

AMERICAN BUILDER

Including "BUILDING DEVELOPER" and "HOME BUILDING"

A SIMMONS-BOARDMAN PUBLICATION

Vol. 47

CONTENTS FOR SEPTEMBER, 1929

No. 6.

COPYRIGHT, 1929, BY AMERICAN BUILDER PUBLISHING CORPORATION

Page	Page
Front Cover—Painting by Quigley of a Quaint Entrance at Flintridge, Calif.; Ray Kieffer, Architect, Los Angeles, Calif.	Five Room Irish Cottage. Colonial with Overhung Second Story. Compact Home for a Narrow Site. Quaint Early English Design Using Many Materials. With Broad Front Porch. Latest in Two-Apartment.
Editorials73-75	The AMERICAN BUILDER All Feature Home115-119
American Builder Expands. Building Takes Upward Swing. Winter Windows. Proving Hidden Quality.	Complete Working Drawings—The First of a New Series—Showing the Construction of a Popular Quick-Selling Home.
Selling Proven Quality in Detroit.....76-79	Modernization Plus Beauty.....120-121
How Louis G. Palmer Operates to Cash in on His Better Building Features—By Clyde A. Mann.	How Some Remodeling Projects Succeed Better Than Others—By E. A. Martini, Architect.
Market Analysis Preparatory to a Co-operative Apartment Development.....80-82	Modern Home Interiors.....122-123
By Henry T. Holtsman.	Full Page Detail Plates of a Bedroom with Built-In Bed and Wardrobes.
Villa Carlotta Apartments.....83-85	The Gothic Shape Barn Roof.....126-127
Photographs and Plans of Building of Unusual Beauty at Hollywood, Calif.	Explanation with Details of Curved Rafter and Roof Construction—By John T. Neufeld.
Spanish Mission Type Home.....86-88	Tower Parking Garage.....118-119
Photos, Plans and Details of Construction—By Allen E. Erickson, A. I. A., Architect.	Sandusky, Ohio, Firm Builds a Two-Car Garage of Ten Car Capacity—Series of Elevator Platforms Operates Automatically.
Modern Church Is Three-Unit Structure.89-92	Questions and Answers.....128-132
Survey of Present Day Requirements in the Design and Construction of Churches—By Samuel D. Fuson.	Eight July Questions Answered, and Eight Other Interesting Questions Asked.
Belt Conveyors on Big Mart.....93-95	Trouble with Fibre Board?.....134-136
Describing the Installation of 55 Belt Conveyors to Handle the Concreting of the World's Largest Building—By J. F. Janda, Conveyor Engineer.	How a Prominent Dealer Found the Answer.
How Steel Joists Meet Modern Requirements96-99	Law for the Builder.....140
Outline of the Development and Application of Steel Joist Construction—By Frank Burton, Consulting Engineer.	Legal Helps Save Costly Mistakes.
Prize Designs in National Better Homes Competition100-105	How Dan Does It.....142-144
Designs That Won the \$5,000.00 and the \$3,000.00 Prizes.	Clever Kinks from Out on the Job.
Home Planning Suggestions.....106-114	Many Special Requirements in Building for Doctors.....146-148
Large Colonial Residence at Ravinia, Ill. Six Room Dutch Colonial.	Illustrating the Medical Arts Building, Buffalo.
	An English Country Home.....150
	What's New Pages.....152-170
	News of the Field.....172-174
	Book Reviews.....176-182
	ADVERTISERS' INDEX.....227-229

Published on the first day of each month by the American Builder Publishing Corporation, *Chairman of Board and President*, Edward A. Simmons; *Treasurer*, John T. DeMott; *Secretary*, Elmer T. Howson; *Editors*: Bernard L. Johnson and Charles G. Pekar; *Associate Editors*: P. W. Hanna, E. B. Quigley, L. E. Arent; *Business Manager*, Robert H. Morris; *Advertising Staff*: Delbert W. Smith, C. R. W. Edgcumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, R. E. Clement, Sam Campagna, Homer Beach.

Publication Office:

Bankers Building, 105 W. Adams St., Chicago

Telephone: Randolph 0794

Branch Offices:

New York—30 Church Street.

Cleveland—Terminal Tower.

Washington—17th and H Streets, N. W.

San Francisco—215 Market Street.

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of March 3, 1879. Additional entry as second-class matter at Binghamton, N. Y.

SUBSCRIPTION RATES—One year, United States, Canada, Mexico and U. S. Possessions, \$2.00; six months, \$1.00; single copy, 35 cents. Foreign countries, \$4.00.

ADVERTISING RATES—Furnished on application. Advertising forms close on the 10th of the month preceding date of publication.

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS
AND OF THE ASSOCIATED BUSINESS PAPERS

AMERICAN BUILDER

Including "BUILDING DEVELOPER" and "HOME BUILDING"

A SIMMONS-BOARDMAN PUBLICATION

Vol. 47

CONTENTS FOR SEPTEMBER, 1929

No. 6.

COPYRIGHT, 1929, BY AMERICAN BUILDER PUBLISHING CORPORATION

Page	Page
Front Cover—Painting by Quigley of a Quaint Entrance at Flintridge, Calif.; Ray Kieffer, Architect, Los Angeles, Calif.	Five Room Irish Cottage. Colonial with Overhung Second Story. Compact Home for a Narrow Site. Quaint Early English Design Using Many Materials. With Broad Front Porch. Latest in Two-Apartment.
Editorials73-75	The AMERICAN BUILDER All Feature Home115-119
American Builder Expands. Building Takes Upward Swing. Winter Windows. Proving Hidden Quality.	Complete Working Drawings—The First of a New Series—Showing the Construction of a Popular Quick-Selling Home.
Selling Proven Quality in Detroit.....76-79	Modernization Plus Beauty.....120-121
How Louis G. Palmer Operates to Cash in on His Better Building Features—By Clyde A. Mann.	How Some Remodeling Projects Succeed Better Than Others—By E. A. Martini, Architect.
Market Analysis Preparatory to a Co-operative Apartment Development.....80-82	Modern Home Interiors.....122-123
By Henry T. Holtsman.	Full Page Detail Plates of a Bedroom with Built-In Bed and Wardrobes.
Villa Carlotta Apartments.....83-85	The Gothic Shape Barn Roof.....126-127
Photographs and Plans of Building of Unusual Beauty at Hollywood, Calif.	Explanation with Details of Curved Rafter and Roof Construction—By John T. Neufeld.
Spanish Mission Type Home.....86-88	Tower Parking Garage.....118-119
Photos, Plans and Details of Construction—By Allen E. Erickson, A. I. A., Architect.	Sandusky, Ohio, Firm Builds a Two-Car Garage of Ten Car Capacity—Series of Elevator Platforms Operates Automatically.
Modern Church Is Three-Unit Structure.89-92	Questions and Answers.....128-132
Survey of Present Day Requirements in the Design and Construction of Churches—By Samuel D. Fuson.	Eight July Questions Answered, and Eight Other Interesting Questions Asked.
Belt Conveyors on Big Mart.....93-95	Trouble with Fibre Board?.....134-136
Describing the Installation of 55 Belt Conveyors to Handle the Concreting of the World's Largest Building—By J. F. Janda, Conveyor Engineer.	How a Prominent Dealer Found the Answer.
How Steel Joists Meet Modern Requirements96-99	Law for the Builder.....140
Outline of the Development and Application of Steel Joist Construction—By Frank Burton, Consulting Engineer.	Legal Helps Save Costly Mistakes.
Prize Designs in National Better Homes Competition100-105	How Dan Does It.....142-144
Designs That Won the \$5,000.00 and the \$3,000.00 Prizes.	Clever Kinks from Out on the Job.
Home Planning Suggestions.....106-114	Many Special Requirements in Building for Doctors.....146-148
Large Colonial Residence at Ravinia, Ill. Six Room Dutch Colonial.	Illustrating the Medical Arts Building, Buffalo.
	An English Country Home.....150
	What's New Pages.....152-170
	News of the Field.....172-174
	Book Reviews.....176-182
	ADVERTISERS' INDEX.....227-229

Published on the first day of each month by the American Builder Publishing Corporation, *Chairman of Board and President*, Edward A. Simmons; *Treasurer*, John T. DeMott; *Secretary*, Elmer T. Howson; *Editors*: Bernard L. Johnson and Charles G. Pekar; *Associate Editors*: P. W. Hanna, E. B. Quigley, L. E. Arent; *Business Manager*, Robert H. Morris; *Advertising Staff*: Delbert W. Smith, C. R. W. Edgcumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, R. E. Clement, Sam Campagna, Homer Beach.

Publication Office:

Bankers Building, 105 W. Adams St., Chicago

Telephone: Randolph 0794

Branch Offices:

New York—30 Church Street.

Cleveland—Terminal Tower.

Washington—17th and H Streets, N. W.

San Francisco—215 Market Street.

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of March 3, 1879. Additional entry as second-class matter at Binghamton, N. Y.

SUBSCRIPTION RATES—One year, United States, Canada, Mexico and U. S. Possessions, \$2.00; six months, \$1.00; single copy, 35 cents. Foreign countries, \$4.00.

ADVERTISING RATES—Furnished on application. Advertising forms close on the 10th of the month preceding date of publication.

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS
AND OF THE ASSOCIATED BUSINESS PAPERS

Let

WILLIAMS HEATING

make Fall sales for you!

When grass grows green and birds sing, families want new homes. When snow falls and cold winds howl, families decide to stay in their heated apartment until next Spring. Dad doesn't want to wrestle and worry with a furnace. Mother doesn't care to clean up after dirty coal and dusty ashes.

Here is a practical selling plan that wide-awake developers and builders have used with success. Concentrate on the houses you want to move before winter clamps down. Make a special offer to install Williams Dist-O-Matic oil heating without extra charge. Limit this special offer to thirty days to insure prompt action.

Your local Williams Dist-O-Matic dealer will help you use and finance this plan that will make Fall months into good selling months. Prove to yourself that automatic heating, without work or worry, by a quiet Williams Dist-O-Matic will help your sales. Everyone knows Williams dependable oil heating. Williams oil burners are heating more than 90,000 homes and apartments—more by far than any other make! If you can't find the Williams dealer in your telephone book, wire for information or use this coupon now.

WILLIAMS OIL-O-MATIC HEATING JUNIOR

... a New Williams
Oil Burner!

To satisfy waiting public demand Oil-O-Matic Junior, a smaller sized Oil-O-Matic, has been introduced at a low price, for use in homes of 9 rooms, or less.

Oil-O-Matic Junior burns any domestic fuel oil—low in cost, high in heat!

WILLIAMS DISTO-MATIC HEATING

Listed as Standard by Underwriters' Laboratories

WILLIAMS OIL-O-MATIC HEATING CORPORATION
BLOOMINGTON ILLINOIS

A RADIO TREAT

Tune your radio to WJZ and NBC chain stations at 10 o'clock Eastern Daylight Saving Time each Tuesday night. Friday nights at 8:30 Central Daylight Time tune in WGN, Chicago.

WILLIAMS OIL-O-MATIC HEATING CORP.
Bloomington, Illinois

B. D. 9-9

Without obligation, send me detailed information on lowest cost Williams automatic oil heating for.....houses.....apartments.....buildings.

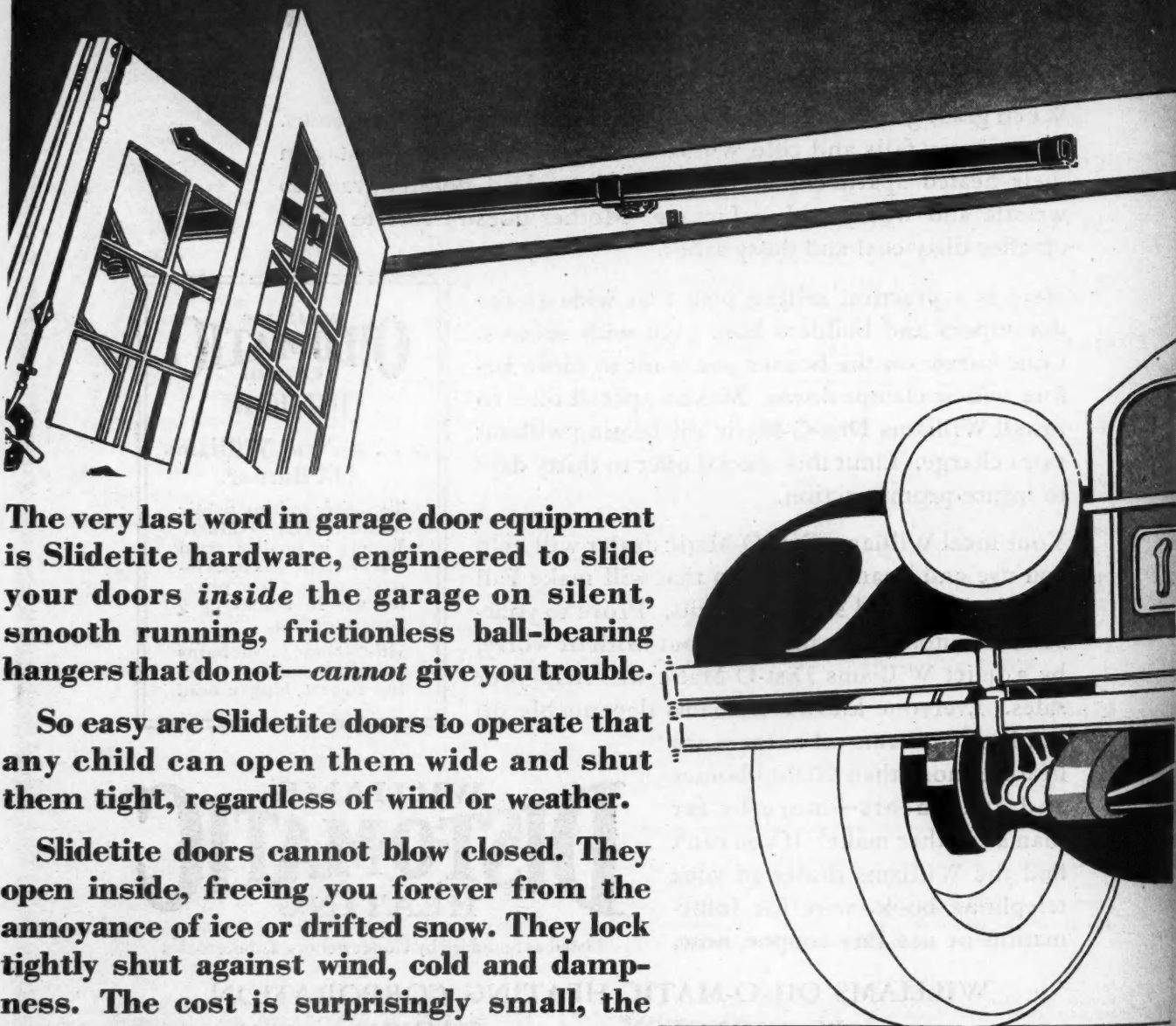
Name.....

Address.....

City and State.....

YOUR GARAGE DOORS

*Unobstructed
full width opening!*



The very last word in garage door equipment is Slidetite hardware, engineered to slide your doors *inside* the garage on silent, smooth running, frictionless ball-bearing hangers that do not—*cannot* give you trouble.

So easy are Slidetite doors to operate that any child can open them wide and shut them tight, regardless of wind or weather.

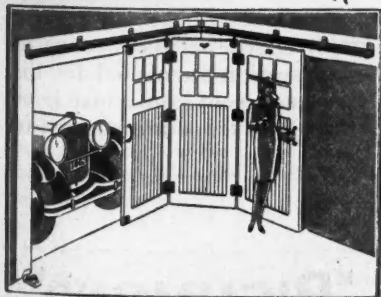
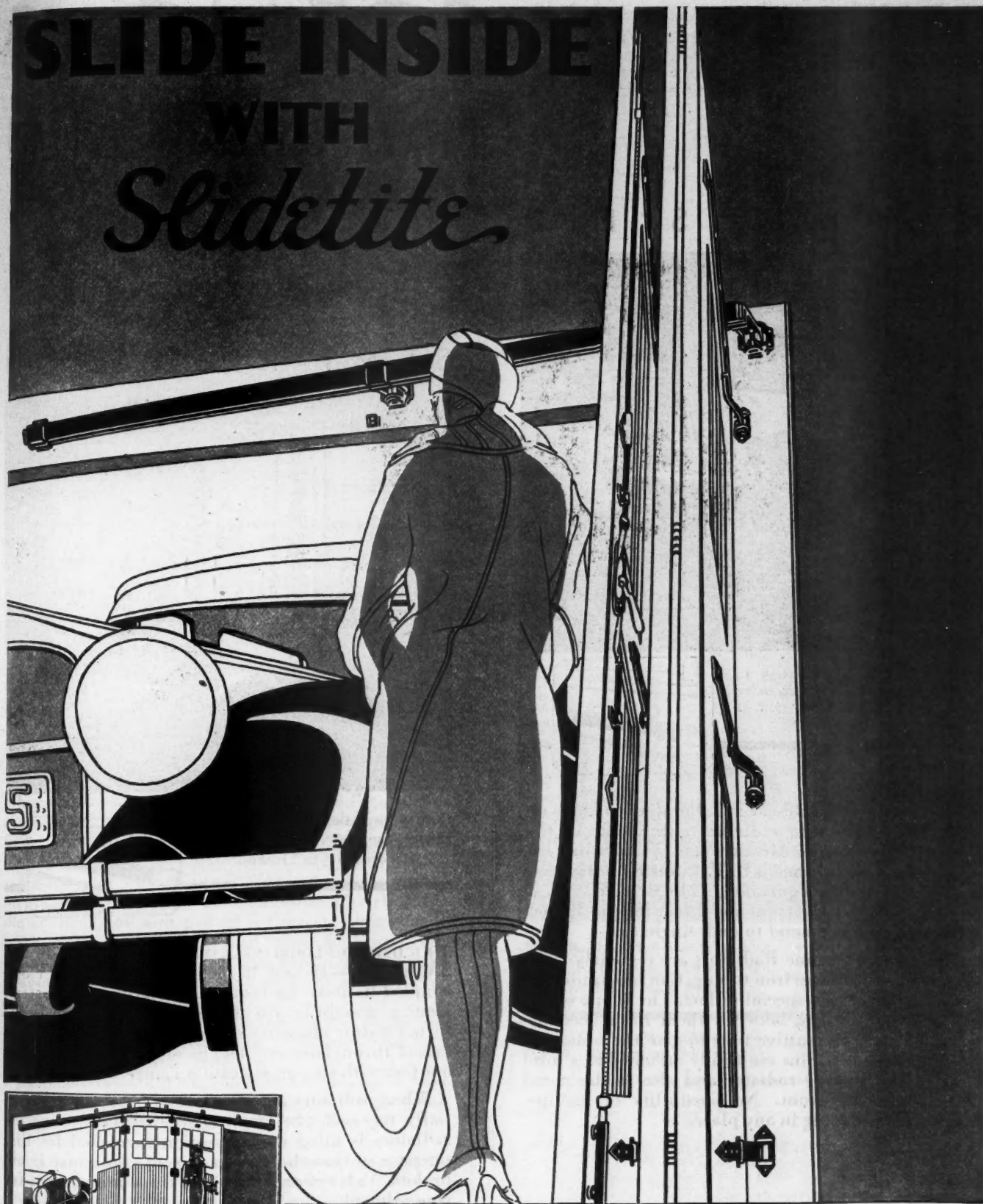
Slidetite doors cannot blow closed. They open inside, freeing you forever from the annoyance of ice or drifted snow. They lock tightly shut against wind, cold and dampness. The cost is surprisingly small, the benefits beyond all comparison.

Regardless of the width of the opening, there are no center posts—the doorway is entirely unobstructed, an R-W feature.

Send for illustrated Catalog No. 55



*"Quality leaves
its imprint"*



Slidaside equipment is specially designed for private garages lacking sufficient space for Slidetite doors. With Slidaside, you slide the doors around the corner.

Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides

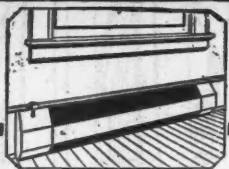
New York AURORA, ILLINOIS, U.S.A. Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
 Minneapolis Kansas City Atlanta Los Angeles San Francisco Omaha Seattle Detroit
 Montreal . RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. . Winnipeg

... A NEW That adds value

E X P O S E D



Inconspicuous when attached to baseboard. A simple, inexpensive method of installation in new or old buildings.



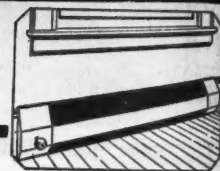
TESTS in the Frost Research Laboratory made in accordance with the radiator testing code of the American Society of Heating and Ventilating Engineers have established a B. T. U. rating in terms of cast iron radiation equivalent (240 B. T. U.) of 15 feet for the 36 inch section and 7 feet for the 18 inch section when placed end to end, single tier.

Richmond Floorline Radiators are regularly made of steel fins welded on iron tubing. Can be supplied in Brass or Copper on special orders. The shape of the fins and the spacing between them have been determined after exhaustive tests to give the utmost in heating efficiency. Fins are firmly attached to a solid metal plate backing radiator and also to the metal plate across the front. No possibility of leaking, breaking, or bending in any place.

S E M I - R E C E S S E D



Cutting away the baseboard alone reduces the projection of the radiator from $3\frac{1}{2}$ to 2 inches.



RICHMOND FLOORLINE RADIATORS are made in two lengths—18 and 36 inches. Radiators are close-coupled to make up required radiation. May extend along a straight length of wall, or make a right-angle turn. Heating efficiency of coupled radiators is maintained throughout any length not exceeding twenty-one feet with six ounce steam pressure.

When radiators are attached to baseboard or partially recessed, the small space between connected radiators is filled with a section furnished for that purpose so that the appearance of continuity is not broken. Valve connections and traps are encased for concealment.

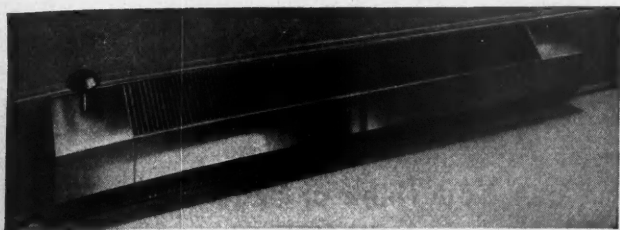
"RICHMOND" FLOORLINE

W
ue

RADIATOR

to every building

EFFICIENT
ADAPTABLE
INEXPENSIVE



A NEW radiator — a modern radiator with many unusual features. It allows three methods of installation—attached to baseboard—partially recessed—entirely recessed. It distributes heat more efficiently. Inexpensive to install in new homes or old.

Three different installations are shown in the photographs above, yet note how inconspicuous the radiator is in each. Only eight inches high, three and one-half inches deep.

Heat is projected at the floor level—where most needed and most efficient. Better distribution of warmth is further insured by the greater length of this low radiator. It ends cold corners and drafty floors.

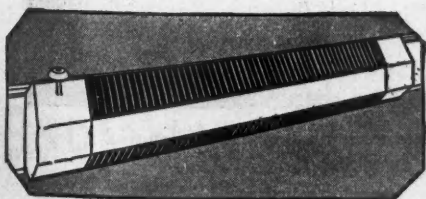
The Richmond Floorline Radiator costs less than other types of concealed or compact radiators. The replacement of present cast iron radiators with this finer type often costs less than installing radiator shields.

Before you decide upon future radiator equipment, get all the facts on Richmond Floorline Radiator. Designed and priced for use in homes of all types, apartments, hotels and office buildings. Operates on any two pipe steam, vapor, and vacuum system, and hot water heating plant of either forced or overhead circulation.

The story of this remarkable radiator is being told to hundreds of thousands of consumers through leading national publications.

The coupon below will bring an illustrated, descriptive booklet of the Richmond Floorline Radiator, and working drawings of various methods of installation for your files.

More than 40 years experience in the manufacture of fine heating equipment is incorporated in the Floorline Radiator. Richmond Steam, Hot Water and Gas Fired Boilers, Cast Iron Radiators and Enamelled Ware are other products of the Richmond Radiator Company.



U. S. Patent Applied for

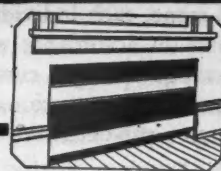
RADIATOR

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

R E C E S S E D



The Floorline Radiator is easy to install in the space between the inner and outer walls.



RICHMOND RADIATOR COMPANY, Inc.
Dept. F9, 1480 Broadway, New York, N. Y.

You may send data on the Richmond Floorline Radiator.

Name

Address

In order that we may send the most helpful information, please check the space below that identifies you:

Builder ☐ Architect ☐ Heating Contractor ☐ Owner ☐

\$250.00

IN PRIZES FOR A NAME AND SLOGAN FOR INDIANA LIMESTONE RANDOM ASHLAR THAT WE CAN TRADEMARK

HERE'S an opportunity to get cash for your ideas. We need a name and slogan to describe Indiana Limestone Random Ashlar that can be registered in the U. S. Patent Office so that only we can use them. Perhaps you can think up good ones! If so, we'll reward you liberally.

Our Product

Indiana Limestone is a natural, not an artificial, product. Random Ashlar is a form of stone facing. It refers to the Indiana Limestone in the sawed strips which we produce and sell for residential and other construction projects where an informal treatment is desired. These strips of Indiana Limestone are generally 4 inches thick and of the various heights required. Sawed by machinery at the quarries to give either a fairly smooth or a ripple-face effect, they are shipped direct to the building site. There these strips are broken to lengths by a simple operation and the stone is laid up in the wall in an informal or random fashion.

This method is quite different from that employed in using Indiana Limestone as cut stone. In buildings of our cut stone, each individual piece is cut to precise measurements in accordance with an architect's drawings. These drawings specify a certain piece of stone for each space in the wall. These various pieces are "set" in the wall according to a pre-determined plan.

In Random Ashlar construction the pieces of stone are "laid up" just as brick is laid up in the wall. No precise plan is followed but simply a rough "jointing scheme" indicates when a large piece and when a small piece shall be used.

The cost of building of stone in this way is much less than when cut stone is used. Yet beautiful results are obtained as the illustration shows. Because of the nationwide interest in this new method of using Indiana Limestone, we are anxious to find a suitable name which we can give to our product and use for promotional purposes.

Put on your "thinking cap." Give us the name you think best fits our product. Then write a slogan, not exceeding ten words to go with it. Anyone is eligible to compete in this contest but the rules must be followed closely.

Can You Think of Better Names Than These?

Some names which have been suggested are: "Gothstone" (from our Old Gothic variety of Indiana Limestone); "Ilcora stone;" "Stripstone." They may set your mind working!



Here is the entrance to a home built of beautiful
Indiana Limestone Random Ashlar.



This view shows method of construction. Note stacked slabs of stone.

RULES OF CONTEST

1. Contest opens August 1st, 1929. Closes October 1, 1929, at midnight. Anyone except employees of Indiana Limestone Company may compete.

2. Seven prizes totalling \$250 will be distributed as follows: 1st prize \$150; 2nd prize \$50; five 3rd prizes of \$10 each.

3. The above prizes are offered for a name ("coined" or otherwise) and slogan not exceeding ten words in length which may be used by us to designate our Indiana Limestone Random Ashlar. The name may consist of one word or a combination of words; it may be or may not be a name that can be used in conjunction with Indiana Limestone Company (as, for instance, "Indiana Limestone Company's Gothstone").

Note: Although we desire a name that will convey an accurate idea of our product, names which are closely descriptive can often not be patented due to patent office regulations. Thus such a name as "Stripstone" might be ruled out on such grounds.

Seven Prizes Totalling \$250

1st prize \$150

2nd prize \$50

Five 3rd prizes \$10 each

4. More than 10 names-with-slogans from any one person will not be accepted. The same slogan may accompany various names and vice versa. Each name submitted should have its accompanying slogan written beneath or immediately following it, thus: "Gothstone—makes a home of permanent beauty." All names and slogans submitted are to become our property. Write or type your names-with-slogans on one side of a sheet of paper. Put your name and address at top. Mail to Contest Editor, Box 757, Indiana Limestone Company, Bedford, Indiana.

5. In the event of a tie for any prize offered, a prize identical in all respects with that tied for will be awarded to each tying contestant.

6. The judges in this contest are: Frank S. Whiting, R. M. Richter, H. S. Brightly, Indiana Limestone Company; E. J. Dies, National Syndicate Service, Chicago; Fred B. Duncan and Edward H. Pearson, Lord & Thomas and Logan, Chicago. The decision of these judges shall be final in every particular.

INDIANA LIMESTONE COMPANY, BEDFORD, INDIANA



"THIS YEAR I'm getting 'em done when the Market's right"

"SEE that crowd of house-buyers?" Contractor Sam Blaisdell indicated them to his banker friend. "That's why I've got a nice fat wad of dough on deposit with your bank this year, Mr. Edwards. I got 'em done when the market was right!"

"Sam"—Banker Edwards drew deeply on his cigar—"Sam, wait 'till I tell that bunch of pikers on our Credit Committee how well you're doing. 'Member they didn't want to make you those loans? They said your houses wouldn't be done in time for the market! Said this competitor of yours across the street had a week's start on you with his excavations and he'd run you ragged. How'd you do it?"

Sam Blaisdell grinned. "I licked 'em on something a lot of builders thinks too small to count—the floor surfacing. They were pretty near ready to start varnishing when I got to laying my floors."

"Boy, I followed those carpenters with a new kind of Floor Sander that runs off a light socket, and Hensy over there,"—he waved toward his competitor's jobs—"Hensy had a sander that needed a special power line. He sat around and waited two whole days for electricians while I was racing my sander men from job to job, busy as a bunch of bees!"

"You see those sanders like Hensy's take a truck to move around as well as a special power line to run. My new sanders don't need either. My boys finished one job, picked up the sanders in their

hands—(they only weigh 31 pounds) and beat it over to our next house. Hensy almost had apoplexy watching us. Up until then he figured he had me trimmed!"

Your Advantages:

The powerful, fast-cutting Clarke Sander finishes 900 to 2,200 sq. ft. of new floors, to a velvety smoothness in 8 hours. The perfected vacuum does away with all dust and dirt, so that varnishers can follow right after. It's especially handy for close work in small closets, alcoves and on stairways. Weighs only 31 pounds. Operates from any light socket. Quickly pays for itself.



Do you need the kind of a sander you can carry in one hand, run off a light socket, get 900 to 2,200 square feet of perfect work out of every 8 hours?

If you do, learn about the Clarke Vacuum Portable, the sander that's taken America by storm. More Clarke Vacuum Portables are made and sold today than any other sander at any price. There must be a reason.

The full facts of what other builders think of the Clarke Vacuum Portable Sander, the complete specification of the machine and the details of the Clarke Guarantee (only definite written guarantee of performance given by any sander) are yours free. Simply mail the coupon below.

Clarke Sanding Machine Co.
Dept. A-39, 3815 Cortland St., CHICAGO, ILL.

Originators and, for over 12 years, manufacturers of
Portable Sanding Machines

MAIL THIS COUPON

Clarke Sanding Machine Co.,
Dept. A-39, 3815 Cortland St., Chicago, Ill.

Please send me, without obligation, illustrated booklet and full information about the Clarke Vacuum Portable Sander.

Name.....

Address.....

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

FLOOR SANDER PROGRESS

New Improvements in the Clarke Speed Up Surfacing Work

More footage for you per day—finer work—easier handling—greater economy—are all embodied in the new Clarke Sander with the *new Drum* (patents pending) which has a $\frac{1}{2}$ -inch felt pad so securely cemented to it by a special process that neither steam, water, moisture nor atmospheric conditions can disturb it.

The Biggest Trouble with floor sanders is **NOW PERFECTED**. No longer need you fear that the pad will give trouble, Clarke has stopped that for you and while doing so speeded up the footage and quality work for which Clarke Vacuum Portable Sanders have become famous.

From 900 to 2,200 square feet per day is now guaranteed, an increase of $12\frac{1}{2}$ per cent, and *only* the Clarke gives you an absolute, definite, written *guarantee of performance*. Why? Because **ONLY** the Clarke can do it for you, day in and day out, under all average conditions.

Think what it means to own a sander which your men can run and turn out beautiful quality work the way the Clarke does.

Think of the convenience in getting your job done without delay and think of the better reputation that goes with floors of velvet quality smoothness.

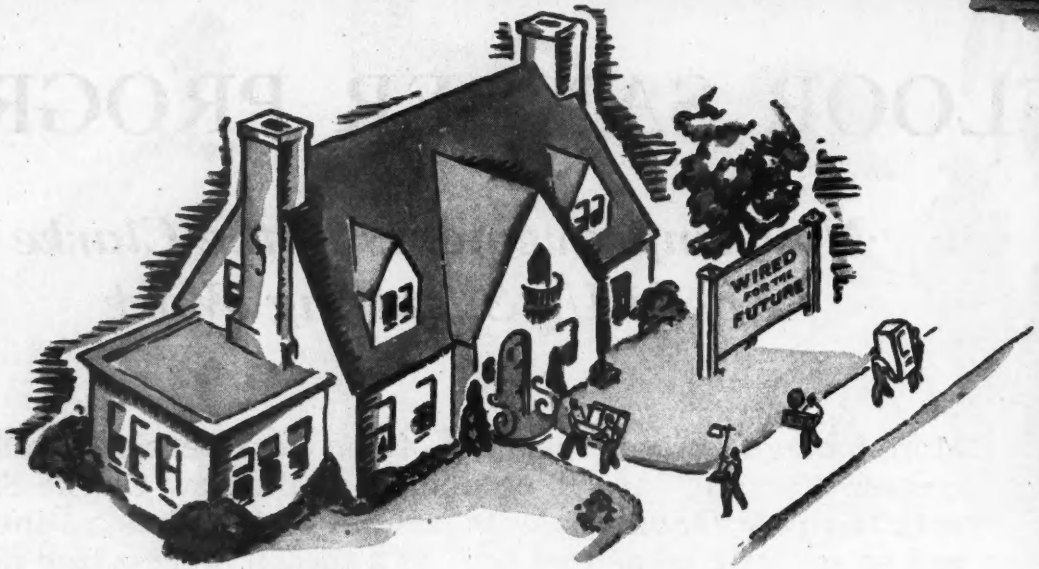
It's all built for you—for your profit.

We urge you to mail the coupon on the opposite page for labor-saving, time-saving, and floor satisfaction.

Sincerely,

A. A. CLARKE

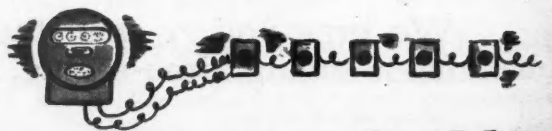
President



The house of 1929 ought to be wired for the conveniences of 1939 ~

*and it can be done economically
with Non-Metallic Sheathed Cable!*

One glance at the developments of the last
ten years is ample evidence that the next
ten will see more and more electricity used
in every wired home.



To be a continued success as a builder

NON-METALLIC




or developer, you know that you must inspire faith in your ability, judgment and farsightedness.



But here's this "wiring-for-the-future" problem!



Non-Metallic Sheathed Cable *solves* it... by greatly lowering installation costs...ask any electrical contractor.  More circuits and more outlets for 1939...without adding to the 1929 cost of the house.

The booklet "Where and How to Use Non-Metallic Sheathed Cable" contains complete information. To obtain a copy write to any of the Licensed Manufacturers listed below.

American Circular Loom Company
 Anaconda Wire and Cable Company
 Collyer Insulated Wire Company
 Eastern Tube and Tool Company
 General Electric Company
 Marion Insulated Wire and Rubber Company
 National Metal Molding Division
National Electric Products Corporation
 Rome Wire Company
Division of General Cable Corporation
 The Wiremold Company
 Triangle Conduit Company, Inc.

The above Manufacturers are Licensed under Non-metallic Sheathed Cable Patents number 1439323; 1520680; 1203788; 1673752.

SHEATHED CABLE

The Shingles are Good for a "Lifetime"—because the Nails can't rust



Roofed with Johns-Manville
Asbestos Shingles, laid with
ZINCLAD Rust Proof Nails
this home in Paris, Ill., has a
roof good for a lifetime.

Rust is the enemy that ruins good roofs. For the finest shingles made can't keep a roof tight if the nails rust, become loose, and let the shingles blow off.

Zinclad

REG. U.S. PAT. OFF.

RUST PROOF NAILS

are zinc coated by the hot dipping process, which gives them a thick zinc overcoat that insures them *permanently* against rust.

Yet the extra cost, for the average roof, is *only \$1.50*. The next time you figure on a roof tell your customer your price includes laying it—for keeps—with Zinclad Rust Proof Nails and see how much it helps you to get the job.

Zinclad Nails are made in all commonly used sizes for Wood, Asbestos, Asphalt or Metal Shingles, Roll or Corrugated Roofing or siding. Also for general outdoor construction work. In handy 5 pound packages—convenient to take up on the roof—at no extra cost.

Get acquainted with ZINCLAD.

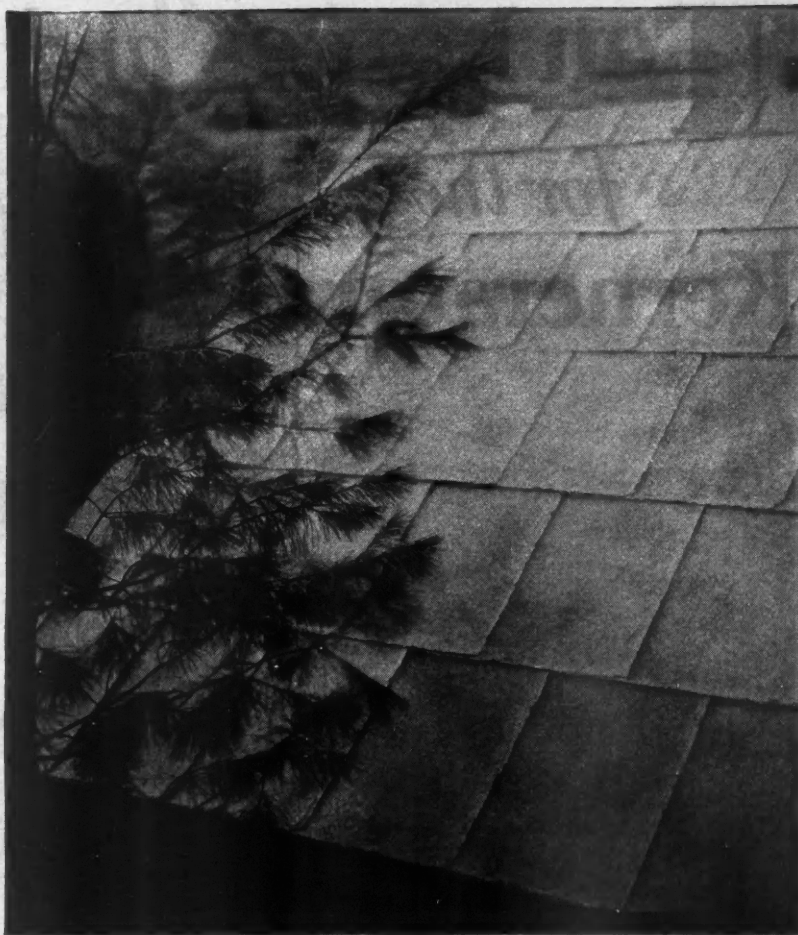
If you haven't used these nails we'll gladly send you a sample package of them.

Sold by
LUMBER AND BUILDING
MATERIAL DEALERS

**W. H. MAZE
COMPANY**

PERU,
ILLINOIS

This new J-M
Asbestos Shingle
gives American
method lines at
Hexagonal prices



THE NEW JOHNS-MANVILLE DUTCH LAP APPROXIMATES THE
APPEARANCE OF THE AMERICAN STYLE—YET AT FAR LOWER COST

EVERYWHERE builders of houses for sale have welcomed the Johns-Manville Dutch Lap Asbestos Shingle. This new shape provides a roof closely resembling American Method Shingles in appearance yet the cost is virtually the same as that of J-M hexagonals—long famous for their economy.

You know the increasing importance, as a sales argument, of a roof which is good looking, durable and fireproof. Now you can put such a roof on even the most modest houses at a surprisingly reasonable cost.

Every home seeker is interested in having a roof in which he has confidence. The Johns-Manville name together with your own reputation is a convincing argument. We are making the J-M trade mark one of the best known in America. No other roofing has nearly so extensive an advertising campaign behind it.

With this new J-M Dutch Lap Shingle you are in a better position than ever before to use the Johns-Manville reputation to add to your own profits. Nothing like J-M Dutch Lap has been offered before. The

vertical lines come directly above each other in alternate courses, thus avoiding objectionable diagonal effects. The pattern is of a size suitable for the smallest house. A generous 5 2-3" side lap and 3" head lap assure weather protection under all conditions.

The J-M Dutch Lap is offered in several new colors—including the new mottled green as well as mulberry, and can also be applied with blended colors. No matter where you are building, nor what type of houses you construct, you will find there is a Johns-Manville Asbestos Shingle exactly suited to the job in shape, color and price. And any house roofed with J-M Asbestos Shingles is easier to sell.

JOHNS-MANVILLE CORPORATION

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

Please send me further details about J-M Dutch Lap Shingles on houses built for resale.

Name.....

Address.....

RS-3-9

Johns-Manville
ASBESTOS SHINGLES



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Ten homes and three reasons for the Kernerator



ARTHUR J. SCULLY
REAL ESTATE INVESTMENTS
SUBDIVISIONS
PHONE CADILLAC 0832
2908 PENOBSCOT BUILDING
DETROIT

January 25th 1929.

Kerner Incinerator Co.,
Milwaukee, Wis.

Gentlemen:

With the development of our Eastmoreland Park Subdivision we have chosen to build homes in keeping with the quality and character of this property. Our first group, a series of ten, were designed by Mr. J. Ivan Dice, an architect of high reputation and ability.

Into these homes are going only materials of the highest quality and reputation, to be in keeping with the quality and character of the homes themselves and the property.

Refuse disposal was an important problem in these houses, and the Kernerator was chosen only after a thorough examination of other makes and experience of members of our organization.

We find the Kernerator an important asset to our homes, unusual simplicity of operation and installation, and intend to use it in all future buildings which we construct.

Sincerely,
Frederick J. Scully
Building Department

Arthur J. Scully's Eastmoreland Park Subdivision, Edgemore Drive, Detroit. Architect: J. Ivan Dice. Each home is Kernerator equipped.

WHY did Arthur J. Scully choose the Kernerator for these ten, beautiful homes? The three, big reasons are told in that little paragraph four:

First, the Kernerator is an important asset. Second, it is unusually simple in operation. Third, it is easily installed.

From actual experience, dozens of Realtor Builders and Sub-division Developers like Arthur J. Scully have found that there is nothing they can build into a home that costs as little and means as much to a prospective buyer as the Kernerator. The housewife is pleased with the thought of no filthy garbage cans in her new home. The husband is glad to know that there is no upkeep cost—for the Kernerator requires no fuel.

Banish garbage cans and rubbish piles with Kernerators in the homes you build, and greatly increase their saleability. Chimney or Basement-Fed residence models as low as \$90. Masonry about \$50 additional.

Write for literature and prices or consult your nearest Kernerator representative. Offices in over 100 cities.

KERNER INCINERATOR CO.
753 EAST WATER STREET MILWAUKEE

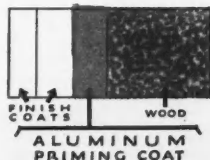
KERNERATOR
INCINERATION

Garbage and Waste Disposal
for New and Existing Buildings

Proper Priming

is the foundation of a lasting finish

for new work *for repainting*



This Aluminum priming coat seals the surface of the wood keeping out moisture and preventing the warping and checking that ordinarily would break down the finishing coats of paint.



FOR a period of twenty months this company has been using the pages of the Saturday Evening Post, and other magazines, to explain to the home owner the unusual qualities of Aluminum Paint, when used as a priming coat.

The response to these messages indicates that they have struck a national public chord—and subsequent experiences have proved that Aluminum Paint is filling a national public need. The use of Aluminum Paint as a primer by home owners all over this country has demonstrated that this “coat-of-metal” protection does actually preserve the freshness and beauty of the finish coats beyond any life that their painting jobs have ever known in the past.

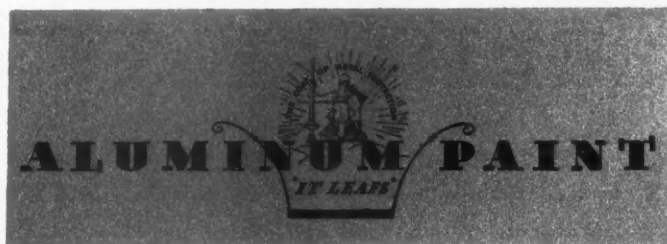
We believe that buyers are impressed with the sort of homes that have made use of Aluminum Paint as a priming coat. It indicates that the builders’ interest extends beyond the matter of sale—and cannot help but increase their confidence.

May we send you complete information concerning the use of Aluminum Paint as a priming coat?

ALUMINUM COMPANY OF AMERICA
2411 Oliver Building, Pittsburgh, Pa.
Offices in 19 Principal American Cities



The pigment base for the better grades of Aluminum Paint is ALBRON, made from pure ALCOA Aluminum. To use ALBRON as the pigment for a priming coat is to assure the quality of the pigment. Most paint manufacturers, dealers and painting contractors are prepared to furnish ALBRON with a suitable vehicle for priming coat use.





The *only* wiring that is nationally advertised!

A PROSPECT going through a house looks for certain comforts-to-be. Adequate wiring is one of the first. Consistent year-after-year advertising of the General Electric Wiring System has built up a definite standard. Each room must have plenty of outlets for every possible electrical need. It must also have switches accessible to each door.

As soon as you say "This house has a

General Electric Wiring System" you give yourself a head-start toward a sale. For your client has been educated by advertising to recognize the name and accept it as a guarantee of quality. Thinks he, if this house has General Electric Wiring, it must be a good house in other respects, too.

Write to Section W-129 for an important little booklet, "Housewiring Data for Builders."

GENERAL  ELECTRIC
WIRING SYSTEM

E-B
*Porcelain
 Steel*



Kitchens

Attract Buyers and Renters — Women Demand Them—They Strike the Dominant Note of the Day

E-B PORCELAIN STEEL KITCHENS are the Architect's final argument—the Builder's best security for quick sale or lease; they're unfailing persuaders of the womenfolks.

Beautiful—They redeem the Kitchen from dreariness and make it one of the most attractive rooms in the home.

Sanitary—Porcelain Steel with welded seams—vermin-proof, fireproof, easy to keep clean.

Roomy—Porcelain Steel construction gives maximum storage space at minimum expense of Kitchen room.

Elastic—Built in interchangeable Sections which combine into standard-size Units, they fit practically any given space and give almost any combination desired. You can have all or any part of: Cabinets, Refrigerator, Range.

Durable—Porcelain Steel is prac-

tically indestructible. Their *first* cost is their only cost.

Triumphant Design

E-B PORCELAIN STEEL KITCHENS are triumphs of correct designing and construction. They represent the finest engineering and cabinet-making talent, chastened by criticisms of America's housewives.

All refrigerators have one-piece liners and acetylene welded seams—insulation of best cork board dipped in odorless pitch; all doors of double steel, with rubber stops; all cutting boards of hardwood, working in accurate steel channels; all drawers suspended in close fitting steel channels, obviating side-sway; all corners ground and filed glass-smooth before finish is finally put on. Women who know of them demand them.

Free Engineering Counsel

Our Engineering Department will be glad to consult with you about your Kitchen problems. Write today for particulars.

EMERSON - BRANTINGHAM CORPORATION

602 Preston St.

Manufacturers

ROCKFORD, ILLINOIS



A FACE BRICK LINE ~

that "dresses up" the exterior

Mixed Carloads

You will find our shipping service unexcelled and the price right. Mixed carloads are shipped without extra charge so that the contractor may vary the mix to meet his requirements. Write for samples and further information.

The dwellings shown above are part of a Pittsburgh suburban development. All of these duplexes are faced with Forestblend Face Brick. This distinctive brick was chosen because of its colorful beauty and unique texture (secured by a patented method of manufacture). More and more architects are turning to Forestblends as a solution of their face brick problems. Its colorful beauty permits of a varied color scheme either for residence work or for larger buildings. Its dignity and beauty are recognized everywhere. Architects are familiar with Forestblends and you will find them specified in many of your jobs.

"Beauty in Brick" is the Finzer Plan Book of easy to sell or rent homes. This book contains many practical suggestions. The price is fifty cents. Every contractor should have a copy in his file.

FINZER BROS. CLAY CO.

Members of the American Face Brick Association

Sugarcreek,

Ohio

The Finzer Bros. Clay Co., Dept. E, Sugarcreek, Ohio.

Gentlemen:

Enclosed find fifty cents for which please send me a copy of the Plan Book, "Beauty in Brick."

Name
Street
City
State

Forestblend

FINZER FACE BRICK

Trade Mark Registered

MORTON

MEDICINE CABINETS

For Every Style Bathroom



The "Venetian," "Vanitie Venetian" and "Georgian" Models, illustrated above, are especially recommended to those who wish to add a touch of unusual distinction to the bathroom. They have all-mirror doors, artistically etched, which completely conceal the cabinet. Many exclusive features of construction.

THE Morton Line of Steel Bathroom Cabinets is *complete!* Regardless of the type of bathroom, be it in a modest residence or a pretentious mansion, a hotel, apartment or club, there is a Morton Cabinet to satisfy every requirement.

There are 11 models from which the architect, builder, realtor and owner may choose the exact cabinet to fit any decorative scheme. While usually finished in a pure white enamel, permanently baked on, Morton Cabinets may be obtained in any selected color to harmonize with whatever artistic effect is desired in the bathroom.

Special finishes are made to order for a nominal extra charge.
Write for catalog and prices.

MORTON MANUFACTURING COMPANY
5190 WEST LAKE STREET-CHICAGO, ILL. U.S.A.

Send the
Coupon for a
MORTON
Catalog.

MORTON MANUFACTURING CO., 5190 West Lake St., Chicago, Ill.

Without obligation, please send me a catalog of the MORTON Line of Steel Bathroom Cabinets.



Name _____

Address _____

City _____ State _____

Architect _____ Builder _____ Contractor _____ Realtor _____ Home Builder _____

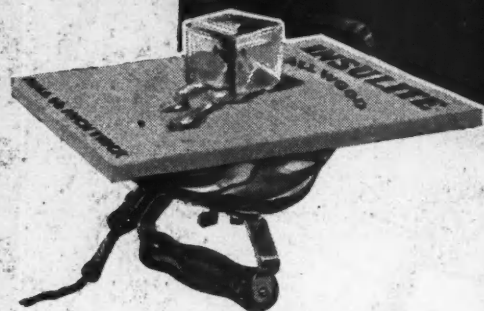
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

INSULITE

the Wood-Fiber Insulating Board

Sheathing
Plaster Base
Wall Board
Attic Lining

Roof Insulation
Sound Deadener
Carpet Lining
Acoustical Treatment



FULL $\frac{1}{2}$ INCH THICK—MEANS
12 $\frac{1}{2}$ % MORE
EFFICIENT
INSULATION
THAN ORDINARY $\frac{3}{16}$ " INSULATING BOARDS

Speculative Builders—Contractor Builders **Feature this Test to Your Customers**

IT'S human nature everywhere that when a person spends a dollar he wants the *best* and *most* that dollar will buy.

That's why we are featuring now in all of our national advertising the fact that Insulite, a full $\frac{1}{2}$ inch thick, is 12 $\frac{1}{2}$ % more efficient than ordinary $\frac{3}{16}$ inch insulating boards. These figures are substantiated by accurate, scientific laboratory tests.

But, many laymen do not understand laboratory data and only believe what they see. Therefore, for the benefit of these people we have conceived the above pictured simple home test, viz.: put a cube of ice on a piece of Insulite and place them on an automatic electric iron. Time how long it takes the heat to penetrate the Insulite and melt the ice. Make this same test with ordinary insulation boards and see the difference.

You contractor builders—you speculative builders—explain to your customers the superior efficiency of Insulite. It will mean more business for you and more satisfied customers.

Furthermore, you can depend upon Insulite. Insulite has greater tensile strength than ordinary insulating boards. It is an all-wool fiber board, chemically treated to prevent deterioration.

Used as a plaster base, Insulite grips plaster with twice the strength of wood lath, and as sheathing has several times the bracing strength of lumber horizontally applied.

Because the broad sheets of Insulite used as sheathing reduce labor costs—often as much as 50%—and because the water resisting qualities of Insulite eliminate the need of building paper, the final cost of Insulite walls is little or no more than you pay for uninsulated construction.

Our Engineering Department will be glad to help with any problems you may have. It is organized to be of service to you. Write for samples and further information—now.

Insulate with

FULL $\frac{1}{2}$ INCH THICK
RESISTS
COLD-HEAT-NOISE

INSULITE

the Wood-Fiber Insulating Board

THE INSULITE COMPANY
1211 Builders Exchange, Dept. 13
MINNEAPOLIS - MINNESOTA



ONE OF THE MANY TYPES BUILT BY KAWNEER

A SUGGESTION FOR NEW BUSINESS

It costs you nothing to find out about this profitable business of STORE FRONT SPECIALIZATION — yet your inquiry may be the means of opening up for you an entirely new, profitable and practically non-competitive field of contracting.

MAIL THE COUPON TODAY FOR INFORMATION

Kawneer
BRONZE
STORE FRONTS



THE KAWNEER COMPANY, 1826 Front Street, NILES, MICHIGAN
Send FREE book of Modern Store Fronts.

Name _____
Address _____
City _____
State _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

ANSWERING Your First Two Questions About Steel Framing

... When Builders Learn How Easily Steel Framing is Erected and How Quickly Other Materials are Applied to It ... Then, Every New Modern Home will be Built with this Skyscraper Construction.

IT is possible that you have pondered over two of the most important things about Steel Framing—the erection of it, and the application of other building materials to it.



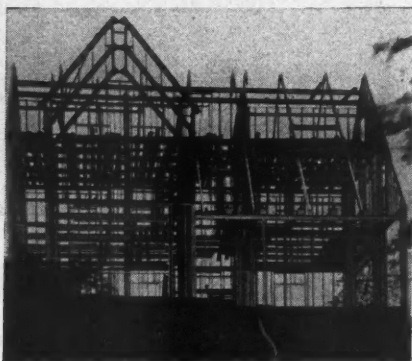
Ready for Immediate Erection

Steel Framing is easier erected than any other framework. Consider for a moment. Every piece is fabricated at the mill, cut to fit exactly and marked for its place in the structure. Steel Framing is ready for erection when it arrives at the building site—a radical difference from material which must be inspected for defects. There is no wait for seasoning. The framework is assembled and bolted together by workmen familiar with home building, without any of the delays that may be encountered in ordinary construction.

Any building material that can be applied to ordinary framing can be applied to Steel Framing. Not only applied as easily, but in most cases quicker. Each member of the framework is perforated with holes spaced two inches apart.

This permits the application of any material by clipping or wiring, with the great strength and rigidity of Steel Framing serving to give these materials a firm base and to reinforce them into solid construction.

Architects and builders are not limited in using Steel Framing.



Quick and Easy Erection

This method of skyscraper construction is just as adaptable to individual styles and designs as ordinary framing. Special provisions of any kind are unnecessary.

Homes built with Steel Framing are better homes—more valuable and longer-lasting. Steel won't warp or shrink, so plaster walls will not crack or fall. Steel Framing is the strongest, most rigid framework that can be built. It puts all of the advantages of skyscraper construction into any

home—large or small. It is fire-proof and stormproof, and assures a structure that will stand staunch and unharmed by time for generation after generation.

Day after day, everywhere, people are buying homes. They are being cautious, more so than ever before. They want their homes to be modern, and they want good, solid construction. They have seen how some properties depreciate in value, run down in appearance and become just old houses. They may not know the construction method that will give them what they want, but they will recognize it when you explain.

Write for full particulars of Steel Framing. The story will tell you



Permanent Construction

why new homes—truly modern homes—are being built with this skyscraper construction.

THE STEEL FRAME HOUSE COMPANY

Subsidiary of McClintic-Marshall Corporation

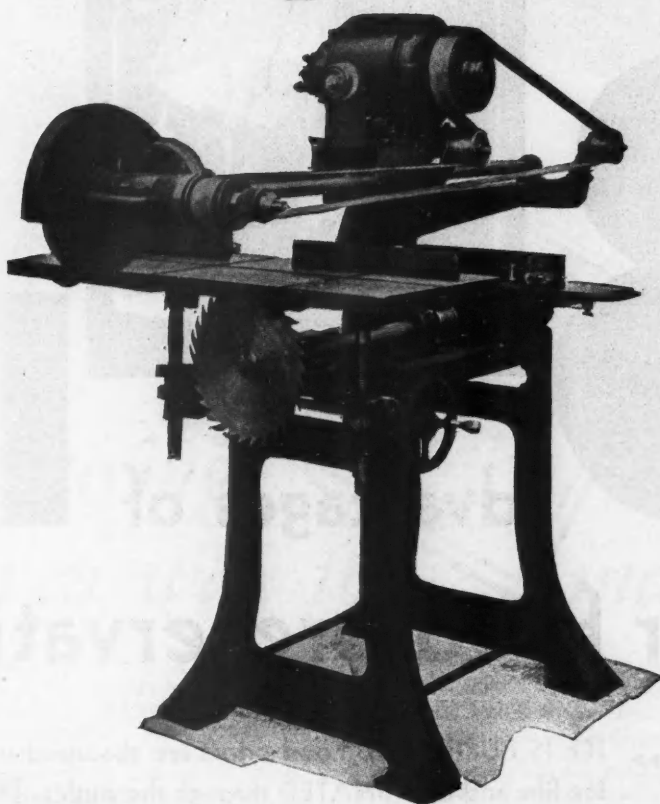
Oliver Building

Pittsburgh, Pa.

STEEL FRAMING

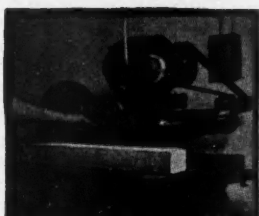
THE MODERN METHOD OF HOUSE CONSTRUCTION

The 20th Century Woodworker *Eats up Work!*



Crosscutting
Ripping
Planing
Boring
Jointing
Dadoing
Sanding
Routing
Plowing
Mitering
Buffing
Rabbeting
Moulding
Matching
Grinding
Tenoning
Sills
Sash
Stair Horses
Window Frames
Stair Routing
Jack Rafters
Screens

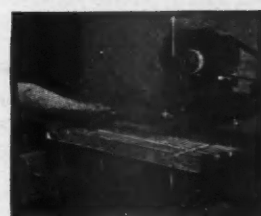
Builders
Contractors
Carpenters
Carpenter Shops
Buildings
Foundries
Industrial Plants
Shipyards
Schools
Colleges
Institutions
Lumber Yards
Repair Shops
Railroads
Wood
Metals
Light Structural
Tubing
Slate
Cork
Leather
Marble
Etc., Etc.



Crosscutting



Window Frames



Tenoning



Sanding

THE 20th Century Woodworker combines the advantages of many machines all in one. For every purpose it works smoothly and swiftly. The unique method of belting provides positive drive from the stationary motor to the movable head. The special design and ball bearing construction provide greatest transmission of motive power, ease of operation and accuracy of work. By removing five of its bolts the 20th Century Woodworker can be separated into three parts and readily moved from place to place—thru even a 24 inch opening. The price is attractive... the machine is exceptional.

Write today for full particulars.

AMERICAN SAW MILL MACHINERY COMPANY

197 Main St., Hackettstown, N. J.

Remember
these



SAVE
WITH
ICE

3 advantages of ICE

for food preservation

- ◀◀ **1** ▶▶ ICE IS PURIFYING. Food odors are absorbed by the melting ice film and **ELIMINATED** through the outlet. This goes on all the time, every hour of the day.
- ◀◀ **2** ▶▶ ICE PROTECTS FLAVOR. It maintains proper atmospheric balance of cold air (easily 45° in the milk compartment), dry air, moist air and pure air to preserve food juices and flavors. There is less drying out.
- ◀◀ **3** ▶▶ ICE IS CHEAP. A survey of 20,000 ice bills shows an average year-'round cost per home of \$3.54 a month. And there is no initial investment but the cost of an ice box.

Provide Clients with Outside Icing

Extremely easy to provide, yet it increases immeasurably the marketability of the homes and apartments in which it is installed. Tell your clients to get their ice company to help them select a good ice refrigerator. Write for free illustrated folder—"Inside Facts on Outside Icing."

NATIONAL ASSOCIATION OF ICE INDUSTRIES, 163 W. WASHINGTON ST., CHICAGO, ILL.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

An Engineering Marvel

Compact and efficient, this machine embodies the principle of "line production," giving it almost unbelievable capacity. Space no larger than a one-car garage provides ample working quarters.

Roof a day capacity
(in any color)

The Money Making Opportunity

Value monthly output (36 days, 7 squares per day) . . . \$2730.00
Cost (materials, labor, selling, all other expenses) . . . \$1237.30
Earnings per month . . . 1442.70
Figures from Duntex manufacturing manual, sent on request.



Let us send you this book and sample tile of "The World's Most Beautiful Roof."

Manufacturing the proven way to independence

Get into manufacturing—where the outstanding business successes of the country are made. Let this simple machine lead you to manufacturing independence and make you a dominant factor in the building industry of your city. This wonderful machine, operated at only 40% capacity, can easily net you \$1,000.00 a month or more. Duntex offers you an exclusive product and the greatest manufacturing opportunity for you in the building field.

Get the free book that described this proven way to manufacturing independence. Subject its facts on market and production to the most searching investigation. Take its analysis of costs and profits to your most conservative banker. Share his amazement at the large earnings on so small an investment.

Take the sample tile to architects and builders. Put it to every test possible with a roofing material—tests for permanence, fire-safety, waterproofness, color-fastness, beauty. Then remember that the sample is only one of the 12 beautiful, permanent colors in which you can make the Duntex roof. Get your friends' opinion. See how eagerly the trade looks forward to the time when you will be able to fill their orders.

Think of it—a potential market of \$300,000.00 annually for every 100,000 population. Visualize yourself dominating this market because of the superiority of your product and the low cost of production.

Be "set for life" with Duntex. That's what can happen to the man who secures the Duntex franchise in your city. The initial investment is modest—for the opportunity is available on a plan whereby the plant is paid for out of earnings. But we must have a man of the necessary determination to succeed.

Nothing but our absolute faith in Duntex as a product—in the manufacturing profit—the market—and in the man selected—

can make so liberal a plan possible. Our 25 years of leadership in the field enables us to back this latest manufacturing opportunity with a plan and a service that will enable any man with ambition to achieve success and independence.

There are no strings attached to our offer. You pay no royalties. You start at once to make money for yourself. You make a trademarked product in a territory fully protected by franchise. You are beyond the reach of competition. And to make your success doubly certain, personal service and a strong advertising campaign constantly bring your product and its superiority before its great and steadily growing market.

Get the book and the sample tile. Know the facts. Learn the complete story. Do it now, while your territory may still be open.

W. E. Dunn Mfg. Co.
415 W. 24th St.
HOLLAND, - MICHIGAN

USE COUPON for sample tile and book



86,000 Tile in one order!

Think of one order alone keeping your plant running to capacity for two full months. That's what a single order did for the Duntile Mfg. & Supply Co. of Allentown, Pa., whose president, Mr. George D. Fister, is shown here. Duntile is the perfected all-purpose concrete unit which builds better buildings for 30% less than solid masonry and no more than frame. Learn how its profits of 60% and more may mean independence for you. Get the complete details as told in the free book, "Basic Facts". Check coupon for your copy.

W. E. DUNN MFG. CO.,
415 W. 24th St., Holland, Michigan.

Gentlemen:

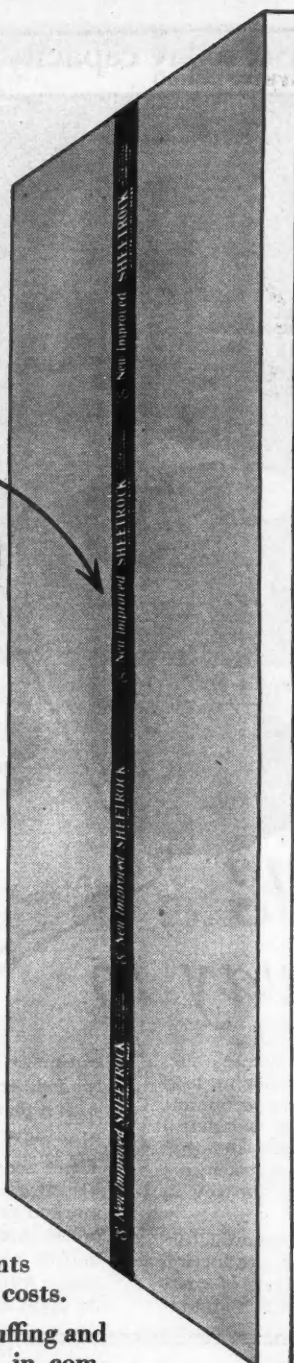
☐ Send me the Duntex book fully describing this new manufacturing opportunity and showing how the plant can pay for itself out of earnings. Also (check) ☐ send sample tile.

☐ Send me the book "Basic Facts" explaining how I can make Duntile in a plant of my own at 60% profit.

Name
Address City

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

This
new
marking



identifies
it...

New Improved Sheetrock is the result of years of effort to improve a product already nearly perfect. *You will know it by its distinctive marking.*

The new, ivory-colored Sheetrock surface takes all types of decoration. Light colored paints dry uniformly and retain their original freshness. All paints spread farther—reducing decorating costs.

The new surface is tough. It resists scuffing and abrasion. An improved gypsum core, in combination with the tough covering, gives New Improved Sheetrock added strength and flexibility. Increased insulation is also provided.

Nailing edges are square and uniformly thick.

Board ends are more cleanly cut and the exposed core is specially hardened. Edges join accurately, providing smooth, even surfaces.

Before building new rooms, or remodeling garages, attics, basements, etc., investigate New Improved Sheetrock. It is distributed by leading dealers in lumber and building supplies.

UNITED STATES GYPSUM COMPANY
General Offices: 300 W. Adams Street, Chicago, Illinois

Sole Distributors for Canada: Canadian Gypsum Company, Limited,
Hillyard Street, Hamilton, Ont.

SHEETROCK

(Reg. U. S. Patent Office)

The FIREPROOF WALLBOARD



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Hangars! . . . A NEW PHASE OF BUILDING WITH LUMBER



The symbol of guaranteed "Tree-Mark" lumber



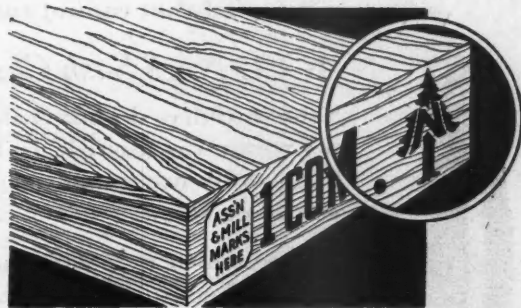
A Growing Field of Profit for You . . .

ARCHITECTS, engineers and builders who have viewed Aviation with mild, detached interest are awakening to the fact that *here, now* is a new phase of building—a new field of profits.

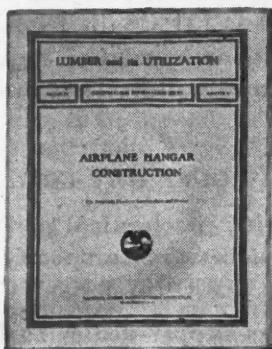
Mail planes—commercial planes—pleasure planes! Their numbers daily increase—and each must be housed in a well-planned, well-built hangar!

It will pay you to know the facts about proper hangar construction. This information is yours for the asking—the coupon below brings you FREE a complete and valuable brochure "Airplane Hangar Construction!"

If you have any problem in construction for aviation the National Lumber Manufacturers Association makes available to you the services of its experts in wood technology and wood-using problems. Their help is given without charge. The coupon is waiting—send it now!



The National Lumber Manufacturers Association guarantees to the dealer that lumber bearing its "Tree-Mark" is of the quality indicated thereon by the official marks of the expert grader. He can pass on to you the benefits of this guarantee



National Lumber Manufacturers Association
Dept. 4757 Transportation Bldg., Washington, D. C.

Gentlemen: Please send me a free copy of "Airplane Hangar Construction."

Name.....

Address.....

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

NATIONAL LUMBER MANUFACTURERS ASSOCIATION, WASHINGTON, D. C.

THESE 17 great associations affiliated with the National Association maintain particular information and service organizations that coordinate with the general services of the National staff.

- †California Redwood Association, San Francisco, Calif.—Redwood
- *California White & Sugar Pine Manufacturers Association, San Francisco, Calif.—California Pines, White Fir
- Hardwood Manufacturers Institute, Memphis, Tenn.—Oak, Gum, *Tennessee Aromatic Red Cedar, Southern and Appalachian Hardwoods
- *North Carolina Pine Association, Norfolk, Va.—North Carolina Pine

- *Northern Hemlock & Hardwood Manufacturers Association, Oshkosh, Wis.—Hemlock, Maple, Birch and Northern Hardwoods
- *Northern Pine Manufacturers Association, Minneapolis, Minn.—White Pine, Norway Pine
- *Southern Cypress Manufacturers Association, Jacksonville, Fla.—Cypress and Tupelo
- *Southern Pine Association, New Orleans, La.—Long Leaf and Short Leaf Southern Yellow Pine
- *West Coast Lumbermen's Association, Seattle, Wash.—Douglas Fir, Sitka Spruce, West Coast Hemlock, Western Red Cedar

- *Western Pine Manufacturers Association, Portland, Ore.—Pondosa Pine, Idaho White Pine, Larch
- National American Wholesale Lumber Association, New York, N. Y.
- National Association of Wooden Box Manufacturers, Chicago, Ill.
- *Maple Flooring Manufacturers Association, Chicago, Ill.
- British Columbia Lumber and Shingle Manufacturers, Ltd., Vancouver, B. C.
- British Columbia Loggers Association, Vancouver, B. C.
- American Wood Preservers' Association, Chicago, Ill.
- *Oak Flooring Manufacturers Association of the United States, Chicago, Ill.

*Grade- and trade-marked lumber available in these species †Trade-marked lumber available in these species

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



"and window suspensions—good for a lifetime"

Home buyers will be impressed when you say that "every window is hung with copper-bearing steel chain—ACCO No. 8 Sash Chain—material that cannot rot, fray, stretch or shrink."

ACCO No. 8 Sash Chain costs less to install per window

Some builders do not realize that on an average, 56 inches of cord per window is wasted. In knots and double knots. 100 feet of cord hangs only five windows. But 100 feet of ACCO No. 8 Sash Chain will hang seven.

There is also a 25% saving in labor with ACCO Sash Chain. A recent check-up of Brooklyn contractors shows that carpenters work faster . . . there is no waste of time tying knots—or fussing with a carpenter's "mouse." ACCO Chain feeds over the pulley and drops into the casing of its own weight. Simple attachments fasten the weight to the sash and pulley. They are furnished at no extra charge.

Operates perfectly over any cord pulley

ACCO Sash Chain operates with mechanical perfection over ordinary cord pulleys—it is not necessary to specify special or more expensive pulleys for use with ACCO No. 8 Sash Chain.

Ask your hardware or builders supply dealer to furnish you with ACCO No. 8 Sash Chain—or write us direct for full particulars and prices.

AMERICAN CHAIN COMPANY, Inc.

Bridgeport, Connecticut

In Canada: Dominion Chain Company, Limited, Niagara Falls, Ontario

District Sales Offices: Boston • Chicago • New York • Philadelphia • Pittsburgh • San Francisco

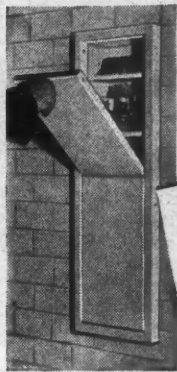
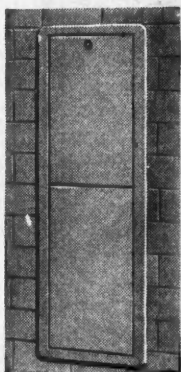


Use ACCO No. 8 Sash Chain

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Modern "Extras"

such as this mean
fewer vacant apartments
and homes



**SAVES FURNITURE
AND TEMPER, TOO**



Dwellers everywhere are welcoming the freedom this popular shoe "service station" affords from tiresome shoe cleaning. Naturally, wise builders and architects are including Griffins in their specifications.

WHETHER it be an estate or a small bungalow—hotel or dormitory—apartment or club—the place you live in deserves modern "extras" that make for the utmost in comfort and convenience.

Such conveniences, for instance, as the Griffin Cabinet, devised by the reputable makers of the famous Griffin Shoe Polishes.

This shoe "service station" has taken the grouch out of the proper grooming of the shoes and has made it a pleasure. In old homes, as well as new, it has ended the irritating hunt for scattered equipment by providing a concealed, shelved receptacle for storing bottles, cloths, tins and brushes.

And no longer must the bathtub rim, chair or handy piece of furniture serve as a makeshift footrest. Griffin Cabinets open out, simply and easily into a firm, com-

fortable footrest the proper height from the floor. A double-quick shine—then it folds back out of the way.

Builders and architects, alike have been quick to discern in this latest contribution to modern living convenience a positive sales and rental asset. And those who include Griffins in their specifications are assured of having their judgments endorsed by Mr. and Mrs. Home Seeker.

Their value as an *extra* building item is far beyond the low cost of installation. You'll be more likely to agree with us after you've read the complete story of the Griffin Steel Cabinets for Shoe Cleaning. Just fill in and mail the coupon today and it will be sent you without obligation. The Griffin Manufacturing Company, Inc., 67-69 Murray Street New York City.

Griffins eliminate back-strain and awkward positions. Built in or attached to the wall. Require no extra space or special construction. Open up easily—a shine in a jiffy—then fold back out of the way. Griffins come in a variety of durable colors.

GRIFFINET

Steel Cabinets for Shoe Cleaning

GRIFFIN MANUFACTURING CO., Inc.
Dept. 39, 67-69 Murray Street, New York City.

Gentlemen:

Please send further information on
GRIFFINET Cabinets for Shoe Cleaning.

Name.....

Address.....

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

Please check business or profession
Architect ☐ Contractor ☐ Builder ☐ Realtor ☐ Home Owner ☐



WINTHROPS *On the Roof of Another* ARCHITECT'S HOUSE

Pierre Lindhout has been responsible for much fine architecture in the city of Grand Rapids, Michigan. When he built this house for himself in the Ottawa Hills district—858 Iroquois Drive, S. E.—he selected Winthrop Tapered Asphalt Shingles for his roof.

Out of the twenty Winthrop colors—solid and blended—Mr. Lindhout preferred the blue black, which gives striking and pleasing contrast with the buff brick walls.

The architect, builder or owner who uses Winthrops faces but one decision—the selection of the color best suited to his house and its surroundings. All Winthrop colors are permanent. All Winthrops have the thick butts, exclusively, that lie flat and close,



weather-sealing the roof and doubling the thickness where exposure comes. Besides durability and beauty, Winthrops have fire-resistance. They bear

the Class C Label of Underwriters' Laboratories. Over old roofs, Winthrops are unequaled.

Samples Free

Most good lumber dealers carry Winthrops, but we believe you can use one or more full size samples. Write us, stating, please, what color you wish or whether you'd prefer that we send you one of our popular blends.

BECKMAN-DAWSON ROOFING COMPANY
1032 Brooks Building, 223 W. Jackson Boulevard, Chicago, Illinois
Factories at Chicago, Ill., Detroit, Mich., and Lockport, N. Y.

 **Winthrop**
Tapered Asphalt Shingles

Argotile (slate surfaced) Roofing, Supreme (mica surfaced) Roofing, Wearproof (talc surfaced) Roofing

MODERN BUILDINGS *and* HOMES NEED MODERN SASH

VENTO (THE ORIGINAL) PUTTYLESS STEEL SASH

Vento's Best Recommendation is the Fact that it is being Imitated. Ask for VENTO.
It has Exclusive Features no other Sash can copy.

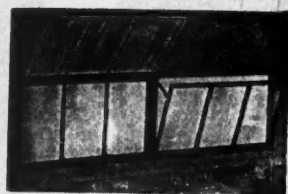
Vento Puttyless Steel Basement Windows



Made of 12 gauge steel, electrically welded into one solid piece—Frame and Muntin. The only basement window made that opens in overhead and also opens up at bottom full wide. The only steel window that can be locked when open, making basement safe and also keep it dry.

U. S. Pat. (3-4-24) (12-11-28) (7-30-29). Distributors, as well as manufacturers, of an infringement will be prosecuted under U. S. Pat. Laws.

Vento Puttyless Steel Mullion Basement Windows



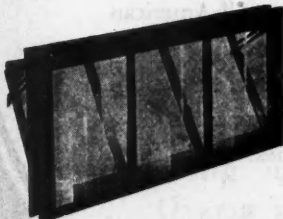
Two standard basement windows can be taken out of stock and set into a twin or mullion window by using Vento Mullion Bars—the real window for over the laundry tubs.

Detail of Vertical Mullion Bars

Vento vertical mullion bars for basement windows are made of 12 gauge steel held secure by carriage bolts. If the space between mullion bar and window is filled with cement it makes a solid concrete steel covered jamb. This window can be fastened in combinations of units.



Vento Puttyless Steel Storm Window and Combination Screen



A Vento Puttyless Storm Sash is a good selling item and can be fitted with pane size screens in the spring making the same steel frame an outside screen. In the fall—the screens can be removed and glass inserted and held by the Vento Pat. glazing clips.

Vento Metal Frame Pane-size Screens

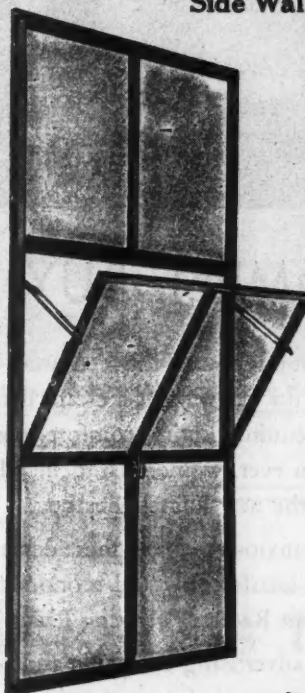
These screens come in all standard sizes for basement sash, utility or factory sash and special size for storm sash. Be sure to mention when ordering where they are to be used.

Vento Metal Bound Outside Screen

Are made of $\frac{3}{4}$ "x $\frac{3}{8}$ "x $\frac{1}{8}$ " channel bar electrically welded at each corner. 16 mesh galvanized or copper screen cloth is held tight by $\frac{1}{2}$ " oval bar with rust proof screws. Any one can re-screen a damaged screen in short order. The frame will outlast the building.

Sold by all Progressive Lumber and Building Supply Dealers

Vento Puttyless Steel Factory, Garage and Side Wall Windows



Vento Puttyless Steel Factory Type or Side Wall Sash are stronger than the riveted or mitered sash that have one muntin running the full length of sash. Vento is electrically welded at each muntin connection or joint. The full strength of the steel is there, nothing cut away as on other steel sash.

Vento Puttyless Steel Windows are jigged square and plumb. No need of "hay wire" on the job. Will stand more wind pressure.

Push a riveted window on one corner and see it give $\frac{1}{2}$ to 3 inches. Push a Vento and it won't "Budge." No breaking of glass in Vento.

Vento is puttyless. No need of Bed Putty. The glass, standard size—12x18 or 14x20—is held against a cushion of chemically treated cork (last a lifetime) by Vento Pat. glazing clips.

Cheaper to glaze than any other window as any one can set the glass.

Vento windows can be re-glazed by the night watchman or office boy.

It is an expensive job to dig out old, hard putty and re-set a new pane in a puttied sash. It costs about \$1.00 a pane to replace a puttied job.

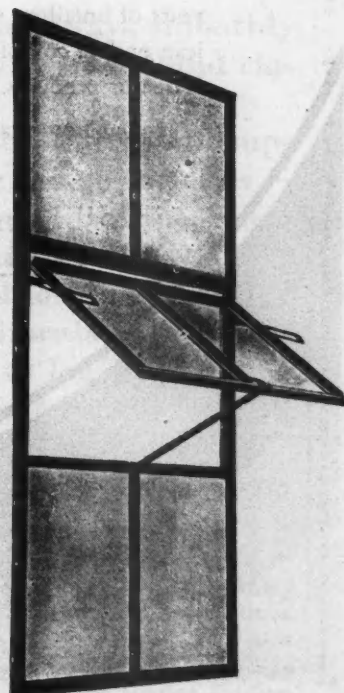
Vento Standard Factory Type Windows have overhead ventilating sections opening in at top shedding rain out. Can be opened $\frac{1}{2}$ " to 14" wide and stay where wanted held by Vento Stage Openers.

Ventilating sections can also be lifted out and held wide open by Vento New Ventilating Bar. Vento is the only steel window that has four distinct methods of ventilating.

Vento is the most popular steel sash on the market. You lose money by not selling them.

Write today for catalogues and price lists, your cost price and the suggested selling price list for contractors.

We don't sell every dealer. We can furnish you with electros of Basement or garage windows free for your advertising.



VENTO STEEL SASH COMPANY
MUSKEGON, MICHIGAN

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



DO WOMEN BUY HEATING EQUIPMENT?

Women may not understand the mechanics of a boiler but they do know what a clean, livable basement and genuine heating comfort means. Now, more than ever, women are demanding these things in the new homes they buy.

The Builder, anxious to meet these demands can do it more satisfactorily and economically with an American Radiator Heating Plant.

A consistent advertising campaign and forty years of unfailing service have given the American people complete confidence in American Radiator products.

If your homes are equipped with American

Radiator Heating there will be no questions. The mere mention of the name tells your prospects that you have selected the world's finest heating products. Because of this overwhelming confidence you will find that American Radiator heated homes will sell faster and insure more contented owners.

There is an American Radiator product for every heating need. A complete All-American installation — Boiler Radiators and Accessories means an undivided Manufacturers responsibility. Buyers want this undivided responsibility for the equipment in their homes.

AMERICAN RADIATOR COMPANY

40 WEST 40th STREET • NEW YORK

AND ALL PRINCIPAL CITIES



The hospitable charm of pine is shown in this paneled living room from the William Russell House, built at Providence, Rhode Island, about 1770. This room is now preserved in the Minneapolis Institute of Arts.



The Pine Paneled Room is the Vogue

THE use of pine paneling for living, dining or recreation rooms is finding favor with leading architects and builders.

Over a period of centuries, pine paneled rooms in America's oldest homes have retained their beauty and good taste. Those who are building fine homes today realize that pine paneling is a typical American treatment of permanent style and value.

A choice of five varieties of Shevlin Pine particularly commends this wood to architects and builders for sturdy exterior use as well as for interior finish. For whatever purpose it is intended, you will

find Shevlin Pine always smoothly milled, carefully seasoned and rigidly graded.

Leading lumber dealers will supply Shevlin Pine in five varieties — Shevlin Northern White Pine, Shevlin Ponderosa Pine, Shevlin Norway Pine, Shevlin California White Pine and Shevlin California Sugar Pine. Through selective logging a sufficient supply to last for generations is assured.

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: 1030 Monadnock Bldg.; Toronto, Ontario, Sales Office: 606 Royal Bank Bldg.; Sold in New York by N. H. Morgan, 1205 Graybar Building.



A modern kitchen, a beautiful bathroom—a desirable home

Will it be easy to make a real home of the house you have built to sell or rent? Will it be comfortable and cheerful? Have you kept in mind the convenience of the housewife who will make that house a home?

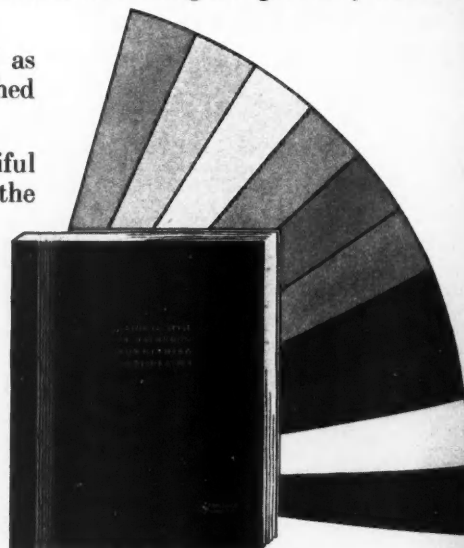
She, the prospective buyer, will know the moment she sees the kitchen and bathroom. All of the other rooms may suit her perfectly. But if the kitchen and bathroom are not to her liking she probably won't want the house you have built as a home.

So it will pay you well to plan the bathroom for beauty as well as utility and to install "Standard" Plumbing Fixtures which are distinguished alike for fine appearance and fine construction.

It will pay you well to install a "Standard" Three 8's Sink, of beautiful design and color, under the window "where the light comes in". This, the most modern of sink designs, is available in regular enamel and in Acid Resisting Enamel, which fruit and vegetable acids cannot roughen or discolor. And, like all "Standard" Plumbing Fixtures, even the most inexpensive designs, it is made in Ming Green, Clair de Lune Blue, St. Porchaire Brown, Ivoire de Medici, T'ang Red, Royal Copenhagen Blue, Rose du Barry, Meissen White, Ionian Black, and Orchid of Vincennes.

To illustrate the correct use of these exclusive colors, "Standard" has published the book "Color and Style in Bathroom Furnishing and Decoration". It is an inspiration as well as a practical guide to the builder of homes. Your copy will be mailed on request.

Standard Sanitary Mfg. Co., PITTSBURGH



"Standard"
PLUMBING FIXTURES

TH
are
shin
cati
shin
to c
best
to l
trim
they
A
grea
dem
shac
fire-
crac
perm

FOR

Let the *exclusive* Eternit Horizontals cut your application costs!

They save you money, and increase the value of your homes



Eternit ASBESTOS SHINGLES

THE exclusive Eternit Horizontals are the fastest laying of all asbestos shingles! Profits go up when application costs come down. Only 80 shingles to the square—160 nails to drive—less than any other asbestos shingle! And they are *easy* to lay! Self-aligning, perfectly trimmed, punched, and notched, they virtually fall right into place.

And Eternit Horizontals mean greater profits because of their demand, too. They offer deeper shadow lines. They are absolutely fire-proof. They will not rot, or crack, or deteriorate. And they are *permanently* beautiful!

Eternit colors run all the way through. These rich, mellow shades are not a mere surfacing, produced by an imperfect covering of gray cement with a heterogeneous, embedded material. Not a paint that may wash off.

Not surface beauty!

Eternit colors form an integral part of the shingle itself—obtained by an exclusive Eternit color treatment. And *permanent* colors—*Eternit* colors—mean quicker sales!

Let us tell you about Eternit Horizontals. Better still, write for the complete Eternit story! *Eternit, Inc.*,

Riverview Drive, St. Louis. Also Philadelphia, Houston, New Orleans, Jacksonville. *Makers of Eternit Big-7 Corrugated Asbestos Sheets and Eternit Asbestos Flat Sheets.*

ETERNIT, INC., Dept. C
Riverview Drive, St. Louis

Please send me full details, roofing directions and samples.

Name

Street

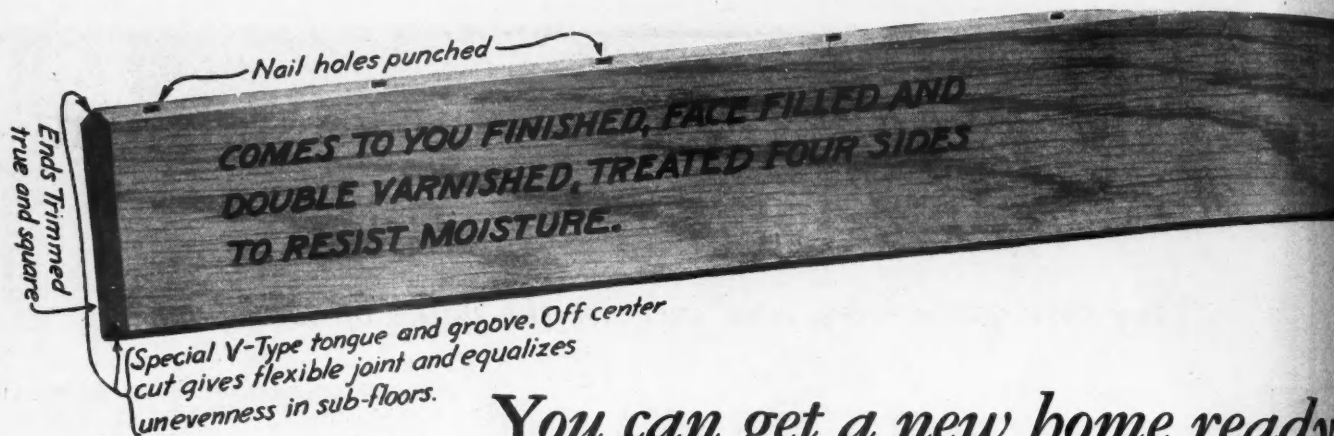
City

State

Dealer's Name

FOR THE PROTECTION OF THE BUILDER, EVERY ETERNIT ROOF IS REGISTERED; EVERY ETERNIT SHINGLE IS TRADE-MARKED

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



*You can get a new home ready
for occupancy two weeks earlier
when you lay CROMAR OAK FLOORS*



CROMAR is made from Appalachian White Oak only.

This slow-growing, medium-textured oak gives you better grain and figure than the very hard-textured stock. It also takes the finish better and HOLDS it better.

Here's the reason . . . CROMAR
Floors are ready to use
when nailed down!

CROMAR Factory Finished Oak Flooring is the only wood-flooring in the world which is COMPLETELY FINISHED before it is shipped from the mill. Every CROMAR strip is scraped, sanded, filled, twice varnished, and even treated to resist moisture. Ingenious, powerful machines perform all of those operations. *There's nothing left for you to do but nail down the strips!*

Two carpenters will lay the average-sized room of a residence with CROMAR Oak Flooring in a single day.

And the completed job will be more perfect than the usual hand-finished floor—in the laying because of an improved, simplified tongue and groove—in quality of the finishing job because of several

obvious reasons and some not so obvious which our booklets explain.

The completely finished strips of CROMAR reach you *crated*—with no faces or edges exposed—damage-proof.

And there's one other feature which will save you annoyance and expense when you use CROMAR: You are depending upon ONE company—a big, responsible, national advertiser—for the quality of the flooring, the finish AND the finishing.

If you have ever sub-let many hardwood flooring jobs you know what *that* means. And you don't sub-let when you use CROMAR; you use your own men and make a profit on them.

THE CROMAR COMPANY
WILLIAMSPORT, PA.

Pacific Greater West Distributor
THE C. L. THOMPSON COMPANY
Offices and Warehouses

200 Davis Street, San Francisco, Calif.
324 N. San Pedro St., Los Angeles, Calif.

CROMAR
FACTORY FINISHED
Oak FLOORING



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

SANITAS

MODERN
WALL COVERING

A High Quality Product for High Class Apartments

This interesting apartment house in Chicago supplemented its tiled bathrooms with Sanitas Modern Wall Covering.

Using a Sanitas Brocade, which is used in many hotels and fine homes for other rooms, the architect added the final decorative touch to colored tiles by using this very practical wall fabric.

Sanitas improves the appearance of any room. There are plenty of styles, plain and decorative to match any decorative scheme.

Sanitas is the original cleanable cloth wall covering. Doesn't fade, crack nor tear; easily cleaned with a damp cloth. Nationally advertised and known everywhere as the leader in its field.

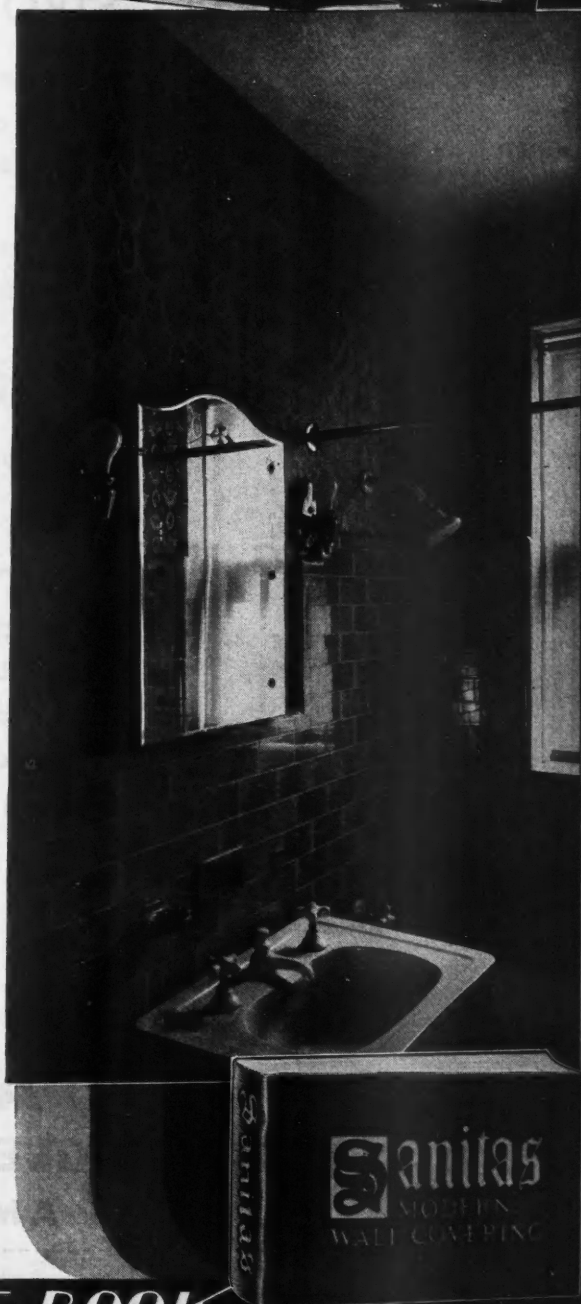
See the complete line in the Sanitas Sample Book, sent to executives. Write on your letterhead, and give name of your wholesaler.

The Standard Textile Products Co.
320 Broadway Dept. 51 New York



Illustration at top is an apartment house at 1354 Greenleaf Avenue, Chicago.

Lower illustration shows use of Sanitas Brocade above tiles. All bathrooms in this house treated in this manner.



SEND FOR THIS SAMPLE BOOK

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

ONLY LINABESTOS[★]

WILL GIVE YOU ALL THESE QUALITIES

- ▶ **FIREPROOF —** Linabestos is made of Asbestos Fibre and Portland Cement, beaten together and given tremendous pressure. Neither of these two materials can burn.
- ▶ **STRUCTURALLY STRONG —** The binder of Asbestos Fibre for the concrete results in sheets of uniform thickness, even texture, density and maximum strength with minimum shrinkage. Linabestos does not warp, split or crack when exposed to weather or heat.
- ▶ **VERMIN PROOF —** Rats cannot gnaw Linabestos. It is too hard for any sort of vermin to work their way through it.
- ▶ **USED EITHER OUTSIDE OR IN —** Its resistance to the weather and its long life means that Linabestos is equally effective for either exterior or interior.
- ▶ **PLEASING NATURAL COLOR —** Linabestos is made in a light buff color which is pleasing to the eye. Unlike many inferior wallboards, it is not necessary to paint it, either to improve its color or make it more durable. Linabestos may, however, be painted if some particular decorative effect is desired. It will not absorb paint as quickly as many other wallboards on the market.

★ LINABESTOS — The Cement-Asbestos Wallboard for home, store or factory use, made by the makers of Ambler Asbestos Shingles and Watile.

Write your name on the Coupon on bottom of this page and send to Ambler for prices and full information.

AMBLER
ASBESTOS SHINGLE & SHEATHING COMPANY
AMBLER, PA.

NAME

STREET

CITY

Dwellings faced with Brick sell more readily

W. L. BRIDGES
PRESIDENT



BRIDGES & GRAVES CO.
REALTORS - HOME BUILDERS - INSURANCE
243 N. DELAWARE STREET
INDIANAPOLIS - IND.

A. H. M. GRAVES
SECY. - TREAS.



July 25, 1929

American Face Brick Association,
130 North Wells Street,
Chicago, Illinois.

Gentlemen:-

In reply to your inquiry as to why we build most of our homes with face brick, we find the desire for better homes is always present and that dwellings faced with brick sell more readily than those faced with other materials.

We build from forty to fifty houses per year ranging in price from \$4,000 to \$18,000.

In one locality we have built during the last five years about thirty houses all but two of which were faced with brick. The development of this district has been particularly interesting due to the constantly increasing standards demanded by prospects who like the neighborhood. The first houses there were sold at \$8,500, but now the more exacting demands and increase in lot values have sent the price up to \$11,500.

Social and living standards throughout the country seem to be developing in full proportion with our educational and industrial standards.

Very truly yours,

BRIDGES & GRAVES COMPANY

BY *W. L. Bridges*
President

WLB:GV

AMERICAN FACE BRICK ASSOCIATION
2163 City State Bank Bldg., Chicago, Ill.

If you live in Canada, please write to 26 Queen Street East, Toronto, Ont.

"The Charm of Face Brick Homes." Just issued—Features beautiful color illustrations of modern Face Brick homes. Sent Free. Designs and floor plans for □ 3 & 4 room houses, 25c. □ 5 room houses, 25c. □ 6 room houses, 25c. □ 7 & 8 room houses, 25c. □ 5 & 6 room duplexes and double houses, 25c.

Name

Address

Send for
Face Brick
Plan Books



An Elevator Trim *that keeps it's* **GOOD LOOKS**

FORMICA offers many advantages as a material for refinishing the interior of elevators.

It has a splendid surface polished or satin, in a variety of wood grains, solid colors and art moderne patterns.

The material is unaffected by moisture and will never rust or corrode. It is hard and will stand a lot of wear. In fact, it provides a cab interior on which there will be practically no maintenance.

The Walter Kamman Mfg. Co. is offering Formica Kamman cabs built in this fashion for new buildings.

THE FORMICA INSULATION COMPANY

4667 Spring Grove Avenue

Cincinnati, Ohio

FORMICA

for **BUILDING PURPOSES**

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Why does a prospect decide on one particular house?

LET'S look at a typical buyer of a new home. He has dozens of houses to choose from. All are attractive, all are in his price range. Out of the group he selects one house. Why that house?

Was it the exterior design? There were others in the same period equally beautiful. Was it the layout of rooms? There were others just as convenient. Was it the neighborhood? His was not the only house for sale in that district.

Design, layout, location, price—all these have an important part in creating decision. But, there is another factor also important. And that is *confidence*. For buying a house is a big event in any man's life. He expects to live happily in that house for years to come.

He wants to be sure that ten years from now he will still be satisfied with his decision of today. In other words he is looking for something upon which he can place his confidence. Is he intimately acquainted with the builders? If he is—fine! For he can have confidence in their choice of materials. Does he recognize well-known quality materials in the house he is looking at? If so, fine! For he knows that

good buildings are made of good materials.

Take hardware for example. What does he see on the front door? Good Hardware—Corbin?

If it is, he has confidence before he ever enters the house. For years he has known that good buildings deserve good hardware. And he knows "good hardware" means but one thing—"Corbin." From attic to cellar he sees rooms, rooms with doors and windows, doors and windows with Good Hardware—Corbin. Step by step his initial confidence is increased. Step by step he approaches nearer to the signing of the buying contract with confidence.

He is not interested in the money saved by the builder through easier and quicker installation of Good Hardware—Corbin. But, he is interested in knowing that doors will lock securely, windows open easily for the life of the house. And naturally he is pleased with the beauty of the authentic period design of all the many varied items of his Good Hardware—Corbin.

Why does a prospect decide on one particular house? The experience of hundreds of successful builders has proved that Good Hardware—Corbin has a lot to do with securing a favorable decision for their house.

Good Buildings Deserve
Good Hardware



P. & F. CORBIN SINCE 1849 NEW BRITAIN CONNECTICUT

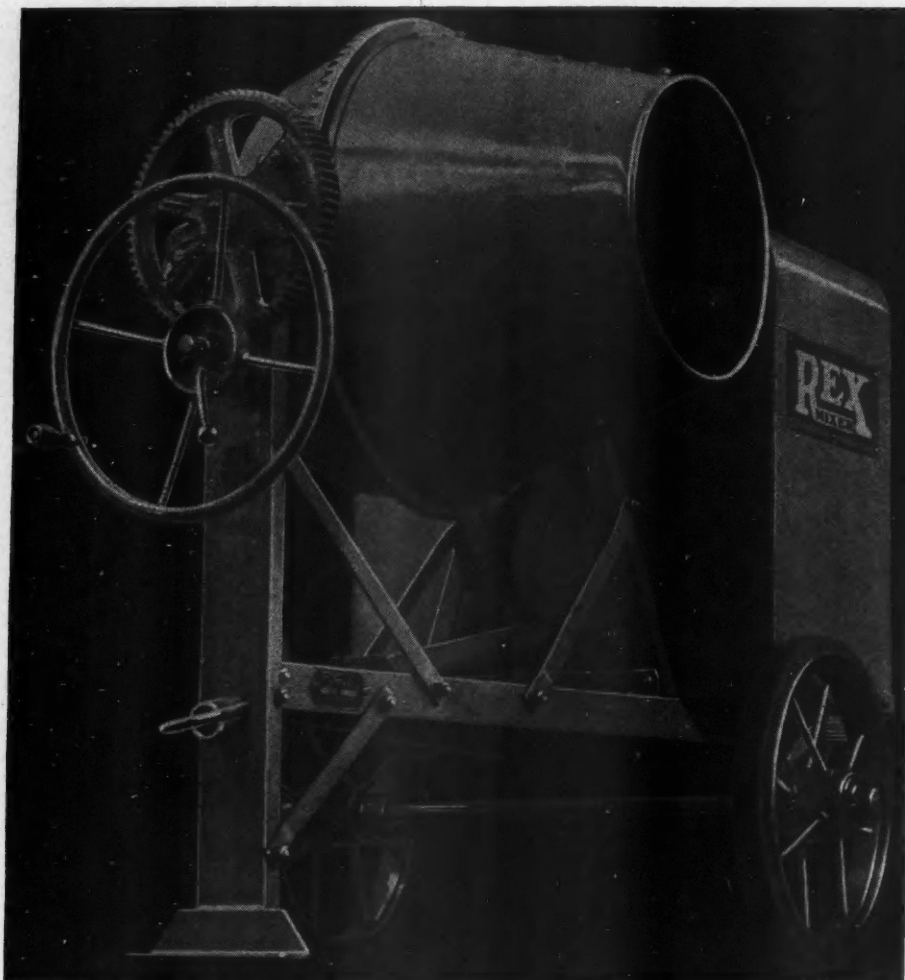
The American Hardware Corporation, Successor

New York

Chicago

Philadelphia

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



**"Low Price
alone
is NOT
ENOUGH"**

said REX engineers designing THIS NEW TILTER

Rex never intended that this new $\frac{1}{2}$ -bag Tilter for 1929 should sell on low price alone.

Rex aimed first of all to make this machine the outstanding leader of its class—in design—in features—in construction—in performance.

What Rex Engineers accomplished is plain to see: a new $\frac{1}{2}$ -bag tilting mixer built from stem to stern to meet today's conditions on the 20-to-50 yard per day concrete job.

And Rex production facilities make low price a matter of course.

This coupon brings the detailed catalog.

A New Tilting Lock

See this new Rex Tilting lock that holds the drum at any desired angle—that can't slip or loosen.

CHAIN BELT COMPANY
721 Park Street, Milwaukee, Wis.

Send me Catalogs on the mixers I've checked.

$\frac{1}{2}$ -bag tilter <input type="checkbox"/>	2-to 3-bag 14-S <input type="checkbox"/>
$\frac{1}{2}$ -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.....

CHAIN BELT COMPANY
721 Park Street, Milwaukee, Wis.

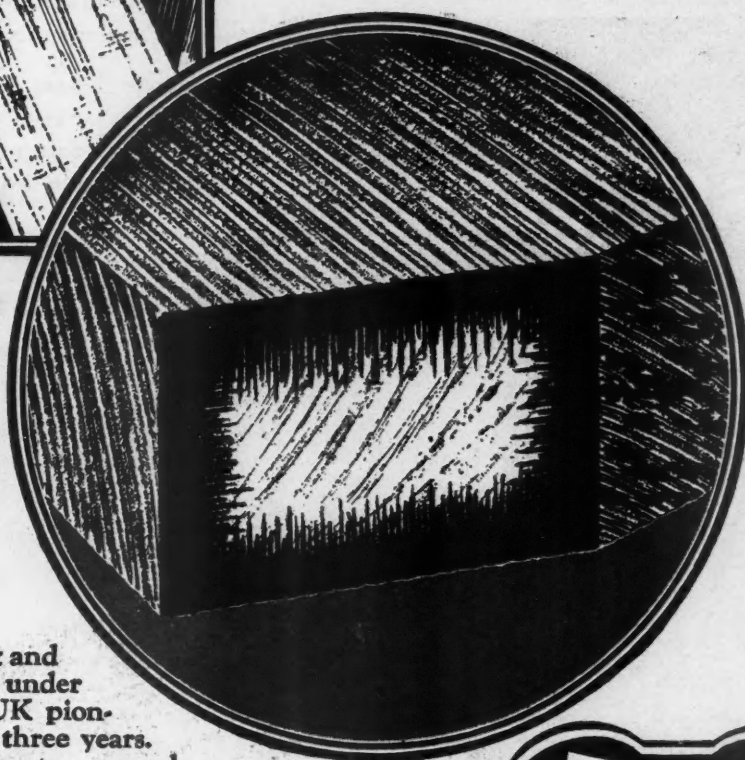
REX MIXERS

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



Greater Color Penetration in MAUK Shingles

*Forced into
the wood with
32 tons
of Pressure
per bundle*



MAUK Shingles (clear, all heart and vertical grain) are stained twice under high pressure—a process MAUK pioneered and has used for the last three years. Special, natural mineral pigments, ground to pass a 325 mesh screen, bound together with pure linseed oil impregnate every shingle.

The preservative creosote oils go clear through the shingle. The color itself penetrates the surface deep as mineral pigments can be forced into red cedar. That's why MAUK Double Dipped colors don't wash off—why they resist sun, salt air, extremes of weather. Where appearances mean sales, it's worth considering these facts.

**MAUK
DOUBLE-DIPPED**

Shingles Stained Under Pressure

THE C. A. MAUK LUMBER CO.
TOLEDO, OHIO

DOUBLE-DIPPED

SHINGLES

Stained Under Pressure



HERE is a manual on the production and use of stained shingles with a portfolio of truly beautiful shingled houses in color. You should have it for reference and for making sales.

Send for it

Name.....

Address.....

City.....

A Balsam-Wool insulated house earns the owner's recommendation

COMFORT and economy cannot be installed in a home like furniture. They must be built in. The finest, most expensive heating equipment can be little more than two-thirds efficient if effective wall and roof insulation is not built in as part of that equipment.

Balsam-Wool blanketing is true insulation—efficient insulation. Consider it as part of the heating system in houses you build to sell. Recommend it as a heat saver

in homes you build on contract. A full inch can be used at little or no additional cost because at least 25% of the radiation can be saved. And every year fuel savings will be 25% or more.

Balsam-Wool is true insulation because it is flexible—because it fits snugly into walls and roof—because it tucks into every crack and cranny—because it seals spaces around doors and windows. Obviously, this is the way to make a house heat-tight. Obviously, this is the way to win the owner's recommendation of you.

Investigate Balsam-Wool blanketing before planning the next job—your own or for a customer. Ask your lumber dealer. If he does not sell Balsam-Wool, write us for names of reliable dealers who can supply you.

Balsam-Wool Blanket

it tucks in!

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

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, 3107 Chanin Bldg.—Detroit, 515 Stephenson Bldg.—Chicago, 360 N. Michigan Ave.—Minneapolis, Baker Bldg.—Kansas City, 231 W. 47th St.—Seattle, 621 Liggett Bldg.

SOLD THROUGH RETAIL LUMBER DEALERS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

TOMORROW'S DOOR

*Designed by R. H. SMYTHE, architect, winner
in the PHILIPPINE LAMINEX competition*



NOT long before you'll be specifying doors *like* it. Doors entirely new in design, new in coloring, new in wood. In fact, stock doors of a striking new wood already are going into the most notable current construction.

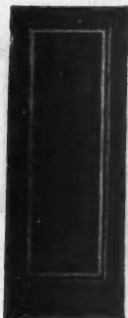
They are doors of Philippine Laminex, unquestionably tomorrow's wood.

Philippine Laminex doors bring back the beauty of mahogany and teak—their slender parallel ribbons and color—at an amazingly low cost. You can secure Philippine Laminex doors for just *half* what you've paid for mahogany doors!

That's because: (1) Philippine Laminex comes in duty free; (2) is selected by our own organization in the Islands; and (3) is imported in vast quantities for stock manufacture by the largest door makers in the world.

Philippine Laminex doors now come in 23 beautiful stock designs. With carton trim to match. Each item scraped and hand smoothed, *ready for finish.*

Today's most popular door design, the Belle Porte, is pictured here in lovely Philippine Laminex—one of the 23 stock doors in this beautiful new series. They're sold locally by Laminex dealers.



And Philippine Laminex doors won't shrink, swell, or warp. Rush coupon below for prices—Philippine Laminex may land you a next job—or an earlier sale!

THE WHEELER, OSGOOD COMPANY,
Dept. E-99, Tacoma, Washington.

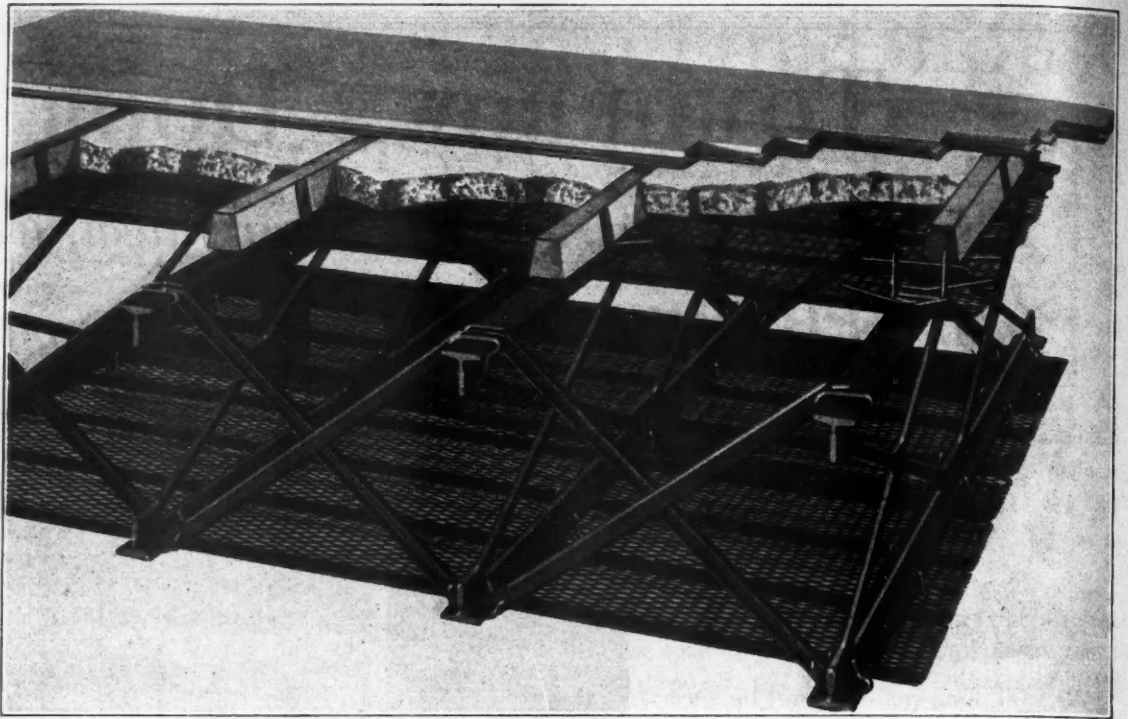
Please send me more information about Philippine Laminex doors, and prices at which I can get them locally.

Name.....

Address.....

.....

Tomorrow's door! According to three of the country's best known architects and designers, here it is! It was designed especially for Philippine Laminex by the New York architect, R. H. Smythe. In many a "modern" home and commercial building being planned today this door would be most fitting. We can now supply it to you on order.



The Floor and Roof Construction of Tomorrow

Through engineering genius and modern manufacturing methods Kalman is able to provide you with this new and improved method for building fire-safe floors and roofs.

In this construction the principle of the old wood floor and roof construction is maintained—but the materials used are greatly improved.

Kalmantruss Steel Joists are made by a new and different method—a rolling process. As a result, joints are one-piece and the joist has unusual dependability.

Kalmantruss Rigid Bridging follows the engineering principles of wood cross bridging, but it is fire-safe.

In addition, the application of Kalmanlath and the distinctive line of Kalman accessory products, such as ceiling and floor lath clips, result in producing the improved fire-safe floor and roof construction of tomorrow—a construction that is easy to erect.

KALMAN STEEL COMPANY

Successors to Sykes Metal Lath Company

KALMAN STEEL

**MODERN. FIRE-SAFE
BUILDING PRODUCTS**

Atlanta
Baltimore
Boston
Buffalo

Charlotte
Chicago
Cleveland
Columbus

Dayton
Detroit
Houston
Milwaukee

Minneapolis
Newark
New Haven

New York
(Export Office—New York)

Niles
Philadelphia
Pittsburgh
St. Paul

Syracuse
Toledo
Washington, D. C.
Youngstown

Winter Windows mean Easier Sales



The increasing popularity of winter-windows (the new name for storm sash)—is evidence that homeowners everywhere are beginning to realize as they never have before the importance of insulating their homes against the dangerous drafts of winter. ¶ On September 21 and October 19, full page advertisements on winter windows will appear in the Saturday Evening Post selling the idea of storm sash to new thousands of homeowners. ¶ Watch for this advertising. And begin now to cash in on it by equipping your homes with winter windows. They mean actual dollars and cents savings which should make any home easier to sell. ¶ Send for our interesting booklet—"Save Fuel with Winter Windows"—which gives the complete story of the many advantages of storm sash.

Winter windows are, of course, at their best when glazed with quality glass. Be sure, therefore, to specify Libbey-Owens flat-drawn clear sheet glass—the choice of builders everywhere.

LIBBEY-OWENS

**FLAT DRAWN
CLEAR SHEET
GLASS**

Libbey-Owens Glass Company, Toledo, Ohio

Gentlemen: Please send me your free booklet SAVE FUEL WITH WINTER WINDOWS.

Name _____

Address _____

City _____ State _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The Builder's "RIGHT HAND MAN"

the BLACK & DECKER Portable Electric Hammer



Capacity In Con- crete or Brick	Blows Per Minute	Overall Length	Net Weight	Price
No. 2-Up to 5/8"	3300	16 3/4"	10 lbs.	\$145.00
No. 4-Up to 1 1/8"	2300	18 3/4"	15 1/2 lbs.	185.00
No. 6-Up to 1 3/4"	2900	20 3/4"	23 lbs.	245.00

Each day brings word of new uses for the Black & Decker Electric Hammer in the building construction field. The advent of this new tool is one of the greatest advancements in the history of labor-saving devices, as it accomplishes in a few minutes, work which formerly required hours with hand tools.

Black & Decker Portable Electric Hammers are ideal for driving any type of tool where hammer action is desired, such as star drills, chipping chisels, wood working tools, bulls points etc. They are unusually light in weight, strong and sturdy and each is a complete unit in itself - no auxiliary apparatus being required. They are ready for use as soon as plugged into the electric light socket.

Some of the uses made of Black & Decker Electric Hammers in the building construction field:-

- Cutting into walls where switch boxes are to be placed
- Changing equipment in Industrial plants.
- Drilling holes for expansion shields
- Drilling holes through concrete or brick for pipe and conduit
- Drilling stalactite for insulators
- Erecting steel partitions and fitting steel sash
- Hanging pipes, fireproof doors, radiation and conduit
- Installing sprinkler systems, meters, switchboards, metal staircases and fire escapes
- Surfacing concrete with bushing tool
- Tearing out concrete foundations and floors
- Wood gouging and chiseling on heavy wood construction

The BLACK & DECKER MFG. CO.

Toronto, Ontario, Canada

TOWSON, MD.

Slough, Bucks., England

For cooling in summer and heating in winter



LET Holland assume full responsibility for year around comfort in the homes you build. Holland designs, plans, installs, finances and guarantees every installation. Responsibility is undivided. You and the home buyer are fully protected. In the winter the Aire-U-Well electric circulating unit forces moist warmth throughout the home. No room is ever hard to heat. In summer the air-plane-type propeller sends a delightful, cooling breeze to every nook and corner

—equivalent to several electric fans in every room. Holland's name and fame are known everywhere. It has a million "warm friends". More than 30,000 women hear the Holland story daily. Its superiority is dramatized to millions monthly by a steady stream of national and direct advertising. We are helping builders everywhere sell more homes. Get the facts. Let us explain why it will pay you to install Holland Vaporaire and end your heating responsibility. Call the Holland branch nearest you.

HOLLAND VAPORAIRE

THE HOLLAND FURNACE CO., HOLLAND, MICHIGAN

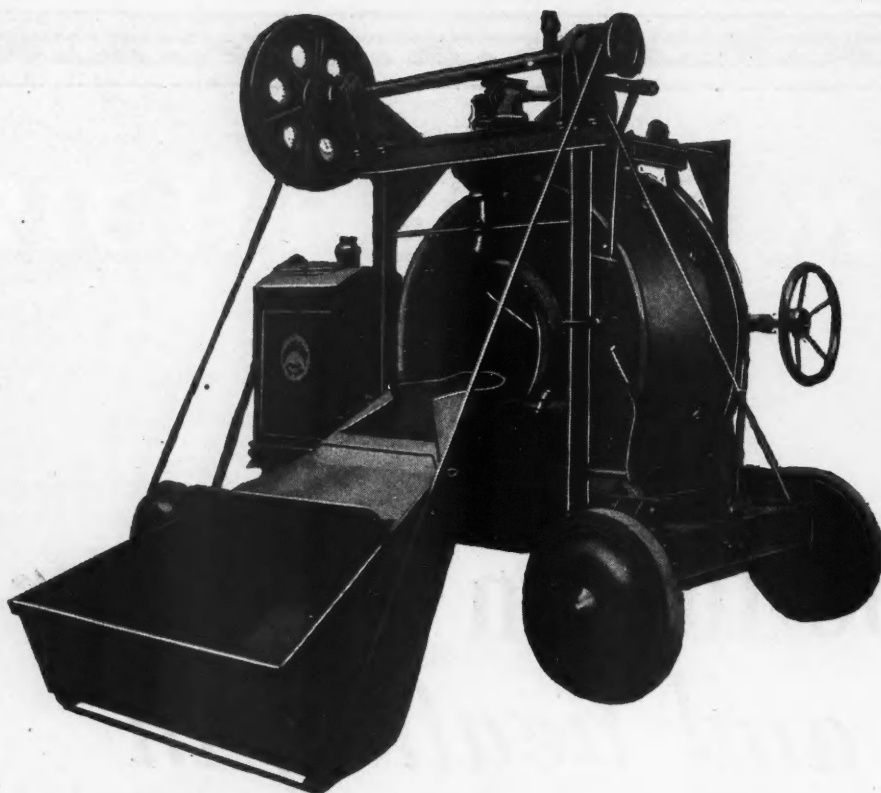
USE THIS COUPON
HOLLAND MEN KNOW WHO PLANS TO
BUILD OR BUY IN YOUR NEIGHBORHOOD
Get the facts. There's no obligation.



HOLLAND FURNACE COMPANY, HOLLAND, MICH.
☐ Without obligation on my part, ☐ Send me literature.
please have a Holland man call.

Name _____ Address _____
City _____ State _____

HB-1



THE NEW *Ransome* 7-S BUILDING MIXER/

Built the Way Contractors Told
us They Wanted it Built / / /

Leading contractors who knew what they wanted wrote the specifications . . . we followed them.

Users wanted built-in ability to stand up under the hardest kind of service. They wanted a light weight mixer—easy to move around on the job. They asked for simplicity, so that all parts could be easily operated, lubricated or replaced—a fast mixer with great

capacity—insuring large output in fast time. They demanded the same improved water control as found on our large mixers.

Ransome engineers met all these requirements, and yet kept the price down. The result is *value* . . . the new 7-S, the last word in small mixer construction.

Mail the coupon below today! It will bring you our Bulletin No. 123, giving complete specifications for the new 7-S, as written by our contractor friends.

RANSOME CONCRETE MACHINERY COMPANY
DUNELLEN NEW JERSEY

Gentlemen:

Please send me, without obligation, your Bulletin No. 123, describing the new Ransome 7-S Standard Building Mixer.

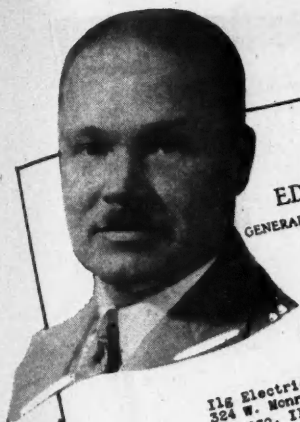
AB

Name _____

Address _____

City _____

State _____



EDWARD E. BJORK
GENERAL CONTRACTOR and HOME BUILDER,
136 MERRILL AVENUE
Park Ridge, Ill.

April 1, 1929.

Ilg Electric Ventilating Co.,
324 W. Monroe St.,
Chicago, Illinois.

Gentlemen:

I am the owner of the west half of an apartment building in which I had installed nine Ilgair Kitchen Ventilators, one in each apartment. The owner of the east half did not have any ventilators installed.

It has been found that the apartments with the ventilators have been rented much easier than the others and in greater demand.

The walls and ceilings of the apartments have been found to keep cleaner.

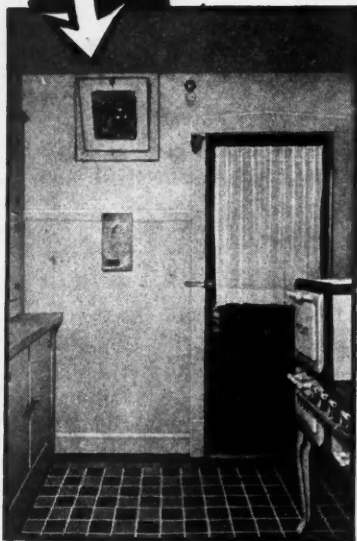
Although I have not been asking more rent than the other owner, I believe I could do so because of the advantages given by the installation of the Ilgair Kitchen Ventilator.

Yours truly,

Edward E. Bjork.

EEB:KIB

Why 1/2 of this Building Rents 100% and The Other Half Doesn't



View of kitchen in one of the Bjork-Cameron apartments showing the Ilgair Kitchen Ventilator installed in the wall as a built-in feature.



HERE is pictured the new Bjork-Cameron Apartments, Park Ridge, Illinois. There are eighteen apartments—9 on each side. The "For Rent" sign is still hanging out on the eastern half because a number of the apartments are vacant—but the western portion is rented 100%.

Read Mr. Bjork's letter. ♦ ♦ ♦

Profit by his experience and install an Ilgair Ventilator in every home or apartment you build in the future. No other electrical device will add so much to your sale and rental values as this compact, quiet-running exhaust fan which removes cooking odors, greasy fumes and excessive heat. It makes the kitchen a joy spot—in any kind of weather—summer or winter.

Clip, sign and mail the coupon for new illustrated Bulletin, of special interest to Builders, Contractors and Real Estate Operators.

ILG ELECTRIC VENTILATING CO., 2852 N. Crawford Ave., CHICAGO



For Offices,
Stores, Factories,
Restaurants,
Theatres, Public
Buildings,
Homes, etc., etc.

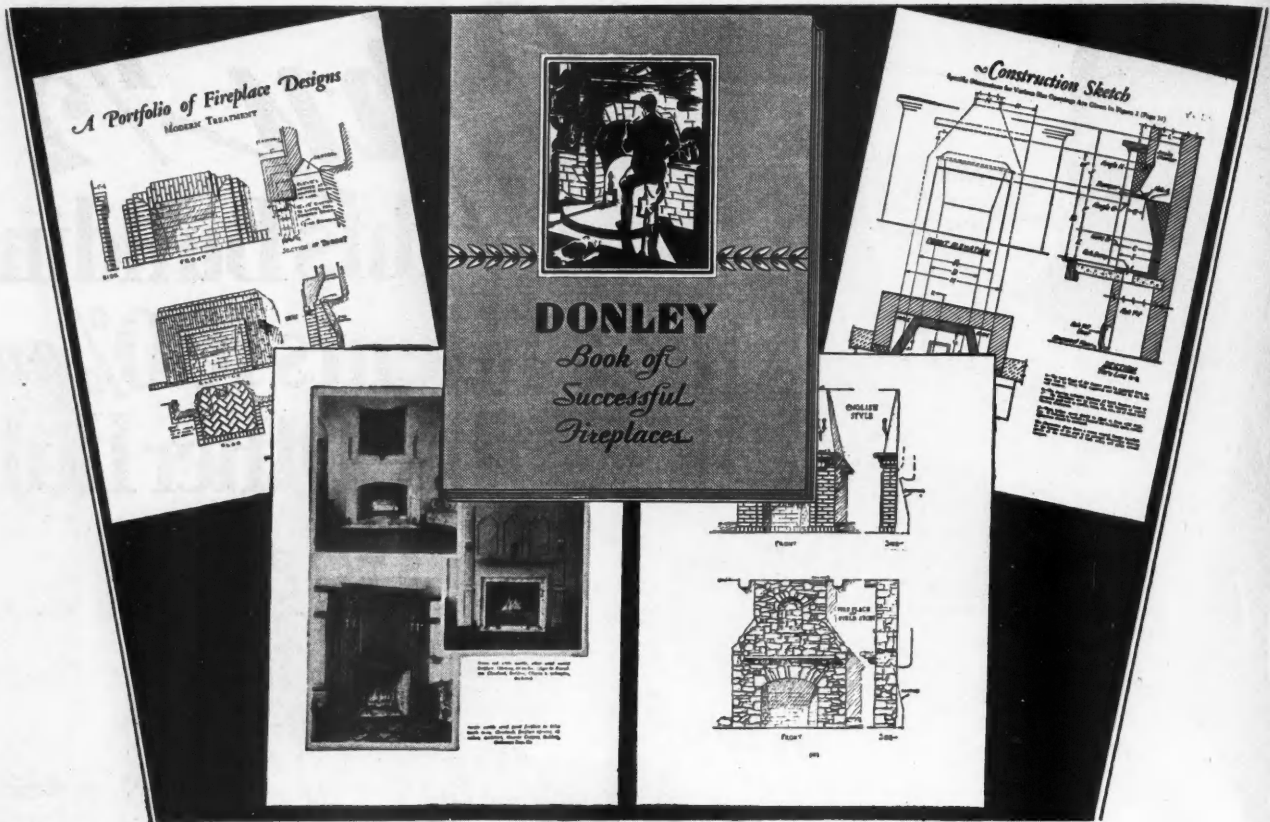
C · O · U · P · O · N

ILG ELECTRIC VENTILATING CO.
2852 North Crawford Avenue, Chicago, Ill.

Without obligation send me the new Ilgair Kitchen Ventilator Bulletin including price and data sheets for builders.

Name _____

Full Address _____



Just Off The Press— The New Sixth Edition of The Donley Book of Successful Fireplaces

THE Donley Brothers Company, publishers of the well-known Donley Book of Successful Fireplaces, has just brought out a new sixth edition. This is the most complete treatise on fireplace building published today.

In its pages you will find over 100 fireplace designs for living-rooms, bedrooms, dining-rooms, and porches; also designs for fireplaces in offices and public buildings and institutions. These designs are in wood, brick, stone, marble, tile and combinations of these materials. It gives complete descriptions on how to build fireplaces in summer cottages and cabins.

This new edition also contains details and sizes that enable any contractor to build a fireplace that will be 100 per cent successful.

Contractors can use the Donley Book of Successful Fireplaces to show fireplace designs to customers. Many of the designs can easily be duplicated. Here's a book easily worth \$1.00. You can get a copy by sending 25c in stamps or coin to cover the cost of mailing. If you desire, we will also send you the Donley Catalog containing the complete description of Donley Home Comfort and Convenience Devices.

THE DONLEY BROTHERS COMPANY

13910 MILES AVENUE



CLEVELAND, OHIO

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



"I'll
buy the
house!"

Running water helped close the deal!

Water at the turn of a faucet! What an asset in a house—offered for sale—BEYOND THE CITY WATER MAINS! Running water means comfort and convenience impossible without it. It brings a higher price for the property—gives you a distinct advantage over your competition. Yet the cost of the service is remarkably low—when it is rendered by a Fairbanks-Morse Home Water System known for its quality all over the world.

Think of it! As little as \$70 buys a complete electric system that will give years of dependable, trouble-free running water service. And low priced as it is, the added benefits of the F-M Easy Purchase Plan are at your disposal.

Investigate! Ask your dealer about the plan. Remember—there is no water problem that F-M equipment does not solve—satisfactorily—and savingly. Send coupon for full particulars.

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"



Only
\$70

Cash f.o.b. factory, for 210 gallon per hour system complete with motor for 60 cycle or direct current.

Here are unmatched F-M Features

- 1 Completely enclosed. All parts fully protected.
- 2 Compact—19" in diameter, 21" high.
- 3 Big capacity—210 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 Can be used with large storage tank when desired.
- 12 Genuine F-M unit throughout. Fully guaranteed—the biggest home water system value ever offered.

Also a 420-gallon per hour system with features listed above at \$100. Both sizes for use where source of water is not more than 22 feet below the unit.

MAIL
COUPON
today!

FAIRBANKS, MORSE & CO. Dept. H-9, 900 S. Wabash Ave., Chicago.
Send your FREE Home Water Service Booklet and information about F-M Home Water Systems.

Name _____ Address _____ Town _____ County _____ State _____ R. F. D. _____

My source of water supply is:
☐ Shallow Well ☐ Deep Well
☐ Spring ☐ Lake
Have you electricity?
☐ Yes ☐ No



GENFIRE

FIRESAFE BUILDING PRODUCTS

Less Time, Lower Cost and Higher Quality

Experienced builders know that Genfire Firesafe Building Products speed up erection, reduce installation costs and insure the best finished work. Their superior design and workmanship are the results of Genfire's wide experience and large facilities.

Herringbone Doublemesh Metal Lath—proved by experience to be the ideal base for plaster. The small mesh takes and holds the plaster, thoroughly reinforcing it against cracking. Extra rigidity prevents loss through bulging and sagging.

Genfire Steel Joists—light weight, permanent floor construction, quickly erected without centering and economical in cost. T-Bar and

Plate Girder Joists (used with concrete slab), and Nailer Joists (with wood flooring directly attached) meet all building conditions.

Genfire Steel Windows—Steel Casements of superior quality for distinctive beauty and practical utility, and Steel Basement Windows for double daylight. Genfire Windows are used in the Master Model Homes of the Home Owners' Institute. Pivoted Steel Windows for garages and industrial buildings. Steel Doors for the protection of outside openings.

Rigideck Roofs—light weight, economical, fireproof roofs for new or old buildings. Laid like boards and insulated to any degree. Made of Armco Ingot Iron for permanence.

Literature and complete information on Genfire Firesafe Building Products furnished on request

GENFIRE STEEL COMPANY, YOUNGSTOWN, OHIO
Warehouses and Offices in all Principal Cities. Dealers Everywhere

~ ~ Saves 25% of Carpenter Labor Costs

MAC LEAN CONSTRUCTION CO.
Building Construction
76 West Monroe Street
CHICAGO

DeWalt Products Co.,
431 N. Michigan Ave.,
Chicago.

Gentlemen:

With reference to your letter of
the 10th, beg to advise:

We have been using one of your
small Wonder-workers on a number
of our jobs during the last three
months as a dado, rip and cutoff
saw. The only objection we have
to the machine is that all of our
men want it all of the time.

Yours very truly,
MACLEAN CONSTRUCTION CO.

Complete with motor, table,
saw blade, safety guard,
switch and connecting cord.

PRICES
\$195⁰⁰
and Up
Complete
F.O.B.
Factory



GOVERNMENT figures (compiled by U.S. Department of Labor for the Bureau of Statistics and the Department of Commerce) show that 33.1% of all costs on residence construction goes to carpenter labor.

The DeWalt effects a saving of about 25% on this carpenter labor cost. Figure out what a saving that represents even on small jobs!

What's more, skilled carpenters like the DeWalt (as noted in letter) for it relieves them of hard back-breaking handsawing and allows them to put in a full day on really profitable work.

*Let us arrange for a demonstration
on your job. Mail the coupon
for full particulars*

DEWALT PRODUCTS CORPORATION

768 New Holland Ave., Leola, Pa.

Sales and Service in All Principal Cities

Made for Canada by DeWalt Products Corporation of Canada,
Calgary, Alberta

DEWALT

Wonder Worker

The Economy Wood Worker

DeWalt Products Corp.
768 New Holland Ave., Leola, Pa.
I'd like to know how the DeWalt will save
money on our job.

Your name

Firm name

Address

Type of Business



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



The enduring charm of Koll Lock-Joint Columns

Many buildings are given a touch of classic elegance by the happy use of a few stately columns. You have seen

columns, however, that just missed giving this pleasing effect. Hartmann-Sanders craftsmen, long

schooled in the art of creating fine columns, lend not only correctness and artistry to every detail, but also outstanding superiority in these eight important features:

- 1 Koll lock-joint columns cannot come apart.
- 2 Not a knot in ten thousand Koll columns.
- 3 Correctly proportioned, according to the five orders of architecture.
- 4 Also made to architects' detail.
- 5 Asphaltum paint water-proofing inside all large columns.
- 6 Ventilated plinths, wood or cast iron, the latter recommended.
- 7 Staves same thickness full length of shaft, for maximum carrying strength.
- 8 Workmanship and lasting qualities fully guaranteed.

These booklets gladly sent

Hartmann-Sanders has just published two interesting booklets, illustrating a notable group of columns and entrances. Architects and builders are invited to write for booklets numbers 53 and 48. No charge. Hartmann-Sanders Co., Factory and Showrooms 2171 Elston Avenue, Chicago. Eastern Office and Showrooms Dept. Y, 6 East 39th Street, New York City.



HARTMANN - SANDERS

PERGOLAS

• COLONIAL ENTRANCES •

KOLL COLUMNS

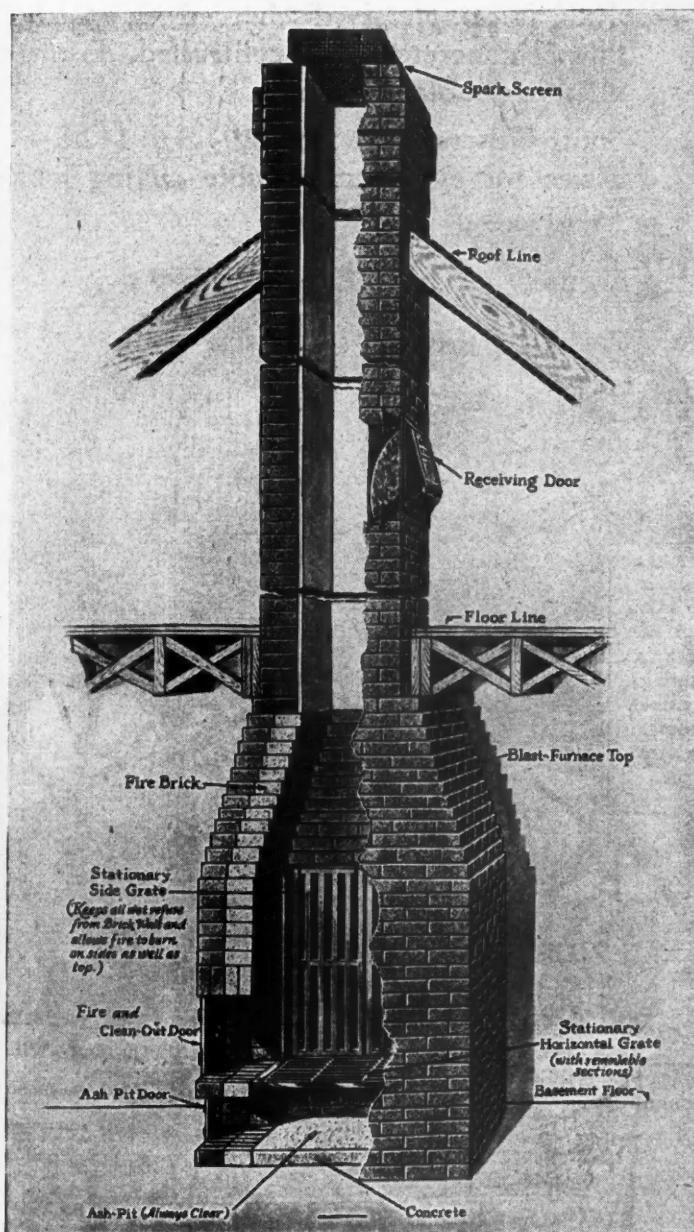
ROSE ARBORS •

GARDEN EQUIPMENT

K-M Incinerators

For Residences, Apartments, Hotels, Offices

WIDELY RECOGNIZED
for their simple
EFFICIENCY
and
ECONOMICAL COST



GRANADA TOWERS
 Long Beach, New York

Granada Towers, Inc.
 Owners

Lang & Rosenberg
 Architects

K-M INCINERATORS have won recognition from coast to coast for their simplicity and efficiency and for their low installation cost.

They are simple in design, without nuts or bolts, bearing blocks, shakers, handles or moving parts. There is nothing to get out of order. Clogging and warping of grates is impossible. Their blast furnace construction provides a strong draft thru two points . . . the fire door and the ash pit door. A patented arrangement of the grates, forming a suspended basket, keeps the refuse away from the fire brick side walls and permits the circulation of air and combustion on all sides as well as at the top. Combustion is speedy and thorough.

K-M Incinerators are made in seven sizes to care for all apartment house, residential, hotel and office building needs. Write for details.

KELLOGG MANN & Co., INC.
 315 Grote Street, Buffalo, N. Y.
 551 Fifth Ave., New York City

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 _____


Like Emptying a Pail!

NO one empties a pail with a scoop. It takes too long. The fastest, most practical way is to *tilt* the pail and *pour* out the contents.

Smith engineers applied this same simple reasoning when they designed the famous Smith Tilters. You simply "tilt and pour" the Smith — the easy natural way — like emptying a pail.

One quick short motion of the tilt lever and *dry or wet batch* comes scooting out. Clogging is impossible. In 8 seconds the drum is *completely* discharged—a speedy flow of concrete, easily controlled. Forms filled in double quick time.

Smith Tilters range from 2½-S to 112-S—a size for every conceivable mixing job.



The Smith tilting drum is in perfect balance—its axis being below the center of gravity. The batch is swung on its own center, tipping quickly and without undue effort. Mixing continues even during discharge—no chance for separation.

SMITH MIXERS

You will want this **BETTER** and **FASTER** mixer for pouring the small jobs. Send the coupon at right for complete descriptive information.

THE T. L. SMITH COMPANY, 1026-32nd St., Milwaukee, Wis.
Division of National Equipment Corporation
Please send me complete descriptive information on your Small Mixers.

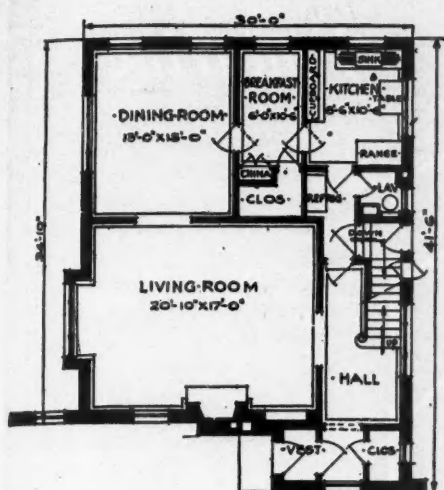
Name.....

Address.....

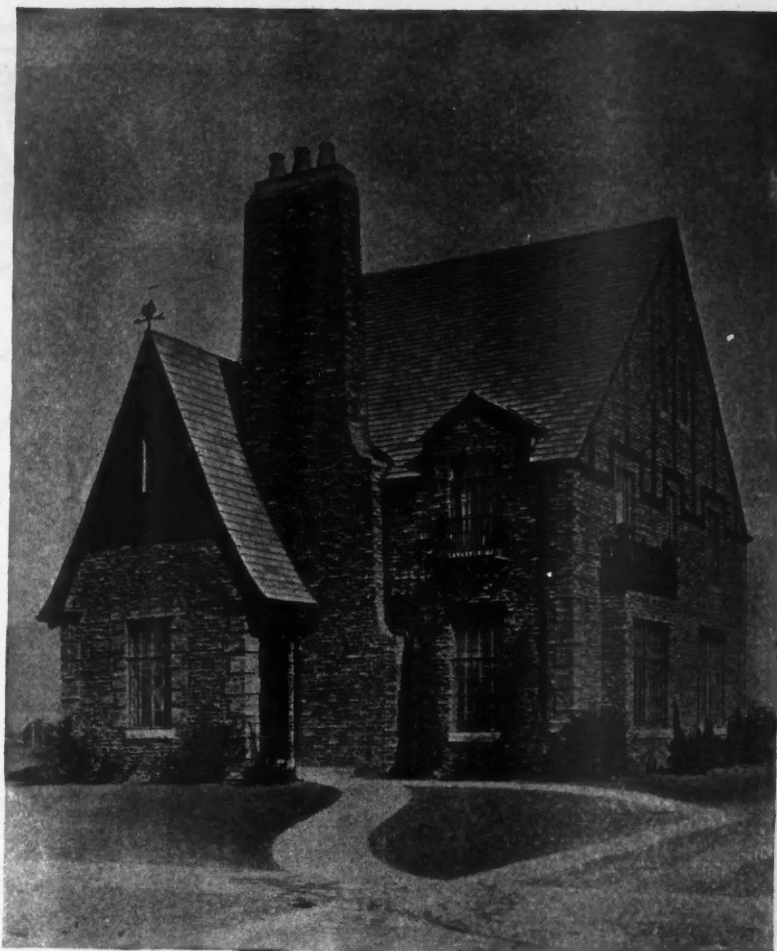
City.....

State.....

A5381-I-SM



FLOOR PLAN



A Small Brick Home That is Different



This bronze is placed in the wall of all brick houses that pass an Association inspection. It is a certificate of Sound Materials.

BRICK

beauty forever

*District Association Offices
and Brick Manufacturers
Everywhere at Your Service*

The Marian, pictured above, is built from a reversed plan. It is beautiful and cozy, having two baths and two fireplaces. The unusual exterior effect is secured by skintled* brickwork.

This plan is but one of hundreds available to you at cost, through this Association. Here, too, you will find literature and information, all available for the asking. Into the booklets, listed below, has gone the accumulated knowledge of men who know brick and its possibilities. If you are thinking of building a home, you should have this information. Check the booklets desired and send with money to this office.

**There are many types of skintled brickwork. In the Marian, the effect is produced by allowing the mortar squeezed out of the joints to project irregularly beyond the face of the wall.*

COMMON BRICK MANUFACTURERS ASSOCIATION
of America

S-2131 GUARANTEE TITLE BUILDING / / / CLEVELAND, OHIO

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.

- | | |
|---|--|
| <input type="checkbox"/> "Homes of Lasting Charm" 25c. | <input type="checkbox"/> "Farm Homes of Brick" 5c. |
| <input type="checkbox"/> "Beautiful Homes" (1 Story) 25c. | <input type="checkbox"/> "Brick, How to Build and Estimate" 25c. |
| <input type="checkbox"/> "Skintled Brickwork" 15c. | <input type="checkbox"/> "The Heart of the Home (Fireplaces)" 25c. |
| | <input type="checkbox"/> "Spanish Book" 25c. |

(Enclose \$1.40 if you want all the books)

Rot Proof

Crack Proof

Enduring

Composition Capital with sharp lines and fine architectural detail.

Stopped flutes and apophyge at top of shaft.

Union Metal Columns are protected against weather conditions by being galvanized with lead and zinc spelter, both inside and outside.

Corinthian flute with flat top (Sharp Doric flute provided on Doric designs).

Vertical joints of all columns are double lock seamed with seam rolled on inside so that all outside surfaces are smooth and clean.

Entasis (modified taper giving an outcurving or bulging effect).

Section of fluting showing beautiful, clean-cut lines due to Union-Metal steel die construction.

Stopped flutes and apophyge at bottom of shaft.

Double roll Attic base with bottom square member.

Cast-iron top ring.

Galvanized steel cylinder carries weight from top ring to pressed steel shaft.

Cast-iron bottom ring. This construction relieves composition capital of all weight.

All columns are provided with priming coat of best grade reinforced red lead before leaving factory. Any color of finishing coat can be applied after erection.

8 inch, 10 inch, 12 inch, 14 inch, diameter columns made of one-ply 22-gauge galvanized steel. Large columns, 16-inch to 42-inch diameter, made from two-ply 22-gauge laminated steel construction. Special construction from 42 inch to 60 inch diameter.

Details of stopped flute outward curvature or apophyge and lower end of shaft where it fits over cast-iron base flange.

Cast-iron base, smooth and clean.

THE UNION METAL MFG. CO.
GENERAL OFFICES AND FACTORY, CANTON, O.
Branch Offices: New York, Chicago, Philadelphia,
Cleveland, Pittsburgh, St. Louis, Los Angeles, San
Francisco, Jacksonville.

UNION METAL COLUMNS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Here's the way the women are getting better acquainted with Schlage Locks. Every month House and Garden, and the American Home are carrying the message to over 300,000 prospective home-owners.



Builder of cooperative apartment homes writes . .

"Believe they have been material help" .. in sale of apartments

"One feature that has caused considerable comment is . . that they do away with keys. . . From our point of view their being interchangeable* has been a general convenience . . . we have 3,000 doors in this building."

Chicago builder of cooperative apartment homes . . Mr. Elmer A. Claar . . writes from an extensive experience. . .

He, like many of the other large builders the country over, has found Schlage Locks one of his great selling features . . . because they're new . . different . . more convenient . . more attractive . .

Yet . . these unit-type locks cost you no more than any good mortise lock. And they save you about 70% on installation cost . . you can install 4 Schlages to 1 mortise . .

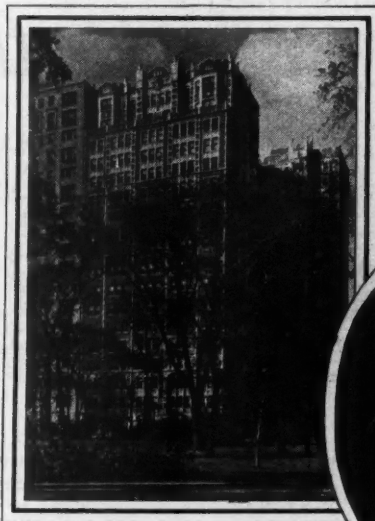
Bore 2 holes . . insert lock and latch units . . and tighten-up on 2 screws. No assembling. No mortising.

No wobbly knobs. No loose screws. Schlages stay put! They're bound to the door by 2 steel plates.

Our catalogue is full of other new, outstanding features that will interest you. Mail coupon for copy. . .

*Schlage Locks are interchangeable for right- and left-hand doors.

"We didn't know before what privacy really is..."



In Chicago



*to LOCK
press the button
to UNLOCK
turn the knob*

A quiet press of a button and the door's locked. As you turn the knob on leaving, the door's unlocked. Isn't that great? No keys. A mere glance at the button—even across the room—shows if the door's locked.

Really, Schlage Locks are the most intriguing fittings you've ever seen. And they're in such stunning designs and finishes! In colors, too!

The surprising thing is that they're so simple in construction. An entirely new principle. Only a few parts,—all held together permanently. They stay put! So you're never annoyed by wobbly knobs and loose screws.

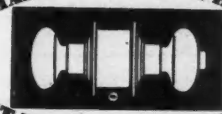
Be sure to include Schlage Locks in your new home. Millions are already in use. They cost less than any other high-class lock. Talk to your architect or contractor about them (say Slay-g).

SCHLAGE

THE NEW PRINCIPLE IN LOCKS

Say Slay-g

INSTALL BY BORING 2 HOLES



UNIT TYPE...SIMPLE...STURDY

SCHLAGE LOCK COMPANY " SAN FRANCISCO, CALIFORNIA { Name _____

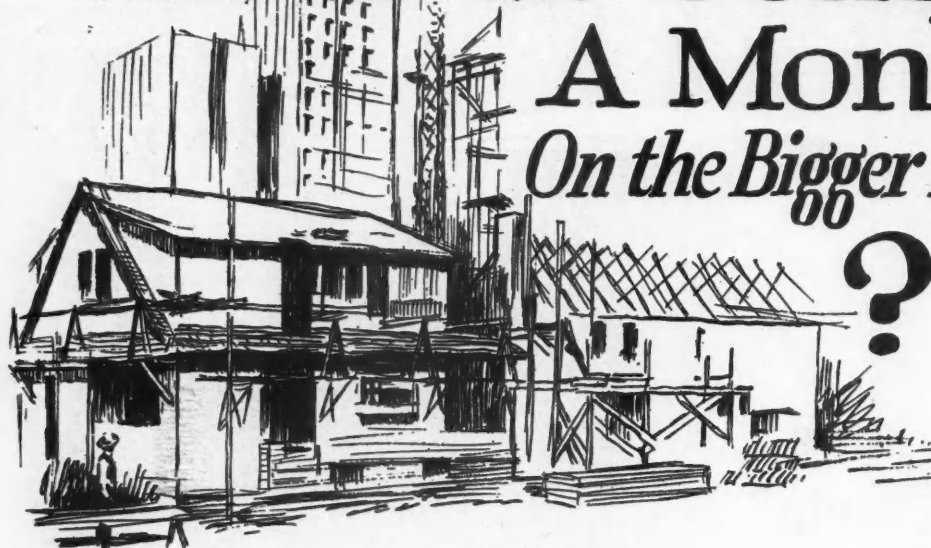
Please mail me information

{ Company _____

Address _____

140

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

A. B. 9-29

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 ☐

What FENESTRA SCREEN CASEMENTS

*... can do for the
investment builder*



See how easily Fenestra swing leaves are opened or closed without touching the screens.

FENESTRA Screen Casements are the most outstanding improvement in the building material field this year. They provide Investment Builders with five new and exclusive features which will attract prospective Home Buyers.

(1) Metal Screens, standardized to fit, may be supplied with the house or bought and installed by the home owner afterward without any extra labor whatever . . . (2) Non-warping metal-to-metal contact between *flat screen frame and flat window frame* eliminates wood stops and insures a permanently fly-tight job . . . (3) Casements may be unlocked and opened or closed and locked without touching the screens in any way . . . (4) Screens may be removed or reset in a jiffy and when stored need not be numbered or marked . . . (5) Standardized, only two types of screen are required.

Many other advantages have popularized Fenestra Casements for years: extra daylight; better ventilation; 100% opening if desired; finger-touch operation without warping, shrinking or sticking; fire resistance; outside cleaning from within the room.

And the Builder's cost goes down with

the use of Fenestra Screen Casements because:

(1) Casements and screens are supplied through one manufacturer, standardized to fit and operate together . . . (2) You can install both the casements and screens immediately or buy the casements alone without subjecting the owner to any inconvenience when he purchases screens later . . . (3) Only the actual ventilating opening is screened. Frequently that saves money . . . (4) Wood mouldings and screen stops are unnecessary—a worth-while economy . . . (5) Casements arrive on the job complete—fitted, hinged, hung, with a priming coat of paint already applied. Hardware is included ready for immediate attachment. No weights, cord or hardware to buy. Carpenter labor reduced . . . (6) And with all these advantages Fenestra Screen Casements cost no more—sometimes even less—than ordinary windows and screens.

Call the nearest Fenestra office for details and a demonstration of this new Screen Casement, or write to:

DETROIT STEEL PRODUCTS COMPANY
2281 East Grand Boulevard, Detroit, Michigan

Factories: Detroit, Michigan, and Oakland, California
Convenient Warehouse Stocks



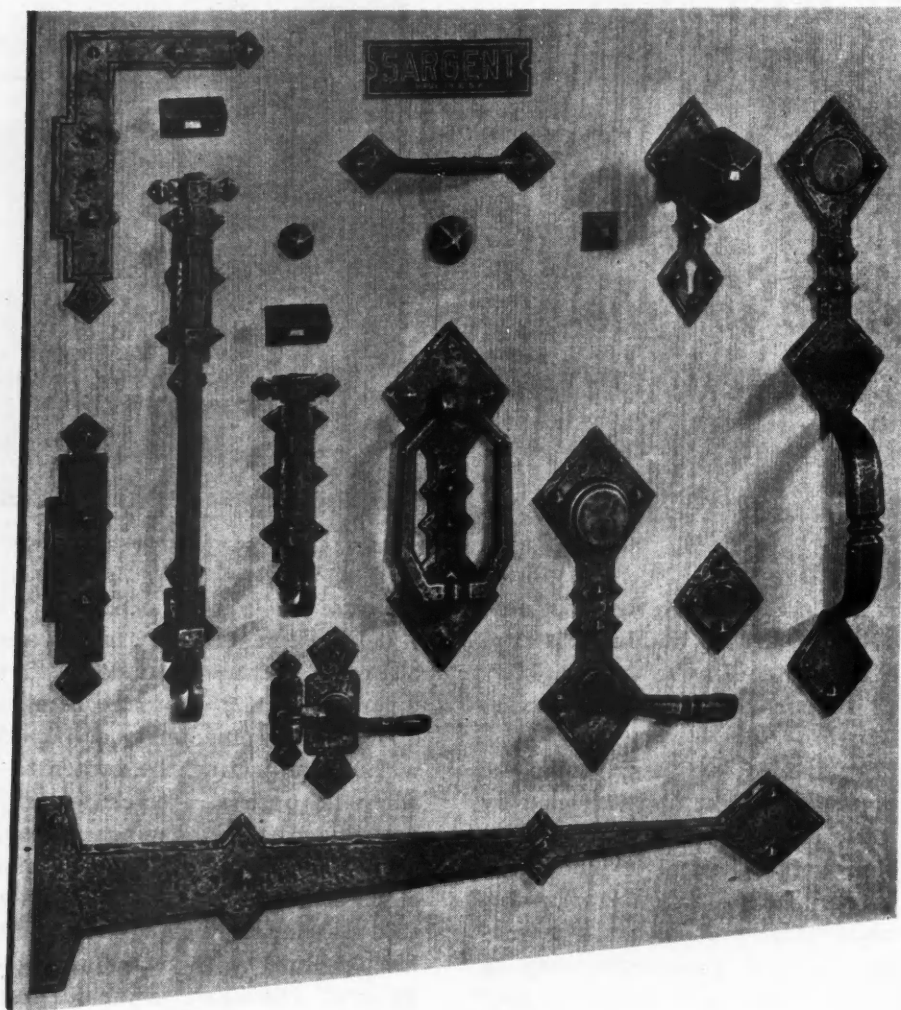
Screens removed or replaced in a jiffy

Fenestra

casement windows of steel

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

*BARCELONA, OR BK, ANOTHER NEW DESIGN OF
RUGGED CHARM IS ADDED TO THE SARGENT LINE*



A NEW Sargent design to enable you to give your customers a comprehensive choice of hardware for any building of the cottage style of architecture, Spanish, Mediterranean, English, American. Like the Sargent "Catalonia," or CK, which was immediately popular, this new BK hardware combines the rugged appearance

of hand-wrought hardware with the permanence of solid bronze. The forge finish is rustless. Each piece will give smooth and certain operation. Past experience and the present trends in residence architecture foretell the popularity of this attractive new design. Sargent & Company, 51 Water Street, New Haven, Connecticut.

SARGENT
LOCKS AND HARDWARE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

The BEAVER

Powered by Electric Motor or
Gasoline Engine

BALL BEARING

FEATURES

Parallel Cross-cut and Mitre saw...Work always visible...underslung Rip saw...safest and proper method of ripping...Head tilts for compound miters. Table tilts for bevels...Jointer has extra long tables...for accurate, smooth work...Horizontal boring and Hollow Chisel mortising attachment...Disc Sander...Completely Guarded...requires small space...Cross-cuts stock 4 inches thick...Rips stock 3½ in. thick.

Before investing in woodworking equipment it will pay you to get details of this unequalled machine... We'll be glad to tell you more about it... No obligation, of course.

WE ALSO BUILD BAND SAWS, JOINTERS, SHAPERS, SAW TABLES, ETC.

HUTCHINSON MFG. COMPANY, INC.
NORRISTOWN, PENNA.

REPRESENTED IN PRINCIPAL CITIES OF U. S. AND EUROPE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

**Ask for
YOUR FREE COPY
OF OUR CATALOG
NOW!**

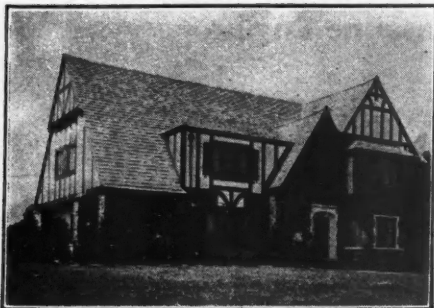
HUTCHINSON MFG. CO., Inc., NORRISTOWN, PA.
Gentlemen: Please send a free catalog No. 1929.
I understand this does not obligate me in any way.

Name _____

Address _____

Business _____

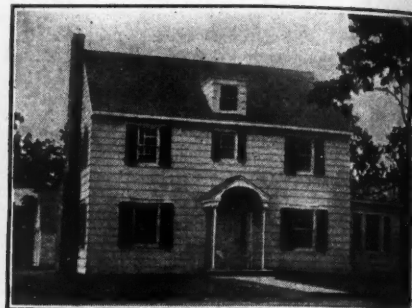
Successful builders capitalize the value of reinforced plaster



The NEW RIBBED STEELTEX reinforces plaster walls and ceilings in this home of Mrs. Frank Gaynor, Westchester-Biltmore Country Club, Rye, N. Y. One of eight houses built or under construction by Thomas W. Gotti, 506 Main St., New Rochelle, N. Y., in each of which lasting wall-beauty is assured by the NEW RIBBED STEELTEX. Richard W. Buckley, Mamaroneck, N. Y., architect.



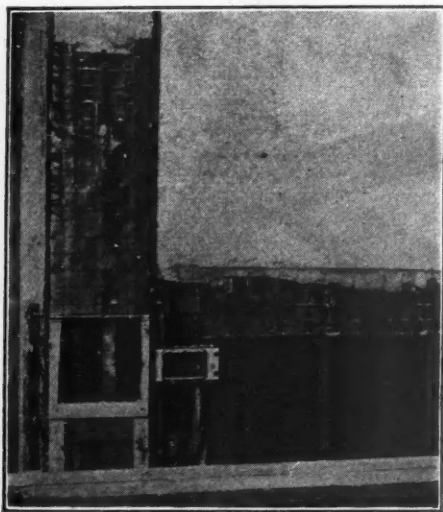
In this attractive modern apartment house at Woodmere, L. I., N. Y., all plaster adjacent to exterior walls, and certain other plaster surfaces where conditions are most severe, are reinforced by the NEW RIBBED STEELTEX. Architect, William L. Rouse, 2 W. 43rd St., New York City; owner and builder, Farwood Realty Co., Far Rockaway, L. I., N. Y.



STEELTEX is adapted to safeguard plaster walls and ceilings in homes of modest proportions, as well as in the most elaborate structures. Witness this attractive moderate-priced home of Mr. Oscar J. Nollett, Roosevelt, L. I., N. Y., designed by Louis J. Day, Floral Park, L. I., architect. It is reinforced throughout with the NEW RIBBED STEELTEX, for permanently beautiful plaster.

Four economies of the New Ribbed STEELTEX

1. Low first cost—lathers and plasterers like it, and work is rapidly finished.
2. No upkeep costs—plaster reinforced with RIBBED STEELTEX takes on new strength.
3. Reduced operating costs—the heavy backing adds heat insulating value—also sound-deadening.
4. Tenant satisfaction—through permanently beautiful walls and ceilings.



REQUIRES NO NEW APPLICATION METHODS—Lathers and plasterers like it. Plaster goes up easily on RIBBED STEELTEX with long, smooth sweeps of the trowel. The level, rigid sheets save mud on the scratch coat and assure even thickness of plaster slab with uniform reinforcement. Note fibrous, absorptive backing, furred-out steel reinforcing fabric, and new V-rib stiffeners on back of sheet. The initial investment is low, for RIBBED STEELTEX adds nothing to the cost of the finished wall.

Permanent Wall-Beauty insured with economy by

the New Ribbed STEELTEX

These shrewd investment builders are profiting from the fact that plaster on walls and ceilings can now be made a permanent building material that adds to sale and rental values!

Your prospects, like theirs, will be immediately interested in the greater economy and value of beautiful plaster permanently strengthened against strains with the NEW RIBBED STEELTEX.

The NEW RIBBED STEELTEX is the result of more than eight years of effort to bring reinforced plaster construction to even the most modest home. It is a plaster base consisting of welded steel fabric and a tough, fibrous backing. The new features include a V-rib stiffener that brings board-

like rigidity and a heavier, absorptive backing to which the plaster clings tight.

Our free book, *Better Walls for Better Homes*, gives full information about the economy and lasting value of reinforced plaster, which STEELTEX alone can provide. Write for a copy. Ask also for information about other members of the STEELTEX family, including STEELTEX for Stucco and Overcoating, STEELTEX for Brick and Stone Veneer, and STEELTEX for Floors and Roofs (concrete and gypsum).

National Steel Fabric Company

DIVISION OF
Pittsburgh Steel Co.

3109 Union Trust Bldg.

Pittsburgh, Pa.

the New Ribbed
STEELTEX
"BUILDS LIFETIME WALLS AND CEILINGS"



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Your roofs must do more than keep out the weather

Please the observant eye of the Home Buyer with the new colors of Johns-Manville Asphalt Shingles

Home buyers today look for more than utility. It is no longer sufficient for a roof to be weather-tight and long-lived. This is the age of color—and many a house sale has been closed because an attractive roof successfully completed the prospect's idea of decorative beauty.

The new colors of Johns-Manville Asphalt Shingles meet the new ideas of home buyers. With these shingles you can obtain a variety of effects suitable for all architectural styles and every setting.

These colors were not picked at random. They were chosen in collaboration with a committee of architects, all of whom specialize in designing homes of modest size, know the color effects that win attention and, by increasing decorative beauty, help make sales.

With this color correctness, and attractiveness, goes Johns-Manville quality. Highly fire-resistant and impervious to the most severe weather these Johns-Manville shingles can be recommended to your prospects without any reservations.

You will find the Johns-Manville trade mark an asset of importance. No other name used on roofing is backed by so large an advertising campaign, nor so many years of public good will. Your prospects know the Johns-Manville name.

Johns-Manville ASPHALT SHINGLES



JOHNS-MANVILLE CORPORATION

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

I should like complete information about Johns-Manville Asphalt Shingles, in the new color effects.

Name _____

Address _____

BP-3.5



Women — who often decide the choice of a house—are attracted by beauty.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

YOU *can make a* BETTER DEAL-



FOR SALE
by
BUILDER

In an unsewered district, and where basements are below sewer level, every house is subject to basement seepage—a condition that decreases the desirability of the property from the buyer's viewpoint.

When you install a Penberthy Pump in such a home, you entirely eliminate this objection by assuring complete basement drainage. You also gain an important sales advantage over neighboring property not so equipped. You can get a better deal where the buyer is assured of a dry basement.

Your plumbing contractor can quickly supply and install either the electric or hydraulic Penberthy Pump.

PENBERTHY INJECTOR COMPANY

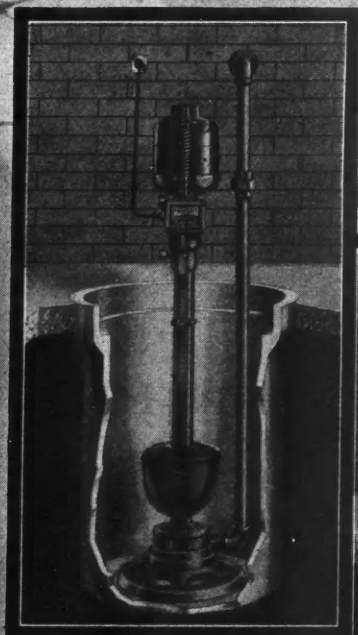
Established
in 1886

DETROIT

Canadian Plant
Windsor, Ont.

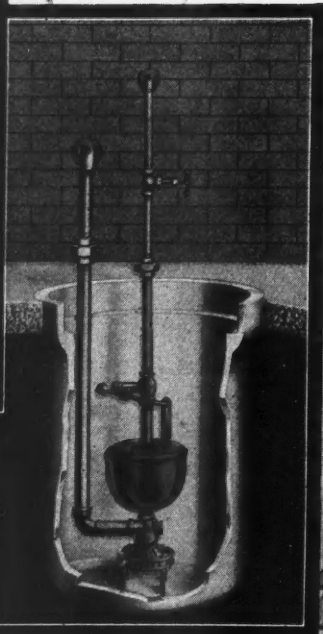
PENBERTHY PUMPS

PREVENT FLOODED BASEMENTS



Penberthy Automatic
Electric Sump Pump

Penberthy Automatic
Cellar Drainer
(Water Operated)



AMERICAN BUILDER



Including "Building Developer" and "Home Building"

BERNARD L. JOHNSON and CHARLES G. PEKER, *Editors*

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

American Builder Expands . . .

EFFECTIVE with this issue AMERICAN BUILDER . . . recognized for nearly a quarter of a century as the most widely read publication in the building field . . . has been enlarged to include BUILDING DEVELOPER (New York) and HOME BUILDING (Chicago), two monthly magazines of high standing among speculative or merchant-builders and real estate developers. With this merger AMERICAN BUILDER will present to this enlarged body of readers the best of the editorial contents of these three publications:

First, AMERICAN BUILDER will continue the publication of detailed design and construction data and methods relative to all kinds of building construction—commercial, public and residential . . . features which have brought to AMERICAN BUILDER the endorsement of the contractors, builders, dealers, architects and others active in this great industry.

Second, the practical, helpful information formerly presented in BUILDING DEVELOPER, regarding the planning, financing, construction and selling of sub-divisions and groups of individual homes and apartment buildings.

Third, the architectural and other small home features which made HOME BUILDING so well-known and admired.

That this merger will materially benefit the industry as a whole and our subscribers and advertisers individually is clear to those of us who have studied the recent trend of the building field. Today, in the eyes of contractors and builders everywhere, the design, financing and construction and even the sales of buildings are very closely interwoven; and every important man in the building industry finds it essential to be constantly in touch with all of those

phases of building activity. Obviously, this can best be accomplished through the editorial pages of *one* publication.

The merger will assure our readers a complete and well rounded editorial program, calculated to cover every important aspect of the present-day building situation.

The AMERICAN BUILDER numbers among its readers the active and responsible men of the building industry—builders, architects, dealers, real estate developers and those engaged in financing building projects—and we will present features of real value to each.

The men who have to do with building are broad in their interests; and this publication will be equally broad. It will take into consideration all of the factors, from the laying out of a sub-division, or the first conception of a business or public building, up through the various steps of design, financing, construction, completion and final sale of the building. Many important groups of men have to co-operate and plan together to bring about the realization of these construction projects. The AMERICAN BUILDER includes within its family of readers all of these groups. Our editorial policy will be broad enough to include all and interest all.

By the addition to the AMERICAN BUILDER of the two other substantial publications with their readers, we are consolidating interests in the building field and making it possible for the AMERICAN BUILDER to render a still greater service.

Chairman of the Board

Here's How

To obtain High-Early-Strength Concrete
at a Saving ' ' '



Whether yours is just an ordinary rush job or whether it is work requiring unusually wear-resistant or water-tight concrete, it will pay you to read these booklets. In them you will find a description of methods for making *High-Early-Strength Universal* Concrete to fit any requirements for early strength, durability, wear-resistance or water-tightness. Because such concrete is adaptable to a wide variety of requirements, it is correspondingly economical. You pay for only what you need and get.

You make a further saving because with the application of tested methods, *High-Early-Strength Universal* Concrete is made with the same standard Universal cement used for ordinary work. Hence all the materials, equipment and labor needed to obtain it are ready at hand on the average job. You don't need to order or wait for anything special. All you need are the regular materials and the tested methods described in either of the booklets. Just mail the coupon and we'll send them to you.

One Standard Cement for All Concretes and Mortars
Universal Portland Cement Co.

Subsidiary of United States Steel Corporation

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

Concrete for Permanence

Name _____

Address _____

Universal Portland Cement Co.
208 So. La Salle Street, Chicago

Without obligation, please send me the following booklet:

- ☐ High-Early-Strength Concrete
☐ General Building Edition
☐ Paving Edition

EDITORIAL COMMENT

Building Takes Upward Swing

IN the face of continuing high money rates, which handicapped building construction all through the first half of the current year, a new record for July building contract volume has been established. With the release of contract figures compiled by the F. W. Dodge Corporation, the prophesied recovery of the building market, from the depression of earlier months, has become an established fact. The argument that the country was overbuilt and that the downward trend of building activity marked a return to normal has been refuted.

The increase in July contract volume, amounting to 20 per cent over June and 12 per cent over July of last year, was not only contrary to the seasonal decline customary for this month, but was sufficiently pronounced to establish a new record for July and also was the second highest monthly total yet attained.

An encouraging feature of the month's record was the improvement noted in residential building which showed an increase of five per cent over June, although 13 per cent below July, 1928. This is a definite improvement when compared with a decline of 34 per cent at the end of the first quarter and 28 per cent at the end of the half year, below the corresponding periods of 1928.

Non-residential building continued to make further increases amounting to 10 per cent over the preceding month and 18 per cent over July of last year. The most pronounced increase, however, occurred in the public works and utilities class, amounting to 61 per cent over June, 1929, and 42 per cent over July, 1928, establishing a new monthly record.

The July record has made an auspicious start for the second half of 1929, with business sentiment more than usually optimistic and supported by reports of large corporate profits and high volume of industrial activity, it seems likely that the second half year will maintain a better construction record, compared with 1928, than did the first half of the year.



Winter Windows

A MARKED increase in the use of what are now known in the trade as *winter windows* was revealed as a result of a recent survey by a national advertising agency. More of these windows—generally called storm sash formerly—have been made during the last 12 months than in the whole previous three years together, according to the survey, which is confirmed by the general experience of dealers in many parts of the country.

In these days when almost every new home is built with walls, roof and floors carefully insulated, it has become glaringly evident that the window is an unprotected gap and that a large proportion of the benefit arising from insulating other contacts with the exterior air is lost by heat leakage through the window sash or around the window frame. To meet this loss architects and builders have come to make liberal use of the modernized winter window, with results, reports agree, of a highly satisfactory character.

Advantages shown by experience to accrue from the use of window sash are numerous and impressive. They include:

1. Fuel saving amounting to a considerable proportion of the former winter outlay for heating, and large enough in all cases to repay the cost of the new window equipment in a short period.

2. Enhanced family comfort and health by maintaining even temperatures and preventing draughts, cold spots, etc.

3. Reduction in domestic labor or expense for cleaning windows, which require attention only once in six weeks instead of weekly.

4. Greater silence in the home by effective closeting it from noise of traffic, winds, rain, etc.

5. Clearer vision by prevention of frost and steam forming on windows.

6. Improved air circulation through properly adjusted vents instead of by opening windows full length.

7. Increased beauty of house exterior resulting from use of paint on winter windows to harmonize with and complement the general color scheme of building.

The winter window, as now made, is a modernization of the double window or storm sash in general use half a century ago and still to be seen in cooler sections of the United States and Canada. In construction and appearance it has been materially improved, however, and in its present form it is not only an adornment to the most modern home but with the better grade of glass now available and the scientifically planned vents for air passage it is vastly more efficient for all its functions than its early prototype.



Proving Hidden Quality

ONE of the biggest problems confronting the building industry—more particularly the speculative or merchant builders, building homes for sale—is to get good construction appreciated. Most of the things that really count for quality in home building are covered up and out of sight before the prospective buyer ever sees the home. He is apt to buy on *surface* indications rather than on the honest substantial quality that has been built into the foundation, frame work, walls, floors and roof.

Builders would rather do good work and they know that the buyer will give preference to the well-built home if he recognizes it. The question has been how to *prove* the quality that is under the surface.

Several different methods are being developed and are worthy of study by all those building for sale. How a prominent Detroit builder is having his houses "rated" for construction, heatability and permanence is described in an article in this issue. In a number of the New York City suburbs, in Columbus, Ohio, and in some other places, the builders themselves have organized with an inspection committee which certifies to the quality of each house constructed by members of the association. Some lumber and building material dealers co-operating with builders are furnishing to each job an authenticated list of materials of which the house is built, so that the future buyer will have full information.

All of these ways and others are good. Quality has a powerful appeal to the buyer and anything that builders can do to put quality into their work *and then prove it as there*, will make for quicker sales and more satisfactory conditions in the building industry.



Palmer Sells *Proven* Quality

How a Prominent Detroit Builder Operates to Cash in on His Better Building Features

BY CLYDE A. MANN

HARVEY CAMPBELL, secretary of the Detroit Board of Commerce, stepped to his office window and swept his arm north and west across the square miles of homes beyond the Fisher Tower and General Motors Building, high against the skyline. He was putting a climax upon his remarks to an associate of mine as to the great importance to any city that the homes provided for residents and new arrivals be well built homes, worth the prices paid.

"I will tell you whom to see," he added, whirling about. "See Louis G. Palmer. He is interested in better homes. His organization builds homes that are among the best built in Detroit. He can tell you what is built in those houses—see him."

That recommendation of Palmer-built houses, I can now say from having seen most of those under construction and many of those completed is well justified. No doubt there are many other Detroit builders who build sturdy houses, but I have as yet seen and had engineers' reports upon Palmer Plan houses only.

I am proud that the swing to better building in this country has such a notable example in any city. The explanation lies in the keen, sympathetic interest in providing good homes for good people that animates Mr.

Palmer himself and Wm. Hall, manager of his home building work. To both of them the human side of good homes or poor has obvious appeal. They know the amazing handicaps that poor construction can add to the zealous efforts of father, mother and children to possess a home of their own and pay for it. To most families the greatest purchase ever made is a home and to most of them the problems involved to secure low depreciation, low repairs and replacement and low fuel bills are problems they must leave to the builders.

Among Mr. Palmer's counsellors on better home building are some of the chiefs of Detroit's automobile industry. Their interest lies in the welfare of hundreds of thousands of employees. Every wage dollar that pays heavy toll to poor home buildings lays in burden also upon the employers. Efficient work never is inspired by anxiety about excessive repair or fuel bills added to interest and taxes. Automobile chiefs value efficient work.

"Build so well that your sales expenses will be cut out or be at a minimum," was the counsel of Henry Ford.

"Quality engineering sells automobiles best," said another chief of the motor world.

So
are
prov
hidd
by th
the
evid
try.
plast
Mr.
As a
sales
forti
sales.
Fi
revis
fully
and
That
the p
num
that
ning
for it
ing n
prefe

On
Plan
not s
in gu
plum
twist
door
The e
more
tence
load
sort o
buyer
and it
Mr. F

Selling Without Sales Effort

So that is the Palmer program to build houses that are good enough to sell without sales pressure. It is proving successful. Palmer took steps to prove the hidden merit of his construction by impartial inspections by the Certified Building Registry, of Chicago, to have the benefit of "rating" by good engineering standards evidenced by certificates of rating issued by the Registry. When so much difference lies hidden behind the plaster and paint when a home is ready for the buyer Mr. Palmer wanted his good work proveable in detail. As a result "fortified" houses are on the way to ready sales, the rating disclosing to what degree they are fortified. Every sale is counted upon to produce other sales.

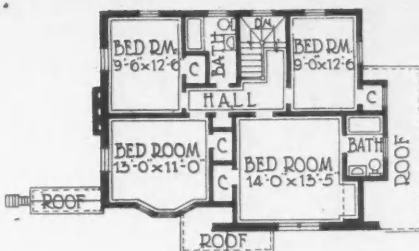
Fifty houses in five subdivisions, built according to revised specifications from plans that were very carefully studied by Mr. Palmer himself and by Mr. Hall and his construction staff, have been built and sold. That, however, is but the beginning of the work under the present policy, for it is likely that 100 will be the number for the current year. One hundred houses that will sell for \$11,000 to \$15,500 is a program running into millions of dollars. Detroit is a logical place for it, because the rapid growth of population is creating need for homes for all kinds of pocket books, and preference in that city runs to houses instead of flats.

Structural Sturdiness

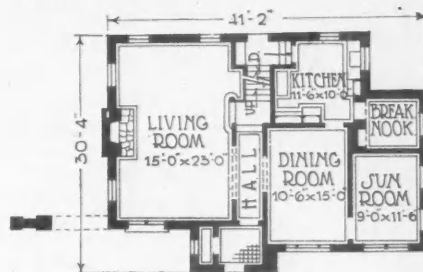
On analysis, the outstanding feature of "Palmer Plan" homes is structural sturdiness. Their floors do not sway under one's weight, their roofs do not vibrate in gusts of winds, their corners cannot be pulled out of plumb by storms, their foundations cannot settle and twist the walls or crack the plaster. Their window and door openings are carried sturdily on heavy headers. The explanation lies in the stalwart framing, the use of more than adequate joists, rafters and girders, the insistence upon wall footings that cannot fail to carry the load without sinking, the stressing of carpentry of the sort our grandsires took pride in. It is true that many buyers do not know the value of such construction and and it is for their benefit and the resales of the future Mr. Palmer is having his houses "rated."



Sidewalls and Ceilings Are Thoroughly Insulated.



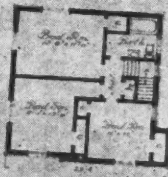
SECOND FLOOR PLAN



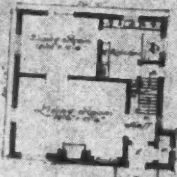
FIRST FLOOR PLAN



A Typical Palmer Plan Home — Smart in Looks and Convenient in Arrangement. See Floor Plans Above.



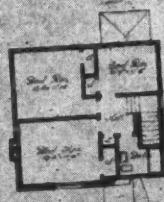
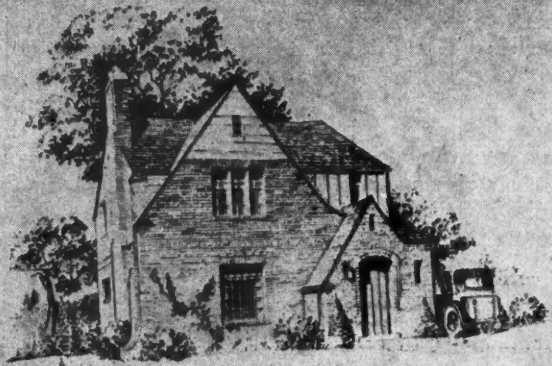
Second Floor Plan



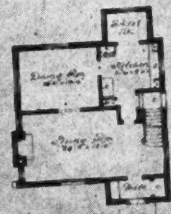
First Floor Plan

- English Gables -

Palmer Plan House No. 302 Woodstock St. Detroit, Mich. Cal. 1927



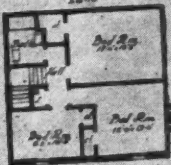
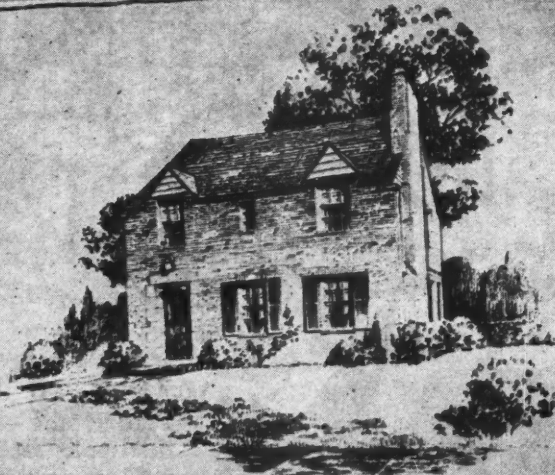
Second Floor Plan



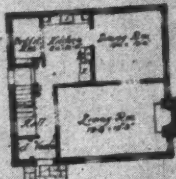
First Floor Plan

New English number 2.

Palmer Plan House No. 303 Woodstock St. Detroit, Mich. Cal. 1927



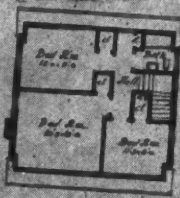
Second Floor Plan



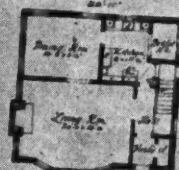
First Floor Plan

Windsor 30 L

Palmer Plan House No. 304 Woodstock St. Detroit, Mich. Cal. 1927



Second Floor Plan



First Floor Plan

Amsterdam

Palmer Plan House No. 305 Woodstock St. Detroit, Mich. Cal. 1927

Prospective Clients Study Dozens of Home Design Sheets Like These and Select What Pleases Them Best. Then the Quality Is Built in. The design sheets are photostat copies, 8 by 10 inches in size; and can be quickly tinted for various color schemes as required.

Four factors are covered by this "rating," permanence, fire safety, fuel cost and comfort. The structural merit has caused the permanence rating to run in some cases to 194 rating points out of a possible 200. Steel girders, braced corner posts, bridged joists, 2 by 6 rafters (instead of 2 by 4), 2 by 12 joists and wall footings of real concrete 18 inches wide—these comprise some of the items that combine to make the depreciation during future years exceptionally low.

But good architectural design is given heavy credit in arriving at the permanence rating, the impelling reasons for this being the well known habit of owners to neglect a house that is ugly to look upon. Obsolescence will not overtake the Palmer houses, for each is carefully designed to charm the eye and retain the local devotion of owners to paint and repair them before damage is done.

Among the items considered in constructing and in "rating" the houses are these: good exterior walls adequately framed, braced, nailed and mortared; good hardware that will survive 10 years and more without replacements; electric fitments of similar quality; plumbing that will not submit to corrosion of pipes or chipping of white enamel; roofs that are waterproof as well as strong under winds or winter's load of snow, and flashings and gutters that, if kept painted, should survive the 10-year period of the rating without replacements or repairs. Steel casement windows have been used, with plate glass panes in all of them. Fireplace draft has been assured by a patent throat in the flue that prevents smoke "rolling out."

What will be the result when that first item of "walls adequately braced" is disregarded, is proclaimed



A Typical Modern Interior in a Palmer-Plan Home.

throughout Detroit's areas of homes poorly built by many horrible examples. Lack of rigid bracing against storms has left houses out of plumb at the corners, leaning one way or another. Such houses rarely can be made ship shape again without rebuilding. For lack of diagonal bracing from corner posts to adjacent studs the owners have unending troubles with doors and windows that bind because out of plumb. Palmer houses are braced with care.

Doubled plates, precautions against shrinkage of framing lumber and bridging between joists are among other features that earned high rating.

When one knows that fuel expense is a major cost of owning a home the importance is seen of knowing in advance that the fuel requirements will be moderate, not alone by insulation and weather stripped doors, but by adequate size and height and straightness of fuel of the chimneys, also by the use of thermostatic devices for automatic damper regulation of the heating plant—a very important item. However, insulation of the upper ceiling, and not a mere excuse for insulation either, and of side walls, was considered in planning the Palmer houses. Insulation without tight windows would be almost a joke. Also, the infiltrations of winter winds through brick walls is well shut out by the use of heavy craft paper.

Under the head of comfort rating, the abundance of daylight and

(Continued to page 138)



Example of the Extra Care and Strength Given the Framing of the Palmer Houses.



A Typical Living Room in the Dorchester Apartments, Dorchester Avenue, Near 57th Street, Chicago:
Henry K. Holsman, Architect.



had it
concom
Tho
dark a
familie
prefer
iences
distan
from
Rec
go bac
ate in
lord, t
of fre
rental
Thi

Sizing up the Market

Analysis of all Factors Should be Made Before Undertaking a Co-operative Apartment Enterprise

By HENRY T. HOLSMAN*
Co-operative Apartment Specialist

AN apartment building is an attempt to build two or more houses where, ordinarily, only one could be. It might have been a feasible solution of the multiple dwelling problem had it not been for the landlords and leases and the concomitant greed and overcrowding.

Those families who could not tolerate landlordism's dark and airless rooms and close contact with other families, moved from the congested areas to open spaces, preferring to suffer the deprivations of urban conveniences and privileges for the freedom of space, until distances became so great as to virtually separate them from the advantages of city life.

Recently the urban minded families, preferring to go back to, or stay in city life, found a way to co-operate in apartment ownership, thus eliminating the landlord, the waste of flimsy construction, and the expense of frequent moving, entailed by the apartment house rental system.

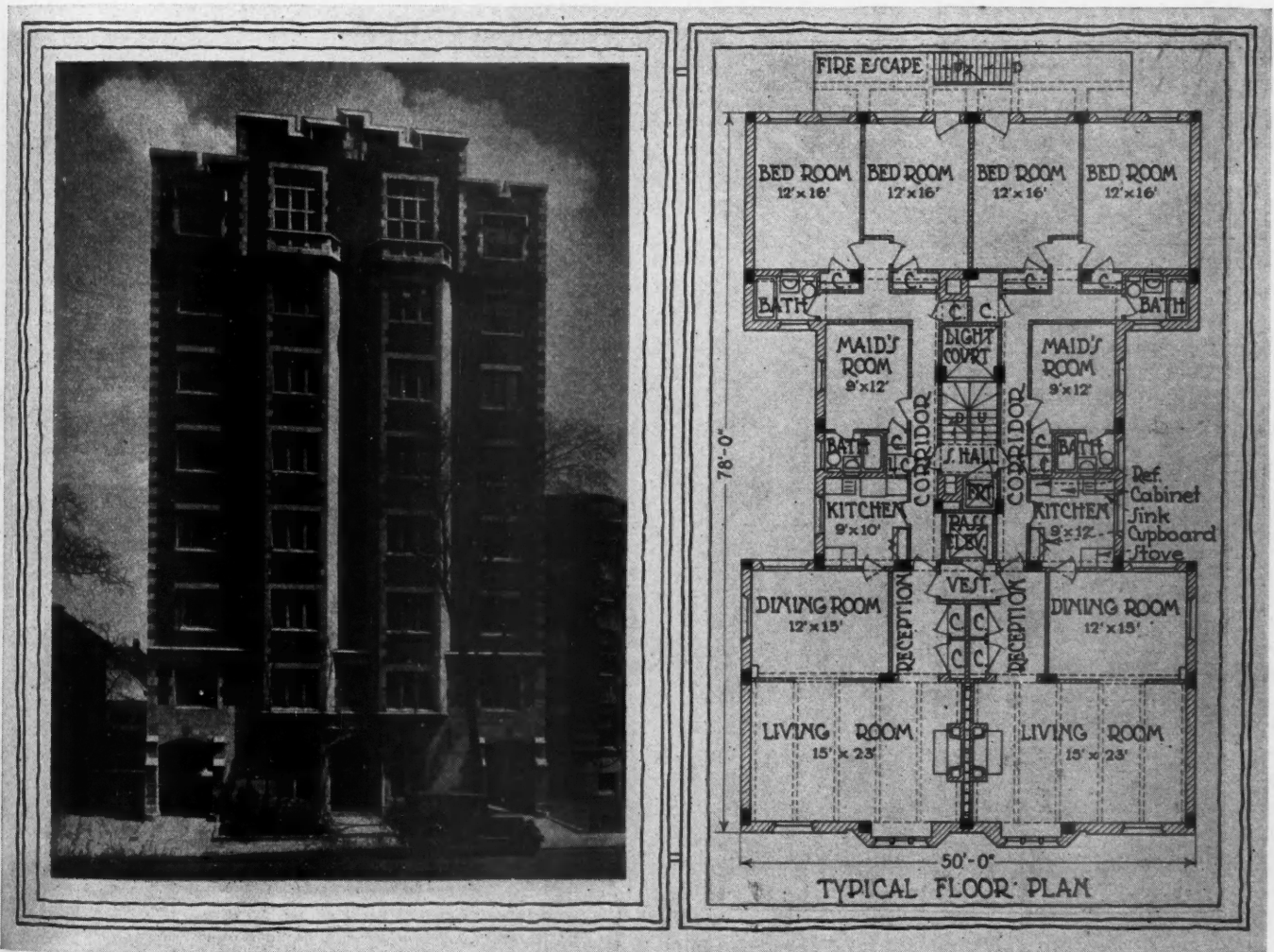
This improved, community owned, multiple dwelling,

the modern co-operative apartment building, seems a good solution to home ownership under the conditions of American city development.

The co-operative apartment must first of all provide a home as nearly like the one family residence as possible in light, air, privacy, security and the instinctive feeling of ownership and permanency. It must at the same time have some of the advantages of the city apartment such as easy access to business or shops, good schools, churches, theatres and recreational facilities and some freedom from the difficulties of real estate transfer and the ceaseless care entailed by the private house and grounds.

The three major steps in developing a co-operative project are: First, find a location where prospective purchasers are likely to be, a location where evidence indicates that people desiring private homes would like to live; second, plan the structure so that each apartment will have as much of the appeal and as many of the advantages of the single family home as possible;

Henry K. Holzman, Architect.



The Dorchester Apartments, a Recent Successful Holzman Enterprise in the University of Chicago Neighborhood.

third, develop a financial and legal set-up that is less expensive, more simple and as safe as the ownership of an individual home.

In making these decisions follow carefully the points emphasized in the minimum standards for the certifying of co-operative projects as set out by the Consultation Bureau of the Co-operative Apartment division of the National Association of Real Estate Boards. These standards make a good formula or a most excellent check.

While the service of this bureau will endeavor to determine if your particular building on your particular lot will be successful, it can only criticize, it cannot go out and find you another or better location. It is this selection of the proper location and of a proper building design that could be termed "Analyzing the Market, Preparatory to a Co-operative Development," for it is much more desirable to build what the people want and need, where they need it and want it, than to make them want what you have.

There are neighborhoods where one may note the persistence of one family homes, even though land values, taxes and public improvements have grown so that one family residences are economically obsolete. Apartments have so encroached upon the former open spaces that yards are no longer adequate for privacy, light and air, nor fit for private recreation and play. This type of location will furnish prospects who like to own their homes and who have a desire to be permanently located. High land values are not objectionable provided the structure may have good vertical transportation and thus the number of stories may divide

the cost of the land per apartment to proper economical proportions.

Hotel minded people regard movement superior to permanency and privacy. They care less for proximity to schools, churches and recreational neighborhood facilities of value to the home. They desire close contact with public transportation, theatres, and shops while the home owner prefers a certain amount of isolation and quiet. Therefore, in general, hotel districts will not furnish potential home buyers, nor will the couple looking for a home and the proper environment in which to raise their family, buy in a district dominated by or in the path of a hotel movement.

Many districts are dominated by or are in the path of industrial, commercial or racial trends. These may be suitable for co-operatively owned office buildings, garages, industrial or racial housing but are not desirable for a co-operative apartment home development.

The structure, since it should have permanency, should be fireproof. Only such materials, as far as possible, as will endure with the least expenditure for upkeep and are least likely to become obsolete should be used. Floors and walls separating one apartment from another should be as soundproof as the art of building affords. The apartments must be provided with permanent light and air adequate for home life. If the prospective owners in the proposed location cannot afford such a structure it is not ripe for co-operative apartment development.

In fact, the plan of the individual apartment, the rela-

(Continued to page 84)



A Dining Room in the Dorchester Apartments.

7

Th
entra
direc
open
nine
dupl
Th
and
of th
The
stucc
stone
wind
stone



*The Patio
viewed
from Lobby*

Villa Carlotta Apartments

at Hollywood, California

ARTHUR E. HARVEY, *Architect*

THE Villa Carlotta Apartments, Franklin Avenue, Hollywood, Calif., were built by Luther T. Mayo, Inc., of Los Angeles, Arthur E. Harvey being the architect.

The building is planned in the form of a U with entrance in the center from Franklin Avenue, opening directly into a large lobby which faces the north and opens upon an enclosed garden patio. There are forty-nine apartments, consisting of singles, doubles and duplex De Luxe, ranging from two to four rooms.

The general style of structure is Italian and Spanish; and an unusual effect is obtained by the setting back of the second story, a balcony being created at this level. The exterior walls are of brick with special textured stucco outside. Ornamentation of the exterior is of art stone; and wrought iron balconies and grilles above the windows contribute to the highly decorative effect of stone and wrought iron.

Awnings for the entire building were especially designed for locations in which they appear; all hand painted and decorated to harmonize with colors of the building. Fire escapes were required by law on the front of the building, but these were decoratively treated by being recessed and by the use of ornamental wrought iron railings resembling balconies.

Hardwood floors were used throughout the apartments; the walls textured plaster decorated in colorful manner, while the ceilings are beamed in Spanish style. The lobby has large view windows overlooking the garden, and a noteworthy high ceiling effect is gained by lowering the floor below that of the apartment floor level, permitting the use of tile steps. Furthermore, an attractive wrought-iron treatment of stair rails from lobby to main hall is made possible.

At one end of the lobby is the office; at the other is a large art stone fireplace. The office desk and counter

The Main Floor Lobby Has the Atmosphere of a Fine Hotel.



A Typical Living Room in the Villa Carlotta Apartments, Hollywood, Calif.



are of mahogany with sand-blasted and recessed design. Heavy Spanish beams on the ceilings are chamfered and decorated with textured plaster between the beams. The floor is of hand-made tile laid in pattern. Throughout wrought-iron lighting fixtures are used, designed for both direct and indirect lighting.

In the duplex apartments the bedrooms are on the floor above and are reached by means of attractive stairways with railings of wrought iron; the living rooms of apartments are a few steps lower than the entrance hall and give a suggestion of greater height than would otherwise be obtained. These rooms are treated in various styles of beaming.

Forced ventilation is provided for kitchens and utility rooms. Completely equipped kitchens were installed with provisions for electric and gas ranges, automatic refrigeration, etc., and the plumbing is of the highest grade with recessed tubs, showers, etc.

—C. M. LINDSAY.

Sizing Up the Market

(Continued from page 82)

tive proportion of the rooms and their relation to each other, and the approach to it should produce a pleasing emotion on the part of the beholder or occupant, whether he is aware of it or not. It must appear like a home to the senses, to the eye, to the ear, even to the nose. It must "feel like a home so that visitor or occupant may feel at home." In no class of building will the high art of architecture be more valuable or the element of beauty in all its phases be a greater asset than in permanent community homes. If the project does not warrant the care and expense of such treatment it should be abandoned.

I do not mean that a co-operative apartment must be expensive and out of the reach of the man who makes \$4,000 to \$6,000 a year. In fact this is a group of very likely prospects as a co-operative apartment can give them better accommodations for less money and

thus
coun
it is
youn
smal
and
it is
apar
peop
desir

It
as c
cess
begin
gani
succ
much
amon
of c
affai
All
other
ing
aptit
of in
tions
hand
and
with
not
apar
class
trust
who
tent

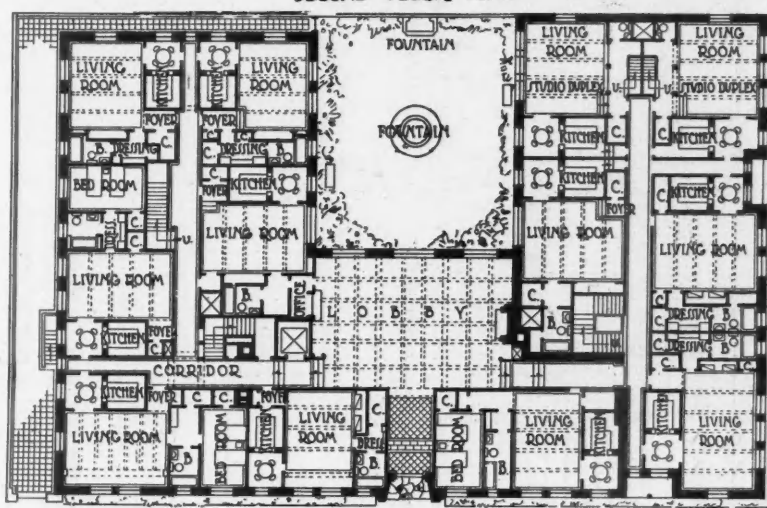
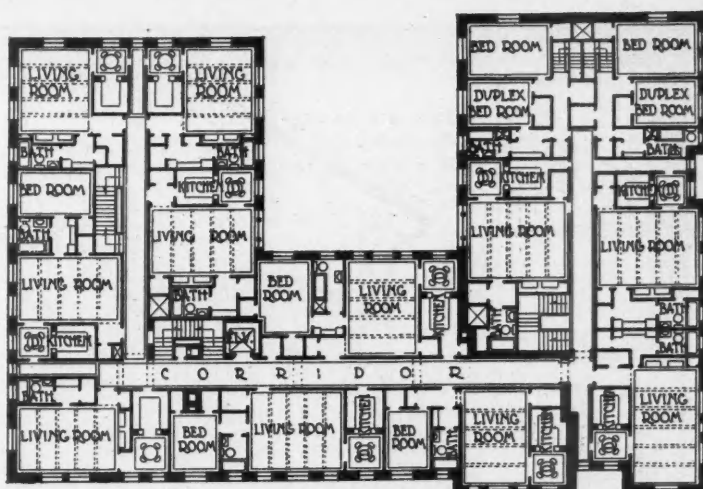
If
elem
co-op
not

Vill
Holl
Harv
tect;

thus help them to save and advance. Of course, all people do not need to save—and it is just as grievous a mistake to make your building too plain and the rooms too small, if it is in a neighborhood of wealth and to be occupied by people of means, as it is to make the rooms too large and the apartments expensive in a district where the people cannot afford everything they might desire.

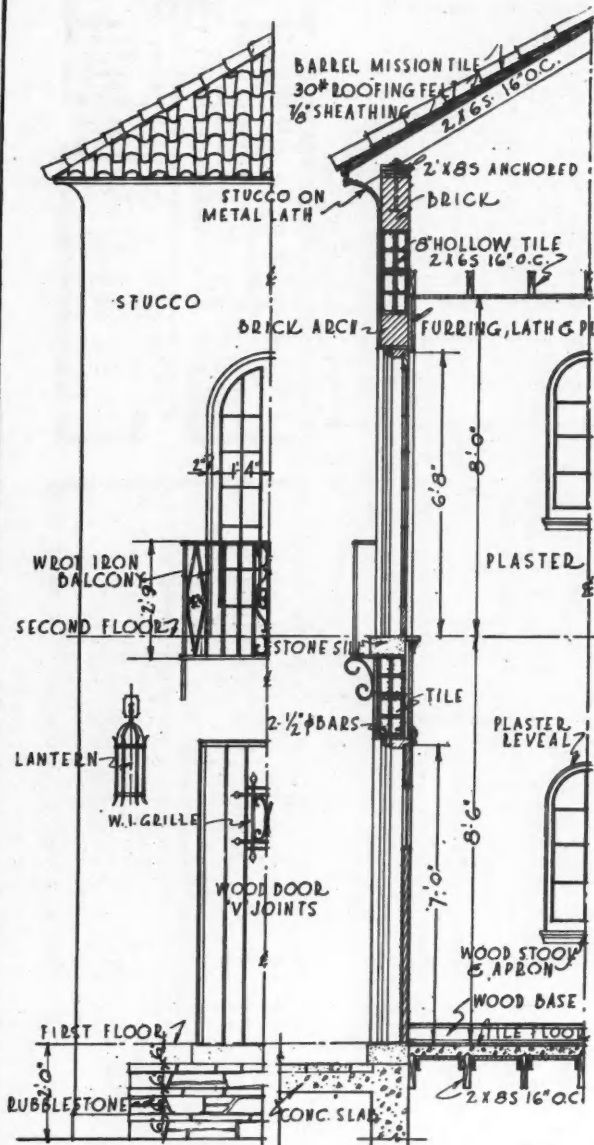
It is not necessary that a group of owners as congenial as those required for a successful club be available; in fact, in the beginning co-operative apartments were organized on the club basis and did not succeed. The plan should not rely over much upon congeniality or friendship among owners. The intimate mingling of co-operative owners in their home affairs is not desirable and not necessary. All sorts of co-operative enterprises other than co-operative apartments relying too much on personal relations and aptitudes have failed, because the best of individual human characters and intentions waiver at times. On the other hand, a community, where the custom and habit of the people is to go it alone without co-operation with others, would not be fertile ground for co-operative apartments. There must be available a class of people who can submit to some trust in, and co-operation with others and who can shape their conduct to competent management.

If a location can be found where these elements can be brought together then a co-operative apartment development is not only possible but desirable.

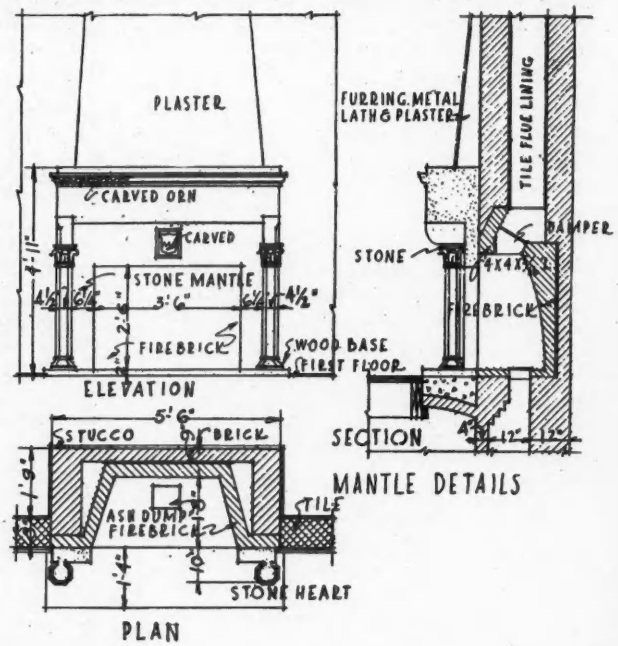


Villa Carlotta Apartments,
Hollywood, Calif., Arthur E.
Harvey, of Los Angeles, Archi-
tect; Luther T. Mayo, Inc.,
Builders.

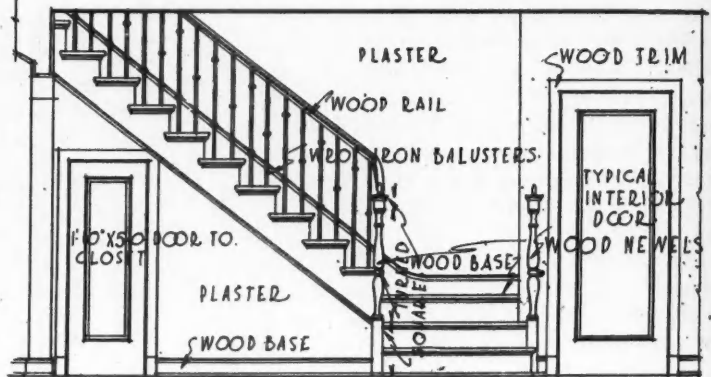




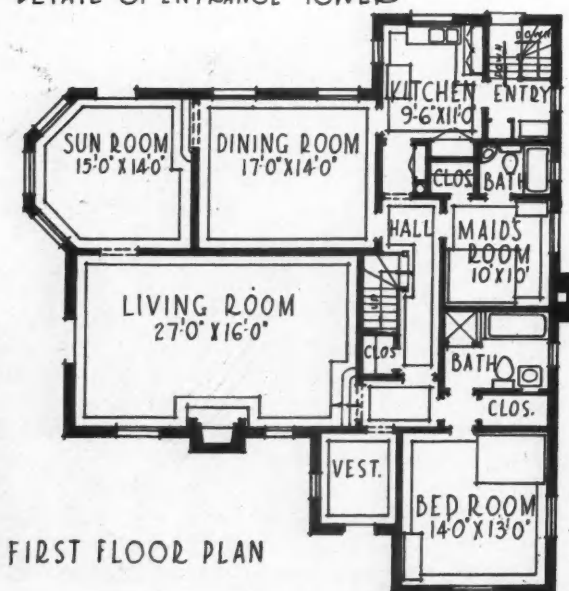
DETAIL OF ENTRANCE TOWER



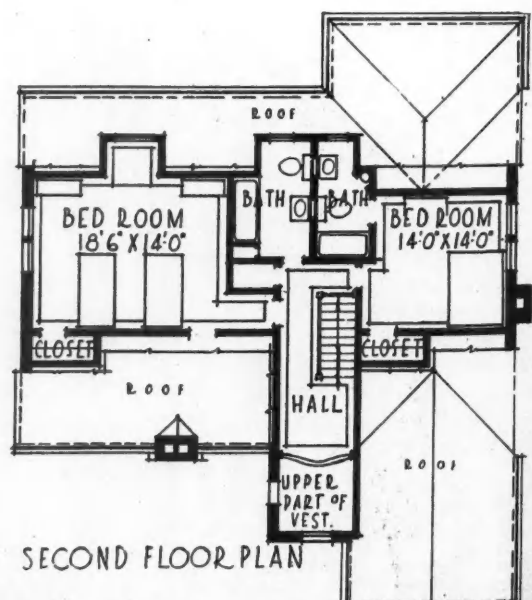
PLAN



FIRST FLOOR STAIR HALL



FIRST FLOOR PLAN



SECOND FLOOR PLAN

SPANISH MISSION TYPE HOME
Plan and Details



Spanish Mission Type Home

Plans and Details of Construction on Page Opposite

By ALLEN E. ERICKSON, A. I. A., *Architect*

WE have all been possessed of the idea, after a visit to the bright sunny climate of southern California, to come right back to our home community in another part of the great United States and build a beautiful home, full of life and color, similar to those we have seen.

Every object must have its correct setting in order to be displayed to the best advantage. Down in southern California and Mexico, where the Spanish Mission type of architecture originated, it grew naturally out of its surroundings. The style was influenced by the climate, the length of the day and intense sunshine, and the clear blue skies. The use of materials was a natural outgrowth of available products and materials. Many homes in that section of the country have borrowed characteristics of the Spanish Mission style and form the modern American home of that type today. The house illustrated is one of these.

The characteristic details of this house are the simple low roof lines, except an accentuated entrance tower and chimney; the use of bright colored exterior stucco. The roofing is a hand scored, barrel-mission tile of deep reddish color with varying shades. Another characteristic is the arched window

opening with balcony over entrance; also the shuttered window openings. These shutters can be closed during the hot glare of the sun. A setting for the house is provided by the landscaping which admirably ties the whole house to its site.

The plans on opposite page reveal some interesting things. The rooms are large. The living room is 16 by 27 feet. It has rough hewn solid wood beams in the ceiling. Ceiling is 11 feet 6 inches in height. Living room is reached through the entrance vestibule and hall, and is down a flight of three steps. See photograph of living room on next page.

A feature of the entrance tower is the fact that it is two stories high. As one enters the house, one steps on a Navajo tile floor laid with colored tile inserts, in an attractive pattern. Looking up, one can see the balcony at the second floor stair landing. This is of hand wrought iron. The ceiling of the entrance tower runs clear to the underside of the roof rafters. At this point hangs, suspended, a large lantern. This, of course, is designed in, and carries out the feeling of the style in which this house is designed. Most of the rooms, including the entrance tower, have a wall finish of textured, colored plaster. Each room has a

NEXT MONTH Mr. Erickson presents details and photographs of a French Country Type home built at Greenwich, Conn.



The Living Room in the Spanish Mission Type Home.

variation of color and texture. The sun room with its large bay overlooking the yard and French doors which lead out to it, is a bright spot in this habitation. A view can be had in three directions. The floor is of large hand made tiles of bright colors. The kitchen and service entry is placed adjacent to the garage. Refrigerator and broom closet are located in the service entry. An electric dishwashing sink with conveniently arranged cupboards, cabinets, drop-leaf table and range constitute the kitchen equipment. A wrought iron gate divides the garden from the service drive of the house. Each bedroom on the first floor has its private bathroom and a cedar lined closet is adjacent to the private bath. The large front bath has both bath tub and tiled-in shower. The walls and floor of this bath is of matt-faced orange tile with black trim. It also has colored shower curtains.

The second floor plan shows two more bedrooms and two baths, one opening off of the bedroom and the other the upper stair hall. These are both tile and have the latest equipment in plumbing figures.

The construction of this type of house is well carried out with the use of concrete block of cinder type or a clay hollow building tile. In both cases the exterior

is given three coats of plaster, the final coat containing the desired color and texture. The interior should be in both cases, furred and lathed with metal lath, and plastered three coats. Insulation is an important item in climates similar to the one where this house was built. Over the entire second floor portion containing rooms a flexible insulation has been applied between the rafters. On all exterior walls of the first floor an insulating board was used for the plaster base. Between the first and second floor, the same insulation as used under the rafters was used as floor deadening. Strips laid down and the finished floor on top. Only a portion of the basement of this house was excavated, the saving being considerable. The house used gas heat. The remaining part of the basement is used for laundry and storage rooms. Two dressing rooms are provided with bath and shower, seat and wardrobe. These are used by the family before and after enjoying a swim in the lake. This is indeed a complete house. Each bedroom has its own bathroom. The sleeping quarters are separated from the living quarters. The house is faced in such a way that each room has an abundance of sunlight and a beautiful view.

NEXT MONTH:

Two timely articles for those building Homes for Sale, one on OIL BURNERS, the other on MORE GLASS, WIN-TER WINDOWS and WEATHER STRIPPING.

Modern Church Is Three-Unit Structure



The First Presbyterian Church, New Rochelle, N. Y. John Russell Pope, architect; John K. Turton & Co., New York, general contractor. This church is being constructed this summer and promises to be one of the most complete three-unit church structures.

WHILE the essential purpose of the church building is the same today that it was hundreds of years ago, the modern church structure differs quite materially from those of other days. In fact, the change has been most marked in recent years as the church has sought to combat through a seven-day-a-week program the worldly influences of a jazz-industrial age. Where formerly the House of God was a one-unit building providing only for worship, today it is a three-unit structure providing adequately for worship, for recreation and fellowship and for religious education.

Essentially, however, the purpose of the building is unchanged. Throughout the ages man has sought to give expression to his conception of God through the design and integrity of the temple in which he worshipped. Thus from the time of King Solomon the church building has commanded the best efforts of the ablest craftsmen.

Solomon, you will recall, called not only for the ablest craftsmen in the land, but also for the best building materials available. And there was nothing hurried about its construction. Thirteen years were required to complete it. It was designed and built as a permanent structure—"a place for Thee to dwell in forever."

Before entering into a more detailed discussion of the trend in church building, it may be well to sketch briefly the history of the church in America.

Seven-day-a-week Use of Religious Buildings Bring Many Changes in Construction

Churches are Spending \$213,000,000 Yearly

BY SAMUEL D. FUSON

The earliest churches in the United States were "meeting houses" designed to accommodate community assemblies of various sorts, in addition to the weekly worship services. They were unattractive structures, reflecting to a marked degree the restraint of the pioneers who first settled this country. Having left their homes in Europe primarily to seek out a place where they might worship according to their own ideas, they were unwilling to utilize in any

way the beauty of the medieval churches of their former country.

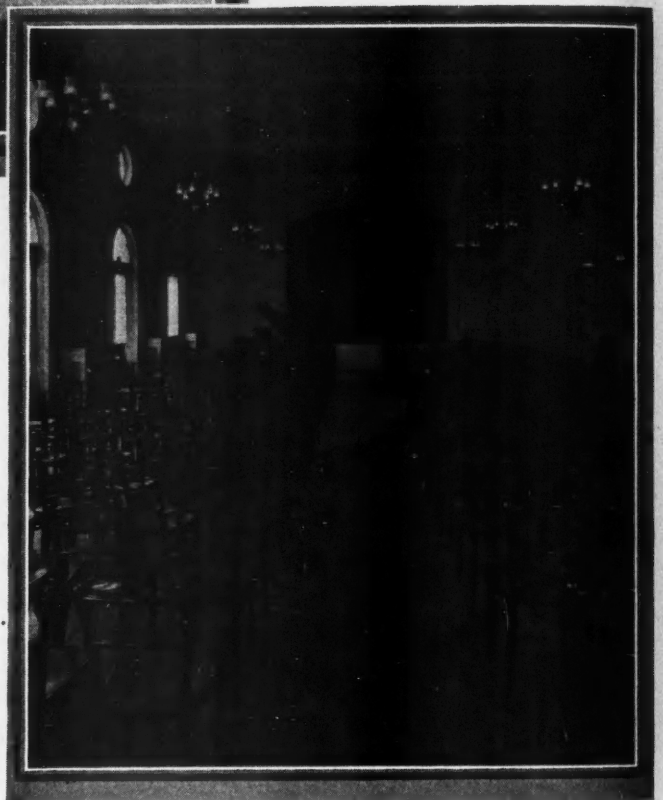
It was not long, however, as they advanced culturally, before they felt the need of greater beauty in their churches and this, they obtained, by adding towers and steeples, the church building remaining rectangular in shape. These early churches were usually built of timber because that material was plentiful. Generally they were built as community endeavors.

Many of these Early American churches are still standing, for they were built in a day when every mason and every carpenter worked with a loving devotion and not for so much a day. Soon after the American revolution, brick and stone came into common use and many large, if un-religious churches, were erected. Among the few notable churches erected in this period, which were free of sham and, therefore, worthy of the purpose for which they were built, are Trinity Church in New York City and Grace Church, also in New York. The former was designed by Richard Upjohn, grand-



To Left—Ladies' Parlor,
Hyde Park Community
Church, Cincinnati, Ohio.

Below—Fellowship or
Social Hall, First Baptist
Church, Plainfield, N. J.
This church won second
prize in a national compe-
tition. Hobart Upjohn,
architect; Walter Kidde
Co., New York, general
contractor.



father of Hobart Upjohn, one of America's present-day church architects. Renwick was the architect of Grace Church.

Gradually the church gave more heed to the needs of its younger folks, but alas! the plan adopted and followed for so many years—in fact, until very recently—was the so-called "Akron plan," which placed religious education under a heavy handicap.

Finally there has evolved a plan of church design and construction that is being pretty generally accepted, although, of course, not all church men, architects and builders are agreed in all details.

Instead of a single rectangular shaped structure with the sanctuary on the main level and a gloomy Sunday School in the dark basement we have a churchly structure to house the worship room and one or more adjacent or connected buildings with social hall, rooms for club activities and a modern church school plant.

Church building today is big business in point of volume and value. While many towns and villages are over-churched in the sense that too many denominational churches are in the field, they are under-churched, in fact, because few of the existing churches are in any way adequate to the needs of congregation or community.

Approximately \$213,000,000 will be expended this year for new churches in the United States. A considerable proportion of this amount is going into fellowship and religious education buildings. A few of these churches are great cathedrals and a small number are of the so-called skyscraper type in which business is combined with the church. But by far the great majority are medium-priced churches for averaged sized congregations. And nearly all are following the new trend and making adequate provision for the three ministries of worship, fellowship and religious education.

The skyscraper church requires little consideration in this article. It is advisable only in the great centers of population where land values are enormous and the church must either give up and move to the outlying residence districts or effect a combination with business. This combination is accomplished in many ways. The Chicago Temple (Methodist) in Chicago is a fine example of the church-office building. Another building of

this type is the Rochester Baptist Temple. Labor (Presbyterian) Temple in New York City was the pioneer in this form of construction. Other notable examples of the church in business are: Boulevard Methodist Episcopal Church, Detroit, Mich.; Chelsea Presbyterian, Park Avenue Methodist and Rutgers Presbyterian Churches in New York.

Broadway Temple is rising thirty-six stories high in uptown New York, Central Methodist Episcopal Church is building a hotel in San Francisco and the Abbey Presbyterian Church of Dallas, Texas, has adopted plans for a twenty-eight story apartment-office-church building.

Some of these churches actually go into business while others effect the improvements through long-time leasing arrangements.

The Cathedral type of church is worthy of a lengthy article by itself. But after all cathedrals are not built every day. The Cathedral of St. John the Divine in New York has been under way for many, many years,

as has also the great Washington Cathedral, which is rising on the top of a hill in the nation's capital.

But this modern averaged-sized church which reaches into the very heart of our lives is going up all around us. How well it is being planned and built depends on the interest each of us displays in the building, from the smallest contributor to the building fund to the individual stonemason, bricklayer or steamfitter.

I grew up in a church in the Middle West where the organ and choir occupied the position of honor; where the church school met in odd corners of a big assembly

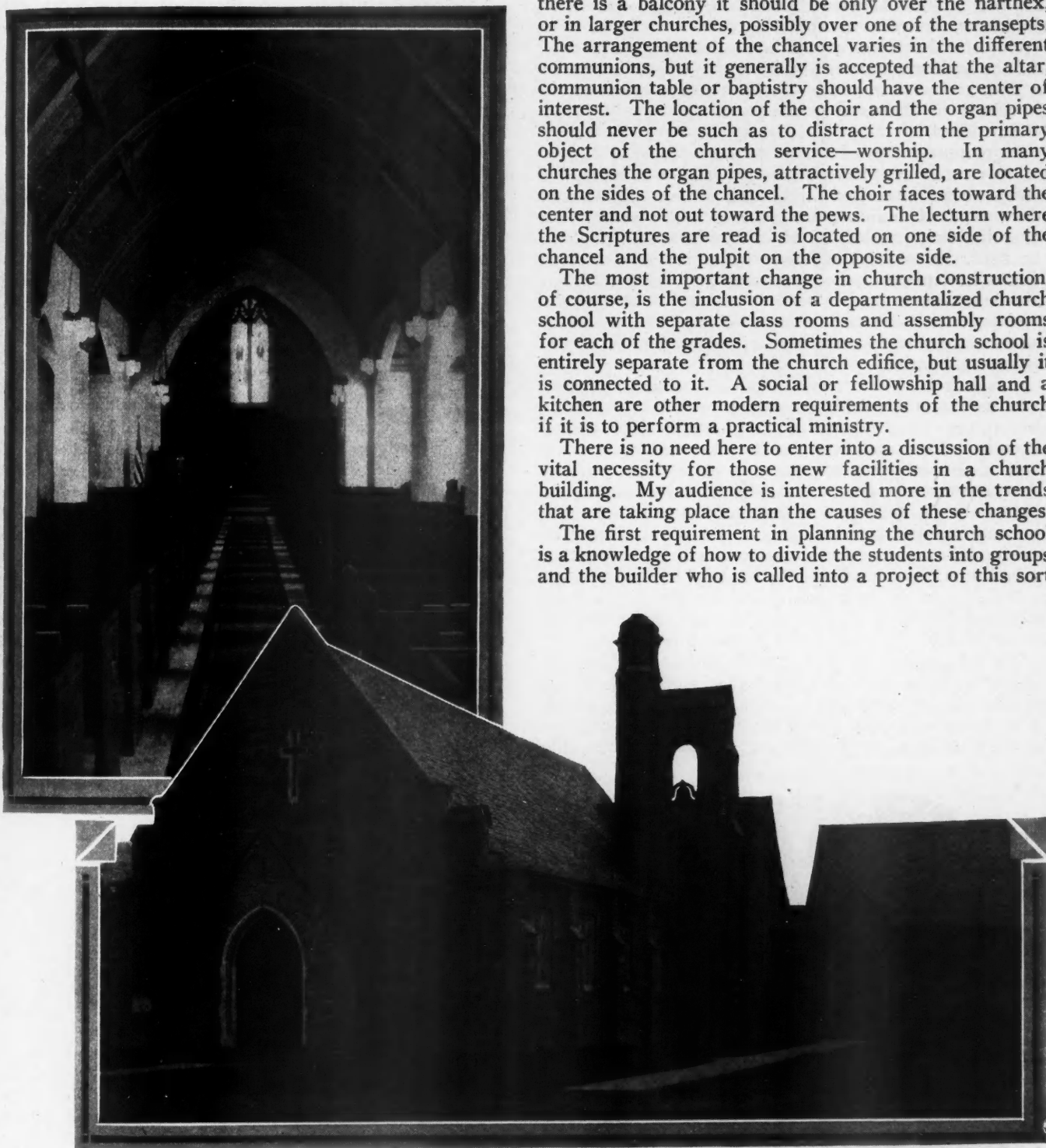
room or in curtained-off cubby holes; where the pews were curved and the floor sloped, as in a theatre. There were other defects but mention of these will suffice, for these are among the major mistakes of the church building of yesterday. The modern trend is to correct the faults of the worship room and add the new facilities for recreation and religious education.

The sanctuary, or auditorium as it is frequently called, should be oblong with the chancel at one of the narrow ends. The nave or body of the sanctuary should be at least twice as long as it is wide. The floors should be level. The pews and aisles should be straight. If there is a balcony it should be only over the narthex, or in larger churches, possibly over one of the transepts. The arrangement of the chancel varies in the different communions, but it generally is accepted that the altar, communion table or baptistry should have the center of interest. The location of the choir and the organ pipes should never be such as to distract from the primary object of the church service—worship. In many churches the organ pipes, attractively grilled, are located on the sides of the chancel. The choir faces toward the center and not out toward the pews. The lecturn where the Scriptures are read is located on one side of the chancel and the pulpit on the opposite side.

The most important change in church construction, of course, is the inclusion of a departmentalized church school with separate class rooms and assembly rooms for each of the grades. Sometimes the church school is entirely separate from the church edifice, but usually it is connected to it. A social or fellowship hall and a kitchen are other modern requirements of the church if it is to perform a practical ministry.

There is no need here to enter into a discussion of the vital necessity for those new facilities in a church building. My audience is interested more in the trends that are taking place than the causes of these changes.

The first requirement in planning the church school is a knowledge of how to divide the students into groups and the builder who is called into a project of this sort



Exterior and Auditorium Views of the Methodist Episcopal Church, Trainer, Pa. Thoralf M. Sundt and Bruce C. Wenner, of Philadelphia, Pa., architects; William Provost, Jr., Chester, Pa., general contractor. This church, which cost \$75,000, was awarded first prize of \$1,000 in a nation-wide competition for average sized church buildings.

will do well to recommend a consultation with the church's dominational headquarters. In any event, rooms should be provided for each teacher and class and the rooms should be sound proof. Folding or sliding doors and movable partitions should not be used.

I would like to warn against the use of stock plans for a church, be the building ever so small. I have on my desk as I write these words a letter from a builder asking for stock plans for a small church. And my answer must be that each church plan should be prepared to meet the special requirements of site, size and needs of congregation and church school. Let me urge also that builders be wary of accepting assignments from church committees to furnish plans and build also. Architectural services are economical in the last analysis and the builder approached with a suggestion that he act as both architect and builder will confer a favor on the church if he insists that adequate and detailed plans be furnished.

A greater number of architects are evincing real interest in church architecture today. The profession has always been interested in church design because no other type of building so challenges the artist. No other building has left so vivid an imprint through all the ages. Most of the larger denominations, such as Methodist Episcopal, Presbyterians and Baptists, maintain departments of architecture designed and equipped to consult with churches, architects and builders. These bureaus are glad to consult on church building projects without obligation.

It is largely due to the efforts and influence of these bureaus that the business methods of church building committees have shown such marked improvement recently. More and more builders are finding it worth their time and best efforts to seek church projects. Many contractors are building splendid reputations for themselves by building well the churches in their respective communities, and it is generally recognized that the builder holds a most important position in the erection of a church. Quite often he is the final authority on the materials used in the building, and certainly the appearance and durability of the structure, in the last analysis, are up to him. He can make or mar the building.

"In the greatest days of church building," Elbert M. Conover, director of the Methodist Episcopal Bureau of Church Architecture, told the writer of this article, "the ability and spirit of the craftsmen were recognized as essential to a church building. Sometimes the chief

interest of a famous building lies in the detail work evidencing the most careful attention on the part of the builders themselves.

"Today it is highly important that the contractor or builder measure up to the reasonable demands involved in building the House of God. The builder must be a man of intelligence so that he can recognize the reason for many of the special features of a church building. He must know the market conditions of the materials and be able to guard the building against the introduction of untested materials that would cheapen the building or cause deterioration. He must have a craftsman's interest in the project and take pride in the work and also be able to inspire his workmen with the same spirit."

No type of structure offers the same opportunity to the builder for displaying his handiwork to so large a group. Successful churches are visited by committees from other churches for miles around. The architect and the builder share almost equally in the praise or blame.

It is difficult to state the average cost of churches being erected today, but roughly it is estimated that in excess of 2,000 religious edifices are being built this year. On the basis of a total expenditure of \$213,000,000 the average cost is a little more than \$100,000. Average sized churches range in cost from \$30,000 to \$281,000.



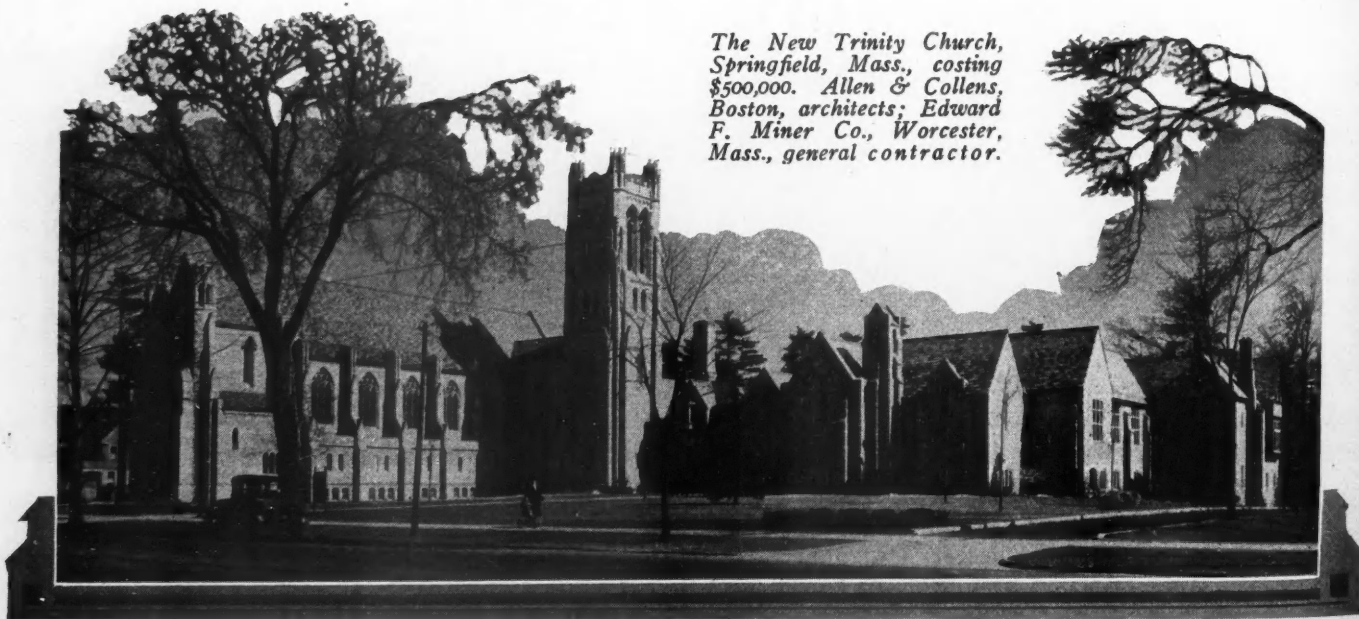
More Apartments Every Year

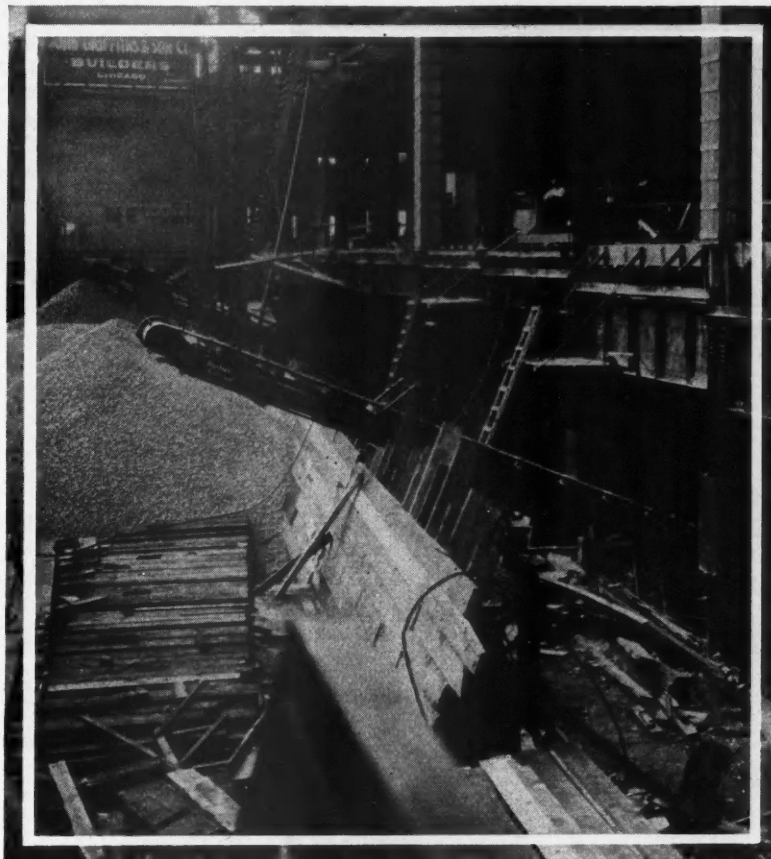
THE trend toward department house dwelling continues in full swing, according to figures compiled by the Bureau of Labor Statistics of the U. S. Department of Labor.

In 1928 homes were provided in new buildings for 388,678 families in these 257 cities; 53.7 per cent of these were in apartment houses, 35.2 per cent in one-family dwellings, and 11.1 per cent in two-family dwellings. In 1921 only 24.4 per cent were housed in apartment houses and 58.2 per cent were housed in one-family dwellings.

During this period there has been, with the exception of one year when there was a slight falling off, a steady increase in the percentage of families housed in apartments, but this is the first year that more families were provided for in new apartment houses than in one-family and two-family dwellings combined. This is the third consecutive year that more family units have been provided in apartment dwellings than in one-family dwellings.

The New Trinity Church, Springfield, Mass., costing \$500,000. Allen & Collens, Boston, architects; Edward F. Miner Co., Worcester, Mass., general contractor.





Conveyors Unloading Gravel from Cars to Storage.

Belt Conveyors on Big Mart

Record Installation Handles Concreting of World's Largest Building

By J. F. JANDA, Conveyor Engineer

FIFTY-FIVE belt and other conveyors working in varying combinations, suiting every possible need in the way of rapid flexible placing of material, are distributing the wet concrete and dry aggregate on the Merchandise Mart Building now under construction in Chicago.

The Merchandise Mart Building, located at Wells Street and the river, will be two blocks long, twenty-three stories high, with twice the floor area of any other business building in the world—a \$32,000,000 project, using the most modern method of handling wet concrete and the largest installation of belt conveyors ever made for the purpose.

The application of belt conveyors to the handling of wet concrete on this particular job was the result of plans made by Bruce Gordon, general superintendent in charge of John Griffiths & Son, builders.

The entire idea of conveying the concrete was worked out by Mr. Gordon and it is without a doubt one of the outstanding engineering achievements of the year.

The fifty-five belt conveyors offer the most flexible system ever used for such a job, distributing the dry aggregate and concrete. Forty-four of these conveyors actually handle the wet concrete—the remaining eleven handle sand and stone.

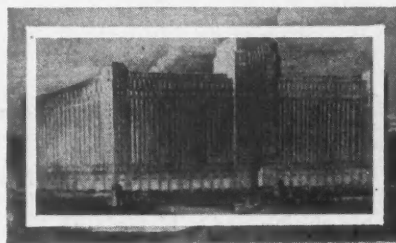
The aggregate is brought in in battleship hopper bottom cars. The tracks are located directly beneath the building itself and the unloading section of the track is excavated below so that the material flows by gravity to the hoppers of the conveyors in the pits. As the photos and drawings show, there are six conveyor belts used for unloading the aggregate—four on the stone and two on the sand.

These six belt conveyors store the material in piles, taking care of the entire aggregate supply without working full time. They are 60 feet long by 24 inches wide, cleated belts, handling about thirty cars of material a day.

Underneath the storage piles are located tunnel belt conveyors. These machines carry the material toward the central mixing plant. As shown on the diagram, there are four towers, each tower being supplied by a separate one-yard mixer, making up altogether two central mixing plants.

One belt conveyor under the sand and one under the stone bring the materials to the central mixing plant located on the river side of the building. The aggregates are discharged into bucket elevators, one on each side of the central mixing plant, these elevators taking the material up to the batching bins.

For the central mixing plant



The Merchandise Mart.



24-Inch Belt Conveyors, 60 Feet Long, Handling Wet Concrete.

located in the center of the building (as shown on the chart), two tunnel conveyors are located beneath the stock piles. These conveyors discharge into bucket elevators which take the material up to the third floor where it is discharged into permanent belt conveyors which carry it to the center central mixing plant. The sand (on the left side of the chart) is carried over two permanent conveyors on the third floor—and the stone (on the right) is carried over one.

These three conveyors used on the third floor are referred to as permanent installations. This signifies only that they are not mounted on trucks. They are perfectly portable and can be lengthened or reduced in length as required very easily due to their sectional construction, which is common on all of these conveyors.

The mixed concrete is elevated from the four mixers by the four towers, one-yard buckets being used. The material is elevated by the towers to a point two stories above the floor being poured. The conveyors which are handling the wet concrete are located one floor above the floor being poured. Assuming that the third floor is

being poured, the buckets in the towers raise the wet concrete to the fifth floor where it is discharged into a one-yard hopper. This hopper has a chute in the bottom which carries the material down to the waiting conveyor on the fourth floor. Altogether there are forty-four conveyors for handling the mixed concrete. These machines are 40 feet long and 24 inches wide and are each mounted on rubber-tired castors. In distributing concrete from the towers, one to fifteen of these conveyors are used in tandem as required to reach the point above the spot being poured. All the machines are electrically operated and wires are conveniently strung with plug outlets throughout. The machines are very easily moved about, forming various combinations, sometimes involving complicated crooks and turns, and the fact that they are working on the floor above the floor being poured makes this a very easy operation.

Since the belts easily handle a yard a minute, and one-yard mixers are used, there is never any delay due to limited capacity of the conveyors.

There are a large number of advantages to this system of distributing the concrete, both in the economical advantages of the method itself over other methods, as well as in the resulting concrete that reaches the forms.

There are only four concrete elevating towers, rising from two central mixing plants. This is the minimum of towers for such a big job. If conveyors were not employed, it would be necessary to use buggies, with probably a hundred men wheeling them. This system would not only be infinitely slower, but would be much more costly and would involve about one hundred times the human element. The entire conveying system with buggies would be subject to the "not so fast" or "slow up a little, Bill," that the tampers slip to the buggy wheelers. With the present conveying method, the tampers are obliged to keep up with the flow of concrete coming down the troughs from the conveyors. The mixer, tower elevator, and conveyors operate systematically, efficiently, economically, not lagging or slowing down as the hours of the day wear on.

A high tower chuting system on a building of this kind would be absolutely prohibitive, in that the radius on which the chute could swing would be limited by the beams, girders, etc., unless only the top floor were poured each time.

Not counting the wonderful flexibility, and rapid distribution of the belt conveyor system of handling wet concrete, there is a decided advantage in the lack of segregation involved.

With the belt system of carrying the concrete, segregation is entirely eliminated, or at least it is cut down to a negligible figure. Although the concrete is laid out flat on the belt and is carried along at a good speed, there is no friction between the material and the conveying medium. They are standing still in relation to each other.

It is clearly seen that in pouring wet concrete, the belt conveyor is ideal at either extreme of moisture content. If the mix is such that the slump is very low, say from one or two inches—it is too dry to chute (from high towers) unless it is shot down such a steep angle that the

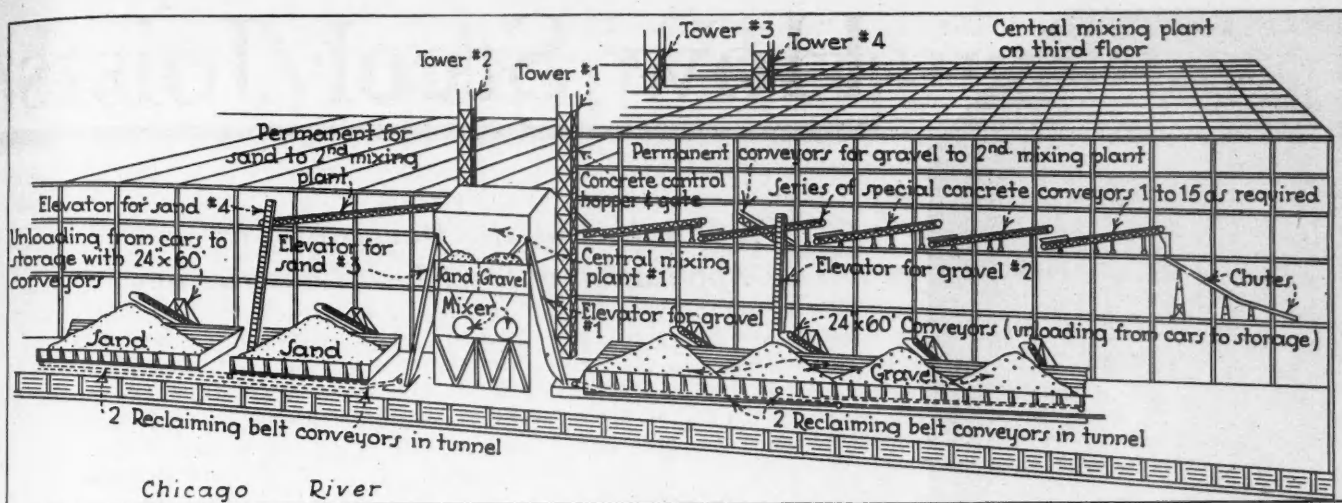


Diagram of Concrete Conveyors on Merchandise Mart, as Designed by Bruce Gordon, of John Griffiths & Son, Builders.

resulting segregation makes the method prohibitive. If the mix is very wet, say with a five-inch slump, although it will chute at a practical angle, the material, due to its extreme dampness, is very susceptible to segregation and must be handled much more gently than the chuting system can convey it for any great distance. When such care is exercised to have the material properly mixed, it can hardly seem logical to deliver the concrete to its destination by a means that destroys the results so carefully obtained in the mixer. When the buggy system is used for distributing the wet concrete, there is an inevitable settling which destroys the mixing that has just been done. On the belt conveyor, although the material rides easily, this settling is avoided.

On this Merchandise Mart job, the conveyors used are 40-foot units. If only one machine is being used

for carrying the material from the discharge chute of the elevator buckets to the discharge chute above the tampers, the material is carried so rapidly that the settling does not have a chance to take place. If, however, a greater number of conveyors are being used to carry the material from the first discharge chute to the tampers, say, for instance, ten to fifteen units covering approximately 400 lineal feet, every forty feet there is a slight drop, not a sliding over a chute, but a drop from the discharge end of one conveyor into the hopper end of the next, this drop being identical to the mixing process in the mixer, and actually mixes the material better, more than compensating for any possible settling taking place en route on each unit.

Even though only one conveyor 500 feet long were

(Continued to page 138)



Series of Concrete Conveyors on Merchandise Mart.



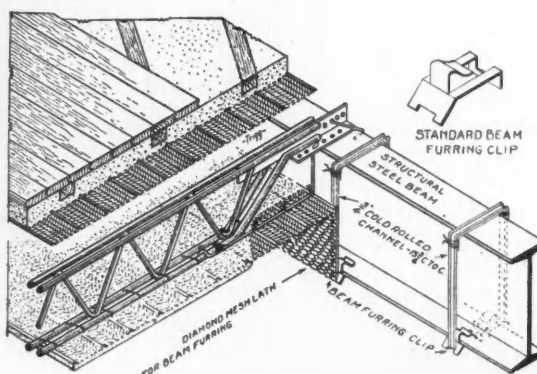
Frank Burton, Consulting Engineer

How Steel Joists

An Outline of the Development and Application of Steel Joist Construction

By

FRANK BURTON,
Consulting Engineer



A Typical Bar Joist Construction Protected by Metal Lath and Plaster Below and a Concrete Slab Above.

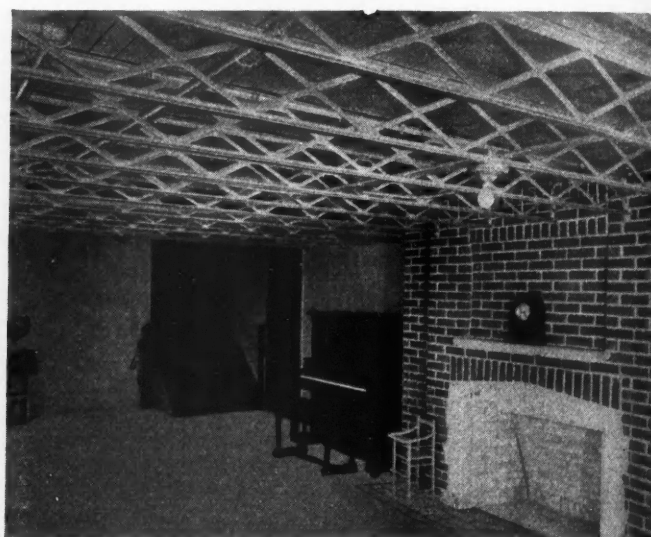
FOR many years engineers and inventors have been seeking a practical method of constructing floors more fire resistive than those supported by wooden joists. The first types evolved were short span arches of brick, terre cotta or concrete. Following these came a great variety of reinforced concrete floors, varying chiefly in the type of filler used.

While having many advantages, all of these constructions were subject to certain objections. The arch floors were very heavy and the spans very short, while the reinforced concrete floors were also quite heavy and necessitated expensive form work. In order to find a method of constructing a lighter floor which would not require forms or centering, many experimentors turned their attention to the construction of light beams or joists of steel, suitable for supporting floors when spaced from 16 to 30 inches apart.

The first of such steel joists were made of sheet steel in 1855 and were used in building the State of New York Bank in William Street near Wall Street, New York. The sheets were bent to flat curves and riveted back to back with flat top and bottom flanges. The building was taken down in 1903 and the joists were found to be in good condition.

Somewhat similar joists were manufactured and sold in Chicago, Minneapolis and St. Louis from about 1887 to 1893. Several important buildings were constructed in Chicago about 1901 to 1905. During this period, production of steel joists never assumed large proportions, and the industry met with little encouragement. The sheet metal used was very light; the joists were short and production was almost entirely local.

In 1908 quantity production of steel joists was started. The Berger Company started to produce steel joists made of 15 and 16 gauge plate pressed into the form of channels and riveted (later spot



Expanded Steel Joists as Used in a Residence First Floor Where Fire Resistive Construction Is Not Required.

welded) together to form a light I section. Longer joists were made than heretofore, but those over 10 feet long had to be spliced. By 1917, arrangements were made whereby joists up to 16 feet 8 inches could be made without splicing.

In 1914, the Truscon Steel Company entered the field, making a similar joist, but later developed a new form made of a single strip steel web plate and four small angles assembled in the form of an I beam by spot welding. In 1919 the Central Steel Company also started producing steel joists under the name of the National Steel Joist Company.

During this period the industry encountered many difficulties because of the prejudice of architects, engineers, building officials and rating bureaus. Nevertheless, substantial progress was made and steel joists gradually became accepted as a proper type of construction for many purposes. The great-

s Meet Modern Requirements

est difficulty was, however, a practical one, arising from the installation of piping, especially sanitary waste lines. There was no easy method of installing large pipes or conduits at right angles to the direction of the joists. In roofs and other places where pipes were not needed, the construction proved very practical and economical, but in the floors of hotels and apartments the difficulties were numerous.

Up to 1923 all joists were of the solid web type, but in that year the production of open web joists was started and the expansion of the industry in the following years was rapid. About 40,000,000 square feet of steel joist floors and roofs are now being constructed annually in the United States and the possible field of usefulness is only partly developed.

In 1923 the Massillon Bar Joist Company (later the Macomber Steel Company) started manufacturing a joist made like a light Warren truss, having the top and bottom chord made of two round bars each, and the vertical and diagonal members being a single round bar all assembled by welding. The bottom chord was brought up near the supports, making the joists only $2\frac{1}{2}$ inches deep at the supports regardless of the depth at the center. In using these joists it was found easier to install piping than when wood joists are used. Also, the economy of material was much greater than in the older types, although the cost of fabrication was increased. By supporting the joists $2\frac{1}{2}$ inches below the top chord, they were held in proper position by gravity and erection problems were simplified.

In the early part of 1926, the Bates Company intro-

duced the expanded one-piece type of joist made from an I-beam section, an expanded truss similar to that manufactured by the Bates Company for steel poles for a number of years.

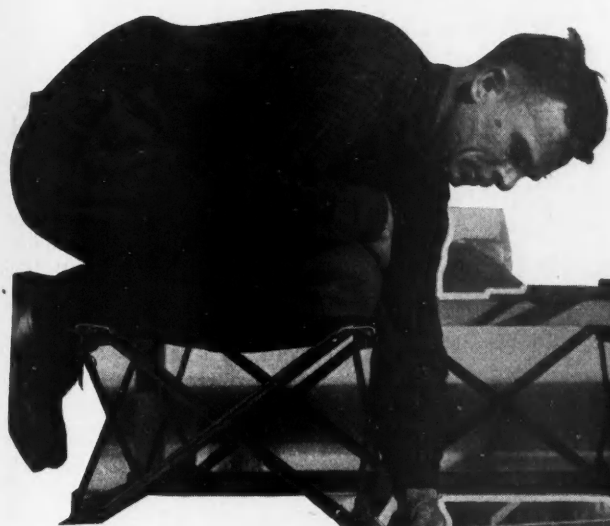
In the next few years a great number of different types of open joists were put on the market and several manufacturers entered the field, making joists substantially the same as those of the Macomber Company. At the present time, there are three distinct types of open joists in addition to the round bar joist. In one type the top and bottom chords are blunt T shapes attached by pressure welds to a round bar web member. Another has for a top chord a special shape like a small I from which one-half of the bottom flange is missing and an angle bottom chord and angle web connected by arc welds. The other type is made by slotting the web of a small I beam and expanding the section to form an open web beam having a depth considerably greater than the original beam.

All of these joists have a $2\frac{1}{2}$ -inch depth at the support and are made in depths of 8, 10, 12, 14 and 16 inches. In every other particular, the products of each manufacturer differ from those of the others.

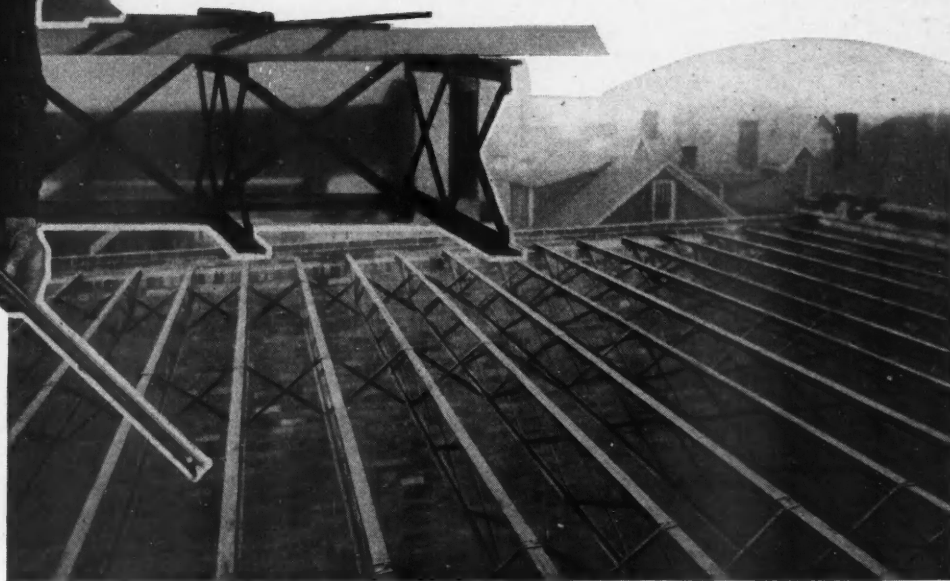
The maximum span of these joists is from 20 to 23 times the depth but there is the greatest variety as to the minimum span. All manufacturers make 8 or 10-inch joists for a span of from 4 feet up, but the shortest span for the deeper joists is usually about 15 times the depth. The safe carrying capacity of commercial joists is from 170 to 250 pounds, although many heavier sections are made.

The weight of open joists also varies considerably, some types being very economical of material but expensive to fabricate, while others are heavier but can be fabricated with less labor. To provide for a total floor load of 120 pounds on a 20-foot span, the steel joist will weigh from $3\frac{1}{2}$ to 4 pounds per square foot, and for a 30-foot span from $5\frac{3}{4}$ to $6\frac{1}{2}$ pounds per square foot.

As with every new product, the introduction



These Joists Were Cut Off and Placed to Show a Type of Rigid Bridging Which Is the Approved Method in Steel Joist Construction



Proper Bridging Must Be Installed as Soon as the Steel Joists Are Erected to Eliminate Lateral Movement and Hold the Joists in a Vertical Position During Construction.

of steel joists met with certain resistance due to the unfamiliarity of architects, engineers and building officials with the proper methods of design and erection, and because of a misunderstanding regarding the fire resistive properties of the construction. In the early days of steel construction, proper methods of fireproofing were not understood and there were numerous failures of steel members in fires. This led to a reaction on the part of building authorities who began to require sufficient fireproofing to resist a four hour fire test.

Such a requirement is fair enough for a heavy mercantile building, well filled with combustible material, but is excessive for most light occupancies. The Bureau of Standards has found that it takes 10 pounds of wood, paper or similar combustible to sustain a fire equal in its destructive action to a standard one hour fire test. In an ordinary apartment having incombustible walls, partitions and floor construction, if we weigh all the combustible, including the wood top floor, doors, window frames, trim and furnishings, it will be found that the total is less than 10 pounds per square foot of floor space. The same is true of most offices, hotels, residences, schools, theatre auditoriums, halls, hospitals, sanitariums and similar buildings. If, therefore, the floor construction of such buildings is capable of withstanding a two hour fire, it is amply safe for all purposes.

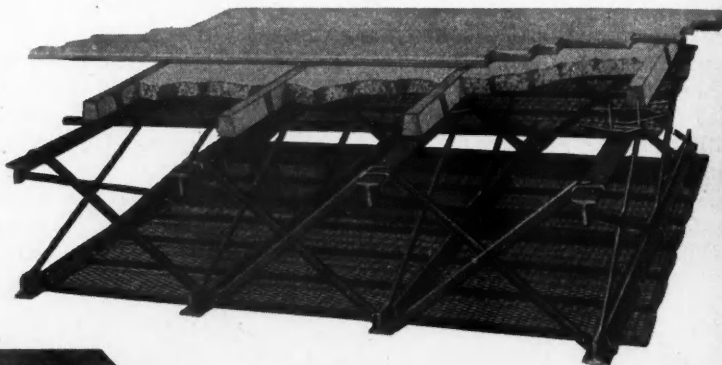
Steel joists, protected with a good ceiling of metal lath and plaster, will withstand such a fire as has been shown by actual tests. In fact, the fire resistance of steel joisted floors is equal to many types of concrete floors and the damageability in an ordinary fire is much less than many types of concrete floors.

The question of proper lateral support during testing and during construction is

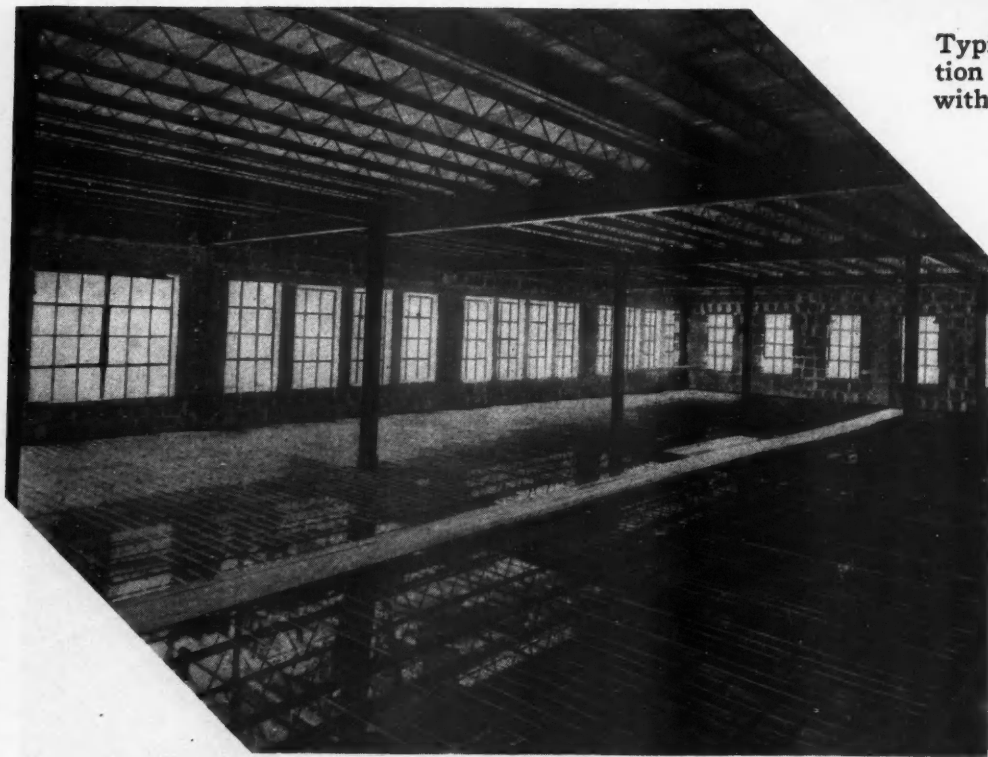
one which is receiving a great deal of study at the present time. Builders generally do not understand the use of these joists and frequently neglect to properly bridge them during erection. When the construction is complete and the finished top floor and ceiling are in place, the joists are securely held, but during construction the proper bridging of joists is of utmost importance. Such structural failures as have occurred with steel joists have resulted from neglecting to give proper attention to this point.

The floor covering used over steel joists is usually a 2-inch slab of concrete poured on metal lath, but such floors should be properly reinforced with bars or mesh, especially over the joists. In some instances the joists have been spaced rather far apart and the proper reinforcing of the slab neglected with the result that cracks have appeared over the joists. At times builders have found fault with steel joists because of these cracks, whereas the truth is that the fault lies in the improper use of concrete.

The same difficulty is encountered with thin concrete slabs supported on structural steel where proper negative reinforcing over supports is neglected. It is highly important that the slab or the lath under the slab be securely attached to the top of each joist at frequent intervals to say the top chord of the joist. When this is done the finished



Typical Expanded Joist Construction with Adequate Bridging and with Nailing Strips Clipped to the Joists.



Using Open Web Joists, Several Floors Can Be Erected Without Waiting for Plumber's, Steamfitter's and Electrician's Installations and the Floors Can Be Poured Under Cover After the Roof Is Applied

floor will carry a considerably greater load than the separate joists would carry without the top slab.

When a fire resistive construction is required the bottom of the joists must be protected with a fire resistive material. Metal lath and plaster has proved most practical for this purpose. With $\frac{3}{4}$ to 1 inch of gypsum or portland cement plaster below and a 2-inch concrete slab above a steel joist floor will safely withstand a two hour standard fire.

Steel joist construction has one great advantage in a fire which can only be realized by practical experience. It can only expand in one direction and if the joists are left free at one end there should be very

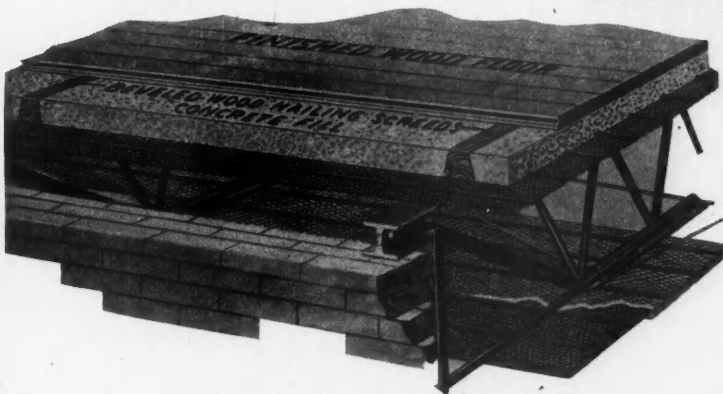
little stress developed even in the direction of the joists. When we realize that expansion is the chief cause of structural failure in fire resistive constructions, this point becomes very significant.

Steel joists have also been used to a considerable extent where fire resistive construction is not required. For this purpose, wooden nailing strips are attached to the top cord and a wood top floor used.

As soon as a steel joist floor is erected and bridged, it can be used as temporary floor. It is not necessary to delay the progress of the building to let the



Another Type of Steel Joist Has Blunt "T" Shaped Top and Bottom Chords Welded to Round Bar Web Members



floor harden and there are no shores to interfere with the progress of other trades. Several floors may be erected one above the other without waiting for plumbers, steam fitters and electricians to install their pipes, sleeves or conduits. The actual concreting of floors may be delayed until the mechanical trades have installed their work by placing planks over the steel joists and, by pouring the roof first, it is possible to have the other levels poured under cover. Experience indicates that this is the way to insure good smooth concrete floors.

As these facts are becoming better understood, the use of steel joists is increasing because of the numerous advantages which they offer to the builder.

A Summary of the STANDARD SPECIFICATIONS FOR STEEL JOISTS

COMPILED BY FRANK BURTON, CONSULTING ENGINEER

Adopted by the Steel Joist Institute, December 20, 1928,
Effective February 1, 1929

1. Definition: Defines the term Steel Joist as used in this specification.
2. Materials: Establishes a standard of materials used in steel joists.
3. Connections: Establishes a standard for the fabrication of joists.
4. Methods of Design and Stress.

The Farrand Apartments, Detroit, Mich., Weidmaier & Gay, Architects, Dunitz & Bordstein, Owners and Builders, Are Representative of a Type of Building for Which Steel Joists Are Widely Accepted.

The lightness of steel joist floors results in great economy in steel framing; the open web joists are very convenient for installing piping. The saving in form work is a great item, especially in buildings where the forms cannot be reused. The use of steel joists is particularly attractive to the builders in small cities where it is difficult to obtain skilled form carpenters and reinforcing steel placers.

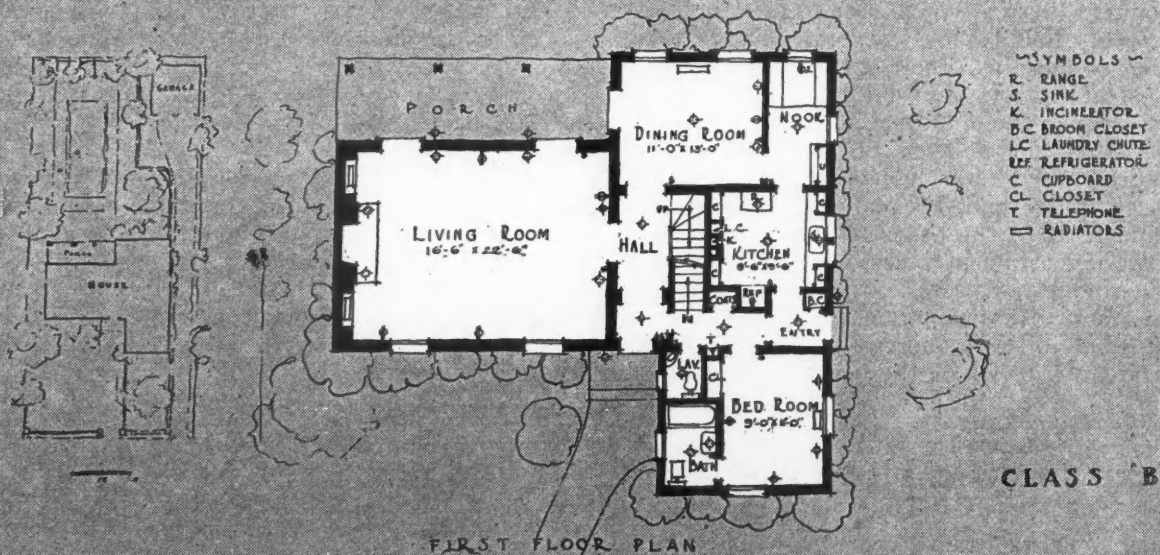
Naturally there has been a variety of opinions as to the proper methods of designing and erecting steel joist floors, and in order to standardize these methods, an association of steel joists manufacturers was formed in the spring of 1928, known as the Steel Joist Institute.

As a result of a thorough study of the problems of steel joist construction, a standard specification has been prepared covering the vital points of design, erection and use of steel joists, which it is hoped will be of value to architects, engineers and building officials. Copies of the specification may be obtained from the Steel Joist Institute, 1736 Dime Bank Building, Detroit, Michigan.

5. Span: Limits the span in relation to the size of joists.
6. Spacing: Limits the spacing of joists in floors and roofs.
7. Erection: Outlines standard construction with steel joists.
8. Bridging: Describes the bridging required under all conditions.
9. Uses of Steel Joists: Lists the required fire protection.
10. Decks and Top Slabs: Specifies the various slabs.
11. Deflection: Limits the deflection permitted.
12. Factor of Safety: Establishes a standard factor.



1929 NATIONAL BETTER HOMES
ARCHITECTURAL COMPETITION



Submitted by
"NOM-DE-NOM"

DESIGN for Seven-Room Home of Southern Creole Type Awarded First Prize in Competition Conducted by Home Owners Institute of New York; H. Roy Kelley, of Los Angeles, Calif., Architect. For basement and second floor plans see page 102.

Winners in \$29,000 Competition

**1929 National Better Homes Contest Attracted 3,000 Entrees—
Winning Designs of Unusual Merit**

ARCHITECTS from California and Michigan, the Pacific Coast and the Middle West triumphed over those from the Atlantic Seaboard and the East, which heretofore has been considered both the center and the cradle of all that is best in American architecture, in creating the grand prize-winning designs submitted in the 1929 National Better Homes Architectural Competition.

Announcements of the winners of the three grand prizes and of the thirty-nine regional awards totaling \$29,000 in cash prizes was made by Raymond M. Hood, president of the New York Architectural League and internationally known member of the American Institute of Architects, chairman of the National Jury of Awards.

First and second prizes went to Los Angeles, Calif., architects, while the third prize went to a Detroit architect. H. Roy Kelley, past president of the Los Angeles Architectural Club, is the winner of the first grand prize of \$5,000. Another of Mr. Kelley's designs won honorable mention in the national competition. Both these designs had already won awards of \$500 in the Pacific Southwestern States regional competition.

Harrison Clarke, another member of the Los Angeles architectural profession, is the winner of the second grand prize of \$3,000.

Amedeo Leone, of Detroit, is the winner of the third grand prize of \$1,500.

In discussing this competition conducted by the Home Owners Institute as a laudable effort toward the improvement of home design in all sections of the country, Raymond Hood, speaking for the jury, said:

"Community service and improvement has long been the ideal of American journalism. Architecture, more than any other art or science, puts its stamp upon the community, a seal which he who

runs or rides may read. A town's aggregate taste as well as the comfort and contentment of its citizens is to be measured by the way in which its homes are built and equipped.

"As members of the National Jury of Award of the 1929 National Better Homes Architectural Competition we feel that the Home Owners Institute has furthered this competition for better home designs and is to be congratulated on its work. In stimulating architects to design homes which are at once of a high calibre in exterior design and efficient in space utilization within, it has taken a step forward and the entire field of architecture will benefit by it.

"We hope it will do more of it. We hope architects will continue to co-operate as contestants and as jurors. We believe this work merits the support of the architectural profession. Through the continuation of efforts of this sort we look forward to the development of a finer type of American small-house architecture."

L. Porter Moore, president of Home Owners Institute, for many years active in the fight against poor home design and construction, expressed himself as well pleased with the results of the competition.

"It has drawn the attention of the architectural profession to the need of better home designs and room arrangement. More than 3,000 students, draftsmen and architects from practically every state and several foreign countries participated.

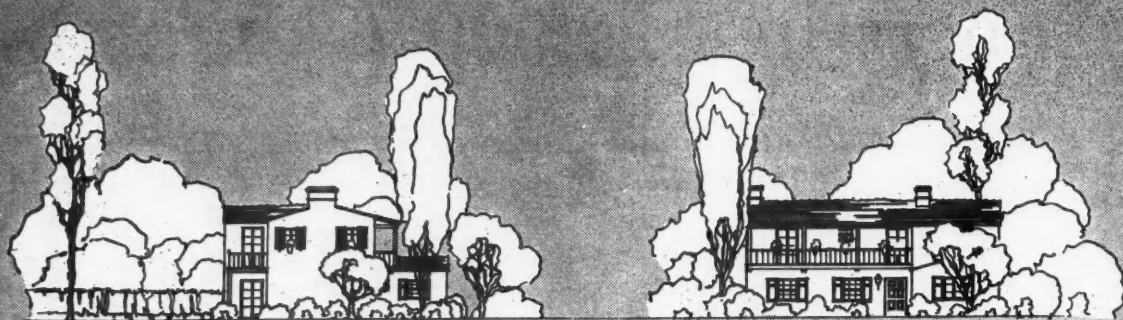
"It has resulted in the creation of finely executed designs which possess high architectural merit and which are suited to the needs of the small family with a modest income. These designs may be built in any section of the country. It has clearly defined architectural trends and structural tendencies which are important to designer, builder and owner. It has shown,

The Judges

Pictured below—in a moment of relaxation—the noted Architects who acted as Judges in the National Better Homes Architectural Competition.

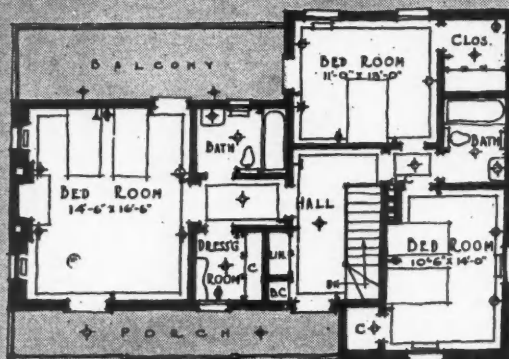
In the group are Raymond M. Hood, Chairman, John Holabird, Albert Kahn, Benno Janssen, Frank F. Forster, H. T. Lindeberg, Ralph T. Walker, John R. Kilpatrick, Winold Reiss and H. U. Nelson.



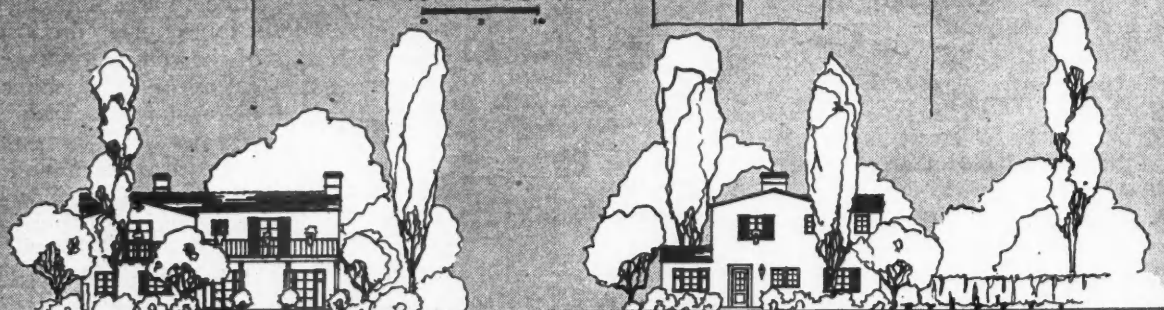


SIDE ELEVATION

FRONT ELEVATION

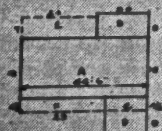


SECOND FLOOR PLAN

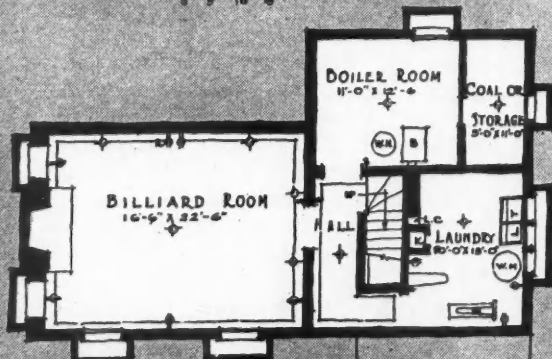


REAR ELEVATION

SIDE ELEVATION



A	12'-0" x 16'-6"	21.60
B	11'-0" x 12'-0"	13.20
C	10'-6" x 14'-0"	14.84
D	10'-6" x 14'-0"	14.84
E	10'-6" x 14'-0"	14.84
F	BALCONY 4'-0" x 6'-0"	2.40
TOTAL		61.72



BASEMENT FLOOR PLAN

SYMBOLS

- H. HANGING
- D. DOILER
- W.H. WATER HEATER
- L.C. LAUNDRY CHUTE
- I. INCINERATOR
- W.M. WASHING MACHINE
- L.T. LAUNDRY TRAYS
- R. RADIATORS

1929 NATIONAL BETTER HOMES ARCHITECTURAL COMPETITION CLASS B

Submitted by
"NOM-DE-NOM"

BASEMENT and Second Floor Plans of Design Awarded First Prize of \$5,000; H. Roy Kelley, Los Angeles, Calif., Architect. For first floor plan and perspective see page 100.

for instance, that there is a distinct trend toward houses built of a single material, such as common brick or metal lath and stucco construction, rather than houses utilizing a combination of materials.

"It has shown that houses of distinctly formal design, such as pure Colonial or Spanish, are not as popular as composite designs in which architectural style periods are intermingled. It has shown that many modern accessories to living comfort may be economically incorporated in a house containing 27,000 cubic feet of space at no sacrifice of architectural perfection or convenience of room lay-out. I refer to such accessories as a second bath, a livable basement with fireplace, built-in laundry chute, incinerator and conduits for telephone wires.

"I firmly believe that as the building program gets under way and as these prize winning and honorable mention designs are constructed throughout the country housing standards will be raised and the economy and wisdom of using first quality materials and approved methods of construction will be realized by home builders and buyers as never before."

First Prize Winner Explains His Design

H. Roy Kelley, winner of the first grand prize states that the following reasons actuated him in the design of the home which he submitted for competition.

"I decided on that type of house primarily because of its simplicity and adaptability to a sixty-foot lot, because it is different and less stereotyped than most houses, because it can be carried out with a certain amount of Colonial character which would make it adaptable to both Eastern and Southern sections of the country. For California, Florida, Louisiana and other areas with a Spanish background it can have Spanish Colonial character, thus making it ideally adapted to climate environment and historical precedent. At the same time the design provides more livability than is usually obtained in the more extreme Spanish type of dwelling which has become somewhat prevalent throughout the United States, but unfortunately is not often related either to its environment or the living needs of a people with an Anglo-Saxon background.

"The type of house which I submitted is a fusion of the

Spanish and the American Colonial. It combines the romanticism and picturesque qualities of the Spanish and the domestic simplicity and livability of the Colonial and offers a fitting background for accepted forms of domestic planting and early American types of furniture.

"This type of house can well be adapted to any section of the country. I also decided upon this type because of its adaptability to a simple, compact and straightforward plan which can be worked out in a very small area, utilizing practically all of this area for actual living needs. This should mean not only economy in initial construction cost but economy and ease of housekeeping and upkeep."

Cost Price to Build Prize-Winning Homes

Three New York architects have submitted approximate costs of constructing the three suburban homes which won the grand prizes in the 1929 National Better Homes Architectural Competition.

Frank J. Forster estimates that the \$5,000 grand prize winning design by H. Roy Kelley of Los Angeles could be built around New York at a cost ranging from \$16,500 to \$17,923, depending upon the location of the property and the materials and equipment used. The plan is for a house of Southern Creole type, containing seven rooms, three baths, basement billiard room and laundry, first floor lavatory, dining nook and dressing room off the master's chamber. The home contains 29,873 cubic feet of space, including the detached double garage.

Mr. Forster also estimates that the \$3,000 grand prize winning design by Harrison Clarke, Los Angeles architect, could be built in this section at a cost ranging from \$14,700 to \$16,075. This plan is for a house in the English Georgian style which includes six main rooms, two baths, basement recreation room and laundry, first floor lavatory and dining alcove. It includes 26,793 cubic feet of space.

According to Leland Hubbell Lyon, of the New York architectural firm of Lyon & Taylor, the first prize Kelley design could be built in this section for \$16,500, and the second prize Clarke design for \$14,700.

"These figures," says Mr. Lyon, "are considered average for construction in the metropolitan area of New York."

Regional Contest Winners

Following the selection of the winning and mention designs in the national competition, names of the winners in the thirteen regional competitions were announced. These winners are:

Region one, New England States—Constantin A. Pertzoff, Cambridge; Francis Durfee Johnson, Belmont, and Royal Barry Wills, Boston, all of Massachusetts.

Region two, North Atlantic States—Carlos D. Barragan and Earl Purdy associated, and James G. Resh, all of New York City, and J. R. Howe and E. J. Hergenroeder associated, of Pittsburgh.

Region three, Middle Atlantic States—Samuel J. Collins, Staunton, Va.; W. N. S. Pugh of Baltimore, Md., and Forrest W. Coile, Asheville, N. C.

Region four, Southeastern States—Jefferson M. Hamilton, Tampa, Fla.; Britton Kirton, Jacksonville, Fla., and T. L. Waterhouse, Atlanta, Ga.

Region five, Michigan—Rhees E. Burket, Hubert F. Howe and Amedeo Leone, all of Detroit.

Region six, Ohio-Kentucky—D. E. Stevens and Fred H. Kock, both of Cincinnati, and Fred J. Abendroth, Cleveland.

Region seven, South Central States—George P. Turner and Allan L. Bartlett, both of Birmingham, Ala., and J. A. Sloan, Arkadelphia, Ark.

Region eight, North Central States—Alvin Grellinger, Milwaukee; Fred E. Sloan and Elmer A. Johnson associated, Chicago, and Conner & O'Connor, Chicago.

Region nine, Mid-Western States—Otto McCrackin, Hutchinson, Kan.; Mrs. W. M. Ingemann, St. Paul, Minn., and H. H. Eads, Minneapolis, Minn.

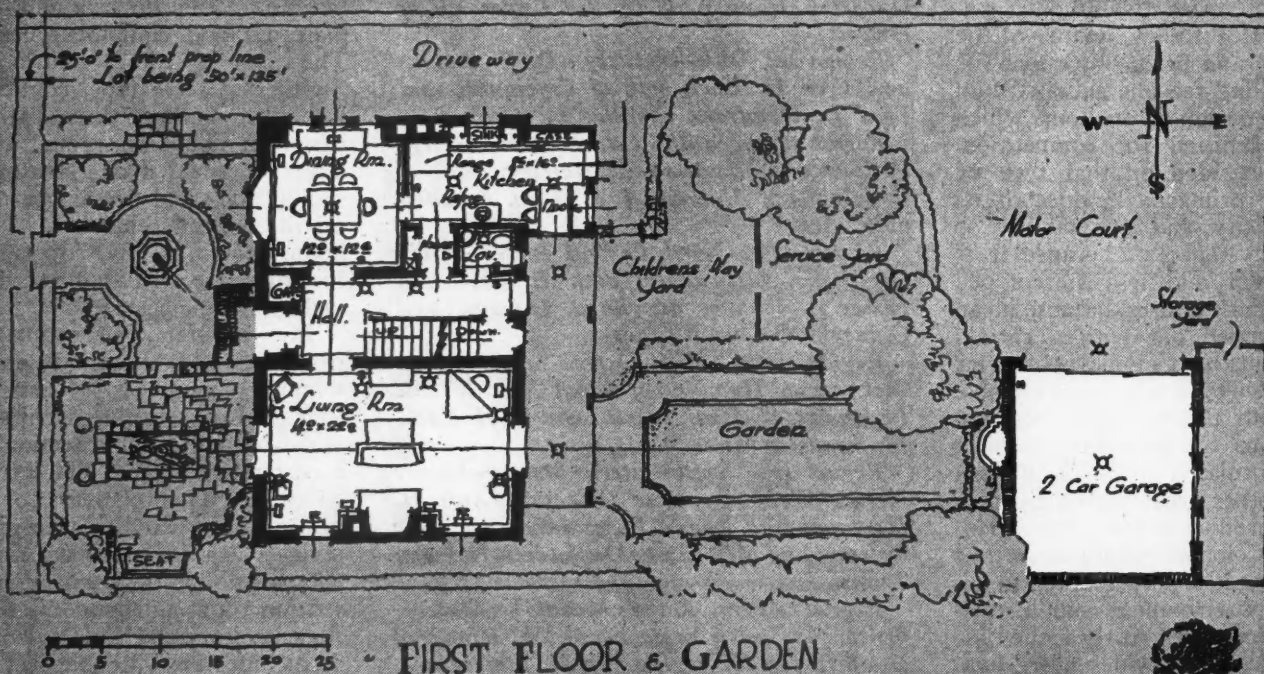
Region ten, Southwestern States—Sidney Nelson Wellborn, New Orleans; Louis H. Hammeth and August Perez associated, New Orleans, and Miss Esther Duckworth, Houston, Texas.

Region eleven, Rocky Mountain States—Gordon F. Street, Santa Fe, N. M., winner of two prizes in this region, and M. James Slack, Denver, Col.

Region twelve-A, Pacific Northwestern States—Hollis Johnston, Portland, Ore.; Jack Woodsmansie, Ray Marks and Hollis Johnston associated, Portland, Ore., and Livingstone H. Elder, Billings, Mont.

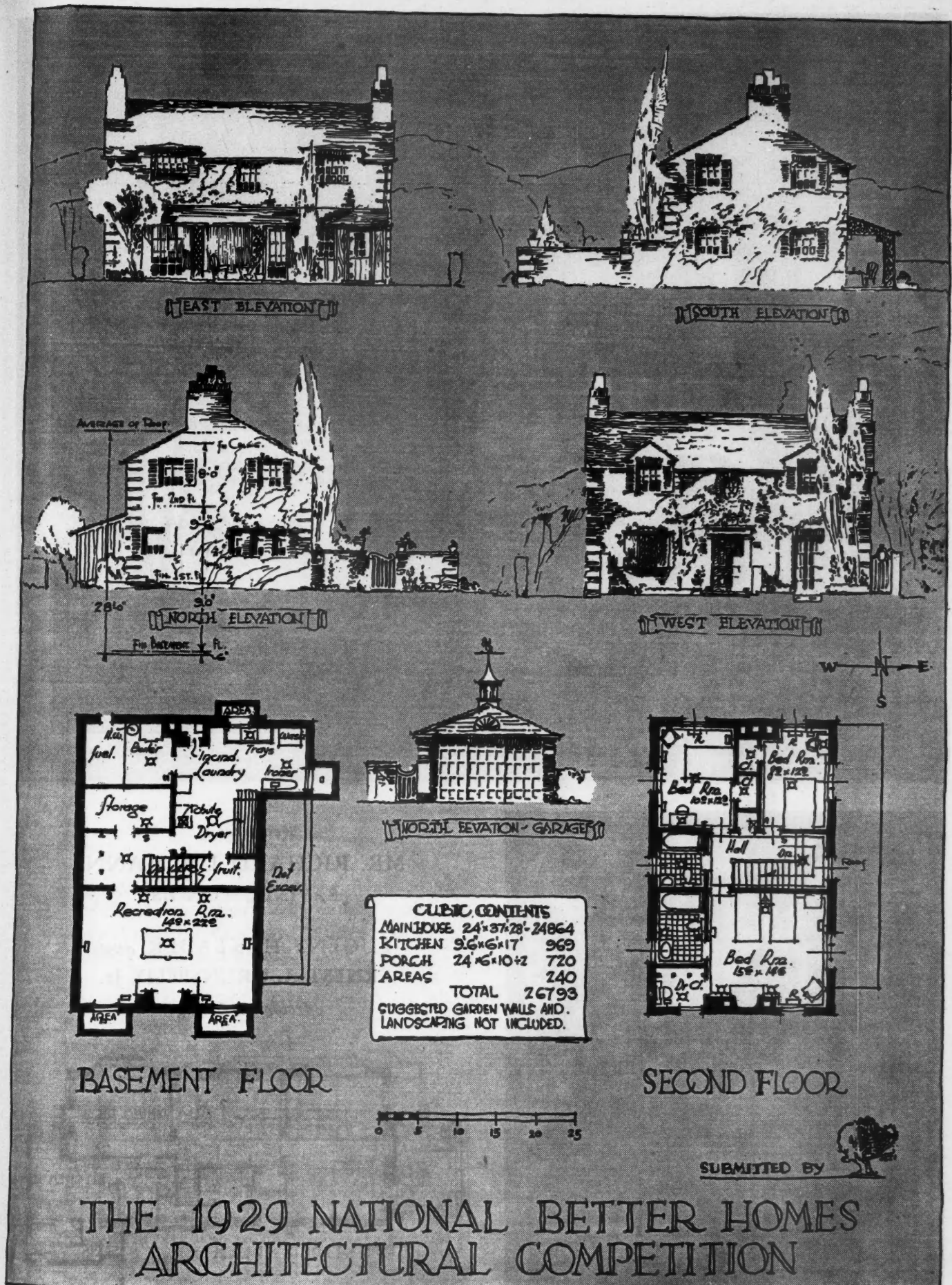
Region twelve-B, Pacific Southwestern States—H. Roy Kelley, winner of two prizes in this region, and Harrison Clarke, both of Los Angeles.

All of these Designs will be published in future issues of the American Builder.

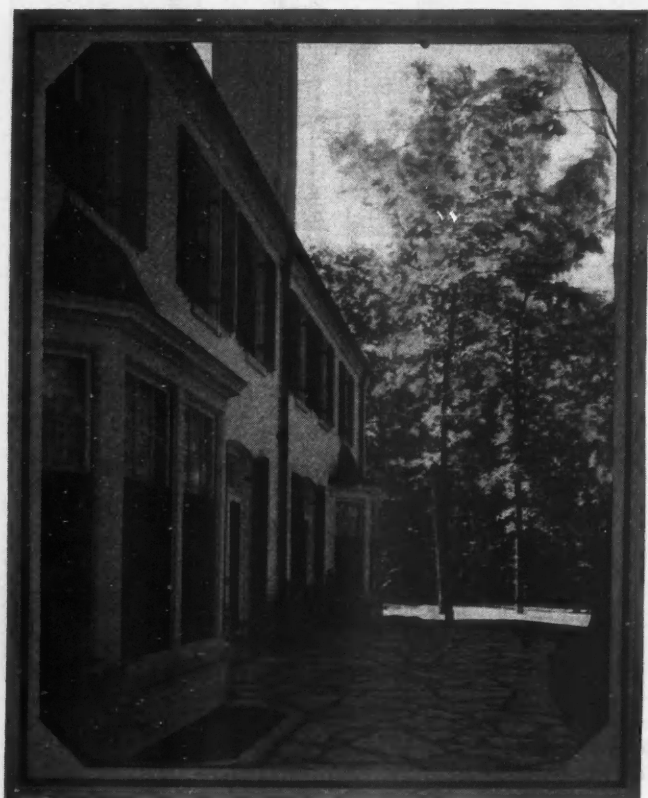


THE 1929 NATIONAL BETTER HOMES ARCHITECTURAL COMPETITION

ENGLISH Georgian Design Awarded Second National Prize of \$3,000; Harrison Clarke, of Los Angeles, Calif., Architect. For basement and second floor plans and elevations see opposite page.



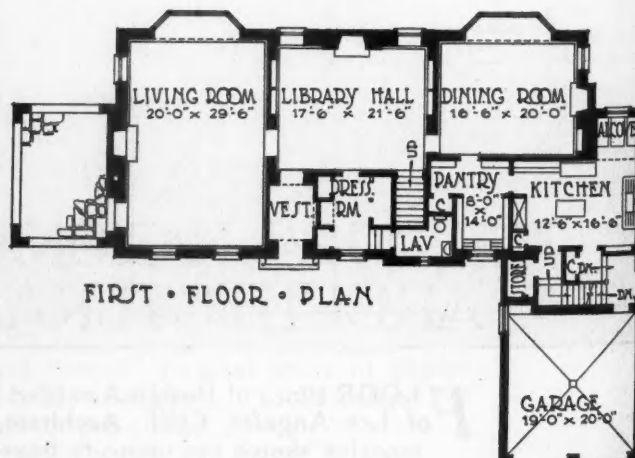
FLOOR Plans of Design Awarded Second Prize of \$3,000; Harrison Clarke, of Los Angeles, Calif., Architect. For first floor and plot plan, and perspective sketch see opposite page.



Residence of
MR. RICHARD UHLMANN
 RAVINIA, ILLINOIS

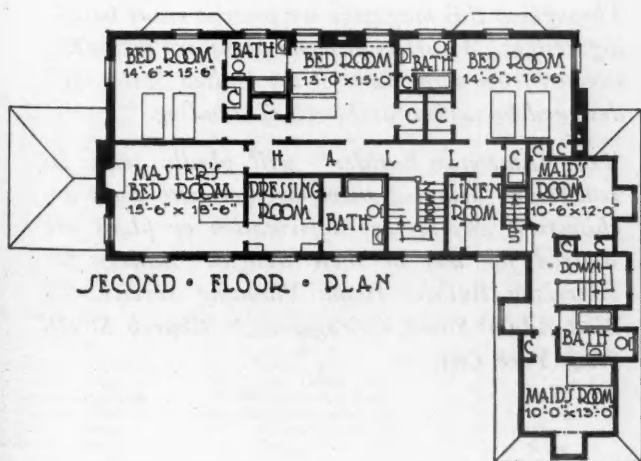
EUGENE H. KLABER and
ERNEST A. GRUNSFELD, Jr.

Architects, Chicago





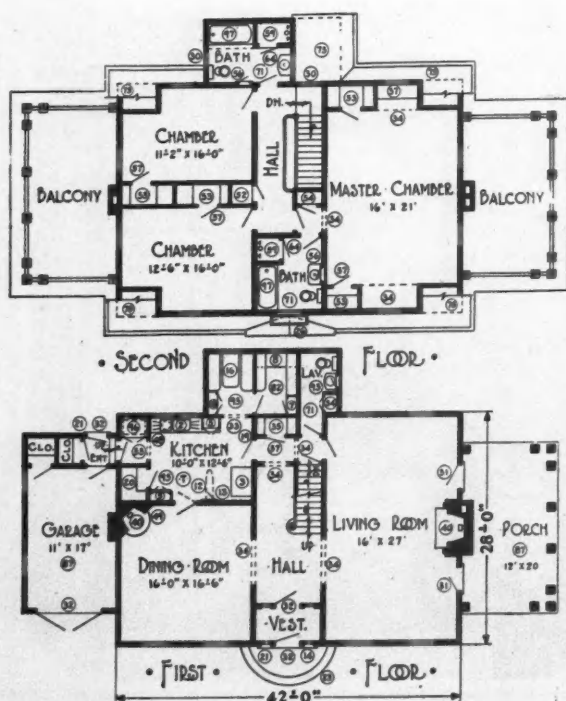
STATELY Interiors in the Richard Uhlmann residence harmonize with the Colonial exterior. Views show dining room and library.





NO DARK CORNERS HERE

Perfectly balanced Dutch Colonial Design puts six large, well-lighted rooms, two baths and attached garage into a compact home

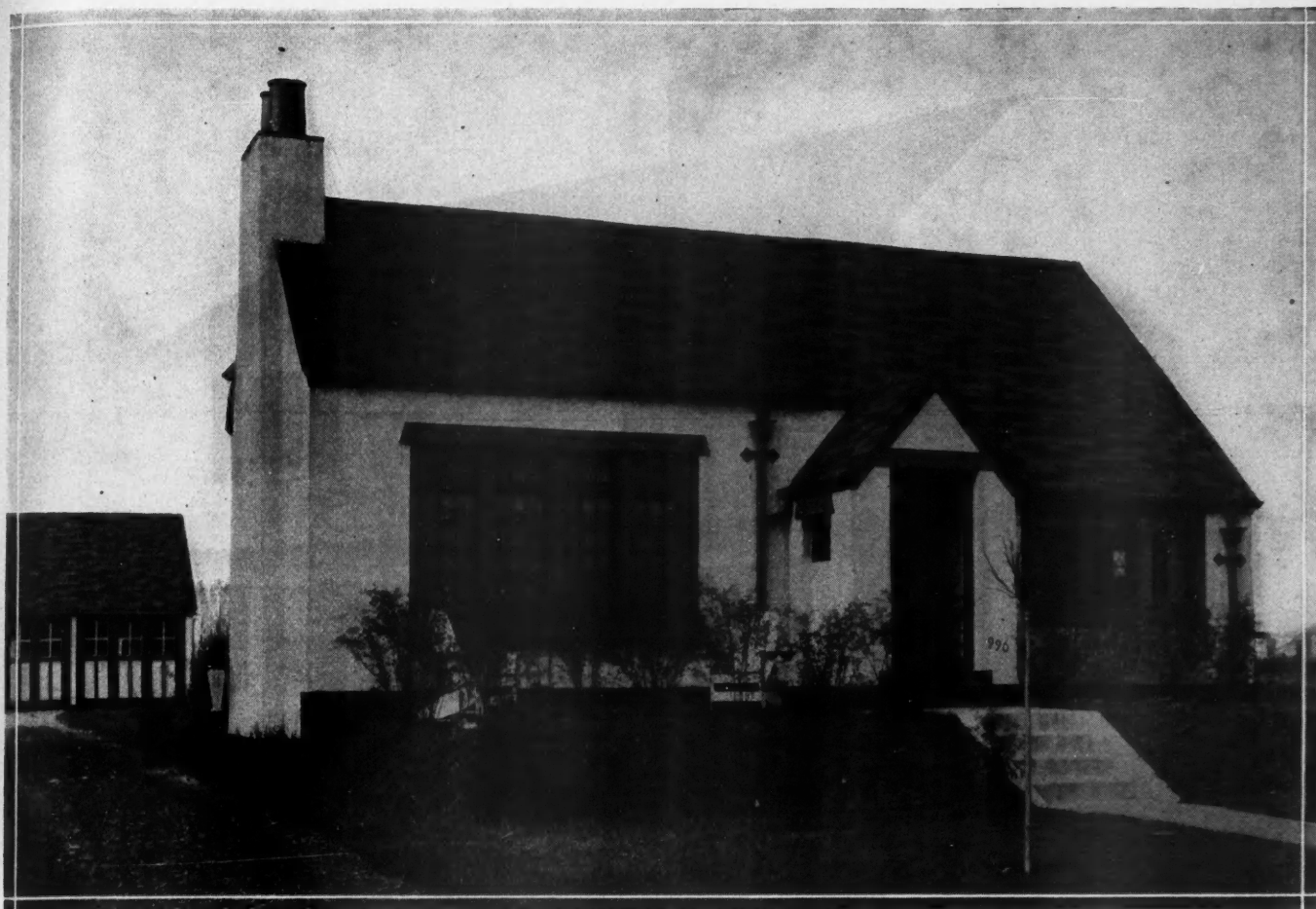


SERVICE TO HOME BUILDERS

Throughout this magazine we present many building designs. A variety of home plans are included, selected from many parts of the United States and designed by various architects of standing.

The "American Builder" will gladly serve its readers by bringing them together with these architects if any further information or plans are desired for any of these designs. Address the American Builder Home Planning Service, 105 West Adams Street, Chicago, or 30 Church Street, New York City.

1. K
2. I
3. K
4. K
5. K
6. K
7. K
8. K
9. K
10. V
11. I
12. I
13. E
14. B
15. K
16. D
17. V
18. C
19. T
20. P
21. O
22. P
23. F
24. P
25. C
26. F
27. F
28. I
29. T
30. A
31. F
32. G
33. C
34. P
35. C
36. B



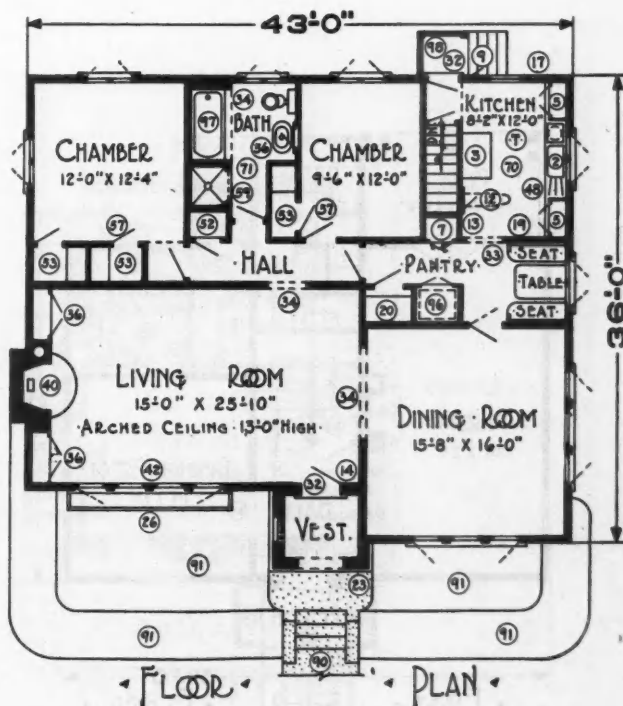
NESTLES CLOSE TO EARTH

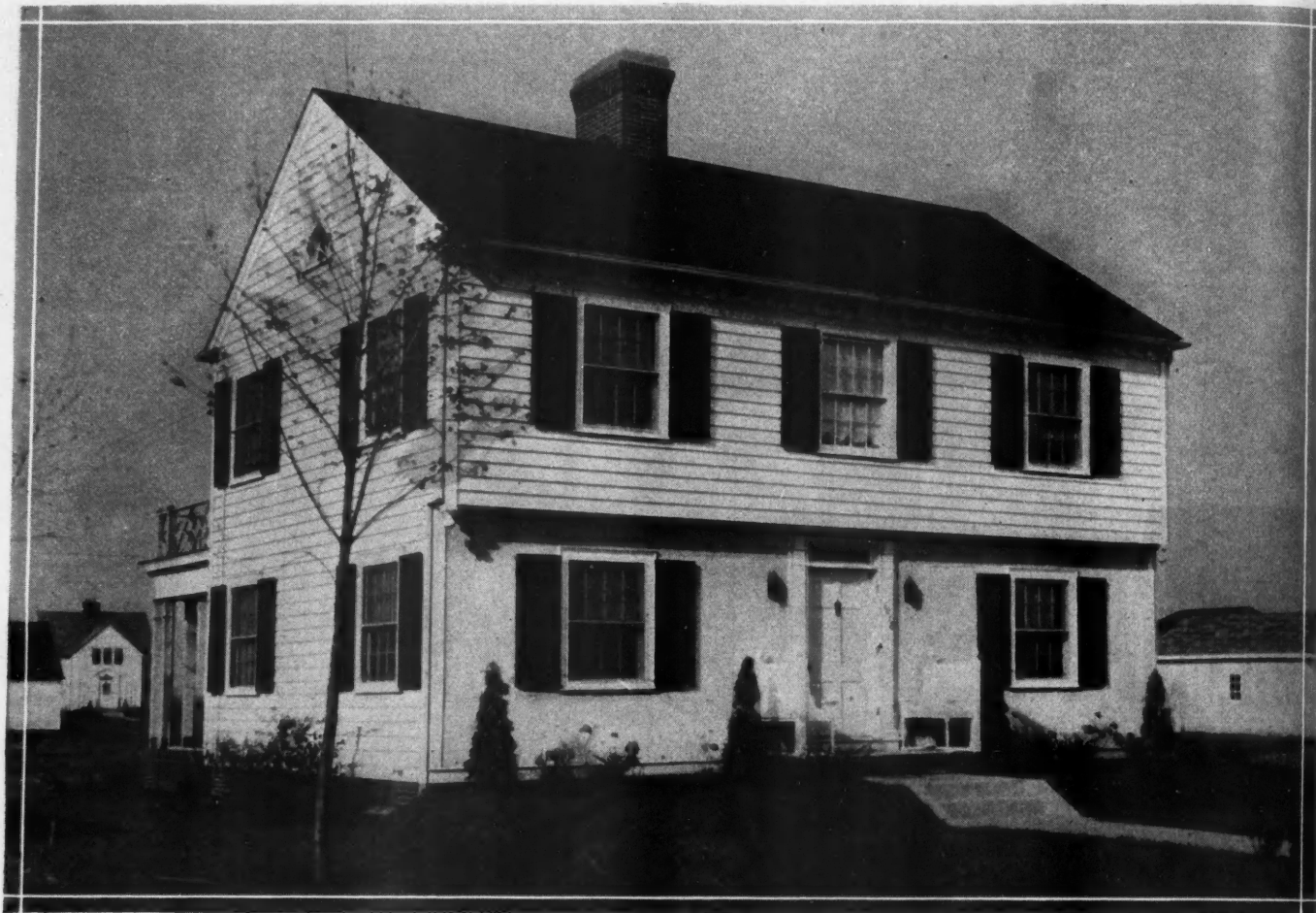
Grass Terrace Gives Low Effect to this Charming Irish Cottage of Five Rooms, Bath and Breakfast Nook.

Key to Plan Symbols

Used on Some of the Plans in this Department

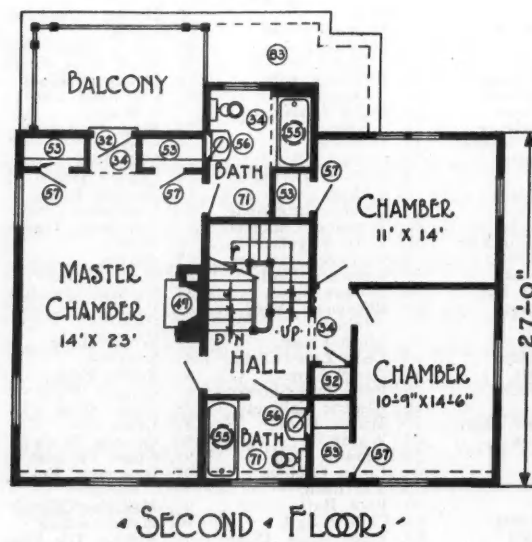
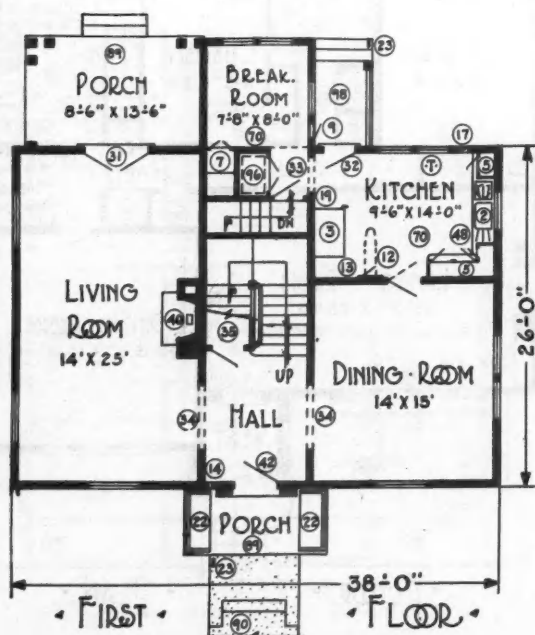
- | | | |
|-----------------------|--|--------------------------|
| 1. Kitchen Sink | 37. Seat | 67. Dining Combination |
| 2. Dishwasher Sink | 38. Phone Cabinet | 68. Galv. Vent. Pipe |
| 3. Range | 39. Disappearing Stairs | 69. Vent. Pipe Grille |
| 4. Refrigerator | 40. Fireplace with Damper | 70. Linoleum Floor |
| 5. Kitchen Dresser | 41. Wood Casement Sash | 71. Tile Floor and Walls |
| 6. Hanging Closet | 42. Transom | 72. Steel Casement Sash |
| 7. Broom Closet | 43. Clothes Chute | 73. Tile Roof |
| 8. Pantry Shelving | 44. Built-in Dining Unit | 74. Copper Hood |
| 9. Package Receiver | 45. Disappearing Beds | 75. Shingle Roof |
| 10. Water Heater | 46. Dressing Cabinets | 76. Swimming Pool |
| 11. Incinerator | 47. False Fireplace | 77. Telephone Outlet |
| 12. Ironing Board | 48. Garbage Container | 78. Nook |
| 13. Electric Iron | 49. Fireplace Unit | 79. Alcove |
| 14. Built-in Mail Box | 50. Storage Space | 80. High Closet |
| 15. Kitchen Table | 51. Efficiency Wardrobe | 81. Package Receiver |
| 16. Dining Nook | 52. Linen Closet | 82. Pantry |
| 17. Ventilating Fan | 53. Cedar Lined Closet | 83. Roof |
| 18. China Closet | 54. Towel Closet | 84. Wood Hood |
| 19. Thermostat | 55. Bath Tub Shower | 85. Louvres |
| 20. Pot Closet | 56. Electric Cabinet | 86. Rafter Ends |
| 21. Outside Light | 57. Mirror Door | 87. Cement Floor |
| 22. Porch Seats | 58. Wardrobe | 88. Stone Floor |
| 23. Foot Scraper | 59. Shower Stall | 89. Brick Floor |
| 24. Pergola | 60. Linen Cabinet | 90. Cement Walk |
| 25. Combination Door | 61. Sitz Bath | 91. Grass Terrace |
| 26. Flower Box | 62. Foot Bath | 92. Basement Entrance |
| 27. Fountain | 63. Child's Bath | 93. Medicine Cabinet |
| 28. Ice Door | 64. Plate Glass Door | 94. Metal Ceiling |
| 29. Trellis | 65. Kitchen Cabinet | 95. Rubber Tile Floor |
| 30. Art Glass | 66. Skylight with Art Glass Sash Below | 96. Refrigerator |
| 31. French Doors | | 97. Built-in Tub |
| 32. Glazed Door | | 98. Wood Porch |
| 33. Cased Opening | | 99. Party Line |
| 34. Plaster Arch | | |
| 35. Coat Closet | | |
| 36. Book Case | | |





WITH OVERHUNG SECOND STORY

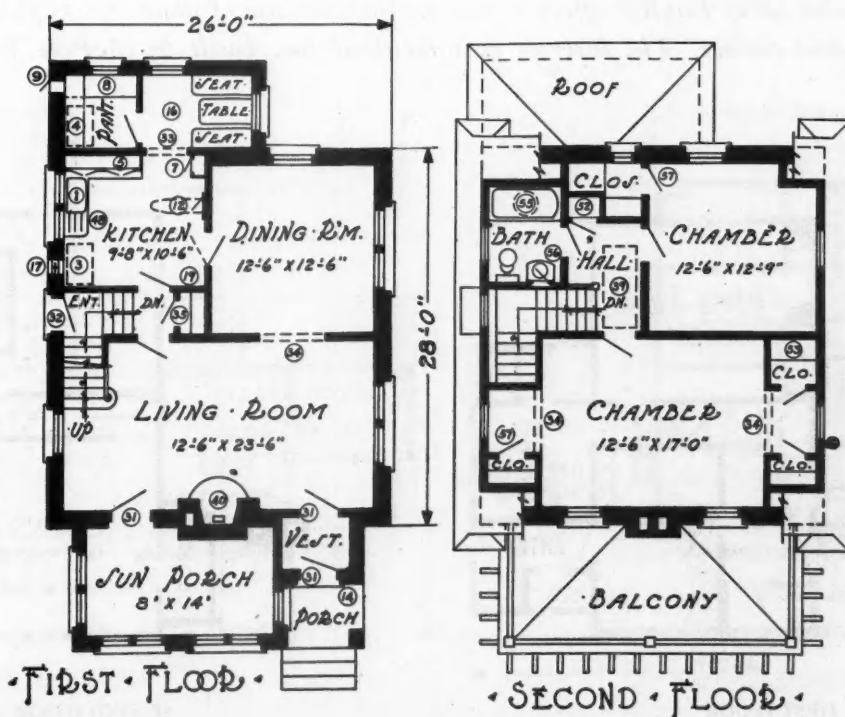
Early Colonial Details embellish this modern home, executed faithfully in the old-time manner. Seven rooms and two baths in ideal arrangement





FOR THE NARROW SITE

Compact and substantial home of five rooms, sun porch, breakfast room and bath only 26 feet wide; main section is 28 feet deep.

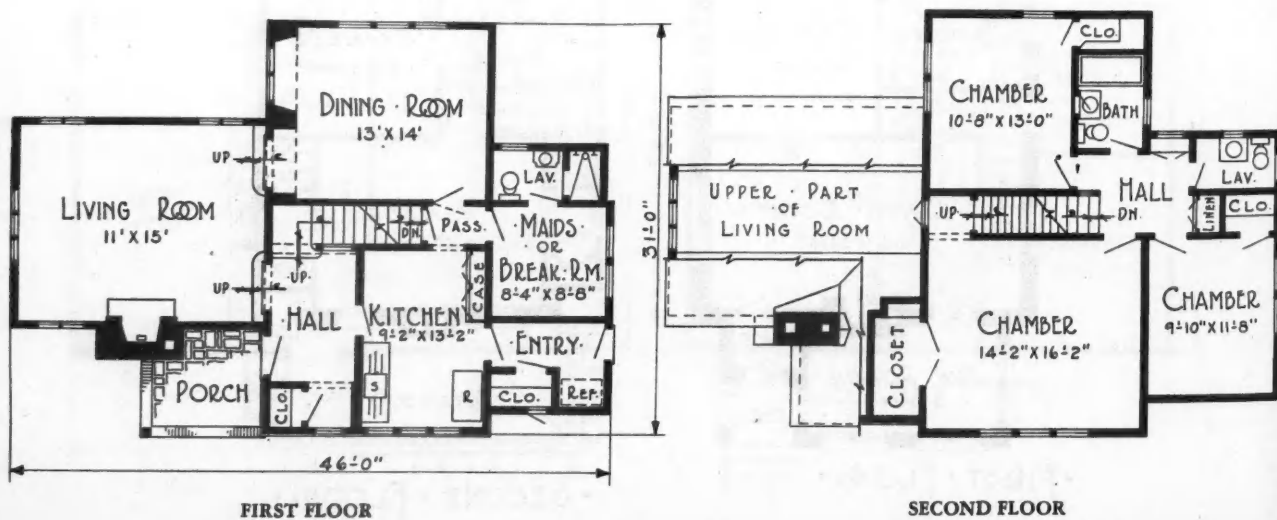




MARCEL VILLANUEVA, East Orange, N. J., Architect

MADE OF MANY MATERIALS

A quaint early English effect is secured here by use of stone, brick, plaster work and timber. The interior is individual too. Built by McPike Bros.

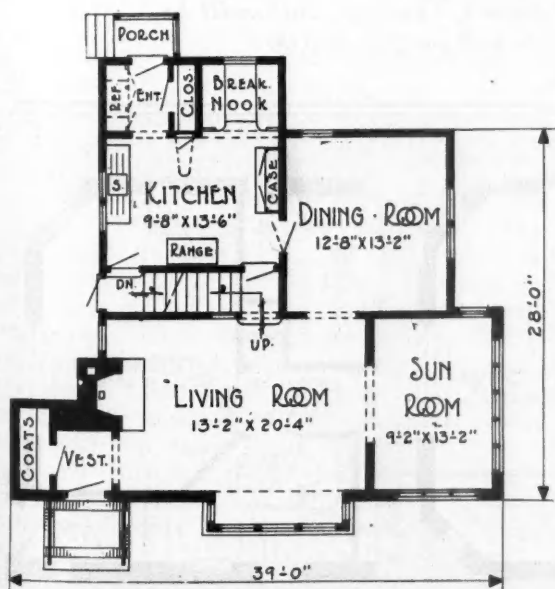




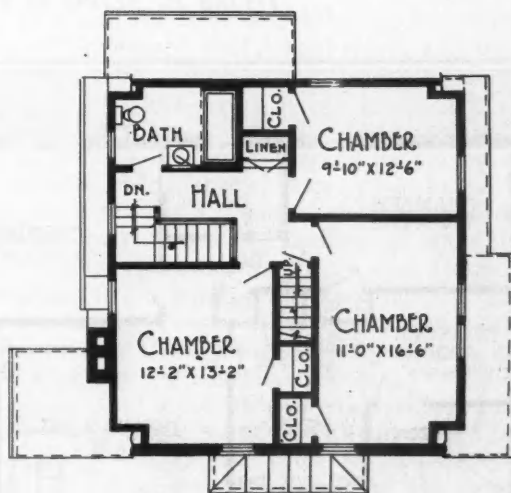
MARCEL VILLANUEVA, East Orange, N. J., Architect

BROAD FRONT FORWARD

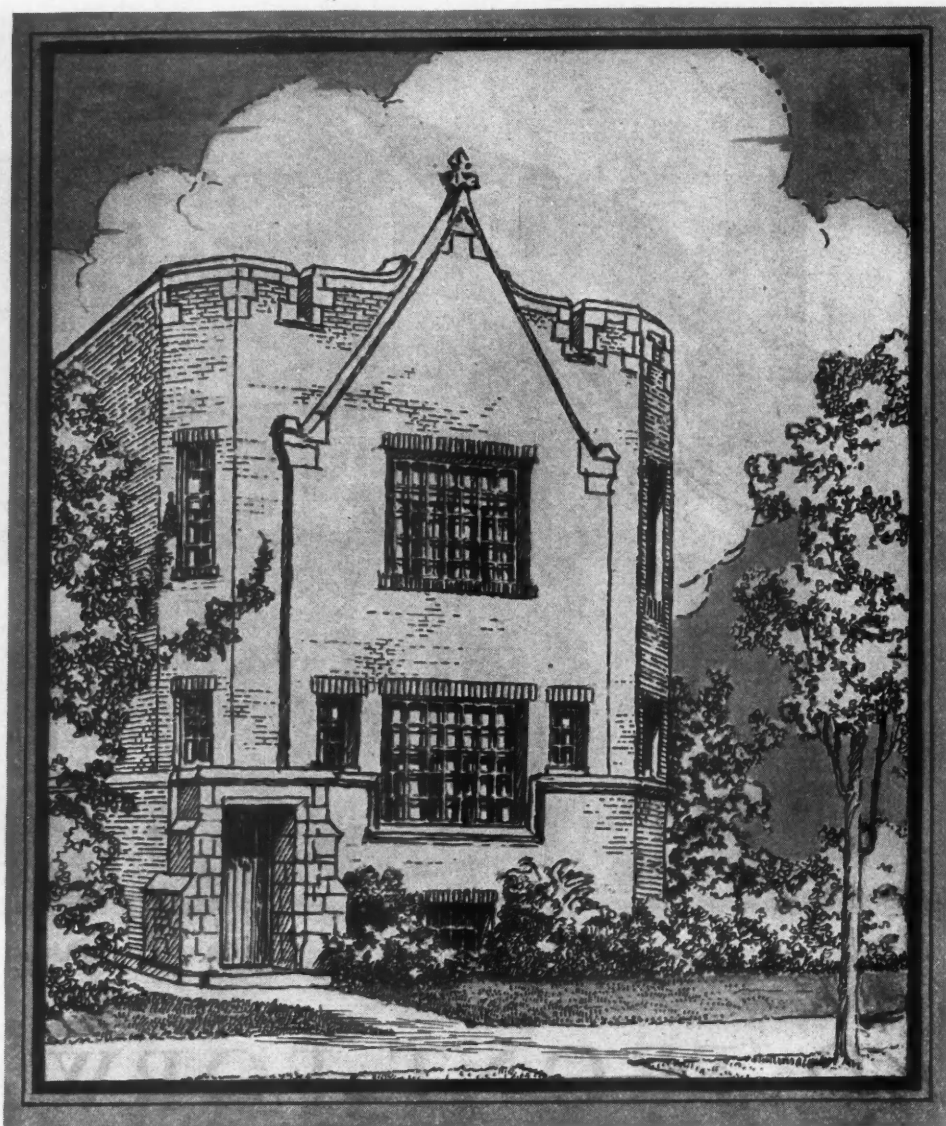
Snug home design 28 feet square manages to turn a 39 foot front toward the street. Sweeping roof lines accent the charm. McPike Bros. builders.



FIRST FLOOR

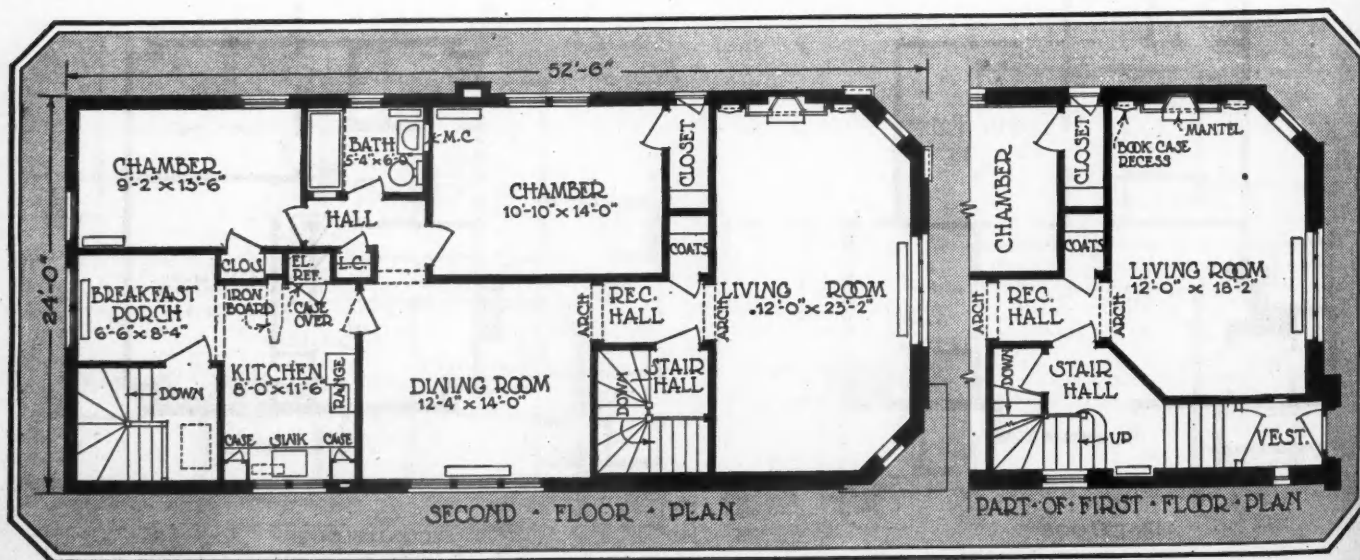


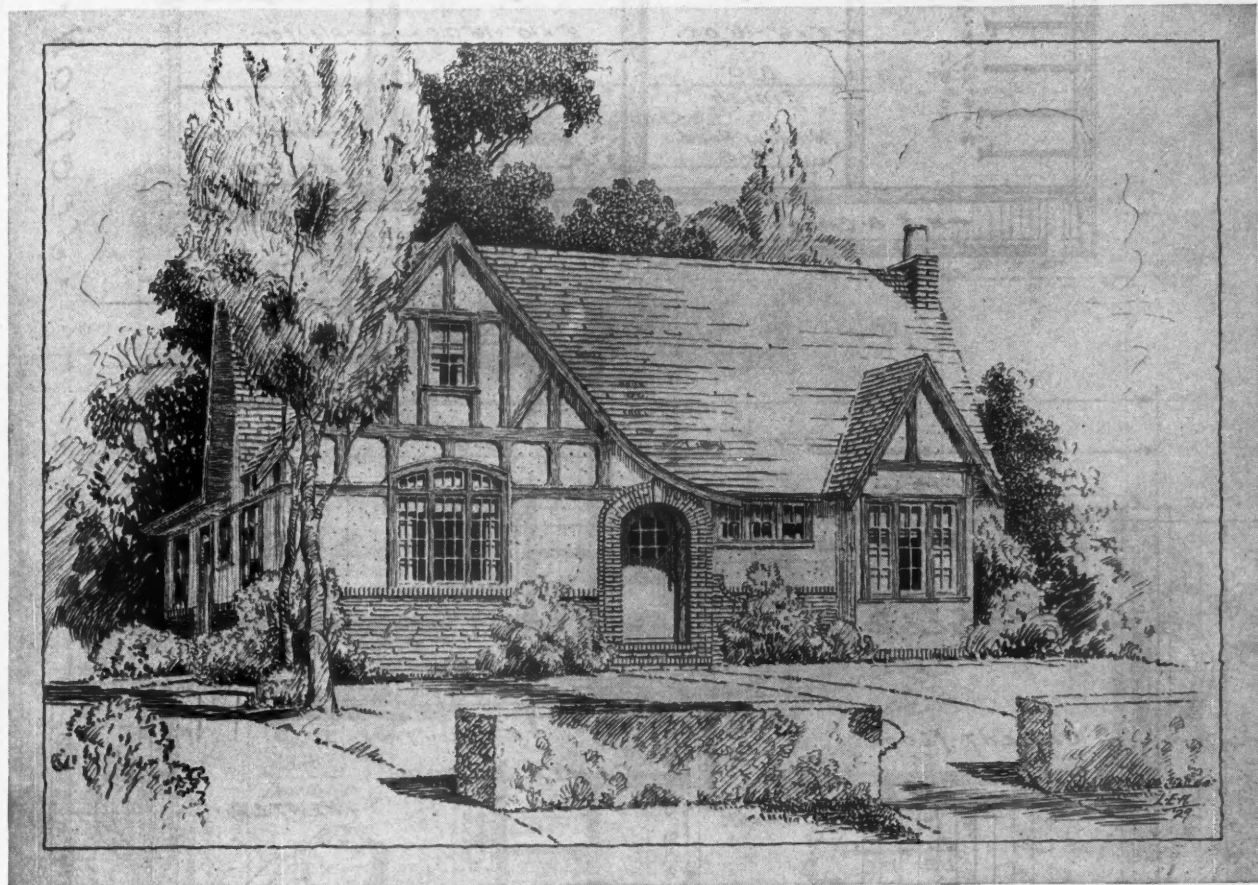
SECOND FLOOR



LATEST IN TWO-APARTMENTS

Double Five Designed by Wm. G. Kreig, Architect, Chicago, and built by Irving A. Marks in Berwyn, Illinois, to sell for \$20,000.00





THE AMERICAN BUILDER ALL-FEATURE HOME

Complete Working Plans

*Popular English Style Home fully Presented in
Eighth-Inch Scale Drawings*

A DELIGHTFUL little English-type home of seven rooms, designed by our own architects, is presented herewith. Complete working plans, drawn to one-eighth inch scale, are reproduced on the four pages following.

Thousands of our readers have in the past found these working plans extremely valuable. They are a reliable guide to the student of architecture and for builders interested in plan reading, estimating and associated subjects; but still more important, many have actually built from these plans—either directly from these one-eighth inch scale drawings or re-drawn to the customary quarter inch scale.

A valuable collection of popular, quick selling home designs can be easily built up by AMERICAN BUILDER readers at no extra expense, simply by taking care of these designs published each month.

Our All-Feature Home this month is indeed a jewel of artistic design and convenient planning. Study the

basement plan and the main floor plan on the next two pages and note the large, well lighted rooms and the step saving arrangement. The sleeping rooms on the first floor are well separated from living room and dining room, assuring privacy and quiet. Nevertheless, they are close at hand. Additional sleeping rooms and storage are provided on the second floor, while in the basement, with its eight large windows, there is opportunity for developing many interesting features of home living.

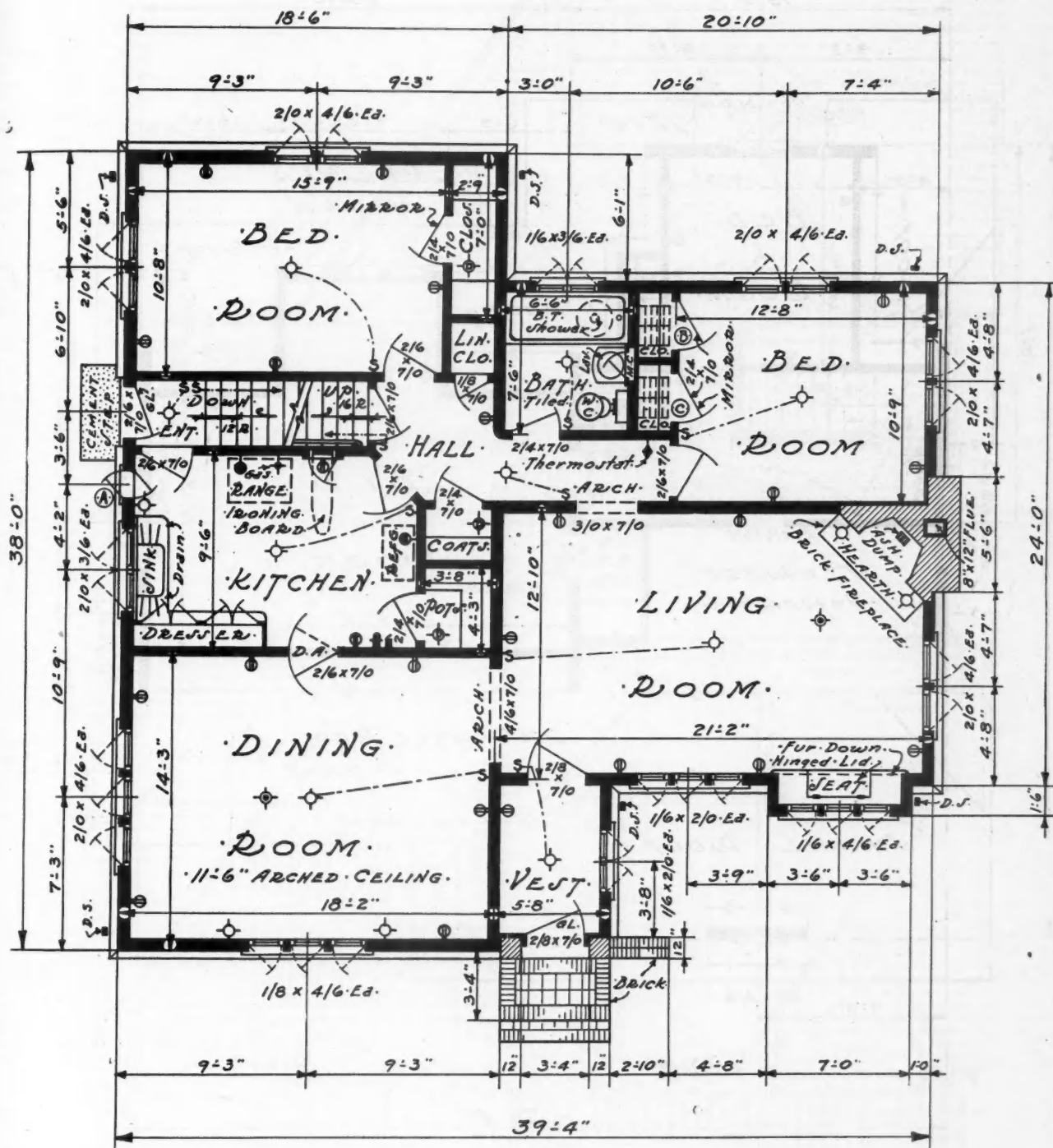
In construction, this house is 2 by 4 stud frame with brick veneer up to the window sills, resting on a poured concrete foundation. The upper walls are portland cement stucco over metal lath. Wood panelling in the gables add an artistic old English touch.

An attractive color scheme for this home would be mixed red and brown rough face brick for the foundation course and around the door opening, half-timber work, door frames and cornice tobacco brown, stucco panels light tan or cream, and roof of stained shingles brown and red.

NEXT MONTH
Complete Plans of
6-Room Shingle Home

NOTE.

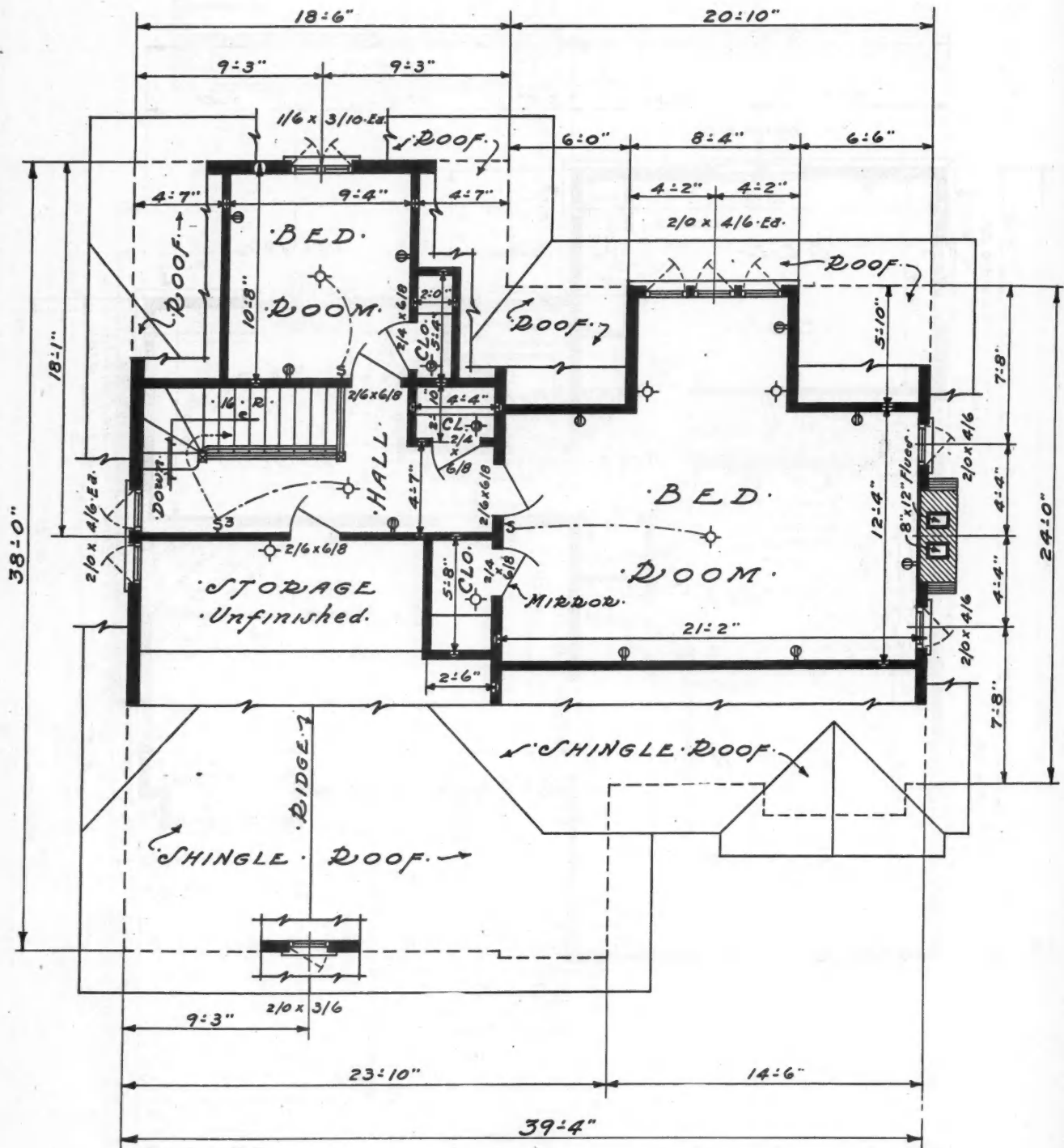
- (A) - PACKAGE RECEIVER.
(B) AND (C) CLOSETS TO HAVE EFFICIENCY WARDROBES.



FIRST FLOOR PLAN.

SCALE $\frac{1}{8}'' = 1'-0''$.

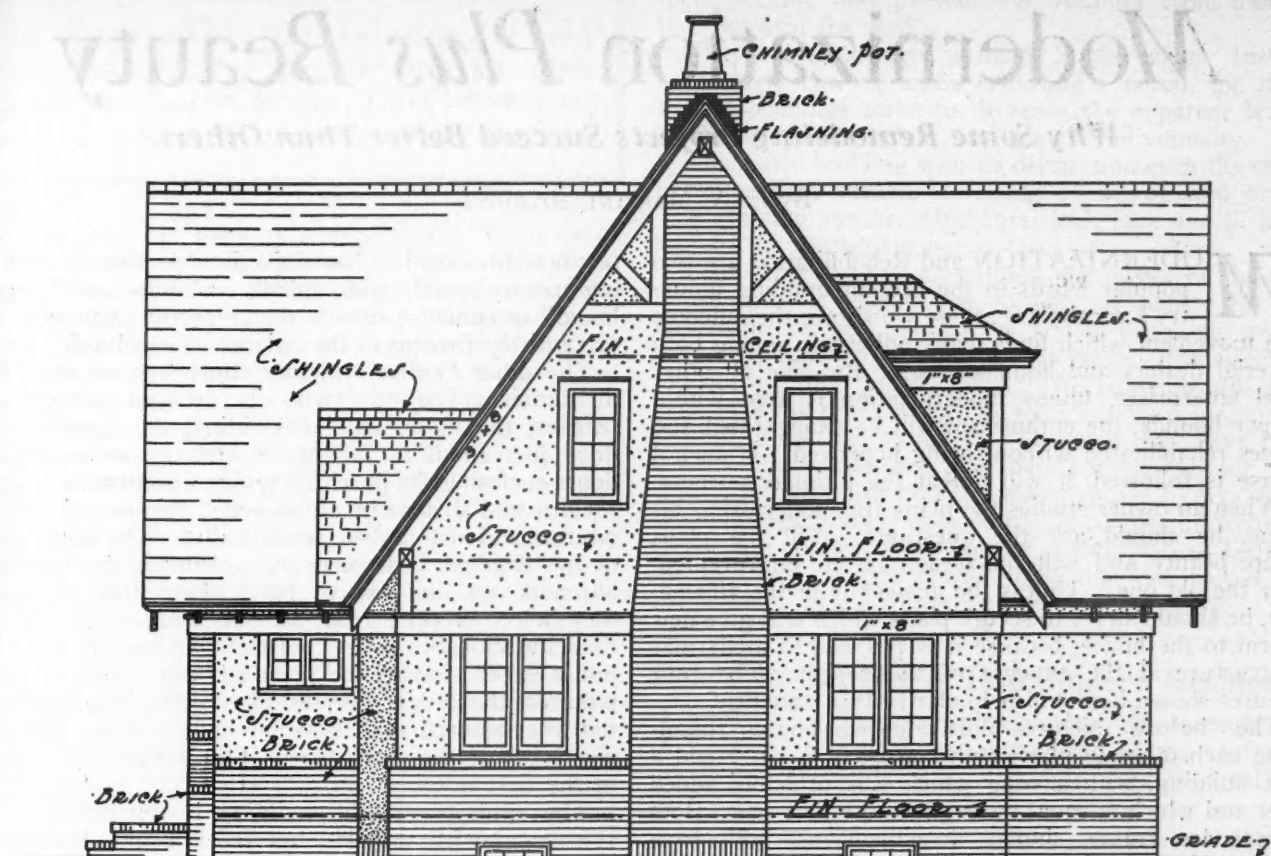
The Main Floor of Our All-Feature Home Has Two Bed Rooms and Bath Besides the Well-Arranged Living Room, Dining Room and Kitchen.



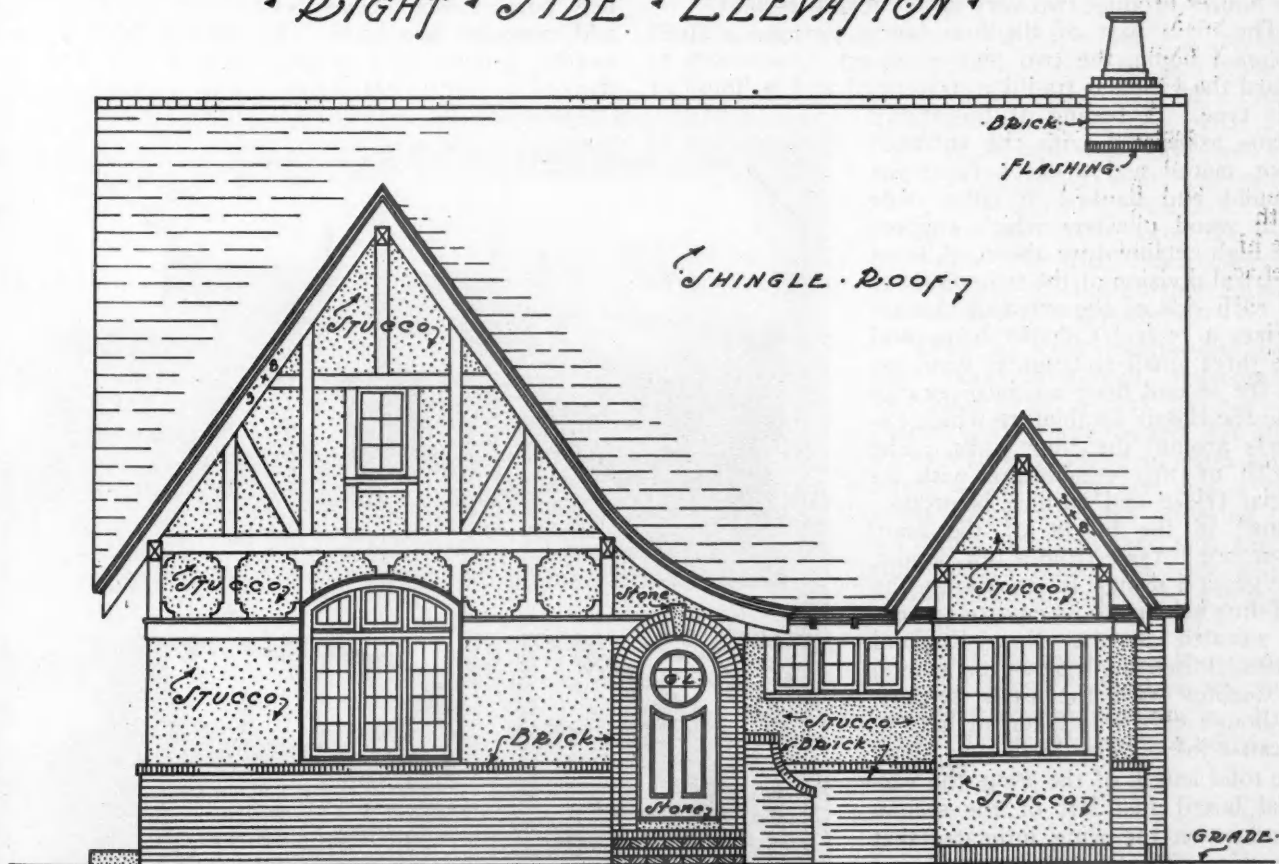
• SECOND FLOOR PLAN •

• SCALE • 1/8" = 1'-0"

There Is Considerable Usable Space Up "Under the Roof" of our All-Feature Home.
A second bath room could be easily provided.



• RIGHT • SIDE • ELEVATION •



• FRONT • ELEVATION •

• SCALE $\frac{1}{8}'' = 1'-0$

The Elevations of the American Builder All-Feature Home Show Accurately the Careful Detailing of This Design.

Modernization *Plus* Beauty

Why Some Remodeling Projects Succeed Better Than Others

By E. A. MARTINI, *Architect*

MODERNIZATION and Rehabilitation are two popular words in the present building industry's vocabulary; these words are the outcome of a movement which finds many adherents among both material dealers and home owners. But like all other good enterprises, unless modernization is kept within proper bounds, the enthusiasm will be exaggerated and homes rehabilitated without being improved. If such a course is followed, it will defeat the ultimate purpose.

When an owner studies the plans for modernizing his home, he should ask the question: Will the plans create beauty and will the design be an improvement over the old one? Unless the answer is in the affirmative, he should strive to secure plans which will give new charm to the house, because it is possible to modernize a structure at the expense of the design. The four pictures shown here will help clarify this statement.

The "before" pictures illustrate two houses resembling each other in plan; both consist of a story and a half building, with a wing which was probably added later and which is equal in length to the first unit. Both houses are frame, similar in dimensions, both have gable roofs with slight projections, and both are covered with wood siding. So far their descriptions tally, but the houses produce two very different impressions.

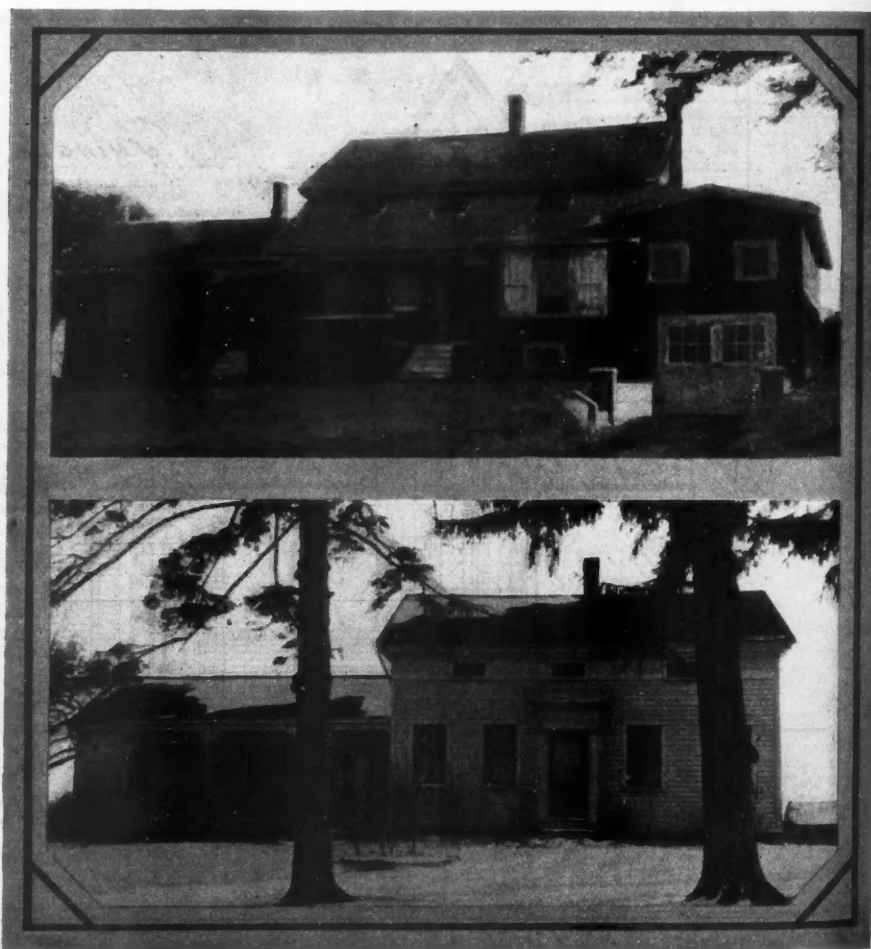
The main part of the first house pictures a small Colonial home, the two pine trees act as sentinels to guard the Colonial tradition associated with a house of this type. A feeling of hospitality seems associated with the entrance door placed a few steps from the ground and flanked at either side with wood pilasters which support the high entablature above. A symmetrical division of the two windows on each side of the entrance characterizes a typical Colonial home and the three small rectangular windows on the second floor are incorporated into the classic entablature which extends around the four walls. The width of this entablature with its fascia, frieze and cornice is proportioned to the height of the main structure. Aside from a few details, the general design is interesting, the building belongs to its environs; were it situated in the New England states, stories might be woven around it dealing with the early settlers. Although care was taken to hide it, because the cornice detail runs along the total length of the wing, the vertical board just left of the second window on the wing intimates that the wing was lengthened at a later date. A shorter wing would be bet-

ter, but this detail is less objectionable than its adjoining narrow porch with spindly columns and "gingerbread" ornaments; details that mar the symmetry and are entirely foreign to the balance of the house.

The other "before" picture illustrates an old house in Illinois. The roof with its decayed shingles and patches, the loose unpainted siding, the outside cellar door just about to fall apart, and the series of sash doors enclosing the porch all typify a picture of a shack, forlorn and dismal in all respects, minus any note of interest and with a low resale value. The large panes in the window sash seem to accentuate the building's bareness, and the row of porch doors look as though they were wrecked from an old house.

Unquestionably, the "before" picture of the first house excels that of the second house. In the "after" pictures, the order reverses for, taking into consideration the material each designer had on hand, the exterior view of the modernized Illinois house is superior to the first one.

The exterior of each building is remodeled and is re-covered with shingles, but the one has deteriorated and the other has profited by the change. The interesting facade of the original first house is defaced by a new porch raised above the level of the former steps and extended beyond the old building line so that the sloping ground necessitated erecting ugly high steps, flanked by buttresses, from grade to the porch floor.



This Owner Spent a Considerable Amount of Money for His "Modernization"—Pictured Above—and Spoiled His Home.

The Responsibility for the success of each home modernizing project rests on some American Builder Reader. Our Columns are open to you for an exchange of experiences.

The new built up piers protrude beyond the lines of the new facia, which curves down to rest on the piers; the porch roof joins the old building below the top member of the old cornice and produces an awkward junction which is emphasized by the large unsightly gaps to provide light for the small second floor windows.

The garage roof and the porch roof appear as though they were rammed in a collision and the garage addition produces an unbalanced composition. There is no symmetry on the front elevation, not even the basement window centers with the triple window above. High steps lead to the side entrance porch also, where the ugly junction of facia and porch post is repeated.

Turning back to the first picture, we notice that the original first building breathes an atmosphere of repose and refinement, an atmosphere we love to associate with a home; while the second photograph produces the opposite effect. This result contrasts sharply with the second house where the exterior changes improve the building. On this latter house the monotony of the roof is relieved by the new dormers with their outswinging casements which provide ventilation for the second floor; their roofs are low enough to maintain the original outline. New asphalt shingles laid in a hexagonal pattern over the old roof add interest to the texture. The alcove is also reroofed and its windows fitted with new upper sash; their small panes are an embellish-

ment because they prevent the windows from looking like holes in the wall.

The greatest change is made in the wing. Instead of an ugly row of doors enclosing a porch, the three arched openings serve to decrease the apparent length of the wing, add height, and give it individuality.

The entire building with its details and even the cellar entrance door creates a feeling of repose and order. The growing shrubs, which first look bare and ill kept, add to the attractiveness.

Comparing the two alterations, the owner of the first house spent a considerable amount of money for his modernization and spoiled his home; the other owner spent less money and improved his home. The two men did not use their talents alike. This principle was true even in Bible times when one man increased his money tenfold, the other buried it. The men may have been equally anxious to improve their homes, but one evidently did not know that the wisest course to take when rehabilitating a home is to employ a competent architect to prepare correct plans for the modernization, because the two new designs clearly show that one lacked the magic touch of an architect to reveal its beauty.



Converts Old House Into Modern Residence

HOW an old house can be modernized through the laying of oak floors, remodeling of the roof and other improvements was strikingly demonstrated by Mrs. Charles Treas, of Aberdeen, Miss.

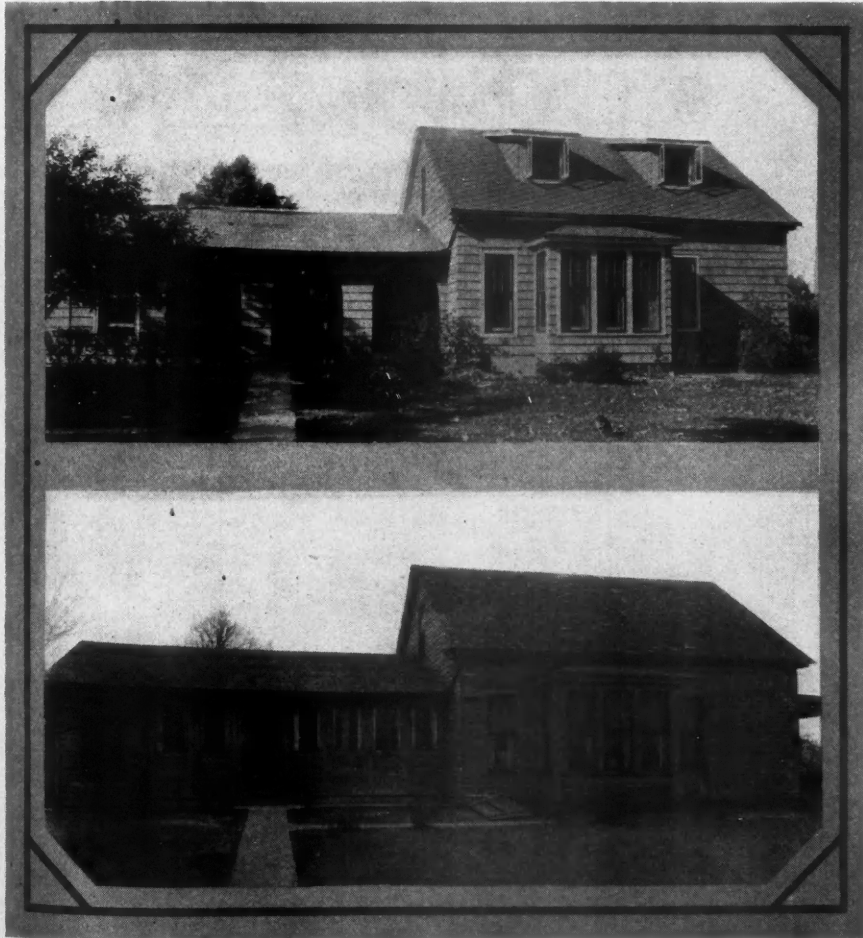
Mr. Treas was obliged to take the house, built 80 years ago, in payment of a debt. He did not think much of the place, but his wife saw possibilities in it. He turned it over to her.

"She engaged a resourceful carpenter and builder, who ripped off the roof and replaced it with a new one," said Mr. Treas. "He tore away the old porch and built on, a new one. He had the entire place bathed with fresh paint. He placed a fence around it. He added to and rejuvenated the out-buildings. He used much concrete and finished off the outside appearance with much shrubbery.

"Then he went inside—laid new oak floors throughout, redecorated the walls and added touches of enamel work where needed. He built a new stairway, added an extra bathroom, a sleeping porch and a sun room. New windows relegated the old to the junk heap, and new wiring and fixtures graced the spot where the old had died a natural death from old age."

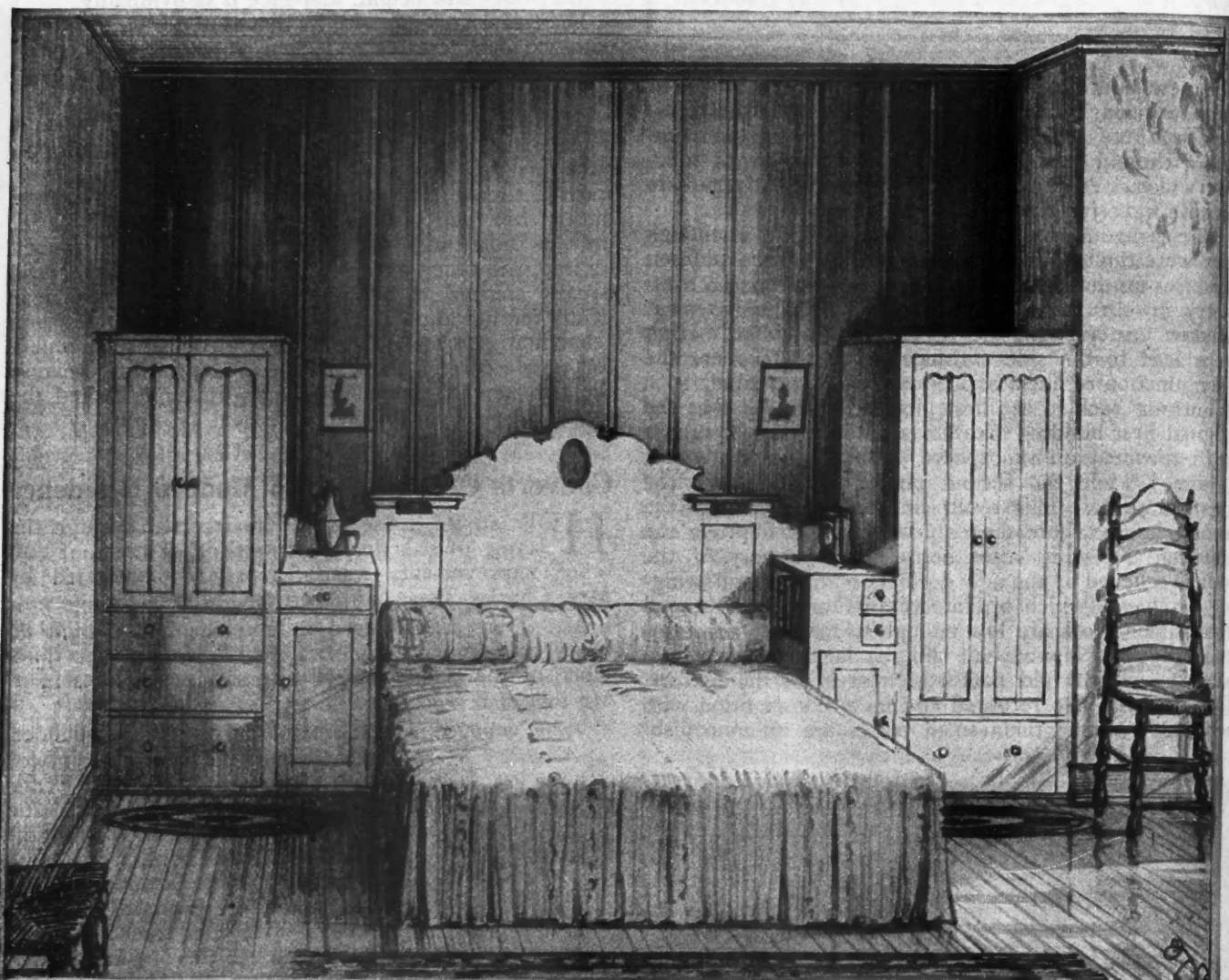
When the house was completed, Mr. and Mrs. Treas gave up their apartment and moved into it. It is one of the most attractive homes in Aberdeen.

This Owner Spent Less Than His "Neighbor" Across the Way but Got a Much More Successful Piece of Home Modernizing.



Modern Home Interiors

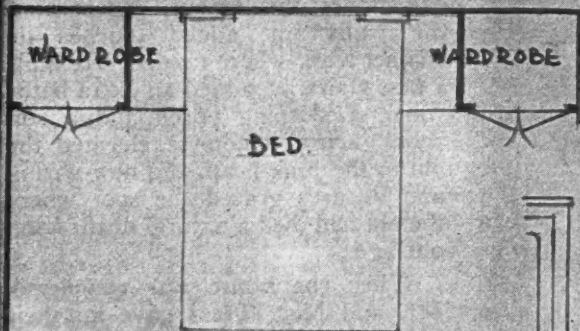
The Third of a Series of Plates



A BUILT-IN BED ROOM ENSEMBLE CONSERVATIVELY MODERNISTIC.

AN IDEA CAPABLE OF MANY VARIATIONS TO SUIT SPACE AND PERSONAL TASTE.

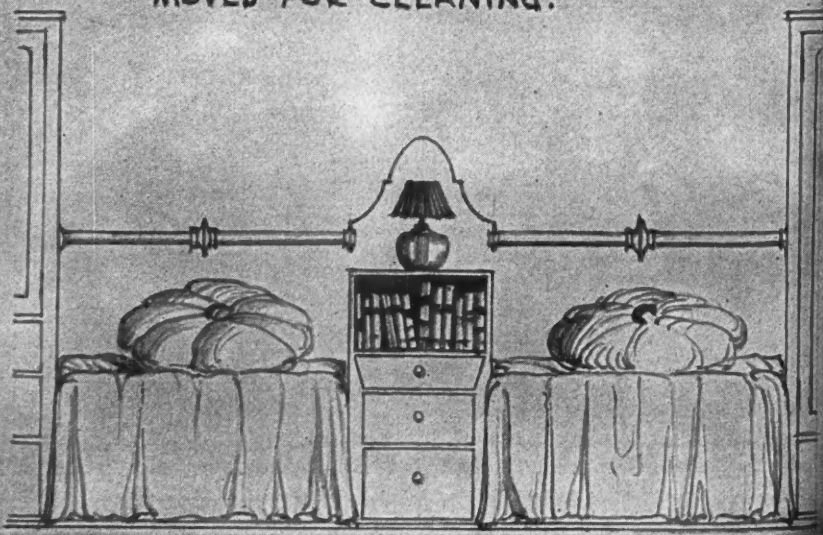
THIS FURNITURE NEED NOT BE MOVED FOR CLEANING.



PLAN

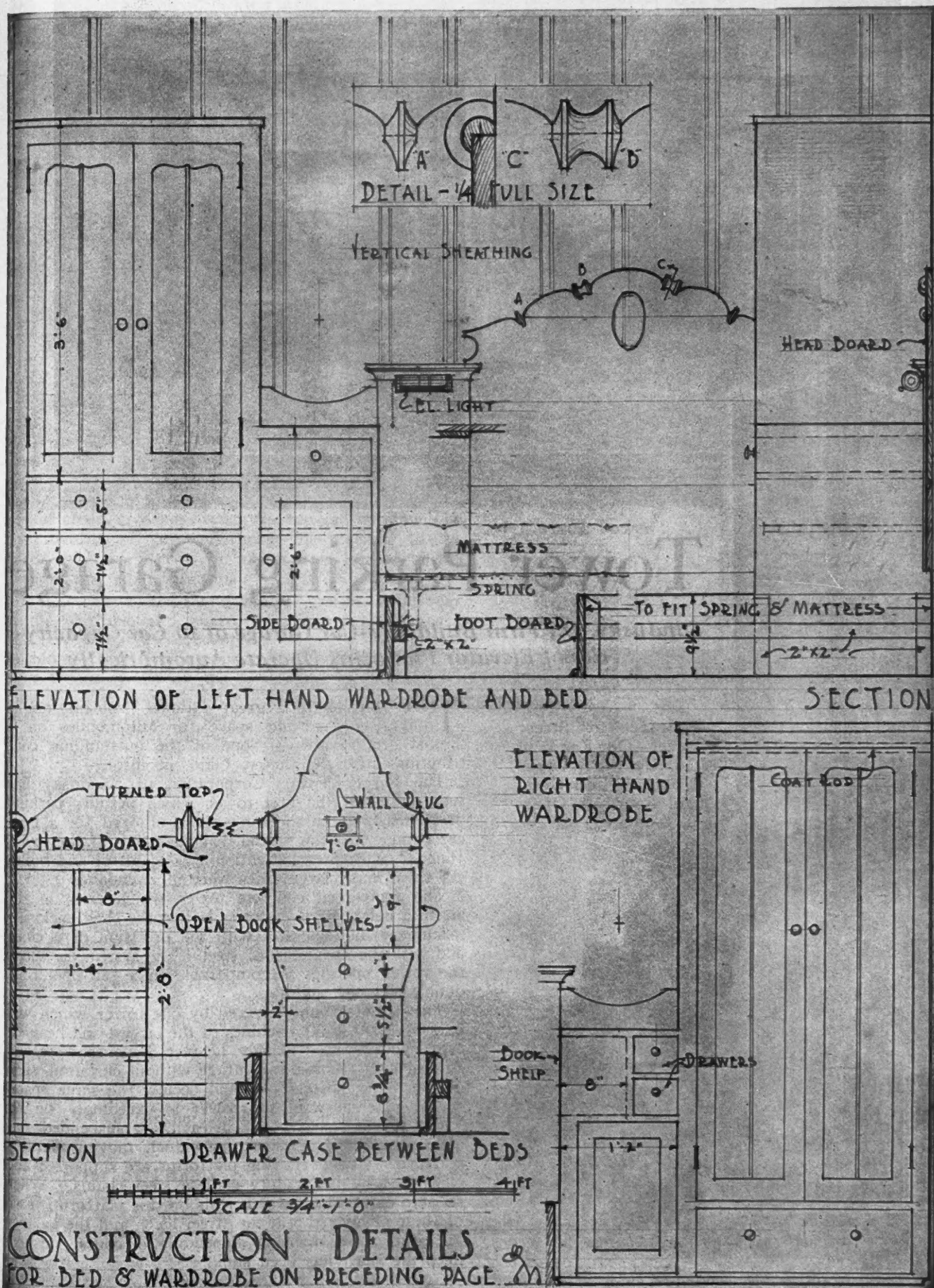
THIS IDEA IS EQUALLY PRACTICAL FOR TWIN BEDS. THEY MAY BE BUILT TO FIT ANY SPRING AND MATTRESS. BEDS SHOULD BE LOW.

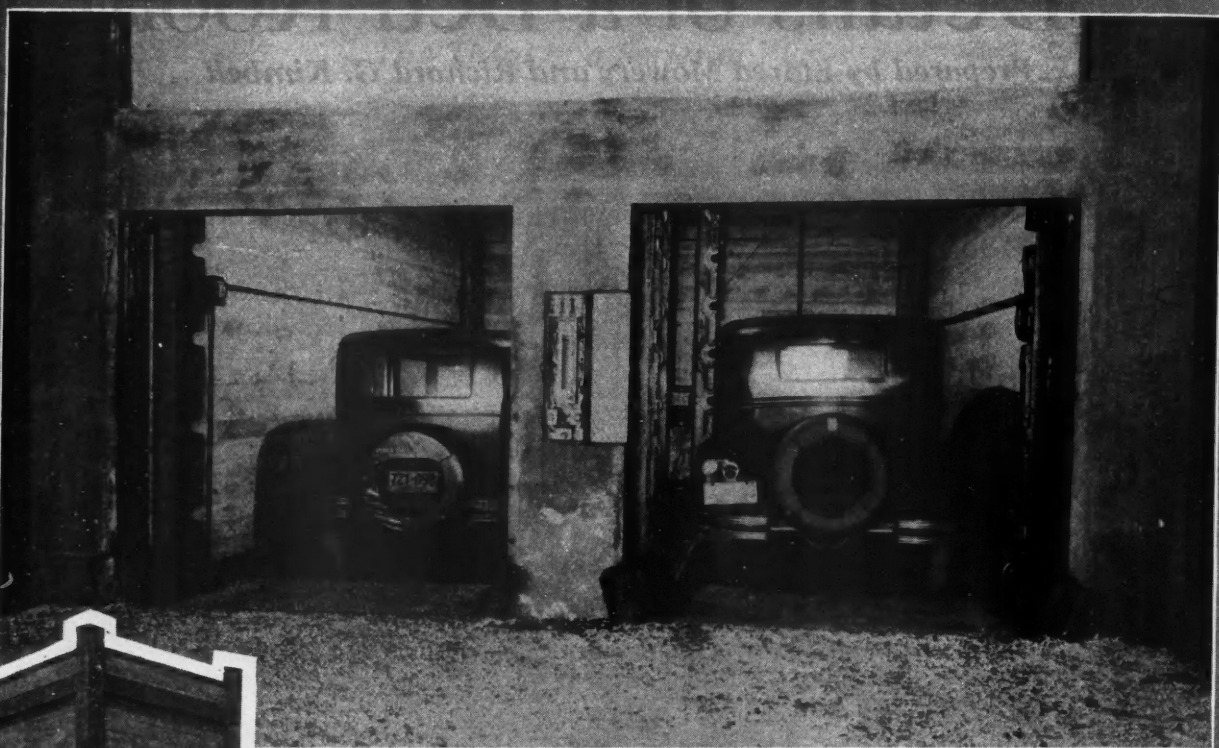
CONSTRUCTION DETAILS ON NEXT PAGE



—Details of a Bed Room

Prepared by Eldred Mowery and Richard G. Kimbell





Tower Parking Garage

*Sandusky, O., Firm Builds a 2-Car Garage of 10 Car Capacity—
Series of Elevator Platforms Operate Automatically*

Entrance at Street Level—One Car Will Go Up, the Other Down When Control Board Is Operated.

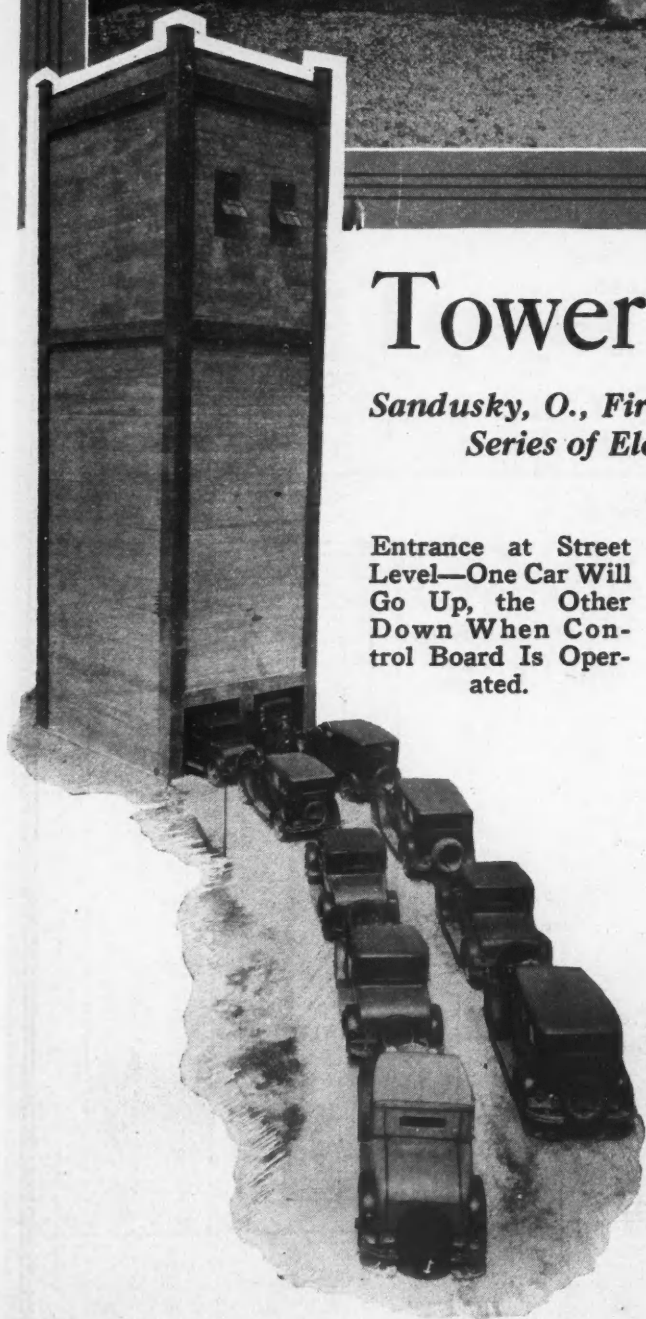
THE solution to a great national problem—ample garage or parking space for automobiles on a limited ground area—is one of the outstanding contributions of a Sandusky, Ohio, inventor.

The Parker Tower Corporation of Sandusky has just completed the first tower which permits parking of 10 machines in the same space allowed for a two-car garage. At the official demonstration of the tower June 22, widespread attention was manifest and builders from many large cities were in attendance.

The reinforced concrete tower which rises in the air to a height of five stories is just the shell enclosing machinery that operates with the precision of a clock and with the durability of steel. The system on which the tower operates is comparable to a self-operating, double elevator shaft.

The actual ground covered by one tower which will park from 10 to 60 machines of the largest and heaviest type manufactured is only 17 feet 8 inches wide and 25 feet long. A two-car garage without elevation, such as the tower possesses, would occupy the same space.

The machinery in the tower is exceedingly simple. There are two shafts and, in each, are suspended, one above the other, all-steel, individual, moving parking platforms. These moving platforms are supported and controlled by heavy-duty endless steel chains. When an auto enters the tower it rests on this platform. Two of these always stop at the street level, and the balance are either above or below, depending, of course, on how deep the shaft has been sunk.



Limit to the height the cars can be raised is ruled entirely by the wish of the architect in erecting the towers. Towers that will contain 60 or more machines can be constructed and placed in operation with the same ease as the one now functioning.

A Westinghouse motor with a 20-horse power capacity is installed in the demonstration tower. The specifications of the engineer in designing the towers call for two horse power per car. Therefore for a 30-story tower, housing 60 machines, a 120-horse power motor is required to obtain the most efficient operation.

If so desired, this motor can be speeded up and will raise and lower the platforms so that a machine can be discharged from the top position of a 30-story tower in less than three minutes, actual demonstrations prove. Precautionary measures to eliminate the possibilities of accidents have received every attention of the engineer and his staff of assistants. The towers will be practically accident as well as fireproof.

The auto parking tower is entirely automatic in its operations. It is controlled either by push button or by key switch, placed on a panel board, conveniently located at the entrance. The entrance is guarded against theft by automatic steel doors which open upwards when the proper control is touched. This is devised especially for apartment houses where only tenants with a key to the control board can open the doors.

The push button or key is connected directly with the corresponding platform bearing identical numbers. As cars are parked or removed one column of platforms moves up while the other moves down on the endless chain, crossing over at the top and bottom. The push button, or key, will bring the machine to the street level irrespective of where it is located in the tower at that particular time.

It is so constructed that a bumper system on the rear of the platform and guard rails on the sides prevent machines from coming in contact with walls or machinery. The upward slope of the floor at each end prevents autos from rolling, even if brakes are left unapplied. A stationary concrete platform is constructed in the center between the two columns on the street level to afford sufficient space for passengers to embark from machines, after they are parked.

For apartment houses, hotels, department stores or public parking for revenue, the towers are ideal. They can be installed in any new building with but comparatively small additional cost and will add greatly to the value of the property. They are built for years of service. For downtown parking ga-

rages, one operator, stationed at the control board can park or discharge 60 autos in a very few minutes.

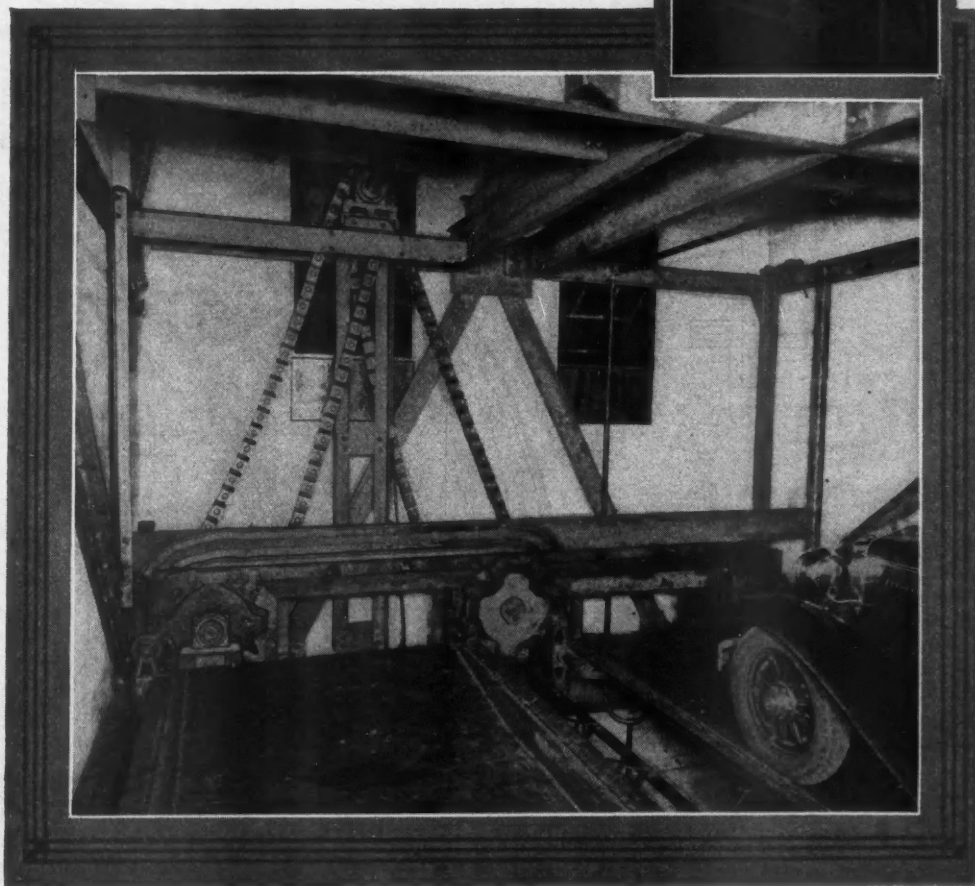
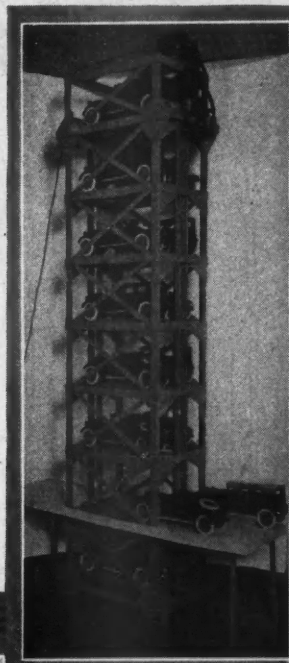
After viewing the tower and its signal performance, architects from all over the country greeted the invention with a marked display of enthusiasm and predicted that with the advantages it offers towers will soon become part of every large building.

There appears to be no limitations to the possibilities of the towers. The platforms are so arranged that a machine can be removed from the top floor as well as from the street level, or from any intermediate floor, providing a doorway is constructed and a runway provided for discharging the cars. The shafts, too, can be sunk far into the ground if so desired.

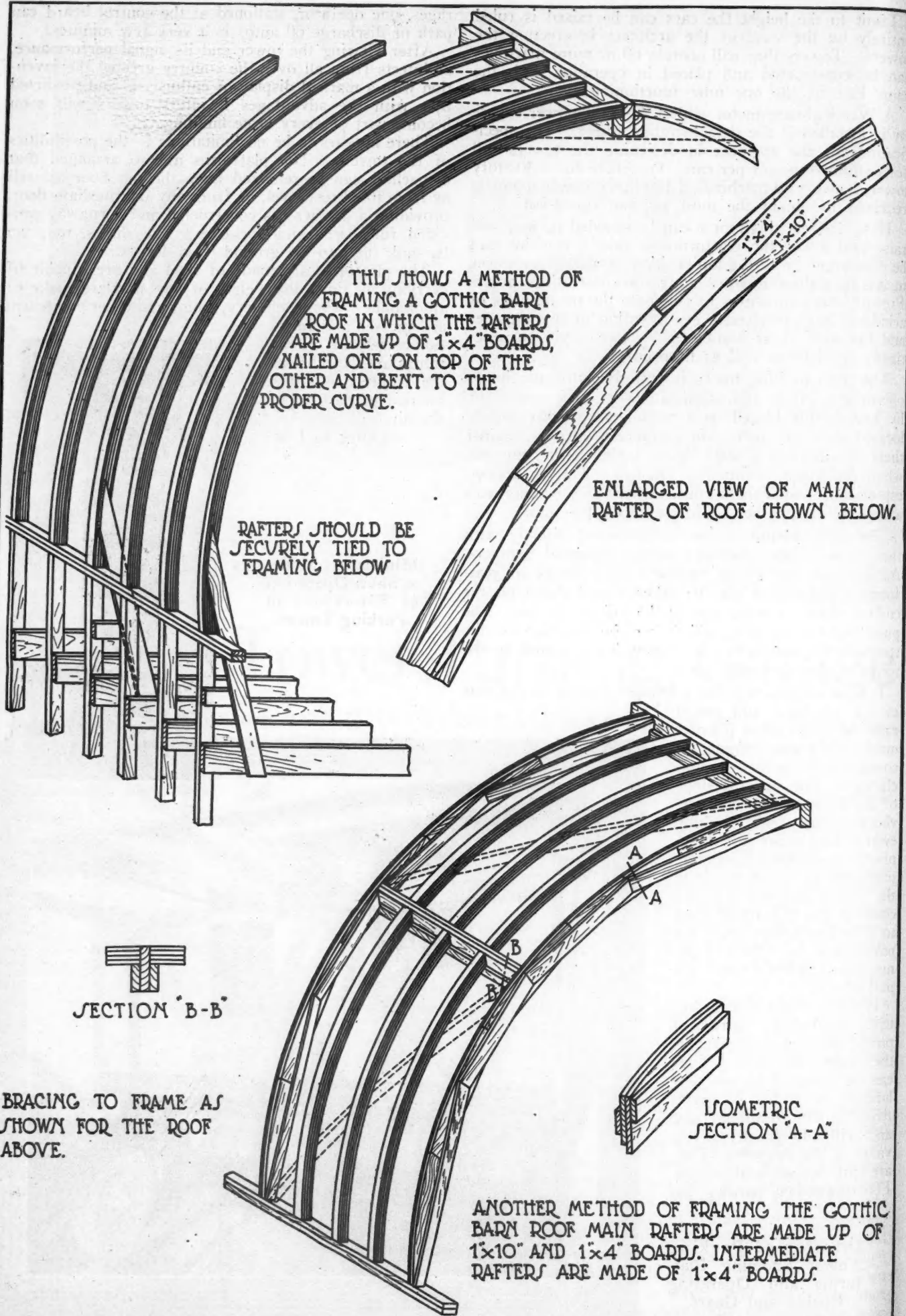
The platforms are made of steel and are capable of carrying 40 times the weight of any standard make of automobile. The machinery, motor and other equipment are encased and function noiselessly. Great things are expected in the future from this method of parking in the air.

—JAMES R. LEE.

Miniature Model to Show Operation of Elevators in Parking Tower.



Interior of Parking Tower Showing Platforms and Operating Chains and Gears.



A
the
nu
thi
to
I
lik
Fir
a r
1
inc
2
as p
3
for
4
of t
S
1.
buil
stru
2.
cons
run
3.
itsel
a ter
tunit

Va
regar
ing m
do n
meth
the c
own
In
1 by
other
bolte
woul
glue
may
we m
peopl
this 1
factu
string
ing to
ing th
truss.
saw
McKe
shop
for th
new c
Potor
ton.

The Gothic Shape Barn Roof

*Explanation of Carved Rafters and Roof Construction—
Details on Page Opposite*

BY JOHN T. NEUFELD

AS some readers of the AMERICAN BUILDER have shown their interest in the so-called Gothic barn roof, we shall try to give some framing details, the graphical layout having been given in a previous number. One hesitates somewhat in giving details for this type of construction because of the various ideas as to how such a roof should be built.

Before describing the details more fully we would like to have the privilege of a few critical remarks. First we might mention a few points in favor of such a roof.

1. The loft space so desirable under a barn roof is increased to the maximum in this type of construction.
2. The loft space is uninterrupted by supports such as posts and braces.
3. The amount of lumber used is comparatively small for the size of the barn loft obtained.
4. The force of the wind pressure is decreased because of the curved surface.

Some of the points against this type of roof are:

1. The type of construction is that of a masonry building as the arch is a feature of brick or stone construction. Wood is not readily built to this shape.
2. The construction involves mechanical skill and a considerable amount of labor, and for this reason will run comparatively high in cost.
3. The curved shape of the surface does not adapt itself to the usual type of shingles. Shingles will have a tendency to curl up at the lower end, giving an opportunity for wind and rain to drive under.

Methods of Construction

Various methods are advanced from time to time in regard to the details of constructing the various framing parts. Two different parts are shown here. We do not wish to distinguish as to which is the better method, nor do we believe that these two methods are the only practical methods. Readers may form their own conclusions and are welcome to send in their ideas.

In the first case the rafters are made up of pieces of 1 by 4 boards. These boards are nailed one over the other, joints broken. They should be well nailed or bolted together. A good idea would be to use waterproof glue between the boards. This may seem rather queer, but we may well learn from those people who have experience in this line. Some truss manufacturers making the bow string truss use glue for holding together the boards forming the curved parts of the truss. Not long ago the writer saw on the floor of the McKeown Truss Company shop the bow string trusses for the form centering for the new concrete bridge over the Potomac River at Washington. These concrete arches are

to be over one hundred feet in span. The curved upper chords were made of 1 by 4 boards nailed and glued together.

On small roofs these rafters are often made of four boards nailed together, but it seems that five would not be any too much.

Ridge Pole Recommended

In the illustration a ridge pole is shown, this we believe will help to stiffen the roof. The ridge board is not always used as it is easier to put up the rafters when they can be nailed together two at a time and raised up. We would advise the use of the ridge and also the tie boards shown dotted in the illustration. If space allowed, it would be advisable to have the tie boards or collar beams lower down and of 2 by 6 material as they would then add very much to the strength of the roof. Of course, if a hay carrier is installed it is usually desirable to have all the room possible in height; for that reason they are put right under the ridge.

Knee Bracing

The braces at the lower end of the rafter tying the roof to the lower part of the frame are also very important. Some of these should be made even longer than shown so as to brace some of the rafters farther up the roof.

Sheathing nailed on the rafters should be with long nails, preferably the cement coated kind or the new chisel pointed kind, as these have a greater holding power. A roof of this kind is stiffened very much by the sheathing over it, therefore "nail well."

Rafters Sawed to Curve

A second method of framing is shown in the lower illustration. Here two kinds of rafters are used. The heavier rafter is made up of 1 by 10 and 1 by 4 pieces. Two pieces of 1 by 10 are used to form the curve. The curve in this case must be sawed. As the curve is the same for all pieces, these may be sawed somewhere in a shop and delivered to the job ready to be nailed together. Each board may be from 6 to 10 feet long. Of course, joints should be broken. The 1 by 4 or 1 by 6 pieces at each side served as additional braces.

Collar beams should also be used on these rafters. The purlin may be omitted, running the intermediate rafters through, as in the upper illustration.

A great strain is exerted on this roof at the gable ends. This may be taken care of by bracing the gable studs from the studs to the ridge and also to rafters. Diagonal braces similar to bracing of stud walls may also be set between the rafters as shown by the dotted lines in the lower illustration.

*BIGGER WAGES and
Better Profits to the
man who knows! A careful
study of these practical
articles will put you ahead.*



Questions and Answers

This Department Conducted by
V. L. Sherman, Engineering Dept. Lewis Institute

Have You a Question You Would Like to Have Someone Answer?

Have You An Answer to Any of the Questions Listed Below?

QUESTIONS TO BE ANSWERED IN THE NOVEMBER ISSUE

Give Us Your Answer—Those Published Will Be Paid For.

1. *What construction is used for the filled or rounded valleys seen in old English and French roofs?*
2. *What is the best method for removing or loosening old cement which sticks to the inside of a concrete mixer?*
3. *Can you give the correct span limits for floor joists in homes, 16 inches on center, for joists 2 by 4 inches up to 2 by 14 inches?*
4. *How can I design a fireplace of any reasonable size and be certain that it will draw well?*
5. *Is there any way in which telephone and light wires can be run underground to a house?*
6. *My home has five rooms with eight lighting fixtures and eight outlets. I am told that in adding two rooms with three fixtures and three outlets I will have to change the wiring. What about it?*
7. *The wall next a soil stack is discolored, at times very noticeably. What is the cause of it and what can I do about it?*
8. *What is the best way to build up a batten door, about 3 feet by 7 feet, for an outside living room entrance?*

SEE OCTOBER FOR ANSWERS TO AUGUST QUESTIONS

Following are the questions asked in the July issue, and their answers

Question: What definite information is there as to the rather general term "humidity" in dwellings?

ANSWER: Humidity has to do with the moisture content of the air. The amount of moisture which can be held in the air without its being deposited on a surrounding wall depends on the air temperature and the temperature of the wall. Humidity is relative. Humidity in dwellings has to do with physical comfort or body temperature. Physical comfort depends on the maintenance of a constant comfortable body temperature. Heat is constantly being generated within the body, and heat is constantly being lost from the surface of the body through evaporation of moisture, by convection, and by radiation. The heat produced within the body should be balanced by the heat loss from the surface. If there is a difference it is noticeable.

Since there is more warmth in youth than older age the two will not agree as to a suitable temperature. And since quiet occupation and manual work account for different body temperatures there should be a difference in temperature between the kitchen and the living room. In a dwelling, however, such differences are never assured and it is best to compromise.

Since the heat lost by evaporation of moisture from the skin depends largely on the percentage of moisture already in the air, and the percentage of moisture in the air depends upon the temperature of the air the term "proper humidity" can be taken as the proper percentage of moisture in the air of a room at a given temperature, say from 65 to 70 degrees. This percentage can be controlled by humidifiers during the time the house is heated.

During warm weather the moisture content of the air

may increase greatly with an increase in temperature. When this increase is enough to be uncomfortable, air motion from a fan or otherwise will increase the evaporation from the skin. If this same air is cooled artificially the relative humidity increases sometimes to a sort of clammy condition. With some of this moisture removed the "feel" of the air returns to normal. That is called air-conditioning. One of these days we may all have it in our homes.

Whether or not the air is properly humidified can best be determine by the people in the house and the condition of the furniture. Definite figures as regards evaporation of water and maintenance of humidity can be had from any reliable heating contractor or from the "Heating and Ventilating Guide" of the American Society of Heating and Ventilating Engineers.

V. L. S.

Question: Should wood framing ever carry brick or hollow tile walls or curtain walls?

ANSWER: In the first place, we hardly see the advisability of installing fireproof construction on combustible construction, so the reasons for doing it are questionable.

If adequate support in timber construction is provided so that there is little contraction or shrinkage in the structure, there is no reason why a tile wall cannot be used satisfactorily. However, the timber construction, which is usually built, allows so much greater deflections and contraction and shrinkage, that we would hardly recommend the use of tile, as the cracks in the structure would undoubtedly be laid to the tile wall itself rather than the structure supporting it.

A well constructed, properly plastered tile wall changes so little in its dimensional sizes that it should only be used

... BRIXMENT mortar is strong

MORTAR made of 1 part BRIXMENT, 3 parts sand (no lime, no portland) has greater strength than that required by the building code of any city for the heaviest load-bearing walls.

Its strength increases with age, becoming greater than that of the brick itself. When tested in piers, it approaches that of straight 3-to-1, portland-cement mortar. This makes it suitable for foundation, load-bearing or parapet walls and even for tall, free-standing stacks.

BRIXMENT makes a stronger, tighter bond between the brick and the mortar; it is ground finer and hardens more slowly than portland, thus permitting deeper penetration and a more thorough keying into the pores of the brick. Louisville Cement Company, Incorporated, Louisville, Kentucky.

District Sales Offices: 1610 Builders Bldg., Chicago; 301 Rose Bldg., Cleveland; 602 Murphy Bldg., Detroit; 101 Park Ave., New York

BRIXMENT *for Mortar and Stucco*

Among the many BRIXMENT stacks is the 250-foot radial-tile smoke stack at the power plant of Purdue University.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

in those structures where constancy of dimension is assured, and these are usually steel and concrete structures of fire-proof construction. However, as mentioned before, if exceedingly good care is used in building the wood frame supporting the wall, a tile wall might be advisable, but the factor of safety is too low to recommend it.

C. R. BIRDSEY,
Director, Research and Development,
U. S. Gypsum Company.

Question: What responsibility should be taken by the general contractor for work by a sub-contractor after the original contract is fulfilled?

ANSWER: After the original contract is fulfilled the relations that existed during the life of the contract between the contractor and the sub-contractor no longer exist. The sub-contractor is a temporary employee of the contractor for the purpose of performing certain work. The difference between him and a foreman is that he works under forfeit and the foreman works for wages. The general contractor cannot be held responsible for work done by a former employee (or sub-contractor) after the work for which he was specifically employed was complete.

ERNEST McCULLOUGH,
Consulting Engineer,
Long Island City, N. Y.

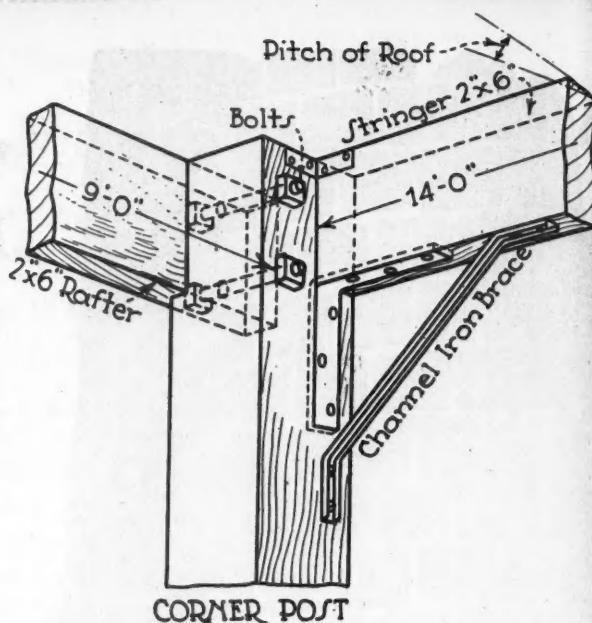
ANSWER: The contractor is not liable for any work additional on a job after the contract is fulfilled. That is quite plain. But what responsibility "should he take" for further work by a sub-contractor? In any business these days we know that completion of a piece of work does not entirely release a builder from responsibility even if it does so legally. If the contractor knows better the abilities and limitations of a sub-contractor and knows that he can be of service in further work it surely would be advisable for him to help, and share some of the responsibility, even if he does not collect his ten percent. It is to be understood that this help would be welcome. G.R.S.

Question: Can a fireplace and chimney be built on an outside housewall without disturbing the walls or foundation?

ANSWER: I had one such case where a chimney was erected on the outside of a brick wall. The size of the necessary base was figured and an excavation made beneath the wall footing. The excavating alongside the wall was done in a trench four feet wide, and underneath the footing. It was executed rapidly in three sections, each section being filled with concrete tamped into place and permitted to set for 24 hours before excavating and filling the next section. It was necessary to use this care in order to prevent settlement of the wall. The chimney was then erected on this base entirely on the outside of the wall. Only three sides were made of brick, the outer face of the wall serving as one side of the flue, which was lined with a clay flue-lining. The mortar was a portland cement mortar. The work was done in the spring and six months later iron bands were placed around the chimney at approximately six-foot intervals and fastened into the joints of the house wall. The reason for waiting several months was to give every possible opportunity for settlement. If the chimney had been toothed into the old wall there would have been cracks due to settlement. The work was done nineteen years ago, and when the building was torn down last spring the chimney appeared to be in good condition.

ERNEST McCULLOUGH,
Consulting Engineer,
Long Island City, N. Y.

Question: Can I have a design for a rigid but simple rafter joint for an awning or glazing frame of two rafters and plate supported by two corner posts, about 14 feet wide by 9 feet deep?



Bolted Corner of Awning or Glazing Frame.

ANSWER: The sketch attached is of one that has been in use for some time and has given satisfaction. I find screws and bolts more work but more reliable than spiking; and the small channel iron is very handy and rigid. V. L. S.

Question: What sure methods are there for waterproofing foundation walls?

ANSWER: Lay up foundation wall on rock or stone. Construct a blind drain, using small stone, all around the inside of the wall and connect to the sewer through a trap. Plaster outside of foundation wall with cement up to grade. Use hot tar on inside of foundation wall up to grade. This question involves the general proposition of keeping a cellar dry, and is largely dependent on local ground conditions such as temperature and moisture. In cities on tide water, tar is used on the inside of the wall, and in ordinary residential sections a blind drain is reliable. The location of the house has much to do with it. L. B. HARMON, Somerville, Mass.

ANSWER: Probably persons building their first house give less thought and attention to making the basement water-tight and dry than to any other part of the construction. This may account for the large number of requests we receive for information on how to keep water out of the basement after the house is completed. With the rapidly increasing use of basements for recreation rooms, more and more attention must be given to proper construction. As is usually the case, it is much easier and less expensive to build the basement water-tight in the beginning than to repair it afterward.

While some damp basements are caused by poor ventilation and moisture originating from within, by far the largest part result from outside water coming through the walls or floors. In all cases of leaky basements, the first step is to provide adequate drainage for the outside of the wall. A line of 4- or 6-inch drain tile of good quality should be placed around the outside and just below the top of the footing. It should be connected with the sewer and have sufficient fall to carry away the ground water quickly.

If a considerable part of the wall leaks, it is good practice to dig a trench at least two feet wide around the foundation and to at least 4 inches below the top of the footing. The wall should be scrubbed perfectly clean with water and then allowed to dry thoroughly. In damp weather it may be desired to dry it with a gasoline torch or some other heating device. After it is dry, hot tar or asphalt is mopped onto the surface. A layer of burlap that has



Safe-n-dry

"Non-tearable Asphalt Blanket"
actually gives—that
Super Protection
 you have always wished
 for in a Building Paper

WHEREVER positive, permanent insulation must be a known factor, this extra-strong, air-tight, "more-than-waterproof" blanket will more than meet your most exacting requirements or rigid specifications.

Safe-n-dry is reenforced with Woven Jute Fabric—a stronger strengthening material than is used in any other building paper. It also contains a greater amount of water-proofing Asphalt than any other paper.

Safe-n-dry bends and creases without cracking; conforms readily to odd shapes in construction; withstands almost any amount of abuse by man, wind or weather, without losing its water-proofing qualities.

Safe-n-dry is not only "more than water-proof," and weatherproof, but it is also impenetrable to wind, air, smoke, odors, frost, mildew, summer heat, winter cold, and vermin. Rats and mice dislike asphalt and will not gnaw through this heavy asphalt blanket.

Safe-n-dry is clean to handle, saves time and labor, one man can apply it; requires no cleats to hold it in place; is moderately priced.

Consider these important facts when you must have **SUPER-PROTECTION** on the structures you build, for once you have used Safe-n-dry, no other paper will satisfy.

*Generous sample test sheets are yours on request—
 with prices and literature. Mail the coupon NOW.*

Safepack Mills Inc.
Millis Massachusetts

SAFEPAK MILLS, Inc.
 Millis, Mass.

Gentlemen:

Kindly send test sheets and complete information on your extraordinary new Safe-n-dry Building Paper.

A. B. S

Firm Name.....
 Street..... City.....
 Dealer's Name.....
 Address.....

been soaked in the tar is mopped on and allowed to harden for a few hours, after which the second layer of tarred burlap is applied. Over this a final coat of tar or asphalt is used. The tarred burlap should extend at least 4 inches below the top of the footing. Special care must be used to insure a clean wall and one that is thoroughly dry before the tarred burlap applications are started; otherwise, poor bond will result.

The combination of drainage and burlap treatment will insure a dry wall. Very often, however, folks only wish to plug the seepage cracks that have developed from settlement or construction joints. Plugging settlement cracks frequently does not prove satisfactory, because the settlement continues, due to poor drainage or inadequate footings.

Preparation of the crack to be waterproofed is of utmost importance. It should be widened to about one-half inch with a hammer and cold chisel and cut at least 2 inches deep. It should be roughened or undercut at the bottom to provide an adequate key or bond for the mortar that is to be forced into the opening. In case water is flowing through the crack, it is desirable to calk it with oakum. When the water has been stopped and the crack thoroughly washed with water to remove all dust and loose particles, the crack is filled with a portland cement mortar made as follows: 1 part of cement is mixed with 2 parts of clean sand passing a $\frac{1}{8}$ -inch screen, in which not more than 3 per cent passes a 100-mesh screen. To this mixture is added one-fourth by volume of fine iron filings. The whole mixture is mixed to a plastering consistency and allowed to stand from one-half to two hours, during which time it is frequently remixed without the addition of water. This mixture is then forced into the bottom of the crack with a small pointed tool, which will permit getting the mortar to the bottom and into the keys that were provided for bond. Then the crack is completely filled, after which it should be covered with a wet board or burlap so that it can properly cure. It should be kept wet at least seven days, and longer if possible. It is not absolutely necessary to use the iron filings, but their addition frequently improves the job, because a certain amount of the iron corrodes and fills the fine cracks that might not otherwise be completely filled in by the mortar.

W. D. M. ALLEN,
Manager, Cement Products Bureau,
Portland Cement Association, Chicago.

Question: Are fire-stops any help in preventing heat loss from houses?

Answer: Fire-stops do not prevent heat losses except as they prevent the circulation of air from one story to another, but they help to give a better distribution of the heat. This can be explained as follows: When a room is heated, the warm air will rise to the ceiling. On its way up it will heat the walls. Some of this heat will be conducted through the inner wall to the air-space within the wall. If there are no fire-stops all of the heat will rise to one spot (or escape to the attic or out from under the eaves) and be lost more rapidly. If there are fire-stops, the heat will be confined in sections, each section beneath a fire-stop.

PAUL NESS,
1036 S. Union Ave.,
Los Angeles, Cal.

Question: Why should a few of the oil burners I have installed in my houses prove unsatisfactory to the owners when I know from experience that they should be entirely satisfactory?

Answer: Probably the best thing to do is to write the manufacturer and ask for the proper flash-point of the oil to be used in the particular burner. Then be sure you get the desired oil. The burner perhaps is installed unsuitably in the boiler or furnace. Or the boiler or furnace may not

be suited to the heating system. The burner people should be consulted on the first point and an oil burner expert on the second. Intermittent burners such as are employed in most small installations are more dependent for success on the flash-point than on gravity of oil.

V. L. S.

An Important Factor in Building

A COMPILATION of building and loan associations in the United States with assets exceeding \$10,000,000, on December 1, 1928, has recently been made by H. F. Cellarius, secretary of the U. S. League of Building and Loan Associations. The results make an interesting showing. There are now two associations with assets exceeding \$50,000,000; there are four in the \$40,000,000 class; six in the \$30,000,000 class, and 59 having assets of from \$10,000,000 to \$20,000,000.

The announcement that there are 86 building and loan associations with assets of \$10,000,000 or more is an indication of healthy growth throughout the movement. There are literally thousands of associations that during the past three or four years have stepped up into the million dollar class and the number of \$10,000,000 associations can be expected to increase at an accelerated pace.

Building and loan has become a real business. It is one of the main arteries of finance in the building industry and one of the important factors in the country's prosperity.

A Market Is Widened

THE problem of supplying electrical service to scattered rural districts has been solved by the introduction of new and simplified apparatus, according to a recent announcement. Farmers who have seen lofty steel towers near or across their property, carrying high voltage electricity from remote generating plants to equally remote cities, have often inquired why it was not possible for them to obtain electricity for their farms from these lines. They have been informed that the cost of substation equipment for reducing the voltage made the cost of installation prohibitive.

Now, however, new apparatus makes possible the use of this source of power, without sacrificing safety or reliability, and it lacks some of the expensive parts of the conventional substation. After a sufficient rural load has been built up with the new equipment, the conventional substation can be installed, or an existing distributing system extended to that district from a distant point, and the original substation equipment can be moved and used again in developing another rural section.

This development means an extended use of electricity, new markets in the building industry, new outlets for building products, new opportunities for the builder and greater prosperity for all concerned.

Glass and Public Health

THE invention of the new, ultra-violet light transmitting glass is seen as of importance to the public health of the nation in a report made by 150 leaders of medical opinion, obtained through a survey conducted by the Ultra-Violet Glass Information Bureau of New York. Deans of both the physiology and physics departments of all standard colleges, superintendents of leading hospitals and heads of the health departments of principal cities were questioned on the ultra-violet glass discoveries.

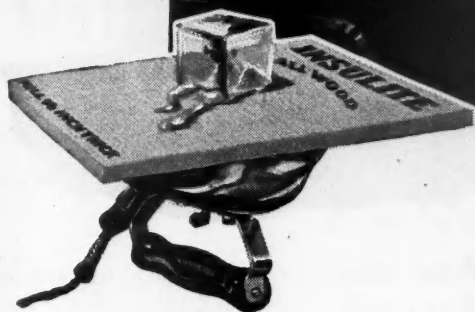
Increased illness in spring, fall and winter are due to lack of sunlight in indoor living in America today, in the opinion of 109 of those questioned. Combating this effect of indoor life, necessitated by the increasing shift of the American scene toward great city concentrations of population, are various window glasses that admit the ultra-violet rays which are excluded by ordinary glass.

INSULITE

the Wood-Fiber Insulating Board

Sheathing
Plaster Base
Wall Board
Attic Lining

Roof Insulation
Sound Deadener
Carpet Lining
Acoustical Treatment



FULL $\frac{1}{2}$ INCH THICK—MEANS
12 $\frac{1}{2}$ % MORE EFFICIENT INSULATION
THAN ORDINARY $\frac{3}{16}$ " INSULATING BOARDS

Speculative Builders—Contractor Builders Feature this Test to Your Customers

IT'S human nature everywhere that when a person spends a dollar he wants the *best* and *most* that dollar will buy.

That's why we are featuring now in all of our national advertising the fact that Insulite, a full $\frac{1}{2}$ inch thick, is 12 $\frac{1}{2}$ % more efficient than ordinary $\frac{3}{16}$ inch insulating boards. These figures are substantiated by accurate, scientific laboratory tests.

But, many laymen do not understand laboratory data and only believe what they see. Therefore, for the benefit of these people we have conceived the above pictured simple home test, viz.: put a cube of ice on a piece of Insulite and place them on an automatic electric iron. Time how long it takes the heat to penetrate the Insulite and melt the ice. Make this same test with ordinary insulation boards and see the difference.

You contractor builders—you speculative builders—explain to your customers the superior efficiency of Insulite. It will mean more business for you and more satisfied customers.

Furthermore, you can depend upon Insulite. Insulite has greater tensile strength than ordinary insulating boards. It is an all-wool fiber board, chemically treated to prevent deterioration.

Used as a plaster base, Insulite grips plaster with twice the strength of wood lath, and as sheathing has several times the bracing strength of lumber horizontally applied.

Because the broad sheets of Insulite used as sheathing reduce labor costs—often as much as 50%—and because the water resisting qualities of Insulite eliminate the need of building paper, the final cost of Insulite walls is little or no more than you pay for uninsulated construction.

Our Engineering Department will be glad to help with any problems you may have. It is organized to be of service to you. Write for samples and further information—now.

Insulate with

FULL $\frac{1}{2}$ INCH THICK
RESISTS
COLD-HEAT-NOISE

INSULITE

the Wood-Fiber Insulating Board

THE INSULITE COMPANY
1202 Builders Exchange, Dept. 13
MINNEAPOLIS - MINNESOTA

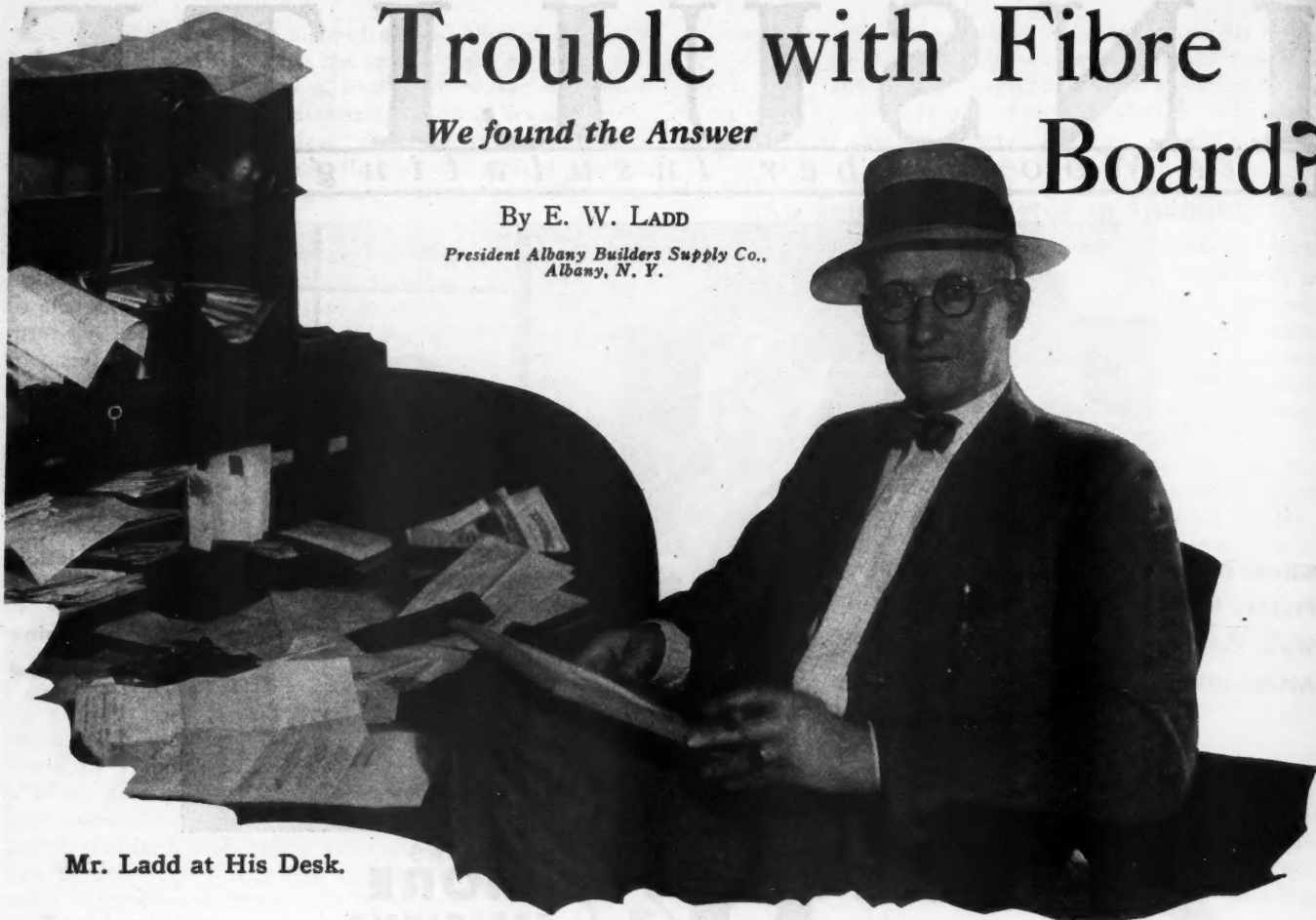
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Trouble with Fibre Board?

We found the Answer

By E. W. LADD

*President Albany Builders Supply Co.,
Albany, N. Y.*



Mr. Ladd at His Desk.

NOW that insulating plaster base is being used so extensively and material dealers are finding an increasing demand for such as insulating boards and insulating lath, I believe that giving a little history of our experience in pioneering and successfully building up a large business on these items may be of interest to other dealers and builders.

We purchased our first car of insulating board some six years ago, and, as is usual, we went ahead on our regular lines, thinking it would sell itself and without effort on our part. When we did begin to realize that this wasn't the case, we put forth every effort to unload, regardless of where and how it was to be used, and with the result that we had a number of complaints.

We carefully investigated every complaint, and were then convinced that here was a new material with wonderful possibilities, not only for the dealer, but also for the consumer, if ordinary horse-sense was practiced in its sale and use.

Looking back and analyzing the complaints we had, the following are but a few of the contributory causes:

1. Panels nailed cross-wise of studs, without headers, instead of lengthwise.

2. Panels not properly centered on studs, nor nailed as directed.

3. Panels were forced into place, not having clearance for expansion.

4. Studs were not true nor properly spaced, and of green stock, which warped and pulled away from panels.

5. Studs and joists were 24 inches centered, instead of 16 inches centered, as directed.

6. Panels expanded after first

coat of plaster was applied, causing buckling, cracks and unevenness.

7. Difficulty was experienced in some cases, due to the plasterers skimping on amount of material used.

The carpenters and plasterers soon became just as anxious to attain good results as were we, and co-operated in seeing that the manufacturers' instructions were fully carried out. However, we still had occasional complaints, where the material was plastered on, that in some cases it would expand to such an extent as to buckle and crack the first coat of plaster.

These complaints would come up where the board used was part of the same car from which other jobs we had furnished, were perfect; and in checking this, we could only arrive at the following conclusion:

Insulating boards and lath are shipped from the mill bone dry and stacked in piles as they emerge from the dry kiln, and it takes considerable time for these panels to adjust themselves and take on the prevalent air moisture content. We found most of these complaints we had were where delivery to the job was made from stock just received from the mill, and that these panels if immediately nailed and exposed on both sides as they were, took up the moisture content very quickly. Naturally, this caused an expansion, the only outlet being to buckle between the studs.

We also found where fresh stock was so used as a plaster base, that the rapid absorption of moisture from the plaster was detrimental, and also caused a violent expansion of the boards.

It wasn't feasible for us to stock such material until they were acclimated to prevalent

DEALERS AND BUILDERS!

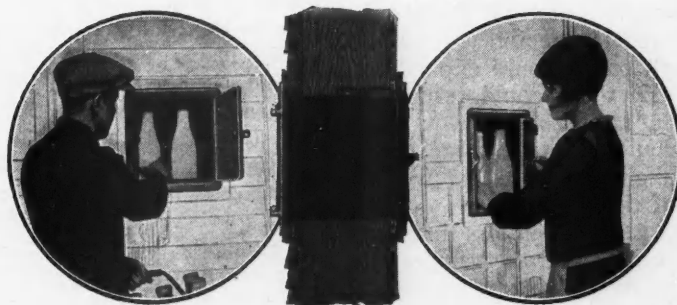
*What do you think of this idea?
And have you one to contribute
equally as good? Let us hear
from you.*

—EDITOR.

New Models Lower Prices

Two-Door Type

Cast semi-steel doors and frame. Inside door finished in jade green. Lever latch on inside door. Two sizes. No. 5, wall opening $9\frac{1}{2} \times 11\frac{1}{2}$ " body adjustable from $5\frac{1}{2}$ " to 8" deep—list price \$8.10. No. 6, wall opening $9\frac{1}{2} \times 11\frac{1}{2}$ " body adjustable from 8" to 14" deep—list \$8.40.



Majestic Milk and Package Receivers

Now there is no reason why you shouldn't put a Majestic Milk and Package Receiver in every home or apartment you build. New models with trim, graceful lines and attractive finish fit perfectly into every modern building. And the new low prices enable you to provide a Majestic on every job. Can be installed for much less than it costs to build-in a receiver. The Majestic adds real value to the home or apartment, and helps you sell.



Single Door Type

Door and frame of cast semi-steel. Built with solid body for outside installation only. No. 4, wall opening $9\frac{1}{2} \times 11\frac{1}{2}$ ", depth of body $8\frac{1}{2}$ "—list \$4.80.

✦ *Majestic Quality REALLY Costs Less* ✦

THE MAJESTIC COMPANY
629 Erie Street, Huntington, Indiana

MAJESTIC BUILDING SPECIALTIES

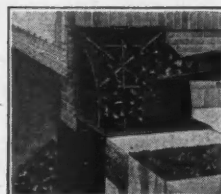


WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

OTHER
MAJESTIC
QUALITY PRODUCTS
that help sell homes



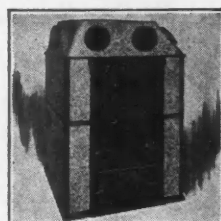
Quality, utility and good design make this coal window a real value.



Low foundations have popularized this grade line Majestic coal chute.



Majestic dampers, ash pit doors and ash dumps insure a correctly built fireplace.



The heart of a really efficient heating system—the Master Majestic Down Draft Furnace.

Write for full information about any one or all of these Majestic Quality Products that help sell homes.



moisture conditions in our territory, and we also could see where it was impossible for the manufacturer to ascertain in advance of his shipments, what conditions would be in such and such a territory, and at the time the boards would be used, and thereby adjust the moisture content of the boards to such a situation.

Knowing that it has always been good practice to wet kiln dried wood lath and shingles before using, I tried out the same plan on insulating boards and lath. I made arrangements in my yard and saw to it that on each order, every panel of insulation board and lath was well sprinkled and then repiled, at least thirty-six hours before they were delivered to the job and used. In doing this, I knew that each panel would expand to the maximum and that only one thing could result—a slow contraction and not to a noticeable extent; and in the lath, the contraction would not take place until the plaster had set, and this slight readjustment would be taken up by the resiliency of the lath.

We followed this plan, and with such success that our customers are now sold on the idea and advantages of insulating boards and lath, and we are now selling several cars each month, with universal satisfaction.

We realize that when something happens, a blame must be placed somewhere; and invariably the responsibility is placed on whatever new material is used—never on the human element involved. However, we have faith in the justification of selling and using insulating boards.

Successful Dealer Methods

RETAIL building supply dealers in Indiana are adhering to certain business rules with unusual success, according to Reding Putman, field representative of the Southern Pine Association. These rules do not form a definite code but were merely observed as applying generally to successful firms.

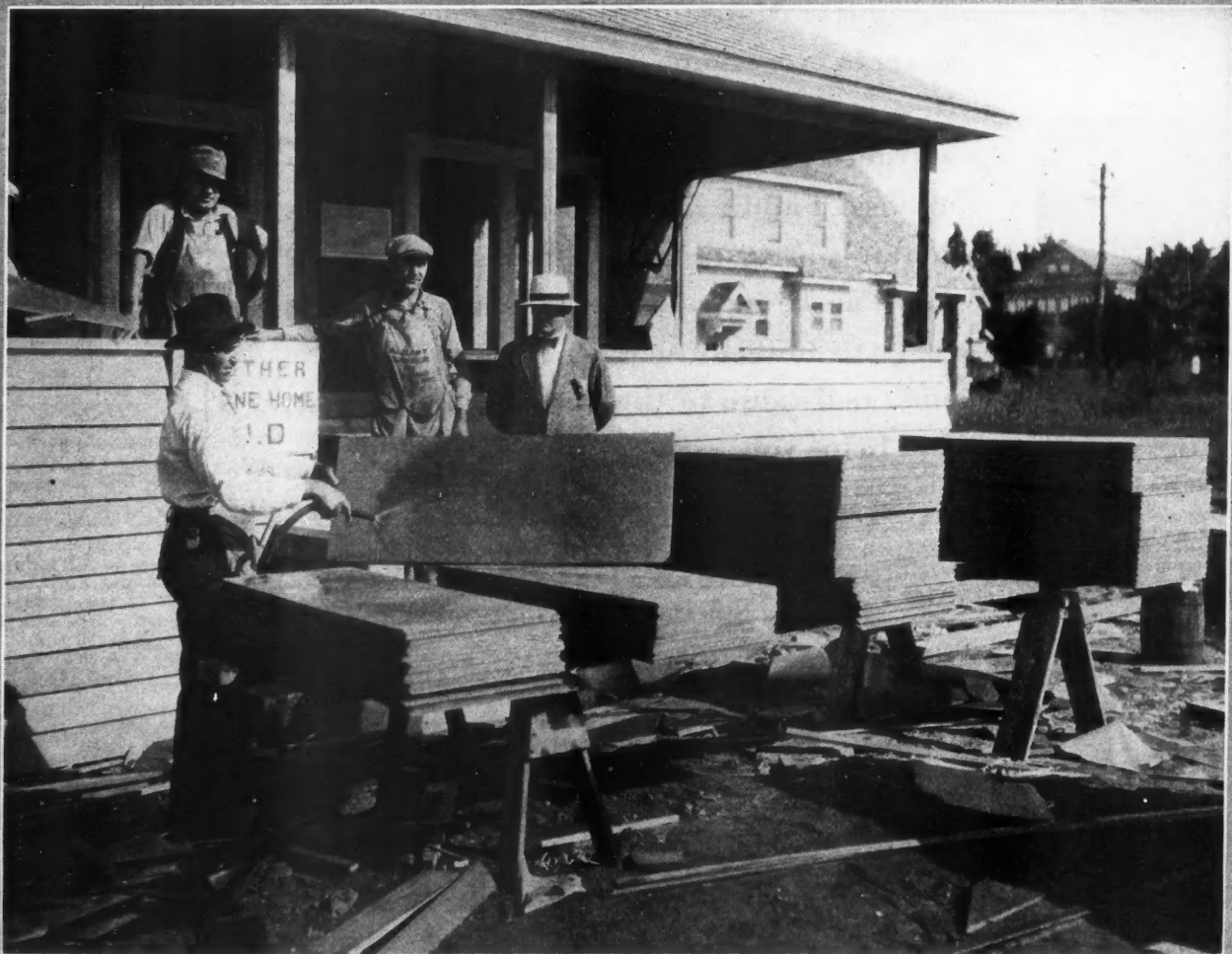
1. A charge of 15 per cent is made against all material returned for credit unless there is some legitimate reason for the return. By this rule the amount of material returned is greatly reduced. Where material is returned, the 15 per cent takes care of damaged material and handling costs.

2. No new accounts are opened for less than \$10.00. Dealers find the number of small accounts they are required to carry and the cost of collecting unreasonable and unprofitable.

3. All bills paid before the tenth of the month following purchase are discounted 10 per cent. This greatly reduces the accounts receivable. As a rule, it is necessary to mark up the goods an additional 10 per cent. If accounts are not paid promptly the dealer has merely added a reasonable carrying charge.

4. A 20 per cent deposit is required on all special millwork. This has been found helpful in making the planing mill, usually the hardest department to operate, profitable.

5. Special trips are charged for at 25 per cent extra per trip. Next to merchandising, the biggest problem is handling cost and this rule helps to reduce this item.



**Wetting the Fibre Insulating Board with Hose Just Before Using Cured
Warping and Plaster Cracking.**

“Andersen FRAMES are great TIME-SAVERS!”



Flint Tavern, Flint, Mich.
Built by Carl S. Barry
Using 301 Andersen
Box Frames.

These quality frames
cost no more
in the end.

The sooner you get away
from a job the more money
you make on it.

Isn't that true? At least that
is what one successful builder
wrote us and he finished up
his letter by saying, "Andersen
Frames are great time savers".

We believe every builder,
contractor and carpenter ap-
preciates the advantage of a
frame that can be put together
in ten minutes or less. Ander-
sen Frames require no refitting
and are accurately milled to
save the carpenter's time in
fitting sash and interior trim.
Some contractors claim this
time saving amounts to as
much as one dollar an open-
ing. Cut this estimate in half
and the saving more than
offsets the slight extra cost of
these superior frames.

All we ask is that every con-
tractor prove for himself the
time saving value of Andersen
Frames. We shall be glad to
send you illustrated folders
showing where and how our
frames are being used. Write
to us at the address below.

As in all
Andersen Frames,
sills and casings
(or staffbeads) of
box frame No. 171
are of genuine
white pine. Drip
groove, caulking
groove and slot for
water bar under the
sill aid weather-
tight installation.



Why

Contractors use
Andersen FRAMES

- (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 including groove for wide blind stop.
- (4) Absolute accuracy of milling.
- (5) A Frame up in 10 minutes.
- (6) Standardized styles and sizes, convertible for all architectural needs.
- (7) Nationally known and distributed.
- (8) Dependable because guaranteed by a reliable manufacturer.

Andersen FRAME CORPORATION., Bayport, Minn.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Palmer Sells Proven Quality

(Continued from page 79)

of night light is given great importance. The windows in Palmer houses are numerous and large. In this day of tight casement windows and of weatherstrips, there is no need to be miserly with sunshine by day. And likewise, in this electric light age, the use in each room of two and three convenience outlets, where lamps may be plugged in, has been accepted as most desirable.

The need for uniformly comfortable temperatures prompted the use of insulation and weatherstrips quite as much as the need for fuel economy. Fire underwriters well may stress the importance of "heatability" of houses, for lack of it causes more winter fire losses than does the lack of fire stops. Important as fire stops are known to be, the need to "force" heating plants during subzero drops has an inevitable result—fires are ignited that may burn down the home. Therefore in the "rating" of Palmer houses as to fire safety due credit was given to their good heatability. Also, under the comfort rating the certainty of more uniform indoor temperatures, whatever the outdoor temperatures, puts a rated premium on heatability *built in*.

Waterproofness, not only of the basement, but of windows and roofs, is another item given attention in Palmer houses. The foundation walls are never complete without drain tiles, both inside and outside of the walls, nor is waterproofing on the outside of those walls omitted. A waterproofing mixture is added to all mortar used in brick laying.

From the standpoint of fire safety the use of firestops in the walls, the sheet metal protection about the heating plant and the air cell pipe covering on hot steam pipes have been given scrupulous care. The fact that the houses, built on 40-foot lots and the larger ones on 60-foot lots, are not jammed directly up against neighbor houses is, of course, a big element in fire safety.

Superlative, the Rating Shows

The highest rating for houses yet issued by Certified Building Registry is the one given to one of the Palmer houses, a rating that entitled the houses to Class AA because the premium above zero (assigned to the extremely poor type of dwelling) is over 85 out of a possible 100. Some changes in specifications for other Palmer houses to be built this year will add some two or three rating units. Thus these frame and brick veneer houses will almost reach the 90 mark. It is safe to say that few "model" homes built of favorable materials but with no measure of craftsmanship applied would approach that mark, just because the use of good materials and good equipment often is faulty. I would challenge any committee having "model homes" in charge to submit to a painstaking rating as Mr. Palmer has done.

The day is near at hand, I think, when home buyers can demand certificates of rating of houses just as they now secure proofs of good title to the real estate. The "ratings" given therein in figures, classification and graphs express the composite values according to good architectural and engineering practices of all the factors and elements that enter into the rated buildings.

To arrive at the rating, Certified Building Registry has had worked out a Code for Rating Dwellings, which under the four heads named, permanence, fire-safety, fuel cost, and comfort, covers all the essential elements to be considered. Recently the United States Bureau of Standards aided in the current revision of that Code. From footings to roof, from fuel cost to comfort items such as sunlight and sound deadening, breakfast nooks

and plumbing, this code furnishes a lens of engineering fact through which to project all facts and arrive at an index of rating.

Loan departments of insurance companies and banks and mortgage bankers generally are justified in accepting high ratings as reasons for first mortgage loans more liberal than usual. Second mortgage lenders also are justified in preference for the "fortified" building that can prove by its rating that more money will be available for principal and interest because of the lower expenses for repairs, replacements and fuel.

Many thousands of dollars and some years of time have been required for the Certified Building Registry to work out as it has done the complete data and code for rating houses. Rating charts have been supplied by which inspectors can identify the types and conditions of walls, roofs, windows, floors, chimneys and heating plant conditions and arrive at a rating, by percentage of saving assured as compared to "superwasteful" types. Applying these standards to the homes built by Louis G. Palmer show convincingly why he has earned his reputation as "Detroit's best builder."

✱

Belt Conveyors on Big Mart

(Continued from page 95)

employed for taking material over this distance, there would be no appreciable chance for settling due to the much greater speed that the belt has over the buggy wheeler.

To Mr. Bruce Gordon, superintendent for the Griffiths company, is due credit for the above plan of operating the conveyors which has proven itself absolutely on the work done so far on the building. Graham, Anderson, Probst & White are the architects of the Merchandise Mart and Geo. W. Allen architectural superintendent.

The company which manufactures the conveyors being used on the Merchandise Mart Building have just published a book on the handling of wet concrete with portable belt conveyors. This book, which will be sent free upon request, has a group of photographs and an excellent description of each job on the following applications: Buildings, retaining walls, blocks, sewers, sewage disposal plants, irrigation ditches, bridges, viaducts and railroad elevations.

✱

Steel Resists Deterioration

PROOF that steel can successfully carry its designed loads and withstand deterioration through corrosion and other sources has been afforded by careful analysis of the material which was removed from the Tacoma Building, in Chicago. This 13 story building was built in 1887. The Illinois Society of Architects appointed a committee to make an examination of the condition of the material in the building as it was wrecked.

Henry Penn, district engineer of the American Institute of Steel Construction, also submitted samples of the material to Robert W. Hunt Company, engineers, of Chicago, for careful investigation. A report of the Hunt Company states:

"The steel from the old building has been subjected to chemical analysis, etching and microscopic examination. There has been no evidence of deterioration in the crystalline structure and it is believed that the framework of this building would have been good and efficient for many years to come. The material in the webs of the beams, as originally rolled, was less than 1/4 inch in thickness, yet was still perfect and capable of carrying its loads when the sections were removed."

CONVENIENCE



Just set the Thermostat—
That's all there is to it!

Modern Improvements Take Another Step Forward ~ ~ ~ With The Wayne Oil Burner

AS the electric refrigerator has brought new convenience and efficiency to the modern kitchen . . . so has the New WAYNE OIL BURNER set a new standard of Comfort, Convenience, Efficiency, Quietness and Economy . . . in the heating of homes and apartments!

NO home can be "Truly Modern" with the discomforts, labor, dirtiness and erratic temperatures of coal heating! With a WAYNE OIL BURNER . . . a constant, even temperature is maintained . . . just by setting the thermostat! Nothing but solid comfort and absolute cleanliness!

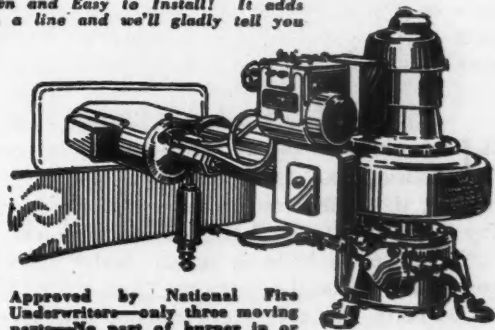
THE New, Perfected WAYNE OIL BURNER is Easy to Buy, Easy to Own and Easy to Install! It adds much more than its cost to the value of your property! Just drop us a line and we'll gladly tell you where you can see it in operation!

Wayne

WAYNE HOME EQUIPMENT COMPANY

Office & Factory
Fort Wayne, Indiana

New York Office
1780 Broadway



Approved by National Fire Underwriters—only three moving parts—No part of burner is or under fire box—No carburetors, cams, seats or needle valves!

"Built To Give Service ~ ~ Not To Require It"

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Law for the Builder

Conducted by M. L. Hayward

The "Conditional Sale"

"YOU can have that steam outfit for \$8,000—6, 12 and 18 months," the salesman offered.

"I'll take it," the builder agreed.

"Of course there'll be the usual 'conditional sale' agreement that we take on all time sales, providing that the title to the outfit remains in us until full payment," the salesman suggested.

"No objection to that," the builder concurred and signed on the dotted line. Two months later the builder's entire business and equipment was burned through no fault nor negligence on his part. When the first payment on the outfit came due the seller demanded the amount thereof.

"It was yours till paid for, then it was to be mine—now you've got no outfit to deliver, so I'm clear of my contract," the builder contended.

"No—you're bound by the contract, regardless of the fire," the seller retorted.

"The buyer should sustain the loss, because the article passed under his dominion and control, and, if the rule were otherwise, the buyer would have no incentive to take care of the property," said the Kansas Supreme Court in ruling in the seller's favor.

What Is the Measure of Damages?

"WHAT'LL you take for your building business on Young Street?"

"Thirty thousand dollars, lock, stock and barrel," said the builder.

"I'll buy it, if you'll agree not to compete with me in the same line of business in this town."

"All right—let's find a lawyer and do up the business."

Three months later the builder opens up a similar business on the same street, and competes with the buyer, contrary to his agreement not to do so.

Now, the buyer is plainly entitled to damages for breach of contract, but how much damages, measured in dollars and cents?

"You're making \$1,000 a month in your new business, and I'm entitled to damages on that basis," the buyer argues.

"Yes, but the customers I took from you don't amount to more than \$300 a month, and that's the highest basis you can claim on," the builder contends.

In other words, is the amount of damages based on the profit to the seller, or on the loss of the buyer?

On this point the general rule is that the damages are based on the actual loss to the buyer due to breach of the agreement not to compete.

"Estimate as nearly as you like in the light of the evidence the difference between the buyer's business and what it would have been if the seller had strictly complied with his contract not to compete, and consider the difference as damages," the court told the jury in an Iowa case on the point.

Rights of an Exclusive Agency

"I'LL give you the exclusive agency in your state for my flooring and agree to supply you with whatever you require, if you'll agree to take \$500 worth per month, and pay inside of 10 days," the manufacturer proposed.

"Suits me," a building supply dealer agreed. The agreement was "reduced to writing," and signed by both parties.

Contracts like this are common, and give rise to some interesting problems, for instance:

1. Is the builder supposed to make any special efforts to sell the flooring?

2. Can he assign his contract?

3. If he cannot assign his contract, but does so, does it justify the manufacturer in cancelling the agreement?

These points were dealt with by the New York Court of Appeals in a case reported in 127 Northeastern Reporter, 898.

On the first point the court ruled that the builder impliedly agreed to do whatever was reasonably necessary in selling the flooring.

"In view, however, of the credit and the exclusive agency given to the buyers, it is fairly to be implied that they were to devote their time and do whatever was reasonable and necessary in selling the seller's product. The contract meant something. It was not a mere scrap of paper. The owner of a product would not give to another the exclusive agency, covering a wide territory, to sell the same, unless he believed an effort would be made by the one to whom such right was given to sell; and one would not take, if acting in good faith, an exclusive agency to sell another's goods unless he expected and intended to use reasonable efforts to sell," said the court.

On the second point the court arrived at a negative conclusion.

"The general rule is that rights arising out of a contract cannot be transferred if they are coupled with liabilities, or if they involve a relationship of personal credit and confidence," said the court on this point.

On the last point the court ruled in favor of the right to cancel, on the ground that the seller having contracted with one party, was entitled to say whether he would do business with a third party.

The Dilatory Tax Collector.

"I'M enclosing herewith your tax bill for the current year," the tax collector wrote.

"I'm enclosing herewith a draft on the X bank to cover my tax and enclose the bill which you sent me," the builder wrote back.

Now, if the tax collector had presented the draft with reasonable promptness it would have been paid, but he held it an unreasonable length of time, the X bank failed before the draft was presented, the builder refused to pay again, and the tax collector sued.

"You held the draft for an unreasonable length of time, relieving me from any liability and that is the same as payment," the builder contended when the case came before the court.

"That rule holds in an ordinary business transaction, but does not apply to the payment of taxes," the collector retorted, and the South Dakota Supreme Court ruled in his favor in the recent case of Eggleston vs. Ploughman, 207 N. W., 981, in the following words:

"We are of the opinion that the rule, applicable between private individuals, cannot govern as between an individual, whose duty is under the law to pay his taxes and pay them in money, and the public officer whose duty is to collect the taxes and collect them in money."

DON'T MISS this Legal Department. It may save you a costly mistake. Appears every month in AMERICAN BUILDER.

The water heater

THAT HASTENS THE SALE

BURN OIL-SAVE TOIL

EXPERIENCED builders who are also good salesmen realize the importance of first impressions. They know how to capitalize on conveniences that have an instant appeal to prospects.

A good impression always is made by the exterior attractiveness of a Piatt Oil-burning Water Heater. And builders can capitalize on the trouble-free operation of Piatt Water Heaters which supply quantities of steaming hot water at the least possible cost—1 cent heats 10 gallons.

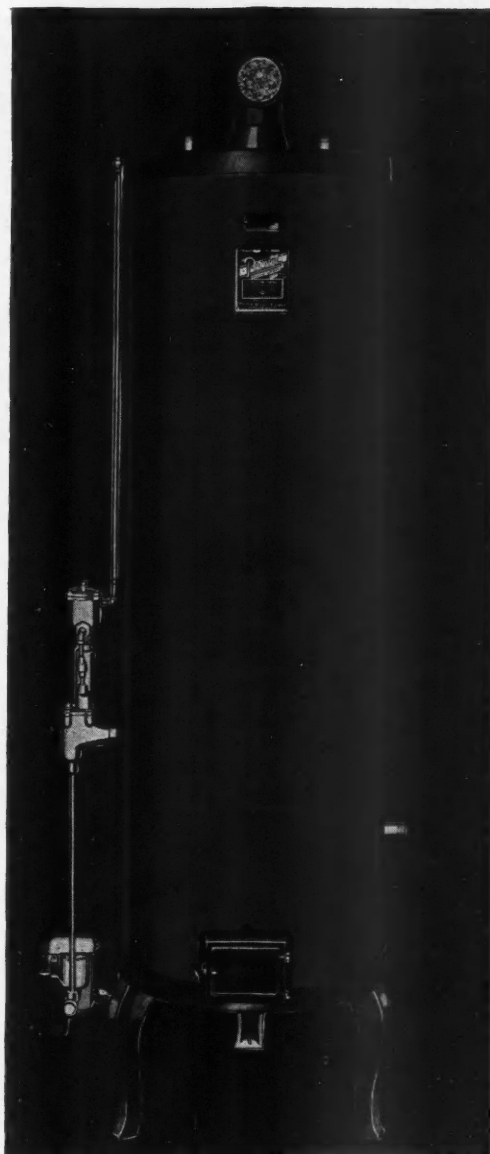
It is easy to understand the reason Piatt meets every selling and operating demand. Piatt is entirely automatic, safe within the strict regulations of the Underwriters' Laboratories, flexible enough to meet every requirement for hot water, durable and economical beyond almost any competition.

Send the coupon for full data on mechanical layout, construction details and simple instructions for installation.

MOTOR WHEEL CORPORATION
Heater Division

LANSING

MICHIGAN



MOTOR WHEEL CORPORATION
Heater Division LANSING, MICHIGAN

Send me at once, full information and profit-building plan on the Piatt Heater. I am not obligating myself but will study the details carefully.

Name _____
(Please print or typewrite)

Street _____

City _____ State _____

My Business _____

MINERAL WOOL

The Perfect Insulator

- ✓ COLD PROOF
- ✓ HEAT PROOF
- ✓ FIRE PROOF
- ✓ SOUND PROOF
- ✓ VERMIN PROOF



Makes Every Room Livable Winter and Summer

COLD rooms in Winter and hot rooms in Summer are a thing of the past in buildings insulated with Mineral Wool.

Placed in the walls, floors and rafters of a building, Mineral Wool acts as a protective shield which repels heat, cold and sound.

It is a real economy—saving enough in Winter fuel within a short period to cover installation cost—adds untold comfort and increased resale value to a building.

Mineral Wool is a sanitary, indestructible, entirely mineral material, easy to apply and inexpensive.

Mail coupon for Free sample and illustrated booklet.

U. S. MINERAL WOOL CO. Dept. B
230 Madison Avenue, New York, N. Y.
Without obligation you may send Free sample and illustrated booklet to

Name.....
Street.....
City..... State.....

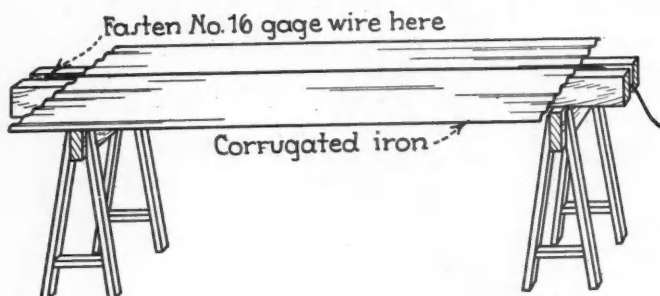
**U. S. Mineral Wool Co.
280 Madison Avenue
New York**

**Western Connection—Columbia Mineral Wool Co.
South Milwaukee, Wisconsin**

Cutting Corrugated Iron

I OFTEN have to rip a piece of corrugated iron and I find it is a difficult thing to do with a pair of tin snips. I have found another way of doing it, however, which is quite simple. I nail two pieces of 2 by 6, longer than the corrugated iron that is to be ripped, to the tops of a pair of horses, spacing them about $\frac{1}{8}$ to $\frac{1}{4}$ of an inch apart, just far enough apart for a No. 16 wire to pass between them easily.

I then tack the iron that is to be ripped on top of the 2 by 6 pieces so that the line of the cut is directly over the space between them. I then take a piece of No. 16 wire that is longer than the piece of corrugated iron and fasten



A Piece of No. 16 Wire, Fastened at One End, Will Cut Corrugated Iron Smoothly and Easily.

one end at the end of the space between the 2 by 6 pieces. I pass the wire over the corrugated iron to the other end and down through the space. Taking hold of the loose end of the wire, I pull down and back toward the point where the other end is fastened. This cuts the corrugated iron more smoothly and quickly than is possible with the tin snips or the back of a hack saw, and much more easily.

ROBERT KNIGHTON, 603 Belknap St., Fort Worth, Texas.

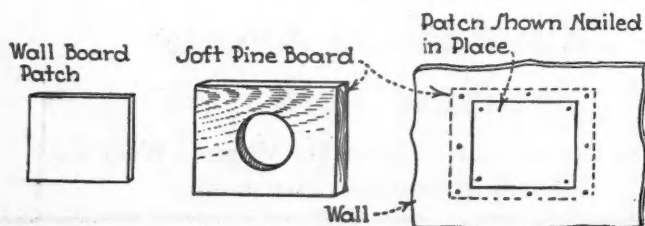
For Patching Wallboard

HERE is a method I use for patching holes in various fiber and gypsum wallboards which I feel might be worth passing along to others. I first take a piece of the wallboard and cut it to a size somewhat larger than the hole to be patched, say five by eight inches. I put this patch against the wall, over the hole, and mark around it. I then cut out the hole so that the patch just fits it.

I then take a piece of lumber, soft pine preferred, and cut it a little larger than the patch. In the case of a patch measuring five by eight inches, as suggested above, I would make this board six by nine inches. This permits it to pass through the hole but to cover it completely from behind. I make a hole about $1\frac{1}{2}$ inches in diameter in the center of this board so that I can hold it after passing it through the hole in the wall, while nailing it in place. I then put the patch into the hole and nail it to the board. It can then be papered or painted so that it will not be noticeable and will make a very neat repair job.

There are many cases where it is necessary to vary the size of the patch but, by making the hole large enough to get a fair sized piece of board back of it, you will have no trouble. Sometimes, however, it is necessary to nail strips on the back of the board to prevent it from slipping.

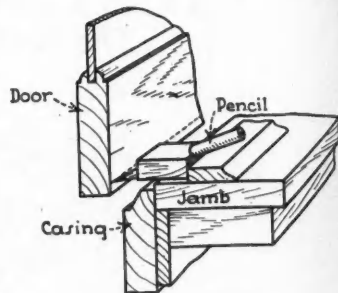
C. W. SKEEN, Eskridge, Kan.



The Piece of Soft Pine Is Passed Through the Hole and Nailed to the Back of the Wall and the Patch Nailed to It.

Scribing Doors for Clearance

THE sketch shows my device for scribing doors. I set a pencil into a small block of wood by boring a hole through the block, as shown. It is so placed that the point will be even with the bottom of the block when it projects about $\frac{3}{4}$ of an inch. By backing the pencil up in the hole I am able to mark the door for any amount of clearance desired. After scribing, I dress the door square across then ease the inside edge to clear the jamb. This always insures a perfect fit without taking down and putting up the door to try. I have used this device for a number of years with complete satisfaction.



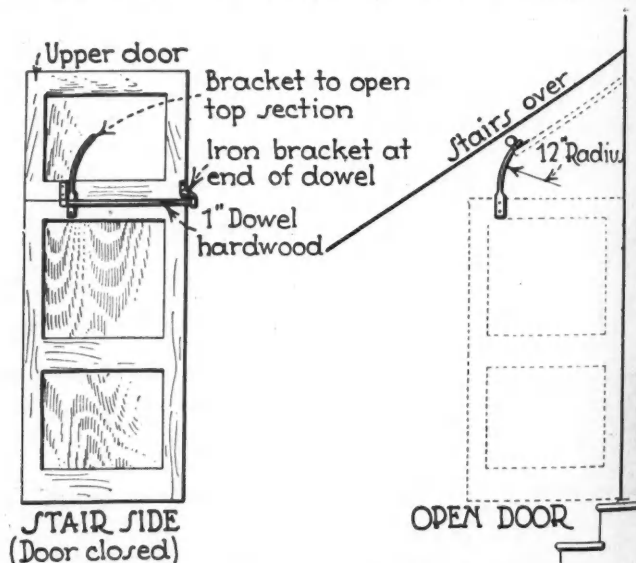
A Small Block of Wood with a Hole Through Which a Pencil Is Passed for Scribing Doors.

ELIAS A. W. BEEMER, Langstaff, Ont., Canada

Another Stairway Door

ON page 106 of the April issue, a counter-weighted door was illustrated, as the solution of a stairway door problem. Here is a sketch showing a solution of a similar case which works successfully and is, perhaps, simpler. The door is divided into two sections, the top section being about two feet of the height of the door and hinged at the top. The lower section is hinged at the side in the usual manner and is only that part of the door which will swing open without interference from the stairway above.

A hardwood dowel, one inch in diameter, is fastened to the inside of the upper section by means of iron brackets at each end. This dowel is placed just below the edge of the section and one inch away from it. A $\frac{5}{8}$ inch, round, iron bracket, flattened for screws at one end and with a curving arm 13



A Simple Bracket and Bar Device to Open the Upper Half of This Stairway Door When the Lower Half Is Opened.

inches long bent on a radius of 12 inches, is fastened to the lower section of the door.

This arm runs up between the dowel and the upper section of the door. When the lower section of the door is opened, in the ordinary way, this arm pushes against the dowel and pushes the upper section of the door up and in, opening the entire door space. The action is positive for both opening and closing the door.

LESLIE W. CUTTER, 65 State St., Bangor, Maine.

THERE'S A NATIONAL HEATING SYSTEM FOR EVERY BUILDING NEED



Playroom



Bed Rooms



Grandma's Room



Bath Room



Living Room



NATIONAL NOVUS BOILER

Twenty Years of Service Testify to Its Reliability

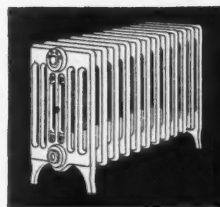
Standard for almost twenty years, the Novus Boiler has been consistently renowned for honesty of rating, and reliability of performance. There are seven grate widths and 36 sizes, augmented by a series of Duplexes. This comprehensive National Novus Line provides a time-tried unit for steam, hot water, or vapor systems in a variety of applications ranging from the smallest home to the largest building.

Each National Boiler is guaranteed—and the guarantee is endorsed by a Surety Bond, issued by The Fidelity and Casualty Company of New York. It covers three distinct guaranteed stipulations as to

performance, manufacture, design, and replacement of any defective part. It assures client satisfaction, protects against criticism or complaint.

National Bonded Boilers are designed to perform efficiently with all leading types of fuel: coal, coke, oil and gas. They can be converted on the ground to meet the individual requirements of the fuel selected. Scientific engineering design coordinates every part to produce economical combustion and thoroughly satisfactory heating.

A line to us will bring you complete and helpful information.



NATIONAL RADIATOR CORPORATION

Executive Offices: 55 West 42nd Street, New York, N. Y.

NATIONAL

Made-to-Measure

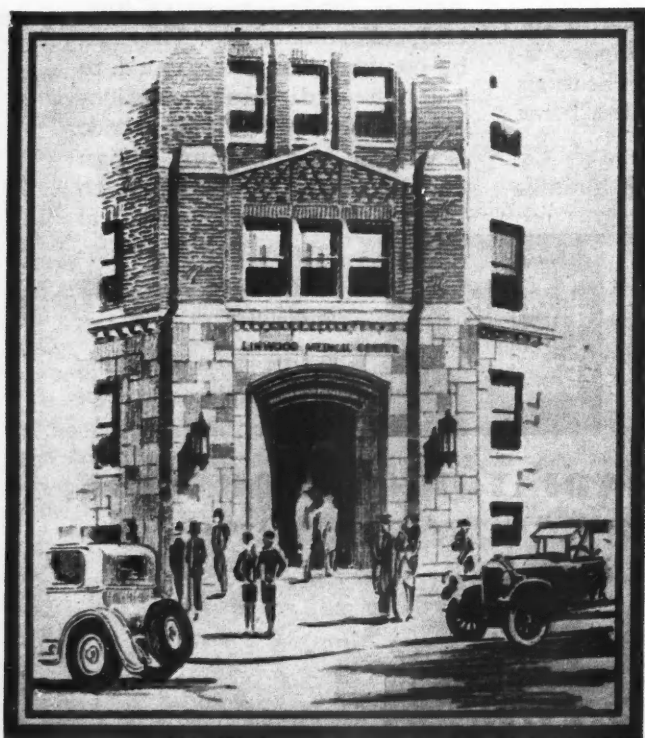
HEATING SYSTEMS

Copyright 1929
National Radiator Corporation

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Many Special Requirements in Building for Doctors



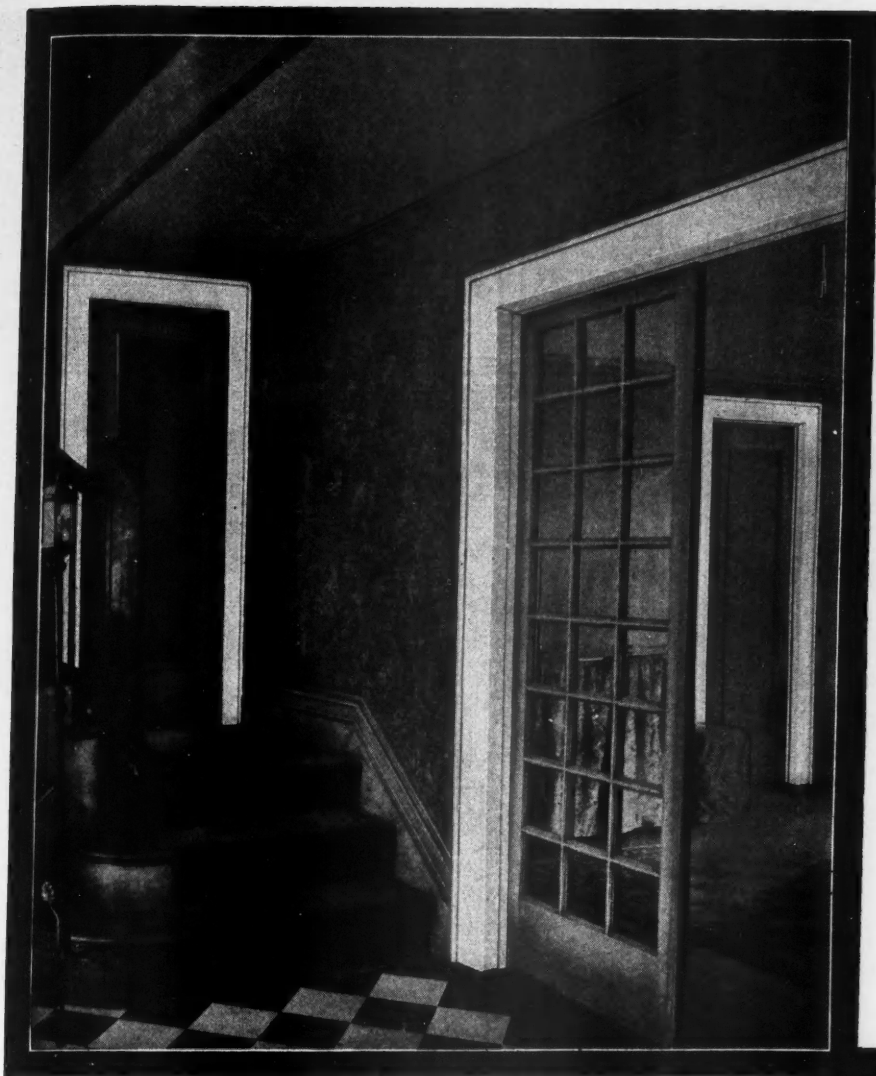
The Medical Centre Building, Buffalo, N. Y.,
Bacon & Lurkey, Architects

EVERY city and suburb has, or soon will have, its specially designed office building for doctors and dentists. For business reasons these professional men like to group together. Their needs for office space differ greatly from other types of business, and their requirements for plumbing, gas, electricity and sanitation are so special as to make the designing and building of a modern medical building, large or small, truly a job for the specialist.

A \$650,000 building, designed for the exclusive use of the medical and dental professions and known as the Medical Centre Building, was recently completed in the city of Buffalo, and is illustrated herewith. It is considered one of the finest equipped professional buildings in the country. It is a five-story and full basement, fireproof office building containing ninety units, arranged as indicated in the typical floor plan. Each unit will be divided to suit the tenant; and we show some suggested layouts of double, single and half units. Rental rates run from \$2.50 to \$3.50 a square foot.

Every office is an outside office and each unit has hygienic air ventilation. The building has 24-hour telephone switchboard service, with intercommunicating and direct outside call service. Each unit has gas connections and complete laboratory equipment. Also each unit has its own toilet.

Each floor has X-ray connections. The film vault is located in the basement. Two high speed passenger elevators are provided. In addition there is an ambu-



/ /
For
NEW HOMES
or
REMODELED
HOMES



Good trim is an important accessory and a definite sales aid in well-built homes. For best results, use TrimPak in every house you build. It will cost you no more than ordinary trim.

TRIMPAK

The public has been thoroughly educated in the points that make a well-built home. Buyers are more critical than ever before of the niceties of construction and finish. A good job of interior trim is always obtained when TrimPak is used, and it is as easily applied in a remodeled home as in a new one. TrimPak's inherent quality and fine surfaces are kept clean and dry from the mill to the job by the sturdy cartons in which it is shipped. Whether you are building a group of new houses or modernizing an old one, play safe on your customers' approval of your trim work by always using TrimPak. Sold everywhere in all desired patterns and woods. TrimPak Corporation, 44 Whitehall Street, New York, N. Y. 19 South La Salle Street, Chicago, Illinois.

ASK YOUR LUMBER DEALER



TRIMPAK CORPORATION, 44 Whitehall Street, New York, N. Y.

Please send complete information on TrimPak, and the story of properly dried lumber.

AB-929

Name _____

Address _____

Please check the square that identifies you, so we may reply most intelligently:
☐ Architect ☐ Builder ☐ Contractor ☐ Retail Lumber Dealer ☐ Home Builder

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

lance elevator for stretcher carts. The ambulance is at the east end of the building, away from the main entrance and passenger elevators.

The Medical Centre Building contains an apothecary shop in charge of a registered pharmacist, where prescriptions may be filled. There is also a depot in the basement for surgical instruments and supplies for ready use of doctors and dentists.

This Buffalo professional building was constructed by George Schaaf, of Buffalo. Bacon & Lurkey, Buffalo, were the architects. The cost was \$750,000.00. The five floors and basement contain 39,000 square feet of floor space.

In preparing the plans for this Medical Centre Building, the architects made a survey of thirty-five of the best professional buildings in the country. The Buffalo structure is a composite of the best features of all that came under their survey.

Some of these features are:

Every office an outside office; no dark courts.

Hygienic air ventilation for each unit in building.

Compressed air service for each unit.

Incinerator with openings on each floor.

Filtered, cooled water on each floor.

Public toilets for both men and women on each floor.

Complete lavatory equipment, including toilet, in each unit.

Gas connections in each unit.

Electrical equipment with plenty of base openings.

X-ray connections on each floor with film vault in basement.

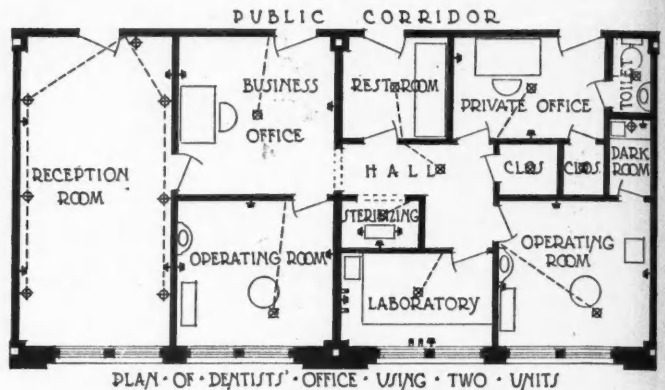
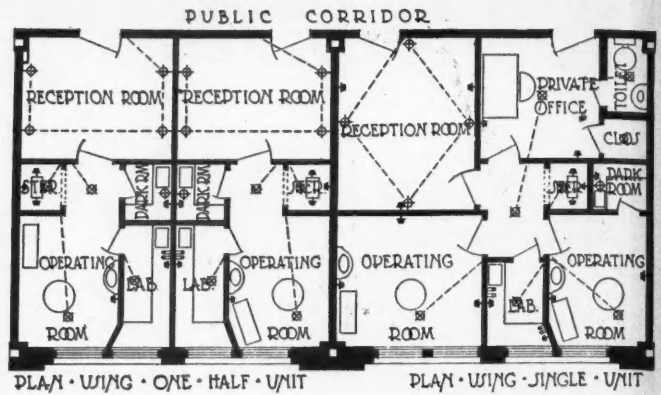
Rubber tile on floors.

Offices are equipped with sound-proof doors and walls.

Ample parking is an important feature of any doctor's establishment and has been well taken care of in this professional building. The wide streets bordering the property offer easy parking for the autoist, a doorman being present to co-operate and assist. Tenants are also served by a modern garage nearby.

The Medical Centre Building meets adequately a demand that has existed in Buffalo for some time. In order to keep the occupancy of the building highly ethical, a committee of selection passes on the status of each applicant. This not only protects the lessee, but assures a high standard of tenancy in the building.

A demand for buildings of this type undoubtedly

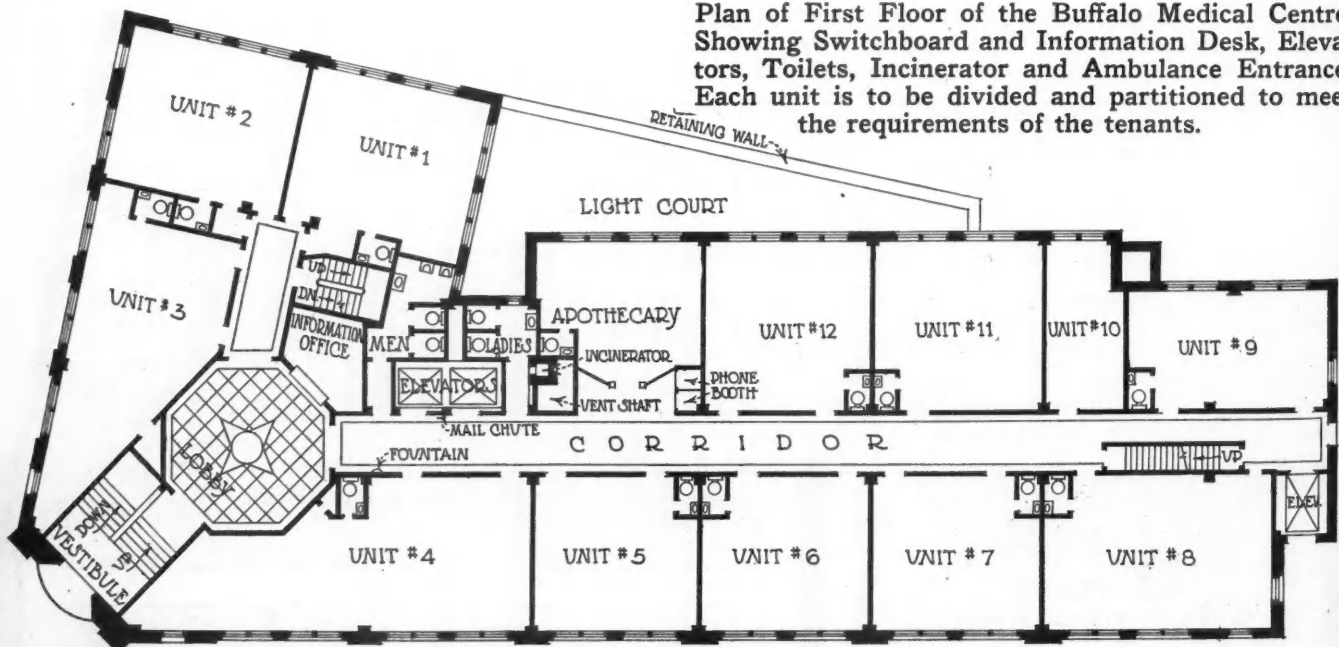


Arrangement of Doctors' Offices as Suggested by the Davis-Schultz Co. for Bacon & Lurkey, Architects.

exists in many other cities of this country and this demand presents an opportunity to the builder who will study his local situation and also the special requirements as suggested here. A special building of this sort is a complete failure unless it is created to meet a definite demand and unless it meets that demand adequately, as to location, number of prospective tenants, design and equipment. When properly planned such a building should prove highly profitable for the medical profession is quick to appreciate and take advantage of special provisions.

—ROBERT K. DORAN.

Plan of First Floor of the Buffalo Medical Centre, Showing Switchboard and Information Desk, Elevators, Toilets, Incinerator and Ambulance Entrance. Each unit is to be divided and partitioned to meet the requirements of the tenants.



Lay them right over the old wood shingles!



If you are a building contractor, you want to have a steady business that is profitable every month in the year. And Genasco Latite Shingles are just what you're looking for. Roof new buildings. Re-roof old ones. Do the work all through the year. Winter or summer, it makes no difference, for Genasco Latite Shingles are particularly suitable for re-roofing—laid over worn-out roofs—no exposing the interior of the buildings to the weather.

And here's additional business for you. Use Genasco Latite Shingles for re-siding over weather-boarding or wooden shingles of old homes. That adds new and lasting beauty, affords extra protection—and is profitable for you.

Color catches the eye today as never before. And Genasco Latite Shingles are charming in their attractive non-fading colors. Rich warm red, cool sage green, blue-black, and the harmoniously blended Mix-Tone—all offer a delightful choice, of color, and wonderful combination effects.

But Genasco Latite Shingles have more than beauty to recommend them. They are serviceable as well—waterproof, weather-resistant, fire-retardant, long lasting.

Not only are Genasco Latite Shingles made of tough, long-fibred, asphalt-saturated rag felt, but they are coated on both sides with Trinidad Lake Asphalt Cement. That seals the saturant in the shingles, prevents them from deteriorating, and thus insures long service. And Trinidad Lake Asphalt Cement—used exclusively in Genasco Shingles—is in itself noted for its weather-resisting qualities. It is made from Trinidad Lake Asphalt—nature's own everlasting waterproofer—used the world over as a street-paving material for more than a half-century.

Our campaign of national magazine advertising keeps the merits of Genasco Latite Shingles before the millions of readers of Better Homes & Gardens, House Beautiful, American Home, and House & Garden.

If you are a builder, you will appreciate the value of Genasco Latite Shingles in helping to sell your homes. Your aim is to build good homes, sell them quickly, get your profit—and then build more homes and make more money. Using nationally-advertised materials helps you—impresses home-buyers and makes selling easier. That's where Genasco Latite Shingles come in. People know about them and appreciate a roof of such beauty and durability.

Whether you are a building contractor or a builder, you will readily understand the opportunities Genasco Latite Shingles offer you. Fill in the coupon—mail it to us today—and let us tell you more about Genasco Latite Shingles.

The Barber Asphalt Company

New York Philadelphia Chicago
Pittsburgh St. Louis Kansas City San Francisco

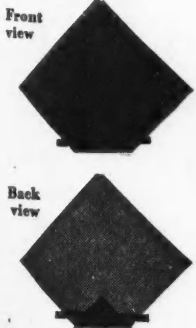


Genasco Latite Shingles
for re-siding homes



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.



Genasco

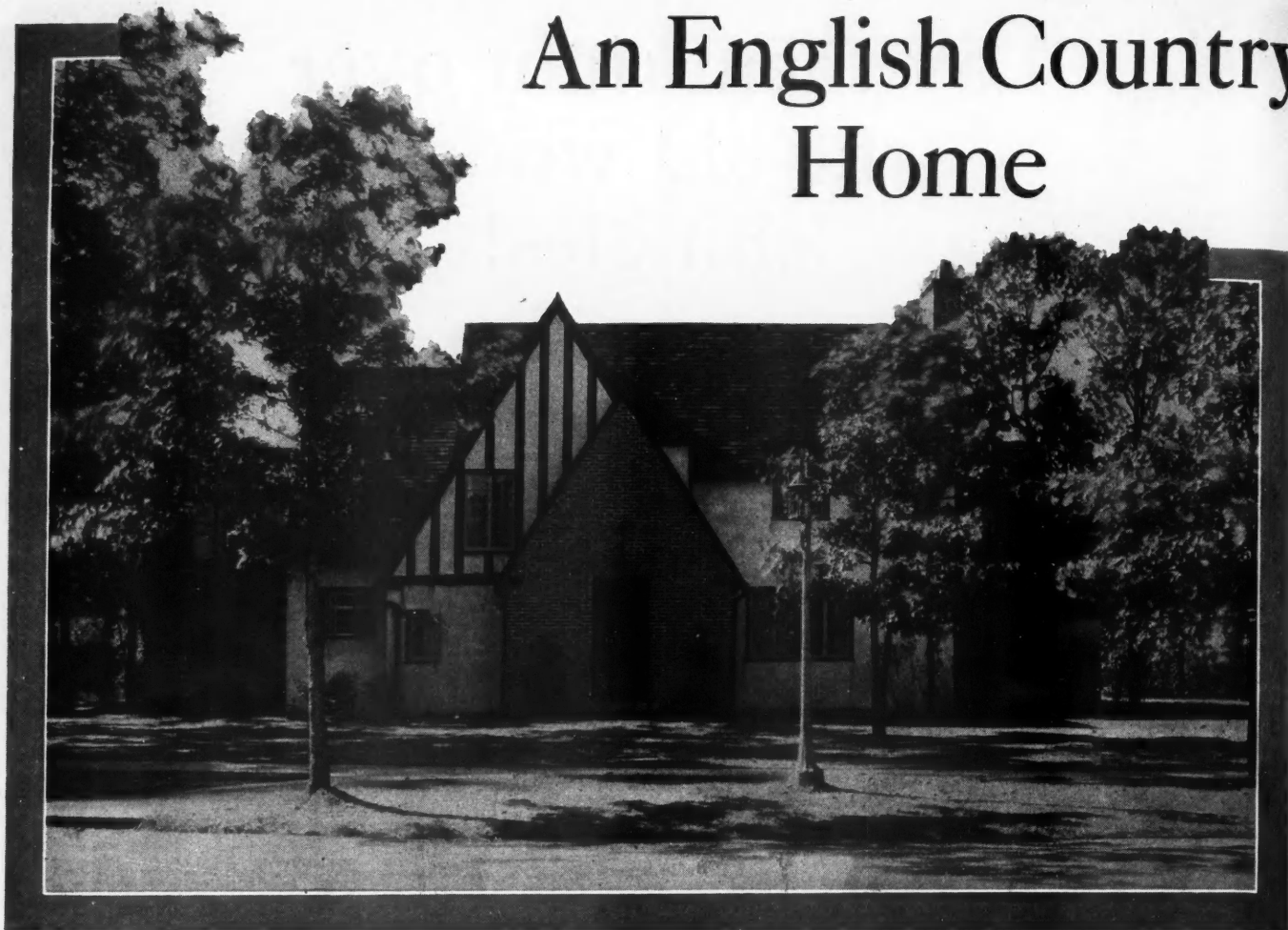
Reg. U.S. Pat. Off.

Latite Shingles

The Barber Asphalt Company, Philadelphia AB9
Please tell us more about Genasco Latite Shingles.

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

An English Country Home

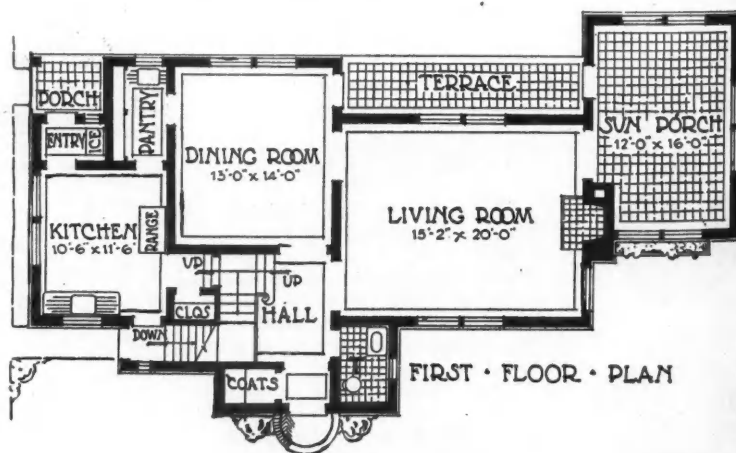
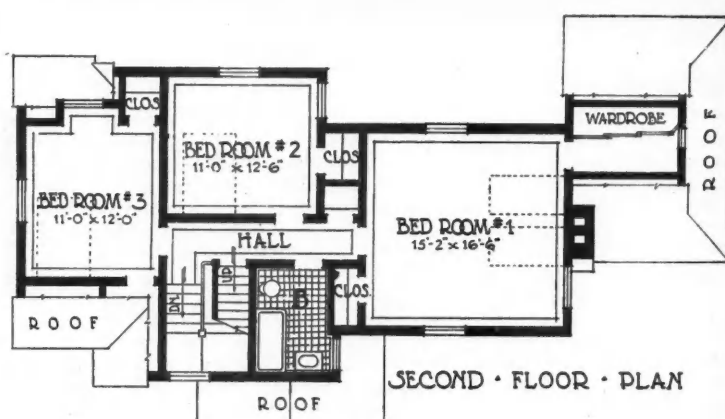


THE architectural flavor of old England is strikingly evident in every detail of this attractive modern home.

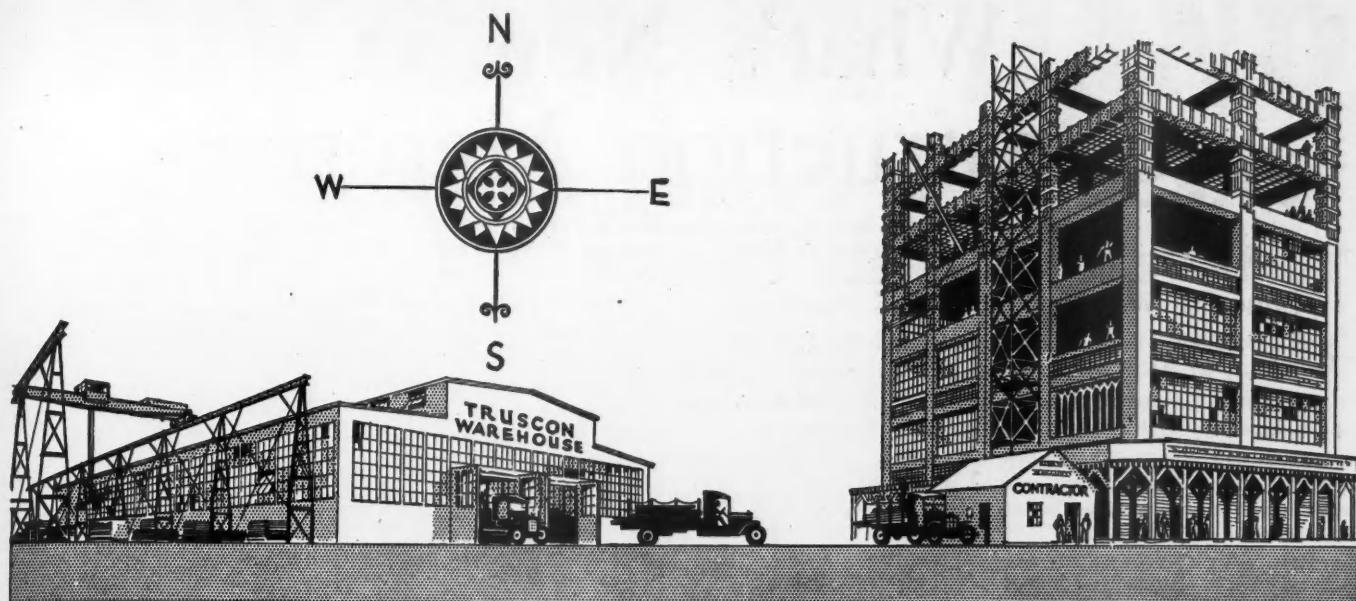
The irregular roof lines with low-hung eaves, the twin gables in contrasting materials, the grouped casement windows with small panes and the low setting of the house amid the trees all impart their charm.

The materials are simple and few but well handled.

A good practical plan accompanies the pleasing exterior and the interiors are most livable.



DESIGNED BY
R. C. HUNTER & BRO.,
ARCHITECTS,
501 FIFTH AVE.,
NEW YORK CITY.



NEAR YOU!

REINFORCING STEEL

Rib Bars Welded Steel Fabric
Column Hooping Steel Inserts

STEEL WINDOWS

Casement Windows
Basement Windows
Pivoted Windows
Projected Windows
Utility Windows Steel Lintels

STEEL DOORS

Swing and Slide Types
Single or Double Units
Steel Frames

ROAD REINFORCEMENT

Welded Steel Fabric
Reinforcing Bars Curb Bars
Contraction Joints Edge Protectors

METAL LATH

A Metal Laths Cornerite
Diamond A Lath Stripite
Diamond Rib Lath Corner Beads
¾" Hy-Rib Channels
Diamond Lath Base Screeds
Stucco Mesh Partition Channels
Self-Furring Lath Mortar Boxes

A TRUSCON WAREHOUSE

FOR IMMEDIATE DELIVERY OF STEEL BUILDING PRODUCTS

Well-stocked and well-equipped warehouses in the principal distributing centers throughout the United States, make immediately available Truscon's large manufacturing facilities, nation-wide engineering service, and complete lines of Steel Building Products. Your jobs are never held up pending the arrival of these materials as shipments are made immediately. These nearby warehouses have complete modern machinery for economical handling and for such fabrication as is necessary. Leading contractors rely upon Truscon as the source for all Steel Building Products, because of their superior quality, dependable service, prompt delivery and economical cost.

Write for complete information and quotations.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

Truscon Steel Company of Canada, Limited, Walkerville, Ont.

Warehouses and Offices in Principal Cities

TRUSCON

STEEL BUILDING PRODUCTS

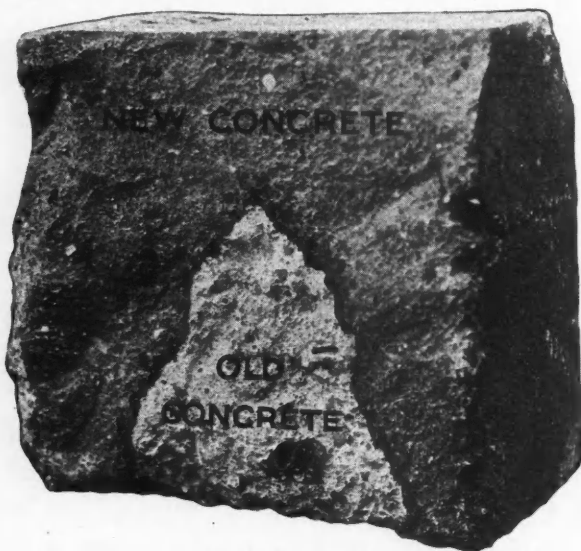
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

What's New in Construction Materials

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

Concrete Waterproofing and Bonding

THE accompanying illustration shows the bonding of new concrete to old concrete, by means of a compound, which also serves as a waterproofing material, in a test which proved the unusual strength of concrete bonded in this manner. Two pieces of old concrete hand rail were used. One piece was treated with this compound, placed in a box form and filled with new concrete which also contained this compound.



New Concrete Bonded to Old Concrete with This Compound Makes a Joint as Strong as the Original Cast.

The other piece was treated the same way except that the compound was entirely omitted. After six weeks both blocks were tested under compression. The one without the compound fractured at the joint between the old and new concrete, it is stated. The one with the compound broke at right angles with the joint, through both old and new concrete, as though it had been one original cast.

This compound is a chemical combination used for waterproofing and repairing concrete, stucco, brick, tile and stone construction of all kinds. It has, as its base, finely ground iron, while most of the chemicals are for the purpose of accelerating the complete oxidation of this iron. Mixed with water and applied with a brush, like paint, this compound fills the pores and voids of the treated surface and, within 10 to 15 hours, the oxidation of the iron takes place. In this chemical action or "rusting," the iron particles expand from two to 3½ times their original size, completely closing the pores and forming a perfect seal, it is claimed.



Complete Plastering System

BECAUSE of its proved merits, a well known plastering system has been purchased, recently, by a leading manufacturer of gypsum products. This company has taken over the patents, good-will and sole privilege of manufacture. The system consists of a gypsum lath, the horizontal and vertical joints of which are reinforced with a fabric of expanded metal, over which base is applied a plaster specially prepared for this system.

The lath, which measures 16 by 48 inches, is of exceptional quality and sturdiness, the gypsum core being processed, the face paper being prepared to insure a perfect bond with the plaster and the back paper being moisture-proofed to prevent any water from reaching the wood framing during plastering. The lath is fireproof, vermin-proof, non-deteriorating and has been shown to bond exceptionally well with the plaster.

The expanded metal fabric, which is three inches wide and is made with a patented selvage edge, is easily and quickly nailed (with the concave side against the lath) and serves a double purpose. It provides a reinforcement at the joints and assures a base coat of adequate thickness. The first two major causes of plaster cracks, inadequate plastering base and skimping of the plaster, are thus prevented.

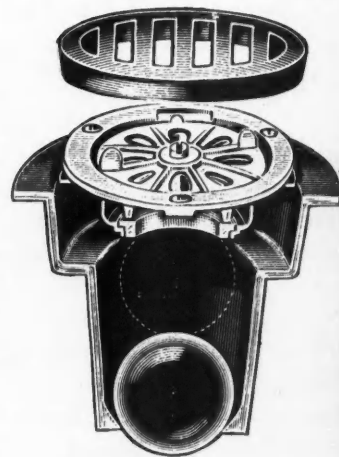
The third major cause of plaster cracks, over-sanding, is guarded against by preparing the plaster at the factory up to the point of mixing with water only. By the special processing of the gypsum, the plaster is made exceedingly plastic and is given unusual strength, density and fire resistance.

As this system gives the greatest satisfaction when only the special materials are used, it is sold only to licensed dealers and applied only by licensed contractors who agree to use the special materials only.



Drain and Back Water Valve

WATER cannot back up into the basement or area and foul gases and odors cannot escape into the basement from the sewer when the floor drain and back water valve illustrated here are used. This drain is equipped with a ground brass shut-off valve with a large opening for the easy flow of water. A copper ball float, fitting into a rubber seat, shuts the opening against backed up water. The removal of three brass screws exposes all parts of this drain for cleaning. It can be used with either four-inch or six-inch pipe and no pipe cutting is required in order to install it. A similar drain, without the float ball, is made by the same company for an economical installation where backing up of water and escape of gases is not of importance.



An Effective Means of Keeping Backed Up Water and Foul Odors Out of the Basement.

WHY SAW BY HAND

*when there's a SKILSAW
model as low as \$60?*

Unless you saw for exercise—you're losing money without a SKILSAW. SKILSAW does everything you can do by hand, does it faster and with almost no effort. Crosscut, rip, groove, mitre and bevel with SKILSAW—cut rafters, joists, lintels, flooring, studding, sheathing, doors, stringers, bridging—and cut them faster!

SKILSAW also cuts or scores limestone, marble, asbestos, tile and other materials of stone by using a carborundum disc! SKILSAW is made in four models, a size for every cutting need. It is light enough to handle with ease, tough enough for any job and has the accuracy of a machine.

SKILSAW will help any carpenter, contractor or builder increase his production and multiply his profits. We'll gladly arrange to let you see it in action, without obligation. Use the coupon.

\$60⁰⁰



SKILSAW, INC.,
3310 Elston Avenue,
Chicago, Illinois

Yes, I'll watch a five minute demonstration of SKILSAW.
This doesn't obligate me at all.

Name.....

Address.....

City.....

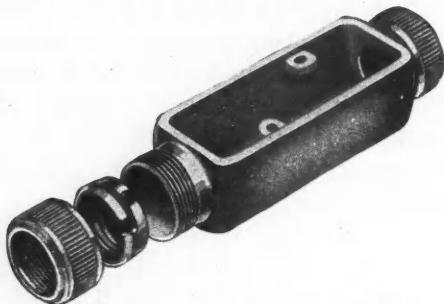
State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Improved Conduit Fittings

ONE of the well known manufacturers of electrical equipment has announced an improved line of non-threaded conduit fittings which will be manufactured in addition to its old line of threaded fittings. The new fittings have many decided improvements over the old type of fittings.

The old type consisted of a steel body with a steel hub securely fastened to the hub of the fitting. This hub had outside threads and was slotted so that the locknut, in being turned on, gripped the conduit. As shown in the illustration



A New Type of Conduit Fitting Which Reduces the Cost of Installation and Insures a Better Job.

tion, the improved type is very simple in design. The tapered steel ring is squeezed onto the conduit by the knurled nut, from the outside. There is no change in circumference of the threaded hub, therefore there is no tendency to strip the threads of either nut or hub.

This same ring has on its inner surface three projecting beads that pierce through the conduit enamel, thus establishing a metal to metal contact and insuring a perfect running ground. All standard covers and fittings are interchangeable with the new fittings.

It is claimed that these fittings save considerable time, as it is not necessary to cut threads. There are no loose parts, which insures the utmost simplicity and efficiency. It is only necessary to cut the conduit, slip it into the fitting and tighten the knurled nut which insures a mechanically secure joint, a perfect running ground and a strong job in considerably less time than ordinarily required.



Insulating Blanket Improved

SEVERAL improvements have recently been made in a well known insulating material which consists of a mat of wood fiber enclosed between two sheets of heavy kraft paper. The principal improvement is in the type of paper used. The kraft paper has been replaced by a heavy crepe paper which, besides being tougher, stronger and more flexible than the old liner, has 25 per cent stretch, which makes the blanket practically puncture-proof.

The use of this liner for the insulating blanket is no untried innovation. For several years a double thickness of it has been applied to each side of a special grade of this insulating blanket used for the insulation of refrigerator and passenger cars. It was adopted by many railroads because it withstood the weaving, distortion and racking to which railroad rolling stock is subjected and at the same time retained its insulating value. This liner made the special grade too expensive for use in ordinary house insulation. Recently, however, a new machine has been perfected which does the creping as a part of the regular process of manufacture. This places the more expensive type of liner within reach of the general building market.

Other improvements that will make it easier and quicker for the carpenter to apply this material include an increase of $\frac{1}{4}$ inch in the width of both the 17 inch and 25 inch width, giving a little more leeway in tucking the insulation between the studs, joists and rafters. All this material is

ruled to indicate the flange by which it should be attached to the framing and is creased or scored to facilitate flanging.

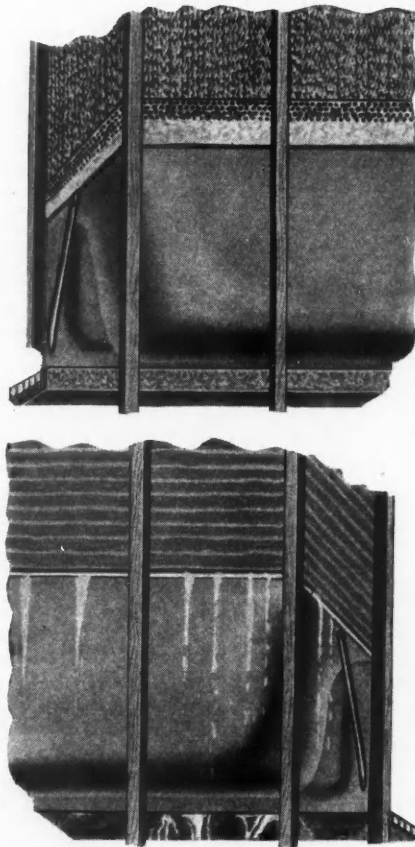
All this material is lined down the center with marks indicating foot-measure so that it will be unnecessary to measure with a rule the strips required to fill a given space. The fiber mat has been made firmer without sacrificing any of its insulating efficiency and the bond between it and the liners has been increased. The product will go to the dealer in an improved package, wrapped in kraft paper as before, but with a convenient opening device added, and a specification sheet in each roll.



Tub Hanger Prevents Cracks

A CONTRAST between the common method of hanging bath tubs and the method of hanging with a new type of bath tub hanger, is shown in the illustration. This hanger consists of a metal trough which acts as a water seal between the wall and the edges of a built-in tub or shower receptor and between the front bottom flange of the tub or receptor and the floor.

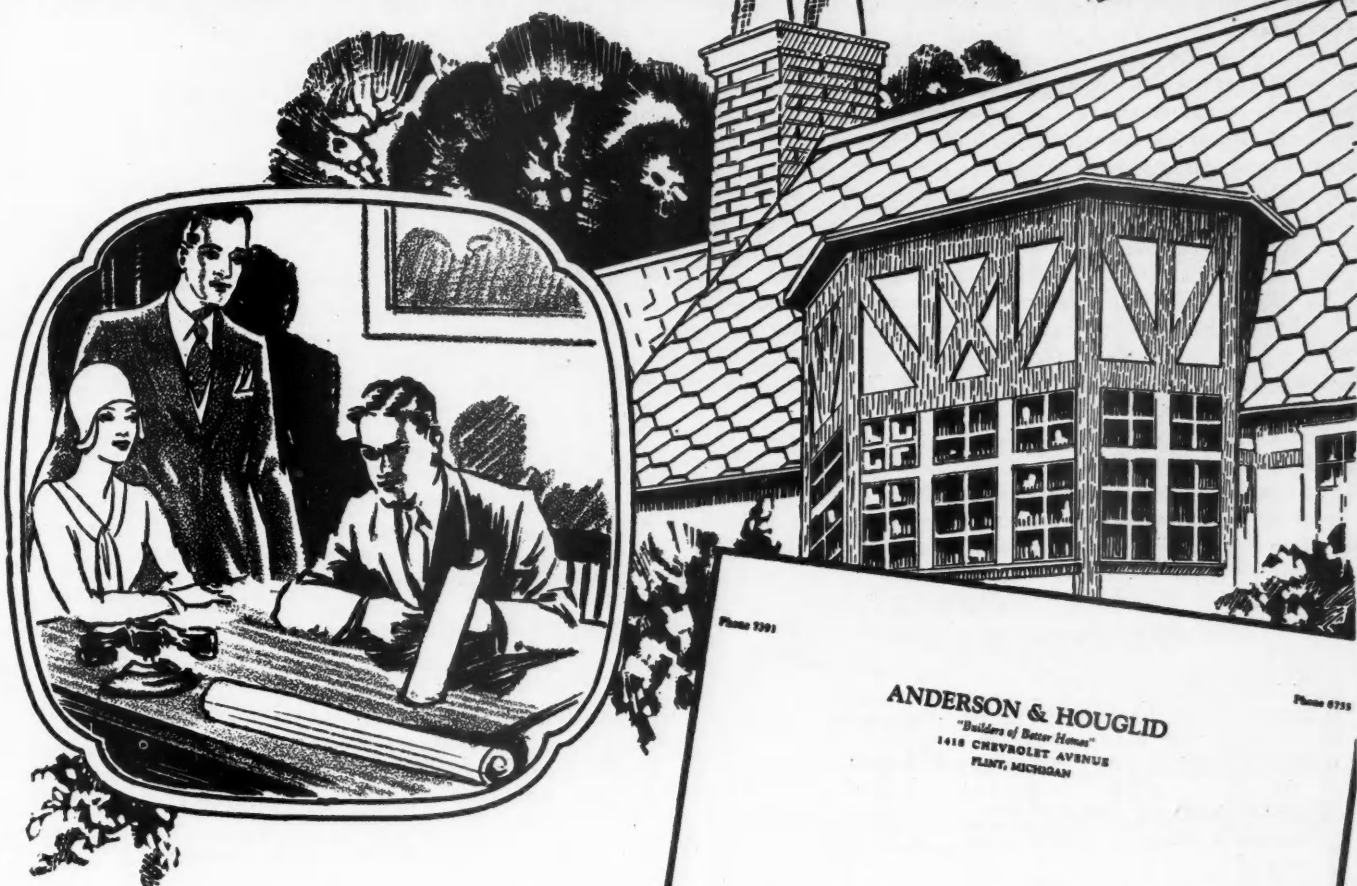
This hanger is made of heavy gauge, galvanized steel in the form of a trough or gutter. The upper part is perforated like metal lath to form a perfect base for plaster, cement, tiling or any other floor or wall covering. It is adjustable in length for tubs of different sizes. It weighs 20 pounds and is tested to support a weight of 3,000 pounds or more.



Above: The New Method Which Utilizes the Bath Tub Hanger Described Here to Eliminate Wall Cracks and Leakage. Below: The Old Method of Installing Built-In Bath Tubs.

With this hanger installed, seepage from around the edges of the tub is prevented. The tub cannot settle, with the result that it stays in position just as it is installed, regardless of the settling of the building, and the wall does not crack. It is easy to install and is not expensive, especially when one considers the saving in expense for repairing and redecorating ruined ceiling which result from leaky bath tubs.

The CONTRACTOR Speaks



"Joyce and Dick Wilson have Cyclone Shingles on their roof. Those are the kind we want, too."

HOME BUYERS ARE becoming "quality conscious." They know the better building materials probably more than you suppose.

No apologies are necessary when you roof with Cyclones. The Cyclone Safety Shingle with its distinctive beauty, extra protection and exclusive safety features will win, instantly, your prospect's approval.

Why not learn more about them?

A post card will bring you samples and full information.

FORD ROOFING PRODUCTS CO.
529 S. Franklin St. - - - - CHICAGO

CYCLONE SAFETY SHINGLES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Anderson & Houglid
"Builders of Better Homes"
1418 CHEVROLET AVENUE
PLANT, MICHIGAN

February 18, 1928

Mr. G. W. Hood,
c/o Ford Roofing Prod. Co.,
529 South Franklin St.,
Chicago, Illinois.

Dear Mr. Hood:

During the year 1927 we used approximately twenty-two hundred squares of "Cyclone Safety Shingles". These were applied on houses built by us for the Modern Housing Corporation a subsidiary of General Motors Corp. The Cyclone has proved satisfactory to us not only in giving us better roof service but in speed of application as well.

It is a pleasure for us to write you this letter telling you of our satisfaction.

Yours very truly,

ANDERSON & HOUGLID,

By *W. Anderson*

DEA/C

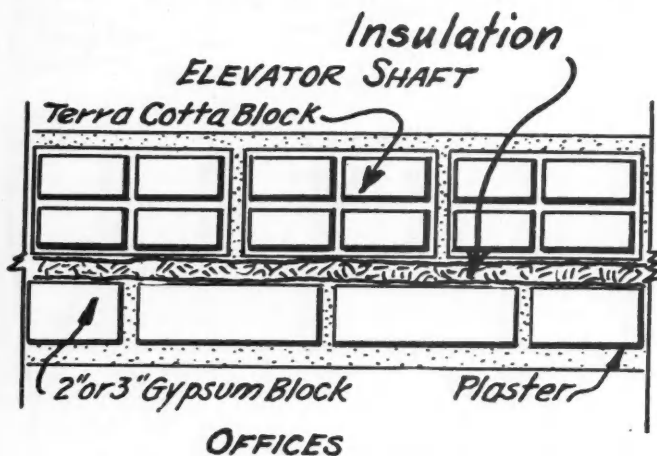
Sound-Proof Elevator Shafts

THE sound-deadening of elevator shafts has become an item of such great importance in hotels, apartments, office buildings, hospitals and similar structures that it is receiving earnest attention from architects, engineers, builders and owners.

Elevator shafts must be centrally located and, if space is to be properly economized, they are likely to be surrounded by offices or apartments. The noise of the machinery, opening and closing of doors, calling floors, and even the conversation of passengers in the elevator may be disturbing to the adjacent tenants and seriously interfere with the rental of those rooms.

In the construction of the newly completed Chanin Building, these factors were all of acute importance. Great pains were taken to solve the problem of deadening the shafts so as to utilize every possible inch of renting space. The conditions required that the sound-deadening material should be fire-resistant and meet all the other requirements of first class construction.

The concrete walls of the elevator wells were covered with single course of hollow, terra cotta tile over which was laid an insulating material made from ell grass. This was followed by a course of two-inch gypsum blocks and a finish of plaster. The insulating material broke up and absorbed



This Method of Sound-Deadening Was Used Effectively in the Elevator Shafts of the Chanin Building.

the sound waves, not only in the elevator well itself, but also prevented them from penetrating through to the surrounding offices.



Waterproof Glue in Packages

THE manufacturers of a well-known casein glue are now distributing this product, through dealers, in a new package, in half and one-pound cans and five and 10-pound bags. This packaging makes it possible for the small user of glue to enjoy the same practical and simple cold gluing methods that have been used for years by the large manufacturing trades.

This casein glue comes as a dry powder which eliminates the old-fashioned glue pot and takes all the uncertainty out of gluing results, it is claimed. It contains no preservatives to reduce its efficiency and is not affected by moisture or atmospheric changes. It is easily and quickly mixed cold and used cold on cold lumber and therefore cannot chill before pressure is applied.

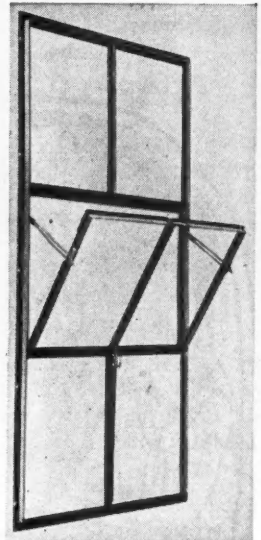
An outstanding feature of this glue is that high moisture content of lumber does not lessen its efficiency. There is no waste as you mix what the job requires. If the powder is stored in a dry place, it will keep indefinitely without losing strength.

A New Steel Window

ONE of the best known manufacturers of steel windows has recently brought out a new window which is illustrated here. This is exclusively an overhead ventilating window. The air comes in over the top, not direct on the desk or the workmen. The ventilating sections slant in at the top and out at the bottom. The rain runs out.

Each ventilating section is fitted with spring stage openers that allow the window to be opened at any point from ½ inch to 14 inches and stay put. The overhead feature allows the window to be screened with a flat, metal bound, 16 mesh galvanized or copper screen. Every window indrilled, ready to be fitted with a screen at any time.

The ventilating section can be lifted out and hung flat against the lower sash, giving overhead and lower draft. This is another feature of this method of ventilating. Also the ventilating section can be lifted up and held open with the ventilating bar as with any other pivoted window. The bar has four stages of opening. This gives a five inch opening at the top for overhead ventilation and a direct draft at the bottom. By pushing the ventilating section up to the window, you have a wide open window with full sweep of air. While the manufacturers state that the overhead ventilation is sufficient, they provide this because some workmen prefer to feel the direct draft.



A Type of Window Which Provides Overhead Ventilation.



Wood Preservation and Finish

A PRODUCT which has but lately been claiming the attention of builders in this country is a wood preserver, originally developed in Europe and introduced into the United States after being thoroughly tested abroad. It is a scientifically tested blend of the active principle of creosote with other oils.

When applied to wood, this preservative gives the wood a natural brown tone. A dark brown or black may be obtained by the addition of a small amount of lamp black. The solution is said to be particularly penetrating and will kill the wood destroying fungi besides preventing the growth of the fungi spores. This has been proven, it is stated, by the fact that this preservative applied to new structures some 25 years ago has preserved the wood perfectly during this time and, from all indications, should continue to preserve it.



Interior Woodwork in This Study Was Decorated and Preserved in a Single Treatment.

30% to 40% more color pigment in each shingle

Creo-Dipts are STAINED UNDER PRESSURE

CREO-DIPT pressure staining is a remarkable advance in stained shingle manufacture. Compressed-air forces protective oils and 30% to 40% more color pigment into the wood, keeping Creo-Dipts fresh and lovely for years longer.

Creo-Dipt houses are easier to sell. They are advertised month after month to people interested in building and buying homes. And every Creo-Dipt advertisement says, "Ask your builder."

There is a Creo-Dipt Representative near you—ready and anxious to help you with special sizes, colors or patterns. Write now for his name.

Creo-Dipt Company, Inc., 1452 Oliver St., No. Tonawanda, N. Y. In Canada: Creo-Dipt Company, Ltd., 1610 Royal Bank Bldg., Toronto. Factories: No. Tonawanda, N. Y., Kansas City, Mo., Minneapolis, Minn., Cleveland, Ohio., Vancouver, B. C.

FIVE ADVANTAGES OF THE CREO-DIPT PRESSURE PROCESS

- 1 Stained under pressure. Creo-Dipts are submerged in stain while compressed air forces preserving oils and colors into the wood.
- 2 Pressure staining puts 30% to 40% more color into every shingle than any other method. Extra color adds years of life and weather resistance.
- 3 Heated stain, kept thin and volatile like the oil in your car to penetrate the wood better.
- 4 Creo-Dipts are kept in the stain six times longer than hand or bundle-dipped shingles.
- 5 Every finished Creo-Dipt Shingle is re-inspected and repacked before shipping.

CREO-DIPT

Stained Shingles

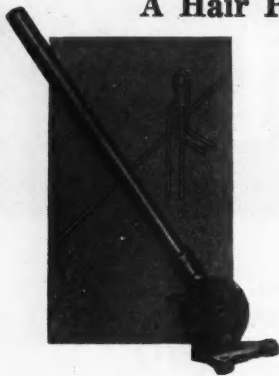
STAINED UNDER PRESSURE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

What's New in Contractors' Equipment

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St., Chicago

A Hair Pin Clip Bender



Designed by a Practical Lather This Simple Machine Assures First Class Workmanship.

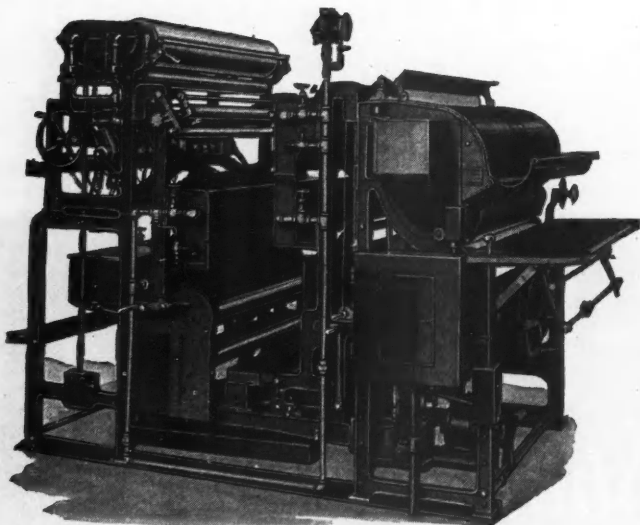
gauge from No. 11 to No. 6, in the machine and pull the lever. The machine does the rest. It makes clips of three sizes, $2\frac{1}{4}$, $2\frac{1}{2}$ and 3 inches, and produces them at a satisfactorily low cost.



Fast Blue-Printing Equipment

GREAT speed of production, high quality of work and low operating cost are the outstanding features of a new blue-printing equipment, which in many respects, differs radically as to design from form machines. Following the usual practice, with this new machine tracings are laid face up on a continuous roll of paper, feeding at the front of the machine, and are carried upward around a semi-circular, uniformly curved segment of French plate glass, past a bank of arc lamps.

After the exposure has been made the tracings are automatically returned to the tray at the front of the machine



This New, High Speed Blue-Printing Machine Can Also Be Used Economically on Single Prints.

near the operator, while the prints on the continuous roll of paper are carried through the machine and the subsequent operations of washing, potashing and drying take place in succession.

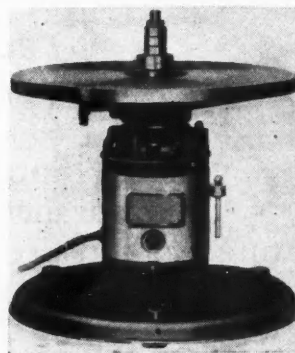


A New Electric Shaper

HERE is something entirely new in the popular priced and portable line of shapers. It is direct motor driven.

The armature shaft and shaper spindle are integral. The belt has been eliminated to avoid slipping, slowing down of operation and loss of power. In other features it is not unlike this company's latest large shaper of high speed.

This machine has a no-load speed of 10,000 R. P. M. It is ball bearing equipped and the lubrication design is such that no excess oil can reach the motor. The excess is picked up and thrown by a slinger away from the armature shaft and drained outside the housing.



Direct Drive Prevents Loss of Power in the Operation of This Shaper.

This shaper operates with a motor of well known make and can be used on the ordinary lighting circuit. It weighs only 42 pounds and sits firmly on its own base without fastening. It can be used on the work bench or wherever needed.

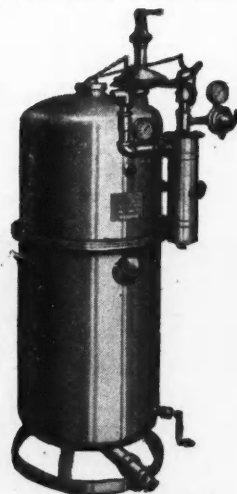


Economical Acetylene Generator

A NEW portable acetylene generator has recently been placed on the market which has a body of drawn seamless steel, lighter in weight, stronger and more dependable than bodies with the usual joints. This generator is extremely simple. It has no clocks or motors and notably few moving parts. The carbide hopper feed control and head are assembled in one unit which can be detached from the body by the removal of a few bolts.

The carbide feed is controlled by a single valve which responds to high or low pressure and automatically stops if the pressure is at zero, or if the filler plug is open or the generator is not properly closed.

The safety features of this generator are among its notable features. The Underwriters' Laboratories made tests by tipping and throwing it over without causing a rise in pressure of the gas or abnormal working of the machine, it is stated. The cost of generating gas with this new outfit is said to be approximately $1\frac{1}{2}$ cents per cubic foot.



The Body of This Generator Is of Drawn Seamless Steel.

The Deed changed hands *quickly...*



L. D. Powell, contractor, owns this Model Home with its Armstrong Floors. It was furnished by the John Gerber Company, of Memphis, Tenn.

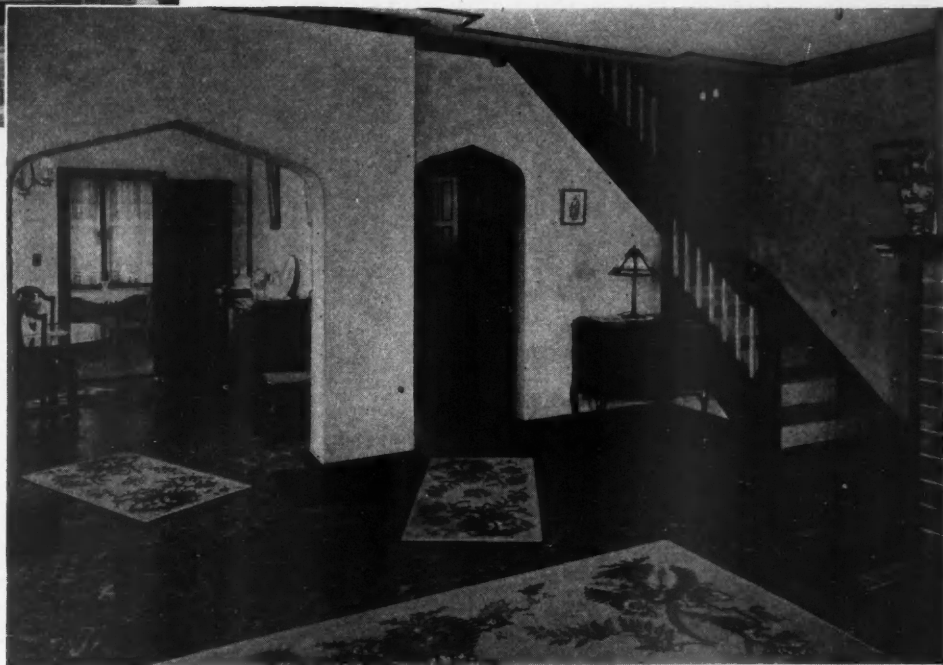
Because nationally advertised products trade-marked this "Quality" home

SOME houses seem naturally to attract prospects.

For instance, here is the Model Home fostered by the John Gerber Company, of Memphis, Tenn. Why was there an immediate sale? Several factors were responsible. One of the most important was the presence of nationally advertised products.

And equally swift sales are won by realtors whenever their houses bear the prestige of nationally advertised products. When the purchaser of this Memphis Model Home found Armstrong's Linoleum in every room, his confidence was won.

Your prospects—particularly women—will welcome the assurance that Armstrong's



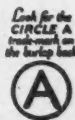
Things spilled—or dirt tracked in? Don't worry! The Accolac Process protects.

Linoleum brings. They know that these built-in floors—quiet, comfortable, and permanent—make even an empty room seem partly furnished.

And you win the further confidence of your prospects because Armstrong Floors need so little attention. With the new kind of finish provided by the Accolac Process, Armstrong's Linoleum is easily cleaned. And designs stay fresh and bright since dirt and spilled things cannot penetrate the lacquer-sealed surface of the floor.

Armstrong's Linoleum throughout this Model Home; red tile in entrance hall; Italian Handmade Marble Inlaid, with black border, in living-room and dining-room; Embossed Inlaid design in breakfast room, kitchen, and back porch; taupe Jaspé in bedrooms.

To acquaint you fully with Armstrong's Linoleum Floors—what patterns are most suitable for each room, why they can be laid in every room in the house, how special designs can be installed, and other details that mean quicker sales for you, write for "New Ideas in Home Decoration." And we will also tell you about the free service of our Bureau of Interior Decoration. Armstrong Cork Company, Floor Division, Lancaster, Pennsylvania.



Armstrong's Linoleum Floors

for every room in the house

PLAIN



INLAID



EMBOSSSED



JASPÉ



ARABESQ

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Moderate Price Floor Finisher

HERE is a new appliance which will interest the practical builder from two angles, as house and apartment equipment which affords a strong talking point for sales or rentals, and as a piece of equipment for his own work in finishing or refinishing floors. In this appliance there has been developed a machine which will perform all the necessary functions of an efficient floor machine at a moderate price and adapted to either domestic or light industrial use.



This Small Machine Will Perform All the Functions of Floor Finishing.

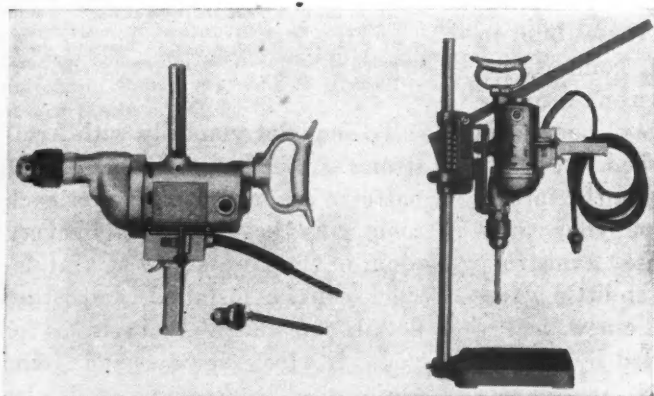
This electric floor machine scrubs, scours, sands, polishes and waxes automatically. It can be used effectively on all kinds of floors. As furnished, it includes the machine itself with handle and 24 feet of rubber cable, an automatic waxing unit, two waxing brushes, two polishing brushes, two felt buffing pads and a $\frac{1}{2}$ gallon can of wax. A pair of scrubbing brushes, a pair of wire brushes and a pair of sanding discs with wrench and sandpaper may be purchased as extras.

All the attachments can be quickly and easily removed or attached when it is necessary to change from one operation to another. In waxing, the wax is automatically fed to the floor by the waxing unit in exactly the right amount.



All Purpose $\frac{5}{8}$ Inch Drill

THIS new, all purpose, $\frac{5}{8}$ inch drill is made by a prominent manufacturer of electrical tools. It is described as possessing features not usually found in portable drill design. It combines lightness with power and performs a wide range of drilling requirements.



Lightness Is Combined with Power in This New Drill, Giving a Wide Range of Usefulness.

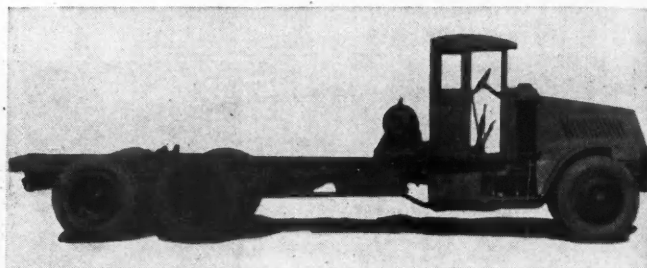
A well known make of motor is used for power and supplies an ample reserve. It is adapted to either direct or alternating current of 60 cycles or less and either 110-125 or 220-250 volts, as desired. An oversize double pole, trigger switch in a convenient position, insures long life. High grade ball and roller bearings are used. The heavy thrust loads are carried by Timken roller bearings. Its capacity in steel is $\frac{5}{8}$ inch and in wood up to two inches, depending on the kind and depth required.

Such a tool will cut costs both in the shop and out on the job.

New High-Speed Heavy Trucks

MODERN highway transportation requires speed to meet the demands of rapid delivery service. One well known manufacturer of trucks has just brought out two new models which meet this demand, not by reducing loading capacities, using higher gear ratios and pneumatic tires with an old type of engine, which would reduce hauling economy, but by entirely new models designed to carry great loads at high speeds.

These models are a four-wheeler and a six-wheeler that will carry from $7\frac{1}{2}$ to 10 ton loads at 30 miles an hour and climb 20 per cent grades with ease. They will haul 35 ton



A New Type of Heavy Duty Truck Designed to Meet Requirements of Greater Speed.

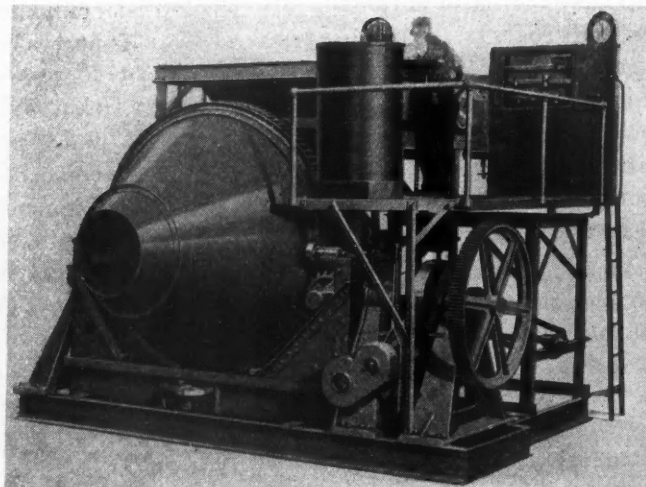
drawbar loads at 25 miles an hour. When 35 tons can be hauled with one engine and one driver at a speed of 25 miles per hour the low cost transportation possibilities are evident.

These trucks are powered with a six-cylinder, high compression engine of 150 H. P. The six-wheel truck has a rear, four wheel drive obtained through this company's characteristic chain drive, four sets of driving chains being used and each set of rear wheels being driven by an independent jackshaft.



Mixer Weighing Device

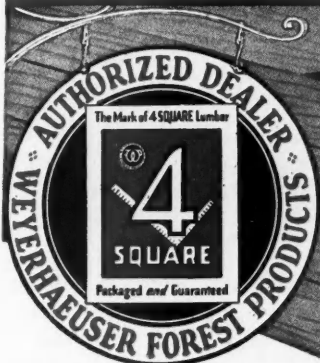
ONE of the big manufacturers of concrete mixers and pavers has announced the development of a new mixer attachment which enables contractors and owners of commercial concrete plants to meet the most stringent specifications imposed by engineers. This new device, when applied to one of this company's standard mixers and batch hoppers, forms a complete, self-contained concrete manufacturing unit. The new attachment is designed to proportion accurately all materials by weight and then thoroughly mix them.



One of This Company's Mixers and Batch Hoppers Equipped with the New Weighing Device.



A new way of judging contractors



This sign of CONFIDENCE
identifies the
4-SQUARE DEALER



4-Square Lumber—species and grade marked—gives public a standard to go by

SIX months or so ago the makers of 4-Square Lumber said "4-Square is rapidly becoming known as the sign of a reliable contractor."

Things have moved forward since then. Now in many parts of the country people are beginning to question the motives of the contractor who *doesn't* use it.

And with good reason. For with this very easy way to settle all doubt of lumber quality, there must be

some reason when a contractor or merchant builder chooses to go on in the old way of leaving his customers in the dark.

Progressive lumber dealers everywhere are prepared to fill your orders for this packaged, nationally known, guaranteed quality lumber. If yours is not yet ready, write us.

**WEYERHAEUSER FOREST PRODUCTS
ST. PAUL, MINNESOTA**

*Weyerhaeuser Sales Co., Distributors, Spokane, Washington
District Offices: Minneapolis, Kansas City, Chicago, Toledo,
Pittsburgh, Philadelphia, New York*

4 SQUARE LUMBER

Species and Grade are Marked and Guaranteed

TRIMMED SQUARE.. PACKAGED.. READY TO USE.. GUARANTEED

SOLD BY 4 SQUARE DEALERS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Woodworkers' Clamp

THE illustration shows a new invention which should prove valuable to carpenters, joiners and woodworkers of all kinds who need to hold a piece of wood firmly in position while working on it. It may be used either on a work bench or, if a bench is not available out on the job, on a two inch plank laid across a couple of horses. It can be carried around quite easily to be used wherever required.

This device consists of two clamp units. The first unit is clamped onto the side of the work bench, which must be equipped with a two-inch top, near one end. This unit goes at the left hand end of the bench and the clamp is secured



This Simple Clamp Can Be Carried Around for Use Anywhere and Holds Wood Firmly for Working in Any Position.

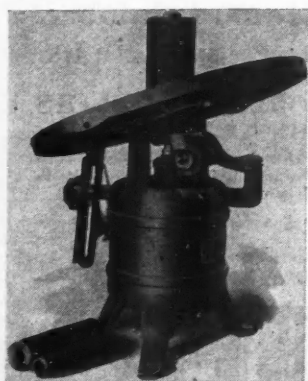
by a lock nut on a handle about four inches long. This lock nut fastens the clamp to the bench and a dog, shaped like the teeth of a saw, engages one end of the board to be worked.

The board is placed against this dog and the other clamp is placed against its other end and clamped to the bench in the same manner as the first unit. The gripping lever, which is seen hanging down at the right in the illustration, is pressed firmly downward. This forces the dogs on the two units into the ends of the board, holding it firmly in place for working.



Economical Bench Spindle Sander

THE bench spindle sander illustrated here has been on the market for some time but has recently been purchased by one of the leading manufacturers of this type of machine and



This Portable Bench Spindle Sander Can Be Attached to Any Ordinary Light Socket.

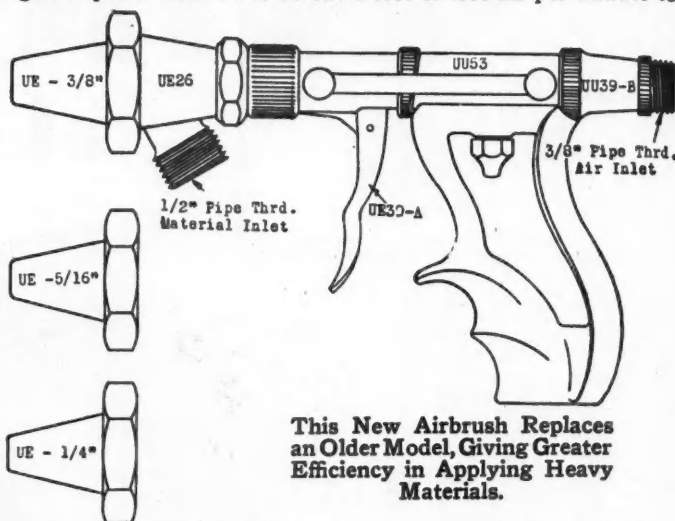
will continue to be manufactured and sold by the new owner. It is designed to cut the costs on all circular work and irregular work of every description. It utilizes every piece of sandpaper to the full limit and the saving on this item alone makes it a profitable investment, it is claimed.

The oscillating movement of the spindle effaces all sandpaper marks and assures a neatly finished job. The table tilts one way 25 degrees and the other 20 degrees to allow for ample draft on patterns. Angles are secured quickly by means of a graduated scale placed in a front position on

the machine. The rolls may be removed and replaced instantly with another size. The whole machine is light and portable so that it may be used wherever needed. This device will last a lifetime.

New Multiple Head Airbrush

ONE of the leading manufacturers of air painting equipment has just brought out a new multiple head airbrush for applying cement wash, refractory, mulsified, asphalt, heavy lubricants, roofing and waterproofing materials. This gun requires from 16 to 36 cubic feet of free air per minute to



This New Airbrush Replaces an Older Model, Giving Greater Efficiency in Applying Heavy Materials.

operate, depending on the size of the multiple head, the consistency of the material and the speed required.

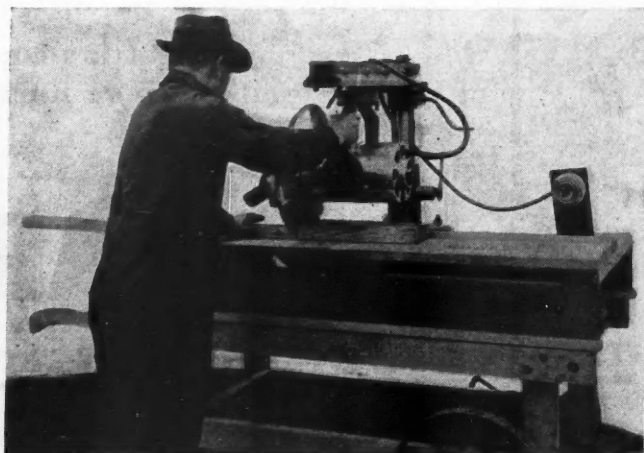
When lumpy materials are to be applied they should be strained through a $\frac{1}{4}$ or $\frac{1}{8}$ inch wire mesh before using. This is a new and improved model with greater efficiency, universal construction and complete interchangeability of all parts and replaces the old model, designed for similar use, made by this company.



A New Improved Woodworker

TIMES change and there is a demand for speed and more speech. In electrical driven, labor saving equipment the modern tendency of direct drive power has gone a step farther and improvements have been made in motor design providing greater efficiency in the delivery of power to the work. The result meets the increasing demand for speed.

Without sacrificing portability or versatility, the manufacturers of one of the well known woodworkers have developed improvements in one of their machines that make possible the delivery of fully 50 per cent more power to the work, it is claimed. This applies to ripping, cross-cutting, dadoing, mitering, beveling or any of the other 29 operations that are done on this machine by means of various tool attachments.



Greater Efficiency in the Delivery of Power to Work Is the Feature of This Improved Model Woodworker.



The builders of Drexel Park

make profitable use of

ANACONDA quality and prestige

ANACONDA Brass Pipe for hot and cold water lines, and Anaconda Copper for leaders, gutters and flashings, are used in the higher grade houses built by the Thomas Conway, Jr., Corporation, successful developers of well-known Drexel Park, Philadelphia.

Flashings, gutters and rain-pipes of Anaconda Copper give the seeker of a home in Drexel Park a convincing first impression of sound construction. This impression is strengthened by the Anaconda Brass Pipe installed for all water lines and the solid Brass and Bronze hardware throughout.

Like the Thomas Conway, Jr., Corporation, many progressive builders in all sections of the country find the use of Anaconda Copper and Brass a powerful sell-

ing help, because people are sold on the permanence and economy of rust-proof construction.

Why People Buy RUSTPROOFED HOMES To Save Money

Rustable sheet metal work requires frequent painting and must be replaced every seven years on the average. Rustable pipe lasts about fourteen years and rustable screens about five. After the first replacement, rustable metals will have cost more than Anaconda Copper, Brass or Bronze which cannot rust. An additional outlay of \$298 is all that it costs to install these durable metals in the average home.

To Secure Comfort

There is real comfort in the knowledge that flashings cannot rust through and leak to cause stained walls and ceilings; that bathroom tiling will never have to be torn out to replace rusted pipe and that insects will never enter through rust holes in screens. Anaconda Copper, Brass and Bronze cannot rust.

Every week during the building season, readers of The Saturday Evening Post, Collier's, House and Garden, House Beautiful and other magazines are being told of the quality of Anaconda metals; and the importance of real and lasting protection against rust.

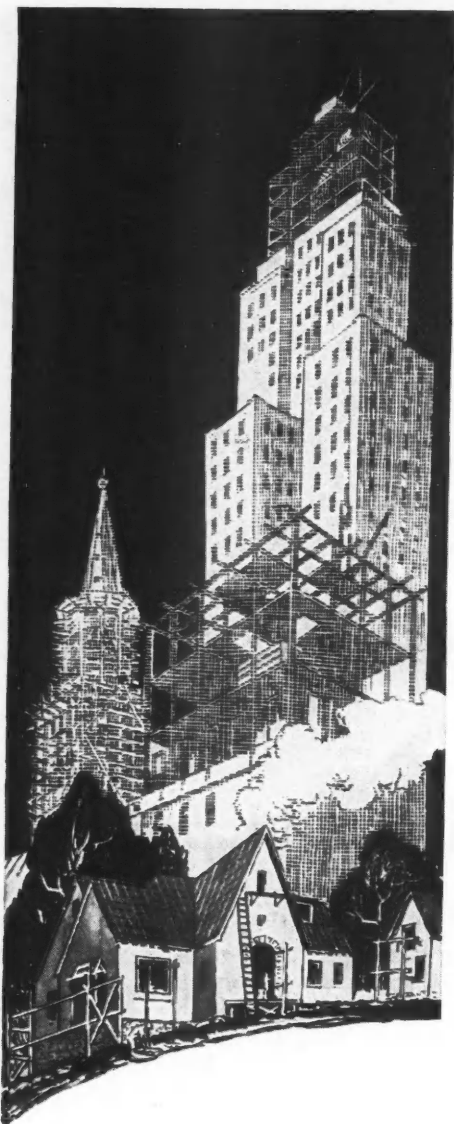
It pays in easier, quicker sales to use Anaconda Copper and Anaconda Brass Pipe, because the public recognizes the durable quality of these rust-proof metals.

If you have not looked into the matter, it will surprise you how little more Brass Pipe and Sheet Copper work cost. For example, Anaconda Brass Pipe hot and cold water lines for the average seven or eight room house costs only \$75 more than rustable pipe.

ANACONDA

COPPER  BRASS

THE AMERICAN BRASS COMPANY: GENERAL OFFICES, WATERBURY, CONNECTICUT



. . . From bungalow to skyscraper

WHEN cutting rafters “from the ground”, laying out stair stringers—and for a multitude of other construction problems—the steel square is the one tool that thousands of experienced builders find indispensable. Its wide range of usefulness . . . from the simple squaring-off of a single board to the careful framing of the most difficult roof detail . . . explains the presence of the steel square wherever there is construction activity.

But before the steel square—that symbol of all tools—arrives on the job, materials have to be ordered. And before they are ordered, these materials must be

selected. It is during this *selection of material* period that AMERICAN BUILDER renders one service fully as valuable . . . *in the builder's office* . . . as the steel square out on the job.

And in the same spirit of efficiency and craftsmanship with which the builder carefully studies each construction problem, the publishers of *American Builder* have always carefully studied both the general and specific problems of its readers. Conforming with that policy, *American Builder* has now been enlarged to include *Building Developer* (New York) and *Home Building* (Chicago), to the end that those who subscribe for *American Builder* shall be fully informed about all phases of building from the development of property to the finished structure, including financing and selling—something that has never before been attempted within the covers of any one paper.

The two publications which are now merged with *American Builder* were read largely by speculative builders, small home, apartment house and other residential building operators, architects, dealers and those concerned with financing. The editorial features which caused them to become so well-known and admired will be continued in *American Builder*. In addition, the subscribers of *Building Developer* and *Home Building* will find in *American Builder* the same distinctive editorial features which led them to subscribe to those publications, as well as the many special articles on actual construction methods, new equipment and materials, and other editorial content formerly available only in *American Builder*.

Keyed to progress . . . modern in its interpretation and treatment of the ever-changing problems and demands of the building field . . . *American Builder* is unreservedly obligated to an even greater service today . . . to maintain and make more impregnable its position as "The World's Greatest Building Paper."

AMERICAN BUILDER

including
Building Developer and Home Building

A Simmons-Boardman Publication

105 W. Adams St., Chicago - 30 Church St., New York
Terminal Tower, Cleveland - 215 Market St., San Francisco

What's New in Equipment for Buildings

For further information in regard to any item described in the "What's New" Departments address, American Builder Information Exchange, 105 W. Adams St. Chicago

Radio Antenna Untangled

WITH the growing popularity of radio, the apartment house antenna problem has assumed serious proportions. This problem has to do with the unsightly maze of tangled antenna wires and poles seen on roofs and in court yards. The landlord is helpless since any objections to radio these days means an empty apartment. Therefore a solution of the problem, which has recently been worked out by three well known radio engineers and which is applicable to existing as well as to new buildings, should prove welcome to builders and owners.



This Small Device Is the Basis of a New Solution of the Radio Problem for Apartments.

The basis of the new system is a device known as a multi-coupler. It consists of a bakelite case, six inches long and 1½ inches in diameter, containing the necessary circuit components. It has connecting lugs at top and bottom and a binding post at the side. There is nothing to wear out or renew

and it will give satisfactory service for years without additional expense of any kind, it is claimed.

As many as 25 radio sets may be operated from a single antenna by means of this device but a fair average is 12 to 15. A common antenna is installed for each 12 or 15 sets. The down lead is brought down alongside the wall of the building and close to a vertical row of windows. The down lead carries a multi-coupler at each floor or near the window at each floor. There are as many multi-couplers as there are floors in the vertical row.

The binding post serves as the antenna connection for the radio set in each apartment. At the bottom of the down lead there is a lightning arrester with a high resistance shunted across it so that the system is protected from lightning in accordance with the requirements of the fire underwriters. In the average apartment building each vertical row of apartments is served by a common antenna and, for a neat arrangement, the antenna can be arranged in umbrella form, supported at the center by a pole or water tank.



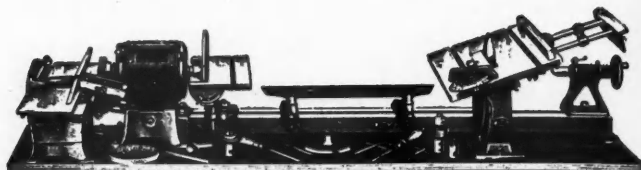
Complete Woodworking Outfit

HERE is a power woodworking outfit that can be made to serve the builder of homes in two ways. First of all it can be placed in the home, as equipment for a basement workshop. As such it takes its place among those items which are being installed everywhere to make use of formerly wasted basement space and to add to the sales appeal of the house. Every family which includes a boy will prize the home workshop and often the man of the house will appreciate it for his own use.

Many builders will also find this equipment useful in

their own shops. It is in no way a toy but a high-class piece of machinery, of small size, capable of doing high class, light work.

The complete outfit consists of a ½ H. P. motor of well



For the Home Workshop or the Builder's Own Shop, This Outfit Will Be Found Practical and Efficient.

known make which, it is stated, will develop ½ H. P. before stalling; a 36-inch lathe bed; an eight-inch circular saw table, which tilts to 45 degrees, extension rods, right and left hand miter, and a 12 by 16-inch table top; a four-inch jointer; a disc sander; a ball bearing tail stock; a miter gauge; a ½-inch drill chuck, and a sander table.

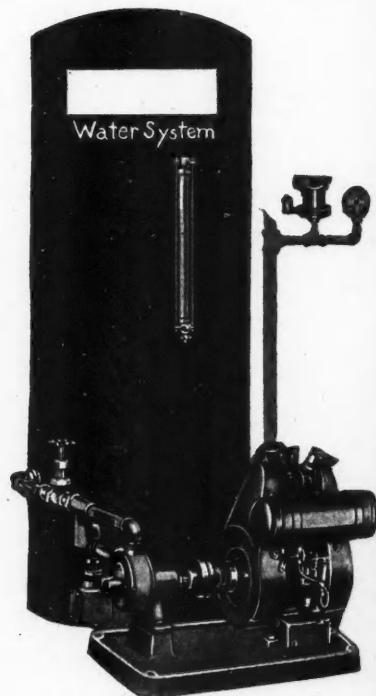


Gas Engine Water Systems

TO enable homes, beyond the range of city water systems and not having electric current available, to have running water, one of the leading manufacturers of water supply systems has brought out a line of gas engine driven water systems to augment its line of motor driven systems. This new line includes both shallow and deep well systems.

The engine used is one which this company considers most efficient for use on this class of product. It has a reputation for dependability, is easily started by hand or foot, is stopped automatically by a circuit breaker when the pressure limit is reached and provides a semi-automatic operation. Engines in both ½ and ¾ H. P. sizes are used with these systems.

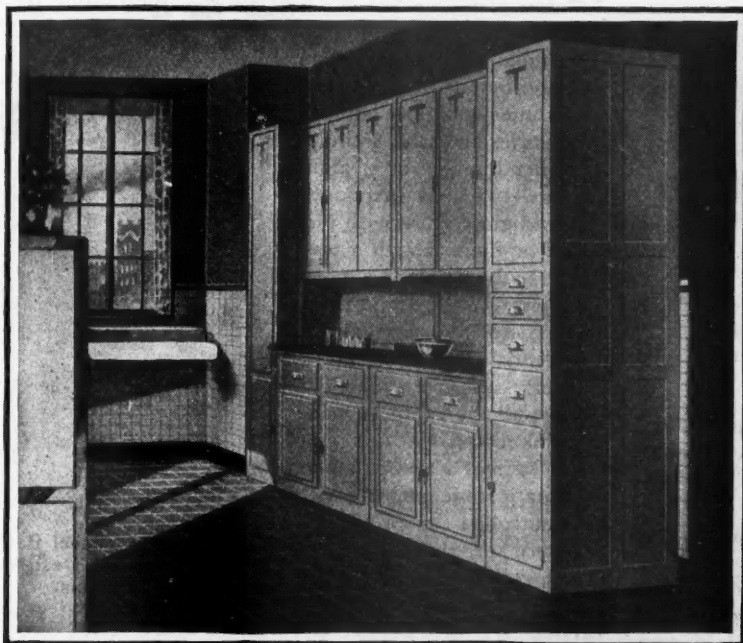
The engine driven systems are just as simple and compact as the motor driven ones and have all the desirable features of the automatic electric units, it is stated. They are equipped with positive pressure, rotary pumps, simple in design and operation and easily installed. They are available, either with or without pressure tanks, in a variety of sizes.



These Water Systems Are as Simple, Compact and Efficient as the Motor Driven Systems.

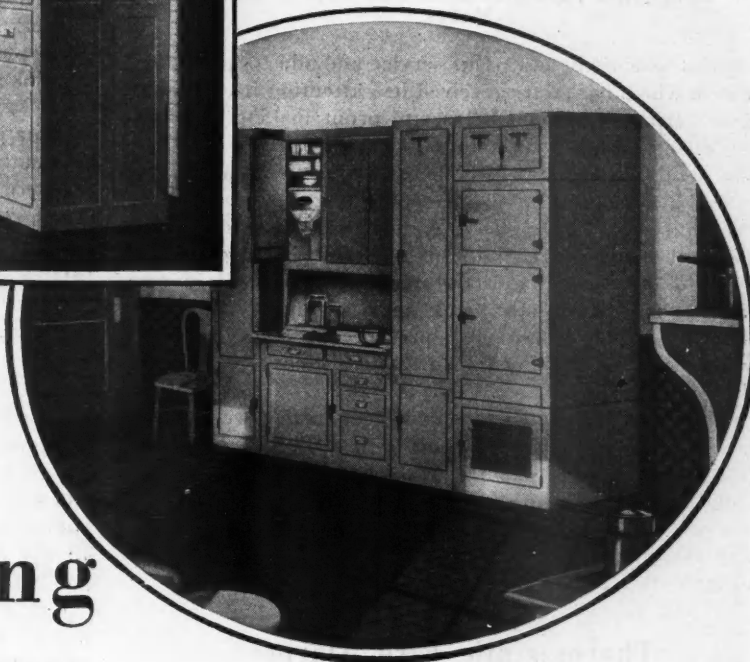
KITCHEN MAID

STANDARD KITCHEN UNITS



Left: For the large kitchen, pantry or service hall, Kitchen Maid Units bring a large degree of convenience, beauty and sanitation.

Below: A typical six unit combination is shown below. There are Kitchen Maid Units to meet every floor plan.



Let the kitchen do the selling

THE sale of a home or the renting of an apartment usually depends upon the woman's "yes" or "no." And invariably she looks at the kitchen with her most critical eye.

Plan Kitchen Maid kitchens for your homes or apartments—and sales resistance goes down to its lowest. For such kitchens contain equipment with a reputation every home buyer or renter knows... units built by America's largest exclusive makers of built-in kitchen equipment.

The Kitchen Maid line is so varied, so complete, so flexible that you can always

be certain of units fitting the specific requirements of any kitchen you plan. And they have many, many exclusive features which instantly appeal to prospects.

Attractive finishes add to the already distinctive beauty of Kitchen Maid Units. You may have a choice of Cactus Green, Pastel Green, Dove Gray, Travertine Ivory or Shasta White. Write for new catalogue and dimensional drawings.

WASMUTH-ENDICOTT CO., 1309 Snowden St., Andrews, Ind.
Representatives in All Principal Cities

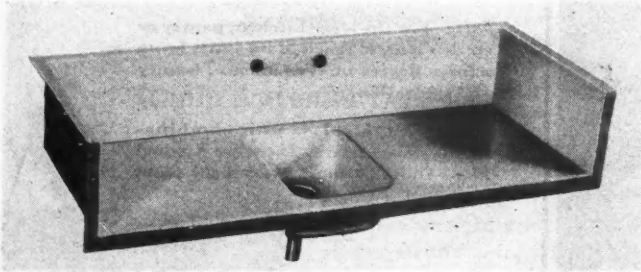
IF IN CANADA, ADDRESS BRANCH OFFICE, WATERLOO, ONTARIO



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Profits in Enameled Steel Sink Tops

THE old time lumber yard is rapidly being transformed into a modern, complete building material store. The present day building supply dealer in supplying builders with practically every item which enters into the construction of homes and other buildings and is always on the lookout for



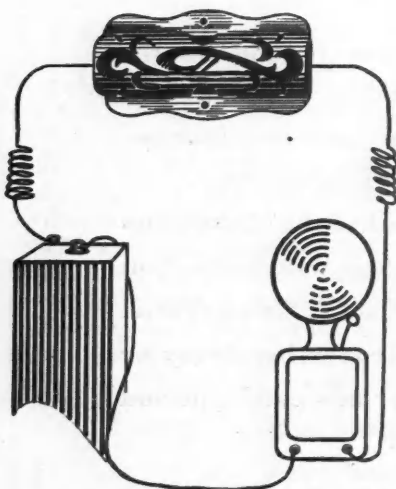
The Modern Building Material Dealer Will Find These Enameled Steel Sink Tops a Money Maker.

specialties which will add to his service and add to his profits. One item which has so far received less attention from dealers than it merits, and which holds real profit making possibilities, is enameled steel sink tops.

This item is one for which there is a double market, the new building market and the remodeling or modernizing market must both be supplied. A modern kitchen sink is one of the first items provided for in modernizing an old home and one of the most important items of equipment in new homes. These sheet steel sink tops are most frequently seen in white but, in line with present day color demands, they may also be obtained in attractive colors to suit the kitchen color scheme.

The sink top illustrated is a new item in one well known line. It is made 23 inches long with a 14-inch back and ends. The sink itself can be placed in any position in the top and is available in five different sizes. This sink is typical of the extensive line offered which can be adapted to any requirements. Dealers will find it to their profit to investigate this line of equipment.

Thermostatic Fire Alarms



A Simple and Inexpensive Thermostatic Fire Alarm Gives Valuable Protection.

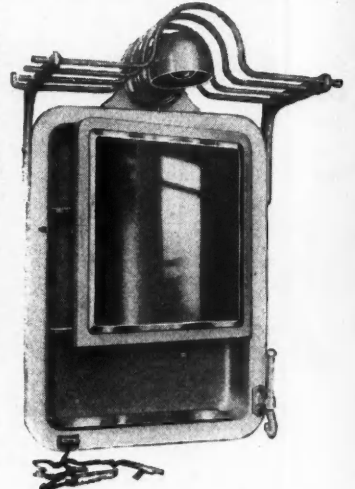
Such a fire alarm consists of a thermostat, made by a company specializing in the manufacture of thermostatic metal and thermostats, so constructed that, when attacked by fire it closes an electric circuit ringing the alarm bell in any room where it is most desirable to locate it. The thermostat is placed

ANY home, or other building, may be easily and inexpensively protected against the hazard of fire which threatens both property and life. Of course the development of modern methods of construction is rapidly reducing the fire hazard, but even in the best construction dangerous and destructive fires can and do occur. A fire may occur at night and gain headway to a dangerous degree before it is discovered. A thermostatic fire alarm guards against this danger.

wherever the danger of fire is the greatest. Wires are attached to the terminals and extended to the bell transformer and then to the alarm bell. ✕

New Hotel Bathroom Cabinet

A NEW cabinet, especially adapted to installation in hotels, has just been announced by one of the leading manufacturers of bathroom cabinets. This cabinet is stamped from one continuous piece of steel and comes complete with all accessories and with a choice of either humped or straight line towel rack. It is equipped with a light fixture with pull chain or for use with a wall switch as preferred, a combination wet towel and razor strop hook and a combination cork screw and bottle opener.



A One Piece Steel Bathroom Cabinet Designed for Hotels.

Like all the cabinets made by this company, this new hotel cabinet features a new automatic door opener which is controlled by a simple pressure of the hand and which eliminates unsightly knobs. This company's new catalog lists this cabinet and also 14 other styles of cabinets of the one-piece steel type. ✕

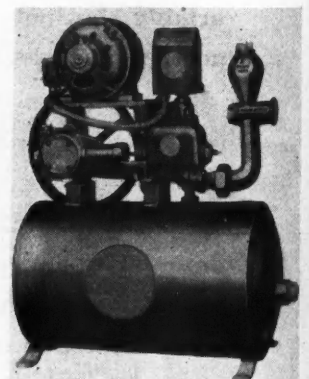
Convertible Water Systems

A NEW development in shallow well pumps and water systems has recently been announced. The new line incorporates some departures from this company's former line of pumps. The new pumps are very compact in design and are fully equipped with relief valve, automatic pressure controller and electric motor. The entire pump, including all the accessories, is built by the company itself which is pointed out as an especially desirable feature.

One of the outstanding features of this line is that these pumps are convertible. This means that a pump can be converted into one of higher or lower capacity simply by changing the motor unit. This is especially desirable in cases where the user's requirements for water may increase after a period of time.

For example, suppose a water system is installed in a farm where the requirements can be handled with a pump of 500 gallons per hour capacity. After a period of time more water may be required for increased stock, for household purposes or for sprinkling. The user would ordinarily find it necessary to install a larger size pump. With these new pumps all he needs to do is to install another motor and motor pulley on the pump which will increase its capacity to 600 gallons per hour.

These pumps are built in many sizes and can be furnished with any size tank from three gallons to 1,000 gallons capacity. All these systems are being equipped with this company's new, patent, automatic air regulator. This simple device eliminates the necessity of water and pressure gauges.



To Increase the Capacity of These Systems It Is Only Necessary to Change the Motor Unit.



from COAST to COAST

it's the

REID-WAY WHIRLWIND

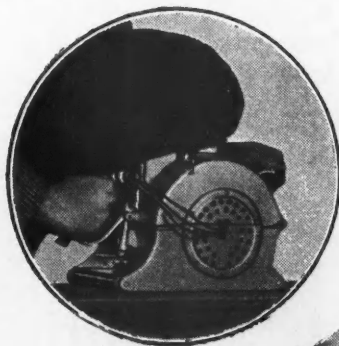
The extreme simplicity of the Reid-Way sander with its *one moving part* won for it instant popularity. The enthusiastic acceptance of the new Whirlwind model has taxed the capacity of the plant. More power, faster cutting, positive control, are outstanding features of the new Whirlwind. Only Reid-Way with its exclusive revolving field motor can offer such simplicity, long life, and capacity for hard work at so low a price. Use the coupon for new circular.

THE REID-WAY CO.

742 North 16th Street

Cedar Rapids, Iowa

The Reid-Way Whirlwind is instantly convertible from bench sander to jointer or floor surfacer. All attachments and extra dust bag are included.



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

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

Name

Address

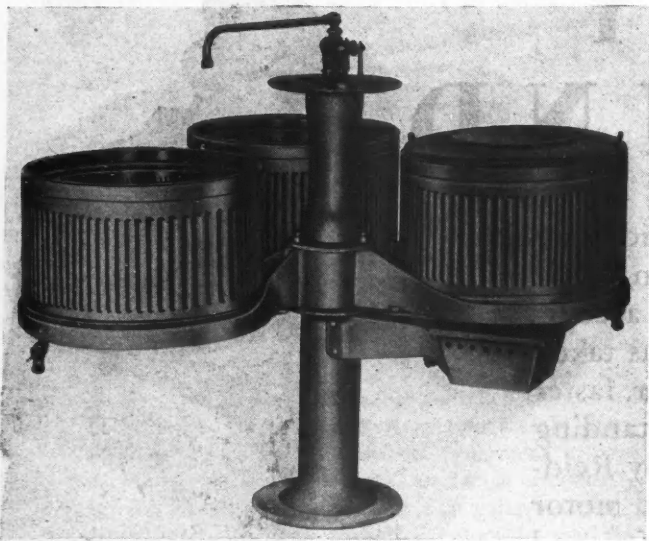


WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Improved Laundry Equipment

MUCH attention is being given these days to the improvement of the basement and especially to the laundry equipment. Now there has been brought out a piece of equipment which rids the laundry of miscellaneous boilers and tubs, pails, etc., and makes it at once efficient in equipment and attractive in appearance. This equipment is illustrated here. It consists of two tubs and a boiler mounted on individual platforms which are fastened to a rotating collar on the center post or standard.

This method of mounting the tubs and boiler permits the platforms to turn in a complete circle and either tub or the



Attractive Appearance as Well as Convenience and Efficiency Are Found in This New Piece of Laundry Equipment.

boiler brought directly over the gas burner which is a part of the appliance. Each platform is hinged so that it will swing to right or left, bringing the two tubs together or the boiler and either, or both, tubs together. An improved type of gas burner heats the water quickly with a minimum amount of gas and is fully protected for fire safety.

A 13 inch swinging faucet, with a special mixing chamber for regulating the temperature of the water, makes it possible to flow water into either of the tubs, the boiler or into a washing machine used with this equipment. There is a 12 inch soap tray at the top and a drip board is provided for convenience in changing clothes from tub to tub.

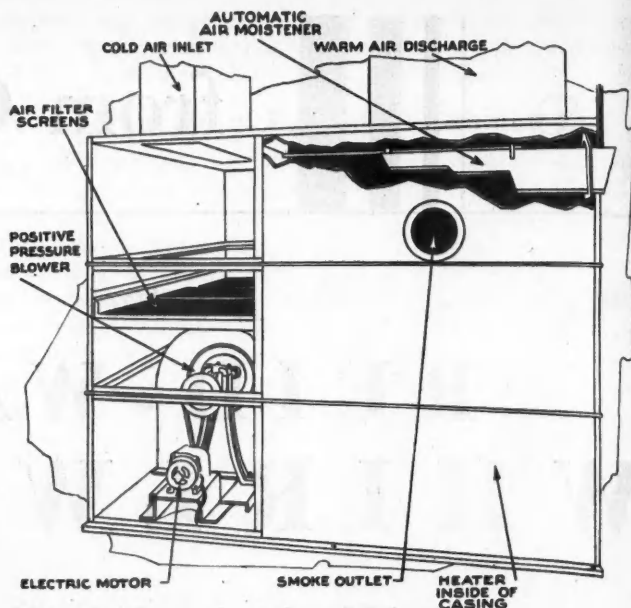
The tubs and boiler are of heavy copper, nickel plated inside and attractively lacquered outside. The complete unit is built to last indefinitely and will add much to the salability of any home.



Home Air Conditioning

STATISTICS show that the respiratory diseases take their greatest toll of life during the winter months, the months when people are confined indoors in stuffy, dry atmosphere. More and more emphasis is being placed by physicians on the importance, for health, of air that is of the proper temperature and humidity, that is free from dust and bacteria and is properly circulated.

A company which has, for many years manufactured and installed complete warming, ventilating and air conditioning apparatus for schools, churches and theaters has recently made the same system available for homes. The apparatus, illustrated here, consists of an air warmer, a positive pressure blower for forcing the warmed air to every part of the home, an automatic humidifier of ample proportion for supplying adequate humidity; effective air filters for removing



This System Not Only Heats the Air but Also Cleans and Humidifies It and Delivers It Where Needed.

dust and dirt and an automatic thermostat for maintaining a constant temperature and preventing overheating.

This system provides instant heat, it is stated. It is equally responsive and quick in the prevention of overheating. It can be installed any place in the basement, a corner location being satisfactory. The flat ducts are horizontal and can be covered with a false ceiling if desired, completely concealing them. The plan itself has an attractive, bright colored, square casing in harmony with present day ideas of basement space utilization. It is available in models to use either gas, oil, hard coal or soft coal fuel.



Artistic Mail Boxes

SOMETHING out of the ordinary in the way of mail boxes is shown in the designs illustrated here. They are of a style and quality to harmonize with the finest home and add a final touch of beauty to an attractive house. They are an entirely different sort of article from the cheap mail box which soon becomes rusted and dilapidated and disfigures the entrance. These boxes are constructed either of cast, aeronautical aluminum or of cast brass and are thoroughly rustproof.

Each of the three styles available is made of either metal.



Mail Boxes of This Sort Are in Harmony with the Finest of Architecture and Are a Permanent Installation.

KEEP YOUR CATALOG FILE UP-TO-DATE

New appliances, materials, machinery and equipment are constantly being brought out and perfected by manufacturers. Your file should contain the latest catalogs of these articles. When a client asks you about some new improvement—you have the information at your finger tips. Perhaps you contemplate enlarging your scope of activity—your catalog file will contain suggestions as to the machinery or equipment best suited to your needs.

What Information Do You Need? American Builder Will Get It For You

If you are interested in power shop equipment, heating systems, plumbing supplies, water supply systems, lighting systems, elevators, school or church or theatre equipment, farm building equipment, building hardware, home conveniences or anything that is used in constructing or equipping any kind of building—the American Builder will help you get all information. Just send the coupon below telling us in what you are interested.



ABSOLUTELY FREE TO AMERICAN BUILDER READERS

The American Builder Service Department will gladly put its readers in touch with reliable manufacturers of appliances, machinery, tools, building materials and supplies of every description. In order to get the best and quickest results, please be sure to print or write your name and address plainly and also check your occupation in the coupon below.



THIS COUPON WILL BRING YOU ALL INFORMATION

AMERICAN BUILDER, 105 W. Adams St., Chicago, Ill.

SFPT.

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 ☐

.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

News of the Field

Convention and Show Dates

- Sept. 24-27, 1929.....Illuminating Engineering Society, Twenty-third Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa.
- Sept. 30-Oct. 4, 1929...National Safety Council, Annual Safety Congress, Stevens Hotel, Chicago.
- Oct. 14-18, 1929.....American Gas Association, Eleventh Annual Convention, Municipal Auditorium, Atlantic City, N. J.
- Oct. 21-26, 1929.....Indiana Building Congress and Trade Show, Manufacturers' Building, State Fair Grounds, Indianapolis, Ind.
- Nov. 1-15, 1929.....Philadelphia Chapter of the American Institute of Architects, and the T-Square Club of Philadelphia, Thirty-second Annual Architectural Exhibition, Art Galleries of the Wanamaker Store, Philadelphia, Pa.
- Jan. 11-18, 1930.....American Road Builders' Association, Annual Convention and Road Show, Atlantic City, N. J.
- Feb. 11-12, 1930.....American Concrete Institute, Annual Convention, Roosevelt Hotel, New Orleans, La.
- Feb. 20-22, 1930.....New England Hardware Convention and Exhibition, Mechanics Bldg., Headquarters Hotel Statler, Boston, Mass.



Winners in Kno-Burn, Jr., Prize Contest to Be Announced Soon

MUCH interest is being manifested in building circles regarding the probable winners in the Kno-Burn, Jr. \$1000.00 Prize Contest, which closes September 2nd. A prize of \$500 (with 14 other awards, ranging in value from \$150 down to \$10) has been offered by the North Western Expanded Metal Co., 407 S. Dearborn Street, Chicago, for the best letter of 100 words or less, from a builder—"Why I Like Kno-Burn, Jr., Small Mesh Steel Sash."

The official judges are: Bernard L. Johnson, editor of the AMERICAN BUILDER; H. H. Rosenberg, publisher of "Building Supply News," Chicago, and T. J. Dowling, president of the Journeymen's Plasterers P. & B. Local No. 5, Chicago. Their decisions will be final. It is expected that the prize winners will be announced on or shortly after October 1.



Appears Before Code Committee

ROBERT D. SNODGRASS, consulting engineer of the Truscon Steel Company, Youngstown, Ohio, recently appeared before a committee of the Merchants' Association of New York City, which is preparing a new building code to be presented to the Board of Aldermen for adoption. Mr. Snodgrass presented a discussion of the suitability of metal roofdeck in

fireproof and fire-protected construction.

At the suggestion of G. H. McCaffrey, director of research of the Merchants' Association, who is also secretary of the committee of the association which is preparing the new code, Mr. Snodgrass, later, put his presentation into letter form so that it might be given mature consideration by the committee. If the data submitted is approved, it will be written into the new code.

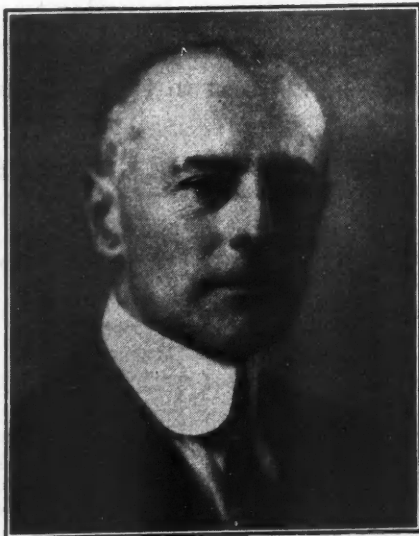


Personnel Announcements

AN announcement from the Chain Belt Company, Milwaukee, Wis., states that Robert B. Marshall, well-known conveyor sales engineer, has joined that company's conveyor division, with headquarters at the company's New York City office, at 50 Church St. In addition to the complete line of Rex conveyors he will handle the belt conveyors, glass batch handling equipment and silo storage system, manufactured by the Stearns Conveyor Co., Cleveland, a division of the Chain Belt Company.

ANNOUNCEMENT of the following changes in personnel has just been made by Sargent & Company, New Haven, Conn.: P. E. Barth, manager of the Chicago office and warehouse, has been transferred to the New Haven headquarters as assistant sales manager. Harold A. Parks will continue as sales manager in charge of builders' and general hardware and in addition will direct the sales of tools. William C. Sullivan who has represented the company in the Southwest for some years, recently as district sales manager, has been made sales manager in charge of the lock division, to succeed R. B. Cherry, who will serve in an advisory capacity giving special attention to the study of new markets. Fred G. Hammer has been appointed sales manager in charge of contract sales. This will be a new division known as the contract sales division. Emory S. Naylor, assistant manager in Chicago, will succeed Mr. Barth as manager of the Chicago branch. Kenneth Lee has been appointed manager of Chicago contract sales.

AFFILIATION of T. V. Sawyer with the insulating board division of the Chicago Mill & Lumber Corporation was effected recently. He will serve in the capacity of assistant general sales manager and work in conjunction with General Sales Manager O'Neil Ryan. The Chicago Mill & Lumber Corporation will come out, in November, with a new insulating board which will be manufactured at its new plant in Greenville, Miss. Construction of the plant will be completed by Nov. 1.



Robert D. Snodgrass, Consulting Engineer of the Truscon Steel Company.

M. A. GROSSMAN, chief research metallurgist of the Central Alloy Steel Corp., Massillon, Ohio, sailed for Europe recently to continue his study of special European steels which the company is preparing to produce in this country. Through its close association with Krupp and other European organizations the company is developing several materials which are expected to find a wide market in the United States.

R. H. Timmons Pays For Sander From One Contract

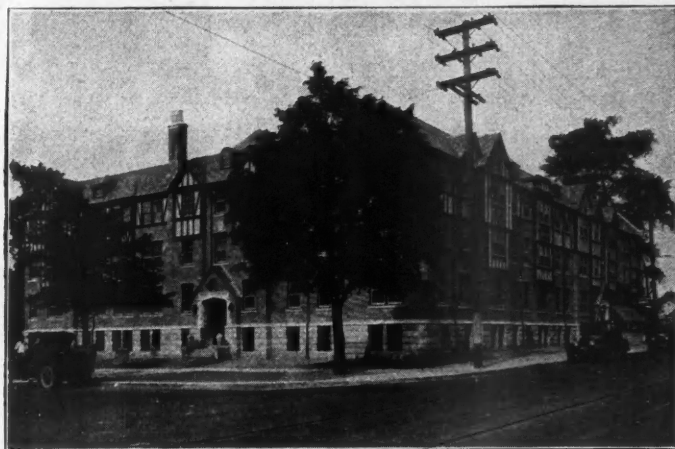
— and delivers a completely
satisfactory job

Ahead of schedule

The building owner writes:

"The floors of the apartment are most satisfactory. Your machine did exceptionally good work and speeded up the job at a help to us."

*Sanded 46 Apartment
Building in 15 Days*



THE AMERICAN HIGH PRODUCTION SANDER

With AMERICAN methods of Floor Surfacing is doing
this for hundreds of men—IT can do it FOR YOU.

Speed up your own work as a contractor. Insure
satisfactory work for your customers and—

**Give Yourself a Permanent Steady Income of
from \$6,000 to \$12,000 Yearly.**

Purchase on convenient monthly payments and "Earn while you Pay."

Use the coupon for requesting further information on the AMERICAN line
of Floor Surfacing Machines and complete plans for Building a Business
of your Own.



**The American
Floor Surfacing Machine Co.**
515 So. St. Clair St. Toledo, Ohio

Branch service stations in principal cities

Canadian Representatives

THE A. R. WILLIAMS MACHINERY CO., Ltd., Canada
Toronto Montreal St. John, N. B. Vancouver
Winnipeg Calgary

The AMERICAN Floor Surfacing Machine Co.
515 So. Clair Street, Dept. I, Toledo, Ohio

Gentlemen: I would like to have further information on the AMERICAN High Production Floor Sander and your plans for Building a Business of my Own. This request does not obligate me.

Name.....

Address.....

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

BUILDER OF DEPENDABLE FLOOR SURFACING MACHINES FOR OVER A QUARTER OF A CENTURY

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Circular Saws as Luncheon Tables

EIGHTEEN persons can be seated comfortably around great circular saws, 108 inches in diameter and weighing



Great Circular Saws Form the Tops of These Luncheon Tables Seating 18 Persons Each.

795 pounds each, manufactured by Henry Disston & Sons, Inc., for a lumber mill at Longview, Wash. These saws are used in cutting giant logs of the Pacific Coast. There are 180 teeth in each saw. The teeth are removable, and, when worn, are replaced with new teeth. The saws were used as luncheon tables at the opening of the new Portland branch factory of the Disston Saw Works.

Discounts Announced

OF tremendous interest to lumber and building material dealers is the formulation by manufacturers of solid section steel windows, of a code of approved practice which will be submitted to the Federal Trade Commission through the manufacturers' attorney, Abraham Meyer, formerly chairman of the commission.

The code is designed to eliminate unfair methods of competition and uneconomic trade practices and to cooperate with the United States Department of Commerce in bringing about standardization and the elimination of waste.

An attempt will be made to eliminate discriminatory prices through publication by each company of its discounts from a standardized list price. These discounts as announced by Detroit Steel Products Company, effective August 1, are as follows:

On Commodity Products to Dealers:

1 to 49 windows.....25% F.O.B. Warehouse.
50 windows or more.....30% Freight Allowed.
Carload lots.....30%-10% F.O.B. Factory, Frt. All.

General Electric Offers Architect's Service

ACCORDING to J. J. Donovan, Manager of the Apartment House Division of the General Electric Refrigeration Department, a complete kitchen planning service is offered to architects and builders.

"We have made a study of modern kitchen arrangement and stand ready to furnish kitchen floor plans to anyone contemplating building a new home or apartment," Mr. Donovan said.

"Kitchen efficiency is an important factor and too much thought cannot be given to its arrangement and the location of the appliances that get the most use. For instance, the

electric refrigerator, range and kitchen cabinets should be grouped to save steps and to facilitate the preparation of meals.

"Owing to the limited kitchen space, this is apt to prove difficult and it is our belief that busy architects and builders will welcome this service. Upon receipt of the kitchen floor plans we will give the problem the study necessary and make recommendations."

Merger Announced

ANNOUNCEMENT has just been made that the American Radiator Corporation, Chicago, and the Standard Sanitary Mfg. Co., Pittsburgh, have acquired the business of Thomas Maddock's Sons, of Trenton, N. J.

Open New Branch Service Station

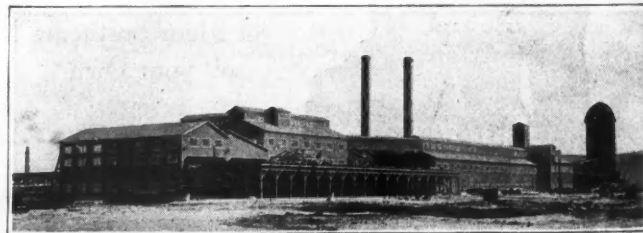
THE American Floor Surfacing Machine Company, of Toledo, Ohio, has announced the opening of a new branch service station at 40 Albany Ave., Hartford, Conn. K. H. Schultz has been transferred from the St. Paul office to the position of branch manager at Hartford. He has had a number of years of both factory and sales experience and is in a position to give helpful service to the trade.

Weyerhaeuser Mill Opens

DESIGNED for an annual production capacity of 400,000,000 feet of lumber, and recognized by millmen as "the last word" in Douglas fir operation, the new plant of Weyerhaeuser Timber Company at Longview, Wash., has gone into partial operation, according to an announcement from the company's headquarters at Tacoma, Wash.

Located on a property two miles long and half-a-mile wide along the Columbia River, the plant includes four big mills. One saws long fir logs; another, short fir and hemlock. Mill 3 is arranged primarily for cedar, but also can be used for short fir. The fourth mill is a shingle-plant in which 16 upright machines will be installed.

This diversity of manufacturing facilities, coupled with the timber supply which includes enough trees of these species to last 50 years, enables the Longview branch of Weyerhaeuser Timber Company to offer the building trade service by which merchants may order mixed cars containing fir and hemlock lumber, cedar siding and shingles.



One Unit of the New Weyerhaeuser Mill at Longview, Wash., Which Is Already in Operation.

Electric Rotary Moves

THE Electric Rotary Machine Co., whose home office and factory are located at 3825 West Lake Street, Chicago, announce the removal of their New York office to larger and more spacious quarters on the 6th floor of the Bartholomew Building, located at 204 East 43rd Street.

New territorial lines have been drawn whereby the New York Office becomes headquarters for the Eastern Sales & Service Division for the states of Maine, New Hampshire, Vermont, Rhode Island, Connecticut, Massachusetts, New York, New Jersey, Pennsylvania, Delaware, Maryland and the District of Columbia.

ld be
on of

prove
uilders
n floor
make

Ameri-
andard
ess of

ny, of
a new
Conn.
office
as had
e and

400,-
en as
ant of
, has
ement

-mile
r big
hem-
an be
nt in

with
these
ch of
trade
tain-

office
Chi-
e to
the

New
s &
hire,
New
and

Wanted... Men To Read Blue Prints *And Run Big Building Jobs!*

Builders! Here's a Message of Vital Importance to Every Ambitious Tradesman in America! To Help You Win Promotion in Building and Qualify You for Leadership at Man-Sized Salaries. This Old Established School for Builders Now Offers Quick, Easy, Practical Training in Plan Reading. Coupon Below Brings You Absolutely FREE a Valuable Book, "How To Read Blue Prints"; Also a Set of Real Building Blue Prints. Smart Builders Will Investigate This Opportunity. Write for Convincing Facts at Once!

SEE HOW QUICKLY YOU CAN BECOME A Superintendent Or Building Contractor By This New, Easy Blue Print Way To Big Pay

EVERY man in the Building Industry today knows that in order to win promotion and run big building jobs he must understand Blue Print Plans and Specifications from A to Z. With a trained mind it is easier to hold a big pay job in Building than it is to keep a job that pays a lot less and depends upon your hands alone.

This announcement spells wonderful news for every man who is practical, ambitious and who yearns for a real future with an income that will afford him the fine things in life he wants! Here at last is an opportunity for you to take a quick, easy step that will bring you the success you have hoped for—if you are of this type and are willing to supply the honest effort necessary. Remember, your spare time is enough.

Practical Blue Print Training— Superintending—Estimating

You've needed it, you've prayed for it and now at last Chicago Tech brings it to you! For by a marvelous new practical blue print method, this old established and recognized School for Builders brings to you in an amazing short time everything you need to put you on the "headwork" side of the Building Industry. Think of it—you prepare yourself for big pay and a real future right in your own home and in your spare time—right while you are on the job! It doesn't matter what your age is. You don't even have to have previous education. If you can read what is written here, you can grasp every money-making principle easily.

No Textbooks—Simple as A.B.C.
The wonderful part about this astonishing blue print training is that it is entirely different from ordinary schooling. No study grind. No text books to wade through. No useless theory to puzzle you. Practical from start to finish. Based on many sets of real blue prints which we give you to examine and keep. Twenty famous experts go over these actual working plans with you step by step and explain everything in plain, everyday language you can easily understand. Fascinating throughout and as easy to understand as your newspaper.

A Better Job At Bigger Pay
This is the kind of training that has enabled builders throughout the country—practical, ambitious men like yourself—to make the kind of money they wanted. Samuel Schrier, Pennsylvania, reports that he has been raised to foreman with and increase of \$72.70 per week. W. Fout, Virginia, was promoted from workman to superintendent as a result of his training. Percy F. Blair, Oklahoma, writes: "When I started your course, I received \$49.50 per week working with my tools. Now I am superintendent and make \$100 a week for the same concern."

If You Live Nearby

Visit our big Day and Evening School attended by over 1,000 builders. You can get the same training at home by mail—same lessons, same plans, same instructors—in your spare time.

Mail Coupon For FREE Facts

Investigate this short-cut to promotion at once! Don't send one penny. Simply fill in and mail the coupon. It brings you promptly a valuable free book, "How To Read Blue Prints," and actual working blue prints as well as convincing proof. No cost or obligation. Get these important facts before you without delay, so that you may see for yourself how really easy and practical is Chicago Tech's Blue Print Method. Write today—NOW!

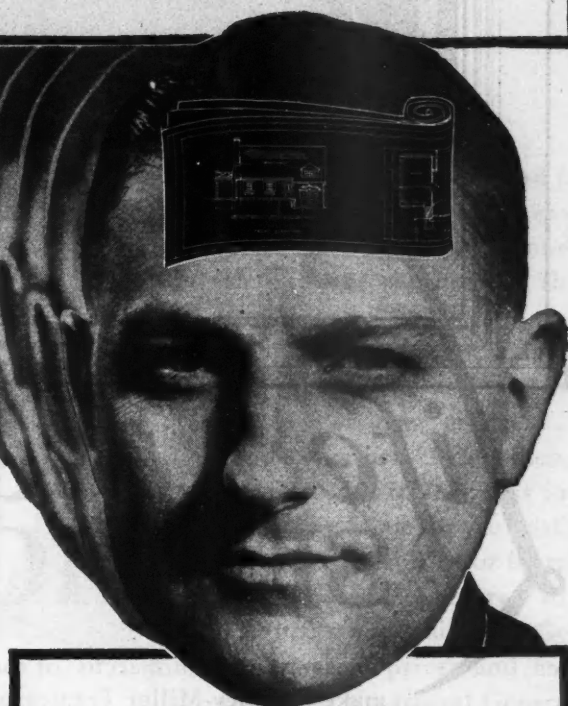
To Read Blue Prints," and actual working blue prints as well as convincing proof. No cost or obligation. Get these important facts before you without delay, so that you may see for yourself how really easy and practical is Chicago Tech's Blue Print Method. Write today—NOW!

**Chicago Technical
SCHOOL for BUILDERS**



Dept. M-122, Chicago Tech Building
118 E. 26th St., Chicago, Ill.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



FREE Books and Blue Prints To Carpenters and Builders!

Without cost or obligation, every ambitious, practical man may now secure a copy of "How To Read Blue Prints" and a set of valuable working blue prints. Also, full facts and details about the new easy at-home training that has made possible promotions and bigger pay checks for scores of builders all over the country. Remember—there is absolutely no risk for you, so fill in and mail the coupon below!



Chicago Technical School
For Builders,
Dept. M-122, Chicago Tech Building,
118 E. 26th Str., Chicago, Ill.

Send me at once your **FREE BOOK** and complete set of **FREE BLUE PRINTS** which I understand are mine to keep without obligation. It is understood that no salesman will call on me.

Name.....
Address.....
City..... State.....
Age..... Occupation.....



Life time SERVICE

These mighty monarchs of the forest make Bradley-Miller Frames possible.

Wind, summer suns and showers, winter snows and zero blasts have tempered the lumber in these mighty monarchs to a point where it will withstand all the ravages of time.

It will not warp, split, shrink, swell or rot. That's why all exposed parts of Bradley-Millers are made from this finest of all frame woods, "Michigan White Pine."

Combining this fine wood with scientific design and Bradley-Miller workmanship, gives you the highest quality frame obtainable.

They come in two bundles consisting of seven units, tied with marproof cord. Any good mechanic can nail them together in a few minutes' time.

Visit your lumber dealer today; ask him to show you Bradley-Millers. You will find the style and size to fill your needs.

Write us today for free construction booklet, describing Bradley-Miller Michigan White Pine Frames.

BRADLEY-MILLER & CO.
BAY CITY MICHIGAN

"4-Square" Improvements

AS a result of investigations among retailers, contractors and carpenters handling and using packaged lumber, the Weyerhaeuser affiliation of forest products manufacturers has just introduced a new type of package that answers the only objection to the original "Container" that was heard during the first year's experience with the "4-Square" merchandise.

Some instances were reported by investigators, in which the metal staples that attached the fibre end-caps to the top and bottom boards in each package had been broken off by careless removal of the cap so as to cause some slight



In making "4-Square" Lumber a Pneumatic "Kicker Finger" Pushes the Boards Against the Stop So There Can Be No Under-Length Or Over-Length Pieces.

trouble to the mechanic using the lumber. The new type of package totally eliminates the staple.

Headquarters of Weyerhaeuser Forest Products in St. Paul, Minn., also announce that a new double re-butting machine for the re-manufacture of the packaged lumber has been developed and is being installed at the Weyerhaeuser mills in Minnesota, Idaho and the Pacific Northwest. Though it costs approximately six times the price of the first re-butting rigs, it has been adopted as standard because of its precision, protection of the product, rapidity of production and foolproofness.



Sales Executives Drafted

AN advisory committee on salesmanship, covering the New York district, has been established by the American Institute of Steel Construction, Inc. This committee is drafted from the sales executives of the fabricators of structural steel in this district. It will meet with the staff of the Institute monthly to advise on the work of the national body as it regards the development of broader markets for structural steel.

This is the first time, it is believed, that the sales representatives of member firms have been drafted into the service of a national trade organization. The American Institute of Steel Construction, Inc., however, is distinctly a selling organization planned for the purpose of developing new uses and a broader market for structural steel. It is felt that good will result by drawing on the selling staffs of members to supplement the work of its engineers.



Correct Asbestolith Address

ON page 66 of the July issue of the Building Developer, the address of the Asbestolith Mfg. Co. of New York City was given incorrectly, in connection with an article describing this company's floor material. The correct address is 1 Madison Ave., instead of 101 Madison Ave., as shown.

Sell your new homes faster!

YOU'RE sure of pleasing the wife of the prospective buyer when you install Frigidaire in the new home. And *she's* the chief one to be pleased!

She wants automatic refrigeration. She considers it a necessary modern convenience. And Frigidaire meets with her instant approval. For she knows that Frigidaire is the most widely used of all electric refrigerators. She knows too, that this popularity has been won by dependable performance.

All this means easier sales, quicker sales—more profitable sales.

And you can gain this tremendous



dous selling advantage at little, if any, extra cost. For by installing Frigidaire, you do away with the need of a refrigerator alcove access-

ible from the outside. And in this way you bring about savings which frequently more than cover the cost of the equipment.

Call at the nearest Frigidaire showroom and see the display of new models . . . models which lend themselves readily to any plans for the largest homes or the smallest apartments. Ask for literature especially prepared for architects and builders. Get the new low prices and find out about the liberal General

Motors terms. Or write us . . . today. Frigidaire Corporation, Subsidiary of General Motors Corporation, Dayton, Ohio.



Model D-4 Frigidaire
Self-contained cabinet; Tu-Tone Porcelain-on-steel exterior; seamless Porcelain-on-steel lining; approx. 4 cu. ft. of food space. Freezes 24 full-size ice cubes.



Model AP-6 Frigidaire
Self-contained cabinet; Tu-Tone Porcelain-on-steel exterior; seamless Porcelain-on-steel lining; approx. 6 cu. ft. of food space. Freezes 42 full-size ice cubes.



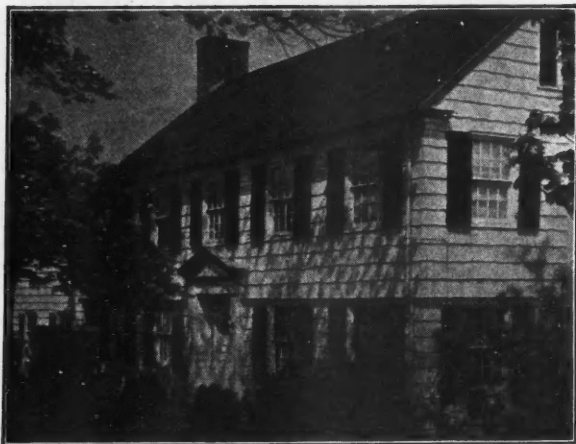
Model AH-P-5637 Frigidaire
One of the eight special Apartment House Cabinets; equipped either for unit or multiple installation; white Duco finish; Porcelain-on-steel lining; approx. 4 cu. ft. of food space. Freezes 30 full-size ice cubes.

FRIGIDAIRE

M O R E T H A N A M I L L I O N I N U S E

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Cabot's



House at Flushing, Long Island. Robert E. Sherlock, Architect. Insulated throughout with Cabot's Quilt.

Beauty, Comfort and Economy *hand in hand*

SOLID Comfort, Beauty, and Economy go hand in hand in the Colonial Style, IF—You do as they did in Colonial times—insulate against cold and heat with *Zostera Marina*, the sea-plant used in Cabot's Quilt.

It actually saves on first costs by reducing the heating plant.

Cabot's Quilt

Nothing better has been discovered in 300 years. Always warm, soft and fluffy. Keeps heat out in summer, keeps heat in, in winter.

Fill out the coupon below and mail today for free Quilt Book.

Quilt

CUT COUPON ON THIS LINE

Samuel Cabot
Incorporated

141 Milk Street, Boston, Mass. AB-9-29

Offices also at: NEW YORK, CHICAGO, PHILADELPHIA,
KANSAS CITY, LOS ANGELES, SAN FRANCISCO,
MINNEAPOLIS, PORTLAND, AND SEATTLE

Gentlemen: Please send me your QUILT BOOK.
(Write your name and address in the margin below.)

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 International Nickel Company, Inc., 67 Wall St., New York City, has just published a booklet "Sink Design Contest" presenting the results of a competition for a design for a kitchen sink to be manufactured of Monel metal as announced by the Art Alliance of America.

"Aerial Navigation and Meteorology" by Captain Lewis A. Yancey, published by the Norman W. Henley Publishing Co., 2 West 45th St., New York City, is "A Comprehensive Treatise in Simple Language for the Student with an Average Education" from which may be obtained a good working knowledge of the elements of navigation and meteorology. Price, \$4.00

The Buffalo Forge Company, Buffalo, N. Y., has published a new catalog, No. 424, on the Buffalo Silex conoidal fans for the ventilation of buildings.

"Architects' Hand Book on Metal Trim," is a handsomely gotten up book published by Knapp Bros. Manufacturing Co., Chicago, containing a large number of photographs and details.

"End This Overhead Expense" is the title of a new pamphlet being sent out by the Amber Asbestos Shingle & Sheathing Company, Ambler, Pa., presenting the advantages and economy of re-roofing with Ambler shingles.

The Milwaukee Corrugating Company, Milwaukee, Wis., has just published a new catalog No. 29 covering Milcor furnace pipe and fittings, stove pipe and elbows which contains useful data on warm air heating.

The American Chain Company, Inc., Bridgeport, Conn., offers a folder entitled "To Which Period Do Your Windows Belong?" which shows the evolution of the window and stresses the advantage of using sash chain.

The Chain Belt Company, Milwaukee, Wis., and the Stearns Conveyor Co., Cleveland, Ohio, a branch of the former, are distributing a new Rex Catalog, No. 30, and Engineering Data Book, showing the company's complete line of chains, power transmission equipment and elevators and conveyors.

The Armstrong Manufacturing Co., Bridgeport, Conn., offers a small circular on its new series of pipe vises and including the Armstrong nipple chuck and pipe cutters.

"Welded Chain—Its Use and Abuse" is the title of a new circular from the American Chain Company, Inc., Bridgeport, Conn., and contains some available information for users of chains.

The Southern Sales and Service Co., Pinehurst, N. C., offers a pamphlet on the subject of its waterproofing for concrete, stucco, steel and wood.

"Zoning" is the title of a new booklet prepared by the Civic Development Department of the Chamber of Commerce of the United States, Washington, D. C., which is "A Statement of Principles and Procedure."

The American Standards Association, 29 W. 39th St., New York City, has just published its "American Standards Year Book" for 1929 reporting important developments in the national standardization activities.

The Associated Tile Manufacturers, 420 Lexington Ave., New York City, has published No. 6 of its "Architectural Monographs on Tiles and Tilework" which covers the subject of "Ceramic Decoration in India," by Rexford Newcomb.

"Electrified by Westinghouse" is the title of a pamphlet offered by the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., on the electrification of the Atlantic City Convention Hall.



Every trucking job is its own Tire problem

Different trucks have different jobs to do. To do its own job well and to make the most money for its owner, every truck needs the *right* type of tire for its duty.

The *right* tire for every truck job is in the Goodyear Truck Tire line. Every Goodyear Truck Tire is designed and built with an experienced eye to the load, the speed, and the traffic and road conditions.

Around excavation projects, for example, where "traction" means gripping power extended far up on the sidewalls as well as on the tread, the *right* tire is certainly the new Goodyear Dump Truck Pneumatic.

Where the duty calls for operation at close to passenger car speed, Goodyear Cord Truck and Bus Tires re-

spond with the tractive power of the All-Weather Tread and the body vitality of Goodyear SUPERTWIST Cord.

For hauling building materials, oil distribution, food delivery, intra-city moving, etc., Goodyear Super Cushion Tires combine extra cushion and long mileage life with the gripping traction of the famous All-Weather Tread.

And where heavy loads are to be moved by slow, short hauls on city streets, the right tire equipment is the powerful, cushioning Goodyear All-Weather Heavy Duty Cushion.

Expert Goodyear Truck Tire Dealers are at your command for consultation on the *right* type and size of Goodyears for each vehicle in your fleet.

The Greatest Name in Rubber

GOODYEAR

Copyright 1929, by The Goodyear Tire & Rubber Co., Inc.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

The Ingersoll-Rand Company, 11 Broadway, New York City, has published a very complete and well illustrated booklet and catalog covering its Calyx drills and their use.

Hartmann-Sanders Co., 2187 Elston Ave., Chicago, in new Circular No. 69, are illustrating some of its garden furniture and ornaments in both wood and art stone.

The Consolidated Concrete Products Corp., Adrian, Mich., has selected the name "Consolidated Contact" for its new periodical house organ as the result of a name contest among the concrete products manufacturers.

The General Electric Company, Schenectady, N. Y., offers the following loose leaf catalog sheets on its products: Type WD1400A Arc Welder, General Electric Typ WD-300A Arc Welder Buda Engine Driven, G-E Arc-Welding Accessories, CR7051 Automatic Starting Compensators, Totally Enclosed, Fan-cooled Squirrel-cage Motors, Direct Current Motors Type BD, and a pamphlet on "Noiseless Construction by Arc Welding."

The American Radiator Company, 40 W. 40th St., New York City, offers two new booklets "Ideal Oil Burning Boilers" and "Ideal Water Tube Boilers for Oil Burning."

"**Driwood Mantels**" is a new booklet describing the products of Henry Klein & Co., Inc., 40-46 W. 23rd St., New York City.

"**Commercial Standards Monthly**," issued by the National Bureau of Standards of the U. S. Department of Commerce, has been expanded and, commencing with the July, 1929, issue, which is No. 1, Vol. 6, will be issued as a printed magazine. It will offer, monthly, "A Review of Progress

in Commercial Standardization and Simplification." Subscriptions will be received by the Superintendent of Documents, Government Printing Office, Washington, D. C. Price, \$1.00 per year.

"**Building Construction**," by Whitney Clark Huntington, C. E., published by John Wiley & Sons, Inc., New York City, is a new book which describes the types of construction used for the various parts of buildings, the materials used in building construction, the methods use in estimating the cost of buildings and in cost keeping during the process of construction. It is designed to meet the requirements of engineering students, architectural draftsmen, inspectors and superintendents. Price, \$6.00.

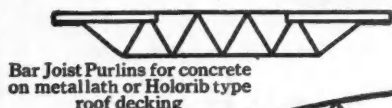
"**Handbook of Building Construction**," edited by George A. Hool, S. B., and Nathan C. Johnson, M. M. E., and compiled by a staff of 50 specialists, is published by the McGraw-Hill Book Company, Inc., 370 Seventh Ave., New York City. A second edition, in two volumes, has just been published. It is devoted to data for architects, designing and constructing engineers and contractors. Price, \$10.00.

Joseph T. Ryerson & Son, Inc., Chicago, offers a pamphlet of information on its product, "Nikrome—A Heated Alloy of Steel of Guaranteed Physical Properties."

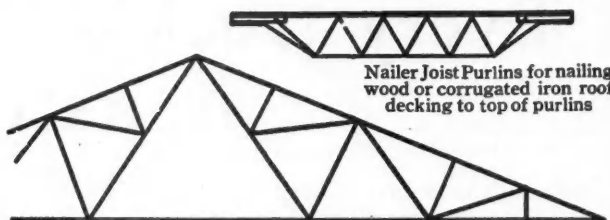
"**Fittings for Pipe Structures**" is a new booklet, Circular 1676-B, offered by the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., being a complete catalog of these fittings.

"**Registers of Revenue**" is a new booklet from the Westinghouse Electric & Manufacturing Company, Newark works, Newark, N. J., covering the subject of Westinghouse watt-hour meters.

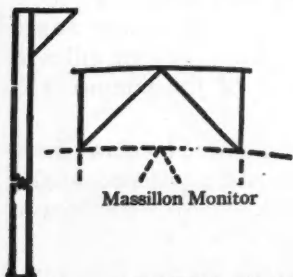
"**Engineering Costs**," an address delivered by Wm. S. Thompson at the Annual Meeting of the Concrete Reinforcing Steel Institute, 435 N. Michigan ave., Chicago, has been published in booklet form.



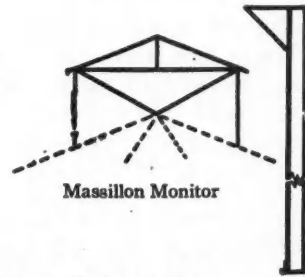
Massillon Curve Chord Trusses



Massillon "A" Type Trusses



Massillon Monitor



Massillon Monitor

Steel Construction

for Commercial and Industrial Buildings, Airplane Hangars and Garage Buildings

"H" Columns

STEEL insures **STRENGTH** and **SECURITY** where "Massillon Standardized Steel Building Products" are used. The standardization of these products invariably speeds up the completion of the building and results in lower costs.

As an example of this standardization, standard stock size roof trusses are provided for all loads for spans up to 100 feet. In a similar manner, standard stock size purlin sections are provided

for all types of roof deckings. Shipments are always prompt.

The contractor who builds with Massillon products has every advantage of the "standard steel building" plus the fact that these standardized products can be provided to meet the individual requirements of his client.

Send us a sketch or set of plans for your next building of this type and let us show you how Massillon construction can benefit you.

"H" Columns

THE MACOMBER STEEL COMPANY, 909 Belden Avenue, CANTON, OHIO

ANNOUNCING

a new

1-TON TRUCK

*at the lowest price^{\$}
ever put on a
Dodge 1-ton truck*

745

A new Dodge Brothers Truck now takes its place in a line already unusually complete. It is typically Dodge in the way it will work and the way it will earn a remarkable chassis value at \$745, the lowest price at which a Dodge 1-ton truck has ever sold.

Take a trial trip—with you at the wheel. Test it for speed, power, safety, driving ease and riding comfort. Lift the hood and inspect the sturdy, modern engine. Note the rugged frame, axles and springs. Give due importance to the quick, quiet, sure hydraulic 4-wheel brakes.

Let us show you the truck complete with body you need. Stand back and admire its good looks. Picture your name on its sides.

You can put one of these 1-ton trucks to work—safe in the knowledge that

CHASSIS F. O. B. DETROIT

it will carry your loads dependably and at a surprisingly low cost per mile, per trip, per year.

Let us prove these statements. Have one of these exceptional workers join forces with your other business-building and profit-earning investments.

PRICES

MERCHANTS EXPRESS—109' wheelbase (4-cyl.)	\$ 525
COMMERCIAL TRUCK—124' wheelbase (4-cyl.)	675
COMMERCIAL TRUCK—124' wheelbase (6-cyl.)	775
1-TON—133' wheelbase (4-cyl.)	745
1-TON—133' wheelbase (6-cyl.)	845
1-TON—140' wheelbase (6-cyl.) Heavy Duty	1065
1½-TON—150' wheelbase (6-cyl.)	1345
1½-TON—165' wheelbase (6-cyl.)	1415
2-TON—150' wheelbase (6-cyl.)	1515
2-TON—165' wheelbase (6-cyl.)	1585
3-TON—135' wheelbase (6-cyl.)	1745
3-TON—165' wheelbase (6-cyl.)	1775
3-TON—185' wheelbase (6-cyl.)	1845

Chassis f. o. b. Detroit

DODGE BROTHERS

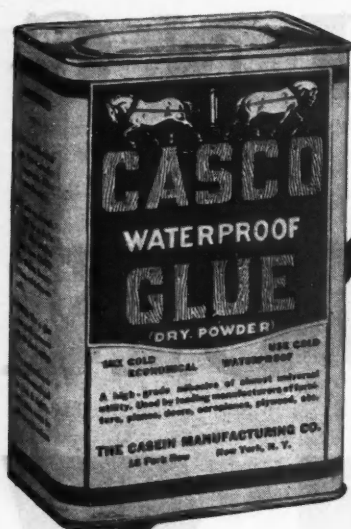
TRUCKS



CHRYSLER
MOTORS
PRODUCT

SOLD BY DODGE BROTHERS DEALERS EVERYWHERE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Send
for this
Sample
Package

**THE
STRONGEST
ADHESIVE
KNOWN**

Casco is an all-glue dry powder—which has modernized gluing methods by eliminating the old fashioned messy glue-pot. Simply stir it in cold water and you have a smooth liquid quick-setting **WATERPROOF** glue of tremendous strength.

Mix it cold and use it cold on cold lumber.

NO HEATING—NO ODOR—NO WASTE

Casco glues almost anything—wood to wood, metal, glass, cardboard, leather or paper and glues it permanently. A Casco glued job is stronger than the wood itself.

One pound of Casco dry powder makes 1½ quarts of the cheapest *good* liquid glue obtainable.

Guarantees unfailing uniform results superior to any ready mixed liquid glue or messy bulk glue.

THIS TRIAL WILL CONVINCE YOU!

Your sample package will prove that Casco is the most practical, durable, convenient and inexpensive glue you have ever used.

Fill out completely the coupon below and a generous trial package will be promptly forwarded postage prepaid.

**The Casein Manufacturing Company
of America, Inc.**

15 Park Row

New York City

SPECIAL INTRODUCTORY TRIAL OFFER

The Casein Mfg. Co. of America, Inc., 15 Park Row, New York
Enclosed find 25c (stamps only) to cover postage and handling cost
for which send me your trial package of Casco Waterproof Glue.

Name.....

Street.....

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

Hardware Dealer's Name (Please include)

B 929

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 Ambler Asbestos Shingle & Sheathing Co., Ambler, Pa., has issued a pamphlet on its product Linabestos as a practical material for the building of poultry houses.

The Geo. D. Roper Corporation, Rockford, Ill., has issued a new "Water Supply Catalog 55" covering its line of water supply systems.

"Fireproofing Structural Steel," by Jack Singleton, District Engineer, is a new booklet published by the American Institute of Steel Construction, Inc., 200 Madison Ave., New York City, treating of the relative value of different materials used for this purpose.

"The Commerce Yearbook for 1929" issued by the United States Department of Commerce has just been published. Volume I contains a complete and authentic record of the latest developments in trade and industry in this country and its territories and possessions, as a reference for business men. Volume II will contain similar information covering all foreign countries. Volume I can be obtained from the Superintendents of Documents, Washington, D. C. Price \$1.00.

Colorcrete Industries, Holland, Mich., has published a new booklet, in full colors under the title "Colorcrete the New Gateway to Money-Making Opportunities" and also a "Confidential Data Manual for Colorcrete Manufacturers—Including Costs, Markets, Sales, Expansion."

"The Oxy-Acetylene Welder's Handbook," by M. S. Hendricks, Editor of The Acetylene Journal, published by the Acetylene Journal Publishing Company, 608 S. Dearborn St., Chicago, is "A Complete and Practical Manual of Modern Practice" in acetylene welding, covering the fundamentals in a clear and helpful manner and bringing the available text matter on this subject up to date on the recent development of the art. Price, \$3.00.

The Save the Surface Campaign, 18 E. 41st St., New York City, has just published "The Guide Book of Painting and Varnishing," which is described as "A Complete and Simple Treatise on the Use of Paint, Varnish, Lacquer and Enamel," and was prepared in order to give the layman a working knowledge of the fundamentals of this subject in the interest of securing for the home owner the best in such work. It is handsomely illustrated in colors. Price, 25 cents each in any quantity.

"Roadside Development," by J. M. Bennett, published by the Macmillan Company, New York City, is devoted to the business of developing the highways for the purpose of safely increasing their practical use and improving the road-sides to a degree where nature can step in and make them beautiful, a problem of community development of first importance. Price, \$5.00.

The National Safety Council, 108 E. Ohio St., Chicago, is distributing its Revised Safe Practices Pamphlet No. 47, on "Compressed Air Machinery and Equipment," which was prepared by W. Dean Keefer, Director of the Industrial, in collaboration with 70 safety engineers representing large industries.

"The Triangle," periodical publication of the Pencil Points Press, Inc., 419 Fourth Ave., New York City, is carrying a bibliography of books relating to architecture and art. Another installment of this bibliography is included in the August issue which was recently issued.

"The 8th Reason Why," is the heading on a new broadside just sent out by the Cornell Wood Products Co., 307 N. Michigan Ave., Chicago, showing the use of its wall board in basement and attic improvements.

PROFIT PRODUCERS



No. X-24

Monarch

No. 65—Variety Tilt-

Saw—with motor on arbor; with motor on base; with countershaft. Each machine furnished with one saw, ripping gauge and one cut-off gauge with reach rod and stop.



Built, tried, tested and guaranteed for long-lasting, hard service, this new Monarch machine is the surest way to secure greater efficiency and economy.

Note these special Features:

Saw may be tilted 45 degrees to the vertical, may be lowered beneath table or raised through table when either vertical or tilted.

Ripping gauge may be used either side of saw.

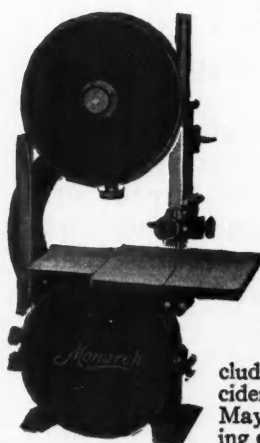
Cut off gauge may be set either side of saw at any angle up to 120 degrees.

Right hand table fixed, left hand table movable for use of dado or removable entirely for free access to saw.

Saw guard of special design affords complete protection.

Diameter of saw, 14". Shipping weight, 690 pounds. Equipment includes 1 14" novelty saw, 1 ripping gauge, 1 cut-off gauge, 1 splitter, 1 saw guard, ball bearing motor which develops 2-h. p. at full speed and is controlled by an internally fused snap switch.

It will pay you to investigate this most modern wood-working machine—and place it in your shop.



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.

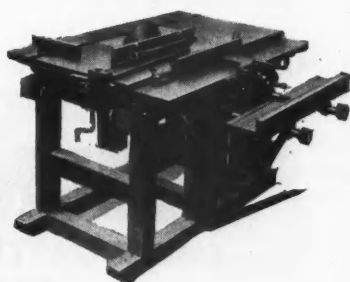


Fig. 690—

Four men can use this Variety Wood Worker at the same time. A Rip and Cut-Off Saw Bench, with Boring Attachment, Mortiser and Jointer all in one. Send for Booklet No. 82.

AMERICAN SAW MILL MACHINERY CO.

60 Main St., Hackettstown, N. J.

Manufacturers of a complete line of Woodworking and Saw Mill Machinery

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Woodworking Shops

that are money-makers!

Parks shops make their owners money before they turn a wheel because Parks machines use the minimum of floor space, saving cost of the shop building, and because Parks prices are so much lower than other machines capable of the same work.

Then, every day a Parks shop runs it makes more money by saving power bills and by handier, faster operation.

Whether you plan a big shop or a little shop you want the lowest cost equipment that will turn out first-class work in quick time. That means a Parks shop because Parks machines cost less to buy, and less to operate.

When you build your shop this fall make it a Parks shop throughout.

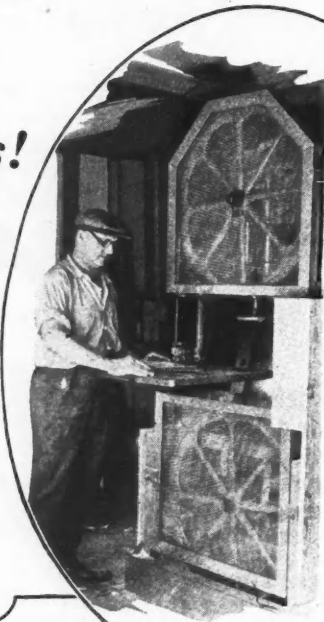
Choose your shop equipment from the Parks catalog showing over 33 different machines—send for your copy today.

THE PARKS WOODWORKING MACHINE CO.
Manufacturers of Quality Woodworking Machines since 1887
FERGUS AND C. H. & D. CINCINNATI, OHIO
Canadian Factory: 338 Notre Dame East, Montreal

PARKS

WOODWORKING MACHINERY

EVERY PARKS IS GUARANTEED FOR 10 YEARS



The top picture shows the owner of a Parks shop at his Parks 36-in. band saw which cost him only \$125.

Are your property values endangered by drainage backflow?



Stop it with Calco Automatic Drainage Gates

BACKFLOW turns drains into a menace—basements and streets are flooded—property is damaged—real estate values fall.

You can stop backflow—automatically protect your property against damage—by the use of Calco Automatic Drainage Gates. These heavy cast iron gates are especially made for use with Armco Corrugated Iron Pipe to which they are readily attached. Their accurate balance permits free outflow, but—*there can be no backflow.*

Protect your property with Calco Automatic Drainage Gates—furnished in sizes from 8 to 84 inches. An interesting bulletin tells about the many profitable uses of these sturdy practical gates. A copy on request.



ARMCO CULVERT MANUFACTURERS ASSOCIATION
MIDDLETOWN, OHIO

ARMCO

CORRUGATED IRON PIPE WITH

CALCO

AUTOMATIC DRAINAGE GATES

© 1929 A. C. M. A.

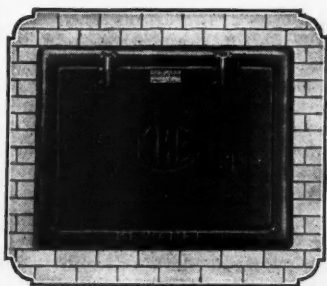
**It's just as easy
to do the job right**



and

KEWANEE

**Copper Steel COAL CHUTES
and BASEMENT WINDOWS
COST NO MORE!**



Every home deserves the protection and convenience of KEWANEE Copper Steel Coal Chutes. These attractive quality chutes soon pay for themselves in repair bills saved. KEWANEE Heavy pressed copper steel construction can be absolutely depended upon to withstand the hard knocks of coal delivery.

**75% More light with KEWANEE
Copper Steel
Basement Windows**

The MODERN Home will have these ideal windows that always operate easily—never get out of order—will not shrink or swell. They are attractive and increase the value of the home.

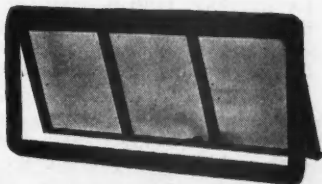
KEWANEE Coal Chutes and windows fit into any style architecture and remain attractive and serviceable for the life of the building.

Dealers: write for our attractive offer

KEWANEE MFG. COMPANY

909 Tremont St.

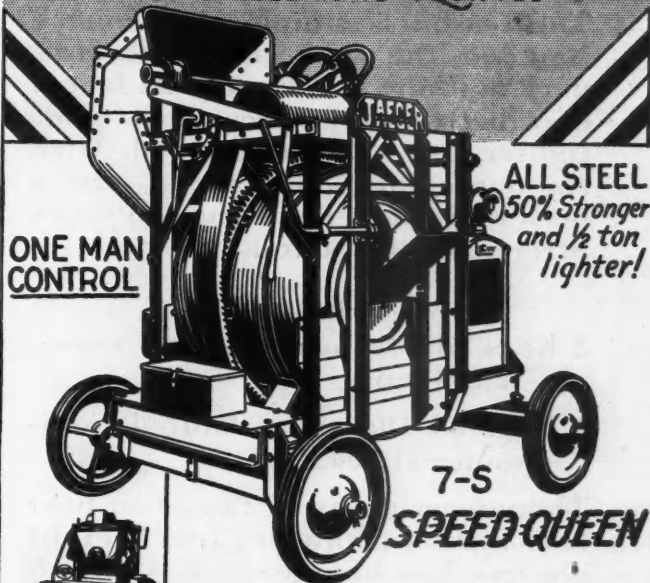
Kewanee, Ill.



**JAEGER'S
Spring Mounted**

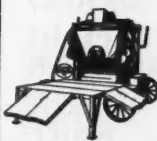
**7-S Mixer
at a \$200 saving
under market prices**

~ 100% BALL BEARING EQUIPPED ~

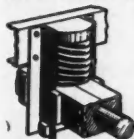


**ONE MAN
CONTROL**

**ALL STEEL
50% Stronger
and ½ ton
lighter!**



LOW CHARGE



**SPRING HUNG
CHASSIS—adds
Years to Life!**



**SKIP
SHAKER**

EVERY production advantage as the world's biggest makers of concrete mixers has gone into this one-bag mixer. It means a saving of \$200 to you at the start, plus more batches a day and longer life.

Short coupled, with 100% roller bearing steel disc wheels, men handle it nicely on soft ground. Weighs about 3500 lbs. complete with 2 cylinder Le Roi engine, Accurate Measure Water Tank.

SPEED KING

portable, end discharge one bagger, equals Speed Queen for batches per day. Low price!

**IT
TRAILS
ANY-
WHERE**



**Jaeger Builds All
Sizes from 3½S up to 28S Mixers**

MAIL THIS FOR CATALOG, PRICES AND TERMS!

The Jaeger Machine Co.

Date _____

521 Dublin Avenue, Columbus, Ohio

☐ NON-TILT MIXERS
☐ MORTAR MIXERS

☐ TILTERS

☐ PLASTER
(Check where desired)

Name _____

Address _____

City _____

State _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



You get more Stronach Nails per pound than are in a pound of diamond pointed nails. The reason is simple. A Stronach Nail does the same work as an ordinary nail one size larger. In fact it does better work, because it holds tighter and won't split wood. With the damaging point cut off, and a lesser diameter, there are more Stronachs in a pound.

An Example

2 Kegs 8d Stronach Special Nails—
32,200 nails

3 Kegs 8d Diamond Pointed Common—31,800 nails

There is economy in this. You have less bulk to handle, less freight charges, less storage space. Above all this, is the added service of nails which hold more firmly and which reduce splitting of materials 70% to 90%.

Mail this coupon for samples and further information.

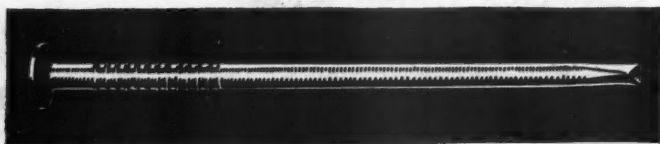
Stronach Nail Co.
2008 Union Bank Bldg., Pittsburgh, Pa.

Name.....

Company.....

Address.....

.....



NON-SPLITTING, SURE HOLDING
Stronach Nails



The builder has his problems...but lumber needn't be one of them!



YOU DO have difficulties. No one ever accused a builder of selecting an easy job. But if you know the *pine tree trade-mark* and what it stands for, your *lumber* problems are over! For the pine tree trade-mark is the sign of dry, well-manufactured, association-graded lumber, and it marks a lumber easy to buy, dependable and beautiful. A lumber that makes reputations!

Back in the old days, it was just about impossible for the average builder—or for that matter, the home owner or architect—to identify any particular kind of lumber. So much for history. Today Pondosa Pine can be *completely* identified by the pine tree trade-mark. It represents the maker's endorsement of Pondosa's suitability for any soft wood purpose. And anywhere you use Pondosa, whether for molding, built-in features, cupboards, surbase work, balustrades, interior or exterior trim—it will prove the ideal soft wood. And it will be recognized as such, too, for advertising in national publications is telling the Pondosa story.

Pondosa Pine comes to your job ready to work, ready to respond quickly to saw and plane, ready to finish up with a clean, beautiful surface. More than that, ready to end lumber difficulties!... You can buy Pondosa Pine at your local lumber dealer's. Ask for the lumber with the pine tree trade-mark. Western Pine Manufacturers Association, Portland, Oregon.

Pondosa Pine
The Pick o' the Pines



What Kind of
an Assistant
would you
choose-



A Husky Man
or a Weakling?

Think of your floor surfacing machine as your assistant, for that is what it is. You wouldn't choose a weakling to work with you. You'd want a husky man who could work hour after hour all day long—and do the work right.

The Improved Schluter

You want a surfacer like the Improved Schluter with the weight, power, and guts to eat away the surface of any floor hour after hour without a stop—and do it right.

Works for You!

You want the Improved Schluter because you don't have to run it like you'd drive a horse. No levers or weights. The Schluter is entirely automatic. The steel roller has a patented suspension feature and adjusts itself to floor irregularities.

5 o'clock Blues

In other words, the machine does the work for you and when 5 o'clock comes around, instead of singing the "I'm too tired" blues, you have plenty of pep left to enjoy your evening.

MAIL COUPON FOR FREE TRIAL OFFER

LINCOLN SCHLUTER FLR. MACHINERY CO.
233 W. Grand Ave. (Dept. A.M. 9), Chicago, Ill.
Gentlemen: Send me full details about the Improved Schluter with details of FREE TRIAL OFFER and Easy Payment Plan.
Name
Address
City State
Lumber Dealer

BUY DIRECT
FROM
FACTORY
YOU GET SALESMAN'S
& JOBBER'S PROFIT!

SAVE \$42 to \$384 ON EACH MACHINE

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 BOSSES 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.



BOSS 108
NON-TILTER
"One-Two-Backer"
patented re-mixing
action, steel con-
struction, high
speed performance
with one man
control.

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 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.

A COMPLETE LINE

We make over 75 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 machine when it is in the BOSS line. Write for catalogue and confidential wholesale prices; also give us information on kind of work you want the machine for. We can probably be of help to you.

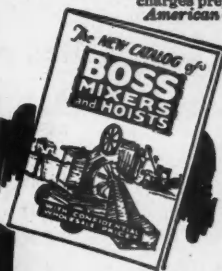
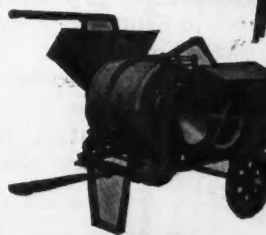
1 YEAR GUARANTEE

GUARANTEE—All BOSS equipment is guaranteed for one year against defective materials and inferior workmanship. Any parts proving defective will be replaced free of charge (electrical or engine equipment excepted, as this equipment is guaranteed by the respective engine manufacturers) upon return to us of defective parts, carrier charges prepaid for our inspection.
American Cement Mach. Co., Inc.

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



THE BOSS 3 1/2 cu ft
NON-TILTER. One half bag
drum type trailer mixer
with 3 disc wheels,
cushion rubber tires,
catch hopper, 3 H-
Stover engine, mag-
neto, steel engine
housing.

CLIP AND
MAIL THIS
COUPON
NOW!

GET OUR PRICES

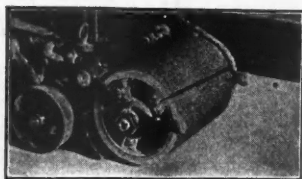
CLIP AND MAIL THIS COUPON
AMERICAN CEMENT MACHINE CO.,
221 S. Fourth St., Keokuk, Iowa.
Send me your new catalogue showing complete line of BOSS Mixers, Pavers and Hoists with confidential wholesale prices.

Name
Address
Town State

. . . Durundum Floor Paper Keeps Pace with construction schedules

MODERN construction moves fast, and the floor surfer of today has to get his job done and move out for the next man just as all other contractors do. His abrasive paper determines his success in meeting his schedule. To finish up on time he requires the fastest cutting paper; to have his job pass inspection, he must use a fine finishing paper; and to make his profit, he

needs an economical high production paper. Behr-Manning Durundum Paper, as thousands of floor surfacers have found, combines all these qualities. Its rugged electric furnace grain is the fastest cutting abrasive obtainable. The careful grading of the grain insures an extremely fine finishing paper, and this, combined with the tough paper backing, gives it a long production life.



**BEHR-MANNING
TROY . NEW YORK**



- A Marquise for Saskatchewan
- A Lift Bridge for Houma
- A Store Front for Winter Harbor
- A Garage for Santa Fe

DISTANCE IS NO BARRIER TO INTERNATIONAL

In Swift Current, Saskatchewan, an International Marquise on the new Eagle Theatre; over a bayou at Houma, Louisiana, an International Lift Bridge; at Winter Harbor, Maine, an International store front, and, in Santa Fe, New Mexico, a garage built with International Bowstring Trusses.

Distance is no barrier to International Service—advantageous freight rates and an enormous stock of standardized raw materials, which permit prompt fabrication and shipment, place International nearer to you, perhaps, than less efficient local service—and costs no more. Investigate!

PRODUCTS of INTERNATIONAL

Store Fronts - Steel Columns
Steel Ceilings - Skylights
Steel Windows
Steel Girders - Steel Trusses

INTERNATIONAL STEEL & IRON COMPANY

DEPARTMENT 18
EVANSVILLE INDIANA

PRODUCTS of INTERNATIONAL

Sidewalk Lights - Coal Chutes
Public Garages - Roof Ventilators
Airplane Hangars

—and many more listed in our Catalog!

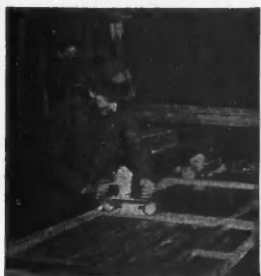
TAKE-ABOUT Sander

Finishing butt ends of floors with the edging attachment



It's easy to finish stairs, closets, nooks and corners with the SUPER TAKE-ABOUT

Ask about the
Speedmatic
Floor Surfer



Ideal for sanding framework, trim, etc.

Down go sanding costs!

Turn these expensive hand-finishing costs—sanding, planing, scraping—into profits. That's one purpose of the SUPER TAKE-ABOUT Sander that finishes doors, trim, butt ends of floors, closets, stairs, etc., 5 to 10 times faster than by hand.

Turning these profits into further profits is another purpose of the SUPER TAKE-ABOUT Sander. The abrasive belt 4 in. wide—revolving at rapid rate of 1650 F. P. M. leaves a finish that pleases the most critical—in fact, usually results in new or repeat business—further profits. Sam Westerheim, North Dakota builder, states: "Two men sanded 1200 lineal feet of casing in 4½ hours. If I should have to sand this by hand the labor would cost about what I paid for the TAKE-ABOUT."

Machine plugs into any light socket. Driven by one H. P. motor. Elbow grease not necessary. Abrasive belt does the work. Operator simply guides machine.

A few jobs and it is paid for. Ask about the SUPER TAKE-ABOUT Sander—also the B-5, a smaller model—considered invaluable in finishing tables, cabinets, vehicles, toys, boats and similar products. Write us. For data on the Speedmatic Floor Surfer, see our advertisement on page 205.

THE PORTER-CABLE MACHINE CO.
1712 NORTH SALINA STREET, SYRACUSE, N. Y.

PORTER-CABLE
SANDERS

3860A

An Ultra Modern Touch To the Small Home or Apartment

A highly ornamental feature of the greatest charm and utility. A well made and very artistic china closet or buffet which may be quickly transformed into a staunch table with seats for four. May be used in either new or old homes or apartments.

EASY-FOLD

Breakfast and Dinette Sets

(Patent Applied for)

A new idea in built-in furniture that captures the admiration of all who see it. Thoroughly practical, made in several styles and in all the popular colors and finishes. Furnished unfinished if desired. Profitable for contractors and building owners as it lends an additional appeal to property for sale or rent. Easy to install and easy to open and close.

Write for Full Information

Investigate it! Get full details. Write for illustrated circular with complete particulars.

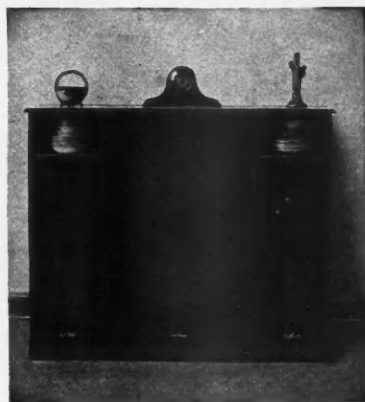
DEALERS

Write for our attractive proposition and our plan for helping you to sell the EASY-FOLD.

SALESMEN

Get in touch with us. Tell us about yourself. We have a fine opportunity for those who can qualify.

Schimmel & Company 605 Central Ave.,
Faribault, Minn.



CLOSED



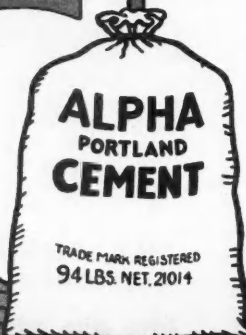
OPEN



View of famous Galveston Sea Wall,
taken in January, 1929.

The tests of time and storm

ALPHA CEMENT was used to the extent of 28,500 barrels in the first section of the Galveston Sea Wall, construction of which began in 1901. The present view shows the original first section which has resisted several hurricanes. In the language of the Galveston Chamber of Commerce, "It appears to be as strong today as the Rock of Gibraltar."



Alpha Portland Cement Company

Baltimore Battle Creek, Mich.
Birmingham, Ala. Boston Chicago
Easton, Pa. Ironton, Ohio
New York Philadelphia Pittsburgh
 St. Louis

use **ALPHA** cement

Driving Rains and Salt Sea Air Cannot Penetrate or Stain These Brick Walls— They're Waterproofed with "ANTI-HYDRO"

ALTHOUGH this large hotel is situated on the ocean front at Asbury Park, New Jersey, the walls are always dry and the brick cannot stain from efflorescence coming from the mortar joints. That's because the cement mortar is mixed with "ANTI-HYDRO."

Driving rains, wintry winds and salt sea air have no effect on this masonry. "ANTI-HYDRO" waterproofs and dampproofs portland cement mortar and concrete *permanently*. Its small additional cost guarantees dry and stainless walls and is a profitable investment for any building, large or small.

Being a liquid compound which mixes readily with water, "ANTI-HYDRO" is extremely easy and economical to use. No additional labor is required for the mixing. And in addition to its many other advantages, "ANTI-HYDRO" makes cement mortar extremely plastic so that it spreads more easily. "ANTI-HYDRO" has been in continuous use for 25 years. It will pay you to use it on your next brick job.

ANTI-HYDRO WATERPROOFING Co.

265-295 BADGER AVE.

NEWARK, N. J.



BERKELEY CARTERET HOTEL, ASBURY PARK, N.J.

WARREN & WETMORE, ARCHITECTS—TURNER CONSTRUCTION CO., CONTRACTORS.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Wall-Tex users enthusiastically recommend this fabric to their friends—Wall-Tex durable wall covering



HERE'S beauty that will please your clients and make you proud of your work. Here's durability and economy that mean more contracts for you. Here's a range of patterns and colors that meet every wall requirement. These qualities protect your reputation because Wall-Tex users enthusiastically recommend this fabric to their friends.

Wall-Tex is tough, durable and elastic. Spots and dust may be easily washed from its surface. Tiny cracks that so often mar old plaster may be completely and permanently hidden by an application of Wall-Tex. Use it to strengthen plaster, as a base for paints and modern plaster finishes and, of course, as a decorative wall covering.

Wall-Tex is easy to hang. It is applied to the walls like paper. Constant improvement of the Wall-Tex line is winning the country-wide favor of the architect, builder and decorator. Write *your* name and address on margin of this page in sending for samples, folder and name of nearest Wall-Tex distributor.

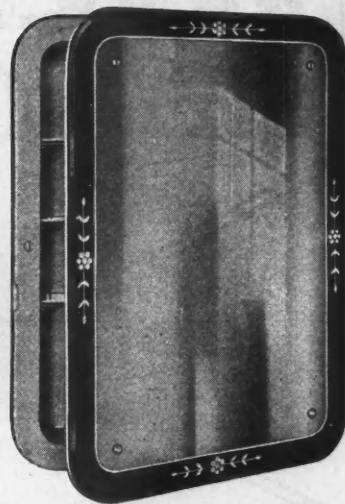
THE COLUMBUS-UNION OIL CLOTH COMPANY
Dept. D-9-29, Columbus, Ohio



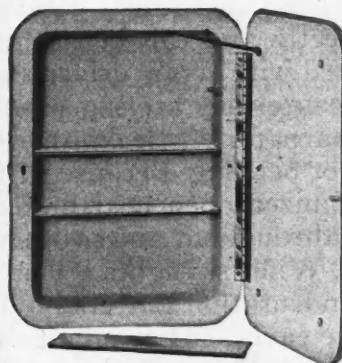
The Cabinet of Today and Tomorrow!

CORCORAN
one piece
Steel Bathroom
CABINETS

Corcoran Cabinets are the Original and Only One-piece Steel Cabinets. No cracks—No seams—No welded joints—No raw edges.



THERE is prestige, ready-made and waiting for you when you specify Corcoran Cabinets—not necessarily because of the trademark, but because of the high attention value and construction features found in Corcoran One-Piece Bathroom Cabinets.



1. Newly patented device opens door instantly when pressure is applied to button.
2. Cabinet body and flange drawn from one continuous piece of steel.
3. Round corners inside and outside harmonize with all bathroom fixtures.
4. Continuous piano type brass hinge will not sag or warp.
5. Bulb edge glass shelves cannot slip forward.
6. Special pad prevents mirror breakage.

Corcoran Cabinets are sold through Jobbers only.

Write for new Catalogue

The CORCORAN MFG. COMPANY
Norwood, Cincinnati, Ohio

Corcoran Mfg. Co., Dept. AB-9

Gentlemen:

We are interested in Corcoran One-Piece Steel Bathroom Cabinets. Kindly send catalogue and full details.

Name.....

Address.....

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

☐ Contractor

☐ Dealer

☐ Architect

Complete stocks are now being carried in Chicago, New York, Philadelphia and Boston; communicate with Corcoran offices at 1820 McCormick Bldg., Chicago; 1228 Locust St., Philadelphia; 11 West 42nd St., New York, and Beaudette & Graham Co., 915 Boylston Street, Boston.

WHY SPECIFY WILLIS SKYLIGHTS?



STYLE No. 70S
Willis hipped turret skylight with pivoted side sash. Combines the best features in skylights and ventilator sash. Locked when closed, yet can be held open at any point.

BECAUSE they admit light, sunshine and ventilation, yet keep out rain, dirt, snow. Because they are built to your specifications (for special jobs) or exact catalog sizes, fit perfectly and can be assembled and erected with screw driver and hammer. Because they are sag-proof, sun-proof, warp-proof, leak-proof, non-buckling or bending. Because rust-resisting galvanized open hearth steel is always used throughout unless otherwise specified. Willis skylights are provided with condensation gutters on all bars and at the eaves. They admit the most light and ventilation without sacrificing essential strength. Thirty years of skillful skylight designing and building are built into every Willis skylight. Every one trial assembled before shipping. Contractors and architects have specified them for years because expensive call-backs for service are practically unknown.

If you do not have the Willis skylight catalog ask for it today. It will set you right on skylight problems.

WILLIS MFG. CO.

Dept. 128 GALESBURG, ILL.

Kimball LIGHT ELECTRIC ELEVATORS

A group of all purpose Kimball elevators with capacity ranging from one thousand pounds and up. Each machine is built complete, sawed, drilled and fitted at the factory and can be easily assembled by a good mechanic at point of installation.

We especially recommend these inexpensive machines for mortuaries, creameries, bakeries, factories, small stores, warehouses and apartment houses. They are safe and economical to operate.

Guaranteed twelve months against structural defects. Automatic safety controls and brakes, heavy steel traction cables.

*Write for particulars on the
Kimball Light Electric
Elevators.*

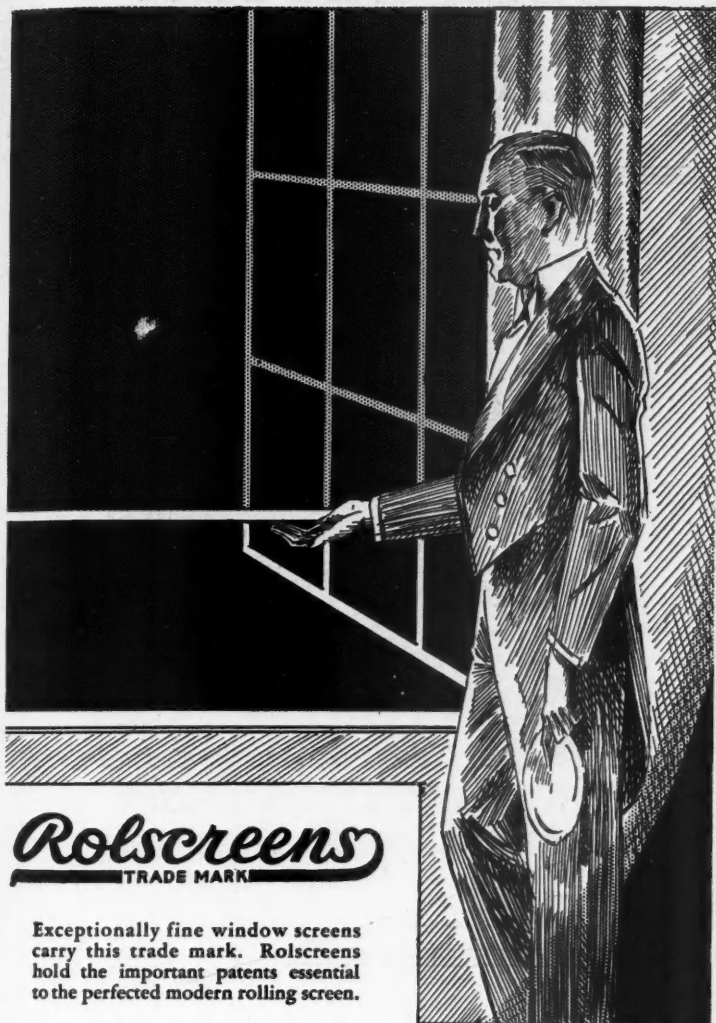
KIMBALL BROS. CO.

Builders of Elevators for 46 Years
989-97 South Ninth Street
Council Bluffs, Ia.

1-29



*Yes, modern — also the finest
window screens you can buy*



Rolscreens
TRADE MARK

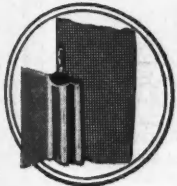
Exceptionally fine window screens carry this trade mark. Rolscreens hold the important patents essential to the perfected modern rolling screen.

*— building priceless
reputation for outstanding leadership
in the production of fine window screens*

Illustrated
Rolscreen
booklet
sent on
request



A section
through guide
showing lug in
saw-edge of screen
wire which pre-
vents screen from
sagging. A "non-
sagging" feature
found only in
Rolscreens.



ROLSCREENS are different from all traditional ideas of window screens. They are built in with the windows. They roll up and down. When up they completely disappear and are protected, which means they are not taken down in the fall for storage or re-hung in the spring.

The special electro-plated "AluminA" wire is woven to our own specifications and is the finest made — a most beautiful wire.

Such alluring performance inspires confidence only through the maintenance of the highest standard of quality and craftsmanship in Rolscreen manufacture. Those who shun substitutes will insist upon Rolscreens. Send for illustrated booklet.

ROLSCREEN COMPANY

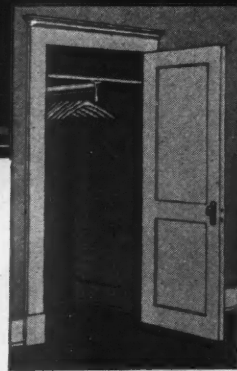
286 Main Street

Pella, Iowa



K-V

Clothes Closet Fixtures



In the Home You Build

...Ask Your Dealer!

Do you know that the K-V Clothes Closet Fixture, the ideal garment carrier, has proved a real selling feature in many homes? This improvement in the modern clothes closet actually promotes turnover along with modern plumbing, modern heating and refrigeration methods.

And yet the K-V Clothes Closet Fixture is an inexpensive, easily installed, handsomely nickeled device that cannot get out of order and will serve satisfactorily at all times.

These fixtures make orderly garment cases out of small, almost useless cubby holes, increase capacity, and preserve clothing. They are a lasting convenience and immediately appeal to every woman who sees them.

If your dealer hasn't a present representative stock of K-V Fixtures for the clothes closet, write us direct and we will see that you are supplied. These fixtures are made in multiples of 2 inches from 12 to 60 inches long, and will fit any closet in new or old homes. Write.

KNAPPE & VOGT MANUFACTURING CO.
666 Richmond Ave. *Grand Rapids, Michigan*

KNAPPE & VOGT MFG. CO.
666 Richmond Ave.
Grand Rapids, Mich.

Send me information, prices, etc., concerning:

- ☐ K-V Clothes Closet Fixtures ☐ K-V Sash Pulleys
☐ K-V Shoe Racks ☐ K-V Shelf Supports

NAME.....

ADDRESS.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Millions spent annually create builders insistence for Rustproof Products



**... a good Reason for
standardizing on
Grand Rapids Pulleys**

OUR complete line of sash pulleys furnished in Zincote finish offers you a splendid opportunity to capitalize on the insistence for rust-proof pulleys.

Recognized as the finest—Grand Rapids Pulleys cost no more than ordinary pulleys. For over a quarter of a century the majority of the trade have standardized on this complete and superior line. Obviously it pays.

Catalog, samples and prices gladly furnished on request.

GRAND RAPIDS HARDWARE CO.

556 Eleventh St.

GRAND RAPIDS, MICHIGAN



"There's one man we're going to keep"

"Ed Wilson, there, is one of the most ambitious men in the plant. I notice that he never fools away his spare time. He studies his International Correspondence Schools course every chance he gets.

"It's been the making of him too. He hasn't been here nearly so long as Tom Downey, who was laid off yesterday, but he knows ten times as much about this business.

"I'm going to give him Tom's job at a raise in salary. He's the kind of man we want around here."

HOW do you stand in your shop or office? Are you an Ed Wilson or a Tom Downey? Are you going up? Or down?

No matter where you live, the International Correspondence Schools will come to you. No matter what your handicaps or how small your means, we have a plan to meet your circumstances. No matter how limited your previous education, the simply-written, wonderfully-illustrated I. C. S. text-books make it easy to learn.

This is all we ask: Without cost, without obligating yourself in any way, put it up to us to prove how we can help you. Just mark and mail this coupon.

INTERNATIONAL CORRESPONDENCE SCHOOLS

"The Universal University"

BOX 8135-D

SCRANTON, PA.

Without cost or obligation, please send me a copy of your booklet, "Who Wins and Why," and full particulars on the subject before which I have marked X:

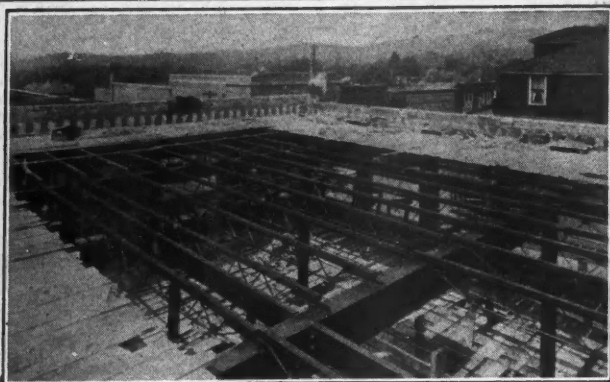
- | | |
|---|---|
| <input type="checkbox"/> Architect | <input type="checkbox"/> Business Management |
| <input type="checkbox"/> Architectural Draftsman | <input type="checkbox"/> Navigation |
| <input type="checkbox"/> Architects' Blueprints | <input type="checkbox"/> Salesmanship |
| <input type="checkbox"/> Contractor and Builder | <input type="checkbox"/> Advertising |
| <input type="checkbox"/> Building Foreman | <input type="checkbox"/> Cost Accountant |
| <input type="checkbox"/> Concrete Builder | <input type="checkbox"/> Show Card and Sign Lettering |
| <input type="checkbox"/> Structural Engineer | <input type="checkbox"/> Industrial Management |
| <input type="checkbox"/> Structural Draftsman | <input type="checkbox"/> Secretarial Work |
| <input type="checkbox"/> Plumber and Steam Fitter | <input type="checkbox"/> Business Correspondence |
| <input type="checkbox"/> Heating and Ventilation | <input type="checkbox"/> Bookkeeper |
| <input type="checkbox"/> Plumbing Inspector | <input type="checkbox"/> Stenographer and Typist |
| <input type="checkbox"/> Foreman Plumber | <input type="checkbox"/> Higher Accounting |
| <input type="checkbox"/> Sheet Metal Worker | <input type="checkbox"/> Grade School Subjects |
| <input type="checkbox"/> Civil Engineer | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Surveying and Mapping | <input type="checkbox"/> English |
| <input type="checkbox"/> Electrical Engineer | <input type="checkbox"/> Illustrating |
| <input type="checkbox"/> Electric Lighting | <input type="checkbox"/> Railway Mail Clerk |
| <input type="checkbox"/> Electric Wiring | <input type="checkbox"/> Civil Service |
| <input type="checkbox"/> Telegraph Engineer | <input type="checkbox"/> Coal Mining Engineer |
| <input type="checkbox"/> Practical Telephony | <input type="checkbox"/> Gas Engine Operating |
| <input type="checkbox"/> Mechanical Engineer | <input type="checkbox"/> Textile Overseer or Supt. |
| <input type="checkbox"/> Mechanical Draftsman | <input type="checkbox"/> Traffic Manager |
| <input type="checkbox"/> Toolmaker | <input type="checkbox"/> Aviation Engines |
| <input type="checkbox"/> Machine Shop Practice | <input type="checkbox"/> Automobiles |
| <input type="checkbox"/> Stationary Engineer | <input type="checkbox"/> Agriculture |
| <input type="checkbox"/> Chemist | <input type="checkbox"/> Poultry Raising |
| <input type="checkbox"/> Pharmacy | <input type="checkbox"/> Spanish |
| | <input type="checkbox"/> French |
| | <input type="checkbox"/> Radio |

Name.....
Street.....
and No.....

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

Occupation.....

*If you reside in Canada, please send this coupon to
International Correspondence Schools Canadian, Limited, Montreal, Canada*



Massillon Nailer Joists in position to receive wood roof on Joines Motor Co. Garage, Brevard, N. C. S. Sternberg & Co., engineers.



Steel Joists with Wood Nailing Members

THESE joists provide every advantage of the famous Massillon Bar Joist except where a strictly fireproof floor is desired. Wood flooring or roof decking is nailed directly to the top member of the joist. Any type of ceiling can be attached to the bottom bars. Nailer Joists are rigid and prevent sagging floors and cracked ceilings. Their open web design facilitates the installation of plumbing and conduits.

Massillon Nailer Joists are made in standard stock sizes to meet all span and load requirements. No cutting or fitting is necessary. They are light and easily handled into position. Used in all types of buildings, these joists provide the strength and rigidity of steel at a cost comparable to wood joists.

*Send for literature and
safe loading tables*

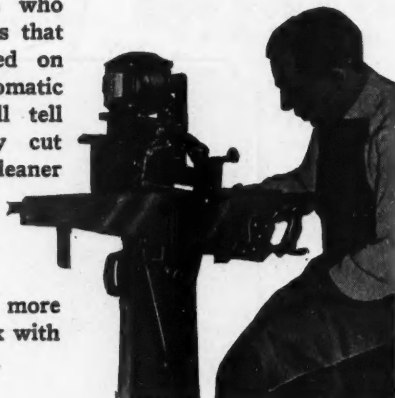
THE MACOMBER STEEL COMPANY
909 Belden Avenue Canton, Ohio

MASSILLON NAILER JOISTS

Massillon Products are manufactured and distributed in Canada by the Sarnia Bridge Co., Ltd., Sarnia, Ont.

"My Saws Sure Cut Better Since I File Them on My Foley"

Carpenters who have used saws that have been filed on the Foley Automatic Saw Filer will tell you that they cut faster, truer, cleaner and stay sharp longer than hand filed saws. They can do more and better work with less effort, too.



FOLEY AUTO MATIC SAW FILER

Keeps All Kinds of Saws in Perfect Cutting Condition

Files all kinds of hand saws—rip, cross-cut, back, panel, keyhole, mitre and others—band saws $\frac{1}{8}$ " to $4\frac{1}{2}$ " wide and cross-cut circular saws 3" to 24" diameter. Evens every tooth to uniform height, size and spacing, so every tooth cuts, at the same time it files. Files teeth from 3 to 16 points to the inch and puts the proper bevel on cross-cut saws, automatically, with such mechanical accuracy that saws are filed better than the most expert hand filing. Uses standard 3-cornered taper files.

You Can Make Extra Money Filing Saws for Others, Too

Contractors and other carpenters will give you their saws to file on your Foley when they see what fine work it does, and how much better Foley Filed saws cut. You can do this work in your spare time and make enough extra money to pay for your machine.

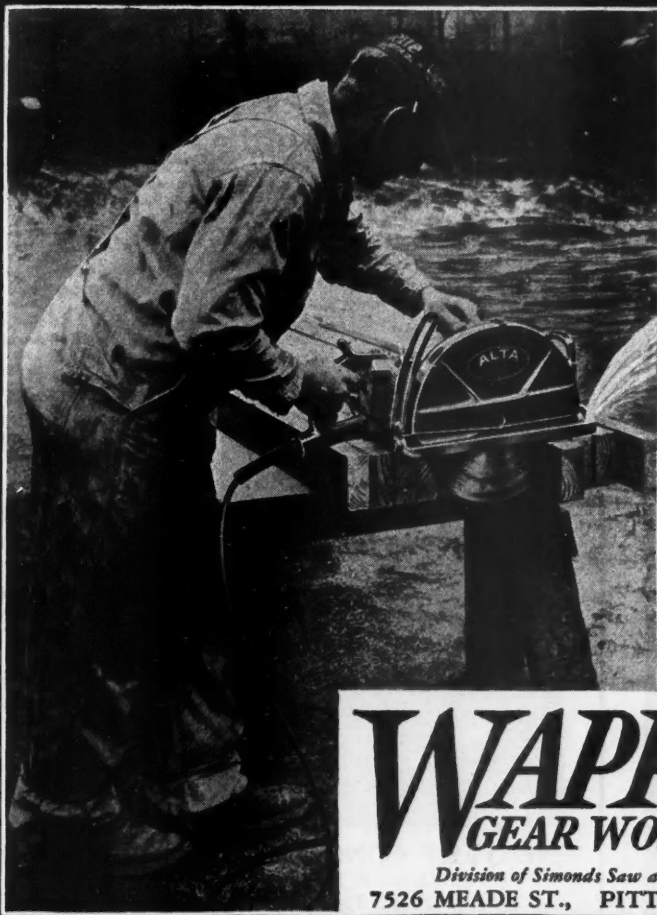
FREE PLAN Tells You How

Hundreds of carpenters and contractors using our FREE PLAN are making extra money filing saws for others. You can do it, too. Write TODAY for complete information—you'll have better cutting saws and make extra money, too.

Foley Manufacturing Co.

Successors to Foley Saw Tool Co.

345 Foley Bldg., 11 Main St. N. E., Minneapolis, Minn.



COMPARE the ALTA Electric Handsaw with Every Other Handsaw

Watch it rip through a board like a flash—ten times as fast as a man with a hand-saw.

Observe its portability, how easily it is carried from one job to another. Saves handling the lumber.

Notice the safest telescoping guard that was ever built on a handsaw.

See how the powerful motor drives the tempered blade through the toughest wood with unfailing accuracy.

Try this most complete handsaw yourself. That's the way to prove for yourself how far ahead the Alta is.

WAPPAT

GEAR WORKS, INC.

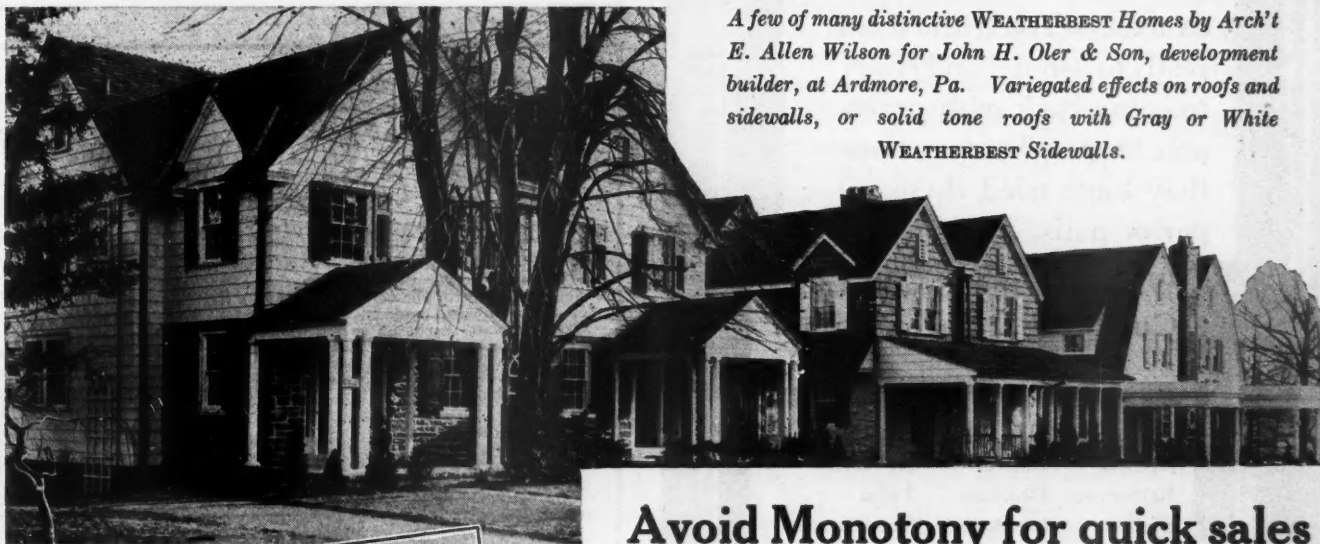
Division of Simonds Saw and Steel Co.
7526 MEADE ST., PITTSBURGH, PA.

Please demonstrate on my job

Name.....

Address.....

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



A few of many distinctive WEATHERBEST Homes by Arch't E. Allen Wilson for John H. Oler & Son, development builder, at Ardmore, Pa. Variegated effects on roofs and sidewalls, or solid tone roofs with Gray or White WEATHERBEST Sidewalls.



Ask our Service Dept. to explain the value of WEATHERBEST laid right over old sidewalls to modernize old homes.

Weatherbest STAINED SHINGLES

FOR ROOFS AND SIDE-WALLS

Avoid Monotony for quick sales

John H. Oler & Son, Philadelphia, in searching for quality material, found in WEATHERBEST Stained Shingles (all 100% edge grain red cedar) for sidewalls and roofs a combination of low first-cost and superior appearance as soon as shingles are applied. The delightful color effects of WEATHERBEST enhance the property and save the muss and cost of painting sidewalls.

Let our Service Department tell you of color combinations and special treatments to secure individuality with repeated designs. Write for literature and sample color pad. WEATHERBEST STAINED SHINGLE Co., Inc., 154 Main St., North Tonawanda, N. Y. Western Plant—St. Paul, Minn. Distributing Warehouses in Leading Centers.

Cut Nails Cut Costs

Because Reading Galvanized Cut Nails have almost unlimited endurance—because their four gripping surfaces hold them

permanently tight—they cut down repair costs wherever they are used.

And because they go straight through hardwood without bending, they save a carpenter's time and temper. It takes fewer Reading Cut Nails, too, to make a firm job.

Explain these qualities of Reading Cut Nails to your customers. You'll find them ready to listen—and ready to come back with profitable "repeat" orders, once they have tried these superior nails.

Write for the Reading Cut Nail Catalog today.

READING IRON COMPANY
Reading, Pennsylvania

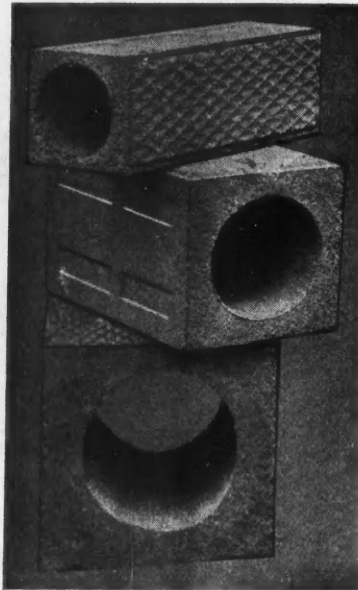
Atlanta	Detroit	St. Louis
Baltimore	Houston	Tulsa
Boston	Los Angeles	San Francisco
Buffalo	New York	Fort Worth
Chicago	Pittsburgh	Seattle
Cincinnati	Cleveland	Philadelphia
	New Orleans	

READING Cut NAILS

Make Building Tile Like These

with your own tile machine!

The T. T. Tile Machine, priced BELOW \$400, makes waterproof concrete building tile in three sizes—4x4x12; 6x6x12; 8x8x12 for foundations, walls and partitions.



Two men can produce 1000 per day.

Returns 50% to 100% profit to the owner.

Uses semi-wet concrete mixture.

Machine operates by belt with any type of power.

Simple in construction, sturdily built, performs day after day without interruption.

Used by builders and contractors throughout the middle west.

Write for
Descriptive
Folder

NEUVERT CONCRETE MACHINERY CO.

Mfrs. T. T. Tile Machine and
T. T. Tile Glazing Machine

HERINGTON,

KANSAS

MYERS WATER SYSTEMS

When you think of water think of Myers Self-Oiling Power Pumps and Water Systems. New Styles, new features, new standards of water service—the Myers line brings them all to you at lower prices.

Unsurpassed for dependability, designed for maximum service at lowest possible cost, made in styles and sizes for water needs up to ten thousand gallons per hour. Myers Self-Oiling Power Pumps and Water Systems simplify water problems in all fields of human endeavor.

If interested in power water facilities for any purpose—home, farm summer cottage, hotel, park, golf course, mill, mine, or factory—write our Engineering Department for catalog and complete information.

The F. E. Myers
& Bro. Co.

ASHLAND,
OHIO

Pumps—
Water
Systems
—Hays
Tools
—Door
Hangers





The Electric Furnace-Man

(Patented Automatic Coal Burner)

**Safeguards the home with
UNIFORM—CLEAN—DEPENDABLE HEAT**

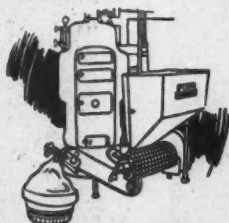
THE ELECTRIC FURNACE-MAN insures protection, barring out fire-hazard, minimizing winter colds and other ailments, and further aiding health by providing **UNIFORM HEAT**—without smoke, smudge, dust or irritating odors.

This **MODERN** scientific achievement is a mechanical device which uses the economical Buckwheat or Rice sizes of **ANTHRACITE**. Brought to a high state of perfection—time-tested and proved in thousands of installations—this device is revolutionizing home-heating practice. It is giving home owners a new conception of **AUTOMATIC HEATING EFFICIENCY**—with absolute **SAFETY**.

The **ELECTRIC FURNACE-MAN** is available for the modest home as well as the mansion. For every heating system—warm air, steam, vapor or hot water. **EXCELLENT FOR HOT WATER SUPPLY.**

Labor-saving—no grates to shake—no drafts to regulate. Here is **AUTOMATIC HEAT** without hazard. Easily installed in a few hours and at a very reasonable cost.

Arrange now for your installation and insure next winter's comfort.



Patented product of DOMESTIC STOKER CO.

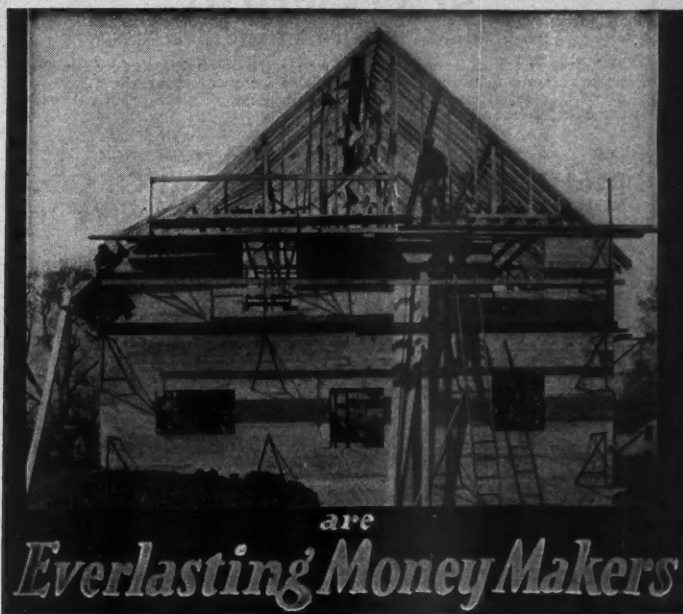
Domestic Stoker Co., 7 Dey Street, New York

I would like to hear more about this interesting system and have you arrange to show me one or more local installations.

Name.....

Address.....

Trouble Savers



Strong!

In a Lifetime of Use, Trouble Savers

- Do not bend
- Do not break
- Do not burn
- Do not collapse
- Are not blown down by heavy winds.

A Permanent Investment that Returns Original Cost on Every Job.

Trouble Savers are put up and taken down in one-tenth the time of wood scaffolding, and require no repair or replacement outlay. They help you to meet and beat competition.

Mail coupon today for 30-day trial offer



Trouble Saver Adjustable Steel Trestles (patented).

Quickly adjusted to desired height, 8 sizes. Each size adjustable from 4 to 15 different heights, giving a range from 16 inch to 12 feet by 3 inch lifts.



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.

The Steel Scaffolding Company

1101 N. Governor St., Evansville, Ind.

(Check items on which you wish particulars, fill out coupon and mail today.)

Trouble Saver Steel Products

Studding Brackets
Nail Attached Brackets
Bolt Brackets with
Safety Railing

Adjustable Trestles
Ladder Jacks
Wood Shingles

Mortar Board
Stands
Sectional Steel
Scaffolding

Name.....

Address.....

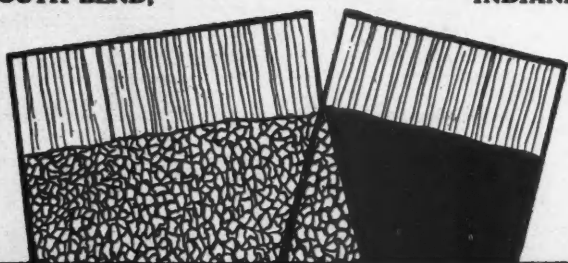
Combining
WOOD, ASPHALT and STONE
makes
SLATEWOOD

A Shingle Without Equal for BEAUTY, STRENGTH and PERMANENCY

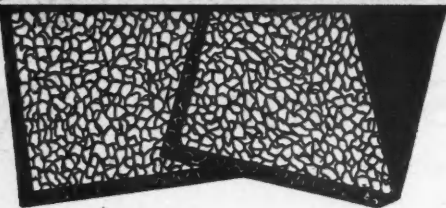
18" clear cedar shingles, twice coated with asphalt, surfaced with natural slate granules from the hills of Vermont make them waterproof, fire-resisting and beautiful. Slatewood is the practical roof for every home.

Send us your Name and Address. We will Mail Free Sample, Literature and Prices to you.

McHENRY MILLHOUSE MFG. CO.
SOUTH BEND, INDIANA



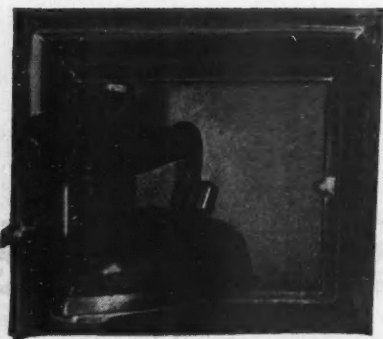
SLATEWOOD



• **Where Does a Housewife
Leave a Hot Iron?**

... On the stove, floor, window sill, shelf or where? She wants a place where the heat will not start a fire and where the hot iron will not be reached by children's fingers.

That's why the Cunningham Electric Iron Receptacle helps sell homes and rent apartments; it provides a safe definite place for the iron hot or cold, ironing or not.

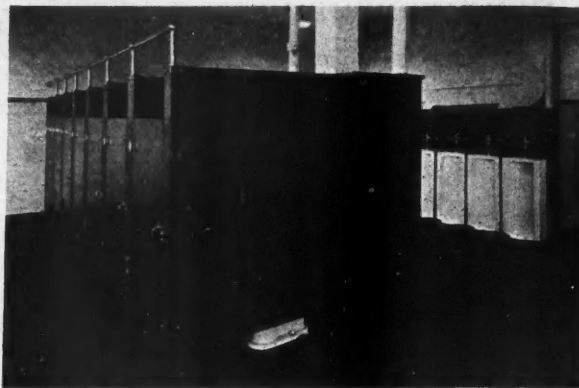


It's made of steel, lined with Asbestos. Furnished in Bright Nickel finish or in Green and White, Blue and White or Plain White. It is easily installed in a wall opening 10½" by 9½"—and the cost to the builder is negligible.

If Your Dealer Cannot Supply You—Write Direct

CALIFORNIA FIXTURES CORP.

First National Bank Bldg., Rockville Centre,
L. I., N. Y.



"Pyramid" Ribbon Slate enclosures in one of the toilet rooms of the Maiden Junior High School, Malden, Mass., M. A. Dwyer, Architect, Boston, Mass.; W. J. Delaney, Contractor, Lawrence, Mass.

DEPENDABILITY AND PERMANENCE, the true measure of quality, is offered you in this great natural product, Slate. With but one aim, to furnish only the best in building material, and to co-operate with the architect in every respect, this company, producing every type of slate product from floor to roof, offers you a service and a product that is the standard of comparison. Pyramid natural slate will not absorb moisture. Years of constant abuse will take no toll from this product of nature. Retaining at all times its fresh, clean appearance, it is the one and only practical material for washroom and toilet installations. It will "outlast the building."



A complete set of chapters bound in three handy volumes in standard A. I. A. filing size are yours for the asking. Address your request for your copies now, without obligation on your part whatsoever.



THE STRUCTURAL SLATE COMPANY

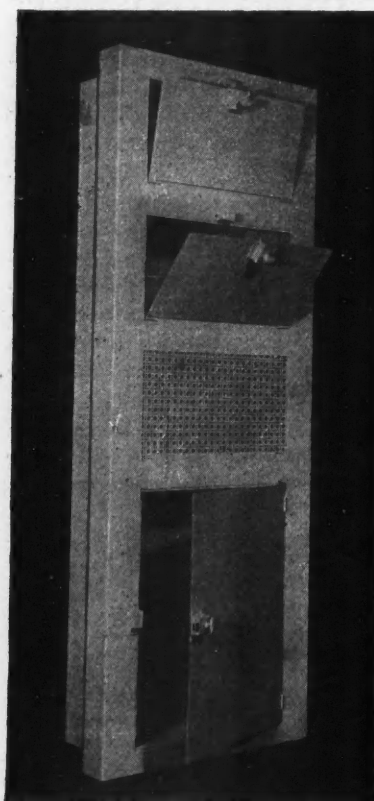
930 Robinson Avenue

Pen Argyl, Pennsylvania

BOSTON WASHINGTON BUFFALO PITTSBURGH
NEW YORK ATLANTA PHILADELPHIA
NEW ORLEANS TORONTO



CLEVELAND ST. LOUIS KANSAS CITY CHICAGO
CINCINNATI WACO MINNEAPOLIS
LOS ANGELES TAMPA



PATENTS PENDING

**NATIONAL
BUILT-IN
ALL STEEL
LAUNDRY
CABINET**

Convenient receptacle for soiled laundry. Built-in the wall—takes up none of the valuable floor space.

Costs very little—due to tile savings, etc. Firmly made of heavy furniture steel.

Now obtained in all sizes with or without special compartment at top for clean linen or other articles.

Distributors
Wanted

No. 1300



No. 1200



WRITE for SPECIAL INTRODUCTORY OFFER, SPECIFICATIONS, and FACTS.

National Tinware Mfg. Co. Inc.
Steel Products Division
54-56 Delmonico Place, Brooklyn, N.Y.

now— a DURO full automatic water softener for *every home*



**VITREOUS PORCELAIN
FINISH—INSIDE AND
OUTSIDE**

Now, for a small sum you can install the Duro Semi-Automatic Convertible Water Softener in the basement of your homes. Later on, at little additional cost, the home owner can have the proper unit quickly attached, which will make his softener fully automatic in operation.

The new Duro Convertible Water Softeners are finished inside and outside in Vitreous Porcelain fused on Armco Ingot Iron, and are non-corroding and non-rusting.

Only in Duro Softeners can you find the great combination of Convertibility—Vitreous Porcelain Finish and Simplification of Control.

*Write for Catalog on Duro
Convertible Water Softeners*

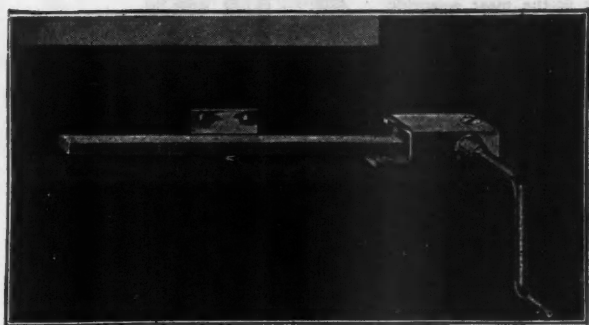
THE DURO COMPANY
109 Monument Ave. Dayton, Ohio

DURO

Convertible Water Softeners

WIDE Usefulness

in this
**NARROW
CASEMENT
OPERATOR**



Rixson No. 94

Because it mounts on stools only $1\frac{1}{2}$ inches wide, this unusually capable mechanism is almost universal in application. Nestling unobtrusively in the window frame it operates casements through a full 90° in $3\frac{1}{2}$ turns. When at rest the window is locked—automatically—secure against rattling. No disturbance of fly screens. Stock it as standard because it is efficient, compact and mounts on both wide and narrow stools.

Write for full details or
see catalog pages
in Sweet's



THE OSCAR C. RIXSON COMPANY
4450 Carroll Avenue Chicago, Ill.
New York Office: 101 Park Ave., N. Y. C.
Philadelphia Atlanta New Orleans Los Angeles Winnipeg

RIXSON

Builders' Hardware

Overhead Door Checks
Floor Checks, Single Acting
Floor Checks, Double Acting
Olive Knuckle Hinges
Friction Hinges

Casement Operators & Hinges
Concealed Transom operators
Adjustable Ball Hinges
Butts, Pivots and Bolts
Door Stays and Holders

**You Can Stake Your Reputation on
Rixson Specialties**

The NEW
"Universal" Level-Transit
Superseding the Convertible Level

**TEN Days
 FREE
 Trial**

The new "Universal" is the highest development in combination Levels and Transits. It is superior to and displaces the convertible level FOR ANY USE OR NEED.

No previous experience required for perfect success in operation—this is the ideal instrument for any builder or contractor. Instantly changeable to level or transit, it is the most scientific development of its kind available. Only a slight touch of the finger changes it to either need. An indispensable instrument for the up-to-date builder.

This combination level-transit is exceptionally accurate, strongly built, with 3-point support, assuring perfect optical and mechanical alignment; 45-degree tilt above or below. Trade in your old instrument for a New Universal. We manufacture surveying and drawing instruments for every need.

Sold by first-class supply houses throughout the country, or directly by the manufacturer. Write for information and free trial offer.

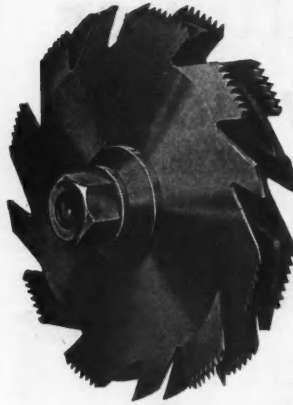
DAVID WHITE COMPANY
 317-319 Court St., Milwaukee, Wis.
 Branch Office, 2101 West Van Buren St., Chicago, Ill.



Level position

Transit position

You need a
HUTHER
Dado head



Developed from our own patents, this adjustable groover cuts either with or across the grain. Cutters may be used singly, in pairs or in any combination necessary for desired cut.

Send for one on approval. It may be returned at our expense if unsatisfactory.

Huther Bros. Saw Mfg. Co.
 Rochester, N. Y.

Makers of Better Saws for More than Fifty Years

**MASTER
 WOODWORKER**

**Bid Good-Bye To
 Slow Hand Methods**

Speed up your work; make more profit. Beat competitors' prices. Build, quicker, easier and cut down labor cost. The Master will do every cut necessary in building a house. Mail coupon today for catalog and particulars.

Electric or
 Gasoline Drive
 6
 Models

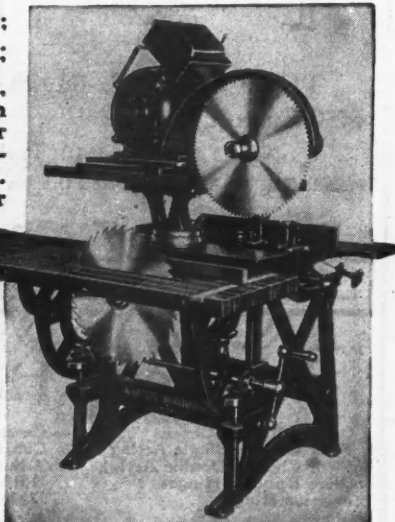
"12
 Machines
 in One"

"Master
 Woodworker"
 Congress and
 Brush Sts.
 Detroit, Mich. (G)

Please send FREE
 CATALOGUE and prices

Name.....

Address.....



Overhead Crosscut;
 Underslung Rip

1906 **MULLER** 1929
ASBESTONE
 GUARANTEED PRODUCTS
 TRADE MARK

**ASBESTONE
 PLASTIC MAGNESIA
 FLOORING**

Durable, beautiful, comfortable, economical, is decidedly appropriate for hospitals, schools, churches, office buildings, hotels, apartments and residences. ASBESTONE affords a jointless, smooth, sanitary surface that is easy to the tread, non-slippery, and noiseless, giving maximum comfort. First cost is moderate, the upkeep practically nil. It will withstand years of severe wear. ASBESTONE flooring preserves its fresh new appearance for years; it is fire-proof and waterproof; easy to clean and may be waxed and polished. Easily applied over any old or new sub-floors, at any angle, over and around any irregularities.

Descriptive literature upon request
Franklyn R. Muller, Inc.
 Manufacturers of Asbestone Floor-
 ing and Sana-bestos Tiles
 209 Madison Street Waukegan, Illinois

Made in SEVERAL COLORS

easily
laid
on
any
surface



Used in
Private Homes
Public Buildings
Offices, Stores
Churches, Schools
Banks, Factories
Laundries, Porches
Billiard Rooms

will
not
crack
chip
or
break

Asbestolith is made in several pleasing colors and is therefore admirably suited for the remodeling of bathrooms and kitchens in old homes, as well as new buildings.

ASBESTOLITH

is applied in plastic form for a very low cost on any surface. It hermetically seals the old flooring against dust and moisture. It is sanitary, fireproof, never becomes slippery—will not crack, chip or break under hard usage.

Thirty years of successful use in churches, auditoriums and public buildings prove the economy and durability of Asbestolith Floor Covering.

Asbestolith Manufacturing Company
1 MADISON AVENUE NEW YORK
R. C. BURNSIDE, Pres.

A GREATER AMERICAN BUILDER FOR YOU!

Surpassing, even, the accumulated achievements of twenty-five years, the American Builder inaugurates with this issue, a program of Editorial research calculated to give to you more than ever before in practical, usable, and money-saving information on every subject included in the building and allied fields.

America's leading Architects will offer to American Builder readers their latest and best home designs. These will appear in black and white and in pen and ink sketches in color on art paper. The designs will range from large to small and will cover Small Homes, Apartments, Business and Public Buildings.

The size of the magazine has been increased to 9x12 inches, thus permitting the use of larger illustrations and a wider margin to more effectively frame both text and pictures. This change will add materially to the appearance of the magazine, already well-known for excellence of typography and general design.

Clip and Mail This Coupon—NOW!

THE AMERICAN BUILDER		AB 8-29
105 W. Adams St., Chicago, Ill. 1929		
Enclosed find \$2.00 for which ENTER my subscription to The American Builder for one year.		
NAME		
ADDRESS		
POST OFFICE, STATE		
My occupation is (Check Only One)		
<input type="checkbox"/> Dealer	<input type="checkbox"/> Builder	<input type="checkbox"/> Architect <input type="checkbox"/> Real Estate <input type="checkbox"/> Miscellaneous



Dependable Air Power

THE savings effected through the use of air operated tools depend in a large measure upon the performance of the compressor unit.

Builders and contractors are well aware of this fact and after a careful comparison generally specify O. K. PORTABLE COMPRESSORS to take care of their requirements.

They quickly discover that an O. K. COMPRESSOR insures a dependable supply of air power . . . that the unit can be operated and adjusted by ordinary workmen and that the simplicity in design makes the machine more valuable to them because it eliminates the expense of high priced service.

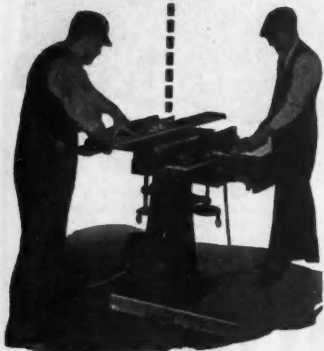
O. K. Compressors have several outstanding features which make them the logical choice for the building industry. Write for our latest catalog which also includes a complete line of pneumatic tools.

O. K. Clutch & Machinery Co.
Columbia, Pa.

MAIL THIS COUPON FOR CATALOG

O. K. CLUTCH & MACHINERY CO. Columbia, Pa.		
Please send your latest catalogs of equipment as checked.		
<input type="checkbox"/> PORTABLE ELEVATORS	<input type="checkbox"/> HOISTS	<input type="checkbox"/> PORTABLE AIR COMPRESSORS
Name		
Address		
City State		

Add the Mill-Man's Profit to Your Profit on Every Job



"Buy One
Machine
Instead of
Eight"

Every time you buy mill work you're paying someone else a profit that you could make for yourself.

Hundreds of contractors have realized this and have equipped themselves with a **SIMPLICITY** woodworker, one machine that performs practically every woodworking operation the contractor has use for—28 in all.

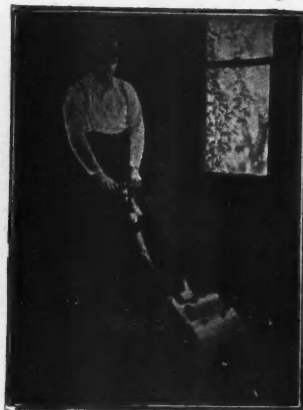
The **SIMPLICITY** combines eight machines in one: Saw Table, Jointer, Practical Thickness Planer, Speed Spindle, Borer and Mortiser, Band Saw Attachment, Upright Spindle Shaper Attachment, Lathe Attachment. Does real work—not a toy. Each operation done in the usual and ordinary way.

Keep your shop busy in rainy weather and in the winter.

Our customers get expert advice free on what to make, how to make it and how to sell it, for a year-round business.

Combination Woodworking Machine Co.
551 W. Randolph St. Chicago, Ill.

ALUMINUM GENERAL PURPOSE (90 lb.) FLOOR SANDER



**Latest Model—
Just Out!**

**Built for
GREAT SPEED and
HIGHEST QUALITY
of work**

No vibrations—no dust—no chains—no belts. Roller sands even with wall on either side of machine. 9" long roller 1-3/4 HP AC & DC motor.

Write for price

WAYVELL CHAPPELL & CO.
36 Jackson St., Dept. Z., Waukegan, Ill.

BOYLE'S BAYONNE

ready to lay
Roof and Deck Cloth



The ideal covering for Porch Floors, Decks or Piazzas, Sun Parlors, etc.

**Waterproof
Weatherproof
Durable
Flexible**

**Lays flat
Stays flat**

Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

Write today for our Sample Booklet "P."



JOHN BOYLE & CO. Inc.

Established 1860

112-114 Duane St.,
1317-1319 Pine St.,

New York
St. Louis, Mo.

Double Your Income! We Tell You How



**INVEST \$23.00
CLEAR \$1,334.00**

Yes, Mr. Ledoux did just that. Big profits? Certainly! No experience necessary. Put your spare time to work on this side line. Soon you will devote full time to it.

MOLDS, \$14.80 UP

The Utility line includes complete molds for making vases, flower boxes, bird baths, sun dials, ornamental porches, chimneys, etc., etc. Write for catalog giving full information and prices.

**CONCRETE EQUIPMENT
COMPANY**

525 Ottawa Ave.,
Holland, Mich.

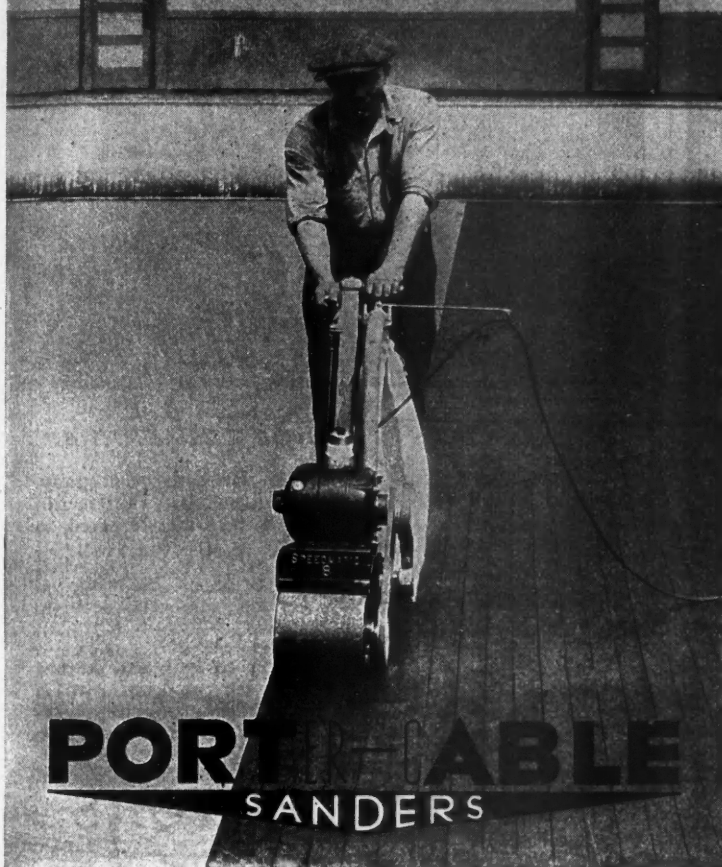
Machinery Catalog

describing power and hand machines for making block, brick and tile, and other equipment for complete products plant. Send for catalog. It's free.



Send for Catalogs

18 years' experience demands Speedmatic "8"



PORTABLE SANDERS

Ira Vogel of the Standard Oak Floor Co., Allentown, Pa., has had 18 years experience with floor machines and writes that the SPEEDMATIC "8" is unbeatable for surfacing floors. He ought to know.

Many contractors and builders feel the same way that Ira Vogel does. They find that the SPEEDMATIC "8" soon builds up a profitable floor surfacing trade.

This light, sturdy machine gives a smooth, even finish with the rapid cutting of the high speed balanced drum.

One man easily carries it from floor to floor—moves it from job to job in pleasure car—no trucks. It's easy to operate, too.

Bid on any size floor surfacing job and be sure of a good profit. If you need still higher production, ask us about the SPEEDMATIC "12." For data on TAKE-ABOUT Portable Electric Sander, see our advertisement on page 189.



The Porter-Cable Machine Co.

1721 No. Salina St.
Syracuse, N. Y.



3860

Paul
Water Softeners
Modernize the Home!

MODERN features in the home simplify your selling problem. A Paul Water Softener (hand operated or automatic), will make any home, old or new, more desirable. A Paul Electric Water Heater adds the final touch of comfort. Paul Water Systems provide running water for homes beyond the water mains. If you are a contractor or dealer, write for our sales proposition.

THE FORT WAYNE ENGINEERING & MANUFACTURING CO.

1713 North Harrison St. Fort Wayne, Indiana

KOEHRING
DANDIE
with Batchmeter

A Two Bagger With Batchmeter
Generous room for 10 cu. ft.! Batchmeter times mixing period, automatic tank measures water — easy to meet strict specifications on quality of concrete. Fast, clean charging — fast discharging.

Dandie Mixers—5-S, 7-S, 10-S
5-S single or four cylinder, 7-S two or four cylinder, 10-S four cylinder gasoline engine. Charging skip or low charging hopper and platform. Rubber tired or steel rimmed wheels. Comply with A. G. C. standards.

Get the Dandie Catalog!

KOEHRING COMPANY, MILWAUKEE, WISCONSIN
PAVERS, MIXERS—GASOLINE SHOVELS, PULL SHOVELS, CRANES AND DRAGLINES

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

Strong Enough to hold a horse "EVER-LASTING" Nail Brackets are



Safe as the ground under your feet.

Easy to put up or take down.

Ten times faster than scaffolding.

Sturdy enough to last a lifetime.

Guaranteed to give satisfaction.

Descriptive folder on request

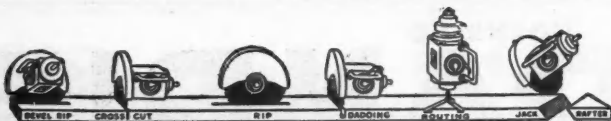
For Sale at all Leading Lumber and Builders' Supply Dealers

DEALERS!!

Our offer will interest you. Write for details.

Manufactured by

HUBENY BROS., Inc.
600 First Ave., Roselle, N. J.



Cross Cuts
Rips
Bevels
Miter
Gains
Ploughs
Dados
Rabbets
Grooves
Routs
Tenons
Shapes
Panels
Bored
Sands
Flutes
Unequaled Capacity
Cross Cuts 20" wide.
Clears 4" material with 14" blade.

The Greyhound Electric Slide Saw

Makes additional profits for builders and contractors by saving time and costs on all woodworking operations.

Heavy Duty Portable

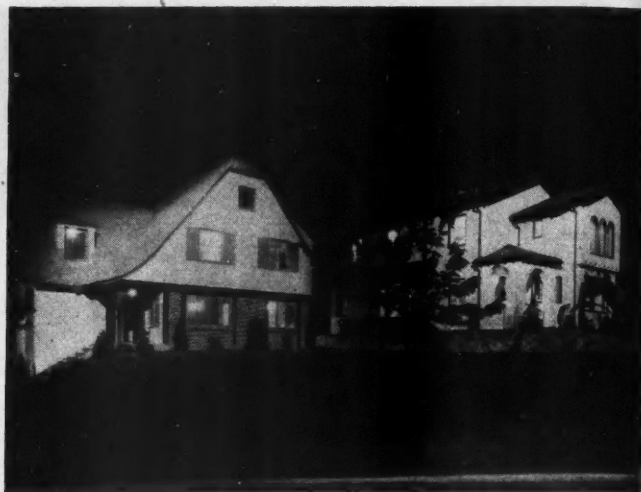
1, 2, 3 or 5 H. P.

Lowest Price! Size for size, Greyhound prices are far below those of any similar device on market.

AGENTS: Some desirable territory open—Write today for liberal proposition.

Write today for new illustrated folder

THE WOODWORKING MACHINERY CO., INC.
250 N. Eleventh St., Philadelphia, Pa.



Colored Light Helps Sell Homes

Colored light helps the Long Building Company, Seattle, to sell new homes in their Varsity Villas development. Above shows two homes floodlighted in amber.

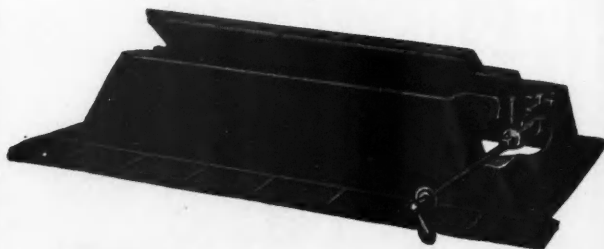
Framed in the darkness of the night, floodlighted homes stand out more prominently and attractively than in the daytime.

If interested in using floodlighting to help sell homes or to help familiarize the public with the location of a new apartment house or other buildings, write Pittsburgh Reflector Company, 304 Ross Street, Pittsburgh, Pa.

PERMAFLECTORS

The Silvered Reflectors With the Permanent Reflecting Surface

A FIREPLACE NECESSITY



The Peerless Fireplace Damper

Of all the equipment required for the fireplace the damper is by far the most necessary. It forms the proper size and shaped throat which is the basis for the successful operation of all properly burning fireplaces. Its cost of a few dollars is insignificant compared to the satisfaction of having a fireplace which will always be free from trouble. The Peerless Fireplace Damper is simple in construction, easily installed and operated and will last indefinitely.

Write for descriptive blue print.

PEERLESS MANUFACTURING CO.

14th & Ormsby
Louisville, Kentucky

SAWING BRICKS FOR ROOF FLASHING

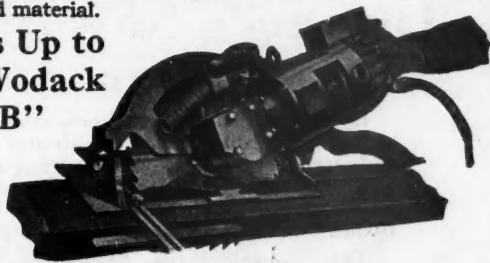


A Wodack Saw equipped with $8\frac{1}{8}$ inch carborundum wheel cutting "Raggles" for "Flashing" on the 23rd story of the Civic Opera House, Chicago. You can't afford to be without this great labor-saver. Cuts wood, stone or any hard material.

Bevel Cuts Up to 60° with Wodack Model "B"

The most complete hand saw on the market! Cuts up to $4\frac{1}{8}$ inches deep with 11-in. blade. A

great saw for rafters; easy to handle but very powerful. G. E. Universal Motor.



Face Plate and Barrel of Door Lock Cut in ONE Operation with Wodack Combination Mortiser and Router

50 Cents saved on every door! And 60 Doors cut in one hour.

Router sold separately if desired $\frac{1}{2}$ h. p. G. E. Universal Motor.

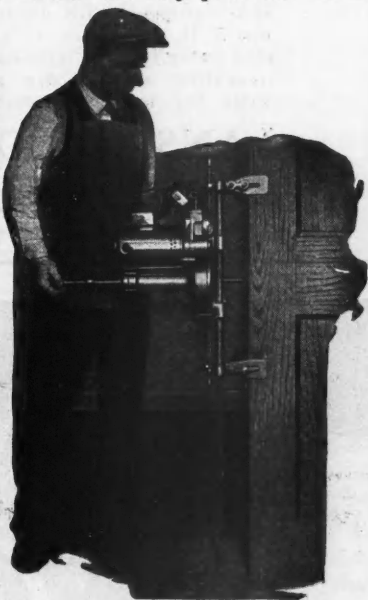
Mail Coupon Today

F. L. ROGERS & CO.
23 S. Jefferson St., Chicago, Ill.
(also New York)

Please send me full information on Wodack Saws

- ☐ Model "K", weighs 15 lbs. cuts up to $2\frac{3}{4}$ "
- ☐ Model "C", weighs 24 lbs. cuts up to $4\frac{1}{8}$ "
- ☐ Model "B", makes bevel cuts up to 60° on heavy lumber
- ☐ Model "D", cuts up to $4\frac{1}{2}$ "
- ☐ Combination Lock Mortiser and Router
- ☐ Wodack Electric Drills

Name
Address



When You Get a
Water System
You've Got Something

Water Systems are selling features in any home



ADD to the other selling features of your homes the reputation and prestige of Water Systems.

Because of finer engineering, higher grade materials and longer life, they are known everywhere as quality products. It's easy to see why.

Examine any model in the Water line. Note the V-belt drive, long pulley centers, accessibility and size of the few moving parts, and other Water features. No other water system combines an array of advantages such as found only in a Water. Yet the Water-boy costs only \$75 f.o.b. Dayton, Ohio. And every Water is proportionately low in price.

Install Water Systems in your houses. Offer the best that money can buy in water system equipment... and still pay no more for it! Find out more about Water shallow and deep well models. Let us send you the entire Water story, the Water prices and the General Motors liberal terms. Never mind writing. Use the coupon. Mail it now... today.

DELCO-LIGHT COMPANY

Subsidiary of General Motors Corporation
Dept. R-124 Dayton, Ohio.

Also Manufacturers of Delco-Light Electric Plants

Water SYSTEMS

PRODUCTS OF
GENERAL MOTORS

"The GOLD STANDARD of Quality"

DELCO-LIGHT COMPANY,
Dept. R-124 Dayton, Ohio.

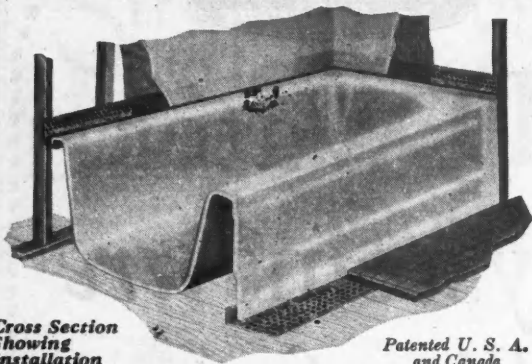
Send complete information covering the entire line of Water Systems for shallow and deep wells.

Name

Address

LUCKE LEAK PROOF TUB HANGERS

Will Overcome Your *Biggest Bath Tub Problem*
NO LEAKS **NO CRACKS**



Cross Section
Showing
Installation

Patented U. S. A.
and Canada

Guaranteed to

1. Prevent Tub from Settling.
2. Prevent Tub from Leaking Around Edges.
3. Prevent Ruined Ceilings and Walls below Bathroom.
4. Eliminates Redecorating Bills.
5. Eliminates Retiling and Replastering Around Tub.

EASY TO INSTALL

ECONOMICAL

Sold through Plumbing Supply Houses

WILLIAM B. LUCKE, Manufacturer,
P. O. Box 130—Dept. "A"

Wilmette, Illinois

RIGIDECK FOR ROOFS

INSULATED TO ANY
DEGREE AND
WATERPROOFED



Laid like boards and interlocking,
Rigideck Roof Decks are quickly and
easily installed on any building. Light in
weight, fireproof, permanent and economical.

NAILER JOISTS

for any Light Occupancy Building



Wood flooring is
nailed directly on the
wood strips attached to the
joists. Metal lath ceiling below provides fire protection.
Genfire Nailer Joists assure permanent construction at the
cost of wood.

GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO

Warehouses and Offices in all Principal Cities.

Dealers Everywhere



Lansing's New 3 1/2-T Mixer

Hyatt Roller Bearing wheels make this
mixer run smoothly. Cushioned with
wide-tread rubber tires and spring shock
absorbers. It can be trailed at fast speed.
Large mixing drum, with four steel
blades—makes quick, thorough mixing.

This popular new Lansing 3 1/2-T
mixer is sturdier than the average trailer.
It is equipped with Alemite fittings, Lau-
son 2 H. P. engine with Wico high ten-
sion magneto. First cost is moderate,
operating savings are real. **TODAY—**
write for more interesting information.

LANSING-COMPANY

Lansing, Michigan

Chicago New York Minneapolis Boston
Philadelphia San Francisco Kansas City

LOOK FOR THE NAME STAMPED
ON EVERY FOOT OF CORD



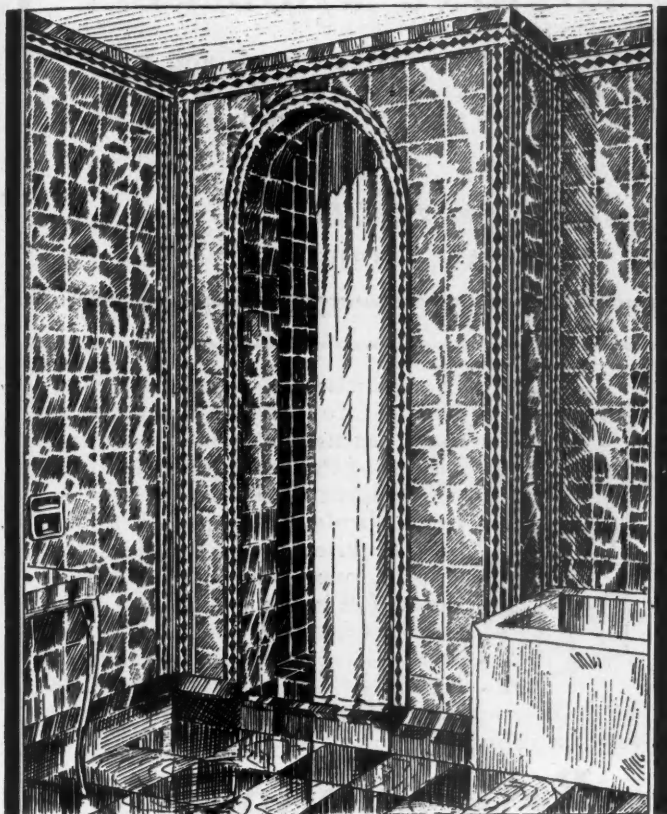
SILVER LAKE CO.
NEWTONVILLE, MASS.



Solid Braided 100% Cotton



**Permanent hard Surface
Tiling . . . Put on in sheet form**



**Beautiful Lustrous
CHROMITE
offers a big saving—
RICH TWO TONE COLOR EFFECTS**

Modern tiled walls need not be so costly. CHROMITE offers a wealth of permanent colors and many designs including borders and combinations. CHROMITE will not crack. —is easily, quickly and permanently applied. Water will clean CHROMITE.

The beauty, color possibilities and the simplified labor of installation (it is cemented to the wall in sheets) and the definite saving contribute to make CHROMITE the new feature in modern homes.

It may be used in many parts of the house in re-modeling or new construction. When you see CHROMITE you are certain to appreciate its advantages.

**Mail Coupon for Illustrated
CHROMITE Booklet**

Estimates furnished
on request.

CHROMITE COMPANY, Dept. H, 228 No. La Salle St.,
Chicago, Ill.

Name.....

Address.....

City.....

State.....

Distributors wanted
in a limited number
of territories.



**Du Pont announces
the NEW and improved**

DU PONT

TONTINE

THE WASHABLE WINDOW SHADE

*which brings you the following
important new features:*

Increased Weight—

Which gives shades made of the New and Improved TONTINE more "body" without lessening their flexibility.

Smoother Surface—

To which dust and dirt do not cling so readily. Hence shades retain their initial appearance longer, and do not require washing so frequently.

Added Washability—

Because of its smoother surface, the new TONTINE is even more easily washed. An occasional scrubbing with soap, hot water and a brush restores its original appearance.

Greater Beauty—

The smooth, glossy surface of the new and improved TONTINE enhances its beauty enormously.

*We will gladly send samples and additional information
about the New and Improved TONTINE.*

Sign and return the coupon below.

E. I. DU PONT DE NEMOURS & Co., INC.
Desk AB-4, Newburgh, N. Y.

Please send samples and additional information about the New and Improved du Pont TONTINE.

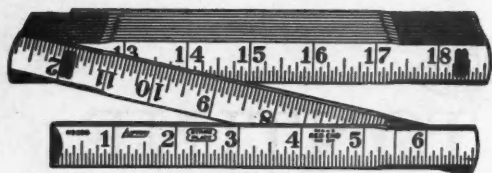
Name.....

Address.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

LUFKIN "RED END" RULES

YOU CAN'T BUY A BETTER FOLDING WOOD RULE



Hard Enamel Finish, Brass Strike Plates, and Rust-Proof Spring Joints make these rules most serviceable. Bright Red Ends give them a very smart appearance.

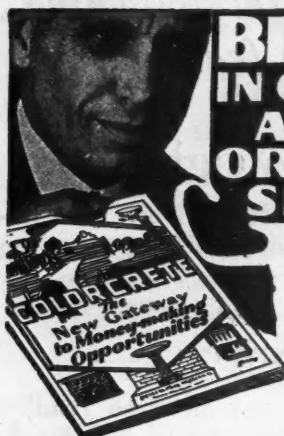
Send for Catalog of
TAPES—RULES

THE LUFKIN RULE CO.

Windsor, Ont.

SAGINAW, MICHIGAN

New York



BIG MONEY IN COLORED HOME AND GARDEN ORNAMENTAL SPECIALTIES



Costs \$3.16
Sells for \$21.00

Costs \$2.52
Sells for \$17.00

Costs \$1.29
Sells for \$6.00

**24 pages of
ways to make
money in
manufacturing
Spare Time-
Full Time**



Costs \$1.03
Sells for \$6.00

**POTTERY
FURNITURE
Flower Boxes
Trim Stone
Flag Stone
Fireplaces**



Costs \$0.96
Sells for \$5.25

People spend money willingly beautifying their homes. Decorative pieces in any color for porch, garden and lawn sell themselves. H. G. Young, New Jersey, invested \$97.00, made \$2,700.00 in spare time. A Michigan man sold \$2,000.00 worth to one concern. You can do the same. No experience needed. Make them spare time, or go into full time manufacturing. Nearly all profit. Big demand in your locality. Modest investment starts you. Expand from profit. The Colorcrete catalog tells how and shows equipment. Send for it now.

COLORCRETE INDUSTRIES
500 Ottawa Ave., Holland, Michigan

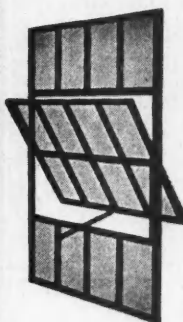
Are You Open?

For

NEW Profits in WEATHER STRIPS.
NEW Two-Member Strips Speed Sales.
NEW Sales Plan Pays Bigger.
NEW Sales Helps for LIVE Dealers.
NEW Way to Get Weatherstrip Jobs Winter and Summer.

WRITE US TODAY!

PYRAMID METALS COMPANY, 2013 Wabansia Ave., Chicago



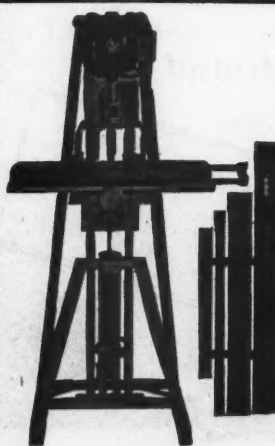
There is a Bayley-Springfield Steel Window for all types of buildings, industrial and residence. All are of the same high standard which have made Bayley-Springfield Windows acceptable to the best architects and builders the country over. The line comprises Pivoted Windows—Pivoted Windows Screened—Projected Windows—Continuous Windows, Basement Windows and Casement Windows. Full information and catalog sent on request.

Bayley-Springfield Steel Windows and Doors

Bayley-Springfield Tubular Steel Doors have the same outstanding superiorities as are found in Bayley-Springfield Steel Windows. Made for industrial buildings and for openings of any size. Bayley-Springfield Airport Doors are in line with modern airport construction.

Write for information and
catalog.

The William Bayley Company
128 North Street
Springfield, Ohio



Mail This Ad with your
name and address for cir-
cular and special price on
this fine

Bearcat Electric Mortiser
It's a Money Maker

THE PAXSON COMPANY
DOWAGIAC, MICHIGAN

**SAW RIGS—SANDERS—
MORTISERS**

RADIA Electric Heat

in every
home!



2700 Radia Electric Heaters were specified for bathrooms in above development, Flatbush Centre, L. I.

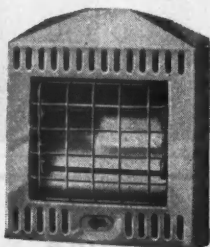
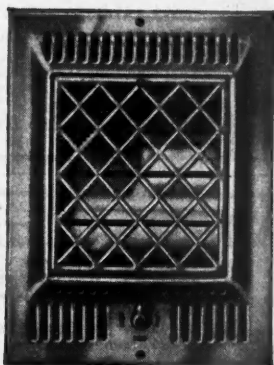
Twenty-seven hundred homes in this Eastern development (all in the \$6000 class) and every one equipped with RADIA Electric Heaters! Builders today realize that RADIA heaters are a distinct departure from old-style types, that they give the tenant a new idea of convenience and comfort, that they are the most economical as well as most efficient! No matter whether you're building a single home or a palatial mansion, an apartment or an entire subdivision—RADIA Electric Heaters will help to sell and keep tenants satisfied!

F. W. SHEPLER STOVE CO.

1312 Sheffield St., N. S. Pittsburgh, Pa.

New Wall-Insert Type (3-heat) can be regulated as desired

WRITE FOR details about the complete and practical RADIA line—unequalled for beauty, utility and economy!



New Portable Hanging Type—a wall heater that can be put anywhere

RADIA

Gas and Electric HEATERS



Bakelite Molded Knobs

do not tarnish like metal

JUST two years' service indoors made the metal door knob shabby as you see it in the picture. A Bakelite Molded knob will not corrode and never requires polishing or refinishing. It stays "new" thru years of service.

In addition, Bakelite Molded Door Knobs are very strong, and their hard, smooth service cannot absorb moisture. They may be wiped clean with a damp cloth. These knobs are reasonable in price and a vast improvement over those made of metal. They are made in an attractive brown and in lustrous and dull black, by the National Brass Co., Grand Rapids, Mich. Hardware dealers can supply them.

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

POWERFUL STURDY RELIABLE

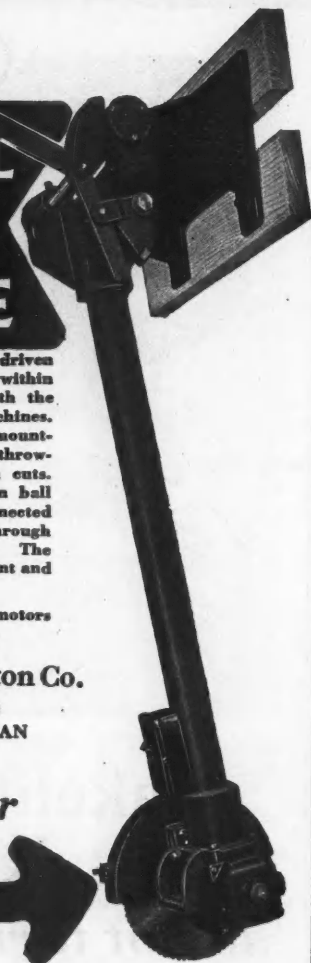
This direct connected, motor driven Swing Saw, though priced to be within the reach of anyone, operates with the efficiency of the costliest machines. Suitable for side-wall or ceiling mounting, the automatic counter-weight throw-back saves time in starting fresh cuts. The swing movement is carried on ball bearings, and the direct connected motor prevents loss of power through bearing friction or belt slippage. The armature flywheel maintains constant and full saw speed under cut.

Furnished with fully guaranteed motors according to the capacity desired.

Gallmeyer and Livingston Co.

206 Straight Avenue
GRAND RAPIDS, MICHIGAN

*Send for
descriptive folder*



Green enamel finish,
\$2.25 each, complete

Galvanized, Green
Enamel,
\$2.50 each, complete

Prices include delivery
in sets of four
or more

Ask your dealer...
or write for free
copy of Folder "B"



"RE-MOVE-ABLE" STEEL CLOTHES POSTS

The yard is an important feature of the houses you are building and selling. Keep it free from unsightly obstructions. You can, by providing "RE-MOVE-ABLE STEEL CLOTHES POSTS, made of high carbon steel tubing, attractively finished. Easily removed from their sockets when not in use. Stand 6½ feet above ground. Strong and durable. Write for free Folder "B".

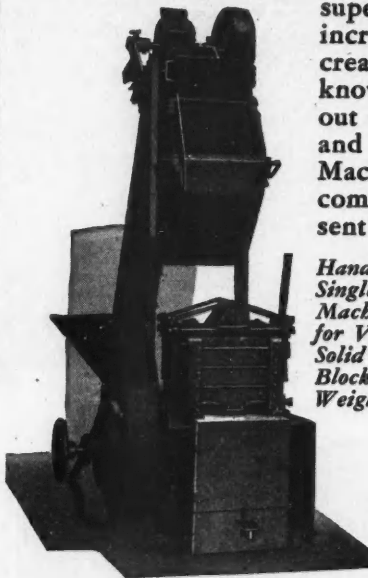
Also manufacturers of "RE-MOVE-ABLE"
steel Tennis Posts, Flag Poles and Swings

NEWARK STEEL POST CO.
WEST ORANGE, NEW JERSEY

You Can Make Money with Multiplex

THERE'S a Multiplex Machine that will find a place in your organization and show you the way to real profits. Large capacity—from 300 to 3000 blocks a day, low cost, low operating cost,

superior blocks all mean increased business and increased profits to you. We know it will pay you to find out more about Multiplex and the profits Multiplex Machines can bring you. A complete catalog will be sent on request.



Hand and Power Double and Single Block Strippers and Tile Machines. Flue Block Machines for Ventilated Flue Blocks and Solid Blocks for Flue Liners. Flue Block Machines for the new Light Weight Flue Blocks.

*"Own a Multiplex and
Increase Your Profits."*

Power Operated Block Stripper.

The Multiplex Concrete Machinery Co.
Elmore, Ohio

Something Finer!

A Hidden Medicine Cabinet
—A Fine Venetian Mirror

Here you have the elegance of a decorative mirror. The medicine cabinet is hidden. No hinges visible. The back of the mirror is of steel finished in hand-rubbed walnut. The cabinet is of electrically welded steel, white or colored enamel. Colored or white etching designs in back of mirror. Also full line popular priced cabinets of artistic designs. Write for builders Bulletins today.

Majestic Steel Cabinet Co.

Household Steel Cabinet Headquarters
4211 Belle Plaine Ave. Chicago

*Best
Tilter
Buy!*

All-Steel and Low Priced!

Here is the handiest, little trailer tilter on the market. You can't beat it on small concrete jobs.

It has an all-steel construction, ample power, large capacity, rubber tired disc wheels.

Let us send you our tilter catalog. Write today.

LEACH COMPANY
10 So. Main St.
Oshkosh, Wis.



LEACH MIXERS

TESTED In This Architect's Studio



EXTREMELY interesting is the studio of the Frank Irving Cooper Corporation, Architects and Engineers. This attractive structure with exterior in Mediterranean style is located on Mr. Cooper's estate at Wayland, Mass., and is a testing ground and adjusting place which bears testimony in many ways of efforts towards the betterment of schoolhouses; the whole atmosphere of the studio being of artistic culture. Here very interesting applications of Ligni-Salvor have been made. Besides preserving the wood and protecting it from the ravages of age and weather, Mr. Cooper says, "It presents an excellent value of decorative effect."

Each day finds more architects and builders indorsing this preserver of wood. For it brings out with handsome emphasis the natural grain in either dark or glossy finish, and the widely popular rustic effects are easily achievable as are the dark tones, brought about by the addition of the desired amount of lamp black to the Ligni-Salvor preparation.

Shingles, doors and woodwork inside and out on buildings treated more than a quarter century ago, are just as solid and pleasing to the eye as the day Ligni-Salvor was applied.

LIGNI-SALVOR

"Best Wood Preserver"

Further details will be gladly given by

PFALTZ & BAUER, Inc., 298 Pearl Street, New York, N. Y.



KUHLS'

Elastic Waterproofing Compositions

Kuhls compositions are unequalled for calking around windows, pointing up terra-cotta and all other stone work, waterproofing the joints between the roof and walls, all kinds of glass construction work and tile setting, etc., in fact, any place where a watertight joint is required. These compositions adhere strongly to wood, metal, glass, concrete, etc. They never dry, crack or crumble, always remaining elastic under any conditions. Any color to match.

Try Kuhls on your next job.
Write today for prices.

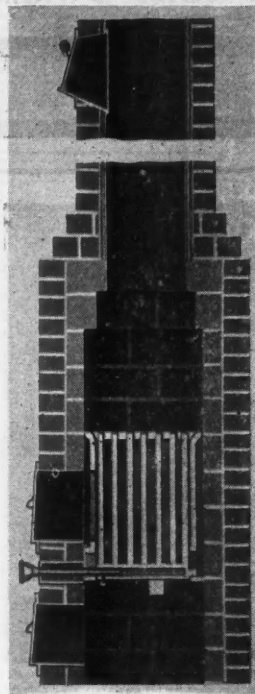
H. B. FRED KUHLS
6415-21 Third Ave., Brooklyn, N. Y.



**Get These
Booklets**

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

NOW an Efficient Chimney fed



Seco Incinerator No. 54

SECO Incinerator

for the Low Price

of **\$65⁰⁰**

(Gas attachment if desired
\$5.00 additional)

This SECO residence unit combines all the good qualities that a modern incinerator should have. Inside dimensions 18 x 18 inches. Capacity 4½ bushels. It employs the SECO suspended 4 wall basket grate (Patent applied for). The SECO basket holds the garbage away from the walls and permits the circulation of air around all four sides. Masonry costs of combustion chamber approximately \$25.00.

There is a SECO to fit every need. Write today for complete details and folder showing other designs.

SECO INCINERATORS

Division

Sanitary Equipment Company

3714 Main Street, Kansas City, Mo.

Consult your telephone directory (Under listing Seco Incinerator) for the name of your local SECO dealer.

CRESCENT Universal Wood Worker

Faster;
Better than ever.

Band Saw
Jointer
Saw Table
Shaper
Borer

Every bearing a ball bearing—
makes great saving in power

Every improvement that makes for bigger production and easier operation is included in this newly designed machine. Its range is simply marvelous—practically anything and everything ordinarily turned out in a completely equipped wood working shop. Ball bearings in every moving part

reduce friction and cut power bills fully one-third; 5-h. p. motor replaces former 7½-h. p. motor. This is the ideal machine for the contractor looking to handle jobs quicker, easier and at greatly reduced costs.



Big new well-illustrated
circular will tell you all
about it. Write today.

WE BUILD:

Band Saws
Saw Tables
Self Feed Rip Saw
Shapers—Jointers
Variety Woodworkers
Planers and Matchers
Planers

Hollow Chisel Mortisers
Borers—Tenoners
Swing Saws
Disk Grinders
Cut-off Table

Universal Cut-off
Saw

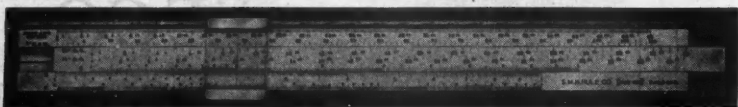
FILL OUT AND MAIL COUPON TODAY
THE CRESCENT MACHINE CO., 224 Main St., Leostonia, Ohio
Send booklet showing the many uses of the Crescent Universal Wood Worker

Name.....

Street.....

Town and
State.....

Business.....

ESTIMATORS—CONTRACTORS—FOREMEN Figure Plans in a Few Minutes. Save Time—Money

The most wonderful device ever invented for estimating. Makes hard calculations easy. Eliminates guess-work and errors. Takes off quantities of lumber from building plans rapidly. Enables Superintendents and Building Foremen to order lumber quickly and accurately. Finds area of given surface immediately. Not the same as a regular sliding rule.

Write today for Free Circular and Prices.

THE KARPOSLYDE CO., Net Inc., 7931 State St., CHICAGO, ILL.

MR. HAPPY MAN
SAYS—

SEND FOR AN
ATKINS NAIL
APRON,
ENCLOSING
25¢ AND ASK
FOR

SAW SENSE
WITH USEFUL SOUVENIR
E.C. ATKINS & CO.
420 S. ILLINOIS ST.
INDIANAPOLIS, IND.

**This MASTER SAMPLE CASE**

and our co-operation will enable you to build a prosperous and permanent business installing MASTER METAL

WEATHERSTRIPS

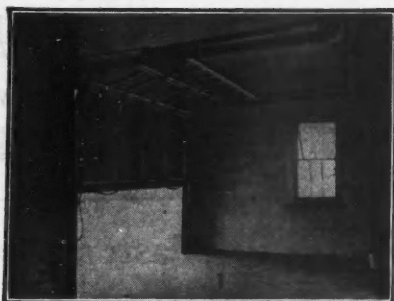
WRITE US TODAY for information regarding our agency proposition and sales helps.

MASTER METAL STRIP SERVICE

INCORPORATED

Mrs. — Metal Weatherstrips — Calking

Cragin Station 1720 N. KILBOURN AVE., CHICAGO, ILL.

**THE "OVERHEAD DOOR"**

Opens Up—Completely Out of the Way.
For Garage—Factory—Warehouse. Send for Catalog.

Overhead Door Corporation

Hartford City, Ind.

Lowest Gas Bills for Heating Water

SAVUTIME ELECTRIC CONTROL with ordinary tank and copper coil heater.

Turns on and off gas from Bath—Kitchen—Basement

Automatic cutoff when water is hot.

It will pay you to investigate

SAVUTIME DEVICES, INC.

88 Manhattan St.

Rochester, N. Y.

New FREE CATALOG!

HOME OWNERS! BUILDERS!
Send for Our BIG New FREE Catalog

Containing hundreds of fixtures for every purpose and every taste. Our selection is the finest and most complete. Be sure you have our catalog before buying. Our prices save you money and our MONEY BACK GUARANTEE gives you 30 DAYS TRIAL.

Also describes fixtures for Churches, Theatres, Auditoriums and Public Buildings

Contractors, Builders, Electricians are invited to write for our proposition

PARAMOUNT ELECTRIC CO.
930 Z ARCH ST., PHILA., PA.

Send for it To-day!

ELECTRIC WIRING DEVICES

Tumbler and Push-Button Switches for houses, offices and apartments. Every latest style and improvement; reliable quality in any price-class. Also Convenience Outlets, Warning Lights, Switch-and-Receptacle Combinations and other new Unified Wiring Devices. Write for Catalogue "T"—to see what your new jobs should have.

**HART & HEGEMAN DIVISION**

THE ARROW-HART & HEGEMAN ELECTRIC CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

MESKER BOWSTRING TRUSSES
GEO. L. MESKER & CO. EVANSVILLE, IND.

STEEL FOR STRENGTH

In Canada, Too they choose the ALTA Electric Handsaw



Because it's the fastest, safest handsaw made. The powerful motor is sturdy and speedy—the patented automatic safety guard protects the operator.

WAPPAT
GEAR WORKS, INC.

Division of Simonds Saw and Steel Co.

7526 Meade Street
Pittsburgh, Pa.

CANADIAN DISTRIBUTORS

H. W. Petrie, Ltd.
Toronto, Ontario
Oliver Machinery Co.
Calgary, Alberta

Simonds Canada Saw Co., Ltd.
St. John, N. B.
Williams & Wilson, Ltd.
Montreal, Quebec.



OVER 10,000

Contractors and Builders have sent into us for a sample pair of the
AUSTRAL SASH SUSTAINERS
Join the Crowd . . .

Costs Less
No More Weights
No More Pulleys
No More Cords to Break
No More Spring Bolts

New England Distributors:
C. E. Holbrook Co., 89 Federal St., Boston

Send for a Sample Pair—Tear along this line.

AUSTRAL WINDOW CO.
101 Park Ave., New York

Gentlemen:

Please send me a sample pair of AUSTRAL SASH SUSTAINERS for which I am enclosing fifty cents (this covers actual production cost, postage and handling).

Name.....

Concern.....

Address.....

ALLMETAL

THE CONTRACTOR'S & BUILDER'S WEATHERSTRIP

ALLMETAL Weatherstrip is made and sold so contractors and builders can make their own weatherstrip installations and save about 50% of the cost of every job.

There are patterns and sizes for each type of opening—Double Hung Windows—Doors—Casements and Transoms. Each pattern is designed for efficient weather protection and ease of installation rather than for makeshift talking points.

Any good mechanic can install ALLMETAL Weatherstrip. Our "Directions for Installing" book gives complete information.

Do your own weatherstrip work and save the middleman's profit.

RETURN COUPON TODAY FOR FULL INFORMATION

ALLMETAL WEATHERSTRIP CO.,
231 WEST ILLINOIS ST., CHICAGO, ILLINOIS

GENTLEMEN: SEND LITERATURE AND SAMPLES

NAME.....

ADDRESS.....

CITY.....

STATE.....

I AM A
BUILDER ☐ CONTRACTOR ☐ CARPENTER ☐

What will it Cost!

An accurate, quick answer to the question is of vital importance to every builder and contractor. Whatever form of construction or job you are planning your estimating will be made easier if you use this authoritative book—use it on your estimating for 10 days at our expense—fill out and send us the coupon today.

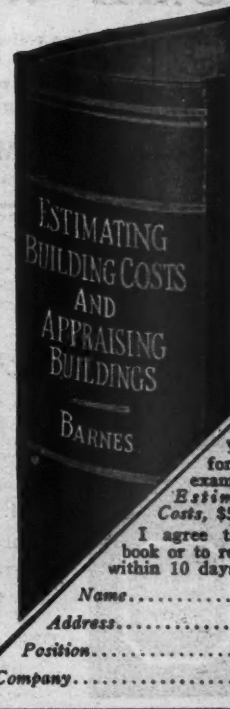
Barnes' ESTIMATING BUILDING COSTS and APPRAISING BUILDINGS

A THOROUGH, up-to-date cost handbook for the building contractor, estimator and appraiser. The book covers all types of building. The data in the book are arranged for quick, easy reference. Wherever possible they are presented in the form of tables.

From excavation and foundation work right through to the wiring and painting of the finished buildings, the book gives exactly the information needed to insure safety in the estimate from every point of view. It tells you how to calculate the cost of materials, of labor, of haulage, of overhead, of equipment, and so on. It gives valuable information on installations and material strengths.

See your copy free—

**MAIL THIS
COUPON!**



By
Frank E. Barnes
Supervising
Bldg. Valuation
Engineer
N. Y. C.
Lines

512 pages
4 1/2 x 7, flexible,
\$5 net
postpaid

McGraw-Hill Book
Company, Inc.
370 Seventh Ave.
New York City

You may send me for 10 days' free examination Barnes' Estimating Building Costs, \$5 net, postpaid.

I agree to remit for the book or to return it, postpaid, within 10 days of receipt.

Name.....

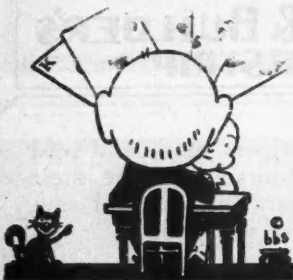
Address.....

Position.....

Company.....

A.B. 9-29

The Evidence at Hand Means Big Profit for You



We only know what our dealers tell us. There are 500 of them. Their evidence is that Diamond Weatherstrip is a pleasant, profitable, permanent income, averaging 33 1/3 to 50% profit with no investment for materials until the contract's made. You, too, can turn your town into a profitable territory for you with this quality line.

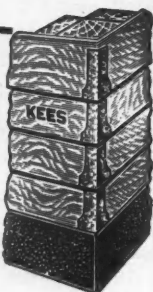
PRACTICAL THE METAL DIAMOND WEATHER STRIPPING

The Diamond Metal Weather Strip Co., Columbus, Ohio

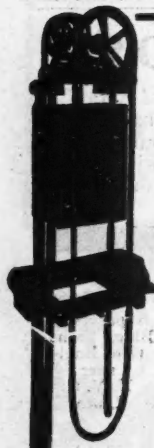
KEES BUILDING CORNERS

Give the effect of a butt-mitred corner, but are tight and weather-proof. Made of galvanized iron, treated for painting without weathering. Sizes for lap siding 3 inches to 12 inches wide; any thickness. They sell because they save carpenter's time and make a better job.

If your hardware or lumber dealer does not have KEES' corners, write for free sample.



F. D. KEES MFG. BOX 33, BEATRICE, NEBRASKA



Matot

Full Diameter Lift Wheel—Hobbed Gear Automatic Brake

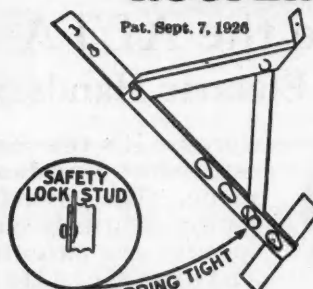
DUMB WAITER

Matot machines are roller-bearing throughout, and guaranteed for five years.

PROMPT SHIPMENTS
Catalog on Request

D. A. MATOT CO., 1546 Montana St., Chicago
Manufacturers of Hand Power Dumb Waiters and Elevators

"EVER READY" FOLDING TYPE ROOFERS' BRACKET



Speed up your work and make it safe with our dependable heavy gauge brackets.

EVER-READY BRACKETS

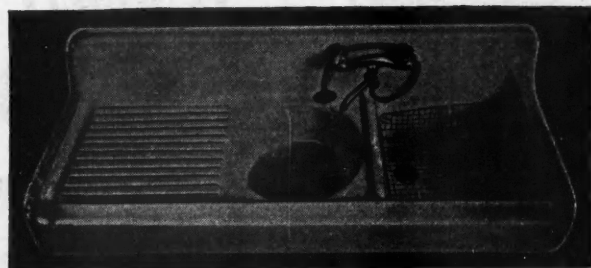
pay for themselves

Send for descriptive circular and prices.

CASHMAN EQUIPMENT CO.

14 Winslow St.

Providence, R. I.



"EBCO" DISHWASHING SINK with dishpan built-in

Featured everywhere Good Homes are built—write for details.

The D. A. Ebinger Sanitary Mfg. Co. 407 W. Town St. Columbus, Ohio
Manufacturers also of Ventilated Closets, Urinals, Wash Sinks, Drinking Fountains and Steel Partitions for Toilet Rooms.

NEW

LIGHT WEIGHT—HIGH SPEED FREE-O-DUST FLOOR SURFACER



Sanding drum 8' wide.
Easily carried by one man, without removing motor.
Dustless and vibrationless.
Plugs into any light socket.

Write for full information without obligation.

Electric Rotary Machine Co.
3824 W. Lake St., Chicago, Ill.



Conveniences Sell Houses

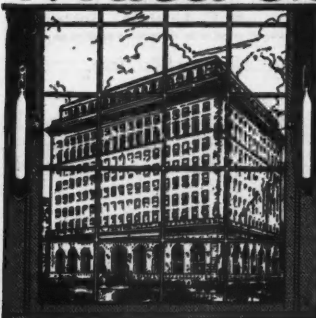
Win-Dor casement hardware makes casement windows as convenient as they are beautiful. ☞ Casements can be opened or closed through the screens. ☞ For wood or steel sash. ☞ Write for Catalogue.

THE CASEMENT HARDWARE CO.

402-AA North Wood Street
Chicago, Illinois

—For permanence
specify the famous

Modell Sash Chain



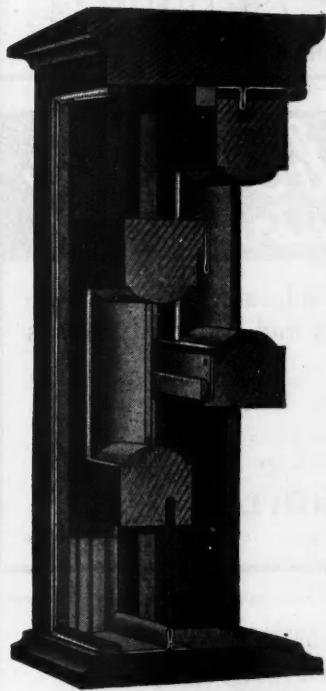
Modell No. 75 Apartment Sash Chain offers the most modest home or apartment building all the advantages of noiseless, permanent, smooth-running sash chain at no greater cost than for cord. Formed from a cold-drawn ribbon of polished steel, NOT STAMPED FROM SHEET; every link is uniform. See Sweet's. Ask for A. I. A. Specification File, Class 27-A1, and No. 75 folder.

We have some open territory on an exclusive basis for reliable and agents handling several builders specialties. Address

THE CHAIN PRODUCTS CO.
Established 1899
CLEVELAND, OHIO

CARPENTERS!

Thousands of Dollars
Waiting for You



ACCURATE

Every Home, Apartment House, School and Office Building is waiting to be equipped with "ACCURATE" Metal Weather Strips.

Every good Carpenter can install them easily and quickly. This is your golden opportunity to reap the benefits to be obtained by installing "ACCURATE" Metal Weather Strips.

We carry a full line of Single, Double and Corrugated Rib Strips, Brass Saddles, Thresholds, Channel Bar, Double Hemmed Spring Bronze, Dust Plates, etc., etc.

Samples and price list
upon request

Accurate Metal Weather Strip Co.
208 East 26th Street New York City

EDWARDS



Spanish TILE METAL ROOFING

Here is the Roof for All Time—Time, fire, storm, wind, rain, lightning—these mean nothing to the imperishable "Edwards" Spanish Tile Metal Roofing.

Here is beauty, too; the touch of color and all the charm of the Old Spanish Terra Cotta.

The initial cost is no more than that of any ordinary roof.

Read all about this Roof in the most elaborate and comprehensive Metal Spanish Tile and Shingle Book on the market—IT'S YOURS FOR THE ASKING.

THE EDWARDS MFG. CO.

401-417 Eggleston Ave., Cincinnati, Ohio

The World's Largest Makers of Metal Ceilings, Metal Shingles, Metal Roofing, Siding, Rolling Doors, etc

Write for
beautifully
illustrated
catalog
It Explains

WRITE
for SPECIAL OFFER
on these
PROVEN SPECIALTIES

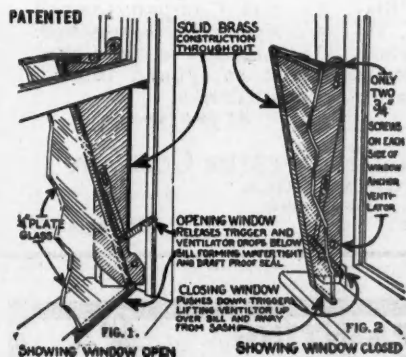
DISTRIBUTORS
WANTED



HOLDS A
FULL
WASH

Butler INDOOR CLOTHES DRYER

Hundreds of thousands in use in many sections of the country. Greatest specialty of its kind. Low priced. Fits on any kitchen or bathroom ceiling. Quickly lowered or raised, always out of the way. Beautifully finished, made of metal. Patented cloths pins.



BUTLER SELF- ADJUSTING VENTILATOR

Opens and closes with the window. Drops down over sill making tight seal against weather and draft. (Read every word of diagram on left.) Chromium or Cadmium Brackets. Also stationary model of same high quality manufacture.

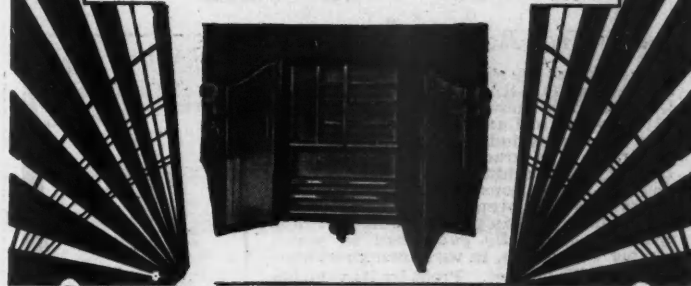
BUTLER LABORATORIES, INC.
4205 Ave. H., Brooklyn, N. Y.

GLORIFY the bathroom with COLORFUL MIAMI STEEL BATHROOM CABINETS

To build an up-to-date home or to make an old structure modern, the bathroom should be brightened colorfully with one of these superb Miami Steel Bathroom Cabinets.

Reasonably priced . . . ready for delivery. For homes, office buildings, institutions, hotels and apartments.

Send for catalog No. 7



The MIAMI CABINET CO.
MIDDLETOWN OHIO

THE MIAMI CABINET CO.
Middletown, Ohio

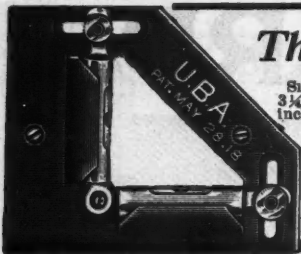
I'd like to know about your new line of cabinets. Please send full particulars.

Name

Address

City

☐ Owner ☐ Contractor ☐ Architect ☐ Dealer



The UBA Adjustable Level and Plumb

Size 3 1/4 x 4 inches
An Adjustable Combination Level And Plumb That Can Be Applied To Any Length Straight Edge Or Board. The Level With An Instant Adjustment And Immediate Results. For Leveling, Plumbing Grades And Pitches Finished Rust Proof With Clear Or Green Double Marked Bulbs. Order From Your Dealer Or Direct From Us Mention Dealers Name.

PRICE \$1.25

UNION LEVEL MANUFACTURING CO.

4649 So. Ashland Ave.,

Chicago, Ill.



LYMCO ADJUSTERS can't get out of order!

The friction clutch does not deteriorate, clog or jam. With the strength and resilience of steel it combines the smoothness of operation so necessary to a friction adjuster.

A turn or two of the knurled nut gives the Lymco a grip that will hold a gale. The finish tops them all, the price is no higher.

Guaranteed to give long, dependable service.

Write for
Literature
and Prices

The Lyons Mfg. Co., Mt. Carmel, New Haven Conn.

Blackboards for all requirements

Duroplate, Permaroc, Enduraroc, Natural Slate
Tackboard, Corkboards and Bulletin Boards

Highest quality guaranteed. Let our service department help you with your problems. It costs you nothing.

Samples sent free on request. We can save you money; write today for prices.

E. W. A. ROWLES CO.

2349 So. La Salle Street

Chicago, Illinois

Sell homes easier—Rent them faster

CARDINAL Toggery Racks



A big talking point when showing an apartment or house to your prospect. Increased closet space is immensely important to every woman. Keep hats, toggery, shoes neatly and in place.

All metal, strong, fit inside any closet door. Beautiful Duco finish—Jade Green—Old Rose—Silver Color Cadmium. Get price and quantity discount by writing today to

Charles Fischer Spring Co., 244 Kent Ave., Bklyn, N. Y.

MAKE EVERY DOOR AN EXTRA CLOSET

You can profit through
GUARANTEED "TREE-MARK" LUMBER

—this Free Booklet tells how!

Do you know the story—the whole story—of the new GUARANTEED "Tree-Mark" Lumber? The new booklet, "Taking the Mystery Out of Lumber Buying," tells you how the lumber industry has made history by trade- and grade-marking its lumber. It tells what architects, builders, farmers, and loan associations are thinking and doing about this new step for their protection. It tells how you can profit by lumber whose grade is financially guaranteed to you—lumber which you, in turn, can guarantee. Write for this booklet. Profit by its valuable information.



NATIONAL LUMBER MANUFACTURERS ASSOCIATION

Transportation Building,
Washington, D. C.

INTERNATIONAL HARVESTER TRUCKS COMPANY

Trucks: 3/4-ton "Special Delivery", 1-ton "Six-Speed Special", 1 1/4, 1 1/2 and 2-ton Speed Trucks and Heavy-Duty Trucks up to 5-ton. Write for information.

Service: Through our justly famous Company-owned truck service organization. 152 branches in the United States safeguard International Trucks.

At your service.

INTERNATIONAL HARVESTER COMPANY
OF AMERICA

(Incorporated)

606 S. Michigan Ave.

Chicago, Ill.

HB PAINT SPRAY

"DOES THE WORK
OF FIVE
MEN"

Only
\$16
Monthly

EASY
TERMS
30 DAYS TRIAL
QUICKLY PAYS
FOR ITSELF

BIGGER PROFITS FROM YOUR PAINTING

Get the profit on painting work that is now going to outside painters. One man with an HB Spray outfit enables you to do the work of at least 4 brush painters—you keep the profits. Does highest quality work both inside and out, because HB gives sufficient air volume at all times. HB will pay for itself out of the profits on the first few jobs. Builders everywhere are reporting as high as \$150 extra weekly profits from its use. A liberal trial on your job to convince you—easy terms if you desire. A card or letter brings details.

Ask for descriptive booklet—tell us the nature of your work—we'll send you complete details without obligation.

HOBART BROTHERS, Box V89, Troy, Ohio





THE ANTIQUE HOUR GLASS
AND THE MODERN WATCH

Is *Your* Measuring Tool as antique as the Hour Glass?

The Farrand Rapid Rule has taken its place like a watch, among neat and efficient measuring devices. Like a watch, it is accurate in performance, dignified in appearance, and instantly available for use. Also as watches have become the standard for measuring time, so have Farrand Rapid Rules become the standard for measuring space.

"A Modern Tool for Modern Craftsmen"

Consult
Your Dealer
or Write

Hiram A. Farrand, Inc.
Berlin, N. H.

An American Product
Accurate and
Durable



THE FARRAND RAPID RULE
AND THE ANTIQUE WOODEN RULE



DR. I. D. KELLEY RESIDENCE

St. Louis, Mo.

Jamieson & Spearl, Architects, St. Louis

Every room in the home a prospect for rubber floors. May we send you our Installation Instruction Booklet? This book has been instrumental in starting many men in a profitable business.

Write for a Copy Today

Wright Rubber Products Co.

Dept. A. B. 9

Racine, Wis.

WRIGHT RUBBER TILE

Only Material That Will Stand The Real Test

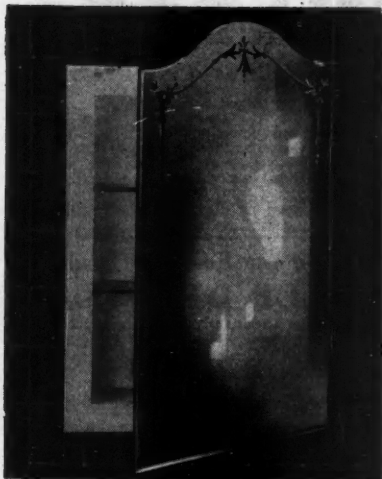
Adamston VERTICALLY DRAWN FLAT GLASS IS GRADED ACCORDING TO THE HIGHEST STANDARDS

A brand you



can depend upon.

ADAMSTON FLAT GLASS COMPANY
CLARKSBURG, W. VA.



The New Excel Venetian Recess Cabinets

Excel metal cabinets are of the highest quality and are priced within the reach of all. A most complete line of cabinets to select from—32 styles in all, including six styles of venetian vanity type cabinets.

The following features will be found in Excel Venetian and Vanity type cabinets:
Doors hung on invisible hinges, and doors strike against rubber bumpers; mirror supported by ledge at bottom of door and held in position by metal clips of non-tarnishing or corrosive material; mirrors are of the highest quality beveled plate glass with a very artistic design cut into the mirror; these cabinets have adjustable plate glass shelves supported by aluminum brackets; body of cabinet heavy furniture steel and finished with the highest quality baked enamel; we guarantee Excel construction features will prevent mirror breakage when cabinet is in use; Excel cabinets measure up to the name Excel.

If you desire the best cabinet that can be obtained at the lowest possible price, write us today for complete information and prices.

Other products manufactured by the Excel Metal Cabinet Company are metal kitchen cabinets, hospital cabinets, ironing board cabinets, and package receiver cabinets.

Excel Metal Cabinet Company, Jamestown
New York

EXCEL METAL CABINET CO.
Jamestown, New York
Please send me your free catalog and prices.
Name.....
Address.....
Town.....
State.....

PULLMANIZE YOUR WINDOWS!

We take extreme pride and pleasure in announcing our new UNIT A Balance which replaces the present UNIT K for 4 to 29 lb. sash.

Special Announcement—New Pullman Unit "A" Sash Balance

It will have all of the well established merits and advantages of UNIT K and innumerable new features never before attempted in this type of hardware, including "CADMIUM" RUST PROOF finish for all exposed parts.

Write for New Folder Today

PULLMAN MFG. CO., INC. 47 SOUTH FORD ST. ROCHESTER, N. Y., U. S. A.

The Superior Speedster

Should save you \$100 on every job **Why?**

Because it is built with swinging arbor and tilting table.

Because it may be powered with gasoline engine or electric motor.

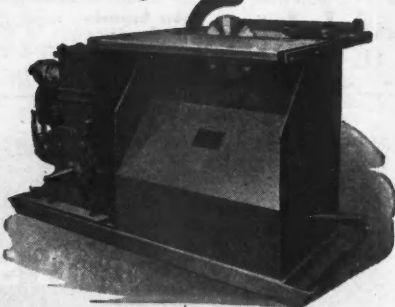
Because it is light in weight and yet has enough power to saw lumber in one-tenth the time required by hand.

Because it saves time and labor, thereby producing greater profits.

New bulletin describing the SPEEDSTER is ready—send for your copy today.

Eliminates Hand Sawing

A Profit Maker for YOU



Jones Superior Machine Co.

1240 West North Ave., Chicago, Ill.

BESSLER DISAPPEARING STAIRWAYS 6 Different Models

The Bessler line includes disappearing stairways from the highest grade to the lowest priced—everyone big value—a full sized practical stairway, not a ladder.

Ask Your Dealer

Bessler Disappearing Stairway Co.
AKRON OHIO



Save 1/2 PLUMBING-HEATING Install Your Own "New Easy Method"



Lowest wholesale prices on Highest Quality, Grade A Goods. Any Handy Man can install his own Plumbing and Heating BY OUR NEW EASY METHOD. Get the best and pay only a little each month.

"We Show You How" BOOK

New bargain catalog just FREE issued. With our cut-to-fit systems you save waste material and high labor cost. 50 years of economical service to builders, home owners, farmers, and mechanics.

FREE ESTIMATE Send Sketch

Free book gives you the whole story. Write for your copy today. Million Dollar Bonded Guarantee Protects You

HARDIN-LAVIN CO. EST 1876
142-52 W. Pershing Road Chicago, Ill.



PROFITS With IDEAL HOISTS

Save money wherever there is a rope or cable to pull. Made in two sizes, 1,200 to 2,000 lb. capacity. Reversible and non-reversible—single and double drum, with or without engine. Write today for complete information.

UNIVERSAL HOIST & MFG. CO.
196 East 24th St. Cedar Falls, Iowa



Try them and you will always use them for safe, comfortable, fast work. Real money-savers.

Send for particulars.

Ajax Building Bracket Co.
1551 Rydal-Mount Rd., Cleveland Heights, O.

ONE QUALITY

ONE PRICE

BECKMANN INSTRUMENTS

THE
L. BECKMANN Co.
ESTABLISHED 1874
500 JACKSON ST.
TOLEDO, O.

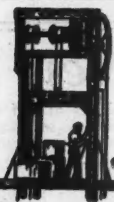


SEND FOR CATALOG



DE LUXE EDITION. The most wonderful book of home plans ever published. 224 pages, nearly 600 illustrations of floor plans, photos and approximate cost to build—of medium cost Colonial homes, cottages, bungalows and two-family dwellings, an ideal reference book showing size of rooms, buildings and a description of each postpaid for \$3. New book of 60 fifty plans of medium-cost English and American Colonial homes \$1, or both books for \$3.50. Complete plans and specifications as low as \$10. You cannot afford to build until you have seen this book. It may save you hundreds of dollars.

FREDERICK H. GOWING, Architect
161 Tremont Street Boston, Mass.

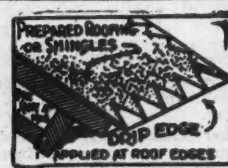


ELEVATORS

DUMBWAITERS and HOISTS
(Electric and Hand Power)

Electric Attachments for hand power elevators. Our product unsurpassed. Have been elevator builders for nearly fifty years. When inquiring for estimate, state kind of elevator wanted, capacity, size, platform travel and height of hoist.

Sidney Elevator Mfg. Works (Miami St. Plant), Sidney, Ohio



When You Roof Use Tried MILLER DRIP EDGE

It easily re-inforces, protects, supports and finishes prepared roofing or shingles at the roof edges. Millions of feet sold, from Eastport, Maine, to Honolulu, Hawaii.

Free Sample and Folder

MILLER & GLEASON, Div. D, Olean, N. Y.

Beautiful Brick Effects



deserve
Anchor Brand
Mortar Colors

C. K. Williams & Co.
634 North 13th St.
EASTON, PA.

Install Wehrle Watchman Wall Safes



for extra profit and protection. Strong, durable, attractive. Finished in Green Lacquer or Mahogany Crystalline as specified, with interior of blue velvet. Polished steel, combination lock, dial and handle nickel plated.

Clip this ad and attach to letterhead. Complete information will be sent concerning these profit makers.

THE WEHRLE CO., NEWARK, OHIO

FORSTNER BITS BRACE & MACHINE

THE FINEST Tool Manufactured for important wood work.

Specially adapted for Hardwood operations; indispensable to the High Class Carpenter and for Cabinet and Pattern Works.

Manufactured by
THE PROGRESSIVE MFG. CO.
TORRINGTON, CONN.

Special Offer

A sample bit up to 1 inch in diameter will be mailed postage prepaid, upon receipt of 75c to any woodworker or carpenter.

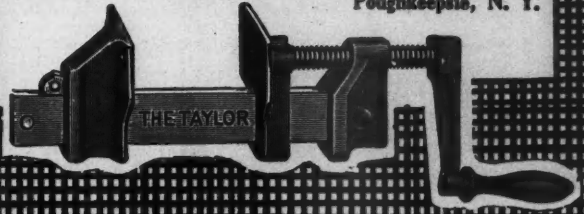
QUICK ACTING *The Taylor* SELF LOCKING

CLAMPS

An Investment
Not An Expense

Quickest and strongest clamps made. Standard in U. S. Government Works and in such concerns as General Electric Co., Singer Sewing Machine Co., Victor Talking Machine Co., etc. We can prove it in your own shop. Write today.

JAMES L. TAYLOR MFG. CO., 110 Parker Avenue,
Poughkeepsie, N. Y.



IRON RAILINGS FOR EVERY PURPOSE

Plain and ornamental iron fence—entrance gates, wire and iron window guards, balcony railings, grilles, folding gates, gratings, cellar doors, etc. Catalog on request—estimates cheerfully given—orders filled promptly.

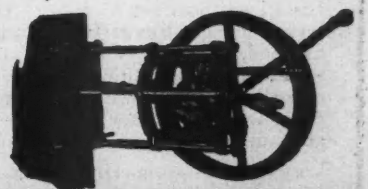


CINCINNATI IRON FENCE CO., Inc., 3331 Spring Grove Ave.,
CINCINNATI, OHIO

\$12 . . . or \$2 for Mortises?

For every \$1 you spend for labor cutting mortises with brace and chisel, the same money will buy six times as many mortises with the Champion! That's because this machine is six times faster—will cut 12 mortises an hour easily. And every mortise will be cut perfectly with smooth sides, bottom and ends. No chance to spoil material regardless how knotty, hard or soft. Try it on our 15-day trial offer. Money back if not satisfied. Year's guarantee. Send for literature.

Colgan Machinery & Supply Co.
499 Hayden Bldg. Columbus, Ohio



Costs Less in the End "STERLING" Convertible Wye Level

Built to stand hard knocks, hence fewer repairs, longer life. Accuracy and permanence of adjustments permits quicker work. Prove it on your own job.

10-DAY FREE TRIAL

(PATENTED)

Model No. 40

Gold Medal
Sesqui-
Centennial
Exposition,
1926



Pin this coupon to your letterhead and mail today

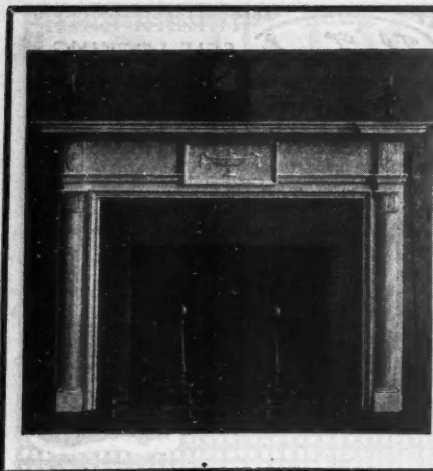
WARREN-KNIGHT CO.

136 N. 12th Street PHILADELPHIA, PA.
Send FREE Illustrated Bulletin F-39 describing "Sterling" Convertible Wye Level, with details of free trial offer and easy purchase plan.

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

KNICKERBOCKER MIXERS

All sizes 3 1/2-S to 28-S—each built as
only Knickerbocker builds mixers.
Ask for Catalog
KNICKERBOCKER COMPANY
Jackson, Michigan



This Added Touch of Refinement Costs so Little

Just a small investment in a wood mantelpiece of authentic design will often add hundreds of dollars to the value of a house. A Columbia mantel in classical or period design, painstakingly wrought by master craftsmen turns "house" into "home." No other single feature means so much to the restfulness, dignity and livability of a room, whether living room, dining room or bed room. There are 60 Columbia designs to choose from—each distinctively different. Descriptive literature sent on request.

THE BRECHER CO. INC.,
443 W. Jefferson St.
Louisville, Kentucky

Boice Has It at a Better Price!

Boice-Crane portable bench machines operated from light socket can't be beat for low price, accuracy and time saving. Here are two illustrated and described.



New 12" Band Saw
This sturdy saw is copied after our famous 14" band-saw. Has table 10"x12" tilting 45 degrees. Cuts stock 4 1/2" thick. Bronze bearings. Guards, \$8. Price, without motor or guards,\$35

Handi-Saw
Universal type. Table 15"x17", tilts 45 degrees, 8" saw cuts 2" stock. Elevates for grooving. Attachments for dadoing, jointing, boring, disc and drum sanding, etc. Wgt. 60 lbs.

\$30

Send for free, new, 80-page catalog describing the complete line of Boice-Crane bench machines. Do it today!

W. B. & J. E. Boice — Dept. A. B. 9-E — Toledo, Ohio

THE AIRMASTER

Costs So Little and Helps You Sell!

Install wall cabinet Airmasters; compact, beautifully finished, highly efficient; suitable for any thickness of wall. One-piece weather-proof outside shutter operates automatically with fan.

And there's a portable Airmaster to fit any standard size window. Easy to install—easy to transfer from one window to another—moderate in price. Write for details.

AIRMASTER CORPORATION, 140 So. Dearborn St., CHICAGO, ILL.

The NATIONAL "Little Brute"

A Fast, Powerful Floor Surfacer for only \$147.50 The biggest value ever offered in floor surfacing equipment.

Built on the same plan as the big Nationals—a high speed, big production machine equipped with 7 in. high speed sanding drum. Does as much work as 5 hand scrapers. Removes 10 coats of varnish without neutralizers.

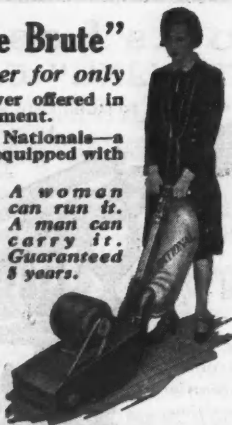
DUSTLESS ALL THE TIME

Separate Motor for Vacuum Dust Collector. Suction not decreased if main motor is slowed down by heavy pull. Weighs only 115 lbs.

Write for full information to-day.

COMPARE the VALUE—COMPARE the PRICE

The National Sanding Machine Co.
4355 Avondale Ave. Chicago, Ill.



A woman can run it. A man can carry it. Guaranteed 5 years.



TILE AT WHOLESALE Sold Direct to

Builders, Tile Setters, Bricklayers, Contractors, Home Builders.

Only \$25.00 The Tile for a bathroom can be purchased for as little as \$25.00.

SEND US YOUR SKETCHES

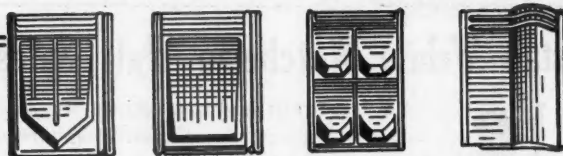
We will estimate the cost free of charge on Bathrooms, Kitchens, Vestibules, Mantels, Store Rooms, Entrances, Store Fronts, Bulkheads or any kind of Tile work.

PROMPT SHIPMENTS

We ship promptly White and Colored Ceramic Floor Tile and Borders in Plain or Designs—White Glazed Wall Tiles, many shades and colors of colored Wall Tiles, Falsene, Tiles, Mantel Tiles, Tile Mantels, Red, Buff Travertine and Copper Colored Quarry Tiles, Decorated Glazed Strips, Recess Tile, and China Bathroom Fixtures, both in White and to match our various colors of Wall Tile.

Free Catalog illustrates our complete line in colors. Send today.

LLOYD FLOOR & WALL TILE COMPANY
Box 5064-AB KANSAS CITY, MO.



MAKE A BIGGER PROFIT On The Roof

Wise, thrifty builders will appreciate the saving in putting on Walters and Coopers Metal Shingles. The Walters and Coopers Metal Shingles weigh less than wood, or slate and take lighter frame work to support it. Moreover, it is permanent. This roofing does not require skilled labor to put it on, carries a low rate of insurance and is storm, wind and fireproof. We manufacture a complete line of designs in Painted Tin, Galvanized Tight Coat, Sheet Zinc and Copper.

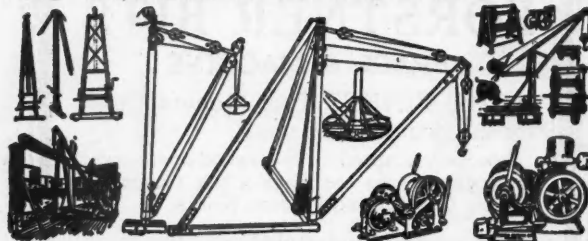
Write for full size samples and prices

National Sheet Metal Roofing Co.

339-345 Grand St.,

Jersey City, N. J.

We Mfg. A COMPLETE LINE OF BUILDERS' DERRICKS and Winches



WE SEND DERRICKS ON TRIAL TO RELIABLE CONTRACTORS
OUR MOTTO IS SATISFACTION OR DERRICK RETURNED

Write for Circular No. 2 with illustrations, descriptions and best prices on our complete line. Sagen Builders' Derricks are built of the best Crucible Steel and Malleable Iron Fittings which makes them light, strong, safe and durable. The derricks will please you, and probably more than pay for themselves on the first job. Get one on trial.

SAGEN DERRICK CO., 3101-3125 W. GRAND AVE.
CHICAGO, ILL.
NEW YORK OFFICE—130 West 43rd St.

THE SHEBEL FILER



MAKE MONEY

filing saws. It's easy. Get a Shebel Filer and you at once become an expert filer. Nothing to it. Any one can get a high class job of filing with it. It's a brand new idea in a Saw Filer. Send for full particulars. Some say it is worth \$100.00. The price is only \$5.00.

ANTHONY P. SHEBEL

326 REED STREET

Milwaukee, Wis.



The MASTER RULES THE WORLD

Slides out in a jiffy — does not fold



Every Conceivable *INSIDE* or *OUTSIDE* Measure from 8 in. to 8 ft.

MASTER INTERLOX SLIDE RULE

Automatically figures the exact measure for you, no guess work. Fastest to open or close. Locks rigid in use. Finely made. Ask your dealer to show the MASTER. If none nearby, send \$1.00 for 5 foot or \$1.20 for 8 foot rule.

If you do not fully agree that the MASTER is the most useful rule you ever used, return it in ten days and your money will be refunded.

MASTER RULE MFG. CO., 813 E. 136th St., N. Y. C.



SASH CHAINS



THE SMITH & EGGE MFG. CO.
Bridgeport, Conn.

ORIGINATORS OF SASH CHAINS



THEY HOLD MORE



REQUIRE LESS HOLE

Expansive Screw Anchors

Ackerman-Johnson expansive screw anchors hold a greater load than any other expansive fastening made. Installed in a fraction of the time needed in any other method. Recognized throughout the world as the best. They save more than their cost.



Stud Expansion Bolt Shewing primary expansive sleeve only.

Ackerman-Johnson Co.

625 W. Jackson Blvd., Chicago : 53 Park Place, New York

Folding **Stairs**



Make better use of your attic

\$35.00

adds a STORY to your HOME

WRITE FOR FREE BOOKLET "A"

THE MARSCHKE CO.,

551 University Ave.St. Paul, Minn.

BESSLER

DISAPPEARING STAIRWAYS

6 Different Models

Another Bessler Achievement

\$15.00 UP

No. 15 just out, sets a record in low price and big value. It is a stairway, not a ladder; and is the most quickly and easily installed of all disappearing stairways.

Ask Your Dealer


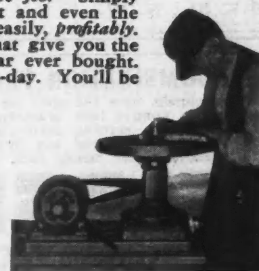
The Bessler Disappearing Stairway Co.
Akron, Ohio



You'll Finish the Job Lots Quicker and at a Bigger Profit With H & A Portable Machines Right on the Job!

THINK of the enormous saving of time and labor with H & A portable electric wood-working machines *right on the job!* Simply plug into the nearest light socket and even the heavy-duty work is done swiftly, easily, *profitably*. Sturdy, powerful, *better* machines that give you the biggest value your equipment dollar ever bought. Write for the complete catalog to-day. You'll be glad you did.

HESTON & ANDERSON
209 Market St.
Fairfield, Iowa

IROX

BINDS OLD AND NEW CEMENT

The Iron Method
of Waterproofing, Preserving and Repairing

Concrete, Stucco, Brick, Tile and Stone construction of all kinds.

See Page 152 of this issue, or write for free Folder.

The U. S. WATERPROOFING CO.,
821 Transportation Bldg., Chicago, Ill.

PREPARE FOR FALL PROFITS



Line yourself up right now with a proposition that made enormous profits for hundreds last fall and winter. Every building in your community is a prospect for Federal Metal Weather Strip. It is easy to sell because practical and beneficial. You can install at a profit. Write today for details of our agency proposition.

Federal Metal Weather Strip Co.
4538-58 Fullerton Ave. Chicago, Ill.

IDEAL MANUFACTURING PLANT

in Milwaukee, Wisconsin, consisting of two large manufacturing buildings, several small buildings; 150,000 feet floor space; Sprinkler System; Generator and power plant; switch track; 7 1/2 acres ground; employee's auto shed. Buildings have daylight on all sides. For immediate sale this complete plant can be had at a real bargain price. Terms over a period of ten years on practically a rental basis if desired. Write for information.

Owners, **SMITH BARNES & STROHBER CO.**
105 N. Clark Street, Chicago, Ill.

Build CLOCKS for Pleasure-PROFIT!

with our
Plans Parts
and Help

WOULD a set full of Extra Dollars look good to you? BUILD CLOCKS!—Bunko Clocks, Mantel Clocks, Grandfather's Clocks. Big demand, plenty of profit. We furnish plans, works, parts. Small works \$1.50; others with chimes all prices. Write NOW for FREE Book—FREE Blueprint offer—all the money-making details!

American Chime Clock Company
163-J Ruffner St. Philadelphia, Pa.

**Patents and Trade Marks!**

Protect your most valuable assets.
Expert service. Personal attention.

LESTER L. SARGENT

Registered Patent Attorney

1115-K St., N. W.

WASHINGTON, D. C.

A NEW COMBINATION TRANSIT AND LEVEL

Levels and plumbs from the same set-up. No shifting or looking of scope. Control level prevents errors. Has vertical arc, clamp and tangent, shifting center; complete with plumb bob, folding tripod, sectional rod and target. Write for folder 172 and full details of our money back guarantee.



WISSLER

INSTRUMENT COMPANY

627 No. Broadway

St. Louis, Mo.

No. 172, \$45.00

No. 173 with
compass, \$50.00

A Real Home Comfort
Mallory Shutter Workers

MALLORY MFG. CO.

700 BROAD STREET

FLEMINGTON, N. J.

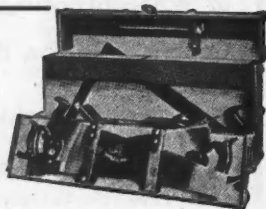
INDESTRUCTO CARPENTER'S TOOL CASES

The Tool Case you need. Light, strong, secure locks, every tool in its place and carried like a Suit Case.

Write for Booklet and Prices.

WEDELL & BOERS

128 W. Jefferson - - - Detroit, Michigan

**Malleable Asphalt (Mastic)**

The Roofing and Flooring compositions that are creating a sensation. We want Salesmen to act as district Sales Supervisors—also local Salesmen.

Contractors make a two-way profit... one on the sale and one on the application.

Write today for free Information

MALLEABLE ASPHALT CO.

6355 Broadway, Chicago, Ill.

**The Perfect Bond for Concrete**

Contains no acid. Therefore cannot injure concrete or steel. Forms a bond stronger than the concrete itself.

Catalog on request

LIVING-STONE CO.

1 E. Lee Street, Baltimore, Md.



OUR TRADE MARK SINCE 1905

Classified Advertising**RATES:**

Small letters 25c per word
Capital letters 50c per word.
Minimum twenty words.

Business Opportunities
For Sale and Exchange
Help and Situations Wanted

To Insure Insertion Remittance Must Accompany Order

PATENTS PROCURED. Prompt service. **PERSONAL, CAREFUL AND EFFICIENT SERVICE.** Highest references. Moderate fee. Send sketch and model for actual search and advice. **GEORGE K. KIMMEL**, Master of Patent Law, 941 Legal Bldg., Washington, D. C.

USED TRANSITS AND LEVELS, BUFF, Hudson Terminal Building, New York City.

CARPENTERS, CONTRACTORS, BUILDERS, ETC.—Send for our Free Booklet, "How to Read Blue Prints." Tells how to make most money in the building trades. Every builder should have this information. Write today. Address: Dept. 2346, CHICAGO, TECH., 118 East 26th St., Chicago, Ill.

PATENTS—Booklet free. Highest references. Best results. Promptness assured. **WATSON E. COLEMAN**, Patent Lawyer, 724 Ninth St., Washington, D. C.

SALESMEN DISTRIBUTORS. **INSA-LUTE** Liquid Porcelain, new fireproof coating for Celotex, wall boards, brick, concrete. All colors. \$5.80 per gallon. **TECHNICAL PRODUCTS CO.**, Pittsburgh (6) Penna.

FOR SALE—Handle machinery outfit. Cost \$900.00. Will take \$280.00. **JOE FREEMAN**, Wamsley, Ohio.

SALES REPRESENTATIVE with 20 years' experience in New York building trades will handle additional high grade account. Thorough experience among architects, builders and export trade. **W. T. VOEGE**, Graybar Building, New York.

MAKE WASH DAY EASIER

Banks (Patented) Removable Green Enameled Steel Clothes Post and Flag Poles

They carry a money back guarantee. To guard against inferior imitations, be sure to look for the "ACE OF CLUBS SHAPED TOP" which has the name and date of (Patent) "The Ace of Clubs Top" that holds the clothes lines in **PARKERIZED**, making them absolutely rust-proof. Will last as long as your house. Why buy anything but the best—quality will tell.

All progressive Department and Hardware stores and supply dealers sell them. Write for Description folder.

BANKS STEEL POST COMPANY
125 Wakeman Ave., Newark, New Jersey

**Clinton Mortar Colors**

Clinton Cement Colors

NATURE'S MINERAL PIGMENTS

Guaranteed Uniform and Colorfast

CLINTON METALLIC PAINT CO.

599 Clinton Road " CLINTON, N. Y.

**SAVE 1/2**

on plumbing, heating, hardware, paint, roofing. Large quantity buying enables us to offer Grade "A" merchandise at great savings.



Send today for free catalog—over 180 pages of enormous bargains

Stanley Plumbing Supply Co., Inc., 412 North 12th St., Philadelphia, Pa.

THE SLATINGTON-BANGOR SLATE SYNDICATE, Inc.

SLATINGTON, PENNA.

Miners and Shippers of

Black Roofing Slate

Natural Blackboard

Structural Slate

Electrical Slate

and Slate Products

WRITE US FOR PRICES

The Most Economical Sash Holder

Write
for
Prices

It Is
Automatic

No Sash weights,
cords, pulleys or bal-
ances necessary.

Send For Trial Set
\$1.25 Prepaid

HARDWARE SALES CO., 30 Church St., Room 446E, NEW YORK CITY



Framing Device and Guide for Trigger Saws

Let your device be exhausted at the end of the day and not yourself. It is a lifesaver and money maker and will pay for its self in a short time. The device can be used on a carpenter trustee, work bench and framing table (it takes 20 minutes to build a table) it also can be used stationary or moved in getting lengths of cuts, in the operation of moving you measure the length that is to be cut.

A jack rafter can be framed as quick as laying it out the old way. Fits all makes of trigger saws.

Write for literature.

Agents and distributors write today.

C. T. Earhart, 244 Atwood St., Pittsburgh, Pa.



Waterproof Plain or Granite-Veneered Blocks!

You can make a worth-while sum on every building job by making your own blocks, brick and tile. It is very simple if you use the ZAGELMEYER SYSTEM of multiple molds. Pouring and applying a sparkling pure granite veneer in a single operation. Produces an absolutely waterproof product at a surprisingly low cost. Get started now in this profitable business. Send today for FREE BOOK.



Zagelmeyer Cast Stone Block Machinery Co.
3001 S. Henry St., Bay City, Mich.



MAILLO-BOX

MADE IN U.S.A. AND CANADA

Attracts Home Buyers

Because of its beauty and convenience, the Maillo-Box makes a hit with women. It saves many steps and protects mail. Costs little. Easily and quickly installed. Adjustable to any wall thicknesses. Lasts as long as the house. Price \$4.75 to \$12.00. Beautifully finished.

Write for circular and our proposition.

Penn-Greg Mfg. Co.

800 University Ave. St. Paul, Minn.



Patent Applied For

HAGSTROM SECRET DOOR LATCH

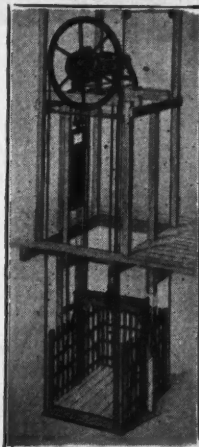
Designed especially for concealed panels. May also be used on doors, instead of ordinary latch. When door is closed no hardware is visible. To close push lightly on door—to open push hard. Door moves less than 1/4". Shrinking or swelling will not affect this latch as long as door swings free.

Latch may be screwed right on door jamb. Strike screwed on door without cutting. Built in five sizes. Anyone can apply this latch in less than ten minutes. If your jobber cannot supply you address Dept. A for literature and prices.

Hagstrom Mfg. Co., Glen Cove, N. Y.

WESTERN CANADIAN COMPANY

25 years operating Structural Plate and Machine Shops, also rolling Open Hearth Bars and small shapes, desires to confer with Road Machinery Company view manufacturing standard lines. Will build and equip special shop if necessary, or would take interest in Sales Company. Care American Builder Box 271.



SEDGWICK ELEVATORS and DUMB WAITERS

Sedgwick Hand Power Trunk Lifts protect walls, stair and floors in up-to-date homes.

Also Invalid Elevators and Fuel Lifts.

Standard Sizes Ready to Ship

WRITE for Complete Catalog

SEDGWICK MACHINE WORKS
154 West 15th Street New York

"Sedgwick Service Satisfies"

"Jewel" Electric Fountain

A delightful home beautifier. Motor and pump built inside of fountain make water connection unnecessary. Connect to any light socket. Humidifies and cools atmosphere. New lily pond fountain changes color by spectroscopic beams. Patented prismatic geysers searchlight fountain is a marvel. World's largest electric fountain makers.



Large New Catalog Free



"Jewel" Oil Burner

Sells fast everywhere. For 7-room home, complete with 250-gal. tank, only \$150. Blue print and instructions. Any practical man can install. 4000 in use in Cook County, Ill. Send for FREE catalog of original "JEWEL" Electric Specialties for the Home. Reliable agents and dealers wanted.

We have many Contractors and Builders who are acting as our agents on both our Electric Fountains and on Superior Oil Burners. You can install a sample in your own home and in your dull season make good profits selling our line.

JEWEL ELECTRIC & MFG. CO.

Dept. 499

4505 Ravenswood Ave.

Chicago, Ill.

Free Trial Fully Equipped

Accurate Durable Easy to Manipulate

Ask Your Dealer or Mail Coupon



Universal Y Level

Used by Thousands of Building Contractors

A High-Grade Instrument at a Low Price

Write today

Write to: CUB 45, Dept. 45, 670 River St., Troy, N. Y.
Please mail me free information.
Name.....
Address.....



“Here’s a new Feature ... Telephones *all through* the House”



“AND what do you think of my den? You’re absolutely right. Comfort, man, solid comfort. That’s me. And in this new house I get it.

“Here’s something new: *Telephones all through the house*. Sure. No more marathon running for me whenever a telephone rings. There’s going to be one handy, whatever room I’m in.

“The builder was clever. He installed conduit for the telephone wires *within the walls*, so as to provide outlets wherever a telephone would be convenient. That made it easy for us to plan with the telephone company just the service we wanted . . . to have telephones right where we need them.

“You ought to hear Mary boast about it to her friends. I have an idea that was one reason she was so strong for this particular house. You know how women are about things that add to convenience and smartness. . . .”

Builders know that too. Probably that is why many are providing *built-in* facilities for telephone convenience in their new houses. Your local Bell Company will be glad to show you how easily this is done . . . and how much satisfaction it will bring to your clients and prospective buyers. Just telephone the Business Office.



Index to Advertisers

SEPTEMBER, 1929

227

A	Page
Accurate Metal Weatherstrip Co.	217
Ackerman-Johnson Co.	223
Adamston Flat Glass Co.	219
Airmaster Corp.	222
Ajax Building Bracket Co.	220
Allmetal Weatherstrip Co.	215
Alpha Portland Cement Co.	190
Aluminum Company of America	19
Ambler Asbestos Shingle & Sheathing Co.	42
American Brass Co.	163
American Cement Machine Co.	187
American Chain Co.	32
American Chime Clock Co.	224
American Face Brick Assn.	43
American Floor Surfacing Machine Co.	173
American Radiator Co.	36
American Saw Mill Machinery Co.	27-183
American Stove Co.	231
American Telephone & Telegraph Co.	226
Anaconda Wire & Cable Co.	14-15
Andersen Frame Corp.	137
Anti-Hydro Waterproofing Co.	190
Armco Culvert Mfrs. Assn.	184
Armstrong Cork Co.	159
Asbestolith Mfg. Co.	203
Associated Sheath Cable Mfg. Co.	14-15
Atkins & Co., E. C.	214
Austral Window Co.	215
B	
Bakelite Corp.	211
Banks Steel Post Co.	224
Barber Asphalt Co.	149
Bayley Co., The Wm.	210
Beckman-Dawson Roofing Co.	34
Beckmann Co., L.	220

C	Page
Behr-Manning Co.	188
Bessler Disappearing Stair Co.	220-223
Black & Decker Mfg. Co.	52
Boice Co., W. B. & J. E.	222
Boyle & Co., Inc., John	204
Bradley, Miller & Co.	176
Brasco Mfg. Co.	227
Brecher Co.	222
Buff & Buff	224
Butler Laboratories	217

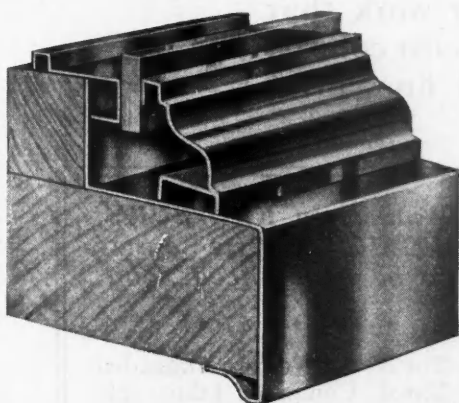
C	Page
Cabot, Inc., Samuel	178
California Fixture Corp.	200
Caselm Mfg. Co.	182
Casement Hardware Co.	216
Cashman Equipment Co., W. E.	216
Chain Belt Co.	46
Chain Products Co.	216
Chappell & Co., Wayvell	204
Chicago Technical College	175-224
Chromite Co.	209
Cincinnati Iron Fence Co.	221
Clarke Sanding Machine Co.	12-13
Clinton Metallic Paint Co.	224
Coleman, Watson E.	224
Colgan Machinery & Supply Co.	221
Colorcrete Industries	210
Columbus Union Oil Cloth Co.	191
Combination Woodworking Machine Co.	204
Common Brick Mfrs. Assn.	63
Concrete Equipment Co.	204
Corbin, P. & F.	45
Corcoran Mfg. Co.	191
Creo-Dipt Co., Inc.	157
Crescent Machine Co.	213
Cromar Co., The	40

D	Page
Delco-Light Co.	207
Detroit Steel Products Co.	67
DeWalt Products Co.	59
Diamond Metal Weatherstrip Co.	216
Dodge Brothers Corp.	181
Domestic Stoker Co.	190
Donley Brothers Co.	56
Dunn Mfg. Co., W. E.	29
Du Pont de Nemours & Co., E. I.	209
Durco Co., The	201

E	Page
Earhart, C. T.	225
Eastern Tube & Tool Co.	14-18
Ebinger Sanitary Mfg. Co., D. A.	216
Edwards Mfg. Co., The	217
Electric Rotary Machine Co.	216
Emerson Brantingham Corp.	21
Eternit, Inc.	39
Excel Metal Cabinet Co.	219

F	Page
Fairbanks-Morse Co.	57
Farrand, Hiram A.	219
Federal Metal Weatherstrip Co.	223
Finzer Brothers Clay Co., The	22
Fischer Spring Co., Chas.	218
Foley Saw Tool Co.	196
Ford Roofing Products Co.	155
Formica Insulation Co., The	44
Fort Wayne Engineering & Mfg. Co.	205
Frantz Mfg. Co.	3
Freeman, Joe	224
Frigidaire Corp.	177

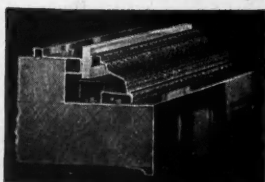
ADVERTISERS' INDEX CONTINUED TO PAGE 229



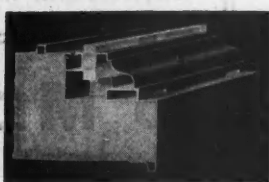
PERMAWITE

Here we have the answer to present day demand for a brilliant, all-white solid metal store front. PermaWite is an exclusive Brasco product noted for its remarkable beauty and wearability. A new and superior construction at moderate cost.

Brasco
STORE FRONTS

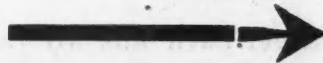


ART BRONZE



COPPER OR BRONZE

MAIL
COUPON



**Learn How
To Make More
Money With This
New Store Front!**

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

Send information (free) on
your new PermaWite all-
white metal store front con-
struction.

Brasco Mfg. Co.
5029 Wabash Ave.
Chicago

Here's a new opportunity for you as an active contractor to put new life into the store front business in your locality—and reap all the profits of being on the job early.

PermaWite is the latest novelty—an all-white chromium-lustre metal construction, brilliant and remarkably weather-resistant—at a cost actually lower than plated metal. It's going big everywhere.

And don't forget Brasco also offers other types of modern fronts—gives you every advantage—full service co-operation. *Mail coupon now for all details—no obligation.*

BRASCO MANUFACTURING CO.
5029 Wabash Avenue
Chicago



NORWEST

For Moderate Price Construction

HERE'S just the plastering base you need for work that must be figured close,—wherein every penny of cost counts, yet where a fire-resistive construction and fine, firm, crack-free plastering is desired.

IMPROVED NORWEST Steel Lath has all the desirable features of the best of the older types of metal lath—their crack-retarding and fire-resistive qualities. Furthermore, it is **STIFFER** than other plastering bases of equal weight, and easier to erect and plaster.

In addition, it has a brand new advantage—it is **REVERSIBLE**—either side is the *right* side. It is impossible to erect NORWEST wrong.

These qualities, together with its marked economy, make it well worth your while to give the **IMPROVED NORWEST 1/8-inch Flat Rib Lath**, an immediate trial.

- *Samples and Circulars Gladly Sent.*
- *Ask Your Dealer for Prices.*
- *Prompt Deliveries.*

Winners in KNO-BURN, JR. \$1000.00 Prize Contest to be Announced Soon.

• • • • •

The North Western Expanded Metal Company takes this opportunity of thanking the many representative builders who have submitted entries in response to its offer of \$1000.00 in prizes for the best letters of 100 words or less—"Why I Like Kno-Burn, Jr. Small Metal Lath."

Announcement of the names of the prize winners will be made as soon as possible after the judges have completed their task.

NORTH WESTERN EXPANDED METAL CO.

1203 Old Colony Building, CHICAGO

ADVERTISERS' INDEX

September, 1929 (Continued)

Page	Page	Page
G		
Gabriel Steel Co.....171	Macomber Steel Co.....180-196	Sargent & Co.....68
Gallmeyer & Livingston Co.....112	Majestic Co.....135	Sasgen Derrick Co.....222
Geier & Bluhm, Inc.....225	Majestic Steel Cabinet Co.....212	Savutime Devices, Inc.....214
General Electric Co.....14-15-20	Malleable Asphalt Co.....224	Schimmel & Co.....189
Genfire Steel Co.....58-208	Mallory Mfg. Co.....224	Schlage Lock Co.....65
Gilbert & Bennett Mfg. Co.....218	Marlon Insulated Wire Co.....14-15	Sedgwick Machine Works.....225
Goodyear Tire & Rubber Co.....179	Marschke Co.....223	Shebel, Anthony P.....222
Gowing, F. H.....220	Master Metal Strip Service.....214	Shepler Stove Co., F. W.....211
Grand Rapids Hardware Co.....195	Master Rule Mfg. Co.....223	Shevlin, Carpenter & Clarke.....37
Griffin Mfg. Co.....33	Master Woodworker Mfg. Co.....202	Sidney Elevator Mfg. Co.....220
	Matot Co., D. A.....216	Silver Lake Co.....208
H	Mauk Lumber Co., C. A.....47	Sisalkraft Co.....2
Hagstrom Mfg. Co.....225	Maze Co., W. H.....16	Skillsaw, Inc.....153
Hardin-Lavin Co.....220	Meaker & Co., George L.....214	Slatington Bangor Slate Syn.....224
Hardware Sales Co., Inc.....224	Miami Cabinet Co.....217	Smith Co., T. L.....67
Hart & Hegeman Mfg. Co.....214	Miller & Gleason.....220	Smith, Barnes & Strohber Co.....224
Hartmann-Sanders Co.....60	Milwaukee Corrugating Co.....230	Smith & Egge Mfg. Co.....223
Hess Warming & Ventilating Co.....194	Morton Mfg. Co.....23	Standard Sanitary Mfg. Co.....38
Heston & Anderson.....223	Motor Wheel Corp.....141	Standard Textile Products Co.....41
Hobart Brothers Co.....218	Muller, Inc., Franklin R.....202	Stanley Plumbing Supply Co.....224
Holland Furnace Co.....53	Multiplex Concrete Machinery Co.....212	Steel Frame House Co.....26
Hubeny Brothers, Inc.....206	Myers & Bro. Co., The F. E.....198	Steel Scaffolding Co.....199
Hutchinson Mfg. Co.....69		Stronach Nail Co.....188
Huther Brothers Saw Mfg. Co.....202	N	Structural Slate Co.....200
I		
Ilg Electric Ventilating Co.....55	National Assn. of Ice Industries.....28	T
Indiana Limestone Co.....10-11	National Electric Product Co.....14-15	Taylor Mfg. Co., James L.....221
Insulite Co., The.....24-133	National Lumber Mfrs. Assn.....31-218	Technical Products Co.....224
International Correspondence Schools.....195	National Mfg. Co.....232	Trimpak Corp.....147
International Harvester Co.....218	National Radiator Corp.....145	Truscon Steel Co.....151
International Steel & Iron Co.....188	National Sanding Machine Co.....222	
	National Sheet Metal Roofing Co.....222	U
J	National Steel Fabric Co.....70	
Jaeger Machine Co., The.....185	National Tinware Mfg. Co.....200	Union Level Mfg. Co.....218
Jewel Electric & Mfg. Co.....225	Neuvert Concrete Machinery Co.....198	Union Metal Mfg. Co.....64
Johns-Manville Corp.....17-71	Newark Steel Post Co.....212	U. S. Gypsum Co.....30
Jones Superior Machine Co.....220	Non-Metallic Sheathed Cable Licensees.....14-15	U. S. Mineral Wool Co.....143
	North Western Expanded Metal Co.....228	U. S. Waterproofing Co.....223
K	O	Universal Hoist & Mfg. Co.....220
Kalman Steel Co.....50	Oak Flooring Bureau.....194	Universal Portland Cement Co.....74
Karposlyde Rule Co.....214	O. K. Clutch & Machinery Co.....203	
Kawneer Co., The.....25	Overhead Door Corp.....214	V
Kees Mfg. Co., F. D.....216		
Kellogg-Mann Co.....61	P	Vento Steel Sash Co.....35
Kerner Incinerator Co.....18	Paramount Electric Co.....214	Voegel, W. T.....224
Kawnee Mfg. Co.....185	Parks Woodworking Machine Co.....184	
Kimball Brothers Co.....192	Paxson Co.....210	W
Kimmel, George P.....224	Peerless Mfg. Co.....206	
Knappe & Vogt Mfg. Co.....193	Penberthy Injector Co.....72	Wappat Gear Works, Inc.....197-215
Knickerbocker Co.....221	Penn-Greg Mfg. Co.....225	Warren-Knight Co.....221
Koehring Co.....205	Pfaltz & Bauer, Inc.....213	Wasmuth-Endicott Co.....167
Kuhls Co., H. B. Fred.....213	Pittsburgh Reflector Co.....206	Wayne Home Equipment Co.....139
	Porter-Cable Machine Co.....189-205	Weatherbest Stained Shingle Co.....197
L	Progressive Mfg. Co.....221	Wedell & Boers.....224
Lansing Co.....208	Pullman Mfg. Co.....220	Wehrle Co.....221
Leach Co.....212	Pyramid Metals Co.....210	Western Pine Mfrs. Assn.....186
Libbey-Owens Sheet Glass Co.....51		Weyerhaeuser Forest Products.....48-161
Lincoln-Schlueter Machinery Co.....187	R	Wheeler, Osgood Co.....49
Living Stone Co.....224	Ransome Concrete Machinery Co.....54	White Co., Inc., David.....202
Lloyd Floor & Wall Tile Co.....222	Reading Iron Co.....198	Williams & Co., C. K.....221
Louisville Cement Co.....129	Reid-Way Co.....169	Williams Oil-O-Matic Co.....5
Lucke, W. B.....208	Richards-Wilcox Mfg. Co.....6-7	Willis Mfg. Co.....192
Lufkin Rule Co., The.....210	Richmond Radiator Co.....8-9	Wissler Instrument Co.....224
Lyons Mfg. Co.....218	Rixson Co., Oscar C.....201	Wood Conversion Co.....48
	Rogers Co., F. L.....207	Woodworking Machinery Co., Inc.....206
M	Rolscreen Co.....193	Wright Rubber Products Co.....219
McGraw-Hill Book Co.....215	Rome Wire Co.....14-15	
McHenry-Millhouse Mfg. Co.....200	Rowles Co., E. W. A.....218	Z
	S	
	Safepack Mills.....131	Zagelmeyer Cast Stone Block Machy. Co.....225
	Sanitary Equipment Co.....213	
	Sargent, Lester L.....224	

NOTICE TO ADVERTISERS

Forms in the October Number of the American Builder will close promptly on September 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.

Modern Beauty in Enduring Copper

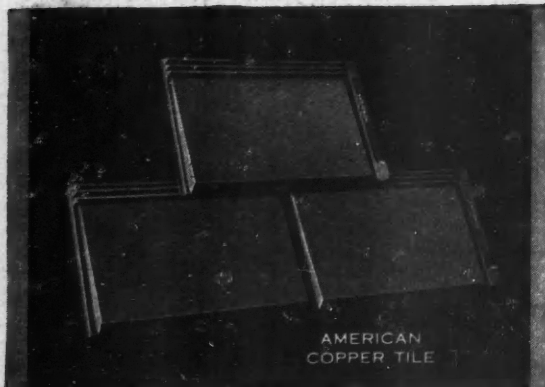
NO other part of a home has such constant and severe exposure as the roof. Year in and year out it is beaten by storms . . . by wind . . . by rain . . . and by snow. Season after season it is subjected to the extremes of climate and weather. Yet the roof must be beautiful and attractive, for it never escapes the critical observation of a guest or passer-by.

Of all the materials from which roofs can be made, one alone lends itself to real enduring beauty . . . pure copper. And so from pure copper, *Milcor* has produced its dignified and handsome American Copper Tile.

Age beautifies rather than deteriorates the roof of *Milcor* American Copper Tile. It weathers and mellows into shades that cannot be artificially reproduced or even successfully imitated. Years do not destroy this charm, for a copper roof resists corrosion . . . It is fire-proof . . . time-proof . . . and free from maintenance. The tile is so designed that it produces a play of light and shadow over the roof—an effect much to be desired.

Use *Milcor* American Copper Tile. It is the most distinguished and practical of all roofs.

MILWAUKEE CORRUGATING CO.
1409 Burnham Street Milwaukee, Wisconsin



Pure Copper

Milcor American Metal Tile is, in addition to pure *Anacoda* Copper, furnished in Copper Alloy Roof Terne or *Armco* Ingot Iron painted red or green. However, any color scheme desired can be easily achieved. Also double coated galvanized (hand dipped after formed). All *Milcor* Metal Tile has the famous *Milcor* "Tite-Lock" edge, which seals the roof against leakage.



MILCOR PRODUCTS

Eastern Plant: THE ELLER MANUFACTURING CO., Canton, Ohio
Sales Offices: Boston, Mass., Detroit, Mich., Atlanta, Ga., Little Rock, Ark., Minneapolis, Minn.
Branches: Chicago, Ill., Kansas City, Mo., La Crosse, Wis.

