

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

A SIMMONS-BOARDMAN PUBLICATION

Vol. 46.

CONTENTS FOR FEBRUARY, 1929

No. 5.

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Published on the first day of each month by American Builder Publishing Corporation. *Chairman of Board*, Edward A. Simmons; *President*, William A. Radford; *Treasurer*, Henry Lee; *Secretary*, Roland D. Radford; *Editor*, Bernard L. Johnson; *Eastern Editor*, Charles G. Paker; *Advertising Staff*: Delbert W. Smith, C. R. W. Edgcombe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement.

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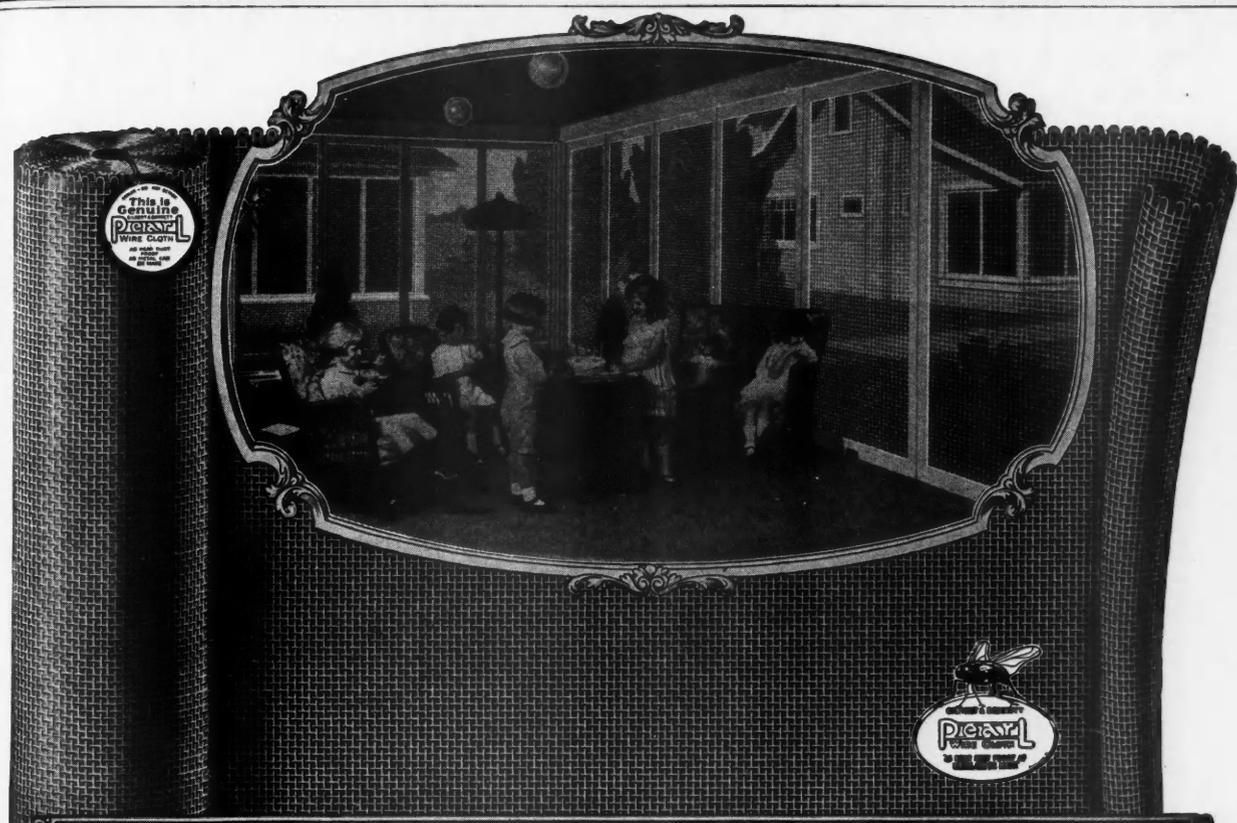
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Genuine PEARL Has 2 Copper Wires in the Selvage

Carpenters! Now is the time to Make Money Screening Porches!

Every Unscreened Porch, or Porch with rusted Screens—every New Home is a prospect for YOU.

SHOW these prospects how simple and economically porch screens can be installed. Submitting a simple floor plan showing portable screen panel construction will aid you in securing more business.

Home owners prefer PEARL wire cloth because of its beauty and durability. PEARL is highly rust-resisting—made so by a process exclusive with us. No competitor can use this process, consequently no imitation of PEARL can be “just as good.”

Clean, Sanitary, Easy on the Eyes, firmly woven so as to make no-bag, no sag screens, requiring no painting, PEARL is the most economical, as well as the most handsome, screen wire cloth on the market today. Out-wears Galvanized Wire Cloth several times.

We have a dealer in your town. See him or write us if you are interested in permanently screening doors, windows or porches. Samples and literature FREE.

Address Dept. “A”

The Gilbert & Bennett Mfg. Co.

New York Georgetown, Conn. Chicago Kansas City

*PEARL is made in Regular Grade [12 x 13 Mesh] and 14, 16, 18, 20, 24 and 30 Mesh, also Extra Heavy Grade [14 Mesh only]
The best hardware dealer in your city sells “PEARL”*

MAIL THIS COUPON

The Gilbert & Bennett Mfg. Co.
Dept. “A”—Box 760
CHICAGO, ILL.

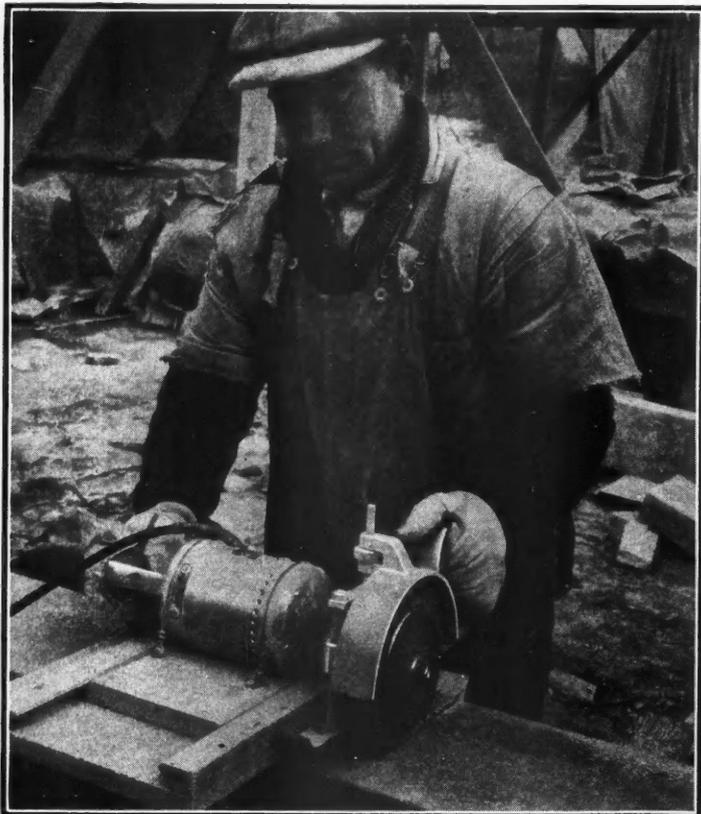
Gentlemen:

Please send complete information on PEARL WIRE CLOTH and PLAN for screening porches to

NAME.....
STREET.....
CITY.....STATE.....



Sawed Stone, the New Building Material!



Cutting groove in stone with portable electric saw preliminary to breaking. A tap with a mallet on the opposite side breaks the strip clean on a line with the groove. One man keeps six stonemasons or bricklayers busy laying up stone!

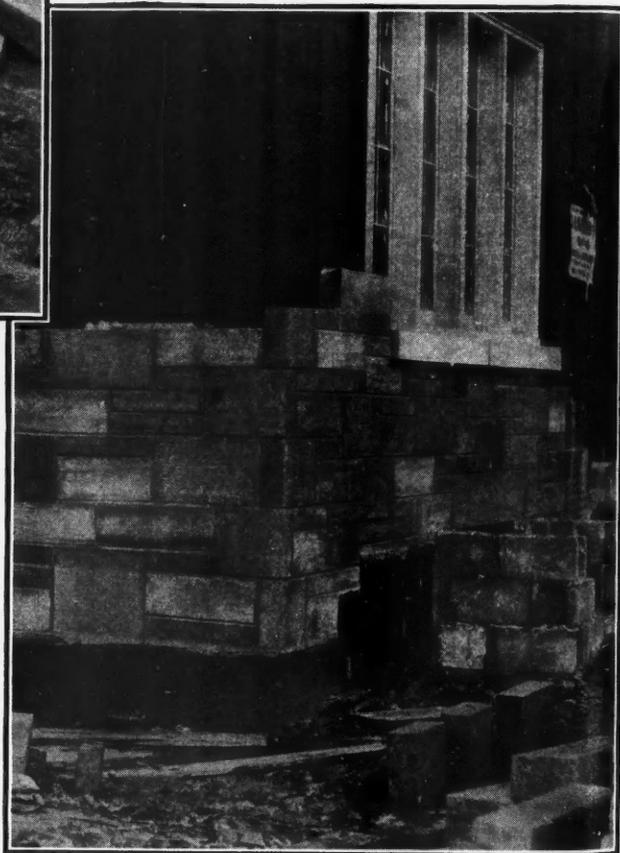
THIS tells you about a new development in building. One that makes natural stone just as economically practical for facing residences as brick, stucco, or wood.

We are telling the American public all about the use of sawed Indiana Limestone Random Ashlar in residence construction. See our ads in House Beautiful and House and Garden.

So new is this method of using limestone for residence construction, that the average house builder does not yet clearly understand its advantages. We are looking for contractors who want to take advantage of the opportunities which the use of the rough-sawed Indiana Limestone presents.

Why not inform yourself so that you can explain it to your prospects? Here are the facts. Instead of walls of solid stone, Indiana Limestone is now used as a facing or veneer, just as brick, stucco or wood

Houses built with facing of Indiana Limestone Random Ashlar prove amazingly popular. Write for booklets telling all about this new profit field.



House under construction. Indiana Limestone Random Ashlar is used as a veneer just like brick.

INDIANA LIMESTONE COMPANY, General Offices: BEDFORD,

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Did You Ever Have the Pleasure to Run a CLARKE?

LOOK THIS OVER

Oak floors
 Hard maple floors
 Soft pine floors
 Fir floors
 Poplar floors
 Birch floors
 Beech floors
 Parquet floors
 End grain floors

Edge grain floors
 Riff grain floors
 Cork Tile floors
 Rubber Tile floors
 Composition floors
 Magnesite floors
 Mastic floors
 Mosaic floors

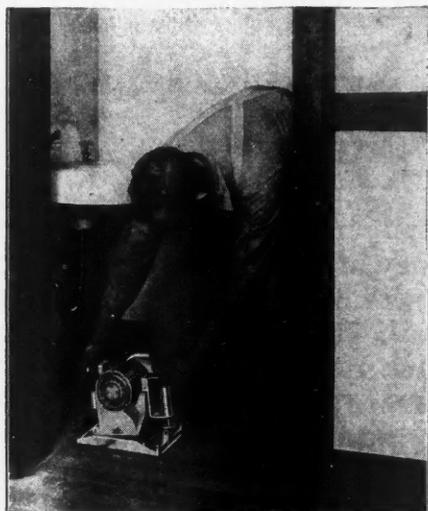
Plugs in any
light socket—



Sands all rooms—large spaces—dance halls

The CLARKE Sands them all

At the rate of 800 to 2,000 square feet in an 8 hour day (certain types of composition floor material excepted). And IT REFINISHES OLD VARNISHED FLOORS WITHOUT THE USE OF any remover or neutralizers—300 to 1,000 square feet per day.



Sands closets and tight places

Nothing else can compare

The CLARKE Removes

(without gumming or clogging the paper)

2 coats
or
20 coats

Floor varnish	Floor wax
Flat varnish	Liquid wax
Gloss varnish	Floor oil
Spar varnish	Paint
Floor stain	Shellac, etc.

These results are absolutely guaranteed by the originators of portable sanders. They will refund you every cent paid any time *within 60 days* if unable to show you. Think of it!

And, remember, the CLARKE is entirely dustless, uses less sandpaper and less current per foot than any other machine—it saves so much on operating costs, you can pay for it out of your savings—and still weighs just 31 pounds. Get proof of these facts before you buy. Mail the coupon below at once.



Ideal for bench work. Sands doors, millwork, trim. When you want it, as you want it and anywhere. Heavy duty roughing or beautiful smooth cabinet finishes.

Clarke Sanding Machine Co.

Dept. A-32, 3815 Cortland St.
Chicago, Illinois

Originators and, for 12 years, Manufacturers
of Portable Sanding Machines

MAIL THIS

CLARKE SANDING MACHINE CO.
Dept. A-32, 3815 Cortland St., Chicago, Illinois

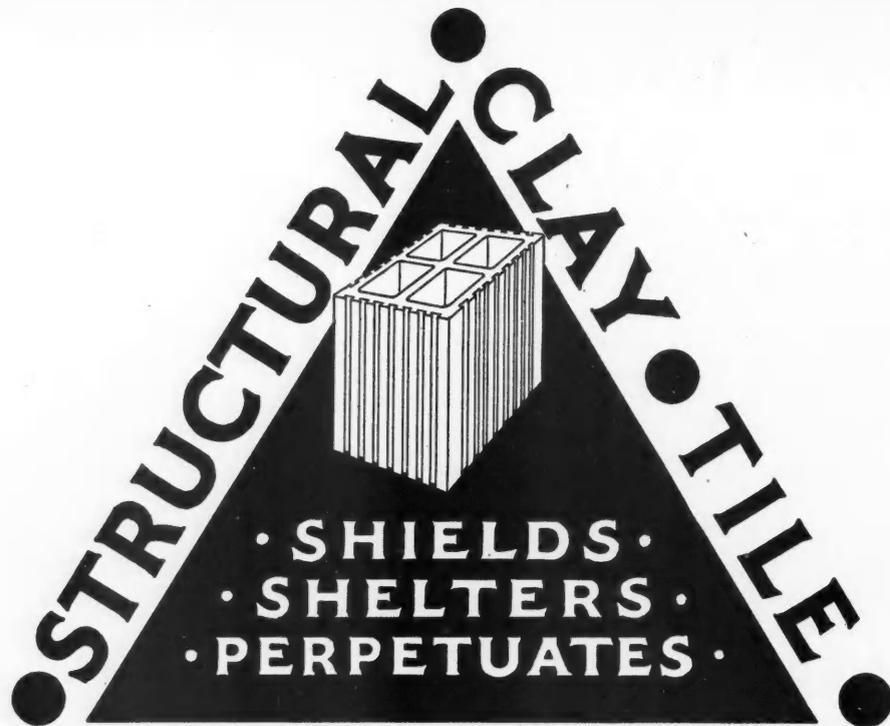
Please send me, without obligation, full facts about the
Clarke Vacuum Portable Sander.

Name.....

Address.....

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

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



THE MARK OF A PROVEN PRODUCT AND THE SERVICE OF THE STRUCTURAL CLAY TILE ASSOCIATION

COUNTLESS homes and buildings, everywhere, offer evidence of the permanence and economy of Structural Clay Tile. Born, like granite, of a union of plastic clay and searing flame, it is blood brother to the everlasting rocks.

Structural Clay Tile shields, shelters, and perpetuates. Whatever the requirements—for exterior walls, for interior partitions and floors, as protection for steel work, in every type of building, there is a true-to-size, hard-burned Structural Clay Tile unit for the purpose.

Never have the quality, variety and avail-

ability of structural clay tile been so marked as they are today. Never has the engineering service behind the product been so helpful. The Structural Clay Tile Association maintains a staff of engineers whose services are available at all times to the building industry. A trade association, working for the good of the industry as a whole, its services are rendered without charge. For general or specific information address:

Structural Clay Tile Association

Formerly Hollow Building Tile Association

Engineering Building · Chicago Illinois



FOR HOMES



FOR INDUSTRY



FOR BUILDINGS



only \$70

cash, f.o.b. factory, for 210 gallon size complete with motor for 60 cycle or direct current. \$100 for 420 gallon per hour size.

for RUNNING WATER

1. *Makes a home more comfortable.*
2. *Increases its value.*
3. *Makes it more readily salable.*

Only \$70 for a complete Fairbanks-Morse Home Water System—but how much is gained by such a small investment! A house really becomes a home of comfort and convenience. The big objection to the "home away from town," lack of *running water*, is eliminated.

And the value of the home equipped with Running Water is increased far out of proportion to the cost of the installation. Put one of these Fairbanks-Morse Systems in one house in a block of homes not so equipped and see for yourself which one sells first and at the largest profit.

The subdivider and builder will find these systems a profit maker. The home owner will find the \$70 investment yields big returns in living comfort.

FAIRBANKS-MORSE Home Water Systems

Manufacturers FAIRBANKS, MORSE & CO., Chicago, U. S. A.

Branches and Service Stations Covering Every State in the Union

Fairbanks-Morse Products



"Every Line a Leader"



Here are unmatched F-M features

- 1 Completely enclosed. All parts fully protected.
- 2 Compact—19" indiameter, 21" high.
- 3 Big capacity—210 and 420 gallons per hour.
- 4 Entirely automatic—starts itself—stops itself.
- 5 Easy to install—only two pipe connections.
- 6 Completely equipped, including electric motor, automatic switch, pump and tank.
- 7 Quickly accessible—simply lift hood. The removal of one stud bolt exposes valves.
- 8 Quiet and exceptionally smooth running.
- 9 Self-oiling.
- 10 Supplies steady, full stream without pulsation.
- 11 Fresh water connection with every pump at no extra charge.
- 12 Can be used with large storage tank when desired.
- 13 Genuine F-M unit throughout. Fully guaranteed—the biggest home water system value ever offered.

MAIL COUPON today

FAIRBANKS, MORSE & CO., Dept. H-2
 900 S. Wabash Avenue, Chicago
 Send your FREE Home Water Service Booklet and Special Circular about the New F-M Home Electric System.

Name.....
 Address.....
 Town..... County..... R. F. D.....
 My source of water supply is:
 Shallow Well Stream
 Spring Cistern
 Have you Electricity?
 Yes No

Hardware and O. Henry

HEVER read any of O. Henry's stories? If you haven't you've missed something.

Well, O. Henry used to work in a drug store down in Greensboro, N. C. Maybe that's why he loved the plain people so much and knew better than most writers, all the trials and troubles you and we and the next fellow go through without any noise or fuss.

The Southern Railway built a fine new station down in Greensboro and since they put Good Hardware—Corbin—on it, we ran an ad to architects to tell 'em about it.

Here's part of what we said —

“Here in the new station at Greensboro, his home town, O. Henry would see at train time, humanity in the raw—the hurrying hundreds he loved, all intent on their own missions, gay or tragic, setting out on hopeful journeys, seeking fresh fortune, returning

to face joy or sorrow, meeting, parting.

“What does the hardware on the new station mean to them? No more than it means to the users of any public place. *It means little or nothing.*”

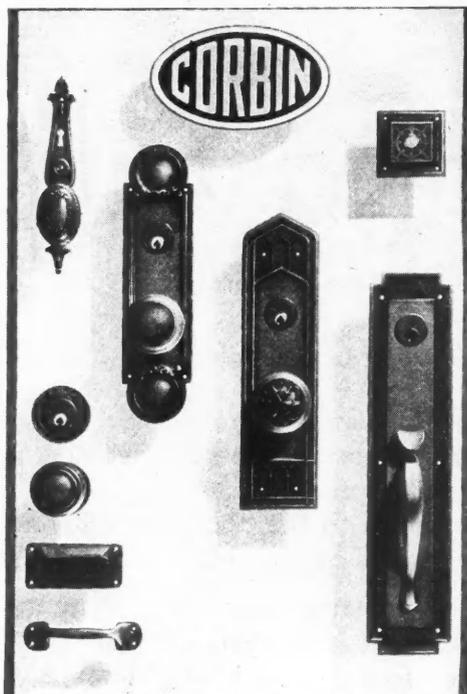
And that's just the way it is with builders' hardware almost everywhere—even Good Hardware—Corbin. Once it's bought and installed and the owner takes over the place, it's forgotten—until something goes wrong.

It's up to the builder, up to you, when, as and if something does go wrong. Hardware may be a small part of the job, but you can't

take chances on it. Poor hardware is a destroyer of good-will.

Play it safe. Don't give people cause to think about the hardware on your buildings—most of them have enough to worry about, anyway. Make it easy for them as long as your building will stand. Use Good Hardware—Corbin.

Good Buildings Deserve Good Hardware



P. & F. CORBIN SINCE 1849 NEW BRITAIN CONNECTICUT

The American Hardware Corporation, Successor

New York

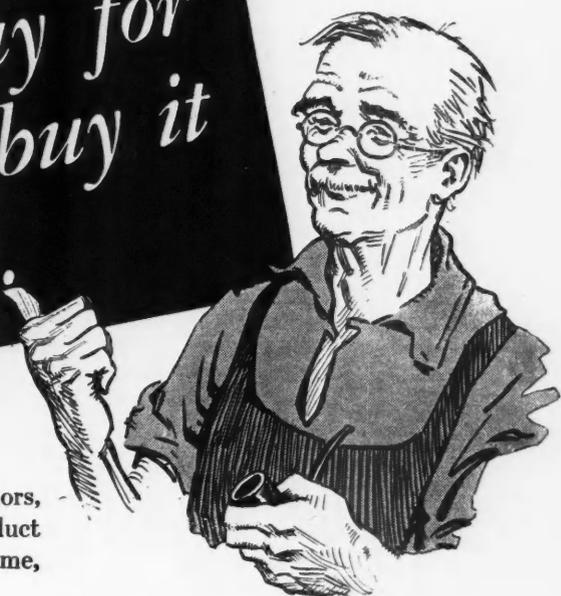
Chicago

Philadelphia

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE



When you need a thing... you pay for it whether you buy it or not



ANYTHING, be it toggles, expansion bolts, drills or anchors, must be of quality to do the job. When you try using a product not made for the specific purpose you risk breakage, loss of time, money and possibly a job to do over again.

It's costly—in time, labor and money—not to get what you need in the first place.

The 5-point Star leaders are: SPRINGIN—the toggle with resilient wings; SCRUIN—the lead anchor that never fails; DRYVIN—the expansion shield you hammer home; TAMPIN—the machine screw anchor set in place with tamping tool; and LOXIN—the all-steel, hot-galvanized machine bolt shield that locks in place.

We're proud of our products; they're built to do the job. Star products give you two things:

1. A sound, substantial article that will do what it is supposed to do.
2. The backing of a company making Star products for many years—a house that knows your requirements and is manufacturing to meet those needs.

Seems t' me there's things we just naturally depend on; the blueprint for workin' plans, SEBCO for bolts and toggles—and the noon whistle for dinner.

Seen the new development in toggle bolts—the SPRINGIN? Tell ye, what to do. Try it out at our expense. Just drop me a line and say you want free samples. You'll get 'em.

Ale Ben Bolt

for Free Samples and Stuffers

MAIL THIS COUPON

STAR EXPANSION BOLT COMPANY

143 Cedar Street New York

A full stock is carried at these branches

- | | | | |
|----------|---------------|---------|-------------|
| NEW YORK | PHILADELPHIA | BOSTON | ATLANTA |
| DETROIT | SAN FRANCISCO | SEATTLE | LOS ANGELES |
| | CLEVELAND | CHICAGO | ST. LOUIS |

STAR EXPANSION BOLT CO.
143 Cedar Street, New York
Send me free the items checked.

- | | | | |
|----------|-----------------------------------|--------|-----------------------------------|
| SPRINGIN | <input type="checkbox"/> Stuffers | DRYVIN | <input type="checkbox"/> Stuffers |
| | <input type="checkbox"/> Samples | | <input type="checkbox"/> Samples |
| SCRUIN | <input type="checkbox"/> Stuffers | TAMPIN | <input type="checkbox"/> Stuffers |
| | <input type="checkbox"/> Samples | | <input type="checkbox"/> Samples |
| | | LOXIN | <input type="checkbox"/> Stuffers |
| | | | <input type="checkbox"/> Samples |

[Be sure to state quantities desired]

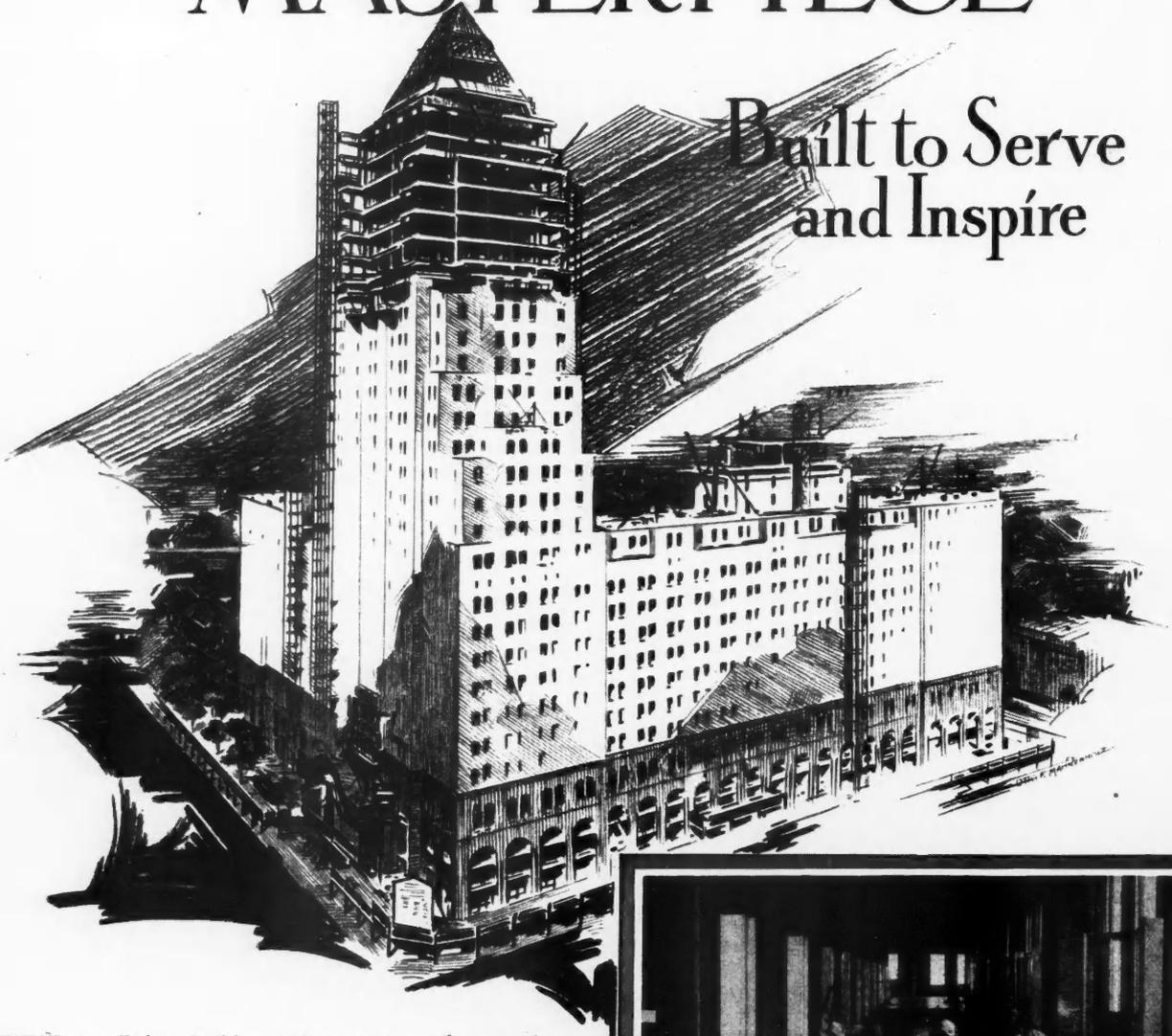
Name

Address

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

AN ARCHITECTURAL MASTERPIECE

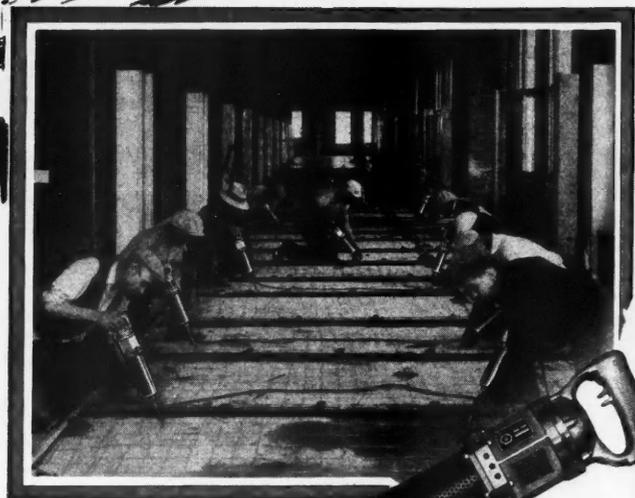
Built to Serve
and Inspire



THE new Fisher Building in Detroit is a tribute to American enterprise and business leadership. This mammoth building has 1,134,000 square feet of floor space, a theatre seating 3000 persons and an eleven story garage accommodating 1100 cars.

It is significant that Black & Decker Portable Electric Tools played an important part in the construction of this gigantic building. For instance, thirty-four Black & Decker Portable Electric Hammers were used for drilling concrete to accommodate conduit in the installation of electric wiring and fixtures. Electric tools in this instance alone saved millions of hammer blows by hand and speeded up the job by days and weeks.

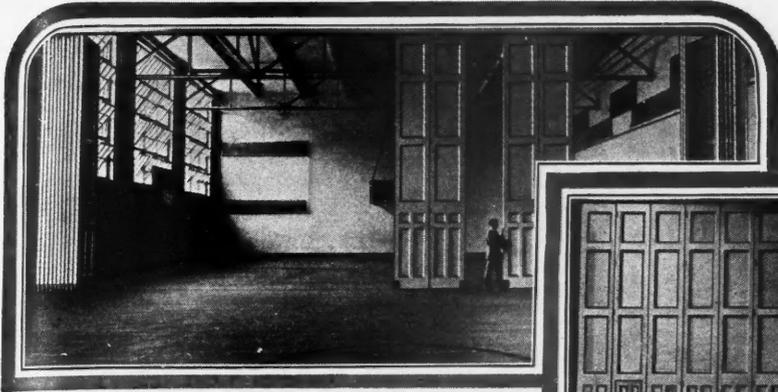
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BLACK & DECKER

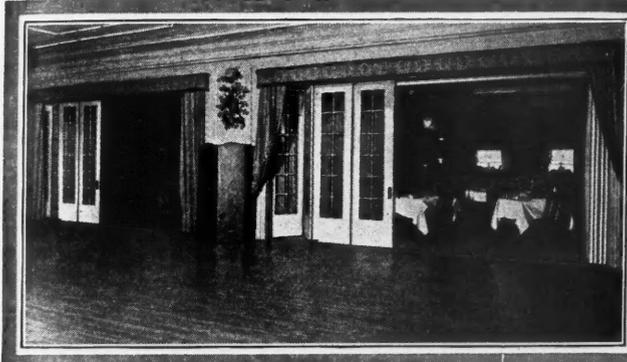
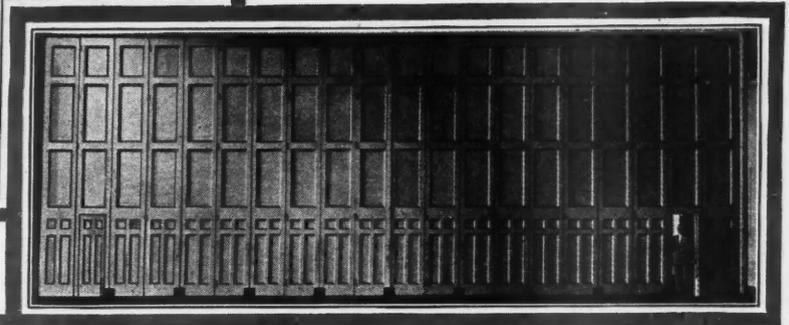
TOWSON, MD., U. S. A.

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE



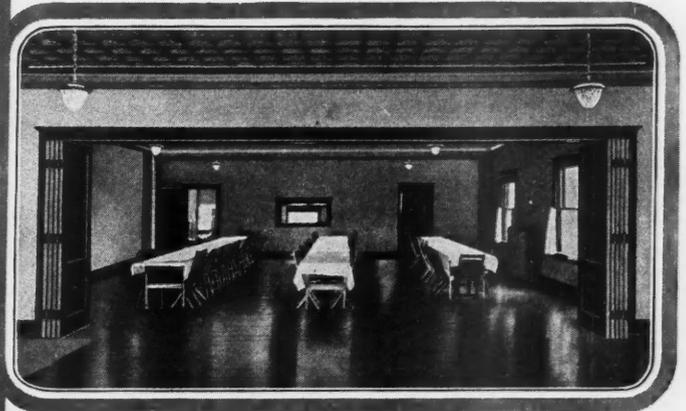
Left and Below: FoldeR-Way Hardware as used on very high and heavy partition doors. The weight is carried on floor track.

With this type of FoldeR-Way the doors operate in pairs—easily handled by one man.

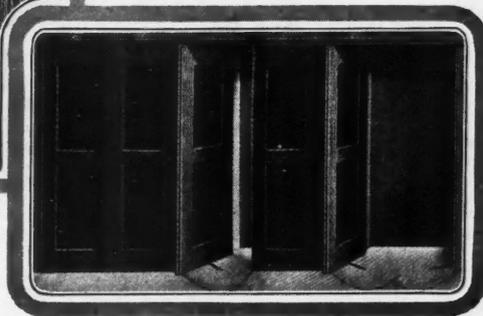
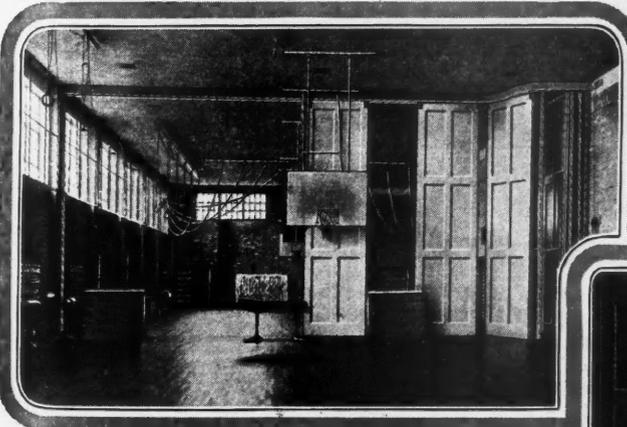


Below: With FoldeR-Way hardware as used on smaller size doors, the weight is carried on track at top.

The dining room and ballroom shown above can be separated or quickly made into one room.



Left: This type of FoldeR-Way is particularly adaptable for very wide doors, each handled as a separate unit.



The type of FoldeR-Way at the left is most desirable for school wardrobes, telephone booths, etc.

FoldeR-Way METHODS

DESIGNING hardware for partition doors that slide or fold away requires expert engineering skill. Installing partition doors, however, becomes a simple matter when FoldeR-Way methods are used.

No line is more complete, offers more variety, than FoldeR-Way partition door hardware. Whatever your problem is, from telephone booths to churches, gymnasiums and auditoriums, you are certain of finding FoldeR-Way hardware specially designed for any size or style of sliding or folding partition doors you wish to install. Feel free at any time to consult R-W engineers about any kind of door problems.

The R-W book "Sliding and Folding Partition Door Hardware" contains over 100 photographs, drawings and diagrams illustrating FoldeR-Way Methods and uses. Details of design and engineering are fully explained. Let us send you this book. You will want to retain it in your files for ready reference.

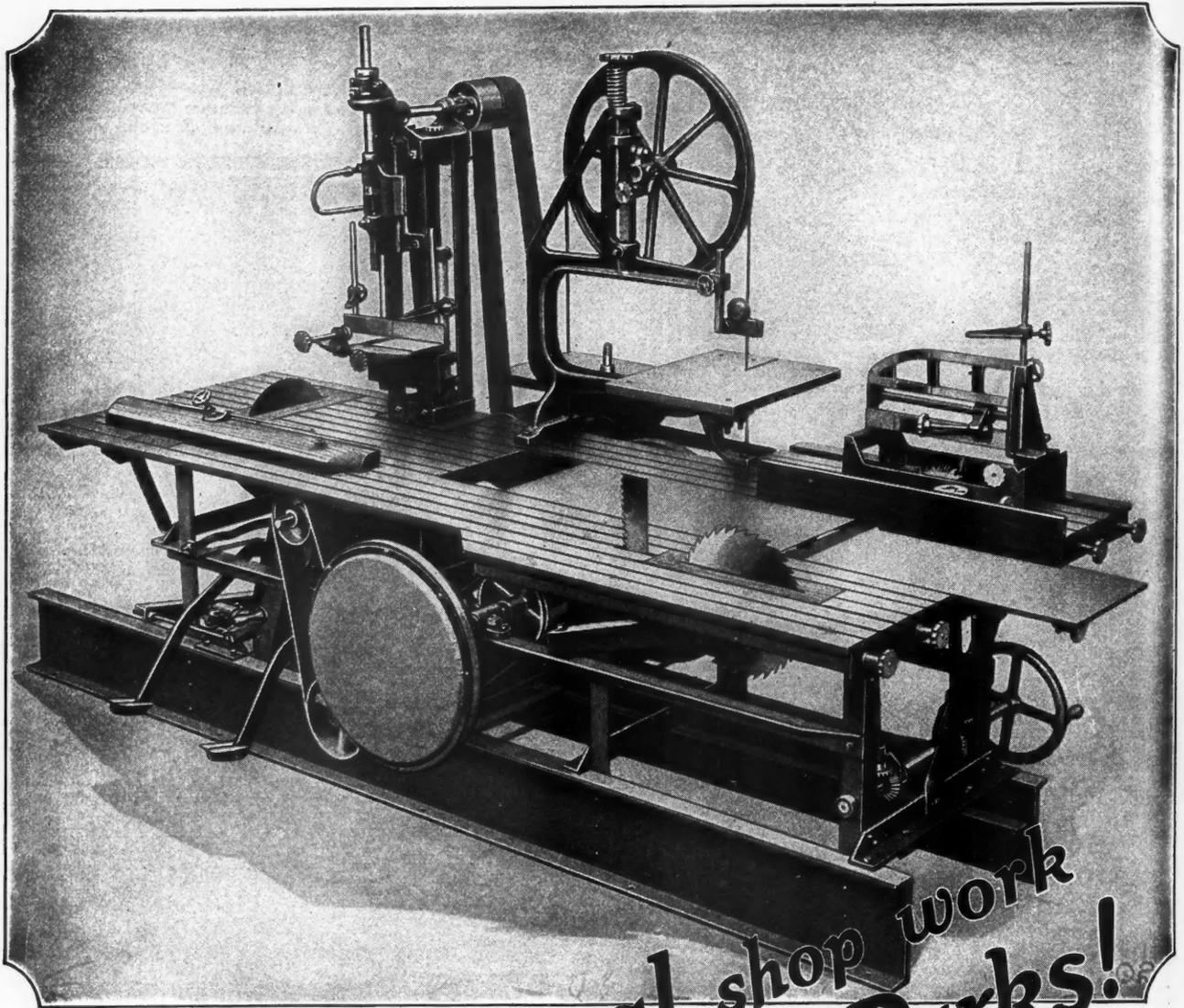
Richards-Wilcox Mfg. Co.

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 Denver
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. Winnipeg

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Parks "Planing Mill Special"
 8 machines in 1—12-inch circular rip and crosscut saw, 22-inch band-saw, 12-inch swing saw, 12-inch jointer, tenoner, hollow chisel mortiser, spindle shaper and sander—does everything in woodworking\$590.00

...for real shop work
Get a Parks!

L. B. Emerson, Thetford, Vt., contractor, writes us: "This is the third shop I have equipped for myself and for real work Parks machines have my O.K. They are great help in general repair and new

construction work." For a wide variety of shop work get the big Planing Mill Special above, for speed up work in new construction get the Cabinet Shop Special, for fine finishing you'll want the new Parks Drum Sander shown below.

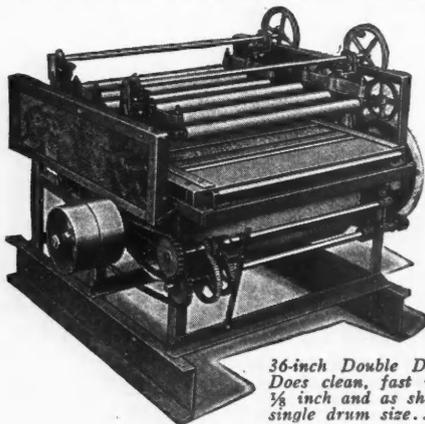
Look these machines over and then write for complete specifications

THE PARKS WOODWORKING MACHINE CO.

Builders of quality woodworking machinery for over 40 years
 Fergus & C. H. & D., Cincinnati, O. Canadian Factory: 338 Notre Dame, East, Montreal

- Lathes Planers
- Band Saws Rip Saws
- Swing Saws
- Drum and Belt Sanders
- Mortisers Jointers
- Combination Outfits

Write for complete catalog



Parks "Model S"
 Drum Sander, \$450

36-inch Double Drum Sander with steel bed. Does clean, fast work on material as thin as 1/8 inch and as short as 8 inches. Also 24-inch single drum size.....\$225.00



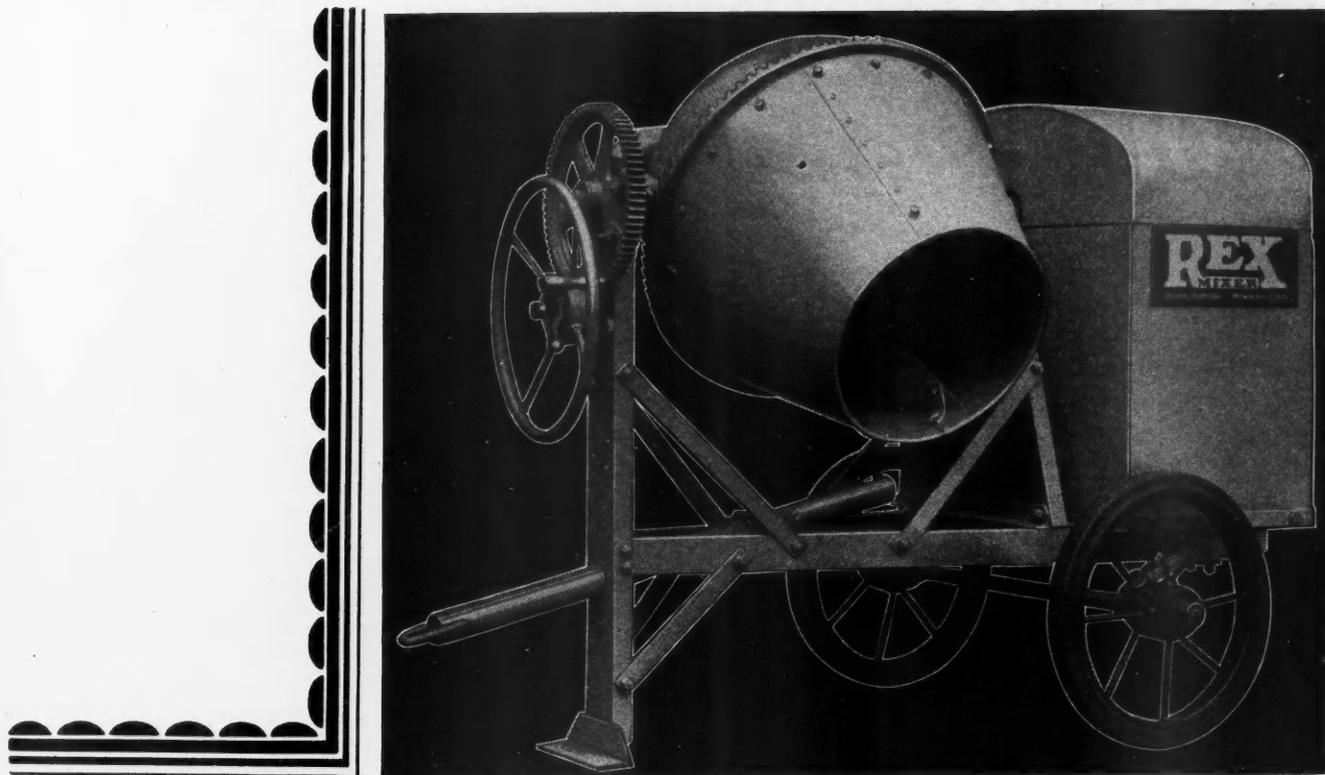
Parks "Cabinet Shop Special"
 No. 10

Rip and crosscut saw, band-saw, jointer. Compact, complete woodworker\$290.00

PARKS

WOODWORKING MACHINERY
 EVERY PARKS IS GUARANTEED FOR TEN YEARS

A New 1/2 Bag Tilter Value



AGAIN REX ENGINEERING SCORES A VICTORY IN VALUE

As others followed the design of the preceding Rex Tilter, so they will assuredly follow the footsteps of Rex Engineering authority as expressed in this 1929 1/2-bag Tilter.

But only Rex engineering and production facilities could give you such a mixer, with so many new features, for a low price—at the present time.

So if you're interested in getting all the industry can give you for your money, in a 1/2-bag tilting mixer—ask to see the Rex Tilter Catalog with this coupon.

You Get:

Cantilever springs for easier riding, faster towing... a new tilt lock that can't loosen... a Timken in the drum spindle ends lubrication worries... the hand wheel and gear tilt drum faster and easier... a drum at easy shoveling height that dumps into any barrow... a reinforced drum lip that shovels can't nick... a new welded frame that hard work won't loosen... a towing tongue that slides out of the way... a counterbalanced frame for easy moving.



REX MIXERS

(Reg. U. S. Pat. Off.)

CHAIN BELT COMPANY
721 Park Street, Milwaukee, Wis.

Send me Catalogs on the mixers I've checked.

1/2-bag tilter	<input type="checkbox"/>	2- to 3-bag 14-S	<input type="checkbox"/>
1/2- to 1-bag 5-S	<input type="checkbox"/>	6-bag 28-S	<input type="checkbox"/>
1-bag 7-S	<input type="checkbox"/>	12-bag 56-S	<input type="checkbox"/>
1- to 2-bag 10-S	<input type="checkbox"/>	27-E Paver	<input type="checkbox"/>

Name

Address

City..... State

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The experience of
thousands available to you

THOUSANDS of DeWalt users have developed ways and means to "cut corners" on expenses and to "step up" profits.

These figures show that there's enough lumber to be cut to make a DeWalt profitable on almost every type of construction—apartment houses, factories, office buildings, concrete forms, huge construction projects (such as dams, bridges, railroads).

The DeWalt Wonder Worker is the most powerful, usable and easily portable machine you can have on your job—and will definitely save you carpenter labor costs.

Let our representative show you what the DeWalt will do for you.

Send Coupon Today!

DEWALT

Wonder Worker

The Economy Wood Worker

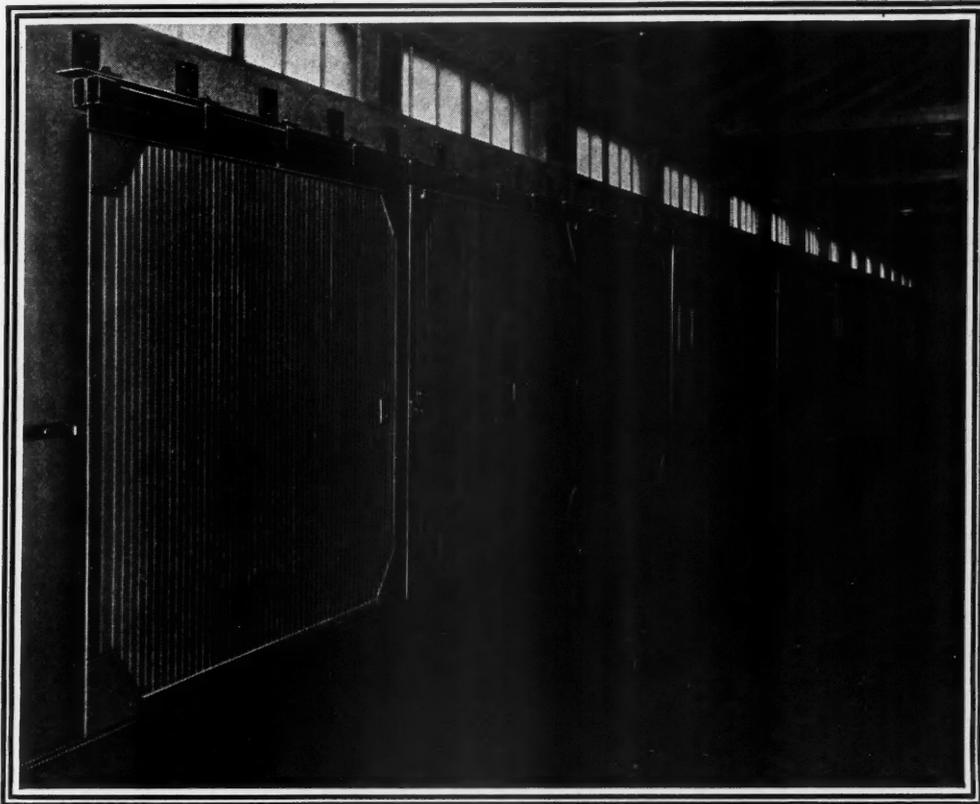
DEWALT PRODUCTS CORPORATION
754 New Holland Avenue, Leola, Penna.

I'd like to have a practical demonstration of the DeWalt right on our own job.

Your name.....

Firm name.....

Address.....



Super-Way doors and hardware as installed in Illinois Central Freight House at Indianapolis, Ind.

Super-Way

Doors and Hardware

Here is doorway equipment that is meeting the most exacting standards of many of the largest railroads and industries.

The construction of Super-Way doors is exactly suited to the strenuous abuse which most doors in roundhouses, freight houses and warehouses must withstand.

Super-Way doors are built with a heavy steel frame securely welded. Solid wood members are tongued and grooved and

securely spiked together inside the steel T. frame without a spike exposed.

Super-Way Hardware, either hangers or hinges, is fitted directly to the steel members—"steel to steel" contact. All weight is carried by the steel frame and corner-bracing so there is no possibility of sagging, warping or pulling apart.

Both doors and hardware are made to take care of any size opening.

Construction details and catalog of designs will be mailed on request.

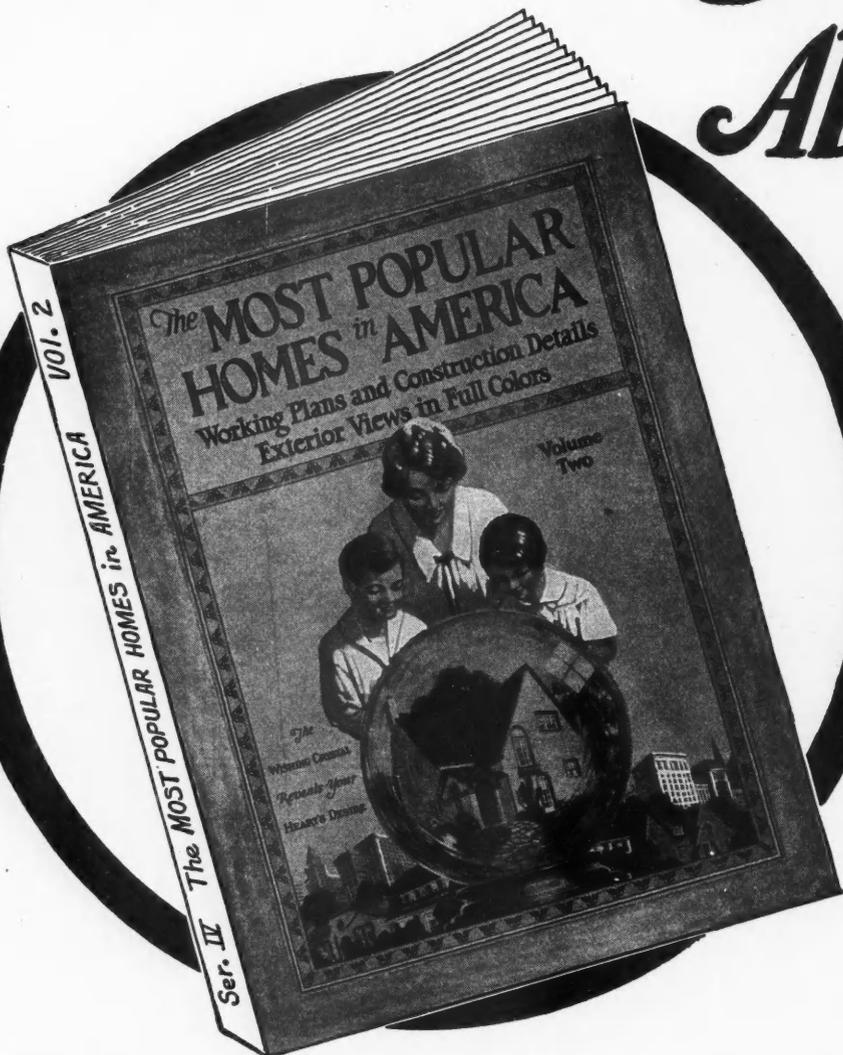
Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides.

New York . . . AURORA, ILLINOIS, U.S.A. . . . Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
 Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
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FIFTEEN of the home designs in this wonderful book have complete working drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

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Enclosed find \$2.00 for which ENTER RENEW my subscription to The American Builder for one year and send me free and postpaid a copy of your book “MOST POPULAR HOMES IN AMERICA”—Vol. 2.

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My occupation is (Check Only One)
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PROFIT\$ IN EVERY MODEL

Here are shown FOUR reasons why successful contractors and builders are lowering construction costs on their jobs. Why do they prefer SKILSAW? Because, these FOUR models are the greatest time savers in sawing, known to keen-minded builders. There are PROFITS IN EVERY MODEL!

SKILSAW serves every purpose in sawing.

Model "J" [weight, 10 lbs.] is used for cutting form panels, stair stringers, sheathing, bridging, etc.

Model "E" [weight, 18 lbs.] has a tilting base for bevel cuts. It is designed for cutting concrete forms, rafters, joists, studdings, etc.

Model "O" [weight, 24 lbs.] also has an adjustable and tilting base; it is particularly adaptable for cutting all kinds of rafters for roofs of any pitch. Lintels, doors, heavy joists, shoring, etc., are speedily and accurately cut with this model. It quickly converts to a table saw.

Model "M" [weight, 28 lbs.] is appropriate for cutting timbers 4 x 4 or heavier.

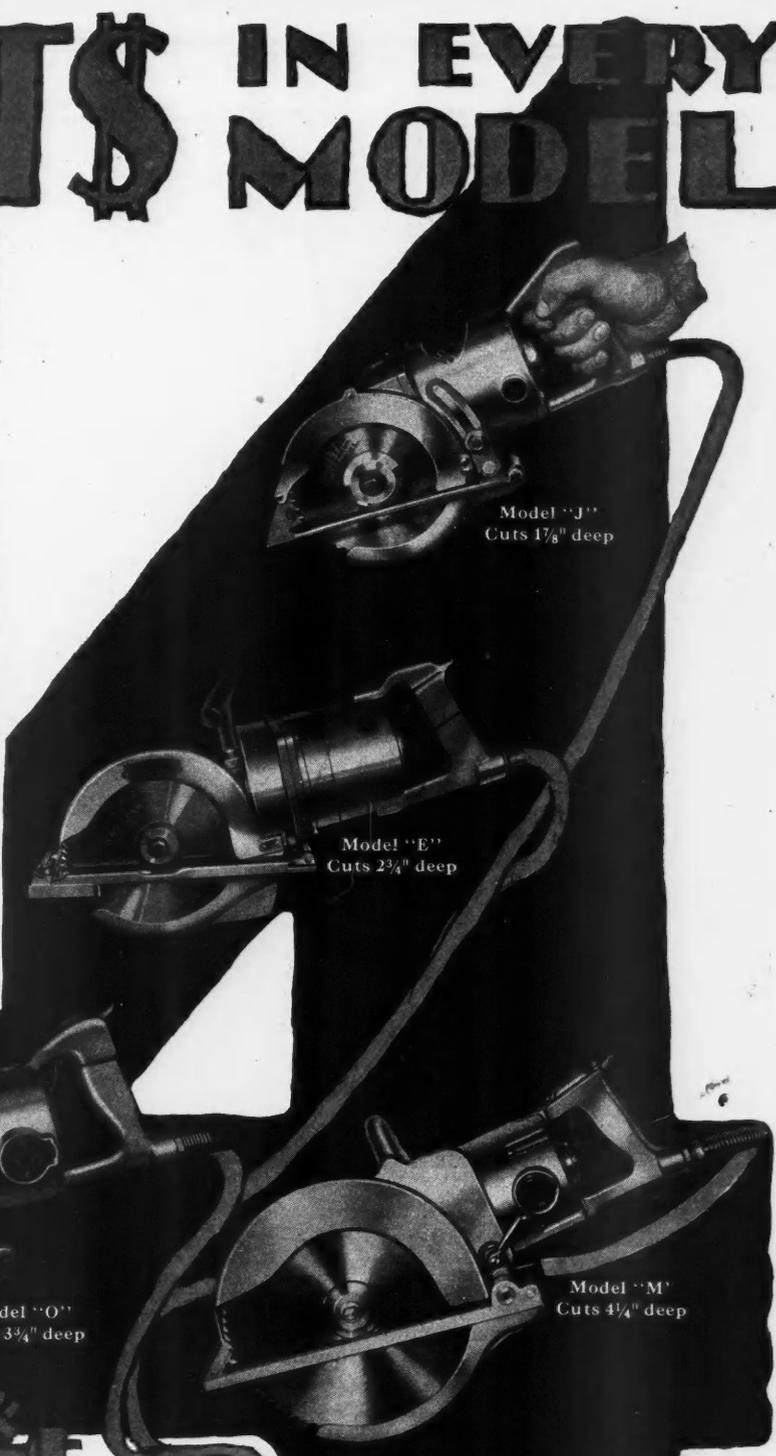
These tools have "guts" for real work! They are simple, sturdy, easy to handle, easy to operate for straight, depth or bevel cuts. Only these and other PRACTICAL features are included in their design by the pioneers in the electric hand saw business.

See SKILSAW demonstrated before you buy any saw. No obligation. Just fill in the coupon below and mail it today.

Look for the trade name. These tools are manufactured only by

SKILSAW INC

3822 RAVENSWOOD AVENUE, CHICAGO, ILLINOIS



Model "J"
Cuts 1 7/8" deep

Model "E"
Cuts 2 3/4" deep

Model "O"
Cuts 3 3/4" deep

Model "M"
Cuts 4 1/4" deep

I have checked the model I'm interested in. I'd like to see it demonstrated.

Model J Model E Model O Model M

Name

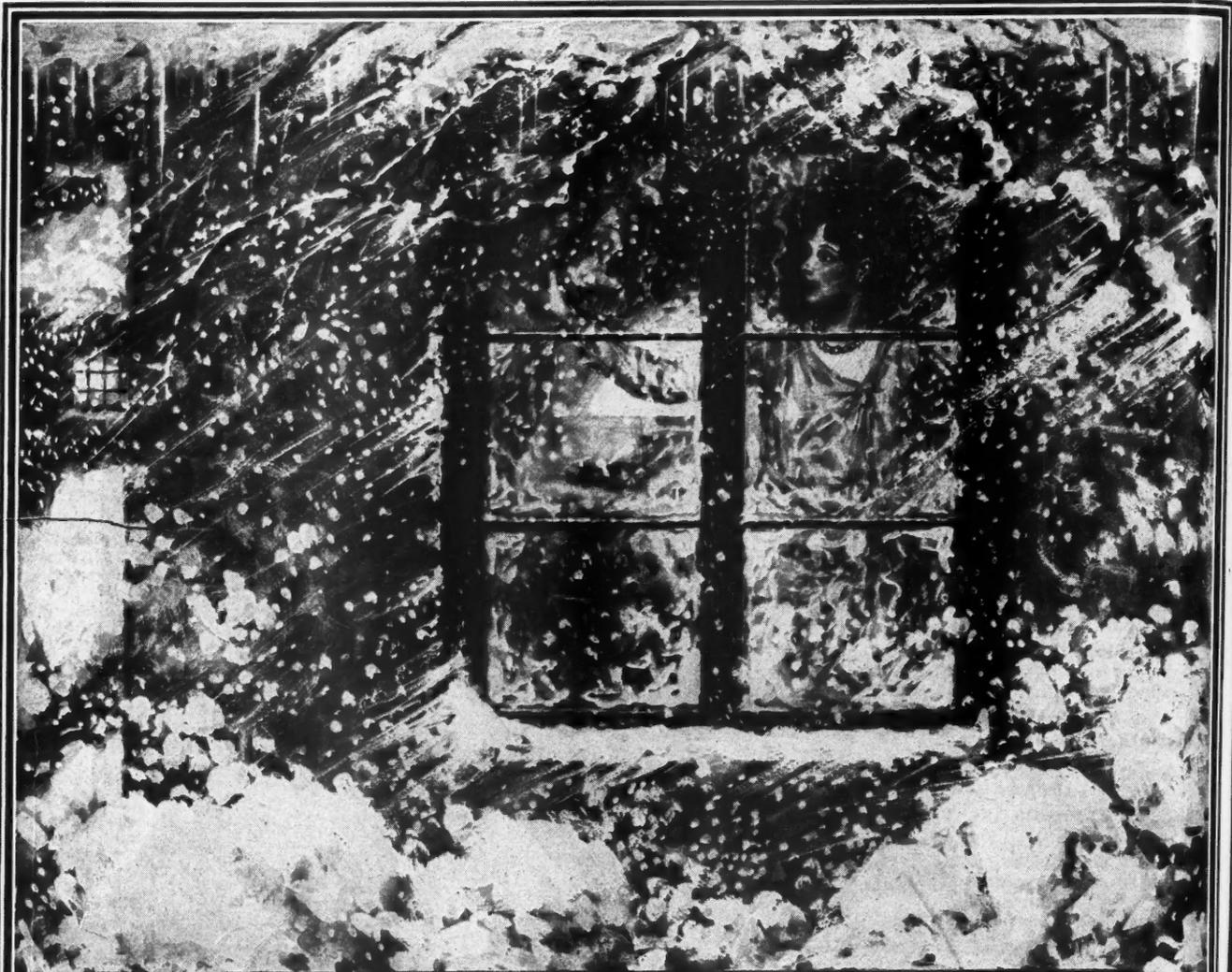
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City State

No. 32

SKILSAW

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



"It's nice and warm in here!"

Houses insulated with INSULITE dare the weather at its worst. Less fuel consumed—yet there's complete comfort even on the coldest days.

And the same houses are cool in the hottest summer weather. Moisture condensation is prevented—sounds do not pass so readily from room to room. True shelter. Genuine year-round comfort.

The houses you build will sell more quickly—and command better prices—if insulated with—

—INSULITE Plaster Base; INSULITE Building Board for sheathing or for use as wall board; INSULITE for lining attics and garages; INSULITE roof insulation; INSULITE for acoustical correction and sound deadening.

Consult our engineering department at any time. No obligation on your part. Write for booklet—"Increasing Home Enjoyment"—and other helpful material, including free samples.

THE INSULITE COMPANY
1202 Builders Exchange, Dept. 6, Minneapolis, Minn.

INSULITE
the Wood-Fiber Insulating Board

TO INSTALL BRASS PIPE *RIGHT*

YOU SHOULD KNOW THESE ANSWERS . . .

Brass is softer than steel and works easier. But it must be installed right, with right tools and dies, and by the *right* methods. Brass pipe joints won't rust shut. They have to be made right to begin with.

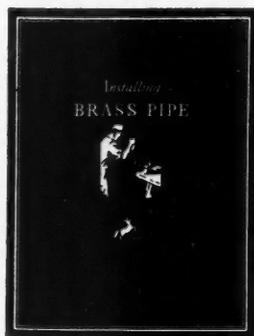
CAN YOU ANSWER THESE QUESTIONS?

1. *What is the best way to cut brass pipe?*
2. *What is the easiest way to bend it?*
3. *How much does reaming increase the water flow?*
4. *What are the best dies to use?*
5. *Is it necessary to use a lubricant in threading?*
6. *Should a thread project beyond the fitting?*
7. *Should wicking be used?*
8. *What is the best wrench to use with brass pipe?*
9. *Does brass expand and contract more than steel?*
10. *Can you allow for expansion accurately?*



*The Mark that Identifies Good
Brass and Copper Products.*

If you are not *sure* of the answers to all these questions, then you will be interested in our new book "Installing Brass Pipe"—FREE to you—without obligations. It's short, clear, and definite, large type, 51 photographs, blue prints and drawings—a review of the best practices of good plumbers, free. Just send off the coupon below while you think of it and we'll mail the book to you.



FREE

A review of the best ways
to install brass pipe—30
pages, 51 illustrations.

Chase Brass & Copper Co.
Waterbury, Conn.

Dear Sirs:

Please send that new book of yours "Installing Brass Pipe". I understand it's free with no obligations.

NAME _____
(Please write clearly)
STREET _____
CITY _____ STATE _____

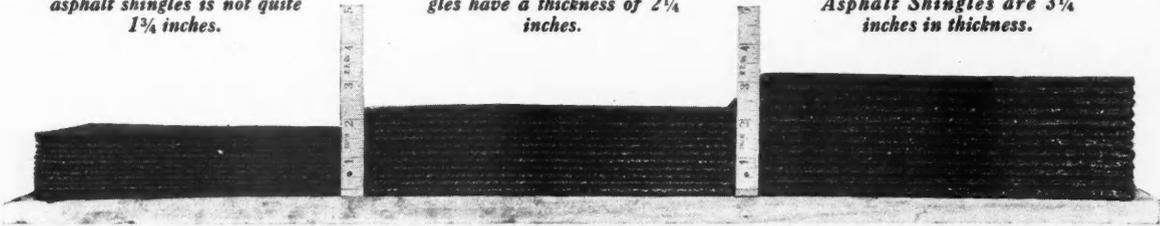
CHASE BRASS AND COPPER CO.
INCORPORATED
WATERBURY . . . CONNECTICUT

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The thickness of 12 standard asphalt shingles is not quite 1¾ inches.

Twelve jumbo asphalt shingles have a thickness of 2¼ inches.

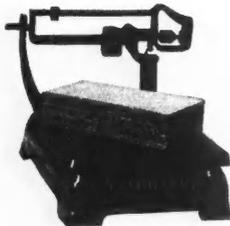
A dozen Winthrop Tapered Asphalt Shingles are 3¼ inches in thickness.



Comparisons, when proved, are convincing



The laid-to-weather portions of 12 standard shingles weigh 32 oz.



The laid-to-weather portions of 12 jumbo shingles weigh 78 oz.



The laid-to-weather portions of Winthrops weigh 95 oz.

When we say that the thick butts of Winthrop Tapered Asphalt Shingles double the wearing thickness of a roof's exposed portion, plain facts back our statement.

The ruler shows Winthrop butts to be twice as thick as standard shingles. The scales show that any unit of the exposed or laid-to-weather portion of Winthrops weigh over 50% more than an equal laid-to-weather area of standard shingles.

-the Big Butt Shingle

Winthrop Tapered Asphalt Shingles

The double thickness and the greater weight of the butts of Winthrops mean long wear and a tight, snug roof with attractive shadow lines. Winthrops are not called giant shingles, but are GIANT shingles in fact and in performance.

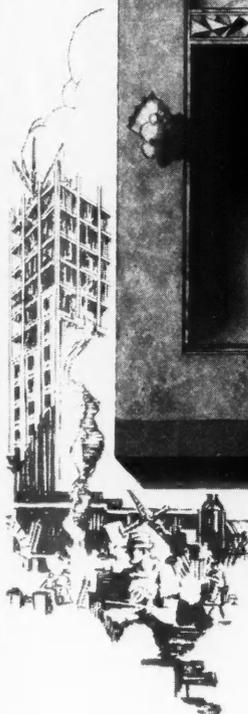
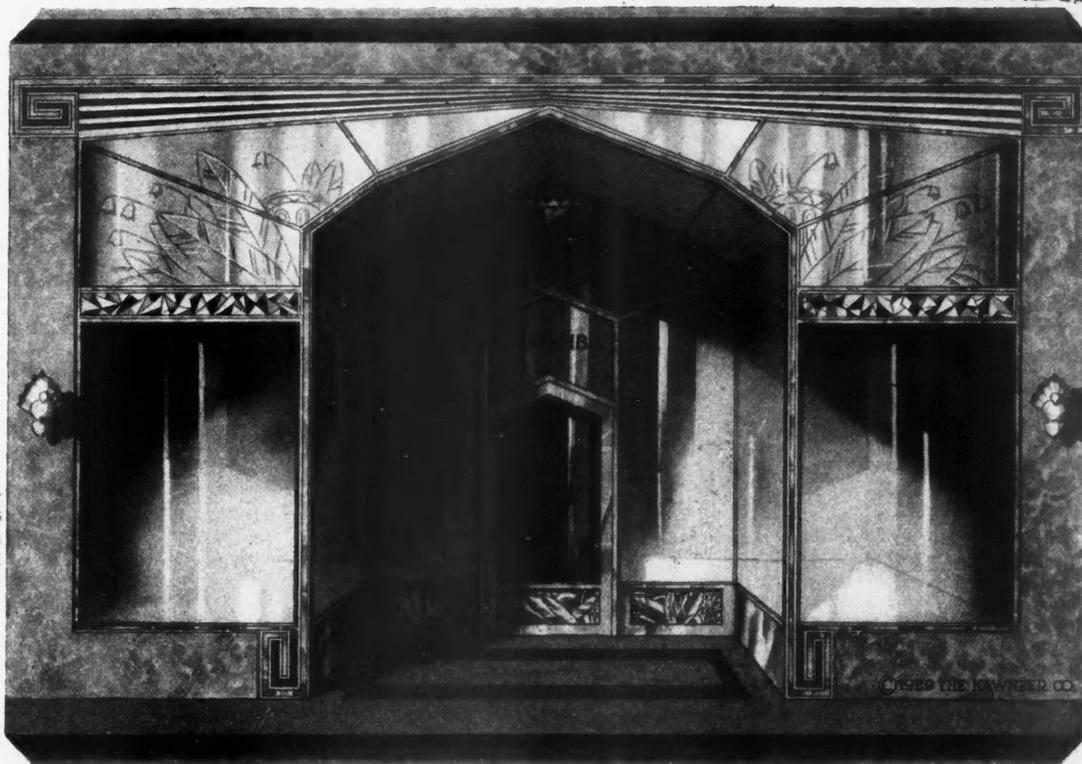
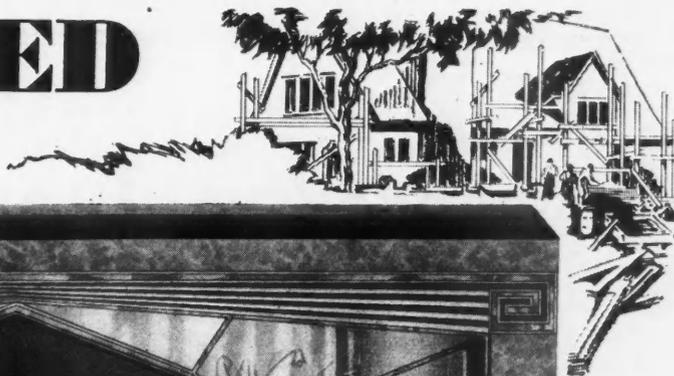
Winthrop Tapered Asphalt Shingles are surfaced in non-fading crushed slate, in twenty natural colors, solid and blended. There's a color or blend for any type of house in any surrounding. Winthrops do not curl, rot, rust, nor crack. They bear the Class C Label of Underwriters' Laboratories. They are unequaled over old roofs.

Most lumber dealers carry Winthrops both in individual and in 3-in-1 strip form but we will send you, free, a sample, in the color you select. Write, today, and ask, too, for a sample of Argotex Building Felt, noted for its insulating quality.

Beckman-Dawson Roofing Company
1032 Brooks Building, 223 West Jackson Blvd., Chicago, Illinois
Factories at Chicago, Illinois, Detroit, Michigan, and Lockport, New York

Argotile (slate surfaced) Roofing, Supreme (Mica surfaced) Roofing, Wearproof (talc surfaced) Roofing, Argotex Insulation

UNCROWDED



35,048 building contractors all engaged in practically the same type of work—all competing at the expense of profits.

Why not specialize in Store Front construction?

Here is one field that is uncrowded. It is a specialization in a field that means profit to the merchant and profit to you. There's enough business to be had in your city to keep you busy for many years to come.

Just mail the coupon — We'll work with you and help you get this business.



Kawneer

BRONZE

STORE FRONTS

THE KAWNEER COMPANY
1126 FRONT ST., NILES, MICHIGAN
I'd appreciate more information
about Store Front Specialization.

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

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

ADD security with these locks that enhance *Beauty and Convenience*~

SCHLAGE

B-100 Cylinder SPRING LATCH

A new type SPRING LATCH affording added security, attractive appearance, and unsurpassed convenience. Because of its simplicity and compactness it will be welcomed where a bulky rim latch will not do. So moderate in price that it will be preferred to a rim latch and purchased where the cost of higher priced mortise latches would be objectionable. Working parts concealed. Key changes practically unlimited. Master keyed and grand master keyed if desired. Compression coil springs throughout. Handy slide catch for holding back latch. Self-adjusting to all doors 1 1/2 to 2 1/2 inches thick. Reversible for right or left hand doors. Solid brass trim. Standard finishes. Interchangeable with B-300 at any time without altering door.

Concealed

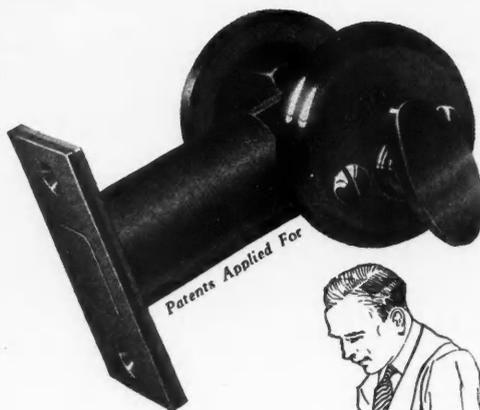


B-300 Cylinder DEAD BOLT

This SCHLAGE auxiliary lock is recommended either for interior or exterior doors where good appearance and greater safety are required. No other lock on the market can compare with B-300 in giving so much protection in such convenient and attractive form at so moderate a cost. Working parts concealed. The bolt deadlocks itself when extended by turning the key outside or the small metal thumb piece inside. Key changes practically unlimited. Master keyed and grand master keyed to meet any requirements. Self-adjusting to all doors 1 1/2 to 2 1/2 inches thick. Fits either right or left hand doors. Solid brass trim. Standard finishes. Can be interchanged with B-100 at any time without altering door.



Patents Applied For



Patents Applied For



SCHLAGE LOCK CO., Mfrs.
Executive Offices and Factory
SAN FRANCISCO, CALIF.

Branches in
NEW YORK CITY—71 Murray St.
CHICAGO—549 W. Randolph St.
PHILADELPHIA—2401 Chestnut St.
DETROIT—439 Penobscot Building
BOSTON—11 Beacon Street
WASHINGTON—410 Bond Building

Mail this Coupon for Bulletin

SCHLAGE LOCK CO., SAN FRANCISCO, CALIF.

Gentlemen:—Please send us prices and complete information on the AB-2 types of SCHLAGE Locks we have checked below:

Spring Latch..... Dead Bolt..... Button Locks.....

Name

Address

City

State..... Business.....

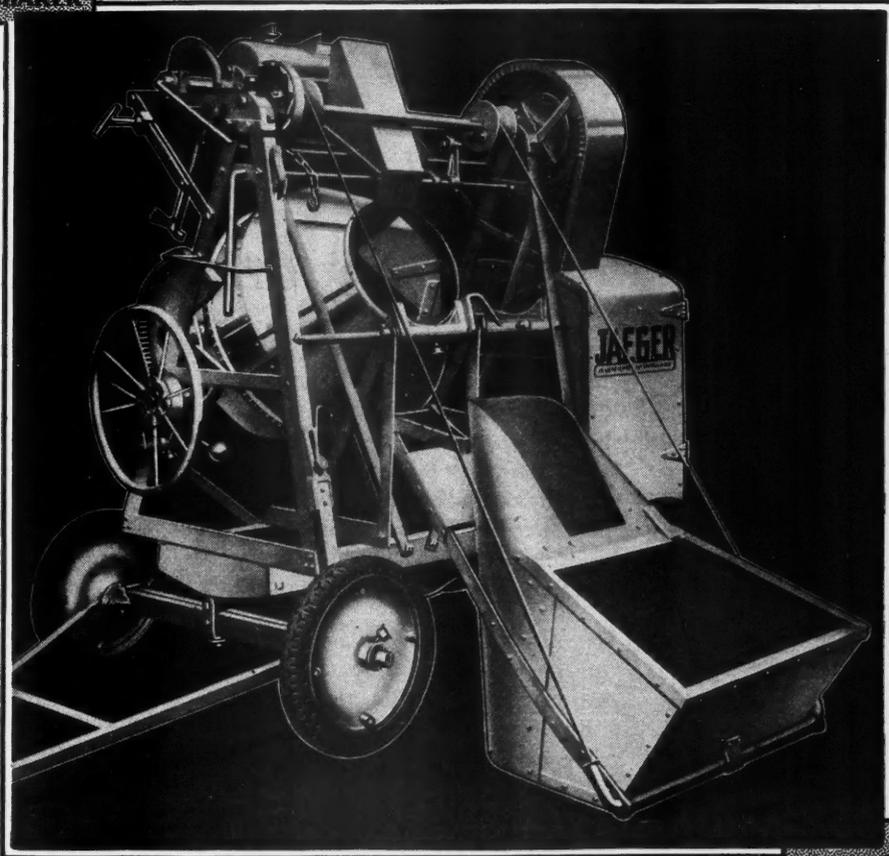


Any one can install a SCHLAGE SPRING LATCH or SCHLAGE DEAD BOLT in a few minutes. Simply drill 2 holes, slip in latch or bolt, draw up on 2 machine screws, and fit plate for strike. That's all. No complicated mortising. No laborious assembling. No delicate adjusting.

Manufacturers of SCHLAGE Button Locks



Jaeger Timken Bearing Tilters

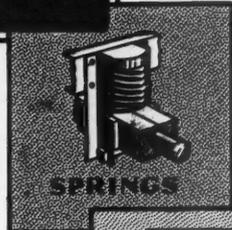


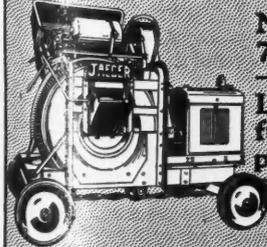
↳ this full One-Bag size at the usual Half-Bag Price ↳ ↳ ↳

SEE this mixer on the job and you'll see fast work. Every operation shows speed; the whole job moves faster.

Watch it work all day every day of the year, and you'll recognize dependability. It's built in, with steel and forgings, Timken bearings and reliable power plant.

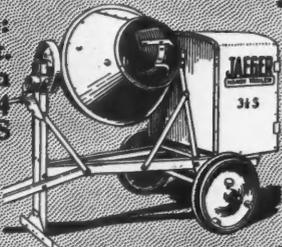
Get the price on this popular 7S and other Jaeger Tilters—with Automatic Skip Shaker, fast Accurate Measure Water Tank and easy, automatic discharge. They're served by over 100 stations, distributors and branches; they're OK'd by over 75,000 users. It will pay you, too, to standardize on Jaeger. Send for our new catalog and compare values.





NON-TILTERS:
7, 10, 14, 21, 28 ft.
— **TILTERS** with
Loaders up to 14
ft.— **TRAILERS**
priced \$169 up

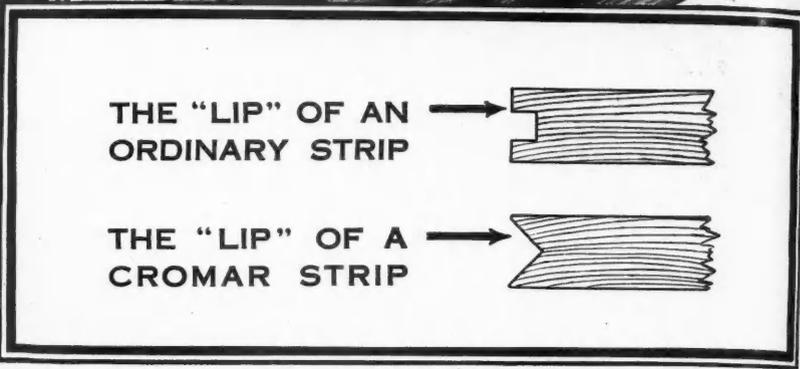
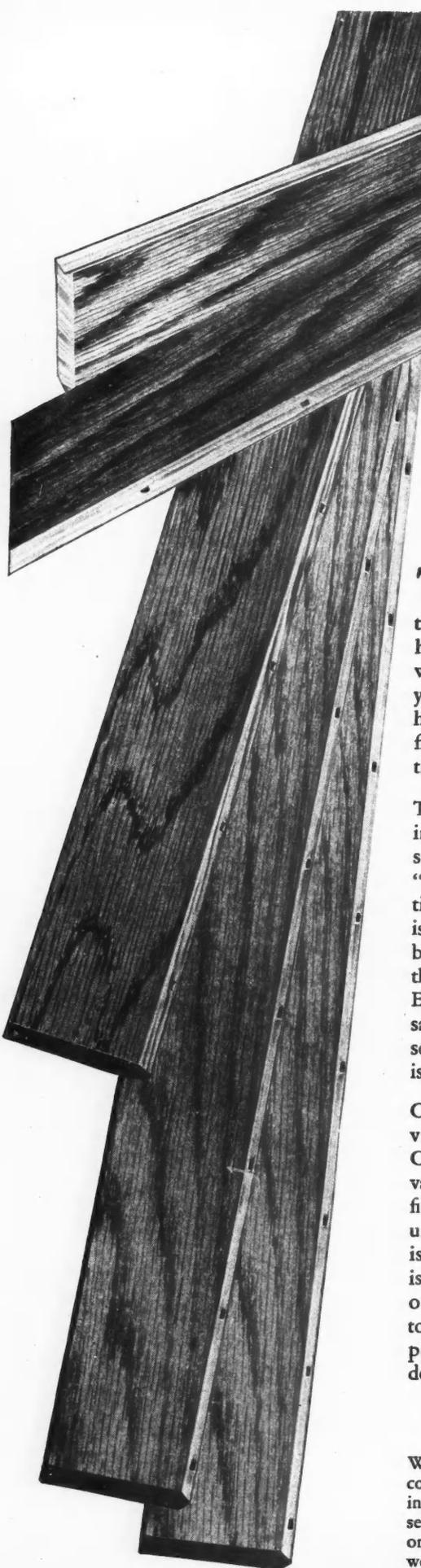
**1 and 2 Bag
Plaster Mixers**



Mail this Slip for Catalog and Prices

THE JAEGER MACHINE CO. Date _____
 521 Dublin Avenue, Columbus, Ohio
 Please send catalog, prices and terms on
 NON-TILT MIXERS TILTING MIXERS
 PLASTER MIXERS

Name _____
 Address _____



Why CROMAR is made in only one thickness...

THERE is nothing to prevent the manufacture of CROMAR in any thickness. But if CROMAR were made heavier than actually necessary, it would only cost more without giving you any real advantage to offset this higher cost. The usual objections to flooring less than 3/8" thick are entirely overcome in CROMAR.

The objections to 3/8" un-finished flooring are quite sound. Scraping and sanding weaken the already thin "lip" on the groove side, both at the time of installation and when refinishing—even to the point of actually breaking through entirely. Obviously, this can not happen with CROMAR. Every CROMAR strip is scraped and sanded at the factory. So there is no scraping and sanding after CROMAR is laid.

CROMAR is also filled and double-varnished, by machines, at the CROMAR plant. This machine-finish is vastly superior to the ordinary hand-finish—and it makes early refinishing unnecessary. But even when CROMAR is ultimately refinished the V-shape of the CROMAR tongue and groove permits cutting down the CROMAR



Laid and used the same day

Write for free samples and complete literature concerning the manufacture, the selling and laying of the only Factory Finished hardwood flooring in the world.

"lip" without weakening it (it does in fact become stronger as it is cut down).

But, in addition to the above mentioned finishing operations, every strip of CROMAR is also treated with a special compound to resist moisture—before it leaves the CROMAR plant. Thus CROMAR is protected when it leaves the factory against any excess absorption of moisture either in transit or in the warehouse or lumber yard or during the installation and after it has been nailed down.

In other words, cupping, warping and shrinking—those enemies of thin un-finished flooring—are practically eliminated by the special CROMAR treatment against moisture.

It is therefore the combination of the peculiar CROMAR "lip" and the special moisture-resisting treatment which makes it absolutely safe for you to use CROMAR with complete confidence on jobs where you would never dare to use 3/8" un-finished flooring.

THE CROMAR COMPANY
Williamsport, Pa.

Pacific Greater West Distributor:
THE C. L. THOMPSON COMPANY

Offices and Warehouses:
200 Davis Street, San Francisco, Cal.
324 N. San Pedro St., Los Angeles, Cal.

CROMAR

FACTORY FINISHED

Oak FLOORING

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LA
A
Forc
T
John L. S
son, of Kan
when they
machine to
business run
"S
Wm. J. L
walk, Conn.,
competition
Decided to m
he has a Du
take \$70,000
80% i
M
George D. I
town Duntile
Company, rep
ume now in m
profit both on



Why Struggle Against these Needless Handicaps?

Get into DUNTILE manufacturing and say good-bye to them all



Forced to Expand in Three Months

John L. Strandberg and C. E. Swanson, of Kansas City, barely got started when they had to install an extra machine to meet demand. Today their business runs into six figures.



"Set for Life"

Wm. J. Lyons, a contractor of Norwalk, Conn., saw the day of increased competition coming for his business. Decided to manufacture Duntile. Today he has a Duntile business he wouldn't take \$70,000 for.



80% in Extra Profit Mat Glazing

George D. Fister, President of Allentown Duntile Manufacturing and Supply Company, reports eighty percent of volume now in mat-glazed units which yield profit both on making unit and glazing it.

The successes made in Duntile manufacturing are due to the simple fundamental advantages all Duntile manufacturers possess. First, is lack of competition. Duntile is made and marketed on an exclusive franchise arrangement which guards against price cutting wars and other destructive business practices. Profit margins are fixed and constant because they are based upon manufacturing costs, not upon competitive bidding for jobs.

The Duntile manufacturer is always at an advantage because he is always prepared to point out how Duntile will build any type of building better and for less. When people are shopping around for lower costs is just when the facts about Duntile appeal the most.

Why Stay in the Ruts?

Can you afford to turn your back on the facts of success in Duntile manufacturing?

Is there any logic of struggling year after year with the same old difficulties when a way is available to break into the bigger field of manufacturing?

Get the facts about Duntile. Learn why it offers high grade masonry construction at cost of frame. Learn about its forty beautiful colorings and the profitable process of producing them. Learn about its strength as certified by all types of buildings from coast to coast. Find how men have started with investments as low as \$1,750 and multiplied their capital ten, twenty and thirty times in a few years. For you, too, Duntile may be the road to real profits and progress. Use coupon now. Find out!

W. E. Dunn Manufacturing Co.
415 W. 23rd St. Holland, Mich.

W. E. DUNN MFG. CO.,
415 W. 23rd St.,
Holland, Mich.

2-29

Send me your book, "Basic Facts," describing the non-competitive basis of Duntile manufacturing and explaining how I can manufacture Duntile in a plant of my own at 60 per cent profit.

Show me how Duntile offers high grade masonry construction at cost of frame.

Name

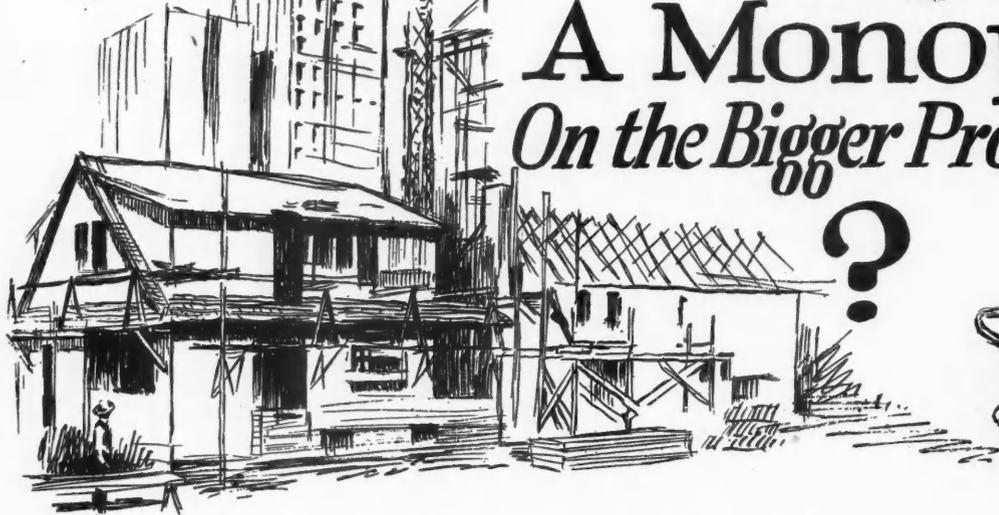
Address

This Book tells How



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Has Your Competitor A Monopoly On the Bigger Profit Work



PERHAPS he is better informed on the latest improvements in equipment and materials for the building field. He reads **AMERICAN BUILDER** advertisements carefully. Every new development in his line comes under his critical inspection. The same source of information is open to you.

Read American Builder Advertisements

By merely turning the pages of **AMERICAN BUILDER** the same liberal education is yours. Listed here you'll find the reliable products, the new ideas, materials, etc., which lessen labor and increase your profits.

Will Your Profits Increase This Year?

Expanded business requires new and improved production methods. One or more new machines or an improved method of estimating may solve your problem. 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, church or theatre equipment, farm building equipment, building hardware, home conveniences or anything that is used in constructing or equipping any kind of building—we will help you get all information.

Obtain Valuable Reference Data

Every advertiser represented in the **AMERICAN BUILDER** will gladly send you catalogs and circulars covering his entire line. If there is some product which you are unable to find or if there are other questions concerning the Building Field, write to us and we will co-operate in supplying information.

Free Service to American Builder Readers

If there is some article which you want and lack the proper information regarding it, fill in the coupon below and we will gladly get it for you and co-operate in every way possible. Print or write your name plainly in the coupon below, list the articles and check your occupation.



AMERICAN BUILDER, 1827 Prairie Ave., Chicago, Ill.

Gentlemen: Please put me in touch with manufacturers whom you know to be reliable and can furnish goods promptly. I am in the market for the following items:

.....

Name.....

Address.....

Please check your occupation:

Building Contractor

Dealer in Building Materials

Prospective Home Builder

Architect



One Man Control

EASY one man control because charging skip, water, and discharge levers are located at the end of the mixer from where the operator has full view both of charging and discharging operation!

That's just one reason the Dandie 10-S is fast. Clean, high speed charging, fast discharging, the Dandie takes aggregate in the skip and changes it to concrete

in the forms in record, money-making time.

Feature by feature, item by item of construction it's the *long service, long distance* great value in its field! Send for the Dandie Catalog No. D-1.

Dandie 5-S, 7-S, 10-S

5-S single cylinder; 7-S and 10-S two or four cylinder radiator cooled Ricardo head gasoline engine. Rubber tires with disc wheels or steel rimmed wheels. Complies with A.G.C. standards.

KOEHRING COMPANY, MILWAUKEE, WISCONSIN

PAVERS, MIXERS — GASOLINE SHOVELS, CRANES AND DRAGLINES

*Sales Offices and Service Warehouses in all principal cities
Foreign Dept., Room 579, 50 Church St., New York City
Mexico, F. S. Lepum, Cinco De Mayo 21, Mexico, D. F.
Division of National Equipment Corporation*

A 5060-1

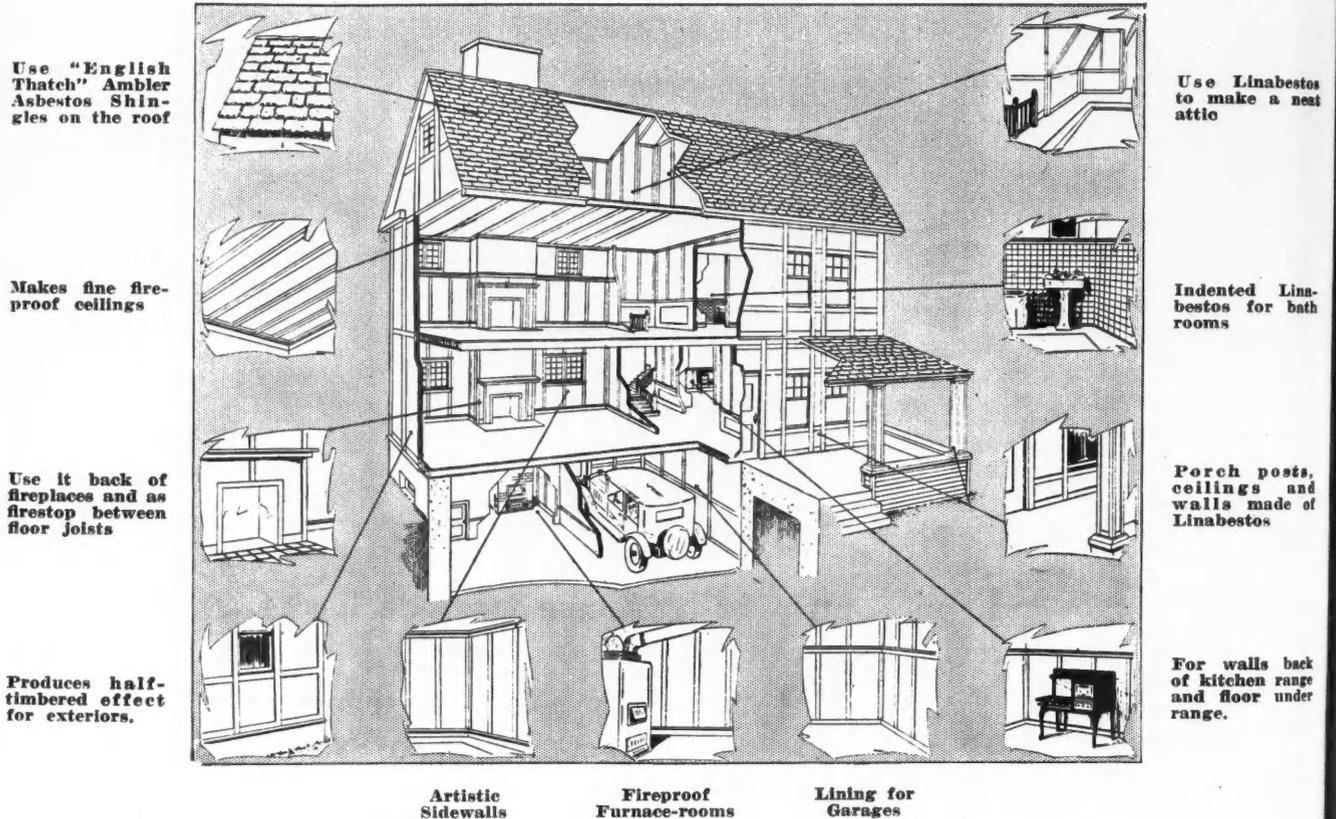
KOEHRING

DANDIE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

LOOK AT THE MANY USES OF LINABESTOS

An Ambler Asbestos Product



Use "English Thatch" Ambler Asbestos Shingles on the roof

Use Linabestos to make a neat attic

Makes fine fireproof ceilings

Indented Linabestos for bath rooms

Use it back of fireplaces and as freestop between floor joists

Porch posts, ceilings and walls made of Linabestos

Produces half-timbered effect for exteriors.

For walls back of kitchen range and floor under range.

Artistic Sidewalls

Fireproof Furnace-rooms

Lining for Garages

Linabestos is composed of Asbestos Fibre and Portland Cement compressed under tremendous hydraulic pressure into sheets of uniform thickness, in even texture and density. It will not warp, split or crack. The above sectional view shows the innumerable uses to which Linabestos may be applied in the construction or remodeling of a home, making it absolutely Fireproof, attractive and everlasting.

It cannot ignite or burn.
It is easily worked, only a hammer, nails and hand-saw being required to apply it.
It is the only fireproof board on the market not faced with paper.
It is rat and vermin-proof.

It is the only board from which wallpaper can be removed.
It is the only board that can be sanded to a polished finish.
It can be either papered or painted.
Being less porous, there is a large saving in paint, as compared to other boards.

ASBESTOS SHINGLE, SLATE & SHEATHING COMPANY

Executive Office: AMBLER, PA.

Branches in
Principal Cities

Factories: Ambler, Pa.
St. Louis, Mo.

Makers of
Ambler Asbestos
Shingles

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE



Home of Robert Tyre Jones, Jr., North Shore Drive, Atlanta, Ga.
 Frazier & Bodin, Architects; C. H. Black, Jr., Builder; N. Divoskin & Son, Paint Contractors.
 Finished in Sherwin-Williams products throughout, including SWP House Paint, Old Dutch
 Enamel, Flatrite, Flatstone, Wall Primer and Sealer, Handcraft Stain, Porch and Deck.

Beautified throughout with Sherwin-Williams Finishes

The residence of Robert Tyre Jones, Jr., ("Bobbie" Jones, famous golf champion), on the North Shore Drive in the exclusive residential district of Atlanta, Georgia, is in itself a splendid example of Colonial architecture. The Sherwin-Williams finishes employed throughout this home contribute the final touch of beauty that makes it perfection.

Sherwin-Williams Finishes were chosen for their rich beauty and evident superior quality which set off architectural features to best advantage. Chosen too, because their exceptional covering capacity and lasting durability mean down ght economy to the owner. Properly applied by a master painter, these famous products will actually save money.

Help build reputation

The Jones home is one of many examples in which prominent architects are

specifying Sherwin-Williams finishes—whether the surface calls for paint, varnish, lacquer or enamel.

These "quality" finishes improve the appearance of even the finest buildings, add distinction to the architect's work, and help him build a still more profitable clientele.

Many builders and contractors as well as architects employ these famous products on homes they build to sell. Like nationally known plumbing and heating appliances, Sherwin-Williams Paints suggest that other materials in the home are "quality" too. They build buyer-confidence and are a strong sales point.

Our technical staff is at your service. Write us when planning difficult painting specifications.

THE SHERWIN-WILLIAMS Co.
 Dept. 720 - 601 Canal Road, N. W.
 CLEVELAND, OHIO



SHERWIN-WILLIAMS

Paints
 Varnishes

Lacquers
 Enamels

L A R G E S T I N T H E W O R L D

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Seven
Layers of
Protection
Count them

- 1 Sheet Kraft Paper
- 1 Layer of Asphalt
- 1 Ply Parallel Cords
- 1 Sheet Kraft Paper
- 1 Layer of Asphalt
- 1 Ply of Cross Cords
- 1 Sheet Kraft Paper
-
- 7-PLY Building Paper

Safekote
more than waterproof

7-PLY Building Paper

**offers Architects, Contractors and Builders
More Insulation in the one sheet than has
ever before been built into a building paper**

This fact is so easily demonstrated to home buyers that
Houses Sell Quicker and Easier when insulated with 7-PLY

7-PLY will not tear in the wind or thru rough handling. It is Impenetrable—Air-tight—Forever Waterproof. Protects as long as the building stands. Will not rot or dry out. Handles easily on the job. Costs no more than ordinary good papers.

Just try 7-PLY once—on the next job—and be convinced

Standard rolls, 36" wide, contain 500 sq. ft. Half rolls, 36" wide, contain 250 sq. ft. To order: 40, 48, 54, and 60" wide

7-PLY is made only by

Safepack Mills
Mills Massachusetts

Lumber and Building-Supply Dealers Will Profit Greatly by Selling 7-PLY—Write for Dealer Prices

Safepack Mills
Mills, Mass.

Kindly send without obligation, full information, samples and prices on your remarkable 7-PLY Building Paper.

Firm Name _____

Street _____

City _____

Individual Name _____

AROUND *the* FAMILY TABLE



APRIL Will Bring Our Big Annual Reference and Directory Number

ANOTHER treat is in store for AMERICAN BUILDER subscribers—another big Annual Number, including the GREEN PAPER DIRECTORY, the same as last April.

Many pages of valuable reference data and other valuable editorial features will be included. We also have for this issue an exceptionally fine collection of building designs—including popular, quick selling homes and apartments and also business buildings, public buildings and other designs of real value.

This April issue will be a big Annual Number to be proud of. The manufacturers serving the building field are making special effort to present in their pages the information which builders, architects and dealers want and often need in a hurry. The advertising section of the Annual AMERICAN BUILDER is really a co-operative catalog of the best firms in the building industry and the Green Paper Directory classifies and presents their entire line, including all trade names.

For a reference book we always like to turn to the big complete directory where we know that the greatest number of dependable concerns are listed. Some publications try to present a few pages of directory information in each issue. The AMERICAN BUILDER, however, presents just one directory during the year and makes that very complete and thoroughly cross-indexed for ready reference. Thirty-two pages on distinctive GREEN PAPER will be used in the April Annual Number just for this directory feature.

These reference features included each year in the April AMERICAN BUILDER have won such a place with the busy men of the industry that the Annual Reference and Directory AMERICAN BUILDER has come to be known as "the most used and studied magazine in the building field."

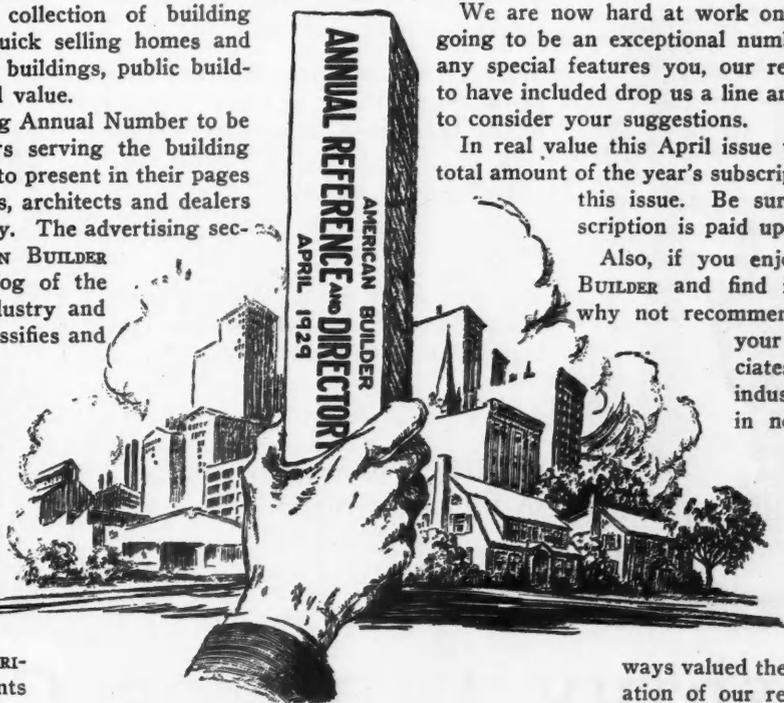
We are now hard at work on this issue. It is going to be an exceptional number. If there are any special features you, our readers, would like to have included drop us a line and we will be glad to consider your suggestions.

In real value this April issue will be worth the total amount of the year's subscription. Don't miss this issue. Be sure that your subscription is paid up to include April.

Also, if you enjoy the AMERICAN BUILDER and find it useful to you, why not recommend it to some of your friends and associates in the building industry? Invite them in now so that they, too, will have the benefit of this big Annual Reference and Directory Number which will be ready to mail April 1.

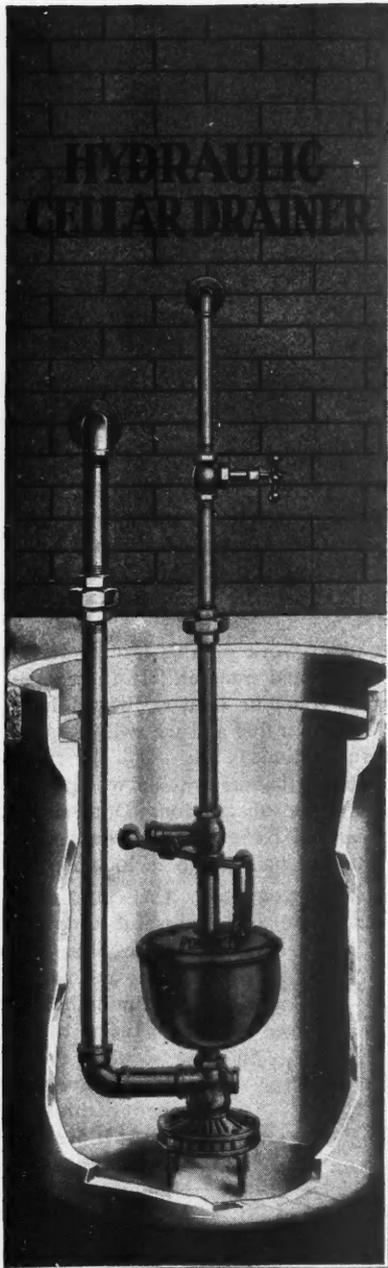
We have always valued the friendly co-operation of our readers in building up our editorial features and also in extending our circulation. This April issue is the big feature of the year and we are counting on you, our readers, to help make it a big success.

BERNARD L. JOHNSON, Editor
AMERICAN BUILDER.



*The Most Used and
Studied Magazine
in the Building Field*

Wherever Water Accumulates



YOUR seepage problem may be the deep basement for a building where the sewer is not low enough for drainage—or the basement of a residence without adequate sewerage facilities. Perhaps it is the drainage of a boiler room, settling basin, fly wheel or elevator sump, a tunnel or scale pit.

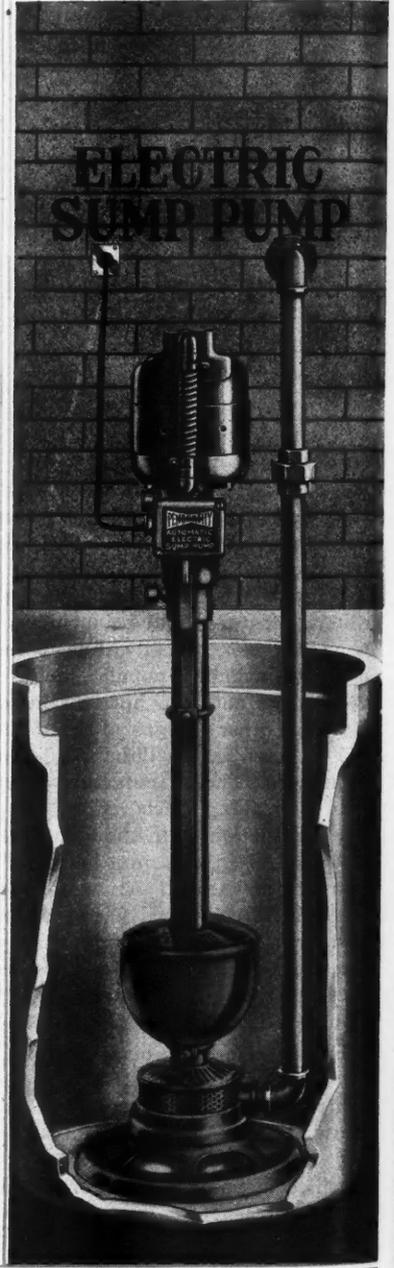
The amount of seepage may be considerable or it may be only a small trickle.

Whatever the conditions, there is a Penberthy Sump Pump or Cellar Drainer which will dispose of that seepage in the most economical manner. Either electrical power or hydraulic power can be used, and there is a size to fit every condition.

Write for details on the Penberthy Automatic Electric Sump Pump and the Penberthy Automatic Cellar Drainer.



Quality is particularly stressed by the use of copper and bronze throughout.



PENBERTHY INJECTOR COMPANY

ESTABLISHED IN 1886

DETROIT

CANADIAN PLANT WINDSOR, ONT.

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AMERICAN BUILDER



BERNARD L. JOHNSON, *Editor*

105 West Adams St., Chicago—30 Church St., New York City

1928 Breaks All Records

THE 1928 construction volume was the highest in the history of the country, according to F. W. Dodge Corporation. Contracts let on new building and engineering work in the 37 states east of the Rocky Mountains during the past year reached a total of \$6,628,286,100. This figure was five per cent ahead of the total for the year 1927 and it was four per cent in excess of the total for 1926. The previous high record had been held by 1926. The territory covered in these 37 Eastern states represents about 91 per cent of the country's total construction.

There was \$432,756,300 worth of contracts let on new construction work during December. The above figure was eight per cent below the total for November, 1928, and there was a drop of nine per cent from the December, 1927, record. Analysis of last month's contract record showed the following important classes of work: \$178,323,100, or 41 per cent of all construction, for residential buildings; \$80,194,000, or 19 per cent, for public works and utilities; \$66,772,600, or 16 per cent, for commercial buildings; and \$38,247,900, or nine per cent, for industrial projects.

Advertising is Economy

BOTH from the practical and the theoretical viewpoint, advertising has a staunch defender in William Butterworth, president of the Chamber of Commerce of the United States, and head of one of the country's large manufacturing concerns.

"One still hears," he said in a recent address, "the occasional voice of a dissenter charging advertising with wastefulness. That complaint which, by the way, is similar to those one hears directed against every other line of human endeavor, rarely, if ever, comes from those in business who understand and work with advertising. The charge of wastefulness is true in regard to only a part—a very small part—of modern advertising.

"A business man who thinks advertising is a magic formula is likely to waste his money. But I am con-

vinced that most of the advertising of today is a sincere, informative service which, upon the whole, has the appreciation and confidence of the buying public. It is mass selling in tune with the mass production of today."

Building and Loan Associations Show Rapid Growth

BUILDING and loan associations have become popular institutions and are being well patronized by the public, one out of every 10 of our population now being members of these associations. They are filling a needed place in the financial structures of our country and are annually making hundreds of thousands of home owners by furnishing them with the necessary funds for the accomplishment of this purpose. They are a most important factor in the growth and prosperity of every community in which they function.

The rapid and consistent growth which building and loan associations have made in the last five years, during which they have more than doubled their assets, is indicated by these comparative figures:

	No. of Associations	Total Membership	Total Assets
1923.....	10,744	7,202,880	\$3,942,939,880
1924.....	11,844	8,554,352	4,765,937,197
1925.....	12,403	9,886,997	5,509,176,154
1926.....	12,626	10,665,705	6,334,103,807
1927.....	12,804	11,336,261	7,178,562,451
1928*.....	13,000	12,150,000	8,155,000,000

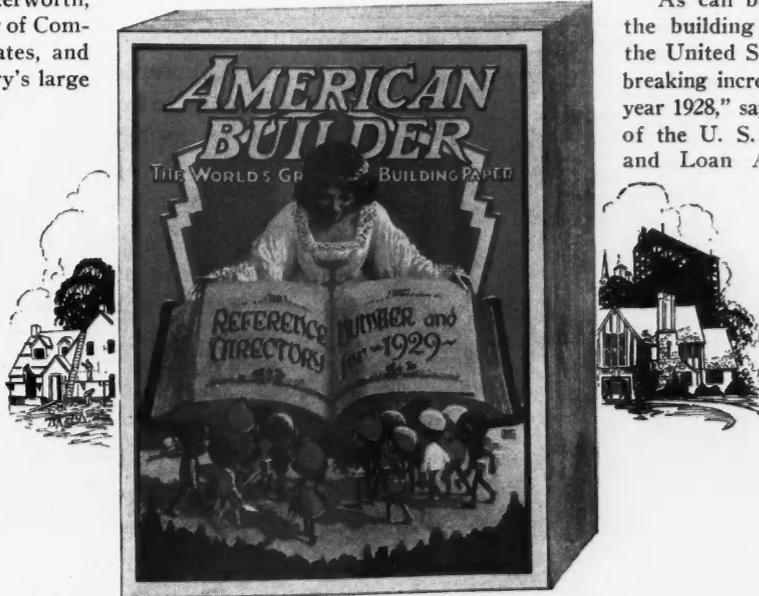
* Estimated.

"As can be seen from these figures the building and loan associations of the United States made another record breaking increase in resources during the year 1928," says H. F. Cellarius, secretary of the U. S. League of Local Building and Loan Associations." The total

investments of the associations now aggregate \$8,155,000,000, which is an increase for the year \$976,500,000. The 13,000 associations have an estimated membership of over 12,000,000 members, an increase of over 800,000 for the year.

"More than two billion dollars was loaned to home owners during the past year, which was used to finance approximately 700,000 new homes, giving shelter to 3,500,000 people.

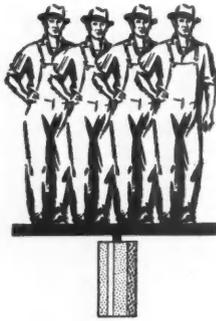
"This year, 1929, will set a new record in building and loan financing."



WATCH for this big Annual Reference and Directory Number which will be out April 1. The cover, in four colors and gold, will show the Fairy Godmother of the Building Industry inviting the professional men and leaders in the construction field to a close study of this great reference book.

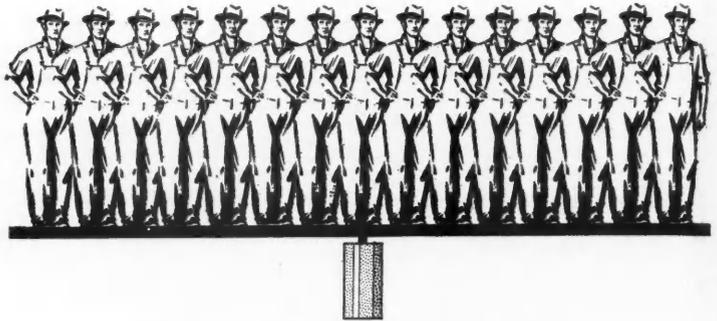
Our Editors are preparing many special features for this Annual Number. The Green Paper Directory and Buyers' Guide to all advertised products and Trade Names will again be included. You will use this issue all through the year.

Why Not Profit by This Method!



One square inch of this 3-day-old Ordinary Concrete Will Support 4 Men

Cylinder represents average of a number of pavements the concrete for which was mixed and placed by ordinary methods. Average compressive strength at 3 days was 620 lbs. per square inch.

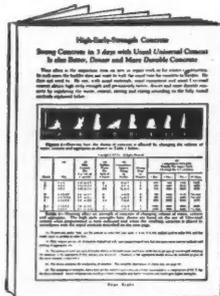


One square inch of this 3-day-old High-Early-Strength Universal Concrete Will Support 15 Men

Cylinder from concrete pavement, LaSalle Street, Chicago. Average compressive strength at 3 days was 2400 lbs. per square inch. John A. Mc Garry & Co., Chicago, paving contractors.

A concrete that gives you the strength you want at the time you want it. A concrete that satisfactorily meets both job and weather conditions. A concrete that not only is as strong in 3 days as ordinary concrete is in 28 days but that is permanently stronger and more durable. A concrete that is used and found up to the mark by hundreds of engineers and contractors. Try *High-Early-Strength Universal Concrete* on one job and check it for yourself.

The methods for making *High-Early-Strength Universal Concrete* are condensed into handy, easy-to-use tables. A new booklet containing them will be sent on request.



Send the coupon for your copy

Name _____
 Address _____
 Universal Portland Cement Co.
 208 So. La Salle Street, Chicago
 Without obligation, please send me your new booklet giving full details for securing strong concrete in 3 days with the usual materials and labor.
 A.B. 2-28

One Standard Cement for All Concretes and Mortars
Universal Portland Cement Co.
 Subsidiary U.S. STEEL Corporation
 Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York
Concrete for Permanence

EVERYBODY'S BUSINESS



Talkers and Toilers

By FLOYD W. PARSONS

"WHAT position did you hold in your last place?" asked the merchant.

"I was a doer, sir."

"A doer! What's that?"

"Well, sir, you see, when my employer wanted anything done he would tell the cashier, the cashier would tell the bookkeeper, the bookkeeper would tell the clerk, and the clerk would tell me."

"And what would happen then?"

"Well, sir, as I hadn't anyone to tell it to, I'd do it."

This story is particularly pertinent at the present moment for the reason that this country is now divided into two classes of people—the talkers and the toilers. Always there must be dreamers and people who plan. Nothing much is accomplished in places where there is no exercise of imagination. But the situation becomes difficult for the real doers when those higher up make promises and outline programs that are beyond fulfillment.

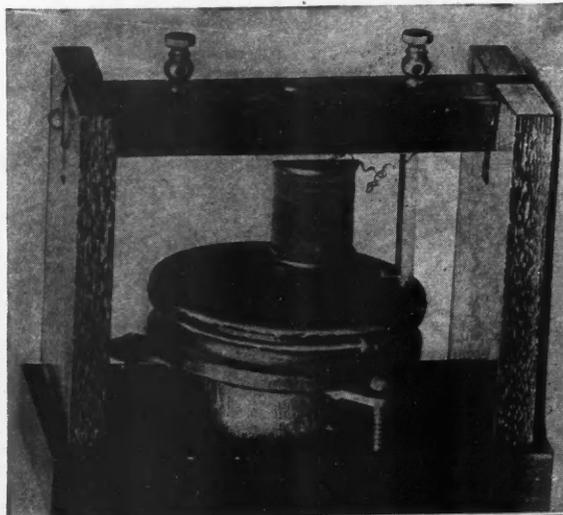
Capitalizing the future is perfectly legitimate and highly desirable provided it is done in a way that will not endanger the business structure and bring distress to the public as a whole. But when the profits from speculation, from financing, and from putting through mergers is permitted to take precedence over profits from day-to-day production, then we are on the way to building up a system that shifts an impossible burden of responsibility to the shoulders of operating executives.

The United States has the most wonderful future of any nation on earth. Its natural resources are unequalled. No other country has a climate more favorable to maximum mental and physical effort on the part of the individual. But we are making a serious mistake when we permit national attention to be diverted from constructive business to the hazardous occupation of gambling in the stock market. There is a great difference between the wise investor and the in-and-out speculator who disregards established fundamentals on the assumption that none of yesterday's yardsticks fit this amazing new era.

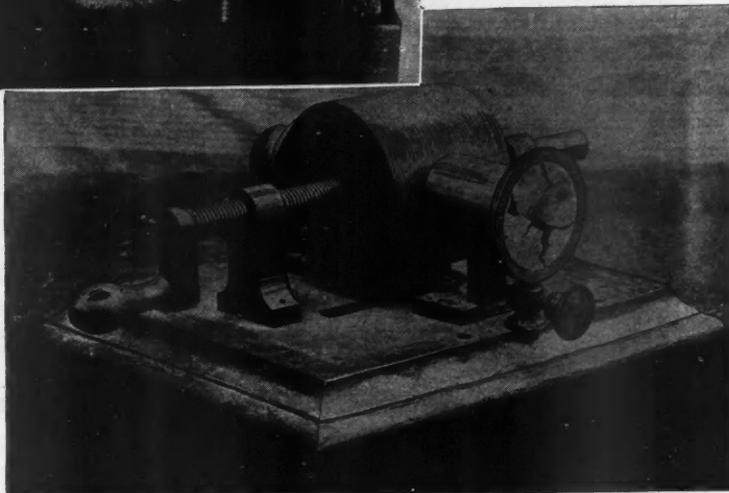
A bull market running four or five years does not supply sufficient evidence to justify discarding all the copy-book rules of elementary economics. It is

easier to multiply the market values of corporations than it is to show net earnings to warrant the values. Recent astounding advances in stock quotations have created in thousands of people an utter disregard for the incomes resulting from yearly dividends. Eventually the pools will go broke or get out and millions of people will be left holding the bag. The market manipulators who use strong-arm methods to force prices upward are not the kind of folks who are willing to endure the disappointments of the years that must pass before extravagant promises can be made good.

It is in times like the present when hard-headed business executives regard the coming years with apprehension. They are not afraid of America's industrial future if business is kept free of gambling excesses. Never was the outlook in legitimate lines of enterprise more hopeful. Carloadings are showing gratifying increases. Sales of machine tools are heavy. Corporation earnings are satisfactory, and for the country as a whole will show profits closely approaching the record totals of 1926. The relations between capital and labor are harmonious. The average income of the wage-earner



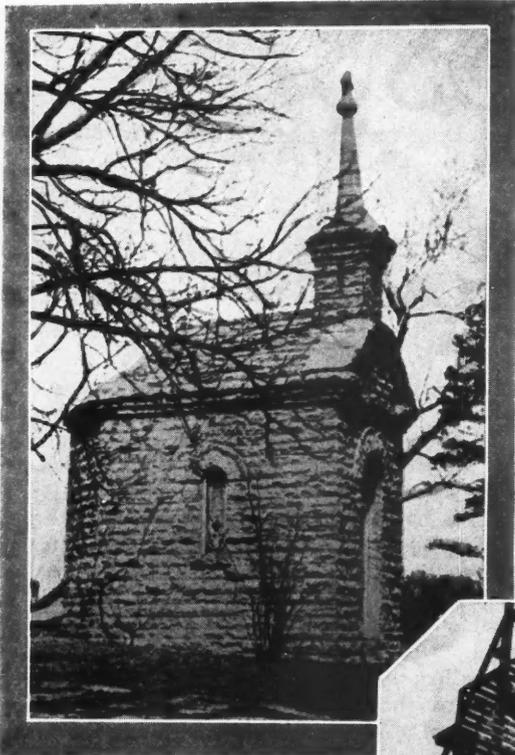
© Ewing Galloway



© Brown Bros.

Above at Left—The Original Telephone.
Above Center—The First Phonograph

Oddities of Construction

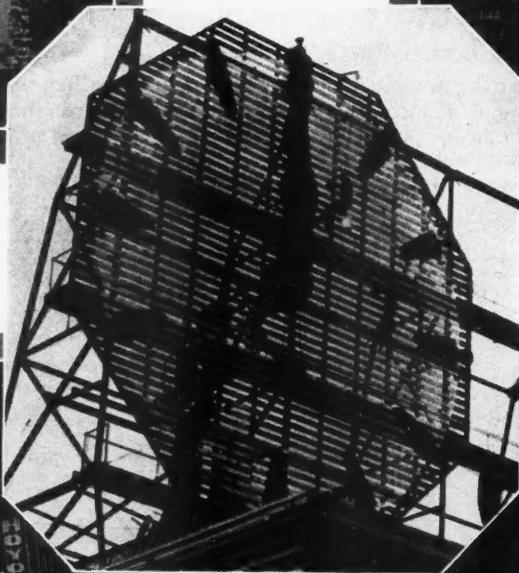


Left: The World's Smallest Church. This quaintly beautiful building on the top of Mt. Casino, near Covington, Ky., seats but three worshippers.



Right: Nine Feet Frontage, 12 Stories High, the Narrowest, Modern Apartment Building Is Located on the Grand Concourse and Tremont Avenue, New York City.

Below: This Great Clock Atop the Colgate Building, in Jersey City, N. J., the Largest Timepiece in the World, Has a Dial 38 Feet Across and a Minute Hand 18 Feet Long and Weighing one-third of a Ton.



Below: New York City's Narrowest House Is This Structure at 32 1/2 Stone Street. It measures six feet across the front and is more than 100 years old.

Below: This Tiny Triangle Is the Smallest Plot of Real Estate in the World. It was part of a plot in the city of New York purchased for a street, but the surveyors forgot to include it and the title is still held by its original owners.



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has reached the highest level since 1920, a year of inflation. In spite of record-breaking brokers' loans, the ratio of reserves to deposits of the Federal Reserve banks is fairly good. And although comparatively recent exports of the yellow metal have brought us down to our "last billion" of surplus gold, this billion held by the Federal Reserve banks will support, at the theoretical maximum, nearly 30 billions of bank credit. This indicates no immediate danger of any large shortage of bank funds.

All of this speaks well for the actual accomplishments of America's doers. But unfortunately we must also reckon with the talkers. They tell us we should completely change our attitude with respect to the nation's financial structure. They say that stocks are much more to be desired than bonds; that it is perfectly proper for the price of a stock to be 20 or 30 times the earnings of the company; that there is no such thing as a saturation point in any field of consumption; that the "piker" class in the stock market, the one that usually gets burnt, has practically been eliminated; and that the so-called business cycle has been forever banished.

Our new leaders of government propose a \$3,000,000,000 construction reserve for the nation. This plan is designed to reduce the chances of widespread unemployment, and if successful will show that at last we have succeeded in organizing our economic system to provide a job for all who have the will to work. Construction expenditures in the United States under the control of public authority now total more than \$1,500,000,000 annually, so it is clear that intelligent control and co-ordination of such spending would have an effect on general business. It would act as an economic gyroscope. Incipient business depressions might be checked at the start by releasing money for building, and inflationary tendencies might be curbed by a reversal of this process.

It is gratifying to hear of such constructive plans to flatten out the bottom of the business cycle. It is encouraging to note a growing sentiment in favor of a government board to serve the interests of consumers just as the Federal Reserve Board functions in behalf of producers. But if the United States is to prove to the nations of the world that a country can actually organize for prosperity, some effective action must also be taken to prevent the development of a frenzy of optimism that starts millions of people on a mad rush to stake out claims in a future that may be totally different from the visions that have been built.

The talkers, most of whom are out-and-out speculators, now flatter themselves that they have prophetic minds. They point to the stock market as confirmation of their wisdom. General Electric has advanced from \$115 to a price equivalent to \$1,031; Radio from \$41 to \$400; Montgomery Ward from \$56 to \$428; and Consolidated Gas from \$87 to a price equivalent to \$250. The stock of a graphophone company advanced from \$70 to \$160 in six weeks.

The index of the average price of 20 industrial shares

climbed from \$69 in 1921 to \$168 in 1927; and to \$235 at the present time. Twenty well-known securities have risen from 600 to 7,000 per cent. The increases in 12 of these stocks have exceeded 1,200 per cent. One motor stock has shown an advance of 6,493 per cent. Never before have common shares sold at prices so many times their earning power.

The talkers are in the saddle. The toilers who gave America its great opportunity have temporarily been pushed into the background. A few months ago the savings banks were talking of reducing their interest rates. In the meantime so much money has been withdrawn for use in speculation that the banks have been compelled to raise their interest rates in order to hold their accounts. The forces directing speculation have done their job well. We are now witnessing the development of a new mob psychology and a new era of financial autocracy. In five years there has been an increase of nearly two million in the number of owners of common stocks.

Speculators spend freely when things are coming their way. The immediate effect of extreme optimism is a stimulation of business.

But the hard-headed, matter-of-fact doers are looking ahead to the aftermath of the present orgy. The miseries of the Florida boom are still fresh in their minds. They have tried to prevent the stock market from corrupting their judgment of values. They are wondering how serious will be the readjustment of conditions when sanity returns, loose talk is checked, and thousands of people go back to their regular jobs with a better appreciation of the virtue that lies in careful saving and wise investing.

In the cold gray dawn of a day of reckoning it will be disclosed that sudden riches are hard to hold; that not all conservative investors are fools; that industrial hazards are being increased daily by unexpected developments in science and invention; and that big business cannot run wild in carrying out monopolistic aspirations. The folly of hundreds of assumptions already capitalized, will become apparent. Substitute products will make their appearance and foil schemers who are seeking to exploit consumers. Stock prices will settle down to levels determined by current earnings plus reasonable prospects.

The present stock market has smashed all records and rules. It violated precedent by getting on the front pages of the daily papers and yet refusing to break. Never before were there so many sensational advances in non-dividend paying and red-ink stocks. Never did insiders, economists and accountants appear to be so utterly ignorant concerning values.

But engineering stock movements and engineering industrial production are widely separated activities. The measure of permanent progress is the rate at which the doers effect economies through increased efficiency. Such savings come surely, but slowly, and that is why wise people advocate buying for the long pull.

Building to Balance Industry

“OUR new leaders of government propose a \$3,000,000,000 construction reserve for the nation. This plan is designed to reduce the chances of widespread unemployment and, if successful, will show that, at last, we have succeeded in organizing our economic system to provide a job for all who have the will to work. It would act as an economic gyroscope. Incipient business depressions might be checked at the start by releasing money for building and inflationary tendencies might be curbed by a reversal of this process.”



The Philadelphia

A System of Second Mortgage Financing Which Has Made Philadelphia the "City of Homes"

PHILADELPHIA is widely known as the "city of homes" and, as with a certain well known breakfast drink, "there's a reason." What that reason is it shall be our purpose to point out briefly, in the hope that some light may be shed on the interesting and timely problem of the second mortgage.

Statistics collected by the Bureau of the Census show that among the six largest cities of the United States Philadelphia stands first in home ownership, with 39.5 per cent of the homes owned by their occupants. This is in distinct contrast with the two other cities which had over one million population at the time of the last census. New York can boast of only 12.7 per cent home ownership, while Chicago stands much higher than New York, but far below Philadelphia, with 27 per cent of her homes owned by their occupants.

Can we assume that home ownership is desirable in itself? It is generally admitted that the most desirable type of citizenship is partially an outgrowth of owning one's own home. If we can take this for granted, it behooves other cities and towns to pry into the why and the wherefore of Philadelphia's outstanding accomplishment.

The chief reason for the condition we have pointed out is not difficult to find. It can be stated simply. The Philadelphian who desires to purchase a home finds it much easier to finance the purchase than do the residents of other cities and towns in the United States. The exceptions to this statement are so few as to be negligible.

In order to see just how this financing proceeds let us follow the attempts of a Philadelphian, Mr. Black by name, to purchase a home. It so happens that Mr. Black has never had a large income but always a steady one. He therefore has no large sum saved up which he can put into the purchase, although the stability of his income warrants him in obligating himself to meet regular monthly payments which in time will completely pay for the home.

Mr. Black has chosen as the object of his purchase a home which is modest in size and is priced at \$5,000. The \$1,000 which he has saved for this purpose is left as a down payment when the bargain is closed. Mr. Black then borrows \$2,500 on first mortgage security from a bank, insurance company, or private lender at an interest rate of about six per cent per annum. This is probably a three to five-year loan, but he is assured that there will be no difficulty in renewing it, and that there will be no obligation to reduce its principal sum. He will then appeal to an institution which is practically unknown outside Philadelphia—a second mortgage building and loan association.

After examining the nature of the property and Mr. Black's integrity, this association will lend him an additional \$1,500 on second mortgage security. For this he will be required to pay an interest rate of six per cent. He will also be required to reduce the principal of this second mortgage loan by subscribing for one share of the association's stock for each \$200 of the loan and paying for this stock in regular monthly installments of \$1.00 per share per month. He is informed that at the end of 11 to 11½ years the maturity value of these shares, \$200 each, will be sufficient to repay the loan. Thus, with only small monthly payments, Mr. Black may repay the money he has borrowed on second mortgage security. After this has been cared for, he may convert the first mortgage, or a part of it, into a building and loan mortgage and go through the same process as he did with the original second. It is important to note that had Mr. Black been constructing a new home, instead of purchasing one already built, he could have used precisely the same financing plan.

There are some other charges Mr. Black will be called upon to pay, a discussion of which would be too lengthy to include here. However, a very careful calculation shows that the Philadelphians who borrow second mortgage money under the plan we have described pay from five to ten per cent per year less for it than do borrowers in other places.

That this plan of second mortgage financing, which for convenience we may call the "Philadelphia Plan," meets satisfactorily the financing needs of home purchasers is clearly shown by the extent to which it is used in the City of Philadelphia. The fact is that practically all of the second mortgages which are placed on homes in Philadelphia are handled by the building and loan associations. Many Philadelphians think of a building and loan association only as a second mortgage financing institution.

In the City of Philadelphia there are approximately 3,400 building and loan associations, having aggregate assets of about \$750,000,000. Approximately 600 of these associations make only second mortgage loans, about 450 confine their activities to the first mortgage field, and about 2,350 will lend on either a first or a second mortgage. More than one-half of the latter group have one-half or more of their outstanding loans on second mortgage security. It is necessary to note that when an association lends on a second mortgage it practically never holds the first mortgage on the same property. At the present time Philadelphia associations hold second mortgage security for loans totaling more than \$250,000,000.

Not only is this financing plan used extensively in Phila-



W. N. Loucks, of the Wharton School of Finance and Commerce, University of Pennsylvania.

Plan

By
W. N. Loucks

Of the
Wharton School of Finance and Commerce

Philadelphia, but it has been used in that city for many years, just how many it seems impossible to determine accurately. The first building and loan association in the United States was established in Frankford, then a suburb but now a part of Philadelphia, nearly one hundred years ago. Some Philadelphia building and loan men claim that second mortgages were financed from the very beginning of Philadelphia building and loan history. Taking care to be duly conservative, we may say that second mortgages on homes have been extensively handled by the Philadelphia associations for at least the past fifty years.

But is the plan really a safe one? Is a second mortgage not always dangerous and risky no matter how it is handled or who handles it? Possibly so, but the Philadelphia experience does not support such contentions. During long years of Philadelphia building and loan history failures of associations have been remarkably few. Dishonesty of officials has taken its toll, especially in recent years, but this is not connected with the Philadelphia plan of financing second mortgages. If failures due to dishonesty be excluded, there have not been over 10 failures in the past 10 years. For a city having over 3,400 associations this is more than an excellent record.

More specifically, how many second mortgages do the Philadelphia associations find it necessary to foreclose and what losses do such foreclosures cause? A recent investigation of the experiences of 195 representative associations over a period of 14 years attempted to answer such questions as those stated above. The results amply support the contention of Philadelphia building and loan men that foreclosures are very few and losses negligible.

Although it is interesting to note that over this 14-year period 115 of the 195 associations made no foreclosures, the aggregate experience of the whole group is more noteworthy. The entire group of 195 associations during the average period of 14 years made 154 foreclosures on second mortgages. During the same period these associations made approximately 28,000 second mortgage loans. It is evident that about one out of every 180 second mortgage loans was foreclosed during this period.

As regards losses, of the 80 associations which made one or more foreclosures each, 54 suffered no losses. The losses of the other associations growing out of foreclosures of second mortgages and the buying in of property on which second mortgages were held totaled for the 14-year period approximately \$15,000, or slightly less than $\frac{1}{100}$ of one per cent of the present assets of these associations. This is surely an insignificant loss and an experience which most first mortgage financing agencies would have trouble in matching.

It is only fair to note that in the last two years foreclosures in Philadelphia have been increasing in number, and losses have been mounting. This has been due to the serious slump which has occurred in the Philadelphia real estate market in recent months. Just what the final result will be it is too early to determine, but the associations which have used the Philadelphia plan with proper conservatism will in all probability come through unscathed.

The Philadelphia plan of second mortgage financing through Building and Loan Associations has helped Philadelphia come to the top in home ownership. Thirty-nine and five-tenths per cent of Philadelphia homes are owned by their occupants; 12.7 per cent of New York homes are owned by their occupants.

The Philadelphian who desires to purchase a home finds it much easier to finance the purchase than do the residents of most other cities in the United States.

There are 3,400 building and loan associations in Philadelphia with aggregate assets of about \$750,000,000. All but 450 of these lend on second mortgages as well as on first.

In fourteen years there have been only 154 foreclosures on second mortgage loans out of the total of 28,000.

State laws in nearly all states besides Pennsylvania prohibit building and loan associations from entering the second mortgage field.

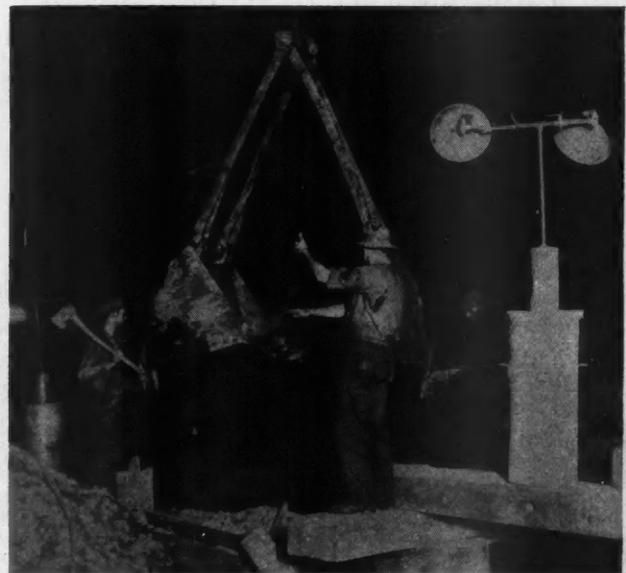
If this plan is good in Pennsylvania why not in other states also?

Could the Philadelphia plan be used elsewhere? That the need exists almost everywhere for some safe and sound plan of financing second mortgages at a reasonable cost to the borrower will be generally admitted. We are not prepared to say that the Philadelphia plan is the universal solution for the second mortgage problem. Second mortgages are in disrepute in a great many places. State laws in nearly all states, aside from Pennsylvania, prohibit building and loan associations from entering the second mortgage field. State officials supervising building and loan associations are, outside Pennsylvania, almost universally and apparently unalterably opposed to the use of the Philadelphia plan.

In view of the wide variations of opinion concerning the solution of the second mortgage problem, we venture to make only one concluding assertion: The Philadelphia plan of financing second mortgages merits more attention and consideration than has been given it in the past by outsiders. Despite defects the plan undeniably has, it has worked, and it has, over a long period of years, proved satisfactory to home purchasers because of the ease with which they use it to finance their purchases, to building and loan officials because of the safety which seems to characterize its use, and to those interested in civic welfare because its effect has been to increase the percentage of citizens who own their own homes.



Flood Lights Aid Construction



Carbide Flood Lights Have Made Possible Both Day and Night Work Ever Since Construction Was Started on the Arlington Memorial Bridge at Washington, D. C.

BUILDERS- DEALERS-ARCHITECTS

Their Business Homes and Business Methods



"We Aim to Make It Easy for the Building Public to Shop with Us"

"OUR firm has been active in the contracting business in Santa Maria for several years and has to its credit some of the city's finest homes, one bank building, two schools and several commercial buildings," says a recent letter from H. R. Meyer, of the Doane Building Company, Santa Maria, California. "After giving the idea a thorough investigation from every angle, it was decided to enter the retail building material business in connection with our contracting activities. Judging by our experience during the first few months of this experiment the decision was a wise one. It is proving profitable.

"Of course, we have no intention of giving up the general contracting, for that is at the present time, and in all probability will continue to be, the largest part of our business, unless this

retailing game grows far beyond what we expect of it. Nevertheless we firmly believe that the two departments can be successfully combined and that it is possible to make both profitable."

In carrying out the new business program referred to, the Doane Building Company determined to build a new

home which would be something out of the ordinary and would be an active factor in putting over both the retail business and the contracting business. This new plant was opened less than a year ago and the success with which it has met is evidenced by the fact that the residents of Santa Maria flocked to the opening and filed through the new office, display room and factory all day and all evening.

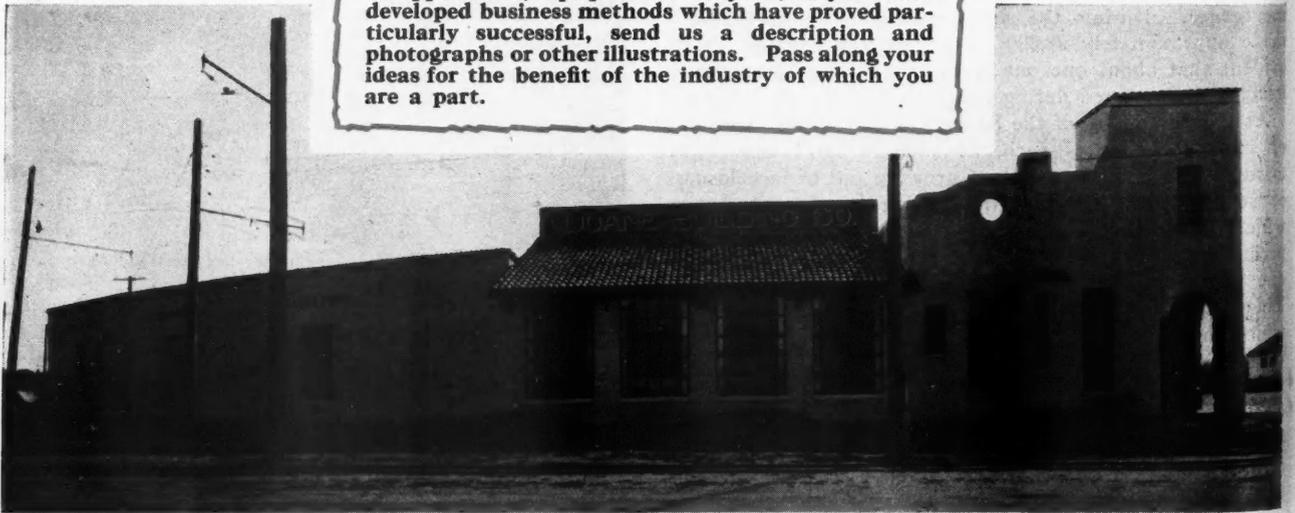
The town still points with pride to its new "building store" and the register of

You Are Invited

IN THIS ISSUE OF AMERICAN BUILDER we are inaugurating a new department, "Builders-Dealers-Architects, Their Business Homes and Business Methods." As the heading indicates this department will be devoted to describing and illustrating buildings and methods which have proved valuable business aids to our readers.

Of recent years business men have developed a new conception of competition. Old fashioned hostility, all too often accompanied by cut-throat competition, has been discredited and, through business associations, has been replaced by co-operation. Experience has shown that a co-operative exchange of ideas is profitable to all concerned. This new department, "Builders-Dealers-Architects, Their Business Homes and Business Methods", will be a place where our readers may have the benefit of co-operation through the exchange of ideas.

If you have new buildings which are outstanding in appearance, equipment or layout, if you have developed business methods which have proved particularly successful, send us a description and photographs or other illustrations. Pass along your ideas for the benefit of the industry of which you are a part.

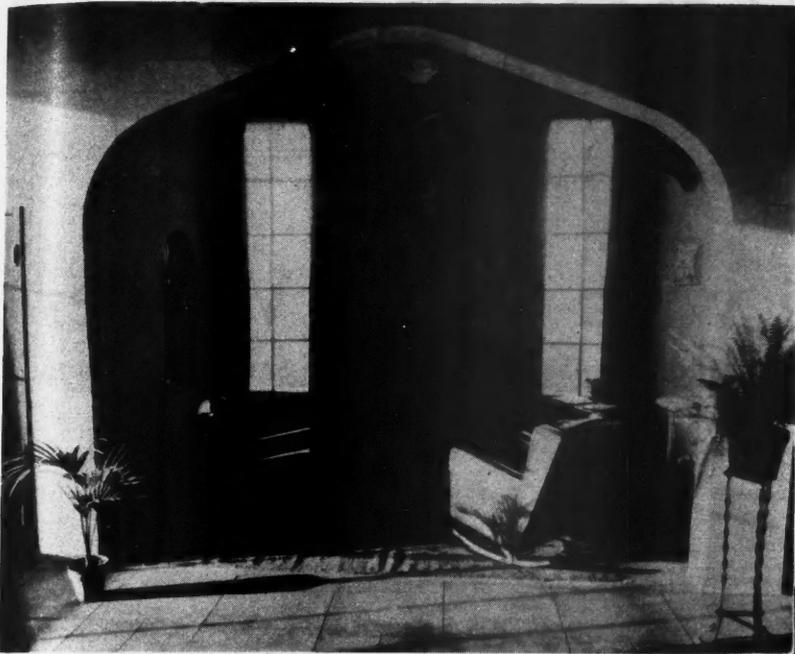


The New Retail Establishment of the Doane Building Company Is Located on One of the Principal Business Streets of Santa Maria, California, Where It Is Easily Accessible to All Who Are Interested in Building or in Building Materials. The building itself is, architecturally, a real city "improvement."

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The Home shown



The Reception Room, Off the Lobby, Resembles the Living Room of a Fine Residence and Is a Big Factor in Making Customers Feel at Home in This Business Establishment.

visitors to the opening has proved out its worth as a mailing list. The Doane Company does direct mail advertising regularly with great success and in addition uses a 30-inch advertisement three times a week in the local paper, changing the copy every week.

For the new building a location with 175 feet frontage on one of the principal business streets was selected and the build-



The Display Room of the Doane Building Company Is a Wide Departure from the Ordinary Conception of a Building Material Store. It is actually artistic.

material store. It is as attractively finished and furnished and the goods as attractively displayed as in the best retail establishments which cater to pleasing the eye of the customer. This is immediately apparent from the photograph reproduced here as are also the same characteristics of the lobby and reception room.

In this display room the customer will find samples of everything which the company handles displayed in a manner best to illustrate its use and appearance when installed. Here can be seen everything which goes into a home from built-in fixtures, builders' hardware and tile drains for kitchen sinks to paints, wall finishes and brick.

The Doane Building Company differs from the usual retail lumber company in that it does not handle ordinary construction lumber. Its stock consists of trim, flooring, sash, doors, etc., in fact everything, except ordinary construction lum-

(Continued to page 146)



The Lobby, Too, Is Attractive to the Customer Entering the Business Home of the Doane Building Company. At the right is the reception room shown at the top of this page and at the left a counter with the office beyond.

HOME MODERNIZING



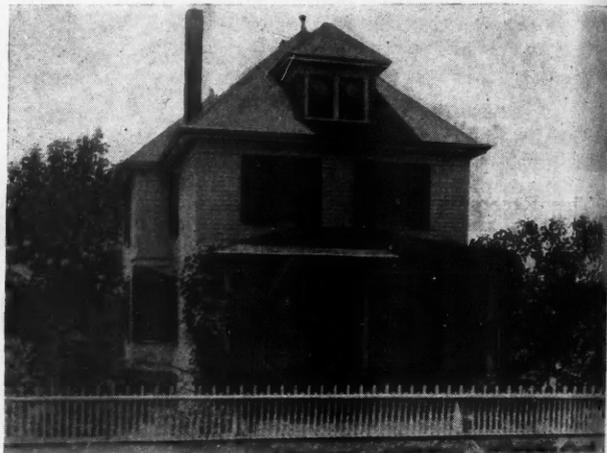
Overcoating with Brick Veneer

Old Frame Houses Made Modern and Attractive by Veneering with Handsome Face Brick Point an Opportunity to Capitalize the Growing Interest in Remodeling

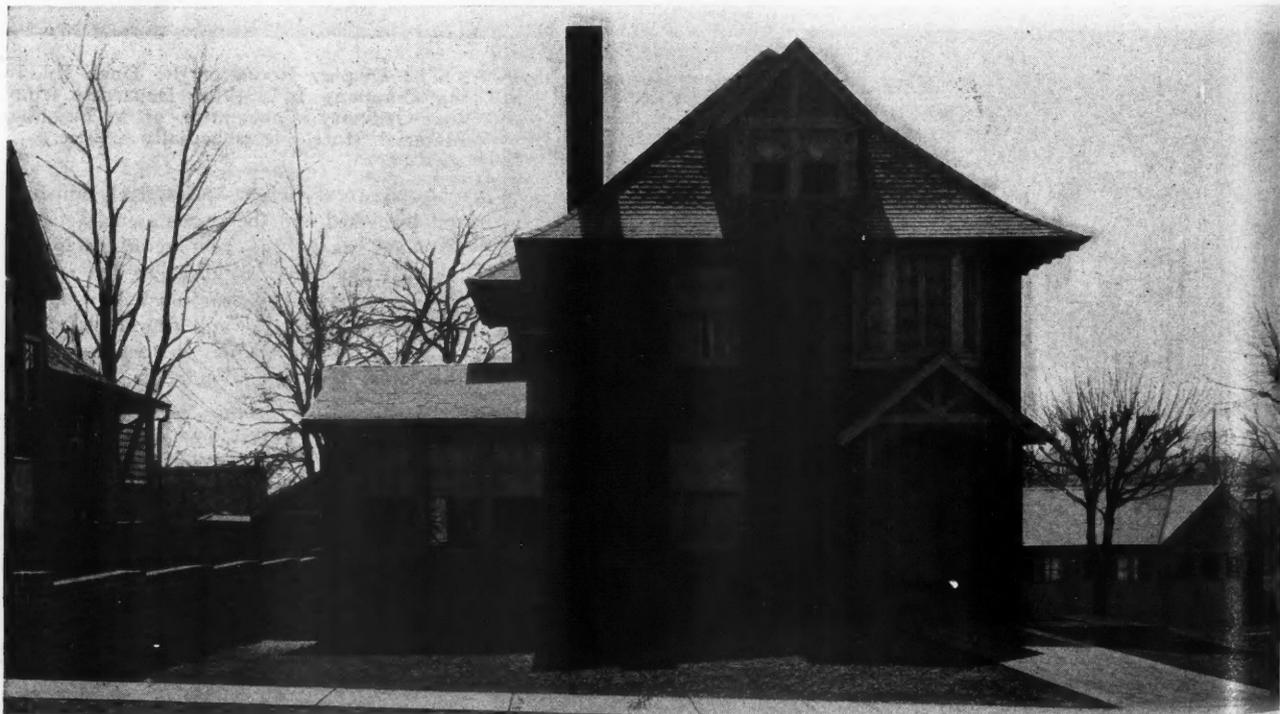
THE owners of the house pictured on this page were, not long ago, confronted by a problem which is heard more and more frequently every day. The old home with its happy associations and surroundings had grown dear to them through many years of family life and pleasant contact with neighbors. Property values had advanced and the location was more desirable than ever before. The house itself was well built and still sound and satisfactory in every way except one. It was out-of-date.

The style was that of a by-gone day and entirely out of harmony with present day ideas of an attractive home. Appearances, in actual fact, play an important part in house values and the old fashioned, unattractive house was most unsatisfactory to its owners. It was too valuable to tear down and rebuild, but something had to be done and the contrast between the small picture of the old house and the large one taken after "something" had been done, shows with what success the problem was met.

The narrow porch across the front of the old house was torn away and replaced by small, neat entrance with a recessed doorway. On the east side of the house a large sun room, with outswinging casement windows was added.



The Old Boyer Residence Was Still a Substantial and Valuable House, but the Owners Were No Longer Satisfied with Its Old Fashioned Appearance and Something Had to Be Done.



The Old Boyer Residence as It Appeared After Being Brought Up-to-Date. A sun room and garage, brick walks and brick wall were added and the house was completed overcoated with a handsome face brick. It is now considered one of the really fine, modern homes of the town and a highly salable property.

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With the New Porch Completed and the Brick Veneer All Laid the House Would Hardly Be Recognized as the Same as That Shown Below on This Page. It is a fine example of the kind of permanent remodeling that is possible with an overcoating of brick veneer.

The single double hung window above the entrance was replaced by a group of case-ments.

Similar alterations were made in the interior, including a big brick fireplace in the living room. Interior brick construction was carried still further in semi-circular arched doorways into the living room and dining room and the sun room was built completely of brick. The walls and floor of this sun room are a beautiful example of the striking note of color contrast which can be obtained by using a very dark brick and a light colored mortar.

The exterior of the house was completely veneered with a handsome face brick which gave a new air of dignity and permanence to the old house and assured the owners of a beautiful home for many years to come, one of which they might always feel proud and which could be sold to good advantage should the occasion ever arise.

The other house illustrated here is another excellent example of the kind of permanent remodeling that can be done with brick veneer. In this case very little change was made in the exterior except for the addition of the brick overcoating and the building of a new porch, the old wood porch being torn away. Nevertheless a complete change was wrought in the appearance of this house, the old, shabby, out-of-date building being transformed into a trim, up-to-



Another Old Home Which Had Depreciated in Value, Largely Because of Its Out-of-Date Appearance, Was a Fit Subject for Remodeling, as Pictured Above.

date home which gives no indication of its past years of service, and looks like a new house.

The application of a brick veneer overcoat is a comparatively simple matter, and can be handled by any experienced masonry contractor. It is, of course, necessary to build out from the original foundation, an extension to carry the brick-work. Then in laying up the brick the new wall must be thoroughly tied to the old wall by means of masonry ties at regular intervals. A space is left between the old wood siding and the new brick walls and this, in addition to the new wall itself, adds to the insulation of the house and effects a considerable fuel economy. With proper foundation and tying of the new wall the house will be sturdier than before and will retain its attractive appearance through the years without expensive upkeep.

JOHN R. WEST.



"New Homes from Old Houses" is the title of a new booklet published by the Home Modernizing Bureau, of The National Building Industries, Inc., 228 N. La Salle St., Chicago, presenting the possibilities of the home modernizing campaign being conducted by this Bureau and featuring the slogan, "It Pays to Modernize." The price of the book is 50 cents.

Careful Planning Lowers Insurance Rates

By G. H. PARKER, Manager Kentucky Actuarial Bureau

IN the past, architects and builders when planning new structures have been chiefly concerned with the three factors of appearance, arrangement and cost—giving little consideration to the element of safety. Now, however, the progressive architect is also carefully considering a fourth important factor—safety from fire.

The designer who is not concerned with the factor of safety from fire not only frequently jeopardizes the lives of the occupants, but fails to protect properly the interests of his client. Nearly all buildings are insured, and the fire insurance rate is based upon a careful analysis of the construction, segregation and safeguarding of fire hazards, protection of exterior and interior openings and the protection afforded by automatic sprinkler systems, standpipes and other "First Aid" devices. Failure to consider these features results in an increased insurance rate, which increase is a charge against the building and its contents as long as the building stands. The files of the Kentucky Actuarial Bureau contain hundreds of surveys which attest the penalty exacted for inferior construction.

The following are two very recent outstanding examples of modern construction. In the first the architect ignored insurance requirements, while in the second he consulted with this office with the result that the building is fire resistive and the owner will enjoy a much lower rate.

(1) The specifications for a \$400,000.00 hotel building called for standard (light) concrete floors, but failed to provide for adequate protection of the columns and girders, resulting in an additional insurance cost on the building of \$2,240.00 a year. The contractor states that standard protection could have been provided for very small increase in cost.

(2) Plans were for a \$200,000.00 office building with metal joists on steel supports; floor joists to be covered with 2 inches of concrete on expanded metal, protected on the underside with a ceiling of metal lath and cement plaster; roof to be constructed in an equivalent manner; vertical and horizontal supporting members to be protected with metal lath and plaster cement. After consulting with this office, plans were changed to provide for standard protection of supporting members at an additional cost of \$3,500.00, with a resulting fire insur-

ance saving on building and contents of \$1,461.00 a year.

These illustrate but one feature of construction influencing the rate of insurance. Perusal of other surveys, taken at random, reveals many more faults in construction and planning for which the insured is paying—and dearly, too. Several of the more common of these, with the resulting effects on the insurance cost, will serve to emphasize the pressing need for more thought toward safe construction on the part of the designer:

Concrete moving picture booth built without provision to carry off the flame and smoke from burning films. Booth was condemned and owner put to much expense and loss of rentable space to provide necessary ventilation.

Standard wired glass (windows) for protection against a severe exposure installed in wooden frames. The windows are of no more value than ordinary glass, and the risk carries a heavy exposure charge.

Standpipe risers improperly located, with the result that all parts of building cannot be reached with the maximum amount of hose permitted. Credit in rate for standard installation withheld.

A small, yet extremely hazardous, part of a manufacturing process not cut off from remainder of risk by a fire wall with openings protected by standard fire doors. Heavy charge for these hazards applies to main building containing large values.

A large building designed for two separate occupants rated as one risk because blank interior wall does not extend through roof.

Metal ventilating duct from hood over range in restaurant on first floor carried up through building. Duct in contact with wooden floor timbers, making a very hazardous installation and necessitating a charge in the rate.

Fuel oil heating system with supply tank improperly installed in basement. Charge in rate for improper installation.

Large heating ducts passed through firewall without automatic cut-offs. A hazardous feature, as a fire in one section of plant can readily pass into adjoining section.

Underground gasoline storage system with fill, vent and inventory pipes inside building. Heavy charge in rate.

The more progressive architects are guarding against these errors by providing safety from fire.



WE are pleased to present on the eight pages following a new feature—a new method of illustrating building designs—which we believe our readers will enjoy. Duotone engravings printed on enamel give these plates depth and richness without obscuring details and without garishness.

Our editors and architectural advisors have used great care in selecting these nine designs. They include homes, apartments and business buildings. They contain many a good suggestion and usable idea.

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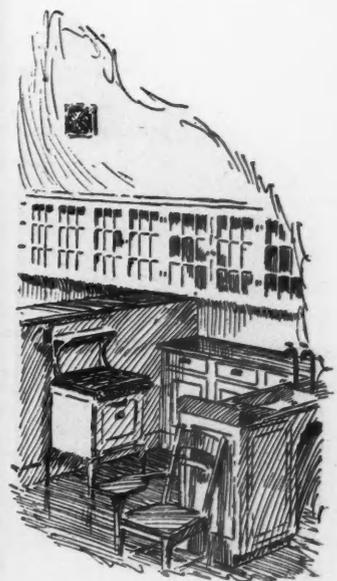
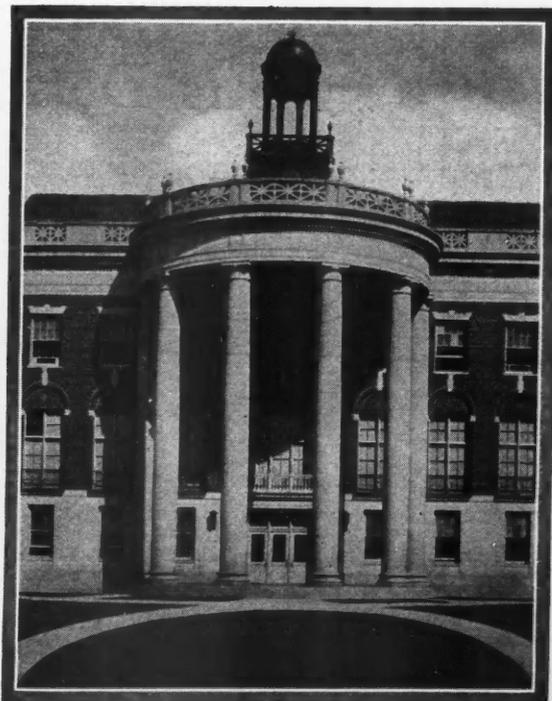
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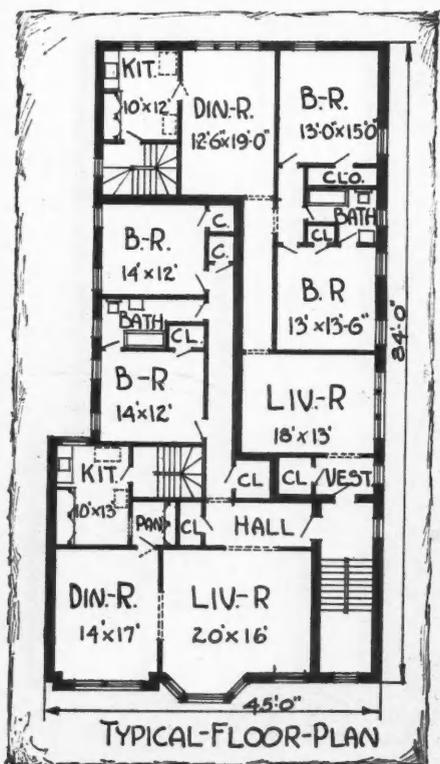
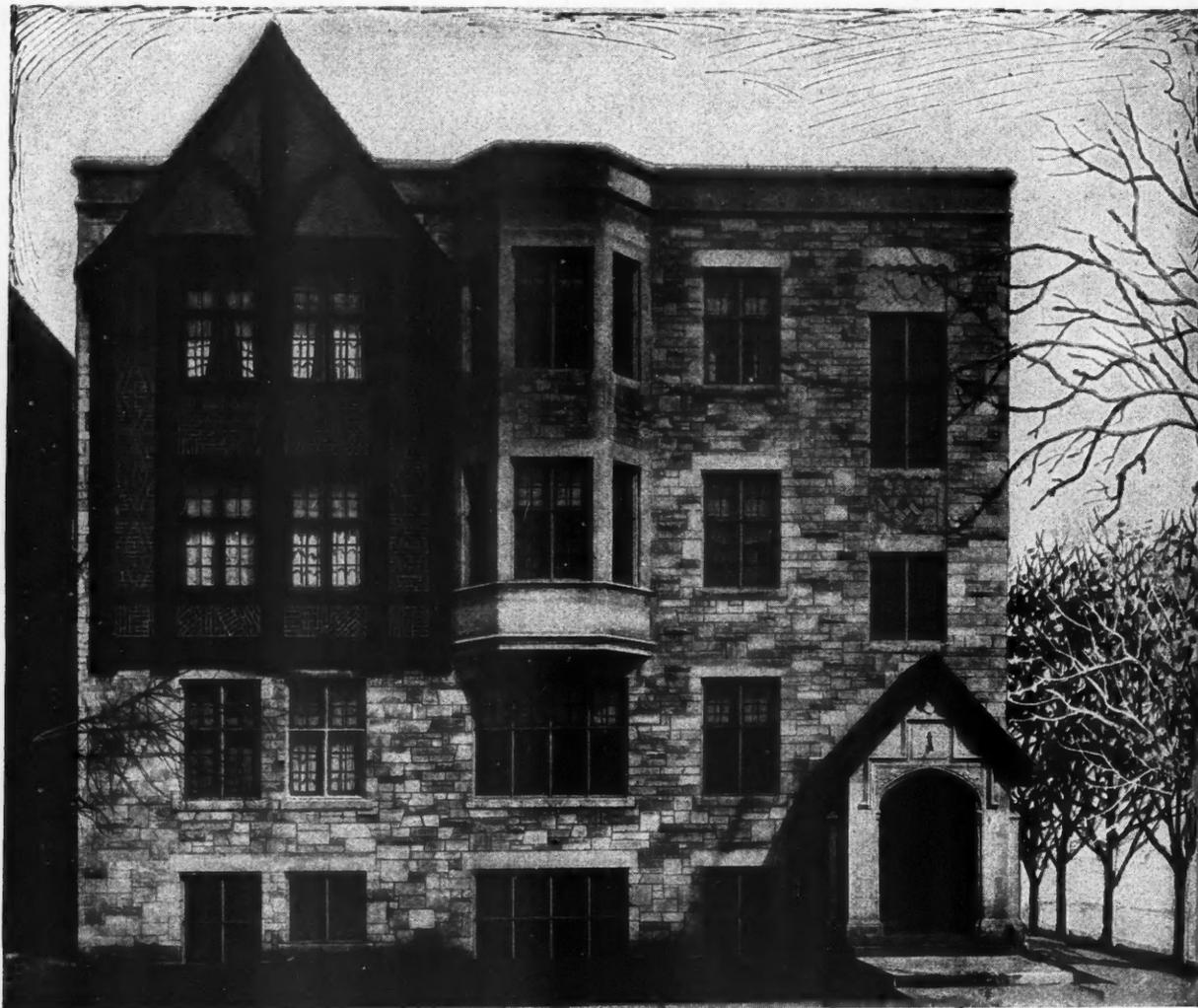


The Cole Junior High School

Denver, Colo.

W. N. BOWMAN, Architect





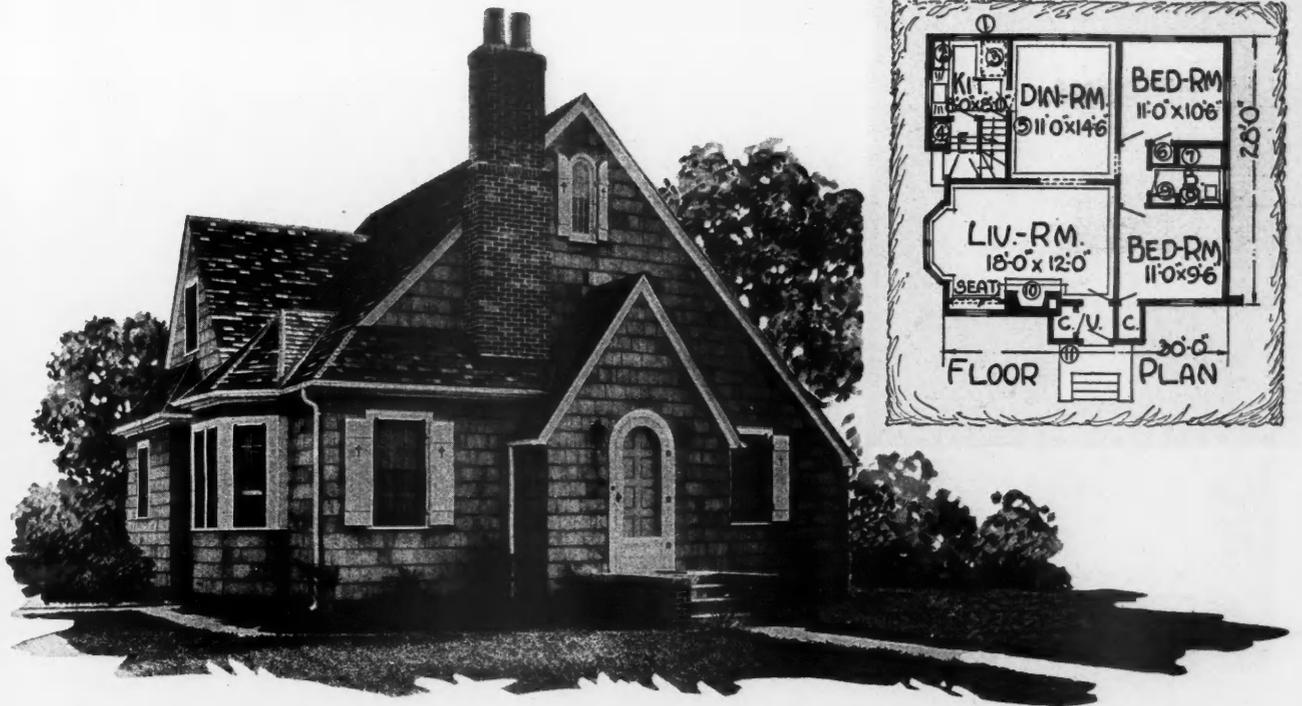
Six 5-Room Apartments in this Detroit Building

A Rich Design in Indiana Limestone

CLARENCE E. DAY, ARCHITECT



A HIGH class building that will yield a good rental or sale return is presented. The exterior achieves character by using stone as a veneer, and the casement windows emphasize the quaint, early English design.



Two Small Homes of Style

Built at Omaha, Nebraska, to Sell at a Low Price

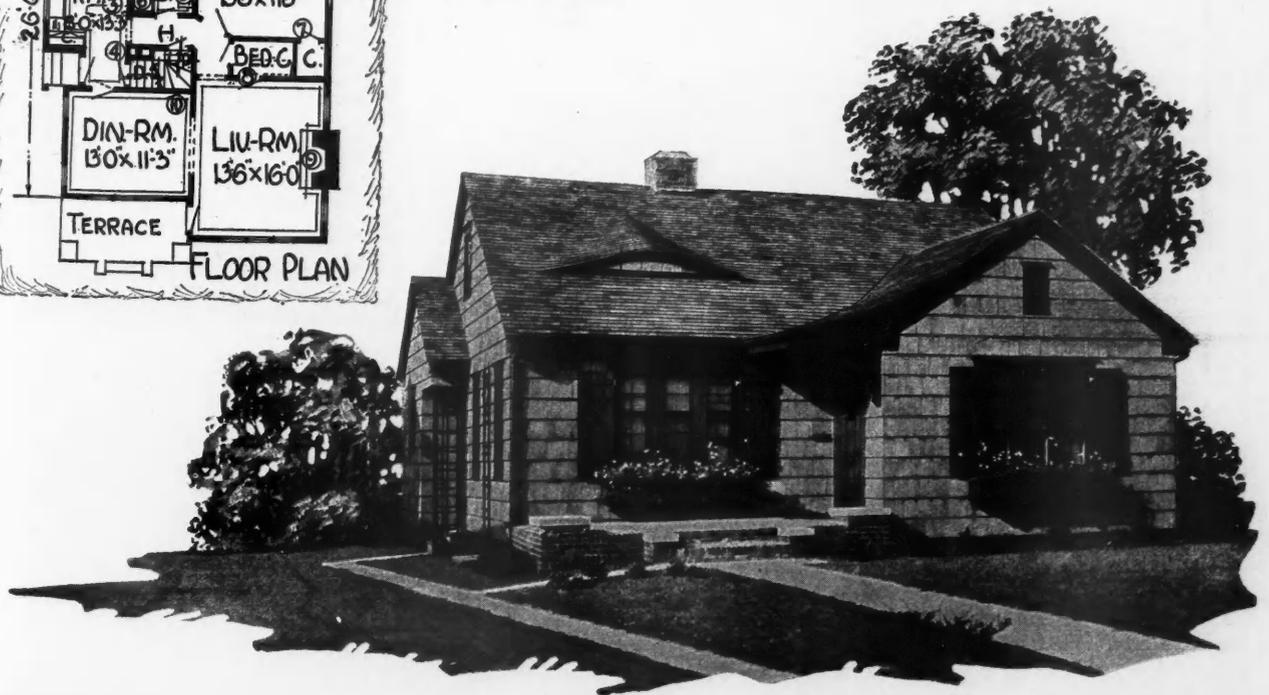
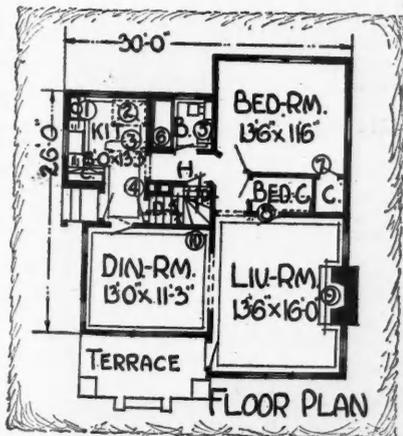
Key to Recommended Specialties of Equipment

Five-Room Design Above

- 1—Kitchen Ventilating Fan
- 2—Kitchen Cabinets
- 3—Range
- 4—Electric Refrigerator
- 5—Thermostat
- 6—Moth Proof Closet
- 7—Tub Shower
- 8—Medicine Cabinet
- 9—Linen Cabinet
- 10—Fireplace Throat & Damper
- 11—Built-in Mail Box

Four-Room Design Below

- 1—Kitchen Cabinet
- 2—Range
- 3—Ironing Board
- 4—Incinerator
- 5—Medicine Cabinet
- 6—Tub Shower
- 7—Mirror Door
- 8—Bed Closet
- 9—Fireplace Throat & Damper
- 10—Thermostat





Stucco Home of English Style as Built in Minneapolis

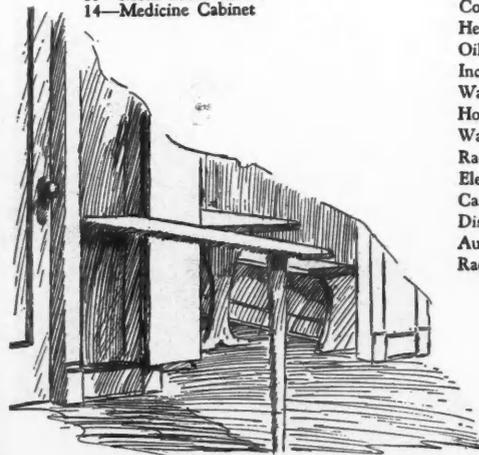
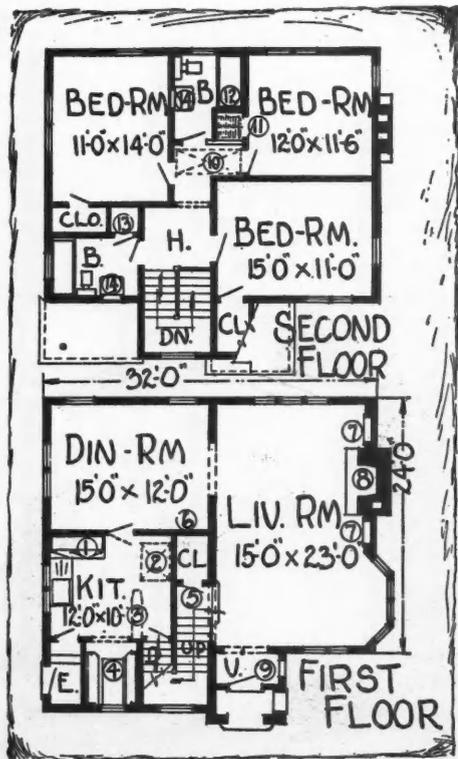
Key to Recommended Specialties of Equipment

The small numbered circles on plans represent the following:

- 1—Kitchen Cabinets
- 2—Electric Range
- 3—Ironing Board
- 4—Breakfast Nook
- 5—Mirror Door
- 6—Thermostat
- 7—Book Cases
- 8—Fireplace Throat & Damper
- 9—Built-in Mail Box
- 10—Disappearing Stair to Attic
- 11—Space Saving Closet Equipment
- 12—Tub Shower
- 13—Moth Proof Closet
- 14—Medicine Cabinet

In addition to the above many items of modern equipment must be considered.

- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machines
- Clothes Dryer
- Coal Chute
- Heating Plant
- Oil Burner
- Incinerator
- Water Supply System
- Hot Water Supply
- Water Softener
- Radiant Gas Heaters
- Electric Wall Type Heaters
- Casement Windows
- Dishwashing Sink
- Automatic Cellar Drainer
- Radiator Covers or Furniture



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High Grade Duplex for Residential Suburbs—Five Rooms on Each Floor

Brick Apartment of Georgian Lines as Built in River Forest, Ill.

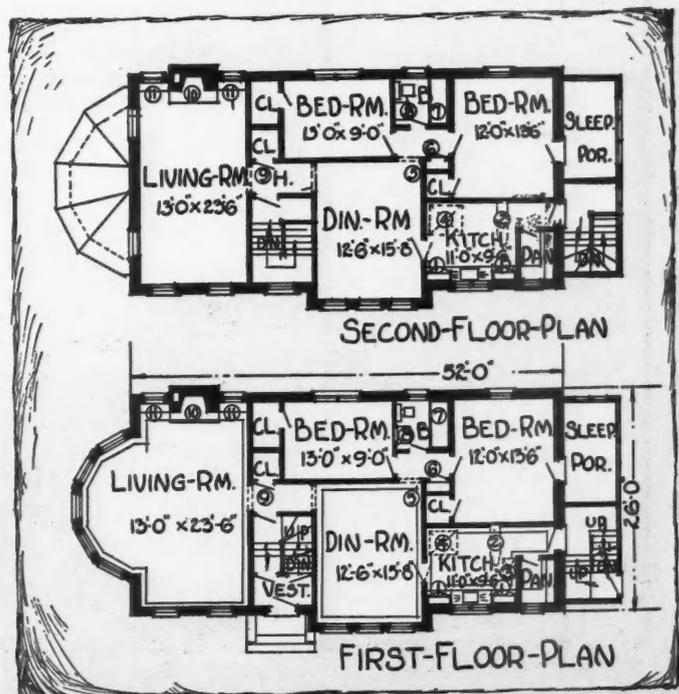
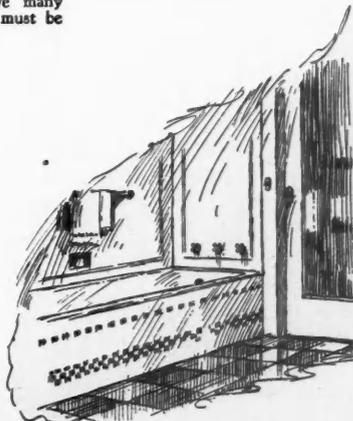
Key to Recommended Specialties of Equipment

The small numbered circles on the plans represent the following:

- | | |
|------------------------------|------------------------------|
| 1—Kitchen Cabinets | Heating Plant |
| 2—Ironing Board | Oil Burner |
| 3—Refrigerator | Incinerator |
| 4—Range | Water Supply System |
| 5—Thermostat | Hot Water Supply |
| 6—Moth Proof Closet | Water Softener |
| 7—Tub Shower | Radiant Gas Heaters |
| 8—Medicine Cabinet | Electric Wall Type Heaters |
| 9—Mirror Door | Casement Windows |
| 10—Fireplace Throat & Damper | Dishwashing Sink |
| 11—Book Cases | Automatic Cellar Drainer |
| | Radiator Covers or Furniture |
| | Disappearing Attic Stairs |

In addition to the above many items of modern equipment must be considered:

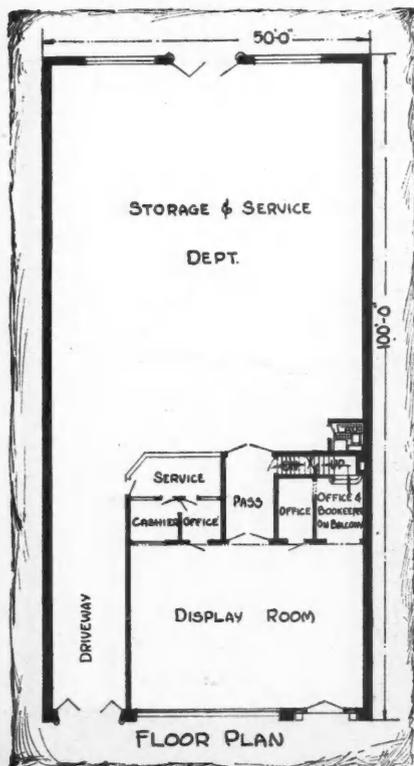
- Weatherstrips
- Storm Sash
- Screens
- Lighting Fixtures
- Convenience Outlets
- Electric Panel
- Washing Machine
- Ironing Machine
- Clothes Dryer
- Coal Chute





A Smart Shop for Auto Sales and Service as Built in Los Angeles, Calif.

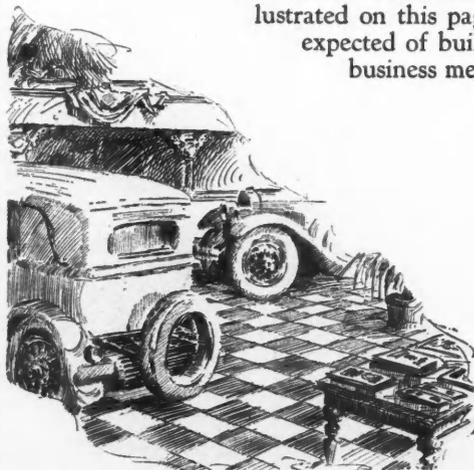
GABLE & WYANT, Architects



STYLE is now recognized as a first necessity to a successful retail business. The automobile industry has gone far along this line, practically every motor salesroom or service garage being now housed in a way to do credit to the beautifully styled modern cars.

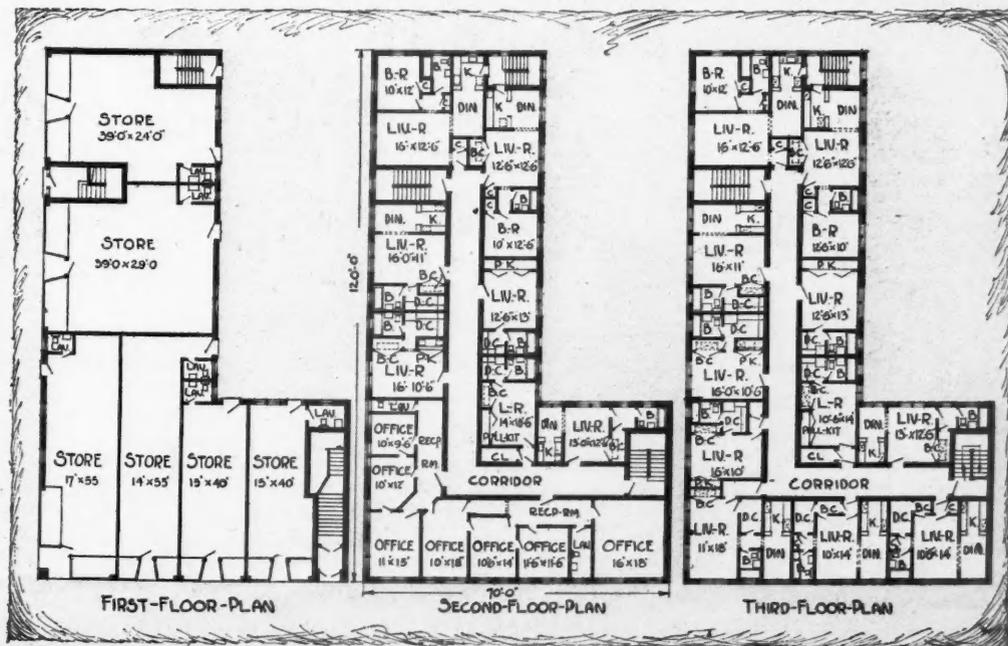
When planning and building a retail merchandising building it doesn't cost much more to put in the features embodying style and good taste.

One of the Studebaker salesrooms in Los Angeles illustrated on this page is a good example of what is expected of builders by these enterprising retail business men.

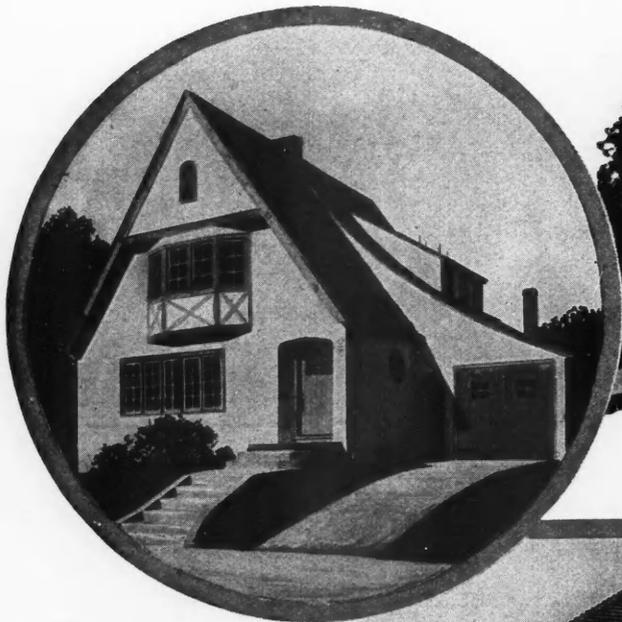




Business Block with Stores, Offices and Living Apartments as Built in Chicago



"With Garage Attached"



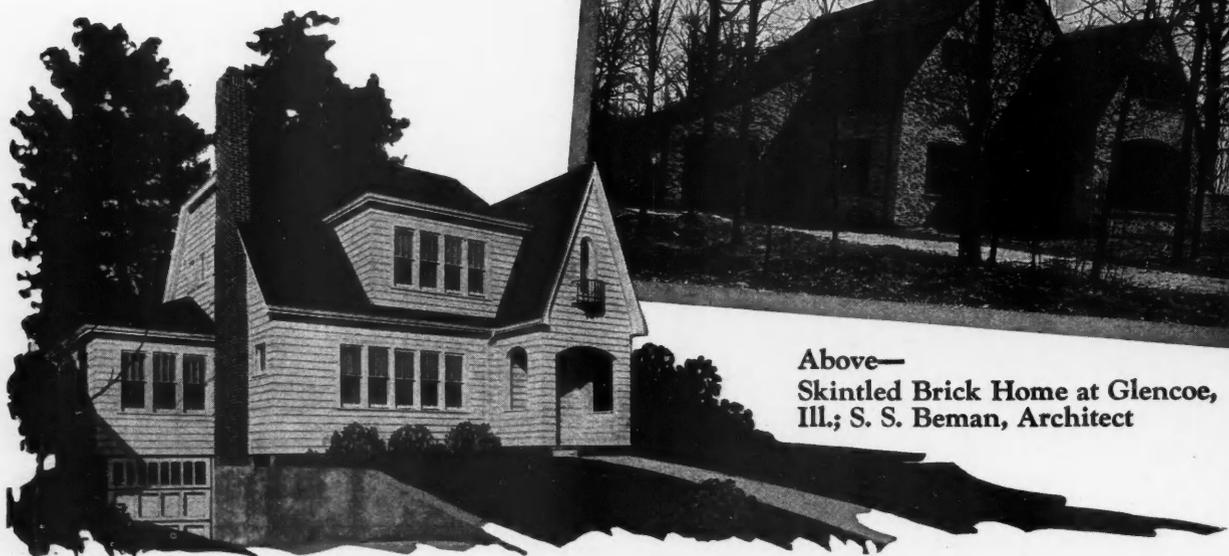
Garage Addition Provides the English Style with Another Sweeping Roof Line



Above—Garage Balances Sun Room, both being Additions with Flat Roofs



To Left—Impressive Treatment Using Arched Openings



Above—Skintled Brick Home at Glencoe, Ill.; S. S. Beman, Architect

Above—Garage at Basement Level Under Sun-Room is Reached by a Depressed Drive

OUR FRONT COVER HOME



This Six Room English Cottage, Well Planned and Completely Equipped with Modern Specialties Should be Readily Salable

THE English cottage style of architecture is particularly appropriate for a small house such as may be seen pictured on this page and, in full colors, on page one. The steadily increasing popularity of this style is ample evidence of its worth and assurance of the salability of a home so designed. Any builder who follows the plans of this Front Cover Home may rest assured that he will have no difficulty in finding a purchaser.

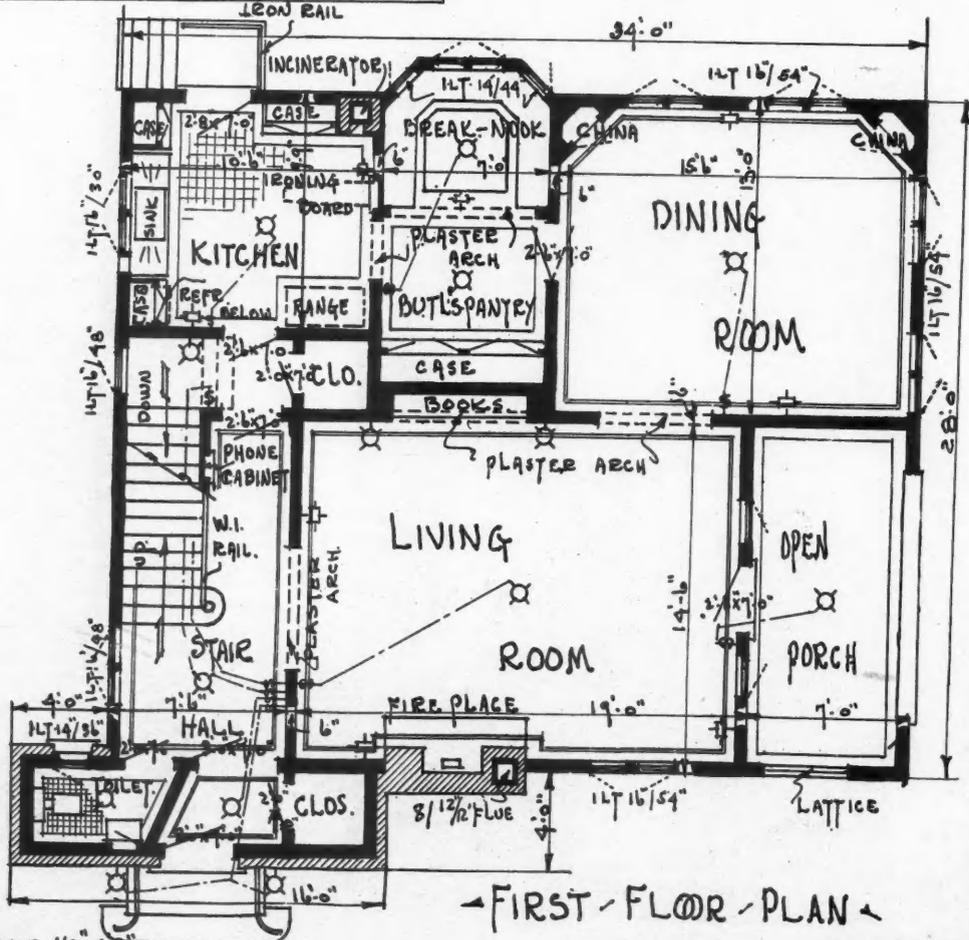
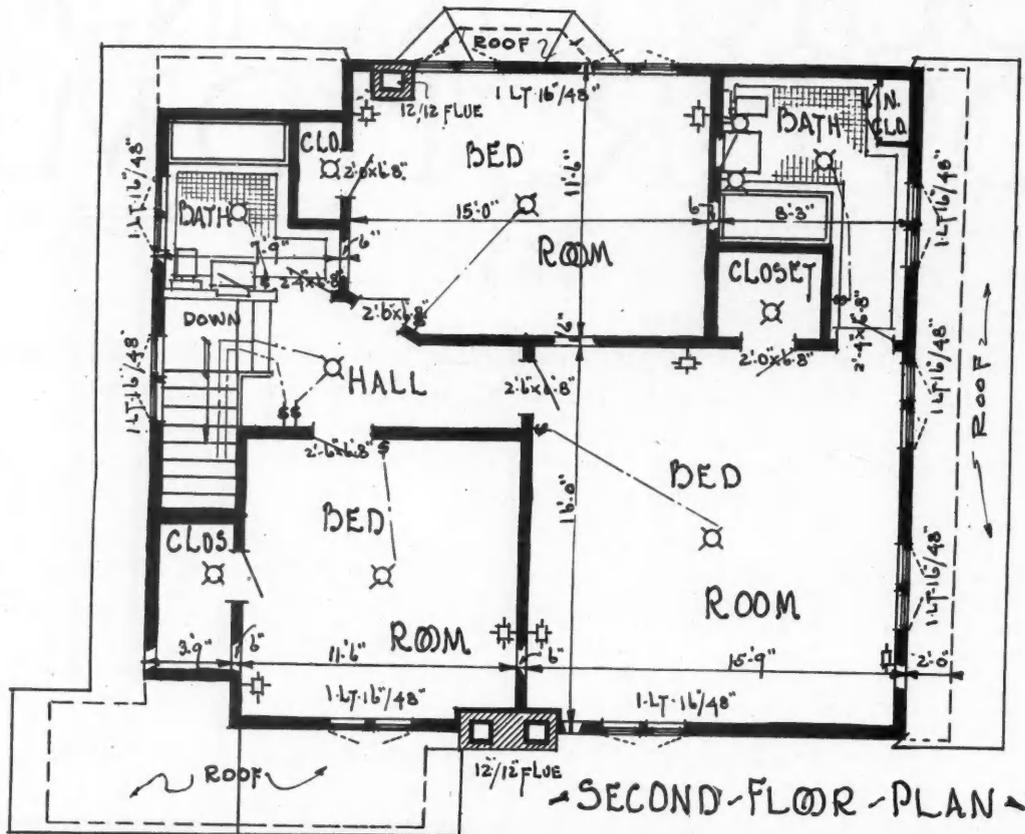
The low foundation line, the wide siding, the casement windows, the long sweeping roof lines broken by wide dormers, and the iron railed steps and plain brick entrance detail, combine to lift this design above the ordinary. Beyond these features, which are all structural in character, it is notable that the design includes little of ornament.

This is a highly desirable characteristic and one which should be given careful attention, especially in the design of small houses which can be over-decorated so easily.

The four pages following this present complete floor plans, elevation and details, drawn to scale, for the convenience of those who wish to make use of this design. Turning to the floor plans it will be noted that this is a six room house, with breakfast nook and butler's pantry and an extra toilet on the first floor and two bathrooms on the second floor. The arrangement is particularly good and the provision of extra toilet and bathroom and the unusual amount of closet space should make an especially strong appeal to the prospective home buyer. This is a design that can be built with confidence of a quick sale.



The Charming Appearance of This Home in the English Cottage Style Is Backed Up by an Interior Arrangement Equally Strong in Its Appeal, as May Be Seen from the Plans Reproduced on the Pages Following This.

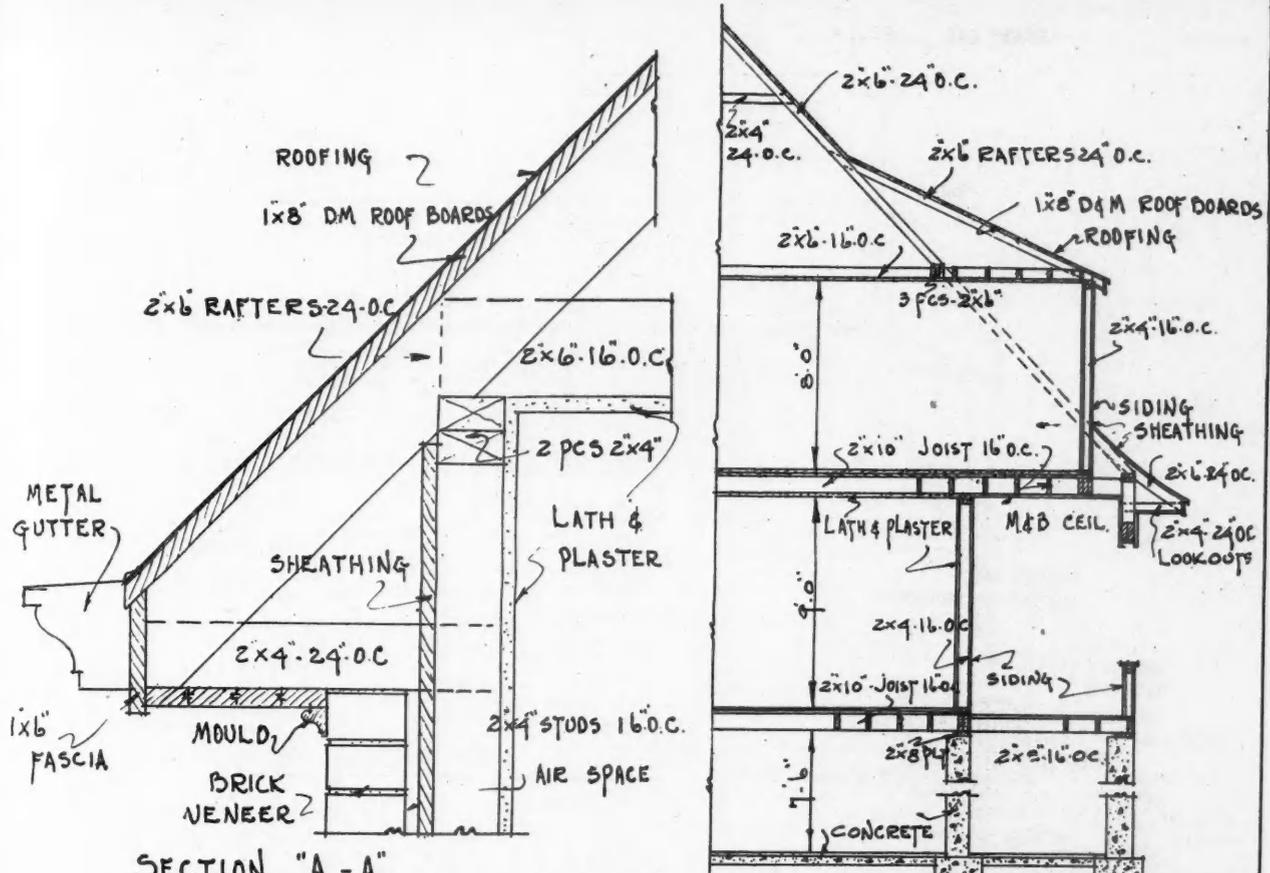


SCALE 1/8" = 1'-0"

SHEET NO.-1

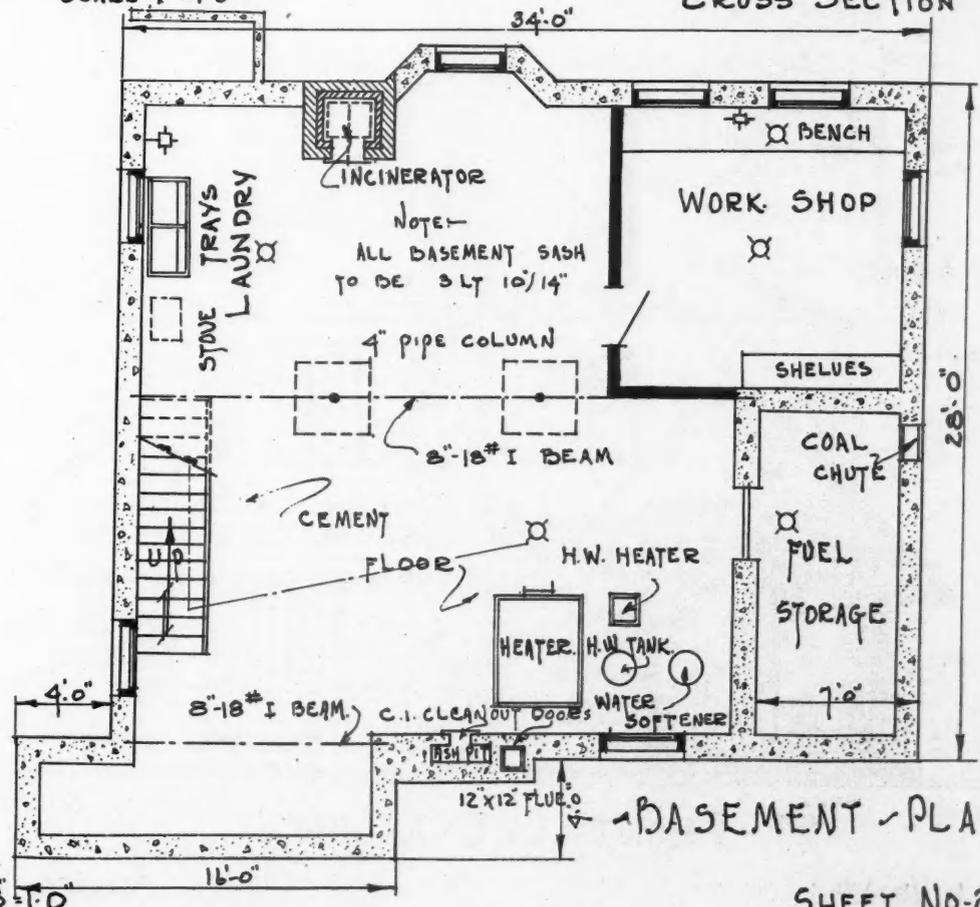
An Unusually Good Arrangement of Well Proportioned Rooms, Numerous Large Closets, an Extra Bath and Extra Toilet and Most Complete Special Equipment Are the Outstanding Features of Our Front Cover Home.

The B



SECTION "A-A"
SCALE 1"=1'-0"

CROSS SECTION



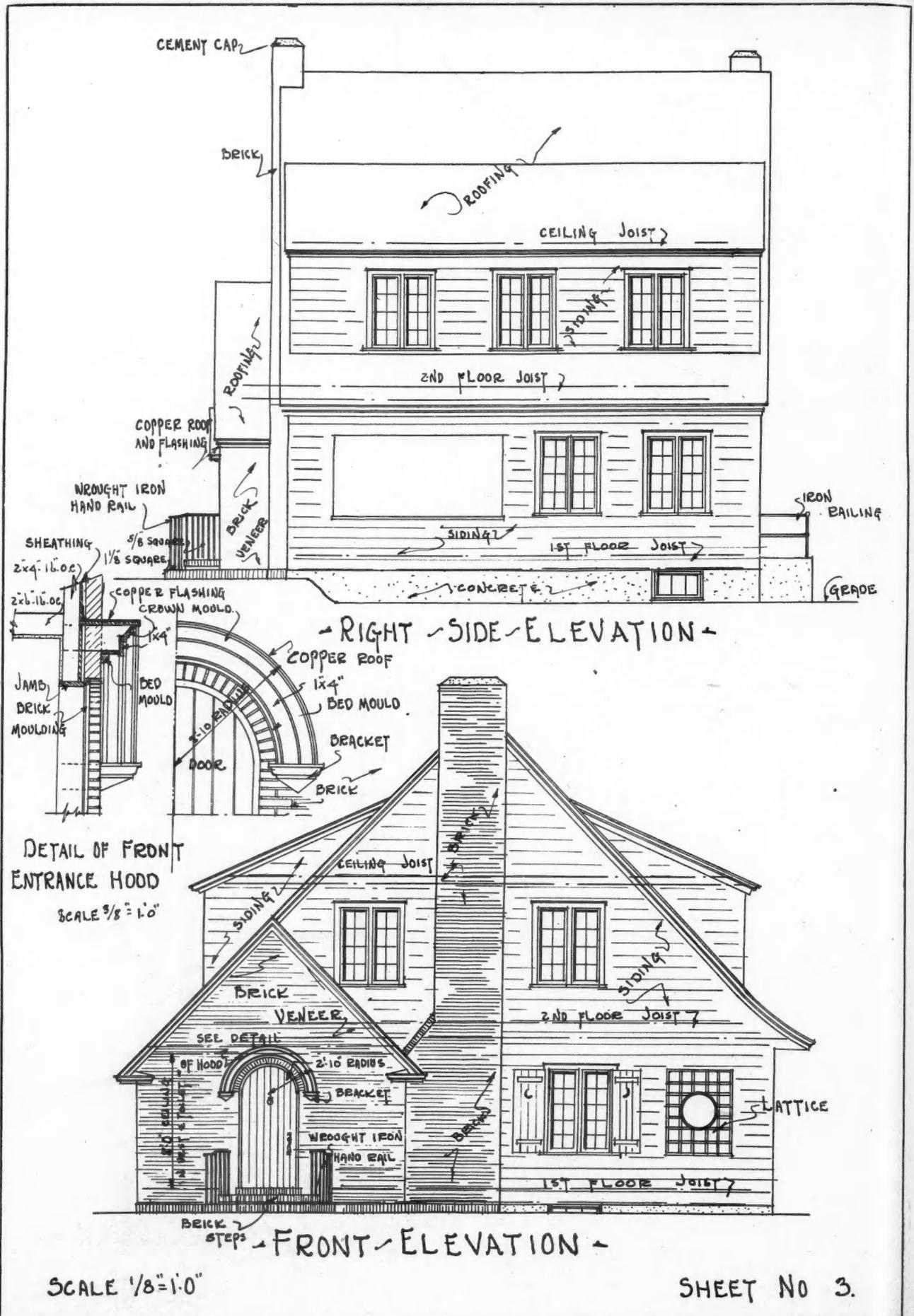
BASEMENT PLAN

SCALE 1/8"=1'-0"

SHEET No. 2.

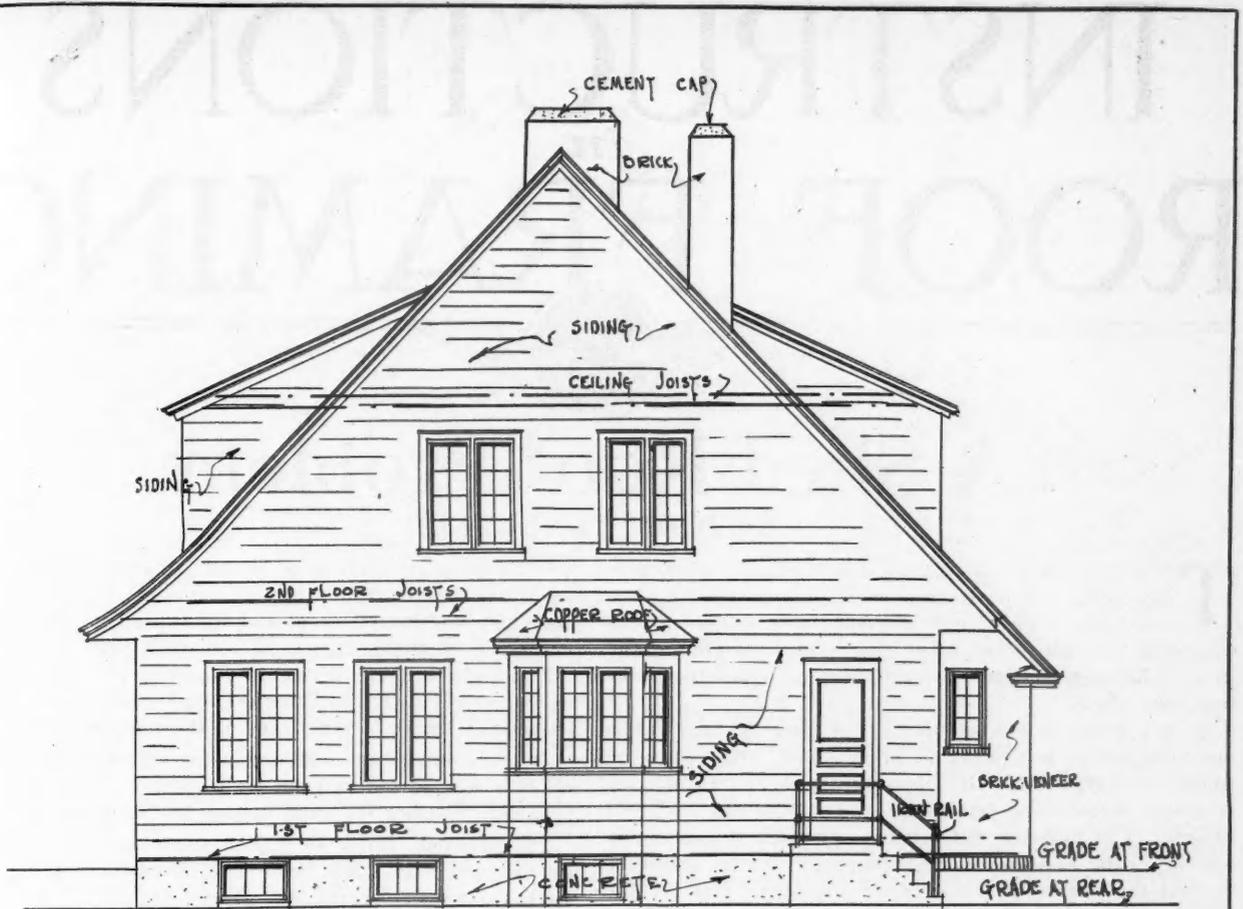
The Basement, Too, Is Modern in Every Respect with the Most Up-to-Date Heating and Laundry Equipment, Incinerator and a Space for a Home Workshop. The elevations and details will be found on the next two pages.

Extra

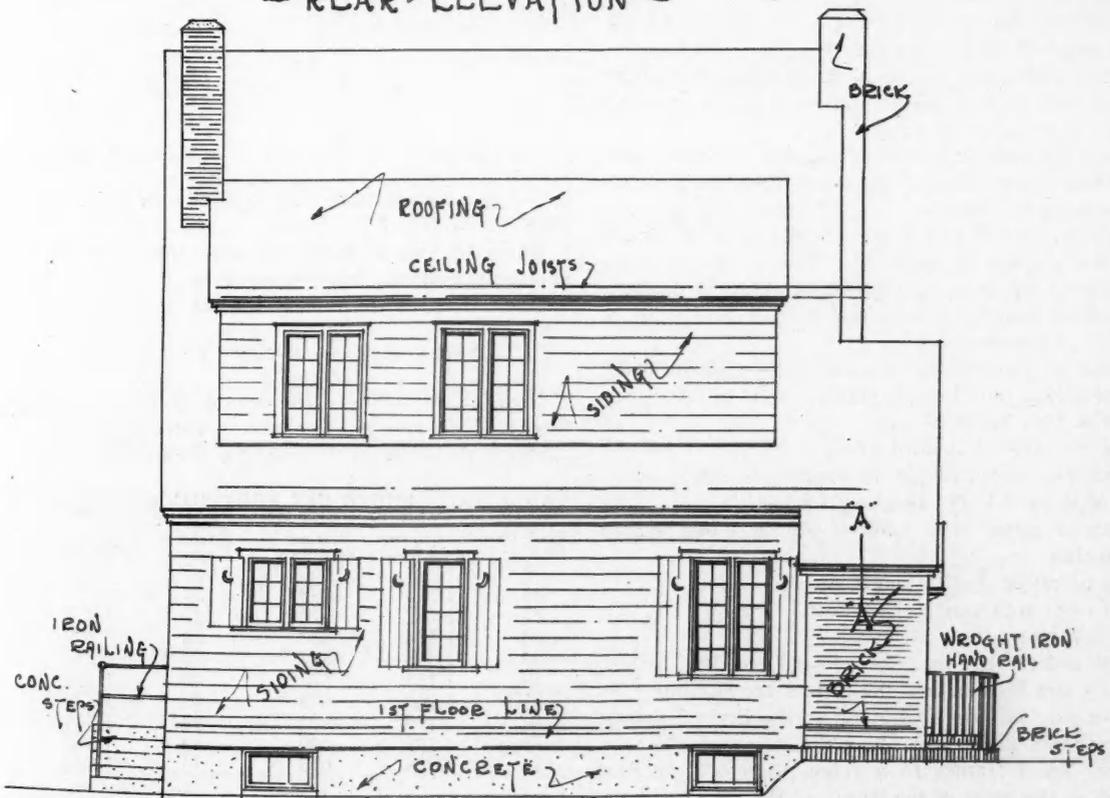


Here We Find the Front and Right Side Elevations of Our Front Cover Home and Also a Detail Drawing of the Front Entrance Hood.

SHEET NO 3.



← REAR-ELEVATION →



← LEFT - SIDE - ELEVATION →

SCALE 1/8" = 1'-0"

SHEET NO. 4.

The Rear and Left Side Elevations Complete the Working Drawings of Our Front Cover Home and with the Plans on the Preceding Pages Make It Possible for the Builder to Reproduce This House.

INSTRUCTIONS in ROOF FRAMING



A Shed Roof Problem

By JOHN T. NEUFELD

THE roof shown is perhaps somewhat out of proportion, but we have seen many worse misfits than this one. This roof presents a problem that is somewhat difficult, when using the square for getting the cuts. The degree protractor, however, simplifies the problem very much.

In any problem the solution is well on the way when one determines just what is known and what is to be found or solved for. In this case the span of the roof is given, which also determines the run of the different rafters. The pitch of the rafter is given in degrees; this also gives the seat cut of the rafters. It is now necessary to find the degree of the cuts for the upper ends of the rafters and to find the length of each rafter.

For finding the cuts for the upper ends of the rafters we again note that the two acute angles of a right triangle together are equal to 90 degrees (see Fig. 3).

For rafter 1 the lower angle is 40 degrees, the upper angle is $90 - 40 = 50$ degrees. Rafter 2 is the same as rafter 1.

For rafter 3 the lower angle is 27 degrees. If this rafter was framed to a ridge then the upper-cut would be a plumb cut and the angle would be $90 - 27 = 63$ degrees (see angle M in Fig. 3). The next step in the problem would be to find the degrees in angle P. This is the same as the upper cut for rafter 2, namely, $90 - 40 = 50$ degrees.

Angle N and P together make angle M, therefore angle N is $63 - 50 = 13$ degrees.

For finding the lengths of the rafters we again make use of a table giving the "Length per foot run" of rafters for various pitches (see Table No. 1).

The pitch for rafter 1 is 40 degrees.

The length per foot run for 40 degrees is 1.305 feet.

The run of rafter 1 is $7\frac{1}{2}$ feet, say 7.5 feet.

The length of rafter 1 is $1.305 \times 7.5 = 9.788$ feet or 9 feet $9\frac{7}{8}$ inches.

The pitch of rafter 3 is 27 degrees.

The length per foot run is 1.122 feet.

The run is 7 feet.

The length is $1.122 \times 7 = 7.854$ feet or 7 feet $10\frac{1}{4}$ inches.

The Figs. 4 and 5 show how the rafters are laid out. To mark the cut just set the protractor at the desired degree and place on board and mark.

The rafter No. 1 frames to a ridge, therefore we first make a mark at the point of the length of the rafter without a ridge and then slip the protractor back the thickness of one-half of the ridge. This distance is measured at right angles to the cut (see Fig. 4).

Trigonometric Principles Involved

The solutions given above are complete in themselves and do not need any explanation in higher mathematics. Those of our readers who are interested in learning more about

the trigonometry that may be used in roof framing may follow us in the following discussion. A complete and thorough understanding of the following, however, is not necessary for using degrees in roof framing.

The right triangle shown in Fig. 6 is lettered with the capital letters A, B and C for the angles and the lower case letters a, b and c for the sides of the triangle.

In trigonometry the relations of the different sides to each other is figured out and put up in table form. The tables give the relations for each degree of the angle A.

For example, for a 40 degree angle the side c divided by the side b is 1.305 feet. This is called the secant of angle A or just "secant A." There are six of these relations or functions as they are called.

$$\begin{array}{ll} \text{Sine} & A = \frac{a}{c} \\ \text{Cosine} & A = \frac{b}{c} \\ \text{Tangent} & A = \frac{a}{b} \end{array} \quad \begin{array}{ll} \text{Cotangent} & A = \frac{b}{a} \\ \text{Secant} & A = \frac{c}{b} \\ \text{Cosecant} & A = \frac{c}{a} \end{array}$$

We give a small table just to show how they are arranged. (See Table No. 2.)

There are two of these that are convenient for the rafter problems that we have studied so far. The first is the secant. This, as we note, is the side c divided by b.

$$\text{Secant } A = \frac{c}{b} \text{ or Side "c" } = b \times \text{Secant } A$$

Now, if we multiply the secant given by b we get the length of the side c. The secant, therefore, that we find in tables is the same as the length per foot run for rafters.

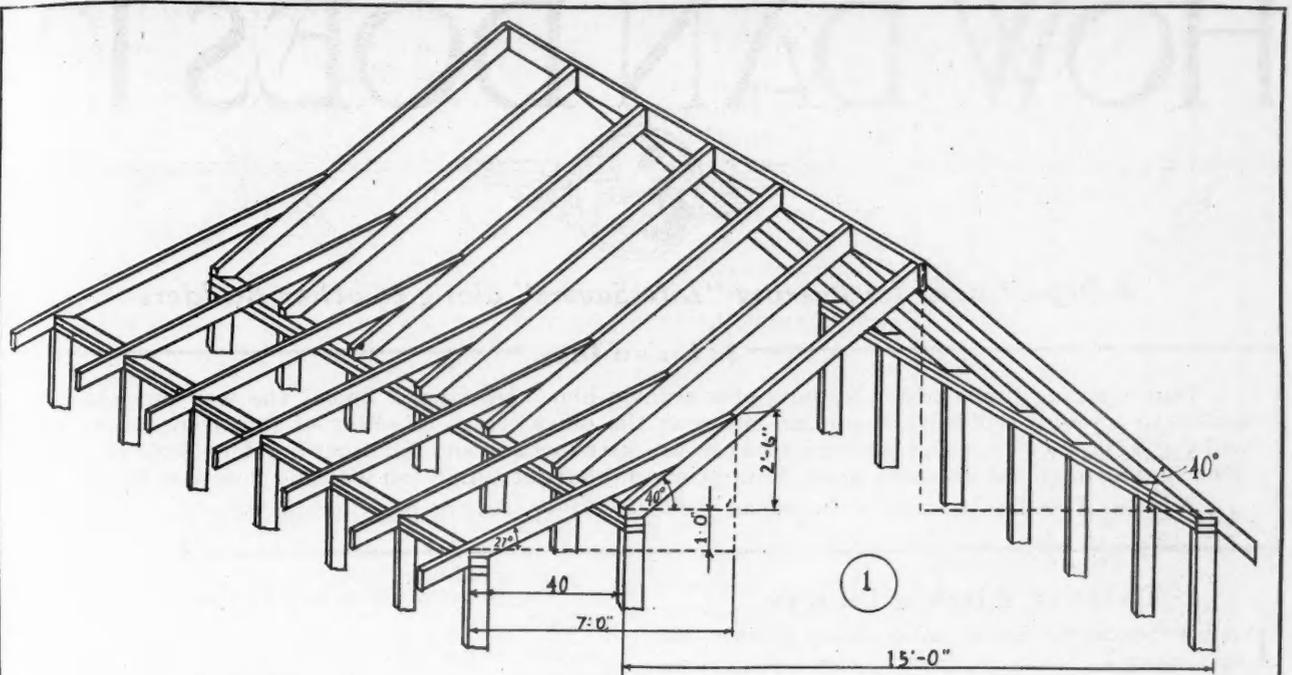
TABLE No. 1—LENGTH PER FOOT RUN AND RISE PER FOOT RUN GIVEN IN FEET AND FRACTIONS OF A FOOT

Pitch by Degrees	Length per Foot Run	Rise per Foot Run	Pitch by Degrees	Length per Foot Run	Rise per Foot Run
25	1.103	.466	35	1.221	.700
26	1.113	.488	36	1.236	.727
27	1.122	.510	37	1.252	.754
28	1.133	.532	38	1.269	.781
29	1.143	.554	39	1.287	.810
30	1.155	.577	40	1.305	.839
31	1.166	.601	41	1.325	.869
32	1.179	.625	42	1.346	.900
33	1.192	.649	43	1.367	.933
34	1.206	.675	44	1.390	.966

TABLE No. 2—SAMPLE TABLE OF TRIGONOMETRY FUNCTIONS

Degrees	Sine	Cosine	Tangent	Cotangent	Secant	Cosecant
25	.4226	.9063	.4663	2.1445	1.103	2.366
26	.4384	.8988	.4877	2.0503	1.113	2.281
27	.4540	.8910	.5095	1.9626	1.122	2.203
28	.4695	.8830	.5317	1.8807	1.133	2.130
29	.4848	.8746	.5543	1.8040	1.142	2.053
30	.5000	.8600	.5774	1.7321	1.155	2.000

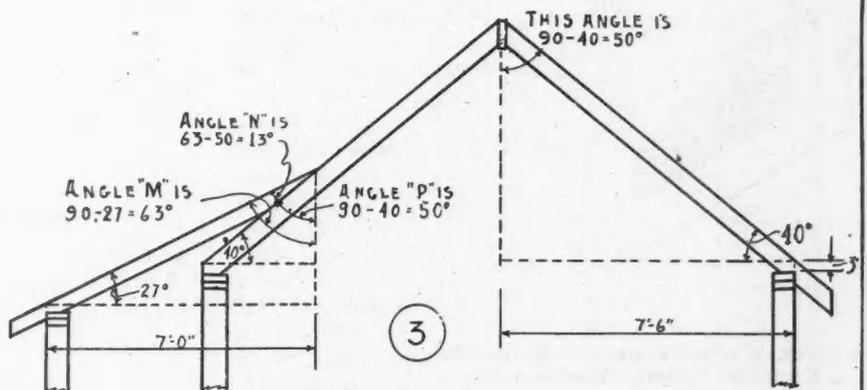
(Continued to page 146)



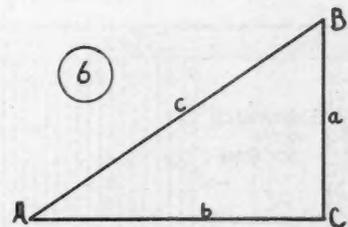
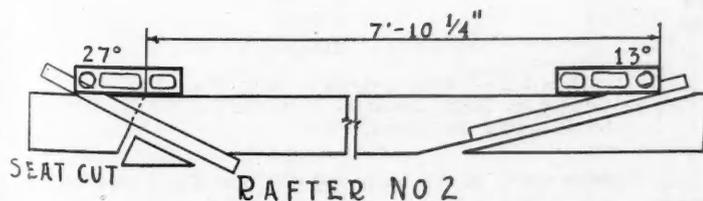
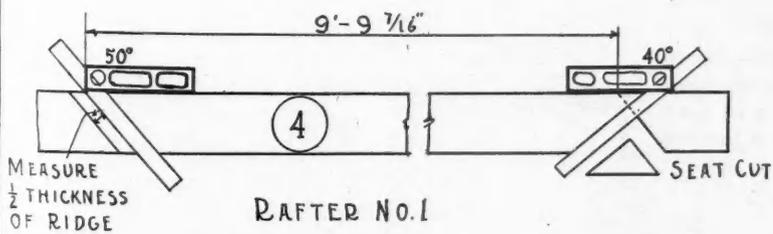
GABLE ROOF WITH SHED ADDITION



THE TWO ACUTE ANGLES OF A RIGHT TRIANGLE ARE TOGETHER EQUAL TO 90°



THIS SHOWS HOW THE ANGLES FOR THE CUTS ARE FOUND



Illustrating How a Shed Roof Problem Is Worked Out by the Method of Framing by Degrees.

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secant 2.366 2.281 2.203 2.130 2.063 2.000

HOW DAN DOES IT



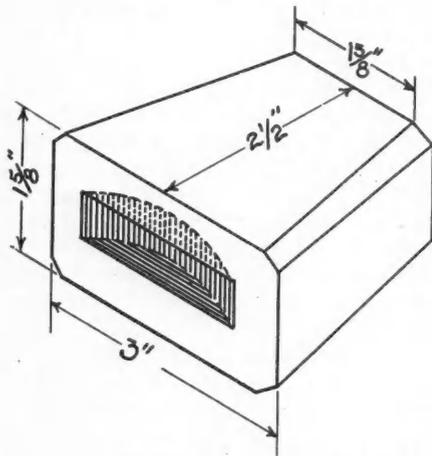
A Department for Passing "Life Savers" along to other Builders

\$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 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, 105 W. Adams St., Chicago, Ill.

To Drive Window Pulleys

THE accompanying sketch shows a block which I have been using for years to drive window pulleys home.



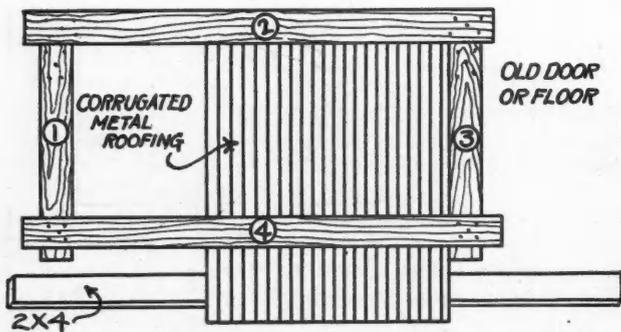
It is very easily made, but as I have never seen it described I thought I would send it in and see if it might not prove useful to others. The sketch shows just how this block is made. It is a single piece of wood. The dimensions shown give a handy size, but do not have to be exact. The end is hollowed

A Block of Wood Formed as Shown Here is Useful for Driving Window Pulleys. out to fit over the pulley.

S. J. BENNETT, Devine, Texas.

How to Bend Roofing Metal

HERE is an idea which may be worth passing along. In roofing several buildings last summer, with corrugated roofing, I noticed the men having difficulty in bending the tin on the edges and over hips, as on a gambrel



There Will Be No Difficulty in Bending Metal Roofing for Hips if Cleats Like This Are Used.

roof. An idea occurred to me which proved practical when tried out.

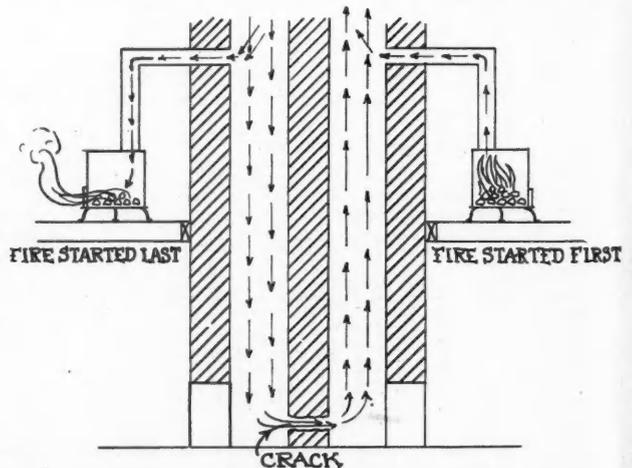
A cleat was nailed on the floor as shown in the sketch, the length of the cleat being determined by the length of eaves or the break of the hip. It must be made perfectly square. The material for the cleat can be ordinary one by four or one by six lumber. Cleats numbered 1, 2, and 3 are nailed flat on the floor and number 4 is nailed on top of 1 and 3 so that it can slide under it.

A piece of tin is slipped into place, taking pains to hold it square, and a piece of two by four is slipped underneath as shown. With a man on each end of the two by four it is a simple matter to bend the tin up as required.

PETER D. ZUBOY, Clayton, Wis.

Stopping a Down Draft

A HOUSE owner recently complained to me about poor draft in his stoves. After a little investigation I found the cause of the poor draft was a small crack between two



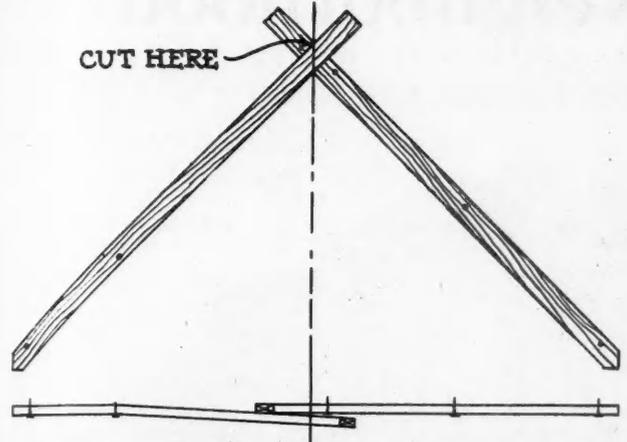
Down Drafts in Chimneys with Two Flues Are Often Caused by Such Cracks as This and Can Be Easily Stopped by Plugging the Crack.

flues down in the basement. When a fire was started in one of the stoves the air would be drawn down from the other flue and cause a down draft from the stove on the second flue. It was a simple matter to fill this crack and when filled both stoves had a satisfactory draft.

PAUL NESS, Fort Staunton, N. M.

To Cut a Gable Facing

THE sketch shows the way I cut the facing on a boxed in gable (the roof overlap). The job can be handled in this way by one man by fastening the boards at the



One Man Can Handle the Job of Cutting the Facing on a Boxed Gable by Using the Method Described Here.

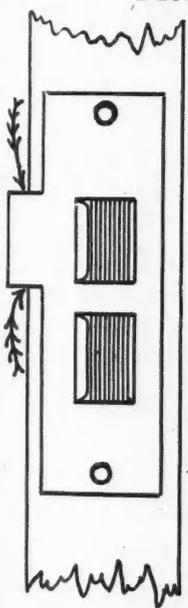
middle first. One board is then nailed at the top and bottom. The top board is next marked vertically at the top and both boards are cut at once. The undercut on the top board will make the facing fit together with a good tight joint.

PAUL NESS, Fort Staunton, N. M.

Fitting a Strike Plate

HERE is my method of applying a strike plate or keeper, after the lock has been mortised on the door. I simply slip the keeper over the latch, as shown in the sketch, and, with a pencil, mark on the lip of the keeper along the edge of the door as indicated by the arrows. Then with a knife I mark the height of the latch on the jamb and, by placing the keeper on the jamb with the line indicated by the arrows even with the edge of the door jamb and with the lip of the keeper centering over where the latch was marked, I can gain in and be assured of a neat fitting job.

F. M. DUNCAN, Liberty, Mo.

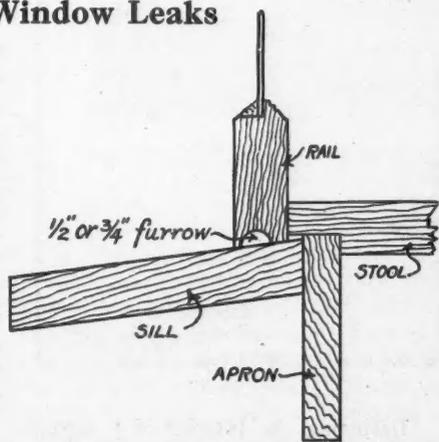


A Simple and Accurate Way of Fitting a Strike Plate.

After reading Mr. Gustafson's contribution on stopping window leaks, in the December issue, it occurred to me to send in another method which is, perhaps, better. Before setting or hanging the sash, take a plough plane equipped with a 1/2 or 3/4 inch blade and plough a furrow along the bottom from one side to the other. This forms a cavity which will check blowing rain before it gets even as far as the inside stool and thus protect the wood from the center of the sash to the inside.

JAMES F. FAIL.

105 Third Ave., Meridian, Miss.



A Groove Ploughed in the Bottom of a Window Sash Will Stop Rain Before It Gets to the Stool.

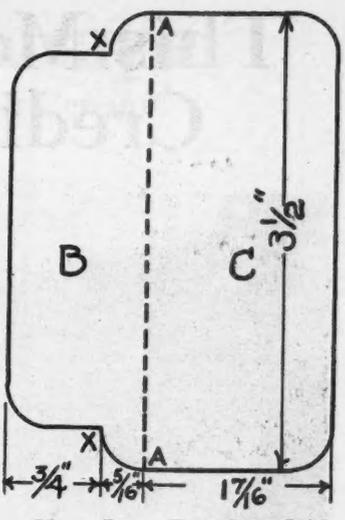
Handy for Casing Doors

THE sketch shows a template, in the flat before bending, which I find most useful in casing up doors. Take a piece of metal three inches by 2 1/2 inches and on one side notch both ends in 1/8 inch, back 3/4 inch from the side. Now bend along the line "A"-"A," at right angles.

By placing the inside of the side "C" on the inside of the door jamb and moving the template up and down with a pencil placed at "X," the proper reveal of 1/8 inch will be marked on the edge of the jamb. By placing the template over the casing with the notch on the side "B" underneath the head jamb, and marking on the top side of "C," which is over the casing, you get the proper length of the casing without any measuring.

If the template is accurately made, both casings will be exactly the same, which so often is not the case in using the old methods. This template can also be used in casing windows flush, by placing "C" inside the pulley stile, against the head, and marking on top.

F. M. DUNCAN, Liberty, Mo.



Here Is a Template Said To Be Useful in Casing Up Doors and Windows.

Protect the Plumb Against Wind

IT is not always easy to use a plumb bob in windy weather unless you equip yourselves with the device shown in the sketch. This is made from 1/2 by 4 inch ceiling in the form of a three-sided box. An arch is cut out at the bottom as shown and the center of the arch marked. The plumb is hung in the center of this side near the top. When the open side of the box is placed against the wall or stud the wind is shut out and does not affect the bob. The bob can be seen through the opening at the bottom.

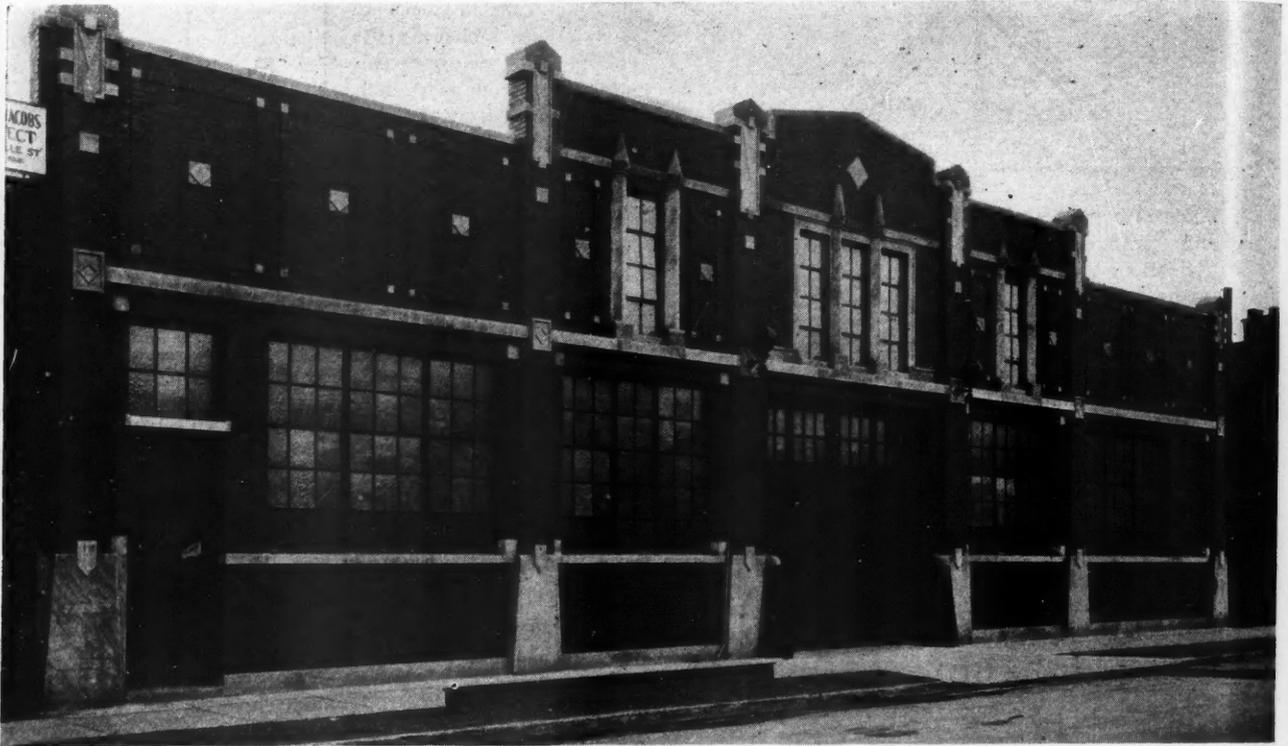
I. J. CRUMBINE, Route 4, Huntsville, Ala.



With the Plumb Bob Hung in a Box Like This the Wind Does Not Affect It.

The American Concrete Institute, 2970 W. Grand Blvd., Detroit, Mich., has published the following pamphlets: "A study of Chapter 11, Tentative Building Regulations for Reinforced Concrete," by Phil J. Markmann; "Testing Concrete for Absorption," by Fred Weigelt; and "Discussion—Design and Cost Data for 1928 Joint Standard Building Code," by H. M. Hadley and W. F. Way, with a rebuttal discussion by Arthur R. Lord. Price, 25 cents each.

This Modern Public Garage Is a Credit to Its Neighborhood

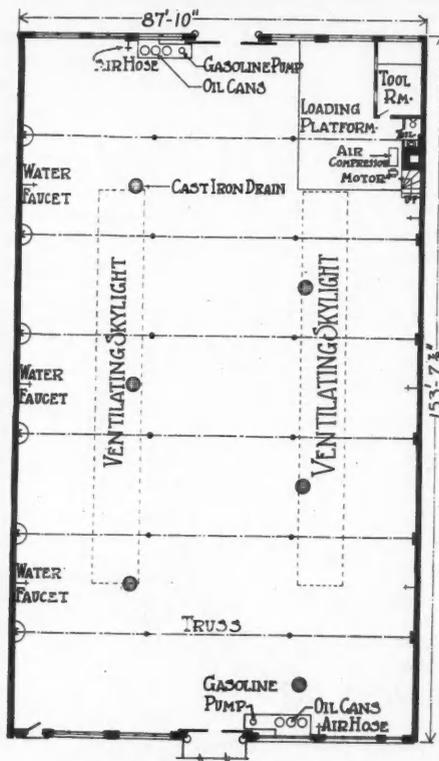


The Parkway Garage, in Chicago, Designed by Arthur Jacobs, Architect, Is a Fine Example of Artistic but Economical Treatment of the Moderate Sized Public Garage for a Residential Neighborhood.

AUTOMOBILES and more automobiles, every year the registration figures grow and with every increase in the number of cars on the road there is an increase in the demand for public garages. In the early days of public garage construction the buildings which sprang up were entirely utilitarian in character, but of late years there has been developed a new type of building.

Modern standards demand that industrial buildings of all kinds shall possess architectural qualities making them pleasing to the eye. Then, too, public garages have had to be placed in residential neighborhoods in order to serve their purpose and it has been necessary to so design them that they shall not detract from the value of other property in the neighborhood. The modern public garage is a credit to its neighborhood, designed to harmonize with the less strictly utilitarian structures about it.

To the casual observer there is nothing remarkable, perhaps, in the building pictured here. It is much like many other garages that he has seen since the automobile became a commonplace. However, this building stands for something definite and of real importance to everyone concerned with



Designing the Interior of a Garage Is Less of a Problem Than the Exterior but It Requires a Knowledge of Requirements of This Particular Type of Building.

buildings and we are all concerned with buildings, if not with their construction, then with their use.

This building is typical of the modern development in neighborhood garage buildings. In its design three factors have been reconciled, attractive appearance, utility and economy of construction. Here a problem, which frequently confronts the builder, has been solved exceedingly well. The credit for its solution goes to Arthur Jacobs, architect, of Chicago, who designed it.

Diffenbaugh Presents Park

J. D. DIFFENBAUGH, of the Diffenbaugh Lumber & Coal Co., Monmouth, Ill., has recently deeded a two-acre tract of land in Monmouth to the Monmouth Park Commission to be used as a park and recreation center. At the same time the Harmon Foundation of New York City, with which Mr. Diffenbaugh is associated, presented the commission \$1,000 to be used in improving and beautifying this addition to the park system. Improvement is to be started soon and it is expected that the park will be dedicated early this year. It will be known as the Diffenbaugh-Harmon Park.

Tpany. the other of its first six. Above ing, 40 of a shure. further in com designs. The l a groun ing rise at the n pted by affiliated space in ants. O a large of the rooms f the offic will have serve 1,1 equipme are to b. Anoth which th tenants, company medical This wil registere to any t during v. In the building, tectural a employed employes building fourteen tem of co perature In summ that even than that In the w Union Tr building, t the ultra-health-giv The arc Grylls, w When the officers of who actu great finan

Detroit's Newest Skyscraper

Union Trust Building Offers Unusual Equipment for Tenants and Their Employees

SMITH, HINCHMAN AND GRYLLES, Architects
DONALDSON AND MEIER, Consulting Architects

THE newest skyscraper to pierce the skyline of down-town Detroit is the new home of the Union Trust Company. The building stands out among all the others in the down-town district because of its unusual exterior construction. The first six stories are of tan Mancato stone. Above this rises the great mass of the building, 40 stories built of an orange color brick of a shade especially created for this structure. The warmth of color in the brick is further set off by decorative bands of tile in contrasting colors and in geometrical designs.

The building occupies an entire block and a ground site of 80 by 270 feet. The building rises to a height of 517 feet at the tower at the north end. Sixteen floors will be occupied by the Union Trust Company and its affiliated companies. The remainder of the space in the building will be leased to tenants. On the thirty-second floor there will be a large cafeteria for employes and tenants of the building, a group of private dining rooms for the officers, and lounge rooms for the officers and employes. The cafeteria will have an all-electric kitchen equipped to serve 1,150 meals per hour. All the kitchen equipment, the shelves, and the storeroom, are to be of stainless steel.

Another interesting feature of the service which the Union Trust building offers to its tenants, as well as to the employes of the company itself, is the use of a very complete medical dispensary located on the ninth floor. This will be under the supervision of two registered nurses. Its facilities are available to any tenant of the building at any time during which the dispensary is open.

In the construction of the Union Trust building, many unusual and distinctive architectural and engineering features have been employed to add either to the comfort of employes or to the efficient operation of the building itself. The windows of the first fourteen floors will never be opened. A system of conditioned air will maintain a temperature of 70 degrees summer and winter. In summer the air will be de-humidified so that even if the temperature were no lower than that of the outside air, the air would feel much cooler. In the windows of the tenth floor, which will house more Union Trust Company employes than any other floor in building, the panes will be of a special glass that will admit the ultra-violet rays of the sun which contain the most health-giving properties of sunlight.

The architects for the building are Smith, Hinchman and Grylles, with Donaldson and Meier as consulting architects. When the construction of the building was begun, the officers of the Union Trust Company felt that the men who actually worked with their hands to complete this great financial structure should receive some definite recog-



Architect's Perspective Showing How the New Union Trust Building, Detroit, Mich., Will Appear When Completed.

ation. Therefore, a program of awards for craftsmanship was instituted. A committee of awards was appointed consisting of five outstanding Detroit business and professional men and an award of \$100 was offered to the outstanding craftsman in each of the thirty-five trades to be employed in the construction of the building.

This program has received the whole-hearted interest and co-operation of every sub-contractor working on the building, of his men, and of the five busy men who constitute the committee of awards. Not only will the craftsmen receive the material recognition of their skill, but their names will be placed upon a bronze tablet in the lobby.

WHAT'S NEW ?



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Clothes Carrier for Closets

THE builder or architect who provides adequate closet space in his buildings will find them easier to sell and this can be done, without using too much floor space, by equipping each closet with clothing carriers which increase the capacity of the closet. The carrier illustrated can be fitted to any closet and does not require special construction, being adaptable to either right or left hand doors. It swings in or out of the closet into the room, keeping the clothes in order while permitting ready accessibility.



This Carrier Keeps the Clothes Orderly and Swings Out Into the Room Making Them Accessible.

With this type of carrier in use there is ample storage space in the closet for trunks and other bulky objects and they, too, are accessible without disturbing the clothing. There is no wasted space and everything in the closet is convenient. This same feature of access to the closet is found valuable for cleaning and the closet, if large enough, may also be used as a dressing closet.

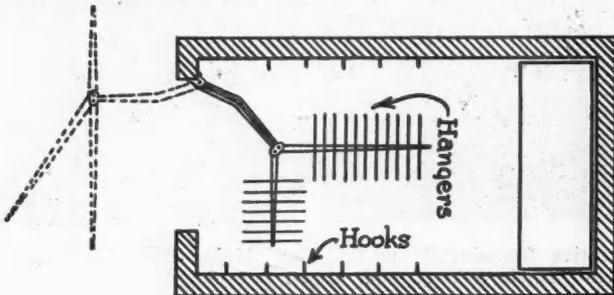


Diagram Showing How This Carrier, Which May Be Fitted to Any Closet, Swings in and Out Giving the Greatest Use for the Closet Space.

This carrier is furnished in a combination of standard arms which may be assembled to fit large or small, wide or narrow closets. It is economical both in first cost and in installation, as it is easily and quickly installed anywhere and is as suitable for old buildings as for new ones.

A New Type of Wood Bit

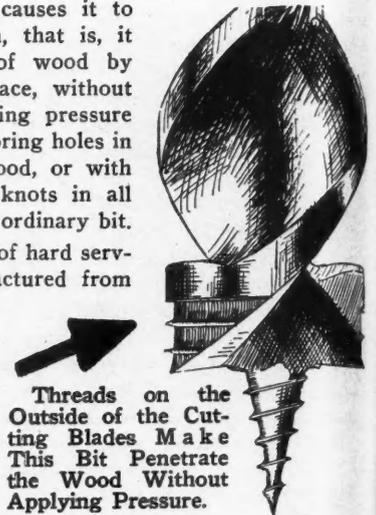
A RECENTLY patented bit, for boring holes in wood, is threaded on the outside of the front half of the

cutting blades. This causes it to make its own traction, that is, it penetrates any kind of wood by simply turning the brace, without the necessity of applying pressure as is necessary when boring holes in hard, green or wet wood, or with the grain or through knots in all kinds of wood with an ordinary bit.

To insure a long life of hard service, this bit is manufactured from one piece of high grade, Swedish tool steel, which is made extra tough by forging and oil treatment. It will even cut through nails, with so little effect upon it that what little damage is sometimes done to the blades can be remedied with a few strokes of a file.

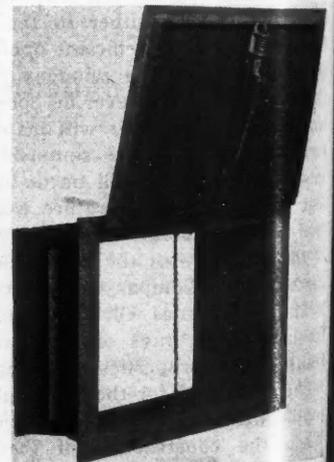
This bit will be especially convenient for carpenters and other mechanics who have holes to bore in inconvenient places where it is hard to apply the pressure required when using an ordinary bit. The bit is manufactured in sizes to bore holes from three-sixteenths to three inches in diameter, or larger by special order, and with any type of cutting head, round, acme or square, with any length of shank or any twist desired. With electric drills this bit relieves the strain on the thrust bearings, thus adding to the life of the drill.

The threads do not leave marks in the hole bored, as their diameter is less than that of the bit above.



Steel Coal Chutes

A WELL-KNOWN manufacturer of steel windows is offering the steel coal chute illustrated here. This chute is made in two sizes. The larger size, 32 by 22 by 14 inches, is suitable for stores and apartment buildings. The smaller size, 22 by 16 by 10 inches, is designed for installation in houses. Either chute may be had with a combination steel or glass door, as the doors are interchangeable. The glass panes or steel plates are held by patent clips which makes them easily and quickly removable.



These New Steel Coal Chutes Are Furnished With Either Glass Panes or Steel Plates Which Are Removable.

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New Electric Fixtures

THE accompanying illustrations show five new fixtures brought out by a well-known company. The first of these is a pull chain, brass receptacle which assures a quick and easy installation because each receptacle is equipped with an adjustable adapter. To install this, the base of the adapter, which is made with a 3/8-inch nipple, is pulled from the socket and screwed directly on the stud. The top of the adapter containing the socket is then attached to the



Five New and Improved Electric Fixtures. Above: Left, receptacle equipped with adjustable adapter; right, porcelain pull receptacle. Below: Left to right, porcelain cap for use with metal shades and reflectors, armored fixture socket, all metal base with stud cap and screw.

base section. By means of the adapter the socket can be instantly adjusted to accommodate the fixture.

A porcelain pull receptacle, rated at 250 watts, 250 volts, for 3 1/4-inch boxes is fitted with a reliable pull chain mechanism. It is easy to wire and install, is neat in appearance and sells at an attractive price. It is equipped with an 8-inch nickel finished chain containing an insulator and pendant and can also be supplied with a ring having a shade-holder groove and with a short chain and long cord.

The porcelain cap is used in connection with this company's single center screw, interchangeable line of porcelain sockets. It has a wrought iron nipple, tapped for 1/2-inch pipe and fitted with a 3/4-inch hexagonal, left-hand locknut, furnished in galvanized iron.

The fourth unit is a keyless, armored, fixture socket with lead wires which is provided with steel bars across the back which greatly facilitate the installation because it gives the person who does the installing something to take hold of. It is regularly supplied with No. 18 wire leads, but if necessary can be supplied with No. 14, rubber-covered wire.

The last item has been brought out as the result of a consistent demand. This item consists of two all metal bases, interchangeable with this company's entire line of brass shell sockets. These bases can be installed readily on any grounded system where they will give a permanently grounded installation that conforms to all Underwriters' requirements.

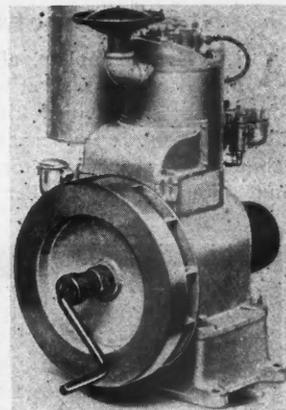


Automotive Type Engine

THE vertical, air cooled engine illustrated here was designed to meet an increasing demand for a motor built on automotive lines, but not too heavy in weight, with working parts substantial enough to give continuous service. Neat, compact, self-contained construction makes it readily applicable to portable units. It also meets the demand of stationary power users for a motor of the higher class design that can be installed on a water or light unit in a residence, dairy or power house,

wherever smooth, quiet operation, coupled with cleanliness is desired.

Many years of experience in the manufacture of governors has been applied to the provision of a governor on this engine. The governor is quick-acting, sensitive and will maintain a constant speed which is quickly changed by moving a speeder lever. The crankshaft is mounted in high grade, heavy duty, roller bearings to reduce friction and give smoother performance and is balanced with counter weights to reduce vibration to the minimum. The construction throughout is of the same high grade, assuring satisfactory operation and long life. This engine develops 1 1/2 horsepower at 1,200 revolutions.



Smooth, Quiet Operation Is the Outstanding Characteristic of this New Engine.



Complete Woodworking Shop

HERE is a complete, portable, woodworking shop. For the contractor to carry about for light work, as a supplementary item of shop equipment or for use as a home workshop by the man or boy who enjoys making things as a pastime it is adaptable to a multitude of uses and will be found speedy, dependable and accurate. It consists of a lathe, grinding and buffing head, circular saw table, jig and scroll saw, sanding disc and table all powered by a high grade electric motor. The units can be obtained separately in any combination.

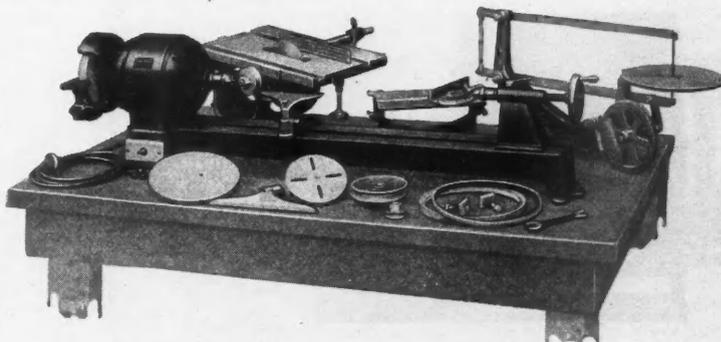
The 1/2 H.P. motor is mounted on a heavy cast iron bed. It operates on a 110 volt, alternating current from an ordinary light socket.

The lathe, which is strong and rigid, is fitted for turning both on centers and with face plate. The distance between centers is 25 inches and the swing over the bed is 8 inches.

The grinding and buffing head is provided with a grinding wheel of 6-inch diameter and 3/4-inch face and is mounted on the outer end of the motor shaft.

The circular saw table is 10 by 17 inches in size, of heavy cast iron, machined to a smooth true surface. It may be tilted and locked at any angle up to 45 degrees. The entire table may be raised and lowered on its base to regulate the depth of cut.

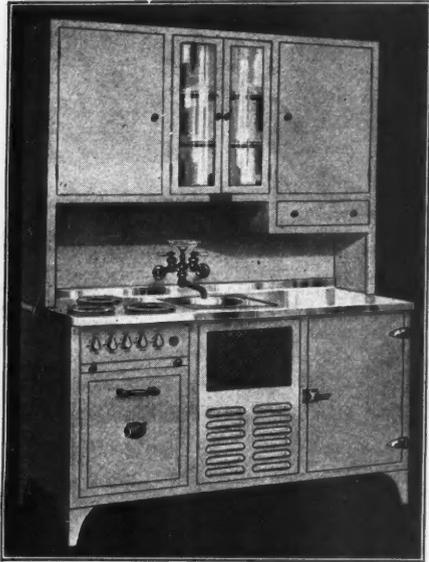
The jig saw has a 2-inch stroke and a throat depth of 19 inches, deep enough for almost any type of work. A 6-inch, pin-end saw blade is used and is adjustable to any tension. The table is 10 inches in diameter, is machined true and will tilt to any angle up to 45 degrees.



This Complete, Portable Woodworking Shop Can Be Used to Carry About for Light Work, as Supplementary Shop Equipment, or for the Home Workshop.

Steel Cabinet and Range Units

A LINE of complete, all steel units has recently been placed on the market which consists of several models comprising a combined kitchen cabinet and range. The illustration shows the largest model, which includes kitchen cabinet, electric refrigerator, range and sink, all in a single unit. Some of the smaller models include only the range and cabinet.



Complete Steel Units, Including Kitchen Cabinets, Ranges and Refrigerators, Have Been Placed on the Market.

both the oven and for the cooking top as well.

There is, in this line, such a wide variety of styles and combinations that the requirements of any builder, dealer or home owner can be met.

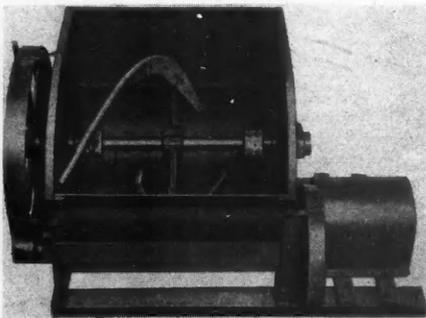


A Concrete Plant Mixer

THIS new mixer, especially designed for the concrete products plant, reveals important improvements that mean much in increased operating efficiency and in added life. It is generally the mixing plant that establishes the production rate of the block, brick and tile machines and contributes largely to the quality of the units made. In designing this machine, therefore, the engineers have concentrated on producing a simple, sturdy machine to mix concrete thoroughly and fast. No effort has been made, it is stated, to build a mixer to meet a price, but every effort has been made to build one which will be trouble-proof, efficient and long lived.

Experiments, both laboratory and field, have indicated

that a short, deep drum gives speedier, better mixing than a long shallow drum of the same capacity. In this mixer, as the capacities increase in the various sizes, the drum depth has been increased more, in proportion, than the drum length. The ma-



This Concrete Plant Mixer Has Been Designed with the Idea of Increasing the Capacity of the Plant.

chine is built in four sizes, 9 cubic feet, 14 cubic feet, 21 cubic feet and 42 cubic feet capacity.

The machine is low, compact and rigid. Care has been taken to give special strength where strains are greatest and provide protection where wear is heaviest. The drum heads are of semi-steel, cast integral with legs and bearings. The spiral blade is protected by renewable plates of a special alloy which is extra hard.

The operating mechanism of this mixer will outwear a great many ordinary, 1/4-inch, steel plate drums, it is claimed, but, as it is poor economy to operate a products plant mixer without a liner, replaceable liners are a good investment. Liners of either boiler plate or of the same, extra hard alloy used on the blades, can be furnished. The latter type carry a two-year, money-back guarantee. All sizes of this mixer may be equipped with pulleys for belt drive or may have motors direct connected. Direct motor drive may be through gears, high speed roller chain or a special rope, except on the 42-cubic foot size, which is gear equipped only.

Prompt, complete and clean discharge of the batch is important in any products plant mixer. This mixer has a large discharge door which swings on links. This is a patented construction that is both simple and rigid. It has proven to be the most efficient manner of hanging doors to close such large openings as are found on these drums, it is stated. A hand lever opens the door wide, instantly; the reverse motion closes it tight and it is kept closed by toggles.



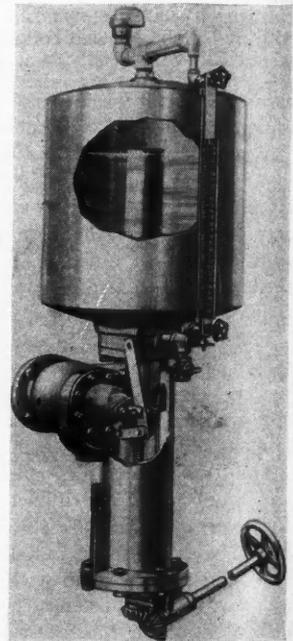
Accurate Measuring Tanks

THE constantly growing use of the water cement ratio for concrete work has been anticipated as in the use, by one well known company, on its 1928 model paver, of a radically different water measuring tank. The new tank, shown in the accompanying illustration, gives accuracy to the ounce, the manufacturers claim. The design follows the practice of manufacturers of pumps used in measuring liquids for sale, as in gasoline filling stations.

The claim is made that the accuracy of the tank is not affected with the paver operating on a side, or up or down hill slope. It is pointed out that slope has been the most prominent cause of inaccuracy in water tanks in the past.

Recent exhaustive tests on all makes of paver tanks, by the highway department of a state prominent in concrete road building, have indicated unusually fast emptying and have borne out the claims for accuracy unaffected by slope, it is stated.

The amount of water discharged is varied by raising or lowering a central pipe of large diameter. A convenient hand wheel on the operator's platform permits of regulation to the ounce. The tank and valve are self-cleaning and the regulating parts are non-rusting. The new tank has been furnished on this company's pavers shipped during the current year and excellent results in actual use are reported.



More Accurate Measuring of Water for Concrete Is Made Possible by This Tank, to Meet the Demands of the Water Cement Ratio.

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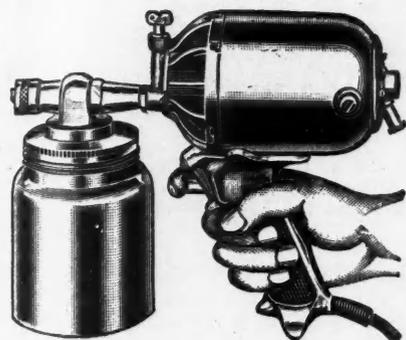


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Small, Efficient, Paint Spray Gun

HERE is a small, inexpensive, paint spray gun which enables anyone to do a good job of painting and which enables the experienced workman to do many painting and varnishing jobs quicker, cheaper and better than by the old hand brush method. It reaches the out-of-the-way corners no brush could ever reach. This outfit will handle varnishes, lacquers, shellacs, bronzes, liquid floor wax, insecticides and disinfectants and other reasonably thin liquids quickly, neatly and without waste of material.

It is equipped with a powerful universal motor, operating on AC or DC current, 25 to 60 cycles. All that is necessary is to plug it into any standard lighting circuit, snap the trigger and start the job, swing the gun back and



Here Is a Small, Paint Spray Gun Which Handles a Wide Variety of Materials and Work.

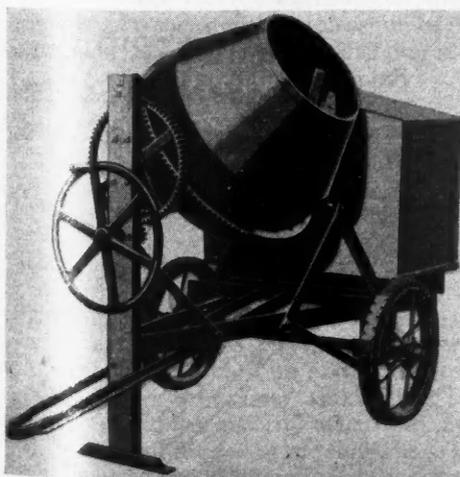
forth with one hand—the whole outfit weighs only 5½ pounds—until the surface is evenly covered and the job is done.

The motor driven air compressor develops a high pressure and fine performance. A new fan nozzle, with two extra interior nozzles provides three widths spray. A round spray nozzle, also furnished, is interchangeable with the fan spray. These various nozzles provide a range of swaths suitable for all purposes. Bronze bearings, with the latest improved type wick oilers, assure smooth running and long life. The cork insulated handle fits the hand perfectly and never lets the gun get too hot no matter how long it is used. The seamless, drawn aluminum container will never crack or leak. It holds a full quart and the opening is large and easy to clean. Two, handy sizes, one pint containers, in addition to the quart container, are furnished and 20 feet of rubber sheathed cord is included.



New Portable Tilting Mixer

A NEW tilting batch mixer, of 3½ cubic feet capacity, has been announced by a well known company whose



This New Tilting Mixer Is Being Put Out by a Company Formerly Making Drum Type Mixers Only.

concrete mixers have, heretofore, been confined to the drum type. This mixer has been carefully designed to fill the need of a contractor for an easily portable model of relatively small capacity. The drum bottom is a one-piece,

semi-steel casting to which is bolted a heavy, 6-inch steel band. The drum cone is riveted to this band. The six-inch middle section of the drum secured by this design, together with the shape, number and placement of the mixing paddles, produces a mixing action closely approximating that in this company's non-tilting, drum type mixers.

The drum shaft has a bearing area 20 inches long and revolves with the drum. In mixing position the thrust of the load and drum is taken up by a Timken thrust bearing high in the drum head, sealed from grit and water. Power supplied by a two h.p. engine is applied by malleable pintle chain drive to a sprocket on the main drive shaft. Easy portability is achieved by a perfect balance of the outfit and the coil spring mounting.



Light Efficient Floor Sander

IN ease of operation and smoothness of handling, a new floor surfer, illustrated here, is said to be an outstanding machine. It is built along the same lines as the successful, larger, heavy duty machine made by this company and is therefore sound in principle and design. Although it is of light weight, it is said that nothing is lost in cutting efficiency as the powerful, one horse, power motor drives the small diameter, high speed, drum at 2,200 R.P.M., surface speed. This combined with a maximum pressure of 95 pounds is sufficient for most work.

Speed combined with light weight is a combination highly desirable to contractors and with this machine, moving upstairs and down and from job to job is made easy. Outfit weighs only 142 pounds. Without the motor the weight is but 75 pounds, and the motor can be detached easily, or attached, by merely loosening or tightening four cap screws, taking about 10 minutes. The motor, when replaced, is aligned by means of a keyway which also is used to take up the slack in the drive belt. The small size of the machine makes it possible to move it about in your pleasure car instead of requiring a truck. The drum is only eight inches wide and this small size is said to be especially useful in sanding wavy or uneven floors as it is able to get into low spots. Being small in diameter and having high speed, it will cut rapidly and, the manufacturers claim, will cut abrasive cost at least 30 per cent, as there is less friction with the high speed. It is an especially suitable size for contractors, apartments, hotels, stores, etc.



Smooth and Easy Operation Are the Features of This Light Sander Built Along the Lines of a Well Known Heavy Duty Machine.

Shock absorbers or tension springs directly connected to the drum are responsible for producing an exceptionally smooth surface. As vibration causes chatter marks, these springs have been specially designed to eliminate vibration and assure a fine finish. The machine sands within ½ inch of the baseboard, which space can be covered by the quarter round. It also sands within three inches in the front.

Cabinet and Concealed Radiators

THE old fashioned steam radiator, because it is bulky and unsightly, has always limited the arrangement of furniture and interfered with the decorative treatment of rooms. The unsightliness was largely overcome by the development of artistic radiator covers, but the bulkiness, taking up valuable space, still remained.

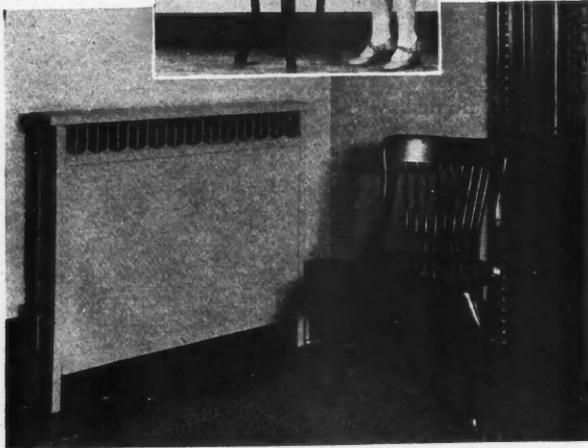
In the last few years a new method of heating has been developed that is designed to overcome all these objections to the old fashioned radiator, assuring perfect heat control and room beauty. A number of companies have brought out heating units of this type. The one illustrated here is adapted to either concealed or non-concealed installations. It represents a new development in room application of convection. No or other equipment for its installation used with any other, vapor or liquid system.

The visible one is an attractive piece of furniture. It is finished in the



new development in room heating by the principle of special furnace heating. It may be steam, hot water or vacuum heating.

type resembles a piece of furniture. It is finished in the



The New Type of Radiation, Described Here, Is Available for Both Concealed and Cabinet Installation.

same tones as the furniture or harmonizing with the scheme of decoration and avoids the appearance of a heating accessory. The concealed type, when installed, leaves visible only an artistic damper grille in the wall and a small opening at the baseboard. There is nothing to mar the beauty or symmetry of the room and no bulk to limit the arrangement of furniture and decorative treatment.

The source of heat in these units is a copper tube with a multiplicity of copper sheets attached so that they are an integral part of the tube. The unit is small and weighs about one-tenth as much as a bulky radiator. As the tube is warmed by hot water, steam or vapor, the heat is conducted into the copper sheets. Air passing the sheets absorbs the heat and carries it out into the room.

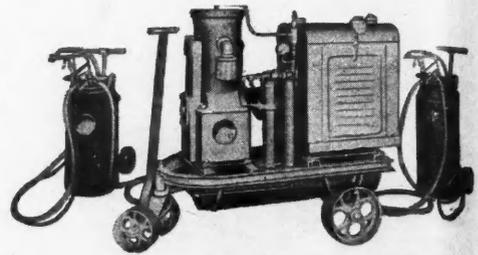
The cabinet of the visible heater and the stack of the concealed heater create a draft that draws in the cool air near the floor at the rate of 100 feet per minute. This air becomes lighter as it warms so that it rises in the cabinet or stack and passes out through the grille to circulate in the room. The entire air content of an average size room will pass through the heater in less than 10 minutes, it is stated, which is said to be the fastest method of heating ever devised. This rapidity of heat control is due to the high conductivity of the copper sheets which give an even and instantaneous radiation of warmth. As

the copper heating elements are immune to rust, these installations have a long life of perfect service.



Large Capacity Air Painting Unit

HERE is a new air painting unit designed to meet all requirements where four to eight high pressure air brushes, or eight to 15 low pressure air brushes are needed. The air compressor, of the hopper cooled, feather valve type, is one of the most efficient compressors on the market. The two cylinder, radiator cooled engine, of well known make, is equipped with cold rolled bearings and magneto ignition. It is the latest and most highly developed unit made by this manufacturer.



Here Is a Large Capacity Paint Spray Outfit Which Can Also Be Used for Heavy Materials and for Light Sand Blasting.

These two units are coupled together and synchronized so that they operate in perfect unison without any vibration. These units are mounted on reinforced angle iron chassis with four wheels or on skids, making them substantial and rigid. A standard A. S. M. E. air tank equalizes the pulsation and the water, oil and dirt separating unit gives dry, clean air.

This outfit can also be used for light sand blasting and, in conjunction with this company's larger capacity air brushes, for handling cement wash, asphaltum paints and other heavy materials. It is available in two sizes, a six H. P., mounted on wheels, and an eight H. P., mounted on skids.

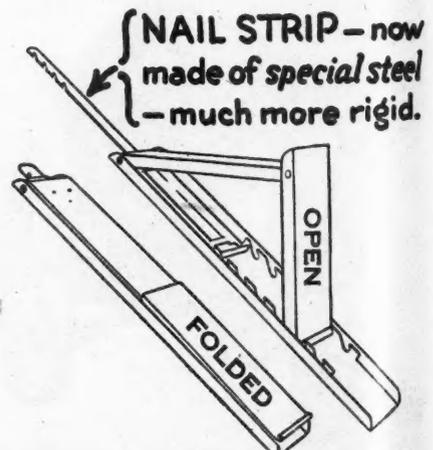


Roofing Brackets Improved

AN improvement has recently been announced in the well known line of roofing brackets illustrated here. These brackets are now being made with a nail strip—as indicated in the illustration—made of special steel which does away with all possibility of buckling while in use.

These brackets are made of heavy 16 and 18 gauge galvanized steel and all the die-cut, stamped parts are scientifically riveted together. Boards or planks up to 12 inches wide can be used on them and they are guaranteed to carry any weight the workmen may pile on them. Plank stops may be used with them which will retain a two by four, two by six or two by eight firmly against the roof.

They are adjustable to the pitch of the roof to afford a level plank scaffold on any roof. They have been found highly practical by both carpenters and roofers and are used in the application of slate, tile, asbestos, asphalt, metal and wood shingles, and roof sheathing.



This Well Known Roofing Bracket Has Been Improved by Making the Nailing Strip of a Special, More Rigid Steel.

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The value to you in
**“The friendly smile of color
 in a sink that’s friendly, too”**

In the homes you are building, or contemplate building, the kitchens will be the center of interest for every woman whose goodwill or disfavor will influence the sale. And what could more happily reflect the home’s inbuilt quality than this efficient-looking, colorful “Three 8’s” Sink, by “Standard”!

The housewife, these days, is looking to her “tools”. And she is measuring values by the facilities provided her. A light, cheerful kitchen is at the head of her list of essentials, and the sink comes next. Its size—height—efficiency—position—appearance, these she checks with the skill of an expert. And you may as well use *her* yardstick for your measurements, if an easy sale is to be desired.

She knows “Standard” sinks. The “Three 8’s” design is featured in her favorite magazines. She has indulged her fancy and reveled in the sunlight as it pours through the pictured broad low window under which this low-

back “Standard” sink fits snugly.—She has admirably approved of its stately proportions and its deep, roomy compartment. The new colors in which she has seen it portrayed—and displayed in “Standard” Showrooms—have won her sincere praise. Can you conceive that she will be easily satisfied with less?

“Standard”
 PLUMBING FIXTURES

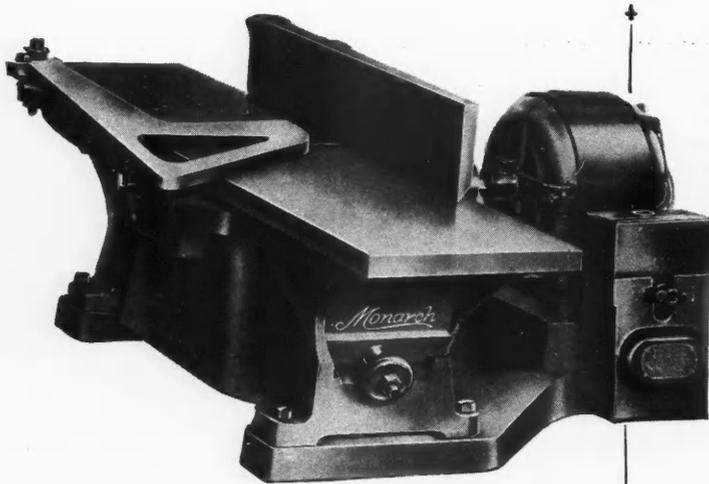
Add to these qualities the platinum-like sheen of tarnish-free Chromard Finish Fittings and—if desired—the enduring beauty of Acid-Resisting Enamel—impervious to spot or stain of fruit and vegetable acids; also, the convenience of the garbage container, matching the sink in color—add these, and you have a representative in the kitchen whose charm and persuasiveness no woman can effectively resist.

Visit a “Standard” Showroom. In no better way can you prove the stimulating influence on sales which “Standard” Plumbing Fixtures inevitably exert.

Standard Sanitary Mfg. Co. PITTSBURGH



INSURES QUALITY INCREASES QUANTITY



No. X-15—6" Bench Jointer. Strong, yet light, built for hard continuous industrial use. Arranged for direct motor drive or belt drive, and furnished with ball bearings, the best obtainable.

You want results

—and the safest, surest way is to buy machinery that's tested, tried and guaranteed to *get results*.

In every detail of their construction, Monarch machines are built for accuracy, speed and endurance. Alive with power and precision . . . equal to every need and emergency . . . they are your surest source of combining quality work with quantity work.

Monarch machines are well worthy of your immediate investigation. Further information as to their exclusive specifications and economical prices will be submitted upon request.

No. X-9—Bench Band Saw. 12" and 16" sizes. Solid wheel guard, completely enclosed, precluding all possibility of accidents. Motor built in. May be operated from lighting current or by belt from any kind of power. Handy—Adaptable—Sturdy.

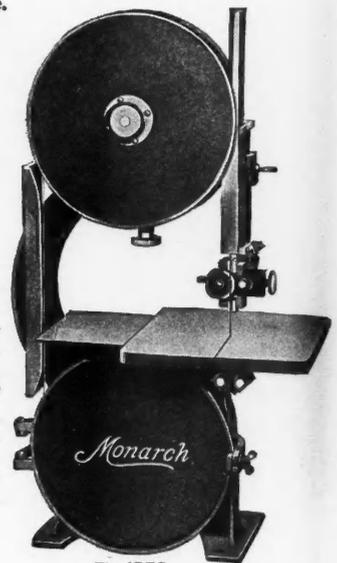
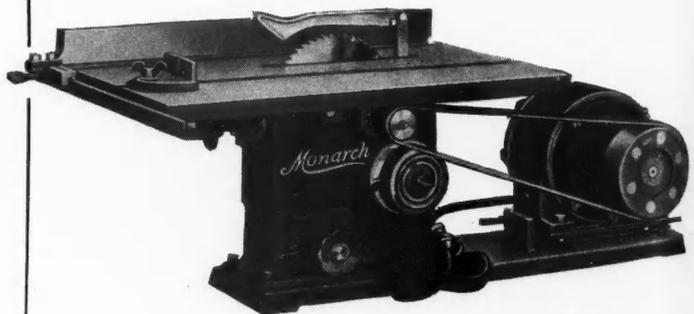


Fig. 1056



No. X-17—Bench Variety Saw. Not built to a price for occasional home use, but a thoroughly dependable industrial machine with highest grade machine work yet moderate price. Table tilts to any angle up to 45 degrees. Fully enclosed motor with fused switch.

American Saw Mill Machinery Co.

*Manufacturers of a complete line of
Woodworking and Saw Mill Machinery*

60 Main Street / Hackettstown, N. J.

It's the New

WONDER

3 1/2



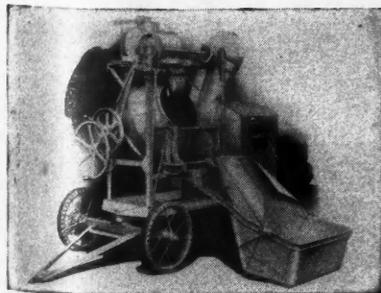
30% Faster

A Year Ahead of the Mixer Field

Money talks. We built this Wonder to put more money in your pockets. Built it to get from job to job quicker—to get set up quicker—to pour more concrete in an 8 hour day than any other 3 1/2-S ever produced. Now it's ready—and believe us "it's some job." A glutton for punishment, ruggedly built, yet light enough to move and place easily and quickly. Proven features—exclusive features—more 3 1/2-S for your money than ever before in the history of mixers.

All steel, arc welded. Enclosed and protected gears. Timken equipped. Spring hung chassis and roller bearing wheels. Diamond type roller chain. Wonder guaranteed drum bearing—and a lot more. Get the low down on this New Wonder 3 1/2-S before you buy.

It's built with loader and tank, too. Diamond Roller Chain Drive to overhead shaft. Wonderquick water tank—Improved skip—Simple clutch. New bulletin tells the whole story. Drop a line for your copy.



The New 3 1/2, With Loader.

CONSTRUCTION MACHINERY COMPANY
103 VINTON STREET, WATERLOO, IOWA

Makers of Wonder Tilting Mixers; Marsh-Capron Drum Type Mixers; C. M. C. Hoists
—Kern Hoists—Mechanical Hoeman Plaster Mixers—Power Sawyers.

FACTORIES AT WATERLOO AND CHICAGO HEIGHTS, ILL.

One Machine Makes All Cuts

A WELL-KNOWN manufacturer of woodworking machines has recently brought out a new machine incorporating a number of new features and improvements. It



This New Woodworking Machine Is the Culmination of 15 Years Specializing in the Design of Such Machines by a Well Known Company.

is an outgrowth of 15 years' specialization in this type of machinery and, it is stated, offers even greater advantages than former models. This machine, the manufacturers state, will speed up work, cut costs substantially and help to produce

greater profits.

The new model is a sturdily built and powerful machine with a cutting capacity up to six inches. It will rip, cross-cut, bevel rip, dado, plane, mortise, grind, rout and perform many other operations. In fact, it is said, practically every cut required in the building of a house can be made with it. It is described as being practically 12 machines in one. It is made in five different sizes to meet varying requirements.



Inexpensive Level and Transit



Leveling and Plumbing from the Same Set-Up Are Possible with This Instrument.

HERE is a complete but simple and inexpensive instrument for leveling and plumbing from the same set-up. It is a combination level and transit requiring no shifting or locking of the telescope. It is equipped with a clamp and tangent to the telescope and control level on the standard, the same as all high grade engineers' transits.

The telescope is brought exactly level,

instantly by a slight turn of the tangent screw, for all leveling purposes, such as establishing grades or obtaining difference in elevations, for drainage, tiling, etc. It is only necessary to release the telescope clamp screw to use the instrument as a transit in the vertical plane, for setting stakes exactly on the line, lining up studding, frames, posts, columns and walls, or running a line for fences, sidewalks, roads, etc.

Vertical angles can be read or laid off on the graduated vertical arc as the telescope may be clamped in any position. Horizontal angles can be laid off to either

right or left for squaring foundations, concrete forms, farm surveys, etc., and cross wires can be set exactly on the point to be sighted with tangent screws.

Equipment for this instrument includes a plumb bob, in a hardwood finished box; a hinged leg tripod; an eight foot graduated rod and metal target.



New Efficient Joint Nail

FOR fastening a wide range of joints the joint nail shown here is said to be a superior product. The side flanges have a double taper which assures maximum holding efficiency. As it is driven into the kerf it is continuously cutting into new fiber along its entire length and imbeds itself firmly and makes a strong rigid joint.

The curved, "V" shaped, knife edge extends below the taper portion, is easily entered into the kerf and aligns the joints before the nail is driven. During the driving process this edge corrects any irregularities in the kerfs. The straight web provides a solid support between the nail and kerf. A convex driving head is standard on these nails.



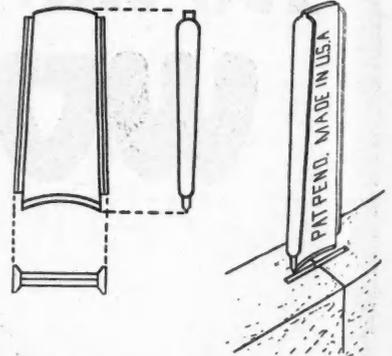
Complete Breakfast Nook Units

THIS equipment makes a complete breakfast nook possible in a single unit wherever there is a clear floor space of 45 by 52 inches. Because the bench seats fold compactly beneath the table this unit is easily portable and can be set down to produce a breakfast nook instantly. When both benches are folded, the unit occupies only 45 by 26 inches, leaving free working space on all sides.

With the general distribution of this unit there has come a demand for units seating just two people and for units seating six people, the manufacturers state. As a result, units seating two, four or six persons are now being produced. The added cost of the leaves, which provide for the seating of the fifth and sixth persons, is so small, it is said, that it makes this a desirable reserve feature for installations where only four seats are ordinarily required.



This Complete Breakfast Nook Unit Can Be Set Into a Breakfast Nook Anywhere and Is Then Ready for Instant Use.



Wide Flanges and Double Taper Give This Special Joint Nail Remarkable Holding Efficiency.

*Johns-Manville Shingles
Provide Roofs Suitable for Small Cottages
or Large Houses*

**A Colorful, Permanent Roof
Adds to the
SELLING VALUE of a Home**

THE builder for resale benefits by every use he makes of well known materials in building.

Johns-Manville Shingles—both Asbestos and Asphalt—are kept before the public by an advertising campaign that carries the story of Johns-Manville Shingles into twenty million American homes every month. Either variety of J-M Shingle will lend to your houses the selling help of a famous name.

Of course, Johns-Manville Asbestos Shingles are fire-proof and everlasting, and hence are the last word in roofing—especially for the better type of house. But do not overlook the importance of good asphalt shingles, where price is a consideration.

J-M Asphalt Shingles are offered in a new and wide variety of attractive colors. You cannot buy a better asphalt shingle at any price.

Our roofing engineers are available at all times to discuss and advise regarding proper roof specifications and color combinations, for single houses or for extensive developments where variety in roof treatment is essential.

Johns-Manville

ASBESTOS SHINGLES

ASPHALT SHINGLES — ROLL ROOFINGS



JOHNS-MANVILLE CORPORATION

New York Chicago Cleveland San Francisco Toronto
(Branches in all large cities)

Please send me full particulars about J-M Asbestos and Asphalt Shingles, both Asbestos and Asphalt.

Name.....

Address.....

R-3-2

Neat Cylinder Spring Latch

MODERN tastes are fastidious and the home builder is keenly aware of them and of the fact that he must keep up with advanced living standards in order to sell his houses in competition with other wide awake builders. With this in mind, a leading lock manufacturer has designed the new cylinder spring latch shown here, a fixture which will add to the desirability of the home.

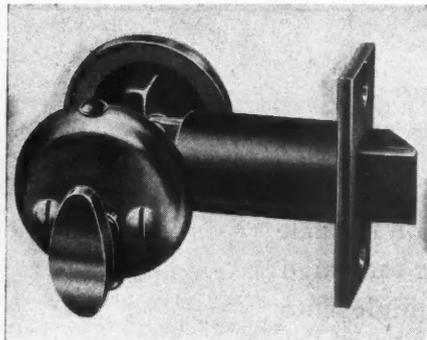
In this latch all working parts are concealed within the door, only the small, artistic escutcheon being visible on the inside and the beautifully finished cylinder head on the outside. It is installed without complicated mortising, adjusting or assembling. It is only necessary to drill two holes, slip the latch, draw up on two machine screws and fit the plate for the strike.

The latch fits any door $1\frac{3}{8}$ inches to $2\frac{1}{2}$ inches thick. It permits master keying and grand master keying. It can be reversed for either right or left hand doors by simply swiveling the latch unit with the hand.

It is operated by a key from the outside and by a neat metal turn from the inside. Operation is made more convenient by a handy slide catch for holding back the latch and by quick, snappy action secured by the use of compression springs throughout.

It is self-adjusting to door thickness, the adjustment being expedited and appearance enhanced by ornamental metal rings.

It is recommended only for doors in such places as the attic or store room where the presence of a cylinder lock is, of itself, sufficient protection. Where greater protection is required this company's dead bolt is recommended.



A Fixture Which Makes the House More Salable Is This New Cylinder Spring Latch.

New Electric Water Heater

THE new, instantaneous, electric water heater, shown in the illustration, provides an unlimited supply of hot water in three seconds, it is claimed. It requires no plumbing in addition to the cold water pipe. It is not a lamp socket device but one which is quickly installed by the plumber or electrician. The faucet handle operates the switch, hot water to the right, cold water to the left, water and current simultaneously cut off when the handle is upright.



Easy Installation Is a Feature of This Electric Water Heater.

This heater will heat water to any temperature desired. A small temperature control valve is provided on the side. Current is only used when hot water is actually being drawn. There are no delicate springs or parts, but rugged construction throughout. It has a plated finish and white porcelain handle. The water passes directly over the heating element which is threaded through 22 tubular passages, assuring instantaneous action. The heating element is non-corrosive.

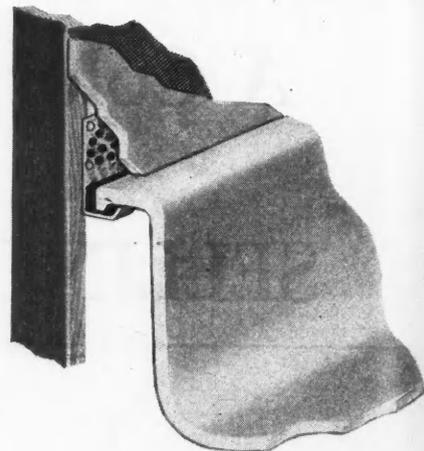
This heater is also furnished in four and 12 faucet types which are usually installed in the basement. The house

faucets turn current and water on and off in the multiple type system. No storage tanks nor boilers are required.



Bath Tub Hanger Prevents Leaks

THE accompanying illustration shows the installation of a bathtub hanger which, according to the guarantee of the manufacturers, absolutely prevents water seepage from around the edges of the tub and absolutely prevents the tub from settling, assuring that it will stay in the same position as when installed regardless of the settling of the building. It is easy to install and is low in price, especially so when one considers the cost of repairing and redecorating ruined ceilings resulting from leaky tubs.



When a Bathtub Is Installed with This Hanger, Cracks and Leaks Are Permanently Eliminated Regardless of Settling of the Building.

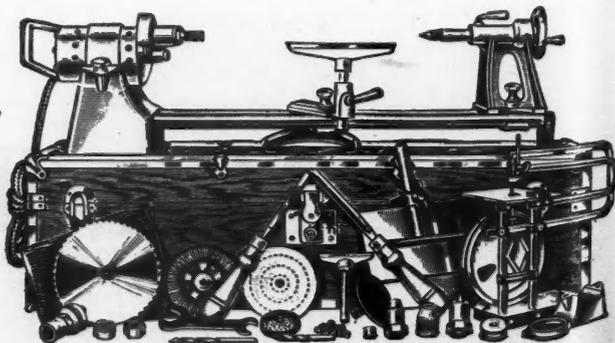
This hanger may be used with any type of built-in bathtub. It is a metal trough which acts as a water seal between any wall and the edges of a built-in tub or shower receptor and also between the front bottom flange of the tub or receptor and the floor. It is made of heavy gauge galvanized steel and consists of a trough or gutter, the upper part of which is perforated like metal lath to form a perfect base for plaster, cement, tiling or any other floor or wall covering. It is adjustable in length for tubs of different sizes. It weighs 20 pounds and is tested to support a weight of 3,000 pounds and over.



Complete Electric Tool Set

THE illustration shows a complete workshop suitable for installation in the small shop or home. The set, which is completely portable, consists of an electric drill, lathe, electric power tools, jig saw, band saw. The capacity of the lathe is 9 by 38 inches, the bench saw has depth and side gauges, scroll and jig saw and all accessories for both stationary and portable power drilling, buffing, grinding and cleaning.

The equipment attaches to any light socket and converts the work bench into a complete private tool and machine shop, it is stated. This set is sold on very easy time payments.



A Complete Electric Tool Set for the Home Workshop.

Andersen FRAMES

Keep Quality Up and Cost

Down!



Note these features of the Andersen Box Frame: Rabbet to receive a wind stop; extra heavy head jamb (1-3/4"); Andersen patented, noiseless and wear-proof pulleys.

1600 Andersen Frames were used in Forest Close, a Cord Meyer community development at Forest Hills, Long Island, consisting of 32 homes priced from \$16,100 to \$21,500.

A de luxe project such as Forest Close naturally called for materials of finest quality, and Robert Tappan, architect, met the requirements of both *quality* and *economy* by specifying Andersen Frames.

These stock frames have sills and casings of *genuine* white pine and noiseless, wear-proof pulleys.

There is a definite sales value to you in these nationally advertised quality frames. The Andersen trade mark die-stamped on every sill helps sell buildings because several million people, every month, read Andersen advertising in national publications.

Why not let the Andersen trade mark help build your business?



Why... Andersen FRAMES
add Sales Value

- (1) Patented, noiseless, long wearing Andersen pulleys used exclusively.
- (2) Genuine soft White Pine sills and casings — last a lifetime.
- (3) Patented, exclusive weather-tight features for home comfort.
- (4) Absolute accuracy of milling insures tight-fitting joints.
- (5) Dependable because guaranteed by a reliable manufacturer.
- (6) Andersen Trade Mark is on every frame.

For full details of Andersen Frames, see SWEET'S Architectural Catalog or Home Builder's Catalog.

An Inexpensive Dishwasher

FOR a large number of homes the old-fashioned method of washing dishes in a dishpan full of water which rapidly becomes dirty and greasy has disappeared completely, the dishwashing machine has done that. But there are still many homes where the dishwashing machine is unknown and many where its cost makes it prohibitive. Even these homes, however, may be freed from the drudgery of the old-fashioned dishpan by the installation of the little device pictured here.

This device can be easily and quickly attached to any kitchen faucet. To attach it, the part containing the set

screws is unscrewed from the device and its inner part loosened by turning with a wrench. The four set screws are then tightened against the faucet till secure. The wrench is then inserted in the bottom and turned till tight against the washer, making it leakproof. This part is left permanently on the faucet and provides the threads by which the device can be attached or removed in a moment, as desired.



A Thoroughly Efficient Dishwasher at a Price Which Places This Household Convenience Within the Reach of All.

removed in a moment, as desired.

The soap container is filled with any free flowing soap powder and in hard water districts water softener can be mixed with the soap. The pressure of water can be regulated as desired by a thumb screw, back of the soap container. With this device installed, even the dirtiest pots and pans can be thoroughly cleaned and every piece can be rinsed with the hottest water without danger of scalding the hands, eliminating dish wiping. The device swings out of the way when not in use or can be quickly removed and placed in a drawer. It is made completely rust-proof and there is no rubber hose to rot from hot water.



Improved Water Softeners

THE advantages of softened water are already too well known to require discussion and water softeners, for home installation, are an accepted piece of equipment. Now comes a softener which incorporates a number of improved features that make it both economical and efficient as well as adaptable to houses of all sizes. It features simplicity and ease of operation, together with generous capacity and durability.

The tank is galvanized inside and out and finished, on the outside, in durable, Duco finish, the standard color being an attractive battleship gray with ebony trimmings. An internal, self-measuring salting chamber is used and there are but two operating valves. The softening material used is doucil which is white in color and does not discolor the softened water.

The construction of this softener enables it to use rock salt for renewing the softening material, which is not only cheaper but easier to handle. Cleansing, salting and flush-

ing are all combined into one quick, easy operation.

All the tanks are of heavy rust-resisting steel, electrically welded. The operating parts are of steel, brass or bronze, the piping is galvanized and the full opening gate valves are of heavy brass.

This softener is offered in nine sizes, providing a range of capacity sufficient to meet the needs of any home, from the smallest bungalow to the largest mansion, regardless of the hardness of the water. Due to its design and flow control, it will operate perfectly on a wide range of water pressures and flow rates.



A Device Useful With Vise

THE accompanying illustration shows a device in use which is a valuable accessory for use with any standard vise and increases its efficiency to a surprising extent. It will, according to the manufacturers, add practically unlimited holding and gripping power to a vise, especially on jobs of eccentric shape or stock with very little gripping surface. This supporting device is quickly attached to the vise and can be just as quickly removed.

In a vise not equipped with this attachment, it is generally necessary to apply so great a pressure to an object with small gripping surface that it is damaged or marred. Such damage is eliminated when this attachment is used as it will hold the work firmly without crushing.

The attachment is a simple device which clamps to the vise jaws, being adjustable to the size of the jaws up to a size of 7¼ by two inches. It handles stock from ¼ inch to two inches in diameter and an attachment for handling stock larger than two inches can be furnished at a slight extra cost.

Only the best materials are used in its manufacture. The supporting yoke is of nickel steel, case hardened, making it impossible to distort its shape. The corrugated, adjustable clamps are selected, malleable iron castings, held by 5/16 inch bolts. The torsion springs are of the best piano wire.—RHYS. G. THACKWELL.



This Simple Device Can Be Attached to Any Vise for Holding Articles of Eccentric Shape or Small Gripping Surface Without Marring.



Simplicity and Ease of Operation, Together with Generous Capacity and Durability Feature This Water Softener.

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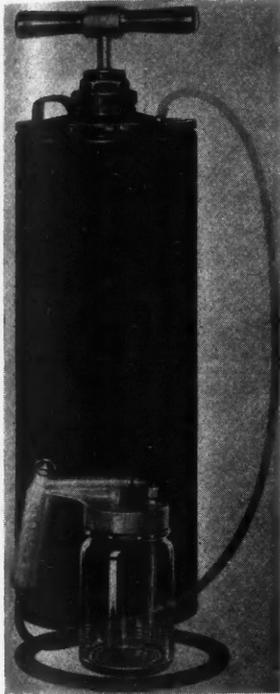
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Inexpensive Paint Spray Gun

THE increasing demand for a low-priced paint spraying outfit that would assure dependable efficiency and satisfaction in the hands of operators not especially trained, lead to the development of such a unit by one of the leading manufacturers of spray painting equipment. This outfit is carefully designed and built and, it is claimed, is as advanced in its field as this company's larger outfits are in their field.



Here Is a Low Priced Paint Spray Gun Which Will Give Dependable Service.

It successfully handles all the modern lacquers, as well as paints, varnishes, enamels, stains, shellacs and bronzes, and enables anyone to take advantage of the unlimited opportunities for decoration, preservation and renewal of household, store, office and factory equipment.

The combination hand-pump and air reservoir operates easily with one hand, storing up air pressure in the reservoir and providing a steady, uniform flow of air through the gun. The glass container for material is easily attached and detached. The gun is under perfect control at all times and, being simple and durable in construction, is quickly and easily cleaned. For convenience, various kinds and colors of material can be kept in extra glass containers, with covers, ready for instant use. This gun is so designed that ordinary pint size fruit jars with screw tops may be used for this purpose.



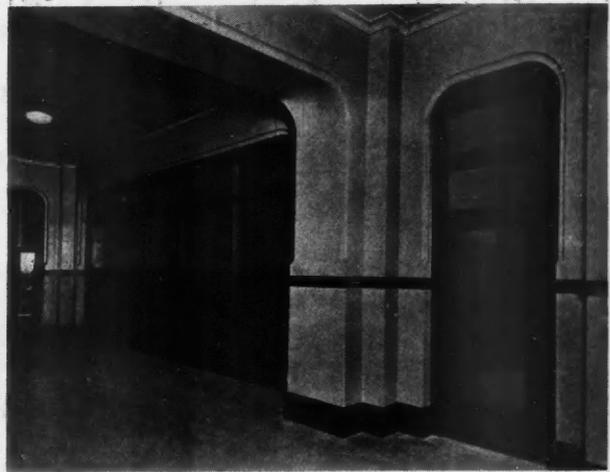
Insulated Steel Partitions

A COMPANY which has long been a leader in the manufacture of steel office equipment, bookcases, etc., has recently placed on the market a line of steel partitions suitable for use in offices, commercial buildings, schools, public buildings, institutions, and all similar construction. These partitions are made in sectional units that are adaptable to any space, door transom, wicket, grille, wall or ceiling requirements. They can be easily and quickly moved to meet changing conditions.

Three lines are included in these steel partitions. These are partitions of special artistic design for use in main corridors, exclusive offices, etc., a utility line of the same quality and construction, but simpler design for use where an economical partition of maximum service is required, and a steel railing line which harmonizes with either of the partition lines.

The partitions consist of a cornice with joints which are wedged and bolted, with concealed bolts, and with a dust cap which can be removed without tools. The dust cap prevents the accumulation of dirt and conceals the construction and wiring inside the cornice. The posts are of heavy channel iron held by heavy spacer channels at frequent intervals.

The chair rail extends from post to post at a standard height of 36 inches from the floor. The base is of heavy steel and its surface is continuous with the post cap and contains ample space for wiring and outlets. The base mould forms a continuous surface from wall to wall, exclu-



These Steel Partitions Permit Fine Architectural Effects and Are Insulated to Deadens the Offices' Noises.

sive of door openings and eliminates dirt retaining corners at the floor line.

The outstanding feature of the line is the panels which consist of a core of heavy, fiber insulating board to which is secured stretcher-leveled, steel sheets. This construction affords a degree of insulation against sound, prevents vibration and resists shock. Upper panels may be of either this type or of glass as desired.

These partitions are supplied in a standard olive green finish or in grained walnut or mahogany as desired. The manufacturers furnish a complete architectural and erection service.



Improved Lighting Equipment

THIS new type of carbide light, which will operate with either lump carbide or carbic cakes, has recently been placed on the market. This addition to a well-known line of equipment is designed to provide a light or welding generator, with extra gas storage space, which does not restrict the user to any particular kind of carbide.

The center of the carbide container is a cylinder which holds the carbic cakes and which is equipped with the proper facilities for taking care of the sludge. The outside of this container is filled with conical pockets for the reception of ordinary carbide.

In designing the new light, the same features which characterize this company's whole line of lights have been retained, such as the fact that the light cannot be overcharged; it can be recharged without changing the water; it has an automatic burner cleaner which cleans the burner while the light is burning, it has low operating cost (only 3 1/3 cents per hour for 8,000 candlepower, using ordinary carbide, it is stated).

The dual fuel principle is incorporated in single lights of 8,000 and 12,000 candlepower and in a duplex light of 16,000 candlepower. This same principle will be incorporated in lights of other capacities on order. This company's other lights will operate on either carbic cakes or ordinary carbide, but the new light or generator offers certain extra conveniences to those who have occasion to switch from one fuel to another.



This Carbide Light or Welding Generator Uses Either Ordinary Carbide or Carbic Cakes.

*New York Times · Saturday Evening Post · Buffalo News · Time · Good House-
 cer · Better Homes and Gardens · Building Developer · Portland Oregonian · La
 and Heating Engineering · Country Gentleman · Baltimore Sun · Domestic Engi-*

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AMERICAN RADIATOR COMPANY

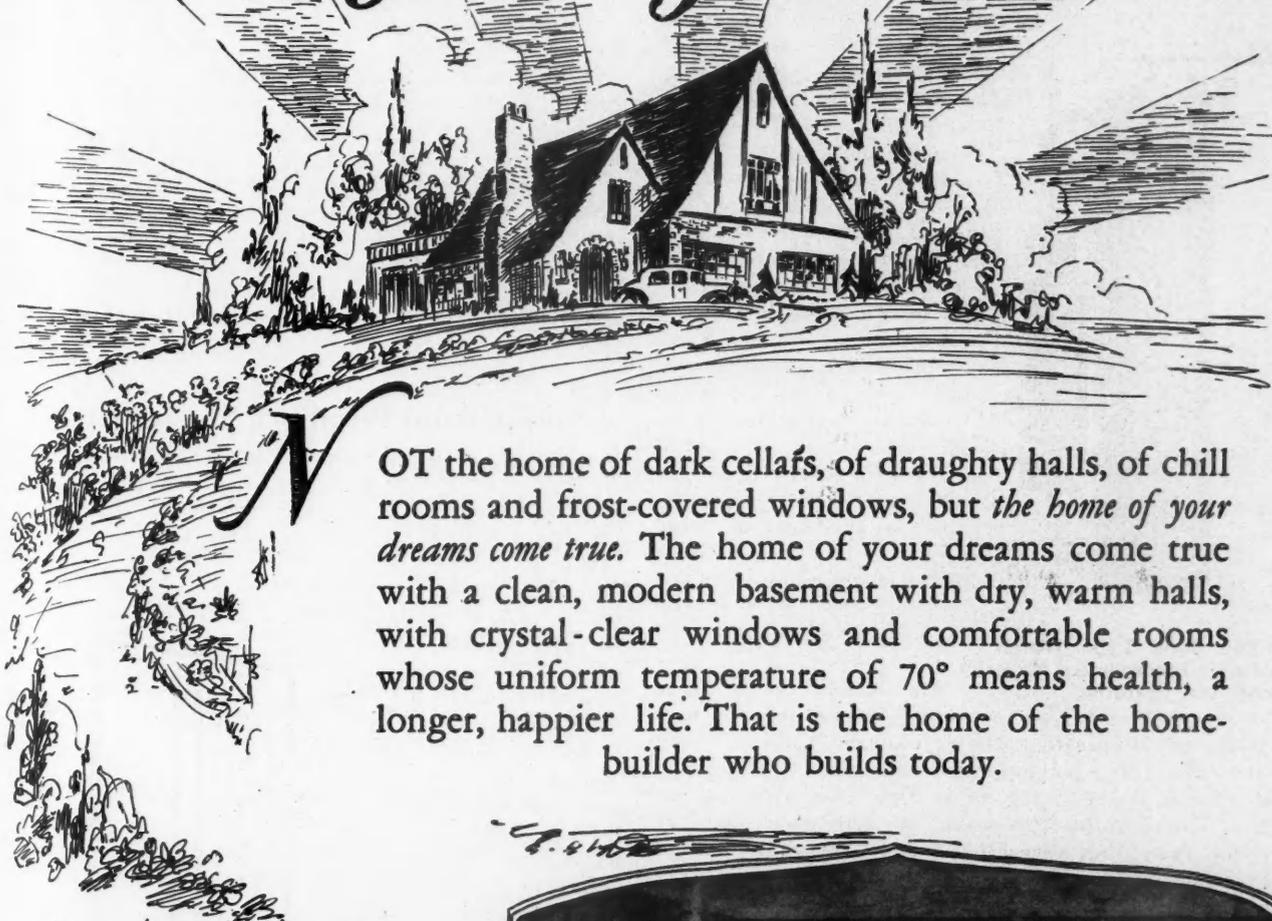
is publishing an endless chain of national advertising to bring the American people back to the idea of building new modern homes and equipping them throughout with modern appliances. This national campaign is appearing in monthly magazines, weekly magazines, daily newspapers and local journals for the public and for the trade. This national campaign will cost more than a million dollars. The American Radiator Company hopes that this campaign will help you to sell more modern equipment for home building and more of the heating equipment of the

AMERICAN RADIATOR COMPANY

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 rome Journal · Boston Post · Good Housekeeping · St. Louis Globe-Democrat ·
 Herald · Better Homes and Gardens · Saturday Evening Post · Building Inve
 ineering · Chicago Tribune · Milwaukee Journal · Portland Oregonian · Ladies*

The Home of Your Dreams Come True



NOT the home of dark cellars, of draughty halls, of chill rooms and frost-covered windows, but *the home of your dreams come true*. The home of your dreams come true with a clean, modern basement with dry, warm halls, with crystal-clear windows and comfortable rooms whose uniform temperature of 70° means health, a longer, happier life. That is the home of the home-builder who builds today.

The "American" Laundry Room -

The American Radiator Company accepts the undivided responsibility of supplying perfect and complete equipment for every heating need.



AMERICAN RADIATOR COMPANY

40 WEST 40TH STREET, NEW YORK
AND ALL PRINCIPAL CITIES

A New Water Softening System

AN announcement from a well-known company manufacturing water softeners, water systems and similar equipment, states that its engineers have developed an entirely new type of softening action and that, after many painstaking and continuous tests this type of softener has been perfected and placed on the market. It is also claimed that this softener is absolutely new, with higher efficiency than any softener formerly produced. The following nine features are listed in support of this claim:

- 1—Double circulation through minerals, in both softening and regenerating flow.
- 2—Positive agitation of mineral when regenerating.
- 3—Packing and channeling of mineral practically impossible.
- 4—Less salt required, because salt solution is circulated twice.
- 5—Greater capacity for the same amount of mineral.
- 6—Smaller tanks, yet greater capacity.
- 7—Softer water, because water is softened twice.
- 8—Greater flow rate.
- 9—More complete regeneration and thorough cleaning of mineral by unusual regenerative action.

This New Type Water Softener Incorporates Nine Improved Features.

The double circulation in both softening and regenerative flow permits greater capacity, yet smaller tanks. The salt water in the regenerating process is circulated twice through the mineral, thus reducing the amount of salt required. In the softening process the water is circulated through the mineral twice, thus assuring absolutely soft water. At the same time this unusual arrangement provides softer water at a greater flow rate; completely softened water is delivered at full city pressure.

In the regenerating action the positive agitation of the mineral prevents packing and channeling and thoroughly cleanses the mineral at each regeneration.

New General Purpose Sander



Small Enough to Be Operated in Closets or on Tables, but Large Enough for Big Contracts.

A NEW general purpose portable high-speed sander is illustrated here. This machine, which weighs 90 pounds, is small enough to be operated in closets, alcoves, on tables and counters, and is light enough for one man to carry complete in one hand, or in two parts of about equal weight. It is separated into two parts for carrying by unthreading two thumb-screws. However, owing to its high speed motor, it has ample power to take care of the big contracts at a real profit.

The aluminum case

serves as a motor case, suction system housing, surface roller container and, together with the aluminum gear case, encloses the driving gears. The outstanding characteristic of this machine, in addition to its lightness, is that the nine-inch long surface roller cuts up even with the baseboard on the one side and, by simply turning over the aluminum case on the supporting carriage so the surfacing roller is on the other side, it works up to the wall all around the room.

The aluminum suction fan operates at a working load speed of 5,500 R.P.M., taking up all dust. The machine occupies a floor space of 12½ inches by 25 inches, and its capacity is claimed to be 200 to 600 square feet per hour on oak flooring. The special high-speed motor is built in and develops ⅓ H.P. at a working load speed of 5,500 R.P.M. on 110 volts, operating on either direct or any cycle alternating current. The machine is equipped with roller pressure regulator. The working load speed of the surfacing roller is about 1,500 R.P.M.

This machine is also used as a bench sander, using the sanding unit only, with special equipment furnished with the machine.



Combination Windows for Ventilation

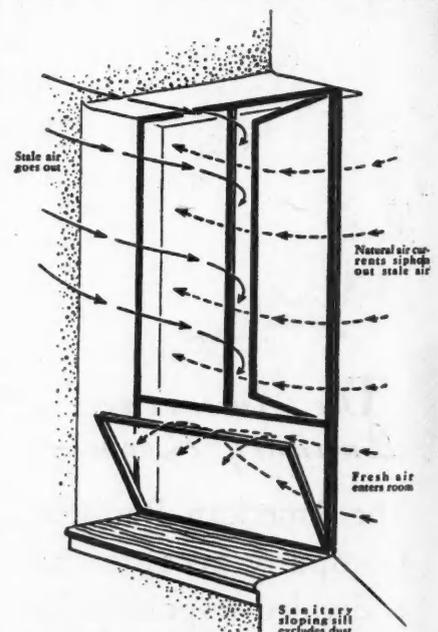
VENTILATING a room without cross-ventilation is often a difficult task, as the ordinary type of window does not provide for proper air circulation. To thoroughly ventilate a room, fresh air must enter as stale air escapes.

Many window designs to not permit both the entrance and exit of air through the same window. A new combination casement and projected window, recently placed on the market by a well-known manufacturer of steel windows, satisfactorily solves this ventilating problem, it is claimed.

The design of this new window provides two side-hinged, out-swinging ventilators below which is an in-at-the-top projected ventilator. The success of this window lies in the relation of the movable window panes to the air currents in the room and outdoors.

Opening the projected ventilator allows the entrance of fresh air without draft for the slope of the opened ventilator directs the air over the heads of the occupants of the room. When the side-hinged ventilator to the lee of the breeze is closed, and the ventilator to the windward is slightly opened, the passing breeze creates a suction which draws the stale air from the upper part of the room. Thus by the combination of planes a natural circulation of air may be provided.

This new combination window is made in 50 sizes and is fully described in a new catalog issued by the company and sent on request.



Here Is a Combination Window Which Provides Real, Complete Ventilation from One Opening.

Reid-Way
728 North
Cedar Ra
Centle
Reid-Way

Name.....

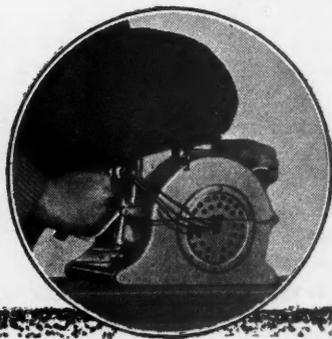
Address.....

ONLY The Reid-Way WHIRLWIND SANDER

HAS ALL THESE FEATURES
Check them ✓

1. Operates from a light socket.	
2. Weighs only 27½ lbs.	
3. Only one moving part (the sander drum) which is entirely enclosed.	
4. No driving mechanism to become noisy and wear out.	
5. Ball bearing rollers front and rear.	
6. Complete halfturn spiral application of sand paper.	
7. No gap in felt on sanding drum to pound flat.	
8. Sand paper speed a mile in two minutes.	
9. Operates exactly like a plane.	
10. Serves as a jointer or edger in the inverted position.	
11. Has exhaust fans on both ends of sander drum to force the dust into bag.	
12. Straight induction motor — no brushes to wear out.	
13. Motor runs on extra heavy ball bearings. Guaranteed for life of machine.	
14. Greater diversibility of operation.	
15. Works within ½" of base board on either side.	

The REID-WAY Co.
 728 North 16th Street
 Cedar Rapids, Iowa



Ball bearing guide rollers front and rear insure ease of handling and uniform cut. The Reid-Way is instantly convertible from floor surfacer to bench sander or jointer.

Reid-Way Company,
 728 North 16th Street,
 Cedar Rapids, Iowa.

Gentlemen: Please send me circular describing the new Reid-Way Whirlwind Sander.

Name.....

Address.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Complete Electric Fireplaces

NOW every home may have a fireplace, and without the expense of masonry work for flues and ash pits. All that is required is an electrical outlet in the wall, and the fireplace shown here is available for the living room, dining room or bed room. This fireplace comes as a complete unit, which can be set against the wall anywhere. It does not even have to be fastened to the wall unless desired.

The fireplace consists of three parts. The mantel is of wood of artistic design, selected for its beauty and to harmonize with any interior style or decoration. It is supplied in white, mahogany or walnut and quarter-sawed oak.



No Flues, Ashpit or Masonry Are Required to Install This Attractive, Electric, Fireplace Heater in Any Room of the House.

The panel facing for the mantel is of a mineral material, formed into a sheet, and presenting a remarkable imitation of marble. It may be had in either black and gold, verde antique or Italian cream.

The electric grate has a hammered frame and hood, which give the appearance of being the handiwork of the village blacksmith, yet are of modern design. Snapping the switch of this grate produces a realistic appearance of a flickering hard-coal fire. A second turn of the switch gives the steady heat of the electrical heating unit.

The heating element is almost indestructible, it is claimed. It will last for years and can be replaced, when necessary, at a small cost. The grate operates on the furnace principle of heating. Cold air is drawn up through the center and comes in contact with the heating element, passes through the hot chamber, of heavy cast-iron filled with heated fingers, and is then discharged through the lower channel under the hood. To protect the wall at the back there is another chamber formed of steel and covered with asbestos. Cold air from the floor passes through the front intake grills and is discharged through the upper channel under the hood, doubling the heat emitted. This keeps the open space behind the mantel cool and safe and the air in the room is kept in constant circulation.



Level and Transit—One Instrument

THE manufacturers of the level-transit illustrated here state that a single, original application of a time-tried and proven idea has worked wonders in the building of this new instrument and that such a host of improvements have been brought about in this new application of former sound ideas that the new instrument is really universal in its ability to accomplish, quickly and perfectly, all operations desired of either a level or a transit.

The single bronze standard frame is of such original design that the instrument can be instantly adjusted to any

type of level or transit work. Yet, by this sturdy bronze bridge, all the delicate parts, such as the spirit level and horizontal circle, are guarded safely and kept accurate.

When a change of position is desired, a pressure on the release levers will instantly disengage the telescope at both ends, permitting a tilt up to 45 degrees above and below the horizon line. The telescope cannot be dropped, nothing need be loosened or tightened, the accurate adjustment is not disturbed.

In changing its position, perfect optical and mechanical alignment of the telescope is assured by a three point support, respectively at the center and at the two extremes of standard bridge. This new, patented improvement has made possible a level and transit in one instrument with no inconvenience in changing positions because the change is instantaneous, with no possibility of injuring any parts because they are all protected and with assurance of accuracy.

The new instrument is finished in deep black, baked, weather-resisting finish with small parts and mountings in bright gold color. Wherever durability is especially important, all parts, such as clamps, screws, leveling plate are made of extra heavy metal.



Handy Bathroom Drawer

HERE is a handy drawer for the bathroom, one which will take care of all the small articles, shaving kit, tooth paste, ointments, shaving cream, shoe cleaning outfit, adhesive tape, dental floss, manicuring articles and countless other items which are so easily lost or misplaced or are constantly rolling off the medicine cabinet shelves into the lavatory or onto the floor.

This drawer is also made with a lock for the safe keeping of medicines, especially poisons. A drawer so equipped relieves parents of all worry over the possibility of children getting poisoned.

The drawer harmonizes with the bathroom decorations. It is finished in white enamel and has a clear glass knob mounted on the panel front. It is colored to match the standard white tile, but can be painted or lacquered, if desired, to match any color scheme. The drawer fits into a metal shell, which is permanently installed in the wall, forming a protective covering which makes it dustproof.

The draw itself is of heavy gauge metal. It is equipped with drawer stops so that it cannot be pulled out accidentally yet, by simply lifting it up, it is easily removed for cleaning. The white enamel finish, with sanitary corners, makes cleaning easy.

One or more drawers can be placed at various convenient locations in the walls or they can be placed in tiers, one above another, like a chest of drawers. They are simple to install in either tile or plastered walls.



A Convenient Drawer, Built Into the Bathroom Wall Takes Care of Miscellaneous Articles and Keeps Them Free of Dust.



Level and Transit Are Combined in This One Instrument for the Use of the Builder.

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las
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Front view

Back view

Mr. Builder, here's help to sell your homes! Mr. Contractor, here's extra business for you!

If you are a builder, Genasco Latite Shingles make it easier for you to sell your homes. You want to dispose of them quickly—you know that the use of nationally known products in their construction is a big help—and Genasco Latite Shingles with their attractive colors and distinctive shape make a roof of unusual beauty that appeals to home-buyers.

If you are a building contractor, you can get into a profitable all-year-around business by applying Genasco Latite Shingles. Besides new buildings to be roofed, consider all the buildings that need re-roofing. And Genasco Latite Shingles are particularly adapted for laying over old worn-out roofs—you can put them on all through the year because there is no exposing the interior of the buildings to the weather.

Whether you are a builder or a contractor, you know that the present-day tendency is for things colorful, and Genasco Latite Shingles are beautiful in their four unfading colors—red, green, blue-black, Mix-Tone. And besides having lasting beauty, they also possess exceptional durability.

In addition to being waterproof, weather-resistant, and fire-retardant, Genasco Latite Shingles give such lasting service because they are waterproofed with Trinidad Lake Asphalt—made from that won-

der of nature, Trinidad Lake Asphalt—and only Genasco Shingles are waterproofed with this material.

Genasco Latite Shingles are made of tough, long-fibred, asphalt-saturated rag felt which is coated on both sides with Trinidad Lake Asphalt Cement. This seals the saturant in the shingles and prevents it from drying out, thus insuring long service.

People everywhere are familiar with the merits of Genasco Latite Shingles through our national magazine advertising. Full pages in color reach the millions of readers of such publications as Better Homes and Gardens, House Beautiful, American Home, and House and Garden—and all inquiries are referred to our dealers.

Let us tell you all about Genasco Latite Shingles—how they help you sell your homes, if you are a builder—how they make it easy for you to get into the business of applying shingles, if you are a contractor. Send us the coupon—today!

The Barber Asphalt Company

Philadelphia

New York
Pittsburgh

St. Louis

Kansas City

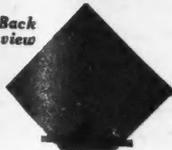
Chicago
San Francisco



Front view



Back view



The patented "key"—invisible on the completed roof—locks each Genasco Latite Shingle tightly to those underneath, and makes Genasco Latite particularly adapted for laying over worn-out shingles.

The turned-under corner holding the "key" makes a double-thick butt that adds distinction to a Genasco Latite roof.



More business for you

Genasco Latite Shingles used over siding or stucco add new and enduring beauty to old homes, and afford extra protection. You can also do this work and make money at it.

Genasco

Reg. U.S. Pat. Off.

Latite Shingles

The Barber Asphalt Company, Philadelphia AB 2

Please have your representative call and tell us about Genasco Latite Shingles.

Name.....

Address.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Six Drills Added to Line

ONE of the leading manufacturers of tools has announced six new electric drills which have recently been added to supplement its line. The new drills include a $\frac{3}{8}$ -inch heavy duty, $\frac{1}{2}$ -inch standard duty, $\frac{5}{8}$ -inch heavy duty, $\frac{3}{4}$ -inch standard duty, $\frac{1}{2}$ -inch heavy duty and $\frac{7}{8}$ -inch standard duty. The addition of these new sizes means that this line now includes all sizes from $\frac{1}{4}$ -inch standard



This Is One of Six New Drills That Have Been Added to Complete a Well Known Line.

duty to $\frac{7}{8}$ -inch standard duty.

The same distinctive features that characterize this company's other electric drills appear in the new sizes. A graceful, compact design reduces the weight of these drills to a minimum.

This smooth design eliminates projections which collect dirt and grease and reduces to a minimum the chance of breakage if the drill is accidentally dropped. The chuck key is held in a convenient holder in the gear housing.

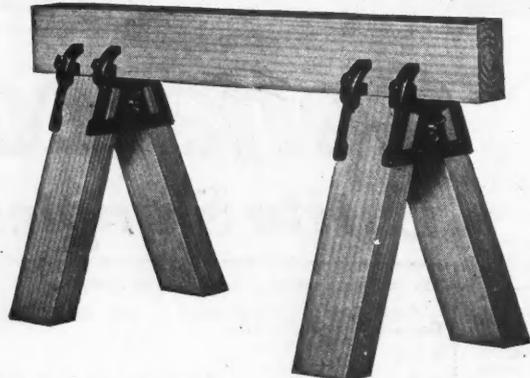
Severe tests have proved that these new drills have plenty of reserve power and will perform satisfactorily on production work within their rated capacity. A complete new catalog showing this full line of drills has been prepared by the manufacturer.



Brackets for Take-Down Horses

BUILDERS and contractors will be interested in this new device for assembling sturdy, durable sawhorses, a device which does away with the old-time wasteful method of cutting, notching, hammering and fitting. With this device, almost as quickly as one can saw a two-by-four, he can set up the horse. When the job is finished it is not necessary to chop up the sawhorses, or to take time to pull them apart for handling or to cart them away in their bulky form. It is only necessary to loosen the brackets, slip out the boards and save them for the next job, handling them in compact form. There is no waste of material or time, and the builder is permanently equipped for each job with sawhorses that are absolutely steady and that will not spread or collapse.

All that is necessary to make sawhorses with these brackets is to cut the wood to the desired lengths, insert the legs and cross-beam into the brackets, and tighten the bolts with a wrench or pliers to secure rigidity. No time is wasted boring holes, driving nails or cutting braces. A horse can be assembled with these brackets in three



A Device for Assembling and Taking Down Sawhorses Which Saves Lumber, Hauling and Storage.

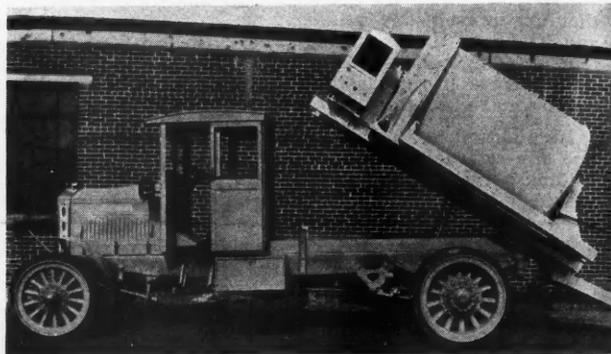
minutes, it is stated, and taken apart in even less time.

The brackets come in two sizes—one size for a two-inch top cross-piece, another for a six-inch top cross-piece.



Mixed Concrete Delivery Truck

WITH the introduction of the use of ready mixed concrete, the problem of transportation over long distances, without segregation of the concrete, became a serious one. The special truck shown here was developed for the purpose of solving this problem and has done so with marked success. Analysis by the Testing Laboratories of Columbia University showed that "no reduction in strength resulted by reason of transporting the concrete for the periods indicated," which varied from four minutes to two hours and 30 minutes. One of the largest companies supplying ready mixed concrete has reported that "concrete poured from this body even after a haul of 30 miles, covering a period of three hours, came out of the body in the same condition as when it left the mixer."



With This Rotating, Cylindrical, Truck Body, Mixed Concrete Can Be Hauled Long Distances Without Any Segregation or Ill Effect.

The body itself consists of a cylindrical steel tank, the inside walls and ends of which are entirely free of any flights, supporting shafts, paddles or obstructions of any kind. After loading the tank, it is sealed and slowly revolved until ready to discharge. This rolling action eliminates all segregation and causes more complete hydration, it is stated, thus putting the batch on the job in a more completely mixed consistency than when it was discharged from the mixer.

The tank is supported at each end by large trunnion shafts revolving in heavy duty, self-aligning, roller bearings, and is revolved by a cut steel pinion engaging with a gear attached to the outer circumference of the tank at the front end. Power for revolving the tank is furnished by a separate, eight H.P. motor operated at predetermined speed so that it is entirely independent of truck operation.

The complete structure rests on heavily reinforced, six-inch "I" beams to which are fastened the hinges and hoist connections. The complete unit can be mounted or dismounted in 10 minutes and can be used on any standard chassis equipped with an under-body hydraulic hoist, as well as on the truck supplied by this manufacturer.

The top or filler door of the tank is large enough to take the full charge of a three-yard mixer without spilling. This door is sealed by a perfect latching device that is not only moisture-proof but also instantaneous in action. The discharge gate, at the rear, opens quickly by means of a 30-inch ratchet extension handle, to a full opening of 10 by 23 inches. There are no obstacles to clean discharge and there is no residue left in the tank to solidify. This company is at present making a three cubic yard outfit which can be equipped with either solid or dual pneumatic tires, and a $1\frac{1}{2}$ cubic yard outfit for lighter, faster deliveries, on which dual pneumatic tires are standard equipment.

You can cut easier with the new and lighter Disston Saws

GO to the hardware store and see the *new* Disston Hand Saws. How *light* they are!

Less weight to push. Less work for you. Easier cutting. Faster cutting. Truer running.

Blades thinner, yet stiff, the goal of saw makers for centuries, first achieved by Disston.

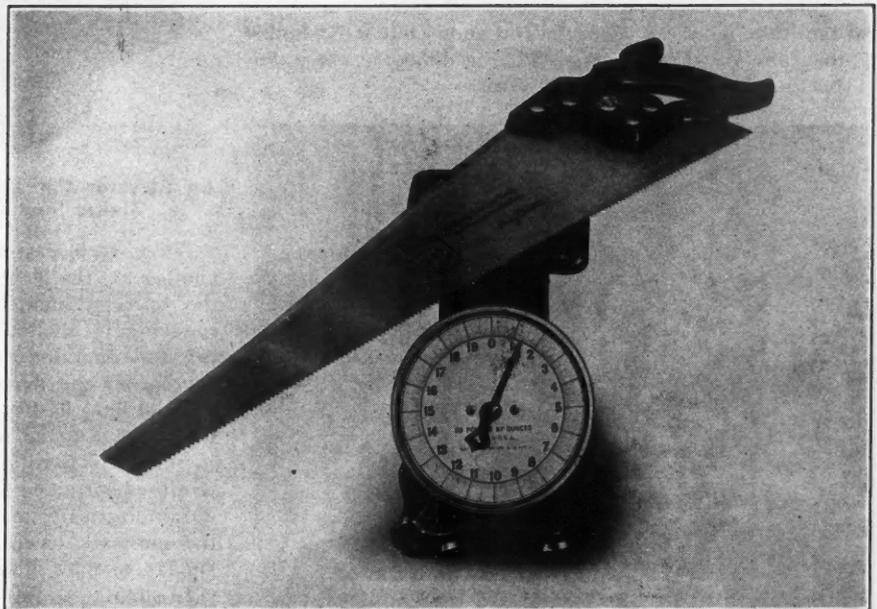
Made possible only by Disston Steel.

And you know this: *The thinner a blade is, if it is stiff, the better it cuts and the easier it is to use.*

Never until now could you get blades so thin, so stiff, so light.

All your favorite patterns, every one greatly improved. Eight regular pattern (standard width) saws and seven lightweight (ship) pattern saws each finer in every way than ever a hand saw was made before.

Realize *how much* finer. Take one in your hand.



The new Disston D-8 Lightweight Saw weighs 1 lb. 7 oz. in 26-in. length. The new Disston Regular Pattern (standard width) D-8 Saw, also made lighter, now weighs 1 lb. 10½ oz.

Get the "feel" of the lighter blade . . . Note the thinness at the back.

See the taper of the blade, achieved by Disston True-Taper Grinding, which removes all unnecessary weight without making the saw limber.

Six Advantages of the
ENTIRELY NEW DISSTON HAND SAWS

- 1—Lighter Blades
—for easier cutting
- 2—Narrower Blades
—save strength
- 3—True-Taper Grind
—for faster cutting
- 4—Thin, yet Stiff
—for true running
- 5—New Handles
—give better balance
- 6—Disston Steel
—stays sharp longer

The new Disston Hand Saws will run with less set . . . cut faster . . . cut easier . . . stay sharp longer, than any other hand saws ever made. They have better clearance, better balance, better steel, better temper, and will give you better service.

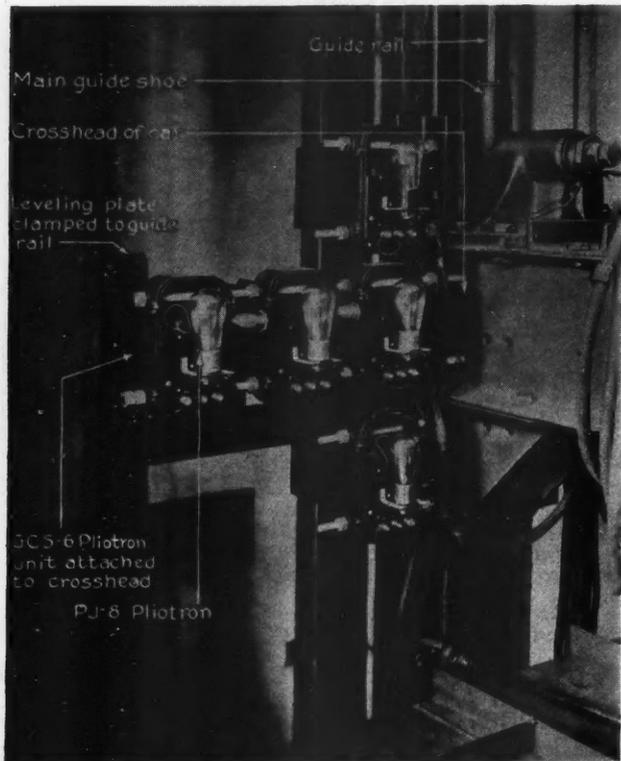
HENRY DISSTON & SONS, INC.
Philadelphia, U. S. A.
Canadian Factory: Toronto

DISSTON

"THE SAW MOST CARPENTERS USE"

Vacuum Tube Used in Automatic Elevator Control

A NEW system of elevator control, by means of which elevators are automatically brought to the correct floor level, has recently been announced. This method, described as being unusually simple in operation and involving but few extra parts, involves the use of a three-element vacuum tube similar to those used in radio sets. The vacuum tube is known as a pliotron and, while it is similar to the common radio vacuum tube, it differs in the value of operating voltages which are used.

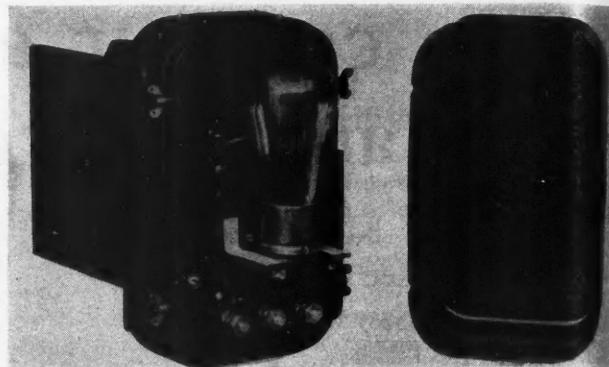


Here Is an Installation of the New Pliotron Units and Pliotron Tubes Mounted on Top of an Elevator Car for Use with Preregistering Elevator Control.

The use of the pliotron in the automatic leveling of elevator cars is based on the characteristic increase of plate current when the tube changes from an oscillating to a non-oscillating condition. A suitable number of tubes are mounted on each elevator car and these tubes are normally in oscillation. By an arrangement of coils and vanes the motion of the car, as it approaches a floor level is made to stop the oscillation of the tubes, thus actuating relays. The relays govern control circuits which slow up the car and stop it at the correct position. The new method controls the car when running in either direction.

In operation, the elevator operator throws his car switch to the "Off" position as he approaches the floor at which it is desired to stop. On nearing the floor the relays are actuated by a combination of the coils and vanes, thus slowing the car up and bringing it to a stop at the floor level without any attention or work on the part of the operator. After discharging or receiving passengers, the car is started in the usual manner and operation is continued as before.

Another application of the pliotron tube to elevator operation makes it unnecessary for the operator to watch his position in the hatchway. Devices similar to those used in automatic leveling are employed and, in addition, a signaling equipment consisting of suitable push buttons, light and a bell is used.



An Elevator Car Leveling Unit of the New Type Which Makes Possible Accurate, Automatic Control.

When each passenger enters the car he calls out the number of the floor at which he wishes to get off and the operator immediately presses a push button corresponding to this floor. When all passengers are in the car the operator starts by the usual method. As he approaches the first floor at which a stop is to be made, a signal light flashes and a bell rings, notifying the operator that stop is to be made. He then throws the car switch to the "Off" position and the car continues at full speed to a predetermined point in the hatchway where it is slowed up automatically and brought level with the next floor by the automatic leveling devices. Operation is continued in a similar manner until the trip is completed.

In addition to this arrangement, push buttons are installed on each floor. A passenger waiting for a car presses a button which lights a signal and rings a bell in the first car approaching in the direction in which the passenger wishes to travel. A corridor lantern also lights.



Spring Hinge Is Adjustable

THE gate, spring, pivot hinge shown here will carry even a wide heavy gate without sag, it is stated. The gate operates on ball bearings and the weight is not carried by the spring, therefore, as light a tension as desired may be applied. The tension is easily adjusted after the gate has been hung. This feature is characteristic of this hinge and is essential to facilitate properly adapting the hinge to conditions.

The spring is made of the best tempered steel, flat wire and is large enough for heavy duty conditions. The adjustable tension makes it equally suited to light doors. The application is extremely simple and if desired all fittings may be applied to the surface of the gate and post without mortising. This is very desirable for metal gates. If preferred the attaching plates may be mortised into the post, thereby reducing the space between the edge of the gate and the post.

An adjustable pintle, with locking device, permits setting the door to remain at rest in any desired position. The top socket is provided with ball bearings, eliminating friction and wear. These hinges are supplied in iron, brass or bronze metal and finished to match other hardware as specified. They are suitable for gates $1\frac{1}{8}$ to $2\frac{1}{2}$ -inch thick or with hand rail as wide as $2\frac{1}{2}$ -inch. The attaching brackets are $2\frac{1}{4}$ inches high by $1\frac{1}{2}$ inches wide.



With this Spring Gate Hinge the Gate Is Carried on Ball Bearings.

Colonials Are Economical

YOU can give your clients more real home comfort for each dollar expended by planning and building homes in Colonial style. Colonial homes are noted for their charming air of refinement. This style is economical because the materials used are low in cost and because Pine is so easy to work with, that construction is speeded and labor time reduced.

There is sufficient Shevlin Pine to last for decades. You will find it smoothly milled, carefully seasoned and rigidly graded.

Leading lumber dealers can furnish five varieties: Shevlin Northern White Pine, Shevlin Pondosa Pine, Shevlin Norway Pine, Shevlin California White Pine and Shevlin California Sugar Pine.

Write for the booklet, "Specify Shevlin Pine."

Shevlin, Carpenter & Clarke Company

903 First National-Soo Line Building, Minneapolis, Minn.

Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.; San Francisco Sales Office: 1028 Monadnock Bldg.; Toronto, Ontario, Sales Office: 606 Royal Bank Bldg.; Sold in New York by N. H. Morgan, 1205 Graybar Bldg., 420 Lexington Ave.



You may wish to save for your files this illustration of the graceful stairway in the Nickels-Sortwell House, a Pine home built in 1807 at Wiscasset, Maine.



ONLY in a rambling old house remodeled could a kitchen like this be found, full of memories of ourselves asking for tastes while mother prepared a holiday dinner. Now without sacrificing, indeed greatly enhancing, its heart-warming friendliness has been added the color and convenience of today. In the roomy *Corwith* sink, placed just the right height from

the floor, its chromium-plated fittings readily at hand yet out of the way in a recess, is summed up the latest ideas in kitchen plumbing. For many other plumbing and decorative suggestions, write for *New Ideas for Bathrooms*. Too, in planning plumbing for remodeled or new houses, you will find it advantageous to take your customers to the nearby Crane Exhibit Rooms.

150
Pounds Pressure



CRANE



2500
Pounds Pressure

FIXTURES, VALVES, FITTINGS, AND PIPING, FOR DOMESTIC AND INDUSTRIAL USE

Crane Co., General Offices, 836 S. Michigan Ave., Chicago + 23 W. 44th St., New York + Branches and sales offices in one hundred and seventy cities

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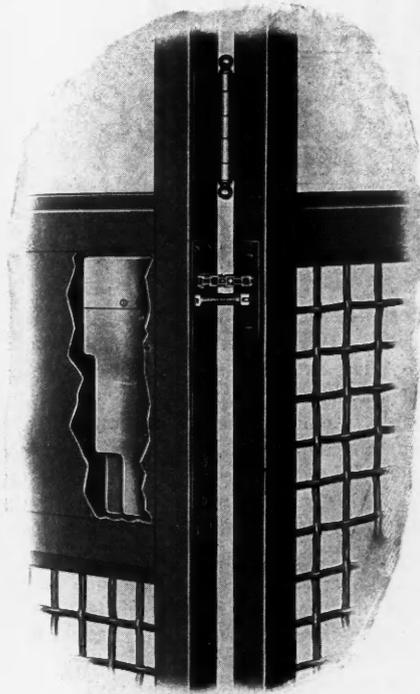
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Invisible Door Closers

THE invisible door closer illustrated here is suitable for installation in industrial buildings, hospitals, churches, schools, libraries, residences, in steel or wood partitions, bank cage partitions, coupon booths, railing gates, automatic elevator enclosures—in fact, wherever door closer efficiency, together with sightliness, is desired. It does not detract in any way from the appearance of the most carefully designed interior because it is entirely invisible.



Being Invisible, This Door Closer Is Especially Desirable Where Neat Appearance as Well as Efficient Operation Is Demanded.

identical. The closers differ in the strength of the springs assembled within to take care of doors of different weights and sizes. They are particularly suitable for round and arched top doors because of being independent of the frame head. They are also independent of the floor and details of floor construction need not be taken into consideration when contemplating their use. These closers are made of the highest grade of materials and precision workmanship is given to every part.



Full Capacity Portable Band Saw

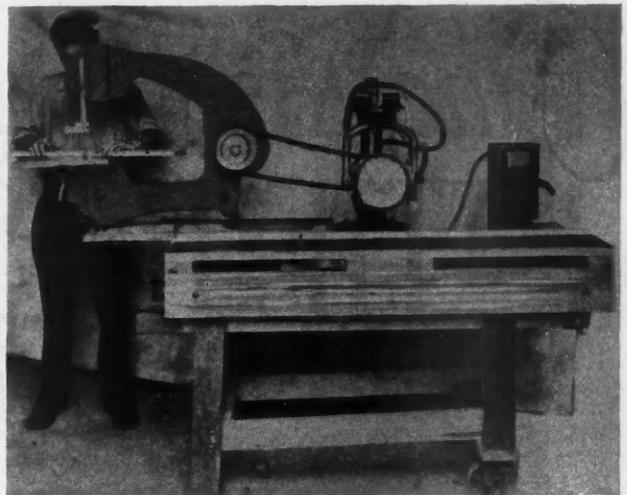
OFFERING a portable band saw with real capacity is introducing a machine that should be of vital interest to the woodworking industry. The band saw shown here is designed to provide, in a portable machine, the power and capacity of a stationary band saw. This machine is guarded to a maximum degree. The band saw above the floor standard is mounted in one casing, housing the three tracking pulleys and saw blade. By the simple means of one cover, hinged to the casing, the blade is entirely covered and is only open at the cutting point.

The unusual feature of using three tracking pulleys instead of two large pulleys to separate the two sections of a revolving saw blade has made it possible to design a compact machine with 20-inch clearance in the throat between the saw blade and frame, with capacity to handle material up to 7-inch thickness.

The entire machine, including floor standard and motor, weighs only 210 pounds. Without the motor and floor

This door closer is made in two styles, one for the smaller hinged clearances, such as are given by 4 by 4 and 4½ by 4 hinges; the other for larger hinged clearance, wherever it is necessary, because of extending trim or other conditions to provide larger hinge clearances.

With this closer installed a full 180 degree opening of the door is possible and the device may be placed at any point, vertically. Closers of all capacities are interchangeable, in same mortise, as the outside dimensions of all are



This Band Saw, While Portable, Gives a Full Capacity Machine That Can Be Mounted on This Woodworker or on a Floor Stand.

stand it weighs 120 pounds. This portability does not in any way handicap it as a stationary unit, it is claimed. It has the power and capacity of a production machine.

This unit is preferably used as an individual motor driven unit equipped with motor and floor standard. However, it may be mounted on this company's well known woodworker as shown in the illustration, so as not to interfere with any other operation of that machine. By simply attaching the pulley on the arbor of the woodworker and swinging the arm to the rear, the band saw is ready to operate. Replace the V-drive pulley of the band saw with the flat belt pulley and the band saw can be driven from a line shaft.



Better Looking Receptacles

THE modern trend toward greater beauty as well as utility in small electrical items is exemplified in the bakelite unit receptacle pictured here. It is made in one unit combining both plate and receptacle so that instead of the contractor having two or more parts to install it is only necessary to hook in the wires and screw on the plates and the job is done. This makes for great saving in time and labor.

The plate itself is very attractive and matches the decorative scheme of the home. Made of bakelite, rich brown in color, it may be had in either two tone (gloss and satin) finish or embossed with various designs. The edges of the plate as well as the receptacle outlets are beveled which adds further to its attractiveness. Small bakelite buttons cover the screw heads, giving a finished appearance and also a "dead front."

The receptacle box is small, affording extra room in the wall for wires and the terminals are recessed, making for further compactness. Double contact with each plug terminal is secured by special spring metal contact arms which grip the plug terminals securely but not too snugly for easy removal of the plug. The mounting screw holes are elongated to secure perfect alignment of the plate when on the wall. The plate is ¼ inch thick and reinforcements on the back give it added strength, making it strong and durable.

Contrary to the impression one might get from its appearance, this plate sells for only a few cents more than an ordinary receptacle with a brass plate.



This Bakelite Unit Adds to the Appearance of the Room.

The Wise Buyer Goes First to THE BASEMENT That Cinderella of the Home and inspects its equipment & specialties

TWENTY-FIVE years ago a basement was a large, excavated space underneath the house which was always dark and frequently damp. It contained a furnace, a coal bin, some fruit shelves in one corner a lot of miscellaneous tools in another corner, perhaps some ancient furniture, too good to throw away but not good enough to use, in a third corner and dingy wash tubs on a bench at one side, with a layer of dust lying thick over all.

A modern basement is also a large excavated space underneath a house, but it is never dark nor damp and is divided up into smaller spaces, each a department serving a special purpose and in regular use. These departments might be called the mechanical department, the laundry department and the recreational or living department. The mechanical department is illustrated in the basement view reproduced on this page.

This department provides, first of all for the heating plant. The modern heating plant would be a real joy to some of the old timers who labor with cranky furnaces throughout the cold months of each year. The modern furnace is no longer cranky and is frequently equipped in such a manner that it requires little attention and still less of labor.

Some of the more elaborate developments in the oil and gas heating line make it possible to light the heater in the fall and forget it entirely till spring comes and heat is no longer required, when it is simply turned off. The best of the coal burning furnaces which provide a less expensive heating plant which quite closely approaches this ideal. Such equipment in a house will go far to win the favor of the man of the family when the builder is show-

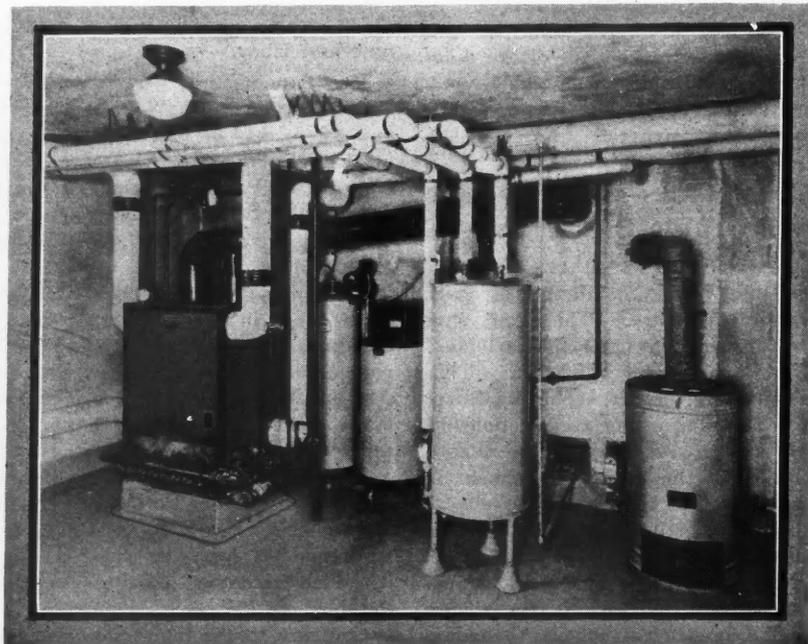
ing prospective owner-customers the new house.

As seen in the picture, this department also contains a hot water heater, providing an ample supply of water, at an even temperature, at all times. Then there is the water softener which is rapidly replacing the old fashioned cistern and providing a constant supply of good soft water for every purpose, for cooking and drinking as well as for the laundry, making possible cleaner clothes, eliminating the need of much soap and washing powder and preventing the old familiar deposit of lime in the cooking vessels.

Another feature of this department, and one which deserves special attention from every builder of homes who would have his houses make a favorable impression of prospective buyers, is the incinerator. The incinerator makes it possible to do away with the old, unsanitary garbage can and irregular garbage removal. It also does away with the collection of papers and rubbish for periodical burning or hauling away. Everything is dropped into the incinerator where it is burned cleanly and without odor.

The laundry department is very different from the old bench with wash tubs and wringer piled on it. It contains

neat, clean, stationary tubs, with running water, both hot and cold, which are designed to be used in connection with an electric washing machine and wringer that eliminate the labor of washing. There is often a clothes drier included so the drying of clothes is no longer dependent upon the vagaries of the weather. With a drier, clothes are dried quickly without being subjected to the dirt of the backyard clothes line. An electric ironing machine is another laundry feature which is making laundry work easier.



A Portion of the Basement Is Devoted to Mechanical Equipment. Besides the heating plant, an incinerator, water heater and in some districts a water softener are essentials of a modern home.

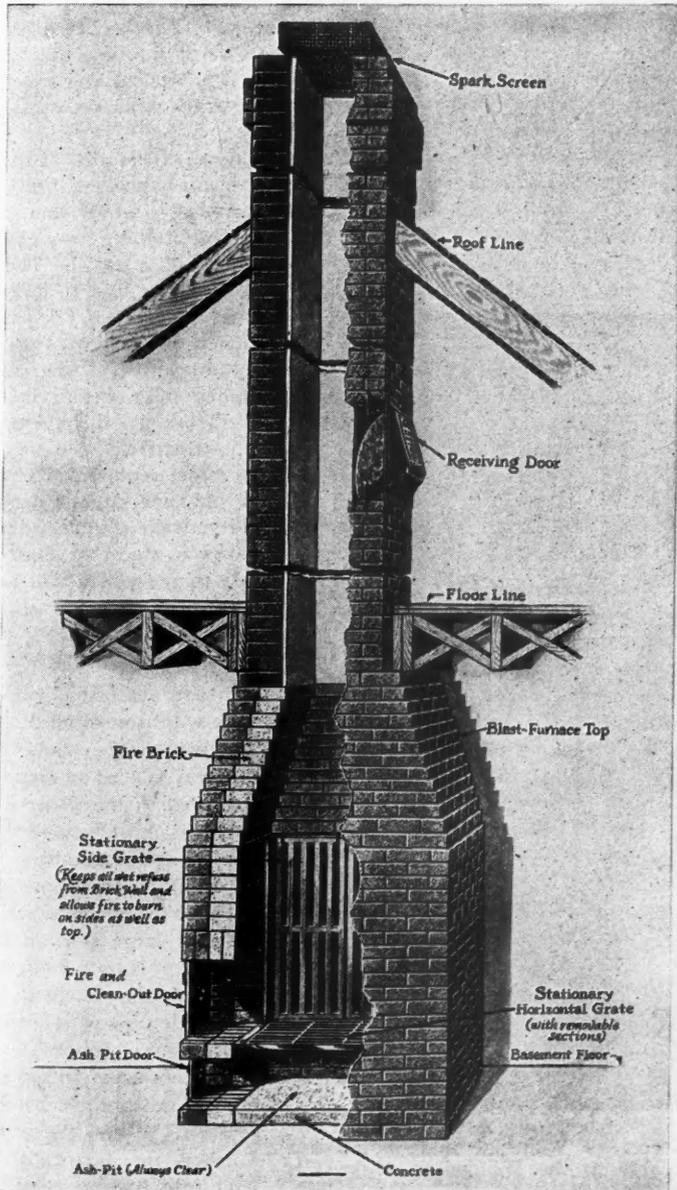
SPECIALTIES for Quick Sales and PROFITS

K-M Incinerators

For Residences, Apartments, Hotels

**For Once, the Best
Is Cheapest Because
it is the Most Simple**

Chancellor Hall, Philadelphia, Pa.
Completely equipped with K-M
Incinerators.
Arthur W. Hall, Architect.
F. V. Warren Co., Contractor



BECAUSE of its simple construction and a consequent saving in labor and material costs—because of the low cost of the incinerator parts owing to their simplicity—the K-M costs less than you have probably been accustomed to figure for incineration.

Because there are no nuts or bolts—because the grates are stationary without bearing blocks or shakers, the K-M Incinerator is "fool proof" and can never get out of order.

Because of its blast furnace design—because the side grates keep the refuse away from the brick and provide for the circulation of air on all sides of the burning mass—and because draft comes from two points, the fire door and the ash pit door—speedy and thorough combustion is assured.

We shall gladly send you complete details of the K-M Incinerator if you will write or simply return the coupon below.

KELLOGG MANN & Co., INC.
315 Grote Street, Buffalo, N. Y.

KELLOGG MANN & CO., INC.
315 Grote Street,
Buffalo, N. Y.

Please send me complete details of your K-M Incinerator. I am a builder or I am a dealer.

Name _____
Address _____
City & State _____

Catching the Woman's Eye

With Specialties for

THE KITCHEN

The Workshop of the Home

At the bottom of this page there is a picture which is, perhaps, as typical of the modern home as anything that could be selected. It shows a corner of a kitchen with an electric refrigerator built into the tiled wall. The electric refrigerator stands a symbol of the new era in home design and construction. It stands for efficiency and labor-saving, completely controlled food preservation, the elimination of much of the work of caring for the refrigerator, the elimination of cleaning made necessary by the ice delivery man tracking dirt and water through the kitchen.

Along with the electric refrigerator goes the gas operated refrigerator and, for those who require a less expensive installation, the ice refrigerator with outside icing. The latter, while depending on the old method of cooling with ice, eliminates the mess of inside icing and the necessity of being on hand to admit the iceman regularly, which means most of the disadvantages of the old system.

For many years—in fact, for centuries—very little was done to improve the lot of the housekeeper. Within the memory of many of us who still refuse to be classed as old or even middle aged, the kitchen looked very much as it did in the Colonial days and was equipped in about the same manner. The old methods of sweeping and cleaning and of laundry work, the same large kitchens with inaccessible corners to be cleaned and drab, cheerless walls that prevailed in the days before the Revolution were an accepted part of the home establishment.

But the past few years, and especially the last decade, have seen a change which has been both great and rapid. The old fashioned kitchen has shrunk, almost, to a size where the housekeeper can stand in the center of the room and reach anything she may want. Untold steps have been saved by this change alone which conserves the energy of the housekeeper for other things more valuable than mere walking across a kitchen floor.

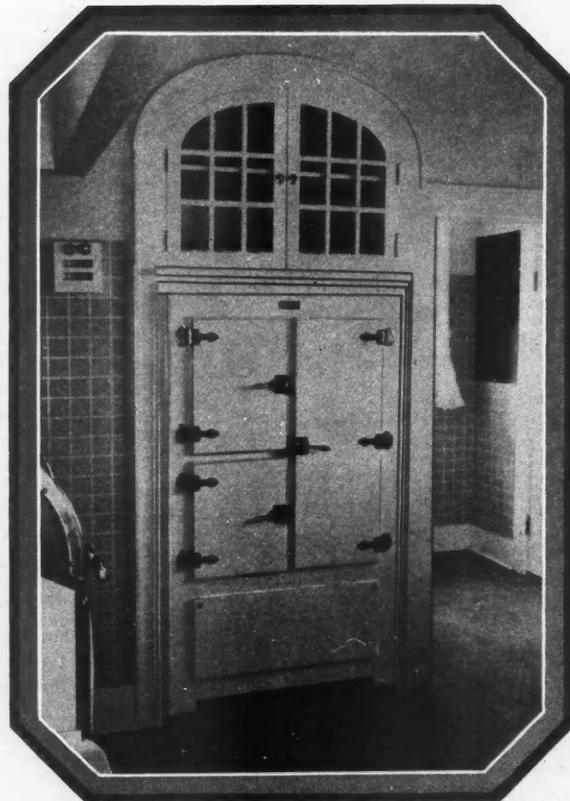
Now, too, it has been discov-

ered that windows are just as appropriate for the kitchen as for the living room and that a pleasing view, visible through the kitchen windows while dishes are being washed, reduces the labor of dish washing in a most remarkable manner. Along with this discovery came another. Attractively decorated walls do not in any way interfere with household duties and walls attractively decorated, in light colors, make a cheerful kitchen and a cheerful housekeeper. At times when artificial lighting is necessary, lighting fixtures that give ample light, placed where it is needed and eliminating glare, have much the same advantages as do windows in daylight hours.

And then there are kitchen floors. In stories of the early days we read much of the housewife who kept her kitchen floor scrubbed until it was literally white and always "clean enough to eat off of." But nothing was ever said about how this model housewife felt after she had done all this scrubbing. The day of white scrubbed floors is

gone forever. The modern kitchen floor is just as clean and attractive as the old time kitchen floor, but it is so finished that it can be kept clean and attractive with a fraction of the effort required in scrubbing the old time kitchen floor. The wide awake builder of today makes a study of floor materials to see which will be most helpful to him in selling his kitchens to housewives who no longer indulge in floor scrubbing.

In the old fashioned kitchen there was a multitude of kitchen equipment to be taken out and put away, placed on high shelves or stored in the pantry to collect dust until wanted when it would have to be cleaned again before it could be used—more work for the housekeeper. Nowadays a large portion of that equipment is built right into the walls of the kitchen. When the ironing board is wanted the housekeeper simply opens a small door and pulls the board out into position, clean and ready for use. When the ironing is finished the board is pushed back into its receptacle.



Built-In Electric Refrigerators Are Typical of the Many Special Items of Material and Equipment Which Are Available to the Builder to Make His Houses More Salable.

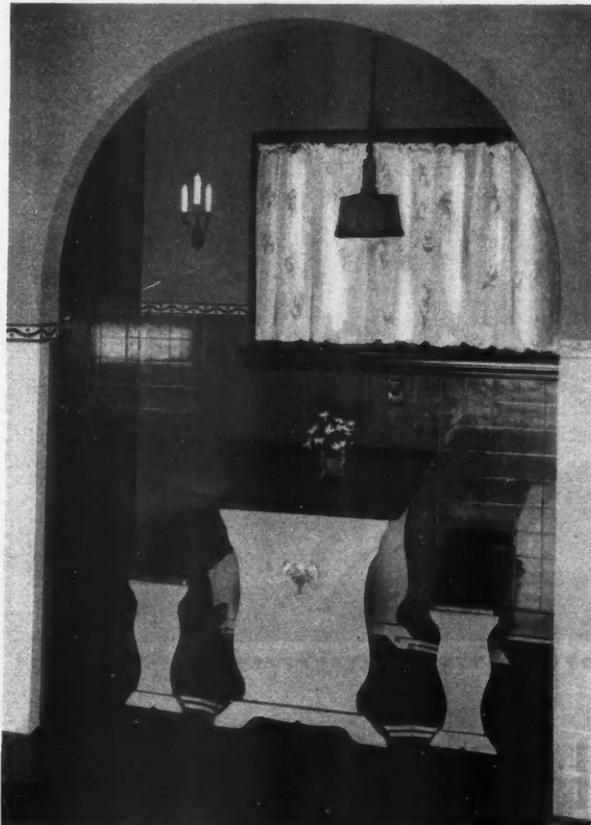
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SPECIALTIES for Quick Sales and PROFITS

No wall space necessary with "Diner-ette"

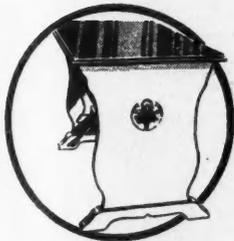
Completely detached breakfast unit. Saves any installation cost and half your floor space. With both benches open, covers only 45" x 52"



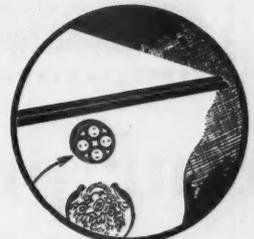
Photographed Breakfast Nook in home of Hugh Taylor Millar, former Treasurer of the Michigan Society of Architects, Grosse Pointe, Michigan. . . .



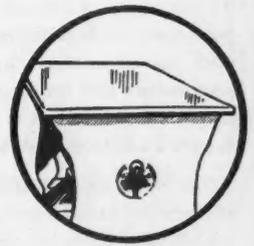
One Bench
Folded Under



Both Benches
Folded Under



Optional 4-Way
Electric Socket



Optional
Porcelain Top
for Kitchen

BUILDING MATERIAL DEALERS SAY . . .

"Diner-ette" is the best and lowest priced breakfast room outfit on the market." ¶ "Diner-ette", adapting the trend towards benches, is the only space saving breakfast room equipment which does *not* require a wall space and has *no* installation cost. ¶ The voguish benches fold compactly beneath the board at a touch, and the whole is shipped and handled as a unit. This leaves all wall space available for windows, cupboards, doors, etc. ¶ Thousands of builders report "Diner-ette" is the big "silent salesman" for the livableness of the whole house. ¶ Now made in three sizes for two, four, or six persons. Lifetime lacquer finish in all pastel shades. ¶ Contractors get the illustrated literature if there is no dealer in your district . . . but if there isn't a dealer near you now there **CERTAINLY** will be soon . . . for "Diner-ette" is a **MONEY MAKER** for those alert dealers who know a *LIVE* one when they see it.

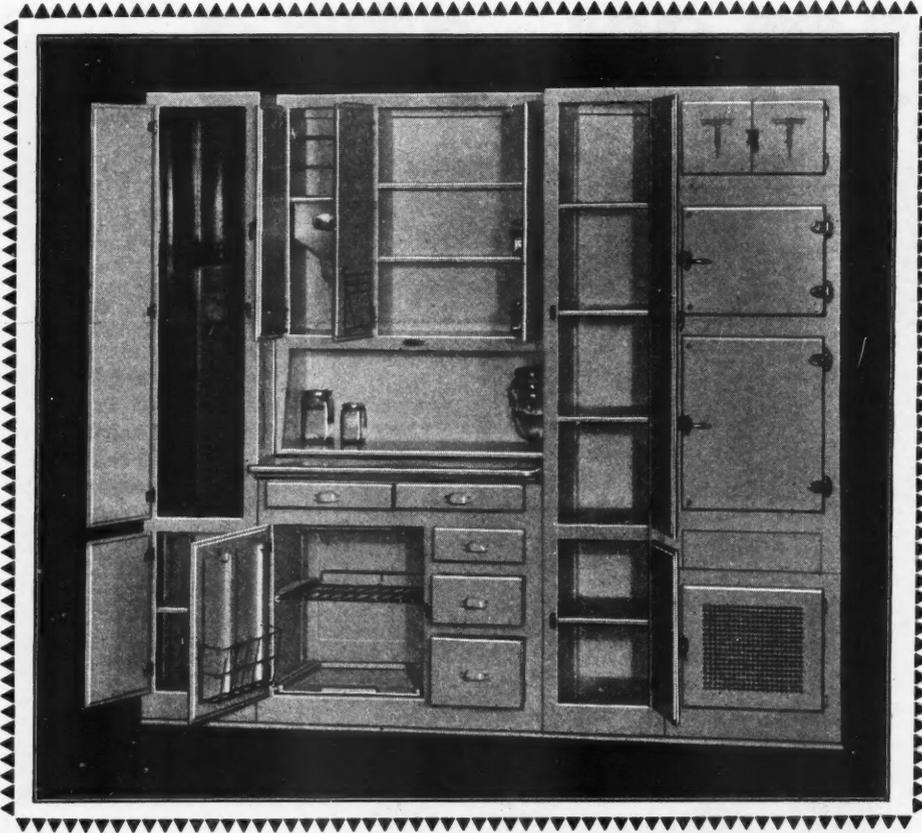
DINER-ETTE MANUFACTURING CO.
Executive Offices: 5227 Loraine Street • DETROIT, MICH.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

SPECIALTIES for Quick Sales and PROFITS

KITCHEN MAID

S T A N D A R D U N I T S Y S T E M S



Your prospects will marvel at the features, color, design of these units

Show any woman a kitchen equipped with Kitchen Maid Units and here's what happens. She recognizes the name, instantly, as a symbol of all that is new, fine and smart in kitchen planning.

She sees, in the units, a wealth of features and an artistry of design which are natural results of the experience of America's largest exclusive makers of built-in equipment for the kitchen.

She sees color of rare beauty whether the Kitchen Maid finish chosen is Cactus Green, Pastel Green, Travertine Ivory, Dove Gray or Shasta White.

The units of this extensive line include kitchen cabinets, broom

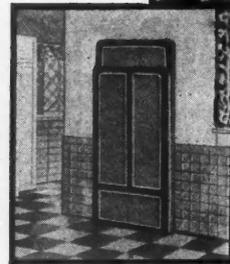
closets, dish cupboards, divider cupboards, refrigerators, butlery units, Dinofold breakfast nooks, complete kitchenette assemblages—units filling every kitchen need. Each Kitchen Maid Unit is complete in itself—may be used alone or in a unit combination, installed in recess or set against the wall.

Kitchen Maid Units are the only equipment providing such attractive advantages as sanitary rounded inside corners, smooth doors, concealed hinges, enamel interior bases.

Make sure your kitchens are up to your prospects' ideals. Write for Kitchen Maid catalogue, dimensional drawings and prices.

WASMUTH-ENDICOTT COMPANY
1202 Snowden Street, Andrews, Indiana

Right: the Dinofold ready to serve four people. Sturdy, rigid, charming in appearance. There is a color combination to harmonize with any kitchen color scheme.



Above: the Dinofold—folded up and out of the way in an instant. May be used on wall, door, or in wall recess.

SPECIALTIES for Quick Sales and PROFITS

ANNOUNCING

Parsons

Pureaire

CABINET

(PATENTS PENDING)



No. 500

Provided with a convenient sliding shelf, two drawers, a bread box and three compartments.

No. 600

Same as No. 500 except that space below the drawers is made into a refrigerator compartment.

Here is what the architect and apartment builder have long been looking for

A stove cabinet constructed on a cold drawn steel channel frame, securely welded, and with DIRECT FLUE CONNECTIONS THAT CARRY AWAY THE COOKING ODORS AND HEAT FROM THE APARTMENT.

The Parsons "PUREAIRE" Cabinet—(cabinet only furnished)—is finished in attractive color effects, and due to large production and perfected manufacturing processes, is very reasonably priced. Note these salient points of the "PUREAIRE" Cabinet.

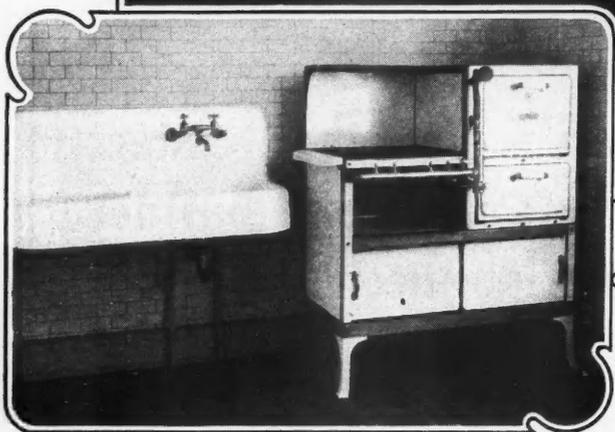
Direct outside ventilation.
No heat from the stove.
No odors from cooking.
Pure air in the apartment.
More rent. Satisfied tenants.
Keeps apartments clean.
Saves redecorating.
Reduces fire hazard.

Write for descriptive literature today

DEALERS: We are appointing dealers in many of the larger cities. Write for our liberal proposition at once. It may mean a large source of income to you.

The Parsons Company
603 Milwaukee East, Detroit, Michigan

SPECIALTIES for Quick Sales and PROFITS



A few of the 500 homes at Stewart Manor, Long Island, N. Y., all Red Wheel-equipped.
(At left) Typical Reliable Red Wheel Stove installation at Stewart Manor.

Hundreds of Red Wheel Ranges in Long Island Homes

IT IS estimated that women influence the buying of 90% of the houses built to sell. And in most cases, they are certain to insist that the kitchen have cookery equipment that enables them to bake via Time and Temperature.

To most women Time and Temperature Cookery means cookery achieved through the medium of the Lorain Red Wheel Self-regulating Oven. Are the kitchens of the houses you build to sell thus equipped?

It will pay you to follow the example of the Realty Associates, Inc., of New York City. At Stewart Manor on Long Island this firm is erecting 2000 homes similar to those shown above. 500 have already been built and each is equipped with a Red Wheel Range. The remaining number will also be thus equipped.

The Red Wheel has been continually advertised in leading

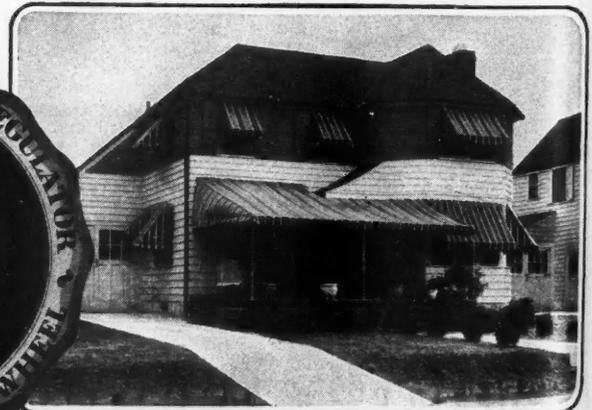
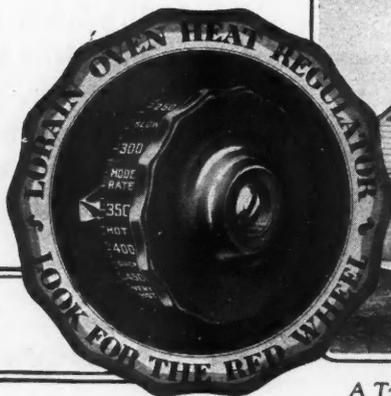
national magazines for nearly ten years. It is the one device of its kind most widely and favorably known among women.

Only these six famous makes of stoves are equipped with the Red Wheel: Quick Meal, Dangler, Clark Jewel, Direct Action, Reliable and New Process. These stoves are used for cookery instruction in over 2700 schools and colleges.

All makes offer the latest in styles, sizes, colors and finishes. For specific data see Sweet's Catalog, 23rd Edition, Pages C4009-C4018 inclusive. A postal request brings interesting catalogs.

AMERICAN STOVE COMPANY

Largest Makers of Gas Ranges in the World
233 Chouteau Avenue :: St. Louis, Mo.



A Typical Home at Stewart Manor, Long Island, N.Y.

Unless the Gas Range has a RED WHEEL it is NOT a LORAIN

LORAIN

SPECIALTIES for Quick Sales and PROFITS

The PROOF!

SELLERS equipped kitchens sell quickly—rent easily

Every finished Sellers house SOLD!

All Sellers equipped apartments rented practically 100 per cent!

That is what a survey made in Syracuse, New York, in June, 1928, disclosed. Yet according to this survey, there were over 2,000 new houses for sale in Syracuse at that time. There also were new nearby apartments with many vacancies.

During the previous six months, Kelvinator-Syracuse, Inc., Sellers Representatives, placed over 12 carloads of Sellers Unit Kitchen Furniture in Syracuse residential buildings. This is equivalent to about 300 Sellers Kitchens.

Think of it! Over 2,000 unsold new houses in the city and not a single Sellers equipped house unsold! Not a single Sellers equipped apartment building not rented practically 100 per cent!

Here is undeniable evidence that the woman of today wants a modern kitchen—a colorful, convenient kitchen where hardest tasks become easy. The woman of 1928 keeps abreast of the times. She reads. She thinks. She has a mind of her own. She knows that a kitchen with the same type of carpentry work built into houses ten years old is not modern.

Women want Sellers equipped kitchens because they are youthful . . . full of color . . . convenient . . . sanitary . . . furniture . . . not mere carpentry. . . .

They want Sellers because millions of dollars invested in national advertising and a million Sellers in American homes have made the name, Sellers, the symbol of highest quality and convenience.

Fifty-four separate Sellers units enable you to correctly equip the largest or smallest kitchen with ease . . . and at a remarkably low installation cost.

Build modern kitchens into your new homes and apartments. Install stylish, colorful Sellers kitchen furniture. Give your salesmen new selling features in this most important room. Sellers equipment pays big returns—and costs no more. Write for detailed information.

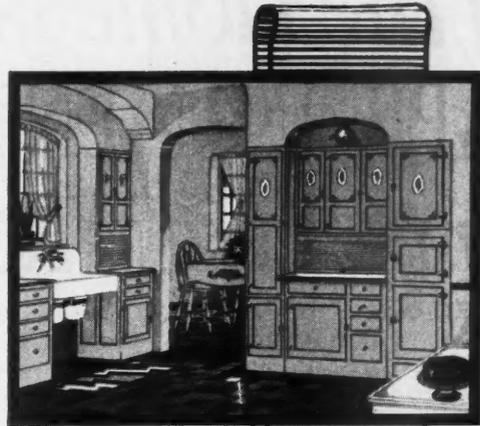
G. I. SELLERS & SONS CO.

Dept. 120

Elwood, Indiana

SELLERS

KITCHEN FURNITURE UNITS



The kitchen equipped with Sellers Unit Furniture combines colorful beauty with maximum convenience.



The BAALBEK 45 Apartments. Designed and built by M. Hider Co., Syracuse, N. Y.



Sellers equipped Residence in Orville, Syracuse, N. Y. Designed and built by H. B. Davenport.

The SOCIAL STATUS of the Home is Helped by the Latest APPOINTMENTS and SPECIALTIES for the LIVING ROOM, LIBRARY and HALL

THE cricket on the hearth sang a song in the olden days which struck the note of domestic contentment. Crickets are not allowed in the modern home. Basement concrete, double floors and insulated walls keep them out but an even better domestic content survives and centers round modern hearths. There is no smoke, nor smell nor dirt. There is radiance and warmth and comfort and with one, at least, of the installations pictured, there is music—music such as our ancestors never dreamed of.

The heat and radiance of these fireplaces is electrical and the music is that of the radio bringing through the air to the family hearth the best music from far and near. Along with the radio mantel are bookshelves and here one may read and bask and listen—an ideal combination of comforts.

The electrical fireplace solves quite a few problems for builders and owners. No chimney is required, which eliminates considerable expense, and the builder is able to satisfy those who want the fireplace feature but wish to avoid the expense of an extra chimney.

The fireplace and mantel for electrical operation may be given the appearance and suggestiveness of the traditional fireplace. The beautiful Colonial mantel and fireplace shown in one of our illustrations is a fine example of the ornamental value of such a fireplace. Its woodwork can be secured in white, mahogany, walnut or oak. The fire basket seems to be filled with glowing coals when the current is turned on and the radiant warmth is reflected from the copper radiator at the back. Tongs, poker and

shovel set alongside the fire still further carry out the suggestion of coal in the grate.

The main advantage of the electrical fireplace is its instant availability at the turn of a switch. The current can be just as quickly switched off. In this way, the room need never be overheated and the householder can use as much or as little current as desired. Most homes have heating plants independent of fireplaces so that a fire on the hearth is a purely auxiliary feature and one that is seldom used for more than an hour or two occasionally.

The installation of these electric grates is so simple that they can be put in service ten minutes after the electric service wire has been run to the hearth. A tile hearth is not required. It is not even necessary to cut or frame a recess in the wall, as most fireplaces with genuine fires project about the same distance into the room.



An Electric Fireplace with Radio Cabinet Above It and Bookshelves on Each Side. Here one may bask in the electrical warmth and radiance while he reads a book and listens to the music.



A Well Designed Mantel of Pure Colonial Lines with a Radiant Electric Fireplace. The ruby coals glow with a fascinating warmth.

The bookcase and radio cabinet feature illustrated in one of our pictures is one which owners appreciate, as it

(Continued to page 146)

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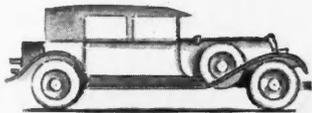
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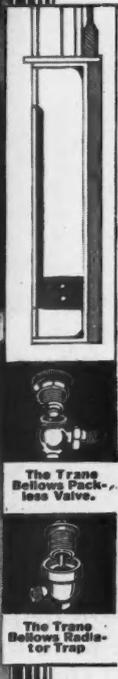
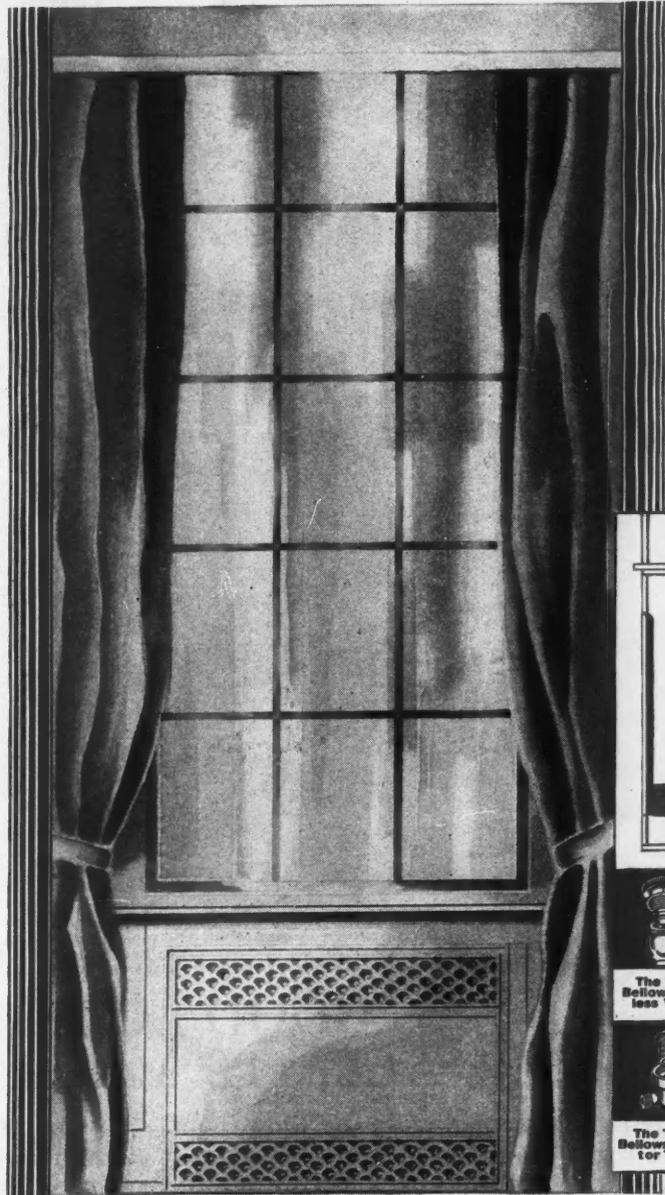
H E
CABIN
PUM

SPECIALTIES for Quick Sales and PROFITS

Style Is The Real Reason



for the interest of prospective tenants or buyers in Trane Under-Window Concealed Heaters . . .



The public insists on modern style in room arrangement, just as it often looks first to the style of a motor car, instead of investigating what is under the hood. Today people know that concealed heating is a big style development. They demand the extra floor and wall space and the freedom in arranging furniture, made available by Trane Under-Window Concealed Heaters.

Trane has put you in a position to satisfy this demand, with increased heating satisfaction and a much simpler installation job than you had with the old fashioned

radiator. This latest model, designed after a thorough study of practical men's experience during the first big success of Trane Concealed Heaters, is installed by one man. It is completely built at the factory; no extras or complicated construction in the wall. And the entire front panel is removable, so you can inspect the unit at any time by two minutes' work with a screw driver. The same instantaneous control—the same protection against soiling of walls or drapes, as on the original heater.

You can always depend on Trane engi-

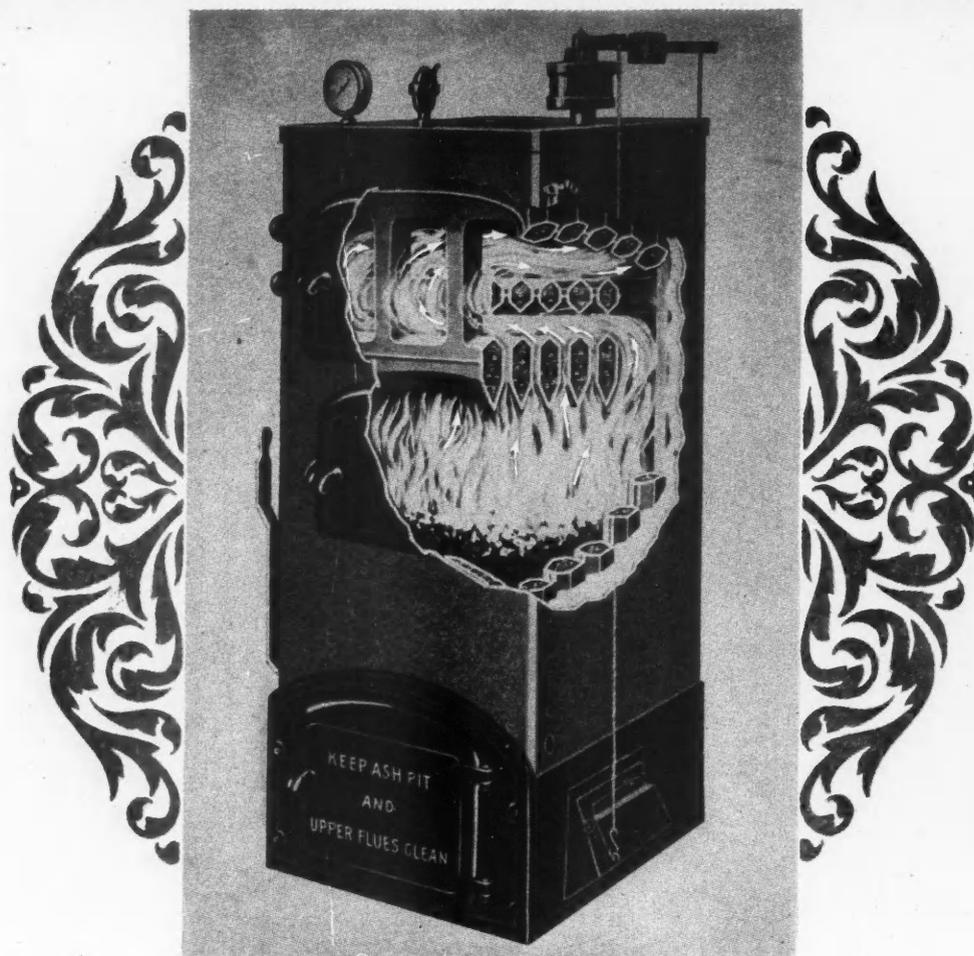
neering leadership in every department of heating served by Trane products. Trane Traps and Valves are a result of the same careful analysis of heating troubles and the requirements of modern buildings. Balanced pressure and the signal feature, in Trane Bellows Traps, are only two of the points which have made this equipment standard for important, high-class jobs. Before you finally decide on any part of a heating system except the boiler and piping, ask your heating sub-contractor what Trane has done recently in that particular field.

HEAT CABINETS **TRANE** CONCEALED HEATERS
PUMPS, UNIT HEATERS, AND HEATING SPECIALTIES

THE TRANE CO., Dept. 2
276 Cameron Ave., La Crosse, Wis.

Send complete facts on your Under-Window Concealed Heater

Name _____
 Name of Firm _____
 Address _____
 City _____ State _____



The exceptionally deep fire box permits heavy fuel charges, gives ample space for proper combustion, and makes long firing periods possible. Long fire travel promotes maximum heat transfer, boosts effectiveness. A thick layer of rock wool insulation decreases heat loss.

GOOD LOOKING BUT AFTER ALL, ITS MAIN JOB IS HEATING!

COLOR helps to sell a boiler in the show room, helps to lift it from the drab and commonplace. Hence the durable, dirt defying empire green finish, with trimmings of glossy black, on the National Jacketed Boiler. It's a fine looking unit—there is none better.

But, after all, a boiler's job is to keep the building warm—not just to add snap to the basement.

So the National Boiler *inside the jacket* was exhaustively tested, and the factors of its dependability, economy and convenience conclusively demonstrated before it was marketed.

The National Jacketed Boiler's *appearance* proves its attractiveness; its *record* proves its performance; the fact that it's a *National Product* gives assurance of complete and lasting satisfaction.

NATIONAL RADIATOR CORPORATION

MANUFACTURER OF RADIATORS AND BOILERS

Nine Plants devoted to National Service through these Branch Offices and Warehouses:

- | | | | |
|---------------------------------------|--|---|--|
| Baltimore, Md.—2600-2622 Matthews St. | Boston, Mass.—93-97 Oliver St. | Milwaukee, Wis.—124-130 Jefferson St. | New York, N. Y.—55 W. 42d St. |
| Buffalo, N. Y.—259-265 Delaware Ave. | Cleveland, Ohio—935 E. 63rd St. | Omaha, Neb.—108-112 S. Tenth St. | Philadelphia, Pa.—121 N. Broad St. |
| Chicago, Ill.—2445 N. Keeler Ave. | Cincinnati, Ohio—3530-36 Spring Grove Ave. | Pittsburgh, Pa.—1509 Arrott Bldg. | Richmond, Va.—3032 Norfolk St. |
| Indianapolis, Ind.—431 W. Georgia St. | Johnstown, Pa.—221 Central Ave. | St. Louis, Mo.—1042 Central Industrial Ave. | Washington, D. C.—2205 Fifth St., N.E. |



NATIONAL JACKETED BOILER



SPECIALTIES for Quick Sales and PROFITS



*for
every
room
in the
house*

Decorate and protect walls and ceilings with Sanitas

Old walls and ceilings, as well as new ones can be improved with this nationally-known cloth wall covering.

Sanitas hides cracks in walls and ceilings and prevents new cracks, due to shrinkage, from showing.

Sanitas is made of cloth, with an oil color finish, that does not fade, crack or peel.

There are 150 styles from which to select—plain colors in dull finish; decorative styles and lustrous metalline brocades; everything for the simplest or most elaborate decorations.

Sanitas defies dirt and finger marks—just wipe off the dirt with a damp cloth.

*Write on your letterhead for the Sanitas
Sample Book, sent only to executives.*



The Standard Textile Products Co.
320 Broadway Dept. 51 New York



Look for this
trademark on the
back of the goods.



Send for this Sample Book

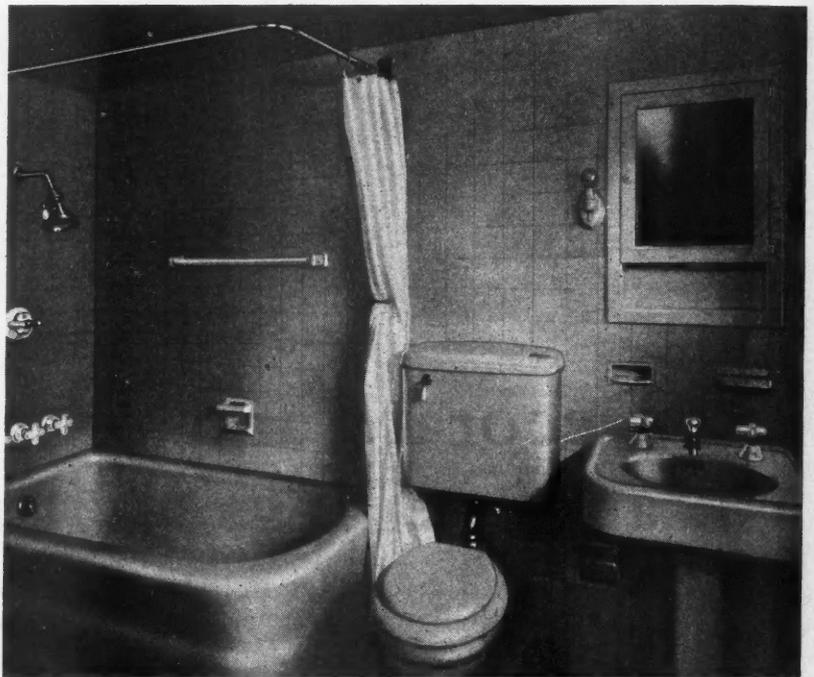
EQUIPMENT *and* SPECIALTIES for BED-ROOM *and* BATH

Have Strong Sales Appeal for the Homeseeker of today

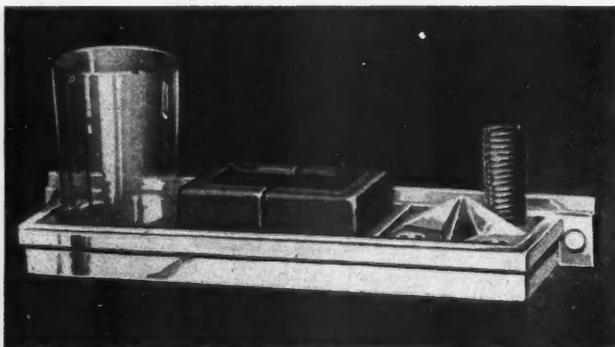
AMERICA is a land of bathtubs as well as liberty. Its people draw a large part of their "pep" from the morning tub or shower and they take pride in a bright, shining and spotlessly clean bathroom for both family and guests. In fact, the bathroom is the first guest chamber where he is conducted almost as soon as he arrives, that he may remove the grime of travel. Therefore, it is a conspicuous room and one which gets a great deal of attention from prospective purchasers. When a house is to be sold, an attractively equipped bathroom goes a long way toward making a sale.

Walls and floor should be of waterproof tile which water can neither injure nor deface. All white or black and white patterns prevail although colors and tints are rapidly coming in.

The one-piece pedestal lavatory is the popular choice, with mixing faucet, to provide water at exactly the temperature desired. A number of auxiliary fittings are required at the lavatory, to provide toilet conveniences—towel bars, soap trays, glass and tooth brush holders and a mirror. The door of the bathroom cabinet provides a most convenient place for the mirror and the cabinet itself is a handy container for toilet and medicinal articles. There is a choice of wood or steel cabinets, as



A Well Equipped Bathroom, with Shower Over the Tub and Tile Finished Walls Which Extend to the Ceiling—an Advantage Where a Shower Is to Be Used.



Here Is a Convenient Combination Fixture—a Soap and Drinking Glass Holder and Toothbrush Rack Combined. It has a finish like china.

preferred. Each has its advantages and each type has given excellent service. They are built into the wall, as also are the soap trays over the bathtub and the toilet paper holders.

The growing popularity of shower baths is causing them to be quite generally installed in private dwellings where formerly they were to be found usually only in apartment buildings, hotels and clubs. The shower bath fits in particularly well with one American requirement—the speed necessary to business men and women who must rise early to prepare themselves for the day. As the tub itself is a necessity for the younger members of the family, the shower is often installed over the tub, occupying no additional space. Easily controlled mixing faucets are an even greater necessity for showers than for tubs. Valve handles and faucets are frequently of porcelain finish which will not show wear. Water closet tanks, as well as the fixture itself, are of porcelain or porcelain finish and the seat of some equally sanitary finish. Seats can now be made of materials that are all

SPECIALTIES for Quick Sales and PROFITS

A Bath of the Future The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enameled Iron Ware

Its Advantages:

- A Seat, Foot, Shower and Child's Bath, all in one.
- Comfortable because the bather assumes a sitting position.
- Easy operation of valves.
- No grip rails needed.
- Saves space. Size of Bath Tub, 44x30 inches. For tiling in recess or corner of room.

Write Us for Descriptive Booklet Giving Measurements and Other Details and Testimonials

LOUIS G. DITTOE
ARCHITECT
1108-7 INSHALLS BUILDING
CINCINNATI, OHIO

Cincinnati, Ohio.
December 5, 1928.

Wheeling Sanitary Mfg. Co.,
315 Wrigley Building,
Chicago, Illinois.

Attention Mr. F. W. Wheelock.

Gentlemen:

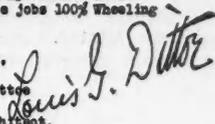
I wish to take occasion to compliment you upon your new combination shower and bath tub fixture, sixty-eight of which I recently had installed in the new St. James efficiency apartments in this city, and fifty-nine in the Auburn Apartments in this city.

While these buildings have been completed for occupancy but a few months they are substantially 100% occupied, which success, I believe, is due largely to these plumbing installations, as practically all the tenants express themselves as being much pleased with this feature.

Considering the satisfaction that these installations are giving, I have just contracted for eighteen similar installations for the new Alma Apartments at Ft. Mitchell, Kentucky, making all of these jobs 100% Wheeling Sanitary Mfg. Co.'s installation.

Yours very truly,

Louis G. Dittoe
Architect.



LGD:VF

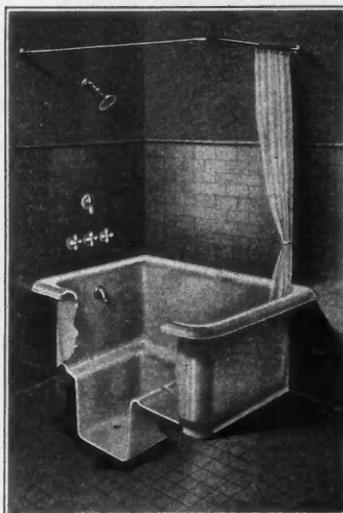


PLATE 11-E
Enameled Iron Ware, 44x30 inches to tile in right or left hand corner. Enameled white all exposed parts. Same as Plate 10-E except for corner installation.



PLATE 10-E
Enameled Iron Ware, 44x30 inches to tile in recess, only. Enameled white front. Waste in foot section either right or left hand end.

100%

Wheeling Sanitary Mfg. Co.'s Installations

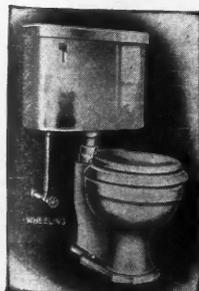


Plate 125-E "The Tranquil" all white Siphon Jet Water Closet Combination.

We manufacture a complete line of Plumbing Fixtures of Vitreous China, Enameled Iron, Semi-Vitreous Porcelain, comprising Water Closet Bowls and Flush Tanks, Lavatories, Regular Bath Tubs, Kitchen Sinks, Laundry Trays, Urinal Stalls, etc.

WHEELING SANITARY MFG. CO.
WHEELING, W. VA.

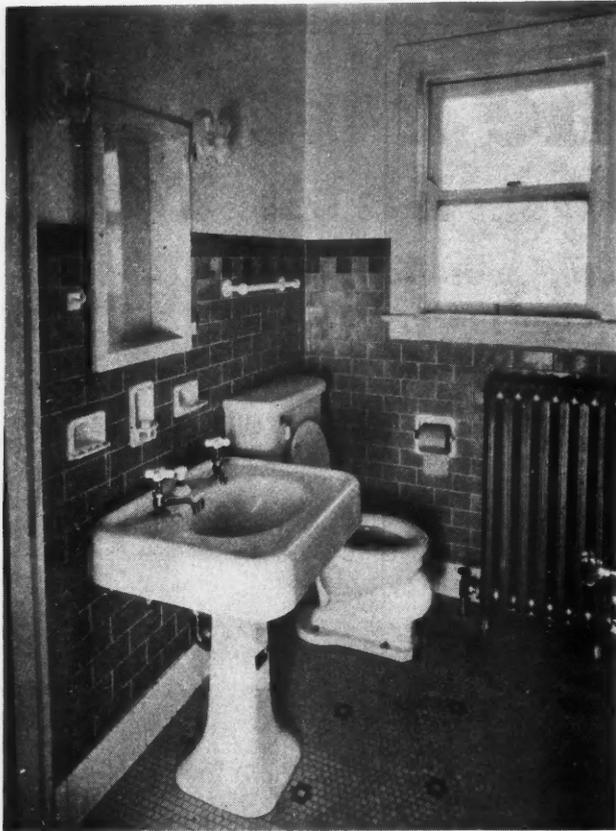
Manufacturers of High Grade Plumbing Fixtures

Sold by Leading Jobbers of Plumbing Supplies



Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.

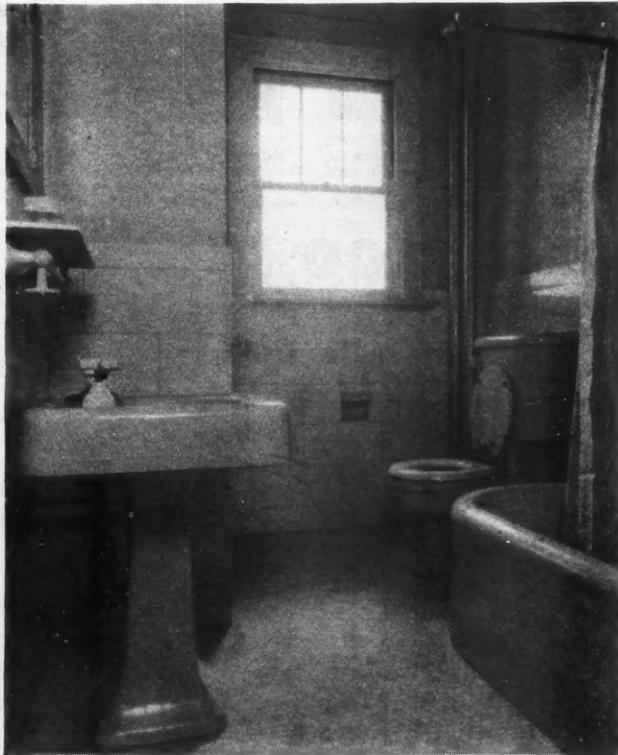
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Note the Well Placed Lights on Each Side of the Bathroom Cabinet Shown in This Picture and the Recessed Wall Fixtures for Soap and Brushes.

but indestructible, with a finish which always looks new and fresh. In the most modern installations, flush valves often take the place of tanks.

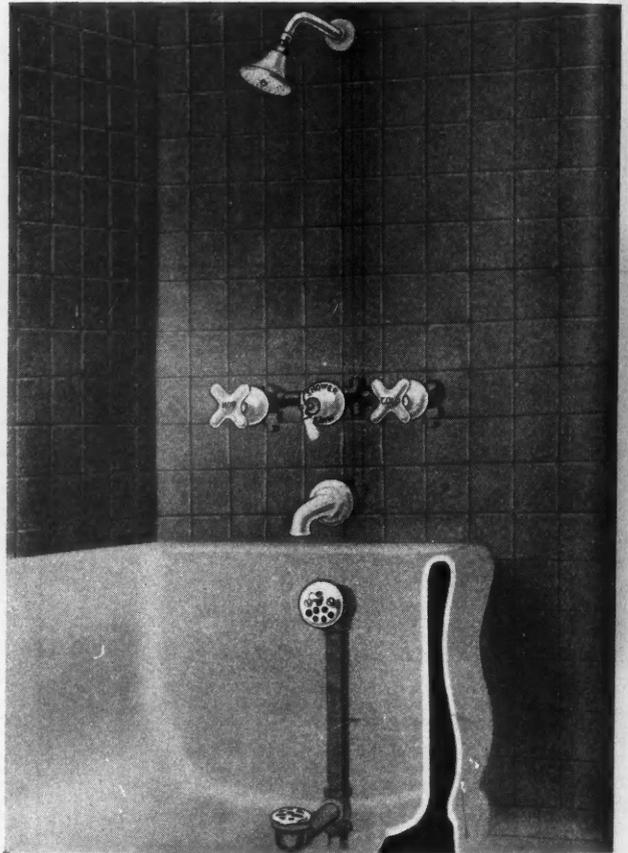
No bathroom is complete without well placed lighting



A Well Appointed Bathroom with High Grade Fixtures and Tile Finish, All in White. Note the convenient shelf and towel bar below the bathroom cabinet.

fixtures and it is an advantage to have at least one convenience outlet. The latter is useful for radiant heaters and for curling irons.

Bathroom door hardware is also important because frequent usage causes hard wear. One very convenient door lock is now on the market which can be locked without a key. Pressure on a button in the handle within the room locks it and a turn of the inside handle releases



In This Convenient Shower Arrangement, the Shower Control Handle Regulates Both the Temperature and Force of the Water. Both the tub and shower controls have porcelain covered handles.

it but it can only be unlocked from the outside by the use of an emergency key.

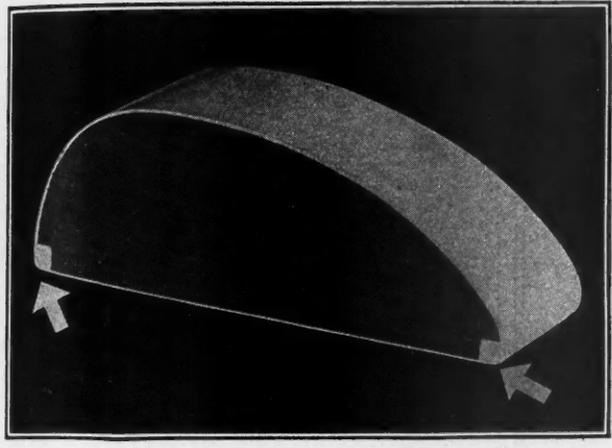
Clever builders are making good use of the strong selling appeal of a well equipped bathroom. While probably the smallest room in the house, it is easily one of the most important and can be made particularly attractive to buyers. The practice of including two or more bathrooms in a house is, fortunately, on the increase, as it is a small family indeed which is not inconvenienced at times by having only one bathroom. Home designers should bear this in mind and plan for the future comfort of the occupants. As the practice grows, the public will be increasingly willing to pay the added cost as an investment in real comfort and health.



The Increasingly Popular Flush Valve Which Makes a Tank Unnecessary.

SPECIALTIES for Quick Sales and PROFITS

You Should Have Brunswick's Catalog.. Showing the Complete Line of Brunswick Closet Seats



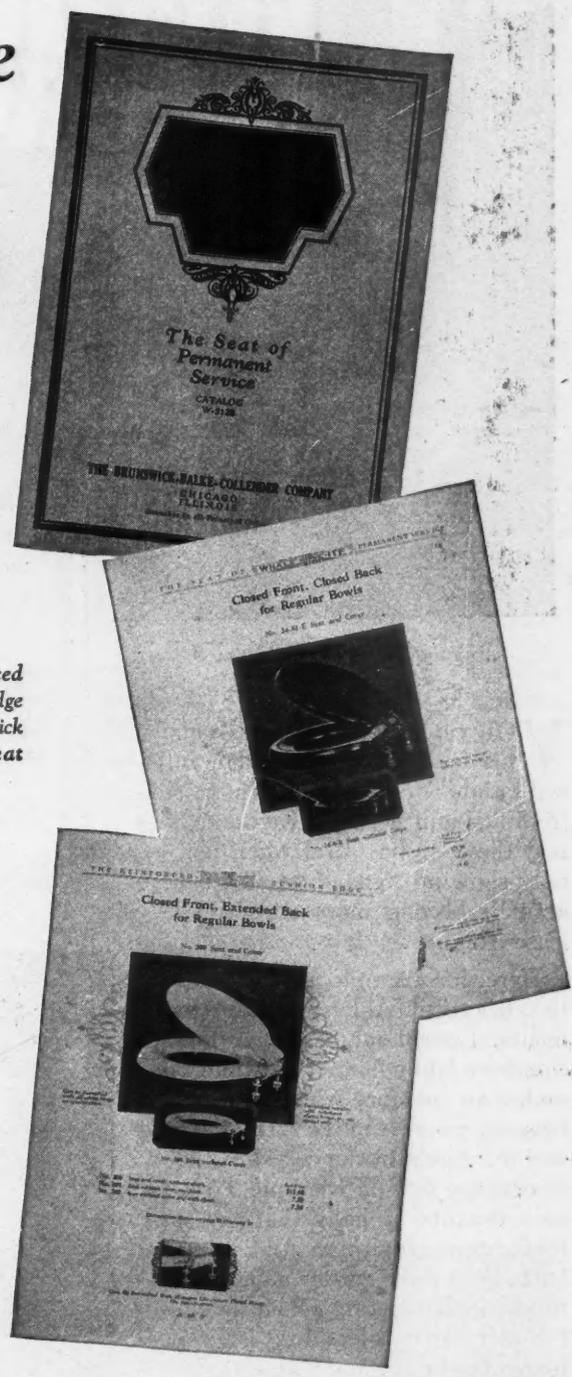
Re-inforced cushion edge of Brunswick White Seat

BRUNSWICK'S Seat line is now complete . . . no matter what type of closet seat you want, you will find it in Brunswick's new catalog. Write for your copy of this catalog now. Use the convenient coupon.

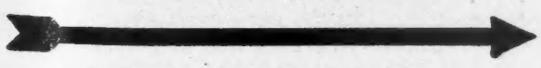
There are construction features in Brunswick Closet Seats too important to be overlooked. Brunswick Sheet Covered Seats (in white and in colors) have the exclusive re-inforced cushion edge. Instead of merely joining the two sheets of pyralin by butting or overlapping, as has been the custom, Brunswick in this new-type seat welds the sheets of pyralin to a cushion of the same material. The result is that the outer seat edge has pyralin 9 times the thickness of a single sheet right where danger of damage is greatest.

No other white sheet-covered seat offers you this unique feature. It enables us to guarantee this edge against defects for an unlimited period.

Brunswick Whale-bone-ite, likewise, has construction features that make this the most durably constructed seat on the market. Our catalog gives you all details of all models. Place no order for closet seats of any kind before you get this catalog showing the Brunswick line.



JUST FILL IN, CLIP AND MAIL THE COUPON TODAY



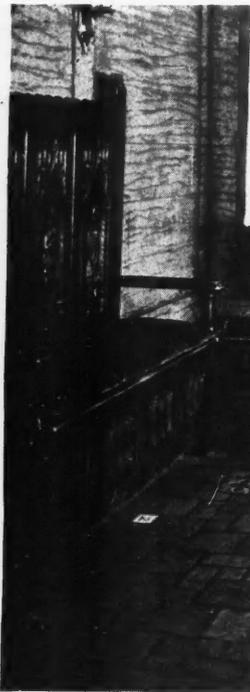
**Box 355, Seat Department,
The Brunswick-Balke-Collender Co.
623 So. Wabash Ave., Chicago**

Send your complete catalog, showing all models of Brunswick Whale-bone-ite, White and Wood Seats.

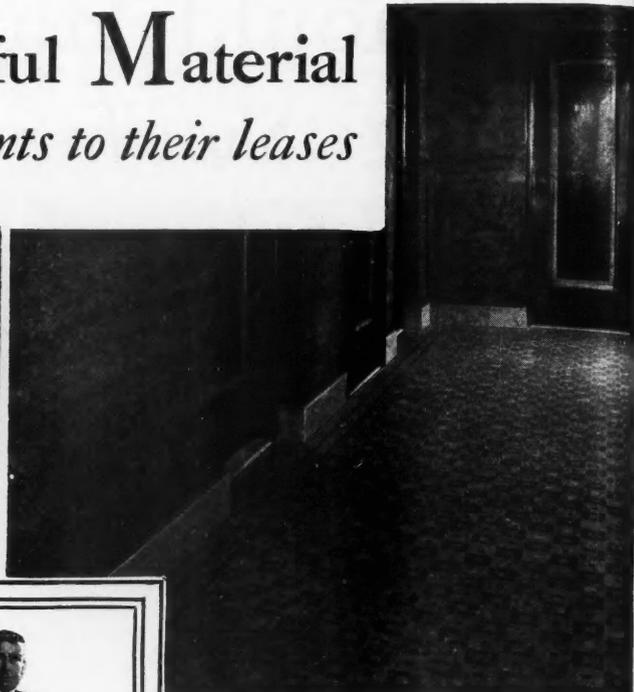
Name.....
Street.....
City.....State.....

THE BRUNSWICK-BALKE COLLENDER CO., 623 S. Wabash Ave., Chicago

\$PECIALTIES for Quick Sales and PROFITS\$



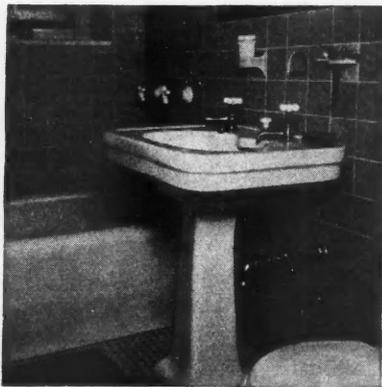
*This Beautiful Material
holds roving tenants to their leases*



Alden House Apartments, Larchmont, N. Y.

YOU can hold the restless tenant to his leases when you plan interior walls and floors that retain their original freshness and beauty. Ceramic Tiles—real tiles—so beautiful when new—not only show no signs of passing time but actually become more attractive as the leases roll by.

Here, for example, are interiors of the beautiful Alden House Apartments, Larchmont, N. Y. A mosaic ironstone lobby floor of Ceramic Tiles makes an entrance which will always be a rich promise of the attractiveness within. Again in the corridors, floors of ceramic mosaic Ceramic Tiles assure tenants of halls that are ever fresh, clean, inviting. And in every bath, both walls and floors have been finished with Ceramic Tiles in cheerful attractive colors that stay permanently bright and pleasant.



YOU DERIVE the greatest benefit from Ceramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.

GEO. KEISTER, Architect, Pompeii Tile Works, Tiling Cont.

In the same way you can use Ceramic Tiles to make sure that the first impression of visiting tenants is a good one . . . to sustain this favorable impression right to the apartment door . . . and finally within the apartment to preserve the attractiveness and charm which every room must today possess in addition to comfort and convenience.

The *first* cost of Ceramic Tiles is little more than for ordinary materials. After that decided economies follow. Ceramic Tiles are easily cleaned, never need repainting, and when properly laid never require replacement or repair.

Call in your tiling contractor on your next job whether it is apartment building or individual home. You will see the numerous ways you can use Ceramic Tiles—to sell houses and to keep them sold.

ASSOCIATED TILE MANUFACTURERS

420 Lexington Ave., New York, N. Y.

K E R A M I C T I L E S

ALHAMBRA TILE CO.
AMERICAN ENCAUSTIC TILING CO., LTD.
CAMBRIDGE TILE MANUFACTURING CO.
FEDERAL TILE COMPANY
FRANKLIN POTTERY
GRUEBY FAIENCE & TILE CO.

MATAWAN TILE CO.
THE MOSAIC TILE CO.
NATIONAL TILE CO.
OLEAN TILE CO.
THE C. PARDEE WORKS
ROSSMAN CORPORATION

STANDARD TILE CO.
THE SPARTA CERAMIC CO.
UNITED STATES ENCAUSTIC TILE WORKS
UNITED STATES QUARRY TILE CO.
WHEATLEY TILE & POTTERY CO.
WHEELING TILE CO.

Wo
by Sp
Floor

CONSTRUCTION MATERIALS of Quality for the INTERIOR Appeal to the Discriminating Buyer

Recent Improvements in Residence Floors

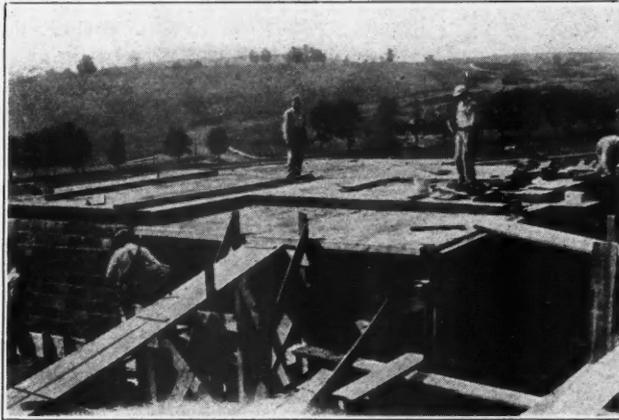
IN the past the mere mention of the use of concrete floors in residences would be pretty certain to bring forth a number of objections. Most common among these would probably be the claims that such floors were hard, damp and unattractive. Experiences with concrete floors, however, have shown these objections to be largely a myth, and their popularity, where used, is dispelling these misconceptions.

The greatest fallacy in these early impressions probably was due to the basis of comparison which seems to have been the concrete sidewalk or the basement floor. A more logical comparison would be the concrete floors in our modern structures. Let us consider the hotels which are competing to give the traveler the "last word" in comfort. Underneath the floor covering, whether it be carpet, rug, hardwood, tiling or terrazzo, is a reinforced concrete floor. The same is true of clubs, the better class of apartment buildings and the more expensive homes where everything from the basement to

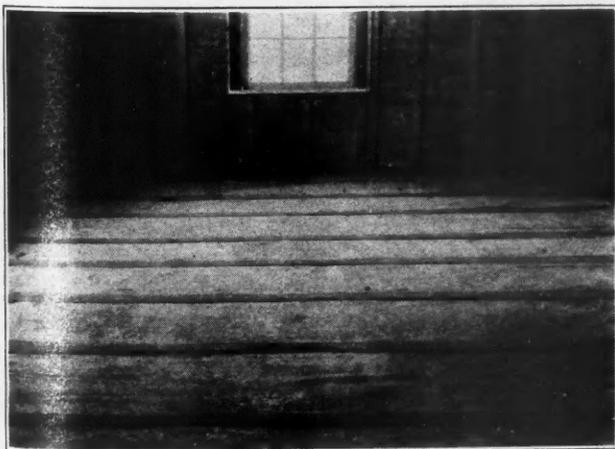
the roof is of the best materials—all designed to give a greater measure of safety, beauty, comfort and convenience to the occupants.

A hotel that is not of fireproof construction is obsolete and attracts few guests. Office buildings that are not fireproof go begging for tenants. We demand fireproof schools for our children, fireproof hospitals for the sick, fireproof theatres for our amusements, yet when we build homes we apparently forget the need of fire-resistive construction. We spend much of our time in our homes and of all structures they should be made firesafe.

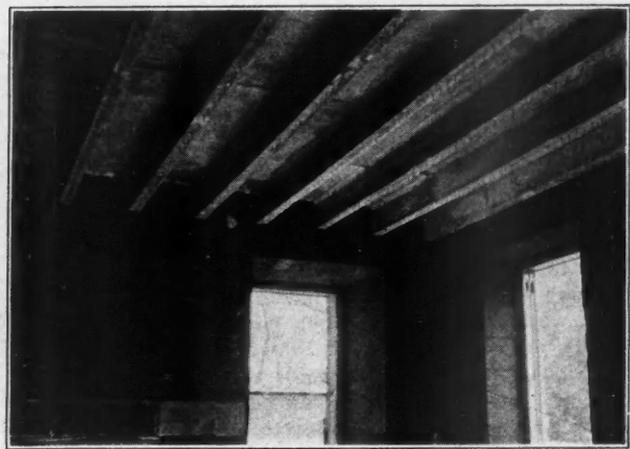
Much progress has been made toward fire-resistive construction within the last few years so that incombustible materials are used extensively in walls and roofs of residences. These act as a barrier to fires of exterior origin but firesafe floors are needed to give protection against fires which may originate in the basement. Statistics show a large percentage of



Concrete First Floors Provide a Fire-Stop for Fires That Originate in the Basement.



Wooden Sleepers Imbedded in the Concrete or Attached by Special Clips Provide a Means of Securing a Hardwood Floor Surface to the Concrete Slab.

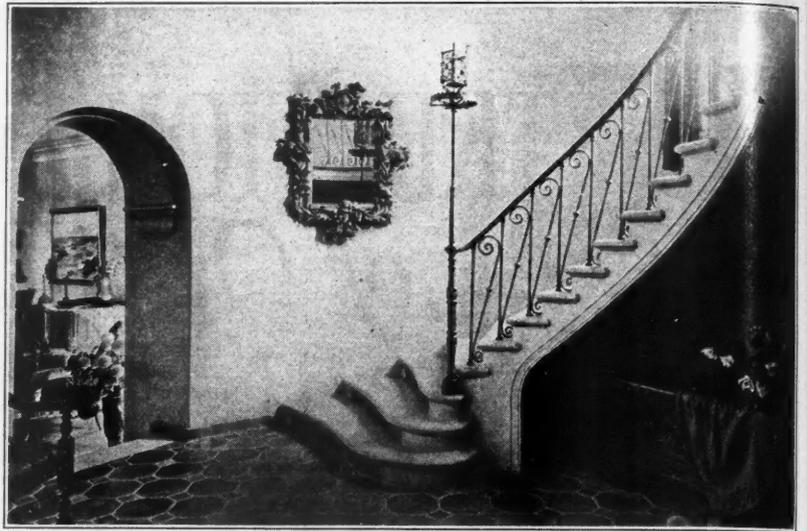


Hangers Imbedded in the Concrete Joists Provide a Means of Attaching Metal Lath to Which Plaster for Ceiling Is Applied.

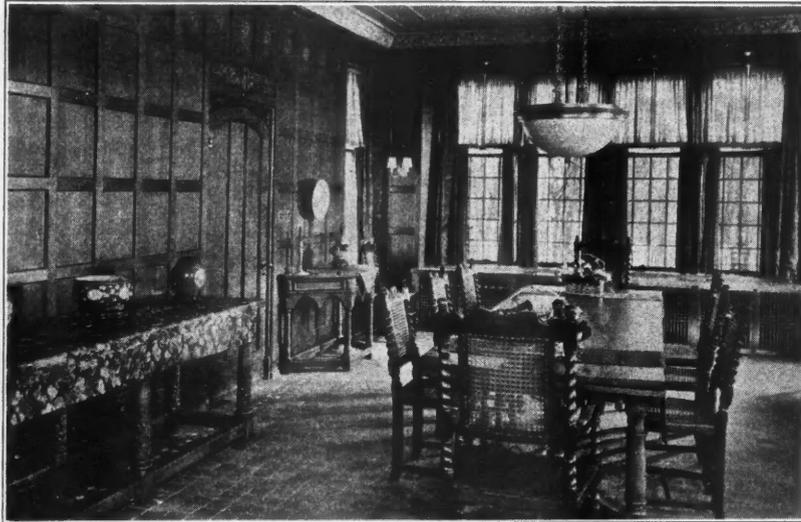
residence fires start in that part of the house. There can be no disagreement with the statement that a home should be a place of security and safety for the members of your family and your cherished possessions.

Aside from the firesafeness of concrete floors there are other features which make them desirable. The greater rigidity secured by the use of a firesafe floor eliminates vibration caused by heavy city traffic or by movement within the house. Concrete floors are also desirable in that they shut out noises from above or below. Especially in apartment buildings, objectionable noises from tenants on the floor above are not transmitted to the rooms below and the noises in the basement are confined to that part of the structure. Concrete floors also seal out smoke and dirt from the furnace and steam from the laundry.

The fact that practically all hospitals demand concrete floors is proof that they are sanitary and easily cleaned. There are



Concrete Tile Is Commonly Used in Hallways, Sun and Bath Rooms, But Its Use Is Not Confined to These Parts of the House.



Ceramic Tile Is Often Selected to Match the Walls or Furnishings, Both in Color and Shape. Here the square effect is predominating.

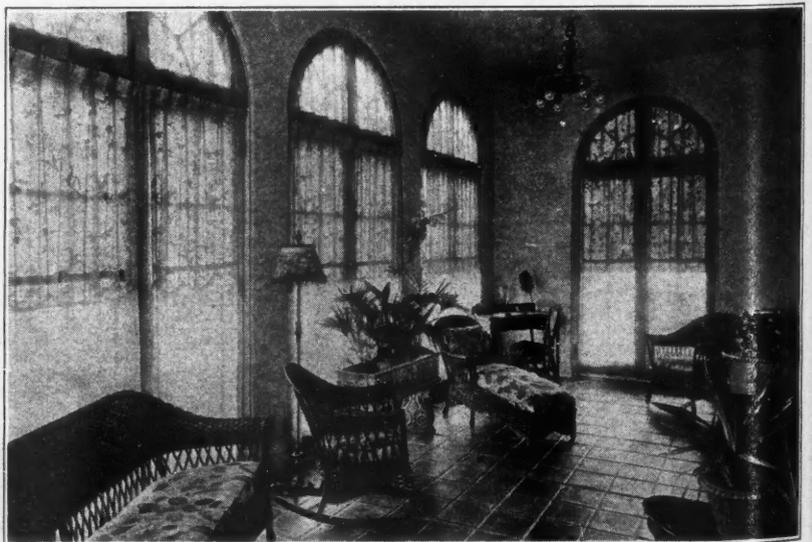
no crevices for dust and dirt and no lodging places for disease organisms, or troublesome vermin. Their smooth surfaces permit easy cleaning with soap and water methods which might damage other types of flooring. Another advantage is the absence of creaking and the elimination of the tendency of the floor to sag.

To have concrete floors in your homes does not mean that your floor should resemble a sidewalk. There are many attractive finishes available, both plain and decorative, which may be used to develop the artistic beauty of concrete floors.

In the reception hall the floor slab can be covered with tiling, either concrete or ceramic, worked out with invisible joints, the design and color being left to satisfy the individual taste of the owner or architect. The living room or library can be floored with hardwood which is nailed to sleepers embedded in the concrete or secured by floor clips so embedded. The dining room may be covered with tiling, plain colors

with wide joints, and the sun room with smooth, waxed terrazzo. Bedrooms may be finished in plain or tinted concrete surfaces, when it is intended that they should be partially covered with rugs. For the kitchen, linoleum may be cemented direct to the concrete slab. Bathrooms may be floored with the usual small ceramic tile.

The home owner in the past has been prejudiced against concrete floors in residences but these prejudices have been proved groundless. Today the home owner is taking advantage of the developments which have grown out of the construction of large structures such as apartment buildings and hotels. Old methods, like old habits, are hard to abandon. Evolution occurs in construction practices just as it does in other things. As our prejudices against concrete floors are overcome by the happy experience of those who are living on them, this type of floor is bound to become increasingly popular.



The Concrete Slab Itself May Be Marked Off Into Square or Irregular Patterns to Resemble Tiling Before the Concrete Has Received Its Initial Set.

SPECIALTIES for Quick Sales and PROFITS

CURTIS offers for 1929 AUTHENTIC REPRODUCTIONS of the most beautiful woodwork designs from historic America



Featured nationally and priced extremely low. They will make your houses sell and rent better!

IMAGINE being able to show prospective buyers and tenants reproductions in your houses of woodwork from some of the finest old homes in America—

At a cost to you of very little more than ordinary woodwork! Now it can be done, through new additions to the Curtis line.

These new Curtis reproductions are the most distinguished architectural details that you can build into your houses. They cannot fail to interest and attract prospective buyers.

Here is one of them—a reproduction of a mantelpiece in the old Joseph Webb house at Wethersfield, Connecticut. This design has been produced in limited quantities and can be purchased through Curtis dealers, for delivery prior to May 1, 1929, for only \$33.76!

It is but one of a large line of authentic woodwork reproductions, made of selected wood by skilled craftsmen. Doors, windows, frames, stairwork, porch work and interior and exterior trim are other items equally distinguished in design and workmanship which you can purchase from any Curtis dealer.

The leading dealer in woodwork in your town (if you are located East of the Rockies) is probably the Curtis dealer.

If he is not, however, write us for full particulars. Also use the coupon below for free literature descriptive of new Curtis mantels.

Visit Curtis Woodwork, Inc., Display Rooms and Sales Office, Room 201, 9 East 41st St., New York City. Chicago Display Rooms, Curtis Door & Sash Co., 1414 S. Western Avenue, Chicago, Ill.

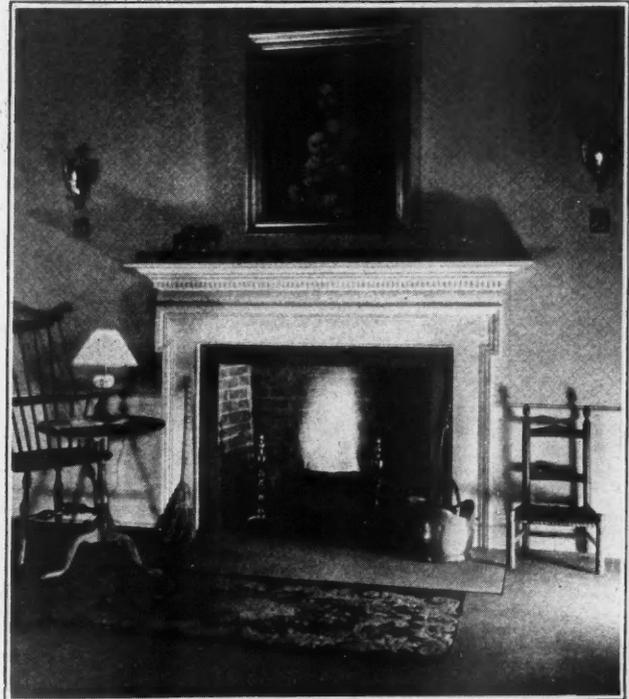
The Curtis Company Service Bureau, 930 Curtis Building, Clinton, Iowa

Representing

Curtis Companies, Inc., Clinton, Ia.; Curtis Bros. & Co., Clinton, Ia.; Curtis & Yale Co., Wausau, Wis.; Curtis Sash & Door Co., Sioux City, Ia.; Curtis, Towle & Paine Co., Lincoln, Nebr.; Curtis Door & Sash Co., Chicago, Ill.; Curtis-Yale-Holland Co., Minneapolis, Minn.; and Curtis, Towle & Paine Co., Topeka, Kansas.

This trade-mark appears only on Curtis Woodwork and no item of woodwork that does not bear this mark is genuine Curtis Woodwork. For your own protection, be sure this mark is on each piece.

**1866
CURTIS
WOODWORK**



Few houses in America are richer in historical significance than the old Joseph Webb house, which was built in 1752, and is still standing, in Wethersfield, Connecticut. It was in this house that General Washington held the council of war which eventually led to the capture of Cornwallis at Yorktown.

And here is the mantel in the dining room of the old Webb house, faithfully reproduced by Curtis, for modern homes. Every detail is here: the delicately molded frame, the gracefully shaped frieze, the dentil molding and the shelf of unusual charm. The mantel (C-6057) is made in white pine and can, like the original, be painted. It is also beautiful when oiled, stained, waxed or finished

natural. The shelf is 6 ft., 6 5/8 inches long overall, 4 feet, 5 1/4 inches high, and 5 1/4 inches deep; and the wood opening is 4 feet, 2 inches wide, and 3 feet, 1 inch high. Priced to sell, unpainted, at only \$33.76!

Other Historic Reproductions

Other reproductions of famous old pieces of woodwork included in the Curtis line are: Mantel from the Vernon house, built in 1758; stairwork from the Burlington County Court House, 1796; stair parts from the William Judson house, 1723, and the George Read II house, 1791-1801; also mantels and stairwork drawn from English inspiration.



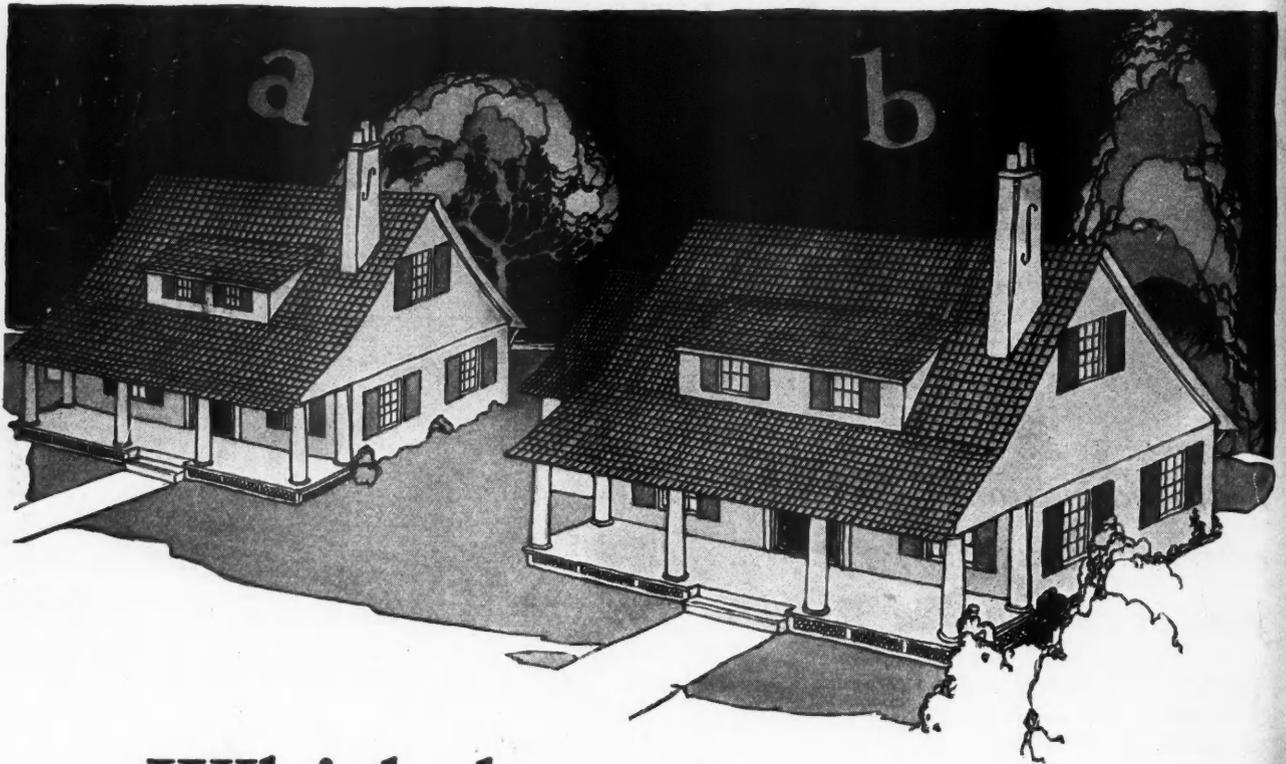
THE CURTIS COMPANIES SERVICE BUREAU,
930 Curtis Building, Clinton, Iowa.

Please send me free literature descriptive of new Curtis mantels and other reproductions.

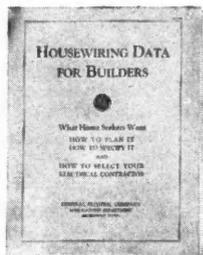
Name

Address

City State



Which house would *you* buy?



Send to Sec. W-162
for a copy of
"Housewiring Data
for Builders"... it is
full of helpful facts.

Put yourself in the place of the purchaser. Would you buy a house that had old-fashioned wiring, with insufficient outlets and few switches? Or would you be inclined to favor the house with the General Electric Wiring System?

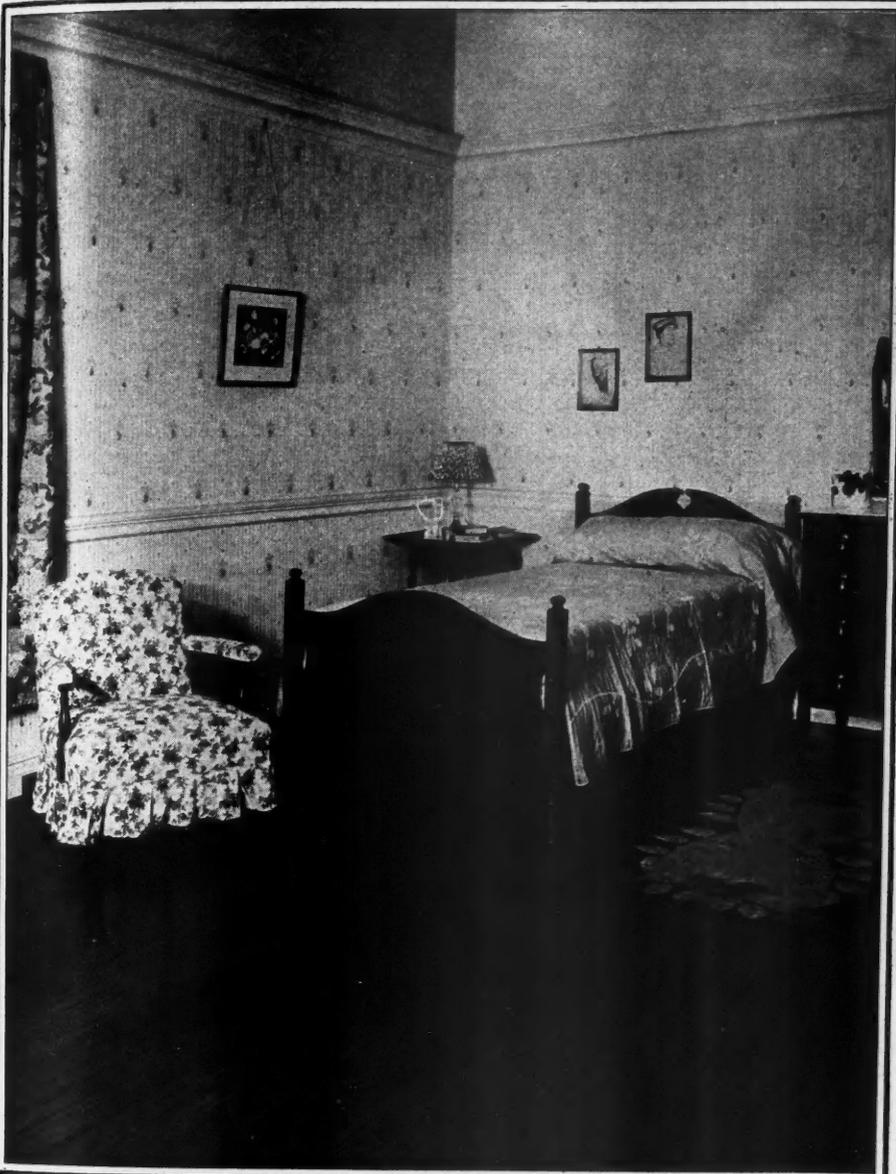
You would see plenty of outlets for comfort in every room. You would see a switch accessible to every door. You would accept the General Electric name as a guarantee of lasting electrical service. Of course you would . . . and so does the prospective purchaser who looks at the houses *you* build!

GENERAL ELECTRIC WIRING SYSTEM

MERCHANDISE DEPARTMENT ~ GENERAL ELECTRIC COMPANY ~ BRIDGEPORT, CONNECTICUT

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

SPECIALTIES for Quick Sales and PROFITS



**“92%
of All Houses
Are Bought
On The Word of
A Woman”**

When you are building to sell or rent don't forget it is the woman you must please. Most women are eye-minded. Ten things you may *tell* her will mean less than one she sees.

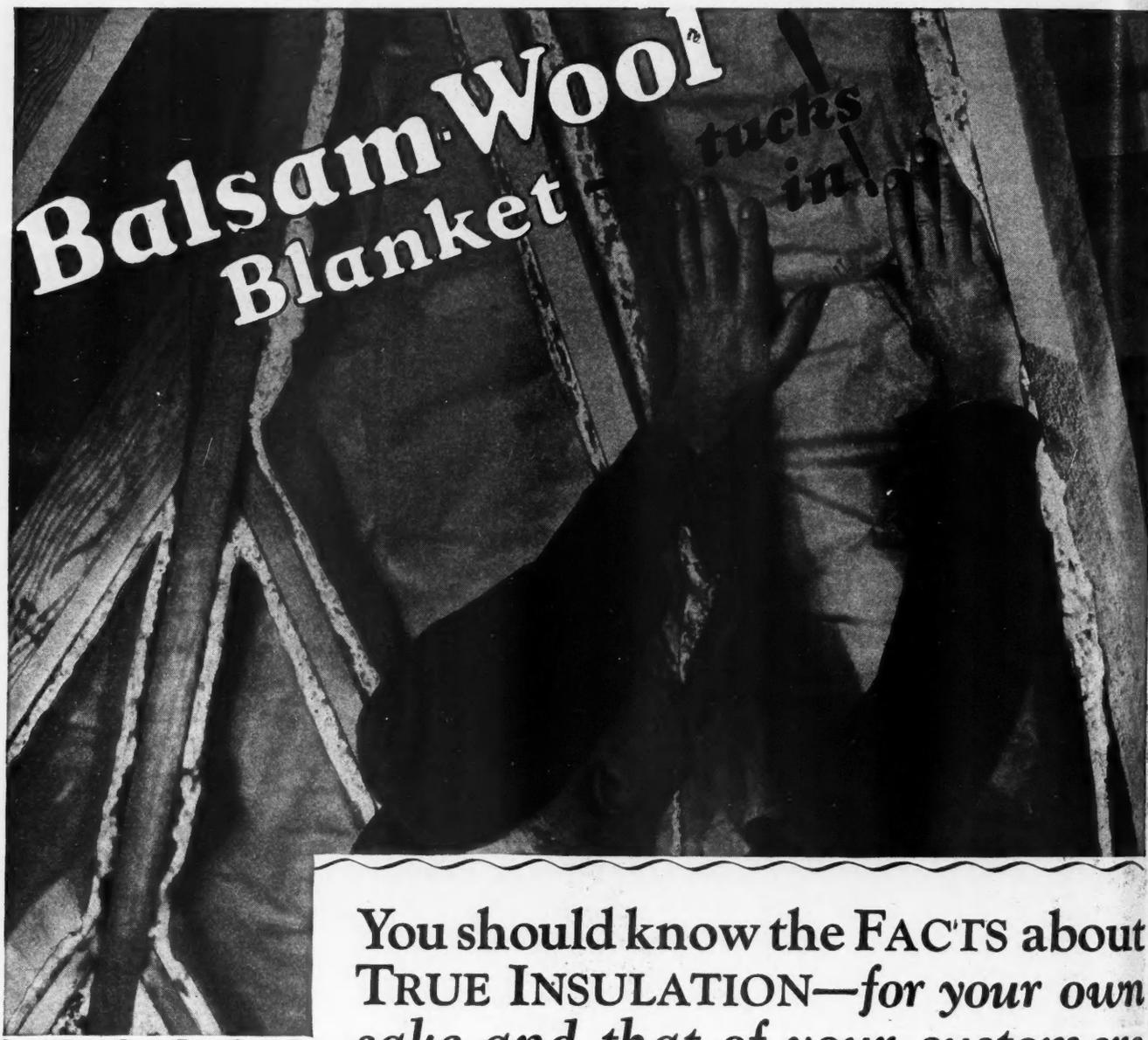
Yet the things that please your prospect do not always cost more. Floors of W. & J. Sloane Linoleum, for example. When specified in the original plans these colorful floors actually cost less.

It will help, too, to mention the name W. & J. Sloane Linoleum to your prospect. It will mean something to her to know that the linoleum is made by a house whose reputation is built on style leadership. W. & J. Sloane Mfg. Co., Trenton, N. J.

**W. & J. SLOANE
L I N O L E U M**

**Special Service
For
Contractors**

As selling agents for W. & J. Sloane Linoleum, we give practical cooperation to investment builders. This includes the selection of suitable grades and patterns for specified rooms, the preparation of laying specifications, securing of estimates, etc. This service extends also to advice on harmonizing color schemes for model homes. This cooperation is without charge. Merely write your problem to: Contractors Service Division, W. & J. Sloane, 577 Fifth Ave., New York City.



You should know the FACTS about TRUE INSULATION—for your own sake and that of your customers

Whether you build houses on contract or for sale, it is important for you to get right on the insulation question.

The purpose of insulation is to keep heat in and cold out.

Insulation which is not flexible—which does not tuck into every nook and corner, cannot do that completely. Insulation which is too thin cannot do it. Insulation which is made to serve some other purpose as well can only do it in a limited way.

Balsam-Wool—thick and flexible does it—it is true insulation—a heat saver that can be truly considered an essential

part of the complete modern heating system—so essential a part that its cost is largely met by the saving it makes possible in size and cost of boiler and radiators.

It will pay you to recommend Balsam-Wool on your contract jobs—pay you in satisfied owners. It will pay you to use it when you build on your own account—pay you in ready sales and pleased customers.

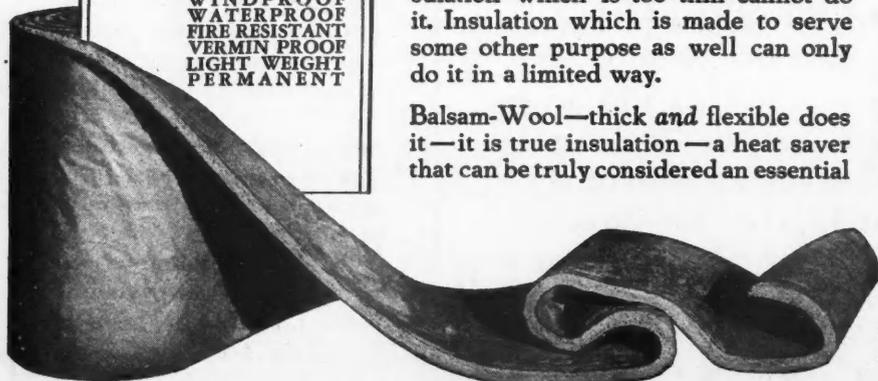
If your regular lumber dealer does not sell Balsam-Wool, tell us and we will put you in touch with a reliable dealer who does.

WOOD CONVERSION COMPANY CLOQUET, MINNESOTA

Makers of Balsam-Wool, the Flexible Insulating Blanket. Also Makers of Nu-Wood—the All Wood Insulating Wall Board and Lath.
Sales Offices: New York, 101 Park Ave.—Detroit, 505 Stephenson Bldg.—Chicago, 360 N. Michigan Ave.—Minneapolis, Baker Bldg.—Kansas City, 231 W. 47th St.—Seattle, 6659 White Bldg.

Balsam-Wool is a guaranteed Weyerhaeuser product—a blanket of fluffy wood fibre that looks and acts like sheep's wool. It is TRUE Insulation—keeping the house warm in winter and cool in summer—because it is—

FLEXIBLE—THICK
EFFICIENT
WINDPROOF
WATERPROOF
FIRE RESISTANT
VERMIN PROOF
LIGHT WEIGHT
PERMANENT



SOLD THROUGH RETAIL LUMBER DEALERS

SPECIALTIES for Quick Sales and PROFITS



Scene in a model home recently built by the New York State Federation of Women's Clubs at Rockville Center, Long Island, N. Y., in which TrimPak was used for doors and windows.

Modernize the Trim, Too! — Replace Old-Style Patterns with TrimPak

In the old houses that you modernize this year, don't overlook replacing the old-fashioned door and window trim with a bright, new, present-day style of TrimPak. The old trim would be very conspicuous and unsightly alongside the many modern touches you'd put in.

The door and window trim is not part of the structure of the house, and is easily removed. TrimPak can be quickly put up at moderate cost, and its smooth, sanded surfaces take all the modern finishes perfectly. TrimPak is readily sold on remodeling jobs on its appearance, and offers builders an added profit source that is very much worth while.

TrimPak is shipped from the mills in sturdy cartons, which protect the fine surfaces from dirt and moisture until the carpenter is ready to use it. Two cartons contain complete trim for a door or window opening, one cut being necessary to fit each piece. No sorting is necessary and there are no delays on the job because of shortages.

TrimPak is sold by good retail lumber dealers everywhere in all desired woods and patterns. Use it on your next modernizing job and note the satisfaction of your customer and the ease with which your men can put it up. It is the ultimate interior trim, saving time and money, and giving a better job that endures through years of use.



44 Whitehall Street
New York, N. Y.

TRIMPAK CORPORATION

624 S. Michigan Ave.
Chicago, Ill.

Ask your lumber dealer for full particulars, or mail the coupon at right for complete information on TrimPak.

TRIMPAK CORPORATION, 44 Whitehall Street, New York, N. Y.

AB-2

Please send complete information on TrimPak, and the story of properly-dried lumber.

Name _____

Address _____

Please check the square that identifies you, so we may reply most intelligently:

Architect

Builder

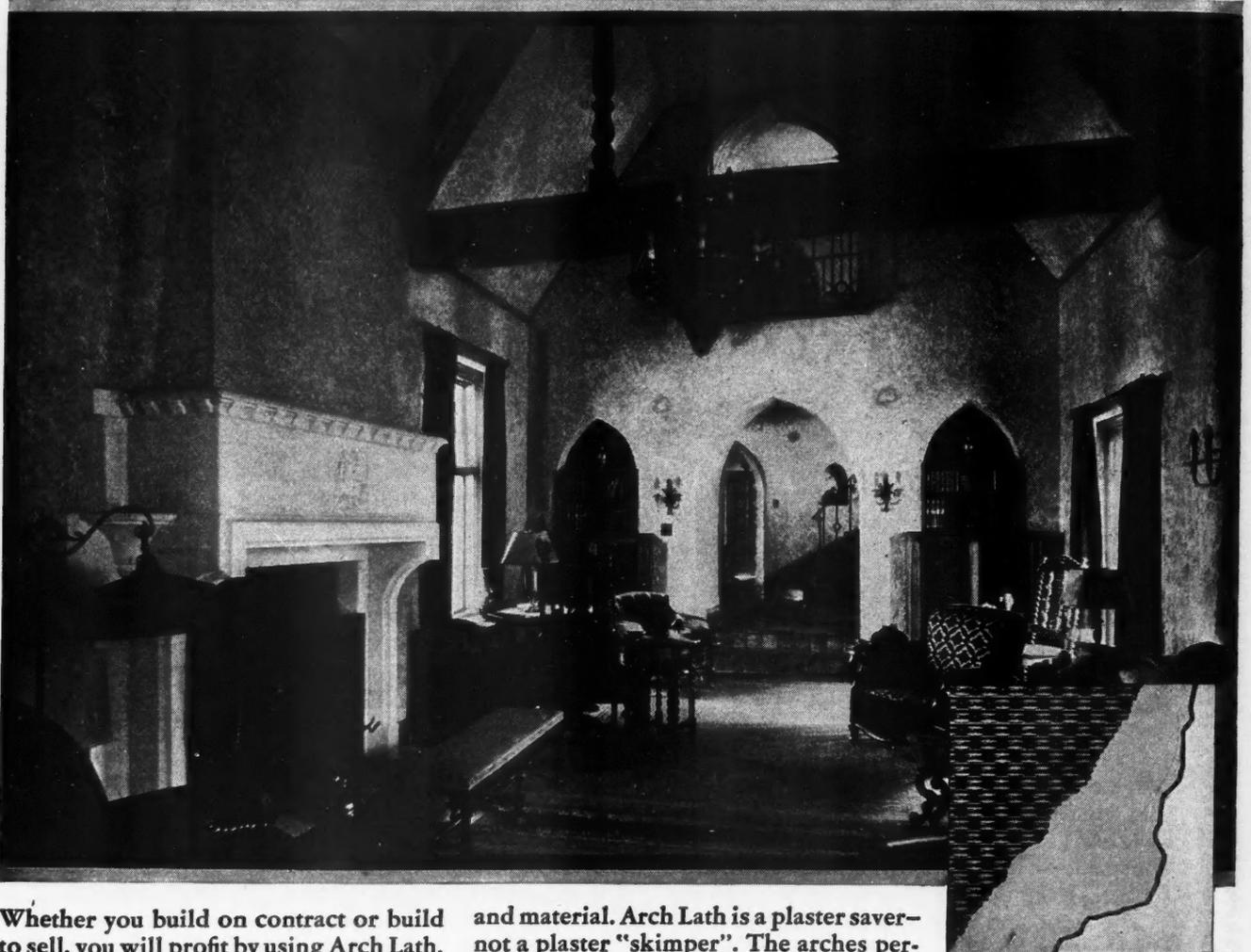
Contractor

Retail Lumber Dealer

Home Builder

SPECIALTIES for Quick Sales and PROFITS

Better Plastering at Lower Cost with ARCH LATH.



Whether you build on contract or build to sell, you will profit by using Arch Lath.

This distinctive metal lath enjoys national prestige. It has been used in many of the country's finest buildings—auditoriums, schools, apartment buildings, hotels, public buildings—in homes, large and small, where skyscraper fire-safety was a chief consideration. Its use assures owner satisfaction and makes homes built on speculation easier to sell.

The favorable low cost of Arch Lath is the result of definite savings in time, labor

and material. Arch Lath is a plaster saver—not a plaster "skimper". The arches permit only the correct amount of plaster to squeeze through the openings for perfect "key". The rigidity of the sheets of Arch Lath makes for easy, quick erection and assists rapid plastering. There is no sagging between supports and no "give" under pressure of the trowel.

This, briefly, explains why Arch Lath enjoys wide popularity. Let us send you more information—prices—samples. Write to us today.

WHEELING CORRUGATING COMPANY, Wheeling, West Virginia

Branches: New York, Buffalo, Philadelphia, Chicago, Minneapolis, St. Louis, Kansas City, Chattanooga, Richmond, Des Moines, Columbus, Ohio

Photograph of Living Room, George Mellow home, Fair Oakes Estate, St. Louis County, illustrates how effectively unusual plaster textures are carried out on Arch Lath. This plaster base has the rigidity of a solid sheet of steel, making it easy to plaster—insuring better workmanship.

George Mellow Home

MARCELL BOULICAULT
Architect

KUHN CONSTRUCTION
COMPANY

General Contractors

H. C. ANDERSON
Plastering Contractor

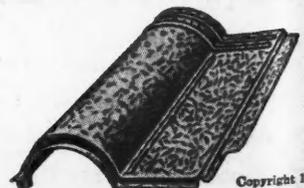


For Weather-proof Roofs of Distinction—
Wheeling Spanish Tile

Wheeling Spanish Tile Roofs have all the character and charm of old Spain. The most artistic roof covering manufactured.

Wheeling Spanish Tile is low in cost, durable, leak-proof and lightning-proof.

Write for full information



Copyright 1929

SPECIALTIES for Quick Sales and PROFITS



*In his own home Mr. Jordan tested Laminex doors
... now he specifies them on all his jobs*

Building a home for himself..

Robert Jordan solved a business problem

WHEN Robert Jordan, president of the contracting company that bears his name in Vineland, N. J., recently built a new home for his family he decided to try out those Laminex doors he had heard so much about. He was curious.

Door troubles have always been a problem to the contractor. Here was Mr. Jordan's chance to learn if with Laminex doors he could avoid all that grief and expense.

He writes now, "I know Laminex doors will never swell or warp ... I'm going to specify them on all my jobs."

Every day some contractor makes the same discovery. Going back to fix swollen or badly warped doors is a thing you're not up against when you use Laminex doors. These doors are built scientifically to overcome the cause of warp-

ing and swelling. They *can't* go wrong.

And all it costs the owner to get the assurance of perfect Laminex door service is, for example, merely three or four dollars more for *all* the inside doors in a six-room house!

Aren't you interested in learning *more* about these trouble-proof doors, and who sells them in your town? Also something about the beautiful new Philippine Laminex doors and trim? Clip the coupon below right now.

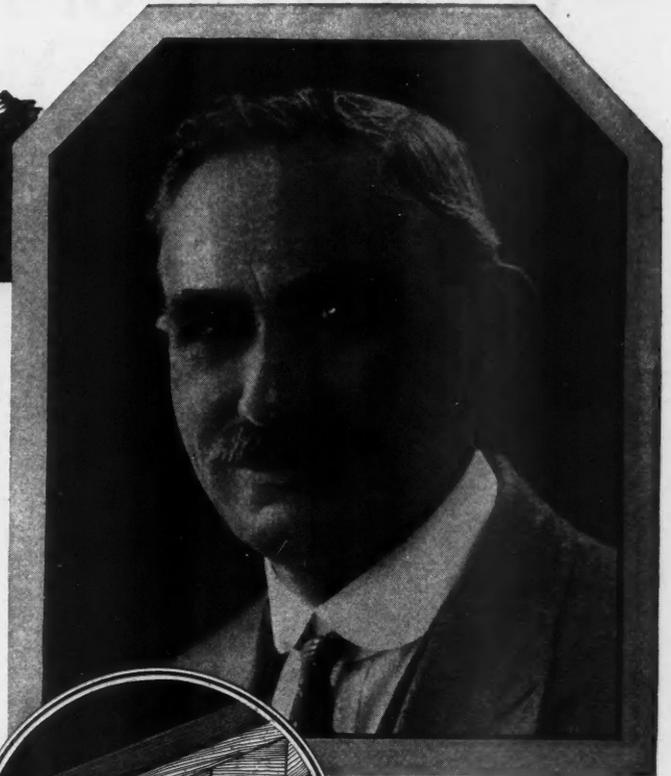
THE WHEELER, OSGOOD COMPANY,
Dept. E-29, Tacoma, Washington.

*Please tell me more about trouble-proof
Laminex doors and where I can get them.*

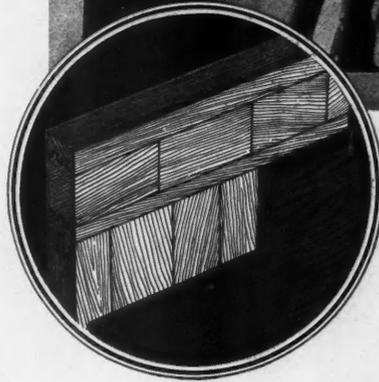
Name.....

Address.....

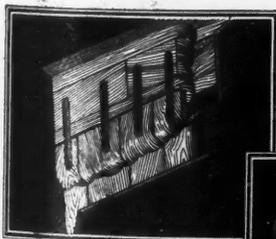
City..... State.....



*Robert Jordan, a leading contractor in
Vineland, N. J.*



*The Laminex stile is built of separate
core blocks with crossed grains. Any ten-
dency of the one to shrink or swell is
counteracted by an opposing tendency of
its neighbor. Blocks are locked together
and dove-tailed to full-length edge braces
with water-proof Laminex cement*



*3-ply panels with grains crossed
and water-proof cemented.
They won't buckle or blister.
And there's no danger of pitch
breaking out!*

*Oversize (5/8") dowels—and one
more than is used in the average
door. The sections are welded
with Laminex cement under tre-
mendous pressure*



LAMINEX DOORS

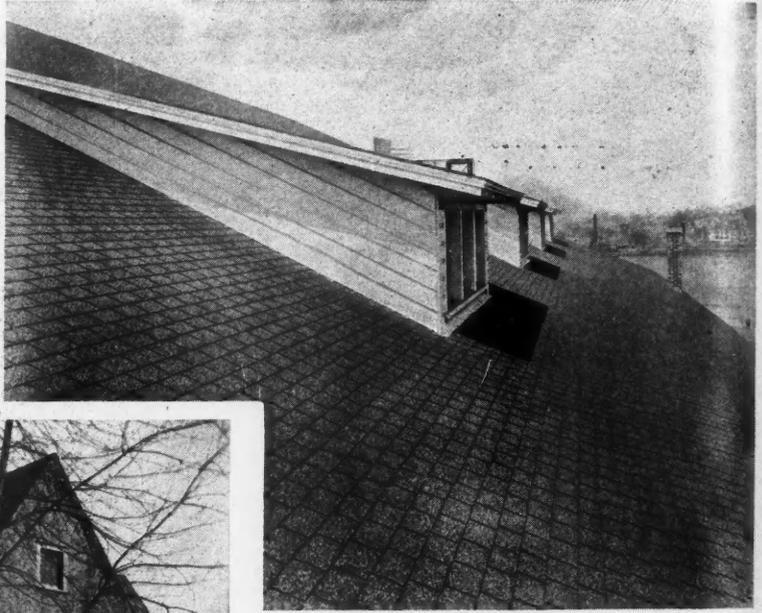
Will not swell, shrink, or warp

What Kind of Roofing for the Houses You Build?

Exterior Construction Specialties Are Most Important

NEVER before in the history of building has so much attention been paid to colors, textures and their effect on the appearance of a building. Nor has any other building material been more influenced by this demand than has roofing. It is fortunate, therefore, that, just as there are many individual tastes, so there are now many colors, textures and effects obtainable in roofings.

Manufacturers of slate surfaced or stone coated asphalt roofings have provided a bewildering variety of shades, tints and blends of color. Red, green and blue-black seem to be the standard colors furnished in practically all brands. The following additional tints and shades are pro-



Asphalt Strip Shingles Surfaced with Crushed Slate or Rock in Its Natural Colors Are Shown on the Roof of This Large Dance Hall. This type of roof covering comes in many pleasing color combinations.



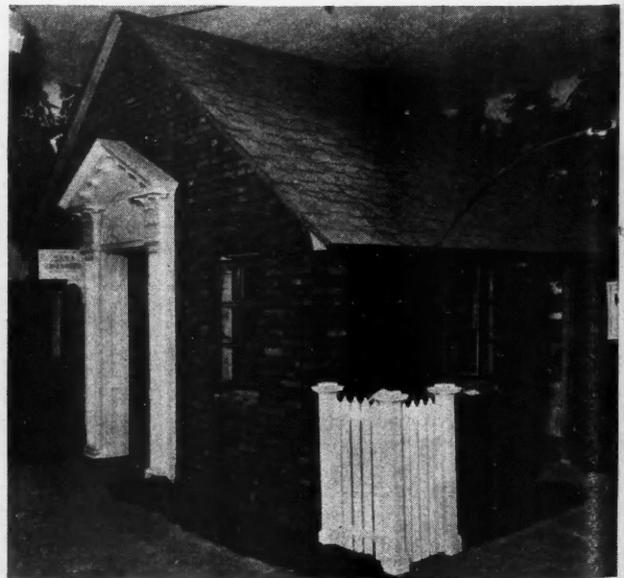
Variegated Colors Add to the Attractiveness of the Asphalt Shingle Roof on This Comfortable Looking Home.

curable in asphalt and asbestos roofings: heather, autumn-leaf brown, heatherbloom, chrome green, golden buff, purple bronze, green-gold, Indian red, violet, sea green, golden bronze, copper, jade and blue.

Blended colors are particularly popular and extremely effective and tasteful in the "color-drift" effects. The color-drift effect at its best resembles a drift of golden brown or buff autumn leaves on a roof and several colors are used which shade and blend into each other. Some of these



The Strength of Asbestos-Cement Shingles is Indicated by This Picture Which Shows Some Boys Playing "Indian" on the Roof. Note the antique effect of the irregular sizes.



Quarried Slate of Soft Blue-Gray Color Was Shown on the Roof of This Exhibit at the Own Your Home Exposition, New York City. Slate is a time-tried roofing material.

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roofs

SPECIALTIES for Quick Sales and PROFITS

are in tapestry colors and effects. Then there is blended purple and blended buff, mottled red and mottled green. Rainbow colors are used which blend into each other as in a rainbow but in a restrained and softened effect. Massive shingle effects are obtainable, both in square and hexagon butts, and economy in laying is secured through the use of twins and fours. The life of well made asphalt roofings and shingles, containing heavy felts and good asphalt saturation and coating, probably exceeds twenty years. Besides their good weather qualities, they are spark-proof.

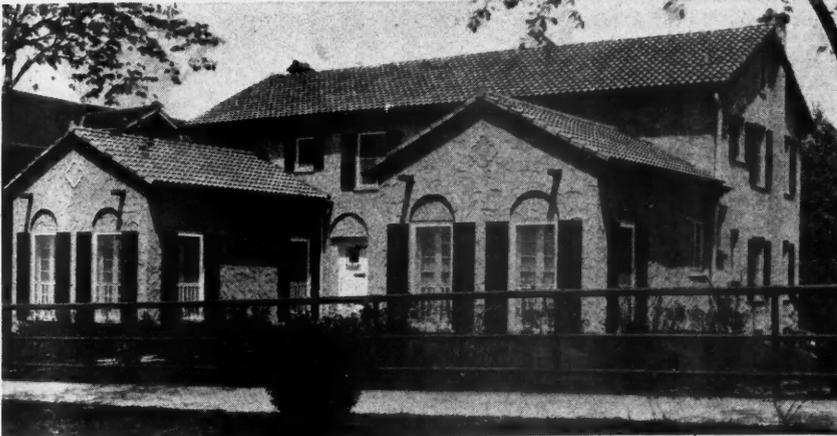
Asbestos shingles are fire-safe, durable and can also be obtained in artistic color blends. As a rule, they are massive and heavy, producing the much desired shadow lines which add to their attractiveness from the architectural point of view. Asbestos shingles of the hexagon shape are quite popular, particularly in the blended colors. Antique roof effects are obtainable in asbestos shingles which can be secured in the varying widths and irregular sizes of the old hand-made wooden shingles. No limit has ever



Even When Illustrated in Black and White, the Color Values of These Asbestos-Cement Shingles Are Apparent. They are large and massive and can be had in many pleasing color combinations.

shingles in thatched effects, rounded at the eaves, peaks and valleys. One of our illustrations reveals the attractiveness of this thatched roof effect.

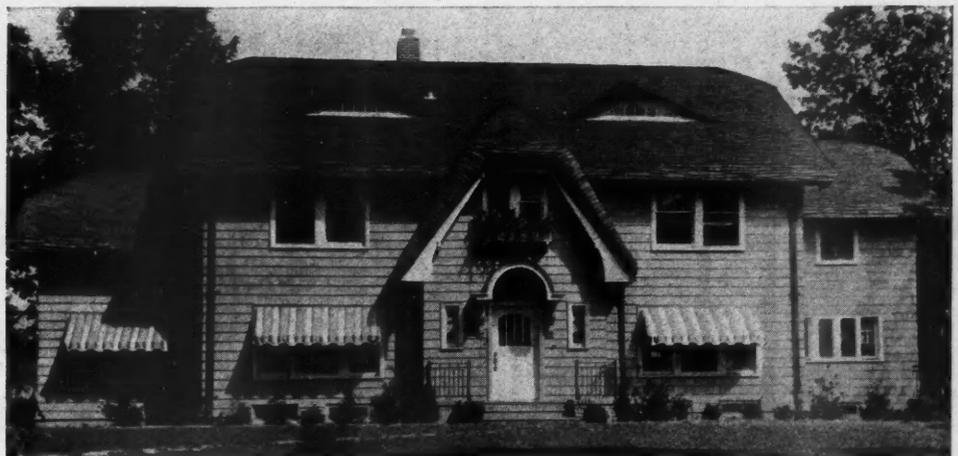
Red and green Spanish roof tile have furnished a cheerful note of color wherever Spanish architecture is popular. This influence is probably strongest on the Pacific Coast and in Florida but is spreading to all parts of the United States. These red and green Spanish roof tile are now made of concrete, and one of our illustrations shows this fine roofing effect.



The Effect of Red Spanish Roof Tile Made of Concrete is Illustrated in This Picture. The green color is also popular.

been set to the life of asbestos-cement shingles and they will probably outlast any ordinary building.

Clear edge-grain cedar shingles are said to have a life of at least twenty years on the roof and are now to be had stained in most attractive colors. They are enjoying considerable vogue for siding as well as roofing and come as large as 24 inches long and 1/2-inch thick at the butt and are usually laid 10 or 11 inches to the weather. They can be had in as many as 31 colors and a great variety of variegated color effects can be obtained. Better class homes are often roofed with these wooden



Stained Wooden Shingles Laid to Produce the Thatched Effect Are Shown on This Roof. No less than 31 tints and shades of color may be secured in these edge-grain, red cedar shingles.

SPECIALTIES for Quick Sales and PROFITS

America's leading builders use Fenestra Casement Windows

C. W. WEISS, SEC. AND TREAS. RAYMOND G. CLARK, PRESIDENT C. E. BHEED, VICE-PRESIDENT

WEBB-CLARK COMPANY
ENGINEERS GENERAL CONTRACTORS
REALTORS

422 W. LIBERTY STREET
LOUISVILLE, KY.

August 29, 1928.

Mr. Lewis N. Wesch, Fenestra Agent,
318 W. Main Street,
Louisville, Ky.

Dear Sir:-

Our experiences with Fenestra steel casement windows are something we are glad to share with the building profession in general.

We have investigated them from every angle - appearance, upkeep, installation and cost, finding that they meet our requirements fully.

Installations in houses ranging in price from \$7,500.00 to \$30,000.00, apartment buildings large and small, and in community buildings enable us to be sure of the truth of the above statement.

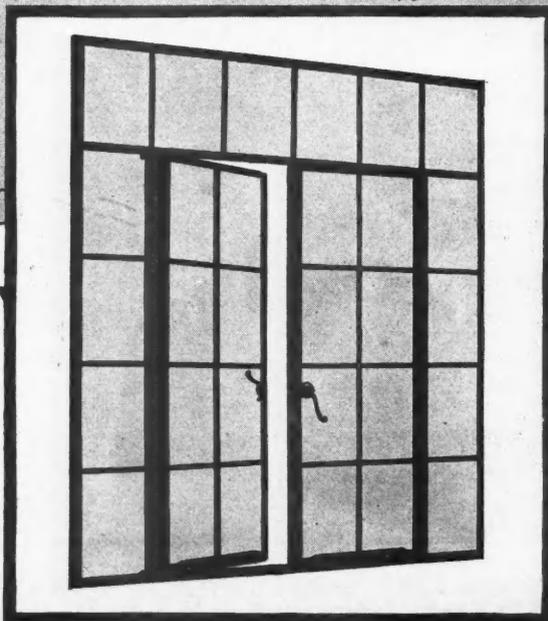
There is no question but what Fenestra Steel Casement Windows are a big improvement in residential building over wood windows, and we are glad to go on record to that effect.

Very truly yours,
WEBB-CLARK COMPANY, INC.
Raymond G. Clark
Raymond G. Clark.

RGC:RTH



Mr. C. R. Webb (foreground)
and Mr. R. G. Clark



Fenestra Casement type 6528 VC. Note fixed glass lights along sides and across head, to take care of drapes and valance. This is only one of more than fifty stock types. Catalog free for the asking.

SPECIALTIES for Quick Sales and PROFITS

Example.. *The Webb-Clark Co.* Louisville

"We've investigated Fenestra windows from every angle—appearance, upkeep, installation and cost. They are a big improvement," writes Mr. R. G. Clark in his letter reproduced at the left.

One of the South's leading builders, the Webb-Clark Company has consistently used Fenestra windows in many types of buildings, including single houses, large residential developments, apartments, terraces, flats and community buildings.

In two of their outstanding residential developments—Castleton and Normandy—they used Fenestra Casements.

Fenestra Casements save the builder installation labor costs and material expense, because they reach the job COMPLETE—hinged, fitted, hung, painted, et cetera. They help sell houses because they offer modern window convenience and beauty. Their cost is low because they are built in large volume. More than 50 types are carried in stock by local dealers, for immediate delivery. Try Fenestra Steel Windows on your next construction job.

DETROIT STEEL PRODUCTS COMPANY
2304 EAST GRAND BOULEVARD, DETROIT, MICHIGAN
Factories: Detroit, Michigan, and Oakland, California. Convenient Warehouse Stocks



Mayflower Apartments, Louisville. Built by the Webb-Clark Co. Fenestra Casements used throughout.



Another apartment house job of the Webb-Clark organization, the Elizabeth Apartments, Louisville. Note size of Fenestra Casements.



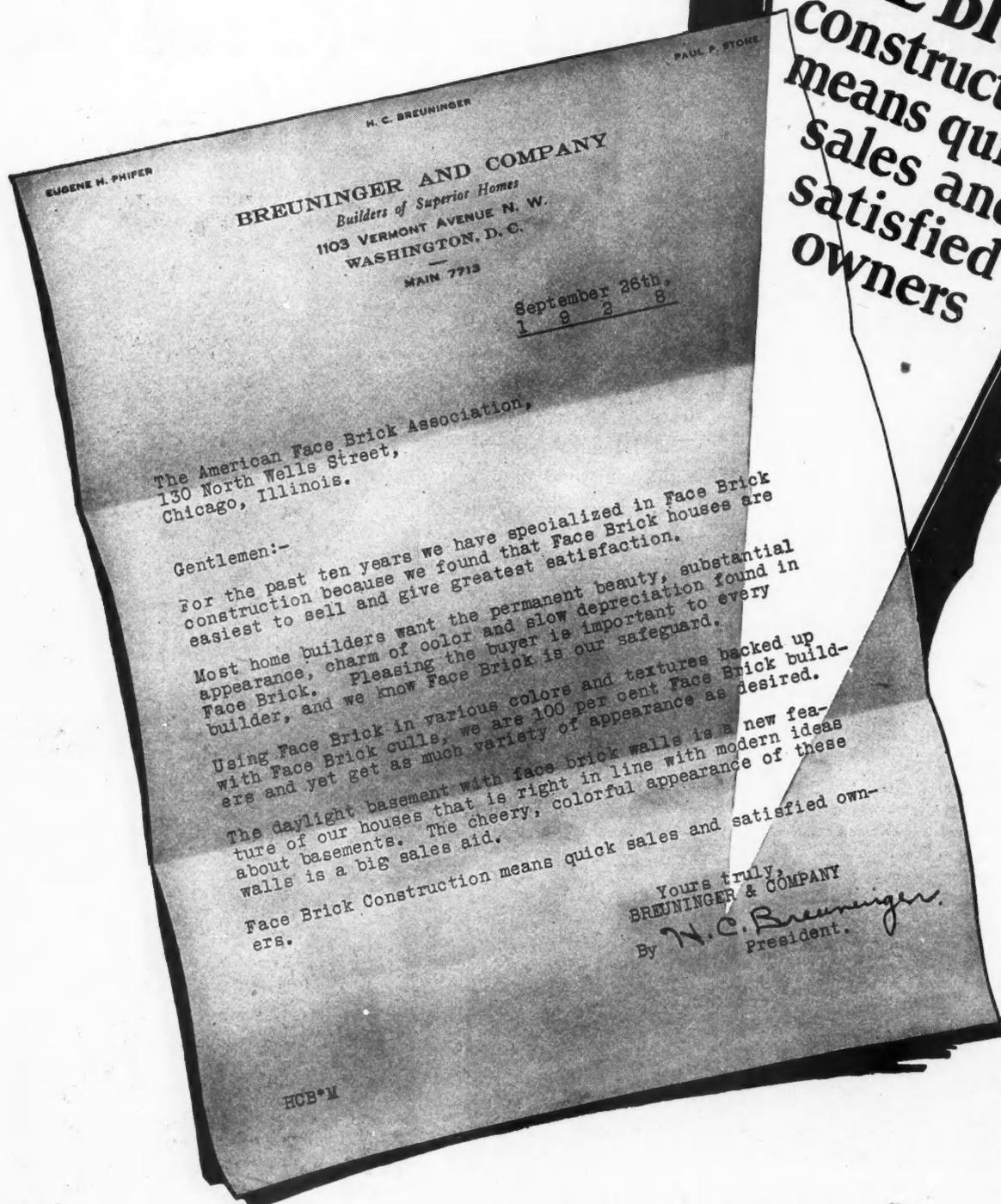
Webb-Clark use Fenestra Casements in inexpensive houses. This one sells for about \$7500.

Fenestra

casement windows

SPECIALTIES for Quick Sales and PROFITS

FACE BRICK
 Construction
 means quick
 sales and
 satisfied
 owners



EUGENE H. PHIFER

H. C. BREUNINGER

BREUNINGER AND COMPANY
Builders of Superior Homes

1103 VERMONT AVENUE N. W.
 WASHINGTON, D. C.

MAIN 7713

September 26th.
 1 9 2 8

The American Face Brick Association,
 130 North Wells Street,
 Chicago, Illinois.

Gentlemen:-

For the past ten years we have specialized in Face Brick construction because we found that Face Brick houses are easiest to sell and give greatest satisfaction.

Most home builders want the permanent beauty, substantial appearance, charm of color and slow depreciation found in Face Brick. Pleasing the buyer is important to every builder, and we know Face Brick is our safeguard.

Using Face Brick in various colors and textures backed up with Face Brick culls, we are 100 per cent Face Brick builders and yet get as much variety of appearance as desired.

The daylight basement with face brick walls is a new feature of our houses that is right in line with modern ideas about basements. The cheery, colorful appearance of these walls is a big sales aid.

Face Brick Construction means quick sales and satisfied owners.

Yours truly,
 BREUNINGER & COMPANY

By *N.C. Breuninger*
 President.

HCB*M

TODAY buyers are insisting on permanence of beauty as well as of materials. They want lasting color-charm and natural beauty. They want strength, fire-safety, low upkeep and slow depreciation. Consequently the Face Brick house gets the preference. "It sells easiest and gives greatest satisfaction."

Breuninger and Company take full advantage of this

preference by building exclusively of Face Brick. In addition to giving their experience in this letter, they introduce a new and interesting feature—the modern daylight basement with Face Brick walls.

You will find many ideas and aids to building and selling in this Association's booklets and house plans. Send your letterhead for information about them.

THE AMERICAN FACE BRICK ASSOCIATION

2163 City State Bank Building, Chicago, Illinois

If you live in Canada please write to 26 Queen Street East, Toronto, Ontario

Truth

about shingles stained under pressure

The C. A. Mauk Lumber Company has been staining shingles by a pressure process for three years. This Company developed, patented and pioneered the method. It has been brought to its present practicability under our supervision ... in our plants. Naturally our opinion on pressure staining shingles is valuable. Here are facts:

Mauk selected, clear, all heart, vertical grain shingles are stained under 32 tons of hydraulic pressure per bundle. Greater pressure is of no value. Less pressure doesn't do the job.

This pressure forces the creosote oils *through* the shingle. It forces the pigment and pure linseed oil binder deep *into* the open grain or pores of the surface. This assures better coverage, longer lasting colors.

But pressure staining alone isn't enough!

Only a certain amount of stain can be applied with one coat no matter

what method is used. By the Mauk process *two gallons of stain per square* is forced into the shingles with the first coat.

Then we give Mauk shingles a *second pressure bath* and *1 1/2 more gallons of stain* is applied. The Mauk *first coat is not a primer*. Both coats are of the same high-grade compound.

Pressure staining is good. But realize for your own greater profit that the *Mauk pressure method plus two pressure treatments plus special stain* is better.

Write for more detailed information.

THE C. A. MAUK LUMBER CO.
TOLEDO, OHIO

MAUK
DOUBLE-DIPPED
MAUK

Shingles Stained Under Pressure

Packaged

All Mauk Shingles are wrapped — dust-proof, practically rain-proof. Easy to handle — and a sure mark of identification.

Special Stain

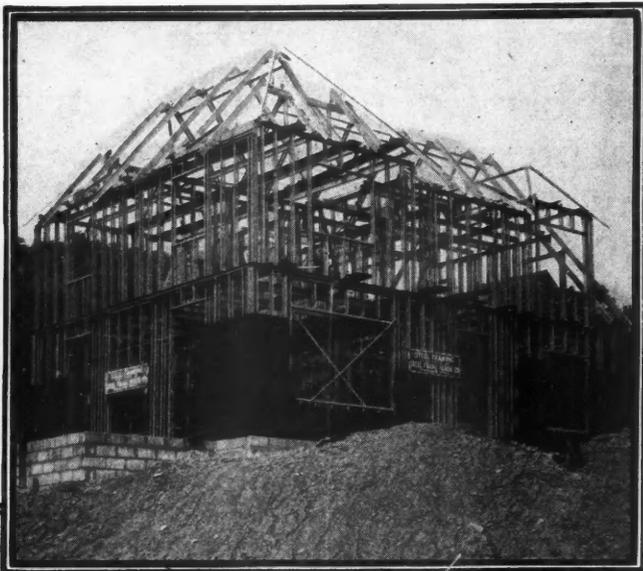
Natural mineral pigments ground to pass a 325 mesh screen compounded with highly refined creosote and pure linseed oil.

SPECIALTIES for Quick Sales and PROFITS



It's easier to sell

A FIREPROOF LIGHTNINGPROOF STORMPROOF HOME



THE complete framework of steel comes to the building site prefabricated and ready for immediate erection. Because every piece is cut to fit, no cutting on the job is necessary; and with every piece marked for its place, easy and quick erection can be made with ordinary tools by craftsmen familiar with building construction. The builder uses methods already familiar through his experience with other construction.

ANY home you build can be protected against fire, storm, and lightning by the use of Steel Framing construction.

Steel replaces wood in this new, practical and economical method of framing residences. It provides the strongest and most rigid framework known in building construction and prevents plaster cracks in walls and ceilings.

Steel Framing possesses the permanence that has been sought for years by architects and building contractors. It fits into any design and permits the widest range in meeting special requirements of individual buildings from foundation to roof. Adaptable to all types of residential structures. No architectural limitations.

Modern homes are built in this modern way—with a framework of steel at a cost comparable to that of wood. You can erect better homes of more value with Steel Framing, and add the fireproof, lightningproof and stormproof features which make them easier to sell.

Write for our booklet "Steel Framing for Dwellings" which contains the interesting and complete story of this new method of framing homes . . . the same as fireproof skyscrapers—with steel.

STEEL FRAME HOUSE CO.

A Subsidiary of **McCLINTIC-MARSHALL CORPORATION**
OLIVER BUILDING PITTSBURGH, PA.

STEEL FRAMING

SPECIALTIES for Quick Sales and PROFITS



This Contest is extensively advertised in Leading Home Building Magazines to Create Business for Builders

\$3000⁰⁰ in 28 Cash Prizes in the **SECOND** **WEATHERBEST Home Modernizing** **CONTEST**

The famous 1927 WEATHERBEST Contest awarded similar prizes for the best examples of old homes modernized by recovering side-walls with edge grain red cedar stained shingles. Mr. and Mrs. Clifford J. Foster, Rives Junction, Mich., won the 1927 first prize of \$1000, modernizing their home at a cost of approximately \$800. The 1929 WEATHERBEST Contest, which opened Jan. 1st and will close Oct. 31st, 1929, is even a more generous offer.

Let us make a modernizing sketch of one of your prospective jobs.

Top: an old home in Oswego, N. Y. Center: sketch furnished by WEATHERBEST to show changes suggested. Bottom: the modernized home. Let us tell you how easily you can sell WEATHERBEST modernizing jobs with the help of sketches from our Service Dept.

First Prize	Second Prize	Third Prize
\$1000.00	\$500.00	\$250.00
Fourth Prize	Four Prizes	Ten Prizes
\$150.00	of \$75 each	of \$50 each
		Ten Prizes
		of \$30 each

(In event of tie for any prize, full amount of such prize will be awarded to each tied contestant)

Write today for details of this Prize Contest which offers an opportunity for you to help your customers win a cash prize.

WEATHERBEST Stained Shingles are 100% edge grain red cedar, treated by the WEATHERBEST special process of staining and preserving that assures quality to make satisfied customers for you. Thru modernizing with WEATHERBEST, added value, beauty and comfort can easily be given to homes growing old.

WEATHERBEST STAINED SHINGLE CO., INC.
147 Main St., North Tonawanda, N. Y. Western Plant—St. Paul, Minn.
Distributing Warehouses in Leading Centers.

Weatherbest
STAINED-SHINGLES
FOR ROOFS AND SIDE-WALLS

WEATHERBEST STAINED SHINGLE Co., INC.
147 Main St., North Tonawanda, N. Y.

Without obligation, please send details of 1929 WEATHERBEST Home Modernizing Contest. Please have your Service Dept. explain the WEATHERBEST modernizing Sketch Service to help us sell modernizing jobs.

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

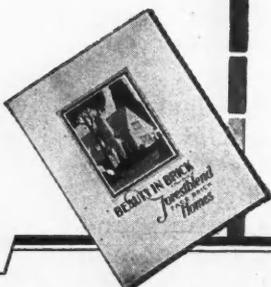
SPECIALTIES for Quick Sales and PROFITS

For Houses you want to sell quickly

The wise contractor, who builds to rent or for resale will be quick to appreciate the advantages of Forestblend Face Brick. This fine face brick offers a wide range of natural colors from which he will make his selection. He will know, too, that these colors are burned in to last for all time (no upkeep expense for painting). He will be quick to see the advantages of the patented Forestblend texture, which gives character to the building. He will appreciate the savings on insurance costs because of the fire safety of Forestblend.

Write today for "Beauty in Brick", the Finzer plan of model homes. It shows many dwellings designed by recognized architects and actual color reproductions of Finzer brick. The cost is only fifty cents. Use the coupon.

THE FINZER BROS. CLAY CO.
Members American Face Brick Association
SUGARCREEK OHIO



THE FINZER BROS. CLAY CO.
Dept. E, Sugarcreek, Ohio
Gentlemen:
Enclosed find fifty cents for which please forward your new 1929 Plan Book.
Yours very truly,

Name.....
Street.....
City.....
State.....

Forestblend

FINZER FACE BRICK

Trade Mark Registered

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE

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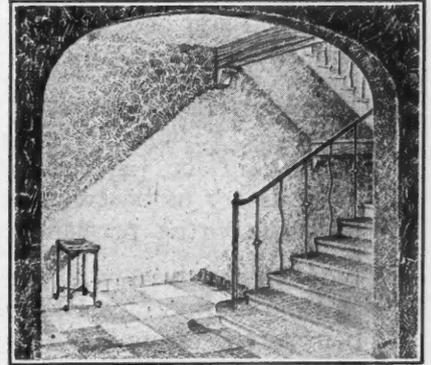
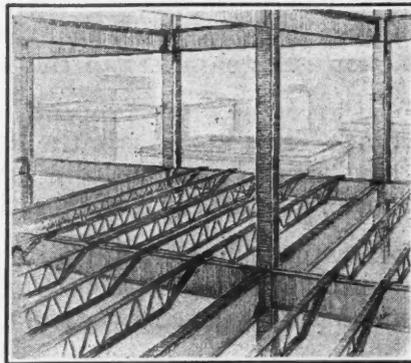
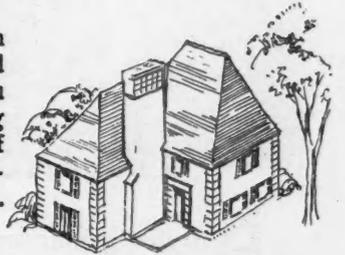
TR
Ware

SPECIALTIES for Quick Sales and PROFITS

TRUSCON

The Only Complete Line of Modern Steel Building Products for Home Construction

The modern demand for permanence and quality in home construction means greater profits for you and greater satisfaction for owners, particularly if you rely on Truscon. You can buy all your steel building products from one source if you take advantage of Truscon's complete line of nationally preferred quality products, ready for prompt deliveries at low prices.



TRUSCON CASEMENTS Model No. 5 are furnished in types and sizes to meet practical window requirements—completely shop fabricated and assembled, eliminating excessive field labor. Their cost installed compares favorably with wood windows. You speed up your jobs and are in step with the modern trend toward more artistic and more practical windows.

TRUSCON STEEL JOISTS provide economical, fireproof floor construction for all buildings. No centering is required, saving time in erection. Truscon Steel Joists reach the job ready for placing without cutting or fitting. The light weight of the construction saves in supporting frame work.

TRUSCON 1-A and 2-A METAL LATH not only insure the best plaster results but make money for you. The rigid ribs prevent bulging and sagging. The key provides a perfect clinch for the plaster. Plasterers can cover more surface with less material. Metal Lath prevents cracking of plaster, preserves the beauty of modern plaster effects and provides protection against fire.

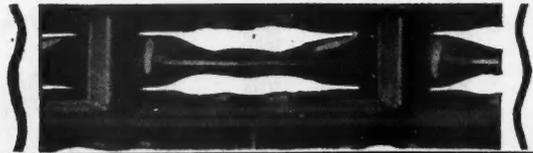
Included in the Truscon line of Permanent Building Products are a complete line of plastering accessories, Welded Steel Fabric, Pressed Steel Lintels, Standard Steel Doors, Steel Basement Windows and Waterproofings.

Quotations and catalogs on any Truscon Product given on request.



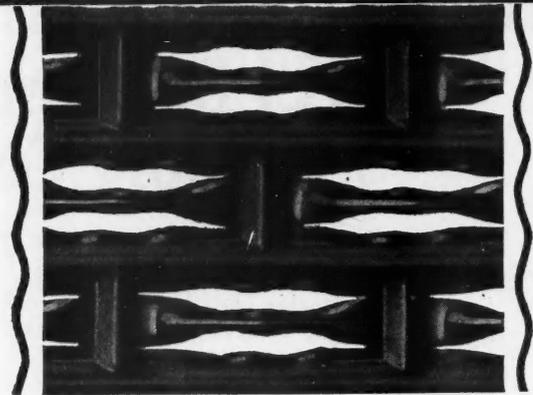
TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO
Warehouses and Offices in all Principal Cities. - Supply Dealers Everywhere.

SPECIALTIES for Quick Sales and PROFITS



The MASTERPIECE

*Of 38 Years
Leadership
in Metal Lath
Excellence . .*



FOR nearly four decades, Bostwick efforts have been concentrated on the problem of better plastering by developing and supplying the ideal plaster base. Bostwick "Truss-Loop" Metal Lath, improved and developed from time to time, has always denoted unquestioned superiority in the metal lath field.

This superiority is the fruit of striving after certain definite objectives—[1] Rigidity, [2] projecting or multiplane key, [3] Adequate bearing surface, [4] Self furring over supports. Incidentally, the long history of Bostwick satisfaction is a guarantee of the fifth Bostwick virtue, permanence.

Now comes the new Super-Bostwick Truss-Loop Lath, the latest and most important Bostwick development and, we confidently believe, the crowning achievement of all metal lath manufacture.

The prime Bostwick merit of rigidity through integral bracing has been strikingly increased by a system of cross-corrugations, so that every truss in the Bostwick surface is surrounded by a rectangle of rib structure.

Wonderfully firm under the plasterer's trowel, this new lath means finer and more rapid workmanship, with minimum disturbance of key. Serving ideally with maximum spacing of supports, it also checks the waste of plaster between walls and facilitates "doubling back" over a partially set scratch coat affording the hardest, most permanent plaster crystal, besides economizing plastering labor. Viewed either from the standpoint of superior results or moderate finished cost, Super-Bostwick is a wonderfully satisfying lath.

A sample of this new lath will be mailed on request. A trial in your most exacting installation will be even more convincing.

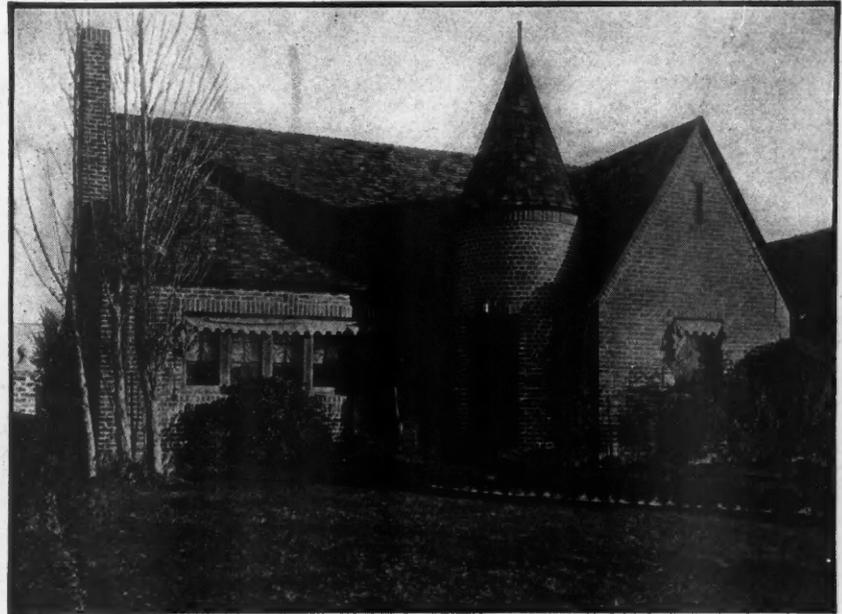
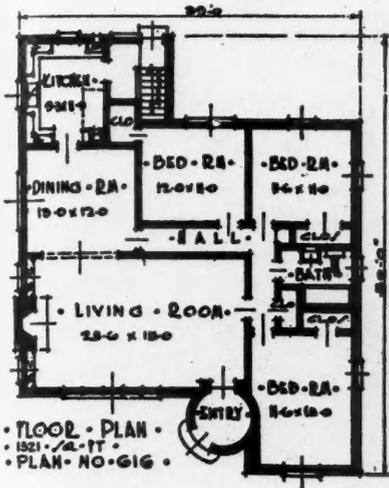


THE NEW
Super Bostwick
TRUSS-LOOP LATH

The
Man

Boston
Chicago
Cleveland
Denver
Detroit
Hartford
Los Angeles
New York
New Orleans
Norfolk
Philadelphia
Pittsburgh
Raleigh
Salt Lake
San Francisco
Seattle

SPECIALTIES for Quick Sales and PROFITS



Wouldn't You Like to BUILD THIS HOUSE?

JUST picture it set upon one of your lots. See how homely it nestles to the earth and how naturally. It is one of those rare designs whose charm grows upon one, one of those happy bits of architecture which blends with trees and shrubs and growing things.

The name of the house is "The James," and you may have complete plans and specifications for it at the very modest price of \$12.00.

These plans are from a service created by the Common Brick Manufacturers Association under skilled architectural supervision. They are not sold for profit or for gain, but as a service.

We are able to offer many of them to Master Builders. Our booklet, "Homes of Lasting Charm" (25c), contains photographs and block plans of 120 houses that are quick to move and easy to sell. "Beautiful Homes" (25c), from which "The James" is taken, shows 31. Besides these publications we have much other literature of value in your building. The price is so very nominal we suggest you send today for all that is listed in the coupon.

COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA
2131 GUARANTEE TITLE BUILDING CLEVELAND, OHIO

BRICK
beauty forever

These District Association Offices and Brick Manufacturers Everywhere are at Your Service:

- Boston 11 Beacon Street
- Chicago 228 No. La Salle St.
- Cleveland—Ohio Assoc., 2124 Guar. Title Bldg.
- Denver 1735 Stout Street
- Detroit 400 U. S. Mortgage Trust Bldg.
- Hartford 226 Pearl Street
- Los Angeles, Calif. 634 Chamber of Commerce
- New York City 1716 Grand Cent. Term.
- New Orleans, La. 727 Canal Bank Bldg.
- Norfolk 112 West Plume Street
- Philadelphia 1420 Walnut Street
- Pittsburg 524 Fourth Avenue
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- Salt Lake City 301 Atlas Block
- San Francisco 461 Market St.
- Seattle, Wash. 913 Arctic Building

Clip and Mail This TODAY

Without charge, please send me a copy of "Common Brick."
I am enclosing cash or stamps for the booklets checked.

"Homes of Lasting Charm" 25c. "Multiple Dwellings of Brick" 10c.
 "Beautiful Homes" (1 story) 25c. "Farm Homes of Brick" 5c.
 "Skinted Brickwork" 15c. "Brick, How to Build and Estimate" 25c.
 "The Heart of the Home (Fireplaces)" 25c.
 (Enclose \$1.25 if you want all the books)

SPECIALTIES for Quick Sales and PROFITS

LUPTON CASEMENTS ADD TO THE LOVELY RESIDENCE OF DR. WILLIAM H. PORTER, ROSE VALLEY, PA.



Quick sales are *stimulated* by these charming and practical windows

INVESTMENT builders of homes and apartments who have used Lupton Steel Casements say that these distinctive windows materially increase the sales-appeal of the property. Their trim design heightens the charm of walls and interiors, and harmonizes effectively with the other modern appointments of the building.

Prospects are attracted by the modern style and the superior usefulness of Lupton Windows. They operate without effort, will not warp or jam, and are much easier to keep clean. In summer, they swing open to capture the outdoor breezes. In winter, they shut snug and

tight against bitter winds and damp weather.

These Lupton Windows are years ahead of the market. They contain the most advanced applications of steel window equipment. They will help your property to maintain that smart modern appearance which has so much to do with influencing rentals and resale values.

Every investment builder should know the facts about Lupton Casement Windows. Their advantages are many. The cost is surprisingly reasonable. Have us send you a free copy of our Catalog C-217. David Lupton's Sons Company, 2203 E. Allegheny Avenue, Philadelphia.

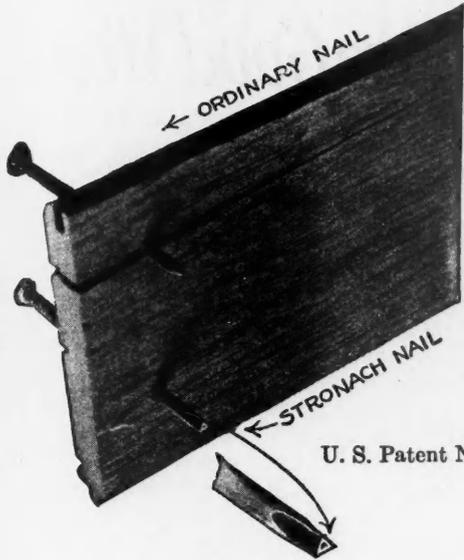
LUPTON

A GREAT ENGINEERING ORGANIZATION
SPECIALIZING IN FINE FABRICATED STEEL

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

SPECIALTIES for Quick Sales and PROFITS

COSTS REVOLUTIONIZED



Unretouched Photographs

The camera always tells the truth. The illustrations presented here are unretouched actual photographs.

U. S. Patent No. 1,466,676

in

New Construction
Plant Maintenance
Manufacturing
Boxing and
Crating

by using

THE NEW
STRONACH
PATENTED
NON-SPLITTING
NAILS.



**4
CARDINAL
REASONS**
Non-Splitting Feature
Increased Holding Power
More Nails per Pound
Lower Cost Per Nail

Sold to the BUILDING TRADE through
RETAIL LUMBER DEALERS

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STRONACH NAIL COMPANY
1805 Union Bank Building
Pittsburgh, Pa.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Labor Saving Contractors' Equipment and Construction Specialties CUT COSTS and Assure Good Work

LABOR saving equipment cuts costs and assures good work, two things that should interest every contractor. The value of cutting costs is something which hardly needs to be proved. As costs are reduced profits increase and profits are, obviously, the prime object of doing business. The value of doing good work is not always so apparent but it is there, just the same, and in the long run it is just as important.

Doing good work, and getting it done on time, establishes a reputation which will be one of the most valuable assets of the contractor. Modern machinery turns out a class of work that it is difficult if not impossible to produce by hand work. Especially is this true where skilled labor is much in demand and the best workmen are not always available. Even a less skillful workman can turn out accurate work with good machinery.

Just what are the possibilities of cutting costs by means of labor saving equipment? Not long ago the United States Department of Labor made an investigation of the relative costs of materials and labor in building construction. The figures, based on eight different types of buildings, ranging from reinforced concrete factory buildings and steel frame office buildings down to typical, two story frame residences, showed that 62 per cent of a building's cost is for labor and 38 per cent for materials.

With 62 per cent of the cost of building going into labor, even a small percentage of saving on labor means a considerable increase in the builder's profit. And the saving made possible by modern labor saving equipment is not a small percentage. It is a large one. For example, one construction company, reporting on its experience in using a well known type of woodworking machine, states that: "We cut sills, joists, studding, braces, frames, rout studs for belt, make jack rafter cuts, all angle cuts of various degrees, rout for stair risers and treads, make our window frames, use the machine in

cutting flooring, trim and, in fact, from the commencement of the construction to its completion.

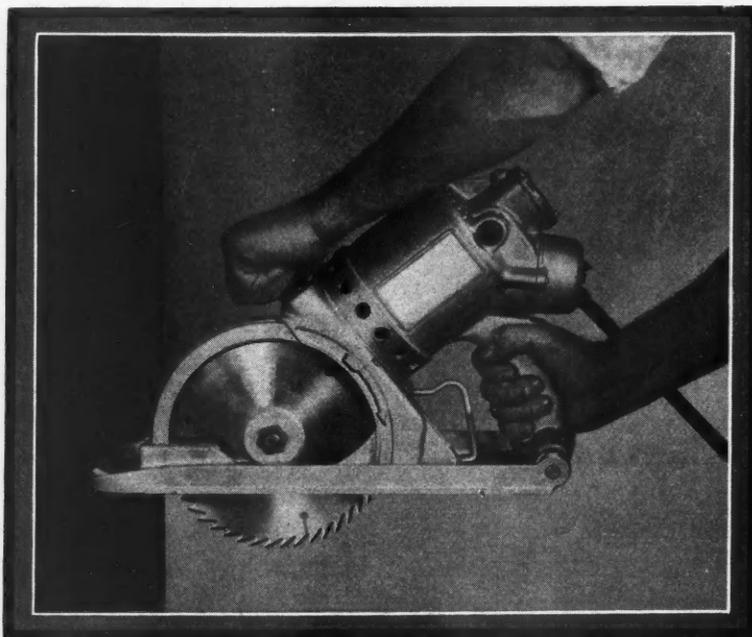
"We figure that we save five men's labor by using this machine and advance the completion of our job fully 25 per cent sooner than we could without it."

Savings such as this make it possible to figure a contract more closely than is possible for the builder hindered by lack of equipment and still leave a larger margin of profit. The difference between the well equipped contractor and one who is trying to work with little or no equipment or with equipment which is out of date or in poor condition, is just as striking as the difference between the electric hand saw illustrated on this page and the old fashioned hand saw. The old fashioned hand saw still has its place, but the power saw has replaced it in much of the work it used to do.

The workman using the electric hand saw turns out several times as much work as the workman using the ordinary hand saw. And he does it with a minimum expenditure of energy. That means his energy is conserved and he can do better work all the way through. It also means that he quits the job at night still full of energy and he is better satisfied with his job than the man who has had to push a hand saw all day long. There is no question of the value of workmen who like their jobs. It means that they

stick to a job and it is possible to keep a trained organization together instead of having to contend against the disorganizing effect of a constantly changing groups of workmen.

In considering modern equipment power saws are not, by any means, the only items that the builder will find essential. There is a long list of equipment, featured in our advertising pages, which must be considered. Some of these items will be needed by one organization and not by another. It all depends on the size of the organization and the kind of work being done. Write these advertisers for all information.



The Workman Using a Power Saw Turns Out Several Times as Much Work as the Man Using an Old Fashioned Hand Saw and Does Better. That means more and better work, lower costs and greater profits for the builder.

NOW YOU CAN BUY DIRECT FROM FACTORY

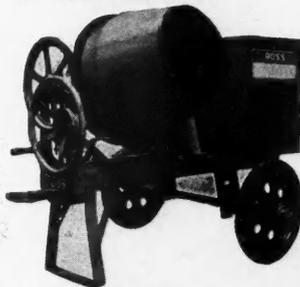
BOSS MIXERS and HOISTS

YOU GET SALESMAN'S & JOBBER'S PROFIT!

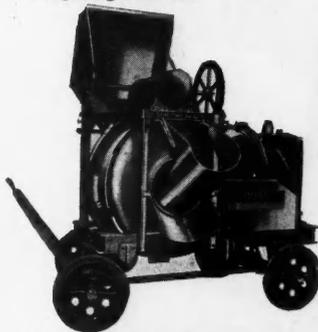
SAVE \$42 to over \$384 ON EACH MACHINE

A COMPLETE LINE

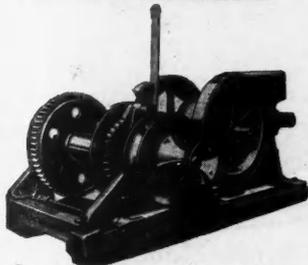
We make over 79 various sizes, combinations and types of BOSS Mixers, Hoists and Pavers. There is a type for every conceivable use. Get the new catalogue first, then decide. Often our customers find that they can use a much lower priced machine after studying this catalogue. There is no need of going elsewhere for a certain type machine when it is in the BOSS line. Write for catalogue and confidential wholesale prices; also give us information on the kind of work you want the machine for. We can probably be of help to you.



BOSS 3 1/2 S TILTER, Trailer type cushion rubber tires, shock springs, 2HP engine, friction brake discharge control, disappearing trailer bar.



BOSS 10S NON TILTER, "One-Two Bagger", patented remixing action, steel construction, high speed performance with one man control. The feature all purpose machine of the BOSS Line.



BOSS HANDY HOIST, single drum reversible. Cable shaver and niggerhead. Safety ratchet, powerful footbrake—ideal for material elevator work.

Every manufacturer is trying to reduce his selling costs. We have found the way and are going to give the difference to our customers in order to increase our sales. We have done away with all our salesmen and jobbers and are now selling direct to users. We have deducted the salesman's and jobber's commission from each machine and the difference is our price to you. This is the most astonishing news in the construction industry and it is certainly paying us as sales are jumping by leaps and bounds. Get the new catalogue with new confidential wholesale prices on each machine. It shows the most popular types and combinations, describing each fully—with new price. The coupon will bring it.

SAME HIGH QUALITY

Regardless of this drastic price cut, the quality of BOSS Mixers and Hoists remains the same. They have always been noted for their heavy duty construction and materials. Under no consideration will we ever sacrifice this reputation. Get the catalogue. Note the specifications and compare the prices. You get the same patented Re-Mixing Action and other exclusive features that have made BOSS preferred wherever used. Hundreds of BOSS machines have ten, twelve

and fifteen years of continuous service behind them and still going strong. For quality of design, materials and construction, we defy anyone to find a better built machine than a BOSS. You can now get all this for less.

GET OUR PRICES

Send Coupon for New Catalogue With Confidential Wholesale Prices

The new BOSS Catalogue gives complete information on all the BOSS Mixers, Pavers and Hoists along with the new confidential wholesale prices. Even if you do not want to order now, get this new catalogue and keep it on hand for future use. Fill in the coupon and mail today. It will save you money. Though you may have bought direct from a manufacturer before you have never been able to buy at these new prices because no salesman's or jobber's commission is figured in. Prices on every machine are greatly reduced. Get the new catalogue with wholesale prices.

1 YEAR GUARANTEE



5 DAYS' FREE TRIAL

So confident are we that every BOSS Mixer and Hoist will give complete satisfaction, that we offer you five days' free trial. Order a BOSS. Use it in the field. If within five days you do not find it exactly as represented in every way, send for return instructions and refund of purchase price. This protects you; you can't go wrong on a BOSS. As long as we have sold on this basis, we have never had a customer demand his money. This proves BOSS quality. Every BOSS machine is backed up with an iron clad guarantee. Read it above.

NEW CATALOG WITH WHOLESALE PRICES TELLS ALL



CLIP AND MAIL THIS COUPON NOW!

GET OUR PRICES

CLIP AND MAIL THIS COUPON

AMERICAN CEMENT MACHINE CO.,
214 S. Fourth St., Keokuk, Iowa.

Please send me your new catalogue showing complete line of BOSS Mixers, Pavers and Hoists with confidential wholesale prices.

Name.....

Address.....

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

Wallace

PORTABLE MACHINES

Portable

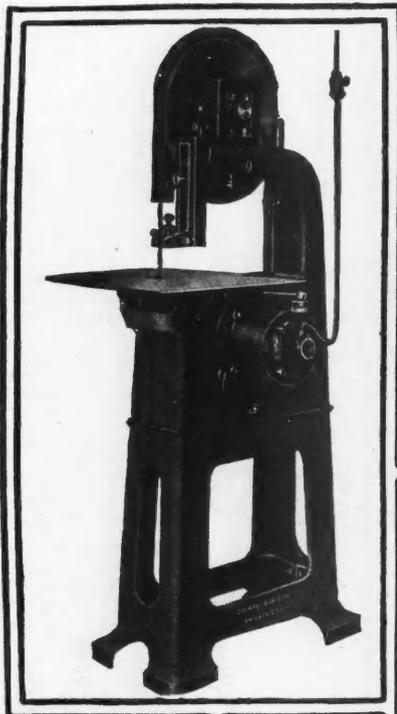
save your money

Workace Radial Saw

Amazing low price, \$140

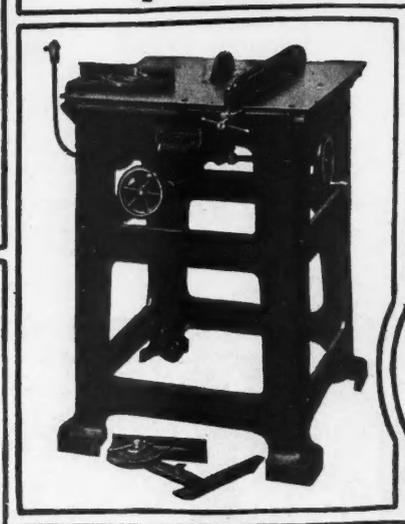
Cast Iron Table, \$10.00 Extra.
Cast Iron Legs, \$15.00 Extra.
(F. O. B. Chicago)

Here's a great big value in a compact, portable machine—the Radial Saw, built to handle all cutting operations, any angle, compound meters, cutoff, ripping, dadoing, tenoning, routing, shaping, fluting, boring, sanding, etc.



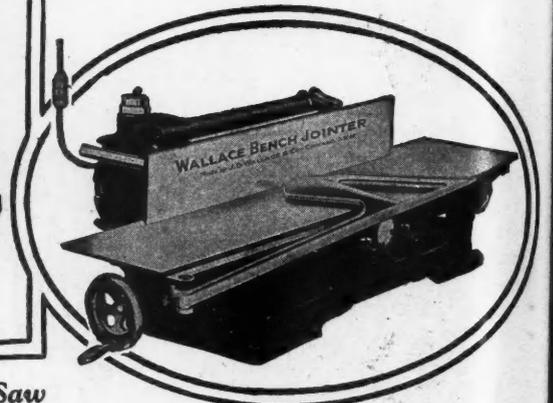
Wallace Portable Band Saw

Contains built-in and directly connected motor with ample power to efficiently handle work within its full capacity.



Wallace Portable Universal Saw

A portable floor type of Universal Circular Saw that combines all the advantages of the portable bench machine and the self-contained floor type. The saw can be moved independent of its base.



Wallace Bench Planer and Jointer

A compact and highly efficient machine—easily portable with ample power to handle all classes of work.

Woodworking Machines

and increase your profits

THE percentage of savings and extra profits on both small and large jobs is well worth the small cost of Wallace Individual Portable Machines. . . You can take a Wallace Machine to the job instead of wasting time and man-power taking the job to the machine.

THE outstanding feature of Wallace Machines is that they are easily moved from one part of a building to another—can be set up anywhere and plugged into any convenient electric light socket. You roll your Wallace Machines from room to room as the work progresses. They're light weight, move about easily, take up very little room and never get in the way.

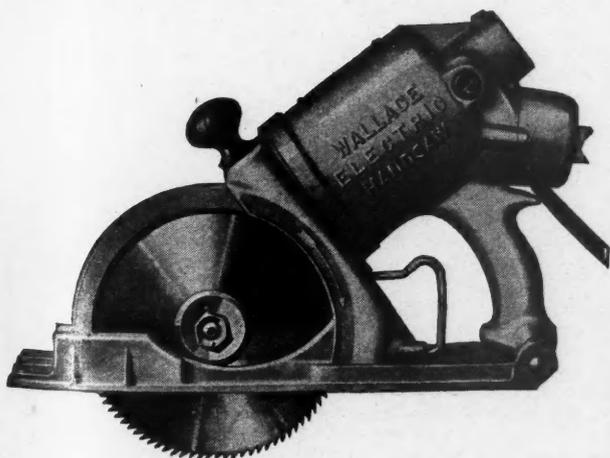
Many carpenters and contractors move their Wallace Machines into the shop when building construction is slack—or into a garage or basement—and during idle hours work up waste stock, turn out storm sash, screens, standard mouldings, cabinets, etc. There's a handsome profit in this extra work.

Wallace Machines not only bring enor-

mous profit increases but insure uniform workmanship. Motors are integral parts of the machines. You never find a belt-driven Wallace Machine—all are direct drive. You know what this means in convenience and easy running.

Free Trial—Easy Terms

We'll send you one or more Wallace Machines for a free trial so that you can prove their superiority by actually using them, right on the job. You'll find the Wallace way so much cheaper and quicker than old-fashioned methods. If you decide not to keep the machines, ship them back to us and it won't cost you a cent, not even freight charges. Or take ten months to pay, convenient easy terms that frequently come right out of the extra profits so you never miss the money . . . Our offer is all in your favor . . . You have everything to gain and nothing to lose . . . Send coupon today for free book illustrating and describing all Wallace Machines. Write now—no obligation.



The Wallace Electric Hand Saw

is light in weight and easy to handle. Its chief feature is absolute SAFETY. The blade is entirely covered at all times. The motor, the switch, the operator and the saw itself are completely protected against injury.

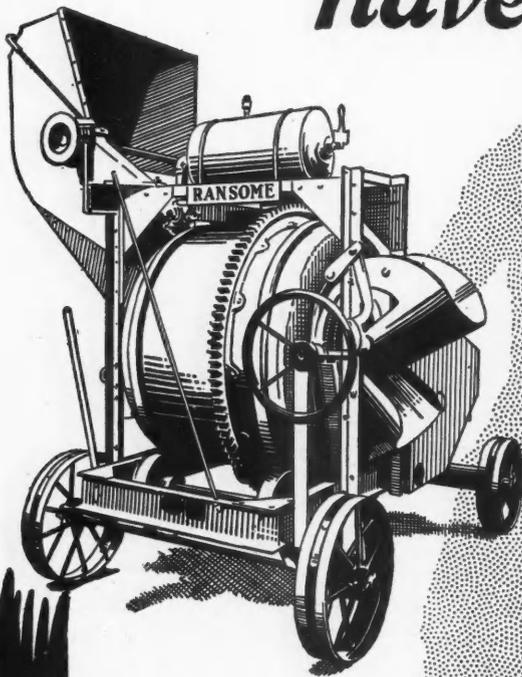
J. D. WALLACE & CO.,
136 S. California Ave., Chicago, Ill.

You may send me your book on Wallace Portable Machines and full details of *Free Trial Offer* and easy terms.

Name

Address

7-S & 10-S Standard Ransome Building MIXERS have the **PUNCH!**



FRONT AXLE—built of two 4" Channels, width 1 $\frac{1}{2}$ " cold rolled stubs.

MAIN FRAMES—made of two 6" Channels.

MAIN ROLLERS—12" in diameter.

In This Corner We Have The Ransome 10-S

DRUM—51" in diameter by 39" wide:

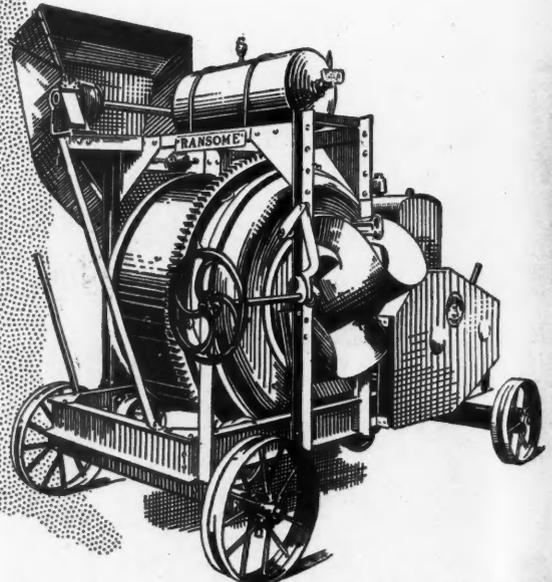
DRUM ROLLERS—12" x 2 $\frac{1}{4}$ "—car wheel iron, Timken Roller Bearings on Drum Rollers.

CONTROL—One set of levers located at drum end of mixer.

GASOLINE ENGINE—LeRoi or Novo—4 cylinder.

WATER MEASURING TANK—16"x 40"—capacity, 37 gallons.

*Ransome—the first mixer in the ring
—the last to enter the repair shop.*



Fast, rugged mixers that knock out the work in record time—that is the general reputation of Ransome 7-S and 10-S among mixer "fans".

Look over the measurements of the 7-S—then you'll see why it has the "guts" to stand up and "take" it.

DRUM—45" in diameter by 35 $\frac{1}{2}$ " wide.

DRUM ROLLER TRACKS—2" wide—1 $\frac{1}{2}$ " thick, forged rolled and turned from solid billets of locomotive tire steel.

Mail this Coupon!



Ransome Concrete Machinery Company
Dunellen 1850—Service for 79 Years—1929 New Jersey

Get ALL of the facts about these fast, husky Ransome Mixers. Learn how they're performed—what they're made of!

RANSOME CONCRETE MACHINERY COMPANY

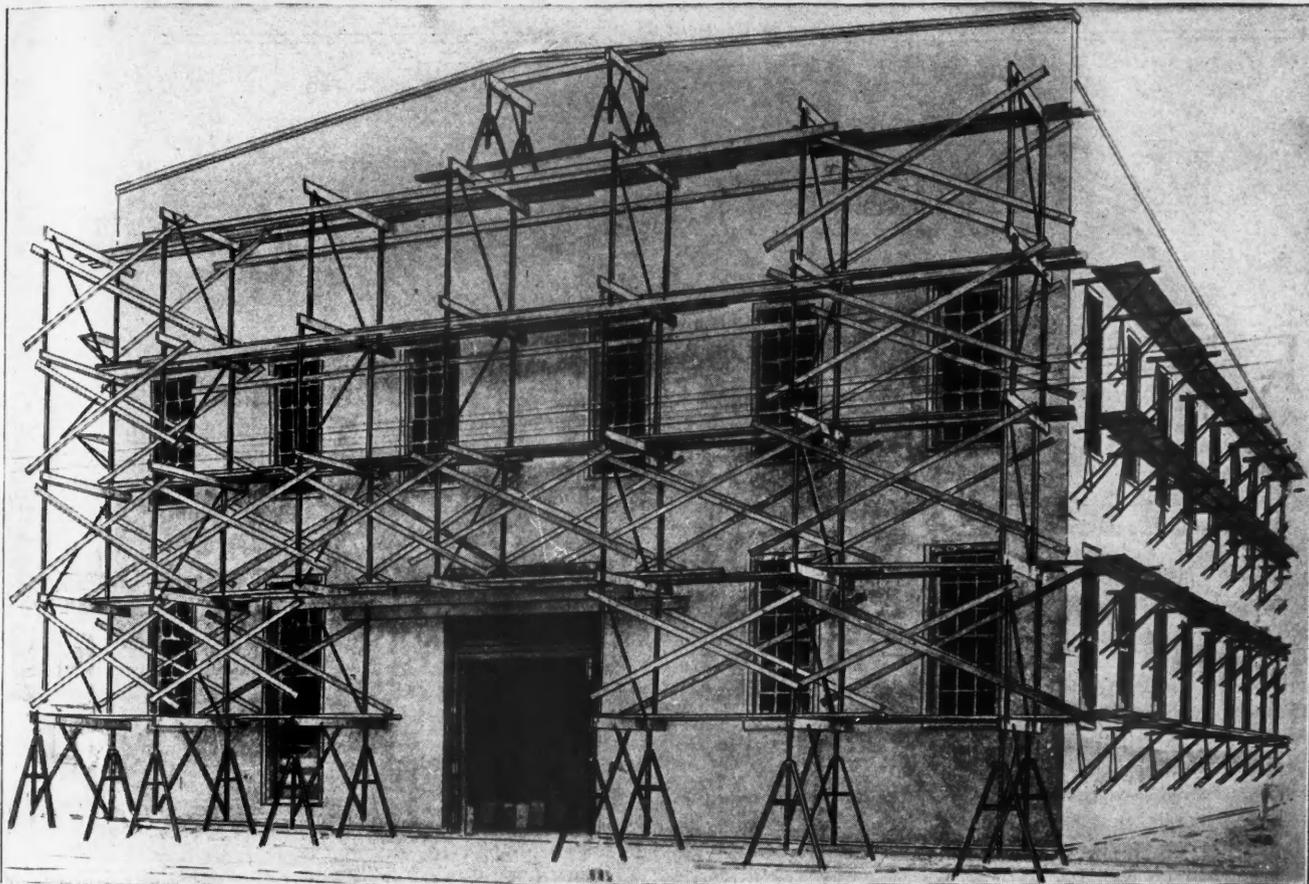
Dept. A. B. Dunellen, N. J.

Without obligation, send me full information about the 3 $\frac{1}{2}$ -S Tilter; 5-S Builder; 7-S Builder; 10-S Builder.

Name _____

Address _____ City _____ State _____

Trouble Savers



Everlasting Money Makers!

WHY add to fire hazards with wood scaffolding?
 WHY waste money building wood scaffolding?
 WHY continually buy scaffolding timber which is quickly destroyed?
 Why risk accidents with wood scaffolding?

NEWSPAPER CLIPPING: "Chicago, Ill., Jan. 14.—Firemen climb 400 feet to fight flames on new bank. Once started, the flames spread before the wind as though fed with gasoline, seizing on the wooden scaffolding all through the top of the building."

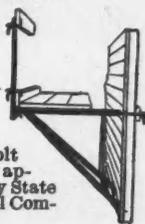
THE STEEL SCAFFOLDING COMPANY
 1101 N. Governor Street, Evansville, Ind.



Trouble Saver Studding Brackets support a ton. Will not bend.



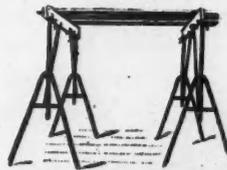
Trouble Saver Nail Attached Brackets support a ton. Held by four nails.



Trouble Saver Bolt Brackets approved by State Industrial Commissions.

Use Trouble Saver Steel Scaffolding

It's fire-resistant. It's safe. It pays for itself in labor saving on its first job and on every job. **IT LASTS A LIFE TIME.**



Trouble Saver Adjustable Steel Trestles (patented).

Quickly adjusted to desired height, 8 size. Each size adjustable from 4 to 15 different heights, giving a range from 16 inch to 12 feet by 3 inch lifts.

Trouble Saver Steel Products

- Studding Brackets
- Nail Attached Brackets
- Bolt Brackets with Safety Railing
- Adjustable Trestles
- Ladder Jacks
- Wood Shinglers
- Mortar Board Stands
- Sectional Steel Scaffolding

The Steel Scaffolding Company

1101 No. Governor St., Evansville, Ind.

Please send me details on your 30-day free trial offer and full information and prices on Trouble Saver.....

Name

Address

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

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

MOTOR TRUCKS *and* TRAILERS



Matching Truck Needs with Maintenance Methods

IN a business in which the demand for delivery equipment is subject to wide fluctuations as it is in the building and contracting field, it is necessary, for various reasons, to carefully schedule the work of fleet maintenance. The manner in which a building contractor plans his truck maintenance is a highly important factor in motor truck economy.

Maintenance scheduling works as an economy in two ways. First, by planning the work of inspection, adjustment, repairing and overhauling, it is possible to keep the shop force constantly busy, thus eliminating overtime work in periods in which the shop is ordinarily crowded with work and eliminating idle time in periods that are ordinarily dull. Second, maintenance scheduling permits the work of upkeep to be matched with actual operating needs so that the maximum number of vehicles will be available during peak operating periods.

Experience shows that the best method of scheduling maintenance is to base each week's program in advance upon the records of truck activity in previous years. In other words, the records of previous years are used to forecast truck requirements for each week of the coming year, allowance being made for any increases or differences which exist due to the growth or change of the business in the current year.

The approximate requirements for any one week are thus predicted on a fairly accurate basis. The difference between the predicted requirements for any week and the number of vehicles in the fleet, shows the maximum number of vehicles that may be scheduled for the shop during that week.

Where a business involves different branches which require different kinds of trucks, it is the best policy to make separate forecasts for each type of truck, since the

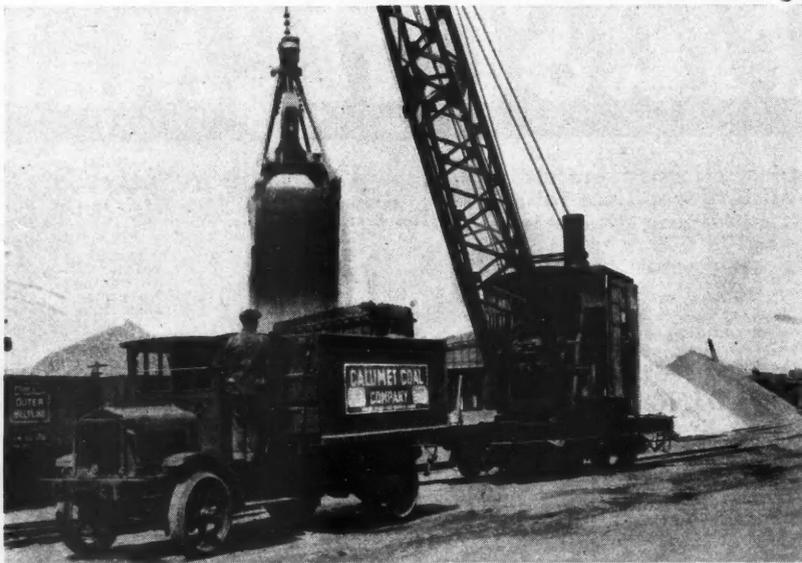
peaks in the two classes may not coincide. In periods which represent the peak of truck requirements (which may represent a solid month at a time) it is possible to plan in advance so that all trucks will be in running condition and will not need serious attention during that time. In such a period the shop force can be kept busy on building, rebuilding or painting bodies or on general work connected with other fields of the business.

How Planning Helps

The important point about upkeep scheduling is that it enables the maintenance policy to run more smoothly. It avoids the condition so often experienced in which, during a peak period, trucks are tied up and cannot be used. It gives the repair shop a uniform flow of work and thus enables upkeep to be systematically and adequately handled at a very minimum of cost.

Such scheduling of operating and upkeep requirements in advance also helps in other ways. It is a good means of determining in advance the correct method of augmenting the truck fleet, either by installing additional vehicles as requirements grow or by hiring vehicles during the peak seasons. Most concerns are able to get some approximate figure (on a basis of their own experience in previous months or years) which will provide an indication as to

when such additional trucks should be owned or rented. But in addition to this, it must be considered that there are advantages in owned vehicles which may not be revealed by a cost comparison. For instance, some concerns have figured that if they can provide 40 or more full working days per year for a light vehicle, it is cheaper to own one than to hire one at \$2.50 per hour, or whatever the rate for renting may be in that locality. However, due to the fact that



The Calumet Coal Company Owns a Fleet of 30 of These Trucks Especially Selected for Efficient Service in Handling Coal, Sand, Gravel and Building Materials.



The School of Hard Knocks

Aids the Laboratories of Science

THE truck of quality cannot be built on a drawing board. Neither the laboratory nor the shop alone can produce it. The task is accomplished only by sound experience, ripe engineering, and practical skill—a combination that comes of years of truck making.

At the two large plants where International Trucks are manufactured, every scientific test for quality and precision is a routine matter. All the knowledge the industry possesses is expertly applied. But these are not enough...

Experimental models of stock construction must be tried and punished to prove out designs and materials. International Har-

vester Truck manufacture has always embraced a strenuous policy of test and trial. A constant succession of trucks go to the testing fields to devote themselves to a life of violence in a school of hard knocks.

The trucks in this service are sent at high speed headlong into embankments, plunging across railroad tracks, over hurdles and

barriers, through ditches and up hills. They suffer tortures in axle, engine, clutch, and gears, brakes, bearings, wheels, and frame. Their drivers have learned precisely how to submit every chassis member to hammer-like blows and to racking stresses and strains. Hours here mean more than years of ordinary service.

The findings of this endless program of test and trial go back into the engineering laboratories and the shop, and so new and sturdier Internationals are born. Every owner of an International Truck owns greater transportation value because of the high standards set for performance at the International plants.



The new Heavy-Duty models, sizes from 2½ to 5-ton, and the new line of Speed Trucks, ranging from ¾ to 2-ton, are now on view at 170 Company-owned branches in the United States and Canada.

INTERNATIONAL HARVESTER COMPANY

606 SO. MICHIGAN AVE. CHICAGO, ILLINOIS



the bodies on the rented vehicles may not be exactly suited to the loading requirements, their daily productivity may be only 75 per cent of the owned truck which has been especially selected to perform this class of work most efficiently.

It is wise, therefore, in planning truck use and in scheduling a smooth-running, adequate program of operation and maintenance to forecast the number of vehicles needed as well as to forecast the work of the shop force. In doing this, it is important to study delivery requirements so that the fleet may consist of the proper number of owned trucks and rented trucks.

Typical Maintenance Plans

Each fleet of trucks requires its own particular kind of maintenance system since no two sets of operating conditions are exactly alike. Therefore it is obviously impossible to suggest a plan which will be instantly adaptable to any concern's use.

Most of the better working systems as used today call for the complete greasing of trucks every 1,000 miles; the holding of every truck in the shop at least one day a month, and a written record of every maintenance operation entailed. A certain day each month is designated for the inspection of each truck, from which there is no variation. If anything radically wrong develops before the time for the monthly inspection, the truck, of course, is brought in at once. Provision is also made for the daily washing of all equipment and weekly inspection of all batteries.

Drivers are required to co-operate by reporting immediately any faulty condition that they may note in the vehicles they drive. These reports, which are written, are turned over to a competent mechanic for immediate correction of the faults.

In a maintenance policy that has proved to be most successful for one concern, the delivery department keeps a complete record of the regular monthly inspections which gives the dates of the inspections, meter readings and names of the mechanics who made them. These sheets are turned into the office, examined and filed away for reference at the end of the month. Mechanics are made to feel personally responsible for good work, as no opportunity is afforded them for shirking responsibility if they are at fault. If anything goes wrong on a job that should have been satisfactory the last inspection report is examined. This reveals the exact nature of the inspection and the blame is placed where it belongs. Two mechanics are assigned to each inspection.

If, on going over a truck on its monthly inspection, it is discovered that repair work is required, it is immediately shunted into the shop. Here an equally careful record of the work done is kept, together with the date, meter readings and the names of the mechanics doing the work. This record, along with the inspection and other records, is sent to the office when the work is completed. The

office again files all data according to the vehicle number for computation and reference.

A complete life history of every tire coming into the department has been another important factor in aiding this concern to keep costs down. A separate record sheet of each tire, which gives the number of the vehicle to which the tire is applied, the wheel on which it is placed, the date when applied, meter reading when applied, space for date when removed, reasons therefor, repairs made and cost and finally information as to when it was reapplied and its mileage. This record gives the best sort of information on which to judge the efficiency of various styles and makes of tires.

Furthermore, as a result of these records, this company has changed the tire equipment on all trucks from solids to pneumatics. By doing so it has accomplished a number of highly desirable things. In the first place it has doubled speed, which means a lessened per hour cost, and in the second place it has cut maintenance cost on trucks and tires by about 25 per cent, again with a consequent reduction in the per hour cost.

Besides these sav-

ings in the transportation department there is less chance of breakage.

A somewhat similar record is kept on batteries which enables the department to check performance against guarantees. The record shows the date of purchase, name of seller, number of recharges and condition of each cell at each recharge and history of all work done.

Important Upkeep Details

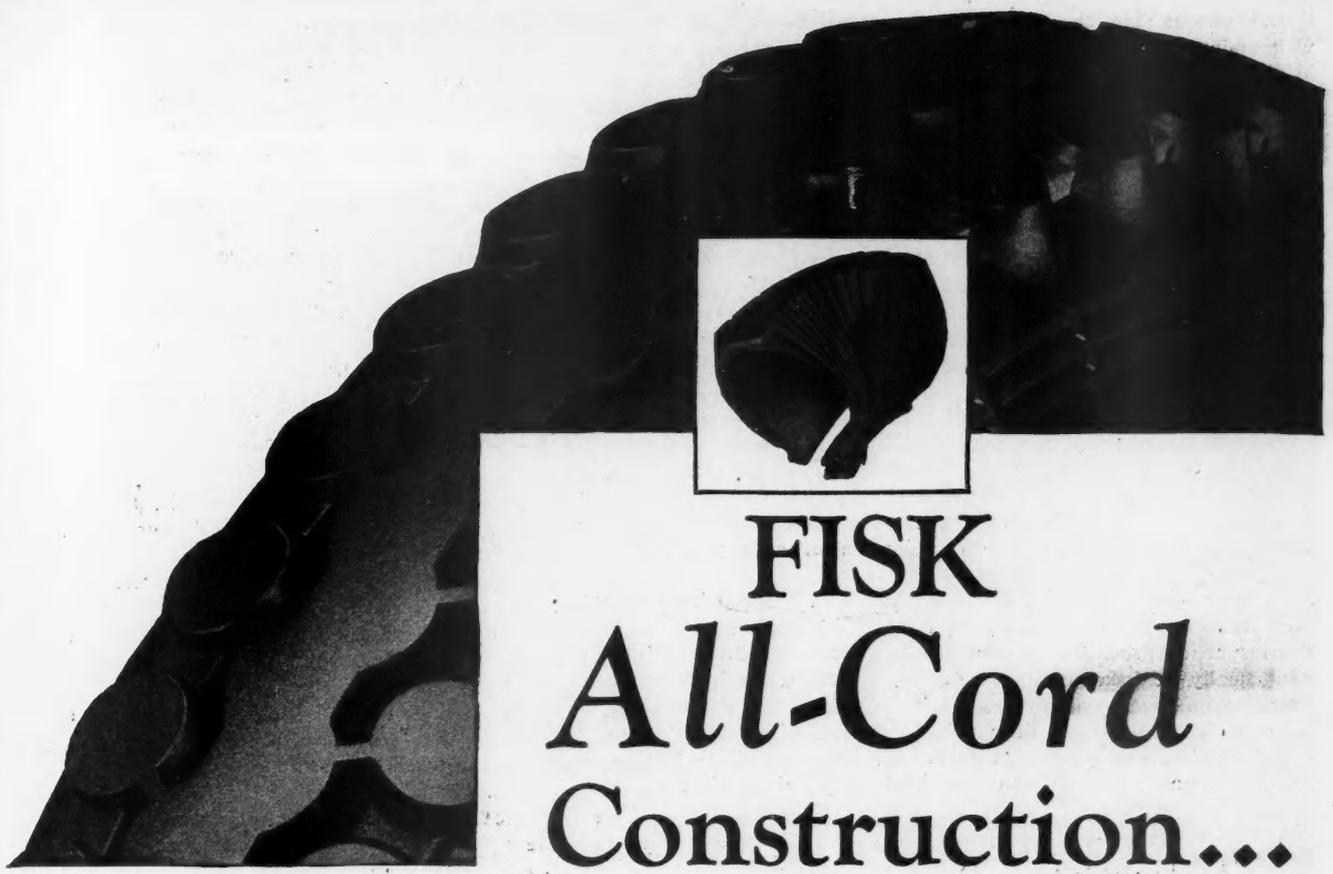
Many fleet superintendents are taking steps to see that trucks in their charge are kept free of squeaks and rattles. In taking this action they are not unmindful of the fact that a noisy truck creates an unfavorable impression in the mind of the public and that drivers are averse to driving vehicles which make too much noise. Of most importance, however, is the knowledge that a squeak or rattle is an indication that some part of the vehicle is in need of attention and that increased maintenance cost or perhaps accidents may result from neglect of the warning given by the sounds.

A brake rod which touches a frame cross member as it vibrates causes an annoying rattle. The noise, however, is a symptom of a condition which may result in the brake rod wearing to the danger point in a comparatively short time unless the vibration is checked. If a loose frame bracket bolt is neglected the holes in both frame and bracket become oval and it is necessary to ream them and install larger bolts to insure a tight job.

Squeaks, while unpleasant, do not have the same significance as rattles. The condition indicated by a squeak is that two parts which should not have any relative motion are rubbing together or that there is lack of lubrication of the point of contact between two surfaces which are expected to rub. The consequence of neglecting squeaks



One of the Fleet of 30 Trucks. With such a fleet maintenance must be carefully scheduled to meet hauling requirements and effect maintenance economy.



FISK All-Cord Construction...

the backbone of FISK *mileage*

THE springy cords in Fisk Tires lie smooth and straight, without cross strings to cause extra wear. Each cord is completely enclosed in live rubber—internal friction is impossible. And every cord is continued around the multiple cables of the bead, adding extra strength where strength is needed.

The thicker, tougher Fisk tread, supported by this firm foundation, wears slowly and grips safely under all conditions.

In every kind of truck service Fisk "All-Cord" has proved its worth. If you want to lower your operating costs, equip your trucks with Fisk, and get the utmost in economical mileage.



THE FISK TIRE COMPANY, INC.
CHICOPEE FALLS, MASS.

FISK TIRES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

is not serious, but they are not allowed to continue in well maintained fleets.

There are two general lines of attack on squeaks and rattles. The first is tightening or adjustment of parts which are in contact, or which may contact, and the second is lubrication to prevent noise due to rubbing of surfaces. Both of these methods can be tied-in with the routine maintenance plan so that noisy operation is prevented, in most instances. However, climatic and weather conditions may alter requirements and any plan adopted must be sufficiently flexible to meet them.

A routine chassis inspection should reveal ordinary causes of rattles, but in some cases it may be necessary to make a special check of those features likely to cause noise. Loose spring shackles and worn spring bolts and bushings cause a distinctive sound. Smaller parts, such as brake rods and clevises, may also attract attention. A loose tail lamp bracket can make a surprisingly large amount of noise and an insecurely fastened spare tire or bumper mounting makes a racket. Prevention of noise depends upon painstaking care in the examination of each part likely to be responsible.

In most cases inspection for squeaks and rattles will be combined in one and remedies will be found for both as the inspection proceeds. Squeaks in light delivery vehicles can usually be located by rocking the vehicle while it is standing on the floor or grease rack. This plan does not work so well on heavy duty vehicles and a trip over a rough road is necessary, a "listener" who perches himself at various points about the chassis and body being taken along.



Instructions in Roof Framing

(Continued from page 64)

The other function that is convenient is the tangent, as is shown above. This gives the relation of the rise of the rafter to the run. By multiplying the run by this figure we get the rise of the rafter. The figure given is the same as the "rise per foot run." If, therefore, the architects' plan gives the pitch of the roof in inches of rise per foot run such as 8 inches foot run, which is .666 inch, we look up in the columns of tangent for .666 and find that it comes between 33 and 34 degrees, it being almost 34 degrees. Then we can use our protractor for laying out the rest of the problem.

Problems

(1) Give the degrees of the opposite angle for each of the following triangles:

A right triangle with one acute angle of 44 degrees.

A right triangle with one acute angle of 33 degrees.

(2) A roof is pitched 32 degrees, the span is 26 feet; give the following information:

What is the rise per foot run?

What is the length per foot run?

What is the length of the rafter?

Give the degree of the upper cut.

(3) A roof has a span of 36 feet and a pitch of 40 degrees; what is the total rise of the roof?

(4) How does the length per foot run in Table No. 1 compare with the secant in Table No. 2?

(5) What column in Table No. 2 compares with the rise per foot run given in Table No. 1?

(6) A roof has a 9 inch rise per foot run; what would be the pitch in degrees?

Answers

(1) If one acute angle is 44 degrees then the other is $90 - 44 = 46$ degrees.

If one acute angle is 33 degrees then the other is $90 - 33 = 57$ degrees.

(2) Pitch of roof is 32 degrees.

Rise per foot run is .625 feet.

Length per foot run is 1.179 feet.

Length of rafter is $1.179 \times 13 = 15.327$ feet or 15 feet $3\frac{3}{8}$ inches.

The degree of the upper cut is $90 - 32 = 58$ degrees.

(3) The rise per foot is given as .839 feet. The total rise is $.839 \times 18 = 15.102$ feet or 15 feet $1\frac{1}{4}$ inches.

(4) The length per foot run is the same as the secant.

(5) The tangent in Table No. 2 is the same as the rise per foot run.

(6) Nine inches is .75 foot. Looking up in Table No. 1 we find that this is equal to a 37 degree pitch.



Business Home and Methods of Builders—Dealers—Architects

(Continued from page 47)

ber, which goes into the house or business building. The company plans, furnishes the materials and constructs anything from a bungalow to the largest office building and gives its best service in alterations and improvements to old buildings. It employs crews of skilled and well organized workmen for every department of construction work. It gives without charge advice and information to prospective builders and its free service is the basis of its building success. Writing in regard to this service, Mr. Meyer says:

"In connection with our material business, we maintain designing, estimating and construction departments, which are organized to handle any building job—large or small. We retail a complete line of building materials, but we do not operate a planing mill nor a central concrete mixing plant. Of course, on the construction jobs we use concrete mixers, power saws, and small power tools.

"It has been our experience that handling quality products, sold at a fair profit to ourselves, and rendering a superior service to the public, has done more for upbuilding of our business than any other factor. We had this in mind when we built our new plant. We aim to make it easy for the building public to shop with us. Experience gained through several years of actual work, with mechanics' tools on construction jobs of various kinds, enables the members of this firm to render a practical building service."

Mr. Meyer is accountant for the Doane Building Company, of which the active heads are Dick Doane and Oscar Doane, who serve as general manager and superintendent of construction, respectively.



Fireplace Specialties for the Living Room

(Continued from page 104)

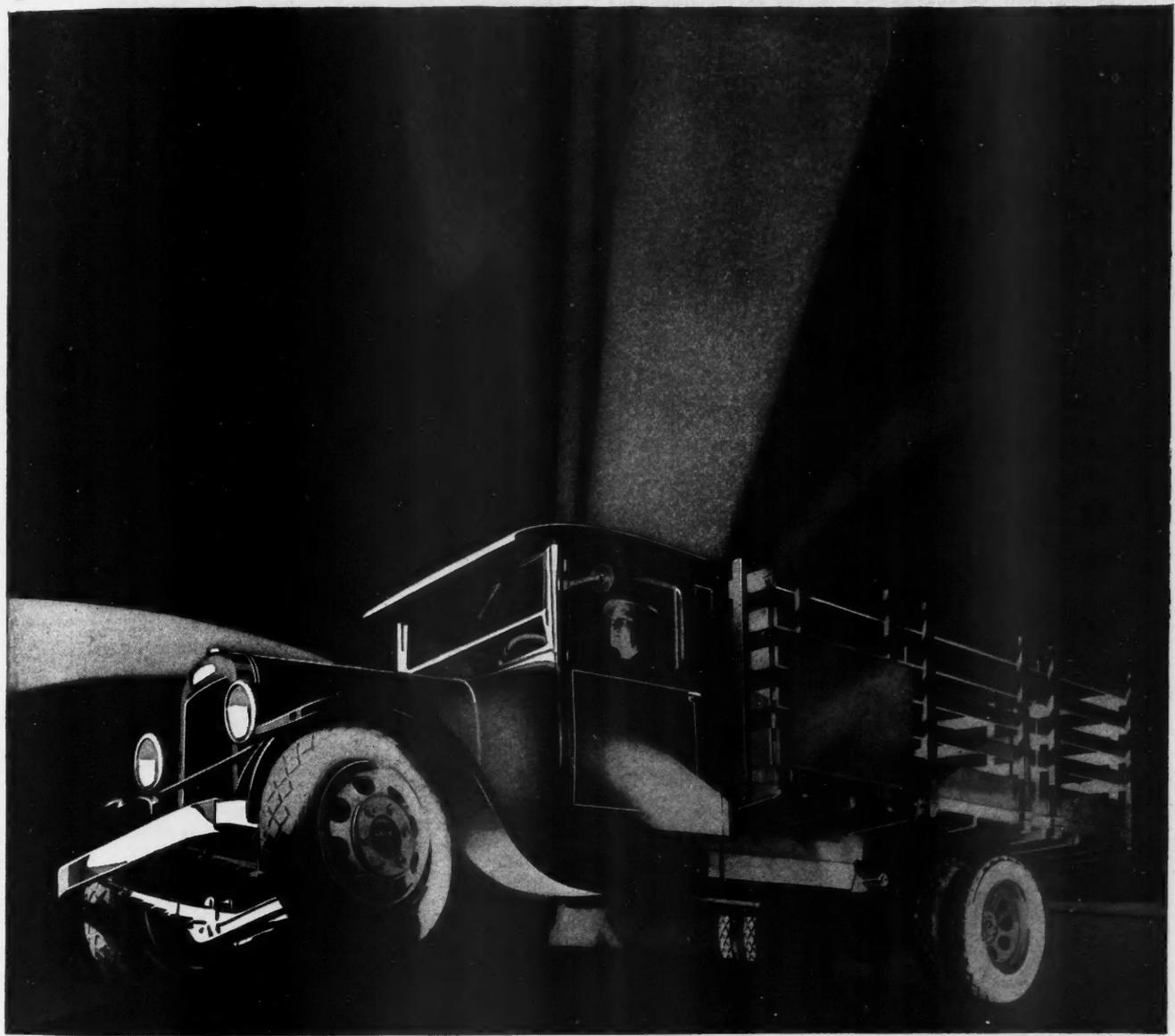
provides such a fitting place for the radio and costs considerably less than would separate bookcases and radio console. There is ample room in the cabinet illustrated for radio set, loud speaker, batteries and wiring, while an ornamental grille provides an opening through which the music is heard in the room.

The radiance from electrical fireplaces has been scientifically perfected so that its comforting warmth penetrates a considerable distance and has a health-giving value for those exposed to it.

Builders and contractors who build for resale find that electrical fireplaces are attractive to buyers and effective selling helps. One advantage is that they are so readily demonstrated and buyers can so easily be shown the beauty of the ruby coals and made to feel their comforting warmth and radiance.

Anyone who has ever seen a good stage setting with a fireplace will realize the gain in appearance and suggested comfort when one of these electrical fireplaces is switched on. Its radiant glow is the very picture of home comfort and contentment.

CERTIFIED EARNING ABILITY



Every dollar saved through intelligent control of haulage costs shows up at the end of the year as PROFIT. That fact has been the basis of Federal's 72% repeat sales.

THE FEDERAL MOTOR TRUCK COMPANY

"Leading Specialists in Commercial Transportation"

5842 Federal Avenue
DETROIT, MICHIGAN

FEDERAL TRUCKS

Write for *"The Federal System of Truck-Operation Control"*

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

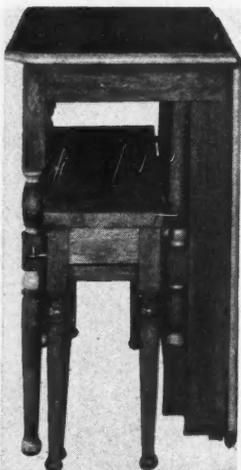
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Something New in Tables

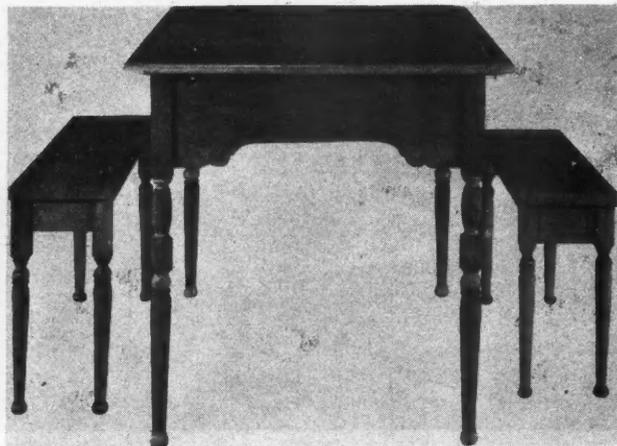
FOLDING tables, of all sorts and varieties, are familiar to everyone, but the folding table illustrated here is something entirely new and possesses features which distinguish it from other folding tables. In the first place the opening and closing of this table is instantaneous because it locks and unlocks itself and does not have any hand operated slide or gate leg.

When closed, it is extremely compact and can be moved about as desired, easily, by anyone. When open it is strong and rigid, sufficiently rigid, in fact, so that it will bear the full weight of a person as steadily as a solid table.

These tables are made in a number of models and finishes for various uses. The models include tables both with and without bench seats and a double folding model which, when open, is 70 inches long, though when closed it is only 12 inches long and 32 inches wide. The bench seats are attached to the table legs at one end and swing out, easily, into position for use. When not in use they are swung back under the table, one under the other, completely out of the way.



The tables are made in size measuring 32 by 45 inches, 28 by 37 inches, 38 by 48 inches and 32 by 70 inches, when open. They are made of various kinds of wood



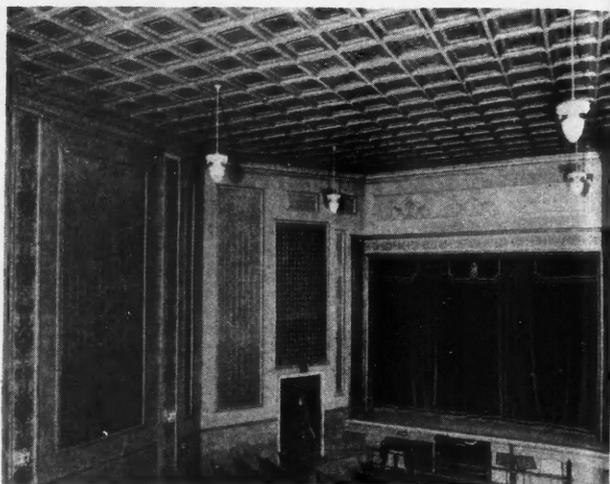
A Folding Table Operated on a New Principle Is Strong and Rigid When Open, Compact When Closed and Operated Instantly Without Slides or Gate Legs.

suitable to their various purposes. The kitchen tables are finished in enamel. The most elaborate model, which is suitable for use as a dining table which can be folded to serve as a flower stand or for some similar purpose, between meals, is furnished in walnut, mahogany, satinwood or bird's-eye maple, in any finish.



Steel Ceilings for All Buildings

THE accompanying illustration shows the interior of the Melrose Park Theater, Melrose Park, Ill., the handsome ceiling of which is an excellent example of the effects which can now be produced with steel ceilings. Such ceilings are being used extensively in stores, show rooms, garages, churches, offices and other buildings. The manufacturers state that they are producing picturesque, small designs for use in homes and apartment houses, which are proving quite popular.



The Steel Ceiling in This Theater Is a Handsome Architectural Feature and Is Proof Against Cracking Because of Vibration.

Steel ceilings, in Grecian, Gothic, French and many other designs have long been recognized for their special merits. Present day heavy traffic conditions have increased their value, for steel ceilings are proof against cracking by vibration.

The manufacture of these ceilings goes on under constant inspection. A laboratory is maintained for tests of strength, fire resistance, acoustics and insulation. For out of town installations, the customer furnishes a rough draft of the rooms to be covered and the manufacturers submit plans for approval. When plans are approved the material is shipped with complete instructions for installation so that, even where expert labor is not available, the installation can be properly made with the labor available.



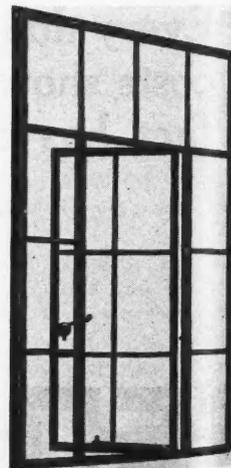
Center Vent Steel Casements

A NEW standard stock type of casement window has been announced by a well known manufacturer of steel windows. This is called the center vent casement because of the new location of the swing leaf. It has been moved from the side to the middle of the unit, giving it a border of fixed lights at the sides and top.

The new location of the vent brings out to best possible advantage the beauty inherent in the small, sparkling panes and narrow sections. It is a type that will be specially adaptable to the smaller rooms in the home, for it will provide ample light and ventilation, besides offering the beauty that is typical of the larger types.

The border of fixed lights around the vent allows the window to be opened without exposing the drapes to the weather. The screen is smaller than usual and the drapes need never touch it, although being on the inside, it stays remarkably clean.

While offering many new features, it retains all of the advantages of the other types, easy cleaning from the inside, controlled ventilation, a two-surface contact providing absolute protection from the weather, and bronze bearing hinges. The same rigid type of construction is used, which precludes any distortion of the frame from exposure, and consequent cracks. The swing leaf may be adjusted to catch any wind that is blowing, and deflect it into the room.



This Is a Standard Stock Type Casement Adapted to Home Curtaining Needs.

for Economical Transportation

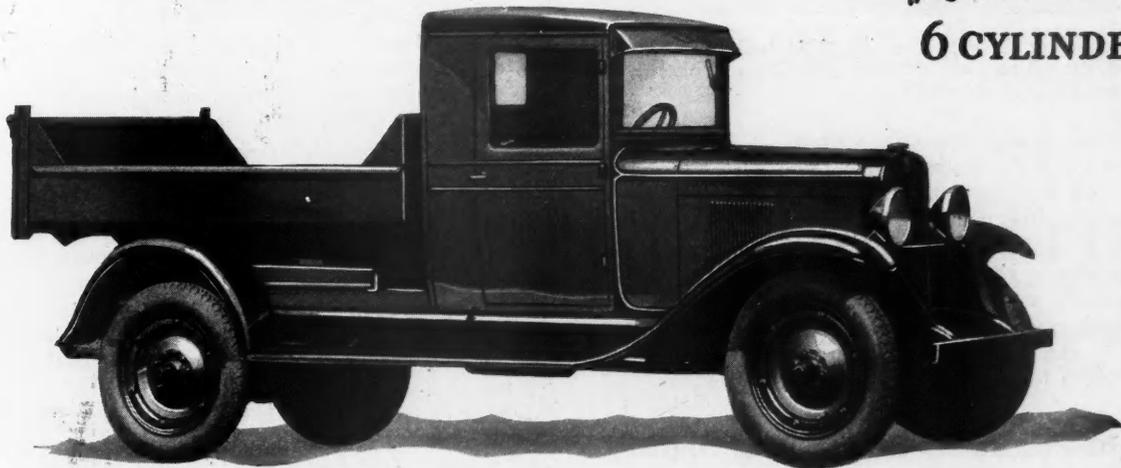


Another Chevrolet Achievement - the New Utility 1½ TON TRUCK

Greater Speed · 32% More Power
50% More Capacity · 7 inches
More Wheelbase · · · 4 Speed
Transmission · 4 Wheel Brakes

Illustration shows Dump Body mounted
on the New 1½ Ton Truck Chassis

and
6 CYLINDERS



1½ TON
Chassis only
\$545

1½ TON CHASSIS
WITH CAB **\$650**

LIGHT DELIVERY
CHASSIS **\$400**

SEDAN DELIVERY ... **\$595**

All prices f. o. b. factory
Flint, Michigan

OFFERING scores of vital advantages never before available in a truck priced so low, the new Chevrolet Utility 1½ Ton Truck represents the outstanding achievement of the world's largest builder of trucks!

The new six-cylinder valve-in-head engine develops 32% more power with correspondingly higher speed and faster acceleration. The 131" wheelbase—7" longer than before—provides full 1½ ton capacity with ample

room for mounting every conceivable body type. The four-speed transmission and four-wheel brakes assure maximum efficiency under every haulage condition, from gravelpit work to high-speed city delivery. And it operates at as low a cost as its famous four-cylinder predecessor.

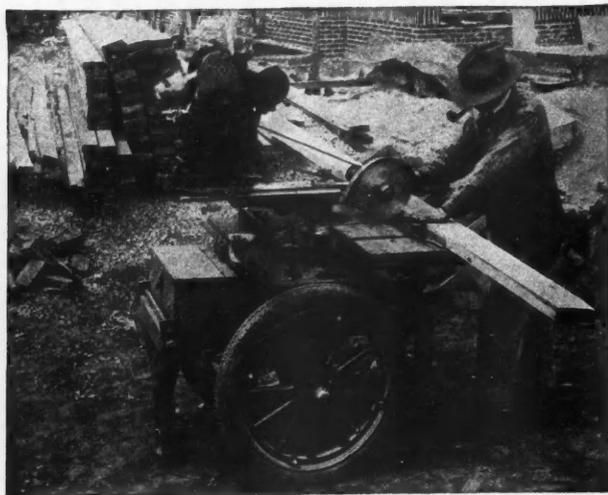
Ask your Chevrolet dealer for a demonstration. Learn how this remarkable new truck will do your work better and cheaper than any other truck you can buy!

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

- a Six in the price range of the four!

A Highly Adaptable Woodworker

THE accompanying illustration shows a well-known woodworker mounted on a trailer. The front support raises and is equipped with a two-way joint for attaching to the back of a car or truck. With this arrangement there is no necessity for taking the machine apart or lifting it. By hitching it on behind a car or truck it may be taken anywhere. It tows 35 miles per hour with complete safety. It is said that many builders take it out on their jobs and jack it up at the lumber pile ready for work.



A Woodworker Which Can Be Attached to a Car or Truck and Placed to Use on Any Job Even Where Electric Current It Not Available.

There is no need for electric current or to run power lines. The $1\frac{1}{2}$ H.P., single cylinder, air-cooled motor runs anywhere and delivers plenty of power for working three-inch material. One man can move it to any location on the job.

The machine is shown in this illustration in the cross-cutting position, and it is capable of performing 28 different woodworking operations with accuracy and speed, it is claimed. It can be used in a shop at night or on rainy days and taken to outside jobs whenever needed.

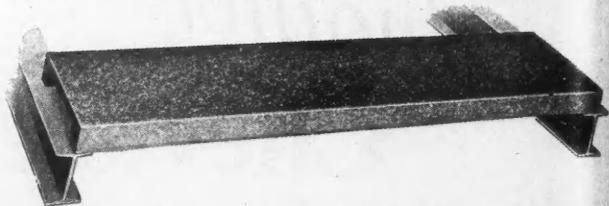
Light Precast Concrete Roof Slabs

CONCRETE is, today, established as one of the most permanent of construction materials, whether it be used for the foundation or the roof of a building. For many types of building concrete roofs have proved particularly suitable because they afford the benefit of low insurance rates and because they are immune to the destructive effects of steam, smoke, water, heat, cold, rust, gases and fumes. A type of concrete roof which affords additional advantages is shown here. It is a precast slab.

The advantages of distribution of material in the channel sections which form these slabs include permitting longer spans between purlins and a decided decrease in the weight of the slab itself, producing a maximum economy both in the roof deck and in the structural steel to support it. In many cases, it is stated, it has been found of benefit to reduce the number of columns in a building by utilizing intermediate jack rafters in lieu of purlins to support the slabs between trusses. The standard, long-span slab is 8 feet long by 18 inches wide with legs $3\frac{5}{8}$ inches deep, and weighs 20 pounds per square foot.

Another slab, 6 feet long, offers still greater savings in both roof and steel. This 6-foot slab measures 24 inches wide with legs $2\frac{3}{4}$ inches deep, and weighs but 16 pounds to the square foot. It gives strength well above all building code requirements, it is claimed.

These slabs are made in a factory where the conditions for mixing and casting concrete are ideal, temperature and moisture being held under strict control, and mechanical equipment as well as the human element at their best for efficient handling. The scientifically proportioned mix is



These Light, Precast Concrete Roof Slabs Make Possible Important Economies in Fireproof Construction.

placed in a rigid steel mold, with the steel reinforcing mechanically held in its most advantageous position in relation to the concrete. The steel mold gives a smooth, attractive under-side finish to the slab, so that the expense of a ceiling under the completed roof may be saved in most types of buildings.

The slabs are laid directly on the steel purlins and the joints cemented on the upper side with asphaltic cement, ready for the composition covering to be mopped in place without delay. These slabs may be used equally well for flat or pitched roofs. They save delay in construction, since they are manufactured while the steel is being fabricated, and are easily and quickly erected without delay on account of weather. No time is lost waiting for the roof deck to dry before the composition is applied. A specially trained organization handles the construction quickly and perfectly. The company furnishes full information and recommendations for the most economical layout of both steel and slabs for any project without obligation.



A Table With Electric Outlets

ANOTHER one of those pieces of home equipment which make for added comfort and convenience and make the house more desirable to the prospective purchaser is the electrically equipped table and bench set illustrated here. It is a most suitable piece of furnishing for the breakfast nook, dining room, kitchen or sun porch, and finished in any one of a variety of finishes or colors, adds much to the charm of the room where it is installed.

This unit is a table of the type most used for breakfast nooks, with benches at either side which comfortably seat two persons on each bench and which fold up under the table and entirely out of the way when not in use. In one end of the table there is an inconspicuous



The Table Is Equipped with an Outlet, Such as Shown at the Right, to Provide for the Electric Cooking Appliances.

receptacle of bakelite with one power inlet and three convenience outlets. It is set flush with the end of the table and provides a place where the hostess may plug in her electric toaster, percolator, waffle iron or other electrical utility. It eliminates the need for unsightly wiring to make numerous overhead or floor connections.

These tables are finished in walnut and mahogany, as well as in a variety of Duco colors, including ivory trimmed in blue, French gray, jade green and Mandarin red.

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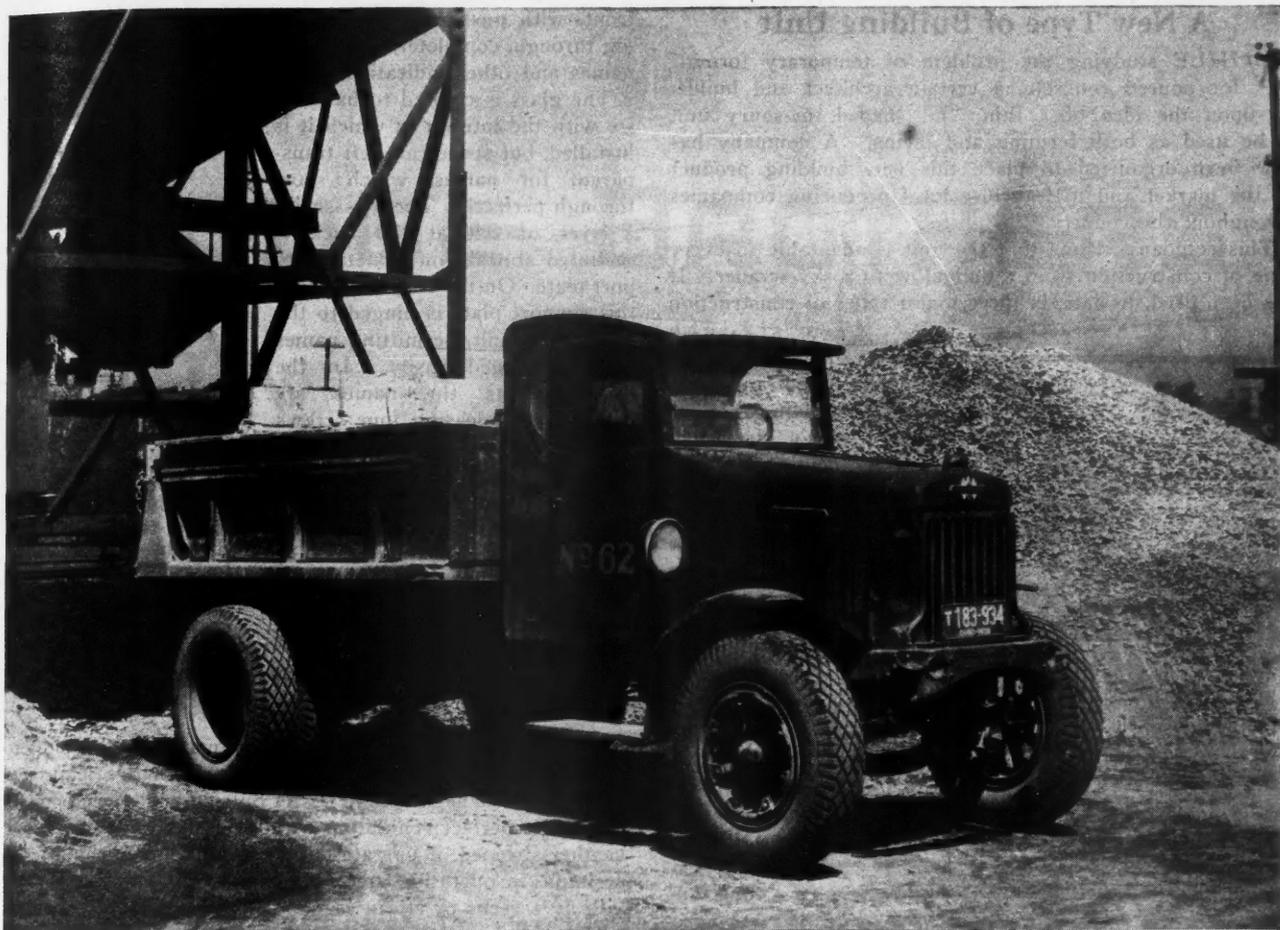
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The *right* Tires for *your* Truck

The special tire requirements of trucks engaged in highway building, engineering and contracting, and similar construction work, are best served by the special qualities built into Goodyear Truck Tires designed for this duty.

For example, the new Goodyear Dump Truck Pneumatic is a tire particularly suited to excavating work.

It has a broad All-Weather Tread with a wide, gripping road contact. A wide base for supporting the load. An extra resistance in its design, compound and SUPERTWIST body, to sidewall gouging and external in-

jury from collision with timbers, eye-beams, curbs, etc. It is the great lower-cost-per-ton-mile tire.

The Goodyear Super Heavy-Duty Cushion is ideal for the protection of sub-grades in road building. The Goodyear Super Cushion (hollow center) combines puncture-proofness with practically pneumatic resilience and activity.

Call on Goodyear for expert technical recommendations on the *right* truck tire for your hauling. Goodyear Truck Tire Service Stations everywhere give prompt, competent and helpful service.

More Tons Are Hauled on Goodyears Than on Any Other Tires

GOODYEAR

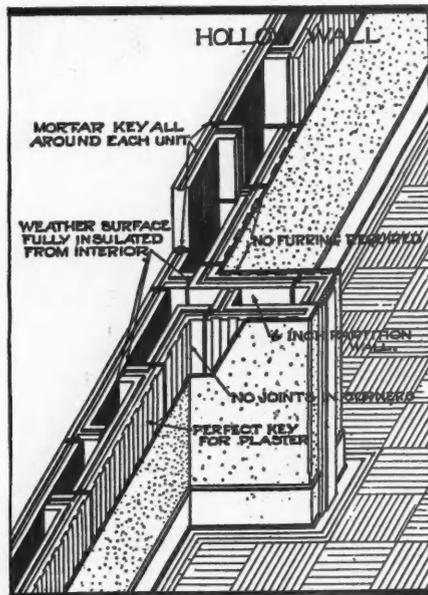
Copyright 1929, by The Goodyear Tire & Rubber Co., Inc.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A New Type of Building Unit

WHILE studying the problem of temporary forming for poured concrete, a certain architect and builder hit upon the idea of a thin, "L" shaped, masonry unit to be used as both forming and facing. A company has now been organized to place this new building product on the market and to franchise local producing companies throughout the country.

This company claims that the unit is adaptable to every type of construction from a bungalow to a sky-scraper. It has been used, to date, in three major types of construction



A New, "L" Shaped, Building Unit Which Is Used for Hollow Walls, as Here, or for Poured Walls, as Form and Facing.

—in six-inch hollow walls for homes and other buildings of similar size and height; as a permanent forming and finished exterior shell for poured concrete walls and columns in heavier commercial construction; as ornamental veneer or finish.

In hollow wall construction, the walls, only six inches thick, are said to be unusually strong and to have two features not found in other masonry walls of similar bulk. The first feature is that no unit exposed to

the weather goes clear through the wall to carry moisture, heat or cold. Such a wall is built up of two series of units. The ends of the "Ls," although abutting against the opposite units, are left as an open joint.

The second feature is the jointless angles. These are obtained through the fact that all angles are turned with the "L" end of the unit. This, it is claimed, provides interior angles free from shrinking and cracking. Another advantage claimed for this wall construction is economy in materials and in labor.

When used as a permanent shell or forming for poured concrete construction, the shell of units is held rigid for pouring by light strap-metal tie bars laid every 16 or 18 inches apart in each course and longitudinal reinforcing is placed by merely dropping the bars into saddles on the "Ls" or ribs. A monolithic wall in three layers is formed.

Through the use of natural stone aggregates and sands, these units are produced in beautiful and colorful, fabricated stone in almost every variety found in nature, and in others which are new and original. The colors are absolutely permanent, being produced by the use of mineral oxides and extending through the entire mass of the unit.



Name and Push Button Plates

THIS name and push button plate has been designed to combine the artistic with the practical and provide a plate which can be used in the finest buildings, harmonizing with its surroundings and rendering perfect protection for the names it displays. It can be cleaned with a damp cloth and kept looking its best. A heavy plate glass

front, with push buttons projecting through, completely covers the names and other indications.

The glass is colored to harmonize with the interior in which it is installed, but spaces are left transparent for names, which show through perfectly. The glass, with a layer of felt at the back is mounted sturdily on a metal support plate. On the larger type unit this support plate is hinged to the base of the unit, permitting names to be changed easily. In the smaller units the names are changed by releasing four screws and swinging the front plate open. These units are also furnished on walnut mounts when desired.

This plate is manufactured to conform with any interior. The standard colors are French gray, dark buff, dust color, apple green and mirrored.



Double Hung Window Permits Inside Washing

THE window illustrated here, which may be had in either steel or wood, offers the following distinctive features: It eliminates dangerous and costly outside window washing, it provides perfect ventilation without draft, it is completely weather-stripped, it operates like a double-hung window, it is simple in operation and its operation does not interfere with fly screens or storm sash.

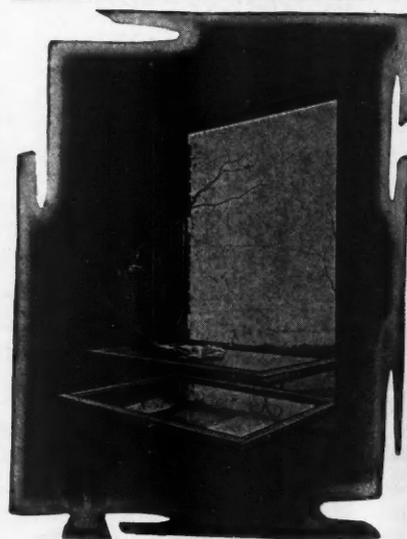
Though these windows slide up and down like the ordinary double-hung window, when it comes to washing both the lower and upper sash can be tipped back into the room to a horizontal position. The washing of the outside of the window is then just like wiping off the top of a table.

In the matter of ventilation many experts agreed that the most satisfactory ventilation is by means of the open window and deflecting board. With this window the same result is obtained by tipping the lower sash inward at the top to the desired degree, and the unsightliness of the deflecting board is eliminated. A room can be completely aired in this manner quickly and without creating drafts, for the incoming air is deflected toward the ceiling and diffused throughout the room. Curtains and shades are not in danger of being ruined and papers are not blown about, except in the case of an unusual down-pour of rain and violent winds, no water will come through this window when left open.

These windows are equipped with interlocking, rustproof, metal weatherstrips, which assure an absolutely air-tight and weather-tight window. This weatherstrip is so constructed as to permit raising and lowering and inward inclination of both sash.



A Glass Name and Push Button Plate in Colors to Harmonize with the Finest Interiors.



These Double-Hung Windows Can Be Tipped in for Washing but Are Weathertight.



DODGE BROTHERS

A N N O U N C E

The complete line of Trucks, Buses and Motor Coaches which Dodge Brothers have been manufacturing and selling under the name of Graham Brothers now take the name of their makers—Dodge Brothers.

These Trucks, Buses and Motor Coaches have always been powered by Dodge Brothers engines. For years they have been built of Dodge Brothers parts in Dodge Brothers plants according to Dodge Brothers standards.

These Trucks, Buses and Motor Coaches are sold, as they always have been sold, by Dodge Brothers Dealers everywhere.

For Power, Speed, Safety, Economy, Fine Appearance and Dependability, Dodge Brothers Trucks, Buses and Motor Coaches will continue to merit that high public regard which impels keen businessmen to buy them at a rate of more than a million dollars' worth a week.

DODGE BROTHERS TRUCKS

BUSES AND MOTOR COACHES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

NEWS of the FIELD



New Testing Laboratory Dedicated by Gas Industry

THE new testing laboratory of the American Gas Association, located at Cleveland, O., was officially dedicated recently when Oscar H. Fogg, President, unveiled a tablet which states that the building "is dedicated to promote and develop the gas industry to the end that it may serve to the fullest possible extent the best interests of the public."

J. G. Clark, engineer of research and training, The London Gas Light and Coke Co., London, England; R. W. Gallagher, president of The East Ohio Gas Co., Cleveland, Ohio; and Carl Shuler, director of law for the City of Cleveland, were the speakers at a special luncheon of more than 100 gas executives and officials.

In unveiling the tablet, Mr. Fogg said:

"The laboratory is in no sense a commercial enterprise. It is the tangible expression of the industry's allegiance to the principle that its greatest progress will be made through providing the best possible service to the American people.

"This structure, with its equipment, was initiated, erected, paid for, and sponsored by the organized gas industry of North America, made up of gas companies, manufacturer companies, and individuals."

Mr. Gallagher also gave some interesting figures about the testing laboratory. He said that since the laboratory was started two and a half years ago, 258 water heaters, 281 furnaces and boilers, 838 space heaters, and 9,500 stoves and ranges—a total of some 11,000 gas appliances—have been approved. Laboratory inspectors have traveled 25,000 miles.

"On 98 per cent of the appliances which have come to the laboratory for inspection and tests, there have been some suggestions made which have benefited the appliances, and, of necessity, the manufacturers and the gas consuming public," Mr. Gallagher stated.

"The building provides roughly 3,200 square feet of office space, 8,700 square feet of storage space, and 14,700 square feet for appliance testing and research," he said.

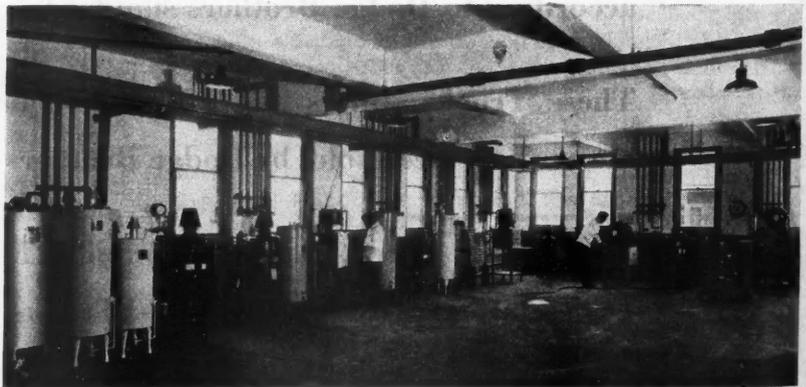
"The building is two-story brick, and was constructed by the Osborne Engineering Co., builders of the University of Michigan Stadium and the Yankee Stadium. Gas is used to heat the building.

"The testing rooms are spacious, and provision has been made for expansion in future years. It is inevitable that the laboratory will assume an even more important place than it enjoys today, and in planning this new building, adequate allowances were made for growth. All of the appliance testing equipment installed is automatic, in so far as possible, to eliminate the personal equation in our determinations.

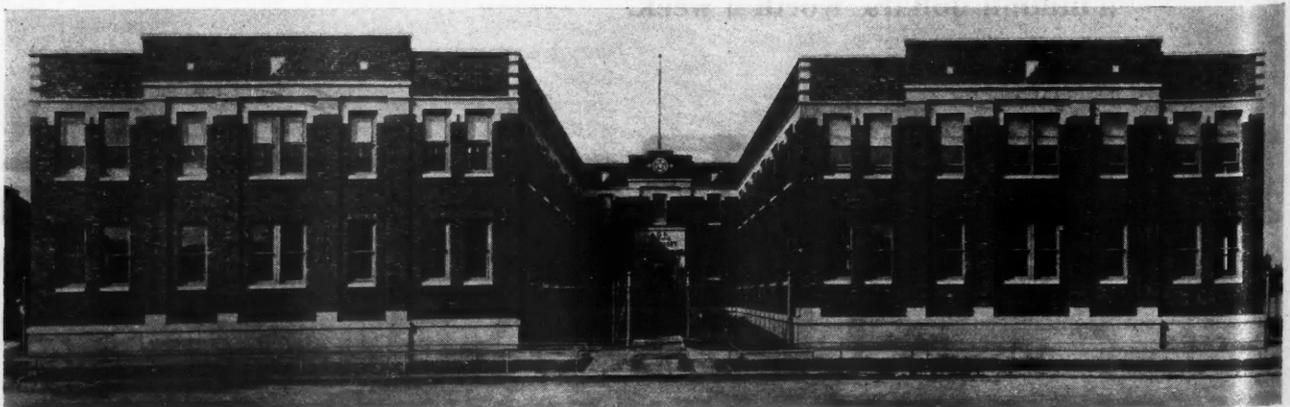
"We now serve more than 200 manufacturers, and for them we have provided three large rooms. These are completely equipped, and manufacturers may use them for their own work.

"It is interesting to note that more than two miles of pipe are installed in the building to provide gas, water and air to the various rooms.

"It is predicted that the new building will serve as one of the most conspicuous monuments ever erected by the gas industry in the interests of the 75,000,000 users of its service. With the unqualified support of the entire industry, and the co-operation of the U. S. Bureau of Mines and Standards and the Public Health Service, and other interested groups, we can expect much of the testing laboratory."



One of the Testing Rooms of the New American Gas Association Laboratory Where Tests of Water Heaters Are in Progress.



The New Building Recently Built by the American Gas Association for Its Cleveland, Ohio, Testing Laboratory. In the two and one-half years since the laboratory was started a total of 11,000 gas appliances have been tested.

SPEED



**HANDLES BATCHES FASTER
AND IT IS BUILT TO LAST LONGER**

**All Steel
Construction**

*S***PEED and durability**—they are combined in this Leach Tilter Trailer. Think of what this means in extra daily yardage plus longer mixer "life".

This ½ bag mixer is rigidly built of all-steel—has generous drum—no corners, discharges clean. Long has the Leach Mixer been outstanding for its sturdy construction.

**Fool-Proof
Lubrication**

Note its clean appearance and design—this mixer will give you longer years of service—continuous, profitable service.

**Thorough
Mix**

Let us send you a copy of our Tilter catalog which describes and pictures all Leach Tilting Mixers. Write for it today.



**Balanced Drum
Easy Discharge**

LEACH MIXERS
OSHKOSH . . . WISCONSIN

TILE-TEX Resilient Floors are Life Time Floors



*water-proof-
wear-proof-
enduring!*

When you put a floor in a school, church, store, hospital or any place where heavy foot traffic is usual—put in a lifetime TILE-TEX Resilient Floor.

TILE-TEX Resilient Floor Tile is composed chiefly of asphalt and asbestos, retaining all the famous time-resisting qualities of these well-known materials. It is particularly adapted for use in areas subject to hard wear, where the combined qualities of durability, appearance, quiet and resilience are desired.

Wear has only a polishing and beautifying effect on a TILE-TEX floor. Water takes no unfavorable action on it. It is the only resilient floor tile guaranteed to stay down when applied directly on unwater-proofed concrete basement floors.

Prominent Contractors and Architects throughout the country have used over nine million feet of TILE-TEX. You, too, will find it the ideal floor. It costs less than any other resilient floor—and because it does not wear out, there is no upkeep.

Distributed and installed by resilient floor experts everywhere. Mail coupon today for name of your nearest distributor, and copy of our big interesting floor book.

The TILE-TEX COMPANY Chicago Heights, Illinois

The TILE-TEX Company
Chicago Heights, Ill.

Send your book—"Floors That Endure"—and give name of nearest TILE-TEX distributor.

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Address.....

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



Milwaukee Corrugating Buys Eller Manufacturing Company

AN announcement has been made by President L. Kuehn that the Milwaukee Corrugating Company, 36th Ave. and Burnham St., Milwaukee, Wis., has purchased the Eller Manufacturing Company, of Canton, Ohio, and that this company will be affiliated with the Milwaukee Corrugating Company after January 1, 1929. The Eller Manufacturing Company will continue, without any change in its personnel, to serve its customers as in the past with the lines which it now manufactures. In addition, its manufacturing facilities will be enlarged. As soon as practical such articles as metal lath, corner bead, channels, road strips, stove pipe, furnace pipe, and all types of conductor, furnace pipe and stove pipe elbows will be added.

The Eller Manufacturing Company now occupies a thoroughly modern building, approximately 280 by 300 feet, and owns 7½ acres of property in the manufacturing district of Canton, on the main line of the Pennsylvania Railroad tracks.

This affiliation is expected to give the Milcor products a national distribution and will enable the company to better handle its increasing foreign business, it is stated.



Copper and Brass Companies Complete Merger

A LARGE consolidation in the copper and brass industry recently took place with the organization on December 17, of the Republic Brass Corporation, at Rome, N. Y. The companies that made up the merger are: The Rome Brass & Copper Company, Rome, N. Y.; the Taunton-New Bedford Copper Company, with mills at Taunton and New Bedford, Mass.; the Baltimore Sheet Mill of the General Cable Corporation, Baltimore, Md.; Michigan Copper & Brass Company, Detroit, Mich.; Higgins Brass & Manufacturing Company, Detroit, Mich.; Dallas Brass & Copper Company, Chicago, and the Rome Manufacturing Company, Rome, N. Y.

The chairman of the board will be Barton Hazelton, president of the Rome Brass & Copper Company, and the president will be George A. Allen, president of the Michigan Copper & Brass Company. The constituent companies will be managed substantially as in the past with the same officers and personnel.



Purchase Dump Body Company

THE American Cement Machine Company, Keokuk, Iowa, has announced the purchase of the Inland Construction Equipment Corporation of that city, manufacturers of Mandt automatic dump bodies. Production plans provide that, in a short time, a complete line of automatic dump bodies for all makes of trucks and automobiles will be announced.

Beginning with January 1, 1929, this company adopted a new, direct to the consumer policy on all its line of Boss mixers, pavers and hoists.



Berns Made Council Chairman

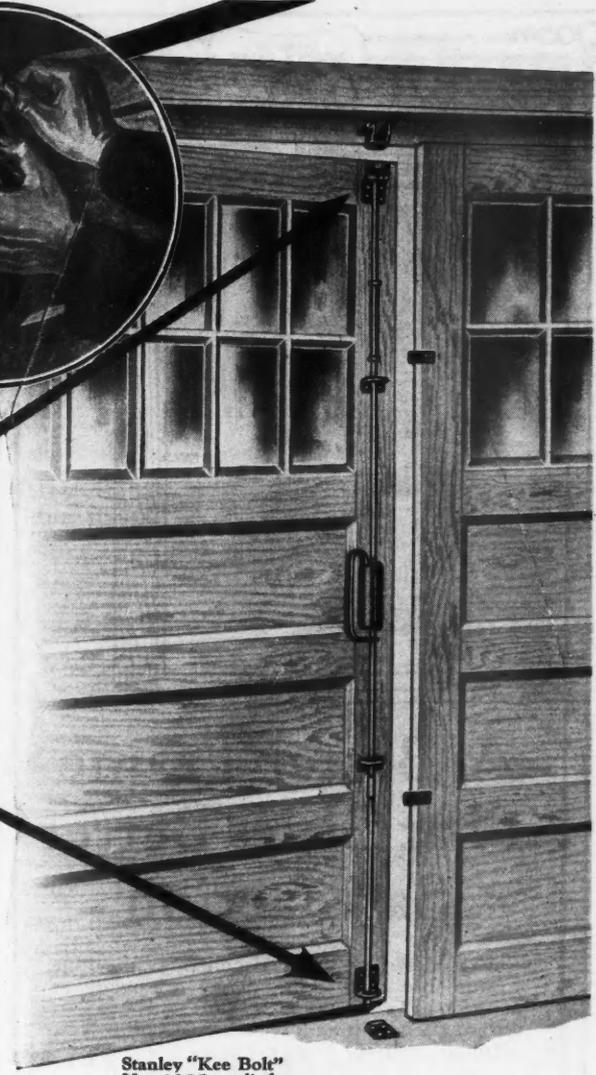
ON January 10, Max A. Berns, publicity manager of the Universal Portland Cement Company, who has been active in the construction field in both an engineering and an advertising capacity, was elected chairman of the Advertising Council of the Chicago Association of Commercial Engineers. He succeeds Homer J. Buckley, who has served in the same position for the past five years.

New

The STANLEY "KEE BOLT"



•• a Bolt
•• a Latch
•• a Lock
for Garage Doors



Stanley "Kee Bolt"
No. 1005 applied

ONLY two motions of the hand are needed to unlock a garage door equipped with the new Stanley "Kee Bolt."

- (1) a slight turn of the key in the cylinder unlocks the mechanism.
- (2) a slight pressure on the thumb-piece releases the bolt at the top and bottom.

The Stanley "Kee Bolt" is furnished either with or without cylinder. Adjusted at the factory to fit any standard cylinder. When cylinder is supplied, any standard make can be specified. The Garage Door can thus be master-keyed to the House Door so that one key can be used for both.

Two sturdy plates fastened to the inactive door act as an astragal, locking both doors. Easy to apply—a real time saver. Guarantees security for the garage door.

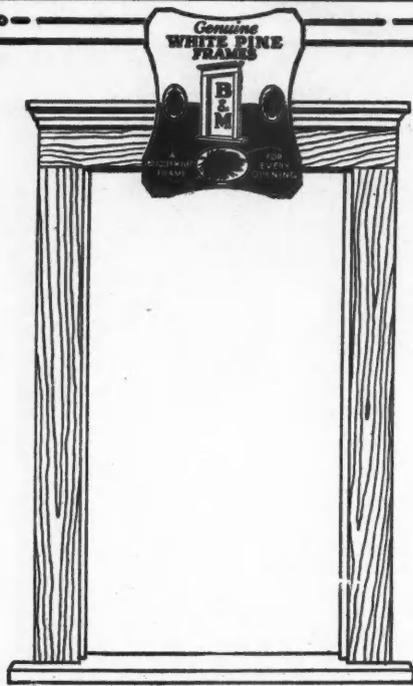
Send for information on this real improvement in garage door equipment: also Stanley Catalog No. 41m, showing full line of Stanley hardware. Write to The Stanley Works, New Britain, Conn.



STANLEY HARDWARE

MADE OF STANLEY STEEL





A Better Frame That Gives Better Satisfaction

Put this Bradley-Miller Michigan White Pine Frame into your jobs. They are made of Michigan White Pine (*Pinus Strobus*), a durable wood found in centuries old New England homes.

Any carpenter can nail them up in less than ten minutes into the finest quality frame you ever saw.

You get immediate delivery on these Quality Frames. Your dealer carries them in stock for any size opening in the pattern you like, for any type of construction. Order now from your lumber dealer.

FREE

Catalog and Construction Booklet for Contractors, Builders and Dealers. Send the coupon today.

**BRADLEY
MILLER & CO.**
BAY CITY, MICHIGAN

BRADLEY-MILLER CO.
Bay City, Michigan

Gentlemen: Please send me your free literature.

Name.....
Address.....
Town..... State.....
Dealer's Name.....
Address.....

Manufacturers Organize

THE Standard Steel Building Institute, composed of manufacturers of standard steel buildings, has recently been organized for the purpose of co-operative trade extension. At a meeting held in the Stevens Hotel, Chicago, on December 6, a constitution and by-laws were adopted and the following officers elected:

C. I. Auten, Truscon Steel Company, Youngstown, Ohio, president; W. A. Knapp, Butler Manufacturing Company, Kansas City, Mo., vice-president; H. O. Davidson, Blaw-Knox Company, Pittsburgh, Pa., secretary-treasurer.

Representatives were also present from the Stefco Steel Company, Michigan City, Ind.; Maryland Metal Building Company, Baltimore, Md., and International Derrick & Equipment Company, Columbus, Ohio.



General Electric Appointments

ANNOUNCEMENT has been made by the Electric Refrigeration Department of the General Electric Company, Hanna Bldg., Cleveland, Ohio, of the appointment of J. J. Donovan as manager of the Apartment House Division and W. E. Landmesser as manager of the Commercial Division. Mr. Donovan and Mr. Landmesser have served as specialists in their respective lines and for some time past have been actively engaged in organizing these two highly important departments.



Behr-Manning in New Building

THE Behr-Manning Corporation, Troy, N. Y., has just moved into its new Administration Building, which is situated near to its mills. The new structure is a three-story building, 52 by 172 feet, of brick, in the Georgian style of architecture. It affords commodious working quarters for 120 people.



Marshall Made Sales Manager

W. B. MARSHALL has recently been appointed sales manager of the Contract Engineering Department of the Chain Belt Company, Milwaukee, Wis. He has been associated with the company since 1921, entering its employ on graduation from the Sheffield Scientific School of Yale.



Announce 1929 Annual Meeting

AT a recent meeting of the board of directors of the Artistic Lighting Equipment Association, Virginia Beach, Va., was chosen for the annual meeting of the association. This will be held at the Cavalier Hotel, February 5 to 7, inclusive, 1929. The organization has added to its collection department facilities by establishing a credit bureau, to be known as the A. L. E. A. protective service department. Its services will be free to members of the organization.



Concrete Convention Announced

THE Annual Convention of the American Concrete Institute, 2970 W. Grand Boulevard, Detroit, Mich., will be held in Detroit, February 12 to 14, 1929.



U. S. G. Adds Metal Lath to Line

AN announcement from the United States Gypsum Company states that metal lath and all types of metal lath accessories have been added to the line of commodities distributed by this company. The company's Red Top brand will be used on all metal lath products.

Make \$25⁰⁰ to \$40⁰⁰ a Day

**Winter and Summer
No Dull Seasons
No Lay-Offs
Your Own Boss**



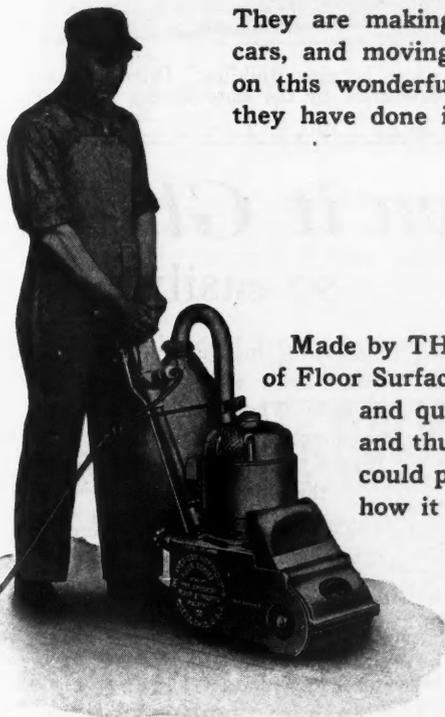
THE AMERICAN HIGH PRODUCTION FLOOR SANDER offers you the opportunity of a lifetime to get into something for yourself, be your own boss, and make big money the year round—Winter and Summer.

Every new floor must be surfaced, and every old floor re-surfaced. There is surfacing work to be done in every new or old building or residence in your vicinity and—

The Work Is Easy To Get

Keep The Money Rolling In

The men who are already in the floor surfacing business are evidence of that. They are making the Big Money, building their own businesses, driving fine cars, and moving into beautiful homes. Hundreds of other men have cashed in on this wonderful opportunity which leads to independence. Let us tell you how they have done it and how it is possible for you with an—



AMERICAN HIGH PRODUCTION FLOOR SANDER

Made by THE WORLD'S OLDEST and LARGEST MANUFACTURERS of Floor Surfacing Machinery to produce for you the utmost in both quantity and quality of Floor Sanding, in fact to DO DOUBLE THE WORK and thus make you DOUBLE THE AMOUNT OF MONEY that you could possibly make with any other floor sander made. Let us tell you how it is EASILY CARRIED BY ONE MAN, how and why it does the work so easily, quickly, and perfectly, also about our ON APPROVAL PLAN, whereby it is NOT necessary for you to place your money with us until you have conclusively proved to your own entire satisfaction that this machine actually does what we say it will and more. And above all, that it will make you MONEY both WINTER, SUMMER and FALL.

Mail the Coupon TODAY — No Obligation

**The AMERICAN
Floor Surfacing Machine Co.**
515 So. St. Clair St., Toledo, Ohio

THE AMERICAN FLOOR SURFACING MACHINE CO.
515 So. St. Clair St., Toledo, Ohio

Gentlemen: Please tell me, without obligation, how I can cash in on the winter months with the American High Production Sander.

Branches in Principal Cities

The A. R. WILLIAMS MACHINERY COMPANY, Ltd.
CANADIAN REPRESENTATIVES

Toronto Winnipeg Montreal St. Johns
 Vancouver Calgary

Name.....
Street.....
City.....State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A. G. C. Meeting and Exhibit

THE National Construction Exposition of the Associated General Contractors of America, will be held, in conjunction with the tenth annual meeting of that organization, from February 18 to 23, 1929, inclusive, in the Builders Building, Chicago. The exhibits will include construction materials, supplies, equipment, accessories, methods and processes, displayed on the same floor and directly in connection with the association meetings.



New Duro Sales Manager

THE Duro Company, of Dayton, Ohio, has announced the appointment of H. R. Eicher as general sales manager, effective January 1, 1929. Mr. Eicher succeeds H. I. Field, who resigned to accept the divisional sales manager-ship for Duro on the Pacific Coast.



Hold Annual Convention

THE Fortieth Annual Convention of the Michigan Retail Lumber Dealers' Association will be held at the Hotel Pantlind, Grand Rapids, Mich., on February 6, 7 and 8, 1929.



Announce New Mixer

THE Construction Machinery Company, Waterloo, Iowa, has announced the addition of a new 3½ Wonder mixer to its line, made in both trailer and loader models.



Branch Office Opened

AN announcement from the American Floor Surfacing Machine Company, Toledo, Ohio, states that a new

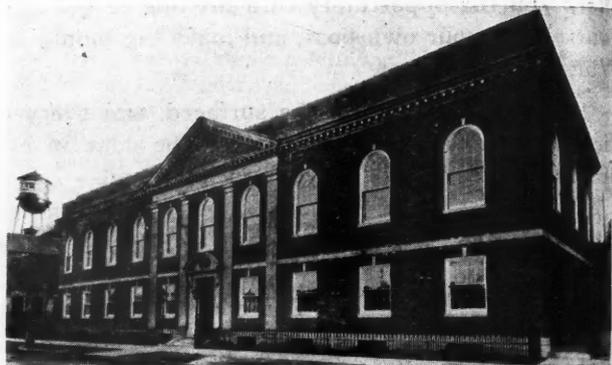
branch office, carrying a complete stock of machines, replacement parts and supplies, has been established at 444 New York Ave., Washington, D. C.



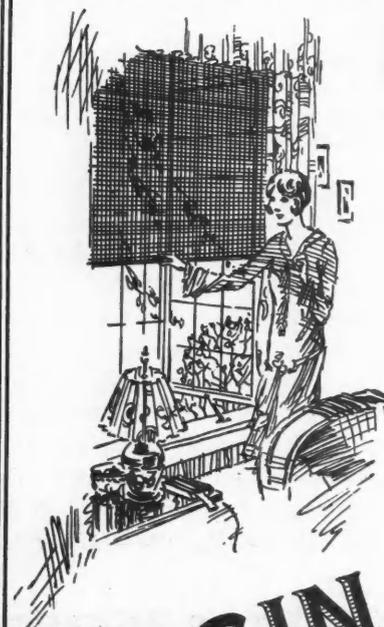
New "Towne Service Building"

THE new "Towne Service Building" of the Yale & Towne Mfg. Co., of Stamford, Conn., was formally dedicated on November 26. Funds for the erection and maintenance of this building, amounting to approximately half a million dollars, were provided through a special bequest in the will of the late chairman of the board, Henry R. Towne. The building represents his plans and purposes for the progression and advantage of the thousands of workers employed by this company.

The structure is modern in every respect and up-to-date in its facilities to serve as a recreation center for employes.



The New "Towne Service Building" Provided for Yale & Towne Employes by the Late Henry R. Towne.



Up or Down it Glides

so smoothly . . . so easily !

Here's a rolling screen that's as practical as it is convenient! Up or down it glides—just like a window shade. And it *continues* to operate, season after season, year after year!

Higgin *Hinged* and *Sliding* screens are well known in millions of American homes—and now Higgin is building a Superior *rolling* screen . . . one that combines the features of ordinary rolling screens and adds certain *exclusive* sales points of its own!

Cash-in on this opportunity. Your clients know that rolling screens eliminate Winter storing, repairing, installing, etc.—and they know that Higgin stands for super-quality . . . the *ultimate* in screens!

You'll find these improved screens as strong a selling point as an electric refrigerator or incinerator! Mail the coupon now for our illustrated booklet and complete information.

THE HIGGIN MANUFACTURING COMPANY

Screen Specialists since 1893

Home office
Washington Ave. - NEWPORT, KY

Branches at
KANSAS CITY, MO. - TORONTO, CAN.

HIGGIN

ALL METAL

SCREENS

The Higgin Mfg. Co.
502 Washington Ave.
Newport, Ky.

Please send complete information regarding your new rolling screen.

Name _____

Street _____

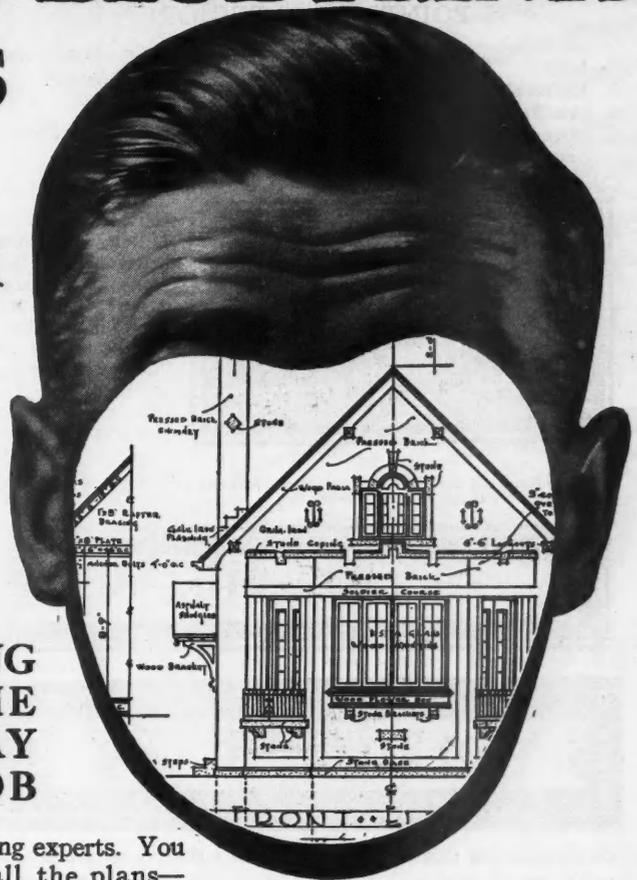
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A FRANTIC CALL FOR MEN WHO CAN READ BLUE PRINTS

AND RUN JOBS AT \$4,000 TO \$12,000 A YEAR

SEE how easy it is now for any man to get ahead in the building game. Nowhere else does such simple training count for so much. Nowhere else are there so many countless thousands of openings as there are with contractors, builders and real estate firms, who are constantly calling for practical men who can read blue prints. Seven billion dollars will be spent this year for building. Trained men are at a premium in this gigantic industry. Untold thousands are needed at steady salaries far above the wage scale.



90 DAYS' EASY TRAINING PUTS YOU ON THE WAY TO A BIG-PAY "BLUE PRINT" JOB

NO longer is it necessary for building tradesmen to spend years learning all the "mysteries" of blue print plan reading. For now you can get the blue print training in three months that has taken others years to pick up "on the job." We train you at home in spare time by the fascinating "blue-print-method" with lessons that are as easy to read as your newspaper. You do not need more than a common school education. There is no hard, grinding study—the whole course is just like playing some interesting new game.

SIMPLE AND EASY AS A-B-C

These plans and lessons come to you from the oldest and largest school of building construction in the country. This is the kind of training that puts men quickly into the \$4,000 to \$12,000 a year jobs, and in contracting businesses of their own. You learn from actual blue print plans—

from practical building experts. You learn how to read all the plans—estimate all the costs—and supervise the entire construction of a building. You learn everything a foreman, superintendent or contractor has to know.

A BIG-PAY JOB—OR YOUR OWN BUSINESS

With this quick, easy training, the building field is wide open to building tradesmen who want to become foremen and superintendents—or who would like to go into business for

themselves. Burgert, Ill., stepped into a Foremanship at a 200% increase in salary. Clifford Scholl went from laborer to Ass't Superintendent in 8 months. Marchand, La., writes: "My salary is now increased 196%." After finishing his training, Baker,

Ohio, made \$3,800 clear profit in 3 months as a Contractor. Depke, R.I., increased his salary 700% in 12 months.

If you really want more money—if you hope to own a business of your own—if you want quick advancement in the building business—decide now to get this training that you must have for a real success.

FREE Book

Simply mail the coupon below for an intensely interesting Free Book, "How to Read Blue Prints," and full information. See what amazing opportunities open up for you in the seven billion dollar building field. Don't delay. Act now. Simply mail the coupon below.



Chicago Technical School for Builders, Dept. B-122, 118 E. 26th Street, Chicago, Ill.

Send me without obligation, your free book, "How to Read Blue Prints," and full details of the course and the opportunities in the Building field. It is understood that no salesman will call on me.

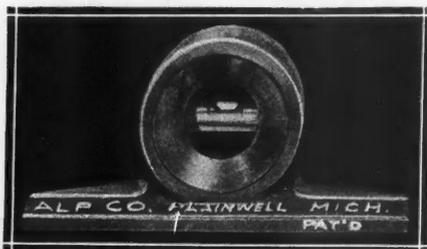
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Chicago Technical SCHOOL for BUILDERS
DEPT. B-122, CHICAGO TECH BLDG. 118 E. 26th ST. CHICAGO, ILL.

New! PLUMBS and LEVELS!

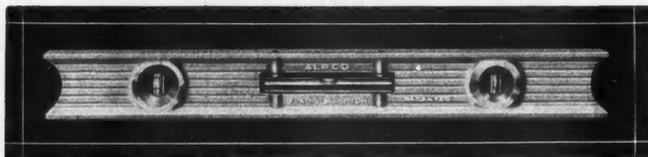
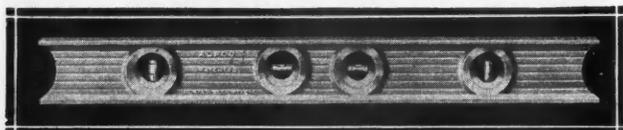
10 POINTS OF SUPERIORITY:

- 1—Low in Cost.
- 2—Accurate.
- 3—Almost Unbreakable.
- 4—Light Weight.
- 5—Adjustable, Reversible and Interchangeable.
- 6—Adaptable to a Wide Range of Uses.
- 7—Multiple All-Purpose Features.
- 8—Sanitary.
- 9—Unusual Variety of Types and Sizes.
- 10—Profitable.



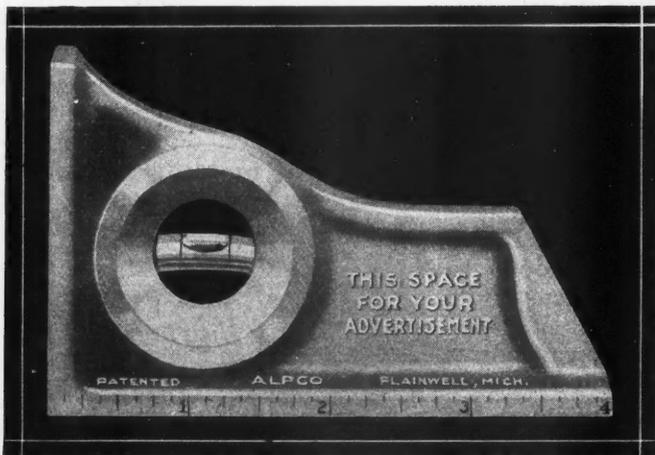
100L Pocket Level, 4" Long. Compact, extremely useful. Glass spirit gauge is only breakable part. This is quickly replaceable by the "O" spirit gauge at the cost of only a few cents. Anyone can do this himself.

150 PL Plumb and Level (Below) 18" long. Also supplied as 155 PL-24" and 160 PL-28".



170 PL Plumb and Level (Above) 18" long. Also supplied in 24" and 28" sizes.

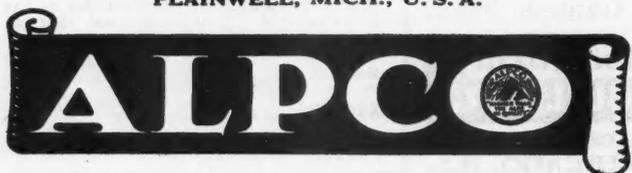
110 PL Plumb and Level (Level, Square and Rule) (Below) Grooved bottom for millwrights and machinists. Ruled sides; space in web for advertising message 4", 6" and 8" long.



ALPCO Plumbs and Levels are of the finest construction, superior materials and exclusive patented features. Machine finished and highly polished.

Samples, prices and discounts gladly supplied

ALUMINUM PRODUCTS COMPANY
PLAINWELL, MICH., U. S. A.



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.

The Bates Valve Bag Corp., 35 E. Wacker Drive, Chicago, has prepared two booklets presenting the advantages of its Multi-Wall paper bags for cement and similar materials, under the titles "No Loss from Mill to Mixer" and "Bates Multi-Wall Paper Bags Tested and Approved." They are so prepared that the dealer's name can be added, in a blank space provided for the purpose, for local distribution.

The Stone & Tar Products Co., 97 South Sixth St., Brooklyn, N. Y., offers several booklets and circulars covering its line of damp-resisting cement paint, ready mixed paints, Mural-Coat wall finish and similar products and including a booklet known as the "House Owners' Repair Catalog."

"Tx-Crete for One Operation Texturing—A Horn Product," is the title of a new booklet, published by the A. C. Horn Company, Horn Bldg., Long Island City, N. Y., dealing with textured wall treatment as accomplished with this company's products.

The Frank Adam Electric Co., St. Louis, Mo., has published a circular, "Presenting Warner Brothers' Theater in Hollywood," and the electrical equipment of the theater furnished by this company.

The Patent Scaffolding Co., 1550 Dayton St., Chicago, has issued a circular covering recent improvements in its Gold Medal safety platform ladders.

"Character and Use of Norton Products" is the title of a new booklet published by the Norton Company, Worcester, Mass., presenting its high quality line of abrasives.

The Lambert Hoisting Engine Co., 117 Poinier St., Newark, N. J., offers two catalogs—Bulletin "F," "Lambert Steel Derricks and Cranes," and Bulletin "H-2," "Lambert Electric Hoists."

"In the Long Ago" is the title of a booklet prepared by the American Asphalt Paint Co., 844 Rush street, Chicago, and tells of the discovery and development of the Gilson asphalt deposits from which its materials are obtained.

The Slatington Slate Co., Slatington, Pa., offers a 1928 catalog and price list covering its "Genuine Franklin Tunnel Slate."

The Inland Steel Company, Chicago, has published a new booklet on "Inland Copper Alloy Steel Sheets," which is the complete story of a "workable, enduring and useful sheet metal" covering both its manufacture and application.

The Forced Underfiring Corporation, 570-572 West Randolph St., Chicago, offers its catalog No. 7 covering its Iron Fireman automatic burner and also a pamphlet listing over 3,000 of its satisfied users.

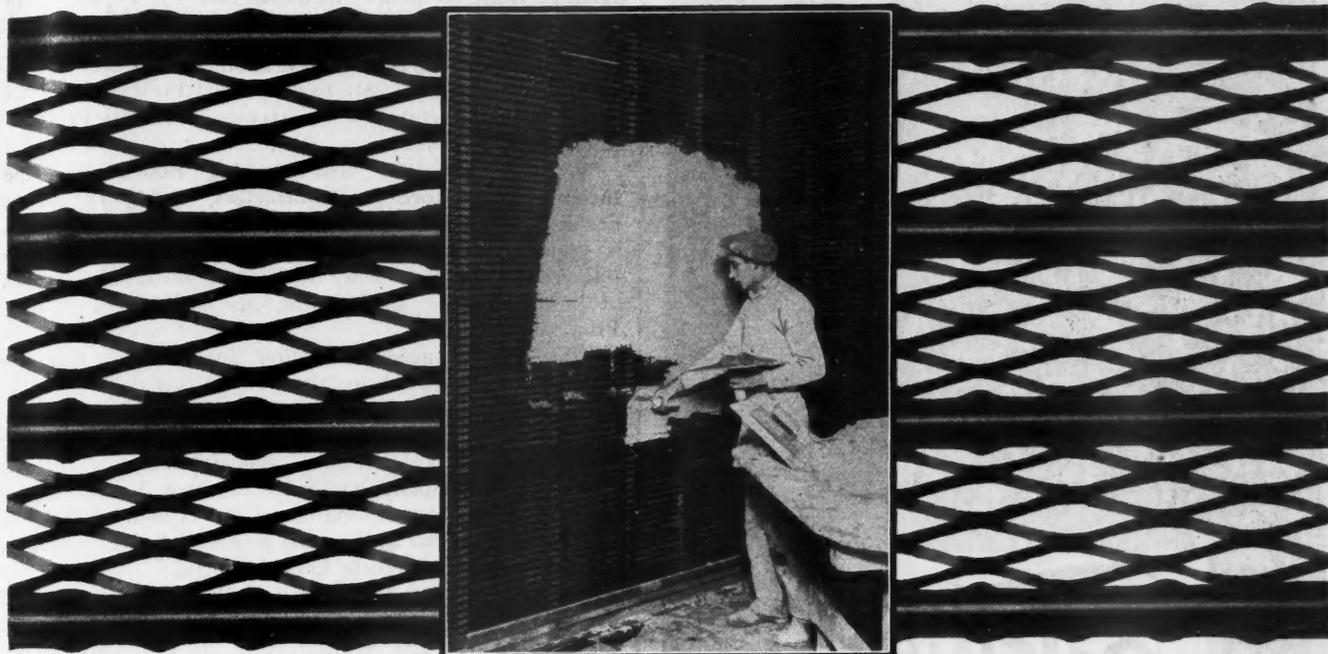
"Jamesway Magazine" is the title of a periodical published by the Jamesway Manufacturing Co., Fort Atkinson, Wis., in the interest of the cow, hog and hen farmer, and contains much of interest and value.

"Duplex-A-Lite for Use in the Home" is the title of catalog No. D. P. 165, of the Duplex-A-Lite Division of the Miller Company, Meriden, Conn., which handsomely illustrates, in full colors, this company's lighting fixtures.

The Metal Lace Corporation, South Boston, Mass., is distributing a folder containing information on and a sample of its Metalace grille No. 10.

"A Credit System for the Building Industry," is the title of a booklet published by the Allied Construction Industries Committee, 1150 Munsey Bldg., Washington, D. C., and is a report setting forth a credit plan which is designed to place the construction industry on a sounder business basis.

Steelcrete Diamond Flat Rib Lath



Combines the Advantages of 2 Laths

*The plaster saving and keying advantages of Flat Rib
with the strength of reinforcement of Diamond Lath*

Steelcrete Diamond Flat Rib Lath makes a perfect plaster base, because the Ribbs assist rapid, efficient plastering and the Diamonds insure perfect bond. The sheets of lath take the force of the trowel without "giving" at any point.

By test, Steelcrete Diamond Flat Rib Lath costs less per square yard to plaster

making the finished job cost no more than where inflammable material is used. Fire-safe houses with better plastered walls and ceilings are easier to sell. Use Steelcrete Diamond Flat Rib Lath on your next job.

Sheets are fully expanded from corner to corner. Easy to handle—will not cut the hands. Let us send you samples and prices.

THE CONSOLIDATED EXPANDED METALS COMPANIES

Steelcrete Building, Wheeling, West Virginia

Atlanta Boston Cleveland Philadelphia
Pittsburgh Chicago New York Buffalo



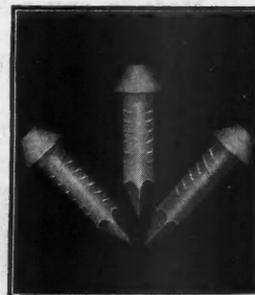
Steelcrete Lathers Tie Wire
Here is a Tie Wire designed for the Lather. A product of unusual strength, yet soft and pliable for quick and efficient workmanship. Wrapped in sanitary packages, a safeguard to the Lather like sterilized nails. Supplied in hanks 25 lbs. each.



Sample Offer

You may obtain on request, samples of the Steelcrete Time Tested Building Products described in this advertisement and complete information on other Steelcrete Products, including Arch Lath, Diamond Lath, Wall Ties, Cornerite, Metal Base Ground, Curved Point Base Screed, Metal Picture Mould, Cold Rolled Channels, Corner Bead, T-Rail Bead, Bull Nose Bead and Expanded Bead.

Write to us today



Steelcrete Stub Nails

Here is the Nail you can drive into Concrete without bending, breaking or blunting the point. Heavily zinc coated. Comes packed 1000 to the bag; also in 100 lb. kegs. The ideal nail for securing corner beads, metal lath and hangers.

THIS IS
PATTERN
No. 621

HANGS LIKE
WALL
PAPER

Oil-Textd
New —
Permanent—
Textured—

Reg. U. S.
Pat. Off.

Wall Covering
Most Serviceable
Decoration Obtainable

Washable—Decorative—Easily Applied—Inexpensive—Built up in Linseed Oil—No Surface Cracks—Easily Repaired—Can be removed, permitting any other type of decoration.

The wall is finished in one operation without smudging the woodwork and a uniform texture is assured. Applied to any smooth surface like wall paper.

Made in any color and in a variety of designs suitable for any room in the home, public hall, stores, etc.

FREE SAMPLES and literature sent upon request.

Width of Roll 19½ Inches Trimmed

PRODUCT OF

Lincrusta-Walton Co.

Hackensack

New Jersey

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.

The Structural Gypsum Corporation, Linden, N. J., offers two booklets, Bulletin 28B, on "Gypsteel Pre-cast Fireproof Floors," and Bulletin 28A, on "Gypsteel Pre-cast Fireproof Roofs."

"Walker's 'Practical' Self-balancing Bookkeeping and Income Tax Record for Contractors," published by the Frank R. Walker Company, 536 Lake Shore Drive, Chicago, is especially adapted to the needs of the smaller contractors and builders who want a complete, easy system of keeping books and making up income tax records. Price, \$5.

"The Xit Advanced Ventilation Book," is the title of a new booklet prepared by the Iona Ventilator Co., Inc., 2821-29 W. Dauphin St., Philadelphia, Pa., containing information on the subject of ventilation which is of real importance to engineers, contractors and architects.

Sargent & Company, 94 Centre St., New York City, has published a booklet descriptive of its "Union" locks with demountable knob and exchangeable cylinder for office buildings, giving complete keying control.

The Wheeling Steel Corporation, Wheeling, W. Va., has prepared a new booklet, containing the complete story of the development and application of its Cop-r-loy, copper alloyed steel, a material designed to give the utmost in life and service.

"Asphalt Through the Ages" is a new booklet from the American Asphalt Paint Company, 844 Rush St., Chicago, containing interesting material on the history of the use and development of asphalt.

"Selling the Millions" is a booklet prepared by the International Harvester Company, 606 S. Michigan Ave., Chicago, containing advertising helps for selling International Harvester and McCormick-Deering machines.

"Present Home Financing Methods" is the title of a new booklet prepared by John M. Gries and Thomas M. Curran, of the Division of Housing and Bureau of Standards, of the U. S. Department of Commerce. It describes the service rendered by various financing agencies and gives practical information for those wishing to finance home purchases or construction. It may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. Price, five cents.

The James Swan Co., Seymour, Conn., offers a complete catalog of its Premium mechanics tools which is fully illustrated and contains a price list.

Johns-Manville Corporation, 292 Madison Ave., New York City, has published four booklets covering "Sound-Absorbing Treatment in Hospitals and Sanitariums"—"Sound-Absorbing Treatment in Restaurants and Cafeterias"—"Sound-Absorbing Treatment in Churches and Religious Institutions" and "Sound-Absorbing Treatment in Banks and Offices."

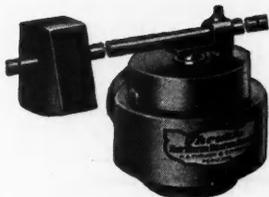
The Tie-To Insert Co., 872 Layton Blvd., Milwaukee, Wis., has issued a new folder on the use of its inserts for cutting costs on metal lath hanging and masonry veneering.

The David Lupton's Sons Co., Philadelphia, Pa., has published a new booklet, "Lupton Residence Casements of Steel," which is listed as Catalog C-217 and which contains full information and detail drawings.

The Syntron Company, 400 Lexington Ave., Pittsburgh, Pa., has issued three folders, with return post cards for requesting further information, illustrating the practical application of the Syntron portable electric hammer.



**HEATING DOES!
SELL HOMES..!**



**THRUSH
REGULATOR**

MODERN wives expect modern conveniences in their homes. Though Mother may have been proficient in swinging the coal shovel, daughter doesn't intend to be. Automatically controlled heat is expected, rightfully in the modern home. Thrush

System Provides an inexpensive but highly efficient method whereby you may convert the ordinary Hot Water Heating plant in the homes you build into a modern pressure system Automatically Controlled and Regulated. It is a big selling feature that your prospects will recognize, for it is nationally advertised.

Thrush System will also help you to modernize old homes, for it can be installed inexpensively on old Hot Water Heating Plants as well as new. Write for our booklet today and learn more about this better type of home heating.

H. A. THRUSH & CO.
PERU, INDIANA

**THRUSH
SYSTEM
OF HOT WATER HEATING**



H. A. THRUSH & CO.,
Dept. B., Peru, Indiana _____ 19
Please send me your booklet "Which Heating Plant for My Home?" and tell me more about the Thrush System of Hot Water Heating.

Name _____
Address _____
My Htg. Contr. _____



*Thirty years of
faithful service*

For thirty years we have kept faith with architects, contractors, builders and buyers. The passing years have proved Willis products worthy of their trust.

Strict adherence to the highest standards of excellence assure our friends of the trustworthy character of Willis skylights. What are the reasons for this long distinguished reliability? First, we start with the right design. Then comes good materials, and unless otherwise specified it is always rust-resisting galvanized open hearth steel. Next is workmanship—and we know how to make skylights right—and so perfectly that any average man can install them with nothing more than a hammer and a screw driver. We make them water-tight, without the use of putty. All are provided with condensation gutters on all bars and at the eaves. We guarantee them not to leak. Design provides for extra glass area without sacrificing strength. Willis skylights will not sag, buckle or bend. That's how good they are.

It takes nine pages in our big catalog to show the pictures and tell the story about Willis skylights. We want you to have this book. Mail the coupon today.

Willis Manufacturing Co.
Dept. 128 Galesburg, Ill.

CLIP AND MAIL THIS COUPON

WILLIS MFG. CO., Dept. 128, Galesburg, Ill.

Please mail us, without obligation, your catalog on sheet metal building products.

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

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.

American Chime Clock Co., 1643-A Ruffner St., Philadelphia, Pa., offers a folder illustrating and describing its new banjo clock for which it furnishes works and also plans or parts for assembly and finishing.

"A Handbook of Domestic Oil Heating," edited by Harry F. Tapp, published by the American Oil Burner Association, Inc., 342 Madison Ave., New York City, with which the author is associated as Technologist, is intended "to supply authoritative information concerning the problems of combustion and heating that is necessary in the practical application of oil heating equipment." Price, \$3.

The Clay Products Company, Inc., Brazil, Ind., has published a loose leaf booklet containing "The Standard of Textured Tiles" created and developed by this company as "a new building material which combines beauty of finish with structural strength and economy."

The Kozy-Kitch Kitchenet Co., La Grange, Ind., has issued a new catalog of its kitchen units, including kitchen cabinets, refrigerators, cupboards and broom closets.

"Stockade Wall Construction" is a new booklet published by the Stockade Corporation, A. B.-12, 228 La Salle St., Chicago, very fully illustrating and describing this interesting and successful system of construction and insulation.

The Frank Adam Electric Co., St. Louis, Mo., offers several new pamphlets covering its products, including panelboards and cabinets, home wiring, service switch panel boards, etc.

"Skyscrapers—and the Men Who Build Them," by Col. W. A. Starrett, published by Charles Scribner's Sons, 597 Fifth Ave., New York City, has been written with the idea of giving the reader a "general idea of the planning and construction of a skyscraper, the essentials of its origin, and the administration and functioning of a modern building organization, avoiding wherever possible technicalities that have already been ably covered by architects and engineers. . . ." Price, \$3.50.

"Plain Concrete," by Edward E. Bauer, published by the McGraw-Hill Book Co., Inc., 370 Seventh Ave., New York City, is described as "A complete discussion of plain concrete specifications, construction and testing of concrete and concrete materials. Methods of production are discussed briefly with special emphasis on items which affect the quality of concrete; purposes and values of the various tests are given and specifications of the American Society for Testing Materials quoted wherever available." Price, \$4.00.

"A Standard City Planning Enabling Act," prepared by the Advisory Committee on City Planning and Zoning of the U. S. Department of Commerce, has been published in the form of a bulletin which may be secured from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. Price, 15 cents.

"Roofs That Pay Dividends" is the title of a new booklet prepared by the Armstrong Cork & Insulation Co., Twenty-fourth St. and Allegheny River, Pittsburgh, Pa., presenting the economies of corkboard roof insulation. Other phases of corkboard insulation are covered in a bulletin of this company, entitled "Time Gives No Quarter."

The O. M. Edwards Co., Inc., Syracuse, N. Y., has issued a catalog, No. 1810, covering its line of steel filing cabinets and steel office furniture.



Photo by Haight Courtesy of "The American Architect"
Attractive new home at Montecito, Calif.
WITMER & WATSON, Architects

This Charming House

Built to satisfy a most discerning owner, this home is finished with Cabot's Creosote Shingle Stains, and its walls are finished with Cabot's DOUBLE-WHITE. There is nothing else so white, so durable, so well adapted to woodwork, brick, stucco, stone or concrete. These Collopake Colors are a new scientific invention, superior for every purpose for which paint was used in the past.

Specify

Cabot's Collopakes

SEND IN COUPON BELOW FOR LATEST INFORMATION

Send best

141 Milk Street, Boston, Mass.
Gentlemen: Please send me full information on CABOT'S COLLOPAKES.

Name

Address

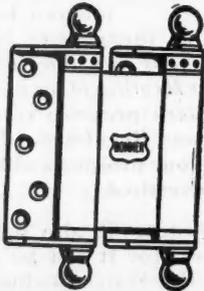
AB-2-29

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Bommer

Spring Hinges

are
the best



are
the best

**Millions
and Millions
of People are Pushing
Them**

whenever they open a door

Follow the line of least resistance

Use Bommer Always

They are the best

Bommer Spring Hinge Co., Brooklyn, N.Y.

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Use & KUHL'S for Glazing, Caulking and Pointing-up



You will find KUHL'S ELASTIC COMPOSITIONS unequaled for bedding and glazing sash, skylights, conservatories and glass construction work, tile-setting, etc. Fine for pointing stone and terra cotta work. Ideal for window caulking. Also made in consistency to be used with gun.

Kuhl's Compositions are elastic, never set hard, adhere strongly to wood, metal, glass, concrete, etc. Never crack or crumble. Stand heat and cold and they are not affected by moisture or changing weather.

Kuhl's Elastic Compositions can be economically and efficiently used in all construction work—from a four-room cottage to a 25-story building. They are now used by the best builders, contractors and architects and greenhouse builders in the country.

Fill out coupon below; we will mail you literature and prices

H. B. FRED KUHL'S
6415-21 THIRD AVENUE
BROOKLYN, NEW YORK



Get These Booklets

H. B. FRED KUHL'S
6415 Third Ave., Brooklyn, N. Y.
Please send me free of charge your literature on KUHL'S Elastic Composition for:

Glazing Caulking Pointing-Up

Name.....
Street.....
City.....
State.....

My occupation is:
 Builder Dealer Architect Real Estate Home Owner



Bakelite Molded Door Knobs are a product of National Brass Co., Grand Rapids, Mich.

Home buyers instantly approve of these attractive

BAKELITE MOLDED DOOR KNOBS

As easily cleaned as glass, but strong and durable; with a lasting color and finish that time and use cannot harm, Bakelite Molded door knobs are a distinct improvement over those of metal or other materials.

Bakelite Molded is non-corrodable, and will not rust nor stain in any climate. No lacquering or surface finish of any sort is used or required.

These Bakelite Molded door knobs are made in brown, burled walnut effect, and in black. Other colors to match wood and metal finishes are available on order. Door knobs of Bakelite Molded, in standard finishes, are stocked by hundreds of dealers in builders' hardware.

BAKELITE CORPORATION
247 Park Avenue . . . New York, N. Y.
Chicago Office . . . 635 W. 22nd St.
BAKELITE CORP. OF CANADA, LIMITED
163 Dufferin Street . . . Toronto, Ontario

BAKELITE

THE MATERIAL OF A THOUSAND USES

THE NEW CARTER LOCK MORTISER

(WITH AUTOMATIC FEED)

IT'S PART OF THE EXCLUSIVE CARTER DOOR SET

OVER 2200 BUILDERS ARE NOW USING IT

(Many using two to five sets)

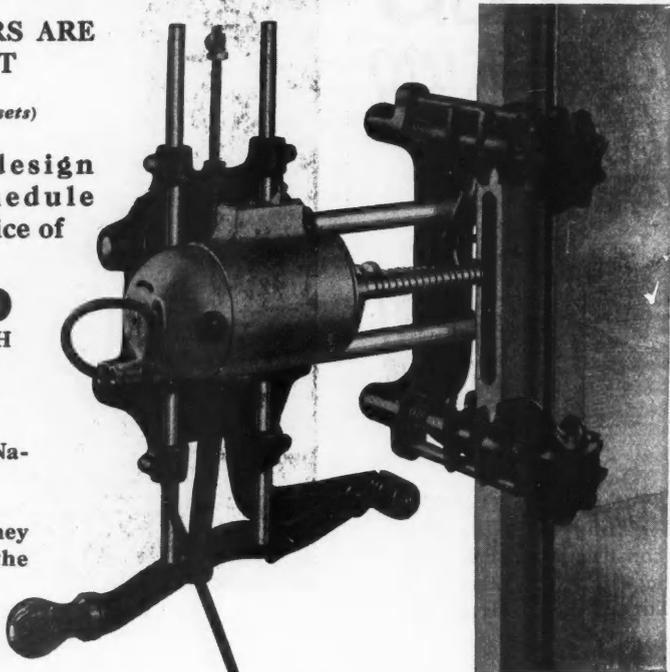
The simple Carter design and production schedule made possible the price of

\$98.00 CASH

30 DAY TERMS \$105.00

(Reference—The Liberty National Bank of Syracuse)

Just send a check or money order for \$98.00 and get the first power lock mortiser with automatic feed for under one hundred dollars.



In sending in your order be sure to ask about the remainder of the door set.

The Carter Super Plane for fitting doors, sash, transoms, etc.

The Hinge Butt Router and Templet—lock face templet.

They do the work far more accurately than by hand and many times as fast. Folder "A" shows how.

THE R. L. CARTER CO., Inc., 1301 Chestnut St., Phoenix, New York
SOLE MANUFACTURERS OF THE DOOR SET, THE STAIR SET, THE HAND SHAPER AND FULLY ADJUSTABLE ROUTER

"ANTI-HYDRO" Prevented a Bad Freeze on this Job

"ANTI-HYDRO" was used to harden the concrete floor in this building and to prevent it from freezing during construction. "ANTI-HYDRO" also makes the concrete resistant to brine and blood.

When this concrete floor laid on cork insulation was about three-fourths completed, during the month of February, the temperature suddenly dropped to 18 degrees and a heavy snow storm caused a two-day lay-off.

The floor was not covered and the materials were not heated, but the concrete did not freeze, and the floor did not have to be torn up and relaid. Furthermore it protected the costly insulation. This saving alone made "ANTI-HYDRO" extremely valuable on this job.

"ANTI-HYDRO" is a liquid integral compound which when added to the water used for mixing concrete makes the concrete permanently hard, absolutely waterproof and resistant to the action of acids, alkalis and oil. It is easy and economical to use and requires no skilled labor for the mixing process.

For 24 years "ANTI-HYDRO" has been in continuous use on every type of concrete work. Satisfactory results are guaranteed. Use it in your next job.



ANTI-HYDRO WATERPROOFING Co.

265-295 Badger Ave.

Newark, N. J.



AMERICAN PACKING CO. BLDG. ST. LOUIS, MO.

HERKLOTZ & HERCHERT CONTRS. KOERNER ENGINEERING CO... ENGRS.

Rolscreens

TRADE MARK



Window Screens Modernized

ALL types of window construction are suitable for Rolscreen installation. All styles of window trim which present different problems of installation have been fully solved.

All plaster or stone jambs—solid wood or semi wood and plaster return and the “forty and one” other conditions may be screened with ease and satisfaction.

The demand for Rolscreens is increasing daily for installation in modern homes, apartments, hotels and hospitals.

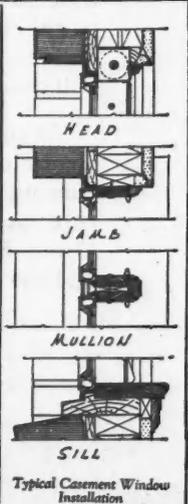
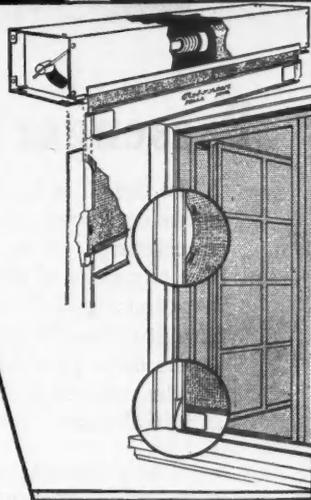
The Rolscreens are substantial in construction, all metal, economical in installation and service, fireproof—no question of sagging, bagging, warping or decaying.

Send for Instruction Sheet and Rolscreen Illustrated Booklet

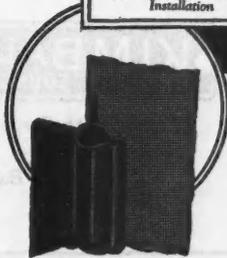


A section through guide showing lug in selvage of screen wire which prevents screen from sagging. A “non-sagging” feature found only in Rolscreens.

ROLSCREEN COMPANY
220 Main Street, Pella, Iowa



Typical Casement Window Installation



Adding Years to the Structures You Build

MOISTURE, that arch foe of all construction, will not penetrate walls or roofs of buildings coated with Hydro-Proof.

Hydro-Proof—pure asphalt, in liquid form—permanently seals the surface to which it is applied, from the damaging effects of smoke, moisture, alkalis, acids and other chemical reactions.

Applied to foundations—inside and out—it assures dry, damp-proof cellars, absolutely impervious to disintegration and corrosion. As a roof coating, it will positively prevent costly leaks and the roof requires no further attention for years. For surfacing and re-surfacing floors, Hydro-Proof 1:2:3 formula produces a resilient surface which makes the floor smooth for traffic, easy to walk upon, and eliminates industrial fatigue—the main factor in slowing up production.

Whether used as a water-proofing material or according to the 1:2:3 formula, Hydro-Proof dries and sets quickly. Floors re-surfaced with 1:2:3 Hydro-Proof are ready for use twenty-four hours after laying.

Builders, contractors and architects who specify Hydro-Proof add years to the structures they erect.

Other asphalt products we manufacture are SILVER SEAL, an aluminum paint; BITUMET, a protective coating against corrosion; and BRUSHING PLASTIC, an asphalt roof coating.

Specification sheets, prices and working samples will be sent upon receipt of coupon below.

THE ASPHALT PRODUCTS CO., INC.
703 Free Street Syracuse, N. Y.

Mail this Coupon

THE ASPHALT PRODUCTS CO., Inc.
703 Free Street, Syracuse, N. Y.

Without obligation, please send me complete information, specification sheets and sample of

- 1:2:3 Hydro-Proof
- Bitumet
- Silver Seal
- Brushing Plastic

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

The Heatilator assures Fireplace Perfection

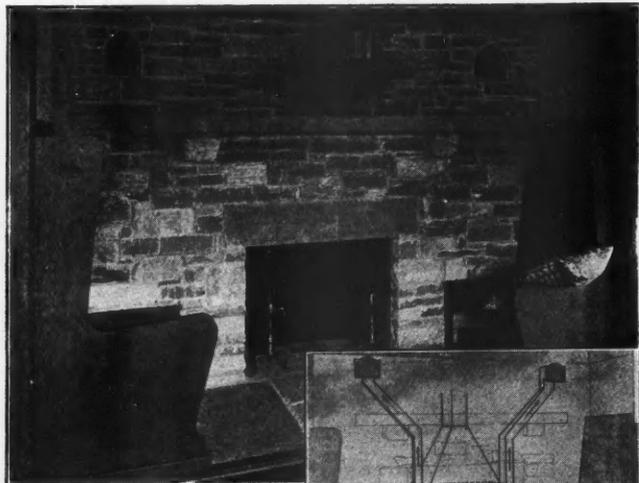


Diagram shows how Heatilator was installed in fireplace above. Scope is unlimited for design of fireplace and location of grilles.

ANY fireplace built with a Heatilator will burn satisfactorily, without smoking, and will deliver double—or triple—heat from same fuel. This we fully guarantee, or will refund the purchase price with an extra sum for removal and return.

The Heatilator is a scientifically designed, double-wall, non-rusting, metal form around which may be laid any kind of fireplace masonry. It is one complete unit up to the chimney flue. Without a Heatilator no fireplace can be built with certainty of charm and comfort; with it, proper construction and entire satisfaction are positively sure. Savings in the damper, smoke box, materials, labor and fuel more than cover cost. Many sizes.

Inquiries for the new Plan Sheets are invited. Heatilators will be sent for inspection if desired.

HEATILATOR COMPANY

611 Glen Avenue, Colvin Station, Syracuse, N. Y.

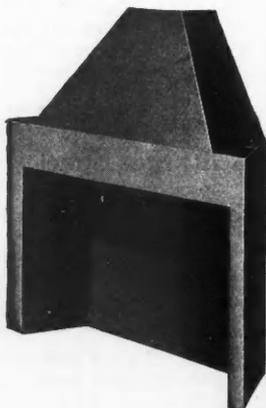
Warehouses in 25 cities

Home buyers want
Heatilator-built Fireplaces

The Heatilator is extensively advertised—in such magazines as:

- American Home
- Home Building
- American Magazine
- Liberty
- Literary Digest
- Better Homes & Gardens
- Your Home
- Good Housekeeping
- Country Gentleman
- House & Garden
- House Beautiful
- Rural New Yorker
- Small Home

Good fireplaces add to property values



Heatilator Fireplace Unit

FOR ADVERTISER'S INDEX SEE NEXT TO LAST PAGE

KIMBALL STRAIGHT LINE DRIVE ELEVATORS

CHIEFTAIN---A
New Eppley Hotel
at Council Bluffs,
Iowa

Equipped with Kimball
Elevators



Passenger Elevators

In the office building, where the absolute certainty of elevator service is an essential, it is interesting to note that the type of elevator construction is pointing towards the Kimball Straight Line Drive Elevator Machine, as the most practical solution for the builder who figures the upkeep, as well as initial cost.

The simplicity of Kimball Straight Line Drive construction, its fewer parts to get out of order, forms a sane contrast to older style double unit type, still much in use.

If you are interested in Kimball efficient elevator installations you can secure valuable information and literature on the Kimball Straight Line Drive Elevators by writing to this address:



KIMBALL BROS. CO.
COUNCIL BLUFFS, IOWA

989-97 Ninth Street

Council Bluffs, Iowa

Elevator Builders for 45 Years

How does the buyer judge a new house?

The first thing he looks at is the floor... he knows oak when he sees it.... If there are oak floors upstairs and down, he knows it is a good house

BUILDING a house that will sell is not a matter of guesswork but of cold facts and figures. You put certain features of extra value into a house because you know they will repay you with a profit. Not all of these features are visible to the prospective buyer.

But the smooth, mellow beauty of an oak floor is something that he and his wife will see for themselves, the instant they enter the door. At once the house takes on added value in their eyes. Oak flooring not only gives a home an air of lasting richness and distinction; it is regarded more and more as a definite index to the quality of the house.

The added cost of flooring with oak instead of a cheaper wood is an insignificant amount—only a small fraction of the increased profit it brings the builder.

This advertising is published by the OAK FLOORING BUREAU, 1238 Builders' Building, Chicago. A bureau maintained by the oak flooring industry for the benefit of home owners and builders. Write us for helpful literature or advice on any flooring problem. Our technical staff is at your service, without obligation.

Oak Flooring advertising will be carried on during 1928-29 on an increased scale. Look for the advertisements in "House & Garden," "House Beautiful," "Good House-keeping," "Better Homes and Gardens" and "The Literary Digest."

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Most Gallons Per Dollar

Duro Vertitank Unit System for shallow wells. Complete water systems as low as \$69.50 list. f. o. b. Dayton.

Why Most Builders Prefer **DURO**

Duro specializes in the manufacture of water systems. Everything that goes into the manufacture of Duro Water System is made by Duro. that goes into the manufacture of Duro Water Systems is made by Duro. every need, and no matter how difficult the requirements may be, Duro will give you perfect satisfaction. In Duro only can you get certain patented advantages which mean long life, and carefree, satisfactory, economical service.

Low in first cost, low in operating cost, Duro is recognized by Builders as the ultimate in quality and value. Buy Duro—without a fault.

Send in coupon below for free copy of the new Duro Catalog. Please state whether you are a builder or a contractor.

THE DURO COMPANY
Monument Ave. Dayton, Ohio

DURO

Automatic Water Systems

Send for NEW CATALOG

THE DURO COMPANY
Monument Ave., Dayton, Ohio AB-2
Please send me the new Duro Catalog.
Name.....
Street.....
City..... State.....



Homes with Garbage Cans are *Harder to Sell*

KICK out the foul smelling, insanitary garbage can—and with it the dangerous basement rubbish pile, cause of 75% of residence fires and an eye sore always in the way!

Kick it out of the homes you build — and with it, one more big stumbling block to easier sales and quicker rentals. Kick out sales resistance with time-tried, thoroughly successful and low-cost—

KERNERATOR INCINERATION

Any new home can have the Chimney-Fed Kernerator, and many of America's most successful subdivision developments are 100% Kernerator equipped.

All garbage and waste are simply dropped into the handy hopper door in or near the kitchen and fall to the basement incineration chamber where an occasional burning destroys the air-dried accumulation without odor. A match does it—no fuel required—the discarded combustible waste is the only fuel needed. Tin cans and other non-combustibles are flame-sterilized for removal with the ashes.

The Basement-Fed Kernerator for Homes Already Built

or new homes where chimney location will not permit use of Chimney-Fed Kernerator, costs but little more than the portable gas-fired incinerator of half the capacity. The saving in gas pays for it in a few years' time. Chimney or Basement-Fed 5 or 6 Room Residence Model \$90. Masonry about \$50 additional.

Write for complete information and prices or phone nearest representative. Offices in 89 cities.

KERNERATOR COMPANY
753 E. Water St. Milwaukee, Wis.

Garbage and
Waste
Disposal

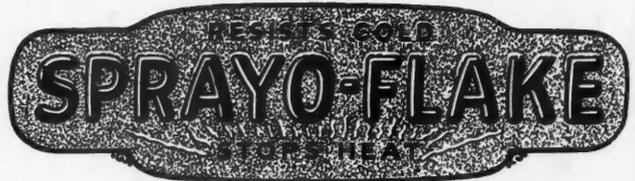


Typical Kernerator Basement-Fed Installation

For New and
Existing
Buildings

132C

Millions of Feet of



have been applied

In less than a year this new type sprayed-on insulation has won the acceptance of shrewd architects and builders in practically every building center of the country.

Sprayo-Flake is an outstanding success. Millions of feet of it have been applied by the exclusive operators listed below, because it seals tight every opening, blankets every space perfectly, deadens sound when sprayed on dividing partitions of apartment buildings. Many steel buildings are Sprayo-Flake insulated.

Make bigger profits, meet all competition, as these men are doing, with low-cost Sprayo-Flake. Write for information about our exclusive franchise proposition.

SPRAYO-FLAKE OPERATORS

Mr. Walter M. Ericson,
Milwaukee Sprayo-Flake Insulating Co.,
Milwaukee, Wisconsin.

Mr. Bruce C. Davey,
Sprayo-Flake Co., of Chicago,
Chicago, Illinois.

Mr. E. F. Stickers,
American Materials Co.,
New York, N. Y.

Mr. Manly Jackson,
Sprayo-Flake Co., of Minneapolis,
Minneapolis, Minn.

Mr. Joseph L. Stiefel,
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Fort Wayne, Indiana.

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Madison, Wisconsin.

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Dayton, Ohio.

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Sprayo-Flake Co., of Hartford,
Hartford, Conn.

Mr. Benjamin E. Plotkin,
Sprayo-Flake Co., of Bridgeport,
Fairfield, Conn.

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The Binks Spray Gun applies paint 60% to 80% faster than Hand Work!



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Builders should not lose time in acquainting themselves with the speed and economy of Spray Painting.

If you turn your painting jobs over to a painting contractor, by all means try one with a Binks Portable Spray Painting Outfit. Buildings are completed for earlier returns; the work is mechanically even and mechanically better. The spray forces paint into surfaces. The speed is the same regardless of surface texture. One man does the work of four or five hand painters. Binks—Spray interiors, exteriors, equipment—everything!

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Harper Made \$52 Extra In One Week— Read His Letter

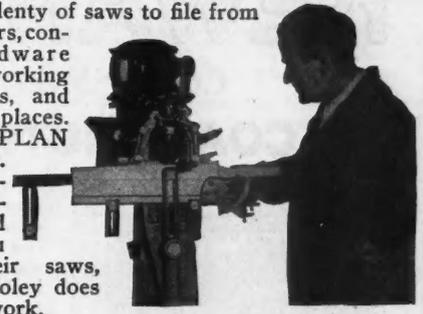
*"The saw-filing business is coming beyond all my expectations. I started to use up some spare time. I got my first Foley Automatic Saw Filer about March 1st, and September 1st had to buy another.
"Have filed \$52.00 worth in one week since that time, not every week, of course, but I am absolutely satisfied. Instead of a hobby, it has gotten to be a regular business, and I am certainly proud of it. This is due to the perfect work done by the Foley."
E. V. HARPER,
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Mason City, Iowa.*

Mr. Harper is just one of many men who are making extra money filing saws on the Foley Automatic Saw Filer. Many men get a Foley to keep their own saws in condition, because it files them better and truer than hand-filing, and they cut cleaner and stay sharp longer. Then they make EXTRA MONEY following the FREE PLAN we give them.

Start in Spare Time— FREE Plan to Help You

You can get plenty of saws to file from other carpenters, contractors, hardware stores, woodworking plants, schools, and many other places. Our FREE PLAN tells you how.

NO CAN-VASSING—they are glad to have you Foley-file their saws, because the Foley does such perfect work.



FOLEY AUTO MATIC SAW FILER

Files all kind of hand saws, hand saws 1/2" to 4 1/2" wide and cross-cut circular saws 3" to 24" diameter. Makes all teeth even, so every tooth cuts, at same operation. EASY TO OPERATE—no tedious labor or eye strain. It files automatically!

IT WORKS!

"I am well pleased with the Foley Filer. Do custom work in my spare time, and have built up a good trade. I also file my own saws, as I am a carpenter and do repair work.

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Please send me your FREE PLAN showing how I can make EXTRA MONEY in my spare time and keep my saws sharp with the Foley.

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

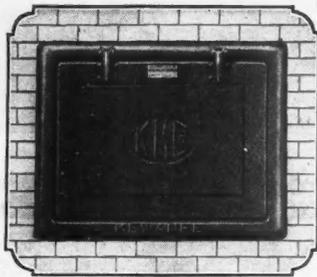
*"and for the Basement
be sure to specify*



KEWANEE

Copper Steel

COAL CHUTES"



"Yes, sir, I want chutes and windows in my building that will last for the life of the building—and not be ruined the first time a husky coal driver misses his aim.

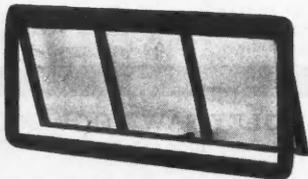
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always made good in every building I've put up."

You can't blame builders, home owners and architects for demanding Kewanee Coal Chutes—they cost little more than wood windows, cast iron chutes or other makeshifts, and soon pay for themselves in repair bills saved. Kewanee Copper Steel construction always stands the hard knocks of coal delivery and protects the building from damage.

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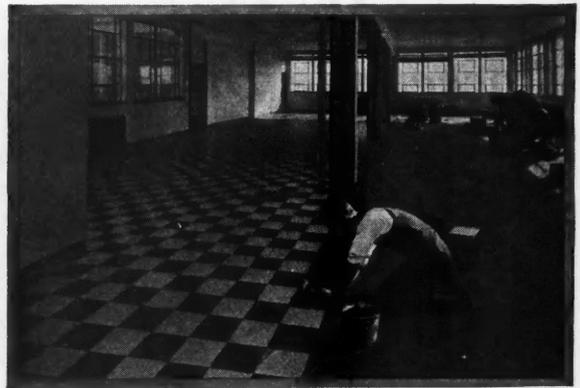
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**DURABLE
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Sana-bestos Floor Tiles offer an attractive proposition to builders and contractors everywhere, because of their moderate cost, beauty and permanence.

Whether you are building on speculation or contract, Sana-bestos Floor Tiles will answer every question you may ask about a flooring.

Inexpensive: Moderate first cost, no upkeep expense.

Easily and Quickly Applied: Over any new or old sub-floors by an average workman.

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Guarantee: A uniformly standard product. Every shipment tested and inspected.

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Manufacturers of Asbestone and Sana-bestos Tiles

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Established 1906

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Design and Steel Supplied by "International"

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Century**

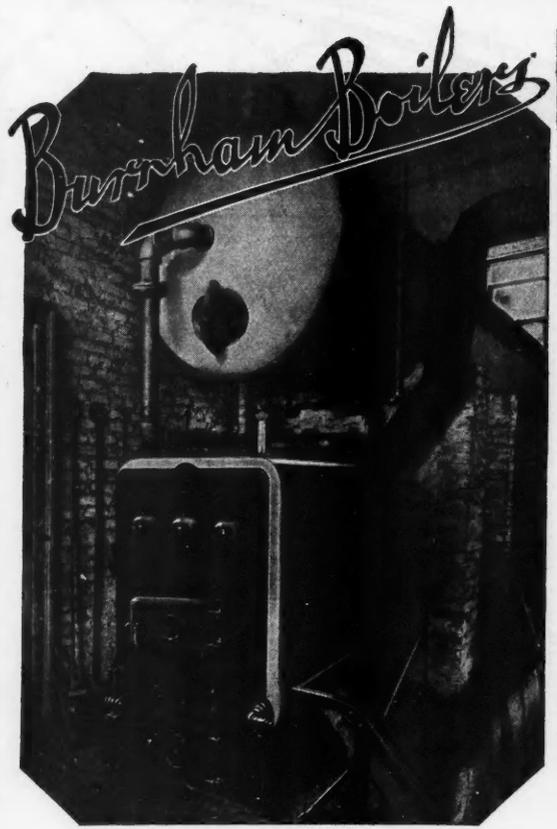
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has been a popular leader**

FOR more than twenty-five years this precision built, patented Cone-bearing pulley has been an overwhelming favorite—selling in larger quantities than any other pulley in the world. It has a large (3/4") self-lubricating cone bearing rather than the ordinary riveted pin or axle and the wheel is always kept in perfect alignment. Thousands of them still operating perfectly after years of use demonstrate the unlimited service that their all-steel construction gives.

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This is a high pressure hot water supply Burnham. Made also for low pressure.

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tell the truth
about the savings of
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WE can't tell the truth, because you would say it was an untruth. But you can see for yourself that's a 1500 gallon water supply tank.

You can see that the boiler's fire box door is open. You know it's open to hold back the fire.

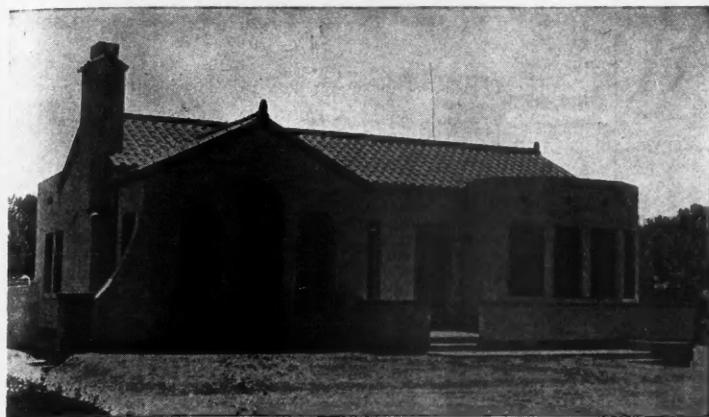
The photo, furthermore, was taken at the peak time when water is being used the most.

You can draw your own conclusions as to whether or not the Burnham delivers satisfactorily to this 70 family installation at 417 East 89th St., New York City.

Burnham Boiler Corporation

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Residence of R. L. Powers, Carlsbad, N. M. Leadclad Spanish Tile chosen for proven economy.

Roofs of Permanent Beauty at low cost

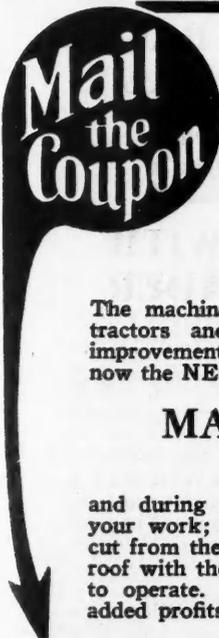
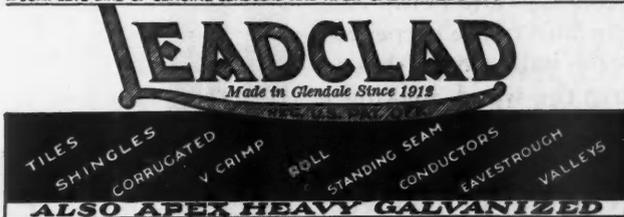
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12 machines in one;
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Ball bearing through-
out. 5 different sizes.

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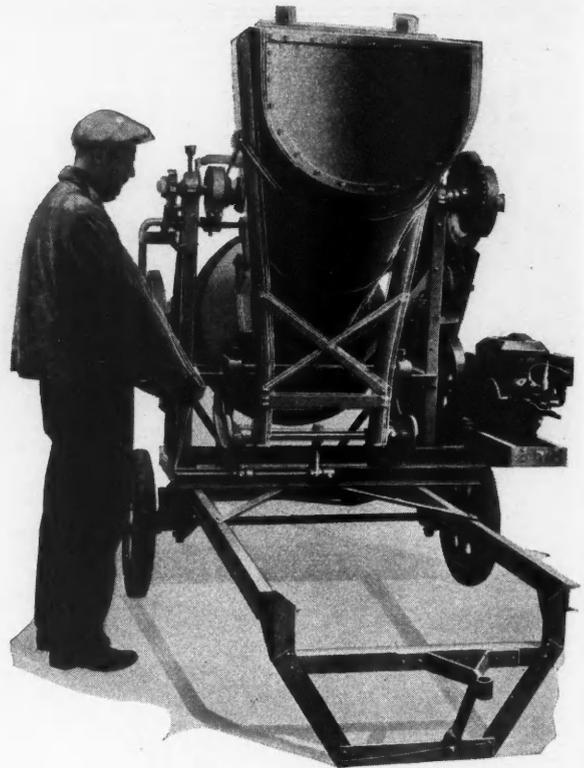
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READING Cut NAILS



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**ONE-HALF BAG
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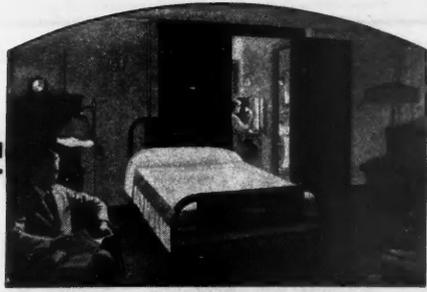
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Holmes

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CONCEALED BED CORPORATION

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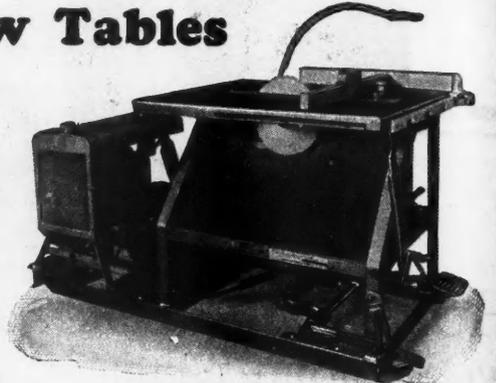
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7 OUTSTANDING FEATURES

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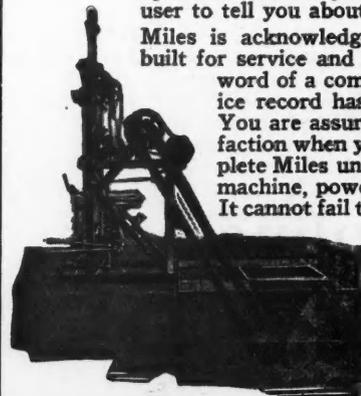


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Miles, for over thirty years, has served the concrete industry, with distinction.

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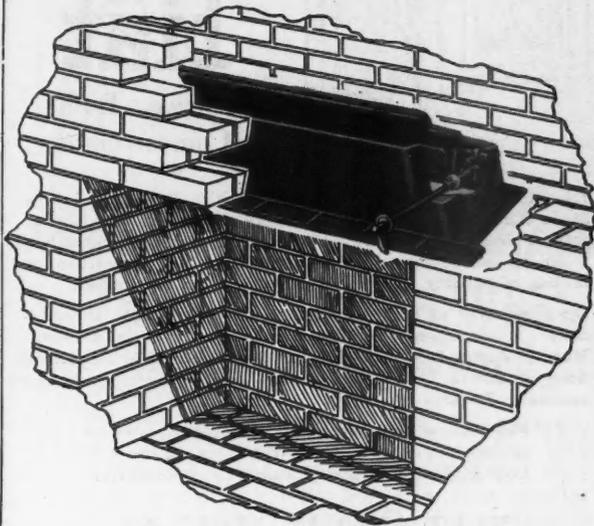
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"Fits in" any home, hotel, apartment, etc., new or old

Fiat

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Note the great simplicity of installing Fiat Enclosures in the above illustration. No breaking walls—no expensive tiling—no costly redecorating. Above all, permanent leakproof construction under all conditions. Unaffected by expansion, contraction or settling of building. A complete unit installed by plumber.

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Ball-bearing—Adjustable Tension



Type 4001

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The "Premier" is a high grade hinge in every respect and is so simple to apply that considerable economy is the natural result. The only mortising required is for the removal of one rectangular piece at the corner of the door.

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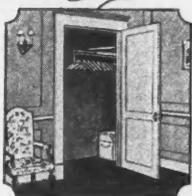
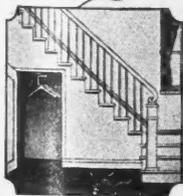
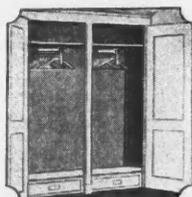
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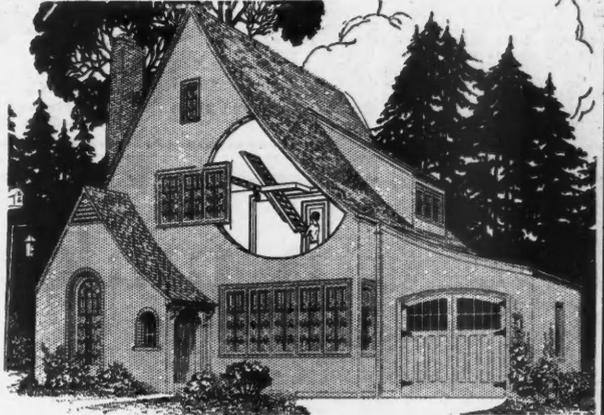
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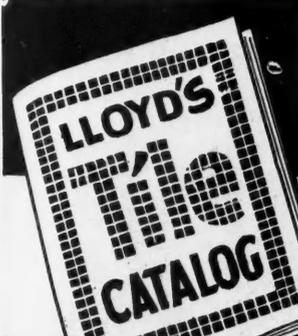
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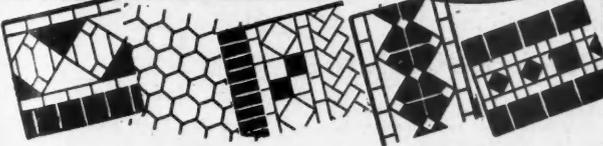
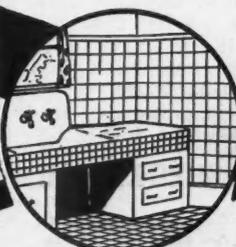
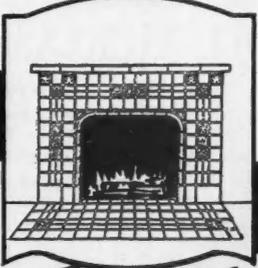
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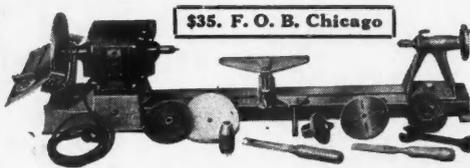
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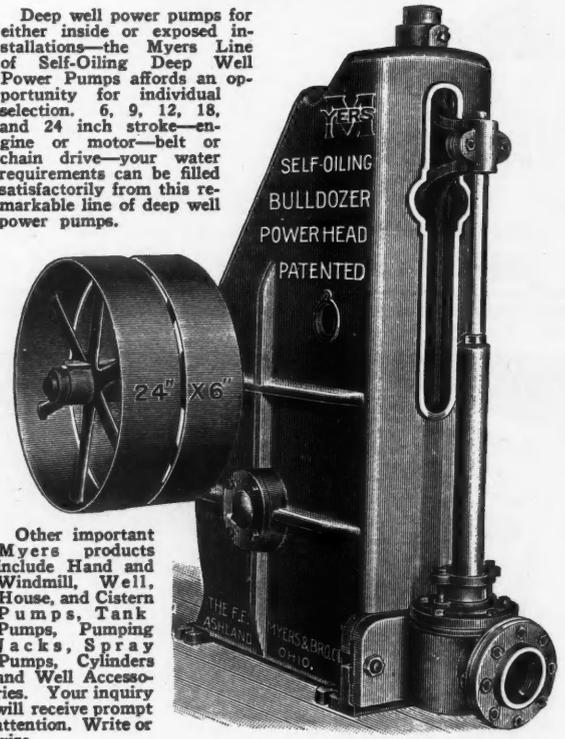
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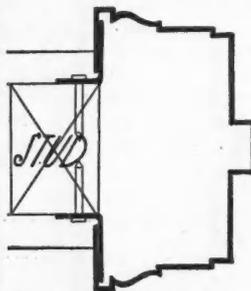
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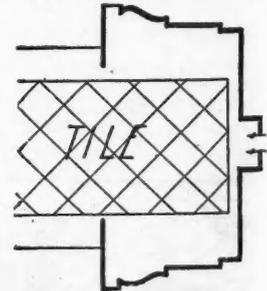


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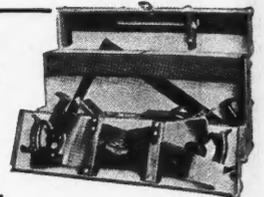
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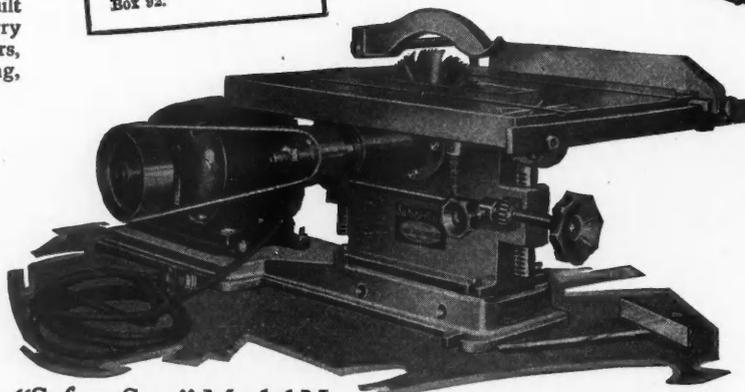
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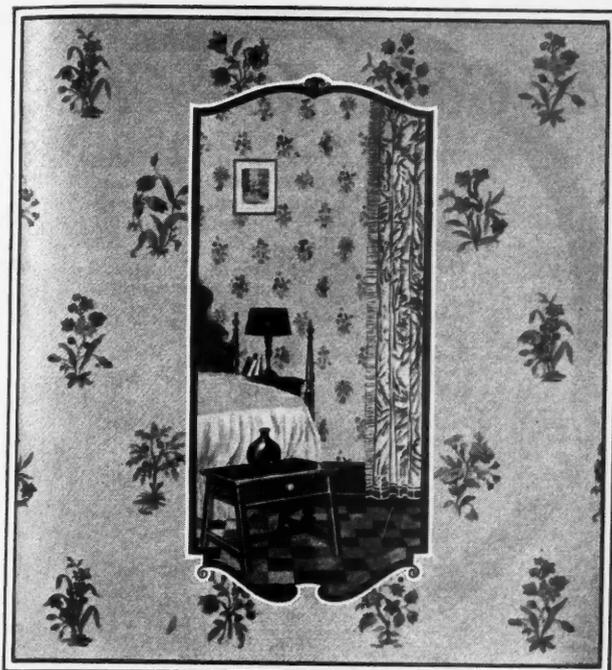
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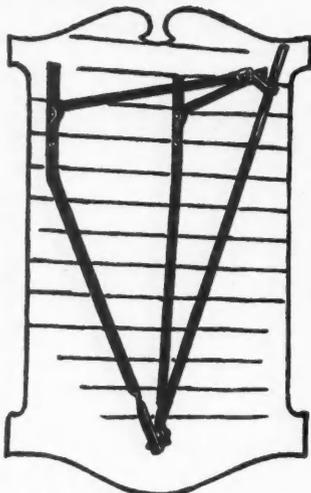
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Order it for a trial. It won't cost you anything. The trial is FREE. Write today.

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FLOOR MACH. CO., INC.
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The IMPROVED SCHLUETER

Rybolt Furnaces

MEASURE UP



To Your Standard of Profit

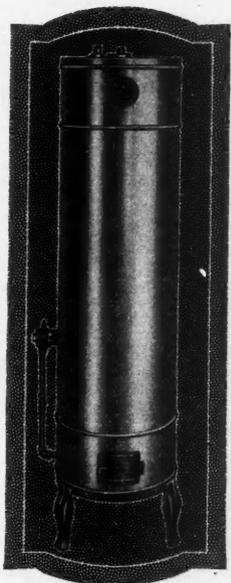
To Our Standard of Dimensions

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ASHLAND :: OHIO

America's largest copper boiler makers



ALWAYS a plentiful supply of clean **HOT WATER**

The Dahlquist Super-Aquatherm is the last word in copper automatic storage units for the home and is made in sizes to meet all requirements.

The Dahlquist Mfg. Co. also produces a complete line of copper range boilers with or without heating units which are available with the famous Dahlquist Aquatherm—a patented device which greatly increases the efficiency of the unit—heating units using kerosene, gas, electricity or coal can be furnished.

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Write for illustrated literature describing Dahlquist hot water copper boilers.

Dahlquist uses only Anaconda Copper.

Dahlquist Manufacturing Company

A, 2nd & West 3rd Streets
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building to sell demands selling features

Both steel and wood casement windows will add beauty and attractiveness to many new homes this year. Wherever they are used you can make CONVENIENCE an important selling feature with Win-Dor Hardware. Win-Dor casement operators afford perfect control of casement windows THROUGH THE SCREEN. Houses with casement windows which are easy to operate are houses that are easy to sell. The cost of Win-Dor equipment is surprisingly small. Your name on the coupon below will bring you our catalog.

Win-Dor

CASEMENT HARDWARE

THE CASEMENT HARDWARE CO.

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Here is a carpenter installing Win-Dor Series 25 geared operators on steel sash.

On the window transom is Win-Dor Series 10 transom operator.

Please mail me your catalog and booklet "Setting the Stage for Easier Selling."

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A B

Only 140 lbs
PORTABLE

More
SPEED

Smoother
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Motor removed the Speedmatic "8" Floor Surfer weighs only 75 pounds; for short moves one man can carry it without removing motor. You don't need a truck to move this machine, easily carried in passenger car.



Floating drum on the Speedmatic "8" has surface speed of 2300 feet per minute, driven by a 1 horse-power motor with 50% overload capacity having sufficient power to maintain speed under all conditions.

High drum speed assures fast clean cutting and minimum abrasive wear.

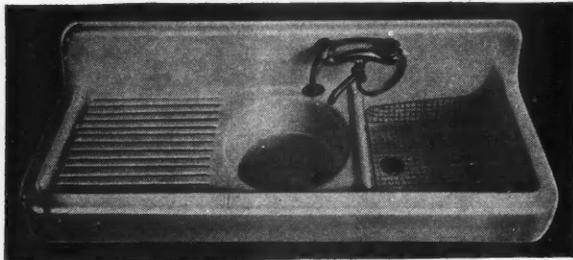
Speedmatic "8"



Shock absorbing springs that balance the floating drum eliminates vibration, chatter marks and "ripples" on the finished surface. The finish you get with Speedmatic "8" will please your most particular customers. Use of sixteen precision ball bearings insures low upkeep cost and continued accuracy of the machine.

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Kitchen
Sink



... with a
built-in dish
pan always
ready to use.

... for fine homes and apartments

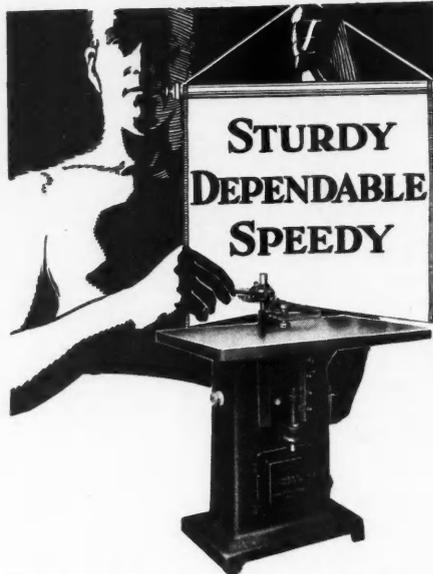
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THE value of Solvay Calcium Chloride in concrete construction work under handicap of severe cold weather conditions is admirably demonstrated by building of the Place Viger Warehouse.

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"No concrete was frozen. Progress was made at the rate of one floor every eight days. The quality of the work is as good as work done in summer weather. Unit costs of the job have been less than the unit costs of a similar job performed last summer, provided the cost of winter weather protection is disregarded."

Send for interesting booklet, No. 1753, "Solvay Calcium Chloride in Concrete Construction."

SOLVAY SALES CORPORATION

Alkalies and Chemical Products Manufactured by The Solvay Process Company

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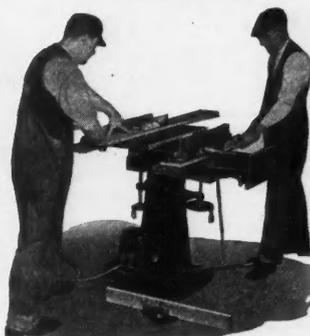
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All the Operations You Need IN ONE MACHINE

SIMPLICITY COMBINATION WOODWORKER



8 machines
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**Buy one machine
instead of eight**

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**A man sized machine,
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SIMPLICITY Woodworker cuts labor costs, speeds up production and increases profits. No other machine can do so many kinds of practical work.

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the year 'round**

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COMBINATION WOODWORKING MACHINE CO.
551 W. Randolph St., Chicago, Ill.

Send me full information on Simplicity Woodworker:
 Cash Installment

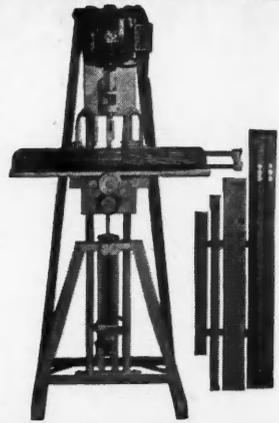
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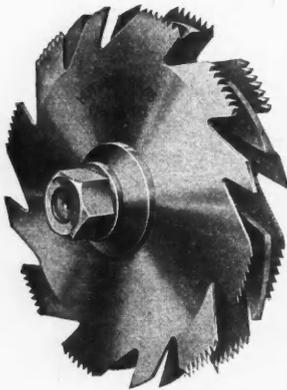
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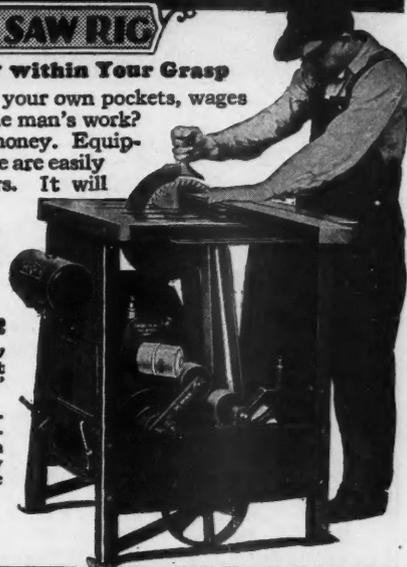
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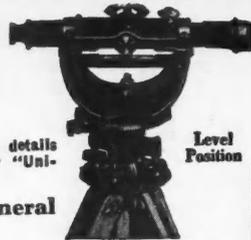
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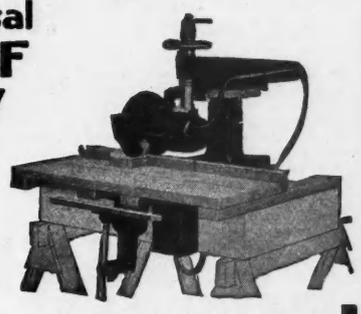
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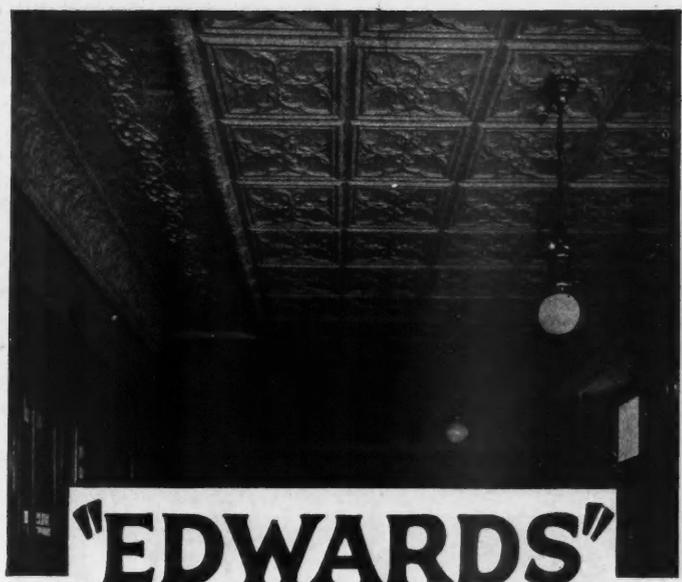
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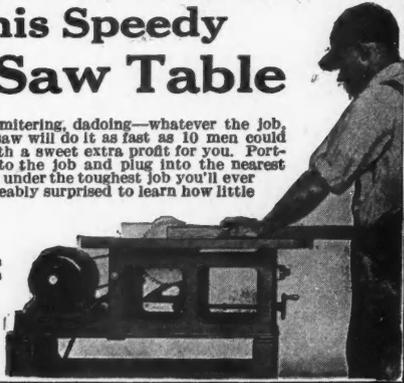
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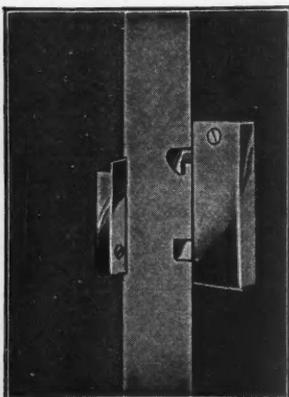
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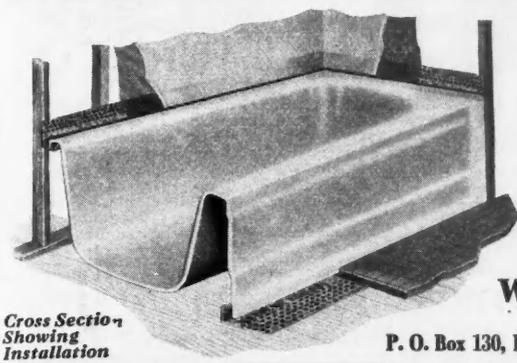
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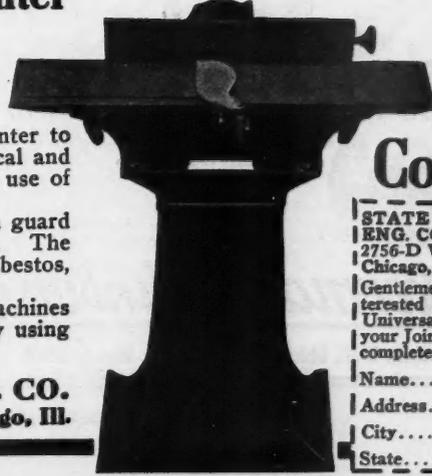
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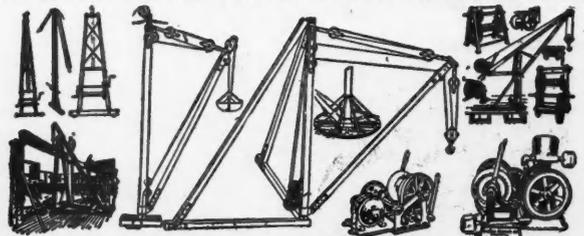
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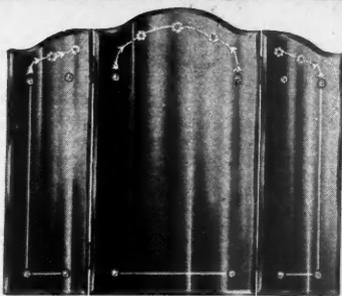
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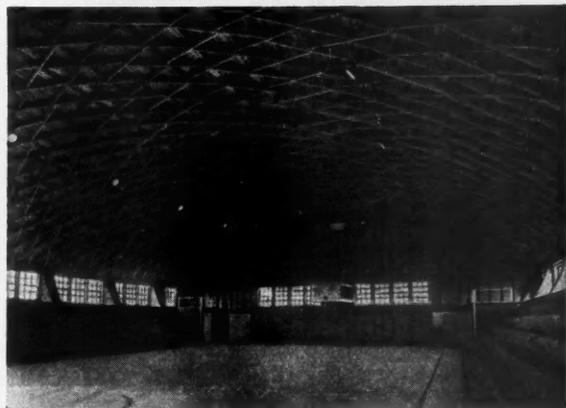
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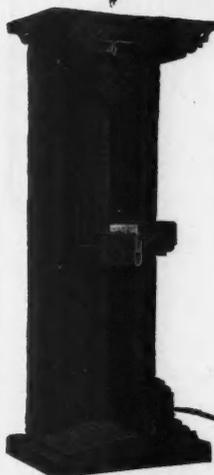
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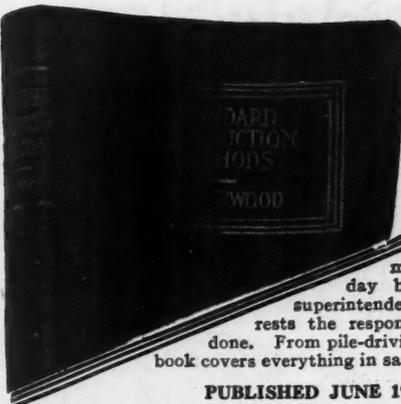
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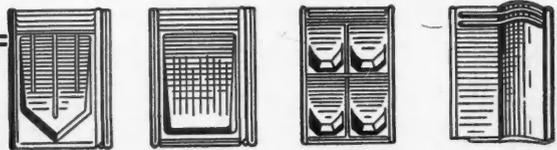
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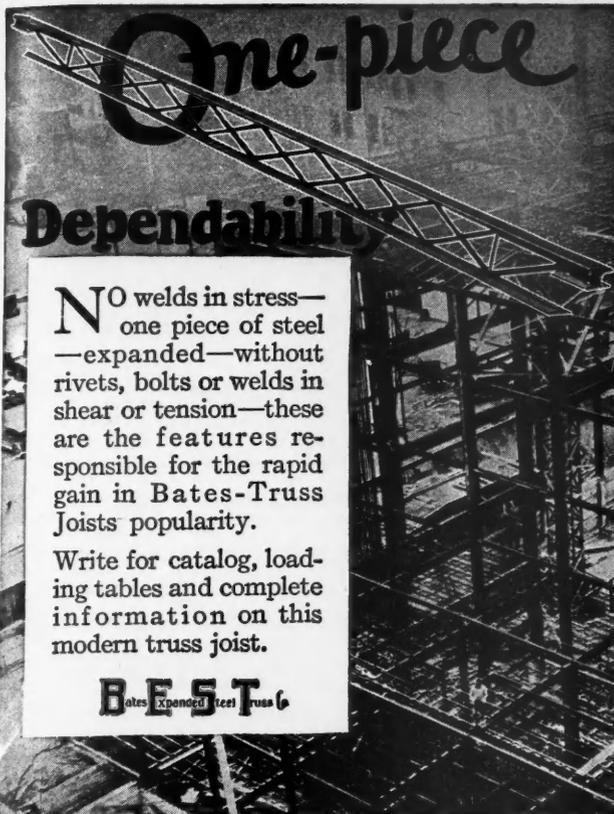
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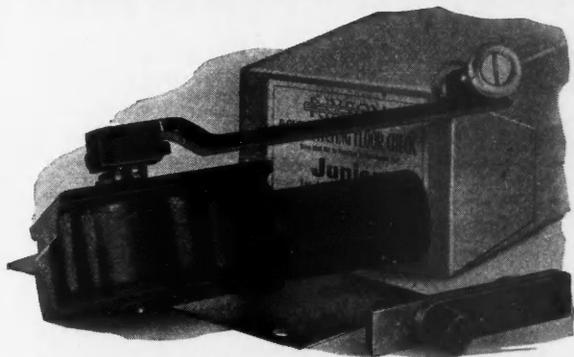
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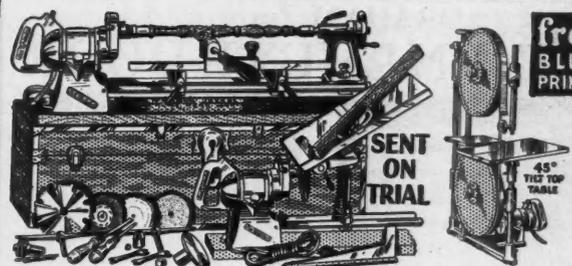
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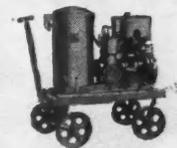
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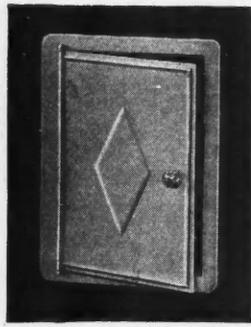
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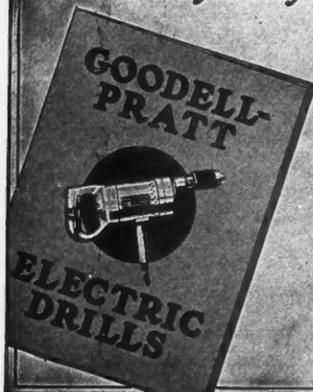
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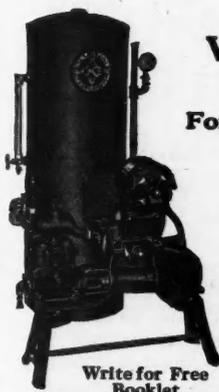
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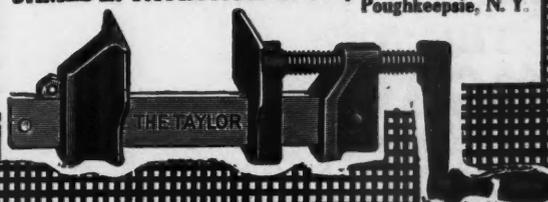
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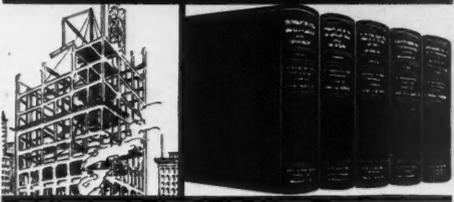
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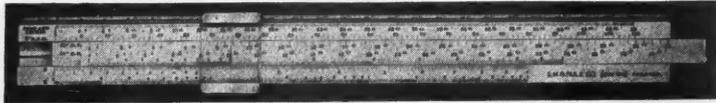
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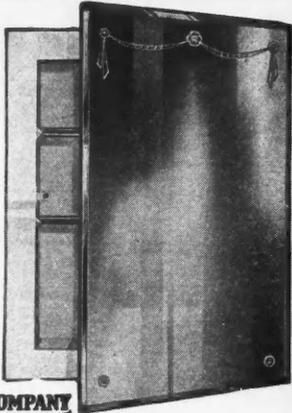
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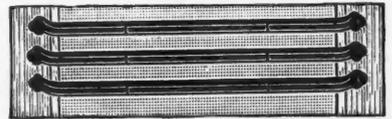
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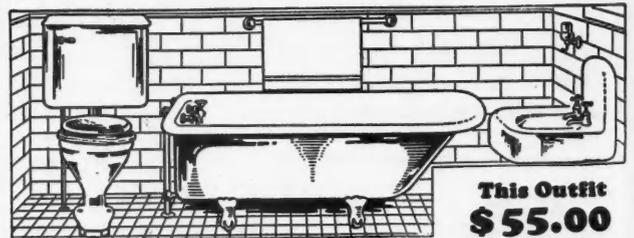
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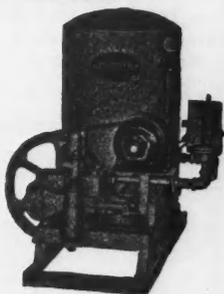


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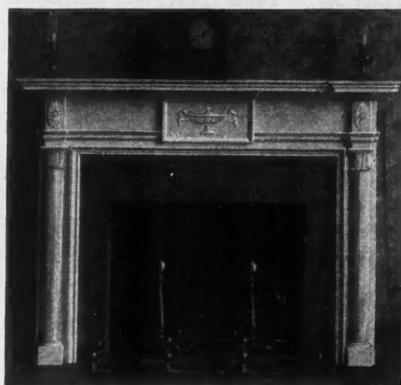
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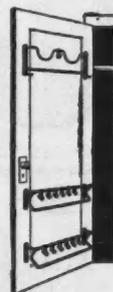
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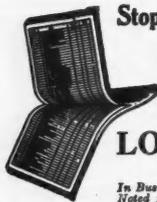
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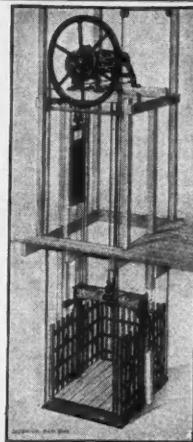
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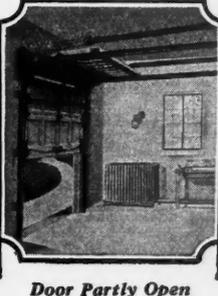
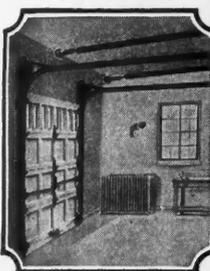
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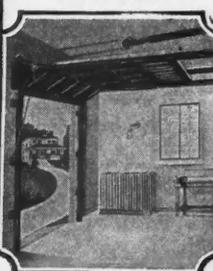
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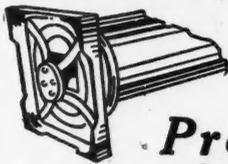
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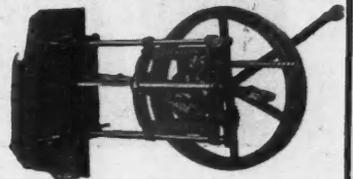
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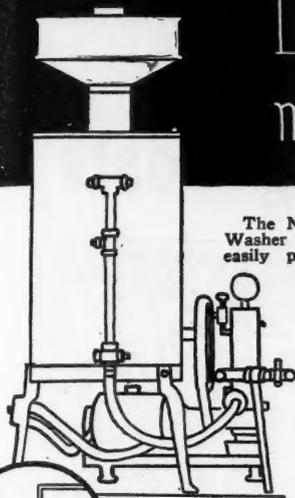
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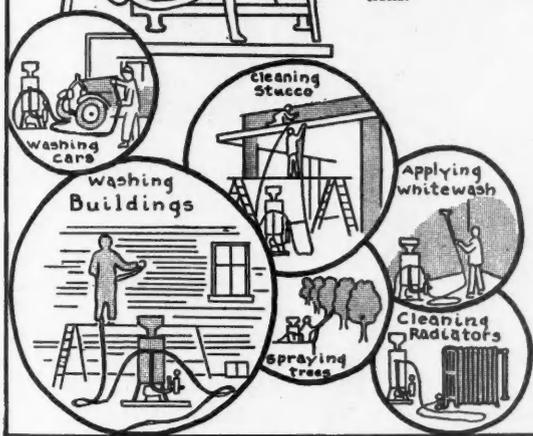
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—*P. H. Carpenter (Architect), Boston, Mass.*

"I can scratch KNO-BURN, JR., lath 3c per yard cheaper than the old style diamond mesh and 5c per yard cheaper than another brand of diamond mesh lath that I used in my test."—*C. T. Hallman, Wilkes-Barre, Pa.*

"In the future, will order all my lath KNO-BURN, JR., as it is the *most economical lath I have ever used.*"

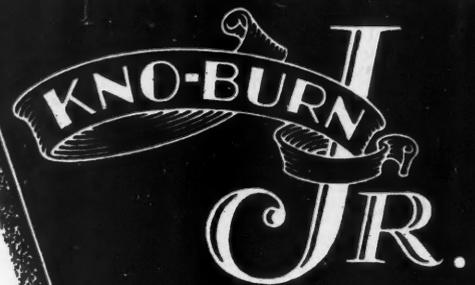
—(*Contractor*), *Wilkes-Barre, Pa.*

"From now on it will be KNOBURN, JR., for me." —(*Contractor*) *Flint, Mich.*

"In our opinion the principle of this new lath is right in design. We find less mortar keyed through the meshes on the back. In our comparisons with the regular diamond mesh lath we found an approximate economy of 9%."

—*Jackson & Forrestall (Contr.), Portland, Me.*

KNO-BURN, JR., has 3200 more "diamonds" to the square yard than its nearest competitor. "Keys" tho ample, are uniformly *small*, hence NO MORTAR WASTE. Lath is properly embedded in scratch coat. Economy of labor. Economy of material. Save! Use this amazingly satisfactory plastering base on your next job.



Saves from  
**4c to 8c Per Yard**

You can save from 4c to 8c on every square yard of your plastering with KNO-BURN, JR., Metal Lath—the *smallest diamond mesh metal plastering base ever made.* A lath so stiff that you can satisfactorily use it in place of heavier, more costly plastering bases.

*Samples and circulars ready.  
Ask for them today.*

**NORTH WESTERN EXPANDED METAL CO.**  
**1203 OLD COLONY BLDG. - - CHICAGO**

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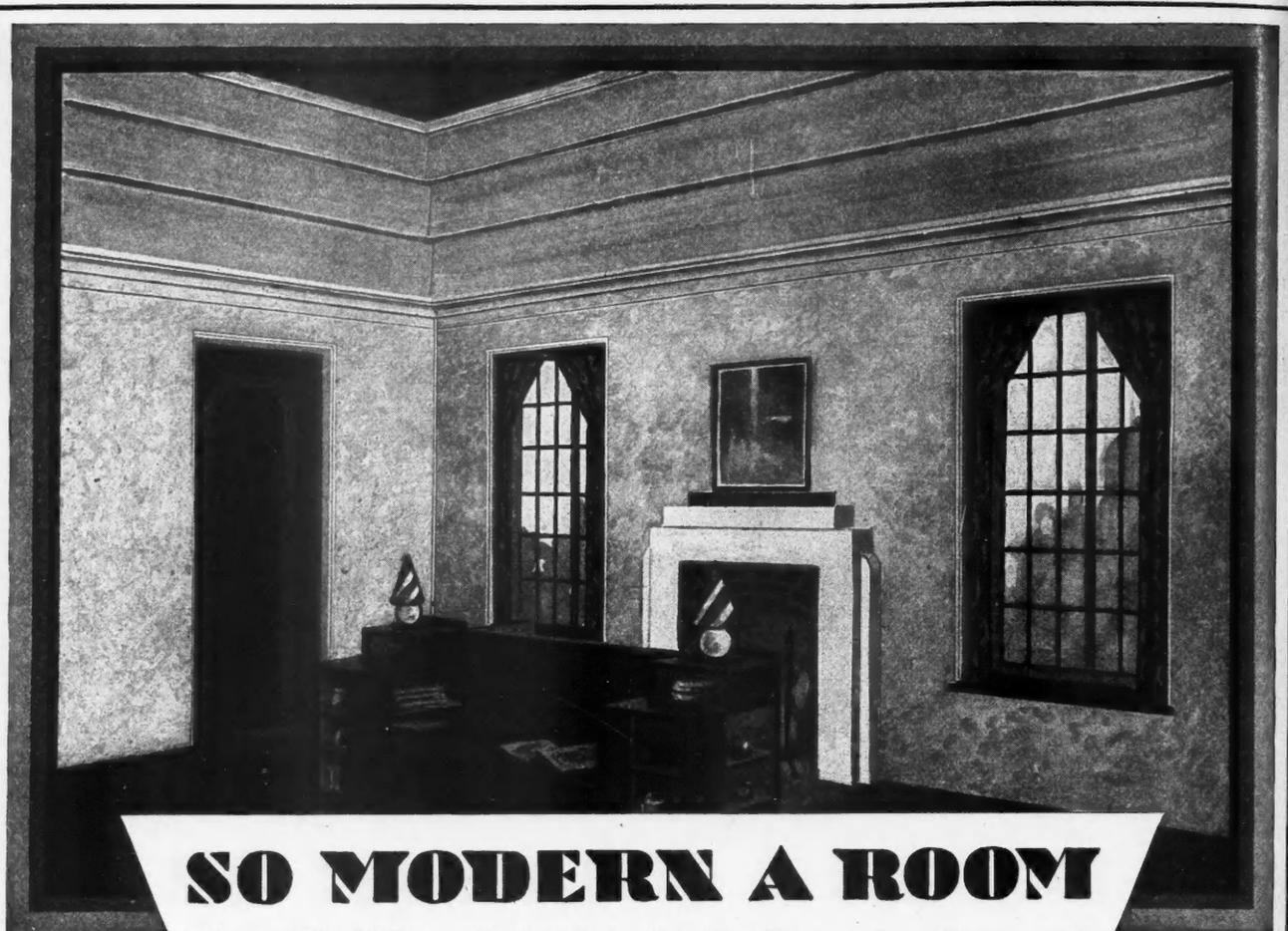
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### NOTICE TO ADVERTISERS

Forms for the March number of the American Builder will close promptly on February 10. New Copy, changes and orders for omissions of advertisements must reach our business office, 105 W. Adams St., Chicago, not later than the above date. If new copy is not received by the 10th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN BUILDER.



## SO MODERN A ROOM

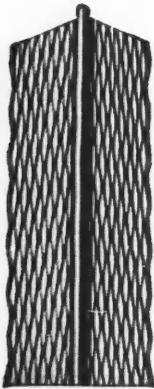
**Demands Milcor Materials for its finest development and its best protection from destructive cracks**

**D**OOR and window openings finished with Expansion Metal Casing. Walls attractively textured in plaster over Stay-Rib Metal Lath. The modern upper wall panels developed over formed cold rolled Channels. Milcor Concealed Metal Picture Molding. Inner angles and exposed corners protected from tension cracks and bumps, and made straight and true with Expansion Corner Beads.

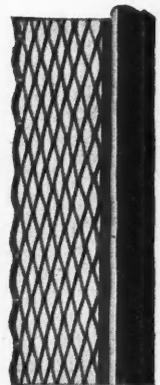
No other materials could be used so satisfactorily in the development of this room. No other finish would leave, so strongly, an impression of the "moderne" interior.

Milcor products are enabling architects and contractors to secure, economically, the most modern effects, with the knowledge that they are permanent and permanently protected.

*Data in the Milcor Manual provides full information covering Milcor Firesafe building products. Sent without charge.*



EXPANSION CORNER BEAD



EXPANSION CASING

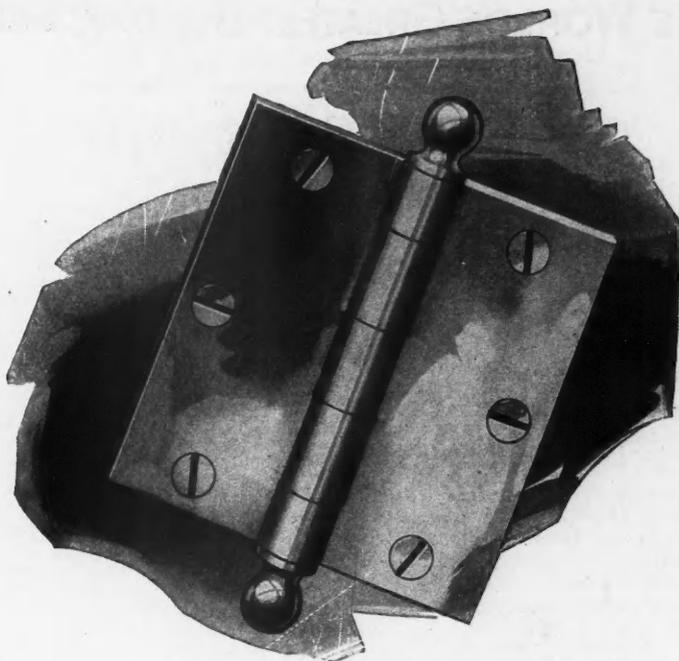
**MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wis.**

*Eastern Plant: ELLER MFG. CO., CANTON, OHIO*

*Branches and Sales Offices: Chicago, Ill., Kansas City, Mo., La Crosse, Wis., Boston, Mass., Detroit, Mich., Atlanta, Ga., Little Rock, Ark., Minneapolis, Minn.*

**MILCOR PRODUCTS**  
**STAY-RIB METAL LATH No. 1**

# Frantz "De Luxe" Butts Are Made for Longer Service



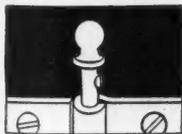
You'll find Frantz "De Luxe" Butts are made with the same care and of the same quality materials that characterize all Frantz Products. That's what makes them popular with Builders.

You want Frantz Features—easy installation and long, satisfactory service—and you can afford to insist on them from your Dealer because Frantz "De Luxe" Butts cost no more.

There's no better recommendation for Frantz Products than the reputation the Products themselves have built.

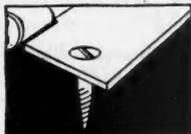
## FRANTZ MANUFACTURING CO.

Dept. A-329, Sterling, Illinois



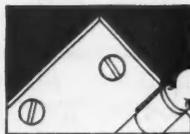
**Non-Rising Pins**

The small wing keeps the pin from turning when the door is swung and consequently prevents it from rising.



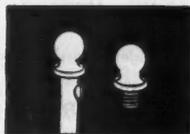
**Proper Countersinks**

Screw holes are located to assure maximum security. They are smoothly countersunk to fit properly the screws furnished.



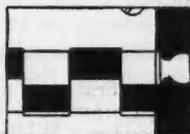
**Accurate Sizes Clean Edges**

Accurately cut to standard sizes. Blanked from cold rolled steel of uniform thickness. Edges are cut clean and true.



**Rolled Pins and Nibs**

Pins and nibs are rolled from the finest of cold drawn wire to assure long wear. Both are smoothly rounded.



**Square Broaching**

The leaves slide together easily and fit closely to make a smooth barrel. This is accomplished by square broaching.



**Reamed Barrels**

Inside of the barrel of every loose pin Butt is reamed to assure easy removal and replacement of the pin.

No Hardware is Genuine FRANTZ



QUALITY Without the Red Label

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER