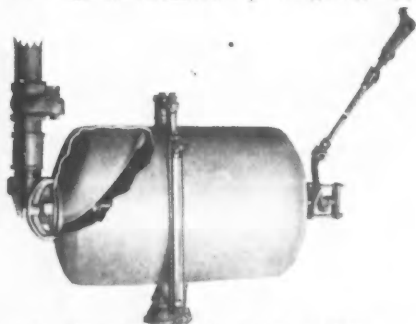
cessity for glazing clips was eliminated some time ago by so designing the window that the glass rests on the mutins when the sash is open, taking all strain off the putty. The glass stays firmly in place without the clips and dispensing with them effects a saving in time for the builder which is a decided economy.

This latest improvement effects a still further saving for the builder who does his own glazing sending the sash out for installation after the job has been closed in.



### Measuring Tank for Mixer

**M**EASUREMENT of water with an accuracy as great as is obtained by weighing apparatus is claimed by



**A Pressure Tank Said to Give as Accurate Measurement as Can Be Obtained by Weighing.**

the manufacturers for a new pressure water system designed to be used with their pavers. In addition, they say that the water is gotten into the drum in about 10 seconds with practically no dribble.

This water system consists of a 42-gallon, drum type tank from

which the quantity of water delivered is controlled by a syphon at one end. This syphon can be rotated about the axis of the tank. When the mouth of the syphon is uncovered and the air breaks the syphonic action, the shape of the syphon is such that all the water above its mouth is discharged and the flow stops immediately. The quantity is, therefore, dependent upon the level of the syphon mouth, which level can be varied by rotating the syphon. This rotating is effected by a rod carried through the end of the tank, opposite the outlet, and connected with the screw handle apparatus shown in the illustration.

Both shop and field tests covering several months have been made on this system demonstrating its accuracy under varying circumstances. The elimination of the dribble by means of the improved syphon is responsible for its accuracy according to the company's chief engineer who conducted the tests.

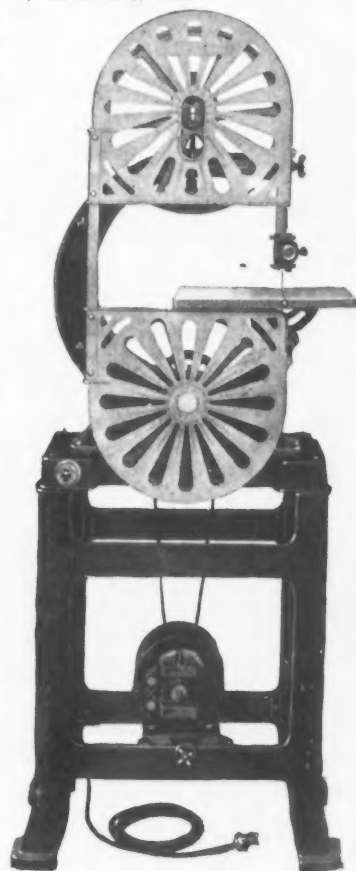


### Portable Floor Type Band Saw

**T**HE illustration shows a new floor type, portable, electric band saw which is being added to a well-known line of saws. This band saw has previously been manufactured in the portable bench type and this addition to the line makes the same saw available in either type. It has 14-inch diameter wheels, carefully balanced, and is fitted with the latest type of ball bearing saw guide. The heavy cast iron table is 12 by 14 inches, surfaced smooth and level and tilts to any angle up to 45 degrees.

The motor is located on a slide, inside of the base, and is controlled by a switch conveniently placed on the front of the machine. It is connected to the machine with a high grade leather belt which gives a flexibility to the drive that insures smooth running and protects the motor from injurious shocks. Provision is made to keep the belt to the proper tension.

The new machine base is rigidly constructed from cast iron and structural steel and is light enough in weight that the machine is easily portable, the table is correct height from the floor for efficient operation. This new saw is suitable for use in pattern rooms, carpenter shops, manual training schools and for production work in factories. It is simple in construction and will render service for years. It will saw material up to 6 inches in thickness and is extremely accurate and free from vibration.



**This Well-Known Band Saw Is Now Being Made in the Floor Type Machine as Well as the Bench Type Formerly Available.**



**"M**ANY of the new houses shown in current architectural magazines are almost exact replicas of the buildings of 200 years ago. The designers of the old Colonial buildings invariably followed the dictates of good design and common sense."

# Why Pay Six Men For One Man's Job

Every contractor without an American Universal Floor Surfacing Machine is increasing his payroll by six men every day he pays for scraping floors by hand. Think what it means to your payroll over a period of a year, and what it would mean in profits over the same year, if you owned an American Universal Floor Surfacing Machine.

Every man with an electrically driven

## American Universal FLOOR SURFACING MACHINE

can earn from \$25 to \$50 a day, year in and year out, as it does the work of six men and earns six men's pay.

### Work Easy to Get

Not only new buildings but old buildings must have their floors resurfaced to be put in shape. The beautiful, smooth, uniform work which the American Universal Floor Surfacing Machine turns out cannot be equaled by hand scraping or any other method of floor surfacing.

### Keeps the Money Rolling in the Year Round

The progressive contractor and builder cannot only add \$5000 or more a year to his profits, but can also keep some of his best men busy during the dull months making big money for him.

Write today and let us furnish you with full information without any obligation on your part.

### The American Floor Surfacing Machine Co.

Originators of Floor Sanding Machines

515 So. St. Clair St., Toledo, Ohio

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The American Floor Surfacing  
Machine Co.,  
515 So. St. Clair St., Toledo, Ohio

Please send me, without obligation  
on my part, full information about  
the "American Universal" Floor Sur-  
facing Machine.

- ☐ I am a building contractor.  
☐ I am interested in becoming a  
floor surfacing contractor.

Name.....

Street.....

City.....

State.....

## ONE MAN ON HIS FEET IS WORTH SIX ON THEIR KNEES

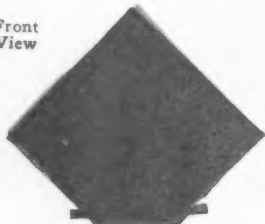




Use the coupon!  
Follow the red  
line to the lower  
right corner

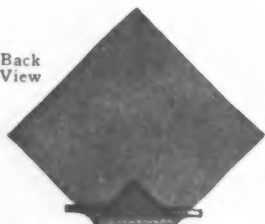


Front  
View

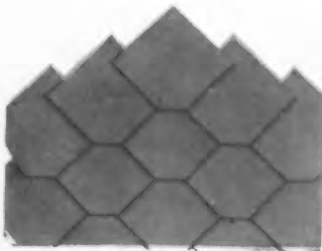


Invisible on the completed roof, the patented "key" device is rendering a service on the back of every Genasco Latite Shingle—locks each shingle securely to those underneath—makes Genasco Latite particularly adapted for laying over old wood shingles.

Back  
View

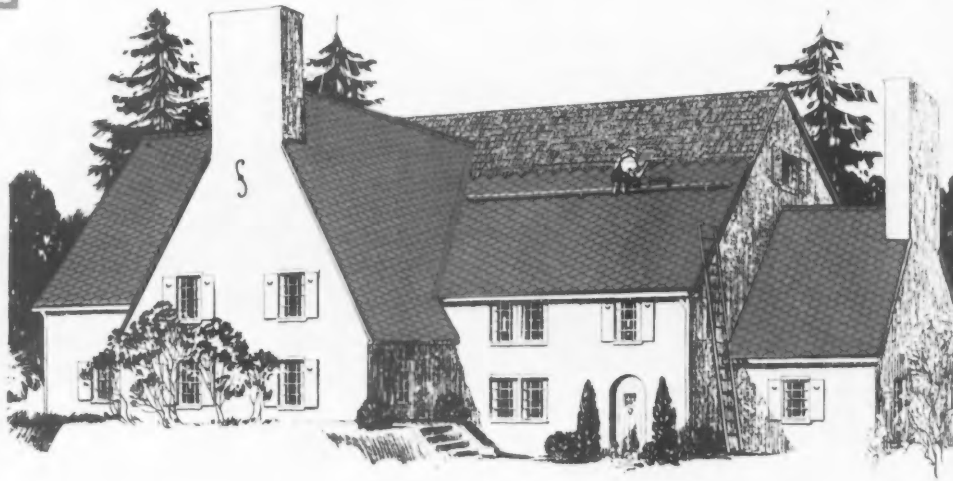


Glance at the back view of a Genasco Latite Shingle and you will understand how the "key" locks. The turned-under corner serves another purpose, too—makes a double-thick butt, giving the completed roof a texture which is a distinct improvement over the usual flat, monotonous roof.



Note the attractive appearance of the finished roof. No evidence of the metal "key" which locks each shingle tightly to those underneath. Note also the "shadow line" as the architects call it, caused by the double-thick butts—it adds a touch of beauty to the roof.

# Genasco



## Follow the red line! It leads to more profits for YOU!

Use the coupon and find out all about it! A real opportunity for every builder and contractor—for YOU! Additional business—for YOU! Increased profits—for YOU! The plan is all mapped out so that you can readily follow it—and all tried out so that you can profit by it.

Applying Genasco Latite Shingles is business you can handle in addition to your present business. There's enough of it to start a roofing department—every new building needs a roof, and old buildings need re-shingling. And you can keep it going all year—no interruption in winter, because Genasco Latite can be laid right over old shingles.

We help along the selling by our series of two-page color advertisements in the Saturday Evening Post—every advertisement reaching over ten million readers. You can depend upon Genasco Latite Shingles to give the utmost satisfaction for they are both weather-proof and fire-resistant, and the granulated

slate surface—red, green, or blue-black—is most attractive.

Genasco Latite Shingles are made of high-quality long-fibred rag felt, saturated and then coated on both sides with Trinidad Lake Asphalt Cement. The undercoating is the famous "Sealbac" feature—exclusive with Genasco. It protects the body of the shingle from the attacks of condensation and tends to make the shingles adhere closer to each other.

Now—knowing these things, don't you want full information? Follow the red line to the coupon—fill it in—cut it out—and mail it today!

The  
Barber Asphalt  
Company  
Philadelphia  
New York Chicago  
Pittsburgh  
St. Louis Kansas City  
San Francisco

# Genasco

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## Latite Shingles



Reg. U. S. Pat. Off.

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## Treasure dug from a lake!

A treasure provided by nature—Trinidad Lake Asphalt. Always uniform in composition and quality. Dug from the surface of Trinidad Asphalt Lake with mattocks. Used for a half-century as a street-paving material. Possessing waterproofing qualities unequaled by manufactured compounds, Trinidad Lake Asphalt has given supremacy to the complete line of Genasco Roll Roofings and Shingles.

Here are some additional Genasco Products. Full information gladly sent on request.

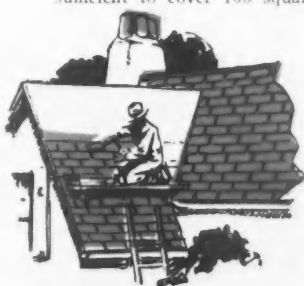
Genasco Asphalt Putty  
(Roofing Cement)  
Genasco Red Sheathing Paper

Genasco Deadening Felt  
Genasco Insulating Paper  
Genasco Wall Lining



### Genasco Stucco Base

High-grade felt thoroughly saturated and coated with asphalt in which granules of calcite are imbedded to act as a "key" or "anchor." A superior but economical base for Portland Cement and Magnesite Stucco—requires a minimum of stucco, and saves time and labor in applying. Wind-proof, water-proof, rust-proof, vermin-proof. Furnished in rolls 36 inches wide, sufficient to cover 100 square feet.



### Genasco Sealbac Shingles

A shingle of the straight conventional type, but the same high quality which distinguishes Genasco Latite Shingles—including the famous Genasco "Sealbac" feature, which protects the body of the shingle from the attacks of condensation and assists in the closer adhesion of the shingles to each other. Genasco Sealbac Individual Shingles furnished in three colors—red, green, and blue-black. Genasco Sealbac Strip Shingles in red, green, blue-black and multicolor.



### Genasco Roof Coatings

Just what smooth-surface roll roofings need every two years. A preservative that helps maintain their waterproofing qualities and insures maximum life.

Genasco Roof Coating is a heavy black liquid asphalt—dries to a tough elastic coating. Shipped ready for use—1 and 5 gallon pails, and 50 gallon drums.

Genasco Asphalt Fibre Coating contains asbestos fibre, and permits a much heavier application, without danger of flowing in hot weather. Furnished in 1 and 5 gallon pails, 30 and 50 gallon drums.

# Genasco

Reg. U. S. Pat. Off.

## Protective Products

The Barber Asphalt Company, Philadelphia

Please send me full information regarding the products I have checked:

Genasco Latite Shingles..... ☐ Genasco Stucco Base..... ☐  
Genasco Roll Roofing..... ☐ Genasco Roof Coatings..... ☐  
Genasco Sealbac Shingles.... ☐

Name .....

Address .....

A .....

### Permanent Roofs

THE initial cost of the best materials is always more than that of inferior ones, but it is well to remember, when selecting materials for the home, the annoyance, the unsettled state of the household and the additional expense which always accompany repairs and replacement. In the long run you will actually save money by selecting materials which are permanent and will not require either repair or replacement. This is particularly true of those parts of the house which are exposed to the elements.



The First Congregational Church, of Fulton, N. Y., Is Roofed with a Permanent Roof of the Zinc Described Here.

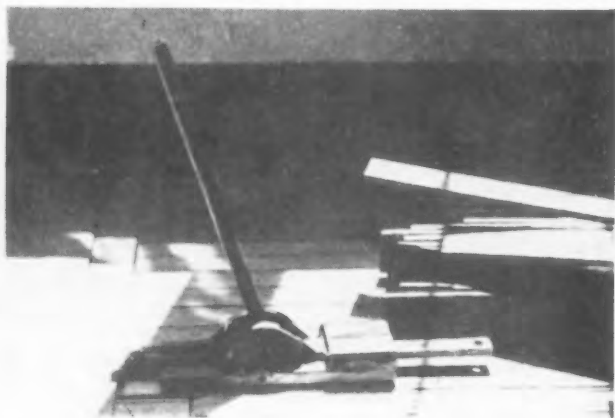
Under this head come the roof, leaders, gutters, valleys and flashings. These should be of material which will withstand constant exposure and will not be destroyed by rust. Such materials will play their part in reducing the present \$625,000,000 year loss from rust and will at the same time give permanent satisfaction and freedom from worry.

A prominent manufacturer of zinc products points out that at the foot of the price scale among the rust-resisting materials is galvanized iron and at the top is copper, while half way between is good quality zinc. The life of galvanized iron is limited, while both zinc and copper are permanent, and since zinc is far less expensive it is a permanent material that is practical for the great majority of home builders.



### A Simple Flooring Jack

A FLOORING jack, which it is claimed can lay eight pieces of flooring at one time, does not abuse the rabbeting, split boards or leave cracks, has been invented recently and is now being put on the market.



This Simple Jack Is an Efficient Tool Which Will Lay Eight Pieces of Flooring at One Time Without Damage.

As may be noted in the illustration, this jack is of very simple construction, consisting of a lever on the end of which is a cog wheel that engages a toothed slide, as in a lifting jack. The slide moves in a frame, the underside having four teeth to engage the bottom floor boards and hold it steady. The slide may be made to move in either direction and exert a pull or a push by the addition of an underframe and a hook to be fastened in the hole seen in the end of the slide. The tool is suitable for other uses and is a handy and light machine.—CHARLES OLUF OLSEN.

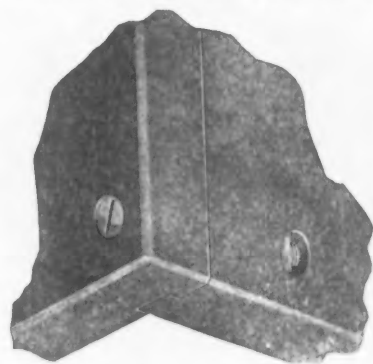


### Fixtures of Unique Stone

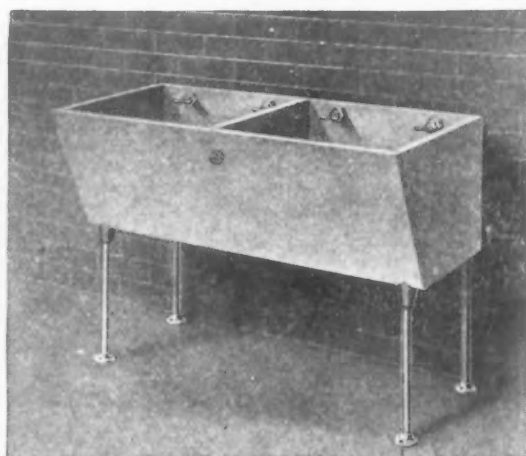
NEARLY fifty years ago a deposit of stone, possessing peculiar qualities, was discovered in Virginia. Because of its qualities it was particularly well adapted to many uses and in the following years the company which obtained the control of the property has developed these uses and produced a supply of material which they state will be available for its special purposes for several hundred years to come.

The qualities found in this stone and not duplicated entirely in any other are: workability, close grain, non-absorbance, strength and resistance to acids and alkalis. In spite of the fact that this stone is so soft that it can be easily shaped and fabricated it is also extremely close grained and has a crushing strength equal to that of granite. These qualities, together with the fact that it does not absorb water and is entirely resistant to acids and alkalis, make it especially well adapted to such uses as toilet and bath fixtures, laboratory equipment and laundry fixtures.

When fabricated for these purposes it is jointed in such a manner that the joints are absolutely tight and a smooth surface is produced in which the joint is practically invisible. The illustrations show a typical laundry tub of this material and also the tongue and groove joint which is used in its construction. With this interlocking joint securely bolted, the finished article is practically as durable as if carved from solid rock.

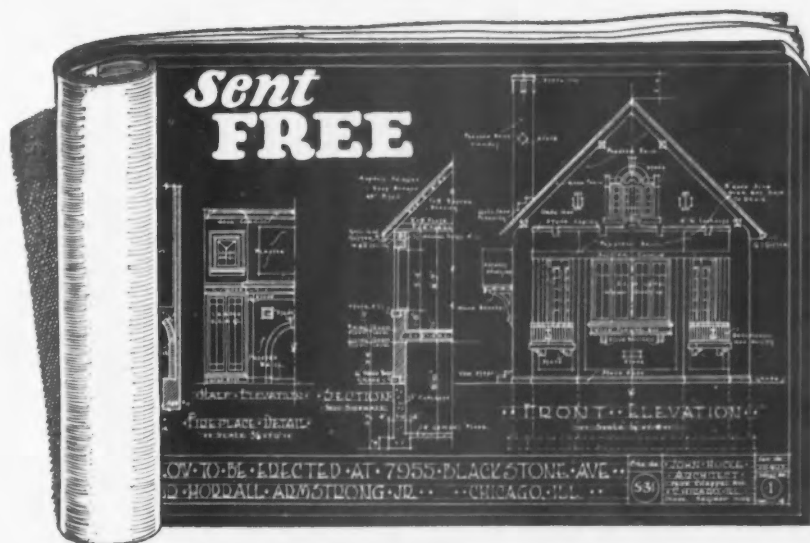


The Tongue and Groove Joint Used in Fabricating Fixtures of This Unique Stone.



Wash Tubs of This Stone Are Smooth in Surface and Entirely Impervious to Water, Acid and Alkal'.





## Mail the coupon for Blue Print Plans and 24-page Book:

### "How to Read Blue Prints"



Blue Prints are interesting to every man in the building trades. And more! They are the key to every builder's success. For until you can read and understand blue prints you will probably have to be satisfied with only a scale wage. The man who can read blue prints can become foreman, superintendent, or have a business of his own. To help every man who really wants to make money and get ahead in building, Chicago Technical School for Builders offers absolutely *free* these Blue Print Plans and a 24-page book "How to Read Blue Prints."

#### You Can Become a Building Expert

**Plan Reading.** Every man who has got very far ahead in any building trade can read blue prints. No man can expect to be a first rate foreman or superintendent until he knows what every line on a plan means and how to lay out and direct work from the architect's plans. By the Chicago Tech. Method you quickly learn to read any plan as easily as you read these words.

**Estimating.** Of course a man who wants to be a contractor or to hold a big job in a contracting organization must know how to figure costs of labor, material, and everything else that goes into any kind of building. The Chicago Tech. Course covers every detail of this important branch—shows you just how it is done from actual blue print plans.

**Superintending.** How to hire and direct men, how to keep track of every detail of construction as it goes on, how to get the work done in the least time at the lowest cost is also fully covered in the Chicago Tech. Builders' Course.

Also special courses in Architectural Drafting for builders, taught by practical men. These explained in Special Catalog "D" sent on request.

#### What this book is

This book is written by an expert... a practical builder who knows the game from top to bottom. It tells how different materials are shown on blue prints, how "sections" and "elevations" are shown on plans, how to lay out a building from a plan, how to take off quantities... and all the other interesting and important facts regarding blue prints. The book is as easy to read as your newspaper... written in plain, everyday English that everyone can understand. "How to Read Blue Prints" will be mighty helpful to you. Aside from the real help it gives you it will show you how clear and plain and easy the Chicago Technical Builders Course is... how quickly you can learn in your spare time... at home... to become a building expert.

#### If You Live in or Near Chicago

Visit our School for Builders, open day or evening. 500 carpenters and builders attend each year. You can get the same training *at home*, by mail. Same plans; same lessons; same instructors. The Coupon brings all facts *Free*.

#### Learn at Home to make more money

For 23 years the Chicago Tech. School for Builders has been training men to advance and make more money in building. Hundreds of successful men, superintendents and contractors, owe their success to their Chicago Tech. training. We train you by mail... in your spare time... at home.

#### Send the Coupon... Now

With the free Blue Print Plans and our book "How to Read Blue Prints" we will send you another book... also sent absolutely *free*. It tells all about the Chicago Tech. Builders course... directed by practical building experts... tells what others say this course has done for them... shows pictures and gives all the facts about our method of training men... quickly... for the jobs that pay most money. This may be your golden opportunity. It costs you nothing to find out all about it. So send the coupon in *now*... for the *free* plans and books.

#### Mail the Coupon—NOW

##### CHICAGO TECHNICAL SCHOOL FOR BUILDERS

Dept. 936, Chicago Tech. Bldg.,  
118 East 26th St., Chicago, Ill.

Please send me without obligation your Free Books and Blue Prints for men in the Building Trades. Send postpaid to my address below. It is understood that no salesman will call on me.

[Write or print name plainly]

Name.....

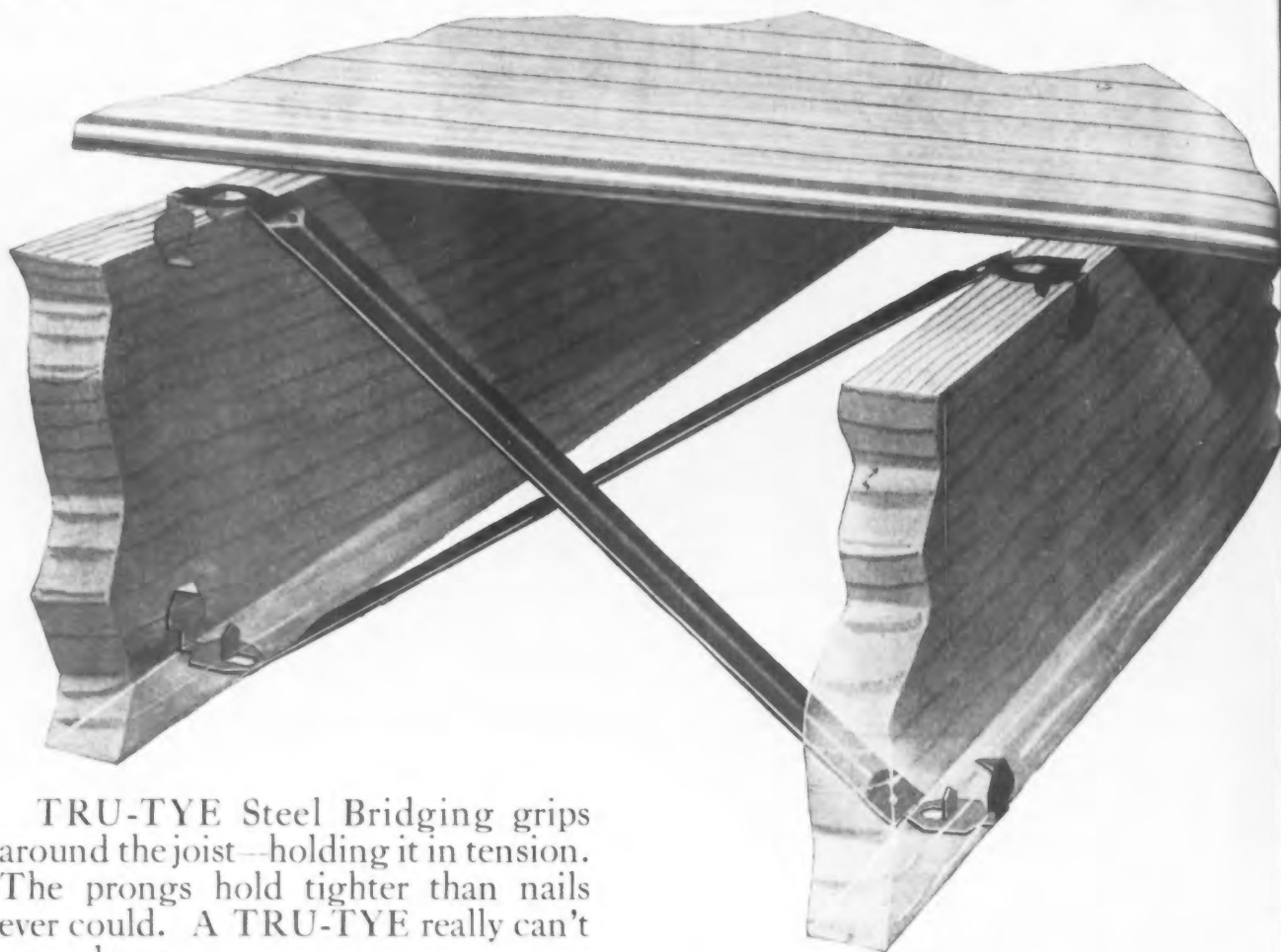
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### CHICAGO TECHNICAL SCHOOL FOR BUILDERS

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# TRU-TYE



TRU-TYE Steel Bridging grips around the joist—holding it in tension. The prongs hold tighter than nails ever could. A TRU-TYE really can't come loose.

Installation is a matter of seconds—ten times faster than wooden bridging. A carpenter can install a TRU-TYE while he is reaching for nails for wood bridging.

A few sharp blows with a hammer and TRU-TYE holds with a bulldog grip.

Users of TRU-TYE Steel Bridging are enthusiastic. Economy and speed of installation are indicated in many letters received from contractors.

Grimm Brothers, Canonsburg, Pa., say:

"A great saving of labor in installation and a neater and stronger job."

*Samples of Blaw-Knox TRU-TYE Steel Bridging will be sent to contractors, dealers, architects or carpenters, upon request. Inspection and trial of TRU-TYE Bridging will convince you of its merit.*

**BLAW-KNOX COMPANY**  
605 Farmers Bank Bldg. Pittsburgh, Penna.



# BLAW-KNOX

# *Steel Bridging*



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NAILS

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### The Thatched Slate Roof

ONE of the most popular styles of architecture adopted by American home builders is the English, which is conspicuous for its attractive roof lines. In order that it

might be possible to reproduce, faithfully, the slate roofs of the English style, one of the important slate companies has developed a thatched slate roof which is a true English type and which is available at moderate cost.

This company states that this new roof is not only an exact replica, in color and application, of the typical slate roof of England, but that it offers

**This Thatched Slate Roof Is Now Being Produced in a Way Which Makes It Available for Moderately Priced Homes.**

a ready made design, in architectural form, at a price within reasonable proportion to the total cost of modest buildings. This is of special interest because of the fact that, in the past, such slate roofs have been confined mainly to the more expensive type of residence.

With this new roof, each slate is trimmed differently and there is an entire lack of uniformity, just as was done four hundred years ago in England. The slates are assorted before shipment, in accordance with standard layouts, as designed by the company's architectural service department. The result is a blend of subdued dignity suggesting mellowed age and giving the effect of a made to order roof.



### More Permanent Paints

EVER since the introduction of lithopone as a paint pigment, its use in general painting has offered interesting possibilities because of its good color, high hiding power, moderate cost and easy working qualities. In the early development of the use of this pigment its inability to hold its color in the presence of moisture and light was a serious drawback, but the research department of a large manufacturing company has experimented until it has produced a super-lithopone which is now being used in the manufacture of paints that are resistant to sunlight and moisture.

Extensive tests over a period of several years have demonstrated that these paints give remarkable satisfaction for exterior painting. Often buildings, after being painted for six to twelve months, show patches of bleached out, pale spots. These are caused by chalking too rapidly.

It is desirable that a paint fail by chalking, but this should be very gradual. These new paints are so blended that they prevent premature chalking and produce an easy working, bright, durable paint with good hiding power and high spreading rate. None of the ingredients form dark colored compounds with sulphur gas, a source of much ruined paint in places where such gas occurs. In spite of its superior qualities, this type of paint is inexpensive. It is supplied ready to spread, as a ready mixed paint, and also

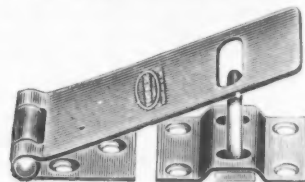
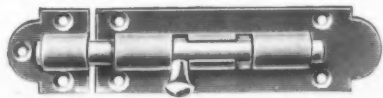
in paste paint form for the master painter, the paste being thinned with linseed oil, turpentine and drier.



### Long Knobbed Bolts

A LEADING manufacturer of stamped metal goods, dies and tools has recently added a full line of barrel bolts, in all sizes and finishes, to its line. This company calls particular attention to the knobs of these bolts which are of special length, making it easy to lock and unlock the bolts.

In addition to the bolts, a line of safety hasps has also been added by this company. The adjustment feature of the staple, which permits the hasp to operate even when the position of the door is changed, due to shrinkage, is noted. The staple is in a vertical position, permitting the hasp to lie flat against the door.



Above: The Long Knobbed Bolt. Below: The New Safety Hasp.

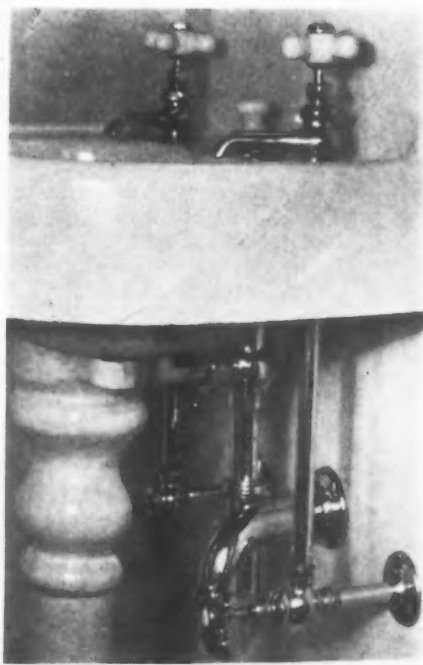


### Chromium Plated Fixtures

PROCESSES for plating with chromium have been developed, perfected and placed on a commercial basis, making chromium plated fixtures available to the builder. The alloy which is used in these processes contains nearly 100 per cent chromium and is available in finishes ranging from a soft, silvery satin to a brilliant, mirror-like surface. It is applied by an electro-plating process.

The quality of absolute immunity from disfigurement by tarnish, verdigris or corrosion is what makes this new type of plating a superior product. The surface completely resists the effects of heat, steam, sulphur and the majority of acids and will never peel, even in salt atmosphere. It is harder than case-hardened steel, will resist wear indefinitely and is scratch-proof. For these reasons it is guaranteed to retain its lustre and color for twenty years without using abrasives or polishing compounds.

The use of chromium plated fixtures assures the home builder of permanent beauty and an absolute freedom from the annoyance and expense of metal polishing and replacement. An occasional wiping with a cloth, to remove grease or other foreign matter, leaves the original surface unaffected. The discoloration of marble, tile or other vitrified materials, at the point of contact, is eliminated by its use. The cost of chromium plated fixtures is generally slightly more than nickel and less than that of white metal or other alloys.



Fixtures of All Kinds. When Chromium Plated, Have a Hard, Non-Tarnishing, Non-Corroding Surface.

**ZINC CANNOT RUST OR STAIN***Use it for Sheet Metal Work and Roofing*

In deciding on sheet metal work you have two choices. You can have frankly temporary work at lower first cost—or you can pay somewhat more at the start for permanent installations which are far less expensive in the long run.

For permanent installations Horse Head Zinc is the logical material. It offers all the advantages of other permanent metals, and its cost is lower.

Horse Head Zinc will last a lifetime without repair, without protective coating, and will not stain the building it protects. The first cost is the last expense.

If you are not familiar with Horse Head Zinc send for the booklet "Once in a Lifetime."

This attractive booklet tells the story of Horse Head Zinc and gives much helpful information on the selection of materials for sheet metal work. Illustrated with photographs of many buildings from all parts of the country. It is free. Use the coupon below.

**The New Jersey Zinc Co.**

160 FRONT STREET • NEW YORK CITY




# zinc

( THE NEW JERSEY ZINC COMPANY - 160 FRONT ST., NEW YORK CITY )

Send me a copy of "Once in a Lifetime"—your new booklet on sheet metal work and roofing.

MR. \_\_\_\_\_

ADDRESS \_\_\_\_\_

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# HOW DAN DOES IT

*A Department for Passing "Life Savers"  
along to other Builders*

## \$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is the editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it.

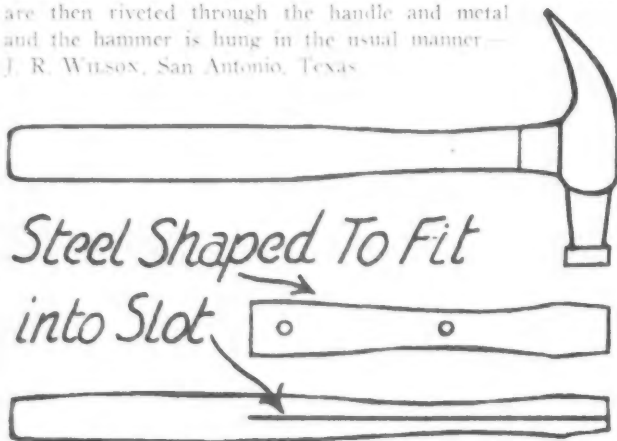
Address Dan-Do-It, care of American Builder 1827 Prairie Avenue, Chicago, Ill.

### Stout Ripping Hammer

THE use to which a ripping hammer is put on rough work is often hard on the handle and it has to be replaced frequently. I have found a way to reinforce the handle and save the bother and time of replacing broken handles, which may be of interest.

The handle is fitted in the usual way. It is then ripped from the top down about half way. A heavy piece of sheet iron—such as a piece of barrel hoop or the blade from an old carving knife—is then inserted in the slot and sized down to the width of the hammer handle. Two T-rivets are then riveted through the handle and metal and the hammer is hung in the usual manner—

J. R. WILSON, San Antonio, Texas



A Sheet of Iron or Steel Inserted in the Handle of a Hammer, as Shown Here, Reinforces It Against the Roughest Usage.



### A Method of Roof Framing

I HAVE been a reader of AMERICAN BUILDER for several years and have followed with interest the various articles on cutting rafters. I would like to submit a method for cutting rafters which I have used for thirty years. I hope that it will prove of interest to other readers.

The advantages of this method are that no complicated mathematics is required and all the rafter cuts and lengths are readily obtained from the drawing. The drawing is constructed as follows:

The run of rafter is laid off with a steel square. The scale is  $\frac{1}{2}$  inch or 1 inch on the square to 1 foot on the rafter. The rise of the rafter is next laid off, perpendicular to the run. The diagonal AC is then drawn and the length of the diagonal measured on the square. This length is then transferred to the line BC. If the run is 12 feet and

the rise is 10 feet, the diagonal will be about 15.6 feet. It will extend 15.6 feet beyond BC and is lettered BD on the diagram. The line AD is then drawn.

From the drawing we may now obtain all the necessary cuts for common rafters and also for hip rafters. The length of the rafter will be proportionate to the length of the line on the diagram and will be designated by the letters at its extremities.

AB is run of rafters.

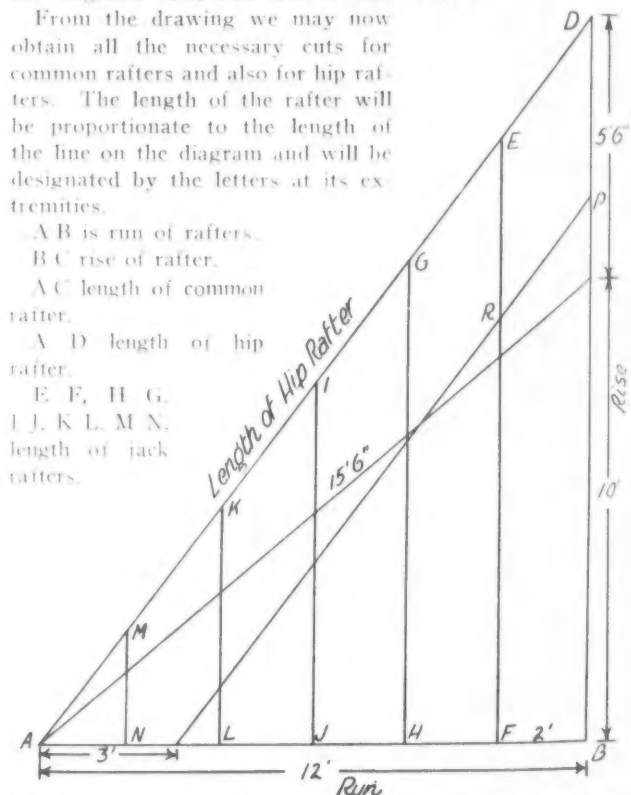
BC rise of rafter.

AC length of common rafter.

AD length of hip rafter.

E F, H G,

I J, K L, M N, length of jack rafters.



Drawing Used for Obtaining Rafter Cuts and Lengths Without Calculations.

ER length of cripple rafter.

It should be noted that the lengths and cuts of the jack rafters and cripple rafters are given by the drawing. To find the above lay off from A, a distance, drawn to scale, equal to the length from the hip rafter to the valley rafter. Draw from this point, O, a line parallel to AD, such as OP. The Line ER will then be the length of the cripple rafter.

The jack rafters are found by marking off the points F, H, J, L, and N. Lines are then drawn to AD parallel to BD, such as FE, HG, etc., which are the lengths and cuts of the jack rafters.

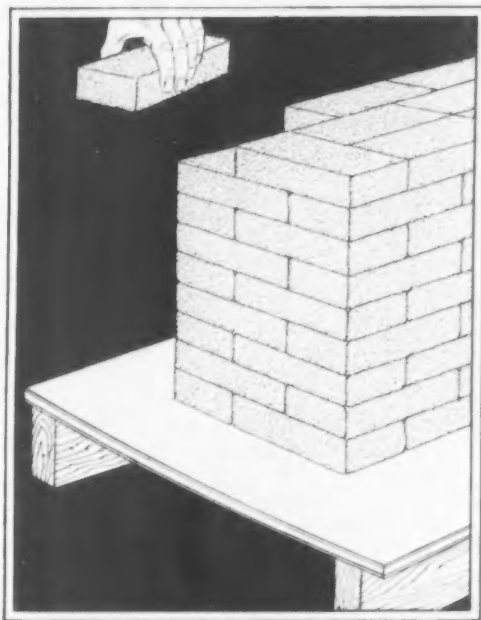
Sufficient accuracy may often be obtained by using the steel square and making the drawing on a smooth board.

—JOSEPH T. FLASH, Capron, Okla.



# TEST IT!

Beaver Bestwall offers important plaster wall board improvements



*For repairs and remodeling*

*For new construction*

## Costs no more than others

This "Strength" Test, made with common bricks, is only one of several practical home tests by which any man can prove to himself the amazing service offered by this improved plaster wall board—Beaver Bestwall.

Let us tell you the rest of the tests or ask your Bestwall dealer about them. Let facts show you why you should use this superior plaster wall board *that costs no more.*

Rubbing on it shows you how hard it is. It does not become "woolly" with use.

It takes wall paper readily—holds it smoothly and tightly. Yet you can remove old paper without damage to the Bestwall surface—another economy.

### *Why accept less?*

Your plaster wall board investment should buy you the most for your money.

Why accept less than Beaver Bestwall gives when Beaver Bestwall costs you no more?

Make sure it is Bestwall that you are getting, however. You can tell it by the cream-colored surface and the famous Beaver trade mark.

Today get samples and the list of home tests either from your local dealer or by writing to us.

THE BEAVER PRODUCTS CO., Inc.  
Dept. 1809 Buffalo, N. Y.



*You can tell the genuine Bestwall by its exclusive cream-colored surface.*

### **Rock plaster core and fibre facing**

One important way in which Bestwall differs from other plaster wall board is in its *tough fibre* surfacing.

This exclusive feature, obtainable only in Bestwall, adds strength and serviceability to it in a practical new way.

Its cream-colored *fibre* facing makes a smooth, hard surface—less absorbent and therefore more economical to decorate.

# BEAVER BESTWALL

**THE SUPERIOR PLASTER WALL BOARD**

530

# TIME-SAVER

**Hundreds of Members of the Building Industry Are Finding the HoltBid Method of Estimating Building Costs is Far Ahead of the Old System**

**By JOSEPH D. EDDY**

**I**N these days of efficiency—when there are so many ways by which a certain object may be attained with a saving of time and labor—it is no wonder that estimators of building costs are adopting a new method by which this difficult and hard task may be accomplished in a comparatively short time.

Thousands of building contractors and material dealers have discovered that the HoltBid method of estimating building costs is simple to learn and simple to use. It is accurate and the cost of a building may be determined in from 50 to 60 minutes.

The HoltBid method is not new. It has been in daily use by some of the more progressive members of the building industry for the last ten years. But it was not until about a year ago when William A. Radford, president of the Radford Publications, became head of the HoltBid Service Company and made this method of estimating building costs available to all members of the building industry. Since that time many hundreds of building material dealers and contractors have become HoltBidders, and are saving themselves many hours of hard work in estimating. They have found that the HoltBid is accurate and that they can depend upon the figures they secure by this method. And what is best, they have found that there are no bills to peddle by the "shoppers," thus eliminating unfair competition.

It required an immense amount of time and study to bring the HoltBid of estimating building costs up to its present state of perfection. The HoltBidders' key, itself, is a set of tables that are simple to understand and to use, and are worth much more to any man who has estimates to figure than the cost of the entire HoltBid course. Quantities are figured to a foot, and the key immediately gives the HoltBidder the exact cost. There are no long series of multiplications, and extensions, thereby eliminating one of the commonest causes of mistakes in figuring estimates.

The success that HoltBid immediately had when it was made available to the building industry is a strong

recommendation for it. Those who have learned it have found that one of the most difficult jobs has been made comparatively easy.

HoltBidders are enthusiastic about this method of arriving at the cost of buildings. They say that it saves them time, that the old, difficult method of figuring bills cannot compare with this modern method. They have proven to their own satisfaction that the HoltBid system is accurate and that the speed with which they can arrive at the cost of a building is valuable as it gives them an advantage over their competitors who are figuring the old way. They are able to give their prospects estimates quickly and after they have secured the figures know they are correct.

"Shoppers" get little satisfaction out of HoltBid, as there are no bills of materials which the prospect can submit to others. This, too, is an advantage because it saves the immense amount of work required to draw off the bills. The HoltBidder knows that when he submits an estimate he has not made a mistake by forgetting some item, or failing to make an extension of his figures.

HoltBid is as easy to secure as it is to learn. It is sent on request with the privilege of examination and study, and the terms are so easy that everyone who has any estimating to do can secure it without inconvenience.

The HoltBid Service Company is an associate of the Radford Publications and has its offices in the Radford Building, 1827 Prairie Avenue, Chicago. Those who are interested in saving time and labor; who want their estimates of building costs accurate; who do not want to go to all the trouble of figuring bills only to have them peddled and then lose the job should communicate with the HoltBid Service Company and learn about this modern method of estimating. Full particulars will be given anyone in the building industry who will write the HoltBid Service Company, 1827 Prairie Avenue, Chicago, Ill.

# Why Garrett & Son changed to Kelly Kats

ESTABLISHED 1811  
**C. S. GARRETT & SON CORP.**  
 20 & 22 SOUTH MARSHALL STREET  
*Building and Roofing Papers*  
*Coal Tar and Asphalt Products*



PHILADELPHIA

April 15th, 1926

Atlantic Tire & Rubber Co.  
 1415 Mt. Vernon St.  
 Phila. Pa.

Attention of  
 Mr. Jos. Browne

Gentlemen:-

In reply to your Mr. Browne's inquiry as to why we changed to Kelly Caterpillar tires for our trucks we would call your attention to our motto, "Roofing Materials delivered WHERE you want them WHEN you want them."

New Building Operations, as you know, are usually off the paved streets. We found Kelly-Kats would not only take the load in to the job through the mud but would also get the truck out again.

We formerly had quite a lot of trouble with our trucks getting stuck in the mud but have not had one stuck since changing to Kellys.

We also use Kelly Air-Core Tires on the fronts as we believe they save in repair bills by relieving the motor from the shocks and jars of a rough road.

We certainly would not hesitate a moment in recommending Kelly Tires to any one giving their trucks the rough usage we do.

Very respectfully yours,

C. S. GARRETT & SON CORP.  
 Treas.

*[Signature]*

THE third paragraph of this letter from C. S. Garrett & Son Corp. to the Kelly-Springfield dealer in Philadelphia, tells a story in itself.

Kelly Kats are noted for their phenomenal traction. They will plough through mud or over crushed rock and gravel without any tire-some, profit-eating, delays.

The truck equipped with Kelly Kats will go wherever the engine has power to push it.

**KELLY-SPRINGFIELD TIRE CO.**  
 250 West 57th St., New York, N. Y.



## KELLY-SPRINGFIELD TIRES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



# NEWS of the FIELD

## Frigidaire Capacity Doubled

A \$20,000,000 expansion program is being carried out by the Delco-Light Company which will double the capacity of its Frigidaire division, at Moraine City, Dayton, Ohio, within the next few months. The plant will be on the new production basis by January 1, 1927, and 5,000 men will be added to the payroll of the company, bringing the number of employees up to approximately 12,000. The production capacity will be 600,000 electric refrigeration units a year, more than twice the present capacity.

This enlargement provides for the estimated needs for 1927 and is said to be only the beginning of the \$100,000,000 expansion program which the General Motors Corporation is prepared to put through if necessary to meet the demand for household and commercial electric refrigeration. Of the \$20,000,000 being spent, \$5,000,000 will be put into additional buildings which will add about 36 acres to the plant, the total up to 68 acres, \$7,000,000 worth of machinery will be installed and \$8,000,000 will go into raw material.



## Gypsum and Lime Companies Merge

THE Universal Gypsum Company of Chicago and the Palmer Lime and Cement Company of New York have recently concluded their negotiations looking to the merger of the two companies into one corporation, the Universal Gypsum & Lime Company. This merger, bringing together two important building material producers into one institution, will insure distinct economies in operating as both gypsum and lime products will be distributed to the consumer through practically the same channels, although they have different uses in building construction.

The consummation of this deal brings to Universal Gypsum & Lime Company men of high standing in the financial and commercial world, as members of the board of directors, and also men of unquestioned ability in operating the company.

The addition to the present board of directors will be: J. N. Babcock, vice-president, Equitable Trust Bank of New York; Carleton Palmer, president, The Squibbs Chemical Company, New York; Lowell M. Palmer, Jr., president, Palmer Lime & Cement Company, New York; C. G. King, general manager, Palmer Lime & Cement Company, York, Pa.

It is reported that the company is doing excellent business at all of its plants as well as in all of its products and the prospects for continued satisfactory business are excellent.



THE New York office of the Bridgeport Brass Co. has been moved from the Pershing Square Building to the Farmers Loan and Trust Building, 475 Fifth Avenue.

## Majestic Guarantees Even the Glass in Improved Coal Window

FOR more than two years the Majestic Company of Huntington, Ind., has guaranteed the metal parts of all Majestic coal windows against breakage. Now Majestic announces that they will guarantee even the glass in the glass panel style window against breakage. Under this guarantee the Majestic Company agrees to replace any glass broken in shipment, installation or use.

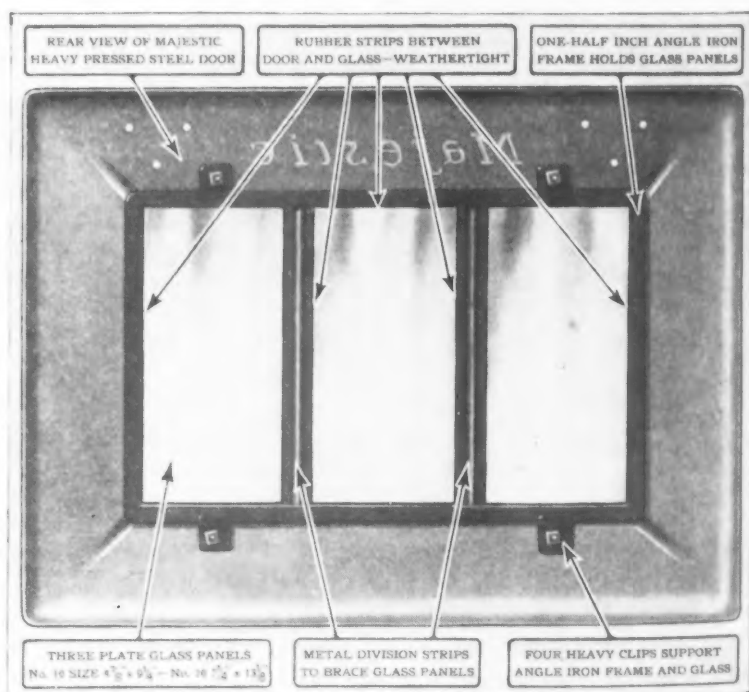
This announcement follows a change in the construction of the window whereby three genuine plate glass panels are used instead of wire glass. A half-inch angle iron frame with two pressed steel dividing strips is now provided for the glass. The use of putty, which has a tendency to soften in hot weather, has been eliminated. Instead a special rubber packing is now being used between the glass and the door of the chute. This gives a far better appearing job and remains weather proof and water tight indefinitely.

A test of this improved coal window shows the plate glass panels to have six times the strength of the glass formerly used. In a typical test of the new feature a Majestic was dropped six feet without injury to the glass. The window was slammed shut with all possible force and tossed about in an exaggerated imitation of freight handling tactics, and the glass came through the rough treatment without damage.

The glass panel coal window has been gaining in popularity due to its appearance and special advantages for dark basements. The improvements in the new Majestic Glass Panel Style chute should quickly do away with any fears of breakage which have frequently been advanced by builders.

Another improvement in the Majestic coal window is the use of a

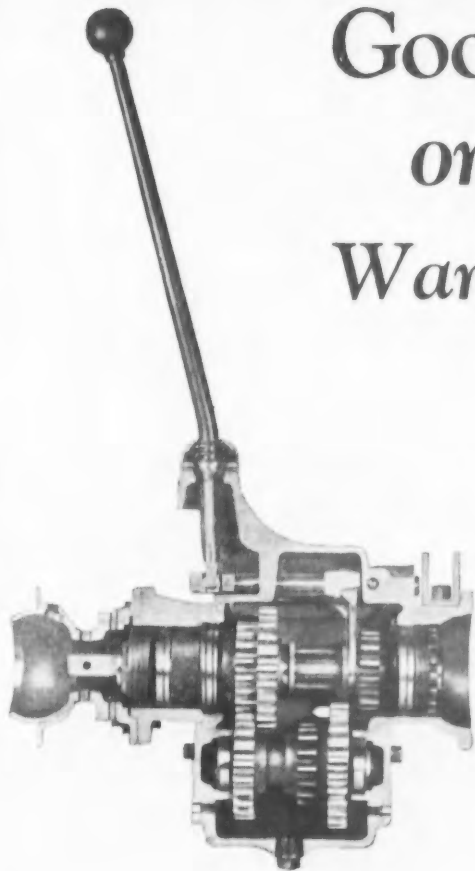
*(Continued to page 252)*



A Rear View of the Majestic Coal Window Which Is Guaranteed Even Against the Breakage of the Glass, Showing Its Construction. The small view above shows the outside appearance.

# Good Roads—Bad Roads or No Roads At All!

## Warford Doubles Truck Profits



The peculiar advantage of the Warford Auxiliary Transmission over Ford Truck devices in general is that it is equally valuable under all conditions.

Each year in America hundreds of miles of new highway are paved. There are good roads from coast to coast, and from border to border. But in the vast meshes of this concrete network are countless miles of bad roads, sand, mud and short steep grades.

The truck must travel over both kinds of highway—profitably.

Because the Super Warford Transmission has six speeds, the Warford equipped Ford truck travels over pavement at passenger car speed with normal engine speed, and worms its way like a wartime tank through the heaviest going that ever a horse could get through.

When you consider that Warford provides this sort of performance with a *double load*, that it hauls two tons instead of one *anywhere* in less time, there can be no reason for considering further which truck to buy.

If you will ask the Ford dealer, he will be glad to show you what Warford does and how it does it. Warford also gives the Ford Truck power take-off facilities.

### Ask the Ford Dealer or the Distributor nearest you about Warford equipment

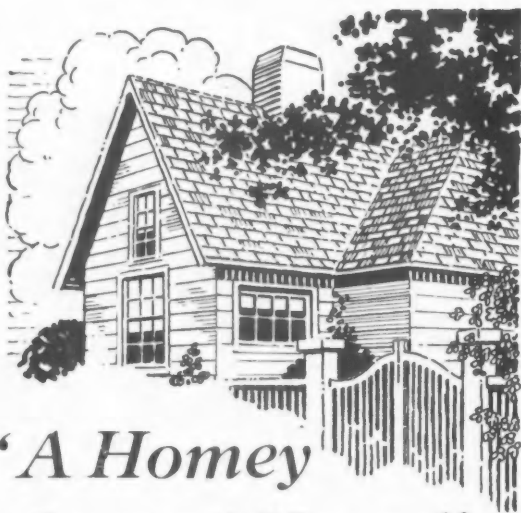
Albany, N. Y.	Foster-Warford Co.
Atlanta, Ga.	Atlanta-Houdaille Co.
Auburn, N. Y.	Foster-Warford Co.
Buffalo, N. Y.	Foster-Warford Co.
Canton, Ohio	Dine-DeWees Co.
Charlotte, N. C.	Hall-Warford Co.
Chicago, Ill.	Sieg-Warford Co.
Columbia, S. C.	Warford-Sales Co. of S. C.
Dallas, Texas	Houdaille-Polk Co.
Davenport, Iowa	The Sieg Company
Denver, Colo.	Motor Specialties Co.
Detroit, Mich.	Transmission Sales Co.
Haverhill, Mass.	Massachusetts Warford Co.
Idaho Falls, Idaho	Auto Parts Company
Indianapolis, Ind.	Kenney Equipment Co.
Kansas City, Mo.	Warford-Western Co.
Lewiston, Me.	Maine-Warford Co.
Los Angeles, Cal.	Hammel-Gerke Co.
Mansfield, La.	W. C. Nabors
Memphis, Tenn.	Wayne Spinks Co.
Morrisville, Vt.	McMahon Bros.
Philadelphia, Pa.	Warford-Eastern Co.
Pittsburgh, Pa.	Warford-Pittsburgh Co.
Portland, Ore.	Woodward Sales Co.
Richmond, Va.	Baker Equipment Eng. Co.
Rockford, Ill.	Schacht Truck Co.
San Francisco, Cal.	Warford-Pacific Co.
Seattle, Wash.	Warford-Equipment Co.
Spokane, Wash.	George H. Dietrich Co.
St. Paul, Minn.	McGee-White Corp.
Stockbridge, Mich.	Transmission Sales Co.
Tampa, Fla.	Wholesale Auto Supply House
Washington, D. C.	S. J. Meeks' Son
Wichita, Kan.	Warford Distributing Co.
Windsor, Ont.	Warford Corp. of Can. Ltd.
(Home Office)	
Toronto, Ont.	Warford Corp. of Can. Ltd.
Montreal, Quebec	A. C. Lewis
Calgary, Alta.	Maclin Motors Ltd.
Edmonton, Alta.	Universal Motor Co. Ltd.
St. John, N. B.	Dominion Motors Ltd.
Vancouver, B. C.	J. H. Irving
Winnipeg, Man.	E. W. Jay
Regina, Sask.	Dominion Motors Ltd.
Moosejaw, Sask.	Canadian Motors Ltd.
	Moosejaw Motors Ltd.

# Warford

## PRODUCTS

The Warford Corporation, 44 Whitehall St., New York City

Neither the Warford Corporation nor its manufacturers has any connection whatsoever with any company manufacturing motor cars.



## "A Homey Sort of Home"

To most Americans there is a peculiar charm about a well-designed house of wood, and this is enhanced where the walls are built of Keystone Red Cedar Siding.

If you use this beautiful, enduring material in homes which you construct, prospective home buyers are sure to be pleased with its appearance and responsive to your assurances as to its quality.

The neat, tight-fitting joints, smooth surface and general air of distinction of this lumber attract favorable attention. Its durability insures lasting satisfaction.

Write today for valuable information about this high grade lumber.

HAMMOND CEDAR CO., Ltd.  
New Westminster, B. C., Canada

*Western*  
**Red Cedar**

is exceptionally easy to work, being soft and light. It will not shrink, swell, warp or buckle and is free from pitch, so that close joints can be made and it takes paint or stain beautifully. It is also noted for its resistance to rot.

**KEYSTONE**  
**RED CEDAR SIDING**

brass pin in the latches of all models. This insures perfect operation of the latch, making it impossible for it to rust or stick. All Majestic Coal windows have heavy, electro-galvanized pressed steel doors, certified malleable iron frame and hinges, and Keystone copper steel bodies. All hinges are flat with double support.



### Bostwick Thirty-Fifth Anniversary

METAL LATH was a little used product when the Bostwick Steel Lath Company, of Niles, Ohio, was founded, June 19, 1891. This company, now many times its original size, has just celebrated its thirty-fifth birthday and William Griswold Hurlbert, Sr., one of the founders, has had executive direction of the company for the entire period.

Mr. Hurlbert, through his close relationship with contractors and architects, has been an active force in developing the use of metal lath and his selling ability has played a large part in the success of the Bostwick company and the metal lath industry. He is highly respected and liked, not only by his associates and employees, but also by many others with whom he has



William Griswold Hurlbert, Sr., for Thirty-five Years Executive Head of the Bostwick Steel Lath Company.

come in contact in business and other relationships.

Back in 1891 Mr. Hurlbert became interested in W. W. Bostwick, a promoter and owner of the patent rights in the new metal lath. The two men joined in forming the company of which Mr. Hurlbert is president. In 1892 Mr. Bostwick formed a company in London, England, under the same name, and then retired from the American company of which he had been a director. This left full executive direction in the hands of Mr. Hurlbert. For eleven years he was secretary and treasurer and in 1902 was elected to the presidency, which position he has held ever since.



### Frantz Salesmen Meet

THE annual convention of the hardware salesmen of the Frantz Manufacturing Company, of Sterling, Ill., was held during the last week of July and was attended by thirty-one salesmen. The program included an inspection of the factory to familiarize the men with the various products and methods of manufacture. The meetings continued over a four-day period.



"WITH the exception of the Colonial type, small houses usually assume an unsymmetrical form. The units of all forms are the square or the rectangle."





The 2-Range Transmission—an exclusive GMC feature—develops 30% more pulling power than is possible with the same size engine and the usual type of transmission. It also effects great fuel savings by allowing all work to be done with the engine operating at its highest efficiency. And this is only one of the reasons for Big Brute's greater Power—Endurance—and Economy.

# GMC Big Brute

## Promised much—It is delivering more

A few months ago when General Motors announced the arrival of Big Brute as a *"truck such as men had never seen before"* the industrial and commercial world was amazed. Never before had any truck manufacturer dared to make the promises which were made for Big Brute.

Yet, all over the country and in every line of business, Big Brute is not only delivering all that it promised—but more.

Letters by hundreds tell amazing stories of its ability, and say, without any qualification, that Big Brute *is* a truck with which no other can compare and is performing in a manner no other truck ever approached.

Yet this is not surprising. For Big Brute is the result of 24 years successful truck building, plus all the great engineering and manufacturing facilities of General

Motors. It is, in fact, the culmination of everything learned since motor trucks were first built. And so it is only natural that it should actually be a truck without "bugs"—a truck endowed with incomparable power, endurance and economy.

See Big Brute today. Test it on the steepest hills and in the hardest pulling. Notice how eagerly it responds to a touch of the throttle. Put it up against the hardest jobs you know. Expect more of it. You will not be disappointed.

*Sold and Serviced Everywhere by Branches, Distributors and Dealers of*

**GENERAL MOTORS TRUCK COMPANY, Pontiac, Michigan**

A DIVISION OF YELLOW TRUCK AND COACH MANUFACTURING COMPANY

GMC 1, 1½ and 2½ ton trucks  
Co GMT Co—1926

Yellow Cabs

GMC Big Brute 3½ and 5 ton trucks

Yellow Coaches

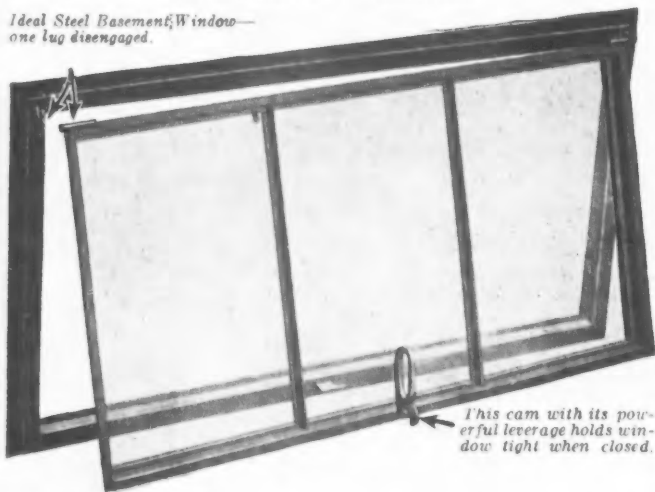
Yellow Light Delivery Trucks

GMC Big Brute 4 to 15 ton Tractor Trucks

Hertz Drivurself Cars

## Additional Information on "Ideal" Steel Basement Window

*Ideal Steel Basement Window—  
one lug disengaged.*



**D**UE to an unfortunate accident to one of the half-tone plates, the announcement of the Western Architectural Iron Company, 211 W. Schiller Street, Chicago, which appeared on page 81 of the April Annual Reference Number of the *AMERICAN BUILDER*, lacked two important items of information which our readers should have. These items pertain to the hinging and the lock.

The illustration is reproduced herewith as it should have been in the April reference page. Notice the arrows and the explanatory type pointing out how these basement windows are easily installed or quickly removed by reason of the simple lugs and slots. To install these "Ideal" removable steel basement windows is simplicity itself. Merely set the frame in the mortar, then hang the sash

on the frame. There are no hinges; no bolts or screws; just two lugs and two slots.

The locking cam is the other important detail. Notice that this is a powerful cam lever lock. It holds the sash storm-tight and air-tight.

These simple but effective details of the "Ideal" windows have met with the approval of architects, builders, dealers and home owners and have a lot to do with the immense volume of sales which the Western Architectural Iron Company has been enjoying.

For the sake of completeness and having all information in the April Reference Number and in the *AMERICAN BUILDER YEAR BOOK*, we suggest that our readers clip out the attached illustration and paste it on page 81 of April.



## To Control Chromium Plating

**A** NEW company, which will be known as the Chromium Corporation of America, has been organized to take over the patents of the chromium plating processes developed by the Chemical Treatment Company and the Chromium Products Corporation, the latter a subsidiary of the Metal and Thermit Corporation. This new company will have plants and branch offices in most of the leading industrial centers.

John T. Pratt, president of the Chemical Treatment Company, will continue in that office and also will be chairman of the board of the new corporation, of which Dr. F. H. Hirschland will be president. The latter is also president of the Metal & Thermit Corporation.

The new company will control or own strong basic patents covering chromium plating under all conditions which are commercially feasible and will license manufacturers who will use chromium plating in large volume in addition to operating its own plants for chromium plating.



## What it means to you to paint with DeVilbiss spray-painting equipment

For years DeVilbiss equipment and organization have been outstanding in character and completeness of service rendered to the contract and other painting fields. . . . These years of most extensive experience are combined with today's greatly enlarged and unequalled DeVilbiss engineering and manufacturing facilities in serving you.

Consider the full value of such experience and production facilities to you. . . . DeVilbiss spray-painting equipment enables you, with absolute certainty, to do an improved quality of work—to do faster painting and greatly increase earnings—to have the best possible working outfit and a more satisfied crew of painters.

Further facts about DeVilbiss equipment and organization, and what they offer to you, will be gladly mailed. Address—

THE DEVILBISS CO. 238 Phillips Ave. TOLEDO, OHIO

New York  
Chicago  
Detroit  
San Francisco  
Cleveland

**DeVilbiss**  
**Spray-painting System**

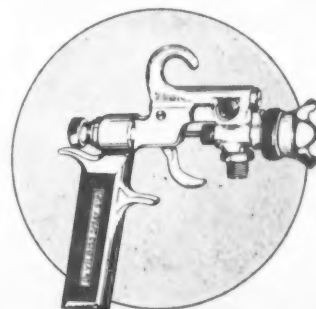
Indianapolis  
St. Louis  
Milwaukee  
Minneapolis  
Windsor, Ontario

## The DeVilbiss Spray Gun

The Type A DeVilbiss Spray Gun is the biggest single development ever brought out for painting the modern, improved way. . . . It is a DeVilbiss quality product throughout.

All nozzle parts are self-centering, insuring a permanent perfect alignment of nozzle and the production of a non-splitting and correct spray. . . . With this and the Gun's many other unparalleled, exclusive mechanical and working features, a wider range of work can be done and far greater results achieved in the application of paint, varnish and lacquer materials.

The design and construction of this DeVilbiss Spray Gun make for the simplest possible operation, cleaning and care.



*for Economical Transportation*



# Now— Chevrolet builds Trucks Complete with Bodies!

In addition to the world-famous dependability and low operating costs that have swept Chevrolet trucks to record-breaking heights of popularity, Chevrolet now offers truck bodies of Chevrolet design and construction to meet the public demand for a complete Chevrolet-built commercial unit.

As a result of this new manufacturing policy, commercial car buyers can now obtain a chassis and body, engineered as a complete unit and sold as a complete unit at a single unit price. In addition, they enjoy all the advantages of the durability, ruggedness and strength for which the Chevrolet One-ton Truck Chassis is famous and the fine appearance of quality-built bodies, whose cabs afford a new order of driver comfort and protection.

These new Chevrolet bodies offer numerous features, heretofore available only on passenger cars, such as: extra wide sedan-type doors, double-ventilating windshield, plate glass windows with Ternstedt regulators, conveniently located instrument panel, durable leather upholstery, deep comfortable cushions, and lustrous, lasting Duco finish in Biscay Green.

Renowned for sturdy design and staunch construction, these improvements still further emphasize the remarkable value which has made Chevrolet Trucks the choice of so many business men the world over.

CHEVROLET MOTOR COMPANY  
DETROIT, MICHIGAN  
Division of General Motors Corporation

1-Ton Truck \$495  
(Chassis only)

1½-Ton Truck \$375  
(Chassis Only)

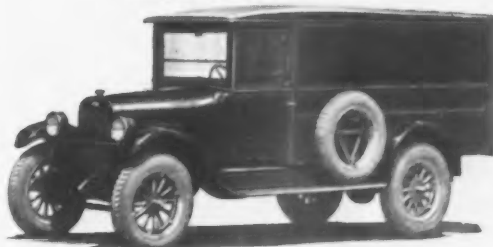
Prices; F. O. B. Flint, Mich.



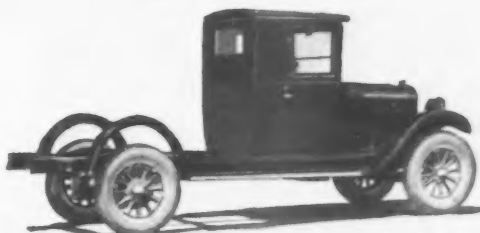
1-Ton Truck \$680  
Stake Body  
Complete, f. o. b. Flint, Mich.



1-Ton Truck \$680  
Grain Body  
Complete, f. o. b. Flint, Mich.



1-Ton Truck \$755  
Panel Body  
Complete, f. o. b. Flint, Mich.



1-Ton Truck \$610  
with cab only  
f. o. b. Flint, Mich.

## World's Lowest Priced Gear-shift Trucks

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



### Permanent Detroit Exhibit

CONVENTION HALL BUILDING, Detroit, Mich., is being rearranged by its owner, R. M. Grindley, well-known Detroit realtor, for the purpose of using the space on the Woodward Avenue frontage as a permanent manufacturers' exhibit and sales bureau.

This space will be arranged so as to classify the various products exhibited. One department will contain all products used in country clubs, another the products used in the construction of apartment houses, hotels and residences, such as refrigerators, electric and gas ranges, kitchen cabinet, dish washing machines, and so forth; another will be devoted to materials entering into actual construction, including roofing, flooring, hardware, heating plants and lighting fixtures, while still another will include special machinery.

A corps of specially trained salesmen will be maintained and complete reports of prospects will be available to exhibitors. The project will be operated as the Manufacturers' Exhibit and Sales Bureau under the direct supervision of W. R. Anderson and the main office will be located at 4611 Woodward Avenue.



### Effective Weatherstripping

THE E. J. Wirfs Weatherstrip Co., of St. Louis, Mo., has recently received a letter of commendation of its Home-Comfort weatherstrip which it considers of particular significance. The letter says in part:

"It may be of interest to you to know that a number of buildings at Washington University are equipped with Wirfs Home-Comfort weatherstrip. Inasmuch as Washington University is considered to be one of the finest university groups in the world, we are very careful in the selection of all materials that go into it.

"I have had the opportunity to witness the effectiveness

of Home-Comfort weatherstrip and will say that it is an excellent product in every way. We find that it is not only easy to apply, but it makes the window and door contacts weathertight, noiseless and dust-proof."



### Plan New Factory

THE largest volume of sales of asbestos building products in the history of the company is reported for June and July by the Asbestos Shingle, Slate & Sheathing Company, of Ambler, Pa. This includes asbestos shingles, asbestos building lumber and corrugated asbestos roofing and siding. Heavy export orders are included in the business for these two months, especially from Cuba, where the company has a Havana branch. A fifteen-acre site has been purchased at St. Louis for a new factory to take care of the company's increased business and provide additional facilities for serving its customers in the West.



### Adds Materials Department

THE Stearns Coal Company, 18th and Magnolia streets, Louisville, Ky., a subsidiary of the Stearns Coal & Lumber Company, Stearns, Ky., is enlarging its office building and erecting large warehouses on its property to take care of a new building material department. This department will handle a complete line of building materials and building specialties. Charles D. Salyers is general manager and M. L. Winkler is sales manager.



### Open St. Louis Warehouse

AN announcement has been received from the U. T. Hungerford Brass & Copper Co., of New York City of the opening of a new warehouse at 312-314 North Second Street, St. Louis, Mo.

Beautifying the Old Battle Line

## ATOP-MISSIONARY-RIDGE



COST IS SOON FORGOTTEN—QUALITY NEVER!

Architect—LOUIS BULL  
Brick—CARLYSLE-LABOLD  
DARK CHOCOLATE  
Mortar Color—  
PARAMOUNT CHOCOLATE 536

### PARAMOUNT COLORS

in shades to harmonize with every make of brick.

Used by exclusive dealers thruout U. S. A.

THE LOOKOUT PAINT MFG. CO., Chattanooga, Tenn.

# 100% Waterproofing Certainty with 42% Waterproofing Economy — —

Results obtained in America's outstanding buildings — results obtained in America's greatest concreting operations including world famous sewerage disposal plants and mammoth reservoirs, all demonstrate this one basic fact. Truscon Waterproofing Paste Concentrated makes concrete 100% waterproof not merely for a few years but for all time to come. Truscon Waterproofing Paste Concentrated provides the one certain method of permanently and effectively waterproofing concrete—but more than this—

## TRUSCON *Waterproofing Paste* CONCENTRATED

### WATERPROOFS CONCRETE AT THE LOWEST COST PER CU. YD.

Only in Truscon Waterproofing Paste Concentrated do you get waterproofing material in such concentrated form as to enable you to waterproof effectively and permanently a cu. yd. of concrete with 42% less integral waterproofing. You get a better job—a surer job, and you get it with utmost economy when you use Truscon Waterproofing Paste Concentrated.

*Write to us for interesting book on  
Waterproofing*

### THE TRUSCON LABORATORIES DETROIT, MICH.

Offices in All Principal Cities

Foreign Trade Division, New York



*University of Michigan Hospital, Ann Arbor, Michigan. Albert Kahn, Architect. Foundations waterproofed with Truscon Waterproofing Paste Concentrated.*

### Establish Tile Setting School

**A** NATIONAL training school for apprentice tile setters has been established at Dunwoody Institute, Minneapolis, under the auspices of the Associated Tile Manufacturers. This is a notable accomplishment as marking the establishment of an understanding between all interested organizations in regard to the question of apprentice training. It comes as the result of an experimental course conducted at the Dunwoody Institute a few years ago, the idea having gradually developed since.

Courses of thirteen weeks each, starting in March, June, September and December, will be given. The class now enrolled numbers about twenty apprentices. An effort is being made to prove that instruction can be given in such a way that it will shorten the apprentice term, turn out good workmen and yet not overcrowd the ranks of the trade.



### Flooring Company Opens Branches

**A** NNOUNCEMENT has just been made by the Indiana Flooring Company, whose main office is in New York, of the opening of two new branch offices, one of these is at Charlotte, N. C., at the corner of West First and South Cedar Streets, and the other at Newark, N. J., at 11-13 Coes Place.

The Charlotte office will take care of not only the South Carolina territory, but of the territory south of these as well, while the Newark office will look after the business in New Jersey. At Charlotte warehouse space has also been secured and a complete stock of all kinds of hardwood flooring will be carried to care for the local trade.

These two new branches will give the Indiana Flooring Company offices, warehouses or factories at seven points

in the United States. In addition to the main office and factory in New York City, this concern owns and operates a maple flooring plant at Reed City, Mich., and an oak flooring plant at Coal Grove, Ohio. Branches are also established at the following points: Washington, D. C., Memphis, Tenn., Charlotte, N. C. and Newark, N. J.



### Abrams Occupies New Building

**T**HE Abrams Cement Tool Company, formerly located at 3818-3834 Grand River Avenue, Detroit, Mich., has just moved into its new home at 2300 Michigan Avenue, opposite the new Detroit passenger station of the Michigan Central Railroad. The main office, sales room, warehouse and factory will now be located under the same roof, which is expected to prove a convenience, not only for the company, but for its customers as well. The new building has a frontage of 82 feet on Michigan Avenue and 60 feet on Fifteenth Street and is a three-story structure, all floors of which will be occupied by the Abrams company.



### Welders Will Meet at Buffalo

**T**HE fall meeting of the American Welding Society will be held in Buffalo, N. Y., on November 17, 18 and 19. An International Welding and Cutting Exposition will be held in connection with this meeting and will open Tuesday afternoon, November 16. The technical sessions will include railroad welding apparatus, welding science in the engineering curriculum of universities and welding in a gaseous atmosphere. There will also be meetings of the American Bureau of Welding and of the directors of the Welding Wire Specifications Committee.

## SEDGWICK OUTFITS FOR PERMANENT BUILDERS

# 2 NEW SEDGWICK IMPROVEMENTS

## *In Dumb Waiters*

We announce an important advance in vertical transportation equipment through the perfecting of Type "FDCG" Sedgwick Geared Automatic Brake Dumb Waiter.

Machine Cut Gears have replaced cast gears and a Full Diameter Hoist Wheel permits the cable to drop direct to both car and counterweight.

These two new improvements, exclusive with Sedgwick, make Type "FDCG" easier to operate and double the life of the car cable. Moreover, it is **easier to install**, thus saving time and labor, because the number of parts is reduced.

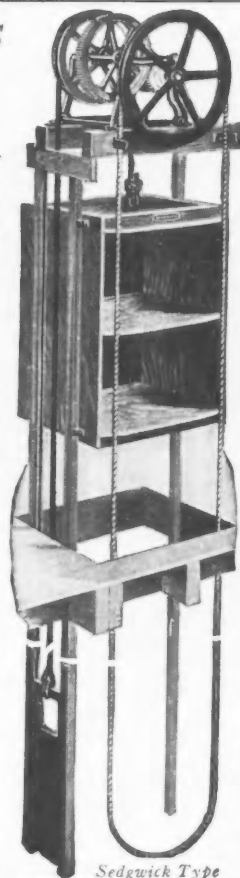
There are five Standard sizes, from 20"x16" to 36"x36", carried in stock at our factory. Special sizes furnished in four days.

### Special Service for Contractors

Includes Blueprints, Illustrations and Specifications

## SEDGWICK MACHINE WORKS

154 West 15th Street New York



Sedgwick Type "FDCG" Dumb Waiter

Sedgwick Machine Works,  
154 West 15th Street, New York.

Please send full information on Dumb Waiters, Freight Elevators, Trunk Lifts, Invalid Elevators, Sidewalk Elevators and Gravity Drops.

Name.....

Address.....



# Jobs like these everywhere



Every town has them—old houses which at small expense can be made modern, fire resisting and permanent by the use of Sykes Cup Lath and stucco.

Often a practical suggestion from a man like you is all that is necessary to get the work.

Whether your town is dead or booming so far as new building is concerned, here is a young gold mine for the fellow who has the intelligence and initiative to go after it.

Let us tell you more about the possibilities and the peculiar fitness of Sykes Cup Lath for this work.

*Use the Coupon*

## Sykes Metal Lath Co.

Niles, Ohio

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Yes, I'm interested. Send on your stuff.

Name \_\_\_\_\_

Work in view— ☐ Remodeling

☐ New Construction

Address \_\_\_\_\_

A

# Build and Sell Homes in the Suburbs Now —Don't Wait for Sewers

"Out to the suburbs," is now the nation-wide cry. The city dwellers want plenty of lawn, green grass, garden, orchard, sunshine and blue sky. Folks are tired of living where they daily toil for their bread and butter.

People realize that it is not necessary to live in the city nowadays just for the sake of city comforts and conveniences. Modern homes with sanitary plumbing are now easily procured anywhere.

The problem of sewage disposal is perfectly solved with the safe, modern, economical

## *San-Equip* Septic Tanks

for all unsewered districts. Don't let lack of sewers worry you.

San-Equip Septic Tanks follow U. S. Public Health Service design. Thousands are in use. No failures. Fully guaranteed. Easily installed.



### Write for Our Free Plan Sheets

Sell San-Equip Septics with the lot or use our free plan sheets to help you sell. Our advertising is telling more than half your prospective home buyers about the San-Equip idea of sewage disposal.

San-Equip Septic Tanks are rust-proofed copperoid iron tanks—correct design—water tight—unbreakable—ready to connect.

Look one over at our risk. Prompt shipment from warehouse near you.

## CHEMICAL TOILET CORPORATION

931 FREE STREET, SYRACUSE, N. Y.

# Rockford Sash Pulleys

FOR long, sure service, specify Rockford Sash Pulleys. Correctly designed and made of the best wrought steel, they can be depended upon.

Rockford Sash Pulleys can be supplied in various finishes to match other hardware. Screws with the same finish can also be had. Both have been treated to give them high rust-resisting qualities. Quick delivery assured from our centrally located factory.

## National Lock Co., Rockford, Ill.

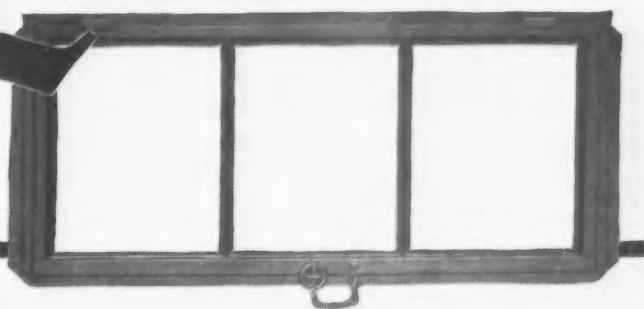
### Branch Sales Offices:

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# At \$2.95

You can't afford  
NOT to use —



# Fenestra

## BASEMENT WINDOWS

3 Lights  
10" x 12" \$2<sup>95</sup>

See the new lift-out sash—with pinless hinges.

2 Lights  
14" x 20" \$3<sup>05</sup>

See the self-centering lock—an exclusive Fenestra advantage.

3 Lights  
12" x 18" \$3<sup>25</sup>  
3 Lights  
10" x 20"

Protruding fin at jambs makes installation easy.

3 Lights  
11" x 24" \$3<sup>40</sup>

Entire window self-contained—no fitting required, no hardware to attach, priming coat of paint already applied.

*Stocked by dealers everywhere—  
can be delivered either open or glazed.*

*Slightly higher in the  
south and extreme west*

DETROIT STEEL PRODUCTS COMPANY

B-2260 East Grand Boulevard, Detroit, Michigan

Factories at Detroit, Michigan, Oakland, California, and Toronto, Ont., Can.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



## Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"Industries Electrical Progress" is a small book, bound in hard covers, by The Cutler-Hammer Mfg. Co., Milwaukee, Wis., telling the story of the progress made in the development of motor control apparatus.

The American Radiator Company, 1807 Elmwood Avenue, Buffalo, N. Y., offers several booklets on the subject of heating and radiation. These are: Home Where You Find Warmth and Comfort, Perfect Warmth with Economy, The Secret of Home Comfort, and Ideal Warmth and Comfort at Minimum Cost.

"Two Norton Achievements" is a handsome book in hard covers published by the Norton Company in recognition of two of its associates, Aldus C. Higgins and Charles H. Norton, who have been awarded the John Scott medal for their inventions.

The Mueller Steam Specialty Co., Inc., 502 West 126th Street, New York City, has issued a new catalog, No. 22, covering its line of steam, water, air, oil and gas specialties.

The National Lead Company, 111 Broadway, New York City, has published a complete standard specification book for painting with white lead and for painting structural steel and other metals with red lead.

Henry D. Sears, General Sales Agent, 80 Boylston Street, Boston, Mass., offers a new catalog of "Weber Dependable Wiring Devices."

Roberts & Mander Stove Company, Philadelphia, Pa., has a revised catalog and price list of gas ranges.

The Indiana Flooring Company, 234 Rider Avenue, New York City, has sent out an additional sheet for its catalog folder covering matted designs.

The Massillon Steel Joist Company, 909 Belden Avenue, N. E., Canton, Ohio, offers a series of five pamphlets on the use of its bar joist in fireproof floor construction, bank vault reinforcing, metal lath and safe loading tables and specifications.

The Portland Cement Association, 33 West Grand Avenue, Chicago, has published a booklet called "The Concrete of the Architect and Sculptor," by John J. Early, with an introduction by Lorado Taft.

"Ornamental Bronze Entrances and Store Fronts" is the first of a series of books illustrating representative bronze work as selected by a jury of architects, which the Copper & Brass Research Association, 25 Broadway, New York City, will publish from time to time.

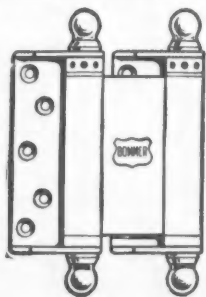
Wm. Bros. Boiler & Manufacturing Company, Minneapolis, Minn., offers a series of booklets on boilers, grates, tanks, creamery supplies and similar equipment which it manufactures.

The Portland Cement Association, 33 West Grand Avenue, Chicago, has just published the 1926 edition of its "Editor's Reference Book on Cement and Concrete," containing a large amount of useful information on this subject.



## Government Wants Architects

APPLICATIONS for associate and assistant architect will be rated as received at Washington, D. C., until September 30. The examinations are to fill vacancies in the supervising architect's office, Treasury Department, where a large number of associate and assistant architects will be employed in the construction of public buildings in Washington, D. C., and elsewhere. The entrance salaries will be at \$3,000 and \$2,400, for associates and assistants, respectively, and promotion to higher grades may be made in accordance with civil service rules.



### Buy the Best HARDWARE For Hard-wear

For more than 48 years Bommer Spring Hinges have maintained their leadership and proven their superiority over all others.

They have kept pace with the times, because they have been kept up with the times whenever improvement was possible.

# BOMMER SPRING HINGES ARE THE BEST

They are in universal demand—easiest to apply and the most satisfactory spring hinges made.

Your Dealer handles them.

Send for New Catalog 47. It is a big help in ordering.

**Bommer Spring Hinge Company**  
MANUFACTURERS  
BROOKLYN, N. Y.



*These HEAT WAVES show  
how the heat RISES and ESCAPES through  
the roof and walls of your house*

That's what makes the snow melt so fast on your roof. Do you like to buy coal to melt snow? This is sheer waste, and you can stop it by insulating the roof and walls of your house with

## CABOT'S Heat ~ "QUILT"

You can lay Quilt under your shingles, siding, tiles or boarding, or between your studs or rafters or under your attic floor. It will save enough coal to pay for itself in two or three winters, and keep on saving heat and doctor's bills and making you comfortable as long as the house stands.

Send for Free Sample of Quilt and full information



**SAMUEL CABOT, Inc.**  
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Cabot's Creosote Stains, Waterproof Collophanes,  
Old Virginia White, Double-White, etc.



# His HEAD is what you pay for!

*Why make him waste  
a third of his time  
on muscle jobs?*

**T**ODAY'S high labor costs make it mighty hard to show a profit if you let skilled workmen do jobs that the DeWalt Electric Carpenter will do six times quicker and cheaper. After a carpenter thinks out and lays out the work it's foolish for him to push the saw—at full carpenter wages—when electricity will do it for about 3 cents an hour.

On the average small frame house, where carpenter work ordinarily would total \$600, the DeWalt is saving \$150 for a builder in Bridgeton, N. J. (Name on request)

## The **DEWALT** Electric Carpenter

### *What It Does*

↔↔

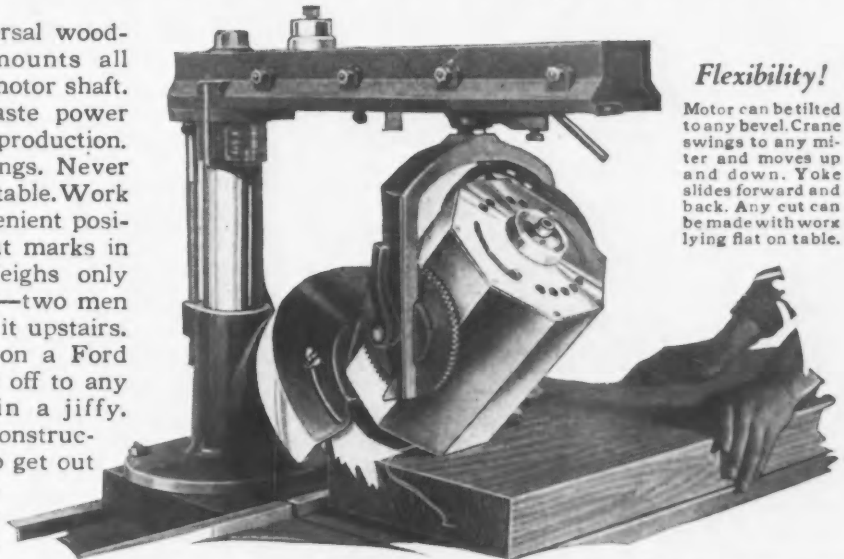
- Cross Cutting
- Ripping
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**Six Times  
Faster**

The only universal wood-worker that mounts all tools direct on motor shaft. No belts to waste power and slow up production. Only two bearings. Never any need to tilt table. Work always in convenient position, with layout marks in plain view. Weighs only 240 to 265 lbs.—two men can easily carry it upstairs. You can lift it on a Ford truck and whiz off to any building job in a jiffy. Simple, sturdy construction—nothing to get out of order. Operates from any lamp socket. Made in 4 sizes, 1/2 H.P. to 4 H.P., with cutting capacities from 1" to 5".

**DeWalt Products Co.**  
Leola, Penna., U. S. A.



### *Flexibility!*

Motor can be tilted to any bevel. Crane swings to any miter and moves up and down. Yoke slides forward and back. Any cut can be made with work lying flat on table.

### **Get the Facts! Mail Coupon NOW!**

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We want a showdown! Send proof that the DeWalt Electric Carpenter will save money for US.

Individual.....

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## Here's the Way to Handle Concrete

Get a Ransome Monkey-on-a-Stick. Within its limits it does everything that a tower will do, it costs a whole lot less and it certainly cuts the cost of handling concrete—and other materials, too.

The Material Elevator Platform runs on the same mast and at the same time as the Concrete Hoist Bucket and the Elevator Platform may be run to the same floor level as that for which the bin is set. It certainly provides the economical way to handle materials and concrete.

If you are interested in reduced costs send for Bulletin 115A—it's worth reading.



**Ransome Concrete Machinery Co.**

Main Office and Plant: Dunellen, N. J.

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Complete Stock and Service

Manufacturers of Concrete Mixers, Pavers, Pneumatic Mixers, Chuting Plants, Hoists, Buckets, Bins, Cars, Carts, Etc.

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## ORIGINAL MAILO-BOX THE MODERN BUILT IN MAIL BOX

Patented Oct. 4, 1921

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U. S. A. and Canada



### BEWARE OF IMITATIONS

SOLD AND CARRIED IN STOCK BY WHOLESALE AND RETAIL HARDWARE, LUMBER AND BUILDERS' SUPPLY DEALERS THRUOUT THE UNITED STATES.

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## WEATHERCAP

**WEATHER  
RESISTING  
WATER, AIR and  
MOISTURE PROOF**

WEATHERCAP is a sheathing and insulating paper which gives unusual protection.

WEATHERCAP is a heavy film of asphalt placed between two tough sheets of kraft paper.

WEATHERCAP keeps houses warmer in winter, cooler in summer and free from dampness.

Manufactured by American Lakes Paper Co., Chicago

*Write for samples and interesting dealer proposition to*

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## In Thousands of Homes

**T**O sell a new home to the average family it must appeal instinctively to the womenfolks. It must be well provided with large roomy closets, a kitchen carefully planned to save unnecessary steps, and a laundry room in the basement equipped with built-in tubs and other labor-saving appliances.

The

## Lamneck Laundry Dryer

The LAMNECK LAUNDRY DRYER is one of the most practical of modern appliances. It solves wash-day's biggest problem—quickly—and economically. It sterilizes and thoroughly dries the clothes by radiated heat while the thermostat regulates the drying temperature and positively eliminates any possibility of scorching even the most delicate fabrics. And the clothes come from the dryer as white and clean-smelling as when dried out of doors on a hot summer's day.

In thousands of medium-priced homes now being erected LAMNECK DRYERS are part of the regular laundry equipment. They are quickly installed without the use of bolts, nuts or screws, and they are packed so that each part is taken from the crate in the order in which it is assembled.

Equip the homes you build with LAMNECK DRYERS. They will sell quicker and bring larger profits. Write NOW for our Illustrated Literature.

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Dept. A, Columbus, Ohio

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Dept. A, Columbus, Ohio

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## Greater Safety

## More Work Less Cost

with this Safety Scaffold Machine



The Patented Operating Device with the Dual Control.

The Gold Medal Junior is raised by a direct drive ratchet and lowered by a worm and gear mechanism. The dual control securely locks the scaffold at all times and prevents slipping or running down. No hitches are necessary as with blocks and falls.

A GOOD manila rope looks strong and durable. But you can't tell by looking at it just how long it will last. Damp weather subjects it to rapid depreciation—constant rubbing chafes and frays. And—most serious of all—acid, rope's deadliest foe, eats away the vital strength fibres. Result—*Danger!*

Steel cables are safe and lasting and resist acid—that's why it pays to use Gold Medal Junior Safety Swinging Scaffold wherever a light duty scaffold is required. Many contractors are finding that the money they save from the constant replacement of blocks and falls soon pays for the Gold Medal Junior.

The Gold Medal Junior is no harder to operate than a block and fall scaffold rig. No hitches are necessary in making fast. A patented operating device locks the machine securely at all times. The broad scaffold platform with its steel reinforcement allows ample working room. Guard-rails and a toe-board protect both the workers on the scaffold and those below.

An X on the coupon will bring you complete information on this and other safe ladder and scaffolding equipment that will save you money on every job. Do it today.

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| <input type="checkbox"/> Safety Extension Trestles.                   | <input type="checkbox"/> Scaffold Irons.                  |
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City..... State.....

# PARKS

## WOODWORKING MACHINES



*Cabinet Shop  
Special  
\$290  
with motor*

## See this Parks this Month

September and October are "Parks Cabinet Shop Special months" with Parks dealers everywhere. In their showrooms this wonderfully popular woodworker will be on display and in many instances in actual operation.

Parks Cabinet Shop Special No. 10 at \$290.00 is the handiest machine Parks ever built! Big enough to turn out first-class work—small enough to fit in a small shop or your basement—a real machine built for real work without freakish "stunt" designing. It makes practically any cut and includes rip and cut-off circular saw, jointer, and band saw. Lathe and shaper may be added at small extra cost. Every man who does cabinet making or woodworking of any kind wants this splendid machine. It is the biggest woodworking machinery value on the market today. Be sure to see this Parks this month.

## In these dealers' showrooms

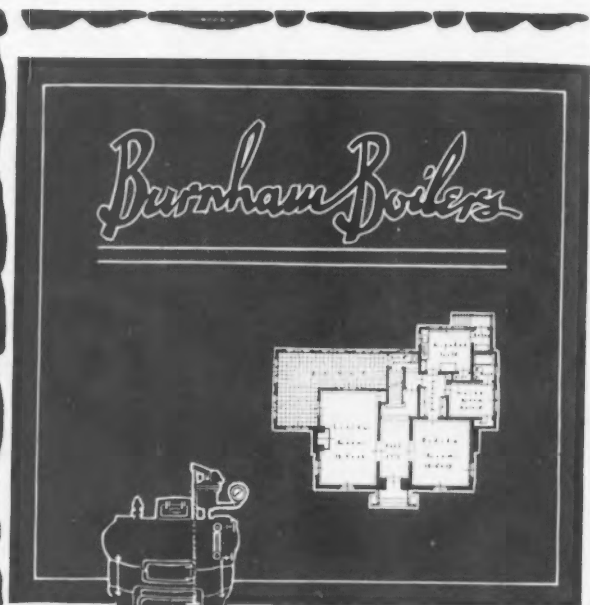
**ALA.**—Moore-Handley Hdwe. Co., Birmingham; McGowan-Lynn Hdwe. & Supply Co., Mobile; Alabama Mch. & Supply Co., Montgomery.  
**ARK.**—Ben. D. Sehaad Mch. Co., Little Rock.  
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See this Parks by all means! If you can't, then write us for circular No. 10 and the new Parks catalog.

## THE PARKS BALL BEARING MACHINE CO.

Fergus Street and C. H. & D. R. R. Cincinnati, Ohio

Canadian Factory: 200 Notre Dame East, Montreal, Canada



Plan of Mr. Scott's residence at Scarsdale, New York, in which his coal cutting heating system works so fine.

## A Steam Job That Equals A Vacuum

W Stanwood Phillips is a New York architect with a natural bent for working out heating economies.

Here's one of his methods.

Instead of the usual numerous cellar pipes, running in a net work of branchings and bends; he has one goodly sized pipe, main, or "extended header" as he calls it.

This he runs around the cellar and takes the leads from it.

Flow and return friction are both greatly reduced, quickening circulation.

But most surprising of all, the rooms are perfectly heated without any pressure indication on the steam gauge.

Why don't you do the same in your houses?

Glad to send you detailed particulars.

# Burnham Boiler Corporation

Irvington, N. Y.

New York Office: 30 East 42nd Street

Representatives  
in All  
Principal Cities

Canadian Offices:  
Harbor Comm. Bldg., Toronto,  
124 Stanley Street, Montreal

# Reputation

"How much would you take for your reputation? To you it is priceless. And so is ours.

"No man, no concern can give himself or itself a reputation. Reputations cannot be bought. They come only through making a record or product, so supremely good that those who know of it, or about it, take pride and pleasure in telling their friends. We have staked our reputation on



our skylights as being as fine a product as can possibly be made at a price you and your client will be glad to pay.

"I wish you would write my Boss for our sheet metal products catalog and our prices.

"I believe it would do you both a lot of good to get acquainted."

**WILLIE WILLIS**



**WILLIS MANUFACTURING CO.**  
GALESBURG, ILLINOIS

## Level and Plumb Like The Big Builders

OWN YOUR OWN — MAKE MORE MONEY

**\$5.00**

BRINGS IT TO YOU

### Aloe Convertible Level and Transit-Combined

**FREE TRIAL**

#### Save Money

Don't rent an instrument or hire others to level and plumb; do it yourself, faster, better, and save money on every job—by owning your own Aloe Convertible Level.

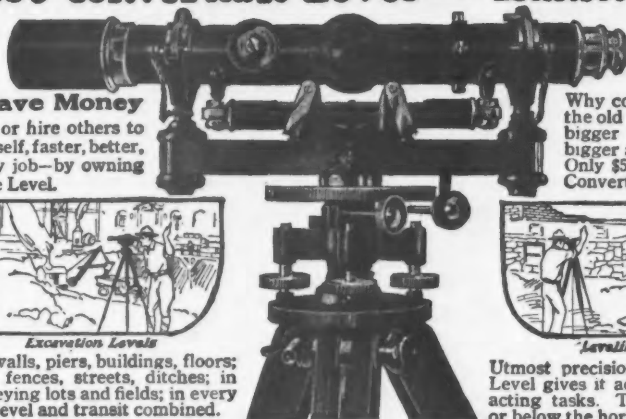


Running Lines



Excavation Levels

For leveling foundations, walls, piers, buildings, floors; running straight lines for fences, streets, ditches; in laying out irrigation; surveying lots and fields; in every job requiring an accurate level and transit combined.



#### Make Money

Why continue to plod along in the old way? Equip yourself for bigger work. Here's your opportunity to become a bigger and more successful man in your community. Only \$5.00 will bring you this high-grade, accurate Convertible Level and Transit.

#### AS A TRANSIT

#### Comes Complete

Tripod, Case, Trivet, Plumb Bob, Sunshade. Instructions included.



Utmost precision in making the Aloe Level gives it accuracy for the most exacting tasks. Takes sights either above or below the horizontal.

### You Learn To Use It In An Hour

Anyone of ordinary understanding can master this Level in an hour, with the aid of this complete book. It has been compiled by experts, but is written in simple, plain language anyone can understand. It is wholly free from technical terms, and tells you exactly what to do and how to do it. You can go right out on the job and get results immediately. The Aloe Level is at once the most complete and the least complicated.

#### FREE TRIAL

Just \$5.00 brings you the Level for 10 days trial. Take it out on the job; test it thoroughly. If perfectly satisfied pay the balance in easy monthly installments. Use it while you pay. It earns money for you faster than the easy payments come due.

#### EASY TERMS

Should you for any reason whatsoever not be perfectly satisfied with the Level, after putting it to every test, return it at the end of ten days, and your deposit will be refunded immediately. There are no compromises. This is our guarantee of perfect satisfaction.

**A. S. ALOE CO.** 1810 Olive St. St. Louis, Mo.

**SEND FOR FREE BOOKLET**

**BE A BIGGER BUILDER**

#### MAIL THIS COUPON

**A. S. ALOE CO., 1810 Olive St. St. Louis, Mo.**

Without obligation, send me your **FREE** book, "Be a Bigger Builder". Also full particulars about the Aloe Convertible Level and details of your easy payment plan.

Name .....

Address .....





## An Amazing Offer!

All that we could tell you in a 200-page book about the Improved Schlueter Floor Surfacer would not be half so convincing a story of its remarkable performance—and its time- and labor-saving features—as your actual experience in using it.

So, we make you this most unusual proposition. Let us send you the

**IMPROVED SCHLUETER  
FLOOR SURFACER**

**FREE**

**for five days' trial**

Test it! Compare it with anything you've ever used! You'll like the marvelous ease and speed with which it operates—the wonderful efficiency with which it performs.

You'll like the way its roller conforms automatically to varying floor surfaces—a special patented feature. You'll like its great simplicity—yes, and you'll discover many other important things we haven't mentioned.

Over thirty thousand in use! There must be a reason! Take advantage of this offer today and learn what it is. Write, wire or phone!

**Guaranteed for five years**

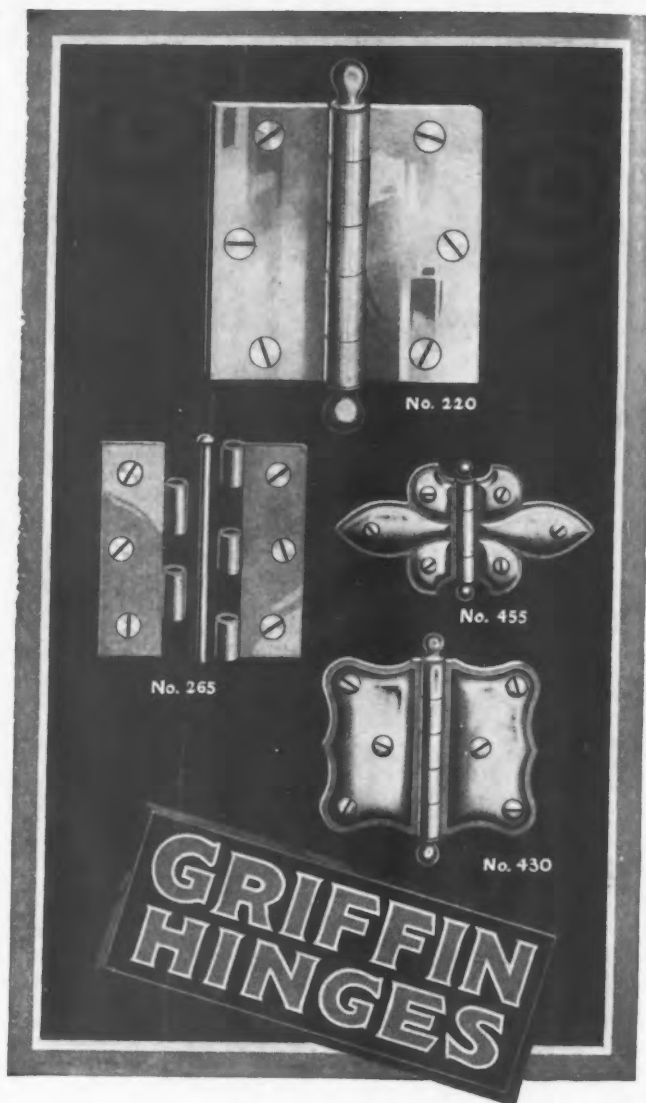
*Manufactured and Sold by*

**LINCOLN - SCHLUETER  
MACHINERY CO.**

222 West Grand Avenue

Chicago, Illinois

NOTE: Sandpaper for all surfacing machines carried in stock.



*There is a GRIFFIN  
Hinge made for par-  
ticular use with every  
door that swings in  
buildings large or small*

**GRIFFIN**  
*Manufacturing Co.*  
**ERIE PENNSYLVANIA**

*Branch Offices*

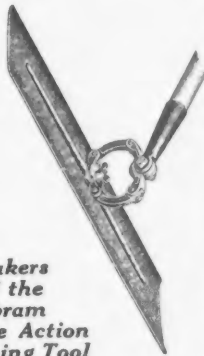
45 WARREN ST. NEW YORK  
74 W. LAKE ST. CHICAGO  
28 BINFORD ST. BOSTON



# ABRAM BLUE RIBBON LINE

*The High Quality of "ABRAM" Service and the "ABRAM" policy of fair dealing has built up our business.*

The new Abram Blue Ribbon Power Tamper with Elevator and Feeder and Abram Blue Ribbon Jr. Down Face Horizontal Stripper Block Machine.



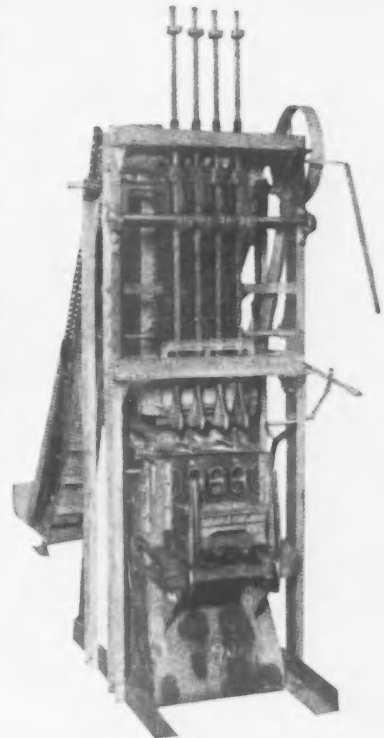
Makers  
of the  
Abram  
Double Action  
Finishing Tool

The Fastest operating block machine yet produced. Cuts the mechanical operations incidental to making and delivering the block exactly one-third in comparison with any other semi-automatic machine. Made for heavy duty. Massive and compact, to minimize vibration.

The "ABRAM BLUE RIBBON" line comprises a block machine for hand use, a block machine for use with the "BLUE RIBBON" TAMPER, with or without feeder and elevator, and an all automatic down face stripper machine that strips and delivers the face blocks as well as the plain blocks, maintaining a given rate of production, regardless of whether operating on plain or face blocks.

Ask us for circular matter, giving full description and prices, also ask for our little magazine, the "Finishing Touch."

We also manufacture the well known Abram Double Action Finishing Tools.



## ABRAM CEMENT TOOL CO.

3818-3834 Grand River Avenue

Detroit, Mich.

Publishers of "The Finishing Touch"



*Sandy Says:-*

Mr. FLOOR SURFACER —

**"HERE'S WHAT THEY SAY ABOUT DURUNDUM"**

A floor surfacer in Cleveland, Ohio:—"I used about every other brand on the market and I can truthfully say that I can surface more floor, make better time, and do a better job with it than any other kind I have ever used. In fact I think it is the best on the market regardless of price."

Another in Spokane, Washington:—"I took 33½ pounds of sandust from 900 sq. ft. of slash grain oak in five hours with one sheet of paper and with the best of the other kinds I cannot get more than 18 pounds."

A third in Olcott, New York:—"Your paper is all that you say it is, and then some. I have used all kinds but never seen any as good as this."

And one in Fort Lauderdale, Florida:—"I can truthfully say, by actual tests, Manning Speed-grits doubled the output of any other paper. I refer to the black (Durundum)."

We guarantee these quotations to be taken from genuine unsolicited letters, now on file. Writers names will be supplied on request.

Send us the coupon for complete information on DURUNDUM.

**MANNING ABRASIVE COMPANY INC.**  
P. O. DRAWER 74 TROY, NEW YORK

MANNING ABRASIVE CO., INC., TROY, N. Y.

Gentlemen—Send me information on *Speed-grits* GARNET and DURUNDUM PAPERS.

Name.....

Street.....

City.....

State.....



## The Road To Good Stucco

The straight road to success with stucco depends on two very simple things.

First—Select the right stucco. That's Rockbond—the plastic magnesia stucco material that's *standardized*. Anything that can be done with good stucco can be done with this enduring material.

Second—Apply it correctly. Our specifications are as easy to understand as A. B. C. and when Rockbond is applied as specified success is assured.

*The new illustrated edition of "Homey Homes", which deals with stucco in general and Rockbond in particular, together with our specifications and Colortone folder will be sent to anybody interested in better stucco.*

### The Rockbond Co.

Van Wert, Ohio  
Harrisburg, Pa. Cedar Rapids, Iowa

*Write the plant nearest you.*

**ROGBOND**  
Exterior Stucco



## Appalachian Oak

*The CROMAR  
Ten Points of  
Prime  
Importance*

1. Factory finished — like furniture.
2. Finish stands hardest wear.
3. Coating four sides protects against moisture.
4. V-type tongue and groove easy to lay.
5. Beveled tongue prevents damage in nailing.
6. Cleanable surface groove.
7. Convenient and damage-proof bundle.
8. Laying contracts need not be sub-let.
9. Promotes extra sales for occupied houses.
10. Laid and used the same day.

*of course!*

CROMAR is milled exclusively from Appalachian Oak (West Virginia White Oak).

We believe this timber, because of its peculiar growth—slow and even—is unquestionably the best for flooring purposes. Its surface, when milled, is more evenly hard. But of much greater importance is the fact that it is of just the right texture to take and hold the finish.

But even of this supreme lumber only No. 1 Common and Select grades are used for CROMAR! This insures better lengths and grades of flooring.

Another point—CROMAR is the only hardwood flooring we know of which is milled from lumber kiln dried to less than 4% moisture content. Our coating on four sides to keep out moisture makes this possible.

# CROMAR

FACTORY FINISHED

## OAK FLOORING

LAID AND USED THE SAME DAY

3/8" x 1 1/2" SUB FLOOR



*laid and used the same day*

If you have a copy of the "Home Builders Catalog", refer to our Pages 184 and 185 for further details.

Write us for free samples and complete literature concerning the manufacture, the selling and laying of the only factory finished hardwood flooring on the market.

The Crooks-Dittmar Company  
Williamsport, Pa.



**Your** Complete protection!

9-foot size and 14-foot size

### Our Guarantee

You WIN from the outset—you cannot lose at any time—with the

## IDEAL PRODUCTS PLANT MIXER

reinforced by Strenes Metal Liner. If the Mixer should wear out in less than a year, we rebate you 1/12 of the purchase price of the Liner for every month less than the year.



**Easy to Load. Easy to Dump—  
A Bear of a Worker**

Sales of the Ideal Products Plant Mixer have increased over 350% in two years. Think this over, then write for names of users and for details of guarantee.

# IDEAL

**THE IDEAL CONCRETE MACHINERY CO.**  
5014 SPRING GROVE AVE. CINCINNATI, OHIO

TRADE MARK  REG. U.S. PAT. OFF.

Pat. Nov. 25, '24—April 14, '25

**G & B Junior**  
**Improved Model**

The Only  
**FULLY EQUIPPED**  
and Guaranteed

**Transit & Level Combined**

Send the coupon for Free Booklet  
on "How to Select, Test  
and Care for Convert-  
ible Levels."



**Easy  
Terms**

**The Closest Rival to Any \$100.00 Instrument**

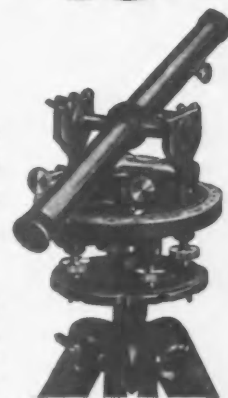
**GEIER & BLUHM, Inc.**  
670 River St. TROY, N. Y.

*We Specialize in*  
**Convertible Levels**  
10 Days'  
**FREE**  
Trial

Cash Price  
**\$45.00**

Learn to use  
this instrument  
in less than an hour  
with our Free instruction  
book—Remarkable Value.

The G & B Junior is the latest model  
of any convertible level. A dependable,  
sturdy instrument, powerful, clear lens sys-  
tem, objective slide, reversible telescope, silver



**MAIL COUPON TODAY**

GEIER & BLUHM, Inc., 670 River St., Troy, N. Y.  
Gentlemen: A. B., Sept., '26  
Please send me free all Information as advertised.



## "Heating Satisfaction Guaranteed"

**R**ESULTS are sure and definite when you install a Moncrief Furnace correctly in the house you build. Let our Engineer check your heating specifications or draft them for you, and you can positively promise "Heating Satisfaction Guaranteed."

### Quality Made

In every way Moncrief Furnaces are superior—correctly designed, made of fine gray iron, all parts carefully ground and fitted together smoke and gas tight.

Moncrief Weldsteel Furnaces are made of heavy boiler plate with solid lap-welded joints.

### Builders Send in Your Plans

We are glad to co-operate with you in planning your heating plants. Send in your plans and our Engineer will draw plans for a reliable, economical warm air heating plant with complete specifications. This service is yours, free.

*Send for name of Moncrief dealer in your vicinity.*

The HENRY FURNACE & FOUNDRY Co.  
3471 E. 49th St. Cleveland, Ohio

# MONCRIEF FURNACES

## USE SAFE EFFICIENT ECONOMICAL

**Reliable Scaffold Brackets**  
Patented Oct. 3, 1910  
**No holes to plug after they are removed**

Stronger and cheaper than costly wooden scaffolding—quickly erected and quickly taken down—Reliable Scaffold Brackets are profit makers on any construction job—wood, brick, stucco.

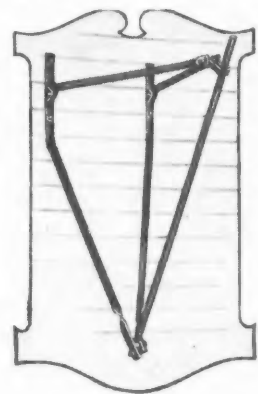
### This letter hits the nail on the head

Never again a wagon load of lumber for a scaffold.

H. C. Sinff, Apple Creek, Ohio, writes:

**"I would not do without them. I would not think of going back to the old way of using a wagon load of lumber for a scaffold. I can scaffold a whole house with them while I would be scaffolding one side the old way."**

Send for our illustrated folder describing them. We ship C. O. D. so you can see the brackets, examine their sturdy construction and approve of them before you pay one cent.



*Investigate what they will save for you on the next job you figure*

## Elite Manufacturing Company

Ashland

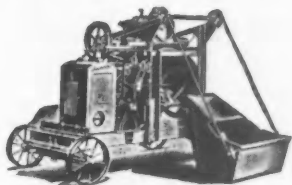
Ohio



## To Serve for Years - - - and years

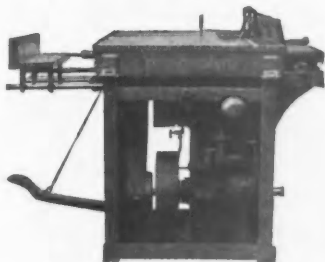
--- to deliver satisfactory, continuous service under a variety of trying conditions. That is what contractors' equipment made by Knickerbocker is actually doing in the field.

*Illustrated Folders on Request*



**Concrete Mixers**

Furnished on skids or trucks, low-loading or batch hopper or power skip. Built in all sizes, 5-ft. to 28-ft. capacity.



**Combination Saw Rig**

No. 424, shown above, has stationary arbor, with jointer, boring and mortising attachment. No. 5, a heavier model, is a swing cut-off and ripping machine.



**Mortar and Plaster Mixers**

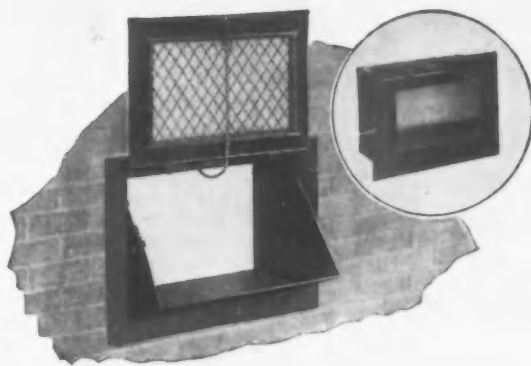
Two sizes of mortar and plaster mixers—they are cost-cutters.

**The Knickerbocker Co.**  
525 Liberty St. Jackson, Mich.

## Where High Quality and Low Cost Meet

# GABRIEL

ROLLED STEEL  
COAL CHUTE



**E**XPERIENCED contractors and discriminating owners everywhere are turning to Gabriel Rolled Steel Products for utmost quality at moderate cost. Coal chutes, package receivers, dome dampers, ash dumps, ash pit doors or scaffold brackets—the Gabriel line is more advanced in design and superior in workmanship.

The Gabriel Coal Chute is made entirely of rolled steel and is equipped with unbreakable hinges. The door is opened automatically from the upper floor.

*Write for information on Coal Chutes and other Gabriel Products*

**GABRIEL STEEL COMPANY**  
Bellevue Ave. DETROIT, MICH.

GABRIEL STEEL COMPANY  
Bellevue Ave Detroit, Mich.

Send me full details and prices on  
Gabriel Rolled Steel Coal Chutes.

Name .....

Address .....

A.B. 9-26





## Big friendly windows a big factor in the sale

**W**HAT a thrill you give the housewife when you lead her into a bright kitchen. How her face lights up when she contemplates the sunny hours to be spent at her work. A pleasant contrast to some of the dark, stuffy places she has visited. Light, airy, sunny rooms are the vogue to-day. For good reason too—modern health standards demand it! Consequently *more* windows and *better* glass are big factors in the selling and renting of homes.

"The BEST Glass" is the choice of many because it is remarkably free from defects permitting the maximum sunlight to enter each opening. Furthermore it is perfectly flat and has a brilliant lustre.

*"The BEST Glass" is a high quality product because the most improved mechanical processes have made it so.*



## AMERICAN WINDOW GLASS CO.

The BEST Glass

World's Largest Producer of Window Glass

The BEST Glass

GENERAL OFFICES: PITTSBURGH, PA. BRANCHES IN PRINCIPAL CITIES

# There's more profit in a HUTHER SAW



Thin High Speed Steel Knives



Grinding Attachment



Cylinder Cutter Head



Cutter Head

**Backed by fifty years experience in the making of highest grade saws, each Huther Saw has a quality built into it that insures maximum length of service.**



Circular Mitre Saw  
with Cleaner Tooth

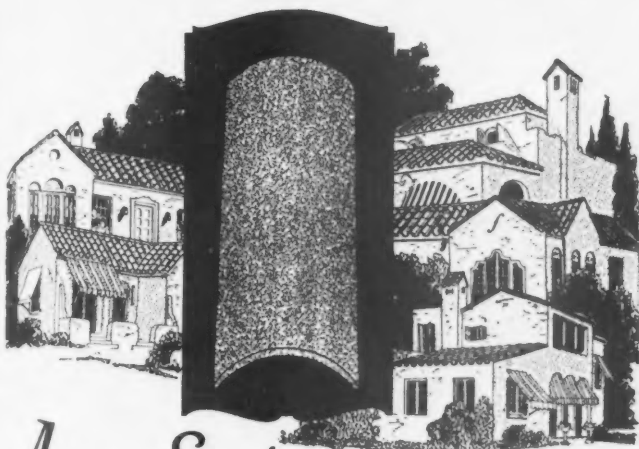
## Huther Bros. Saw Mfg. Co.

ROCHESTER, N. Y.

Makers of Better Saws for More Than Fifty Years



Dado Head



## Ausco Equipment

*Reproduces Original Spanish Mission Tapered Tile*

The tremendous demand for original Spanish Mission Roof tile, which heretofore has been obtained almost entirely from Europe, Cuba and South America at enormous expense, can now be reproduced in concrete and delivered at the building for a fractional cost of the imported article.

The Ausco Troweling Machine, recently perfected and now being placed on the market, reproduces the identical tapered shape of the original Mission tile, but more uniform in size, shape and thickness.

Made of concrete, it is, of course, much harder, less brittle, more durable and susceptible to variations in color and texture impossible with other materials.

Difficulties encountered heretofore in making the tapered shape—one end wider than the other—seemingly has baffled every effort, until this Company finally perfected the Ausco Troweling Machine which does accomplish the operation perfectly.

Other styles, sizes and shapes of roof tile are being made of concrete most successfully, but the original Spanish Mission style, heretofore made by hand, formed on the workman's thigh, has resisted all experiments until the present time.

Concrete is, of course, the accepted tile material, also, the original Mission shape is the accepted style in this country, but wholly impractical to mold on the leg, as the foreigners do with clay, and too laborious and expensive to make that way in America, if it could be done successfully.

Having perfected a troweling machine that actually does reproduce the characteristic tapered shape, and designed also other units for coloring and finishing with equal degree of success, we now offer the complete outfit, ready to be installed wherever it may be desired to locate such a plant.

With no expensive equipment to buy, as required in working with other materials, and the ease with which cement and sand are obtained for making concrete tile, naturally the Ausco method is substantially lower in cost.

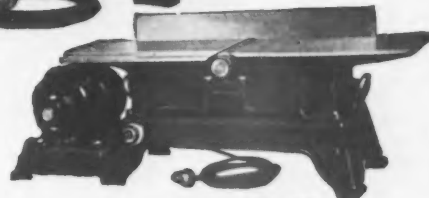
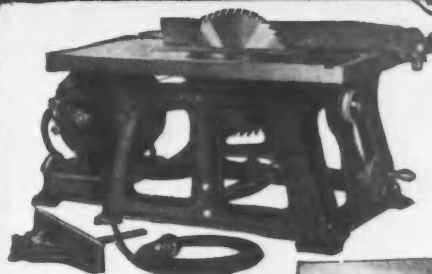
Of course the demand for roof tile will increase greatly, since the cost is lowered and plants will find their way into every city, town and hamlet, wherever the Spanish and Moorish types of architecture are employed.

*Illustrated literature and more complete information furnished on request.*

**THE  
AUSCO  
LINE**

**W. E. Austin Machinery Co.**  
128-A Marietta St., Atlanta, Ga.

**Every Contractor Who Uses  
Them Will Tell You That  
H & A Portable Bench  
Saws Are Big  
Labor Savers**



ONE man with an H. & A. Portable machine can do more work than five men with ordinary hand tools. That's why contractors in every part of United States are using H. & A. Portable Saws and jointers to cut down payroll overhead and to build up bigger profits.

H. & A. Portable machines handle all kinds of work quickly, accurately, profitably. They work from an ordinary electric light socket, or when specified, gas engine can be furnished.

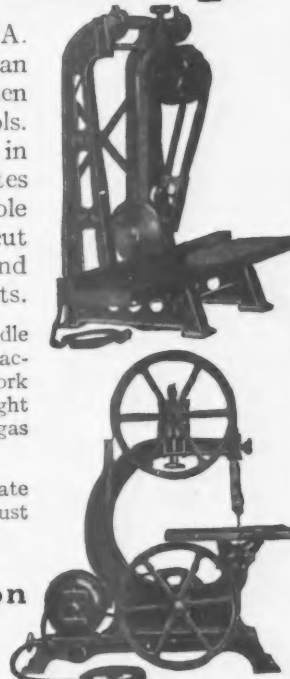
In your own interest, investigate H. & A. machines at once. Just send the coupon.

**Heston & Anderson**

207 South Sixth St.  
Fairfield, Iowa



**Now—Metal Stands**  
Where permanent installation is desired, we equip H. & A. machines with heavy metal floor stands.



Mail to  
**Heston & Anderson,**  
207 S. Sixth St., Fairfield, Iowa

Your name on this coupon will bring you a free copy of our complete catalog. Tear coupon out. Send it now.

Name .....

St. No. ....

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

**Mail  
This  
for Our  
Complete  
Catalog**

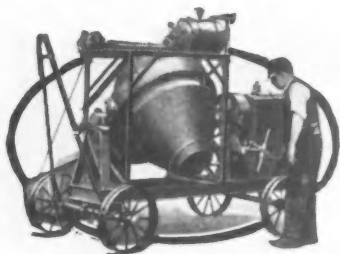


## The Life of a Smith Is One Big Job After Another

Smiths are not sold—nor are they bought—just for one job. We know—and our customers know—that when a Smith leaves the factory it is ready for a long life of dependable, low cost usefulness. No matter how big or how long its first job, it is ready to go on to the next, and to deliver the same speedy maximum production as when it poured its first batch.

Instance after instance can be quoted of Smith Mixers sold years ago—many of them ten, fifteen, twenty and

*Two 28-S Smith Tilters—originally sold in 1920 to the Thompson-Starrett Co., for use on the Fisher Body Plant, later used by the same company on the O'Shaughnessy Dam, and then sold to The Carmichael Construction Co., of Akron, for use in the Goodrich Tire Factory. Fisher Body Plant shown in oval insert.*



*Smith 7-S Tilter With Power Loader*

*Let us send you a copy of Catalog 500 fully illustrating and describing the entire Smith line*

**The T. L. SMITH COMPANY**  
1026 32nd St., Milwaukee, Wis.

*Sales Offices and Service Stations in Principal Cities*



*Smith Tilting Mixers are built in the following sizes: 2 1/2, 3 1/2, 5, 7, 10, 14, 21, 28, 40, 56 and 112 cu. ft. per batch; Smith Non-Tilting Mixers: 7, 14, 21 and 28 cu. ft. per batch; Smith Paving Mixers: 27-E.*

# SMITH MIXERS



*The Republic Building, Denver, Colo., a building designed especially for occupancy by doctors and dentists. GF Steel Joist construction throughout. C. Meredith Music, Archt., Denver. Ditton and Kendall, Contr's., Denver. E. Burkhardt & Sons Steel and Iron Works Co., Steel Contr's., Denver. S. W. Straus & Co., Financing.*

## STEEL JOISTS Approved by S. W. STRAUS & Co.

**L**EADING builders the country over employ GF Steel Joists and the approval of this GF Product by so well known a financial organization as S. W. Straus & Co. is further testimony to the dependability and economy of GF Steel Joist floor construction for light occupancy buildings. With these Steel Joists, erection can proceed with amazing speed, several floors can be constructed at once, and no special machinery is needed. The fire safety, extra rigidity and sound-proofness gained with GF Steel Joists recommend them for all commercial, public and residential buildings. Send for a copy of The Fireproofing Handbook.

### Other GF Products

Steel Tile  
Steel Channels  
Peds  
Key Lath  
Self-Sentering  
Corner Beads  
Trussit  
Expanded Metal

Herringbone  
Lintels  
Road Forms  
Diamond Rib  
Lath  
Steel Sash  
Basement and Case-  
ment Windows

Industrial  
Steel Doors  
Wire Mesh  
Concrete  
Reinforcement  
Waterproofing  
Compounds

*The*  
**GENERAL FIREPROOFING BUILDING PRODUCTS**  
YOUNGSTOWN, OHIO  
*Branches in all Principal Cities. Dealers Everywhere*

# GF Steel Joists

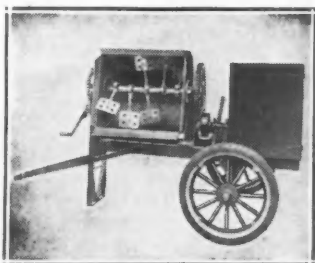
*for Light Occupancy Buildings*





## Compare *before you buy*

There's a lot of difference in mixers—particularly in what they do on the job. Stewarts are noted for results. And by results we mean speed, yardage—thorough mixing, clean discharge—the big things that count in dollars and cents on any kind of job—large or small.



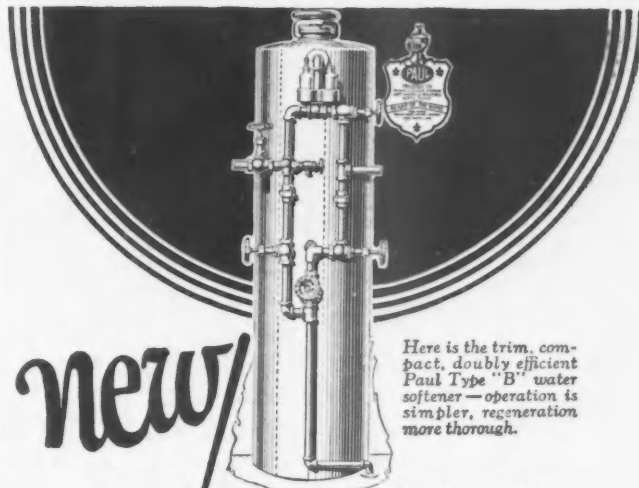
**STEWART  
PLASTER MIXER**

**Stewart Manufacturing Co.**  
157 Rath Street, Waterloo, Iowa

**Built  
on the  
Square**

**Sold  
on the  
Square**

Before picking any mixer—write us. Your name and address on a post card will bring you a lot of facts about Stewarts—things you are interested in knowing about mixers before buying. Write us today.



*new*

### **Paul Type "B" Soft Water Generator**

Here is the trim, compact, doubly efficient Paul Type "B" water softener—operation is simpler, regeneration more thorough.

**P**ROGRESS has produced a new and better double action softener that is quickly regenerated, and tho compact in size, higher in efficiency because the double wash of the mineral bed assures maximum capacity after regeneration. The double wash is assurance against packing or channeling of the mineral. Ask us about it!

**FORT WAYNE ENGINEERING &  
MFG. CO.,**

Fort Wayne, Indiana

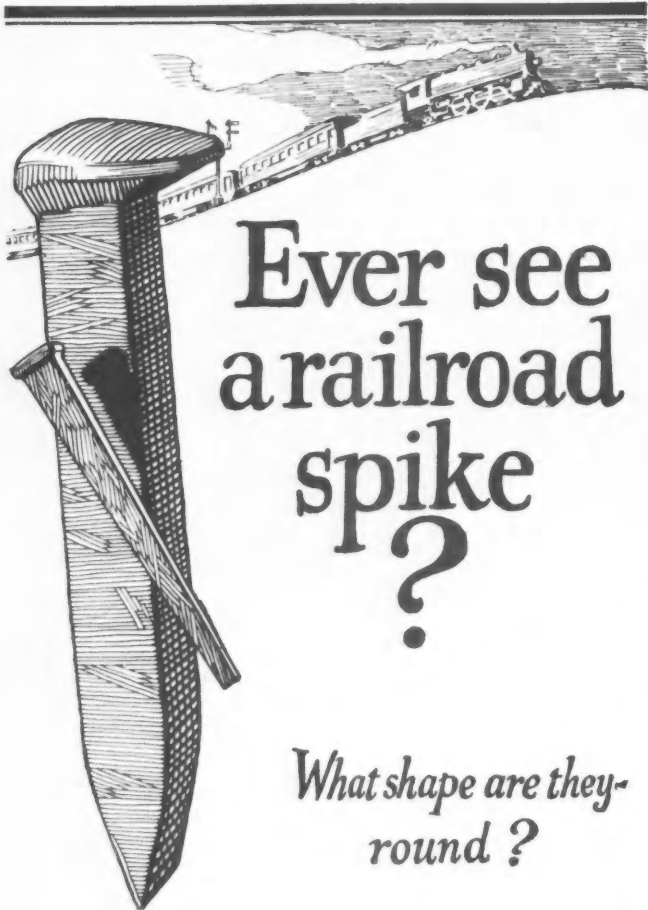
### *Upflow~Double Wash*

FORT WAYNE ENGINEERING & MFG. CO.,  
1713 Harrison St.,  
Fort Wayne, Indiana. \_\_\_\_\_ 19\_\_\_\_

Send literature and prices on your new Type "B" Paul Soft Water Generator with upward flow—double wash principle.

Name \_\_\_\_\_

Address \_\_\_\_\_



Ever see  
a railroad  
spike  
?

*What shape are they—  
round?*

**No,** they are rectangular, because that is the only shape that holds the rail to the ties in spite of the terrific vibration caused by the rapid travel of thousands of tons passing over them daily.

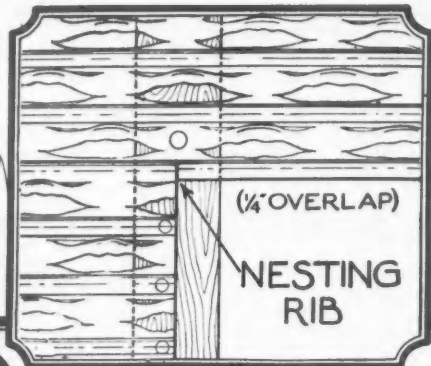
Reading Hard Cut Floor Nails are CUT—the same general shape as railroad spikes—that is why they have 72% more holding power than round wire nails.

They drive straight and hold fast. Use them for your next flooring job.

With unusually hard woods it's safer to use Rico Hard Cut Floor Nails—made to drive into hard wood without bending.

READING IRON COMPANY  
READING, PENNA.

**RICO** HARD FLOOR **NAILS**



## Questions & Answers about METAL LATH—

[ No. 5 of a Series ]

*In applying metal lath, what provision is made for joining adjacent sheets?*

Standard specifications for expanded metal lath call for a minimum of  $\frac{3}{4}$ " overlap.

*What does this mean in excess yardage required?*

If edges were always true and workmen always economical, it would mean only about 3 per cent of overlap loss.

*What are the actual overlap losses?*

Uneven stretching of expanded lath in manufacture sometimes means that the overlap varies from a minimum of  $\frac{3}{4}$ " up to 3" or more in the wide spots. Hence actual overlap losses may vary from 4 to 12 per cent. Eight per cent is a common allowance.

*Do all kinds of metal lath call for the same overlap allowance?*

No, Bostwick "Truss-Loop" Metal Lath is overlapped only the width of its nesting rib, about  $\frac{1}{4}$ ".

*What is the reason for this distinction?*

Its greater stiffness minimizes the need of overlap.

*Can the joint be made accurately within such close tolerance?*

Yes, Bostwick "Truss-Loop" Metal Lath comes in the original dimensions of the sheet—a true rectangle.

*The Bostwick "Truss-Loop" Lath is not stretched?*

Neither in manufacture nor in application. The workman's task is to place it, not pull it. No lath product on the market can be applied with greater rapidity.

THE BOSTWICK STEEL LATH CO.  
NILES, OHIO



Member of  
National Council  
for Better  
Plastering

**Bostwick**  
TRUSS-LOOP  
METAL LATH

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Section of a Thatched-Slate Roof

## **Announcing—VENDOR'S THATCHED-SLATE**

**The True English Slate Roof—  
At Moderate Cost**

Shipped ready to apply—The Same Kind of Genuine Natural Slate, and laid in the same manner as it was in England 400 years ago.

An Architectural Roof at a Commercial Price.

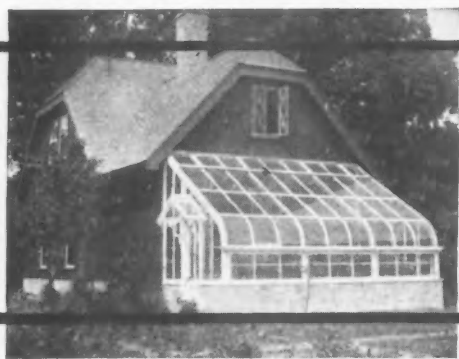
Detach and mail the coupon herewith.

**VENDOR SLATE CO., Inc.**  
**EASTON, PA.**

Please send particulars on Thatched-Slate.  
Name.....  
Address.....

A.B.





## —Costs \$738— Will Double Up On Your Selling Price

This Sunshine Room 11 feet wide and 25 feet long, costs \$738, for the complete fabricated materials and entire equipment.

It should cost you about \$250 or \$300 to put it up.

You can sell your house for \$1500 more. You get \$500 profit on a \$1000 investment.

Next to a sleeping porch, and mirrors in the bedroom doors, you'll find this Sunshine Room certainly does catch the women.

They fairly gloat over it, the way it opens off the living-room or dining-room.

You don't have to paint them any picture of the flowers it will grow or the joys and comfort of its use as a Winter Sunroom.

So good a proposition does the idea look to a Long Island builder he is putting Sunshine Rooms on 48 houses.

Frame is steel.

All wood used, is Cypress.

Completely equipped with benches, ventilating apparatus, heating coils and pipe to boiler.

All materials cut and fitted as far as possible and given one coat of paint.

Bolts, screws, everything furnished.

Send for complete facts.

Use the coupon.

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General Offices and Factory:  
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101 Park Avenue	6701 North Broad Street
Wilkes-Barre	Boston
402 Coal Exchange Bldg.	161 Massachusetts Ave.
Albany, N. Y.	
Postoffice Box 921	

(Please print plainly—Name and Address)

Send me full facts about your Sunshine Room.

Name \_\_\_\_\_

Address \_\_\_\_\_



## Only the Best Flooring would be used in such a house

UP IN the northwest, lumber is one of the leading industries. Yet when John P. Weyerhaeuser's new \$165,000 residence was built in Tacoma, Wash., the flooring was ordered from Arkansas.

Meade & Hamilton, the architects, and Cornell Bros., the contractors, agreed that only "Perfection" Brand Oak Flooring would be used throughout this palatial residence.

From experience they knew the inherent quality of "Perfection". How finely it is milled, how honestly graded and how carefully inspected.

As you see it today, the rich natural pattern has a beautiful lustre. The texture is such that generations from now this same floor will retain its original beauty. Yet "Perfection" costs no more than a number of other brands.

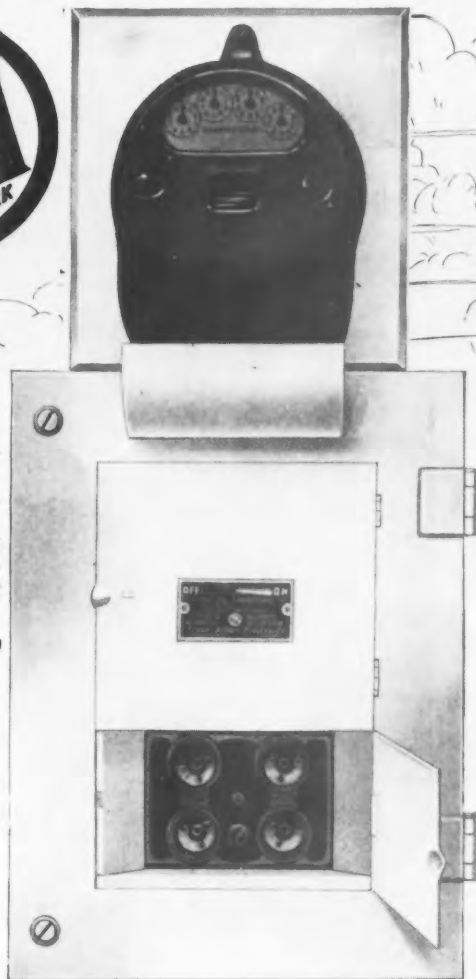
There's a size and grade of "Perfection" Brand Oak Flooring for every type of structure, new or old. For full information write today.

**Arkansas Oak Flooring Company**  
PINE BLUFF, ARK.



# 'PERFECTION'

## Brand Oak Flooring



This  
is  
an

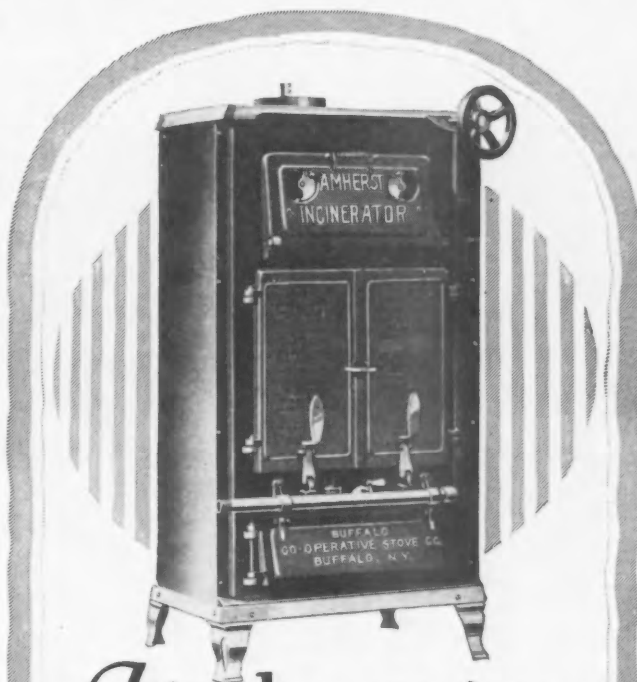
## FA NRSS Flush Service Switch Panelboard for Homes

By combining all the requirements of the Central Station meter entrance and service switch with the safety requirements of the home owner, we have produced a unit for homes that you, as a builder, cannot afford to overlook. It looks better, helps sell the job and is quick to install.

*Send for the NRSS Bulletin and learn the details. We will be glad to send it upon request.*

**Frank Adam**  
ELECTRIC COMPANY  
ST. LOUIS

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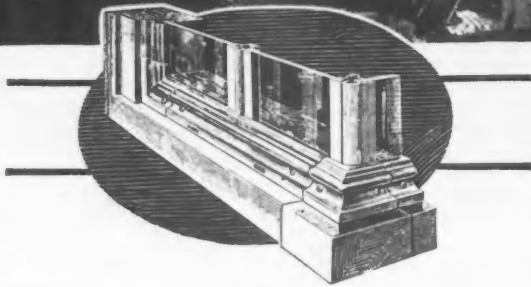
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The same quality and cooperation which helped Shultz & Weaver, architects, and the Scofield Engineering & Contracting Company, builders, successfully solve the Biltmore store front problem, is available to you—in Desco.

There is a distributor near you, no matter where you are, and we carry a complete stock in New York City, at 562 West 52nd Street.

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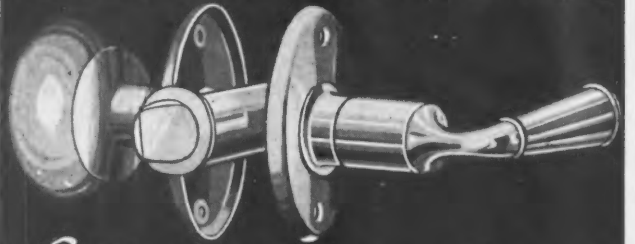
### Facts about Desco Fronts

Their cost is moderate.  
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Their beauty is enduring.  
They are made of copper.  
They give long service.  
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A wide range of designs is available.  
Their merchandising effectiveness makes each installation a salesman for you.  
They bring maximum volume of business and greater profit to the builder.

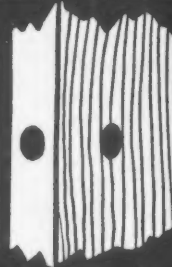
**Desco**  
**METAL**  
**STORE FRONTS**

(269)

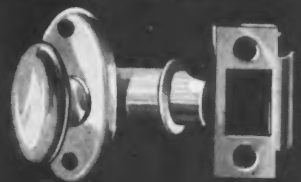
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for FRENCH & SCREEN DOORS



to install, simply  
bore two  
holes



for CUPBOARD  
DOORS

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**B**UILDERS everywhere have come to realize the money saving extra profit making advantages offered by Dexter Tubular Latches.

Any handy man can install four of them while a skilled mechanic installs one ordinary mortised latch. They will render a lifetime of perfect service and in addition they look twice their cost.

Ask your dealer to show them to you. If he hasn't them in stock write us for name of dealer in your community who has. Sold only thru dealers.

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**T**HE selected hard natural stone used in Alberene Stone Stair Treads and Landings has a "toothed" surface which gives as sure a footing for wet as for dry feet. And this "toothed" quality, inherent in the stone itself, is not destroyed by wear.

Furthermore, Alberene Stone is permanently fire-resistant—it will not crack even when a stream of cold water is turned upon a highly heated slab. Think what a safeguard this is, where the fire hazard is considered—as it must be wherever stairways are involved.

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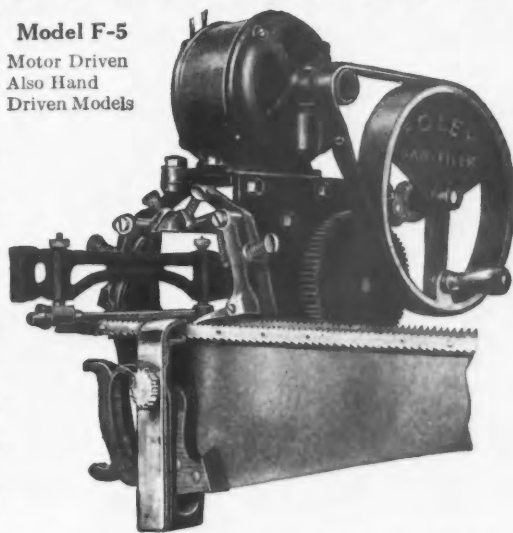
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Hand Saws—Back Saws—Band Saws ( $\frac{1}{4}$ " to  $4\frac{1}{2}$ ")  
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"I sure have done some fine work with my machine. There is nothing that can beat it. It saves your eyes, it saves files, it saves time, and beats the most expert saw filer in time and accuracy."

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"Have received the Filer and am doing fine. Let me tell you right now it is a good deal better than you represent it to be. I never saw anything to beat it. I am more than pleased with my investment and will not fail to show it up."

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Feb. 27, 1926

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"I am having good success with the Foley Saw Filer. It has paid for itself twice in the three months since I got it. I have all the work I can do evenings. I have all the way from two to eight saws every evening."

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—is a money maker on every job. It files saws 6 times as fast as by hand. Saws cut better and follow truer. Men do more and better work. You profit by the time saved. And you don't take a chance either because—

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Put the Foley to work on your jobs for 30 days. Let it demonstrate the time and labor it saves. If, for any reason, you are not satisfied—return it and the purchase price will be refunded. Mail this coupon now.

**\$10  
BRINGS IT  
TO YOU**

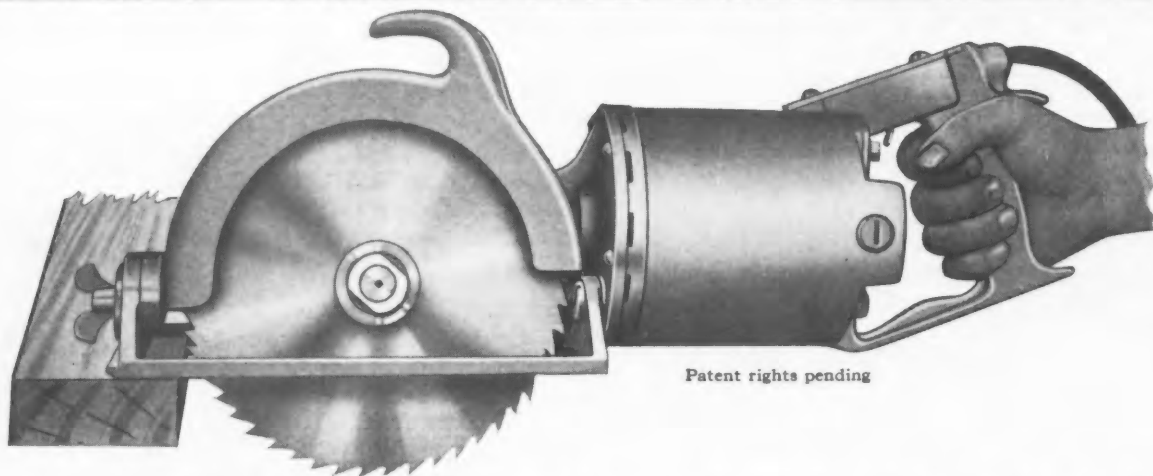
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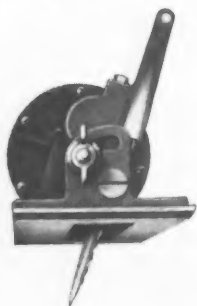
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## THE PEERLESS SAW *with* TILTING BASE



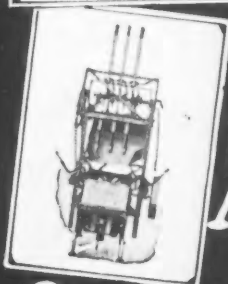
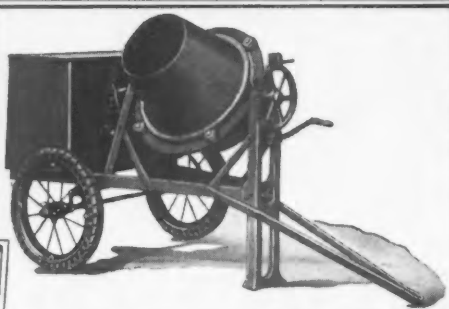
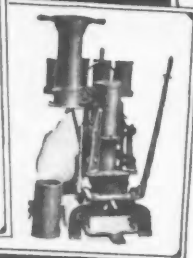
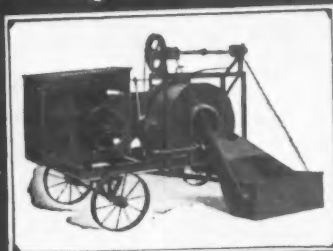
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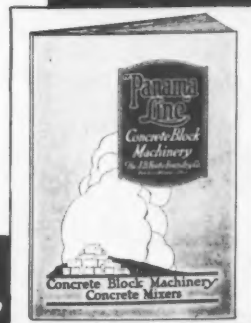


## AND SAVE MONEY

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That's why we say "Buy Panama Equipment."

Have you received your copy of the Panama Catalog? If not, send for it today.



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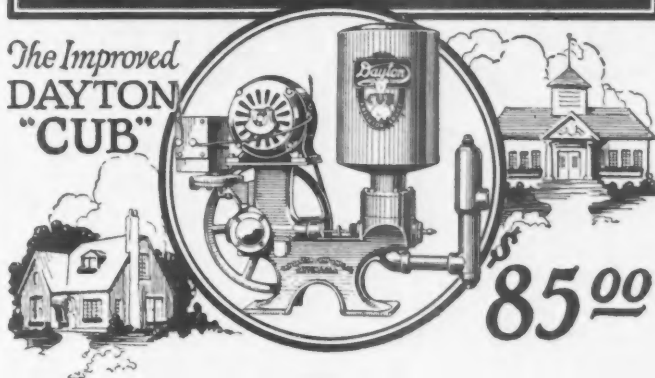
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The "CUB" pictured above, with a capacity of 200 gallons per hour, is unquestionably the greatest water system value ever offered. This is but one of a complete line of water systems for any running water supply requirement.

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The water system you install is as important as the foundations, the walls or the roof. Whether it's a modest residence, a resort hotel or a country club—whether it's a house built for sale or for a client, the water system must be dependable and efficient. And that's what DAYTON pumps and Water Systems are—DEPENDABLE and EFFICIENT. Positive in action and trouble-free, they deliver a generous and unfailing supply of running water. Built in a wide range of capacities and prices that fill any demand.

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We have put all data on DAYTON Water Systems into our booklet, "Dependable Water Service," which also contains most interesting and practical information for both builders and architects. Your copy is ready for you—free. Just give this

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*Make the water do the running*

Please send at once my copy of "Dependable Water Service."

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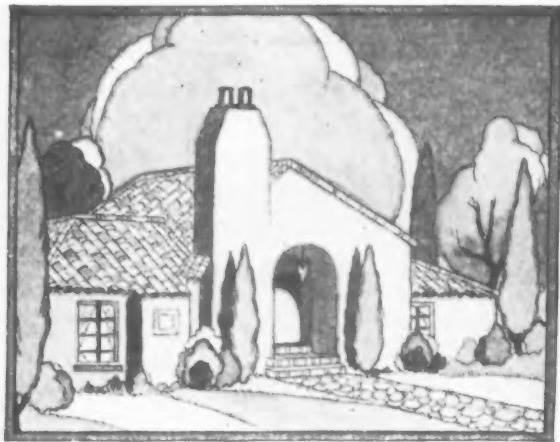
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The house ornamented with Dickey Chimney Tops is instantly classified as *distinctive*. The unique charm which these tops add, their durability and economy, has been proved on thousands of houses.

Among the sixteen designs of Dickey Chimney Tops are styles and sizes suitable for practically all types of architecture. Low, simply designed tops accentuate the charm of the popular Spanish dwelling. The true character of the English structure is brought out by the use of more elaborately designed tops.

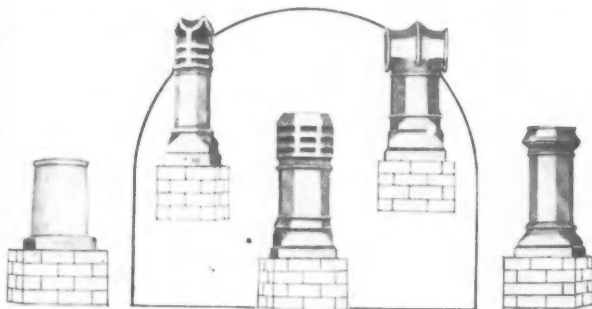
Dickey Chimney Tops are made of hard-burned fire clay—are everlasting. They improve the draft of any chimney. Sizes are made to fit flue lining of practically all dimensions.

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# DICKEY CHIMNEY TOPS

## Sheet Metal Work that Resists Rust!



The destructive enemy of sheet metal is *rust*. It is successfully combated by the use of protective coatings, or by scientific alloying to resist corrosion. Well made steel alloyed with Copper will last longest. Insist upon

# KEYSTONE Rust-Resisting Copper Steel Sheets AND ROOFING TIN PLATES



Add safety to satisfaction, with full protection from fire, lightning, and weather. Keystone quality gives superior service for roofing, siding, gutters, spouting, flashings, metal lath, and all uses to which sheet metal is adapted. Look for the Keystone included in brands. We manufacture American Bessemer, American Open Hearth, and Keystone Copper Steel Sheets and Tin Plates for every requirement of particular architects and builders.

**Black Sheets for all purposes**  
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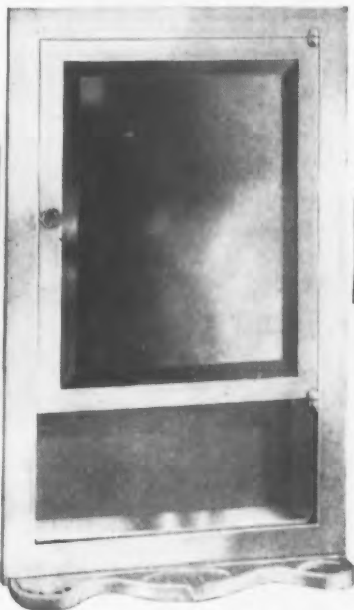
APOLLO-KEYSTONE Galvanized Sheets give increased service and added permanence to your building construction. These are unquestionably the highest quality sheets produced for galvanized sheet metal work.

KEYSTONE COPPER STEEL Roofing Tin Plates make clean, safe, attractive and satisfactory roofs. Supplied in grades up to 40 pounds coating—specially adapted to residences and public buildings. Metal roofs may be painted to harmonize with the color scheme of the building—an important feature which is often overlooked. Keystone quality products are sold by leading metal merchants, and are used by first-class roofers and sheet metal workers. Write for interesting booklets.

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Acme Steel Bath Room Cabinet, Model B, with tooth brush rack, soap tray and glass holder attachment

## "Putting One Over"

### on the High Cost of Building



Acme Model A

It's hard to beat the High Cost of Building—but not impossible. You can begin to do it by installing Acme Steel Bath Room Cabinets in all houses and apartments. The saving on each cabinet may be just a ten dollar bill, but if you multiply that by the number you install in a year you have a tidy sum.

Furthermore, if you could save on all building costs proportionally, **while retaining the original high quality**, you would cut your building costs in half. Acme Cabinets are electrically spot and butt welded so that they are practically a solid piece of cold rolled steel. All inside corners are rounded—making dusting easy, and hinges are sanitary and rust proof. The doors will support the weight of a big man. Mirror is of high grade plate glass, and each coat of white enamel is **slow-baked** on a steel blasted surface. **Enamel will not peel.**

We make cabinets of seven standard models. Special designs made when order is of sufficient quantity.

At a nominal extra cost Acme Cabinets can be furnished with a tooth brush rack, soap tray and glass holder attachment, as shown in illustration at top of page, making it unnecessary to buy these fixtures as separate units.

## MORTON MANUFACTURING CO.

5136 West Lake Street

Chicago, Illinois

### COUPON

#### MORTON MANUFACTURING CO.,

5136 W. Lake Street, Chicago, Illinois.

Send me Catalog A-4, and low prices on Acme Bath Room Cabinets as mentioned in American Builder.

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STREET.....

CITY..... STATE.....



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Azel Meadows, realtor-builder in Huntington, W. Va., says his prospects want homes that are well-built, of products nationally recognized to be standard. Liveability and quality are two essentials. How well oak flooring meets these requirements is proved in this typical Meadows' subdivision home, in which only the best grade of oak flooring was used throughout.

Oak floors satisfy the desire for beauty, dignity and harmony. Their long life and wearing qualities make them an investment, increasing in value as time improves their mellowness and beauty. The cost, compared with temporary perishable floor coverings is negligible.

### Color Finishes express Individuality

How modern color finishes add distinction and conform to decorative schemes is explained in "The Story of Oak Floors," a 24-page illustrated booklet, free.

#### Free literature

We will supply you with illustrated literature to show prospects. Also technical booklets for your use, with grading rules, standard measurements, proper handling, laying and nailing, etc.



#### Mail this coupon

OAK FLOORING BUREAU  
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Please send me "The Story of Oak Floors," and "How and Where to Use Oak Floors."

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## BUILDER'S SUPPLIES



Fig. 410  
Auto Wheel Guard

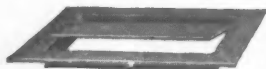


Fig. 116  
Ash Dumps



Fig. 111  
Ash Pit Doors

### A. L. SWETT IRON WORKS

151 Glenwood Avenue  
MEDINA, N. Y.



Fig. 153  
Melting Pots



Fig. 235  
Vault Frames and Covers



Fig. 120  
Jackscrews

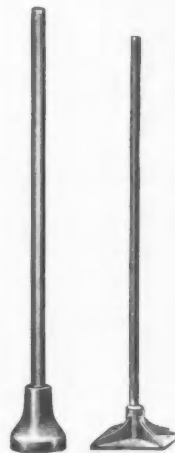


Fig. 92 Fig. 93  
Tampers

We manufacture many specialties required in the building trade, a few of which are shown on this page.

We also make special work from your blueprints, such as post caps and sockets, man-hole frames and covers, stair treads, ventilator grates, porch column bases, garage traps and other fixtures.

*Send for our catalog. Ask your jobber for Swett's Products.*



## PENRHYN STONE

(a Slate Rock)

The wonderful colorings of natural slate gives a charming and delightful effect to the Porch Floor, Garden Walk or Sun Parlor.

Provides the distinctive finishing touch of color to the interior or exterior floor or the informality necessary for Landscape and Rustic Walks.

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Easton, Pa.

### J. W. WILLIAMS SLATE CO.

(A VERMONT CORPORATION)

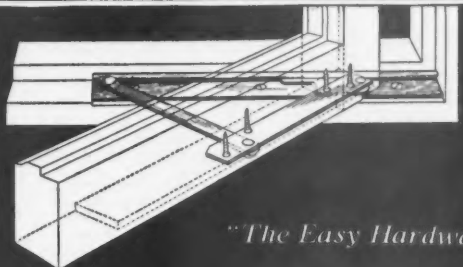
PRODUCERS OF HIGHEST QUALITY  
SLATE ROOFS AND SLATE SPECIALTIES

Vermont Office  
Poultney  
Vermont

Architectural Service Department: 103 Park Ave., New York



# CASEMENT WHITCO HARDWARE



## A Whitco Equipped Sash Cannot Sag

Not only does this self-adjusting hardware provide a cradle-like support for the sash as a whole, but the plate which attaches to it provides the strongest kind of a reinforcement for the joint between the stile and the rails.

*Whitco is sold by dealers  
in builders' hardware*

**VINCENT WHITNEY COMPANY**  
MANUFACTURERS HARDWARE SPECIALTIES

Eastern Offices:  
636-645 Mass. Trust  
Bldg., Boston

Western Offices:  
365 Market Street  
San Francisco



*"Whitco makes it easy and safe to clean both sides of  
the casement from within the room"*



*Some of 100 houses on Cambria Steel Com-  
pany's Johnstown Subdivision*

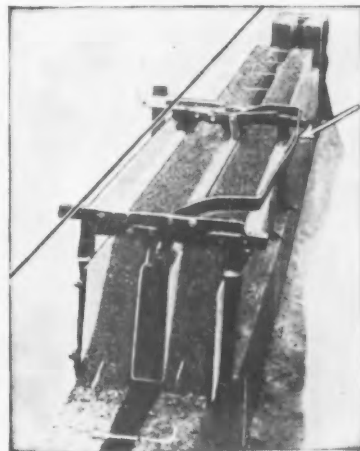


## Bill Says: Only "Better Than Ordinary" Houses Sell Today

**S**ALES on Wallbuilder jobs are always booming. Before the house is finished Wallbuilder at work attracts a crowd of prospects. They see insulation ***built-in*** and know it means a coldproof, heatproof, dampproof, fireproof house. It takes the job out of the run of ordinary construction and makes an easy sale for you. Insulation's your talking point; your profit's in lower construction costs. Imagine . . . no furring, lathing, or scratch coat plaster! And a heating plant 20% smaller! It's the unbroken air space does it."

*Dealers: Write for Information*

*The Van Guilder Wallbuilder shown in place on wall is filled with semi-wet concrete and tamped. Lever indicated by arrow is then lifted, which collapses the center core and expands the outside plates, thereby freeing the concrete on all sides. The Wallbuilder is then instantly slid forward. A foot of wall a minute.*



## Van Guilder System Concrete Bldg. 15 East 40th St. New York

Tell me what the VAN GUILDER WALLBUILDER can do for me. Local costs are—Cement.....per bbl.  
Sand.....per cu. yd. Aggregate.....per cu. yd.  
Labor.....per hr.

Name.....

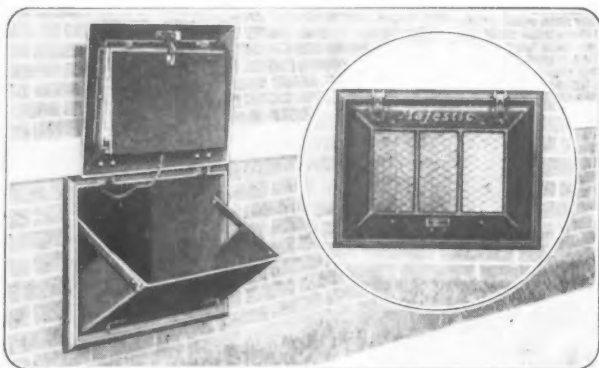
My business is.....

Address..... 9-A.B.



## The Majestic Says "Good Value"

A MAJESTIC Coal Window in a home says "Good Value" to everyone who sees it—because the Majestic is recognized as the leading coal window value. More Majestics are installed each year than all other coal windows combined, because the Majestic is break-proof and rust-proof—with Certified Malleable Iron frame and hinges, electro-galvanized pressed steel door and Keystone Copper Steel body and hopper. You give your clients "Good Value" which they cannot help but appreciate, when you use the Majestic.



This is the No. M10 Majestic open and closed—one of several new and improved styles. All are shown in our new catalog, together with many other Majestic products you ought to use in the homes you build. Write for our new catalog and prices.



THE MAJESTIC CO. - Huntington, Ind.

# Majestic

## Coal Window

The Mark of a Modern Home

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

## GAS for YOUR COUNTRY HOME



You can have gas in your country home, in your own compact, individual gas plant which can be installed in a corner of the basement.

Gas is ideal for cooking, heating, laundry work and lighting. It will supply you with hot water twenty-four hours in the day. It is clean, safe and odorless. It saves many steps—no wood nor coal to carry—no dirt nor ashes.

The Detroit Combination Gas Machine will furnish you with gas for every purpose. Easily installed in any type of building—new or old. A size for every requirement—homes, clubs, institutions.

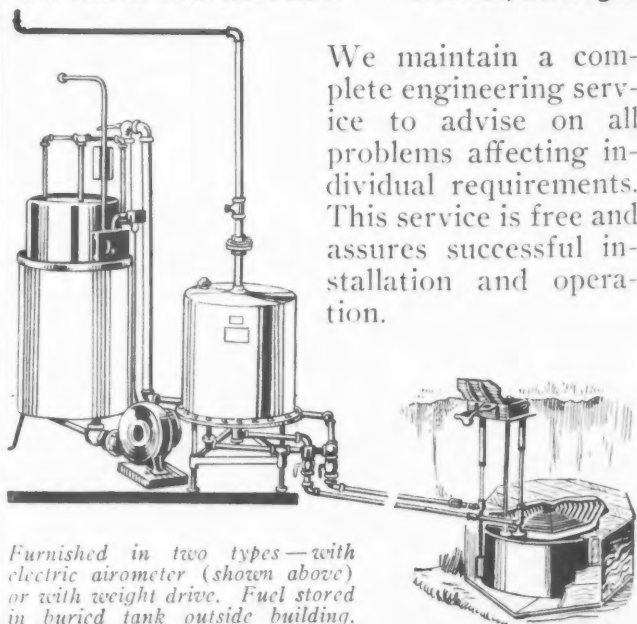
Suburban Gas means more comfort, greater economy and less manual labor for the housewife.

Write for our catalog "Detroit Suburban Gas Service." It tells the complete story.

Dealers—Write for our attractive proposition.

### Detroit Suburban Gas Plant Co.

2155 Milwaukee Ave. East Detroit, Michigan



We maintain a complete engineering service to advise on all problems affecting individual requirements. This service is free and assures successful installation and operation.

Furnished in two types—with electric airometer (shown above) or with weight drive. Fuel stored in buried tank outside building.

## Building Better Fireplaces



### Where to Place the Fireplace Damper

IN suggesting the best possible position for the damper in the fireplace, Donley Fireplace Plans concur with the U. S. Dept. of Agr. Bulletin No. 1230 and recommend that it be placed one to three courses above breast line of opening and at the front of the fireplace, the front flange of the damper in the face brick, the sides resting on the splayed side walls and the rear flange on the forward sloping rear wall. The position at the front of the fireplace permits of a good smoke shelf immediately back of the damper. The higher position offers greater security against smoke eddies.

The question of where to place the damper and why, is fully discussed in the Donley Book of Fireplaces. This book also gives complete plans, designs, illustrations and descriptions of Donley Fireplace Equipment including the Donley Damper with its smooth metal throat that, together with proper construction, prevents smoking.

*The Donley Book of Fireplaces is sent free to all interested. Donley Catalog is also sent if requested.*

**The Donley Brothers co.**  
13910 Miles Avenue • • Cleveland, Ohio

**DONLEY DEVICES**  
Complete the Home



### Architecture Carpentry Building

### These Big Books Shipped FREE

This is an amazing offer to any carpenter, contractor, architect or draftsman, or to anyone interested in knowing more about these splendid professions.

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All subjects are fully covered in detail. Estimating is given special attention, construction is covered in the utmost detail and there are a thousand and one things of tremendous importance to anyone in the building line.

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Framing  
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You may send me, without any obligation, the full set of five big books on architecture, carpentry and building with the understanding that I pay to have them sent to me in full within 10 days after which I will send you \$2.00, and the balance of only \$22.80 is paid.  
Name \_\_\_\_\_ Address \_\_\_\_\_





## A Good Floor to Lay— A Good Profit to Make

That is double security for you and for your client. You provide an excellent floor and make a substantial profit. You will find the business of laying Magnestone Flooring a pleasant occupation and a money-maker as well.

Put it right over the old floor as well as for new construction. It is laid one-half inch thick and trowel finished like cement by any competent masonry mechanic. These floors are sanitary, comfortable, noiseless, durable, warm and fire-proof. Make your next floor Magnestone! Your profit is assured!

### Solves Your Flooring Problems

in kitchens, in bathrooms, in schools, hotels, stores, factories and hospitals, all you need is to get started. Your first job will bring you bigger ones and bigger profits. Easily laid. Eleven attractive colors to choose from.

*Write now for our Magnestone Flooring Proposition and Samples—no obligation.*

### AMERICAN MAGNESTONE CORPORATION

Also manufacturers of Magnestone Quality Stucco.

GENERAL OFFICES: OTTAWA, ILLINOIS

Plants and Sales Offices:

Ottawa, Ill.;

Springfield, Ill.;

Kansas City, Mo.

# MAGNESTONE

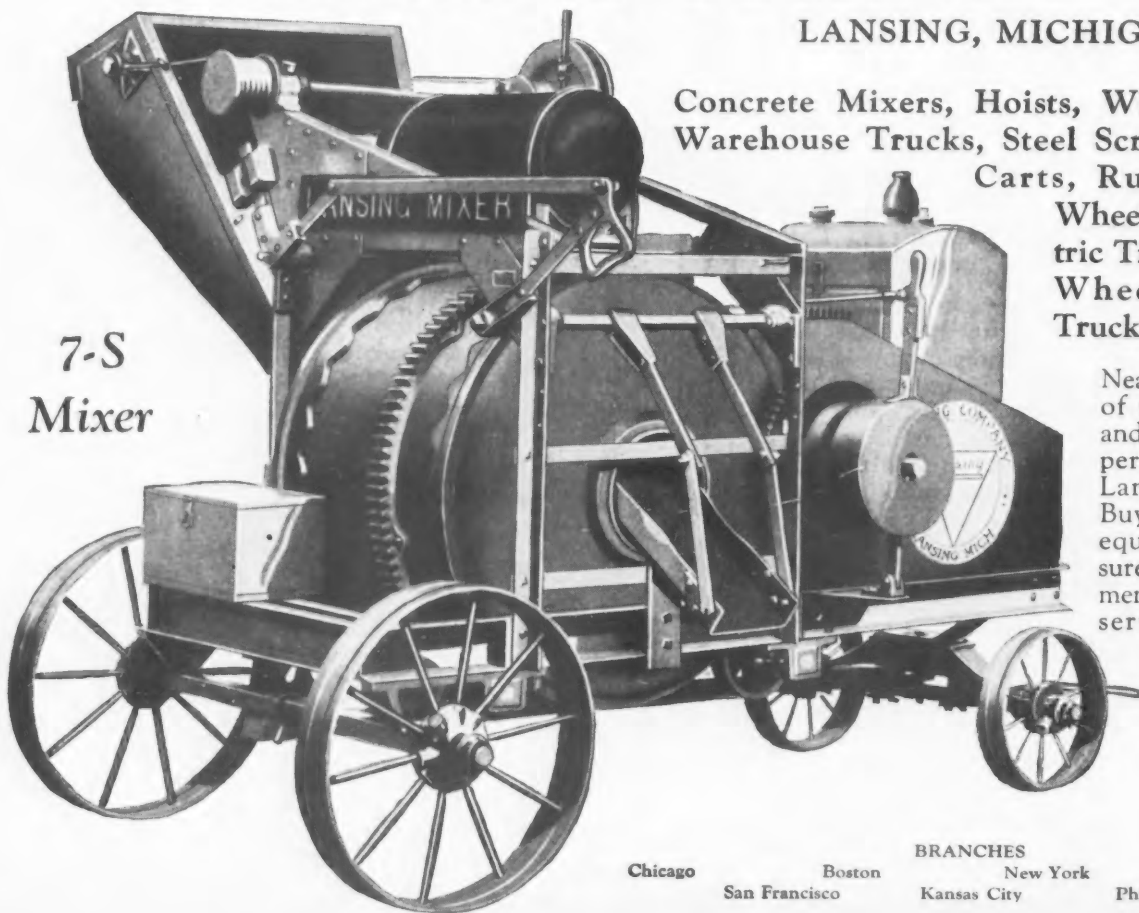
COMPOSITION FLOORING

## LANSING COMPANY

LANSING, MICHIGAN

Concrete Mixers, Hoists, Wheelbarrows,  
Warehouse Trucks, Steel Scrapers, Hand  
Carts, Rubber Tired  
Wheels, Skids, Elec-  
tric Tractors, Fibre  
Wheels, Trailer  
Trucks.

7-S  
Mixer



Nearly half a century of manufacturing and distributing experience is back of Lansing Products. Buyers of Lansing equipment are assured of prompt shipment, efficient repair service and low freight rates.

Send for Cata-  
log No. 12 and  
No. 19-C.

Chicago

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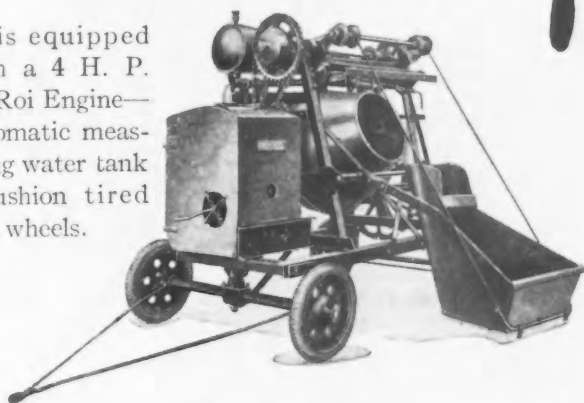
# More Yardage at lower cost

**G**ET the most from your concrete mixer. Its performance will tell you its true worth.

Wherever the Remmel 5L Mixer is used it shows a low cost per yard of concrete laid. It is gaining nation-wide acceptance because of its economic advantages. Try the—

## Remmel 5-L

It is equipped with a 4 H. P. Le Roi Engine—automatic measuring water tank—cushion tired disc wheels.



## Remmel Advantages

1. **Direct Gear Drive**—full measure power direct to the drum.
2. **100% Mixing Drum**—no waste corners—it has every inch of capacity as rated and more.
3. **Reinforced Drum Yoke**—for longer life.
4. **Locking—tilting mechanism.**
5. **All-metal construction.**

## Low Priced Trailer

This trailer will mix over 3 cu. ft. of mixed materials and is the lowest priced trailer-mixer in this size on the market.



Write for detailed information and prices

**REMMELE MANUFACTURING CO.**  
KEWASKUM, WISCONSIN

**REMMELE "DIRECT DRIVE" MIXERS**

"I am well pleased with my 'Trouble Savers'. I have four sets of them and can say that they have paid for themselves ten times over and are just as good as ever."

C. E. Newcomer,  
Dayton, Ohio.

## "Paid for Themselves Ten Times Over"

Mr. Newcomer's letter shows the **result** of using **Trouble Savers**, but the **Cause** lies in the many time and labor-saving features of **Trouble Saver** Trestles.

**Trouble Savers** outlast countless sets of wooden scaffolds. Where a set of wooden scaffolding is

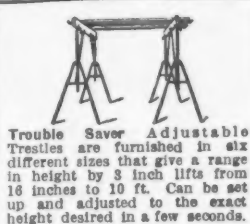
good for only one job, **Trouble Savers** can be used on every job for ten years or more—frequently paying for themselves on the first job.

**Trouble Savers** can be erected and dismantled in less than one-fourth the time required for wooden scaffolding—resulting in a saving which allows you either to make more profit on each job or to bid lower to get it.

There is also the factor of greater safety. **Trouble Savers** are much stronger than wooden scaffolding, and your men **feel** this greater safety—thus giving them more confidence and putting them in a spirit to do better work.

You can fold up **Trouble Savers** as you would fold up a jack-knife and store them in any small out-of-the-way corner.

We will gladly furnish you with prices and full information. Mail the attached coupon today.



**Trouble Saver Adjustable Trestles** are furnished in six different sizes that give a range in height by 2 inch lifts from 16 inches to 10 ft. Can be set up and adjusted to the exact height desired in a few seconds.



**Trouble Saver Carpenter Bracket.** Hooks around the studding and stands firmly on two legs. Will support a ton weight. Far superior to any other method of supporting scaffolding on small buildings.



**Trouble Saver Stucco Bracket** is quickly attached with four nails. Stands firmly on two legs.



**Trouble Saver Ladder Jack.** Gives firm, safe support whether adjusted above or below the ladder. Rests on three rungs.



**Trouble Saver Asphalt Shingles** for composition shingles.

**Trouble Saver "Snapping Turtle" Shingler** for wooden shingles.

We also make **Trouble Saver** Sectional Steel Scaffolding for use on high buildings.

## THE STEEL SCAFFOLDING CO.

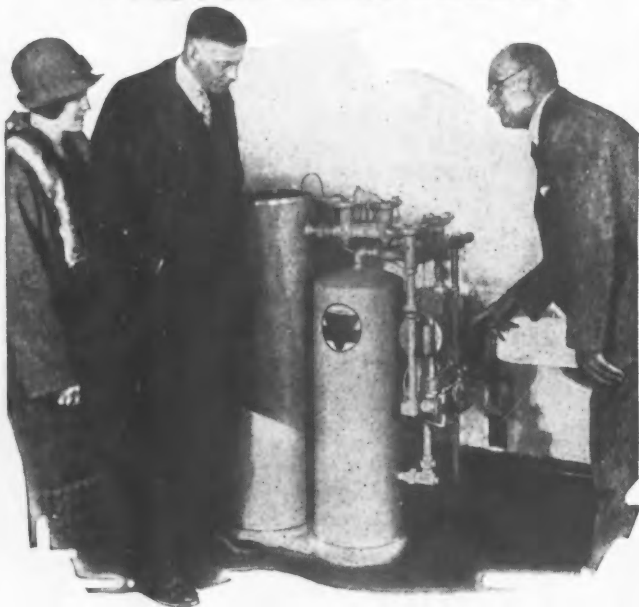
Evansville,  
Indiana

The Steel Scaffolding Co.,  
Evansville, Indiana.

Please send me complete information on your **Trouble Saver** Steel Scaffolding, and also information on your special 30-day trial offer.

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

# DURO Automatic Water Softener



## Make your homes modern!

Yesterday—a home was not modern without a bathroom or electricity. Today—the home is not modern without pure, softened water, the DURO-matic Way.

The DURO Automatic Water Softener is much cheaper to install than the disease-breeding cistern and costly double-plumbing. It is easily connected to city water line in basement.

You save your clients the expense of taking out useless, lime-choked pipes, water heaters, furnace coils, etc., by installing the DURO Automatic Softener.

It is becoming more and more apparent that homes equipped with DURO Automatic Softeners are easier—far easier—to sell or rent.

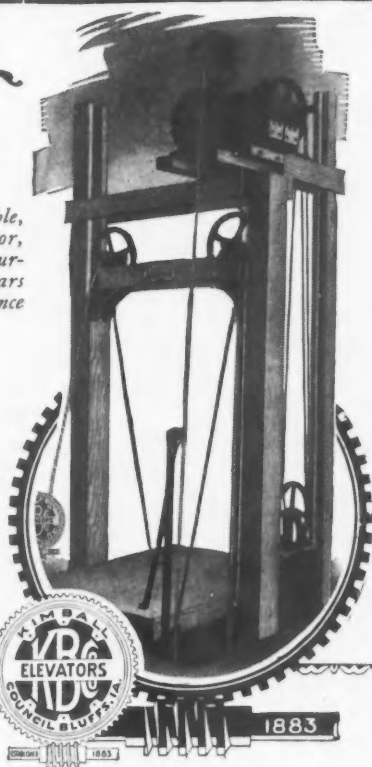
Send for Catalog

The  
**DURO COMPANY**  
109 Monument Ave.  
DAYTON, OHIO

**Duro Guarantees Satisfactory Water Service**

## KIMBALL

*An inexpensive, sensible, safe electric elevator, made by a manufacturing concern with 43 years of satisfactory experience to guide them.*



## LIGHT ELECTRIC ELEVATORS

These Elevators are quickly and easily installed in your building. They are easy to operate and give as fine a service as elevators costing many times as much.

They are built in several capacities, ranging from 1,000 to 3,000 lbs. Each elevator is built for the task it must perform and is fully guaranteed to serve in an efficient manner.

A moderate priced, sturdy, well designed elevator built in all sizes and capacities. An outfit truly worthy of the name "Kimball" it bears.

Especially adaptable for retail stores, bakeries, creameries, mortuaries, hospitals, factories or wherever safe, light, fast, inexpensive elevator service is demanded.

Prompt shipment, quick installation, meeting all state and insurance safety requirements, and guaranteed satisfaction is Kimball Light Electric Service.

*There is a Kimball Elevator built for every requirement*

**KIMBALL BROS. CO.**  
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MINNEAPOLIS  
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SALT LAKE  
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FORT SMITH





## What does your customer want

in a cellar drainer? He wants one that will work well, without attention, and he wants it at a reasonable price. Sell him a Penberthy Automatic Cellar Drainer, Improved Model "R"! It will fill the bill.

What *you* want is one that will satisfy your customer, cause you no after trouble, and allow a nice margin. The Penberthy will do it.

*Your Jobber can supply you.*

## PENBERTHY INJECTOR COMPANY

Established 1886

1269 HOLDEN AVENUE, DETROIT, MICHIGAN  
CANADIAN PLANT, WINDSOR, ONTARIO

## Everlasting, economical weather stripping - -

Here's the weather stripping for you to handle and make money on—Kuhlmann's Metal Weather Strip. Contractors, builders and our representatives are making excellent profits by selling and installing these strips. Any good mechanic can do the job perfectly with ordinary tools.

Why shouldn't you install Kuhlmann's Metal Weather Strips? It's easy work and profitable work.

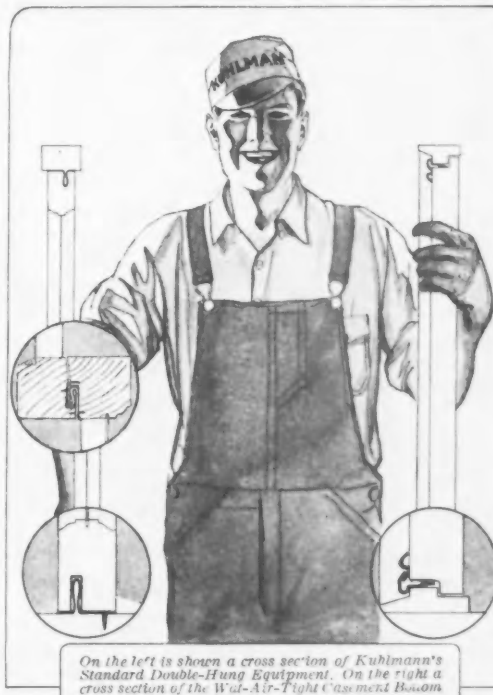
Kuhlmann's Metal Weather Strips are absolutely wind and water tight. Our casement stripping has the exclusive patented water drip holes which absolutely prevent casements from leaking.

Write today for our proposition and samples. We can make real money for you.



Brass Door Sill

## KUHLMANN'S METAL WEATHER STRIPS



On the left is shown a cross section of Kuhlmann's Standard Double-Hung Equipment. On the right a cross section of the Wat-Air-Tight Casement Bottom.

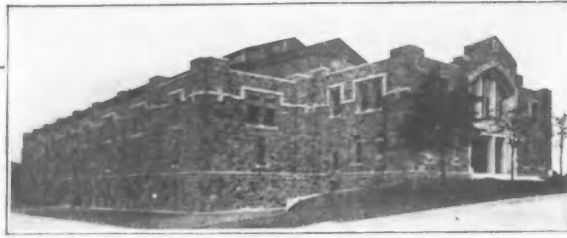
Kuhlmann Metal Weather Strip Co.,  
3805 Forest Park Blvd., St. Louis, Mo.

Please send me complete details of your proposition and samples of your metal weather strips.

Name .....

Street .....

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



Emile G. Perrot  
Architect

Fordham College Gymnasium, Bronx, N. Y. Floored with 40,000 feet of 13 16 x 2 1/2" B. & Better Heart Rift—E. E. Jackson stock.

## FOR HEAVY DUTY FLOORING—

College athletics exert pounding wear and rigorous punishment on gymnasium floors. Specifications must reckon with extreme stress and severe surface wear.

To meet these conditions at Fordham, our B. & Better—2 1/2" Heart Rift Long Leaf Yellow Pine flooring was installed, not only because of its maximum wear-resisting qualities, but for the extra strength factor of

### END-MATCHING

This feature gives every end joint a crushing resistance equal to that at the center of the piece, and widely distributes all stresses thereby adding years to the life of the floor. In the point of cost, END-MATCHED flooring effects a substantial saving in labor because it lays more rapidly than butted stock, requiring no trimming except at the end of each course. Here then is durability, handsome appearance and economy combined in a high type of flooring that qualifies for every sort of heavy duty.

*May we give you other examples and answer your specific questions? Address*

## E. E. JACKSON LUMBER COMPANY

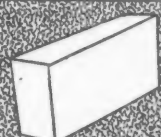
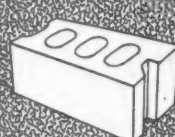
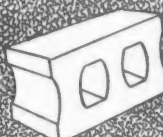
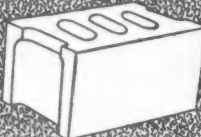
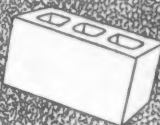
*Manufacturers*

Citizens Bank Building, Baltimore, Maryland  
Plant: Riderwood, Alabama

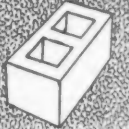
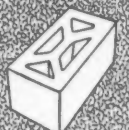


OUR PRODUCTS ARE OBTAINABLE FROM LOCAL DISTRIBUTORS

BLOCKS



TILE



## The Start of a Profitable Business



Anchor Jr. Stripper,  
operated with an  
Anchor Power  
Tamper

The proven economies of properly made concrete wall units—block, brick and tile—has led many contractors to interest themselves in local Anchor concrete products plants.

The installation shown at the left is often the first production unit purchased. It makes plain

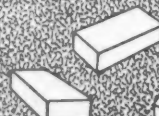
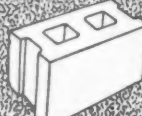
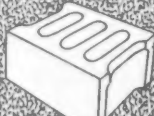
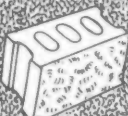
blocks with any desired core arrangement and makes them fast.

The Anchor System "Start with a Single Unit—Add as You Grow" is clearly explained in the new Anchor catalog.

May we send you a copy?

**ANCHOR**  
Concrete Machinery Co.  
Adrian, Michigan

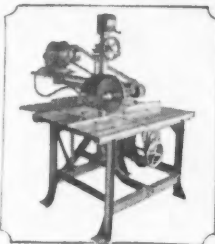
BRICK



## Compare it with a HUTCHINSON

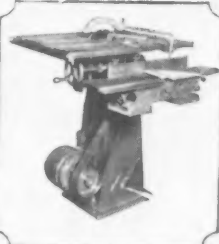
HIGHEST QUALITY  
WOODWORKING MACHINERY  
**before you buy!**

THERE is a Hutchinson machine expressly built for every job. For many years, to buyers of woodworking machinery throughout the country, the name Hutchinson has been a definite guarantee of highest quality. Every machine is guaranteed to do all we claim. It is distinctly to your advantage, therefore, before you purchase any woodworker, to carefully compare it, detail for detail, with all a Hutchinson machine offers.



### New Time Payment Plan.

Hutchinson Machines pay for themselves out of their earnings. Unquestionably, they are the biggest time and money saving woodworkers offered to-day.



**The "Speed Marvel."** Here is the "big job" machine designed for heavy duty work, easily moved from job to job. Works like a swing saw. Equipped with 3 H. P. Motor. 14-inch saws furnished; can use saws up to 20 inches, with which 8-inch material can be cut. Does almost anything that can be done in woodworking.

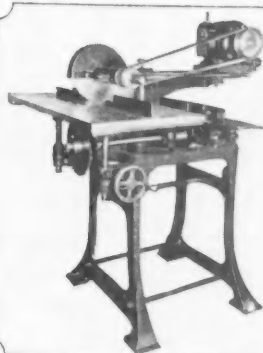
No excuse now to be without one of these woodworkers any longer. For a small first payment any machine you select will come to work for you in your shop or home; 6 months or 12 months to pay for the balance.

### "Handy Hutch."

This is our newest machine, proving extremely popular. Designed for those who want a fine combination machine at a low price. Incomparable value. Runs from any electric light socket. Equipped with 1/2 H. P. dustproof motor. Ball bearings throughout.

Does the machine you contemplate buying contain ball bearings throughout? Hutchinsons do.

Remember, too, Hutchinson Service is always back of every Hutchinson machine sold.



How many operations will that other machine perform? The "Speed Marvel" and "Beaver" perform 23 different operations.

There are no counter shafts, idler pulleys, or double beltting on Hutchinson machines.

### The "Beaver" Wonder Woodworker.

12 machines in one; does 23 different operations. Works like a swing saw. Operates from any electric light socket. Ball bearings throughout. Rips or crosscuts 2-inch material. Sturdy, portable, practical. Breaking all records for an all-around time and money saving lightning woodworker. Can be run all day at a cost of about 18 cents.



### 4-inch "Speed Marvel" Bench Jointer.

Runs from any lamp socket. Long, clean, straight surface obtained by having sufficient bearing surface. Exceptional power per inch of knife. 1/2 H. P. motor. Circular safety head of high grade steel. Automatic guard covering knives. Fence quickly adjusted to any angle.

Hutchinson Machines are easy to use—easy to own—on easy terms.

We can refer to you satisfied users near you.



### 6-in. "Speed Marvel" Bench Jointer.

Can also be furnished without stand for bench use. Extra long, smooth tables. Both jointers illustrated are rugged enough for permanent installation and light enough to be ready portable.

**MAIL COUPON NOW**  
HUTCHINSON MANUFACTURING CO., Dept. A. B.  
Norristown, Penna.

Please send me full information. I am interested in

(Name of Machine)

Name

Address



## Here's the Last Word in Coal Chute Construction—The New, Improved "Kewanee"

The wise builder of today will be impressed when he studies the photograph shown above of the new, improved Kewanee Plain-Door Chute.

He will appreciate the new, attractive pressed steel door, and the new, rugged pressed steel hinges—improvements which make Kewanee Chutes the last word in coal chute construction.

He will read this announcement and mail the coupon below for complete information—before he forgets.

Kewanee "Copper-Steel" Non-Breakable Coal Chutes are provided in various sizes to meet the requirements of the building, but always of rugged "Keystone Copper Steel"—a special alloy which is not only rust-resisting but tougher than ordinary steel.

Yet these superior chutes, guaranteed against breakage, cost but little if any more than brittle cast-iron chutes or steel chutes of light, flimsy construction.

Dealers—Write for Agency Proposition and Liberal Discounts

KEWANEE MFG. CO., 907 Tremont St., Kewanee, Ill.

Mail This Coupon for

### THE NEW KEWANEE CATALOG

Kewanee Manufacturing Company  
907 Tremont St., Kewanee, Ill.

Please send me full information regarding Kewanee Coal Chutes.

I am a

- ☐ Contractor  
☐ Property Owner  
☐ Architect  
☐ Dealer

Name

Address

City

State





# for Cooking She Wants Gas

## Furnish This Convenience with the CLARK GAS PRODUCER

Your suburban homes will sell better and quicker when equipped with the Clark Gas Producer. Housewives appreciate your forethought.

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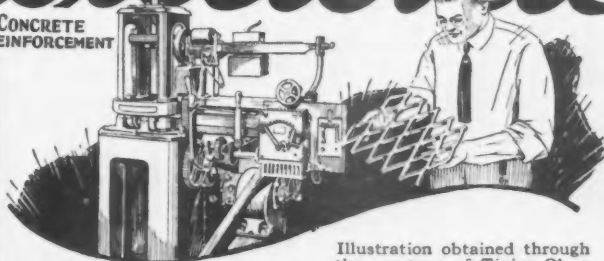


Illustration obtained through the courtesy of Tinius Olsen Testing Machine Company. It shows Steelcrete Mesh, the world's standard reinforcement, demonstrating its ductility and high elastic limit.

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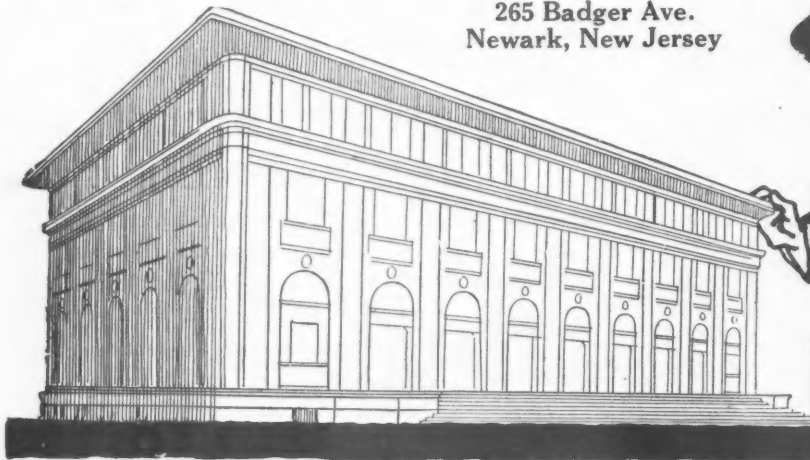
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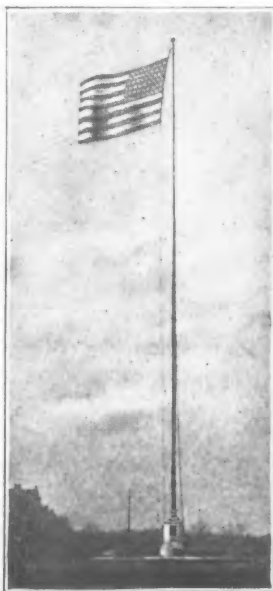
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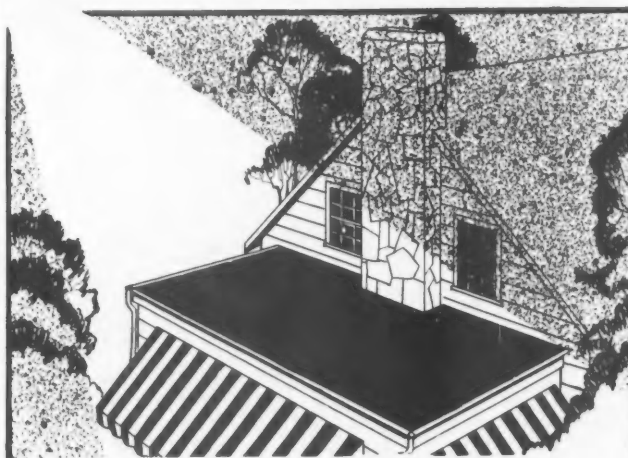
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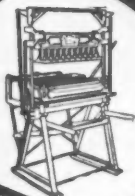
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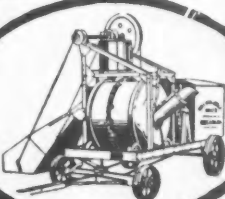
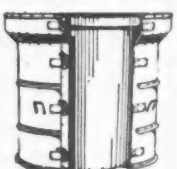
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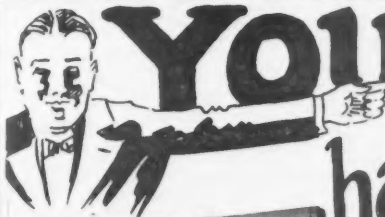
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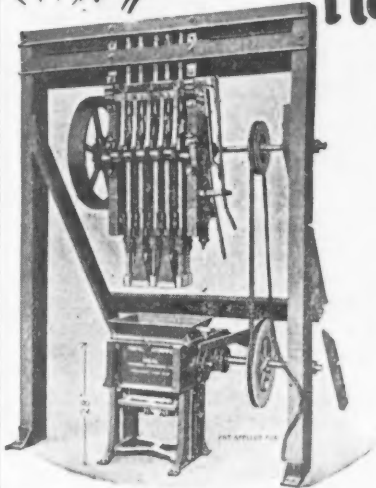
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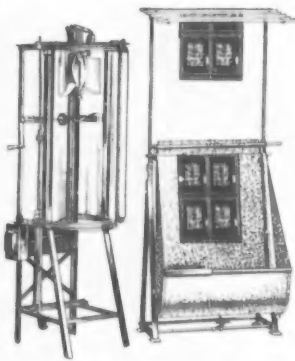
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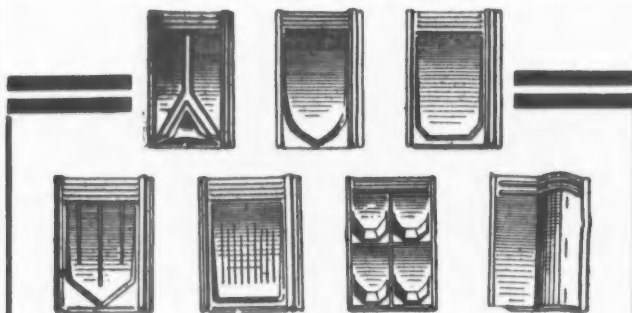
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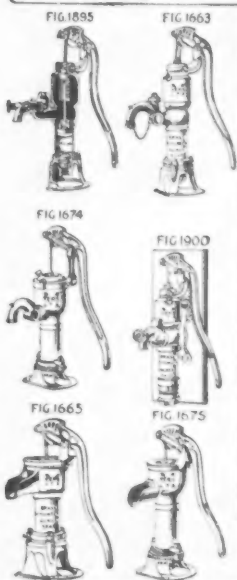
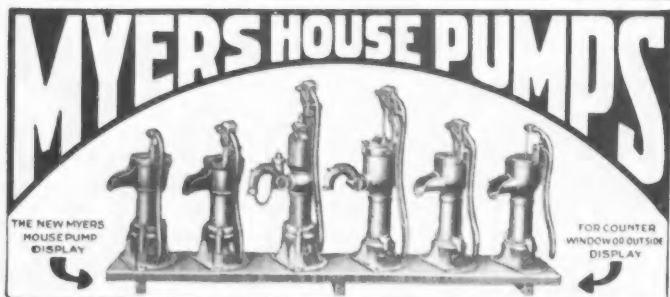


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# Cheney

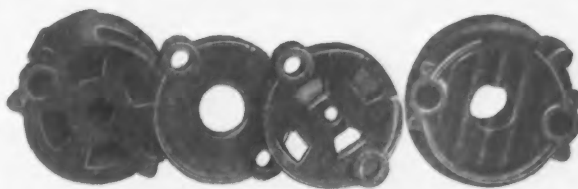
!

## It's a "rip-staving" good hammer

Your first swing will convince you a Cheney Hammer is "there"!

The Cheney has a "hang" you'll rave over from the first—it's just about perfect; a second-growth hickory handle with the famous Cheney "Never-Slip" grip that's formed to fit your hand—and it fits it comfortably, too; a tool-steel head with the ends tempered separately—each for the good hard work it's intended for.

And back of every Cheney Hammer is 90 years of fine hammer making, besides a real guarantee to replace any Cheney that you couldn't call a "rip-staving" good hammer.



*The Sections that break up the water and "stagger" the fire travel.*

*In a*

## Thatcher Round Boiler Many Small Units Heat More Quickly Than One Large Mass

**T**HAT is the principle which makes the Thatcher Round Boiler the most powerful of all house heaters for rated capacity; in both the number of thermal units transmitted to the water and the length of time between firings.

### Staggered Fire Travel

The ingenious construction of the sections shown above and their position in the boiler divide the mass of water into many small parts. They also "stagger" the fire travel, so that the full effect of the heat is exerted below, above and beside each unit.

Less fuel is required than in an ordinary boiler, and the radiators begin to "sing" soon after a fire is started.

Made for steam or hot water heating, there is a type and size of Thatcher Boiler for every requirement.

*Printed matter and any further information regarding THATCHER Round Boilers, and our other products, will be sent you on request.*



**THE THATCHER COMPANY**  
*formerly Thatcher Furnace Co.*

Since 1850

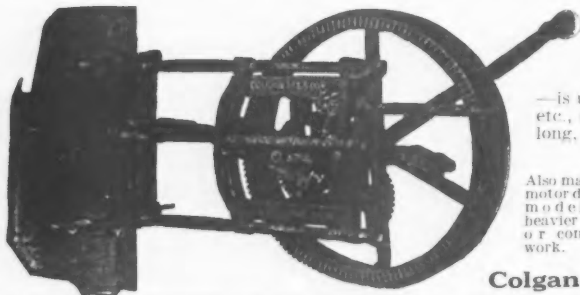
CHICAGO      NEWARK, N. J.      NEW YORK  
341 N. Clark St.      39-41 St. Francis St.      21 W. 44th St.

# THATCHER

**BOILERS-FURNACES-RANGES**

## "Greatest Labor-Saving Device In My Kit"

—says Mr. Gieringer, a prominent contractor of Reading, Pa., regarding the Champion Mortiser. And why shouldn't he? It cuts a perfect mortise of any size in any wood in two to five minutes. Fir, walnut, oak,—in fact any hard or soft wood with all its knots can't stop the Champion from making a mortise with straight sides, smooth bottom and uniform depth. Carpenters never try to dodge a mortising job if they have the Champion. Weighs only 25 lbs.—can be carried anywhere.



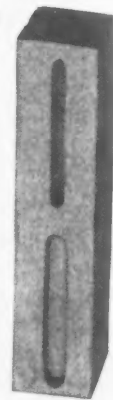
**The Champion Mortiser**  
Cuts a Perfect Mortise in a Minute or Two

—is used by furniture factories, cabinet makers, carpenters, contractors, etc., everywhere. Easily adjusted to any size mortise desired up to 6" long, 1 1/4" wide and 4" deep. Year's guarantee with each machine. Shipped complete with choice of any two bits 1/4" to 7/8" at \$40.00 f. o. b. factory. Try the Champion for 10 days on our money-back guarantee. If not satisfied in that time, return at our expense and money will be refunded. Send today.

Also made in motor-driven model for heavier jobs or contract work.

Descriptive literature on request.

Colgan Machinery & Supply Co., 409 Hayden Bldg., Columbus, Ohio



## Suppose you had to send your Plane back to the factory to have a new blade put in!

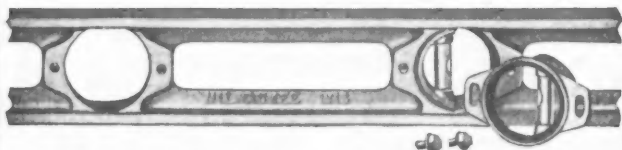
It's just as foolish to send a level back to the factory to have a broken glass replaced.

Empire levels are of MODERN construction that solves the problem. When a glass becomes broken insert a new case. Your hardware man has cases in stock. The repair is made quickly, easily and *inexpensively*.

The Empire interchangeable feature can be had in either wood or aluminum levels. The dissembled view of the aluminum level shown below shows the simplicity of the construction.

Ask your dealer to show you these wonderful tools or send for complete catalog.

**EMPIRE LEVEL MFG. CO.**  
MILWAUKEE, WIS.



## EMPIRE LEVELS

## FACTS

*that will interest every visitor to*

## NEW YORK

A TRIP to New York does not mean big expenses—if you stop at the popular Hotel Martinique.

In the very centre of business activity, the Martinique offers clean, cheerful accommodation to the discriminating traveler who wants comfort and convenience without extravagance.

Rooms as low as \$2.50 per day. Special Restaurant Service at most moderate prices.

It will pay you to investigate—and we'll welcome the opportunity to prove these facts to you.

A. E. Singleton  
Resident Manager



## HOTEL MARTINIQUE

*Affiliated with Hotel Mc Alpin*

Broadway-32nd to 33rd Streets  
NEW YORK CITY

## A PERMANENT PROFITABLE YEAR ROUND BUSINESS METAL WEATHER STRIPPING SOME FINE TERRITORY STILL OPEN

THE **DIAMOND** LINE

THE "QUALITY" KIND FOR USE  
IN BUILDINGS WHERE QUALITY, EFFICIENCY  
AND SERVICE ARE CONSIDERED FIRST

SEND FULL PARTICULARS

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THE **CAPITOL** LINE

WHEN PRICE SELLS THE JOB THIS LINE GETS  
THE BUSINESS ON COMPARATIVE MERITS

Address

The Diamond Metal Weatherstrip Co.  
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## How's this?

Not only 7 distinct tools in one, but some distinct advantages over each of the 7 tools it replaces.

Starrett  
Combination  
Tool  
No. 439

F'r instance: Ever wish you could shorten the beam of your try-square so's you could get into a corner? Well, you can with a No. 439.

Ever get tired of laying out valleys and hips with a try-square? It's a snap with a No. 439—all you got to do is to set the blade to the desired pitch and go ahead.

Ever get tired of having one end of the try-square sticking out of the top of your chest? A No. 439 can be folded up.

And in addition, you can use the No. 439 as a Level, a Plumb or a Depth Gage.

Ask your dealer to show you one. Write us for descriptive matter and Catalog No. 23-6.

**THE L. S. STARRETT CO.**

*World's Greatest Toolmakers  
Manufacturers of Hacksaws Unexcelled  
Steel Tapes—Standard for Accuracy*

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**Use Starrett Tools**



from

**Maine to California**

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BUILDERS from Maine to California have found floor surfacing with the FREE-O-Dust Super Surfer a sure-fire method of collecting extra profits. \$25 to \$40 a day is the average earnings in this business.

Floor surfacing is easy with this modern, electrically-driven machine, and there will always be a steady demand for this work as long as new buildings go up or old buildings have floors to refinish.

The FREE-O-Dust Super Surfer sands right up to the baseboard—no inconvenient side drum is necessary. All leavings are collected on the forward as well as on the backward movement so that the air is kept free of dust at all times. This feature makes it possible to resurface old floors without disturbing the occupants.

Get started today on your road to a profitable business. Mail the coupon for complete information and our booklet, "A Day's Work." There is absolutely no obligation.

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ROTARY  
MACHINE**



For sanding wood floors where an exceptionally high finish is required—also for surfacing and polishing marble, terrazzo, etc., waxing, polishing, and scrubbing. A different attachment for each operation.

**Mail**

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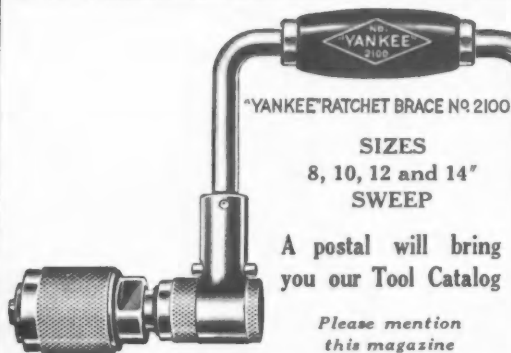
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Branch Office --- New York City





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*Made for Those Who Appreciate the Best  
—Built Like a Precision Tool*

There has never been a brace like it—works like a watch—but unbreakable. Dust-proof! Moisture-proof! Quick, positive shifter. The chuck is a two jaw and holds any bit (round, square or taper) up to  $\frac{1}{2}$ " capacity. Handles of hard rubber. Won't warp, shrink, crack or bind. Top handle is ball-bearing.

*Must Be Handled To Be Appreciated  
Have Your Dealer Demonstrate It To You*

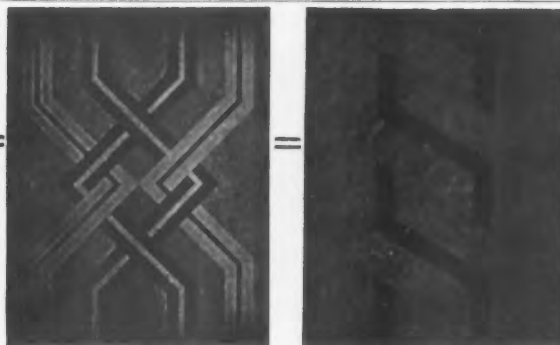
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## Get Into the Floor Surfacing Business While the Field is Fresh

A CHANCE to have a business of your own and still retain your present position. Write today—let us tell you how to get started in this Paying Business and how you can make good by following our method in working up your business. Free Trial. Part down—balance easy payments, which machine will earn for you. \$40 to \$50 a day easily earned with the AUTO-MATIC—the result of 16 years mfg. experience. Will save the wages of 5 men and do work that will stand inspection against the light. SKF ball bearings, carefully protected from dust—Whitney Silent Chain—Roller Pressure Regulator—Force Feed Lubrication—Edge Roller Border Work Eliminated—Steel, not cast iron construction—all dust taken up on forward operation with New Vacuum Nozzle—all working parts inclosed—2HP Alternating Motor on 12-inch machine.

The Little Automatic Surfacing Machine (on table) is a wonder for removing varnish from desk tops, counters, etc., or for all sorts of new work.

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Is ideal for any home, public building or store window.

**Wood-Mosaic** makes a most artistic, sanitary and economical floor covering.

It is easily installed in old or new buildings and greatly increases the value of the property.

Let us tell you all about this profitable business that awaits you. Write at once.

Architects of the highest artistic reputation find us prepared to execute their designs in the most perfect manner.

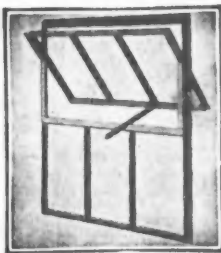
There is no practical wood which we do not carry in stock and there is no idea too difficult for us to execute.

Take advantage of this service. Write for our beautiful colored catalog and our book showing installations in every part of the country.



**WOOD MOSAIC  
COMPANY, Inc.**  
New Albany, Indiana

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The Bayley Window for basements in residences, apartments and other buildings. Cost no more than wood, yet give 50 percent more light—made in four standard sizes.

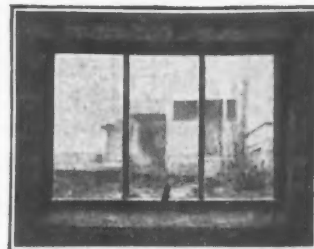
**B**AYLEY-SPRINGFIELD STEEL WINDOWS are easily sold wherever they are shown. Construction features make for strength and economical installation. Require less time and labor to install than wood windows and therefore profits are greater. Quantity production makes it possible to price at very close figures.

Designed for all types of buildings. Have many advantages over wood windows. Bayley-Springfield products are the result of 45 years' experience in architectural ironwork.

*Write for full description and prices. Stocks carried at branches in principal cities.*

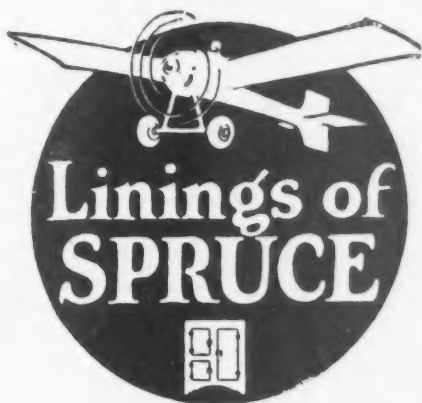
**THE WILLIAM BAYLEY COMPANY**  
128 North Street,      Springfield, Ohio  
44 years of service to builders and architects

**Bayley-Springfield  
Steel Windows**



### UTILITY WINDOWS

This Bayley Utility Window is moderate in cost. Usable in buildings of many types and for many purposes. Ideal for garages and similar small structures. Ventilators center pivoted. Each unit has 4 lights 12x20 and 2 lights 18x20.



White odorless spruce linings in Herrick Refrigerators protect the health of thousands of people just as spruce constructed airplanes protect the lives of Army and Navy Aviators.

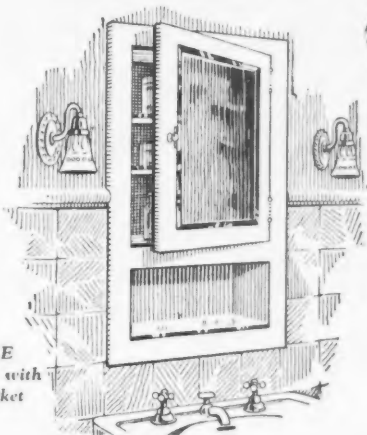
Herrick spruce lined refrigerators never rust or corrode. They have no odor. They help to save ice or electrical current and they endure.

*Free catalog upon request*

**HERRICK REFRIGERATOR CO.**  
WATERLOO, IOWA

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*Snow-White Steel*



**T**HERE are other cabinets; but none so good at our prices—none better at *any* price. We would like to submit a sample.

See Sweet's Index; or write for catalogue.  
**HESS WARMING & VENTILATING CO.**  
Makers of Hess Welded Steel Furnace.  
1220 S. Western Avenue, Chicago

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DISAPPEARING  
STAIRWAYS

*Safe  
and Sure*



You can depend on a Bessler Disappearing Stairway to stay put in the position desired. It is positive in action. It can not accidentally tip up or down. Works easily. So perfectly counterpoised that it requires hardly more than a finger's pressure to move it. All Besslers are guaranteed to give permanent trouble-free service.

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**The Bessler Disappearing Stairway Co.**  
Akron - - - Ohio



Contractors and Builders have sent in to us for a sample pair of the  
**AUSTRAL SASH SUSTAINERS**  
*Join the Crowd . . .*

Costs Less  
No More Weights  
No More Pulleys  
No More Cords to Break  
No More Spring Bolts

*Send for a Sample Pair—Tear along this line.*

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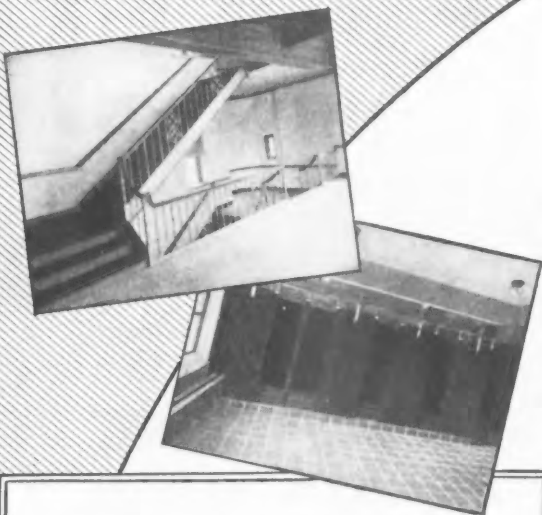
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Please send me a sample pair of AUSTRAL SASH SUSTAINERS for which I am enclosing fifty cents (this covers actual production cost, postage and handling).

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Concern .....

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Just send in your plans and we will quote complete prices that will mean a big saving to you.

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Universal Safety Tread leads the field because it combines to the highest degree Safety, Economy, and Appearance.

**SAFETY**—its diamond hard crystals embedded throughout prevent accidents.

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**APPEARANCE**—besides its natural good looks, it cannot rust, and will not stain the surface to which it is applied.

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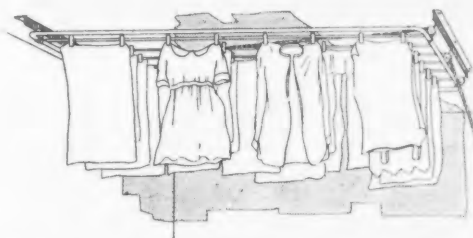
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One of the Largest Plumbing Supply Houses in Philadelphia

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Installed on ceiling—best for drying. Always out of the way. Pulley rope lets it down—and up again.

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THE Butler Clothes Dryer *obviously* modernizes your development. It is an improvement demanded by the housewife of today. She can dry her clothes *indoors* but a few feet from the tubs—any weather, any time she likes.

At a very small cost to you this convenience absolutely adds value to the property and speeds the sale.

Made of rust-resisting metal—equipped with forty-eight patented clothes pins. Beautifully finished, shipped complete, ready to install.

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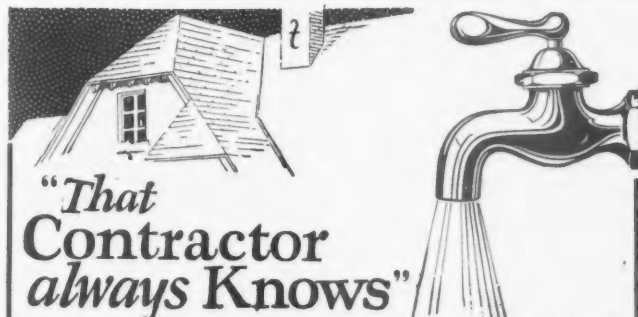
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A few choice territories still open for distributors. Write for details.



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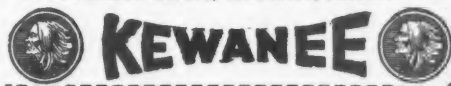
Because people said that about him, he had first choice of all the worth-while building jobs—and never worried about the prices he charged.

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KEWANEE  
"Bungalow Model"  
Water Supply System  
NOW \$140.00



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SAVE POWER  
CARRIES 30 DAYS OIL SUPPLY

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will do your work quickly and accurately



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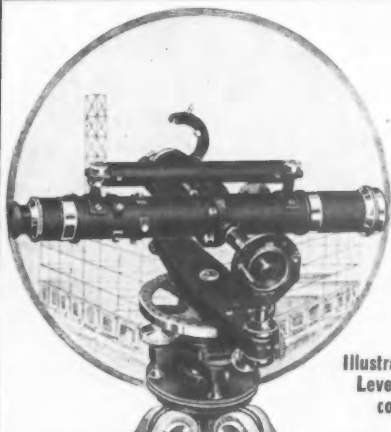


Illustration shows  
Level No. 5115  
converted.

## KEEP ERRORS OUT!

FREQUENT checking of your lines and levels with an accurate instrument is your best insurance against costly errors.

### K & E BUILDERS' LEVELS and TRANSITS

are accurate, but still are so *sturdily built* that they will not be thrown out of adjustment if handled with reasonable care.

They are easy to use. You'll be proud to own one!

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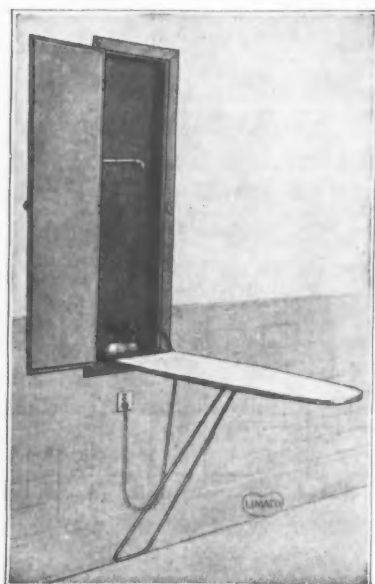
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and a Few  
Minutes

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The contractor should see in the Limaco Ironing Board two savings—the low first cost and the saving in time and labor. Quantity prices to dealers and reliable contractors.

Ready assembled. Made of heavy gauge steel sheets and assembled by welding process.

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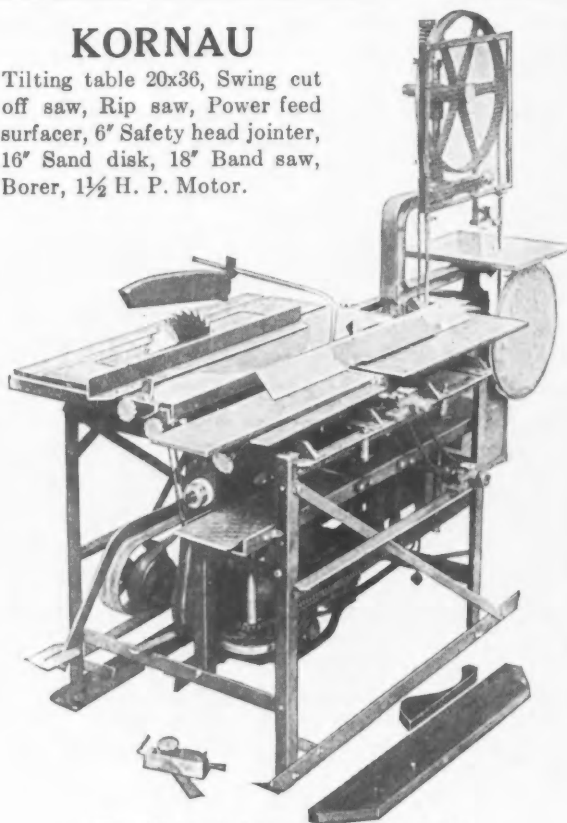
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New York Representative

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**KORNAU MACHINE CO.**

Vandalia & Gulow Sts.

Cincinnati, Ohio

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**COLORED  
STUCCO  
IN  
8 SHADES**

Now is the time to send in orders for stocks which have been depleted thru the Spring and Summer building. Mac-Stone is prepared to make prompt shipments on all the products listed. Don't forget to include KANT-FREEZE which may be used as an accelerator, a water-proofing agent and anti-freezing compound. Use Mac-Stone products and be assured of a first-class job.

Write for Booklet

**MAC-STONE STUCCO CO., Inc.**  
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**KANTFREEZE  
STONE  
DASH  
Mortar Colors**

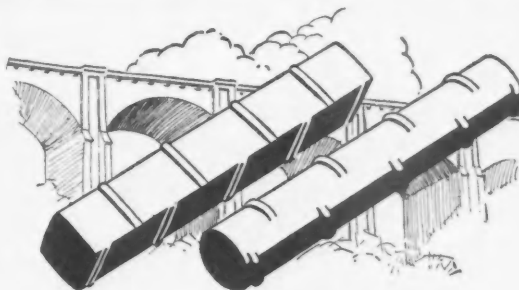
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Exactly duplicate the  
old slate roofs of Europe  
with their rich colorings  
and strong natural texture,

*Roof Suggestions  
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New Billet Stock—all grades  
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**Put on like Plaster—Wears like Iron**

—waterproof, fireproof, resilient, noiseless, dustless

A composition material easily applied in plastic form over practically any kind of floor. Laid about  $\frac{1}{8}$  inch thick. Imperial floor does not crack, peel or come loose from foundation. A continuous, fine-grained, smooth, non-slipping surface. No crevices to gather grease, dirt, dust, disease germs or moisture.

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You can save about 50% of the cost of nearly every weatherstrip job by having the work done by your own men.

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ALLMETAL Weatherstrip is sold cut to size required for each opening. It is easily installed and our "Directions for Installing" book enables any good mechanic to install the material perfectly.

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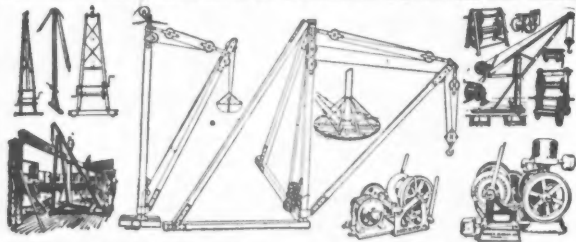
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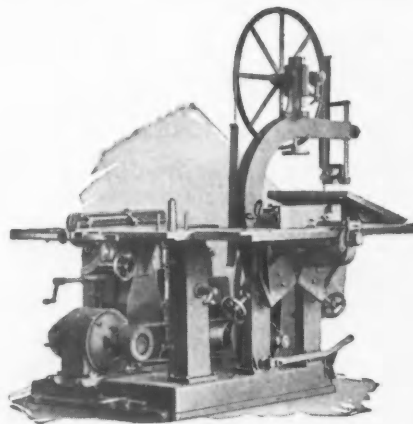
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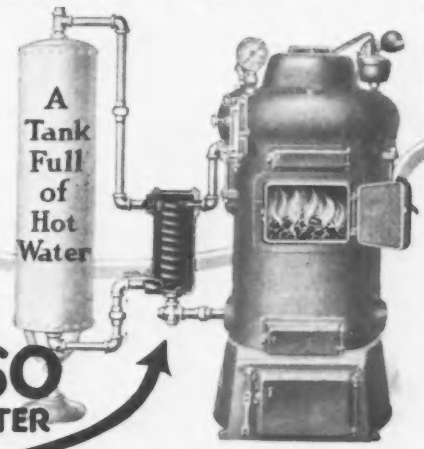
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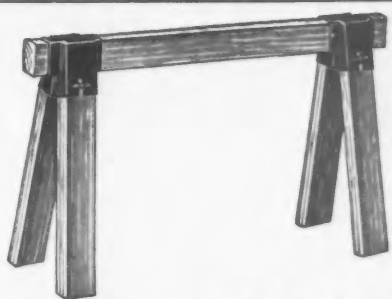


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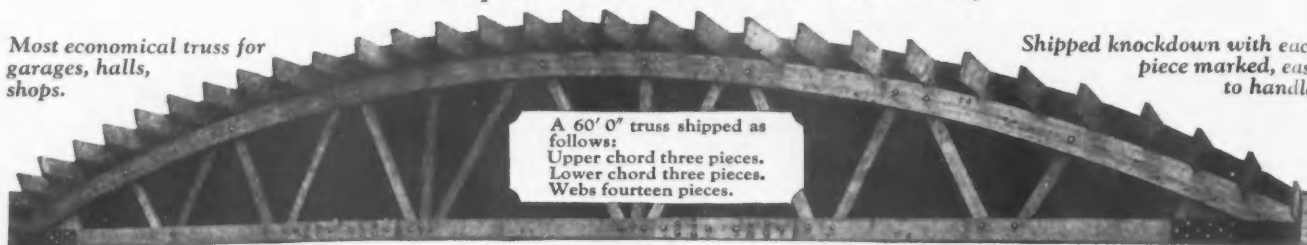
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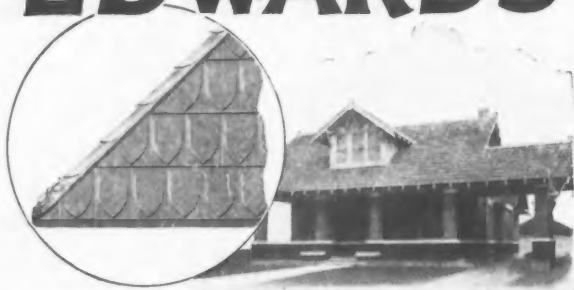
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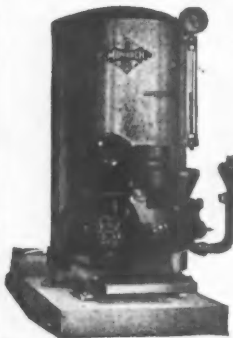
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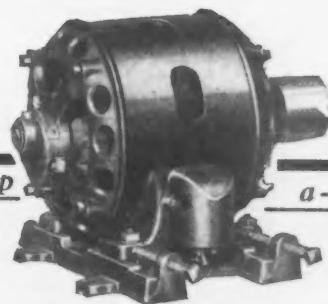
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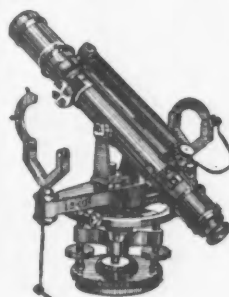
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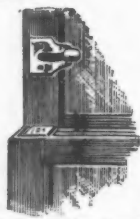
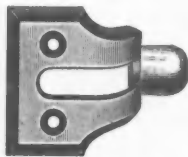
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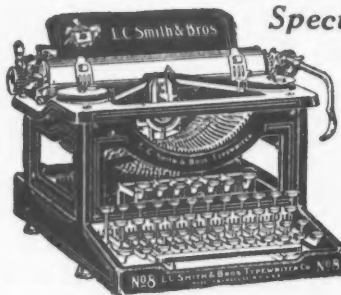
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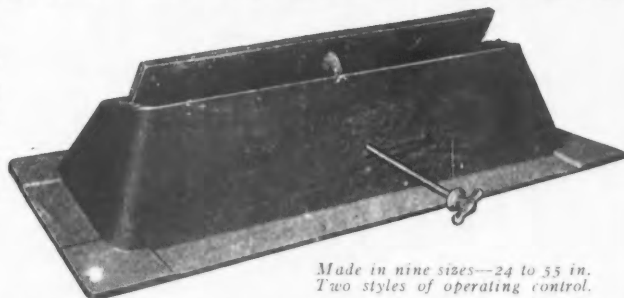
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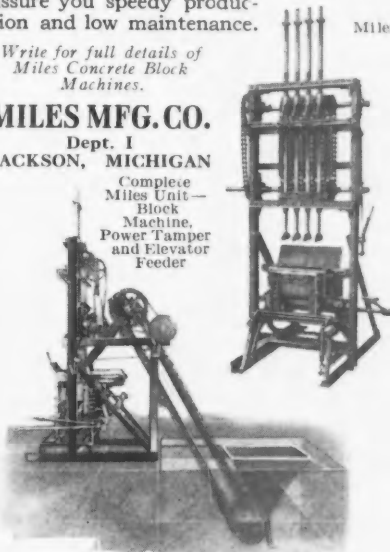
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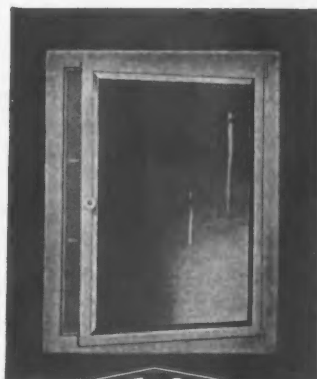
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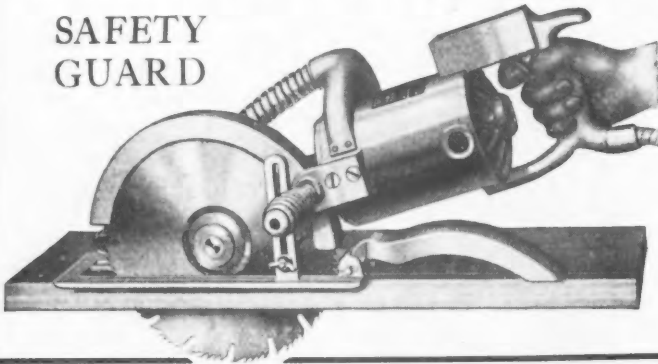
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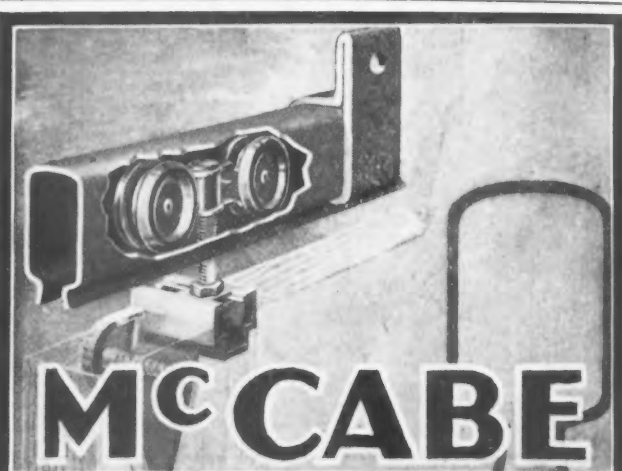
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Guaranteed to outwear three of the cheaper hangers, and stands up under the hardest kind of usage.

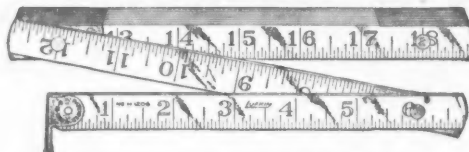
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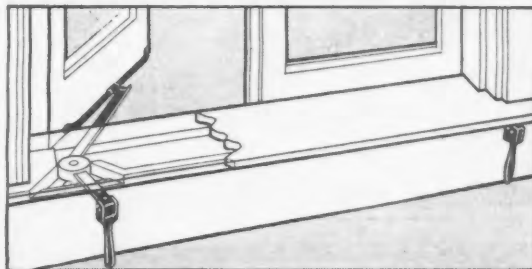


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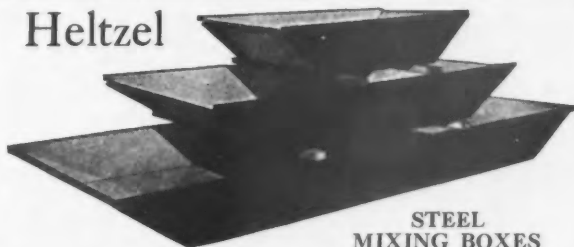
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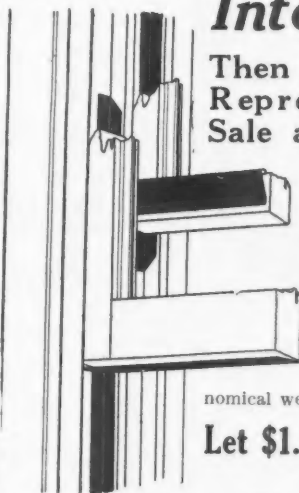
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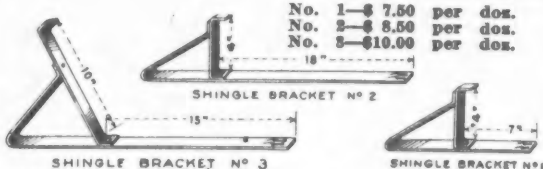
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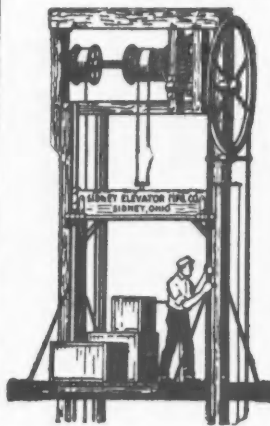
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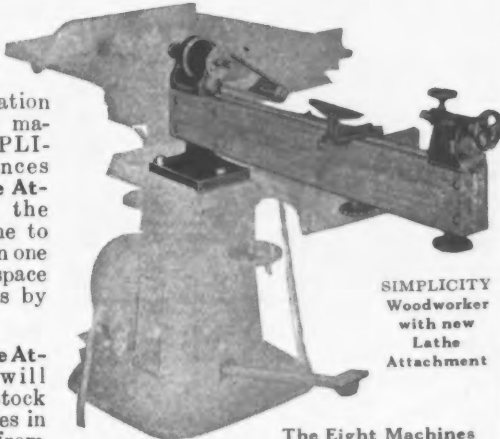
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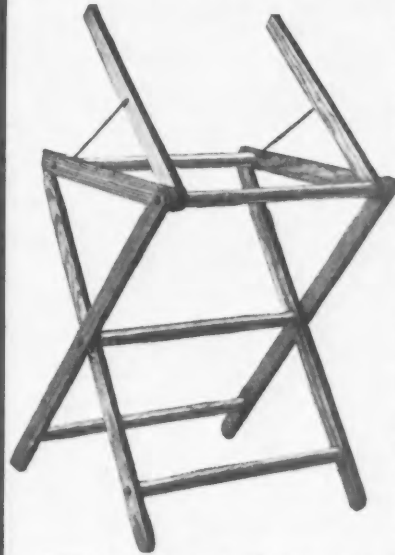


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The Eight Machines  
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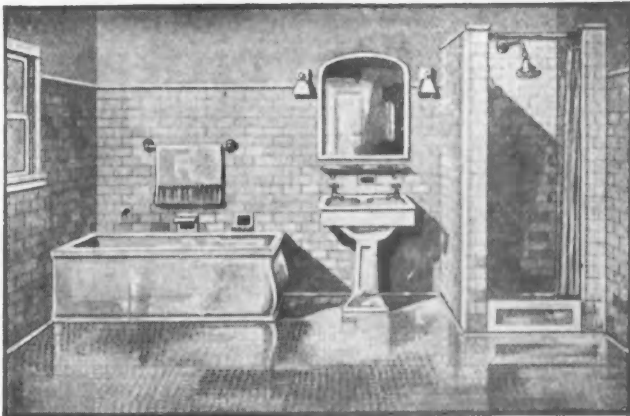
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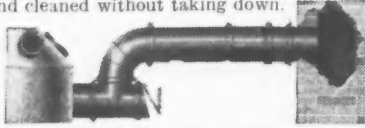
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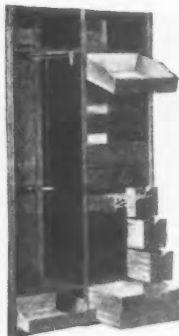
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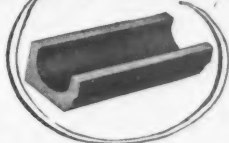
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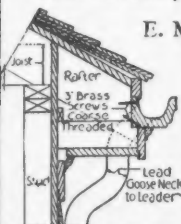
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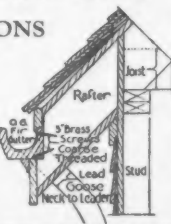
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REPLACEABLE CLAWS**  
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PRICE  
**\$9.75**

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IT IS WORTH  
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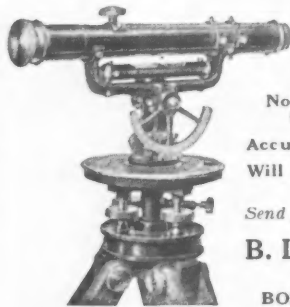
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Change is instantaneous  
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Send for descriptive catalog and terms

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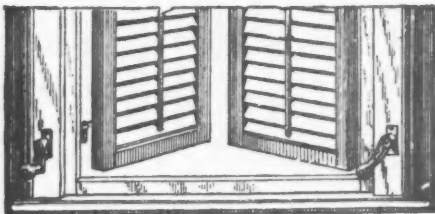
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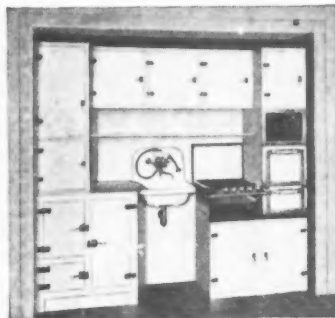


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## What Every Builder Wants A Compact Kitchenette—Flexible Arrangement

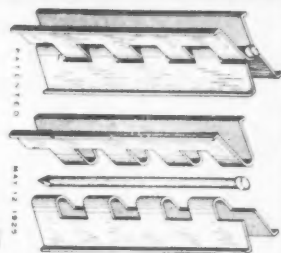
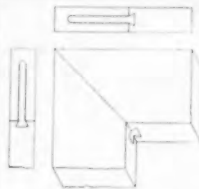


**MAJESTIC** No. 3000  
KITCHENETTE  
Widely Adopted

The first Kitchenette to be really "accepted" by apartment dwellers. Saves time, work, space. Unusually attractive and durable. Greatest convenience. Your choice of combination of units to meet any requirements and space.

Write for details today.

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Household Steel Cabinet Headquarters  
4211 Belle Plaine Ave., Chicago



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The only real knock-down interior trim and frame fastener. Rigid, Durable, Dependable and Economical. Lock Joints will solve your problem. Write for samples and folder giving full information.

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A SLIGHT turn of the thumb nut locks the window in any position. Made of brass throughout in popular finishes; cannot rust, break or get out of order. The simplest, best looking, easiest operated window adjuster made. Sure to please your clients.

The Lyons Mfg. Co., New Haven, Conn.



Formerly Sold Under the Name "Interlock".

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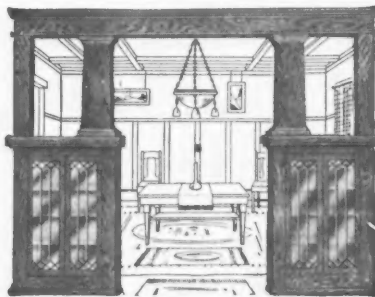
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## WEATHER PROOF SIGNS

We will send you a sample order of 100 signs, size 14 by 20 inches, any wording, printed on either white or yellow stock for only \$9.00. Send for samples and prices on other sizes.

SEND TODAY

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Adds the touch of Refinement. Beauty that increases renting and selling values.

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Bookcase Colonnades—Sideboards, Medicine Cabinets, etc., are of Distinctive Design and give living comfort to any home.

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2119 South Troy Street, CHICAGO

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## Protect Your New Building With MINERAL WOOL

**L**INE your house with it and you will be assured of an indestructible fire-proof and vermin-proof guard at very little expense.

Being a perfect insulator it keeps out the cold air in winter, affording a remarkable economy in fuel, and for the same reason keeps out the heat in summer.

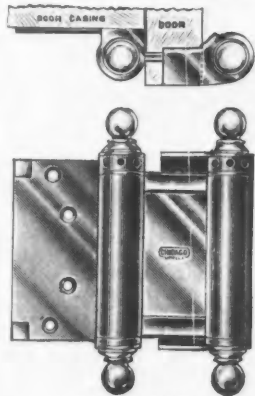
A house protected with Mineral Wool is many degrees cooler in summer than any other.

Mineral Wool being fibrous and inelastic is also one of the best sound-proof materials obtainable.

*Write us today for convincing proof of what Mineral Wool has accomplished*

**U. S. MINERAL WOOL CO.**  
280 Madison Ave., New York

**Requires No Jamb Strip  
and  
Only One Mortise Cut**



TYPE 9001

## The "Simplex"

Application of the Chicago "SIMPLEX" Spring Hinge means a saving in both time and labor.

It can be applied direct to the door casing without a hanging strip and requires only one mortise cut. For economy and simplicity it has no equal.

There are no joints where the barrels of the hinge join the web, thereby avoiding exposure of springs to moisture.

**CHICAGO**  
**SPRING HINGES**

[Send for Catalogue No. C 42]

**Chicago Spring Hinge Company,**

**CHICAGO NEW YORK**  
**U. S. A.**



**The Money Making Possibilities**

**WRIGHT RUBBER TILE  
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**Directions For Laying**



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**One Man Says—**  
"The Wonder Saw I bought from you has already paid for itself. Best I ever saw."

## The New Portable "WONDER SAW"

Carpenters, contractors, builders everywhere say this is the best portable saw table ever made for general construction work. Light enough to move from place to place, yet heavy enough to handle up to 3-in. stuff. Direct from factory prices and low extended payment plan make it easy for anyone to own. Free trial offered. Mail coupon for detailed proposition.

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The WONDER SAW works on improved forward swing principle—foot pressure moves blade forward through lumber. Leaves hands free. Can not bind or jam. Rips, cross-cuts or miters with amazing ease. 24x36 in. table top

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### PAYS FOR ITSELF

The price of the WONDER SAW can be easily saved on one \$2000 job. Besides it saves 3 to 4 weeks' time. Cuts your costs 10 to 12 per cent. You increase your standing as a builder, get more jobs, make more money.

### INVESTIGATE THIS

Get our special offer direct from the factory. Learn all about this saw now. Get all the facts without further delay.

**AT DIRECT FROM FACTORY PRICES TO YOU**

**FREE TRIAL**

See what the WONDER SAW will do for you. Test it thoroughly before you buy. See how much it will save you in time and wages. In order to give you this opportunity we have a wonderful proposition for you. The coupon will bring you details.

**MAIL THIS NOW**

**ST. LOUIS MACHINE TOOL CO.**  
1435 PINE STREET ST. LOUIS, MO.  
Without obligation to me, please send complete information, free trial offer, prices and terms on the new portable WONDER SAW

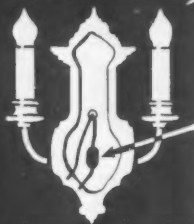
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Address.....

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

## TURN AROUND

that "Wall Bracket" before buying!



See what switch is used in your wall brackets. The turn button type is best because it cannot pull the bracket crooked. Beaver switches are guaranteed. Look for them.



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MACHINE & TOOL CO., INC.  
NEWARK, N.J.



## No. 87 Foot-power Screen MITER CHOPPER

Machine is especially adapted to mitering screen moulding and other light work. It is strong and substantial, and cuts perfectly true. The foot treadle is connected to head which carries the knives, and when released by the foot, a strong and substantial spring raises head to top of the stroke. A gauge rod with stops is furnished with each machine.

Cuts mouldings up to 1-in. in width.

Height of machine, 50-in.; Weight 96-lbs.

Price, F. O. B. Chicago, \$35.00.

You must be satisfied, or money refunded.

## Woodworkers Tool Works

222 S. Jefferson St. Chicago, Ill.

## SEPTIC TANKS

Provide Low Cost Sewage Disposal

Sizes for homes, schools, churches, factories and other large buildings



Save bother, expense and uncertainty of concrete tank or cesspool by installing correctly-designed Kaustine Armeo Iron Septic Tank.

Shipped ready to install: a size for every need. Requires no attention and costs nothing to operate. Designed and built by septic tank experts. Thousands in use.

Approved by Health Authorities

What are your requirements? We furnish free advice and plans. Write for Catalog No. 204. Please include plumber's name.

KAUSTINE CO., Inc., Buffalo, N. Y.  
In Canada, Kaustine Mfg. Co., Ltd., Dundas, Ont.

## Kaustine Super-Septic Tanks

Sold and Installed by Plumbers Everywhere

## FREE—Five Days' Trial

The "Ideal" Electric Floor Sander

Try out the "Ideal" Floor Sander for yourself, absolutely free of charge, and see if you don't find that it's one of the best money-making propositions that have ever come your way. Write today for details—absolutely no obligation.

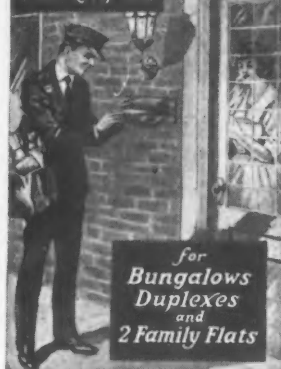
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440 N. Peoria St.

Chicago, Ill.



The "DELIVER-COLLECT" Mail Receptacle



for Bungalows Duplexes and 2 Family Flats

## Build "D-C" Mailboxes into your houses

The Deliver-Collect built-in wall mail box provides for collection as well as safe delivery of letters.

It is ornamental, permanent and easily installed in brick, frame or stucco walls. Makes a big hit with buyers and helps sell your house.

Made with solid brass face plate, door bell button, space for name. Receptacle of galvanized iron. Inside door of birchwood.

Send for our illustrated folder showing different models

American Device Mfg. Co.

4527 Shaw Ave.

St. Louis, Mo.

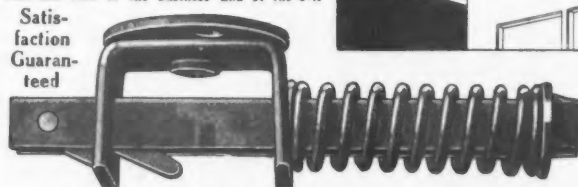
## The 3A Door Holder "Ann Arbor Automatic"

Automatically holds door open. Automatically releases it.

Quick, positive action. Strong, durable. Rust-proof. Can install a pair in a few minutes. At all best dealers—or sent direct for \$3.00 per pair.

Half-size view of the Business End of the 3-A

Satisfaction Guaranteed



AGENTS WANTED. Send for interesting proposition

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## THE HOMER COAL CHUTE



A New Idea with a Practical Door Lock

Homer Fireplace Dome

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Our line is complete, quality guaranteed

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## Order This Book of Newest Homes

FROM Hollywood, Beverly Hills, Pasadena and Los Angeles these fine homes have been selected as the best examples of Spanish influence. The eyes of the nation are now on this type of architecture, which Southern California architects have admirably adapted to modern building.

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Ask your news dealer or mail check or money order for \$1.00 to

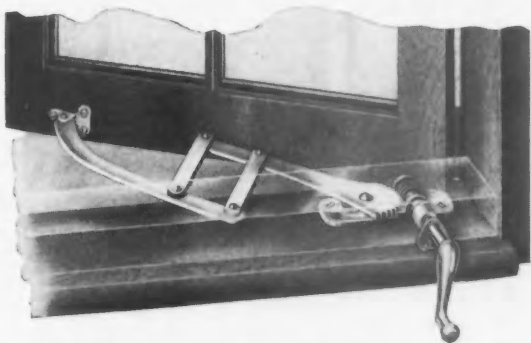
THE ROY HILTON COMPANY

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Long Beach, California

Plan Service and Architectural Designing

## EVERLOCK CASEMENT SASH ADJUSTER



Everlock casement window adjustment solves a long vexed problem. Operates by a rack, worm and lever device completely concealed from view, except for the gracefully designed inconspicuous handle.

Operates from inside without disturbing screens or draperies.

Made of cold rolled steel, electro-galvanized with guide bracket and handle of brass.

*Complete information gladly sent upon request.*

**W. E. PUTNAM CO., Inc.**  
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**Casement Window Adjusters**

## Multiplex HAND BLOCK MACHINE



Hundreds are seeing the wisdom of installing Multiplex Wet Process Machines thereby keeping the money coming in during ordinary slack periods and increasing profits for the entire year.

Multiplex strip-pers are simple to operate and sturdy in construction, turning out 1,600 durable water proof blocks in plain or fancy design in 9 hours.

A 40 ton pressure is applied from top and bottom. Write today for catalog of the only wet process machines made, learning why a wet process mixture makes a stronger, uniformly compact, harder block, saving at least one-fifth cement and the cost of steam curing and keeping the blocks wet for a week.

**The Multiplex Concrete Machinery Co.**  
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## Specify— Fuller & Johnson ENGINES

It is not only your privilege but it's good business to specify Fuller & Johnson Engines. It means money saved and contracts filled on time to have an engine that will always give you faithful service.

Many of the leading manufacturers of construction equipment have standardized on Fuller & Johnson engines, demonstrating the importance of reliable and economical power. In all cases—specify Fuller & Johnson.

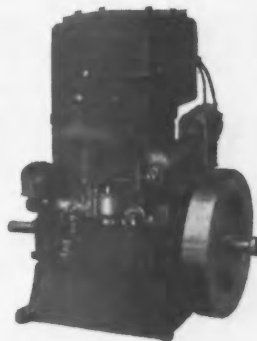
Every contractor should know about Fuller & Johnson engines. Horizontal, single cylinder types, 1 to 25 H.P., see bulletin 430. Two cylinder vertical types, 6 to 8 H.P., see bulletin AB500.

*Let us send them both to you.*

**FULLER & JOHNSON MFG. CO.**  
*Engine Specialists—Established 1840*

306 ALMA STREET

MADISON, WIS.



**FULLER & JOHNSON**

## Profitable end of weatherstrip selling now open

In each city where Ceco is established there is an exclusive agent making \$5,000 to \$15,000 *net profits* yearly. Each owns his own business—is financially independent. Ninety-one per cent of those who started selling Ceco when we organized many years ago are still with us.

Because Ceco Super Service and Ceco's square dealing policy keeps their profits and their business steadily growing.

A new national advertising campaign makes 25 new agents necessary. The full help of consumer advertising and every direct selling aid is available, now.

There is interest and profit for you in the Ceco proposition. The coupon, placed here for your convenience will bring full information.

**Ceco**

**Weatherstrip Co.**

*Pin this to your letterhead  
and mail today*

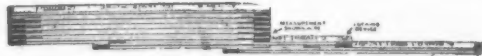
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Chicago, Ill.

Send me your agent's proposition.

Name.....

Address.....





## A Rule For Ruling Builders

One that will wear, one that will measure correctly at all times and conveniently in any position. The "Interlox" Master sliding rule is designed to fit the most exacting needs of any ruling builder. Also we manufacture rules of all kinds. We guarantee all our rules.

*Write for complete circulars.*

**MASTER RULE MFG. CO., 821 E. 136th St., New York City**

*Dealers: Master Interlox and Master Folding Rules are the quickest selling rules on the market. Write for attractive proposition. Ask about our new counter show card.*

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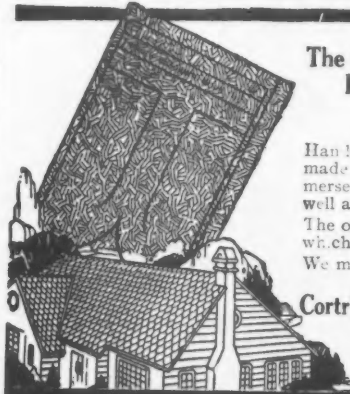
### For Roofing and Flagging

All Colors, Sizes, Thicknesses—Commercial and Architectural

Progressive builders and contractors know that slate roofs and flagging increase the appearance and sales value of houses they build and sell. Write us for information.

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Columbia, S. C. St. Paul, Minn.  
17 Carolina Bank Bldg. 324 Rice Street



### The difference between the two kinds of Galvanized Shingles is this:

Hand Dipped Galvanized Shingles are made from prime tin plate and immersed in molten zinc—all edges, as well as both sides are coated.

The other kind are made from sheets which come already galvanized.

We make both kinds.

**Cortright Metal Roofing Company**

Philadelphia  
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**CORTRIGHT METAL SHINGLES**

## Build With Kalamazoo Glazed Tile

*Costs  
No More  
than  
Lumber*

### Floor Plans Free

No matter what kind of building you are going to construct—a house, bungalow, store, factory, school, church, barn, garage—don't build until you send for our Free Book and find out why Kalamazoo Glazed Tile gives you permanent, fire-safe, buildings that are low in up-keep, warmer in winter, cooler in summer, at no extra cost. We gladly furnish Floor Plans and Tile Specifications FREE.

**Kalamazoo Tank & Silo Co.**  
Dept. 100 Kalamazoo, Mich.

## THE JAMES SWAN COMPANY

28 Warren Street  
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Seymour, Conn.

Awarded Medal of Honor on Mechanics' Tools at Panama-Pacific Exposition

Manufacturers of all kinds of  
**BITS, CHISELS, DRAW KNIVES, GOUGES, GIMLETS, AUGERS, NAIL SETS, SCREW DRIVERS, COUNTER-SINKS, BORING MACHINES and EXPANSIVE BITS**

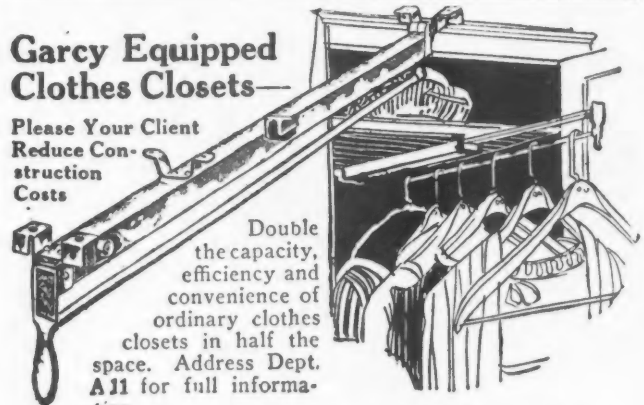


TRADE MARK

*Buy Only Carpenters' Tools Bearing the Trade Mark which Stands for Quality*

## Garcy Equipped Clothes Closets—

Please Your Client  
Reduce Construction Costs



Double the capacity, efficiency and convenience of ordinary clothes closets in half the space. Address Dept. A11 for full information.

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—for all Class of Work

Metaforms will practically eliminate lumber bills for forms. They are adaptable to walls of almost any shape, size or thickness.

They can be erected quickly by unskilled labor.

Use Metaforms for all concrete work. They will cut the cost of construction and increase your profits.

*Write for complete descriptive matter. It's yours for the asking.*

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## RE-MOVE-ABLE Steel Clothes Posts and Flag Poles



**WHY** use wooden clothes posts? They are unsightly and last only a few years. These posts are made of high carbon steel tubing  $1\frac{1}{2}$  inches in diameter, and reinforced with concrete. They are strong, attractive and will last indefinitely. Stand  $6\frac{1}{2}$  feet above ground. Easily removed from the socket. Get our prices. Write for Folder AB.

Also Manufacturers of Removable  
**STEEL TENNIS POSTS**

**Newark Steel Post Co., West Orange, N. J., and Milwaukee, Wisc.**

## Here is a Glazing Composition that will . . .



Adhere tightly to iron, steel, wood, glass, stone or concrete. Make an elastic joint—tight, yet indefinitely flexible, preventing glass from cracking.

Guaranteed to withstand heat, cold, rain or extreme climatic conditions, without chipping or peeling.

### KUHLS' ELASTIC GLAZING COMPOSITION

is used for bedding and glazing all classes of glass construction and is unequalled for greenhouses. Also supplied in shades to match for pointing up stone work, terra cotta, granite, etc.

Complete literature on this exceptional product together with testimonials from such prominent architects as Cass Gilbert, also the Lackawanna and Pennsylvania Railroads, will be mailed on request.

There is a reliable dealer in your locality selling Kuhls' Elastic Glazing Composition. His name will be sent on request.

*Write for generous free sample.*

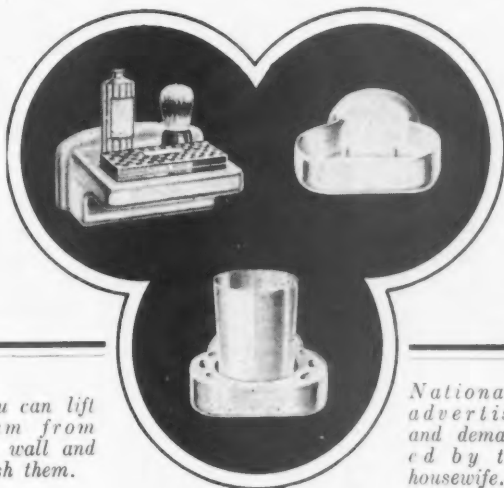


**H. B. FRED KUHL**

*Sole Manufacturer*

6415-21 Third Ave., Brooklyn, N. Y.

## Bathroom Fixtures which offer Short Cuts to Beauty and Economy



*You can lift  
them from  
the wall and  
wash them.*

*Nationally  
advertised  
and demand-  
ed by the  
housewife.*

Easy Set Bathroom Fixtures have so many striking features that once seen they become the **only** bathroom fixture for the modern home.

# EASY-SET

Chinawyte Bathroom Fixtures

J. H. BALMER CO., 257-269 Plane St., Newark, N.J.

# DIETZGEN TAPES for BUILDERS



## ACCURATE—RELIABLE—DURABLE

**T**HE easy readability of the Dietzgen Reliance steel tape has made it a prime favorite among contractors, builders, architects and workmen. They may be had in 25, 50, 75 and 100-foot lengths.

*Purchase from your dealer or write our  
nearest branch for description literature*

## EUGENE DIETZGEN CO.

Chicago New York  
New Orleans Pittsburgh  
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Philadelphia Washington  
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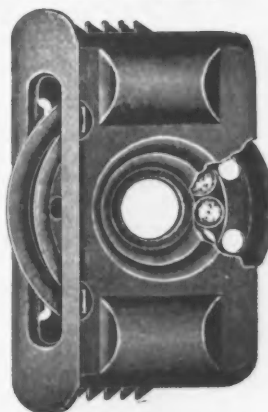
## "GRAND RAPIDS" All-Steel Sash Pulleys

are **LIGHTEST** yet strongest. Two-thirds of your freight is saved, yet a **BROKEN PULLEY IS UNKNOWN** in our product—and these superior **ALL-STEEL** goods cost no more than the common pulleys made of cast iron.

The No. 10 Ball Bearing Pulley illustrated here is one of our best known styles.

This Pulley has the automatic saw-tooth fastening feature which saves time and labor. No nails or screws required, yet the Pulley is held in place more securely than when fastened by any other method.

### No. 10 Ball Bearing



The bearing contains eleven ¼ inch solid steel balls running in lubricant, insuring a noiseless, easy running wheel under any load. This feature makes an excellent talking point for your window frames.

See this Pulley at your dealer's.

**Mail Coupon  
for FREE  
Sample**

Grand Rapids Hardware Co.  
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Grand Rapids, Mich.

GRAND RAPIDS HARDWARE CO.,  
Grand Rapids, Mich.  
I am interested in your No. 10 Ball Bearing  
"Grand Rapids" All-Steel Sash Pulley. Please send me sample.

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

## Hoosier Glazed Building Tile

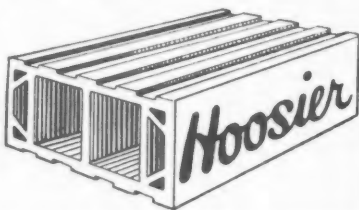
For exterior or interior load bearing wall construction.

**HOOSIER GIANT BRICK.** Our wire cut design for residence construction make a finished hollow 8" wall at one operation. We plaster directly on the inner wall without the use of studding or lath.

### FOUNDATION TILE.

Special block for foundation and basement wall construction.

If your dealer is not handling Hoosier Building Tile send us your plans and free estimates and literature.



**Hoosier Building Tile Co.**

Dept. B-5

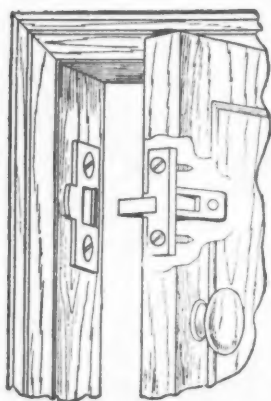
Albany, Indiana

## BIG PROFITS WITHIN YOUR REACH

### LA PLANT-CHOATE HOUSE-MOVING TRUCKS

Any man who has a fair understanding of building construction can step right into the house-moving business and make money! Only a comparatively small investment is required to properly establish yourself in the house-moving business. And LaPlant-Choate House Moving Trucks are the right ones to buy! Built by pioneer housemovers, LaPlant-Choate Trucks carry buildings from one location to another safely, speedily, and easily! Write for Catalog B.

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CEDAR RAPIDS, IOWA.



### DOORS CAN'T WARP

With Hagstrom friction catches installed. The Hagstrom catch prevents warping of new doors. Doors already warped are, by its action, drawn back to normal. Prevents rattling and entrance of dust by holding doors tight. A catch for every door. Made in two sizes.

Hagstrom Concealed Casement Hardware will also warrant your inspection.

See your dealer or write us for full particulars

**HAGSTROM MANUFACTURING CO.**

Glen Cove, Long Island, New York

SOLID BRASS OR STEEL

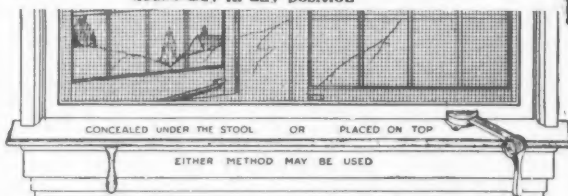
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### FLEXOSTAY

OPENS, CLOSES AND LOCKS

the CASEMENT WINDOW

without disturbing the screen and holds the window noiselessly in any position



UNITED SPECIALTIES MANFG. CO., Ltd., Richmond Hill, New York

23	22	21	20	19
LENGTH OF COMMON OF HIP OR RAFTER VALLEY PER FOOT RUN	RAFTER VALLEY PER FOOT RUN	RAFTER VALLEY PER FOOT RUN	RAFTER VALLEY PER FOOT RUN	RAFTER VALLEY PER FOOT RUN
REFERENCE IN LENGTH OF JACKS	16 INCHES CENTERS	2 FEET	OF JACKS	VALLEY RAFTER CUT OF SHEATHING IN VALLEY OR HIP
FIGURES	GIVING	SIDE CUT	CUT OF	
22	21	20	19	18 17

THIS CUT SHOWS END OF BODY OF SQUARE

The Original and Most Complete Framing Square on the Market Today

We manufacture these in both Solid and Take-Down styles

Send for our LITTLE BOOK explaining this rule

**NICHOLLS MFG. CO., Ottumwa, Iowa**

*Gould Quality*

Is known wherever fine sash and doors are used

Made and guaranteed by

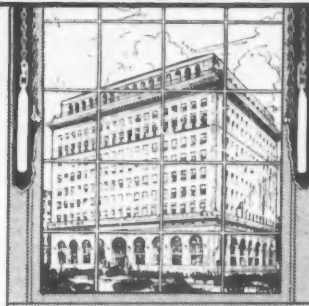
**GOULD MANUFACTURING COMPANY**

Drawer 661 Established 1867

OSHKOSH, WISCONSIN

Specify

## Hodell Sash Chain



Formed from a cold drawn ribbon of polished steel, Hodell Sash Chain for double hung sash suspension offers a permanent, noiseless, rustproof installation, and it will not break, kink nor stick. See Sweet's. Send for Hodell Specification File A. I. A. Class. 27-A1.

**THE CHAIN PRODUCTS CO.**

Established 1886

Cleveland, - - Ohio

## The EASY CHANGE Combination Storm and Screen Door

2 IN 1

If your dealer can't supply you, write us and send his name.

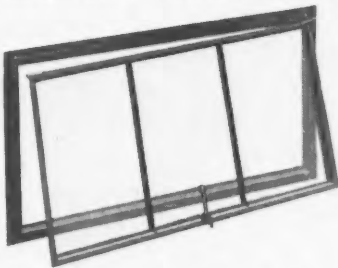
**COMBINATION DOOR COMPANY**

FOND DU LAC - WIS





## "IDEAL" Steel Basement Windows

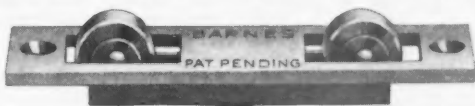


An unqualified convenience in any home both for the builder and owner. Easily installed. You merely set the frame. When the house is completed simply hang the sash. Made of strong, rigid steel, "Ideal" Windows preserve their original trimness through years of service and always boost the resale value of a home.

Write for full information

**WESTERN ARCHITECTURAL IRON CO.**  
211-33 W. Schiller St. CHICAGO, ILL.

## Look! This Sash Holder

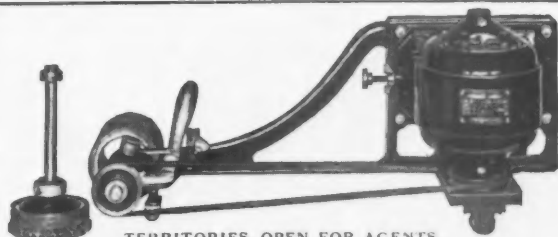


Eliminates weights, cords and pulleys.

Allows narrow trim. Saves labor and materials. Solid brass. Indestructible.

Can be adjusted to any size or any weight window without removing sash.

Write for prices and further information  
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The new time-saving, labor-saving surfacing finisher for builders and others. 1 H. P. motor. Reversible feature permits use of disk or drum. Finishes outer floor edges, goes in corners and under radiators. One-

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and the Ordinary Plain Bearing Kind That Cost Less and Sell for More

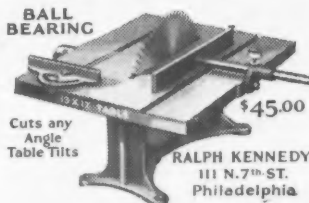
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2'x8' Throat For Dado and Moulding Cutters

Quickly pays for itself. Without motor \$25.00.

Your money back if it fails to please you.

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Cuts any Angle Table Tilts

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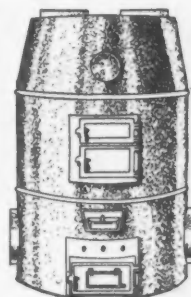
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*Our samples will convince you - Write to-day*  
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Jointers complete ready to use, also full line Jointer Heads and parts, bevel gauges for jointers. If you are doing woodwork of any kind, or have rough lumber to dress, get our circular and prices. They are interesting for any woodworker. Manufactured by

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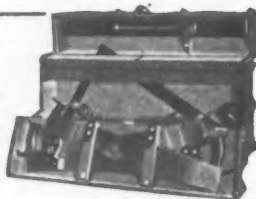
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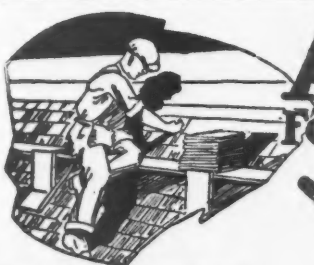
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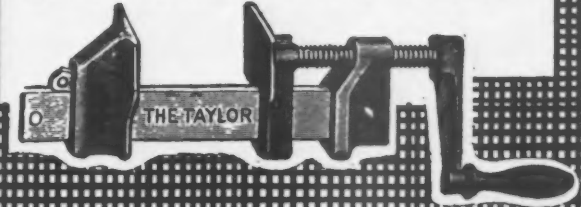
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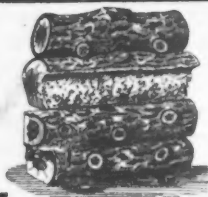


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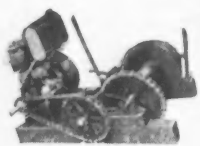




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No Sash weights,

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NATURE'S MINERAL PIGMENTS

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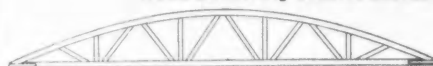
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Built on Job by Us—Erection Optional—Absolute Safety

Wood Bowstring Trusses Exclusively



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**GUARANTEES** to you the absolute uniformity in quality found only in this roofing of the ages.

It assures you of more than a lifetime of uninterrupted satisfaction.

Unexcelled beauty and quiet dignity are at once apparent in the home roofed with

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Electric Hammer  
For drilling or chipping in concrete or masonry  
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*Design "B"*

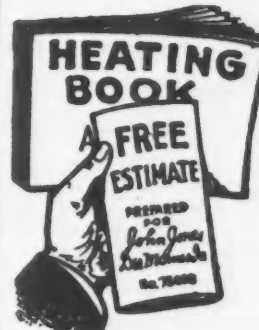
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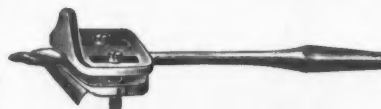
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For cutting all kinds of leather washers, also pump packings, valves, etc. Made in two sizes, 3" and 6".

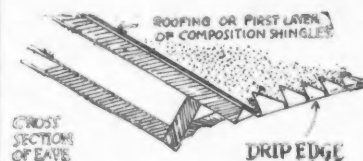


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Manufacturers of Wrenches,  
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**OTIS A. SMITH** Manufacturing Company  
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by using Miller Drip Edge in the application of prepared roofing and shingles. Miller Drip Edge re-enforces, protects, fastens, supports and finishes the edges of these roof coverings. Pleases its users with remarkable results easily and quickly secured. Your dealer can supply you. If he has none in stock write us giving his name.

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WATERPROOF PERMANENTLY

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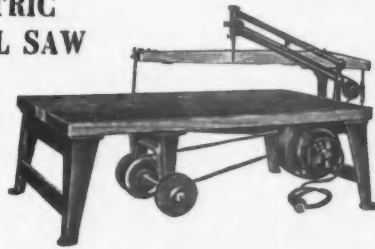
F. D. KEES MFG. CO.  
Box 93. Beatrice, Nebraska





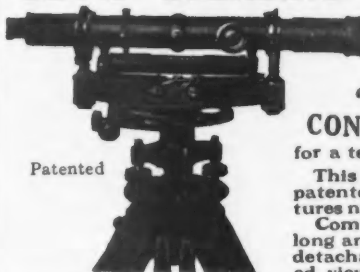
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This level has numerous patented and distinctive features not found on other levels.

Compare the telescope—long and close range focus—no detachable parts—unobstructed view of bubble—ability to convert in 10 seconds for use as a transit—1/4" shift for quick set up—vertical range of 45°—horizontal circle, 4 1/4" with 5 minute vernier—etc.

Pamphlet BL-1 describes many more special and patented features and gives full details of offer. Write NOW to WARREN-KNIGHT CO., 136 N. 12th St., Philadelphia, Pa.

# 6 MEN

## Cost a Lot of Money



You can save the wages of these six men by using ONE "National-Electric" Floor Surfacing Machine.

You can make no better investment. A "National-Electric" earns from \$20 to \$45, daily. Plenty of work. Machine is absolutely dustless. Surfaces up to the quarter round.

5-day free trial!—  
5 year guarantee

**National Sanding  
Machine Company**  
545 Vedder St.  
Chicago, Ill.



Sold  
on  
Easy  
Terms

## THE SUPER WOODWORKER

Equipped with swinging Arbor and Tilting Table

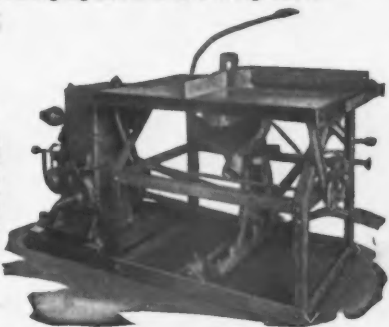
will handle all wood-working operations on the job or in the shop.

Cross Cutting  
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It is easily transported from job to job. Can be used on any job anywhere, for it is gasoline engine driven. The Superior Woodworker is the product of an old well established manufacturer of wood working machines.

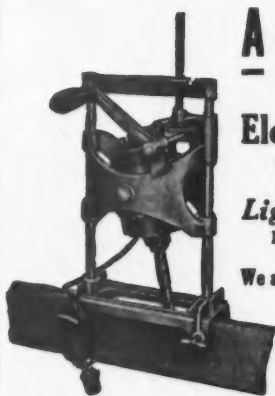
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Surprise You

Write today for illustrated Catalog



Jones Superior Machine Co., 1260 W. North Ave., Chicago

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The New  
**Electric Motor Machine**  
cuts any size mortise from round hole up to 6 inches.

**Light—Simple—Efficient**

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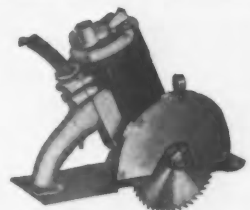
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## Speed Way Portable Electric Saw

Attaches to any lamp socket



Handy—take it to the job. Husky—built heavy and strong with plenty of power. Fully Guaranteed. Contractors and Jobbers can save time and make money with it. Weighs 15 pounds; 6-inch blade. We also make Drills, Grinders, Concrete Hammers. Write for information.

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For floors of Terrazzo, Mosaic, Marble, etc., 100% efficient with greater durability than any other grinder on the market

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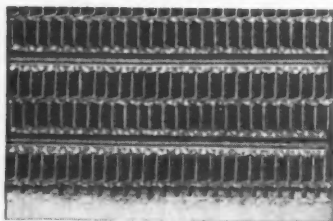
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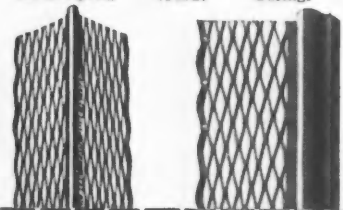
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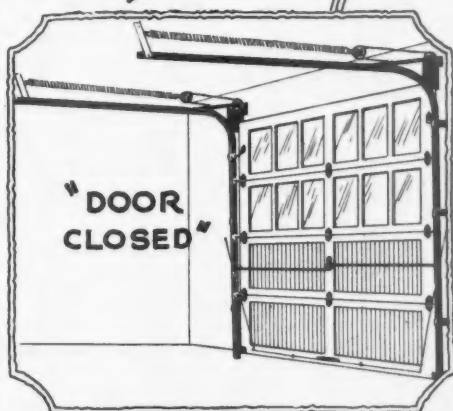
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# WHEREIN PLASTA-SAVER IS "DIFFERENT"

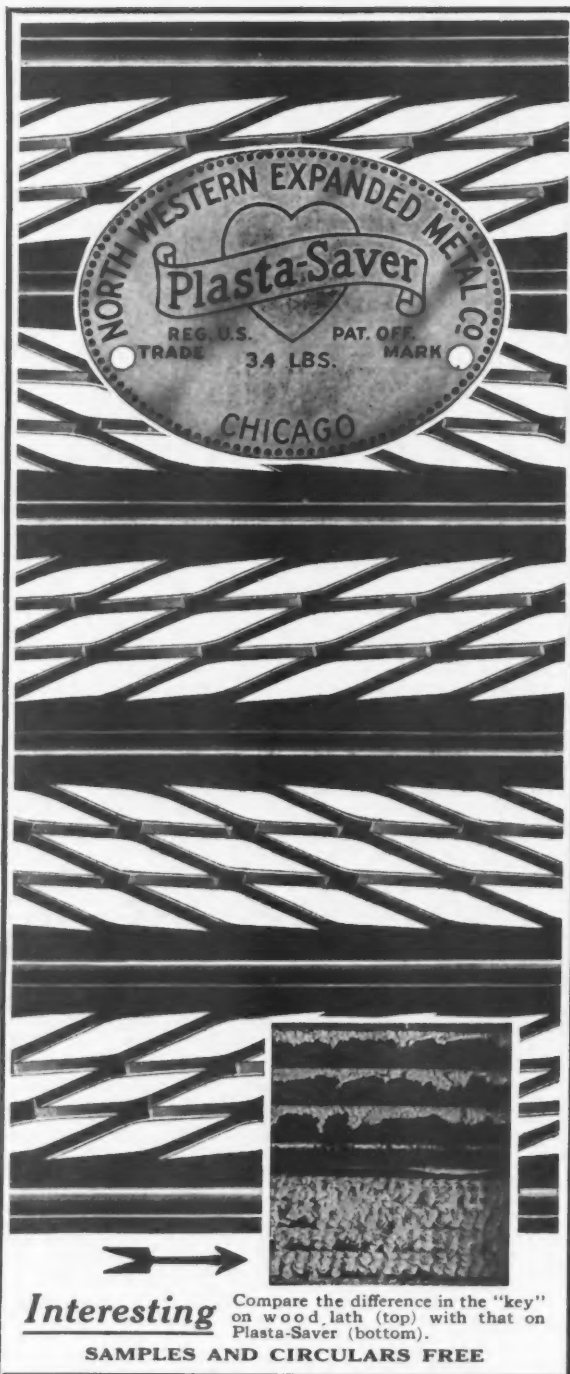
## More Economical

Plastering on PLASTA-SAVER Metal Lath costs hardly more than on wood lath or plaster board—hence this steel base can be used in low-priced construction.

## Savings Explained

(1) PLASTA-SAVER'S stiffness and easier working qualities enable the plasterer to get greater coverage and "double back" immediately without moving scaffolding.

(2) Saves mortar.



### Interesting

Compare the difference in the "key" on wood lath (top) with that on Plasta-Saver (bottom).

SAMPLES AND CIRCULARS FREE

## Does This Mean "Skimped" Construction?

No. Ample mortar passes thru the mesh to provide proper key and embedment of steel, but there are no "droppings"—no waste.

## Are There "Imitations?"

Yes. To avoid disappointment, therefore, be sure that the lath you buy or specify has three "diamonds" between each  $\frac{1}{8}$ " flat rib (spaced  $1 \frac{2}{10}$ " apart). Also see that the PLASTA-SAVER tag above shown is on every bundle of lath you buy.

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CHICAGO

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| <input type="checkbox"/> I am interested in Easy Terms | <input type="checkbox"/> Pipe Furnace      |

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**Outfit—the  
latest design  
at low price.**



**Grade A  
Quality**

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**Hardin Lavin FURNACEOLA \$67<sup>50</sup>**  
**Small, beautiful, efficient**

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**More Heat—  
Less Coal**

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