

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

Vol. 45.

CONTENTS FOR JUNE, 1928

No. 3.

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	Page	Page	
Quick Profits for Builders.....	17-33	Paint and Decorating.....	125
Are We Going Color Crazy?		Plastic Paint Decoration.	
AMERICAN BUILDER Service Department.....	85	How Dan Does It.....	126
Around the Family Table.....	87	Framing Door Openings.	
Editorial Page.....	89	Repairing Rafter Joints.	
Construction Record Broken.		Non-Slip Hammer Handle.	
Will Study Tax Revision.		Laying Out Correct Arches.	
Many Zoning Acts Passed.		Use a Plumb Bob.	
The Home as Loan Security.		Quick Way to Build Doors.	
Cities—1928 Pattern.		Stud Cutting Pattern.	
Everybody's Business—By Floyd W. Parsons..	91	Law for the Builder.....	128
Trends of the Times.		When Is a Check Certified?	
Maison Nouvelle—A Home Interior in the Ultra-		On the Dock.	
Modern Style.....	92	"Approximate Only."	
Cast Stone.....	94	A Kentucky Defense.	
The Small Town Beckons.....	96	Is It an Acceptance?	
The Success of Edward F. Bessey Manufacturing a		Instructions in Roof Framing.....	130
Popular Building Unit.		Planning the Cornices.	
Houses Built by Boys?.....	98	Lumber to Be Merchandised in Package Form..	132
COLORKEED HOME PLANS.....	101-104	What's New Department.....	
The Taunton.....	Colorplate I136, 138, 140, 144, 148, 150, 154, 156, 158	
An English Design Home of Striking Beauty.		Invisible Extended Surface Radiators.	
The Tangier.....	Colorplate II	Small Spray Painting Units.	
A Spanish Gem of Five Rooms.		"Jimmy-Proof" Rim Latch Lock.	
The Toledo.....	Colorplate III	Complete Home Gymnasium.	
A Straight Gable Colonial Home Inexpensive to Build.		Concrete Wall Building Machine.	
The Toronto.....	Colorplate IV	New Simple Floor Machine.	
A Popular Quick Selling Home.		Small Spray Painting Outfit.	
Our Front Cover Home.....	105-109	Steel Milk Service Cabinet.	
Photograph and Complete Set of Working Drawings to		New Type of Lead Headed Nail.	
Eighth-Inch Scale of the Indiana Limestone Veneer		Saw Table for Heavy Work.	
House of English Design Illustrated in Full Colors		An Automatic Window Closer.	
on Our Front Cover.		Boilers with Colored Casing.	
"Easy as Laying a Sidewalk!".....	110	Apartment Mail Box Units.	
Apartment Homes.....	112	New Transit for Contractors.	
Santiago, California, Offers a Unique Bungalow Apart-		Simple Three Bag Mixer.	
ment of Egyptian Design.		New Ornamental Store Fronts.	
Pawtucket's Senior High School Cost \$1,700,000.	114	Mixer Built for Hard Service.	
Two Denver Filling Stations—Same Design,		Combination Sink and Clothes Washer.	
Different Materials.....	117	Fireplace Units Improved.	
Originality of Design as Seen in Los Angeles		Multiple Door Operating Arm.	
Library.....	118	Combination Mortiser and Router.	
RADFORD PUBLICATIONS' COMBINA-		Improved Contractors' Level.	
TION OFFERS.....	121-124	New Vertical Power Stripper.	
		An Improved Radiator System.	
		Motor Trucks.....	160
		Democratic Convention Hall.....	162
		News of the Field.....	167-174
		Books, Bulletins and Catalogs.....	176-180
		ADVERTISERS' INDEX.....	241-243

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

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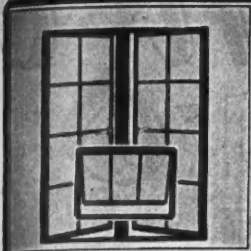
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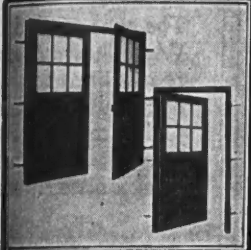
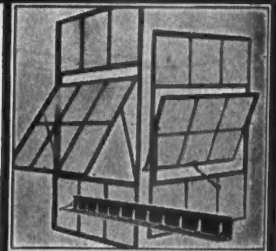
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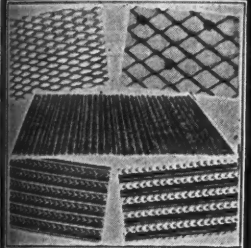
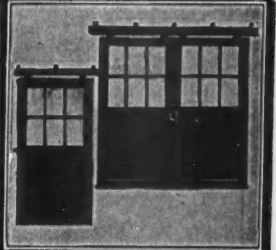
PERMANENT STEEL BUILDING PRODUCTS



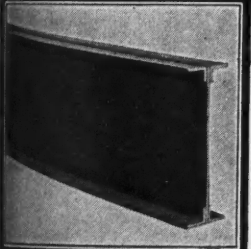
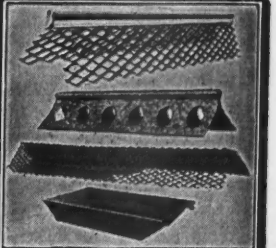
STEEL WINDOWS for Commercial Industrial, Residential and Institutional Buildings. Quality windows, conforming with the most exacting specifications at low cost.



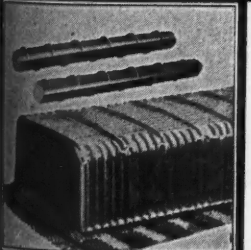
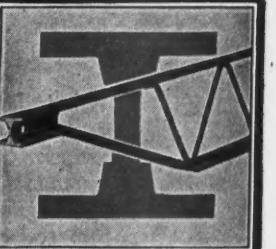
STEEL DOORS in Swing or Slide types. Also Vertical Folding, Vertical Lift, Vertical Lift-Swing, Airplane Hangar and Fire Department types, hand or power operated.



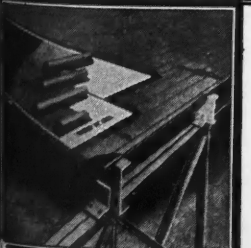
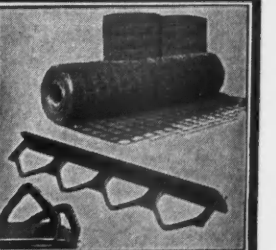
METAL LATH for plaster, concrete or stucco construction. Plastering accessories including Corner Beads, Cornerite, Strip-It, Furring Channels, Steel Mortar Boxes.



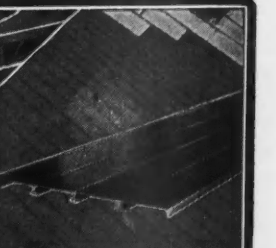
STEEL JOISTS, all types for economical, speedily erected fireproof floor construction. Come to the job ready for placing, eliminating all form-work and centering.



REINFORCING STEEL. Permanent or Removable Floretyles and Floreforms for all reinforced concrete floor systems. Bars, Inserts, Curb Bars, Welded Steel Fabric.



STEELDECK ROOFS. I-Plates construction, insulated to prevent heat loss and water-proofed with any standard roofing. Weighs not more than five pounds per square foot.



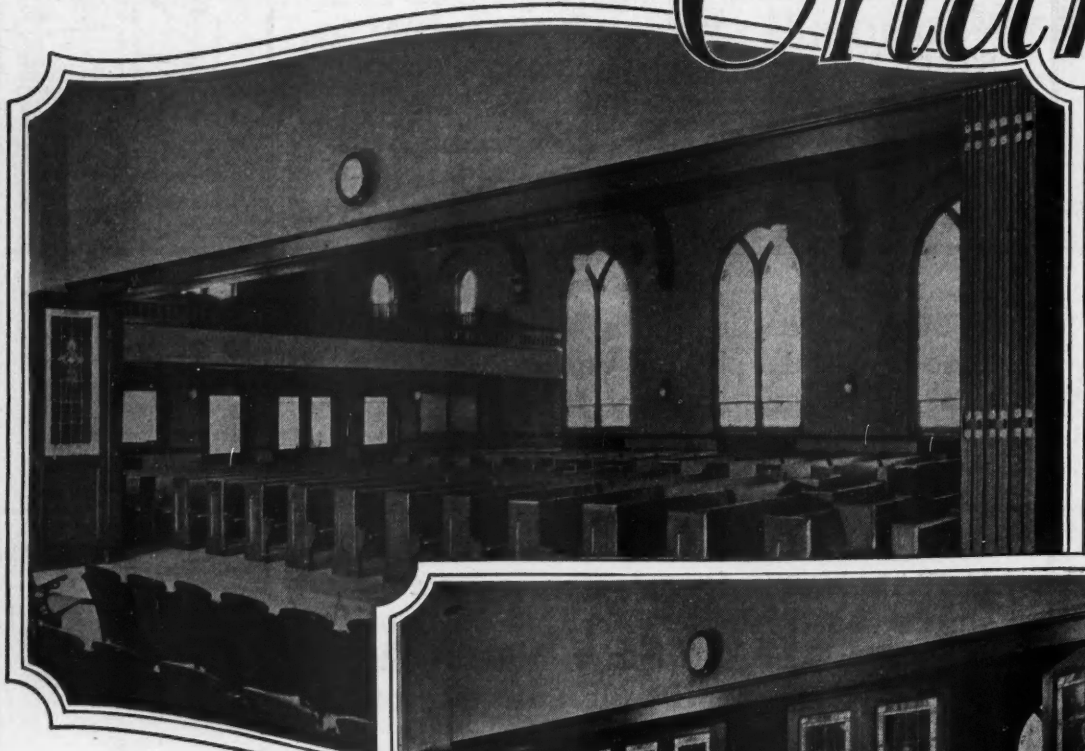
TRUSCON WAREHOUSES AND SALES OFFICES LOCATED IN ALL PRINCIPAL CITIES

TRUSCON

COMMODITY PRODUCTS HANDLED BY BUILDING SUPPLY DEALERS EVERYWHERE

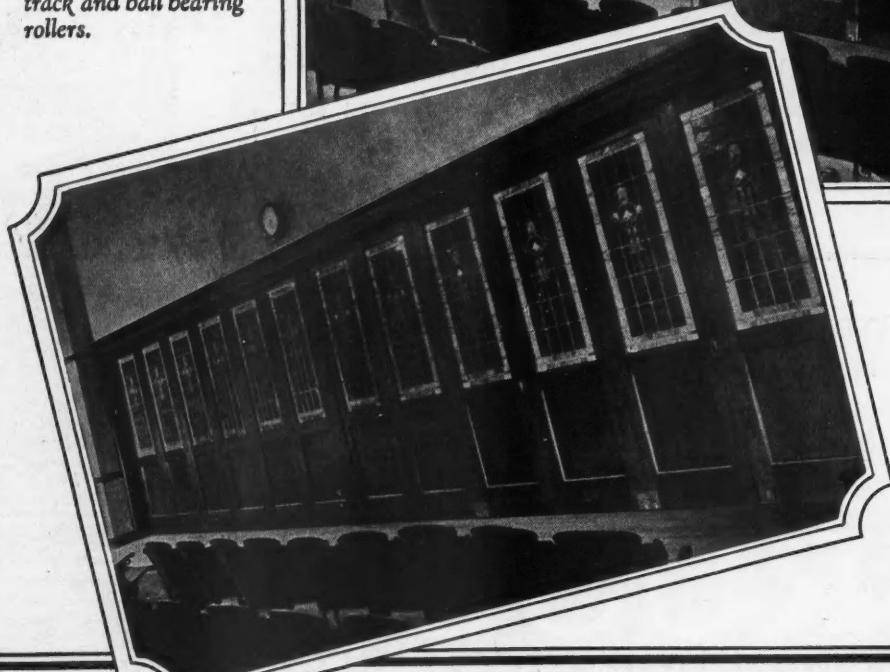
TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO

Change



The type of Folder-Way illustrated here is adapted to wide openings, with doors folded to either side, leaving an unobstructed view between rooms

To right is shown how doors slide and fold in hinged pairs. Overhead hangers and track serve as a guide, with weight supported on floor track and ball bearing rollers.



Closed, the doors form a practically dustproof and soundproof wall which quickly re-converts the enlarged room into its original units.

LARGEST AND MOST COMPLETE LINE OF

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

of the size of any room with FOLDER-WAY

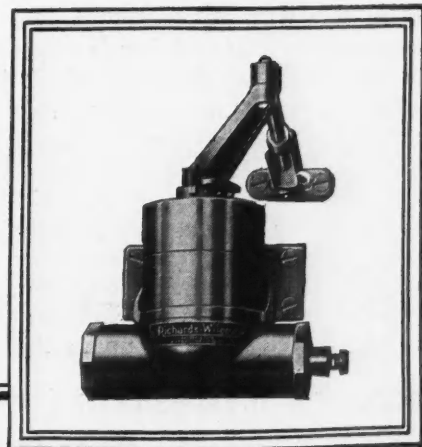
EVERY so often, in churches, auditoriums, lodge halls, gymnasiums — wherever people assemble — additional space becomes an urgent necessity. A moment is sufficient to supply this space, provided FoldeR-Way is installed. With scarcely an effort, you can slide and fold the doors away — just like folding up an entire wall and changing two or more rooms into one. It is the economical solution to the space problem, because it puts rooms to double use, with so little time and effort and such great convenience. Doors move silently and easily on ball-bearing rollers, without sticking, sagging or rattling.

Use an R-W Door Check and Closer and you'll have a closer without an equal. Its ease of application — no taking check apart — is an exclusive feature. Built for a lifetime of trouble-free service — and that's what it delivers.

Write us for the R-W book, "Sliding and Folding Partition Door Hardware," with 100 illustrations of FoldeR-Way methods and uses.

Richards-Wilcox Mfg. Co.
A Hanger for any Door that Slides.

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



DOOR HARDWARE MADE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

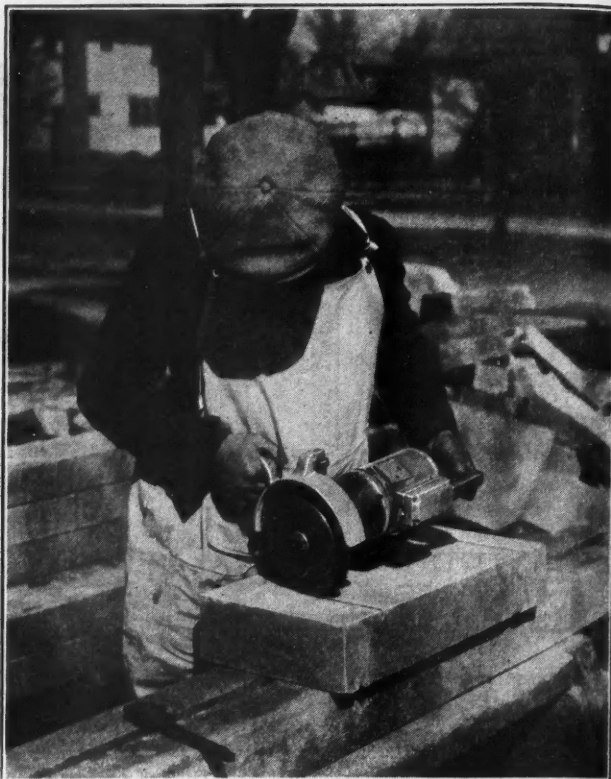
Electric saw replaces old mallet and chisel method of jointing stone. One man at ordinary wages now keeps six stone masons busy!

STONE

—A New Profit Field in Home Construction



The stone home that used to be a luxury can now be built at medium cost. New ways of producing, handling and using Indiana Limestone bring amazing change. Write for free plan books



IMPORTANT changes have taken place in the stone industry that every contractor and builder should know about. Indiana Limestone is now just as economically practicable a material for residence wall construction as brick, stucco or wood.

New methods have been applied to the use as well as to the quarrying of stone. Indiana Limestone is now coming into extensive use as a veneer applied to stud-frame walls. Or it may be used as a structural facing over hollow tile or brick. It is secured to the frame with galvanized metal ties, the same as a veneer of face brick work.

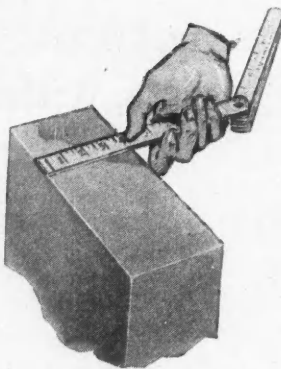
Houses built of Indiana Limestone used in this way are moderate in cost. No expensive stone-cutting is required. Carefully prepared drawings for jointing and laying up are not necessary.

Indiana Limestone for Random Ashlar facing is supplied in sawed strips. The stone is sawed on four sides—face, back, top and bottom. The strips are usually 4 inches thick. We prepare Indiana Limestone in this way right at the quarry. Then we ship it all over the United States as required. Right on the job, these strips of Indiana Limestone are broken, jointed and laid up in the wall. A stone

mason or a bricklayer can do this kind of work.

Electric saw for breaking

New tools have been devised to speed up stone construction. Jointing is done with an electric carbundum saw instead of the old-time mallet and chisel. One man with this efficient device can keep six stone masons busy laying up stone. The saw is used to cut a groove in the face of the stone. The stone is then turned over and a tap with a mallet breaks it cleanly on a line with the groove.



4" veneer commonly used

These are facts the home-builder does not know. When you try to sell a stone house, explain them to your prospect. He may think of stone construction as meaning solid walls. We will send you pictures and booklets showing just how Indiana Limestone is used.

Costs only 5% to 6% more

The total cost of a house with stone-faced wall construction of the sort described here is only 5% to 6% more than when walls are faced with other materials. Obviously, a stone house has a big re-sale value. It immediately stamps its owner as having the best there is.

INDIANA LIMESTONE COMPANY • GENERAL OFFICES: BEDFORD,

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Chas. E. Carter residence, Indianapolis, Indiana. C. T. Myers, Architect. Built of Old Gothic Indiana Limestone Random Ashlar

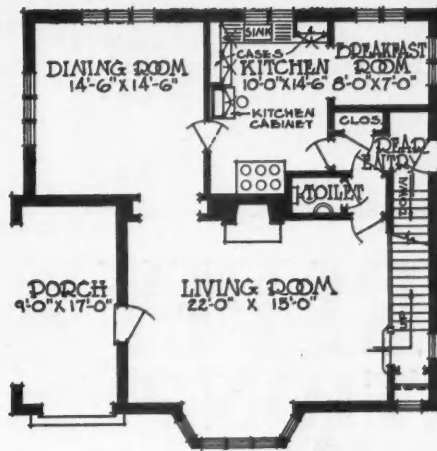
We will help live builders to start stone construction in their localities. Here is a way to get the jump on your competitors. Stone houses will take you out of the level of competition, and give you something that you can make a good profit on and at the same time build your reputation.

Indiana Limestone Company is a consolidation of 24 properties in the Indiana Limestone district. Organized in 1926, this company has assets of over \$46,000,000.00. Residence construction is a field we are now particularly interested in.

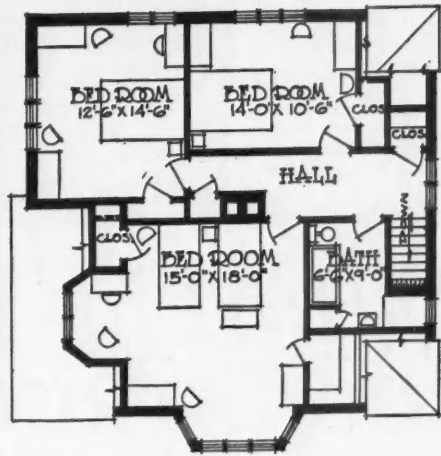
Write for all the facts

Let us send you all the facts about Indiana Limestone facing for residences. You will be amazed at the opportunities that exist.

Fill in your name and address on the coupon and mail it at once. Booklets showing Indiana Limestone houses and other information will be sent you immediately.



FIRST FLOOR PLAN



SECOND FLOOR PLAN

Our free plan books show many attractive house designs. Write for them today

—Fill in, Clip and Mail—

Box 757, Service Department,
Indiana Limestone Company, Bedford, Indiana
Send me full information on Indiana Limestone for
Random Ashlar facing for residences.

Name.....

Address.....

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

INDIANA • EXECUTIVE OFFICES: TRIBUNE TOWER, CHICAGO

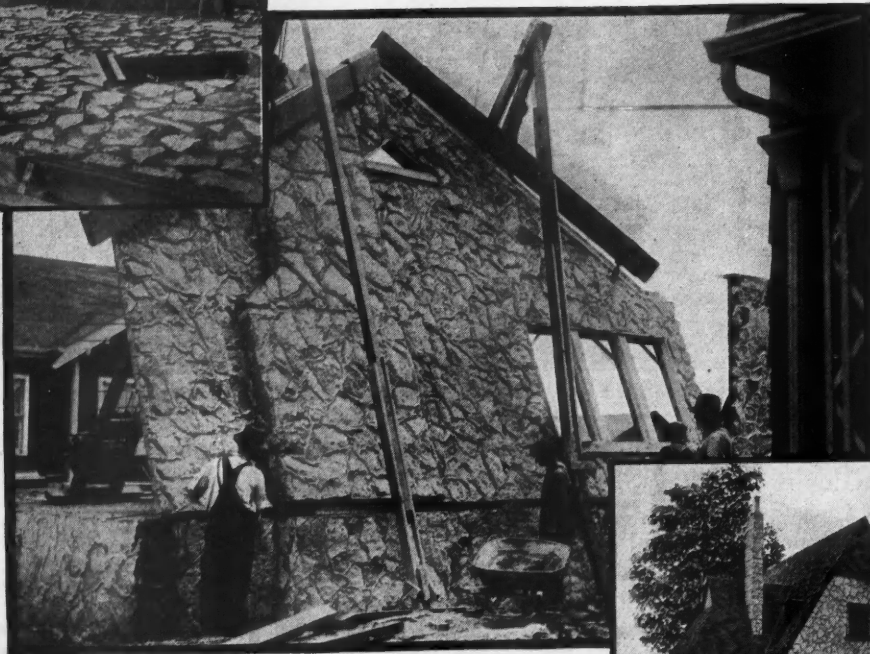
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

BUILD *The* EXCLUSIVE FRANCHISE for



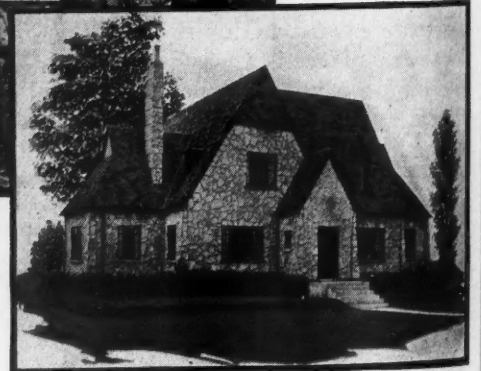
The photo above shows how Tri-Ply walls are built lying on a flat surface.

*Small Investment Required
~ We Stand Back of You*



At the left, a finished Tri-Ply wall being raised to its final erect position. Notice the beautiful exterior finish of thick, deep, "in-built" natural rock.

Below is shown a finished Tri-Ply home. Note the beautiful stone exterior.



What Is TRI-PLY CONSTRUCTION? PATENTS APPLIED FOR

Tri-Ply Construction is the new Monolithic Method of building homes of unusual beauty, permanence and economy. It differs from the customary methods of house building in two important fundamentals.

In the first place, the walls of a **Tri-Ply** house are **built flat on the ground** and then elevated, fully completed, into upright position.

In the second place, the entire wall is a single, solid, fireproof mass of three separate and distinct building materials, namely: the

outer surfacing, the inner core of cinder concrete and the layer of regulation insulating materials. Integrally bonded with one another, these materials become an indestructible, inseparable unit wall.

Tri-Ply Construction as the building world now knows it is destined to **revolutionize all previous building methods**. It offers to builders of the smallest bungalow or largest mansion new beauty, greater permanence, remarkable economy.

TRI-PLY *Way*

PATENTS APPLIED FOR
you-DOUBLE YOUR PROFITS

We Want a Reliable Contractor and Builder
Are You the Man?

In every community we are going to give one (just one) contractor the exclusive franchise for building by this method. You want to be the chosen one. Act at once. Remember success comes to those who keep abreast of the times. New methods are fast replacing time-worn, slow processes. Don't be left standing on the threshold of success. But get your franchise at once before your competitor steps in ahead of you.

Tri-Ply Construction is not an experiment but a tried and proven method of construction; for seven years we have been building homes by this method. It gives beauty, saves you time and money on materials and labor. Furnishes perfect insulation. Is absolutely fire-proof and indestructible. Unusual hazards such as storms, tornadoes, earthquakes, etc., will not affect Tri-Ply construction.

You Need No Specialized Mechanics

You use your own crew and buy your materials as usual from the local supply dealer with whom you are accustomed to deal. The process of Tri-Ply Construction is, of course, fully protected by Patents Pending. Spend a few minutes now and fill out the coupon below. It may mean thousands of dollars to you and it costs you nothing to investigate this remarkable method of construction.

We Assign Only One Contractor in a Given Territory

ACT NOW!

Mail the Coupon At Once

WATT MFG. CO.
 180 N. Michigan Boulevard
CHICAGO ILLINOIS

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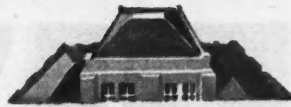
WATT MANUFACTURING CO.
 180 N. Michigan Ave., Chicago, Ill.

I am interested in Tri-Ply construction and your exclusive Franchise. Please send me complete details. I am a

Contractor Architect Prospective Home Owner

Name.....
 Address.....
 Town.....
 State.....

This places me under no obligation



Show Prospects...Kitchens of Prestige

To America's women, the name Kitchen Maid is a mark of excellence in kitchen planning. It suggests instantly that the apartment or house you are showing lacks no element of what is new and fine.

For Kitchen Maid Units have gained an enviable present—backed by a worthy past. They are the product of America's largest exclusive makers of built-in kitchen equipment. They represent years of experience in selection of materials, designing and craftsmanship. They are today's mode.

In the Kitchen Maid line you find units filling every kitchen need—in choice of Cactus Green, Dove Gray, Lama Tan, Travertine Ivory, Shasta White. Each unit is complete in itself—may be used singly or in a unit combination.

You find, too, many exclusive features which women appreciate—such as sanitary rounded inside corners, smooth doors and concealed hinges. Write for our catalog, dimensional drawings and prices.

WASMUTH-ENDICOTT COMPANY
1306 Snowden Street :: Andrews, Indiana
If in Canada, address Branch Office, Waterloo, Ont.



Free Kitchen Planning Service

If you will send us blue prints of your proposed kitchens or sketch showing dimensions and arrangement of windows and doors, we will send you, free of cost or obligation, suggestions for effective application of the unit idea to your plans.

Butlery Combination

No. 547 1/4 Kitchenette Assemblage

No. 640 N. X. Combination

No. 80 Dish Closet

Broom Closet and Ironing Board

Dinette Pulmanook

No. 656 Combination

KITCHEN MAID
STANDARD UNIT SYSTEMS

KITCHEN MAID

S T A N D A R D U N I T S Y S T E M S

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



“Well I’ve been a bull headed son-of-a-gun”

McINTOSH grinned, as Flaherty the contractor sputtered on:

“Guess I ought to have my head examined. Here I’ve been seeing those ads on the Clarke Sander guaranteeing 800 to 1600 square feet of floor in eight hours—but I never thought to investigate.

“Worse’n that, Clarke salesmen have tried to show me a demonstration but I was too pig headed. Said I had the big machines—and that it took a lot of weight to sand a floor. Strike me pink for a barnacled old Moss back” —and red-faced Flaherty stopped for lack of breath.

“Ah weel—tis an ill wind that blows naeboid guid” quoted McIntosh with a twinkle in his eye.

“Yes” broke in Flaherty, “my mule-headedness gave you the profits on a job I could have put in my own pocket.”

“Well, Flaherty, ye hae nae kick comin’, you delivered your job on time with no penalty—thanks to me and The Clarke, and ye hae learned a lesson so ye’ll not be caught in a jam again. And for guid measure I’ll add some free advice and that is, when ye air employing men or buying machinery, pay for the work they do, not their size!”

For a second Flaherty looked as if he would explode and then said with a laugh. “Mac, advice is the only thing you ever did give free, but I’ll admit that if you’d given me that advice a year or two ago and I’d a taken it, it would of saved me a barrel of money. But at that I’m not so bad off. As you said, ‘tis an ill wind that blows nobody good.’

“If I had not had this penalty job—or if I had had power wires connected up, I would probably have finished the job some way with my big machine and would probably gone on using it for

months to come instead of doing more work at less cost with the Clarke.

“But I was up against it—and you showed me that the Clarke—easily carried with one hand, and attached to any lighting circuit could run rings around the big machine.

“So instead of beefing about the profit I paid you, I’m going to thank you for teaching me the best lesson I’ve ever learned. I’m ordering a Clarke by air mail tonight.”

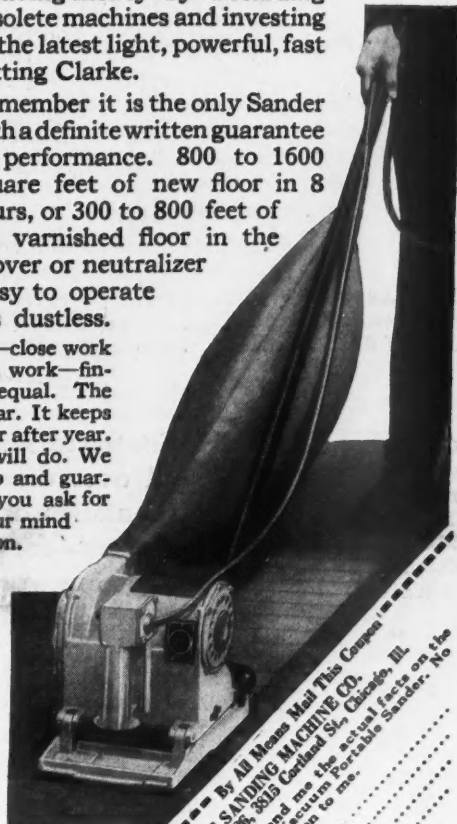
There’s many a contractor like Flaherty who is saving money by discarding obsolete machines and investing in the latest light, powerful, fast cutting Clarke.

Remember it is the only Sander with a definite written guarantee of performance. 800 to 1600 square feet of new floor in 8 hours, or 300 to 800 feet of old varnished floor in the

Don't buy any Sander, anywhere, at any time, at any price, until you see what the CLARKE can do for you.

same time. No varnish remover or neutralizer necessary. It’s almost as easy to operate as a vacuum cleaner and as dustless.

In quality work—quantity work—close work or open work—floor work—bench work—finishing or trim work, it has no equal. The Clarke surfaces more feet per dollar. It keeps plugging day in and day out—year after year. You need the work this Clarke will do. We will show you the work it will do and guarantee it to keep doing it. Can you ask for anything more? While it’s on your mind—lick a stamp and send the coupon.



By All Means Mail This Coupon! CLARKE SANDING MACHINE CO. Dept. A-26, 3815 Cortland St., Chicago, Ill. Please send me the actual facts on the Clarke Vacuum Portable Sander. No obligation to me. Name..... Address..... City..... State.....

Answers all calls



CLARKE SANDING MACHINE CO. Dept. A-26 3815 Cortland Street Chicago, Ill.

Originators, and, for 11 years Manufacturers of Portable Sanding Machines

... and again
A FULL PAGE in

THE SATURDAY EVENING POST

June 9, 1928

THE SATURDAY EVENING POST

Like furniture...
a CROMAR Oak Floor is completely finished at the factory
... simply nail it down
and use it!



After breakfast—the room cleared and the carpenter ready to nail down the finished CROMAR Flooring



In the evening of the same day—the last nail driven and the new CROMAR Floor in use

EVERY strip of CROMAR Oak Flooring is scraped, sanded, filled, varnished and polished at the factory—by patented machines.

That results in two principal advantages—

- 1—Machines can do all those things more thoroughly, more perfectly, than the best trained human hand, and
- 2—You save all the time it takes to do them—and all the irritating mess and trouble and delay.

When the beautifully finished strips of CROMAR Oak Flooring reach you, crated in compact bundles, there is not another thing to do but nail them down—in a new home, or right over your old floor.

CROMAR
FACTORY FINISHED
Oak FLOORING



Send for a free sample of CROMAR and try the famous CROMAR Floor. Test on its surface. You will be amazed at the smooth and crack-free surface, but the CROMAR finish will hold up—no other inferior finish

The complete job (just nailing, remember) is done at the speed of a room a day. Started in the morning—completed in the evening. Think of it! And a CROMAR floor costs you no more than a hand-finished floor! Write for booklets which tell of CROMAR's numerous technical advantages in an interesting non-technical way.

CROMAR is sold by lumber dealers, but carpenters and contractors install it. Consult any of these for further information. If you have the slightest trouble in getting satisfaction, write us and we shall give your inquiry immediate personal attention.

THE CROMAR COMPANY, Williamsport, Pa.

CROMAR makes you completely independent of floor-finishers.

CROMAR is scraped, sanded, filled, varnished, polished, and TREATED TO RESIST MOISTURE—at the factory, by patented machines.

Contractors and Jobbing Carpenters all over the country are picking up thousands of CROMAR orders from owners—for re-laying and new construction work on homes, apartments, hotels, and similar semi-public buildings.

Read the "ad" here reproduced—it explains some of the important CROMAR advantages

which cause owner or builder to give preference to *Factory Finished Oak Flooring* over *hand-finished* hand wood flooring.

Let me send you a free sample of CROMAR. Then go and get price from your Lumber Dealer.

W.D. Crookings

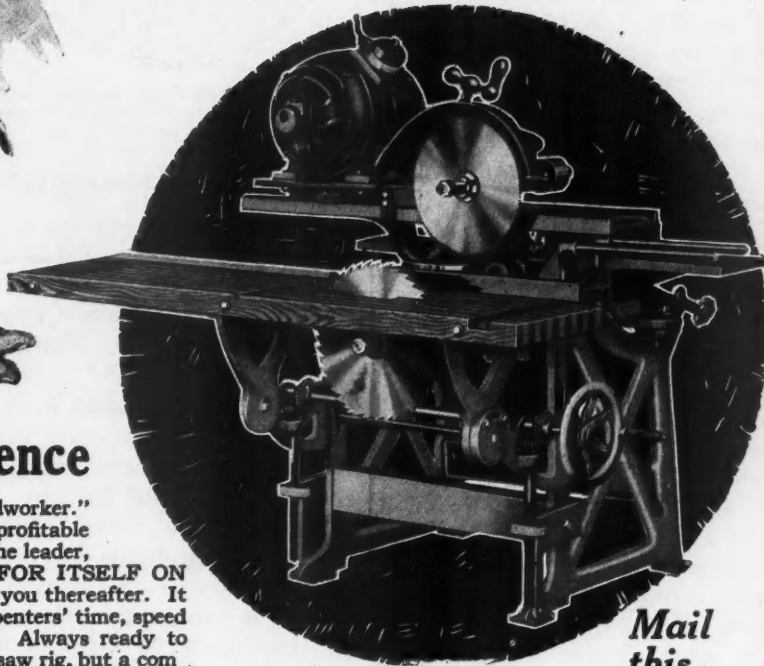
Sales Manager
THE CROMAR COMPANY
Williamsport, Pa.

"It Has No Equal" I've Used It For Years And I Know!



"I have been a carpenter and builder for more than 30 years. I bought a 'Master Woodworker' several years ago, and I never knew till then what it was to have all the hard work taken out of a job. Since then I have had demonstrations of other machines, but I must say the 'Master' is by far the best. It is the fastest, truest and most dependable woodworker on the market. I recommend it above all others."

—E. A. Doty, Bloomsburg, Pa.



Profit By ^{This} Man's Experience

Don't experiment. Buy the "Master Woodworker." You will find it the most satisfactory and profitable machine on the market. Twelve years the leader, though often imitated. **IT WILL PAY FOR ITSELF ON THE FIRST JOB**, then make money for you thereafter. It will save you the cost of five expert carpenters' time, speed up your production and eliminate waste. Always ready to work; reliable, powerful, efficient. Not a saw rig, but a complete woodworking outfit, **12 MACHINES IN ONE**. It crosscuts, rips, dados, does routing, planing, rabbeting, boring, grinding, moulding, mitering, mortising, etc. No vibration; work always in plain sight. **SOLD ON EASY TERMS**. A small down payment; then pays for itself from profits earned. Sixty-day money-back guarantee protects you. Machines in stock for quick delivery. Send coupon for full details now.

Pictured is the portable No. 12 "Master Woodworker." Driven by electric motor or gasoline engine. It is also made in two larger models for job and millwork, and in one smaller size.

Mail
this
Coupon

B-1

The
"MASTER
WOODWORKER"

Congress and Brush Sts.,
DETROIT, MICHIGAN

Send me your FREE catalogue
and easy-payment plan.

NAME.....

ADDRESS.....

The "MASTER WOODWORKER"

Congress and Brush Streets, Detroit, Michigan

(Established 1917)

In 1900 Ludwig Hatschek invented the process for making asbestos-cement products and coined the name Eternit

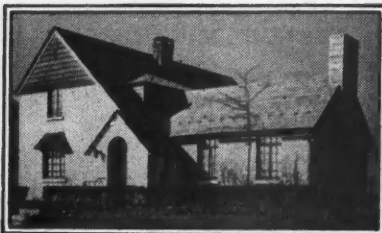
In 1928 that industry, started by Hatschek, reaches its summit in the great new Eternit factory at St. Louis

LUDWIG HATSCHEK, an Austrian, wanted a better building material. Something entirely different! He knew—and for that matter, everyone else did—that asbestos was absolutely fire-proof. He was equally familiar with the durability of Portland cement—its wonderful resistance to time and weather. Working with these two products, he combined them in an exceptional manner. Thus the process for making asbestos-cement products was perfected and the name Eternit born.

Other Eternit products

Shingles were but the first step. Soon came Eternit Asbestos Lumber—made of the same fine materials and in the same manner, but in larger sheets for roofing and siding. Then corrugated roofing, which lately reached its finest development in Eternit "Big-Seven" Corrugated Sheets—a much stronger, more economical roofing for industrial buildings, which is rust-proof, fire-proof and never needs painting.

All Eternit factories work under the Eternit process. Every invention of one becomes the property of the others. Every achievement is passed on, every discovery shared.



Shows the exclusive Eternit Horizontal Shingles applied. This method permits pleasing shadow effects.



Eternit "Big-Seven" Corrugated Sheets have extraordinary strength—made possible by the 7" corrugation span.

The great St. Louis factory

Now comes the great new American factory at St. Louis—building on the firm foundation of all the Eternit experience—using the identical Eternit process.

The Eternit process is different. It contains more than the ordinary mixed mass of asbestos fibers and cement. It distributes the choicest fiber evenly throughout Portland cement—just as steel is used to reinforce concrete. Because of this process, all Eternit

products are tougher and stronger—more resilient. They won't curl or raise or warp. They won't rot. Unlike wood or asphalt products, they are absolutely fire-proof.

Eternits—exclusively colorfast!

An exclusive color process, recently developed, makes Eternit shingles absolutely colorfast. An exclusive method of shingle application was perfected—the Eternit Horizontal, which obtains unusual shadow effects. Other Eternit products which will have unusual interest for builders, dealers, roofers, and industrial engineers will be announced in the near future.

Test out Eternit Asbestos products for yourself at nearby Eternit dealers. Let us send you more information about



Eternit Asbestos Lumber on the Convention Hall, Wildwood, N. J. Needs no painting. Salt air will not affect it.

any of these products. Mail the coupon. Eternit, Inc., 15th and Locust Streets, Philadelphia. Offices and warehouses at Boston, Jacksonville, Houston, New Orleans, St. Louis. Factory at St. Louis.

Eternit
Reg. U. S. Pat. Off.

ASBESTOS SHINGLES
ABSOLUTELY COLORFAST

ETERNIT, Inc., Dept. A, 15th and Locust Sts., Philadelphia, Pa.
 Please send me full information on:

Eternit Asbestos Shingles Eternit Asbestos Lumber
 Eternit "Big-Seven" Corrugated Roofing and Siding

Name _____
 Street _____
 City and State _____
 Dealer's Name _____

Quick Profits for Builders

Nation Wide Campaign of "MASTER MODEL HOMES" Teaches a Timely Lesson of Better Building, Consumer Approval, and Profitable Sales for Builders



Are We Going Color-Crazy?

A Check-up of the Present Buying Trend Among Home Seekers Points That Way

By BERNARD L. JOHNSON,
Editor, American Builder

THE American public is color mad and period crazy and the builder who does not study these tendencies or hire someone to do it for him will not sell his houses as quickly in the future as the builder who meets this demand, according to L. Porter Moore, president of the Home Owners' Institute. The Institute is engaged in building, in key cities throughout the United States, model homes that are open for public inspection under the auspices of local newspapers. This organization completed a program of 74 model houses in 28 cities last year and during this time made a careful analysis of the demands of the average home buyer and builder in cities from New York to San Francisco. The Institute plans for 1928, including the architectural designs to be used, the equipment to be specified, and the furnishings to be selected are based on this survey.

"A desire for pale pink bathroom fixtures, apple green washing machines, scarlet furnaces, and bright blue walls is sweeping the country," says Mr. Moore. "The public wants colored roofs, brilliant interiors and tinted gas ranges.

Material and equipment manufacturers anticipated this trend with uncanny foresight for most of the bright wares on the building material and equipment market have been developed during the past year, but not a minute too soon, in the opinion of the merchandising experts who produced them.

"It is interesting to trace the history of this rise of color and style which is not the flair of the moment, but a demand that will be sustained for many years to come. Color probably originated twenty-five or thirty years ago in our rural districts where the farmers painted their houses in ugly red and lemon yellow tones. Late, in California appeared the brilliantly colored stucco house, but it was necessary for the public to change from Puritanical and Early Settler ideas on architecture before the color age really began.

"It is here that the relation begins between the development of style and color. A dozen years ago, except for small areas on the western coast, American architecture was a cut and dried affair. The Colonial and the variations

of the Colonial called for only white and green tones. The squat brick houses of that time required no colors at all.

"Ten years ago, thousands of young draftsmen, architects, and future architects, serving with our army overseas, were favorably impressed with French and English architecture; and it was this influence principally that brought the English cottage and the Norman and French designs to our western plains and to all parts of our country.

"These architectural styles demanded color and more color as the public developed a broader appreciation of Old World architecture. Close on the heels of this architectural upheaval, came the material manufacturer with the vari-colored roof, the steel casement windows, the period lighting fixtures, and the softly tinted walls, necessary for this new—for America—design.

"The feeling for interior color began, as was natural, in a very subdued and modest way. Women who did not know whether it was quite nice to tint kitchen and laundry walls, began with faint tones, and ended this year with bright blues and vivid greens. It is interesting here to note that the influence of the early Dutch kitchens, combined with the other factors described above, has carried the decoration of our kitchens around a cycle. The old fashioned kitchens, especially the early Dutch ones, were gay with

chintz, and blue and yellow china.

"Then came the efficiency experts who produced the sanitary, dazzling white kitchens and for years it was considered all wrong to have a spot of color in this room.

"With the advent of the new architectural designs and the consequent use of color on the exterior, came the modest border of decorative colored tile for the bathroom, kitchen, and laundry. Today, bathroom walls are frequently made entirely of colored tile, worked in beautiful and intricate patterns, resembling mosaic work, or finished in colored murals. The fixtures vary from pale pink to soft yellow and the fittings can be gold plated, hand hammered, or inlaid with colored enamel to match or contrast with the walls or fixtures. Style has been developed also by the manufacturer of bathroom materials and equipment to keep pace with the architectural changes and the desire for color. The cold, straight edged plumbing fixtures have been abandoned and curved corners, decorative inlays, and graceful contours have been developed in the past twelve months by these progressive interests because these styles appear 'softer' and harmonize better with the flower covered walls and orchid rubber shower curtains.

"Manufacturers do not experiment for months and go to the tremendous expense of putting new products on



The Kind of Kitchen the Home Owners' Institute Says the Modern Woman Wants. The sink is made of acid resisting enamel and fittings that will not tarnish or corrode. The walls are of bright colored tile and colored linoleum is used on the floor. Note the casement windows and gay chintz curtains.



A Modern Bathroom with a Mural Background Painted in Soft Green, Pink, Yellow and Orchid. The bathtub is of yellow, green and orchid tile, combined, to harmonize with the walls and is on a raised dais of yellow tile.

the market if they are not convinced that huge sales will follow. It is true that sometimes such manufacturers make mistakes, but there has been no miscalculation in the production of colored materials and equipment. A large manufacturer is now perfecting an apple green dishwasher because the old dishwashers look out of place in the vivid kitchens of today, another manufacturer is now selling brilliant red heating boilers because of the vogue to use the basement as an extra room, and so the heating plant will not spoil whatever decorative scheme may be undertaken.

"And the surprising thing is that all of this new style and color is obtainable for the average man of average means who buys or builds a small

home, which is the reason why the builder must keep his ear to the ground and be informed on what the public knows it can have. There are now available stock lines of period equipment and fixtures, made of quality materials, priced low enough for the small and modest home. Many of these items, such as wrought iron lighting fixtures, have had such enormous sales, showing the trend of public taste, that it is now possible for the average man to purchase the kind of equipment that was formerly only made to order, and consequently high in price.

"Many builders have realized the importance of the facts I have set forth above and these builders will sell their houses quicker, in small towns and big towns, than the builder who disregards them.

"One of the officials of the sale agents for the Van Sweringen Brothers, the famous developers and builders of Cleveland, Ohio, told me early in May



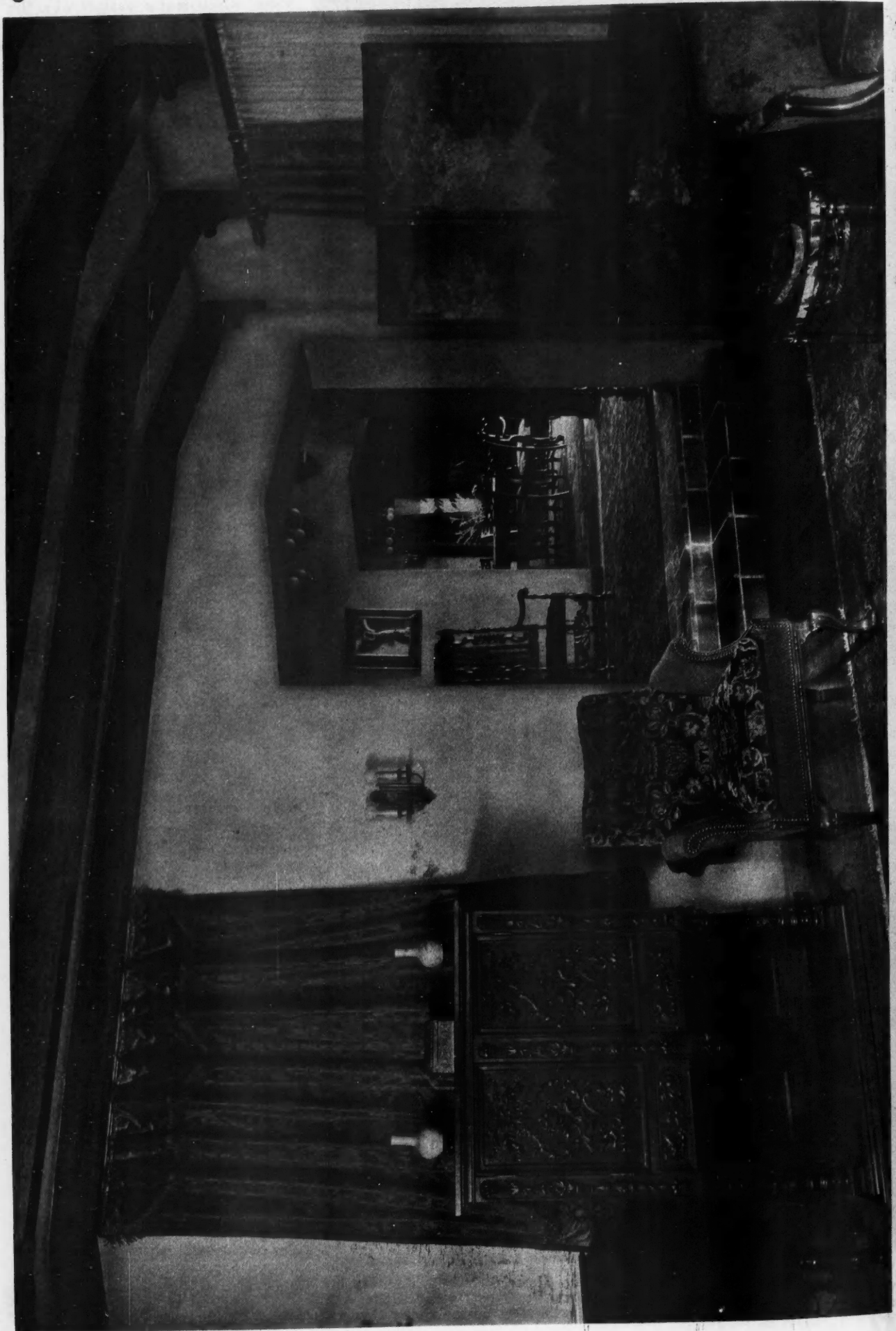
This Charming Interior of the Birmingham, Alabama, Age-Herald-News Master Model Home Shows the Tendency Toward Rough Plaster Wall Interior Finishes, Though the Architecture Is Decidedly of an English Trend.



Sturdy Construction and the Use of Quality Materials in This Good Architectural Design Shows a Master Model Home Recently Opened Under the Auspices of the Birmingham, Alabama, Age-Herald-News in the Home Owners' Institute Nation-Wide Program.

that any builder who does not produce houses beyond the average cannot hope to sell his houses quickly. His houses may be as good and better than other houses in which the public feeling on style and color has been satisfied, his houses may be of equal value, but from now on they will not sell as rapidly.

"This does not mean that the public wants freakish designs of trick rooms or gaudy or inharmonious color, or



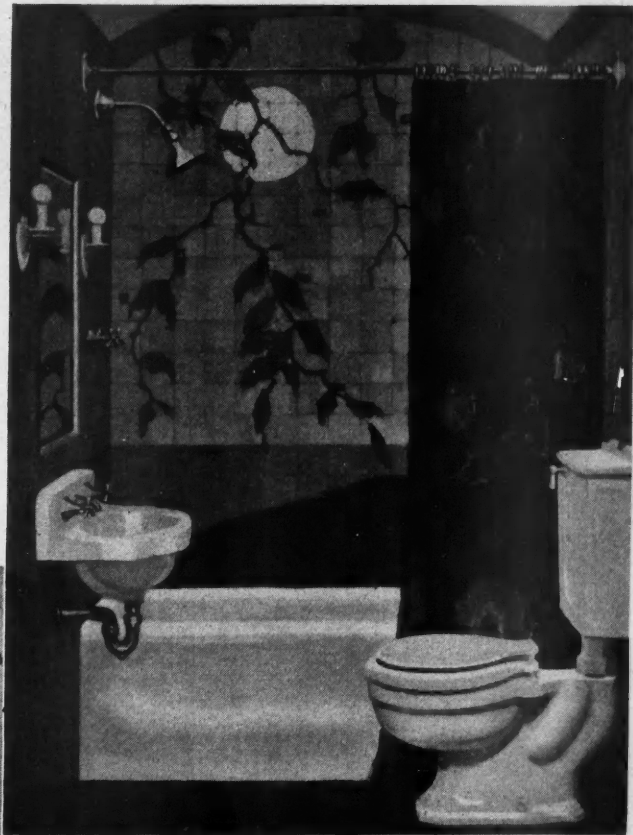
This Interior of a Master Model Home Sponsored by the San Francisco Chronicle Indicates to What Great Lengths Local Furniture Stores and Their Interior Decoration Departments Will Go Toward Co-operating with Realtor-Builders to Dress Good Construction with Good Furnishings to Promote Profitable Sales.

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too much of it. The public has developed an amazing good taste and it wants the unusual rather than the freakish, some slight variance rather than the bizarre."

Included among members of the Home Owners' Institute who are manufacturing materials and equipment in accordance with the public demand described by Mr. Moore, and whose materials and equipment will be used in the Institute 1928 model homes are the following: Johns-Manville Co., originators of color in roofing materials; Truscon Company, steel casement windows; Standard Sanitary Manufacturing Co., colored bathroom fixtures and fittings; Kerner Incinerator Co., chimney fed incinerators; Paine Lumber Co., Ltd., painted or lacquered miracle doors; Kelly Island Lime & Transport Co., materials for wall finishes that may be colored in the mixture or painted later; American Radiator Co., red boilers; General Electric Co., colored electric refrigerators and concealed colored lighting effects; McKinney Mfg. Co., who first produced wrought iron hardware; Cephas B. Rogers, Inc., wrought iron lighting fixtures, first organization to produce for national distribution.



Typical of the Crowds That Attend Model Home Official Opening Day Ceremonies. This shows a portion of the crowd in excess of 5,000 persons who inspected the New York Herald-Tribune Model Home at Glen Oaks, Rye, New York, recently. Above—The five-foot or extra bathroom, in which the color effects are concentrated on the walls. A pale yellow moon behind a branch of golden oak leaves, against a faint orchid background and a gaily decorated, purple shower curtain, set off the dazzling white fixtures. Note the curved corner and graceful contours of the fixtures.

This Interior of a Master Model Home Sponsored by the San Francisco Chronicle Indicates to What Great Lengths Local Furniture Stores and Their Interior Decoration Departments Will Go Toward Co-operating with Realtor-Builders to Dress Good Construction with Good Furnishings to Promote Profitable Sales.

WINDOWS *of* BEAUTY



NOW AVAILABLE

MODEL NO. 5 TRUSCON CASEMENTS *in Single and Combination Units*

Truscon announces a new and distinctive type of steel casement, Model No. 5, in factory-built single and combination units. These Casements are a forward step in casement window equipment possessing a high degree of beauty, utility, permanence and economy.

Model No. 5 Truscon Casements are delivered complete ready to fill the opening and can be set up in place for the glazier with a minimum of field labor.

These Casements provide the latitude so desired by the architect and builder in the execution of his design and assure to the owner lasting satisfaction and the greatest investment value.

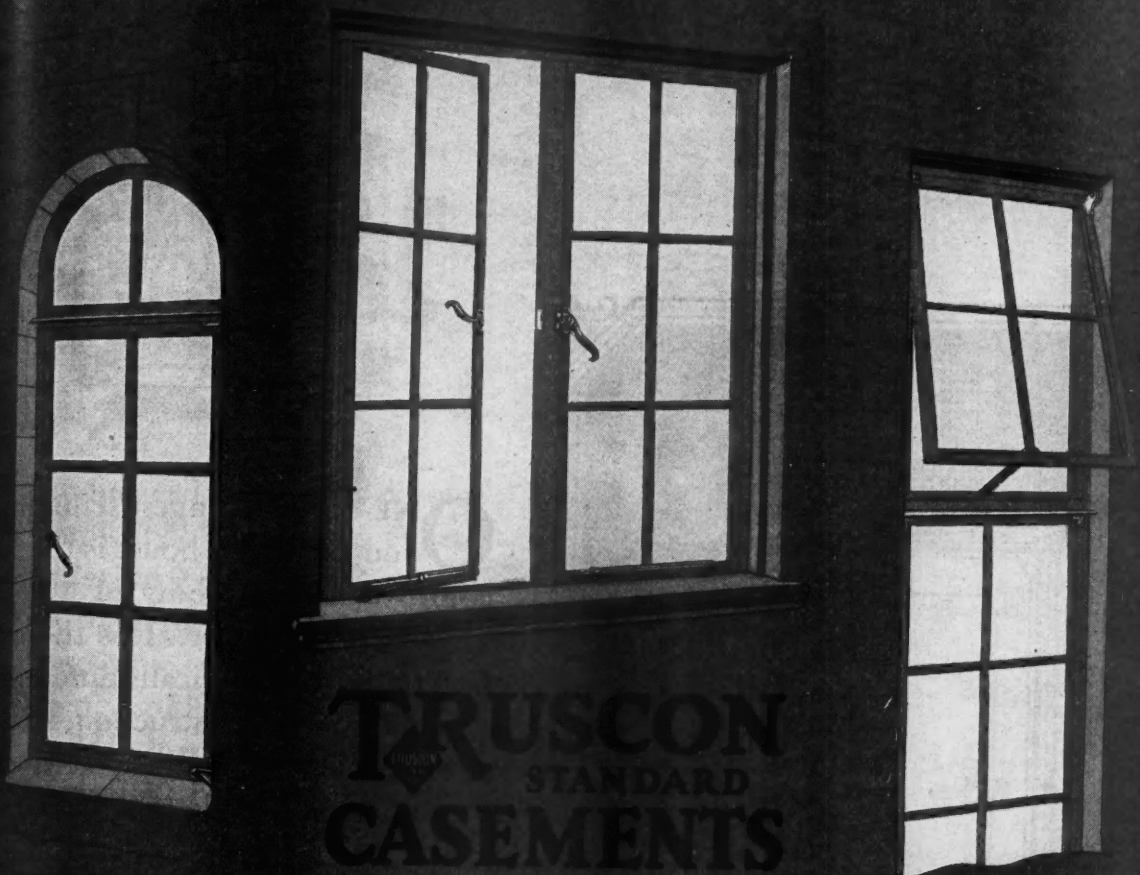
Illustrated Catalog and Architectural Details on Model No. 5 Truscon Casements will be sent on request.

TRUSCON
STANDARD
CASEMENTS
MODEL NO. 5

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO
ESTABLISHED 1903

The World's Largest Manufacturer of all Types of Steel Windows. Warehouses and Offices in all Principal Cities.

UTILITY *and* ECONOMY



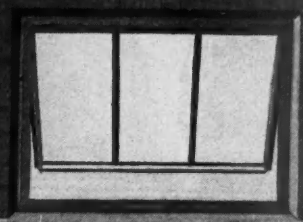
TRUSCON STANDARD CASEMENTS MODEL NO. 5

Single and Combination Units for Practically any Window Opening

Truscon Casements are not only architecturally beautiful but are extremely practical for any building. The combination units, completely assembled at the factory, and the various sized single units, together with rectangular and semi-circular transoms, provide for all desired window openings.

Truscon Casements are easily and quickly installed in any type of wall construction saving labor and time in the field. Priming coat applied at the factory reaches every part of the metal assuring protection and it is only necessary to attach hardware, shipped complete with the casement.

*Write for Illustrated Catalog and Architectural
Details on Model No. 5 Truscon Casements*



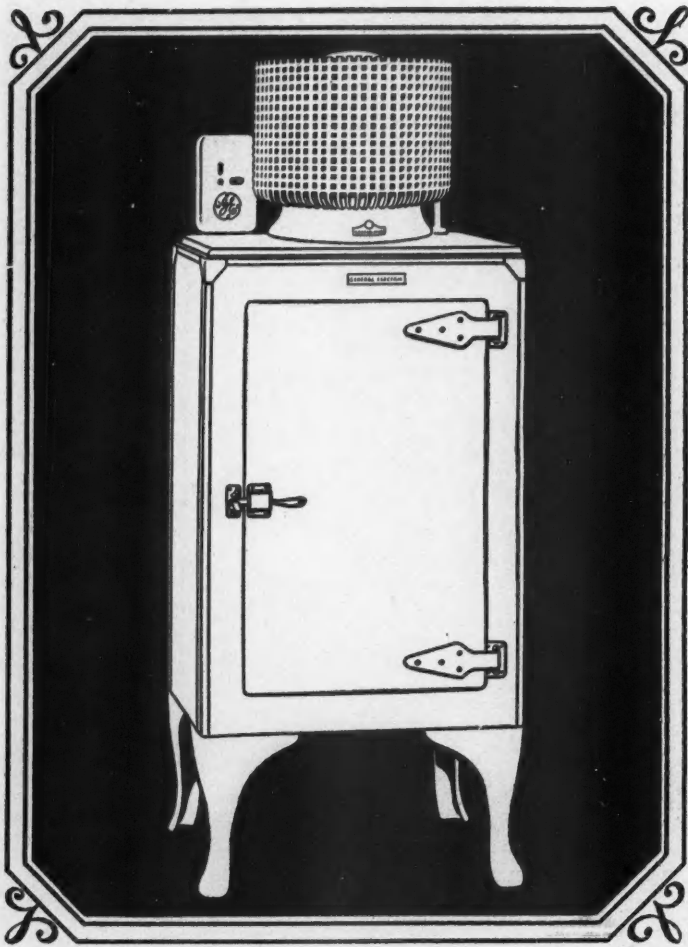
TRUSCON COPPER STEEL BASEMENT WINDOWS

Installed in any type of foundation. Open and close easily; readily screened; never stick, leak or need repairs. Sash and trim in appearance; made of rust-resisting copper steel or hot dipped galvanized. Available in four standard sizes and furnished complete. No hinges or locks to buy, no fitting of sash to frame and no priming coat of paint to apply. Cost no more than ordinary windows and add 50 to 60% more daylight.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO
ESTABLISHED 1903

The World's Largest Manufacturer of all Types of Steel Windows. Warehouses and Offices in all Principal Cities

Quality refrigeration can —this “years ahead” refrigerator



This is the new de luxe apartment house model... finished in porcelain, inside and out. It has the same mechanical perfection as the larger models. While only 24 inches wide and occupying but $3\frac{1}{2}$ square feet of floor area, it has 6 square feet of food storage space.

ONE of the strongest selling points you can give a house is the lasting comfort and economy of a General Electric Refrigerator. It is the one refrigerator that is radically different from all others in its construction, its operation . . . and its results. It is indeed “years ahead” in design.

Architects are specifying them

The better architects and the most progressive builders, after carefully considering all electric refrigerators, have chosen the General Electric. The prestige of the General Electric Company is one important factor in their choice. They know that any product which is the result of fifteen years of research in the General Electric laboratories must be most efficient in operation.

GENERAL ELECTRIC Refrigerator

ELECTRIC REFRIGERATION DEPARTMENT • OF GENERAL ELECTRIC COMPANY • HANNA BUILDING • CLEVELAND, OHIO

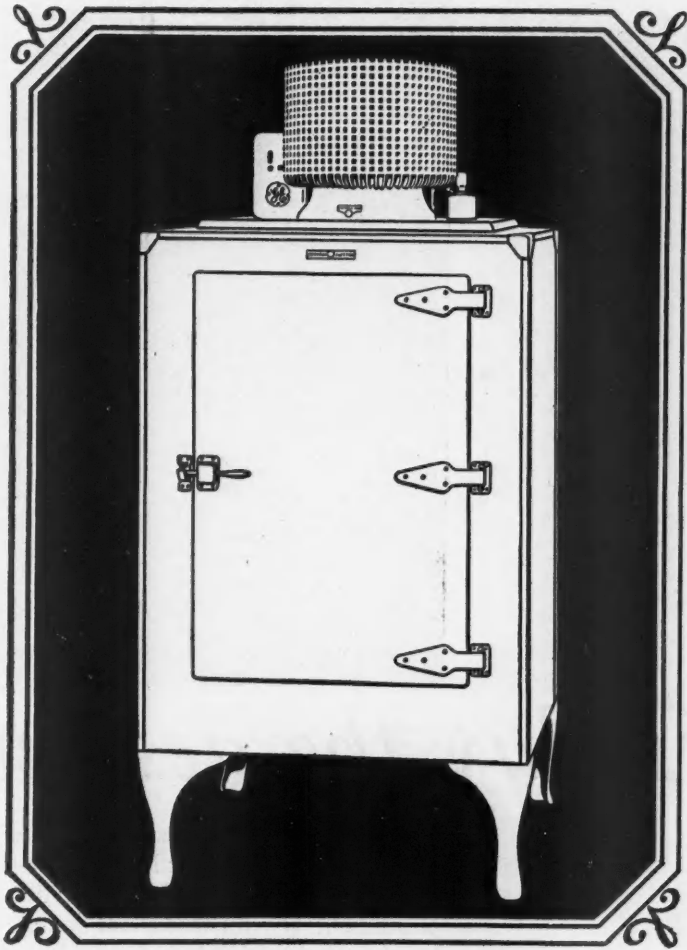
turn prospects into buyers has an unusual sales appeal



They are influenced, too, by its revolutionary simplicity. There is no expensive installation cost. The General Electric Refrigerator is installed by plugging it into any convenience outlet. No plumbing, soldering or extra wiring are needed. It is *unusually* quiet. It has no drain pipes, belts or fans. All its mechanism is enclosed in one hermetically sealed casing—forever safe from dust and difficulties. It is completely assembled and tested in the factory.

Send for Complete Catalogue AB6

To get an idea of the wide range of models—the various sizes and finishes—just send for Catalogue AB6. It gives complete specifications of these refrigerators which are developed, made and guaranteed by General Electric.



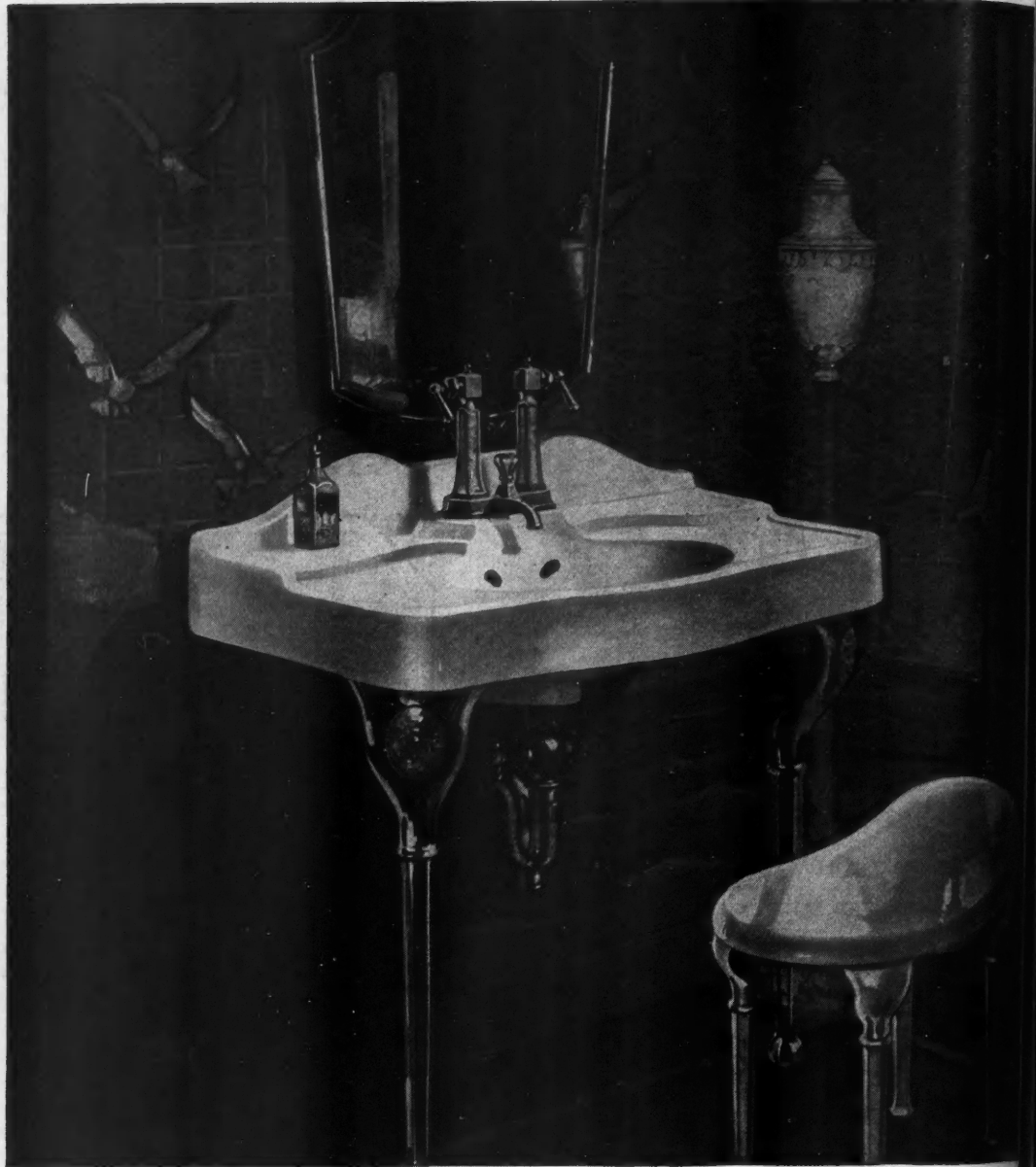
This is the standard 5 cubic foot model. It has a shelf area of 9 square feet for food. It is ideal for the average family of four or five. Other General Electric Refrigerators in 7, 9½, 13 and 17 cubic foot sizes.

GENERAL ELECTRIC Refrigerator

ELECTRIC REFRIGERATION DEPARTMENT • OF GENERAL ELECTRIC COMPANY • HANNA BUILDING • CLEVELAND, OHIO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

279



Today the desirability of a home is

A fresh flowering of genius in home decorative treatment has come at last to that long neglected room—the bathroom. It has found its inspiration in the new "Standard" styled fixtures and fittings. In the bathroom design here illustrated the "Templeton" lavatory is the essential factor around which a harmonious decorative scheme has been developed.

It is modeled in one-piece Genuine Vitreous China—with a grace of line and form in dressing table effect and a convenience never before available in a lavatory.

The fittings are as original as the lavatory.

Today no home is truly modern without a bathroom as colorful and beautiful as it is

convenient. Prospective tenants and purchasers often use the plumbing fixtures as the yardstick by which to measure its value. Because of this, shrewd contractors and builders install "Standard" Plumbing Fixtures and Fittings in kitchen, laundry and bathroom. They know the "Standard" trademark which is impressed in every product of "Standard" manufacture is recognized the world over as a symbol of highest quality and distinctive style.

Kitchen work centers at the sink. Of all home fixtures, prospective tenants and home owners demand that it should give the utmost in cheerfulness and convenience. Today housewives want a sink



Hexagonal fittings are executed in Chromard—the platinum-like, non-tarnishing finish with or without panels of hand-hammered Chromard in natural color, antique or green gold.

“Standard”
PLUMBING FIXTURES

“Standard” PLUMBING FIXTURES



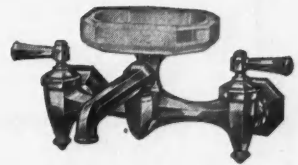
is judged by the Plumbing Fixtures

that fits under a low window. They want a sink with a compartment that is deep enough to prevent over-the-rim splashing and allow plenty of working room under the spout.

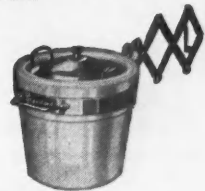
The “Standard” “Three 8’s” Sink—with 8-inch low back, 8-inch deep sink compartment, and 8-inch wide front—meets every requirement. The “Three 8’s” is the ideal sink. Kitchen cleansers, mineral waters, even fruit and vegetable acids cannot mar its glistening beauty. They cannot roughen or discolor its Acid-Resisting Enamel.

The “Three 8’s” Sink in all needed patterns and sizes and other new plumbing fixtures and fittings are on display at “Standard” Showrooms in principal cities. The trademark “Standard” A-R is impressed in every “Three 8’s” Sink. Be sure to see them before you build or remodel another home or apartment. They are available in several beautiful colors as well as white. Write for the new book “Standard” Plumbing Fixtures for the Home. It contains a wealth of ideas and suggestions for the planning and arrangement of bathroom, kitchen and laundry and is sent on request.

Standard Sanitary Mfg. Co.
PITTSBURGH



This swinging-spout faucet of beautiful octagonal design is finished in Chromard. It has the sheen of polished silver and will never tarnish or corrode.



The directly-attached garbage container of Genuine Vitreous China with removable aluminum receptacle may be pushed back under the sink on a folding bracket.



Nine Duplexes, Liberty Heights Ave., Baltimore, Md., J.T. Mathis, Builder.

Nine Duplexes in a Row—and not a Single Garbage Can!

WHEN a builder uses the Kernerator for one building that's interesting. Of course, he may only be experimenting—learning if it really does make sales and rentals easier.

But when a builder like Mr. J. T. Mathis of Baltimore puts the Kernerator into every one of nine duplexes — that's proof!

Here's why Mr. Mathis finds the Kernerator profitable to include: back lawns are not strewn with refuse by stray cats and dogs and are therefore as clean as the front lawns—and that's clean! Complaints from the tenant in the lower flat, and ensuing strained relations are eliminated, because the stairways and pathways have no scraps of garbage dropped on visits to the garbage can—and that means renewed leases from satisfied tenants!

There's no feeding ground to attract roaches and rodents — no obnoxious odors from stench-filled garbage cans — no attraction for germ-laden flies before they frolic in kitchens and bedrooms! And basement trash piles [cause of 75% fires] are ended.

All garbage and waste are dropped through handy hopper doors in the kitchens of both flats and fall to the combustion chamber in the basement. An occasional match burns the air dried accumulation without odor and sterilizes bottles, tin cans and other metallic objects for removal with ashes. No fuel or upkeep necessary. Lasts as long as the building.

Duplex Models as low as \$150 (\$75 per family) — and the masonry adds but little more when regular chimney is used. See Sweet's; write for catalogs or phone local representative.

KERNER INCINERATOR COMPANY
753 E. WATER ST. (Offices in 89 Cities) MILWAUKEE, WIS.

KERNERATOR

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

*Garbage and Waste Disposal
without Leaving the Kitchen.*

Three of a group of six two-family houses, Gardner Road, Brookline, Mass., all six of which are Kernerator-equipped. Mr. Edward Ansin, Owner and Builder.



The Kernerator was selected for each of the Home Owners Institute Model Homes being built in 30 principal cities.

Duplex in Shaker Heights, Cleveland designed by Bloodgood Tuttle. Builder, B. J. Calder. Contractors, Alger & Knowlton.



Duplex Residence of Dr. Otto Geier, 1509 E. McMillan Street, Cincinnati.





This house at St. James Wood, Piedmont, California, illustrates the pleasing effects easily obtained by the use of Johns-Manville Asbestos Shingles. Architect—Miller and Warecke, Oakland, Cal. Roofing Contractor—General Roofing Company, Oakland, California.

Profits are Greater, Sales Quicker with Johns-Manville Asbestos Shingles

THE Johns-Manville national advertising campaign is seeking out the prospective house builder in your neighborhood. It will give him new information about the importance of roofs. It will help him to choose his roof from materials that will provide safety from fire, permanent beauty, and long wear. To the prospective house builder, Johns-Manville

Rigid Asbestos Shingles mean that the house is well built from top to bottom.

Try Johns-Manville Asbestos Shingles on your next job, and let them help you sell your houses. Send the coupon for full information concerning the way in which Johns-Manville Rigid Asbestos Shingles have been successfully used by builders everywhere.

MASTER of ASBESTOS
Johns-Manville
Rigid Asbestos Shingles

JOHNS-MANVILLE CORPORATION
New York, Chicago, Cleveland, San Francisco
Branches in all large cities
Canadian Johns-Manville Co., Ltd., Toronto
(Mail this coupon to branch nearest you)

Please send me information about using
Johns-Manville Asbestos Shingles on houses
built for sale.

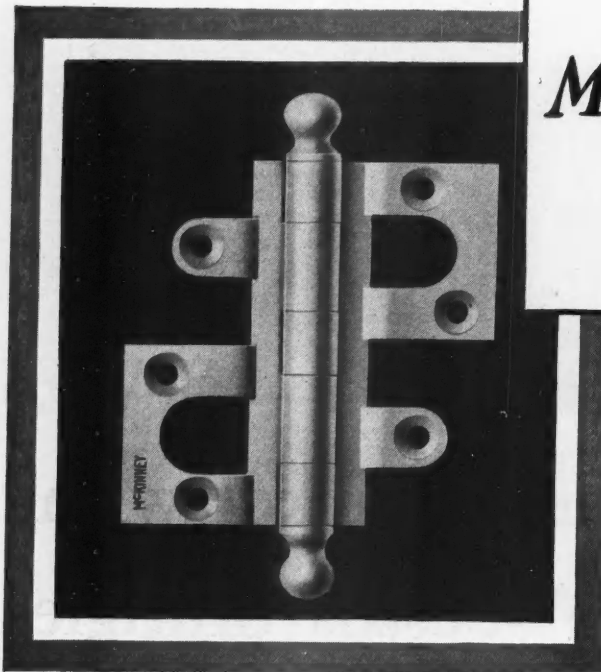
Name

Address

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

Hang a Door in 10 Minutes

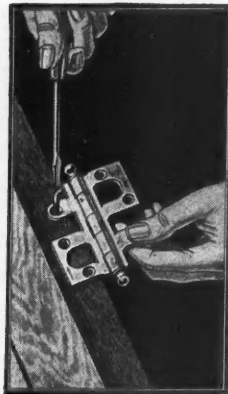
No
Mortises
to
Cut



with this new McKinley "Non-Mortis" Butt

It makes light work of what has always been a tricky job. You can hang a door *without cutting a single mortise*. The doors go up like magic—a third the former time. When in place, there is no difference in appearance from the usual job. The barrel of the hinge is not changed in any way.

The leaves of the McKinley Non-Mortis Butt close one within the other, to the thickness of a single leaf. (See illustration.) On any job where you do not have to work to a knife-edge fit between jamb and door, you can use the Non-Mortis Butt—and you'll breeze through with a speed that will surprise you. For operation houses, for average single houses where you are holding a tight rein on time and costs, you'll



find nothing to equal this new McKinley product

It is now ready in all standard finishes, in two weights. Sizes for doors: 3"x3", 3"x3½", 4"x4"; for cabinets: 2½"x2", 2½"x2½". Begin now, take advantage of the profit-making features of this hinge. Write for information, to McKinley Mfg. Co., Pittsburgh, Pa.

Fit your door to allow for the thickness of single leaf, without mortising either jamb or door. Fasten swinging leaves of both butt to door and the fixed leaf of the upper butt to the jamb, measuring in the usual way. The swedging of the leaf aligns the hinge automatically, without mortising. You can't go wrong. Place door in position, slip pin in upper hinge and fasten the fixed leaf to lower hinge in position.

Send Today

for full information about the new McKinley Non-Mortis Butt.

McKINLEY MFG. CO., Pittsburgh, Pa.

Gentlemen:—

I would like to know more about your new Non-Mortis Butt and how I can make its advantages work for me.

Name.....
Street.....
City.....
State.....

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These Distr
Boston
Chicago
Cleveland
Denver
Detroit . 400
Hartford .
New York C
New Orlean
727 Canal

**IT'S
EASY TO
SELL A HOUSE**
*that looks twice
its cost!*

MOST people think a house of common brick costs twice as much as a frame house. Few of them know that there is an actual first cost difference of approximately one or two percent.

Anyone would rather have brick. A charming, attractive house of common brick, that looks twice its cost, looms up as a wonderful investment. This simplifies selling.

From the standpoint of pure economy, the use of common brick cannot be equalled. Common brick is local made, low-cost brick, available everywhere in colors which vary according to the locality and nature of the clay. Architects and builders have just re-discovered the possibilities of it for obtaining superior architectural effects. They know that a common brick wall can be made to fairly sparkle with color and interest when the bricks are laid with appropriate bonds and mortar joints.

And with all this permanent beauty, there is the economy in reduced painting costs, fewer repairs, lower insurance, and slower depreciation.

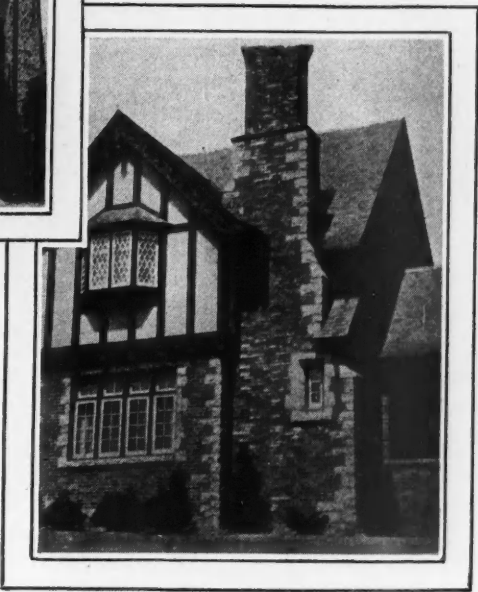


LEFT: Charming six-room house with sun room designed by Henry Fitzgerald, architect

Common brick meets all architectural demands for surface effects and type. It may be used in the best homes in combination with slate or tile roofs, copper and zinc gutters and down spouts, metal casements, and sash, exposed oak timbers and plate glass!

There are several practical books offered by the Association of untold value to builders. One on skintled brickwork, covering the new methods of obtaining interesting surface effects, will prove extremely helpful. A 72-page book, illustrating 120 different small brick houses actually built, with accompanying floor plans, is offered at cost.

Check the coupon below now and mail it today. A dollar bill brings all of them. The services of the Association are available to all dealers and builders.



BELOW: Inspiring six-room house with sun room designed by Yeager & Krause, architects



Are you taking advantage of the service behind Brick?

Back of common brick is a trade service of important co-operation. Make use of it. Below we list a group of valuable brick books. These are distributed at cost. Send today for those you are interested in.

Check coupon below—send cash or stamps to nearest office—

- Homes of Lasting Charm—25c
- Skintled Brickwork—15c
- Multiple Dwellings of Brick—10c
- Farm Homes of Brick—5c
- Brick, How to Build and Estimate—25c
- The Heart of the Home (Fireplaces)—25c

Check above books wanted or send \$1.00 for all of these books.

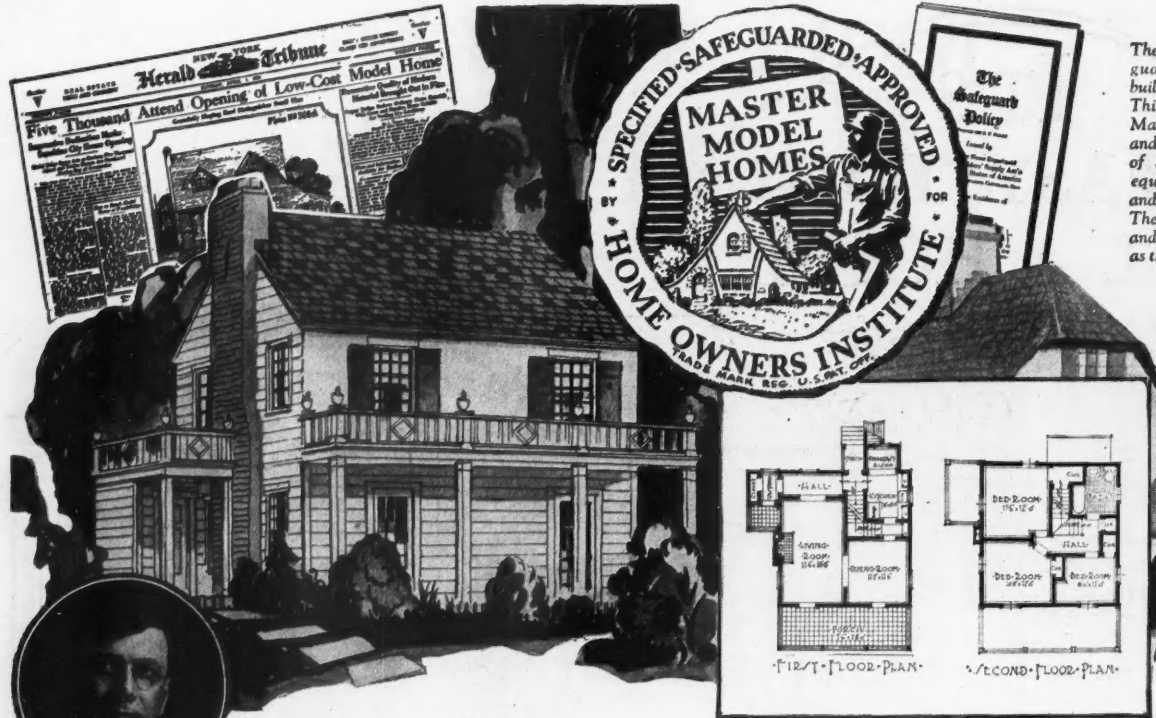
COMMON BRICK MANUFACTURERS ASSOCIATION of AMERICA
JU2131 GUARANTEE TITLE BLDG., CLEVELAND, OHIO

BRICK forever

PREFERRED BY ARCHITECTS

These District Association Offices and Brick Manufacturers Everywhere Are AT YOUR SERVICE

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| Boston 11 Beacon Street | Norfolk . . . 112 West Plume Street |
| Chicago 605 Builders Bldg. | Philadelphia . . . 1420 Walnut Street |
| Cleveland—Ohio Association
2124 Guarantee Title Bldg. | Pittsburgh 524 4th Ave. |
| Denver 1735 Stout Street | Raleigh, N. C.
508 Commercial National Bank Bldg. |
| Detroit 400 U. S. Mortgage Trust Bldg. | Rochester Post Office Box 773
(New York State District) |
| Stanford 226 Pearl Street | Salt Lake City . . . 301 Atlas Block |
| New York City . 1716 Grand Cent. Term. | Seattle, Wash. . . . 913 Arctic Bldg. |
| New Orleans, La.
727 Canal Bank Building | |



The Home Owner's Safeguard Policy protects builder and purchaser. This Policy covers every Master Model Home and certifies as to quality of all materials and equipment as specified and used in construction. The Policy is as valuable and useful a document as the Deed.

Architect's drawings of our New York Herald Tribune Master Model Home in West Englewood Hills, N. J., one of a group of Master Model Homes being built for sale by E. B. MacDonald, Inc., Realtors, and opened for public inspection this month. (In circle) E. B. MacDonald, Realtor-Builder.

Master Model Homes Pay Bigger Profits

E. B. MacDonald, Realtor-Builder, says —

"The experience of Realtor-Builders in many cities throughout the country shows that Master Model Homes, built under the supervision of Home Owners Institute, and containing nationally advertised materials, and sponsored by leading newspapers, not only bring sales to the Realtor-Builder but also provide better homes at a lower cost to the individual purchaser."

Only Nationally Advertised Products Go Into Master Model Homes

- | | | |
|---|--|---|
| <p>To encourage home ownership based upon high standards and known values, prominent Realtors in various cities are building Nationally Advertised Model Homes under Home Owner Institute supervision, and sponsored by leading newspapers.</p> | <p>For the materials used and equipment demonstrated in these Model Homes, supervised by Home Owners Institute, the architect's specifications call for only those products with nationally known trademarks and established reputation, as advertised, including:</p> | |
| <p>Anaconda Brass Pipe, Gutters, Rain-Pipes, and Flashings of Anaconda Copper, Screens of Anaconda Bronze Wire
THE AMERICAN BRASS COMPANY</p> | <p>Rigid Asbestos Shingles; Improved Asbestocel Pipe Insulation
JOHNS-MANVILLE CORPORATION</p> | <p>Metal Lath for Better Plastering
NATIONAL COUNCIL FOR BETTER PLASTERING</p> |
| <p>New Ideal Boilers, New Ideal Hot Water Heaters, Corto Radiators
AMERICAN RADIATOR COMPANY</p> | <p>Tiger Finish (Hydrated Lime) Walls; Lime for Plastering and Brick Mortar
THE KELLEY ISLAND LIME & TRANSPORT COMPANY</p> | <p>Miracle Doors
PAINE LUMBER COMPANY, LTD.</p> |
| <p>Common Brick
COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA</p> | <p>Kernerator Chimney-Fed Incinerator
KERNER INCINERATOR COMPANY</p> | <p>Plumbing Materials
STANDARD SANITARY MFG. CO.</p> |
| <p>G-E Wiring System, G-E Refrigerator, G-E Vacuum Cleaner, G-E Fans
GENERAL ELECTRIC COMPANY</p> | <p>Forged Iron Hardware, Hinges
MCKINNEY MANUFACTURING COMPANY</p> | <p>Cephas B. Rogers Decorative Lighting Fixtures
CEPHAS B. ROGERS, INC.</p> |
| | | <p>Truscon Steel Casement and Basement Windows
TRUSCON STEEL COMPANY</p> |

HOME OWNERS INSTITUTE, INC.
441 Lexington Avenue L. Porter Moore, President New York City





No waste of valuable space here. The basement has become a useful, livable place—an asset to the home owner.

© Underwood & Underwood



Raymond M. Hood, F. A. I. A., winner \$100,000 award for Chicago Tribune Tower design; in association with John Mead Howells, architect for American Radiator Building, New York.

Model Basement Adds a Room

Raymond M. Hood, Architect, says—

"Billions of dollars are invested in basements of American homes. In most of them the bulk of basement space is wasted. Basements can be studied so that this tremendous waste will be overcome or obviated.

"The widespread movement of the Home Owners Institute is one of the strongest factors in stimulating the interest of the public in the quality, comfort and beauty of its homes. Just as the automobile industry has had a tremendous expansion, due to its effort to develop a pride of ownership through the utility and beauty of the present day motor car, so should the building industry profit from the efforts of the Home Owners Institute."

To Help You Sell Your Homes

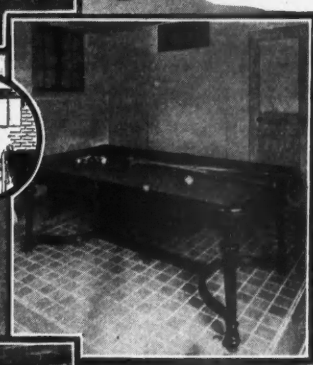
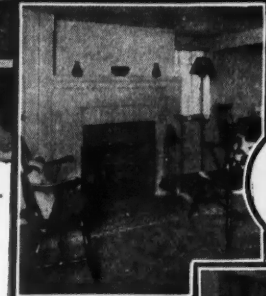
Any Realtor-Builder can get direct benefit from this national Model Homes program. To adopt the Home Owners Institute nationally and locally advertised quality specifications will help sell the homes you build; enable you to maintain prices and at the same time give you a reputation for selling quality houses and property at fair prices. A model basement installation is an additional selling and efficiency feature, adding another room without extra cost.

Write for further information or use the coupon attached.

HOME OWNERS INSTITUTE, INC.
441 Lexington Avenue New York City

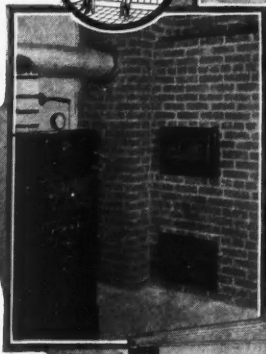


A basement room in one of our N. Y. Herald Tribune Model Homes showing Tiger Finish (hydrated lime) plastered walls on metal lath.



(Above) More and better light provided by Truscon Steel Basement Windows, helping to make possible a Model Basement billiard or pool room.

(Left) Kernerator chimney-fed garbage incinerator, and American Radiator Company Redflash Boiler are part of Model Basement equipment in our Buffalo Courier Express Model Home. (Circle) Kernerator hopper door in the kitchen.



HOME OWNERS INSTITUTE, INC.
441 Lexington Ave., New York City
 I enclose 25c (stamps accepted) for 'A Manual of Home Building', containing 48 pages of pictures and floor plans of model homes.
 I enclose \$1.00 (cash, check or money order) for the "Home Owner's Safeguard Policy".
 I enclose \$3.00 (cash, check or money order) for the 324-page Vol. I "The Books of a Thousand Homes", containing 500 attractive homes of all types.

Name

Address

WDMA

An *Important* development in the door industry



Douglas Fir doors have won the building world on their own merits. Builders know that Douglas Fir doors are beautiful... hang true... do not war... fit snugly against the jam... do not tend to swell or stick.

Good reasons, indeed, for shipments of nine million doors in 1927 and distribution in 30 foreign countries.

A GROUP of leading Douglas Fir door manufacturers, with a belief in the public's preference for a standardized trade-marked product, have perfected an organization known as the Western Door Manufacturers' Association. The purpose of this organization is to encourage and increase the use of Douglas Fir doors by the adoption of uniform grades and standards; by maintaining improved methods of manufacture; to encourage and assist distributors and dealers through cooperative advertising, and by other lawful plans for the general development and improvement of marketing and manufacture.

TRADE **WDMA** MARK

The letters **WDMA** on Douglas Fir doors, made by member mills of this Association, will provide architects, dealers, builders and users with an always available guarantee of quality. It means that the official inspectors of the Western Door Manufacturers' Association have inspected the manufacture and grading of the product bearing this trade mark, and that such doors conform to the standard grades established by the Association. Copy of **WDMA** standard grading rules for Douglas Fir house and garage doors mailed upon request.



WDMA doors are made from the big trees of the Douglas Fir region.

Douglas Fir Doors

That Are Grade Marked

WESTERN DOOR MANUFACTURERS' ASSOCIATION / / TACOMA, WASHINGTON

Robinson Mfg. Co. - - - Everett, Wash.
Tregoning Mfg. Co. - - - Seattle, Wash.
Buffelen Lumber & Mfg. Co. Tacoma, Wash.
Wheeler, Osgood Co. - - Tacoma, Wash.
Clear Fir Lumber Co. - - Tacoma, Wash.

Henry McCleary Timber Co. McCleary, Wash.
Nicolai Door Mfg. Co. - - Portland, Ore.
M. & M. Wood Working Co. Portland, Ore.
Central Door & Lumber Co. - Portland, Ore.
Albany Door Co. - - - Albany, Ore.

Large and selective stocks carried by distributors in all sections of the country

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

OIL HEAT—AS BENEVOLENT AS SUNSHINE

This is one of the series of advertisements appearing in full color in *Country Life*, *Arts and Decoration*, *House Beautiful*, and *Garden and Home Builder*; and in black and white in *National Geographic*, *Nation's Business*, *House and Garden*, *Better Homes and Gardens*, *Good Housekeeping* and *Popular Science Monthly*.



The house of your dreams— how will you heat it?

EVERY one planning a new home has an ideal. Within the limits of his means he does all he can to embody that ideal in the actual finished house. And ideal heating is one of the first requirements.

What is an ideal heating system? Is it not one that takes care of itself so far as possible—that provides you with even temperature without your having to bend your back in dirty, menial toil? Is it not a system which keeps you warm automatically, not only in freezing weather but during those chilly in-between days of spring and fall?

Just imagine yourself in your ideally heated new home. No matter whether outside temperature rises or falls, your heating plant responds instantly and automatically. It keeps the house comfortable all day, and while you sleep. Warm rooms will greet you in the morning.

What is the ideal heating system

for the home of your dreams? Does not oil heating meet all the requirements? Thousands of enthusiastic users prove that it does. They say that no other modern convenience is so beneficial to the health and comfort of the entire family—that it has become indispensable to the full enjoyment of their homes.

An oil heating system also helps to economize in building the new home. The excavation for the oil tank is made at very little cost when the ground is being dug for foundations and basement. Coal bin space is all clear gain, and gives the house valuable additional room.

Be sure to consider oil heating for your new home. Get all the facts you can. Be guided by the experience of friends. And don't neglect to send for a copy of Oil Heating Institute's authoritative non-technical books offered in coupon at right.

OIL HEATING INSTITUTE
350 Madison Avenue, New York

The Oil Heating Institute is prepared to furnish special information on the heating of churches, theatres, hotels, apartment houses and office buildings, and on the various heat treating processes of industry.



This is the Emblem of the
Oil Heating Institute

It is the symbol of satisfactory public service in oil heating. Only the manufacturers who are members of the Oil Heating Institute are permitted to use it.

These manufacturers have earned their membership through the enthusiasm of thousands of home owners whom they have provided with efficient and dependable oil heat.

This emblem protects you, and it will be protected, on your behalf, by the Oil Heating Institute.

**This book is free—
MAIL THE COUPON TODAY**



OIL HEATING INSTITUTE
350 MADISON AVENUE
NEW YORK CITY

Please send me, free of charge, the following information on oil heating equipment:

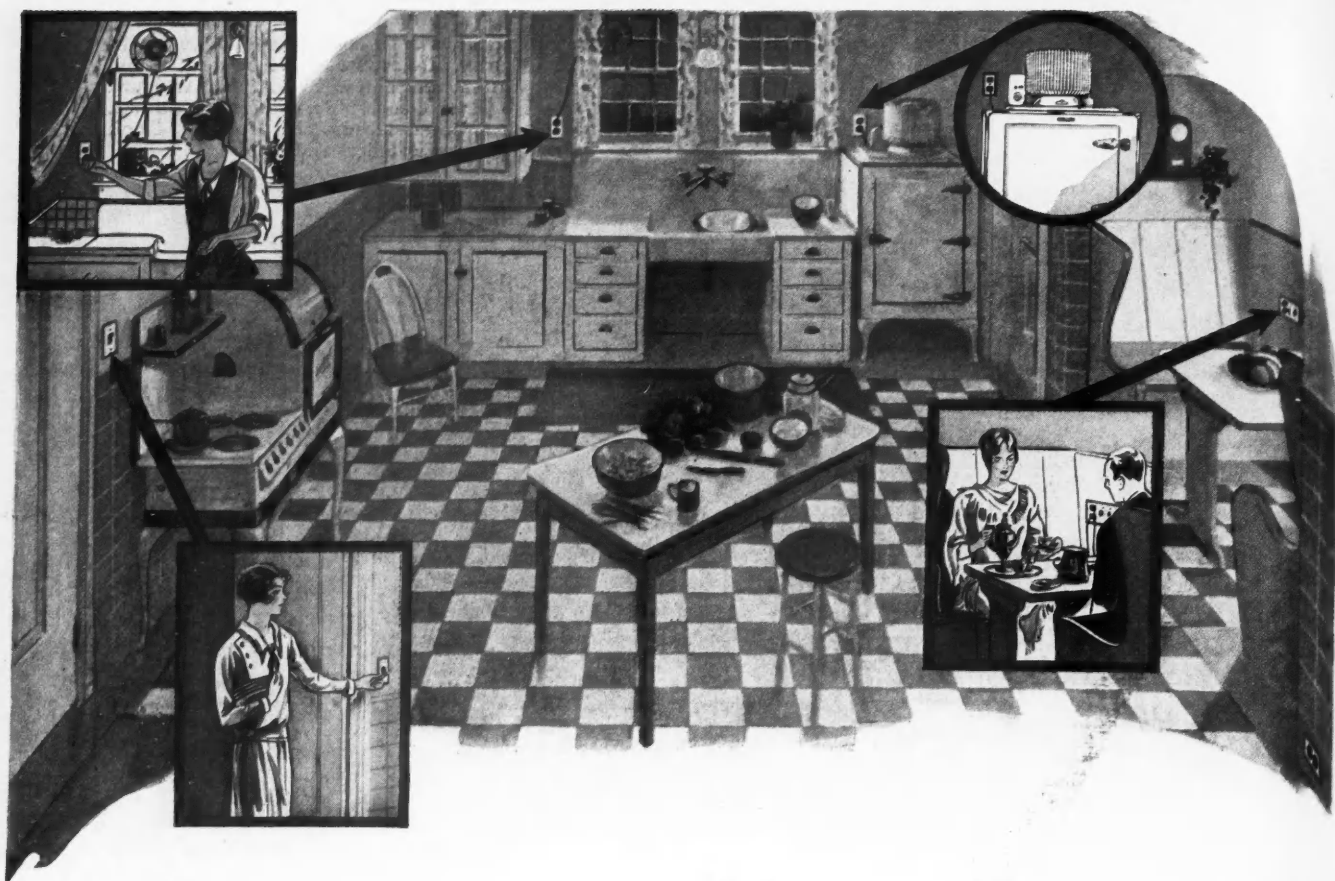
- Does it Pay to Install an Oil Heater?.....
- Are Oil Heaters Perfected?.....
- What About the Supply of Oil Fuel?.....
- Making Better Use of the Basement.....

Name.....

Street.....

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

(NSCB-6)

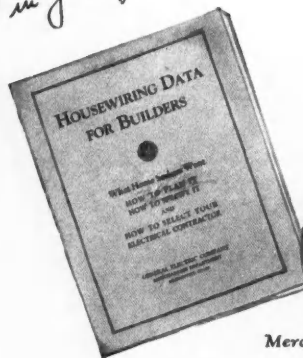


Adequate wiring adds a selling point to every room in the house

Home buyers no longer see four walls and a floor when they look at an empty house. They see it as it will be when they live in it. And if there aren't enough outlets for every electrical need and switches accessible to every door, they know that it can't

be a really comfortable home. Our consistent national advertising has awakened everyone to the importance of completely planned wiring. The General Electric name is accepted as a standard of quality. A G-E Wiring System clinches the sale of many a house.

Write for this helpful booklet you should have it in your files



Merchandise Department
Section 36
General Electric Company
Bridgeport, Connecticut

WIRING SYSTEM

— for lifetime service

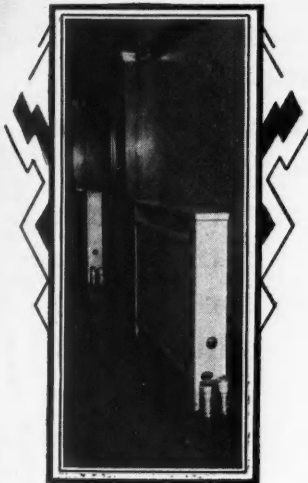
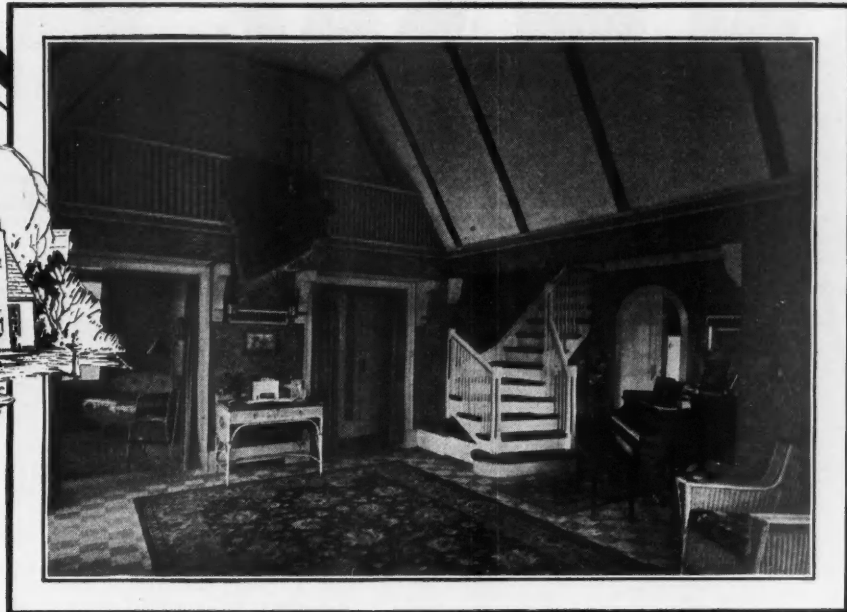
GENERAL ELECTRIC

TH
27

Everywhere, Radiators are Giving Way to Trane Concealed Heaters



Asbury Gables Ideal Home,
Wm. F. B. Koelle, Architect,
Philadelphia, Pa.



Trane Heat Cabinets

Visible type heating units, employing the same heating principle as Trane Concealed Heaters. Finished in any tone or grain to match furnishings. Wide variety of shapes to fit any wall space.

The modern demands for spaciousness — beauty — comfort, have established this trend in room heating

Some builders seem to have an uncanny sense of what will "take" with the public. These builders were first to recognize the introduction of Trane Concealed Heaters as a big step forward in improving the appearance and comfort of rooms.

Today, with thousands of these up-to-date heating units in successful service, you can no longer afford to be out of touch with this

important development.

Write today for Bulletin 24. Learn how Trane Concealed Heaters are installed between standard walls, completely hidden from sight — how the damper grille provides instantaneous control — how the Trane all-copper heating element eliminates heating troubles. Attach the coupon to your letterhead or business card.

H E A T **TRANE** C O N C E A L E D
C A B I N E T S H E A T E R S
*** P U M P S A N D H E A T I N G S P E C I A L T I E S ***

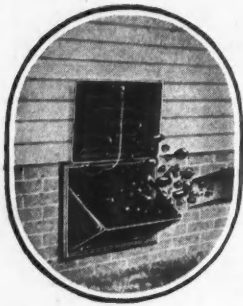
THE TRANE CO. (Est. 1885)
276 Cameron Ave., La Crosse, Wis.

Send Bulletin 24, "How to Select and Install Trane Concealed Heaters."

Name.....
Name of Firm.....
Address.....
City..... State.....

This is a NEW ERA IN THE BUILDING INDUSTRY

THIS is a time when *greater values* are being demanded in the homes you build. Model Home exhibitions, Own-Your-Own-Home shows and other influences have taught home-seekers how to discern real values—what to demand in homes. Everybody *wants more* nowadays, and they're willing to pay a few extra dollars to get what they want. Progressive builders are cashing in on this desire for greater value. In homes built on contract and in homes built to sell, they're installing extra features of quality, convenience and comfort—products of known value and merit such as the Majestic Coal Window, Milk and Package Receiver, Underground or Built-in Garbage Receiver, Fireplace Damper, etc. Modern homes with features like these don't have "for sale" signs on them long.



Majestic products meet every demand of builders who know it is good business to put exceptional value into the homes they build.

Write today for our catalog.



THE MAJESTIC COMPANY, 300 Erie Street, HUNTINGTON, IND.

Majestic Coal Window and BUILDING SPECIALTIES

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

There's a **MORTON** Steel Cabinet for every type of Bathroom



"Out of the carton into the wall." Installed in a few minutes. No upkeep. Made to last as long as the building.

The "Venetian," "Vanity 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
5102 WEST LAKE STREET-CHICAGO, ILL. U.S.A.

Send the Coupon for a MORTON Catalog.

MORTON MANUFACTURING CO., 5102 West Lake St., Chicago, Ill.

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



Name.....

Address.....

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

Please check business or profession:

Architect..... Builder..... Contractor..... Realtor..... Home Builder.....

A Woman's Specifications of "the Ideal Kitchen"



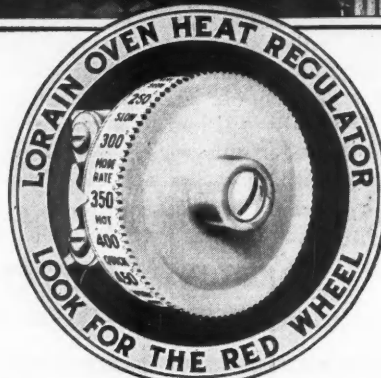
Apartment House at 6022 Jeffery Avenue, Chicago, Ill. Builder, Harold C. Costello; Arch't, Paul Frederick Olsen. Fully equipped with Quick Meal Gas Ranges with Red Wheels. (Below) Representative Kitchen showing Quick Meal Gas Range as installed.

ASK ANY group of women their general specifications of "the ideal kitchen" and you will find that practically all will stress these five points: 1. Efficiency; 2. Attractiveness; 3. Ease of cleaning; 4. Lighting; 5. Ample size.

For Efficiency women insist that the kitchen have the most modern equipment. And since cooking is the most important of all household tasks women want the most efficient cooking appliance available.

No cook stove made is more efficient, economical and saving of time and labor than a Red Wheel Gas Range.

These famous gas ranges are the nationally preferred type of cooking appliances; first, because the Red Wheel provides automatic control of the oven heat and any desired temperature—thereby making perfect baking—results possible every time; second, because Red Wheel Gas Ranges have been



Unless the Gas Range has a RED WHEEL it is NOT a LORAIN

AMERICAN STOVE COMPANY, 233 Chouteau Avenue, St. Louis, Mo.
LARGEST MAKERS OF GAS RANGES IN THE WORLD

L O R A I N

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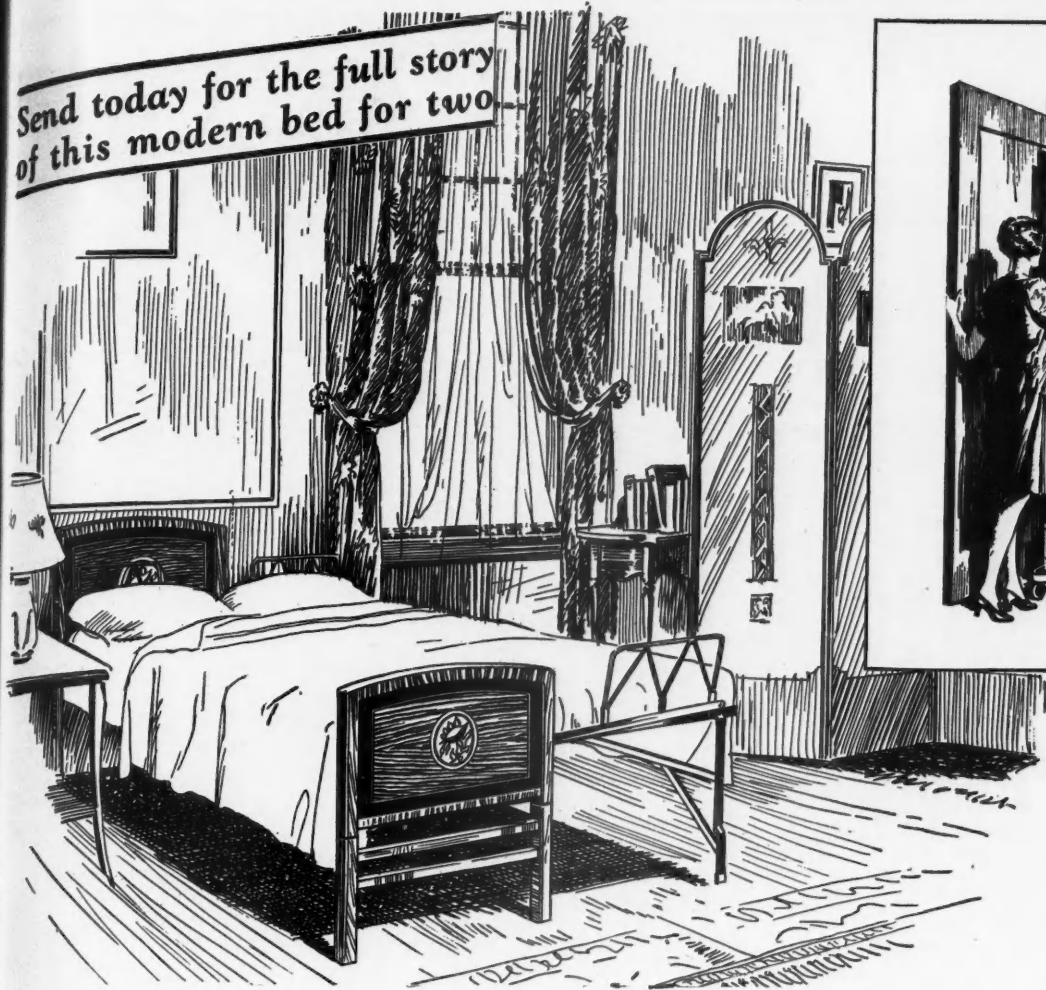
widely advertised in leading national magazines for the past nine years.

Red Wheel Gas Ranges are used in more than 2400 schools and colleges to teach the art of cookery.

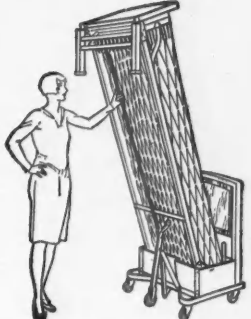
Red Wheel Gas Ranges will bring added beauty to your kitchens. Will make your houses more salable—your apartments more rentable. And—tenants will be apt to remain longer.

The following brands of gas ranges made by American Stove Company are alone privileged to use the Red Wheel: Clark Jewel, Direct Action, Dangler, New Process, Quick Meal and Reliable. Each of the six lines offers the widest possible selection of sizes, styles and finishes for kitchens ranging in size from the smallest to the largest. For specific data, see Sweet's Catalog, 22nd Edition, pages C3245-C3254, inclusive.

Send today for the full story of this modern bed for two



Out of sight in a 31" x 23" closet. Can be moved about anywhere with one hand.



Simple, ingenious springs make raising and lowering effortless.



Stabilizer holds the Seng Duofold steady in all positions—while opening, while closing, and while in use.

No more closet doors in living rooms

CUT down your construction costs—save space, lumber and labor—sell and rent more quickly! You can do so by standardizing on the Seng Duofold Roller Bed—a modern bed for two so compact that it can be kept in a small closet, and so easy to move it can be rolled anywhere with one hand.

It thus does away with closet doors in living rooms and provides larger, more comfortable quarters at no extra cost.

In fact, builders of big apartments have found that this modern bed for two often adds a room to each floor!

Mail the attached coupon for the full story of the Seng Duofold Roller Bed. It offers you an exceptional opportunity to increase your net profits. THE SENG COMPANY, manufacturers and patentees, 1452 Dayton Street, Chicago.

SENG Duofold ROLLER BED

THE SENG COMPANY,
1452 Dayton St.,
Chicago, Illinois

Gentlemen: Please send full description of Seng Duofold Roller Bed and detailed facts about the opportunity it offers me. This request places me under no obligation.

Name.....

Street.....

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



—no loss

Cement Bags that empty out clean

TODAY, the saving way to use cement or plaster is to get it in Bates Multi-Wall Paper Bags. These modern containers empty out clean. The mixer receives every pound of material just as it left the mill, 100% usable and in perfect condition.

With their 5 separate walls of tough, impervious paper, Bates Bags

give reliable protection from rain, atmospheric moisture and rough handling. They eliminate dusting and reduce bag breakage to a minimum. And when they've done their work, they need not be returned for credit.

Buy the cement and plaster for your jobs in Bates Multi-Wall Paper Bags and avoid loss.

BATES VALVE BAG CORPORATION
35 East Wacker Drive, Chicago, Illinois

BATES *Multi-Wall* PAPER BAGS

Bates Multi-Wall Paper Bags are made by the Bates Valve Bag Corporation in 8 modern plants throughout the country.

Away!
with cooking odors and excessive heat
make the kitchen a joy spot



Ventilate it with an
ILGAIR
Electric Ventilator

If you are planning to build a really modern home don't forget to provide for ventilation in the kitchen — install an ILGAIR Ventilator. It's the one outstanding built-in feature of present day model homes — specified and recommended by leading Architects and Contractors everywhere.

No other electrical convenience will add so much to the sales and rental values of a home as a built-in ILGAIR Ventilator — a quiet running exhaust fan that removes excessive heat, objectionable cooking odors and greasy fumes. The change it makes in the atmosphere is delightful. It's a joy to work in the kitchen that's ventilated with an ILGAIR, and the cost of operation is only a few cents a day.

The new and improved built-in ILGAIR Ventilator can be installed at a surprisingly low cost. It comes complete with cabinet, ventilator, automatic shutter and all necessary hardware. It's automatic in operation — simply open the glass paneled cabinet door and the ventilator starts; close it and it stops. The entire outfit is made, tested, sold, and guaranteed as a complete unit — it's the only ventilator manufactured with a fully enclosed self-cooled motor.

We urge every builder of modern homes to send for the new ILGAIR bulletin. It pictures and describes this equipment in detail including data, charts, photographic illustrations and installation suggestions and instructions. Ask for this new bulletin and a copy of our 48 page condensed catalog — clip, sign and mail the coupon — NOW.

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

Inside view of built-in ILGAIR showing door open. When the door is opened the Ventilator starts; close the door and it stops.



Ventilation

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

COUPON

Without obligation please send me a copy of your 48 page illustrated booklet. I am particularly interested in the subjects checked.

Name _____

Full Address _____

Home Public Building Office Store Factory

THE YEARS MARCH BY --- BUT NATCO HALTS DEPRECIATION

EACH year depreciation takes its toll, in beauty and in value, from buildings not built for permanence. What was some builder's pride—and a valuable advertisement for him—becomes an eyesore. What was a paying investment becomes a liability.

But structures built of Natco Hollow Building Tile are left untouched by time. Natco is made of special clay, mined, molded, and burned in great kilns to the density of flint, the durability of granite. Blood brother to the ever-lasting rocks, it partakes of their permanence.

Natco, the complete line of Hollow Building Tile, provides a tile for every building need. Natco Header Backer, Unibacker, Interlocker and Bakup for brick faced walls. Natco Double Shell Load Bearing and Triple X for stucco walls. Natco Tex-Tile and Vitritile for attractive finished face walls. Natco Partition Tile for plastered interior dividing walls. Natcofloor, Combination and Flat Arch Systems for floors. Natco Girder and Column Covering for protecting steel work from fire and corrosion.

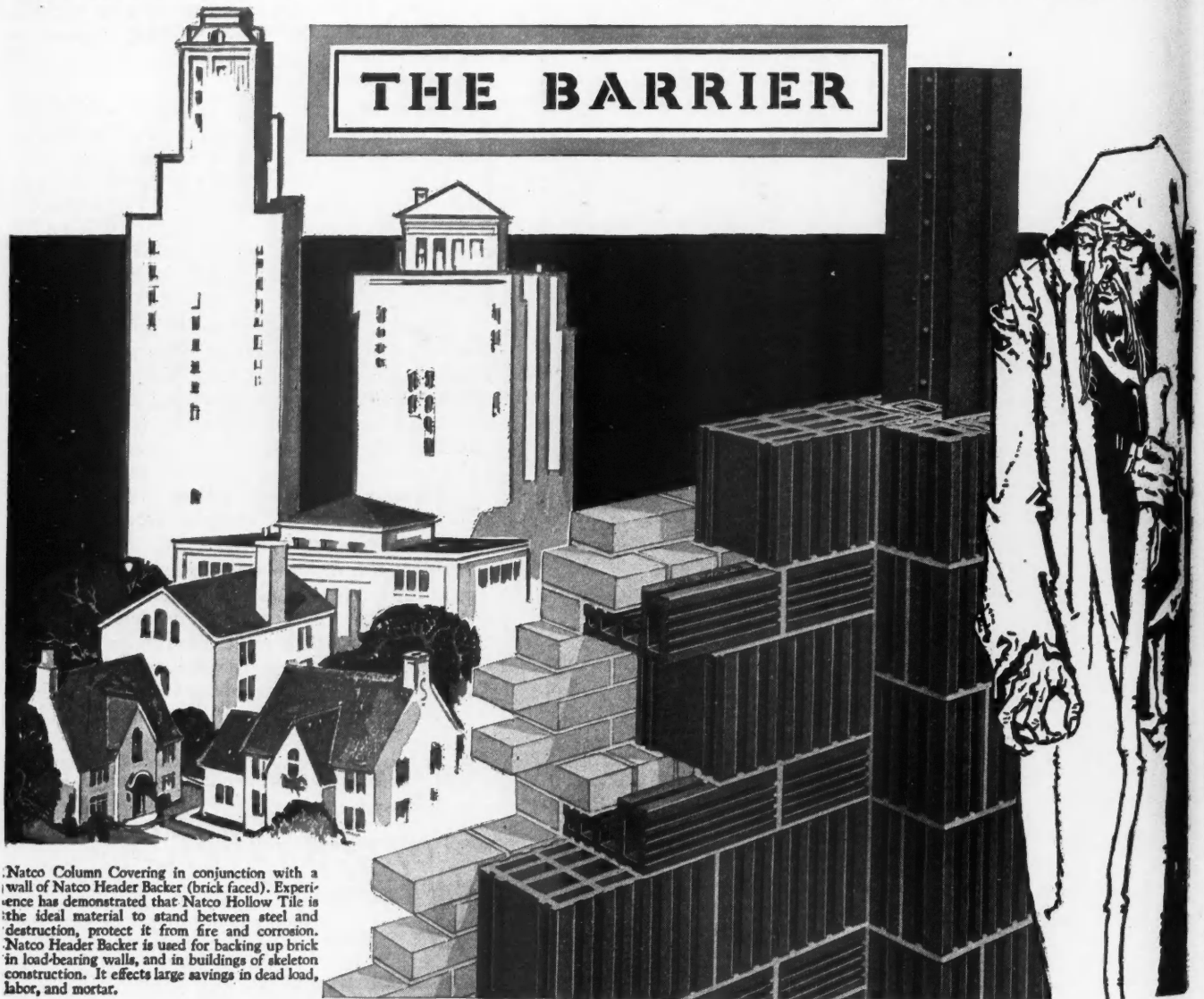
No matter which of these Natco Products you use, you can be sure of a job free from contingencies—a product free from defects and uncertainties—a structure that will be a permanent source of pride and satisfaction to you and to the owner. For while the years march by, Natco halts depreciation.

NATIONAL FIRE PROOFING COMPANY

General Offices: Fulton Building, Pittsburgh, Pa.

Branch Offices: New York, Flatiron Bldg., Chicago, Builders' Bldg.
Philadelphia, Land Title Bldg., Boston, Textile Bldg.

In Canada: National Fire Proofing Co. of Canada, Ltd., Toronto, Ontario.



Natco Column Covering in conjunction with a wall of Natco Header Backer (brick faced). Experience has demonstrated that Natco Hollow Tile is the ideal material to stand between steel and destruction, protect it from fire and corrosion. Natco Header Backer is used for backing up brick in load-bearing walls, and in buildings of skeleton construction. It effects large savings in dead load, labor, and mortar.

NATCO

NATCO

THE COMPLETE LINE of
HOLLOW BUILDING TILE

HOLLOW BUILDING TILE



YOURS for the ASKING

Miller

IT is not within our province to plan a home. But we have studied kitchens and kitchen procedure for many years. We've developed workable and advanced ideas on kitchen design which greatly increase sales and rental value of homes and apartments. Feel free to ask for them. There's no obligation. Coupon brings facts on our architectural service.

MAIL THIS COUPON

COPPES BROS. & ZOOK, Nappanee, Ind.
Gentlemen: Please send me full details on your free architectural service.
I am, Architect, Contractor, Owner.
[Please check square]. AB-6

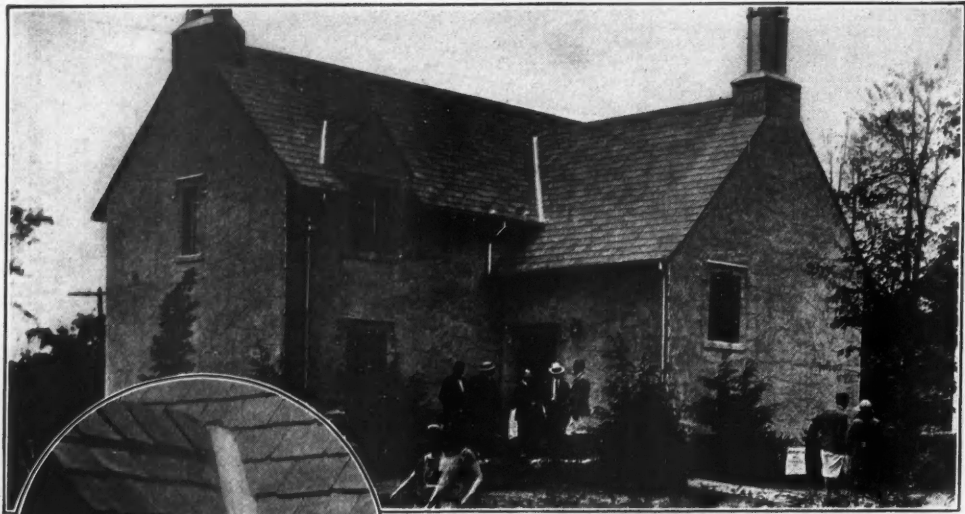
COPPES BROS. & ZOOK, Nappanee, Ind.
New York Office: 415 Lexington Ave.
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Agents in all Principal Cities

NAPANEE
DUTCH KITCHENET
Built Like Fine Furniture

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Address _____
City _____
State _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

"THEY ARE VERY GOOD LOOKING"



TAPERED

"English Thatch"

Ambler Asbestos Shingles

The Ideal, Fireproof, Weatherproof, Roofing were selected by the Lehigh Portland Cement Company for the roof of their Prize House. The enlarged insert of an actual close up photograph shows the definite charm and distinctive effect of this unique product, the "English Thatch" in random widths, irregular courses and rough texture that completely eliminated hard and fast lines and sets a new roofing standard giving a novel beauty to the modern home and an added degree of serviceability to a roof.

First of all, Tapered Ambler Asbestos Shingles have the taper of the old wooden shingles. They come in random widths 6 in. to 14 in., $\frac{1}{8}$ in. thick at the top and $\frac{1}{2}$ in. at butt and 20 inches long. They are **strong, rigid shingles**, not paper or rag felt, never curl or warp, not affected by the blasts of winter, the heavy rains of spring and the blazing heat of summer, year in and year out, for they are made of Asbestos and Hydraulic Cement—Nature's imperishable materials.

They are made in a variety of non-fading colors: Green, Red, Brown, Gray, etc.

FIREPROOF

Tapered Ambler Asbestos Shingles are absolutely fireproof, not merely "fire-resistant." Ask your fire insurance agent what the difference is. He will tell you the difference and show you the saving in rates—a matter of serious consideration over a term of years and years. It will pay you to write us now for complete information covering these superior shingles.

Made by the AMBLER ASBESTOS COMPANY, at Asbestos, Penna., and sold by the

**ASBESTOS
SHINGLE, SLATE & SHEATHING CO.**
AMBLER, PENNA.

or Branch Offices in large Cities

"ASBESTOS CANNOT BURN"

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BUSINESS IS GOOD

for Builders of Holland-Heated Houses

IT IS easy to sell what people want. Ask any builder of Holland-heated homes. His business is good and selling cost low because he takes the shortest route to the dotted line. Holland Vaporaire Heating is deep in the public's confidence. People know its outstanding advantages and want it in the homes they buy. Everywhere today the demand is for those vital features of heating comfort, cleanliness, convenience and economy that Holland alone guarantees. Obsoleting all other

types of home-heating equipment and representing the greatest dollar-for-dollar value on the market, Holland Vaporaire Heating—planned, installed and permanently serviced under factory supervision—has won overwhelming leadership and become one of the greatest single sales inducements that a builder can incorporate in a house. Our files are filled with hundreds of letters from prominent builders expressing appreciation of Holland's active help in the sale of their houses.

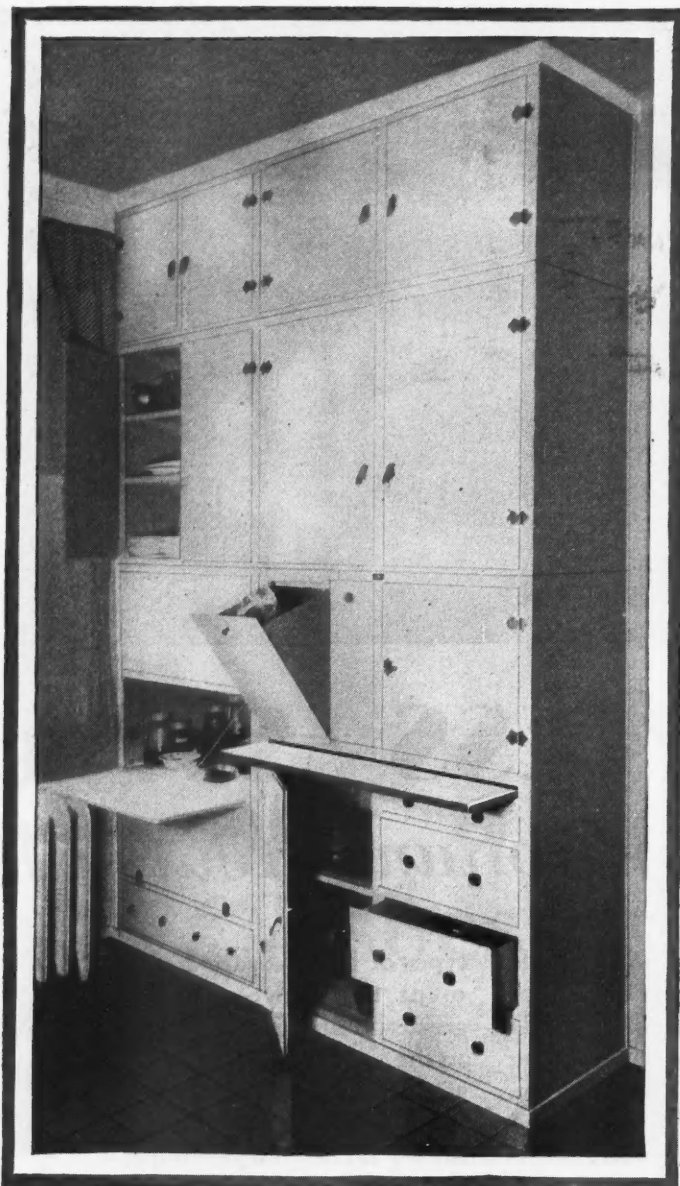


HOLLAND *vaporaire* HEATING

"HOLLAND FURNACES MAKE WARM FRIENDS"

World's largest installers of home-heating systems. 524 direct factory branches and service stations. Look in your telephone book for address of nearest branch.

HOLLAND FURNACE CO., HOLLAND, MICH.
 Without obligation on my part, please Send me literature
 Have a Holland man call
 Name _____ Address _____
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If You Build To Sell—

Cash In on This Preference for Steel

More and more, Sheet Steel is playing a conspicuous part in residential building. The modern housewife demands a modern kitchen and that means steel, glistening white or in colors. The in-built steel cupboard-cabinet illustrated is a typical use. It has surpassing advantages, yet its cost is moderate. It is moisture and odor proof. It is sanitary and easy to keep clean. Its doors and drawers never stick or warp. It enhances fire safety. Ants and other insects find the reception too cool.

Thus, throughout the house, in both interior and exterior applications Sheet Steel serves similarly in innumerable forms. As roofing, gutters and spouts, as interior trim, as kitchen equipment, as colorful wall tile, and even as bedroom furniture of rare beauty, Sheet Steel is enhancing the value and livability of modern homes. Investigate before you build. For particulars, write the SHEET STEEL TRADE EXTENSION COMMITTEE, TERMINAL TOWER BUILDING, CLEVELAND, OHIO.

SHEET STEEL

*"Throughout
the
House"*





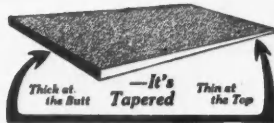
Winthrops,
ingeniously laid,
 produce *strikingly beautiful* roof

It doesn't require the colors of Slatefield Blend—heather blue, heather green and purple—to show that this is a beautiful roof, devised by Rowe, Dillard & Rowe, Chicago architects, for the Fisk Filling Station in Park Ridge, Illinois. About 20% of the Winthrops used on this roof were cut on the job to quarter, third, half, two-third and three-quarter widths. The shingles were then laid, without any spacing, with from one-half inch to five and a half-inch exposure.

Further distinctions were gained by bunching the shingles up on the ridge, itself unusual because of its ancient-looking sway, and by giving a graceful curve to the valley.

The result is a roof of beautiful distinction and one that harmonizes with the brick, stucco and timber of the structure, and helps fit it into its surroundings.

And this roof is as good as it is different. The thick butts of the Winthrops give double the wearing thickness where exposure comes and add attractive shadow lines



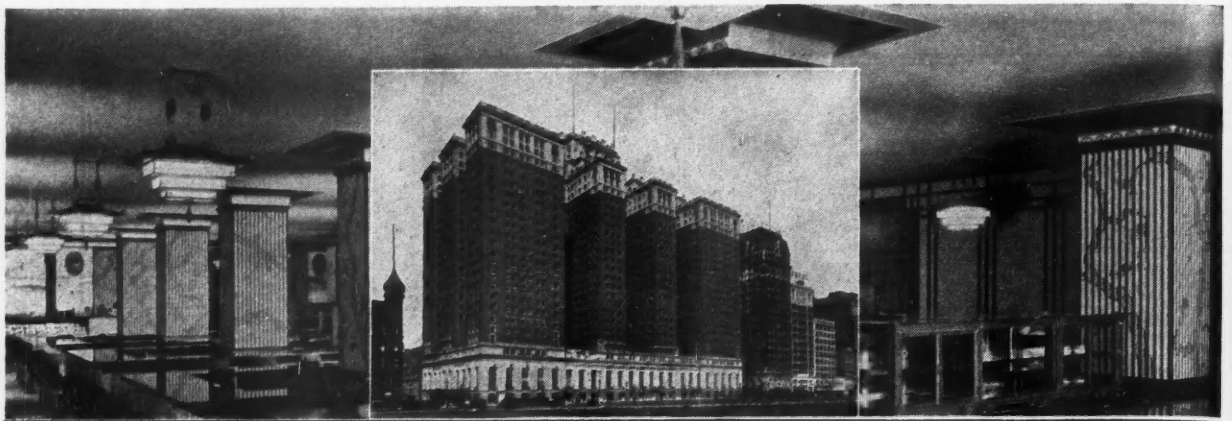
to the blended colors of the roof. Winthrops are the only tapered asphalt shingles made. There is beauty as well as wear in Winthrops that do not curl, rot, split, crack, rust, nor saw through their nails. They bear the Class C Label of Underwriters' Laboratories. Winthrops are made in a score of non-fading colors—all natural colors of slate.

Write for Samples

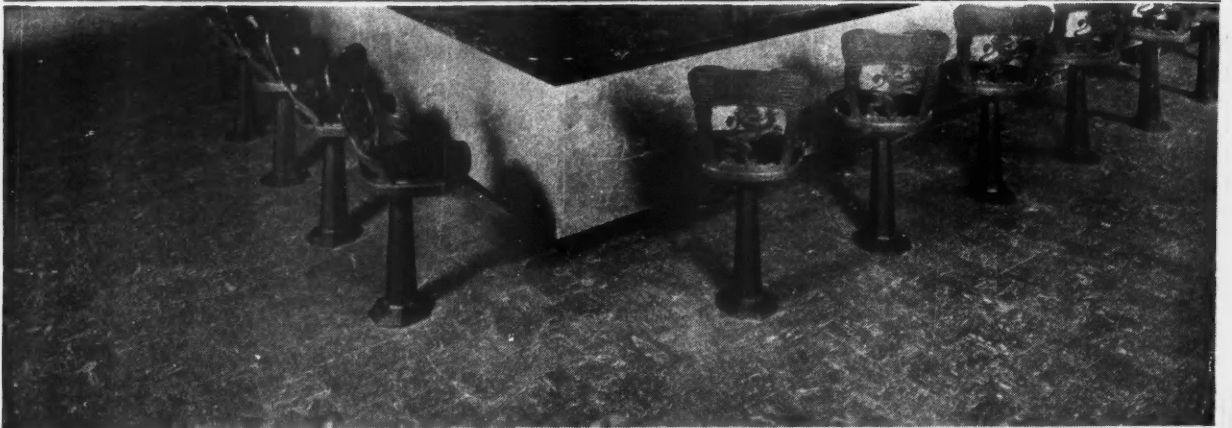
Most good lumber dealers sell Winthrops but we will send you a complete set of Slatefield Blend, free. There is no building in any surroundings that can not be beautiful with the right selection of Winthrops. There are many ways to lay them. Unequaled over old roofs. Ask, too, for sample of Argotex Building Felt, noted for insulating value.

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

-the
Big Butt
Shingle
Winthrop
Tapered Asphalt Shingles



Floors for world's largest hotel



For the magnificent new Stevens Hotel, Chicago, Goodyear Rubber Tiling was used for various large areas including the lunch-room shown in the illustration. Holabird & Roche, Architects. Installations by E. E. Davis Company, Chicago

In providing suitable floors for the world's largest hotel, the architects made liberal use of Goodyear Rubber Tiling.

In this one material they found the rare combination of beauty and durability, variety of color and pattern, a surface lending itself to laboratory cleanliness.

Because of these qualities, Goodyear Rubber Tiling was used in elevator lobbies, ballroom balcony, lunch-rooms and other places subjected to hard use. Quality considered, the cost was found to be surprisingly low.

You will find this modern flooring well adapted to business structures, clubs, hospitals and also dwellings of the better class. For kitchens, bathrooms and hallways, it offers the most satisfactory treatment obtainable at moderate cost.

Comes in a variety of authentic designs, including many rich marbled effects and various other two- and three-color combinations.

Complete architectural data with illustrations will be gladly forwarded upon request. Address your inquiry to Goodyear, Akron, Ohio, or Los Angeles, California.

The Greatest Name in Rubber

GOODYEAR

RUBBER TILING

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Copyright 1928, by The Goodyear Tire & Rubber Co., Inc.

THE GUIDE TO LOWER HOISTING COSTS



One Minute An Envelope And a Stamp

—virtually take you to 34 typical hoisting jobs

The Novo Hoisting Handbook was written especially for contractors who want to get everything possible out of their hoisting units.

It is full of interesting pictures, facts and information on practically every type of hoisting work. This data is a

compilation of hundreds of jobs in every section of the country. Thirty-four typical hoisting jobs are shown.

Fill out and send the coupon today — it takes only a minute, an envelope and a stamp. You'll find it a worthwhile investment. And no obligation.

NOVO ENGINE CO.,
202 Porter Street, Lansing, Mich.

Without obligating me in any way, please send a copy of the *Novo Hoisting Handbook*.

Name

Address

City

State

I am interested in a hoist for

NOVO ENGINE COMPANY, 202 Porter Street, Lansing, Mich.

CLARENCE E. BEMENT, Vice-Pres. & Gen. Mgr.

Service, parts and sales in 65 cities

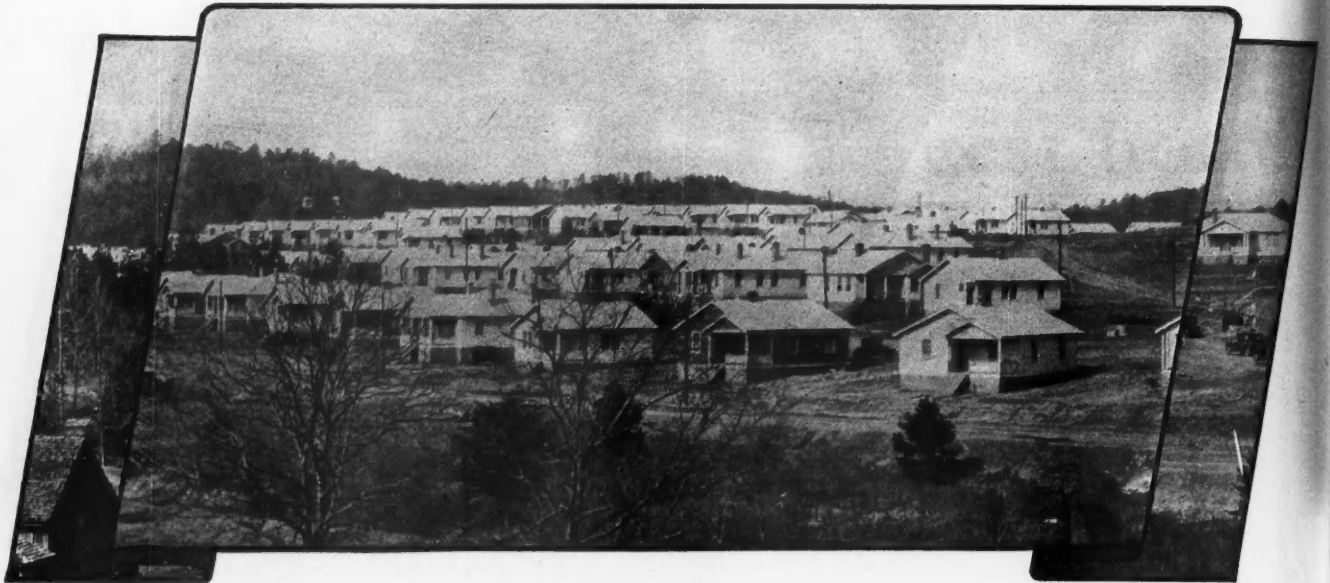


Hoists from 300

to 10,000 Pounds

Also Engines and Pumps

Every house in this
village is roofed with
Careystone Asbestos Shingles



At the time The Slater Manufacturing Company planned its new mill at Slater, S. C., it also had a village laid out, where it erected attractively comfortable homes for its employes. And, with its usual foresight, The Slater Manufacturing Company had each and every one of these houses permanently protected with Careystone Asbestos Shingles!

It will be a long time before a roofer will get a repair job out of *this* village, for these shingles are just as durable as they are beautiful—they actually improve with age. Made from enduring cement, shot through and through with fire-proof, rot-proof asbestos, they cost but little more than ordinary shingles, and there's no upkeep to worry about.

Builders and home-owners, too, know that roofing a house with Careystone Asbestos Shingles adds to its value, makes it more salable. Write us now for samples, prices, and details.

THE PHILIP CAREY CO., Lockland, Cincinnati, O.

Careystone
 ASBESTOS AND CEMENT SHINGLES



TIMKEN BEARING
FULL ONE BAGGER

HERE'S a Timken bearing, full one bag tilter, with Automatic Skip Shaker and "Flat Spot" Drum, for the usual price of a half bagger.

It's built of the best—steel and forgings and semi-steel gears—light, portable and 50 per cent stronger.

Has Jaeger Accurate Measure Water Tank; gives you faster loading, a better mix and a 5 second automatic discharge.

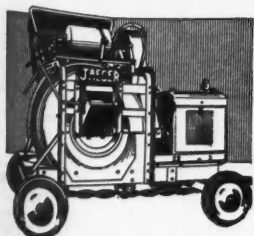


Jaeger Timken Tilters Guarantee More Batches per Day - *Ok'd by over 75,000 users*

MAKE fast hauls on any roads with this trailer—built for heavy duty with Timken bearings, spring shock absorbers and oversize cushion tires.

Get more batches a day with the "Flat Spot" remixing drum, 5 second discharge and semi-automatic dump. It's powered with Hercules engine, Wico magneto. It's built to last.

The Jaeger Machine Co.
521 Dublin Avenue Columbus, Ohio
Branches and Service in Over 100 Cities



Heavy Duty
Non-Tilt
MIXERS
7, 10, 14, 21,
28 Ft. SIZES



HEAVY DUTY
HALF BAG TRAILER

JAEGER TRAILERS
\$169 up
complete with engine

Send Coupon for Catalog,
Prices and Terms →

THE JAEGER MACHINE CO., COLUMBUS, OHIO
521 Dublin Avenue, COLUMBUS, OHIO
Please send catalog, prices and terms on --- Non-Tilt Mixers Plaster Mixer Tiltng. Mixers

Name _____ Address _____ City _____ State _____

Date _____



Residence of Al Zimmer, 2309 Locust St., North Kansas City, Mo. Architect: John Lawrence, Builders: Fritzen & Hufford. Masonite Insulating Lath used as plaster base

Write for a free sample of this thermostatic wood

HERE is an insulating plaster base, sheathing and sound-deadening board which has astounded the building industry.

Builders and contractors all over America are ordering it by the hundreds and thousands of feet, and it is speeding up their business all along the line.

In fact, Masonite not only helps to sell homes much quicker, but it enables you to build at a bigger net profit.

And remember that millions are reading the advertising about this Thermostatic Wood in a big list of newspapers and magazines.

We are also ready to supply you with free job signs and direct mail campaigns.

Write for sample of Masonite and for book of Specifications.

MASONITE CORPORATION
Dept. 168, 111 W. Washington St., Chicago, Ill.
Mills: Laurel, Mississippi

Masonite
THERMOSTATIC WOOD FOR
STRUCTURAL INSULATION

Made by the makers of MASONITE PRESWOOD
REG. U.S. PAT. OFF.

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© M. F. Co.

Why install ordinary doors that may have to be taken down, planed off, refinished and rebung? Read how Laminex doors, because of their scientific, built-up, water-proof-welded construction cannot shrink, swell or warp.



Look at the reinforced construction of this Laminex door

HERE'S a cut-a-way view of a Laminex door. Note how the stiles and cross-rails are built up on a core of blocks. This is the famous Laminex construction, which nullifies the destructive forces of expansion and contraction. Any attempt of one block to warp, swell or shrink is immediately neutralized by forces in the opposite direction, exerted by neighboring blocks. All parts of a Laminex door, including the plywood panels, are held together firmly by secretly compounded Laminex cement, which is absolutely water-proof and actually stronger than wood.

You can soak this door in water without hurting it

Laminex construction is so substantial that a Laminex door may be soaked in water for days without warping, buckling or blistering.

Laminex doors are guaranteed trouble-proof

Every genuine Laminex door is guaranteed. The success of Laminex has tempted others to offer veneered doors, outwardly resembling Laminex doors, but lacking the moisture-resistance that only Laminex water-proof cement can give. For your own protection, insist on doors that bear the yellow replacement guarantee label and the name "LAMINEX". Progressive millwork and lumber dealers can supply you with popular designs of Laminex doors at a price that will make you wonder why you ever took a chance on ordinary doors.

Fill in and mail coupon below for new book about the scientific construction of Laminex doors.

Laminex doors are now being manufactured of Philippine Hardwood (commonly known as Philippine Mabogany), as well as of Douglas Fir

LAMINEX DOORS

REG. U. S. PAT. OFF.

Will not shrink, swell or warp

THE WHEELER, OSGOOD CO., Tacoma, Washington
Gentlemen: Please send the illustrated Laminex door book and instructions for finishing doors. L1168

NAME _____

ADDRESS _____

CITY _____ STATE _____

I buy _____ doors per year

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



For Safety and Saving
Build with

W
Wheeling
CORRUGATING COMPANY

ARCH LATH

Today you may offer the home builder fire-safe walls and ceilings at no greater cost than for inflammable construction! Arch Lath—the fire-safe plaster base—makes this possible.

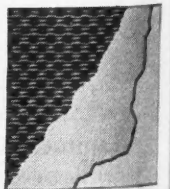
Arch Lath is a plaster saver! Due to a distinctive arch design, only the correct amount of plaster is permitted to squeeze through the openings for perfect "key". There is no piling up of plaster between walls, the hidden waste that runs up the plastering bill.

Arch Lath is a time saver! Immediately after application, the first coat of plaster may be scratched and made ready for the second coat. There is no delay, waiting for plaster to dry. There is no need to remove and re-erect scaffolding. The sheet of Arch Lath is so RIGID that it takes the force of the trowel without "giving" at any point thereby assisting rapid, efficient workmanship.

Arch Lath is a labor saver! Because it is nearly a solid sheet of steel, Arch Lath is very rigid and therefore easy to handle and erect. One man can place the sheets and nail them up. Nail hole starters facilitate application.

Arch Lath—the ideal plaster base! A firm scratch coat is possible on Arch Lath because the arches "grip" the plaster at many angles. This security is best demonstrated by the fact that one sheet of Arch Lath (27"x96") grips the plaster at 8064 points. It is because of this perfect anchoring that the new plaster texture effects are properly executed on Arch Lath at low cost.

Let us send you additional information and a sample of Arch Lath for close-up inspection.



One sheet of Arch Lath (27 x 96) grips the plaster at 8064 points; making the wall an integral unit of rigidity and strength, while minimizing possibility of cracking.

WHEELING CORRUGATING COMPANY · Wheeling, West Virginia

Branches: New York Philadelphia Chicago Minneapolis St. Louis Kansas City Chattanooga Richmond Des Moines



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Wheeling Corrugating Company

Have You Seen the New Spanish Metal Tile?

Beautify your home with a roof suggestive of picturesque old Spain. Specify Wheeling Spanish Metal Tile. It is proof against lightning, rust and leaks. Lowers rates of insurance and is practical and permanent, artistic and beautiful. Write for full information.

Building Materials Backed by a Generation of Experience

They say it is easier to rent or sell—



Lee Plaza Apts., Detroit, Michigan, equipped with Schlage Button Locks. Chas. Noble, Architect. Ralph T. Lee, Owner and Builder.

WHERE doors lock without keys—

Yeadon Manor Homes, Yeadon, Pennsylvania, equipped with Schlage Button Locks. Manley & Mensch, Builders.



DON'T overlook the value of convenient door locks as a talking point in selling and renting. Think of the number of times people turn a door knob every day. Appreciate how forcibly the buyer or tenant must be impressed by Schlage **BUTTON** Locks. They eliminate the old-fashioned nuisance of inside keys. They lock without keys. They unlock automatically with the turning of the inner knob. **MANLEY & MENSCH**, Builders of Yeadon Manor Homes shown above, declare: "We have been using Schlage Locks 2 years, and never had a complaint. They have

proved such a big attraction to buyers we are going to put them in 135 houses at Lansdowne. We can install them in one-third the time it takes to put in old style locks, and save money." **RALPH T. LEE**, Owner and Builder of the Lee Plaza Apartments, shown above, says: "During the past few years we have used Schlage Locks as the inside trim in some of the finest and most up-to-date apartment buildings in Detroit. They are our idea of modern hardware, and have been one of the most popular features with our tenants." Over a million in use. Eight types. All U. S. standard finishes. Over 2,000 dealers in U. S.



SCHLAGE Button LOCKS

TO LOCK:
just press the button in the knob

TO UN-LOCK:
just turn the knob



Mail This Coupon NOW—
to **SCHLAGE LOCK CO., SAN FRANCISCO, CALIF.**, for prices and complete information on **SCHLAGE** Locks for



AB-6

Building _____

Name _____

Address _____

City _____

State _____ Business _____

SCHLAGE LOCK CO.
Manufacturers
San Francisco, Cal., U.S.A.
NEW YORK CITY—
71 Murray Street
CHICAGO—
549 W. Randolph Street
PHILADELPHIA—
2401 Chestnut Street
DETROIT—
439 Penobscot Building

The MODERN Lock for MODERN Buildings



UP under the rafters where cobwebs used to embroider grandfather's trunk and the old horse-hair sofa, there now is this beautiful bathroom. As the children were growing up it was only a dream. Today this extra bath is giving the family the comfort and convenience such a room always adds. Only a cottage bath, it is modest in cost; but mellow, tranquil, and lovely with its pre-

vailing hue of soft green, its floor of russet cork tile, its varicolored rag rugs, its painted linen closet, and figured curtains of Aqua-Silk. . . . Every builder will be interested in *New Ideas for Bathrooms*, an inspiring book of practical suggestions, illustrated with miniature blue prints, floor plans, and color schemes. Write for it, without obligation. And consult a responsible plumbing contractor.

CRANE

EVERYTHING FOR ANY PLUMBING INSTALLATION ANYWHERE

Crane Co., General Offices, 836 S. Michigan Ave., Chicago. + Branches and sales offices in one hundred and sixty-six cities

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Send for Your Copy NOW ~ 25¢ Post Paid



NO! Mr. Home Builder Number 1 Grade Lumber is NOT the best grade Lumber....



FINISHING LUMBER

"A" and "B&Better" (which combines "B" with "A") are the highest grades of Arkansas Soft Pine. They are the grades you should designate for a clear, fine quality of interior woodwork and best grades of flooring in Edge Grain (quarter sawn) or Flat. They are the correct grades for exterior finishing such as window casings, lap siding, clapboards, cornices, etc.—items which comprise the exposed surfaces. "B" and "C" grades are used for the same purposes. They contain minor defects such as small sound knots, pin worm holes, slight surface abrasions, etc. These defects often may be removed by cutting to meet measurements during installation, or they are hidden by paint. They do not detract from strength or usefulness, but are sufficient to classify the grade as slightly below strictly clear.

for example
"A" GRADE
"B&BTR." GRADE
"B" GRADE
"C" GRADE

These are all of higher grade than "No. 1" which is actually a common grade.

FRAMING LUMBER

"No. 1 Common" is a sound grade of common lumber. It is the best quality suitable for framing, scantling, joists, boards, ship-lap, sheathing, fencing, shelving, false flooring, etc. It contains some knots and admits slight splits, shakes, barky edges, etc, but incurs no waste. "Nos. 2 and 3" Grades are respectively lower in quality and higher in number of defects permissible. These grades are economically practical and properly used for framing, roof sheathing, steps, false floors, etc, and are widely used.

This explanation is published, that you may invest your building or remodeling dollar with a better understanding of what you require, what you should expect and what you are entitled to according to specifications designed to give you the right quality for each use.

WRITE FOR THESE BOOKS—Complete grading rules will be sent you free on request—also literature on finishing and painting. If you are planning to build or remodel, send for a copy of our splendid plan book which shows 25 prize winning home designs. Just enclose 25c with the convenient coupon below and the book will be sent postpaid.

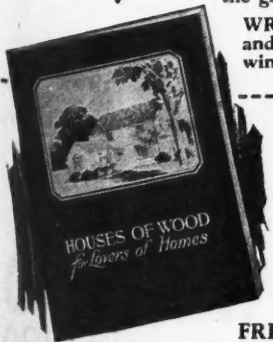
-----TEAR OFF AND MAIL-----

ARKANSAS SOFT PINE BUREAU
625 Boyle Building, Little Rock, Arkansas

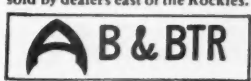
Enclosed find 25 cents Coin or Stamps, for a copy of your book "Houses of Wood for Lovers of Homes."

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City and State.....

FREE! Grading Rules Painting and Finishing Book



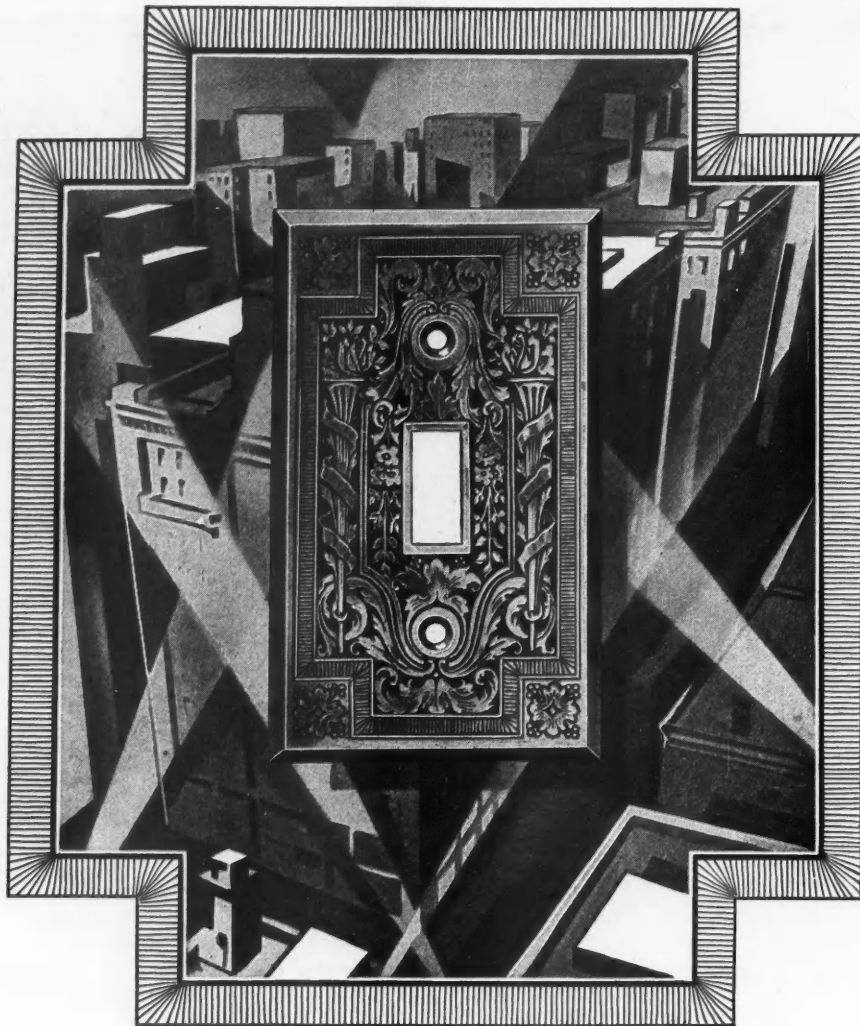
Arkansas Soft Pine is trade-marked, grade-marked and sold by dealers east of the Rockies.



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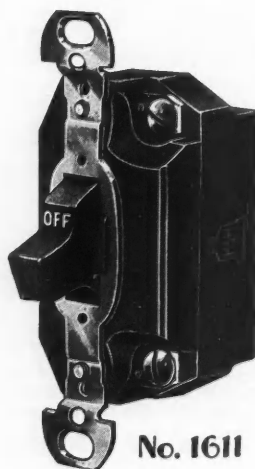
H&H



ATOP THE STYLE-TREND IN WALL SWITCHES

Etched Art Plates

Advanced design in electric switches finds its outer expression in the new Art Plates. The hand-etched design bespeaks fine artisanship — in the plate, in the switch beneath it, in the wiring system behind it. ¶ The style-element, here, suggests the *latest* — in wall plates, in switch-mechanisms, in wiring plans. Unusual decorative value ties up with the thought of unusual value all through your installation. It "sells" the job.



No. 1611

Enclosed Tumblers

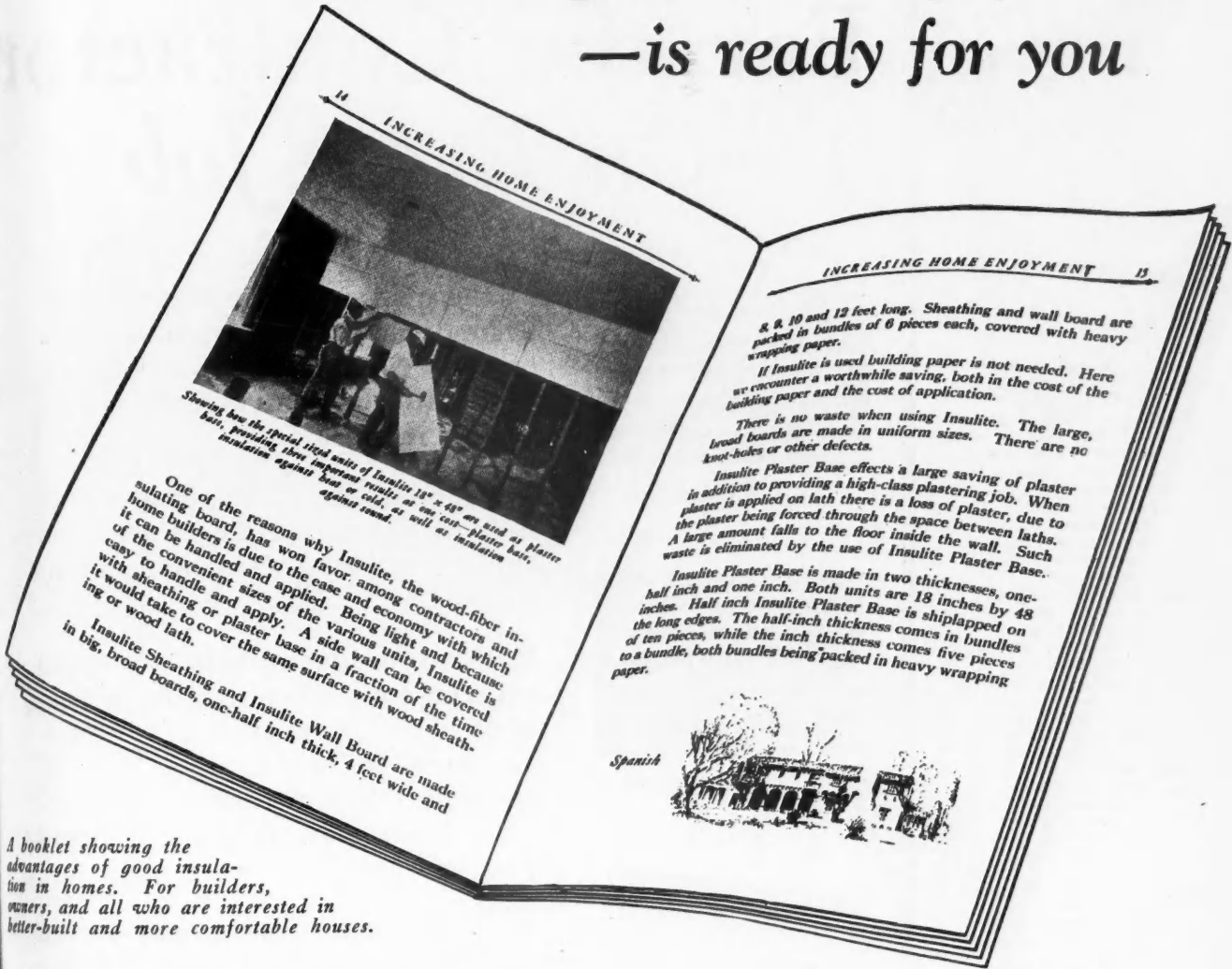
The Enclosed Switch has proved the neatest embodiment of what the builder wants in a *finished* job. The all-composition top — and bottom — completely encloses the mechanical parts. ¶ As a protective measure, it's one more safeguard to perfect functioning of the lighting system. Dust, grit and plaster are permanently shut out. Dependable service is permanently sealed in. Your responsibility ends there.

Specification-data sheets are available both on the new Art Plates and the Enclosed Tumbler — No. 1611. Reference to them will help you definitely to keep "atop the style-trend" in electrical work.

THE HART & HEGEMAN MFG. CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

“Increasing Home Enjoyment” —is ready for you



Showing how the special sized units of Insulite 18" x 48" are used as plaster base, providing their important results at one cost—Plaster lath, insulation against heat or cold, as well as insulation against sound.

One of the reasons why Insulite, the wood-fiber insulating board, has won favor among contractors and home builders is due to the ease and economy with which it can be handled and applied. Being light and because of the convenient sizes of the various units, Insulite is easy to handle and apply. A side wall can be covered with sheathing or plaster base in a fraction of the time it would take to cover the same surface with wood sheathing or wood lath.

Insulite Sheathing and Insulite Wall Board are made in big, broad boards, one-half inch thick, 4 feet wide and

8, 9, 10 and 12 feet long. Sheathing and wall board are packed in bundles of 6 pieces each, covered with heavy wrapping paper.

If Insulite is used building paper is not needed. Here we encounter a worthwhile saving, both in the cost of the building paper and the cost of application.

There is no waste when using Insulite. The large, broad boards are made in uniform sizes. There are no knot-holes or other defects.

Insulite Plaster Base effects a large saving of plaster in addition to providing a high-class plastering job. When plaster is applied on lath there is a loss of plaster, due to the plaster being forced through the space between laths. A large amount falls to the floor inside the wall. Such waste is eliminated by the use of Insulite Plaster Base.

Insulite Plaster Base is made in two thicknesses, one-half inch and one inch. Both units are 18 inches by 48 inches. Half inch Insulite Plaster Base is shipped on the long edges. The half-inch thickness comes in bundles of ten pieces, while the inch thickness comes five pieces to a bundle, both bundles being packed in heavy wrapping paper.

Spanish



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INSULITE

the Wood-Fiber Insulating Board

The Insulite Company
1202 Builders Exchange
Minneapolis Minnesota

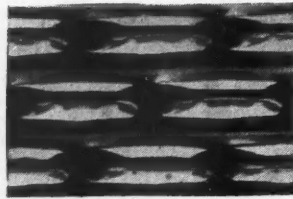
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1202 Builders Exchange, Minneapolis, Minn.
Please send me your new booklet,
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Address.....
City..... State.....

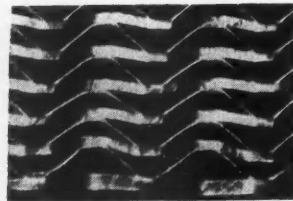
More Profits For the Contractor —On Every Job

Kalman's Line of Products For Building

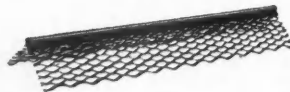
3/4" Rib Kalmanlath
 Diamond Mesh Kalmanlath
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 Flatrib Kalmanlath
 3/4" Stayrib Kalmanlath
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 Hot Rolled Channels
 Pencil Channels
 Box Channels
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 Perfection Corner Bead
 Wing Bead
 Rail Bead (With Clips)
 One Wing Bead
 Bull Nose Bead
 Curved Point Base Screed
 Base Bead
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 Kornerite
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 Stucco Reinforcement Nails
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 Ash Pit and Flue Cleanout
 Doors
 Basement Windows
 Structural Steel Angles for
 Lintels
 Crimp Metal Furring
 Hanger Rods
 Tie Wire
 Staples
 Nails
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 Hot Rolled Angles
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Troff Kalmanlath



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*Kalman
Expansion Corner Bead*



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Wing Corner Bead*

In these days of close bidding with a small margin of profit to work on, the contractor must be even more cautious than ever when buying his materials.

The money-saving advantages common to Kalman products are often the difference between a profit and a loss.

Kalman products help to speed up erection—often making it possible to use fewer men or to transfer men to some other part of the job. They also save on materials when plastering—they avoid plaster waste.

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In addition you can get delivery when and where you want it—your job need never be held up.

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ACCO No. 8 Sash Chain operates perfectly with any cord pulley

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Fill out the coupon below and we will send you a sample length of ACCO No. 8 Sash Chain for testing. If your lumber yard or hardware specialty dealer cannot supply you with ACCO Sash Chain, give us his name and we will see that you have a convenient source of supply.

USE



For one-hole sash, a coil spring provides a strong grip that cannot tear loose. Simply slip coil into end link, give it a turn and insert in sash with thumb.



For two-hole sash, the coil spring is inserted in the upper hole, slipping the coil into end link and inserting in same manner as with single-hole sash.

ACCO No. 8 Sash Chain

AMERICAN CHAIN COMPANY, Inc., Dept. A-6, Bridgeport, Connecticut

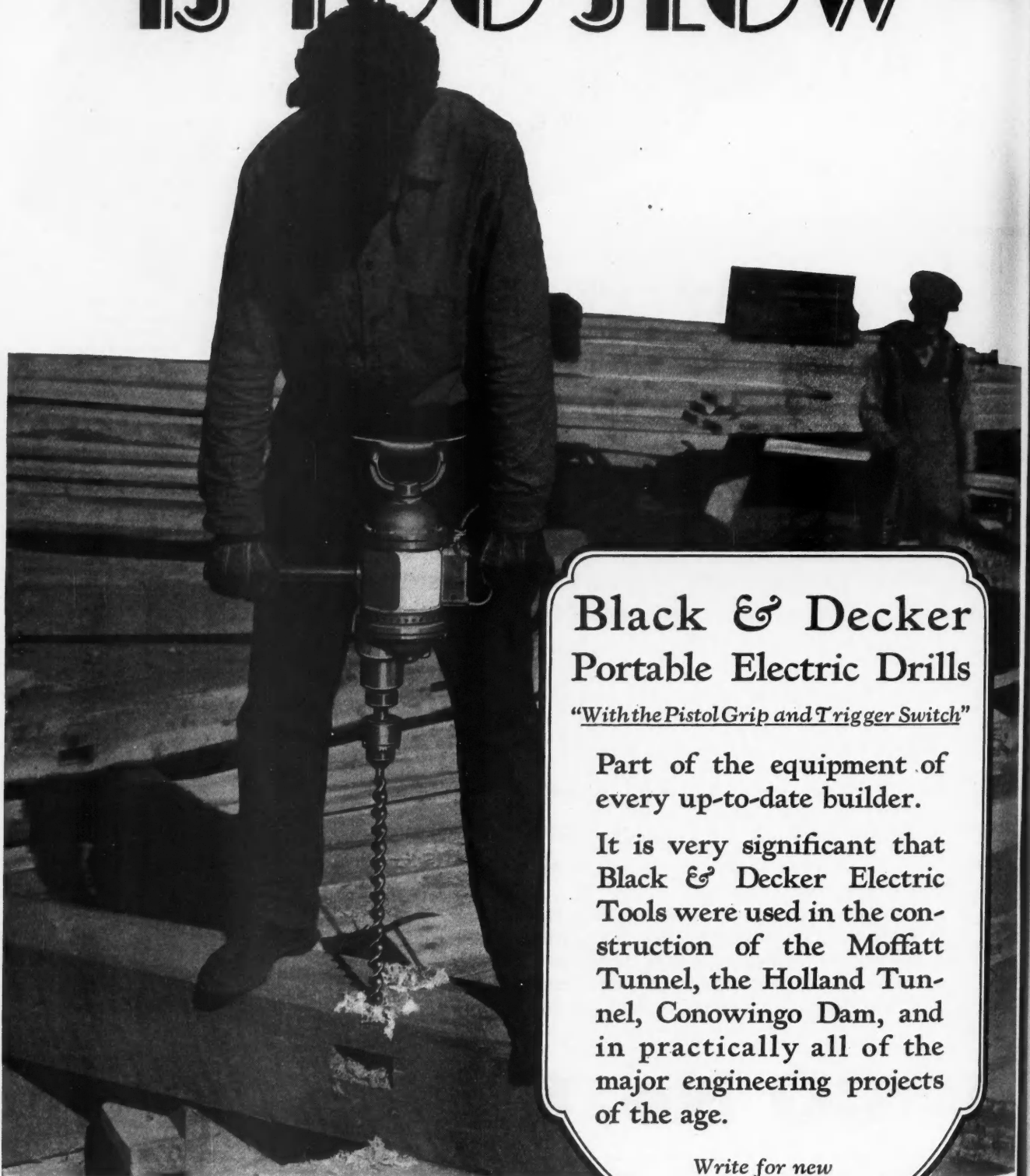
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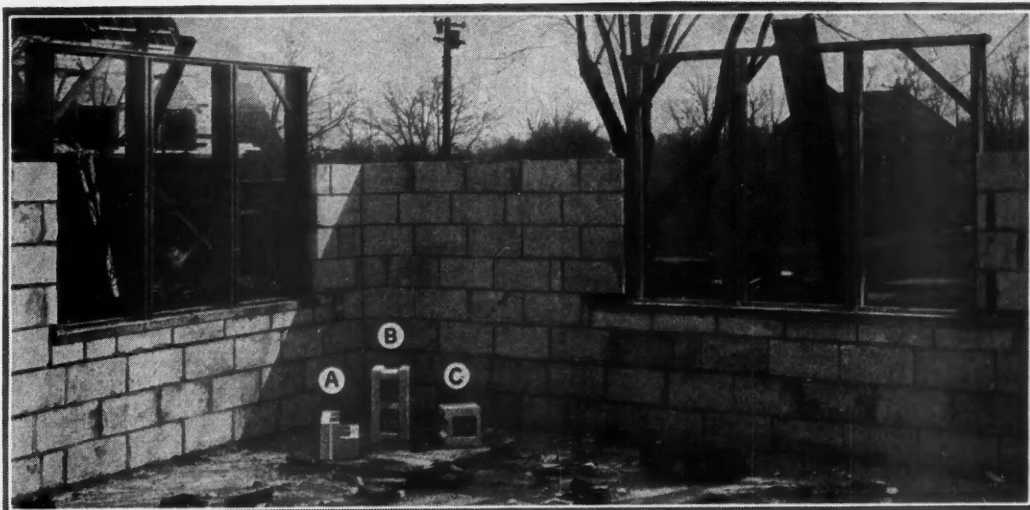
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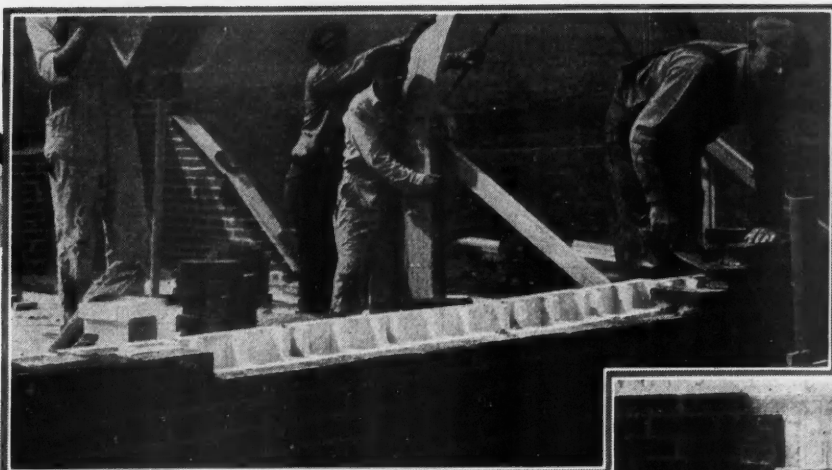
Black & Decker Mfg. Co., Limited, Toronto, Ontario

Black & Decker, Limited, Slough, Bucks, England

As contributing to adaptability, note ease of cutting on the job to fit around openings. Illustrated are—A, bond tile; B, standard tile; C, half standard tile. No special shapes or sizes required to build a tight, workmanlike job.



This picture shows how light weight and smooth surface of tile contribute to ease and speed of placing. Wide side walls contribute to ease of placing mortar and materially reduce mortar loss.



As shown in this picture, header brick bonding is easily accomplished with Structolite Tile. Practically all patterns of bonding are easily adaptable to a simplified construction without requiring continuous brick work clear through the wall.

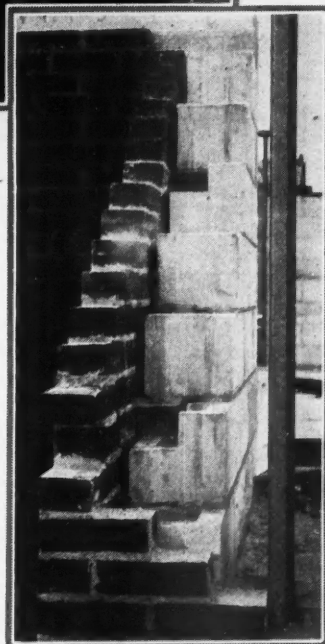
Camera tells why *this tile outranks other masonry*

WITH insulating value as its outstanding characteristic (Heat conductivity per square foot per hour 8" tile, 352 B. T. U.—Peebles) Structolite Tile offers to the architect and builder a number of advantages not to be found in any other building material.

Manufactured "neat" of Structolite cement—no sand or other aggregate being used—it is: Very light in weight. Pure

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UNITED STATES GYPSUM COMPANY
Fireproofing Dept., 300 W. Adams St., Chicago, Ill.



Note air space between face brick and tile, also between end of bonding brick and tile. This method is an assurance of a dry wall to keep insulation value at a maximum. The finished construction is better than ordinary masonry in that it gives the effectiveness of an additional separate insulation without the added cost.

STRUCTOLITE

INSULATING LOAD-BEARING TILE
Made by the United States Gypsum Company

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

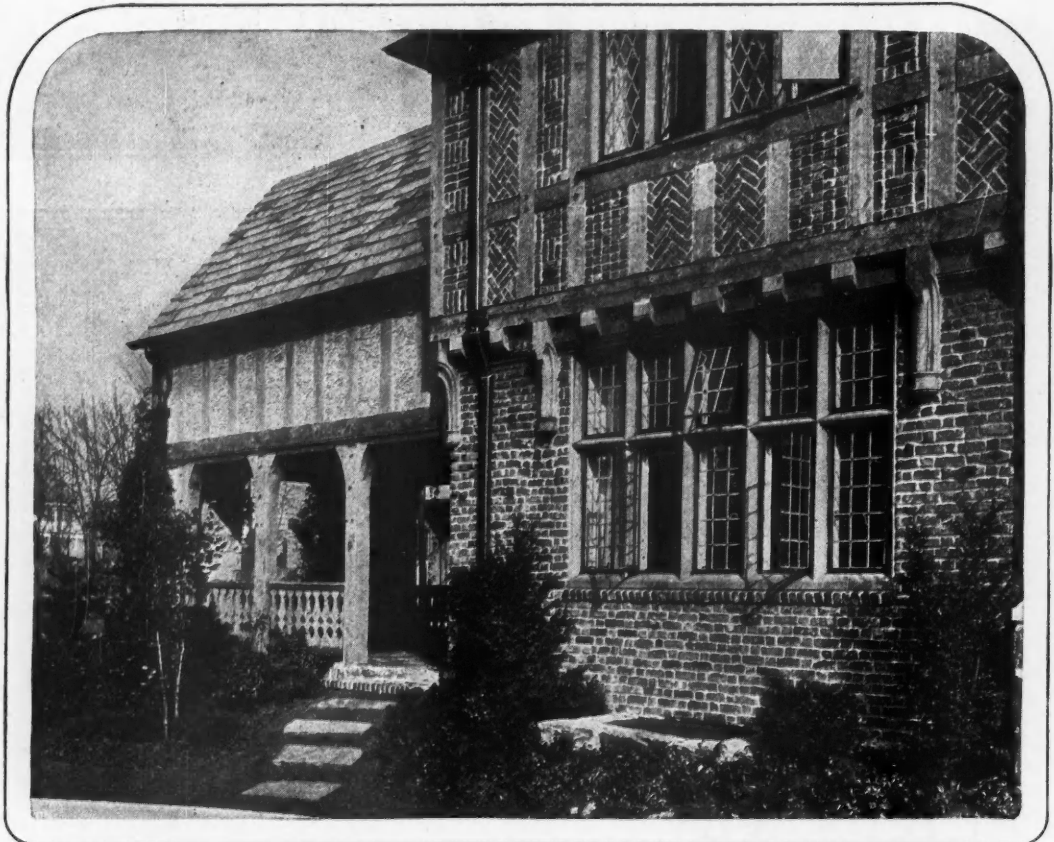


STANDARD
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American Builder, June, 1928

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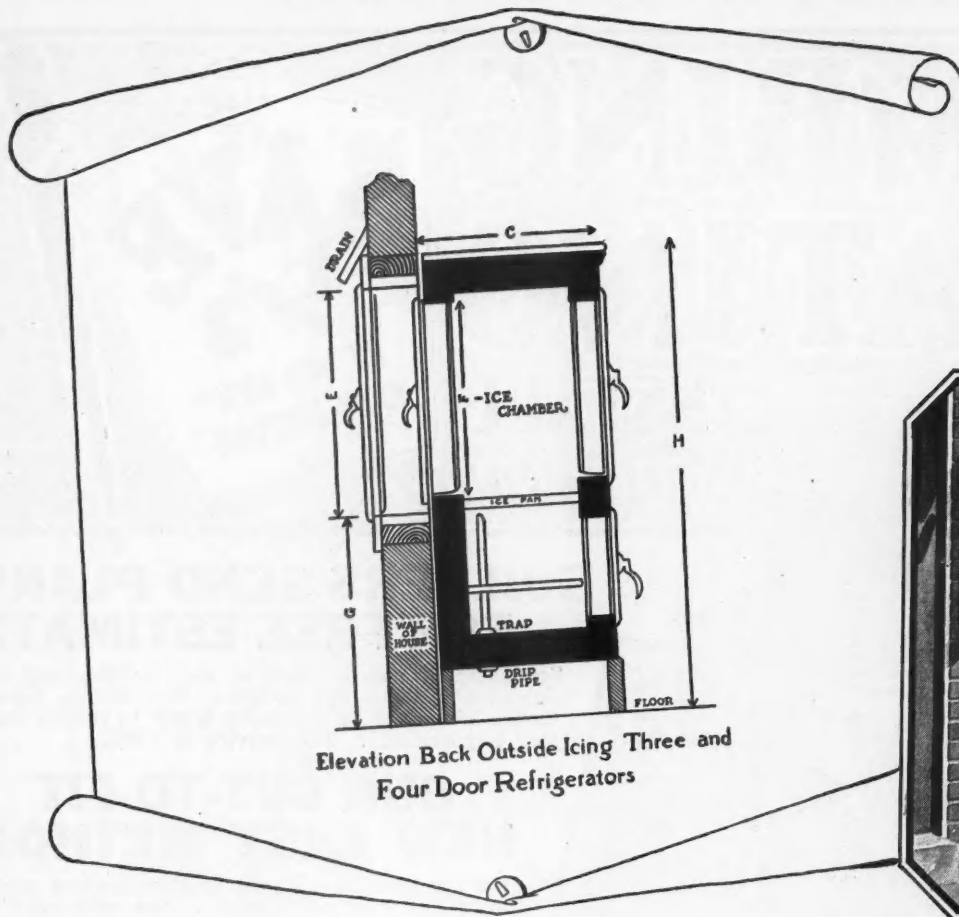
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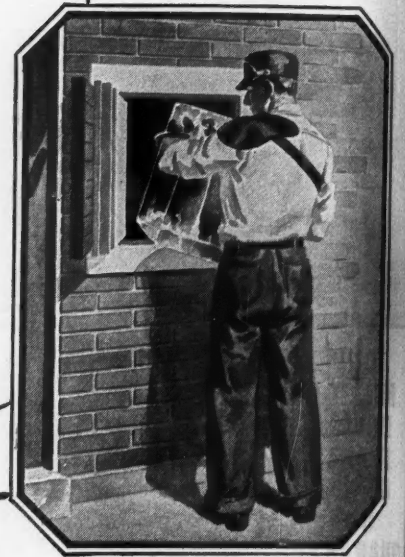
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This feature adds little to the cost, but much to the convenience and marketability of homes and apartments.



Put "Outside Icing" in the BLUE PRINTS of Homes and Apartments

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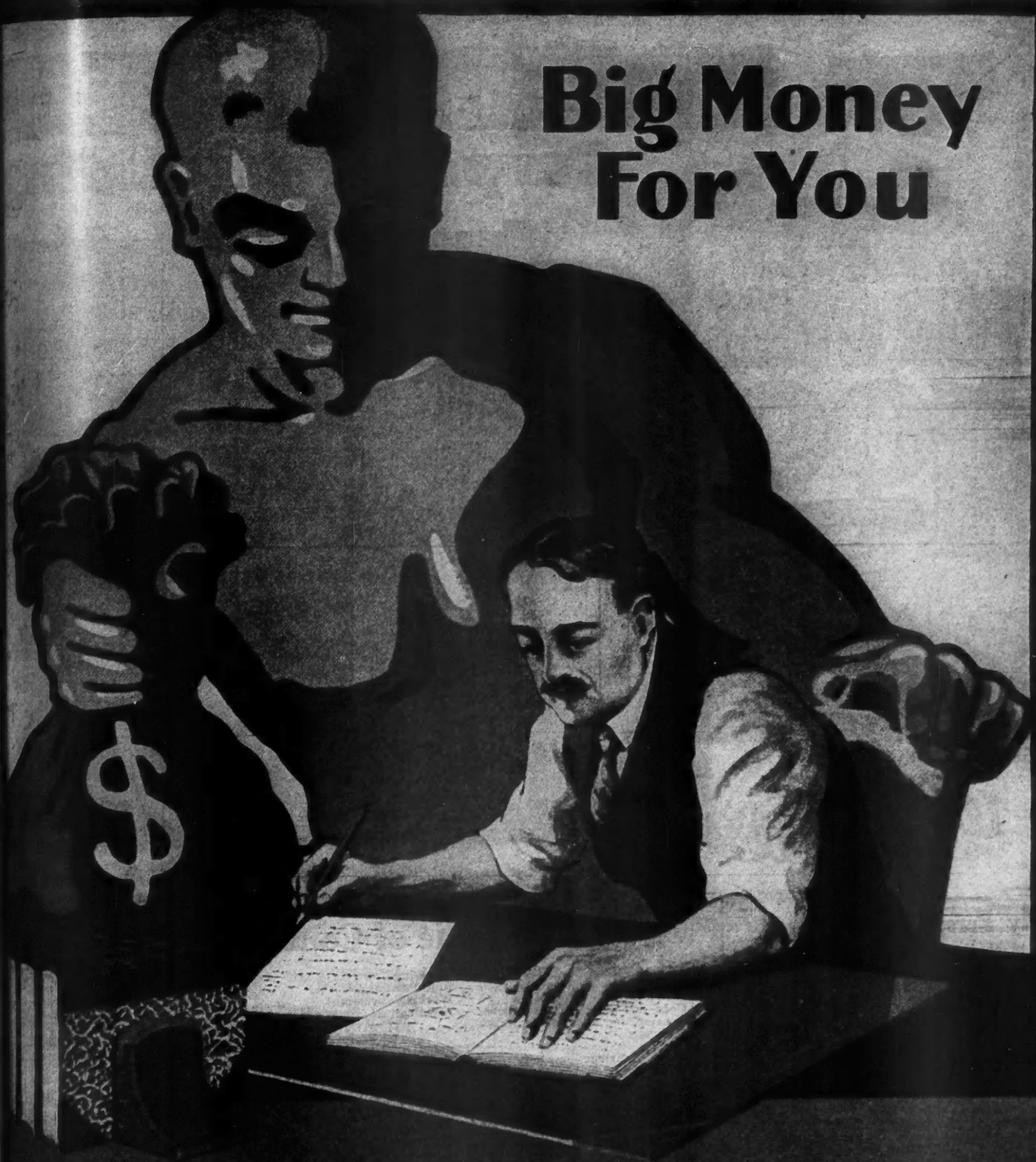
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Construction of Sills and Joists.
Studding.
Cornice.
Porch Construction.
Window and Door Openings.
How to Attach Woodwork to
Masonry Walls.
ROOFS AND ROOF CONSTRUCTION
Lean-to and Saddle Roofs.
Forms of Roof Trusses.
Stresses on Roofs.
Strength of Beams.
Dimensioning, Struts, Tie-Beams, etc.
Roof Braces.
Rafters and Purlins.
Hips and Valleys.
Wall Plates.
Jack Rafters.
Dormers.
Use of Queen Rafter
To Support a Gambrel Roof.
Construction of Circular Porch.
CONSTRUCTION OF STAIRS
Pitchboard.
Treads and Risers.
Housed and Open Strings.
Wall Strings.
Straight and Curved Stairs.
THE ELEVATION
Intersections and Developments.

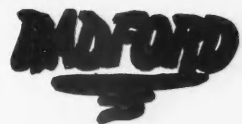
Lettering.
Blue-Printing.
Working Drawings.
Architectural Drawings.
BUILDING CONSTRUCTION
Foundations.
Girders.
Cellar Windows.
TEMPERATURE REGULATION
Practical House Plumbing.
The Sewer and Connections.
Sizes of House Drains.
THE PIPING SYSTEM
Layout of Plumbing.
HOW TO USE THE HANDBOOKS
Rivets and Riveting.
Factor of Safety.
CLASSES OF STRUCTURAL MEMBERS
Design of Girders.
MANUFACTURE OF STRUCTURAL MEMBERS
Forge Shop.
Painting Structural Steel.
Cost of Steel Structures.
Erection of Steel Buildings.
Bridge and Viaduct Construction.
USES OF THE STEEL SQUARE
Uses of the Figures, Lines and Scales.
Testing the Square.

Brief List—See Book
Diagonal and Octagonal Scales.
Adjustable Fence.
Describing Curves with Square.
To Find Length of Braces and Other Timbers.
Steel Square in Roof Framing.
Pitches.
Rafters Cutting.
Common and Jack Rafters.
Hips and Valleys.
Projecting Cornice.
Finding Bevels.
Framing a Circular Porch.
Framing a Gambrel Roof.
Miter Cutting.
Hip Roof Framing.
Finding Length of Rafters.
Bevels for Cuts.
Hoppers and Hopper Bevels.
THE SQUARE IN STAIR BUILDING
Strings and Finishes at Top and Bottom.
Treads and Risers.
Square of the Newel.
Combination Squares.
Topp's Framing Tool.
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Properties of Ore.

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Method of Shingling.
Covering of Circular Dome.

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Rubble Masonry.
Cut Stone.
Bonds and Joints.
Mortar for Stonework.
Stone Cutting.
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Bricklayers' Tools.
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The MAN Who Stood Still!



THE MAN WHO STOOD STILL. He is one of the tragic figures of life. Day after day he follows in the same groove. In good health and in bad he has to work. Growing older and older he sees ahead no relief from the ceaseless toil that he has known all through life. There is no opportunity for him to cease a single day the everlasting "humdrum" that he has known for so long. When he had the chance there was no Cyclopaedia such as this, at so low a cost, and so easy to get. He allowed other men—the men who had studied and knew how—to pass him by. They left him standing on the threshold of opportunity. But they left him behind. He heeded not the beckonings of opportunity. He is **THE MAN WHO STOOD STILL.**

SPECIAL FREE PREMIUMS IF YOU ORDER AT ONCE

If we receive your order at once, we will send with this Cyclopaedia one year's subscription (12 numbers) to the American Builder, the world's greatest building paper. We will send free of all extra cost, one complete set of blue printed working plans and typewritten specifications of any of the houses illustrated in three Books of Plans, which we also send to you free of cost, so that you may make your selection. These plans

and specifications are as complete as those charged \$50.00 to \$75.00 for by many architects. These plans will be very valuable to contractors, builders and draughtsmen. The only reason we can offer to do this is because we have the largest architectural establishment of its kind in the world, and are able to produce these complete blue printed working plans and specifications at the very lowest possible price, and to the purchasers of this big Cyclopaedia we are willing to give the benefit. Without American Builder \$1.00 less.

We make this liberal offer because we want you to have our Cyclopaedia, and we believe by having it in your hands we will have a greater opportunity of disposing of others in your locality, and it is with the distinct understanding that if it is entirely satisfactory, you will write us a letter and assist us in making other sales.

Our special price to you for advertising purposes is only \$37.50, and our liberal terms are only One Dollar down and \$3.00 per month until the amount is paid. We give you five days to look the books over and see if they are entirely satisfactory. If you conclude not to keep them, we will refund your money and pay the express charges both ways. Order today. Fit yourself at once to increase your earning power.

The Radford Architectural Co., 1827 Prairie Avenue, Chicago, Ill., U. S. A.

Pin A Dollar Bill To This Coupon and Mail Today

NO-RISK GUARANTEE COUPON

RADFORD ARCHITECTURAL COMPANY,
1827 Prairie Ave., Chicago.

Please send me, express prepaid, your 12-volume Cyclopaedia of Construction, for five days' free examination, with privilege of return at your expense. I enclose \$1.00 deposit which you agree to return if I decide not to keep the books after examination. If I keep the books, I will pay \$3.00 a month until the special price, \$37.50, is paid, otherwise I will notify you within five days after receipt of books.

Your offer also includes Three Big Plan Books (over 300 designs) and one full year's subscription to the American Builder. You also agree to furnish set of Blue Prints and Specifications, if ordered within 2 months after acceptance of books.

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West of Rocky Mountains and Canada, \$3.00 with this order.
Full amount must accompany all Foreign orders.

A. B. 6-28

THAT'S THE WAY TO SAW!

There's no trick about it. Just plug **SKILSAW** in the nearest electric light socket, put the blade to the wood, press trigger and ZIP — **SKILSAW** rips or crosscuts thru 2" dressed lumber as fast as you can mark it with a pencil. The motor is 1/2 H.P., and yet this **SKILSAW** (the new model J) weighs only 10 lbs.

THE PRICE IS \$60.

You don't have to break your back any more with an old fashioned hand saw.

Those days are gone forever. We'll prove it.

Send us the coupon. We want you to try **SKILSAW** on your own work FREE.

SKILSAW is made in four sizes. There is one to do all of your sawing. It will do it anywhere, because you can carry it about as easy as any tool you've got.

SKILSAW INC.
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CHICAGO

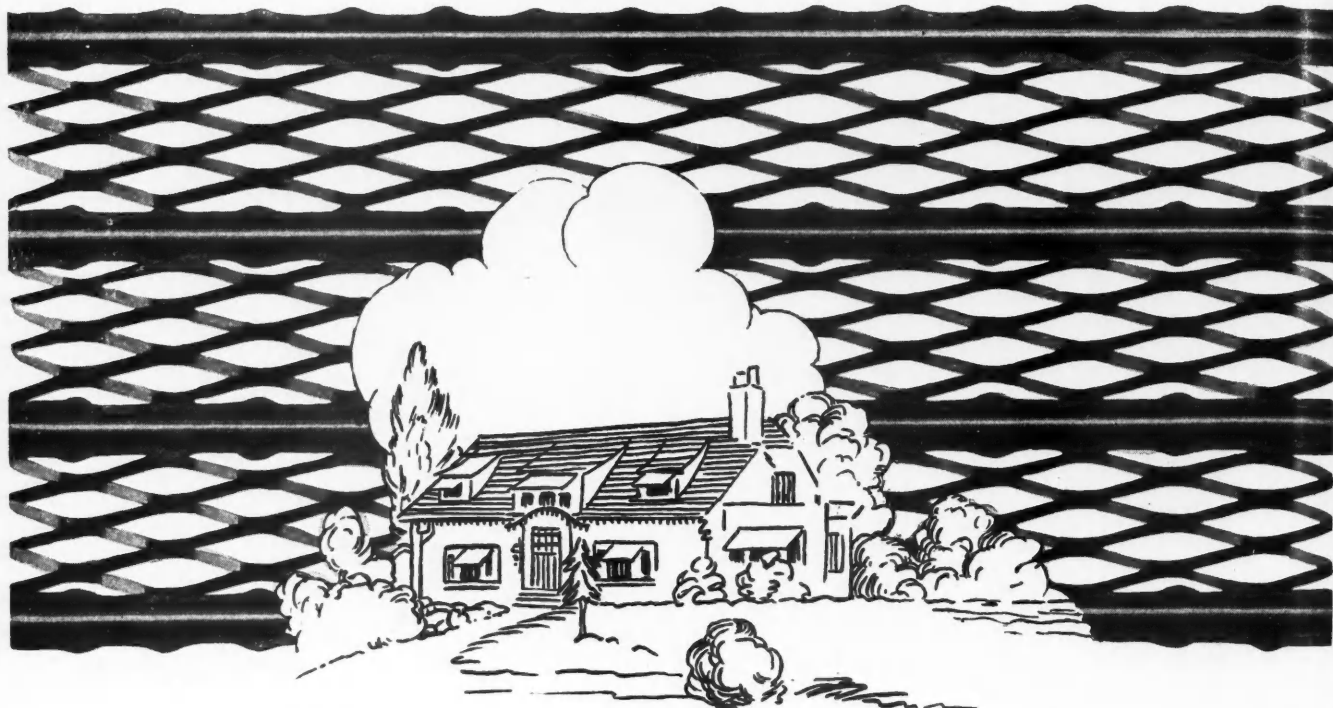
Without obligation I will gladly watch a 5
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Steelcrete Diamond Flat Rib Lath



Not a Cheap Lath—but Economical!

STEELCRETE Diamond Flat Rib Lath is decidedly more economical to use because it costs less per square yard to plaster than ordinary metal lath.

This saving is accomplished by a distinctive rib design which sets up a resistance against the entire field of lath and prevents an excess of plaster from keying through the mesh. This rib also serves to give unusual strength to the entire sheet of lath and acts as a guide for the plasterer.

Steelcrete Diamond Flat Rib Lath is not only a plaster saver of the first rank but a superior reinforcement as well, providing two-

way reinforcement. This insures sound construction—at lowest cost.

The sheets of Steelcrete Diamond Flat Rib Lath are fully expanded from end to end and corner to corner. They are *clean* and will not cut the hands. Rigidity of sheet makes for easy erection and rapid, efficient plastering.

Steelcrete Diamond Flat Rib Lath will produce profitable repeat business for you. Let us send you samples and prices together with results of recent plastering test.

Specifications

Size of sheet 24" x 96". Packed 9 sheets per bundle, 16 square yards. Weight painted 3.4 lbs. per square yard.

Consolidated Expanded Metal Companies, Wheeling, W. Va.

Steelcrete Building, Wheeling, West Va.

Atlanta Boston Cleveland Philadelphia Pittsburgh
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Steelcrete Lathers Tie Wire

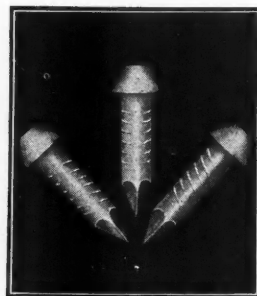
Here is a Tie Wire designed for the Lather. A product of unusual strength, yet soft and pliable for quick and efficient workmanship. Wrapped in sanitary packages, a safeguard to the Lather's health—like sterilized nails. Supplied in hanks 25 lbs. each.



Sample Offer

You may obtain on request, samples of the Steelcrete Time Tested Building Products described in this advertisement and complete information on other Steelcrete Products, including Arch Lath, Diamond Lath, Rib Lath, Wall Ties, Cornerite, Metal Base Ground, Curved Point Base Screen, Metal Picture Mould, Cold Rolled Channels, Corner Bead, T-Rail Bead, Bull Nose Bead and Expanded Bead.

Write to us today.



Steelcrete Stub Nails

Here is the Nail you can drive into Concrete without bending, breaking or blunting the point. Heavily zinc coated. Comes packed 1000 to the bag; also in 100 lb. kegs. The ideal nail for securing corner beads, metal lath and hangers.

SANITAS

MODERN
WALL COVERING

For Hotels or Homes

Whether your building operations are small or extensive, you can protect and beautify inside walls and ceilings with Sanitas. Sanitas is a cloth wall covering with an oil color surface that can be cleaned with a damp cloth.

Obtainable in a wide variety of colors, styles and finishes to meet any wall decorating problem.

The experience of The Congress Square Hotel is typical of thousands of Sanitas users. The manager of this hotel writes: "Sanitas we find a good investment, not only because it stands up so remarkably well, but also because of its low cost of cleaning and the beautiful appearance it gives to our walls." Some of the rooms of this hotel were decorated with Sanitas four years ago, and are in perfect condition.

Whether you are interested in decorating a one-family house or a multi-family apartment house, it will pay you to learn about Sanitas.



*Write our Architect's Bureau
for samples and literature*

THE STANDARD TEXTILE PRODUCTS CO.
320 BROADWAY, NEW YORK
Dept. 51



ARTHUR T. McINTOSH & CO.

REAL ESTATE INVESTMENTS

160 NORTH LA SALLE STREET
TELEPHONE STATE 3783
CHICAGO

May 8, 1928

Prominent Chicago Builder says **FACE BRICK Houses easiest to sell!**

American Face Brick Association,
130 North Wells Street,
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Gentlemen:

For our 1928 building program, tentatively set at three hundred houses, we have adopted the Face Brick house as the best type for us to build.

This policy is the result of a growing realization that the Face Brick house, regardless of age, is the easiest to sell and the cheapest to maintain.

The additional cost of using Face Brick on all four sides of our houses, we consider more than justified by the longer life of the building and its added beauty.

This is especially true in suburban developments such as ours where the building lots are larger than you find in the city districts.

Very truly yours,

ARTHUR T. McINTOSH & CO.,

By *A. T. McIntosh*

ATM:H

MANY builders now realize—as do Arthur T. McIntosh & Co.—that Face Brick adds so much to the salability of houses and so little to the cost as to make it one of the most profitable factors in their business. At the same time, by avoiding all building fads

and excessive depreciation, Face Brick best protects the builder's own interests—a matter of vital importance in long term financing. May we send you information concerning the helpful books and house plans we are prepared to furnish? Send your letterhead or card to

THE AMERICAN FACE BRICK ASSOCIATION

2163 City State Bank Building, Chicago, Illinois

FACE BRICK

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

How Many Times

Do You Open and Close Your Garage Doors Each Year?

A Good Door Should

1. Stay Open.
2. Stay Closed.
3. Not Blow Shut.
4. Open Out of the Way.
5. Not use valuable space.
6. Be easily and quickly operated.
7. Not scrape on the floor.
8. Not wedge or jam in ice or snow.
9. Seal opening at top, sides and bottom.
10. Not twist, pull or sag out of shape.
11. Lock and unlock from either side.
12. Require no change in building to install.
13. Harmonize with building.
14. Makes available every inch of the opening.

The "Overhead Door" meets all these requirements."



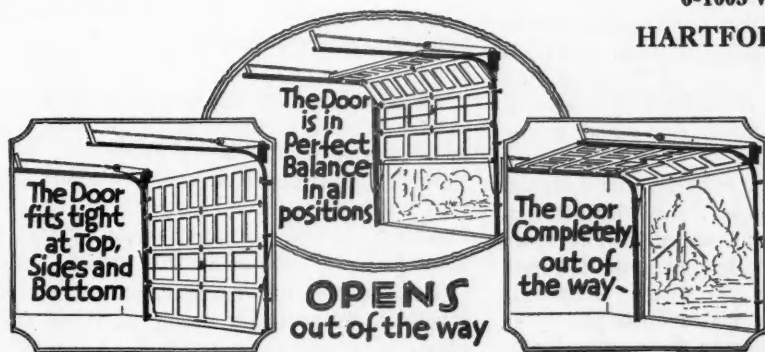
"The Overhead Door!"

"Overhead Doors" are an absolute necessity to the modern garage. The old type of swinging and sliding doors are as obsolete as acetylene lights on your car. Home builders everywhere are realizing the advantages of this perfected door. "Overhead Doors" are built of the very best materials available and the entire "Overhead" organization is schooled to the idea that workmanship must be perfect.

Do yourself the favor of learning more about this great door. You must see its smooth operation, its space saving features, its inherent beauty, its all-around efficiency, to really appreciate its value. **THE COST IS NO MORE THAN ANY GOOD DOOR!** Get in touch with the nearest "Overhead" distributor TODAY — or write direct to the factory. *Distributors Everywhere.*

Overhead Door Corporation

6-1003 West Kickapoo Street
HARTFORD CITY, INDIANA



Write for our new illustrated catalog, which contains blue prints and complete information about the perfected "Overhead Doors."



*An Ingenious Method of
Conveying the Cement Mixture*



*Showing the Reinforcing of
the new floor for the Factory*

FACTORY FLOORS *Repaired with* HIGH EARLY STRENGTH **ALPHA** *Concrete*

By J. G. BRAGG

Service Engineer, Alpha Portland Cement Co.

When it was found necessary to replace a part of the second floor in the Frank H. Lee Hat Factory at Danbury, Connecticut, the inventive genius of Mr. Bernard J. Dolan, contractor, was called into play.

The major requirements of the Frank H. Lee Company were: (1) permanency, (2) waterproofness, and (3) as little as possible delay in their factory operation.

Mr. Dolan considered the use of special early hardening cements and also ordinary ALPHA PORTLAND CEMENT. Finding that he could best obtain the desired results at a considerable saving in cost to the owner, he decided in favor of ALPHA.

Although the old floor of unreinforced concrete was still in good condition after 15 years of uninterrupted service, the supporting wood sub-floor had decayed, due to the seepage of water around the edges of the concrete. After removing the old floor, the wood cross-beams were reinforced with 12-inch steel channels. Some of the old wood columns were repaired or replaced with concrete and steel. For forms, 2-inch by 10-inch wood joists, spaced 16 inches apart, were used to span the 10-foot distance between cross-beams, and a 1-inch rough plank floor was laid over the joists. This was covered with tar paper to prevent water from the fresh concrete running through to the lower floor. The lower of the two views shown above illustrates the method of reinforcing the 7-inch concrete floor with steel rods.



The concrete was mixed for two minutes in proportions of one part ALPHA PORTLAND CEMENT, one and one-quarter parts sand and two parts screened gravel. Just sufficient water was used to produce a concrete of easily workable consistency. Some idea of the consistency of the mix may be gained by observing the lower view closely.

Mr. Dolan reports that with a one-bag mixer the concrete for a 33-foot by 40-foot section was mixed and placed in eight hours. *Factory machines were set in place the following morning, at which time he tested the floor by pounding upon it with a nail hammer without making a dent in the surface.*

It was necessary to elevate the concrete about 15 feet. The upper view shows how the contractor solved this problem by employing an ordinary belt conveyer gravel loader.

In this case, by the use of ALPHA CEMENT, the saving to the owner was \$225.00 for each 33-foot by 40-foot section. It is of interest to note also that although vibration from the line shaft driven machinery was noticeable, all machines were operated during the working hours, except those which were removed from the immediate section under repair.

Interesting information on how to obtain high early strength concrete by using ALPHA CEMENT will be cheerfully mailed on request. Address ALPHA PORTLAND CEMENT COMPANY, 13 S. Third St., Easton, Pa., or 165 Wacker Drive, Chicago, Ill.

CUTTING · THREADING · BENDING



23 Plumbers

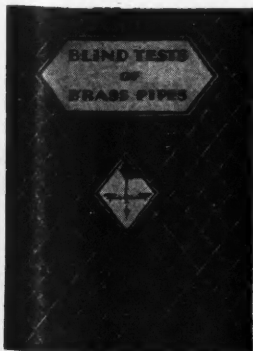
choose the best brass pipe

by tests!

Cutting, threading and bending tests were made by a group of plumbers. They were supervised by a disinterested engineer. Pipes from the leading manufacturers were used. No one knew at any time what pipe he was working on. The only identifications were code numbers known only to the laboratory. A sheet was made out for each operator.

Definite results shown on these sheets have been tabulated. A new Book, "Blind Tests of Brass Pipes" contains the results.

Plumbers can do better work in less time with one of the pipes tested. It requires less effort to work. Strong statements? Certainly... but the facts in this book prove it. We shall be glad to send you a copy.



6139-6

DEPT. No. 216, P. O. BOX 138, GRAND CENTRAL STATION, NEW YORK CITY

Please send me a copy of your book, "Blind Tests of Brass Pipes."

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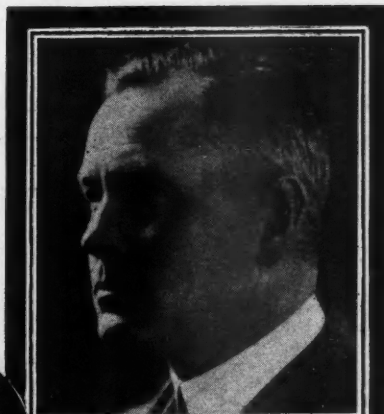


Roofing & Siding, Guttering, Downspouts,
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and many Accessories.

Flashing, Sill Plates, Cornices,
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Flat Sheets, Boxed Roofing Plates.

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Lyons saw the change coming

Wm. J. Lyons, a contractor of Norwalk, Connecticut, saw the day of increased competition coming for his business—studied the trend toward permanence in building—decided to get into manufacturing. Today he is set for life with a Duntile business worth \$70,000.

Get Into Manufacturing

That's where the Big Profits are Made

The building business is changing. New conditions are arising. Competition is growing keener. There's a demand for better construction—permanent construction—at lower cost. Contracting is harder to keep on a stable basis. The fight for business is growing keener.

Many contractors have been studying the situation. Perhaps you have felt in your business, as Lyons of Norwalk, Conn., did, that new methods must be adopted to keep abreast of the times if big profits were to be made.

Lyons became convinced that the country was swinging toward Permanence in building. He saw the necessity for a better permanent material—lower in cost. He realized the big profits that could be made in manufacturing the right kind of material.

will readily see that Duntile is truly a super material. That it is adapted to all kinds of buildings—homes, factories, garages, filling stations, hotels—for foundations, sidewalls, partitions. That it has great strength and splendid insulating qualities. That the manufacturing process is so standardized that men from all walks of life can make amazing successes with it.

NOW—Color!

Now, Duntile achieves an even greater advantage in Mat Glazing, which gives this low cost permanent material a range of color and texture unapproached by any other masonry material on the market. Forty different tones and colors! Beauty indescribable! A wider market and multiplied profit opportunities! Don't wait until someone else in your locality seizes this opportunity. Do as Lyons did. Get the facts. Send for the book which describes the whole proposition in clear, unbiased, common-sense terms. It may open for you, too, the straight road to manufacturing independence. Use coupon.

DUNTILE
THE PERFECTED ALL-PURPOSE CONCRETE BUILDING UNIT

Lyons saw in Duntile a material that brought permanence within the reach of all. He started out to make it in a small way. He soon found he had a whip hand on competition. Using the output of his Duntile plant, he could underbid on all types of permanent construction and still make a very satisfactory profit. Two profits, in fact; one on his manufacturing business and one on his contracting.

Other builders came to Lyons for Duntile. He was forced to expand his facilities. Today, he is in a position to cash in bigger than ever before, with the swing towards permanence gathering momentum all the time.

Other Amazing Successes

Lyons' success reads like a romance of business, yet records of other Duntile manufacturers prove it not unusual. There are over 400 Duntile manufacturers today in all parts of the country.

The Duntile proposition is clean cut. Its basic soundness is clear to any progressive man who has the initiative to investigate. You, like Lyons,

W. E. Dunn Mfg. Co.

415 West 23rd Street
Holland, Michigan

This BOOK TELLSHOW

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

6-28

I would like to know how Lyons and others with average ability and limited capital have won manufacturing independence supplying Duntile in their communities. Show me through your book "Basic Facts" how I too can establish a plant of my own and make 30 to 60% profit manufacturing Duntile.

Show me how I can build permanent, insulated masonry walls at cost of frame and make more money for myself.

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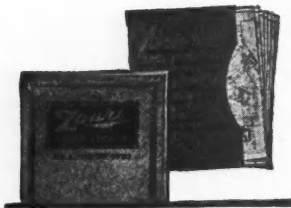
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A.I.A.-26 B-1



Zouri

preferred by owner and builder



Send for this
data book and helpful
detail sheets

Written for the practical architect, builder and contractor, this material gives generous plans and diagrams for suggested methods of window and display space. Detailed drawings will prove helpful to specification writers. Valuable to keep on file. Send for your copy.

From the offices of America's best known architects, builders and contractors come testimonials describing the outstanding *exclusive* advantages of Zouri Key-Set Sash and Store Front Installations. From smart shopkeepers, department store managers and superintendents of skyscrapers we have the statement "Zouri is doing the best possible job."

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There is a Zouri Distributor near you who is equipped to render you helpful service. His advice and co-operation is **FREE**.

Copper and bronze of unusually heavy gauge is used in the fabrication of Zouri sections—gauges that experience proves are necessary. After specifying, Architect and Contractor in considering substitutions should demand samples.

Zouri Drawn Metals Company

And Associated Companies:

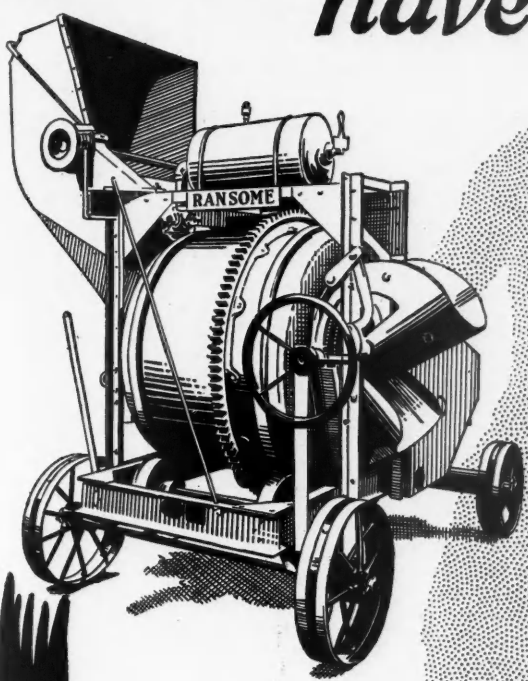
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Names
on Request

Factory and General Offices: Chicago Heights, Illinois

7-S & 10-S Standard Ransome Building MIXERS have the **PUNCH!**

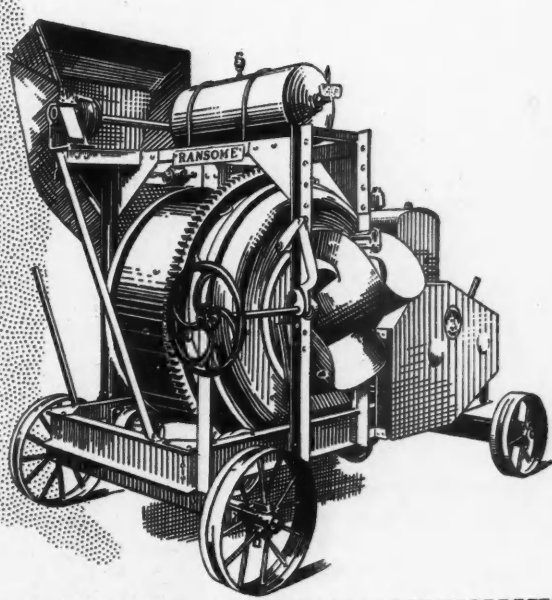


FRONT AXLE—built of two 4" Channels, width $1\frac{1}{2}$ " cold rolled stubs.
MAIN FRAMES—made of two 6" Channels.
MAIN ROLLERS—12" in diameter.

In This Corner We Have The Ransome 10-S

DRUM—51" in diameter by 39" wide:
DRUM ROLLERS—12" x 2 $\frac{1}{4}$ "—car wheel iron, Timken Roller Bearings on Drum Rollers.
CONTROL—One set of levers located at drum end of mixer.
GASOLINE ENGINE—LeRoi or Novo—4 cylinder.
WATER MEASURING TANK—16" x 40"—capacity, 37 gallons.

*Ransome—the first mixer in the ring
—the last to enter the repair shop.*



Fast, rugged mixers that knock out the work in record time—that is the general reputation of Ransome 7-S and 10-S among mixer "fans".
 Look over the measurements of the 7-S—then you'll see why it has the "gum" to stand up and "take" it.

DRUM—45" in diameter by 35 $\frac{1}{2}$ " wide.
DRUM ROLLER TRACKS—2" wide—1 $\frac{1}{2}$ " thick; forged rolled and turned from solid billets of locomotive tire steel.

Mail this Coupon!



Ransome Concrete Machinery Company
 Dunellen 1850—Service for 78 Years—1928 New Jersey

Get ALL of the facts about these fast, husky Ransome Mixers. Learn how they've performed—what they're made of!

RANSOME CONCRETE MACHINERY COMPANY
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 Without obligation, send me full information about the 3 $\frac{1}{2}$ -S Tilter; 5-S Builder;
 7-S Builder; 10-S Builder.

Name _____
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Let this material sell your houses **FASTER!** . . .

IT IS BEAUTY, color and permanence that modern home buyers require in a house. Fulfill these requirements with real tile—ceramic tile—and you sell your houses faster, at greater profit.

A bathroom done in colored ceramic tile wins instant approval—gives the buyer a sound reason for preferring your house. But the bathroom is only a beginning. Beautify the kitchen and the pantry with ceramic tile and you have the women on your side at once. The breakfast room, the dining room, the sun

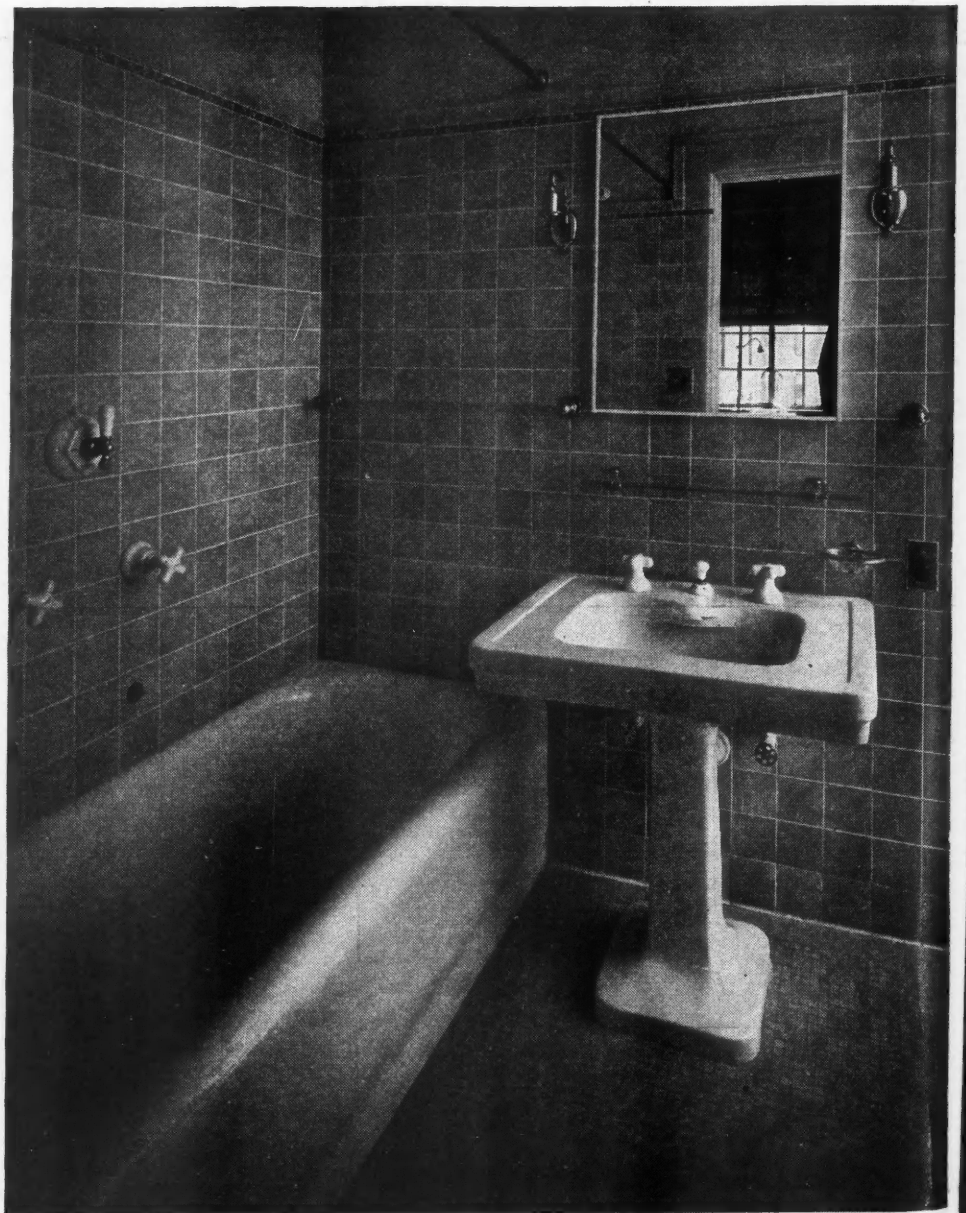
porch, the stairs offer you countless opportunities to make your house more desirable, more saleable when finished in tile.

Put tile to work for you. One glance at rooms finished in tile wins the instant approval of buyers. Sound cold reason strengthens that first favorable impression. Let ceramic tile sell your houses faster!

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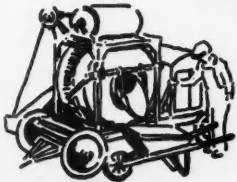


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Ask Us for Information



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.

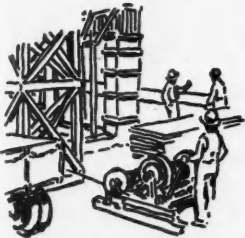


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If you are interested in any kind of building materials, contractors' equipment and machinery, power shop equipment, heating system, plumbing supplies, water supply systems, lighting systems, elevators, school or church or theatre equipment, farm building equipment, building hardware, home conveniences, or anything that is used in constructing or equipping any kind of building—fill out the coupon below, send it to the AMERICAN BUILDER and we will take the matter up at once with the proper parties who will send you their catalogs, prices and any other information you desire.

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In order to get the best and quickest results please be sure to print or write your name and address plainly and also check your occupation in the coupon below. Remember—This service is ABSOLUTELY FREE to American Builder readers.



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It has been definitely proved, however, that the same characteristics that make BRIXMENT preferable to portland cement and lime for masonry make it equally preferable to these two materials when used for stucco.

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(Please check whether Architect or Contractor)

AROUND *the* FAMILY TABLE



Because of Non-Support

The rapidity with which houses are being built nowadays—springing up almost over night, like mushrooms—reminds us of a story that is going the rounds of the building trades. A certain contractor was putting up a flock of small frame houses on a new subdivision. The work was being rushed—every man willing to work who could handle a saw and hammer was put on the job—in order that the houses might be ready to occupy before winter. Early one morning the foreman telephoned the contractor at his downtown office. "Say, boss," he began, excitedly. "One of them new houses fell down last night."

"Fell down!" replied the astonished contractor. "How did that happen?"

"Well, as near as I can figger it out," explained the foreman, "some of them bum carpenters took down the scaffolding before the paperhangers got the paper up."—*Nuggets.*



Why Haggle?

A Texas frontiersman came into camp riding an old mule.

"How much for the mule?" asked a bystander.

"Jist a hundred dollars," answered the rider.

"I'll give you five dollars," said the other.

The rider stopped short, as if in amazement, and then slowly dismounted.

"Stranger," said he, "I ain't a-goin' to let a little matter of ninety-five dollars stand between me and a mule trade. The mule's yourn."



Who Wouldn't

Doctor (examining unconscious engineer): "Did that automobile hit his engine?"

Fireman: "No, the driver slowed up to let the train pass, and the engineer fainted."—*Woman's World.*



No Wonder

A policeman was walking his beat in a residential district, when a badly battered house-to-house salesman rushed up to him.

"Say, officer," he panted, pointing to a red-headed iceman who had just climbed on his wagon. "I want that man arrested. Just look what he did to me!"

Stalking majestically into the street, the policeman waved the iceman to a halt, and commanded, "Did you hit this man?"

"Oi did," was the shameless reply.

"What for?"

"Alienation av affections," replied the iceman. "He sold Bridget Nolan's missus wan av thim electric iceboxes."



He Got It

Our office boy wanted a raise. He went to his boss and asked for \$2.00 a week. "Do you think you are worth it?" he was asked. "I do," was the reply. "I've been thinking so for three weeks, but have been too durn busy to say so."



Traffic Laws in Japan Are Few But Funny

The following rules of the road, copied literally as they appeared in English at police headquarters in Tokio, have been brought back by an American visitor to Japan:

1. At the rise of the hand of policeman, stop immediately.
2. Do not pass him or otherwise disrespect him.
3. When a passenger of the foot hoves in sight tootle the horn, trumpeting at him melodiously at first, but if he still obstacles your passage, tootle him with vigor and express by word of mouth the warning, "Hi! Hi!"

4. Beware the wandering horse that he shall not take

fright as you pass him by. Do not explode an exhaust blow at him. Go soothingly by.

5. Give big space to the festive dogs that shall sport in the roadway.

6. Avoid entanglement of dogs with the wheel-spokes.

7. Go soothingly on the slippery mud and avert the skid demon.

8. Press the brake on the foot as you roll around the corner to save collapse and tie up.—*Nation's Traffic.*



Mistake

"Stunning new house you built, Jones."

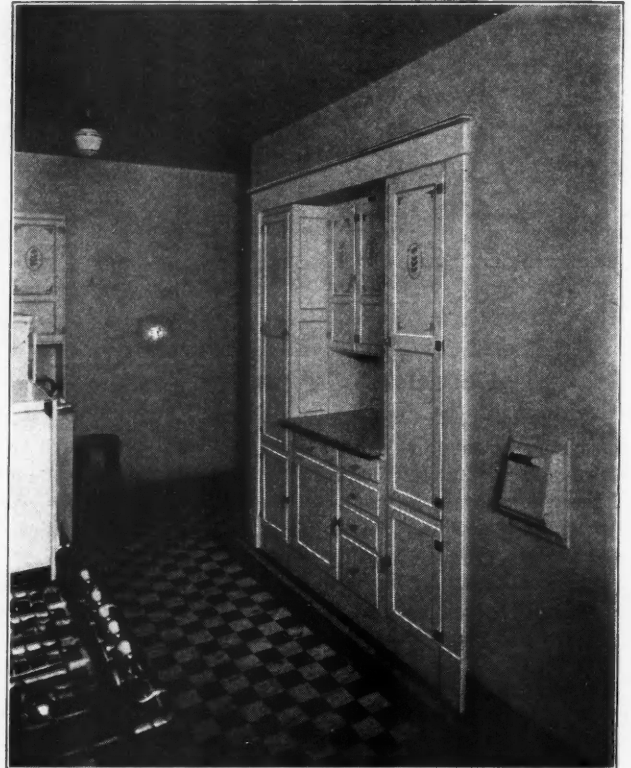
"April fool! It's my old one painted over."

FULL SPEED AHEAD! IT'S TIME TO GET RID OF HIM



[Reprinted by permission of the Chicago Tribune]

Colorful Sellers Kitchen Equipment



catches women's favor~

Color in lovely, cheering hues is the important factor now in designing kitchens to catch women's favor.

Sellers Sectional Kitchen Equipment, in Jade green, Spanish gold, Colonial ivory, or "Sellers" gray, offers the basis for many popular, colorful kitchen effects about which millions of women are reading in Sellers' beautiful national advertising. And always, in every "Sellers" installation, are the specialized time and labor-saving devices that have made Sellers the preferred kitchen cabinet in millions of homes throughout the country.

The Sellers "Sectional" line comes in forty different units. It is adaptable for the simplest or most elaborate "built-in" job. Just a few bolts to slip in holes provided, a quarter round for finishing, and this beautiful kitchen equipment is ready for use.

Skilled cabinet-making and careful selection of materials distinguish Sellers Kitchen Cabinets. Yet the price is moderate. Often it is lower than the "average" built-in equipment.

These are reasons why "Sellers" means THE BEST to women and why prominent builders find that "Sellers" equipment is a profitable selling feature.

Send for our special book described on the left

G. I. SELLERS & SONS CO., Dept. 806, Elwood, Ind.

SELLERS Sectional Kitchen Equipment

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



*The
whole story
in detail
to fit your file*

This red file-size book contains complete assortment of Sellers Sectional Units with illustrations, combinations, specifications, etc. A copy will be sent free upon request. It is sized to fit your file for ready reference.

AMERICAN BUILDER



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1827 Prairie Ave., Chicago—250 Park Ave., New York City

Construction Records Broken

APRIL construction contracts in the territory east of the Rocky Mountains broke all previous monthly records, according to F. W. Dodge Corporation. Building and engineering work contracted for last month in the 37 eastern states (about 91 per cent of the total country) amounted to \$643,137,100. August, 1925; March, 1926; August, 1926; March, 1927; April, 1927, and June, 1927, are the only other months on record showing as much as 600 million dollars for construction contracts. June of last year held the previous high record of \$632,478,000. The April increase over March of this year was 9 per cent; over April of last year, 6 per cent.

Last month's contract total made another record. It brought the amount of new construction work started in these states since the first of this year up to \$2,128,204,100, which is the largest total on record for the first four months of any year. The increase over the first four months of last year was 6 per cent.

Analysis of the April building and engineering record showed the following important classes of work: \$276,586,200, or about 43 per cent of all construction, for residential buildings; \$117,401,000, or 18 per cent, for public works and utilities; \$85,093,400, or 13 per cent, for industrial projects; \$82,757,700, or 13 per cent, for commercial buildings; and \$32,885,400, or 5 per cent, for educational projects.

Will Study Tax Revision

THE working out of a unified and comprehensive program for the modernization of state tax systems will be brought before a joint meeting of the States Council of the National Association of Real Estate Boards and the national board of presidents and secretaries of the state real estate associations. This meeting will be held in Louisville, Ky., June 18, immediately preceding the annual convention of the National Association of Real Estate Boards which is to be held in Louisville, June 19 to 22, inclusive.

Many Zoning Acts Passed

LOCAL zoning ordinances must be based on authority granted to the city or town by the state government, and hence the enactment last year of zoning legislation in 23 states is of underlying importance to the zoning movement, according to Dr. John M. Gries, chief of the division of building and housing of the Department of Commerce, speaking through a bulletin recently issued by the department.

The division's canvass of the situation, which involved the searching of the laws passed by more than 40 state legislatures which met last year, also revealed the fact that the standard state zoning enabling act, which was prepared five years ago by a committee of eminent men appointed by the Secretary of Commerce, has now been used wholly or in large part in laws enacted in 29 states.

The zoning legislation adopted during 1927 ranges all the way from complete state acts applying to all classes of municipalities, to acts that apply to a single city. By the end of the year 1927, zoning laws had been enacted by 45 states and the District of Columbia, while in another state it has been held that zoning is permissible under home rule provisions of the state constitution.

The Home as Loan Security

THE home and farm are good security for loans in the eyes of the insurance company. A survey of the loan policies of 61 American life insurance companies made jointly by the brokers' division and the mortgage and finance division of the National Association of Real Estate Boards, shows that out of the 61 companies reporting their individual loan requirements 52 will make mortgage loans on homes, detached dwellings, and 42 will make them on farms. Out of the nine companies listed who do not make loans on homes, six are companies which specialize on farm loans, one is a company which has a policy of making loans on apartment buildings only, and one makes loans on apartments, stores and industrial buildings only.

Detailed and authoritative information as to the loan requirements of insurance companies was asked by the association in order to facilitate the financing of real estate development for the individual realtor and for his clients.

Cities—1928 Pattern

IN preparation for the forthcoming census of 1930, seventy-two cities are defining their metropolitan regions in order that the returns may be compiled hereafter to show the rate of growth of such units. It is recognized that the American City has spilled over its limits and is now an aggregation of municipalities.

Among the cities defining such areas, reports the Civic Development Department of the Chamber of Commerce of the United States, are New York, Chicago, St. Louis, Philadelphia, St. Paul-Minneapolis, Dallas, Buffalo, Rochester, Kansas City, and others. Twenty-one metropolitan area maps are in preparation or have been made.

Nearly all the cities have recognized the purpose of the metropolitan regions and have drawn boundaries which conservatively outline areas that are urban in character and that are closely associated in the work of the central city. In one or two cases, after maps had been received and the accompanying data studied, it has even been suggested to those cities that the boundaries should be enlarged in order to include an area evidently of an urban character.

In only one case so far has a city definitely suggested including territory that did not fall clearly within the purpose of the work. Apparently it is recognized that a metropolitan region means responsibility as well as opportunity and that grasping at too much would not only arouse ridicule outside the community but would tend to bring discredit upon the undertaking at home.

Here, Briefly, Are the Advantages You Receive thru using High-Early-Strength Universal Concrete (made without the use of special materials or equipment)



During the last two years *High-Early-Strength Universal Concrete* has been used on hundreds of jobs of many sizes and types. Here, in brief, are the advantages the builders received:

Early use of the improvement. *High-Early-Strength Universal Concrete* is as strong at 3 days as ordinary concrete is at 28 days.

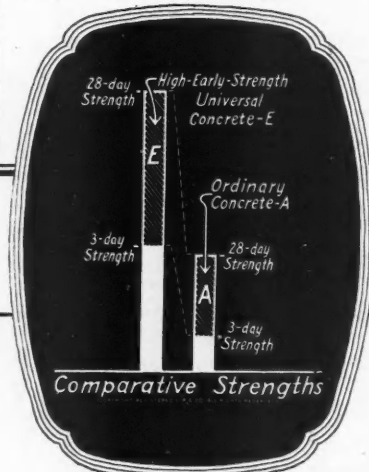
Permanently Stronger Concrete. In addition to a higher initial strength, *High-Early-Strength Universal Concrete* has a much higher ultimate strength than concrete as ordinarily placed (see diagram). As a result, it often is specified where extra-strong concrete is desired.

Early stripping of forms. Because of its quick-hardening properties, *High-Early-Strength Universal Concrete* permits the early removal and more

No Special Materials or Equipment Required

High-Early-Strength Universal Concrete is made by approved methods with the usual materials, usual equipment, usual labor and usual Universal cement.

It may be made as workable as desired and used on all types and sizes of jobs. The accompanying coupon will bring full details.



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

Without obligation, send me detailed information on methods of securing strong concrete in 3 days with the usual materials, usual equipment, usual labor and usual Universal cement.

Name

Address

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frequent re-use of forms. These savings alone often justify its use.

Service to Customers. *High-Early-Strength Universal Concrete* satisfies the owner's call for speed and provides, in addition, a permanently stronger and better job.

Avoidance of Penalties. Frequently, thru unavoidable circumstances, the builder finds himself behind in his schedule. *High-Early-Strength Universal Concrete* enables him to catch up and avoid penalties.

High-Early-Strength Universal Concrete is used wherever early use, quick removal of forms or unusually strong concrete is desired. For full details send in the accompanying coupon.

Universal Portland Cement Co.
Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York
Concrete for Permanence

EVERYBODY'S BUSINESS



Trends of the Times

By FLOYD W. PARSONS

FOREIGNERS are amazed at the wealth being piled up in America. We ourselves are puzzled and astonished by the speed with which the United States has attained world pre-eminence. Back of this remarkable achievement are stories of accomplishments that entailed the exercise of surpassing ingenuity.

There are stages in human progress when the results of thought and effort are most apparent. First comes the conception of a problem, then its study and finally the practical application of the solution. We are now in one of these third-stage periods when people are cashing in on the work and plans of yesterday. A million minds have been turned to the one big job of revolutionizing practices.

For 5,000 years men built houses of brick without effecting any material improvement in either the tools or methods employed. This continued practically up to the time when the late Frank Gilbreth started on a study of the movements involved in laying brick. The outcome of this research was a reduction of the motions from 18 to 5, and an increase in the hourly output of nearly 200 per cent per worker.

Now we have come to recognize that the big profits are in producing finished articles. It is the little things—the ultimate refinements that count. The World war taught us this lesson. It opened our eyes to the necessity of going in for details.

The value of a ton of metal increases a hundred times by turning it into watches and jewelry. A pound of cotton thread worth 25 cents may sell for \$1,500 when converted into lace. We became a creditor instead of a debtor nation when we started in to capitalize all the opportunities that lay in the utilization of the most remote by-products. Our money had been going to buy back in finished form the cotton, copper and other materials we had sold in bulk to foreign peoples.

In the era we have now entered each disclosure of new knowledge is quickly adapted to a multiplicity of uses. Certainly no one expected a few years ago that by means of the X-ray we would be able to breed a new kind of cotton

which would grow so fast that the boll weevil would not have much of a chance to damage it, and yet the experiments of Dr. Muller of the University of Texas appear to make this seem feasible.

Today we utilize the power of the X-ray to penetrate the innermost secrets of matter. These mysterious vibrations tell us if the castings of a great gun or a piece of machinery contain hidden flaws; if the cores of golf balls are symmetrical; if automobile tires are perfect; if a variety of coal runs high in ash; and if hidden knots or resin pockets are present in the center of a large piece of airplane timber.

Photographs produced by means of ultra-violet rays not only disclose the character of a rare stone, but stamp the individuality of the jewel very much as a finger-print marks the identity of a person. Under ordinary white light the photographs of diamonds lack definite distinction, but when made with violet rays the pictures render it possible not only to grade the germs with exactness, but to identify them even if stolen and recut.

Two scientists at the University of Iowa have found a way to measure the sound waves created by messages which travel over the network of nerves in the human body. Recently this sound of a nerve current was magnified 800 times and broadcast from a radio station. Experiments have indicated that there is a correlation between the speed of the nerve impulses and the intelligence of the individual. It is becoming more and more difficult for us to hide our ignorance.

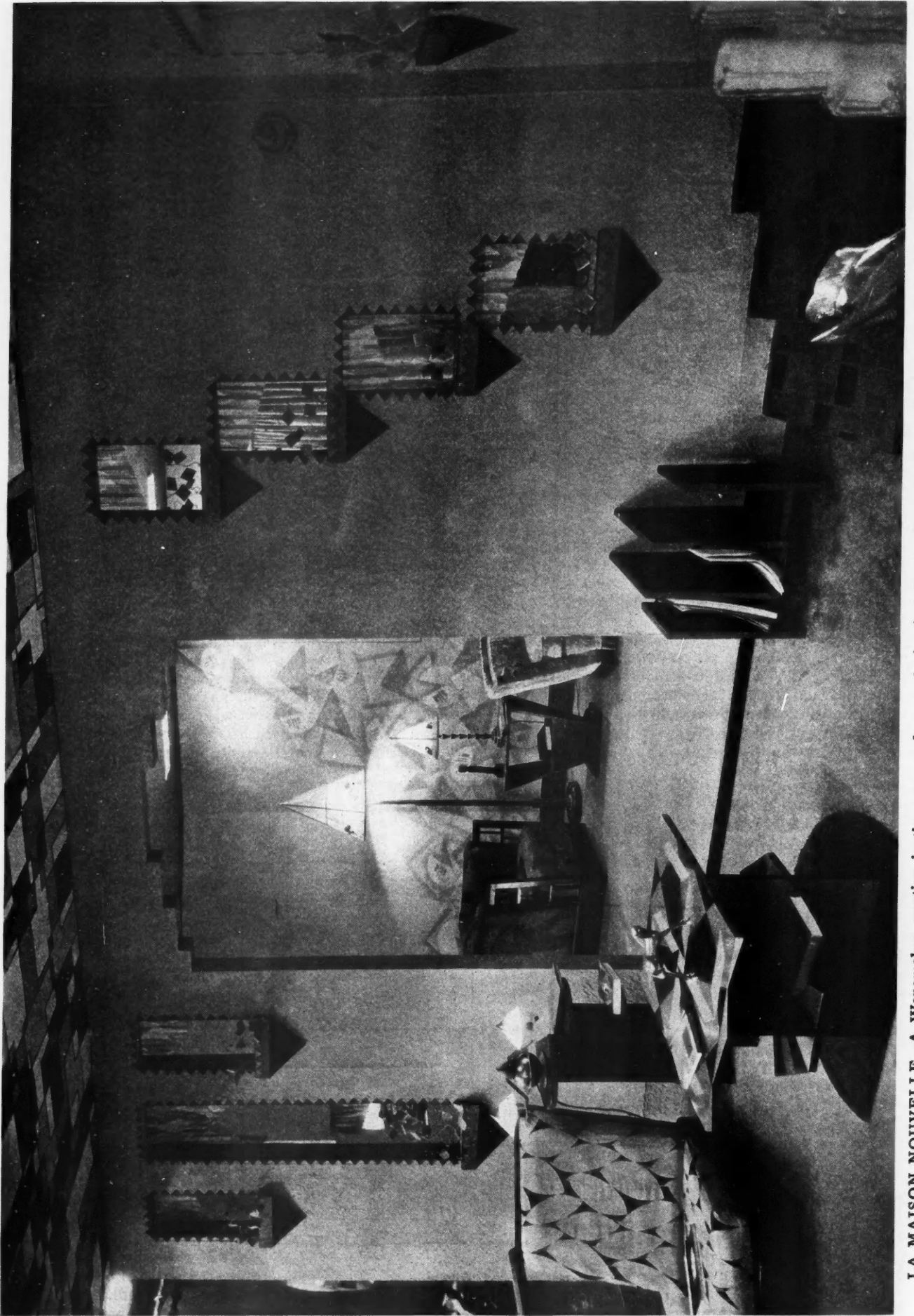
In the field of wireless the new high-speed "beam" system of communication is tending to render obsolete the dot-and-dash signals of the Morse code. Beam wireless throws its message only to the receiving station for which it is intended. The speed of transmission under this system will soon be at the rate of 250 words a minute, and this will insure secrecy because it is too fast for the human ear to record. Messages sent in this way could only be caught by a receiving apparatus



Courtesy "Judge."

Looking Ahead.

"Just think of the progress, darling! Yesterday it was but a smoke-nuisance and today it washes half the shirts in Europe."



LA MAISON NOUVELLE—A Wanamaker creation in the very modern mode inspired by the Stuttgart Exposition (Germany). The circular rug on which the table rests, the old gold, black and sienna mottled floor and broad easy rising steps blend themselves to make a tranquil mood. The windows and their draperies are so cut as to please the eye and serve the useful purpose of admitting the greatest amount of natural light. Architects and builders who aim to lead the procession will be using these modern motifs more and more.

placed in the narrow path of the beam. No longer will it be necessary to broadcast to the wide world a strictly private communication.

A few years ago people regarded synthetic materials with suspicion. They held the notion that no imitation could be as good as the original product. How different the attitude today! In some places substitutes have almost entirely displaced the real articles.

Out in Iowa they found it necessary to collect corncobs and stalks in order to prevent the spread of the borer that threatened their chief crop. In searching for ways to dispose of the cobs and stalks they finally hit upon the plan of converting this agricultural waste into paper, wallboard, lumber and brick. Who would have believed a short time ago that the farmer would soon become a factor in the production of building materials?

Millions in wealth are now created each year by utilizing all kinds of waste. Most of our woolen suits contain 10 to 15 per cent of used wool reworked into them. Paper-pulp is employed in the manufacture of small barrels, pipes and coffins. Japanese men and women wear clothes made from this substance, and while the resulting fabric lacks much in durability, it is light, fairly tough and very cheap.

Oil of good quality is secured from the seeds and stones of various fruits. Tomato seeds that were once thrown away by catsup factories are now made to yield another kind of oil that is easily digestible. The fruit industries of California get a considerable income from the oil and charcoal obtained by the treatment of huge piles of fruit pits. The refuse resulting from the manufacture of cider is converted into a jelling agent for housewives who put up their own jams and jellies.

Picture frames and toys are made from wood flour converted into a paste. This same substance also enters largely into the manufacture of linoleum. A dustless excelsior that is excellent for packing purposes is made by shredding old newspapers. A number of glossy parts of radio sets are constructed from phenol, once a coal-tar waste, mixed with formaldehyde, a product obtained in the distillation of wood waste.

A big automobile company transformed the wood and metal of 200 wartime ships into motor cars, tractors and various kinds of machinery. A railroad corporation found it profitable to substitute worn-out steel rails for ordinary wooden ties, and a forging concern has made a business of buying up the axles from discarded railroad cars and converting this waste steel into anchors for ships.

A new German fabric is made of hemp fibers instead of flax with the result that the material is cheaper, does not soil as readily as cotton, nor wrinkle as easily as linen. The fabric can be spun on a regular cotton machine and mixed with cotton if so desired. Even more interesting is the fact that old automobile tire casings are sold to companies in Greece, and there converted into crude but durable footwear for the peasants. One old casing will yield three pairs of shoes.

A few years ago hardly more than a dozen articles were made from the mineral known as asbestos. Now this strange rock with its myriad fibers is being transformed into composition floors, electric appliances, phonograph records, switchboards, tapestries, rugs, ladders, mailbags, shingles, theater curtains, brake linings, pipe coverings and fireproof clothes. Charley Chaplin in one of his films set his baggy trousers afire, but saved himself by wearing asbestos underwear.

Marine leather is now being manufactured on a considerable scale. The skin of the shark when treated and tanned produces a material not only of beautiful hue but that is extremely durable. Leather produced from large fishes entails no expense for pasturage or superintendence. The hide from the shark of medium size is about one-half as large as that from a grown steer. The by-products

obtained in this process include oil, glue, insulin, walking sticks and various kinds of trophies. It is not unusual for one company to capture as many as 300 sharks in a single night.

The present chemical revolution will produce results of greater importance to life and industry than did the steam revolution which started more than a century ago. Only two or three dozen alloys were available in 1900. Now we have about 1,700 with more coming almost daily.

Heavy metals are giving way to new varieties that are strong, tough and light. We may look forward to the time when an able-bodied man will find it possible to carry a 100-horsepower engine on his shoulder. Typewriters and other common machines will weigh a fraction of what they do at present. Knowing the construction of atoms and the molecular arrangement of crystals, the chemical engineer will produce the precise alloy he desires by drawing up plans on paper in quite the same way as sketches for a house or bridge are prepared.

The fact is we have only just entered an age of metallurgical miracles. Many people have tried the experiment of greasing a needle and placing it on water where it will float. This same idea carried into practical use has given us a comparatively new process which makes it possible to reclaim millions of dollars worth of metals which were formerly thrown away on slag dumps.

By practically reversing the law of gravity, the modern metallurgist is now getting as much as 95 per cent of the values out of ores that were yielding only 60 per cent a dozen years ago. Millions in precious metals are being obtained from properties that were abandoned because they could no longer be worked with profit. A few people got together and bought an old mine in British Columbia about 1917, paying only \$250,000 for the entire property. Last year this mine produced net earnings of more than \$12,000,000.

Wealth that comes from saving what we already have is no less real than that which results from the production of things entirely new. Losses from rust have been totaling tens of millions of dollars annually. As a consequence, brass pipe is replacing corrodible pipe, and bronze screens are being substituted for the shorter-lived galvanized ones. Rustproofing is bringing a multitude of changes. New uses are springing up. Copper is finding a market as a roofing material. When properly grounded it provides protection against lightning. In some cases shingles are merely given a copper coating on their wearing surface. Durable gutters and fixtures in a home cause prospective buyers to assume that the rest of the construction is equally sound.

If the dreams of scientists are realized, wood will gradually find more valuable uses than as a structural material. Quarried stone will give way to rustless alloys incased in cement or some other artificial plastic substance that can be poured. Even furniture will be made largely of synthetic materials, and rubber will come from various bases such as petroleum, potato starch, calcium carbide and coal tar derivatives, instead of being made from the milk of millions of hevea trees.

While I have hardly scratched the surface of the subject, sufficient has been set forth to indicate the character of current achievements and the probable nature of future trends.

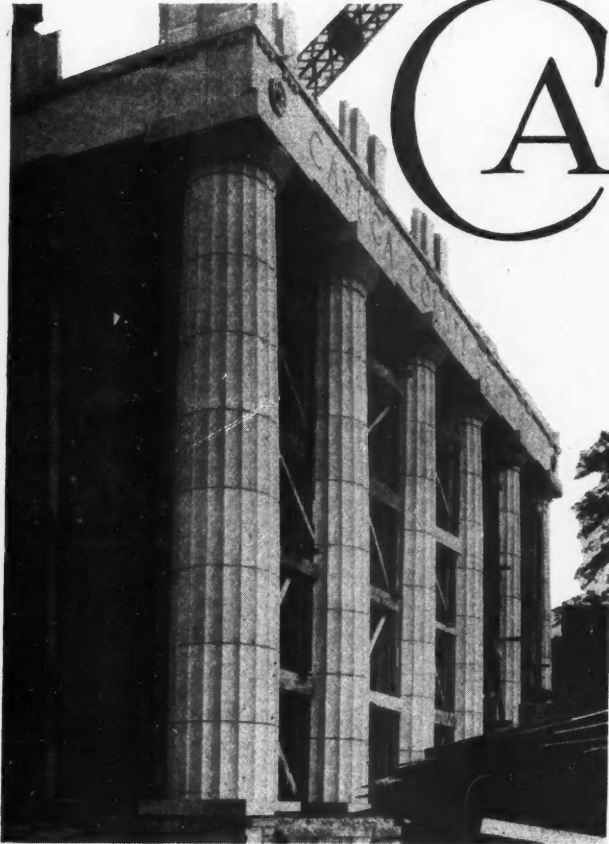


Inventions Wanted

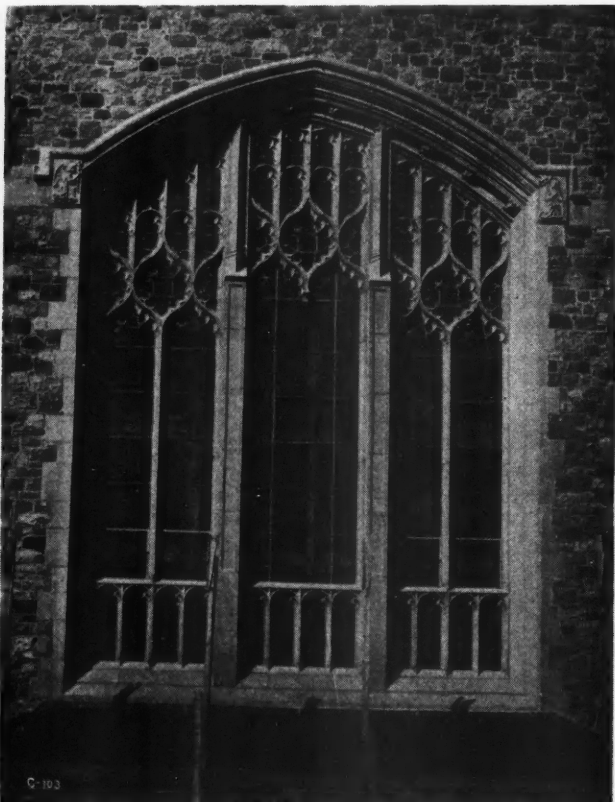
FREEZE & Vogel, Incorporated, 383 Milwaukee St., Milwaukee, Wis., state that one of their clients is looking for some articles to manufacture and market in the building field, preferably made of metal. Any reader of **AMERICAN BUILDER** who may have ideas or inventions of this nature and wishes to arrange for their manufacture and sale, is invited to submit his idea to the company mentioned.

CAST STONE

by
Wyatt B. Brummitt



Architectural Concrete Columns, Five Feet in Diameter and 28 Feet High, Built Up of Cored Drums, for the Entrance of the Cayuga County Court House, Auburn, New York.



This Concrete Tracery for a Window in St. Mary's Church, Oswego, New York, Shows How Cast Stone Is Being Used to Achieve Sculptural Effects Comparable with the Craftsmanship in Old World Cathedrals.

It was but a short step, in the logical development of building materials, from pre-cast concrete structural units to pre-cast concrete decorations. But once having taken that step, the building industries gained a new and effective medium for the realization of architectural goals.

The development of concrete architectural ornament has come, in part at least, as an answer to a definite need. Utility, regardless of beauty, was the keynote of most American building up to the beginning of the 20th century. Up to that time, and for some years after, beauty in a building was generally considered a non-essential, something to be tacked on later, if at all.

Building has advanced a little since then. There are still plenty of thoroughly unbeautiful buildings, buildings which do not even come up to the possibilities inherent in strict utilitarianism. But, in general, the trend is toward buildings of excellent design and intelligent decoration.

One of the basic truths of good building is that the decoration must be integral with the structure, not something applied as an afterthought. It is for this reason that natural stone or concrete cast stone is so effectively used. The decoration in stone is a definite, useful part of



A Glimpse of the Casting Room of a Modern Cut, Cast Stone Plant. The raw concrete is taken from a large rotary mixer and distributed where needed by an agitator suspended from a traveling crane.

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Making a Plaster Mold for a Column Capital. Into these molds the plastic concrete is cast and after it is thoroughly hardened the molds are cut away leaving the casting to be finished by skilled carvers.

the building, gaining strength and beauty as time goes on.

Concrete stone trim and decoration have created their own particular sphere of usefulness because of their easy adaptability to shapes and forms which could otherwise be attained only at great cost in materials and workmanship. Concrete has been called "stone that you can mold"; it is this characteristic, added to the fact that it can also be cut and chiselled which has made an important place in building for concrete trim.

The use of pre-cast stone began with such simple pieces as sills and lintels, particularly adapted for use where concrete masonry was the structural medium. Such pieces were made in sizes to conform with the type of masonry used. In most instances simple steel bar reinforcing was imbedded in the casting. The sills were particularly designed to protect the walls in which they were incorporated, with a fairly steep "wash" or slope to the weather and a drip groove underneath.

From such relatively simple forms, architectural concrete cast stone has advanced to a state of development in which nothing is too delicate, intricate or complex for successful realization. The output of a single factory, today, may range from simple face slabs to column capitals which involve sculptured effects as subtle as those achieved by the master craftsmen of Old World cathedrals.

This type of work, of course, cannot be done by unskilled labor. The making of the wooden patterns, the plaster and glue molds requires expert workmanship. And the undertaking of this type of work implies an understanding of

architecture and the demands of architects.

The preliminary work, in many of the larger plants which make cut cast stone, involves direct co-operation with architects. On receipt of an order the drafting room goes into action, preparing setting drawings on a large scale, correctly interpreting the architect's plans and showing the jointing and relative position of the units. These are submitted for approval. Then clay models are made up, to be approved either by actual inspection or by photographs.

On the acceptance of the clay model, molds are made in either plaster or glue, the latter if duplicate casts are required. Into these molds the plastic concrete is cast. After it has thoroughly hardened the molds are cut away, leaving the casting to be finished off by skilled carvers.

For some types of work, usually the less complex jobs, wooden patterns are used, the castings being made in well compacted sand. This requires, however, precision wood-working of the sort which cannot be done by beginners. As a consequence the pattern shop is a highly important adjunct to any cast stone plant.

The value of concrete architectural stone is dependent on its adaptability, its uniform strength and its appearance. High quality cannot be obtained in any of these characteristics unless particular care is taken in the choice of aggregates, the proportioning of the mixtures and the finishing treatment given the exposed surfaces.

Although the choice of aggregate depends somewhat on

(Continued to page 97)

The Small Town Beckons

Offering Success to Manufacturer of a Popular Building Unit

By S. STUART SHACKELTON

THE time honored story of the youth who, seeing "no chance" in the small home town, turns his face toward the big city to seek fame and fortune, is a familiar one.

The usual vivid word picture portraying him penniless and among strangers bravely overcoming pitfalls and disheartening obstacles, but by grit and perseverance finally climbing to the top of the ladder of success, never fails of applause.

The theme is dependable and popular material for "human interest" articles that can invariably be found occupying prominent positions in the pages of the month's best sellers. A success story is "sure fire stuff." It bores into the "heart strings" and strikes a responsive chord that suggests "go thou and do likewise"—a sort of challenge to the backbone. The story of a winner has a compelling appeal in that it arouses the finer impulses and is conducive to the thought, "if he can I might if I try." In a word it is—inspiration.

A well known quotation is that "the exception proves the rule." And so, while this narrative has to do with the exception, a sort of "reverse English" of the more popular conception of the regulation procedure, a new angle is presented that has much to offer, too, of inspirational worth.

Undeniably the quiet and serenity of the small town with its cool shaded streets, its velvety green lawns decidedly unattractive and "too slow" to "flaming youth," has an irresistible appeal to the man of maturing years. Particularly is this emphasized after he has "arrived"—after he has gone through the battle in the dust and din and tumult of the big city, does he cast his eyes rather longingly toward more restful environment. Perchance if there are children the desire becomes stronger because of purer air, with healthier environment, safety from congested traffic, with trees to climb, a garden, and maybe dad, too, recalls the old "swimmin' hole" of his kid days.

Then, too, a survey of a number of small towns adjacent to large cities indicates that there is a decided tendency toward the locating of new industries in these places in preference to large industrial centers. Likewise because of manifold advantages many old established concerns are moving to "the sticks." So today the small town seems at last to be coming more and more into its own.

An appraising eye for values trained through many years of experience in the real estate field, an intimate knowledge of manufacturing and marketing gleaned

through the successful operation of a manufacturing plant in Chicago, formed a fitting background for Edward F. Bessey when he recently launched his new venture, the Duntile & Concrete Products Co., in Crystal Lake, Ill.

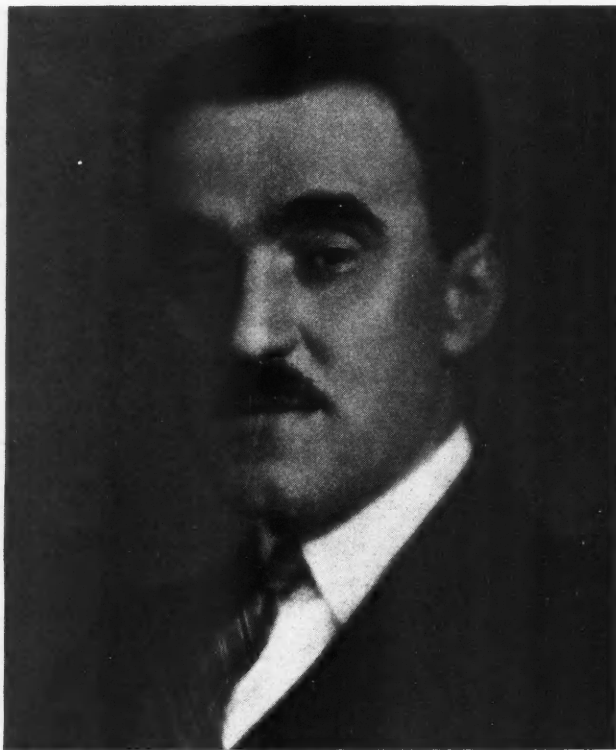
Although but an infant industry, this new concern having started up late in the fall of '27, has gotten away to a running start and is reported to be doing a "capacity business."

"How did I come to locate a plant here in Crystal Lake?" said Mr. Bessey, as he smilingly repeated the question,

"well, in the first place, Mrs. Bessey quite unconsciously played an important role in that phase of the situation. Together with the children we had spent considerable time at various lakes and resorts during summers, but in all instances they were too far away to permit of more than only week-ends with no chance of commuting. Then she discovered Crystal Lake and 'sold me' on it—a lovely spot and just far enough out to permit me to run back and forth from Chicago each day. Then after about three summers of this I began to think that if Crystal Lake was good enough to spend the hot-weather season in, why not make it our home the year 'round? We had all sort of learned to love the place, as it was real living, not just existing you know, —cooped up in a big congested apartment.

"About the only thing that held me back from moving out 'bag and baggage' was the lack of some sort of business that would fit in with the place. Just about then my attention was called to this new concrete building unit and that settled it. It had a double appeal to me, both from the manufacturer's angle and the builder's. My real estate experience was a determining factor in going into the making of this building material, as I knew what the contractor and builder required. I felt, too, that a building unit which would permit of permanency, beauty, because of colors, and economy would be an incentive to home building and thus stimulate the growth of my town.

"You see my business in Chicago consists chiefly in stamping out metal products and the method of turning out these building units with an automatic machine was sort of right along my line. So I investigated what other manufacturers of this same unit were doing and made up my mind it was a good thing for me and a good thing for Crystal Lake," said Bessey. "Then as long as I had decided to go into this business I figured I might as well move the Howe Auto Products Co. business out here, too, and so we've built a new factory for that purpose and will



Edward F. Bessey, Who Left Chicago to Establish the Duntile & Concrete Products Co., in Crystal Lake, Ill., a Small Town, and Achieved an Outstanding Success

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bring a good many of our force of forty men and their families to Crystal Lake this spring," he continued.

"Of course," went on Mr. Bessey, "while the building of homes and schools and business blocks has a certain fascination, and it is a nice sentiment to feel that you have had a hand in the tangible growth and development of a community, it has its practical side as well and must be profitable if it is to succeed. This particular product suggested advantages over the general line of building materials in that it was made close to the job; and, by obviating long transportation charges, certain initial economies could be effected that would quite naturally tend to encourage and stimulate construction. I knew it would find a ready home market and that meant sales. In a word, I saw money in the business.

"Apart, however, from making money in this enterprise, I take a lot of downright pleasure in seeing the town grow," he said with enthusiasm. "Just within the last two months three new stores, two manufacturing plants, one large residence and various other structures have been erected because of our new building unit being made available. Besides I have orders for the material to put up still another new factory building, an imposing home fashioned after the Mt. Vernon home of Washington and a modern metropolitan theater. From the remarkable experience I have had here," remarked Mr. Bessey, in conclusion, "I am convinced that similar opportunities beckon at the doors of countless so-called small towns all over the whole country. Just what I have accomplished here in so short a time has set me to thinking about establishing more of these Duntile plants, spotting them in towns five to ten miles apart. It sure looks to me like mighty good business."

One does not have to be in the company of Edward Bessey long to sense why he is a success or why he makes a success of whatever he undertakes. He is dynamic, energetic and practical. Although a product of the big city, the grinding process of relentless competition, which has a tendency to develop the "iron" in those enlisted in the constantly waging industrial warfare to a degree where it produces a hardened or gruff exterior has, however, left none of these usual telltale marks on him. An engaging personality, sociable and with an abundant sense of humor, he is endowed with a natural buffer to better meet the hard knocks of everyday business strife.

Not alone a natural appraiser of values in land and merchandise, but an appraiser of men as well, is E. F. Bessey. He apparently has an uncanny ability at picking efficient men for his factories; and once he has engaged a man you will find that man "filling the job." They evidently enjoy working for him and the atmosphere of co-operation is apparent on all sides. To a recent visitor to his Crystal Lake tile plant the foreman, in reply to the remark that everybody worked as busy as bees, quickly come back with the rejoinder that "we are all just as anxious to hit our full quota and make new production records as Mr. Bessey is. Every one of us feels that the success of this business depends a whole lot on what each individual accomplishes."

One does not have to inquire further what manner of man these shop fellows are working for. So in the final analysis, is this not success, and likewise, is it not—inspiration?

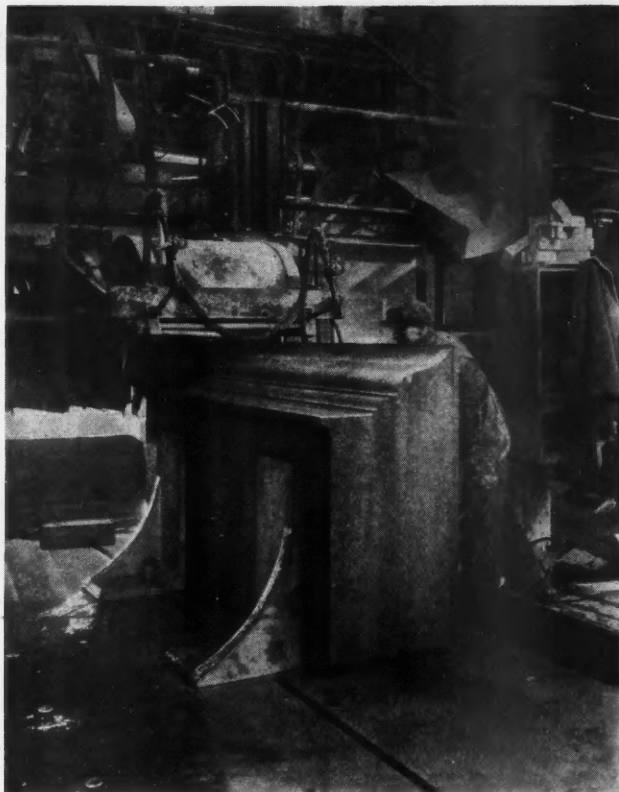


Cast Stone

(Continued from page 95)

the kind of stone desired, marble is generally used. First class marble is crushed and then, by an expensive but important process, freed of all dust. The appearance of the finished job depends on the clean-cut quality of the ingredients.

Either standard or white portland cement is used in the making of the stone, proportioned with only enough



A Carborundum Plane at Work on a Piece of Architectural Cast Stone. In this way the castings are trimmed down to exact size.

water to give required plasticity and maximum strength. Metal reinforcing is carefully designed for each job.

After casting has been made it is cured under ideal conditions for at least two weeks. By that time it has gained sufficient strength to permit further treatment exactly in the manner of natural stone. That is to say, it may be rubbed, honed or machine grooved by mechanical means. Or it may be bush hammered, crandalled, axed, pointed or otherwise treated by hand. Naturally, the finishes obtained by hand are somewhat more expensive than the others because of the expert workmanship involved.

All castings are made a little over-size so that they may be finished down to precisely the dimensions required. Carborundum saws and planers, the latter usually being laminated especially for each job, trim the castings down to exact size.

The results of this modern cut, cast stone work may be seen practically anywhere, from the plain stone facings of skyscrapers to the intricate stone tracery framing church windows. By varying the kind of aggregate used or by adding mineral pigments to the stone mix, it is possible to obtain a practically unlimited number of colors and textures.

One of the most appreciated characteristics of this architectural stone is that it can be used in long, load-bearing spans. The internal steel reinforcement plus the carefully designed mix employed make the finished job a structurally correct reinforced concrete beam. Many decorative arches have been constructed in this manner.

While the concrete cast stone industry may no longer be classed as an "infant industry," particularly as that term applies to technical development, it is fairly obvious that the trend of architecture implies a wide expansion of the market. The increasing emphasis on well executed architectural orders, on significant decorative detail and on utility as well as beauty carries with it implicit reliance on cut, cast stone. The willingness of the makers of this product to keep abreast with structural and architectural progress signifies a future of real usefulness for them.

Houses Built by Boys?

Is This Method of Training New Recruits to the Building Trades as Effective as the Apprenticeship System?

By RICHARD M. VAN GAASBEEK

Head of the Department of Woodworking, School of Science and Technology, Pratt Institute, Brooklyn, N. Y.

Editor's Note: Various articles have appeared from time to time in AMERICAN BUILDER on the construction of houses by high school and technical school students for the purpose of training in the building trades. It seems probable that varying methods of training are best adapted to varying conditions and communities. In this article Richard M. Van Gaasbeek, of Pratt Institute, presents his opinion on the comparative value of this type of training and the apprenticeship system, as successfully developed in that institution.

IN 1921 the Apprenticeship Committee of the New York Building Congress was established for the purpose of conducting an apprenticeship system that would meet the need for developing skilled and properly trained mechanics in the building trades. Quoting from a bulletin issued by the Congress in order to emphasize the thought that the writer has in mind, we read:

"A trained mechanic is a man who has had practice, experience and instruction in the various processes of the trade. The factors of expertness are accomplished by the co-ordination of the hand, the eye and the brain, and the proper functioning of these factors is only brought about by well directed apprentice training.

"Employers are in favor of apprentice training as they know a trained mechanic is an asset to the industry. He earns the wages he receives, he goes about his work in a business-like way without the necessity of a highly paid

foreman directing every few minutes what to do and how to do it. He can stand on his own feet.

"Organized labor is in favor of a well directed apprenticeship plan as well-trained workers can maintain wages commensurate with the quality and quantity of work performed. Such workers take a pride in their work and raise the standard of their trade to a higher plane whereby the craft has the respect of the community.

"The public favors well-trained workers because it knows that when work is performed by trained journeymen, it receives full value for money expended."

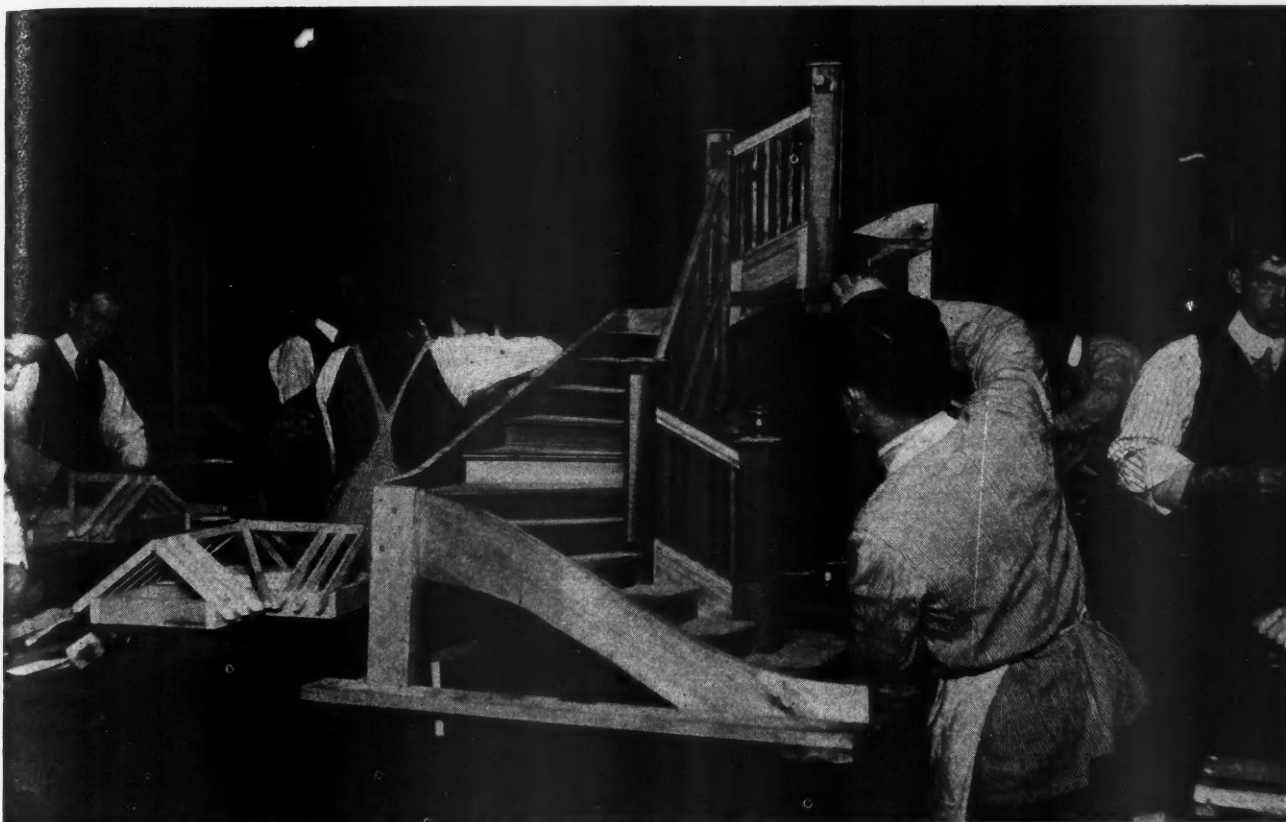
It is very evident that the policy of the committee is to co-operate with employer, educator and labor equally and alike for the good of the apprentice and the industry. Apprentices are hired by employers, there they get their experience. Part of each week is spent in school, there they study principles and their application, together with such technical training as the type of work may require. Employers are bound to discontinue the employment of an apprentice who does not fulfill his obligations so far as school attendance is concerned and likewise the unions are bound to exclude from membership apprentices for the same reason. Here we have an ideal situation, employe, employer, labor and industry all working together for the common good of all, each having a task to perform.

Having analyzed one form of trade training let us look



A Practical Exercise Problem in Roof Framing as Taught in the Evening School at Pratt Institute.

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An Exercise Problem in Stair Building, Large Enough to Be Practical but Small Enough to Be Individual.

at another type of training that seems to be gaining headway in many localities and compare notes. I have before me a publication, "Boy-Built Houses—A School Project Method of Training Boys for House Building," by Blanche Halbert and as I study the publication I wonder if a movement is on foot for certain types of school to undertake the job of training all by themselves, ignoring employers, labor and industry and thus sacrificing the interests of the future employees.

For the past 14 years the writer has been a strong advocate for productive work or the project method of teaching, believing that it had advantages over the exercise method for teaching certain types of shop work. The idea being to have the students do things under the exact conditions that they will find in real life; and having done them, teach them to think about what they have done, so that their next efforts may be better. Teach them to observe everything, that they may apply ideas to what they do. Teach them to think consecutively, to reason, to plan their work so that they may become masters in what they set out to do. These are things that schools can do and do effectively and probably better than any one else because they have more time than the average employer and are therefore not infringing upon the duties of any one.

House building is a trade that does not lend itself to the school shop as many other kinds of work do. Principles can be taught and a limited amount of practice given, but industry is needed to furnish the experience. Schools can develop a limited amount of skill, they can develop initiative and place responsibility, they can teach organization and the value of commercial accuracy and time, but industry must supply the repetition which is the law of memory and likewise a developer of skill. Let us not worry about students with this background giving a good account of themselves as they are thrown on their own resources in the industry and watch them pass over the heads of those who have been less fortunate and have not been able to take advantage of a similar technical education.

After careful study the writer has come to the conclusion that any project that cannot be carried out successfully within the limits of and under the direct supervision of school authorities should not be undertaken by them. Why not let us work together for the common good of all rather than attempt to do that which we are not properly organized to handle? There are too many problems involved in erecting a building that schools should not be called upon to face and most of these would probably fall upon the shoulders of the instructor in charge of the class. Financing, sales, time element, weather conditions, workmanship, equipment, hazards and many other complications that might be mentioned in connection with actually completing a building.

Student labor is not all that it is cracked up to be. There is no use for instructors to fool themselves by saying and believing that student labor is as good or far superior to the workmanship on the average community house. Many students do better work than a certain class of mechanics and it may be said that workmanship on boy-built houses in many cases would be rejected, while if the same work done by men in the industry although inferior would be passed without comment.

Is not too much expected of the prospective new recruit to the industry? Why not let us co-operate and we all do our assigned task in the training of the boy? Even perfect joints or workmanship do not make a building watertight and fireproof, or help it to withstand the elements and the unusual strains likely to come upon the structure. Leaky roofs, bulging walls, squeaking stairs, sagging floors, cracked plaster, draughty and rattling windows and doors are unpleasant facts which carpenters must understand and reduce to the vanishing point.

All work must be done in accordance with the local building code, sanitary code and fire laws. This puts school authorities under the supervision of outside influences, for they must satisfy the various inspectors representing these departments of the community. If they should happen to be in sympathy with the work of the school, everything

may work harmoniously, but they can cause endless trouble if they so desire.

The time element is a big factor. The longer it takes to put up a building the higher the cost will run. The longer it takes to put up a building, the more damage it will get. It is a mistaken notion that time is not a factor in productive work because it is a very decided factor in woodworking. A student working on a piece of work today will find that the elements have affected his work over night. Work of this kind should be kept continuously moving toward completion and then protected with a covering of some kind.

Boys working on these houses are not paid for their labors, therefore they do not come under the jurisdiction of the child labor law or the workmen's compensation law. What then happens if they are injured? What protection has the public from accidents, either while passing the building or being near it during construction? What, then, happens to these boys if they are injured? There are many hazards peculiar to the building industry, is it just the thing to do, to subject these minors to such dangers?

Quoting from Theodore G. Joslin in the Boston Transcript: "Surveys made by the Children's Bureau and the Bureau of Labor Statistics clearly reveal that under identical conditions, the danger of accidents to boys employed in industry is considerably greater than it is to adults. The investigations disclose, in the first instance, that even with the exercise of the same degree of judgment, a child has not the same co-ordination of muscles and parts of his body that a mature person has. The muscles do not react so quickly to the knowledge of dangers as they come through the eye and brain. In the second place, there is not the same degree for judgment for, after all, judgment is largely a product of experience and it can be assumed that under the same circumstances the hazards of accidents necessarily are greater to minors.

"Another thing which tends apparently to increase hazard, especially for young persons, is the tendency to push production to the highest possible point by improved machinery, mechanical appliances, conveyors, power hoists, trucks and by speeding up the workers. Again it must be emphasized that the child has not the same muscular control and the co-ordination of body and mind as a mature person. In consequence the new speeding up devices are more dangerous to the child than an adult."

If the instruction is to be effective it must be done exactly in the same way as it is done in industry so that a student can go from school into industry in much the same manner that a mechanic goes from one employer to another. If a student has to start all over again and do things differently in the industry than he did while in school, then he has wasted a great deal of time and his earning power has been reduced instead of increased.

Why not let the schools do their part in the training of the boy and let industry do its part instead of trying to monopolize the boy's entire time to his disadvantage?

Schools are public institutions and as such must remain neutral, and avoid entangling alliances. They need the advice, co-operation and support of the students, labor organizations, employers and all others concerned. As new problems arise they should have a free hand to study the needs of both employe and employer, to develop the necessary instructional material to satisfy the new need and should be judged by the results obtained.

There are a great many trades affected in erecting a building and it is very doubtful if the average school can complete a building satisfactorily without some aid from the outside. Here is a chance to mix men and boys, union and non-union, together which is not going to be workable in the long run.

Labor organizations are backing the schools all over the country and in localities where schools are not to be found are organizing classes of their own to help the younger members as well as many of the older ones to improve their knowledge of their trade. They realize more and more that a trained man makes a better union man and they are for it. Mr. William Green, president of the American Federation of Labor, writes that "labor is whole-heartedly in support of industrial education and vocational training."

From personal contact with Mr. Green, the writer knows that what he says he means. The general and local officers of the United Brotherhood of Carpenters and Joiners endorse his statements which is manifest by the active interest they are taking in the work of the schools and the work of the apprenticeship system, but they take the position that schools have their place in society and should not branch out into other business foreign to them. Let us not forfeit this good will by antagonizing them.

Wherein does the trade or technical school function? Probably a good answer is to fit the student for the fullest life possible. This is a big job and fits the worker not only into the trade but into the home and community life.

The school increases the promotional opportunities of its students and gives them a real start toward the top or goal which should be their ambition. Let us analyze the word TOP and make a study of some of the things that the young people want and the schools can supply better than any one else.

First—T is for Think, systematic thinking. Students get a mental picture of what it is that they want to do before actually beginning an operation. The successful completion of their work requires that the first step must be done at the proper time and in the proper way before the second step can be properly begun, and so on with each successful step. The work must be thought

(Continued to page 134.)

FREE INFORMATION SERVICE

for

Home Planners and Home Builders

THE ColorKeed Home Plans presented in this magazine have many special points of excellence which are of particular importance and timeliness to those of our readers who right now are facing the home building question—with its joys and its problems.

We illustrate these home designs and show the room arrangements, but our space for description is so limited that we are not able to cover all points. We know there is much additional information desired by subscribers about to build, which would be very valuable to them. Since we have all data pertaining to these ColorKeed Homes we are glad to offer our readers a free service of information, whether questions pertain to the estimated cost, the method of construction, suitable materials to use, special equipment or features, or any other information whatsoever.

Limited space in the magazine prevents publishing all this information; but if you will write AMERICAN BUILDER Home Planning Service, 1827 Prairie Ave., Chicago, we will be very glad to give you direct by mail any information desired.

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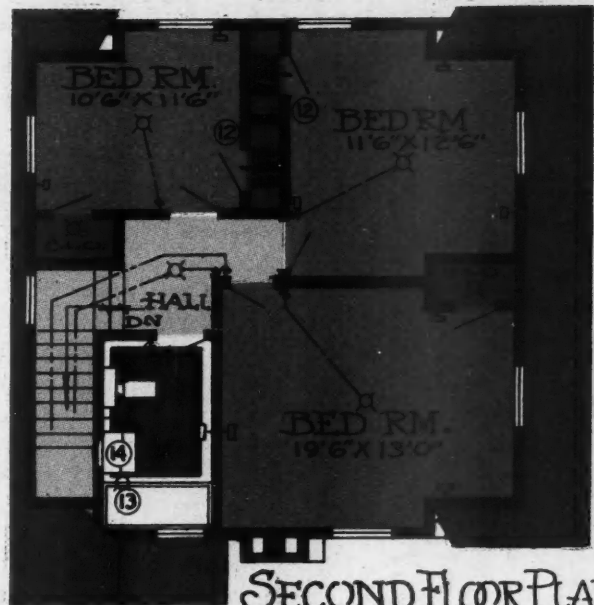
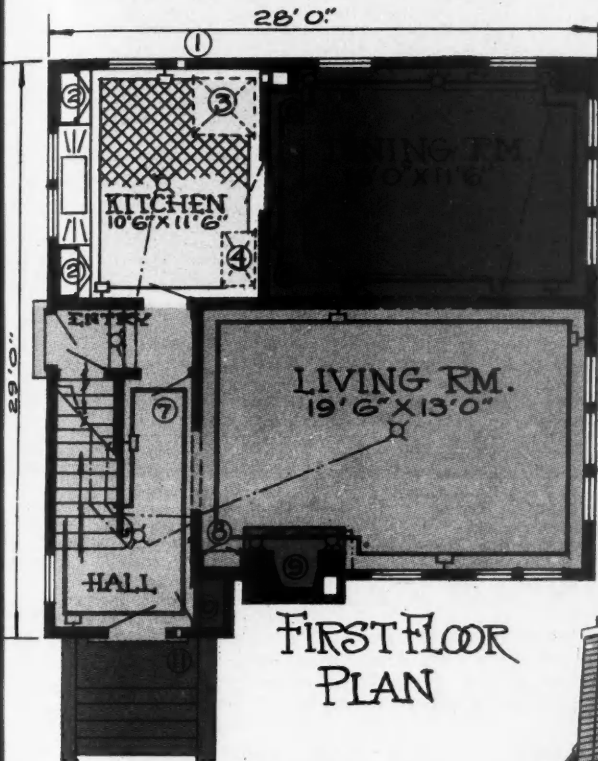
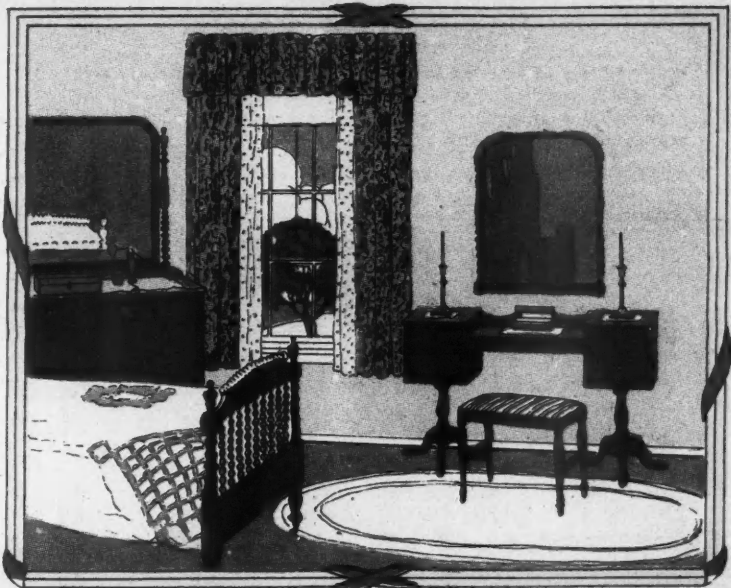
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The TAUNTON

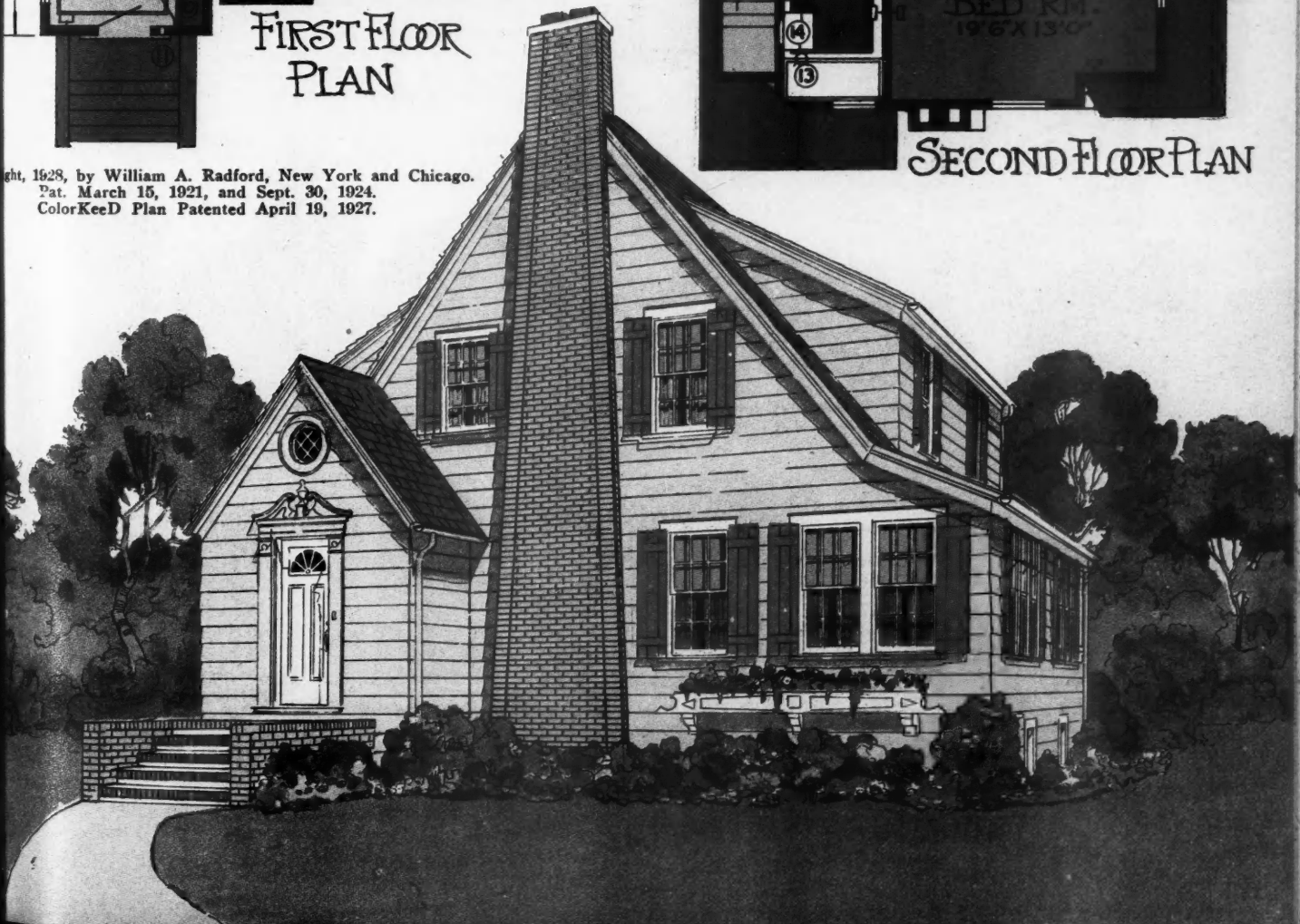
AN English home of striking beauty and impressiveness for a house of this size. It is really not very large, 28 x 29 feet, but the high gable and the commanding chimney give this home a real air of distinction.

Key to Equipment

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|-------------------------------|-----------------------|------------------------------|
| ① Kitchen Ventilating Fan | ⑩ Efficiency Wardrobe | Oil Burner |
| ② Kitchen Cabinets | ⑪ Tub Shower | Water Supply System |
| ③ Gas or Electric Range | ⑫ Medicine Case | Hot Water Supply |
| ④ Mechanical Refrigerator | ⑬ Weatherstrips | Water Softener |
| ⑤ Incinerator | ⑭ Storm Sash | Radiant Gas Heaters |
| ⑥ Thermostat | ⑮ Screens | Electric Wall Type Heaters |
| ⑦ Mirror Door | ⑯ Lighting Fixtures | Casement Windows |
| ⑧ Bookcase | ⑰ Convenience Outlets | Dishwashing Sink |
| ⑨ Fireplace Throat and Damper | ⑱ Electric Panel | Radiant Cellar Drainer |
| ⑫ Coat Closet | ⑲ Washing Machine | Radiator Covers or Furniture |
| ⑬ Mail Box | ⑳ Ironing Machine | Disappearing Stairway |
| | ㉑ Clothes Dryer | |
| | ㉒ Coal Chute | |
| | ㉓ Heating Plant | |

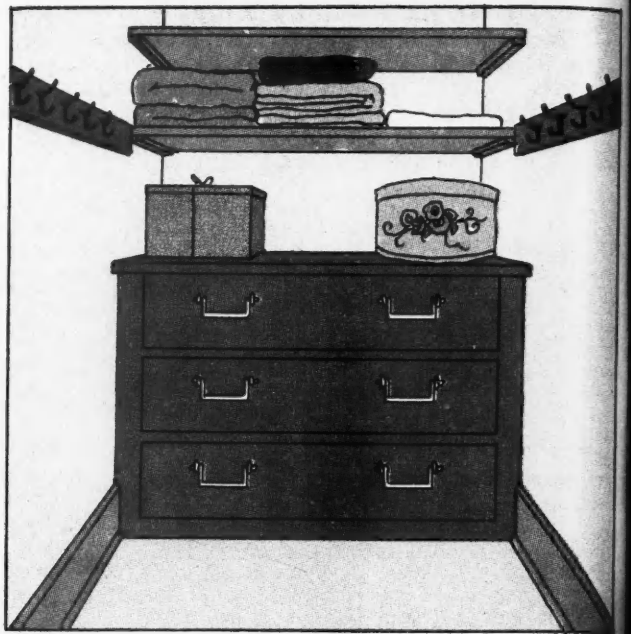
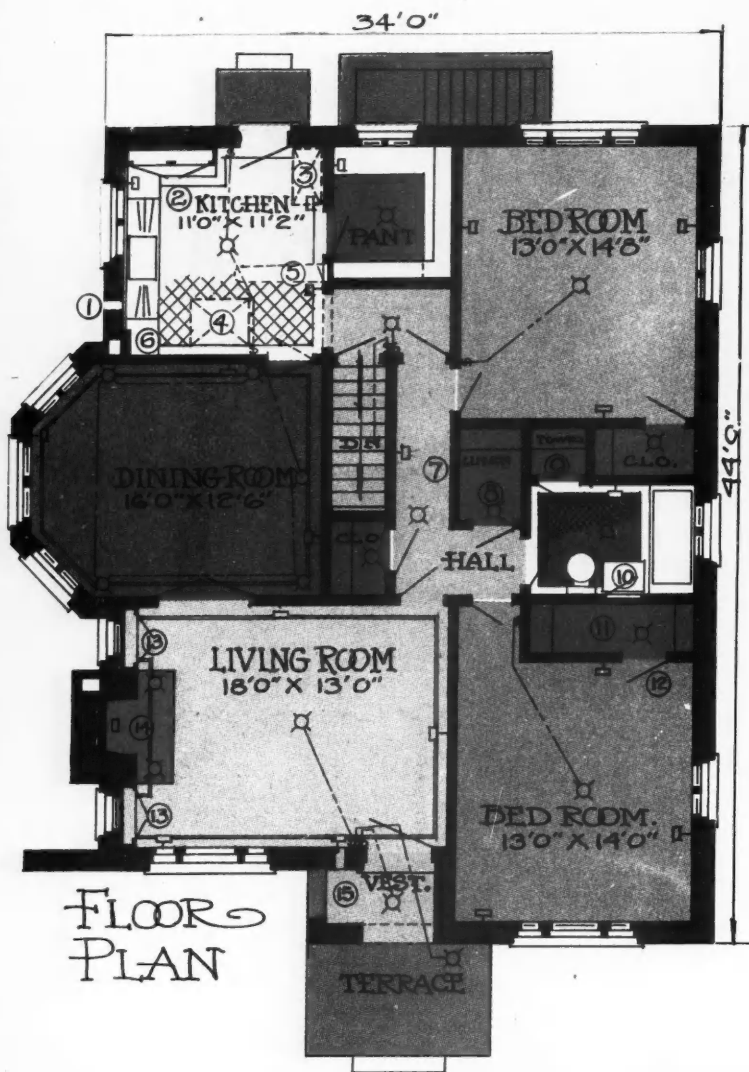


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 Pat. March 15, 1921, and Sept. 30, 1924.
 ColorKeeD Plan Patented April 19, 1927.



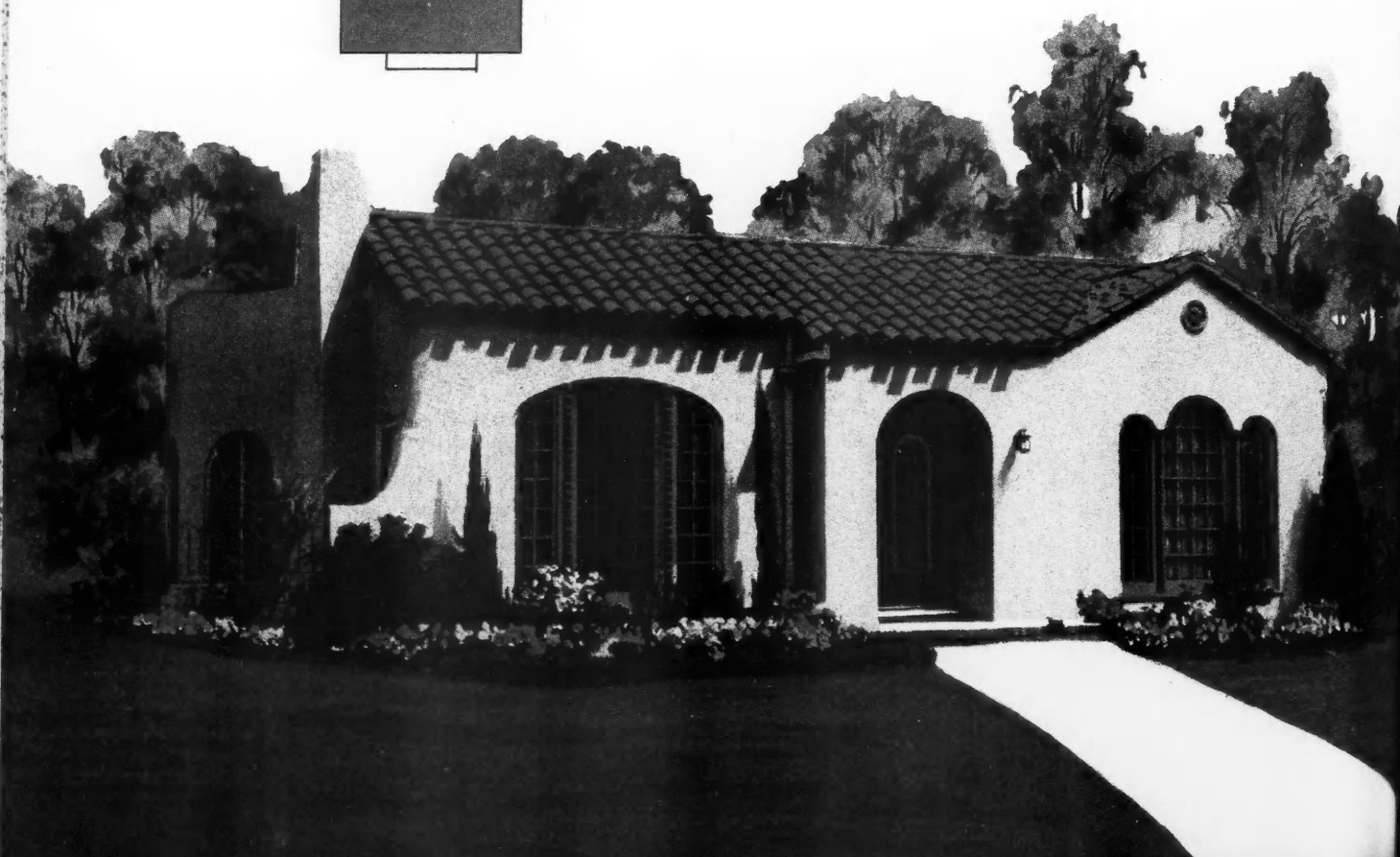
The TANGIER

SPANISH architecture continues its conquest of the American home building situation unabated. Here is a little gem of five rooms. Details of the commodious closet are presented in the sketch to right.



Key to Equipment

- | | |
|-------------------------------|------------------------------|
| ① Kitchen Ventilating Fan | Lighting Fixtures |
| ② Kitchen Cabinet | Convenience Outlets |
| ③ Mechanical Refrigerator | Electric Panel |
| ④ Gas or Electric Range | Washing Machine |
| ⑤ Built-in Ironing Board | Ironing Machine |
| ⑥ Incinerator | Clothes Dryer |
| ⑦ Thermostat | Coal Chute |
| ⑧ Linen Closet | Heating Plant |
| ⑨ Towel Closet | Oil Burner |
| ⑩ Medicine Case | Water Supply System |
| ⑪ Moth Proof Closet | Hot Water Supply |
| ⑫ Mirror Door | Water Softener |
| ⑬ Bookcases | Radiant Gas Heaters |
| ⑭ Fireplace Throat and Damper | Electric Wall Type Heaters |
| ⑮ Built-in Mail Box | Casement Windows |
| Weatherstrips | Dishwashing Sink |
| Storm Sash | Automatic Cellar Drainer |
| Screens | Radiator Covers or Furniture |
| | Disappearing Stairway |



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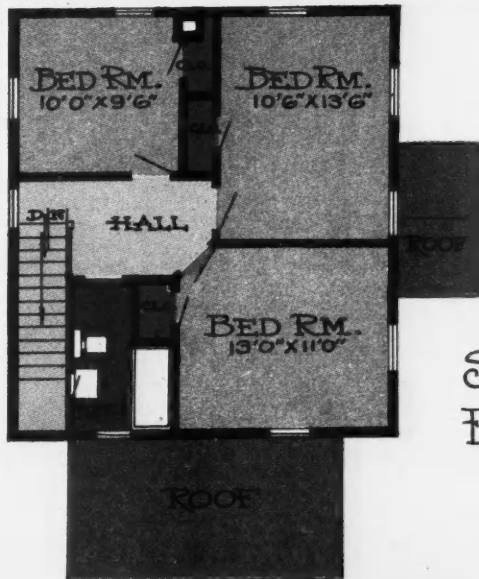
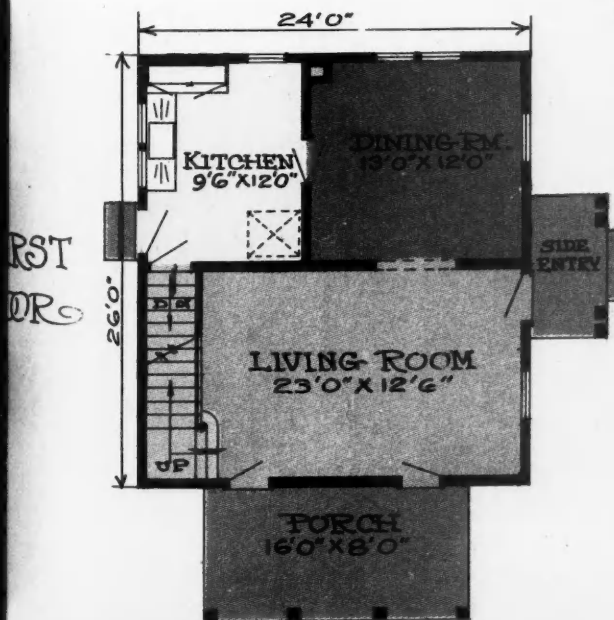
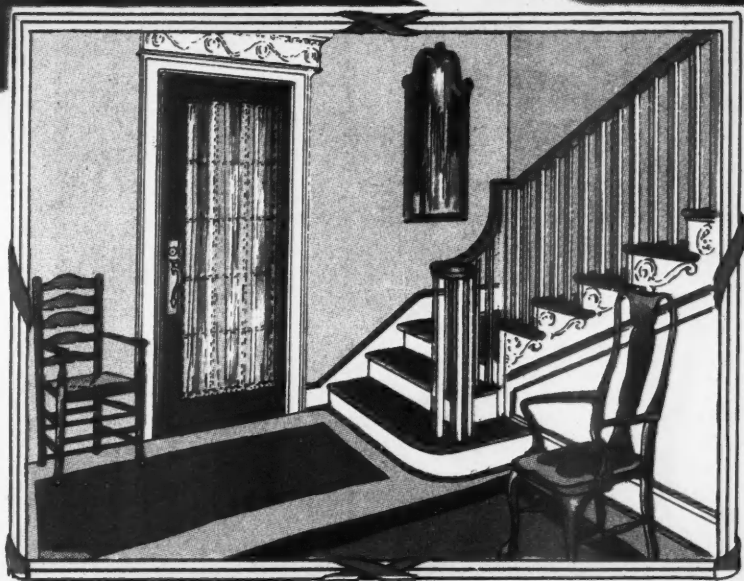
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The TOLEDO

HERE is a perfect example of the straight gable Colonial as applied to a small house 24 x 26 feet. The exterior is typical but the interior has been rearranged to save space, the customary central stairway being moved back to the end of the living room.

Color sketch to right shows what an attractive feature of the living room this stairway has become.

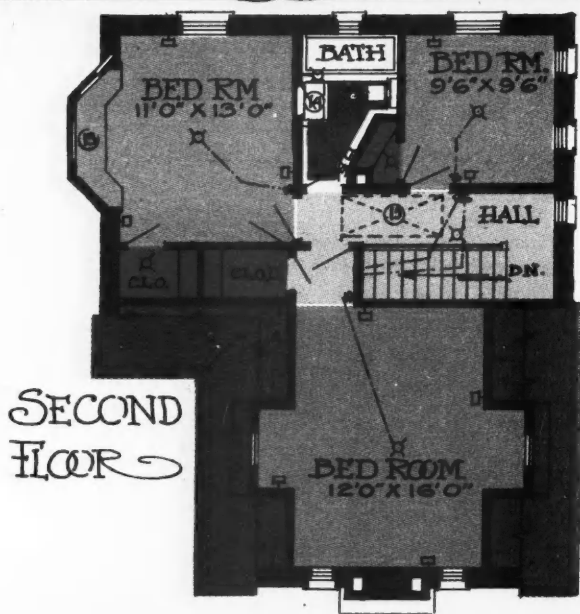
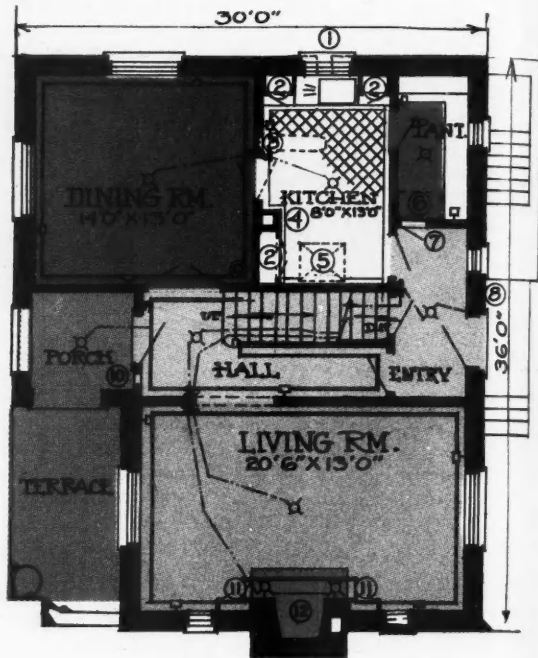
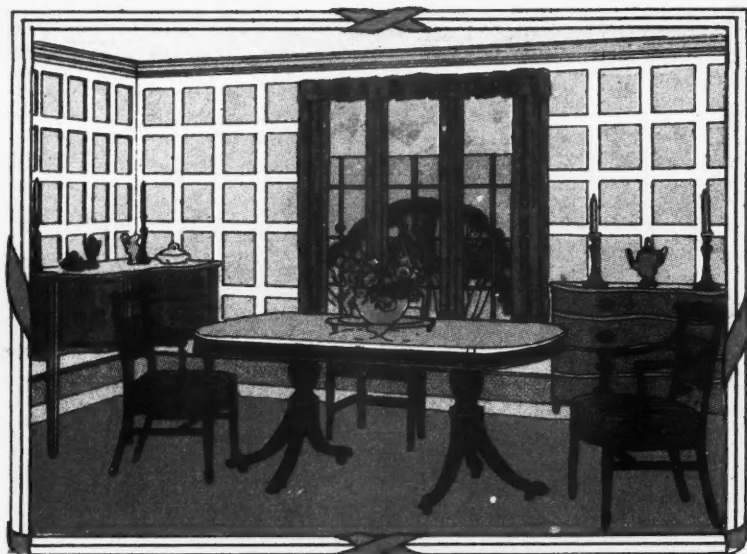


SECOND FLOOR

The TORONTO

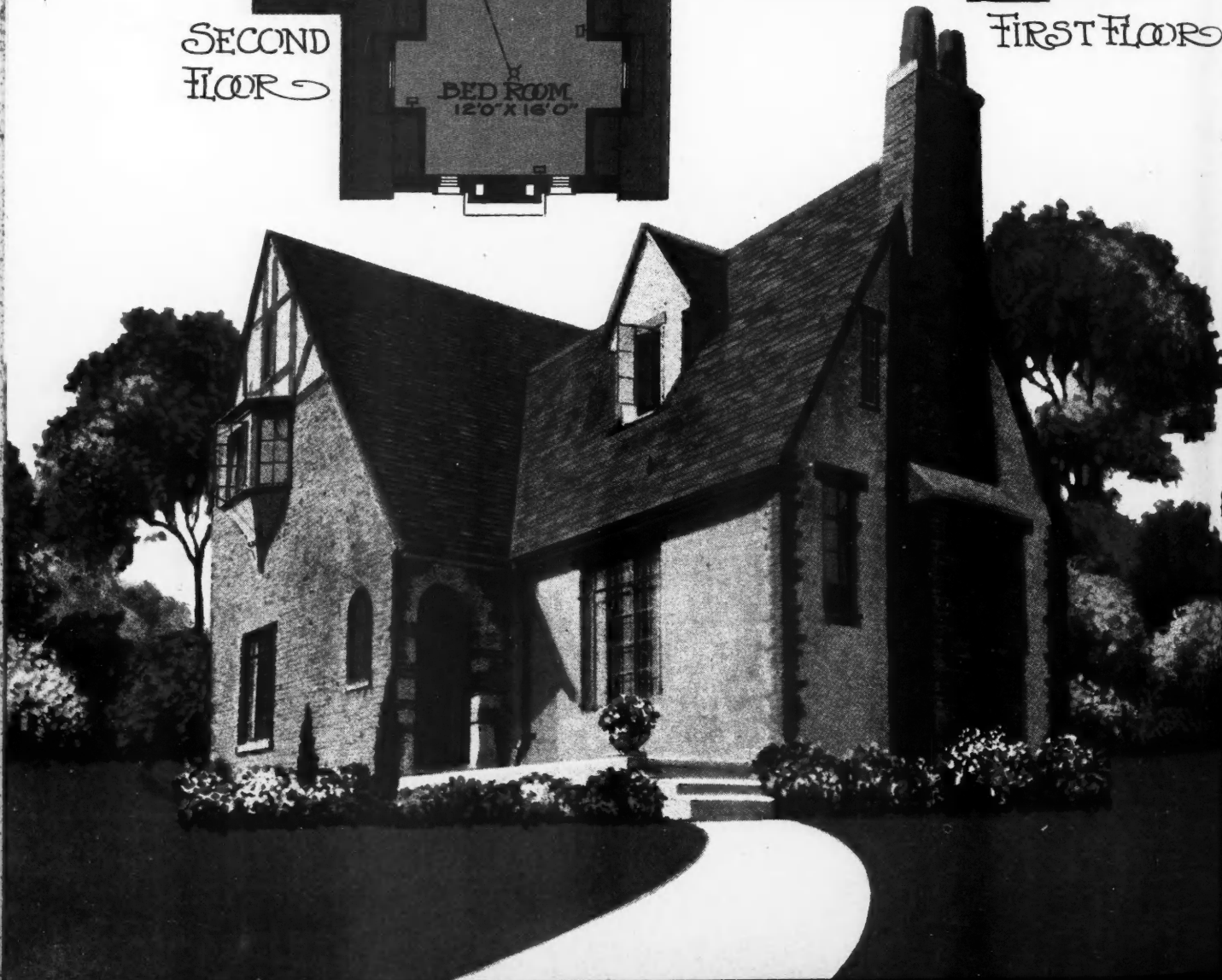
The special equipment recommended for this design as follows:

- | | | |
|------------------------------|--------------------------------|---------------------|
| ① Ventilating Fan | ⑩ Bookcases | Electric Panel |
| ② Kitchen Cases | ⑪ Fireplace Throat and Damper | Washing Machine |
| ③ Ironing Board | ⑫ Built-in Seat | Ironing Machine |
| ④ Incinerator | ⑬ Medicine Case | Clothes Dryer |
| ⑤ Gas or Electric Range | ⑭ Disappearing Stairs to Attic | Coal Chute |
| ⑥ Outside Icing Refrigerator | ⑮ Weatherstrips | Heating Plant |
| ⑦ Icing Door | ⑯ Storm Sash | Oil Burner |
| ⑧ Package Receiver | ⑰ Screens | Water Supply System |
| ⑨ Thermostat | ⑱ Lighting Fixtures | Hot Water Supply |
| ⑫ Built-in Mail Box | ⑲ Convenience Outlets | Water Softener |
| | | Radiant Gas Heats |
| | | Electric Heaters |



SECOND FLOOR

FIRST FLOOR



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OUR FRONT COVER HOME



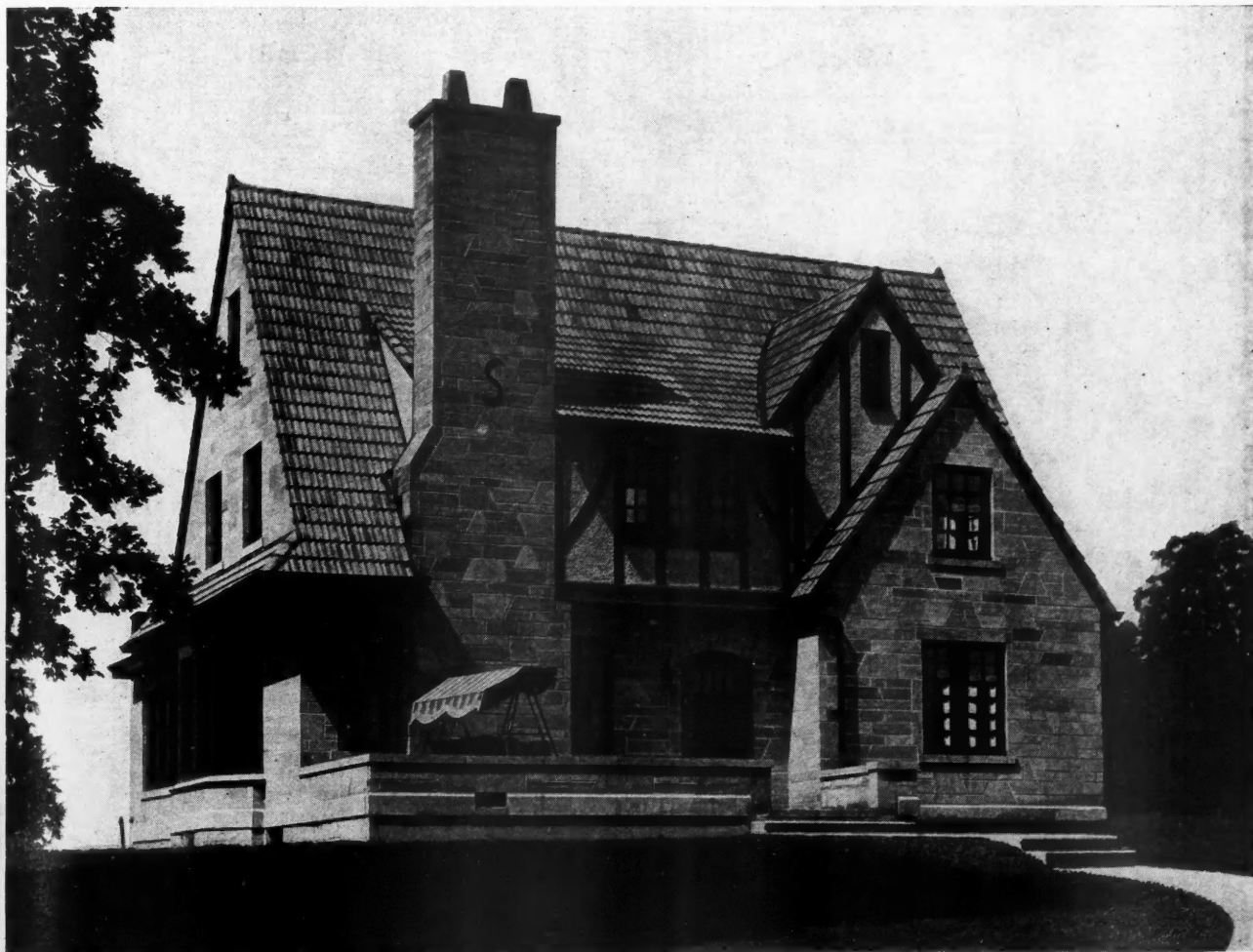
Limestone Veneer for the Modern Small Home Is Not Only Beautiful and Appropriate but Also Available at an Entirely Reasonable Cost

IN Our Front Cover Home may be seen substantial evidence of the all too little known fact that stone is not only a highly desirable, but also an entirely available material for the construction of small and medium sized houses, as well as for those mansions of the very wealthy with which it has always been associated in our minds. Here is a six room house, from a design by A. Raymond Ellis, architect, of Hartford, Conn. It is faced with Indiana limestone in random ashlar and, over the years of its life, the owner will find it far from being a costly investment.

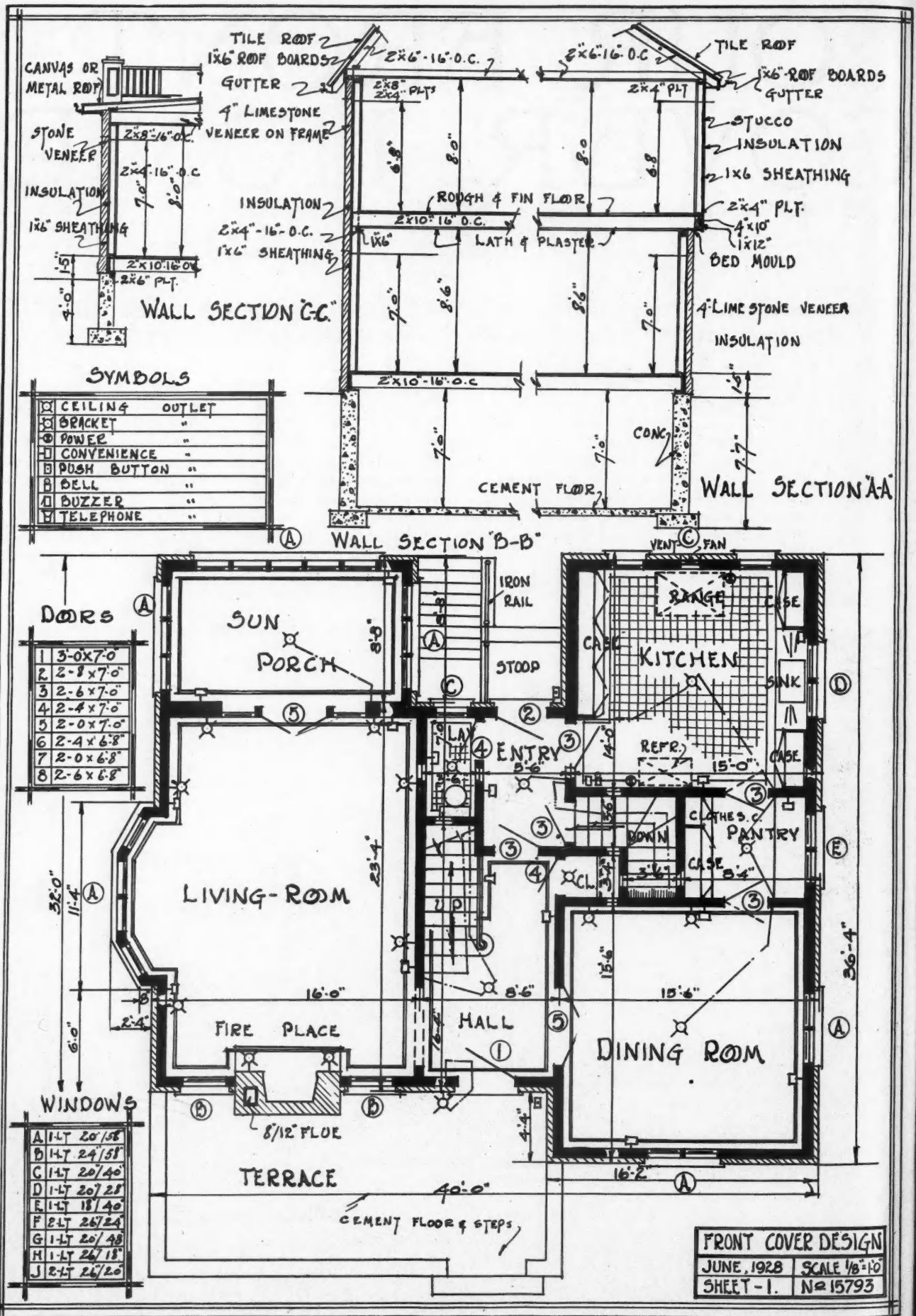
This house is typical of what may be done in the line of home building with this beautiful and exceedingly per-

manent material. The construction is frame with a four inch veneer stone, as may be seen by reference to the sectional drawing shown on the next page. On the same page is the first floor plan, while other floor plans and elevations will be found on three pages which follow it. These plans are all drawn to a scale of one-eighth inch equals one foot and furnish complete working data for building a similar house.

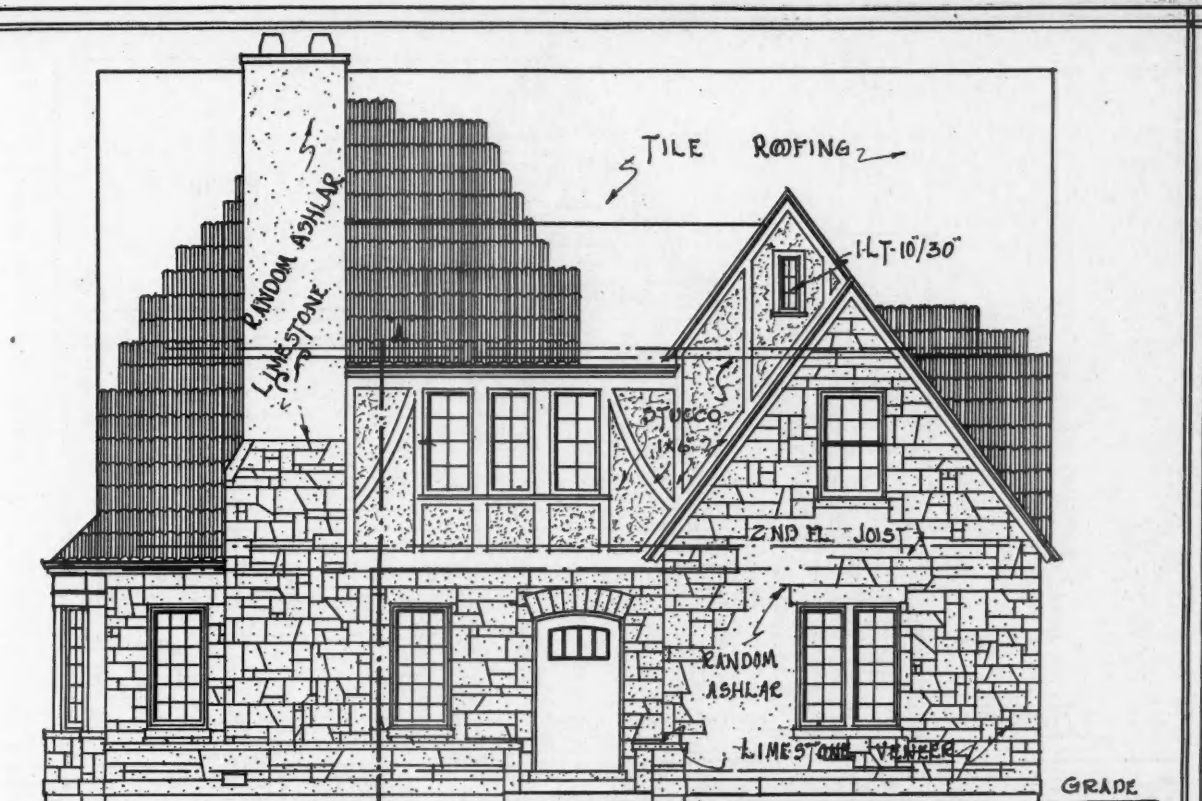
On this page is reproduced a photograph of the exterior, giving a clear cut idea of the appearance of the finished house, while on the front cover will be found a reproduction in full colors suggesting the beautiful color tones which are to be obtained in this material.



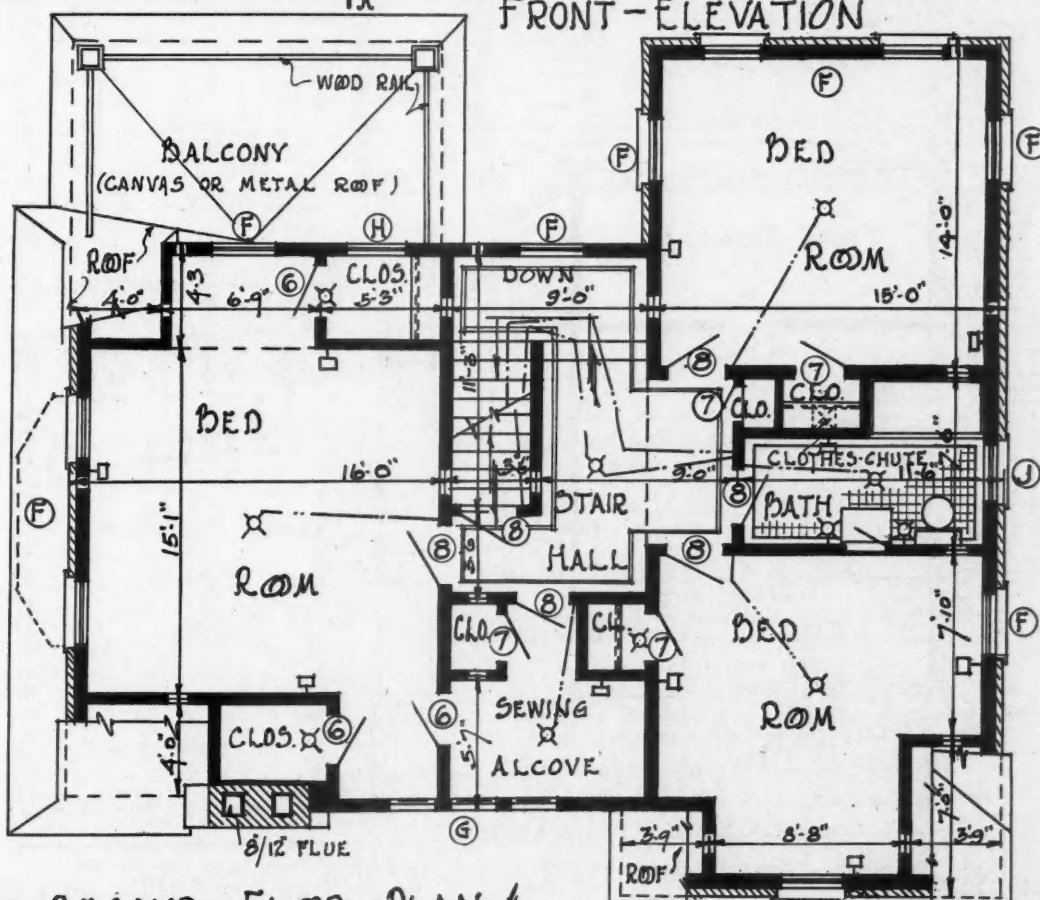
The Color Tones of the Stone Work in This Beautiful Home May Be Seen from the Full Color Reproduction on Our Front Cover, While Complete Working Plans, Drawn to Scale Are Reproduced on the Pages Which Follow This.



The Sectional Drawings of Our Front Cover Home Show the Treatment with a Four Inch Veneer of Limestone, While Below We See a Most Satisfactory First Floor Arrangement.



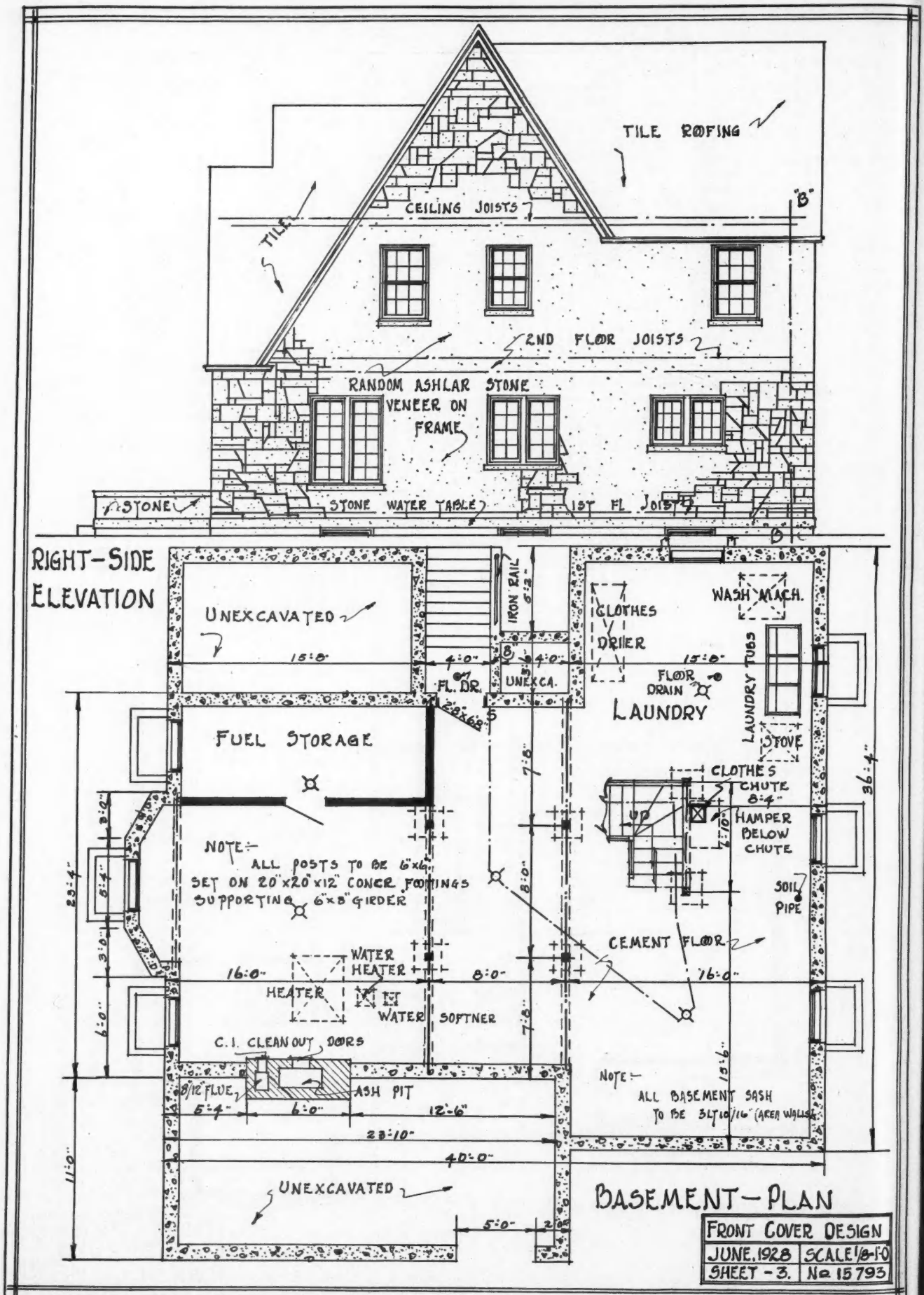
FRONT-ELEVATION



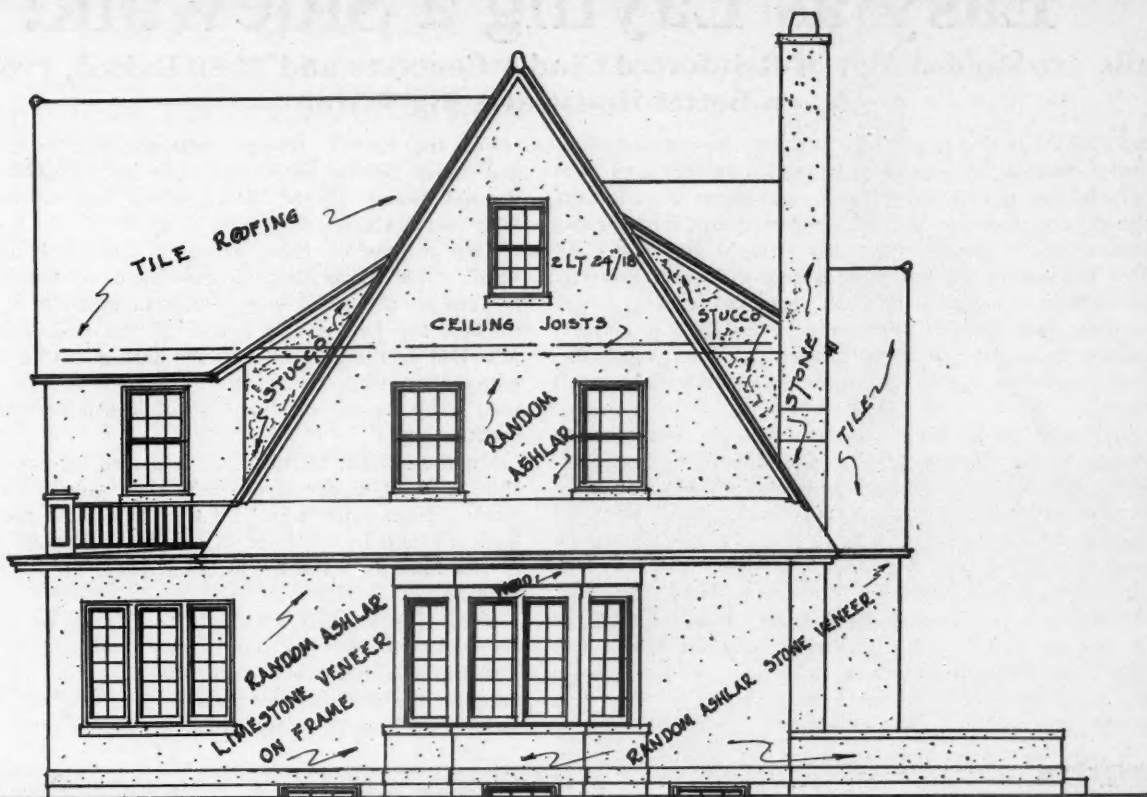
SECOND-FLOOR-PLAN

FRONT COVER DESIGN
 JUNE 1928 SCALE 1/8"=1'-0"
 SHEET-2 No 15793

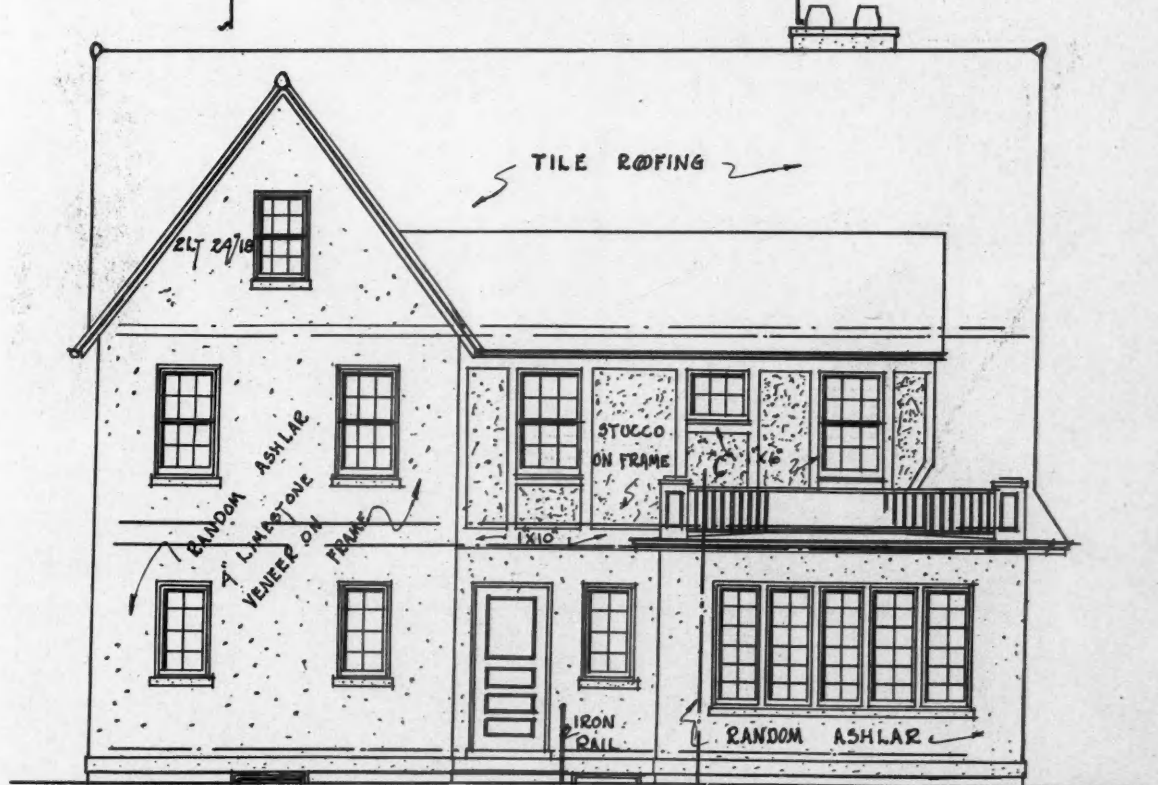
On the Second Floor Are Three Well Planned Bedrooms. The elevation shows how the veneer of random ashlar is handled, while on the pages following are other working plans.



The Basement Space in Our Front Cover Home Is Well Planned. Above, a side elevation shows some points of construction as well as the treatment of windows and roof lines.



LEFT-SIDE - ELEVATION



REAR - ELEVATION

FRONT COVER DESIGN	
JUNE, 1928	SCALE 1/8"=1'-0"
SHEET-4.	NO 15793

These Two Elevations More Fully Explain the Roof Lines, Placement of Windows and Similar Details, the Correct Handling of Which Makes This Home Most Effective.

"Easy as Laying a Sidewalk!"

Walls Are Molded Flat of Reinforced Cinder Concrete and Then Raised, Producing a Better House at a Big Saving

INSTEAD of erecting walls upright—the conventional way—Samuel P. Carroll, an army engineer and successful inventor, builds them as pavement is built—flat on the ground; then elevates the completed wall into upright position where it stands immovably straight and firm. He devised this unique method back during the war. Precious hours of time were saved on each barracks building. Vast areas were dotted with Carroll method buildings in a week. Engineers from all the allied armies came to watch the Carroll crews at work, to study the methods' Carroll employed.

American home-building has recently been coming more and more to the European types of architecture. Unfortunately, however, in many cases only the appearance of the Old World prototypes has been followed. The structural staunchness that has enabled many of these distinctive houses across the sea to survive for centuries has not been duplicated—largely because of prohibitive cost.

All necessity for half measures is now overcome with the perfection of Mr. Carroll's method of construction. The strength as well as the appearance of Europe's best house types can now be secured at a cost always as low, and frequently lower, than for conventional construction.

For the Carroll process, utilizing the least expensive and most readily available materials establishes a substantial saving at the very outset that is increased as each step in the building goes forward.

The process of constructing a Carroll house is very simple. The excavating and pouring of foundation footings is done in the usual way. A form made of 2 by 8-inch lumber, the height and length of the foundation wall is next laid on the ground with the bottom of the form paralleling the inside of the footing, so that the foundation wall when raised into final position will rest squarely on the footing.

On the bottom of this form is placed tar paper. A very thin layer of cinder concrete is then poured over the tar paper. Next $\frac{3}{8}$ -inch vertical steel rods with the ends bent back are laid in the form at two-foot intervals and blocks of wood are placed in the location where the steel floor joist will be.

Two $\frac{1}{2}$ -inch horizontal rods the length of the wall are then placed near the top of the wall and to these are attached eye bolts and nuts, the eye bolts extending up through the wall for the purpose of giving the lifting derricks something to grasp when the wall is lifted into place.



In the Foreground, Unskilled Workmen Are Embedding Stone Slabs in the Soft Mortar to Make the Outside Decorative Face of One Side of the House. In the background we see the inner face of the adjacent side wall, already raised.

Four inches of cinder concrete is then poured in the form and over this is placed a steel mesh 6 by 12 No. 7. After this operation mortar is poured into the form and into it is embedded the exterior finish, rock, stone, brick or whatever it may be. If concrete is to be used for the exterior, the color desired is mixed in and the concrete (two inches of it) is poured in the form and given the finish desired by a concrete finisher.

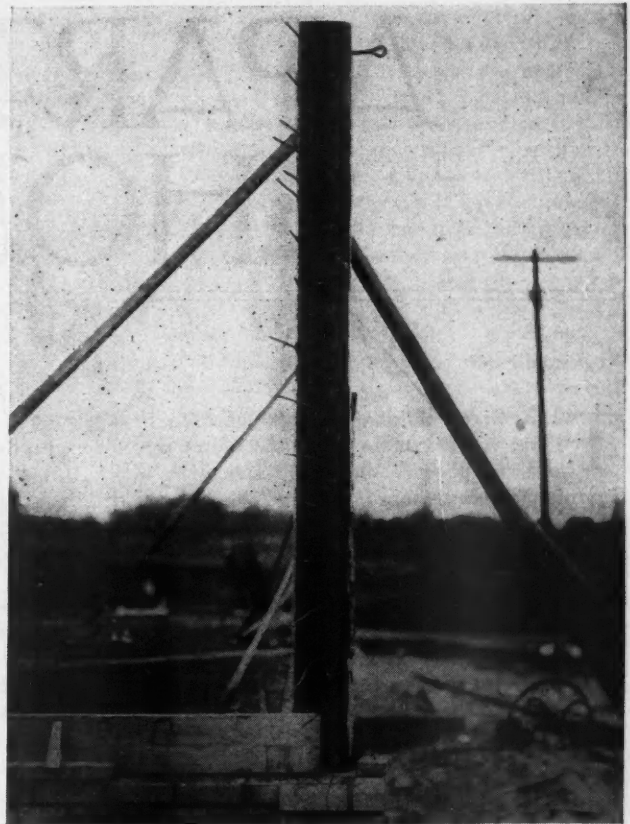
The foundation wall is now allowed to dry for two or three days. It is then hoisted to a vertical position and cemented to the footings. The ends of the walls are laced together with the horizontal rods and steel mesh and the corners poured in a form of two 2 by 10-inch nailed together. The wood blocks are then removed and the ends of the steel floor joist are placed in the slots that remain. When the wall is in place the bolts used for lifting are unscrewed and the holes filled with mortar.

This completes the foundation.

The next step is to cover the floor joist with a fine metal mesh over which 4 inches of cinder concrete is poured for the floor. It is finished off and the side walls are then built in exactly the same manner as the foundation walls with the following exceptions: 1. One of the many prepared insulating fibre boards on the market is placed in the form first instead of the tar paper used in the foundation wall construction. 2. The window sash and door frames are set in place, additional reinforcing rods are placed around windows and doors, spaces for plumbing and heating pipes and any desired niches are blocked out.

Mr. Carroll summarizes the advantages of these homes thus:

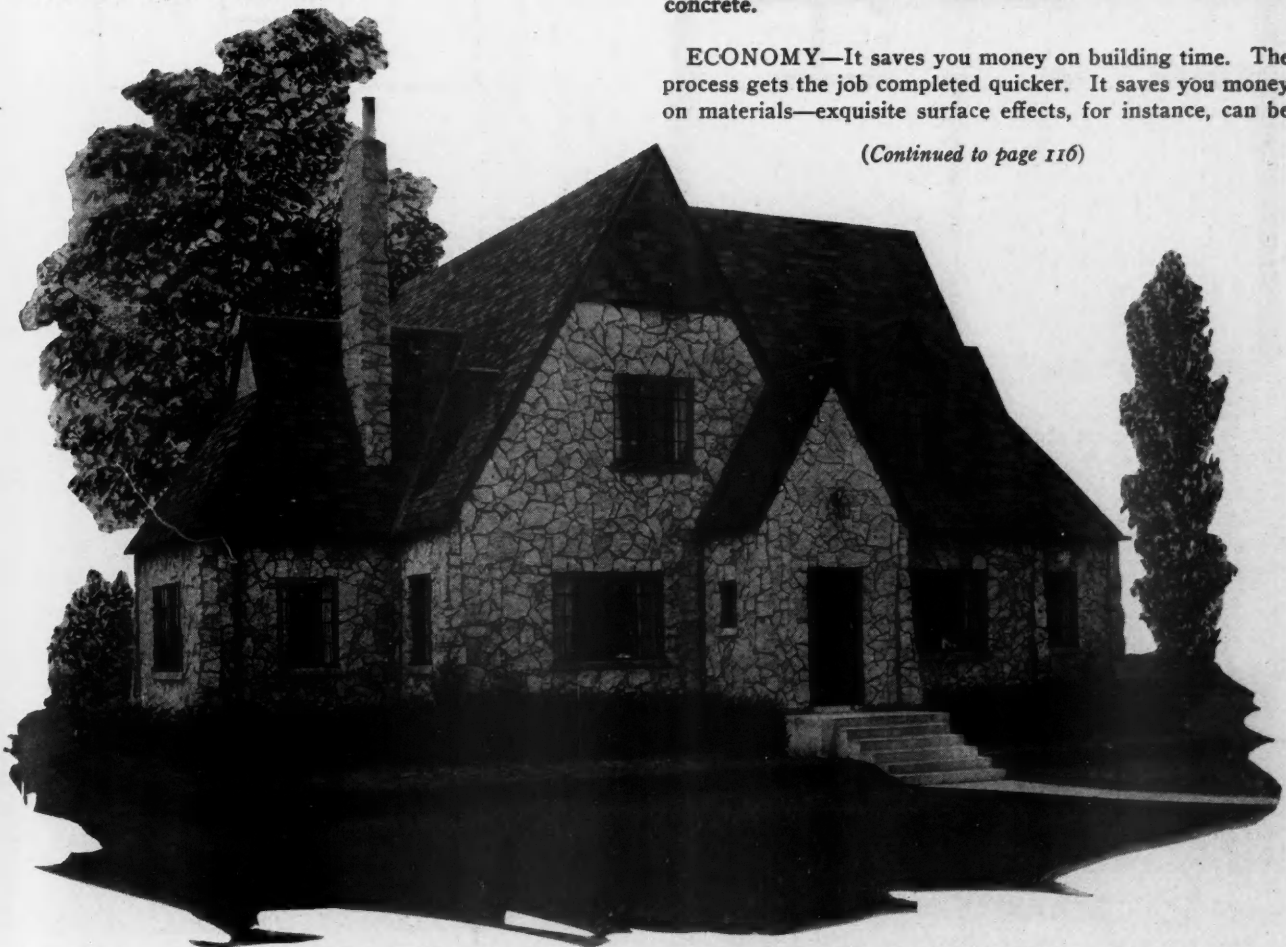
BEAUTY—This method enables you to have a real "dream" home—designed and furnished exactly as you have always wanted a home to be. There is no limitation as to architectural style or effects.



End View of a Wall Raised and Braced. From left to right we see the inner face fibre board, the cinder concrete layer, the steel reinforcing and the dense outer face layer of concrete.

ECONOMY—It saves you money on building time. The process gets the job completed quicker. It saves you money on materials—exquisite surface effects, for instance, can be

(Continued to page 116)



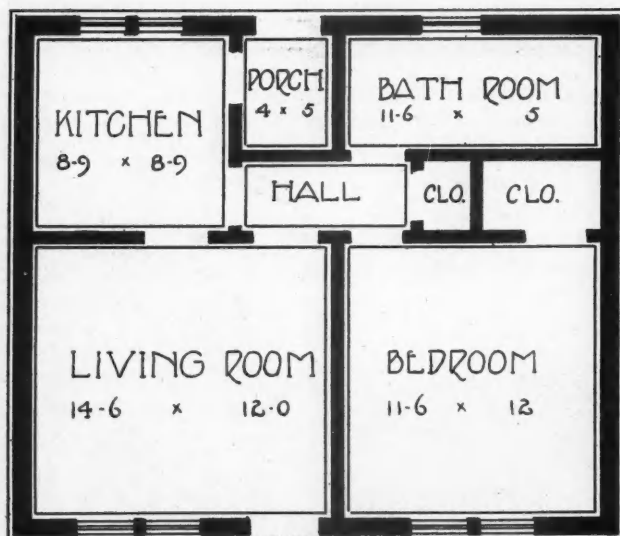
This Beautiful English Design Home Was Built Several Years Ago at Hammond, Ind., Using This New, Easy Method of "Lay-Flat" Construction.

APARTMENT HOMES

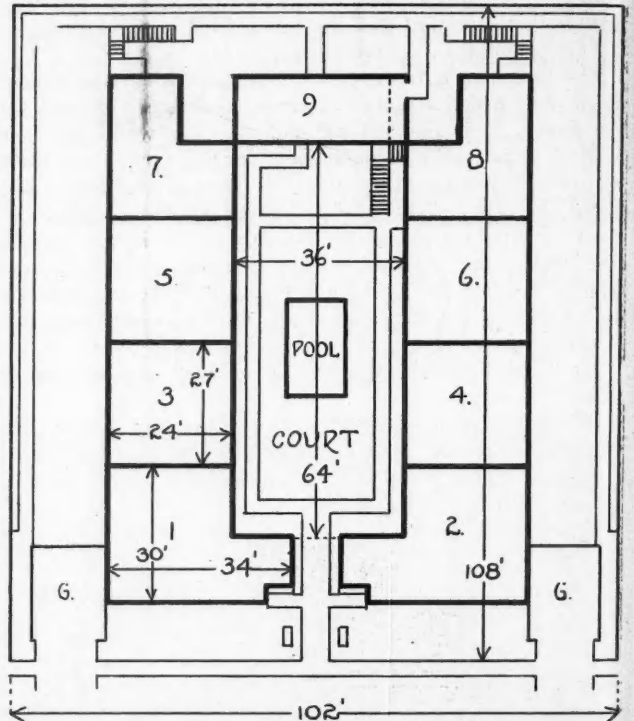


THE Greek Sphinx was supposed to be a strangler. That is, if a mere human couldn't guess her riddle she, supposedly, promptly strangled him. But the Egyptian Sphinx, he of the lion's body and man's head (Androsphinx) is a more social creature. He invites folks to pass along the way he guards. If there are two of him, then pass between in safety.

In front of the Egyptian Court, San Diego, Calif., there are two of these Sphinxes, each perched atop a box-like "signboard" that is covered with very interesting (?) writing. After some moments of consideration I decided that the strange little men and women, and their playthings, really meant an invitation. Glancing between the gaily



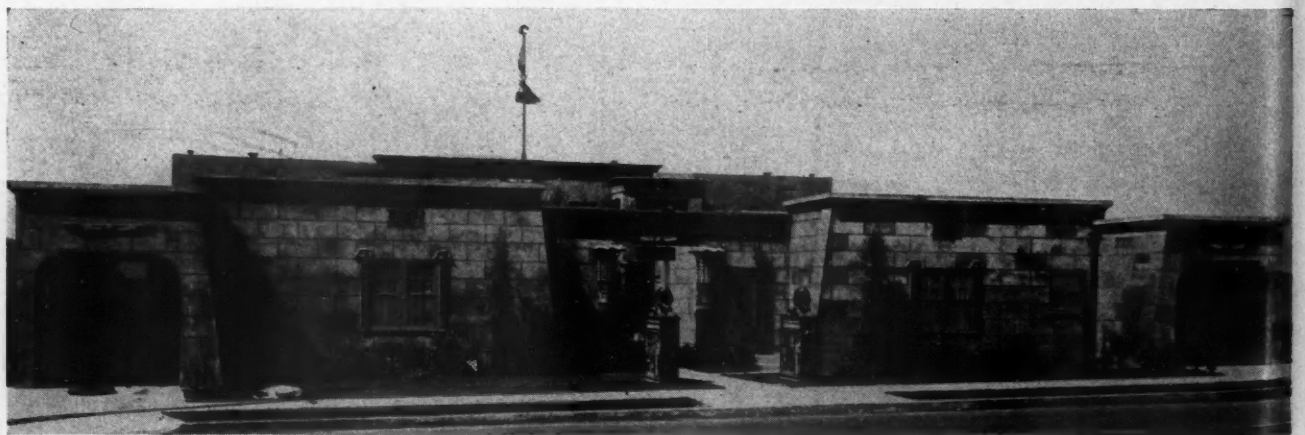
This Plan of One of the Apartments Is Typical and Shows the Compact Modern Convenience Which Has Been Provided.



The General Plan of the Egyptian Court Provides for Nine Apartments Overlooking a Secluded Court Yard and Pool.

colored pillars of the entrance it was plain that the invitation was to enter the inner court where flowers and foliage made gay the scene.

The exterior of Egyptian Court which is unusually well done, was designed by the owner, Nellie G. Edgan, while the plans and construction are the work of Paul Carle, of



The Architecture of the Egyptian Court Apartment Is, at Once, Unusual and Charming While Avoiding Any Suggestion of Being Blatantly Novel, Much of the Effect Being Achieved by the Skillful Use of Color.



The Entrance to the Court Yard Is Guarded by Two Egyptian Sphinxes, Their Supporting Bases Decorated with Hieroglyphics.

Coronado, California. The stucco, brown in color, is marked off to represent large building stones. There is just enough colorful decoration to give the desired atmosphere, and not so much as to make the place appear like cheap imitation. The two thick columns supporting the entrance are set with zigzag bits of green, white, yellow, red, blue and brown. The lower portions of the columns are dark brown, and a band of hieroglyphics divides the brown from the brilliant colors above.

The inner court is well landscaped with tropical plants. In the center there is an oblong pool in which are gold fish.

been built in. The plot of ground measures about 96 by 120 feet.

The idea of building bungalow courts, with special emphasis on having the architecture distinctive, has proved to be successful. As all of the apartments are for rent furnished, the class of renters is usually above the ordinary. That is, they are the class that want hotel-like comforts yet with the feeling of home at the same time. In the natural course of things, this type of renter is not usually long in one place. The court, therefore, must appeal to those sophisticated people who are moving around.

J. HAROLD HAWKINS.

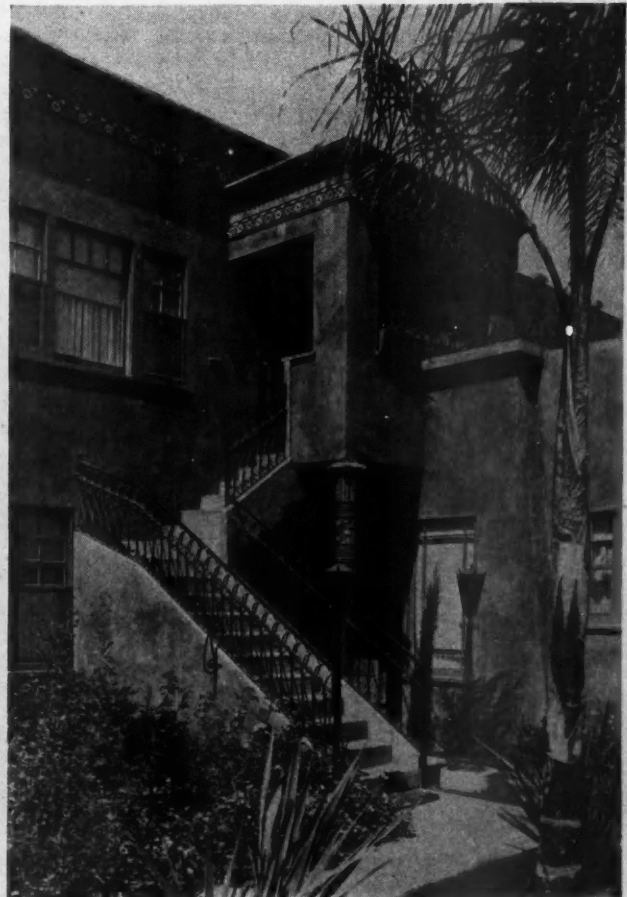
The doors of the nine apartments open to this court yard, and an outside stairway of concrete leads to the two upper apartments at the rear of the court. An ornamental iron stair railing and two standing lanterns are the making of this artistic corner of the yard. Under the balcony to which this concrete stairway leads is a passageway to the rear of the apartment at the end of the court. A colorful frieze of glazed tiles, in a conventional design, bands the upper portion of the rear apartments and the two corner balconies as well.

There are two garages, one at each extreme side of the front of the court. Service walks lead past the sides of these garages to the rear doors of all apartments. The two upper apartments have outside stairways at the rear.

Although the floor plans differ somewhat, the sketch shows a typical layout for one of the side apartments. All of the apartments are very completely furnished, and much equipment for the solid comfort of two people and extra service for six, has



A Decorative Pool Set with Tropical Plants Occupies the Center of the Egyptian Court.



The Two Upper Apartments Are Reached by Way of These Unusual, Artistic Stairways.

Pawtucket's Senior High School

Cost \$1,700,000

Monahan and Meikle, Architects—Cruise Construction Company, Builders

SPLENDIDLY conceived and executed, Pawtucket's new senior high school stands, today, though not the largest, at least one of the best designed and equipped high schools in the United States. The building is 338 feet long, four stories and basement high and the weather vane on the tower is 196 feet above the ground level.

The architecture takes its inspiration from Colonial days and is strongly reminiscent of Independence Hall. Its site on the Pawtucket River, from which the grounds are terraced up, is commanding and conspicuous. The building is of steel and concrete, faced with special texture face brick. Some idea of the size of the building may be gained from the fact that 2,200,000 brick were required. Granite composition stone and terra cotta were used for the impressive columns and trim.

There are class rooms in the basement, which is at ground level as well as on four other floors of the building. The main floor of the auditorium is on the basement level and, in the opposite wing, is the large swimming pool.

The auditorium, in point of size, design, equipment, finish and decoration, is a complete theater seating 1,500 people—900 on the main floor and 600 in the balcony.

The building contains 43 class and recitation rooms of various sizes and a cafeteria which seats 500 at a time. By an ingenious arrangement of movable partitions, most of the cafeteria space may be used for study rooms, as soon as the luncheon hour is over. As the space thus utilized includes no steam tables, counters or tables—simply chairs—the change can be quickly made.

There are four main stairways connecting the different floors—two exclusively for girls and two for boys. Toilet

rooms are located adjacent to most of these stair landings.

A large gymnasium occupies the wing of the building opposite the auditorium wing, which can be divided into separate gymnasia for boys and girls by means of a folding partition. The swimming pool, at the basement level, is one of the largest in the state, with a capacity of 90,000 gallons of water. In front of both swimming pool and gymnasium, there are bleacher seats for spectators.

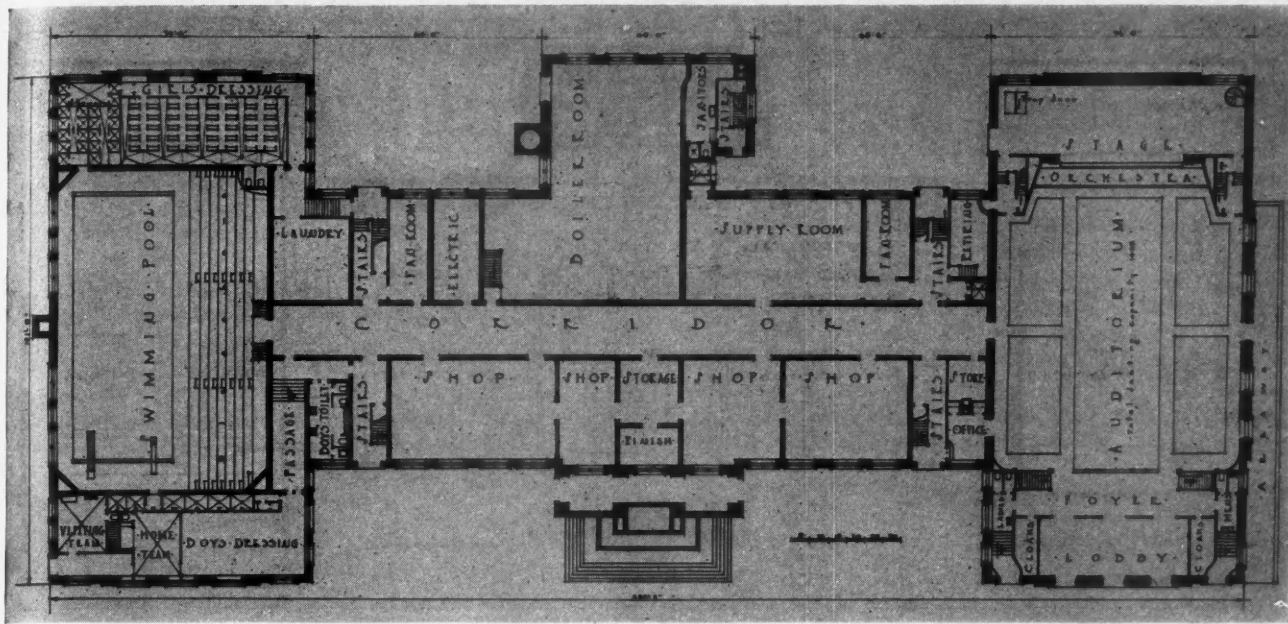
There is one great advantage in having the main auditorium floor at the basement level, in that, when entertainments or community gatherings are held in the school auditorium, the audience passes directly into the lobby of the auditorium at the ground level, thus avoiding a long walk down corridors or up stairs through other parts of the building. This arrangement also provides much needed class room space on the third floor.

The lobby is finished in old ivory color with Tiffany finished plaster walls and the floors are made of inlaid basket pattern tile in red and white panels. We find that, like other parts of the building, the colonial style of the Adams period has been the principle upon which the decorative scheme has been carried out with pleasing effect. Off both ends of the lobby, are the ticket rooms which may also be used as cloak rooms for the student workers. The ceiling has been finished in colonial style with ornamental plaster done attractively. As in other parts of the auditorium there are special circular fixtures under which the lights are hidden.

Next to the lobby is the foyer. There are elliptical arches between the foyer and the auditorium orchestra floor. Mirrors recessed in the wall, and special lighting fixtures



New Senior High School at Pawtucket, Rhode Island, Which Has Facilities for Between 1,500 and 2,000 Students. There are especially equipped class rooms for physics, biology, sewing, domestic science, business courses, music and applied arts. The auditorium is particularly fine and the swimming pool is the largest in the state.



Ground Floor or Basement Plan of the Pawtucket Senior High School. The auditorium floor is at this level and extends through two of the floors above. Completely equipped wood and metal working shops, boiler room and swimming pool are also on the ground floor.

are particularly attractive. All of the walls in the hall and the foyer are done in ivory white, buff and leather brown with sponge effect giving a rich and subdued tint with colors blending harmoniously. Leather covered chairs in the orchestra and balcony mezzanine are set in the concrete, arranged in three sections with wide aisles which are covered with sound-deadening linoleum.

Grills for the supply of fresh washed air into the auditorium are recessed into the walls and the used air is drawn out through openings on either side of the orchestra pit by means of powerful exhaust fans.

In the orchestra pit is the console of the \$10,000 concert organ and this console can be moved and played from any part of the orchestra pit.

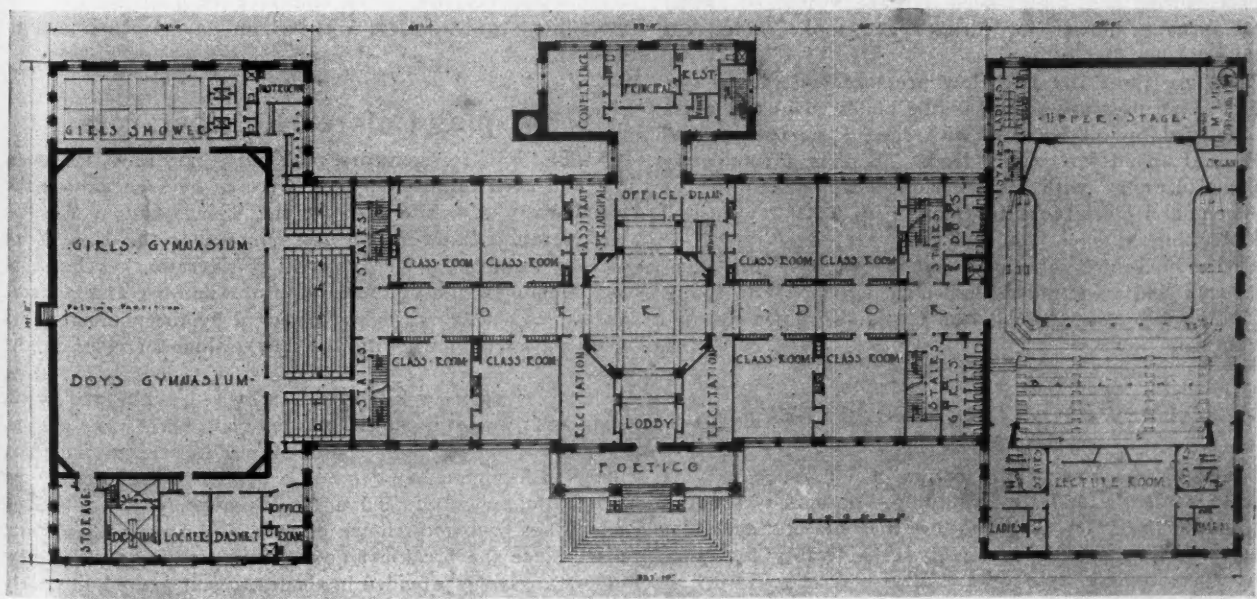
The whole front of the stage is a replica of a colonial entrance, with its two pilasters on the sides and the ornamental frieze and fan-spread overhead decorated in rich

colors. In the center at the top of the proscenium is a reproduction of an open book with the official city seal done in colors similar to the school's class pin in gold, red and blue and lettered with the name of the institution.

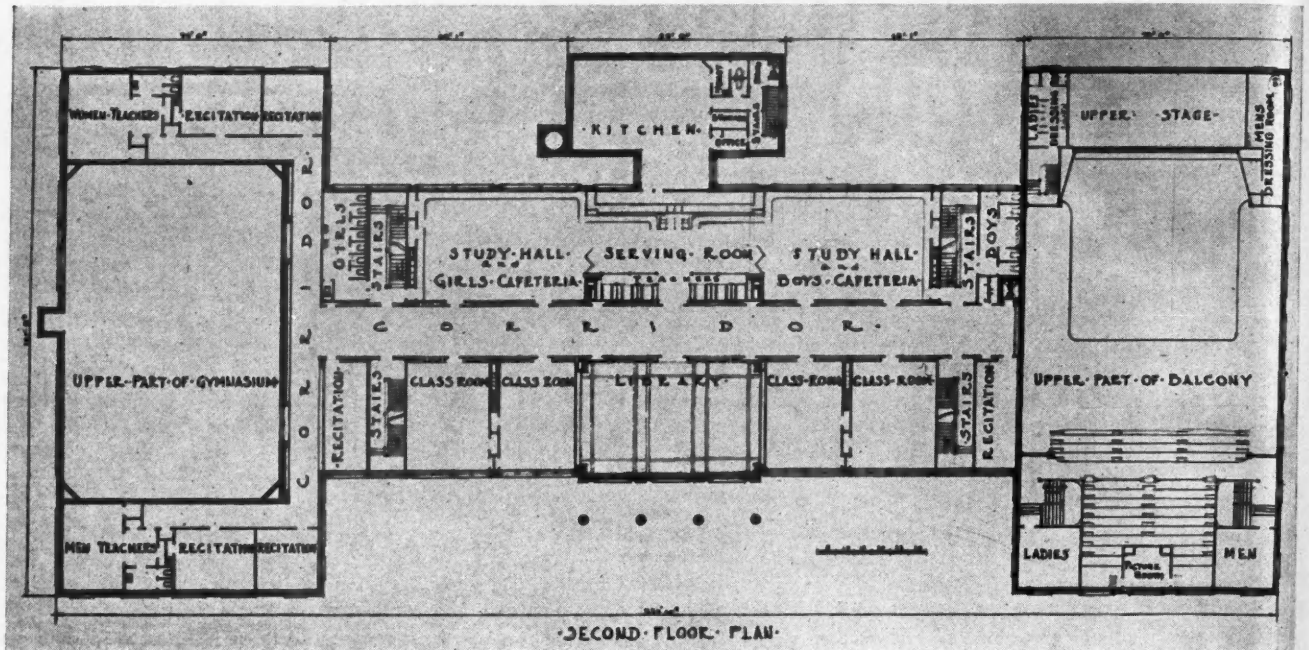
Rich red velour curtains, trimmed with gold, drape the windows on the south side of the auditorium and also the duplicate windows on the north side which are mirrored. Not a light can be seen by anyone standing on the upper tier of seats as they are all shaded by the beams. There are no posts in the auditorium; one can get a clear view of the stage from any seat.

At each side of the proscenium and on the olio curtain are paintings by artists of local fame, which add greatly to the color and attractiveness of the auditorium.

Class rooms and special equipment have been provided throughout the building for the study of chemistry, biology, typewriting, bookkeeping, physics, applied arts, industrial



Plan of First Floor Shows Gymnasium and Shower Baths, Class Rooms, Dean's and Assistant Principal's Offices, Conference Room, Lecture Room and Balcony of Auditorium. Separate stairways are provided for boys and girls with toilets adjoining the stair landings.



An Interesting Feature of the Second Floor Plan (Second Above the Ground Level) Is the Large Cafeteria, Two Sections of Which Can Be Transformed Quickly Into Study Halls. On the floor above are sound-proof music rooms and especially equipped class rooms for teaching applied arts.

drawing, music, library, sewing and domestic science, wood-working and metal machining, as well as the regular courses in English, mathematics and languages. Recessed in the corridor walls are 1,400 steel lockers besides those adjacent to the gymnasium and swimming pool. There are also many special exhibit cases with glass-fronts which are recessed into the corridor walls for the display of pupils' work. The applied arts course includes hammered brass work and the making of certain types of jewelry.

The four music rooms on the fourth floor have been sound-proofed by special sheets of insulation in the walls and by the use of special doors.

The shops in the basement contain circular saws, planers, sanding machine, variable speed lathe, mortisers, small planer and tool grinder for woodworking and three lathes, two milling machines, large upright drill, small upright drill, power hack saw, wet grinder, buff wheel, electric furnace, forge and high speed furnace combined, small metal furnace, blower for furnace and tool grinder, for metal working.

There are three 200 H.P. low pressure boilers and one 50 H.P. high pressure boilers in the boiler room and these are all fired by oil burners, with special emergency coal bunker, arranged for gravity feed. There is a completely equipped laundry with all mechanical appliances in the basement and steel racks for more than 2,000 towels and 1,000 bathing suits.

Marble enclosures are used for the shower bath compartments and cork inlaid linoleum, non-slip stair treads and tiling are used throughout corridors, stairways and entrances.

“Easy as Laying a Sidewalk”

(Continued from page 111)

obtained by the use of the natural field stones in your vicinity, available for little or nothing. It saves you money on maintenance, on fuel and on interior upkeep. The actual building cost is invariably considerably less than you expect to pay.

INSULATED—This construction by its very nature is a fine kind of natural insulation. The cinder concrete keeps winter heat in and summer heat out. It is sound-proof and

moisture-proof—a more comfortable, more healthful home in which to live.

BUILD QUICKLY—This construction gets your house completed and ready to occupy in a minimum amount of time. Whole sections of these houses can be erected in a little more time than it takes to build one house—making the process of inestimable advantage to the area developer or speculative builder and giving him houses that are readily saleable.

Since perfecting this new building method and testing it through several years of actual use on the job, Mr. Carroll has now arranged to offer it to other contractors and builders. Any reputable competent building contractor can now obtain this license on application.

The corporation will assign a supervisor to each job so that the completed structure can be accorded its guarantee. No specialized mechanics are necessary. The contractor uses his own crews, and buys his materials as usual from the supply dealers with whom he is accustomed to deal.

Display Colored Refrigerators

ELECTRIC refrigerators, pink ones, gray ones, tan ones, and even bright red ones, were to be seen among the usual array of white ones at the Third Annual Electric Refrigeration Show in the sales rooms of the New York Edison Company. The colorful refrigerator has burst in full bloom on the country in recent months and a great variety of shades are being produced by the manufacturers who are keeping up with the new fashion of color in the kitchen.

As there are now kitchens done in red, white and black, suggesting travel in rural France, or in yellows and greens, or a multitude of other combinations, the refrigerators are made to harmonize and to add a livelier touch to the room which must be occupied a large portion of the day and which has become as much of an eating place as a cooking place since the breakfast nook became popular. The new colors are being provided in shades to suit many and widely varying tastes, from those with a futuristic leaning to the delicate and flower-like tints that appeal to the more conservative women.

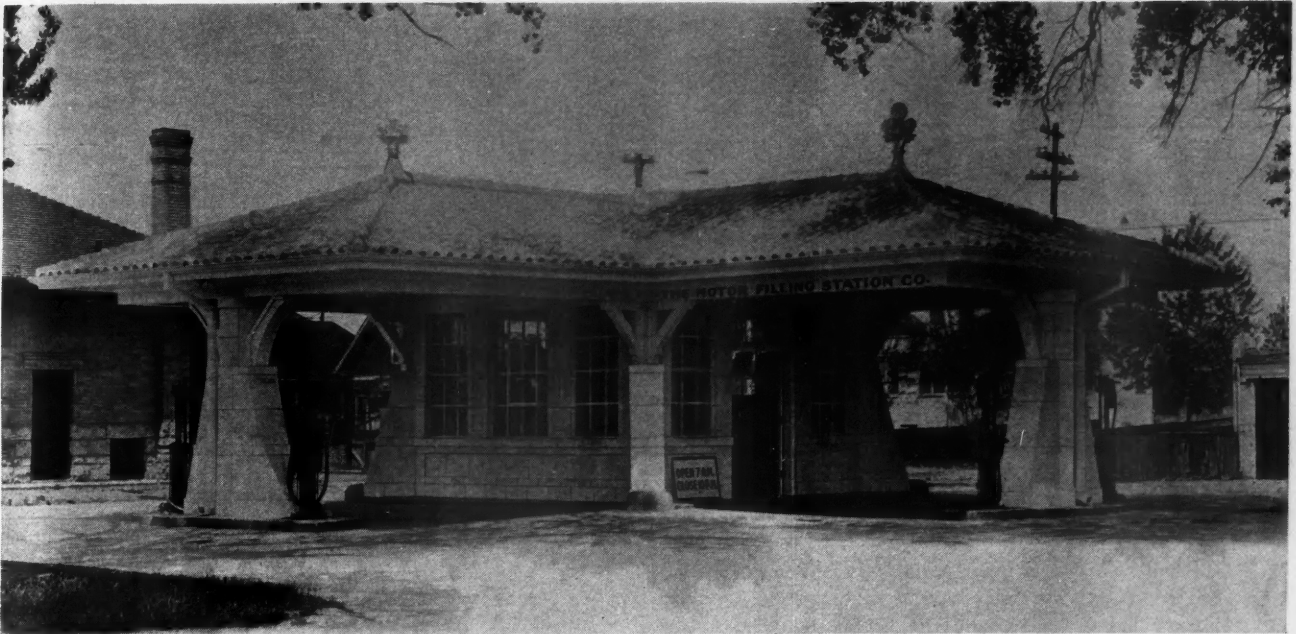
Two Denver Filling Stations Same Design—Different Materials

ONE design is of terra cotta construction with metal tile roof, metal sash and pressed metal ceilings and the other design is made entirely of sheet metal. These two designs have been adopted by the Continental Oil Company as standard for their stations throughout Colorado, Wyoming, Utah, Arizona and New Mexico.

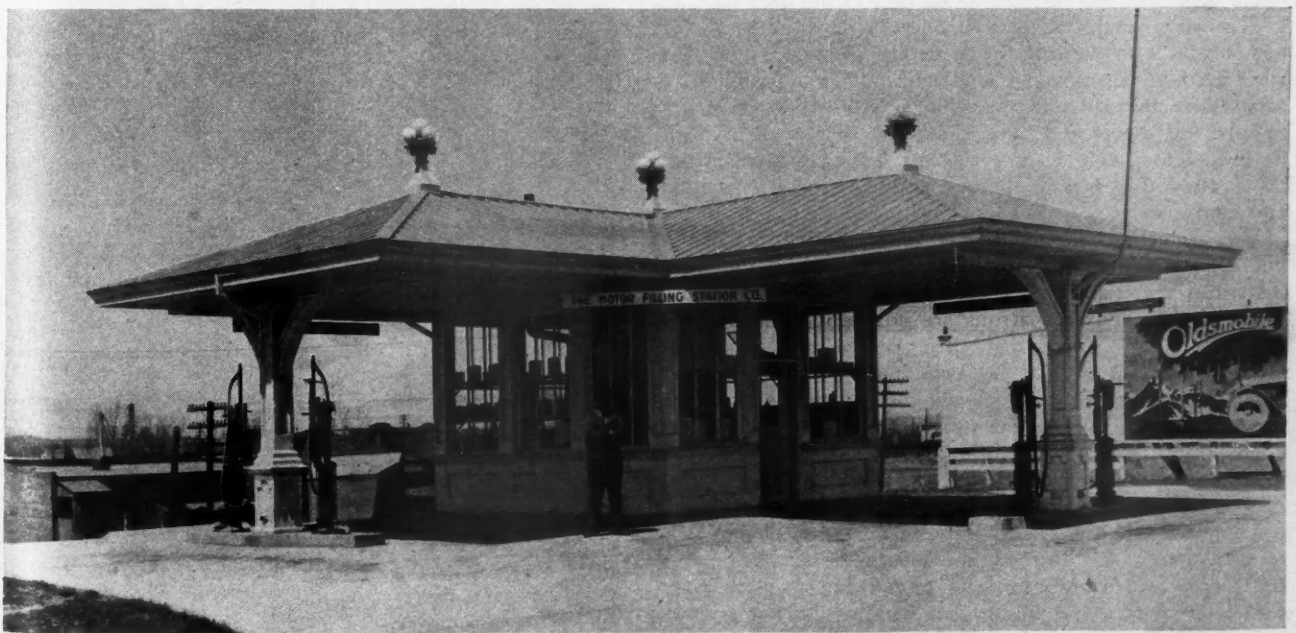
As shown in the photographs, there are projecting canopies over the driveways. As may be fitting for the location of the station, these canopies are also added to the sides or rear of the building proper, thus making the design adaptable for almost any size or shape of lot.

Keeping Pace With Progress

"THE importance of equipment in construction operations in this day and age cannot be over-estimated. The proper application of modern equipment to construction work is a big factor in the successful completion of any job and no contractor can well afford to use antiquated machinery. An up-to-date contractor is constantly in search of new labor saving machinery and methods," says the Monthly Bulletin of the National Association of Building Trades Employers.



Two-Canopy Filling Station Designed for the Continental Oil Company, at Denver. It is built of terra cotta. Designed by the Huntingdon Architect Company, Denver, Colorado. They have also a three-canopy design on the same general lines.



Another Two-Canopy Filling Station Designed for the Continental Oil Company and Built at Denver of Sheet Steel. This design by the Huntingdon Architect Company has been adopted as standard by this oil company.

Originality of Design is Seen in Los Angeles Library

BERTRAM GROSVENOR GOODHUE, Architect



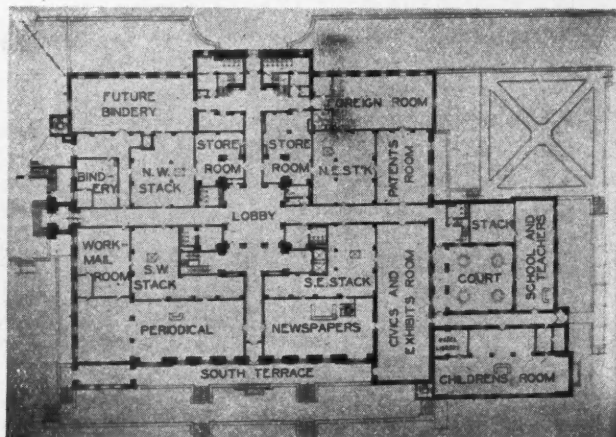
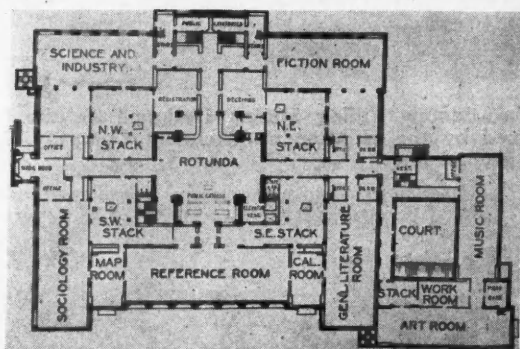
Like Much of the Architecture of Los Angeles, Calif., the New Public Library Building Shows the Spanish Influence, Yet There Is Also a Noticeable Trace of What Might Be Called the Southwestern or Aztec in the Piling of Mass Upon Mass.

YOU have no doubt heard of an actor being laughed off the stage, but have you ever heard of a public library being laughed out of rented quarters in an eight-story office building and into a magnificent structure of its own, costing \$2,500,000? It sounds like an expensive joke—and it was—but the laugh turned into a sigh of relief and a chorus of admiration on the part of 1,000,000 people.

The newly completed Los Angeles Public Library stands not only as a monument to the genius of its designer, the late Bertram Grosvenor Goodhue, but as a symbol of progressive thought and the solid determination of a city to turn the sneers and jibes and jokes that made it hang its head into a volume of praise for having created something altogether new in library architecture, construction and convenience.

The architect himself believed that he had reached a goal in true American architecture, expressed in truly American materials and by American artists. And hundreds of thousands of patrons are not only sure but have the "goods" to prove that their new library is vastly different and better than the two floors of the downtown office building which their beloved books formerly occupied.

Los Angeles, like some other American cities, grew almost more rapidly than the ability of her citizenry to meet the bond issues covering the various development programs. Harbor, streets, public utilities, new bridges, water power and a dozen industrial demands seemed always to take precedence over culture and the arts. And while the "more important" projects got under way or were completed the central library sat huddled on the seventh and eighth floors of a building in the very midst of all the confusion and jangle of street car, automobile and pedestrian traffic, not unmixed with the rat-a-tat-tat of the



The First and Second Floor Plans of the Library Show the Unusual Grouping of Book Stacks Around a Central Rotunda with the Reading Rooms Encircling Them.

bevy of riveters at work on newer buildings on all sides.

But after several years of this incongruous situation, a considerable body of the million inhabitants began to see the joke, the newspapers and other public prints took up the cause and the laugh was on. Articles, paragraphs, quips, cartoons and conversation followed and it was not altogether complimentary to the library's quarters, either. The library, in the words of the movie director, was always "good for a laugh," which no doubt accounts for the widespread use to which the joke was put.

Fortunately, of course, the hundreds of thousands of regular patrons constituted not only an enormous publicity committee, but a voting body of tremendous power, with the result that when a bond issue was proposed it was forthwith carried. The worm will turn if you give him time enough.

Today, with the new building complete, it is an interesting fact that the per capita circulation of books in Los Angeles is greater than that of any other of the five largest cities in the country. Perhaps that shows how serious the people were despite their laughs at the expense of the library.

Mr. Goodhue's work for the San Diego Exposition no doubt showed its influence in his selection of a distinctive type of architecture which is already being flattered by rather wide imitation. The design carries the Spanish feeling, and yet it includes also a noticeable trace of what one might call the Southwestern or Aztec in the method of piling up mass on mass in a most interesting way. Architecturally, there are few buildings of its size and



The Walls of the Children's Room Are Decorated with Paintings of Twelve Scenes from the Story of "Ivanhoe," by the Well-Known Decorative Painter, Julian Garnsey, of Los Angeles.

character that compare in originality of design with the Los Angeles Public Library. Its elemental strength of conception and execution make it outstanding if not unique.

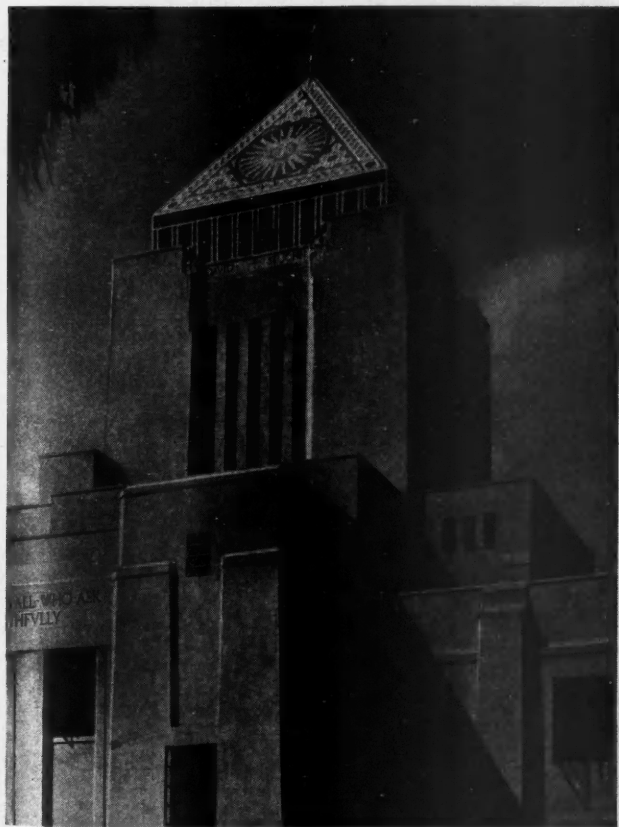
Of monolithic concrete construction, surfaced with stucco and limestone trimming, it presents a great massed pile of harmonious proportions, rising from all four sides to a pyramidal climax in the square tower, with tiled crown, 188 feet high. The three-story main building has dimensions of 200 by 239 feet, and the two-story wing is 89 by 129 feet. The site covers two city blocks from east to west, with a total of 200,000 square feet of floor space.

In the floor lay-outs a plan was adopted unlike any other library except the Cleveland building which is built around a hollow square with reading rooms on the exterior areas of the building. The first two floors are devoted to public reading rooms built around a central opening beneath the tower, from which radiate passages to the reading rooms forming the outside circle of the building, and provided with many windows. The book-stacks, instead of occupying one end of the building and utilizing valuable lighted space, are divided into four tiers and placed between the reading rooms and the central rotunda, each stack serving the adjoining rooms.

All rooms have been arranged with consideration for the comfort and convenience of patrons. The school and teachers' and the children's rooms, in the first floor wing, have separate street entrances; the exhibit and lecture hall also have a special entrance. The newspaper and magazine room can be shut off from the other portions of the building, with a special opening for Sunday entrance. On the mezzanine above the second floor are provided small study rooms for students, writers or business men who wish to make use of the library's reference material. Accommodations also are provided for clubs and committees of a civic character.

The noteworthy decorative features of the exterior of the library are, of course, the sculptures by Lee Lawrie, the New York sculptor. The scheme of both the sculpture and the inscriptive arrangement is based on the image of the light of learning—the torch of knowledge, together with the seers of literature who have held aloft the torch and, through the printed word, have recorded the progress and thought of the world.

The sculptural conceptions were modeled in the Lawrie



The Huge Tower of the Los Angeles Library Rises 188 Feet above the Street and Is Surmounted by a Colored Cap with a Gilded Arm and Hand Holding Aloft the Torch of Learning.



A Corner of the Main Reading Room of the Los Angeles Library, Showing the Mural Decorations by Julian Garnsey.

studios and sent to Los Angeles in plaster cast models. They have been faithfully reproduced in stone by Edward Ardolino, of New York. The thinker, the writer, the poet and the philosopher are represented in the figures of David, St. John, Plato, Dante, Homer, Milton, Shakespeare and Goethe.

The decorative painter, Julian Garnsey, of Los Angeles, has carried out a series of charming and unusual decorations for the ceilings and walls of the main reading rooms, the rotunda and the entrances. The designs are confined largely to geometrical patterns in keeping with the simple lines of the building and are drawn from the Roman, Byzantine and Renaissance styles.

Mr. Garnsey has treated of first importance, and consequently with richest color and design, the central rotunda, the decorative scheme of which includes long rays of silver and gold darting down from a rich central circle and connected by alternate bands of blue and yellow, the blue dotted with gold stars. Each individual room, of course, offered opportunity for the presentation of an outstanding motif and full advantage has been taken of this opportunity. In the children's room, for example, not only has the ceiling been made to resemble old wood in a Norman pattern of softest tones, but the walls have been glorified by a pageant of chivalry depicting the story of "Ivanhoe," in paintings which cover the space between book cases and ceiling.

The building required 18 months to complete under the direction of Weymouth Crowell, general contractor, and is unique in point of its substantial construction. The specifications called for concrete testing 2,000 pounds in strength rather than any particular mix. In casting the foundations it was necessary at one corner of the building to excavate a prehistoric strata of sea

shells and build up a broad footing to prevent slipping, but this was the one and only difficulty of any size encountered in the entire project.

There is a verse from Lucretius on one of the panels of the library to the effect that "Thus the runners of life hand on the torch" and those who have watched and participated in the slow but steady movement toward the new Los Angeles Public Library can even see the smile of triumph on the runner's face.—MARC N. GOODNOW.



Realtors Publish Advice

IN line with the declaration of principles which it adopted last year, the subdividers' division of the Milwaukee Real Estate Board has this year issued a pamphlet called "Suggestions to the Public When Buying Subdivision Property." Ninety thousand copies of this pamphlet have been distributed to every realtor, building and loan association and bank in Milwaukee County. Here are the suggestions:

"Due to the increasing demand for annexation of new territory to the City of Milwaukee, during the past five years, the buying public has looked upon the purchase of subdivision lots as a good investment. The officers of the Milwaukee Real Estate Board are constantly asked for information regarding the values of certain subdivision lots and the methods and reputations of certain firms.

"We ask that prospective purchasers take into consideration the following questions:

"1. Is the lot situated a reasonable distance from an area which is developed and where homes and buildings are now being constructed?

"2. How soon will improvements be made by the City of Milwaukee or by any other municipality in the county?

"3. Have you compared prices with other improved and unimproved lots within the same area?

"4. Is the price of the improved or unimproved lot more than the average price in the same territory? If so, it pays to investigate.

"5. What are the methods of the salesmen? Do they use high pressure methods? High pressure methods are costly to the lot buyer.

"6. Does the salesman guarantee a profit? Has the salesman authority to guarantee a profit. If so, is the guaranteed profit deposited in a trust company or in a bank?

"7. Does the salesman guarantee public improvements? If so, check this information with the proper public officials.

"8. Have you answered a blind advertisement?

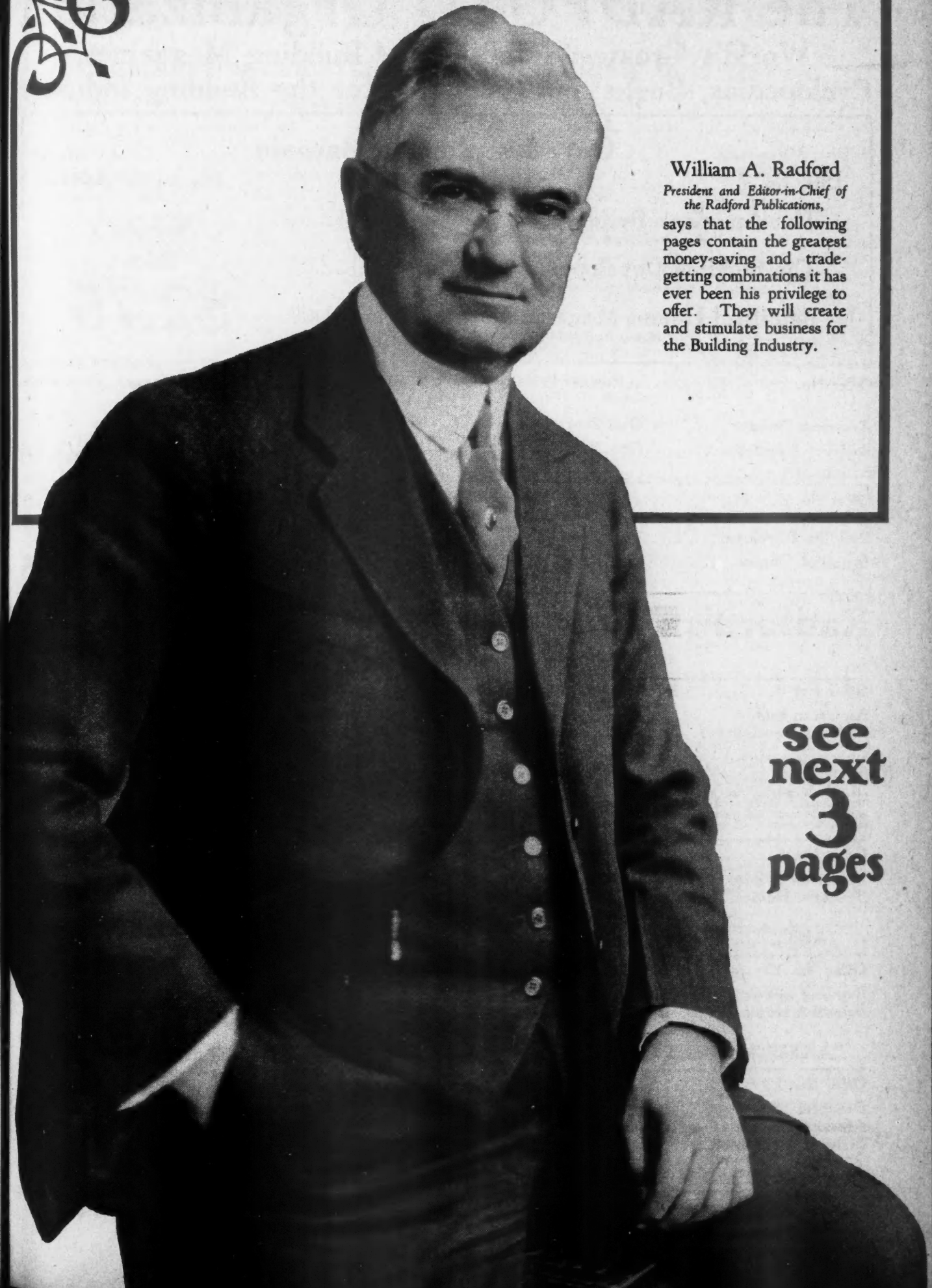
"9. Is the salesman licensed under the laws of Wisconsin?

"10. Have you consulted a realtor concerning land values?

"If you are investing your life savings, make your investment in accordance with the opportunities of the land to develop and make a reasonable profit for you."



Virgil, One of the Eight Heroic Statues, Carved in Stone, to Form Pillars.



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PAINING ^{and} DECORATING



Plastic Paint Decoration

This New Material, Now Thoroughly in Vogue, Offers
Almost Unlimited Decorative Possibilities

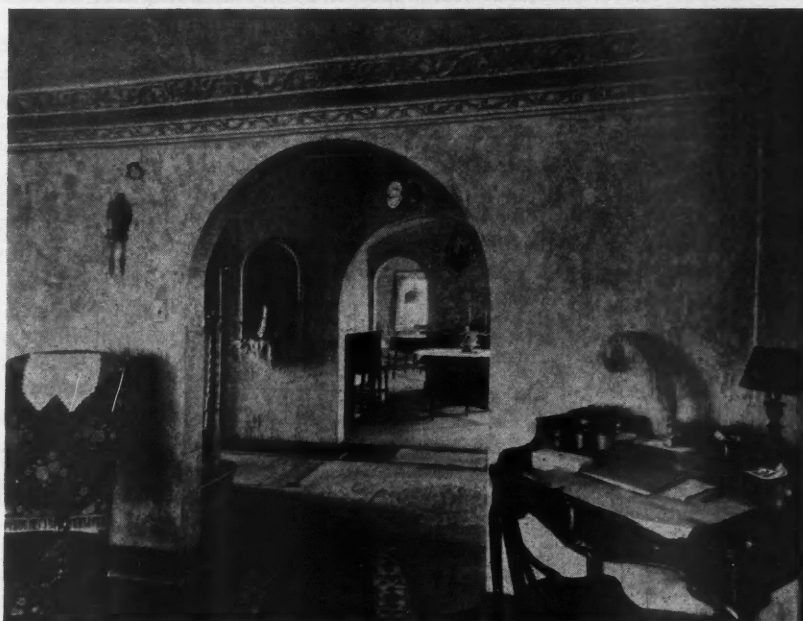
IN every community there are those who want homes of distinction and personality and can afford to have the best and most modern throughout in building construction and appointments. These, as well as the various other persons who are interested in the decoration of ultra-fashionable apartments, theatres, hotels, public buildings and exclusive retail shops, will be interested in the comparatively new plastic finish.

This relief or textured treatment, sometimes known as the "roughing process," or "jazz plaster," and also called by various trade names by different manufacturers who have the plastic paint materials for sale, has grown in popularity to the point where it is an accepted standard for wall decoration, and is exceeding in demand any other type of wall treatment offered to the public in recent years. The reason for its sudden rise to popularity is the fact that plastic finishing permits greater expression of individuality and offers a larger field of decorative color schemes than other forms of wall treatment yet developed, at a cost quite reasonable enough to be within the reach of all who have a real desire for individuality of decoration.

Plastic finishing provides actual texture, which in most forms of wall decoration is only simulated through color manipulation, and at best is only partially attained in rough or sand finish plaster. The relief effects produced with plastic paint materials, colored, bronzed or glazed as may be desired, and the ceaseless changing of the shadows and highlights, provides never-ending interest to the occupants of the building.

In brief, plastic decoration consists of applying a coating of plastic paint over the plastered walls or other surfaces to be decorated, and—before it sets—modeling swirls and fanciful designs, soft stipples, or other patterns, in the material, with various implements ranging from a coarse stippling brush to a common kitchen spoon.

Plastic paint may be applied wherever ordinary paint can be applied. It is put on with a brush, or spread on with a broad knife or spatula, in a heavy coating varying from 1/16 to 3/16 inch or more in thickness, according to the effect to be produced. One coat is applied, instead of two or three coats as with ordinary wall paints. When used on new buildings, the white plaster coat may be eliminated, the plastic paint being readily applied over the



An Example of the Application of Plastic Paint Decoration Which Has Become the Accepted Standard in the Finest Homes, Apartments, Theaters, Shops, Hotels and Public Buildings.

rough or "putty coat" of plaster, the saving thus effected partially absorbing the cost of the decoration—usually at least taking care of the difference between plastic finishing and the ordinary forms of wall decoration which would otherwise be employed.

A certain amount of preparation is necessary before the application of plastic paint, the same as with ordinary flat wall paints, varying somewhat according to the particular make of materials used, and the kind and condition of the surface. On new or unpainted walls, many of the finishes require the use of a size coat of some sort to seal the surface and stop the suction in the wall. When plastic finishes are applied over enamel surfaces of high gloss, the surface should be properly sanded to provide "tooth" for the new coating.

Generally speaking, there are two types of plastic paint on the market. One comes in dry powder form to be mixed with water before use. The other is the stiffened oil paint type supplied either ready for use, or in semi-ready mixed form, with the oil paint and the stiffener separate, to be combined before using. Some decorators make their own by mixing regular flat wall paint with suitable stiffeners. When this is done the painter should

(Continued to page 129)

HOW DAN DOES IT



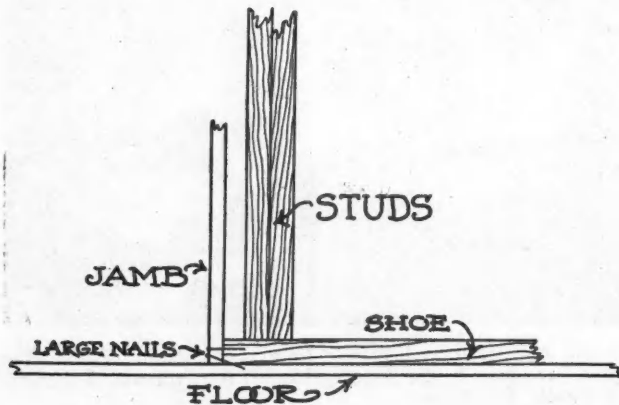
A Department for Passing "Life Savers" along to other Builders

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Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it. Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

Framing Door Openings

HERE are a couple of ideas that may prove useful. When framing-in rough openings for doors, let the shoe project into the opening a few inches on each side, instead of sawing them off in line with the jack studs. Then, when setting the jambs, saw the shoes off square and nail the feet of the jambs directly to the same, with 10 or 12 penny finish nails, and save shimming with shingle. Incidentally this will make a more rigid job.



This Way of Nailing the Jamb to the Shoe Saves Shimming and Makes a More Rigid Job.

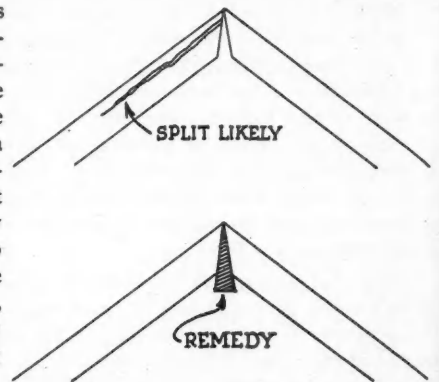
The common method of filling nail holes in fibrous wall board, now being used to such an extent in interior decorating, where the wallboard is to be painted, is to use putty, but I have found the following method of filling holes more satisfactory. I tear off a few corners from waste pieces of wallboard and grind them up in the palm of my hand, to as fine particles as possible. This I mix with prepared glue and using this mixture to fill the holes I get rid of that glossy spot which putty makes. In using this method be sure to hold the putty knife nearly at right angles to the board on the last stroke so as to slightly roughen the spot.

L. W. PIKE, 17 Brattle St., Brattleboro, Vt.

Repairing Rafter Joints

WHEN rafter joints have opened underneath, due to shrinkage of the wood and settling of the roof, they become dangerous members if neglected. The

entire weight rests on the toe, whereas the main pressure should come on the heel. The result may be a split of the holding toe sufficient in size to allow the rafter to slip past and come down with a crash, or at least allow the roof to sag badly.



But it is easy to overcome this danger if taken in time. If the cut has been made wrong in the first place the gap may be large. Cut a hardwood wedge, the width of the rafter in thickness. Pound it well up into the opening and secure it in place with heavy nails. Then the strain on the toe will drop back to the heel as should be, its force acting across the wedge.

Where Rafters Have Spread at the Heel a Hardwood Wedge Will Make Them Strong and Safe Again.

H. ROSSITER SNYDER, Guilford, Conn.



Non-Slip Hammer Handle

WITH an ordinary straight hammer handle, when a mechanic drives a spike he finds that the handle slips through his hand and he has to regrip it during the operation. I have seen many mechanics wrap tape around the hammer handle to prevent slipping; in fact, I have done it myself. The handle shown in the sketch, however, does not slip. It assures a perfect grip in any position. I made this handle myself and have found it perfectly satisfactory. It has to be used to be appreciated. I and all my men have been using these handles for some time so they have had a thorough test.

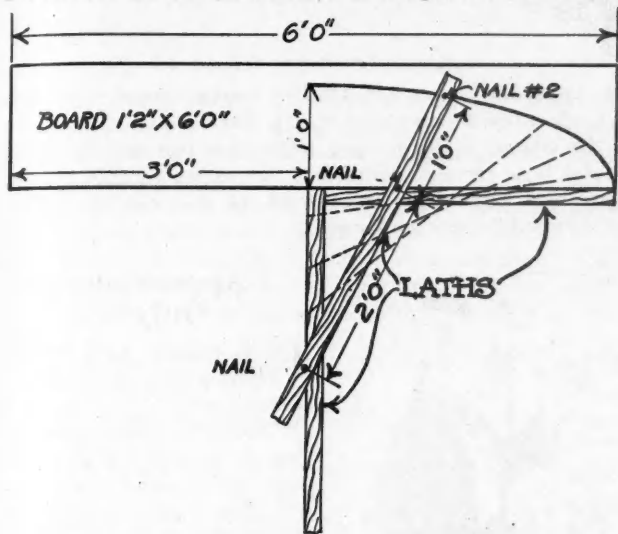
EDWARD ZITZMAN, Pacific, Mo.



The Slipping of the Hammer Handle Through One's Hand While Nailing Can Be Eliminated by Grooving the Handle as Shown Here.

Laying Out Correct Arches

I NOTICED in the March issue a method of laying out an arch. This method was all right for small openings, but cannot be used for the wide ones that are used so often these days. I have noticed many arches that were laid out too flat or too high in the center, having too sharp a break at the side jambs or continuing too far down on



Here is a Simple Way of Laying Out Wide Arches to Obtain an Arch Which is Neither Too High Nor Too Flat.

the jambs. The following method of obtaining an arch will give good results and can be used quite easily on the wide openings.

Nail two laths or strips of wood together to form a 90 degree angle, using a square to make sure the angle is correct. The length of these strips as well as that of the third strip will depend on the size of the arch to be scribed. The third strip is not attached, but is used to slide along the edges of the first two as shown in the sketch.

Three nails are driven into the third strip and allowed to protrude through it. The two nails nearest the ends of the strip are placed at a distance from each other equal to one-half the width of the arch. The center nail should be placed at a distance equal to the depth of the arch from the nail marked "Nail No. 2."

Now start the loose strip with the center nail in the center of the cord of the arch and No. 2 directly above it. Slide both nails along the edges of the nailed strips, keeping the nails tight against the edges of these strips. If the nail No. 2 protrudes just far enough to mark on the board it will describe a perfect arch. If desired, a pencil can be used in place of nail No. 2.

CHAS. A. BOOTH, Gothenburg, Neb.

Use a Plumb-Bob

THE best tool for plumbing the outside walls of a building is the plumb-bob. If the framing has been accurately done, two corners opposite each other on a diagonal, are all that need to be plumbed. The other two corners will automatically be brought to a plumb position. One man handling the braces and one man to handle the plumb-bob, is all that are necessary to plumb a building in this manner. Here is the way it is done.

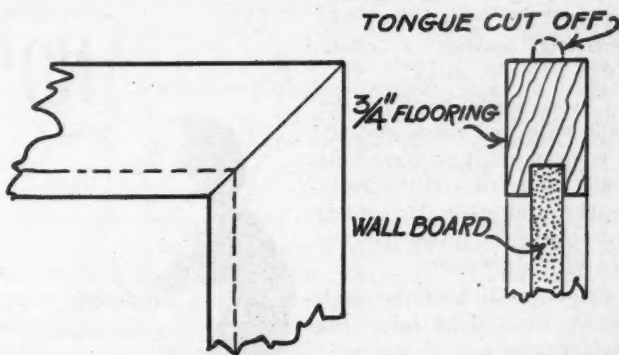
Stick a nail at the outside upper corner of the top plate, say eight inches from the corner. Then toss the plumb-bob over the plate, and with the bob in one hand and the

end of the cord in the other, slip the cord toward the nail until it hits. Now let the plumb-bob down until it hangs within an inch or so above the bottom plate. The edge of the bottom plate will give the plumb-point for one direction, and a mark eight inches from the corner corresponding with the nail above, will give the point for the other direction. Repeat this operation on the corner diagonally opposite to the one just plumbed, and the skeleton is plumbed.

H. H. SIEGELE, Emporia, Kan.

Quick Way to Build Doors

I RECENTLY had to supply several odd size doors for kitchen cupboards so it was up to me to make them instead of buying the mill product. I found that by planing the tongue off of 3/4-inch flooring it would serve very satisfactorily for the stiles and rails of the doors. The



Cupboard Doors Can Be Quickly and Easily Built of Wall-board and Flooring as Indicated Here.

groove was just the right size to hold panels of wallboard and in this way I was able to turn out excellent doors in quick time and with a minimum of labor.

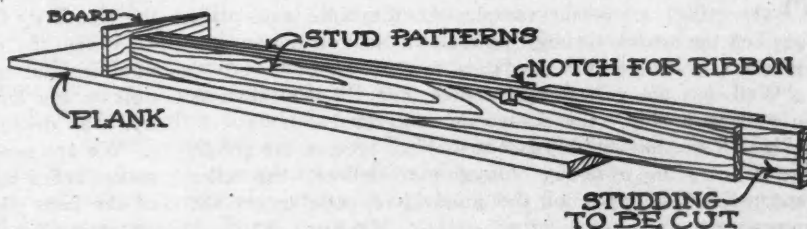
J. F. DERWALLIS, 17 Cummings Road, Newport, R. I.

Stud Cutting Pattern

THE sketch shows a studding cutting pattern which I have used to good advantage. First make two patterns. Then take a plank that is the same length as the studs and square a line across it about six inches from one end. Then set the two patterns on this plank, on edge, and put another piece of two by four between the two patterns. Place one end of the patterns at the mark squared across the plank and fasten each pattern to the plank with two nails.

Now nail a board across the ends of the patterns as shown. It is now possible to place a piece of studding between the patterns and saw it off at the end, getting the exact length. The notch for the ribbon can be cut, using the notches in the patterns as a guide. After the studs are all cut the nails can be pulled and the pattern pieces used along with the others.

HENRY MORTHE, Fingal, N. D.



With Two Studs as a Pattern, Handled as Illustrated, the Work of Cutting Studs Is Simplified and Reduced to a Minimum.

LAW for the BUILDER



When is a Check Certified?

THE builder flipped the ledger card across the desk. "Nothing would please me better than to give you a check for my account right now, but I haven't got that much to my credit," the customer stated.

"Well, give me a postdated check, payable when you will have sufficient funds," the builder proposed, the customer accepted the suggestion, and departed, leaving a check dated 10 days "away."

"Now, hustle down to the bank with this check and see if you can get it certified," the builder ordered, and the bookkeeper returned in due course, with the check properly certified by the president.

"Now, we'll hold the bank for it, we're dead safe," the builder averred.

When the check fell due, however, the bank refused to pay, and the builder threatened suit.

"The maker has no funds on deposit to pay the check, and did not have at the time the check was certified," the cashier explained, "and our president had no right to certify."

"I had no knowledge of the lack of funds or of any want of authority on the president's part, and I'm entitled to hold the bank responsible on the certification."

"No, the fact that the check was postdated was notice to you that the president had no authority," the banker urged, and the Nebraska Supreme Court, in case reported in 154 N. W., 233, ruled that the holder could not collect.

"The president of the bank undertook to guarantee that the checks would be made good by the maker thereof, and that the bank would pay the amount to the payee of the checks. The payee not only had notice of this, but participated in this arrangement, and was bound to know that such a transaction was beyond the power and authority of the president of the bank," said the Court, and the New York courts have arrived at the same conclusion.

On the Dock

A CONTRACTOR had bought certain goods f. a. s. (free alongside) a certain vessel. At the time and place specified the vessel, through no fault of the contractor, was not there to receive the goods.

"Well, put the goods on the dock, and I'll take chances on getting a ship," the contractor suggested.

"No—if the named ship is not there to receive the goods, that relieves me from my obligation to deliver," the seller reported. (The price of the goods had gone up in the meantime.)

"As long as the absence of the ship puts no additional burden on you, you can't crawl out that way," the contrac-

tor maintained, and the United States Circuit Court of Appeals ruled in his favor in 279 Fed., 203.

"Of course, if there was a stipulation that delivery is to be f. o. b. a certain vessel, and the contract could not be performed without the presence of the ship, the case would be different," the Court stated.



The Fact That the Check Was Postdated Was Notice That the President of the Bank Had No Authority To Certify It, According to the Supreme Court.

month of March, but not necessarily during that month, and in determining what would be a satisfactory compliance with that undertaking we should ascertain what under all circumstances was a reasonable time for the shipment, because since the time of performance is not definite (and the use of word 'approximate' excludes the idea of definiteness and exactness), there is no other standard upon which we can rely than that fixed by reason and common experience," said the Maryland courts, in ruling against the builder in the case of Bagley vs. Walker, 27 Atlantic, 1033.

A Kentucky Defense

"I CAN'T pay now," the debtor protested. "Give me your note, and I can discount it at the Brick Bank," the contractor urged. The note was signed, and the contractor attempted to discount it.

"Can't touch it unless you get X to endorse it," the bank stipulated, X endorsed the note, the note was dishonored, the bank sued the debtor as the maker of the note, and the latter set up a novel defense when case came before the Kentucky Court of Appeals as reported in 277 S. W., 310.

"When the contractor got a third party to endorse the note without my knowledge or consent, that was a reflection on my financial standing, and relieves me from liability," the debtor maintained.

"We are unable to understand what principle of law the maker relies upon to absolve him from liability if the truth of the facts pleaded by him be conceded. The note sued on shows for itself that he was the maker, and that the contractor was the payee. He does not deny that he was the maker of the note or that he signed it. He seeks to

"Approximate Only"

THE builder had ordered flooring to be delivered on March 1st.

"Owing to existing condition we have a clause in our confirmation slips that 'delivery dates are approximate only,'" the salesman pointed out.

"That's agreeable," the builder told him, the flooring was not delivered until March 19th, and the builder sued for damages.

"When, therefore, it was stipulated that the delivery dates were 'appropriate only' it was intended that delivery should be made 'near' or 'about' or 'shortly after' the

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be relieved of the consequence of having done so solely upon the ground that after he had signed and delivered the note to the payee, the bank declined to purchase it, and that thereafter, without his knowledge or consent, the contractor procured an indorser satisfactory to the bank, and it thereupon purchased the note. Manifestly, that contention cannot be upheld," said the Court in deciding that such a defense should not prevail.



Is it an Acceptance?

"I'll pay you \$10 for that article," the buyer proposed. "I'll take it," the seller agrees, and this is a very simple illustration of an offer and acceptance which constitutes a binding contract.

Suppose, however, that a builder gives an order to a traveling salesman, and it is understood that the order is not binding until accepted by the manufacturer. The salesman forwards the order in due course, and the manufacturer writes the builder, acknowledging receipt of the order.

"The same will receive our attention," the letter of acknowledgment states.

Does this acknowledgment constitute a binding acceptance of the order?

The law on this point is not exactly clear, but the weight of authority is that it does not constitute a binding acceptance.

"In the absence of a further showing of the intention of the parties, the better view seems to be that a letter acknowledging the receipt of an order, coupled with the words, 'The same shall have prompt attention' or 'prompt and careful attention,' is not of itself an acceptance which will prevent a withdrawal of the order by the buyer, or bind the seller to fill the order, though it may be evidence to be considered with other circumstances," says one state court in the case on the point, quoting from a standard textbook.

A New York case along the same line is a little stronger, as in that case the acknowledgment stated, "the same shall have prompt attention," but the courts of the state ruled that it did not constitute a binding contract.

"Promise to give the proposal attention was not a promise of acceptance; it was not an assent to it. It was no more than a courteous promise to give it consideration, and this, we do not doubt, is the sense in which it is generally, if not universally, employed in transactions of this character," was the reasoning of the New York courts.



M. L. HAYWARD.

Plastic Paint Decoration

(Continued from page 121)

know absolutely that the proper stiffeners and proportions are used to produce a properly balanced finish that will work properly without liability to drying out, cracking, imperfect adhesion and other troubles experienced in the use of improperly made finishes.

After the relief texturing is completed and the plastic material has become thoroughly hardened, the rough edges and projecting nibs are knocked off by shoving a straight-edged board back and forth over the surface or by sandpapering. This final smoothing up of the surface is also sometimes accomplished by pressing a smooth board against the surface before the plastic composition has thoroughly set. For some effects the material is flattened down with the palm of the hand.

Color is sometimes introduced into the plastic finish by mixing dry colors with the water mixtures, or oil colors with the oil paint mixtures. Any desired color treatment may also be given the surface after the plastic finish has been applied. The most general method is by "Tiffany"

mottling or glazing with oil colors reduced with a special glazing liquid, or by dusting on bronzes of various shades and wiping from the high spots as in polychroming. The plastic paint should, of course, be thoroughly dry before the color mottling or bronzing is done—and with many of the plastic finishes on the market, which are particularly porous and absorbent, the application of a special size is required before the color treatment is started.

Another method of coloring sometimes employed is blowing coloring material onto the surface before the plastic composition has dried. Where two or more colors are used, each is blown on separately. Colored or "Florida" sand is often used for this purpose, especially with what are known as sandswirl effects.

The effects which can be produced with plastic finishes are as varied as the decorators who produce them. The competent painter who understands the use of these material, studies this subject and experiments on his own account, can with very ordinary tools produce an almost unlimited range of reliefs, swirl and sunburst effects, stippled and pebbled effects, Travertine finish, raised tile effects, imitations of Caen stone, stone blocks, Spanish leather and combinations of these effects. Spanish, Italian and English textures can be developed, and craftsmanship found in old Greek and Roman cities copied. Raised stencil effects of unique beauty may be produced by means of linoleum stencils.

The range of possibilities offered by this highly versatile method of decoration makes it possible to obtain practically any desired texture and color scheme. Finishes may be readily developed, appropriate for the small cottage, moderate priced home or palatial estate—for the den, breakfast nook or sun room where individual effects are desired, for clubs or public buildings where the most modern in architectural and building practice is demanded, for large office buildings, for the retail store catering to quality trade, and for the fronts of picture shows, restaurants and shops of the de luxe type, backgrounds of store display windows, and a multitude of other uses. When properly used, plastic decoration is a most valuable decorative medium.



BERTON ELLIOT.

Stuart Succeeds Greeley as Chief of Forest Service

THE policies that have governed the Forest Service of the United States Department of Agriculture under its outgoing chief, Colonel William B. Greeley, who has resigned to accept the management of the West Coast Lumbermen's Association, will be continued, without any radical innovations or departures by his successor, Major R. Y. Stuart, according to a recent statement made public by him.

"Our administrative and educational policies and procedure are the product of many years of experience," said Major Stuart, "and have become pretty well stabilized. They are the outcome of the constructive minds of my predecessors, Pinchot, Graves and Greeley, and of the teamwork of the Forest Service organization itself. I shall continue the tradition that is handed down to me from my predecessors and shall strive to keep on in the course already marked out.

"From its inception, the Forest Service has concentrated on the task of having the forest lands of this country made productive and kept continually so. To it was assigned, in 1905, the administration, protection and improvement of the national forests, now aggregating 159,000,000 acres. Its field was later broadened to include co-operation with the states, with public organization, with industries, and with individuals to better protect and utilize our forest resources, and to derive from them the maximum benefits in watershed protection, in public health, and in public recreation."

INSTRUCTIONS *in* ROOF FRAMING



Planning the Cornices

By JOHN T. NEUFELD

OUR readers will pardon if we deviate from the subject of roof framing for one month. A subject that has much to do with roof framing is the subject of cornices.

A carpenter is not ordinarily asked to design the cornice for a very large building, but he has to plan very many small cornices. The small cornices are really as difficult as the more complicated ones; because on a small building the owner does not expect to waste any money, and he expects the work to go ahead fast. It is therefore better to plan a very simple cornice and then to take time to do it right; rather than to try to build a more complicated cornice in a hurry. It is to meet the needs for a cornice for the small building that some of the types shown in the illustration have been developed. Some have been developed during the severe competition between builders specializing in garages and remodeling work.

Among the points to consider when planning the cornice we might mention the following:

- Good appearance.
- Simplicity of making.
- Good bearing for rafters.
- Good tie to wall.
- Accessibility for painting.
- Air tightness.
- Use of standard mouldings.
- Standard widths of boards.

It will not be necessary to go into detail on each of these points, but a few points will be dwelt upon.

It is not necessary to make a cornice wide to make it look well, the width depends on the style of the house and the climatic conditions; however, in general the lower building does not require as wide a cornice as the high building, again a steep roof requires a narrower cornice than a flatter roof. A steep roof with a wide cornice will look top heavy. There are exceptions to this rule in certain styles, but these do not generally enter into consideration so much for small buildings.

Simplicity of making and the use of standard mouldings or stock materials go hand in hand. As a rule, a cornice is easier made by making it before the roof boards are put on.

The point of obtaining good tie to the main wall has been given more attention of late on account of the many storms and the interest in building to resist such storms. A tie can usually be effected by tying the rafters to the ceiling joists; however, good nailing is also very important. Fig. 5 shows a cornice used at present on porches in remodeling work. Here the tie is very poor; the method of fastening the soffit is also rather poor.

Fig. 7 is a decided improvement on this method, and it does not use any more lumber—only a little more time.

Carrying the sheathing past the plate and nailing it to the rafters as shown in Figs. 1, 2 and 10 helps to tie the rafters to the wall.

Figs. 14 and 15 show the difference between the work of a good craftsman and one who depends on the moulding to cover up his cheap work. When the moulding in Fig. 14 dries up or lets off from the soffit there is a good crack for the cold air to get in. By the method shown in Fig. 15 all chance of air leakage is eliminated.

The use of the sheet metal gutter has almost eliminated the wooden gutter shown in Fig. 12. There are, however, certain regions where the sheet metal gutter will not last very long, on account of the atmosphere; in such localities the wooden gutter may be used with satisfaction. If put on with care and kept properly painted it will last for many years. If shaped like a moulding it adds greatly to the appearance of the cornice.

Cornices as shown in Fig. 13 are used in certain styles of buildings and in some cases add to the appearance of the building; they are, however, not so good in regions where there is much snow. The snow and ice will find a resting place in the curve and stop the water from flowing off, thus resulting in leaks in the roof at this point.



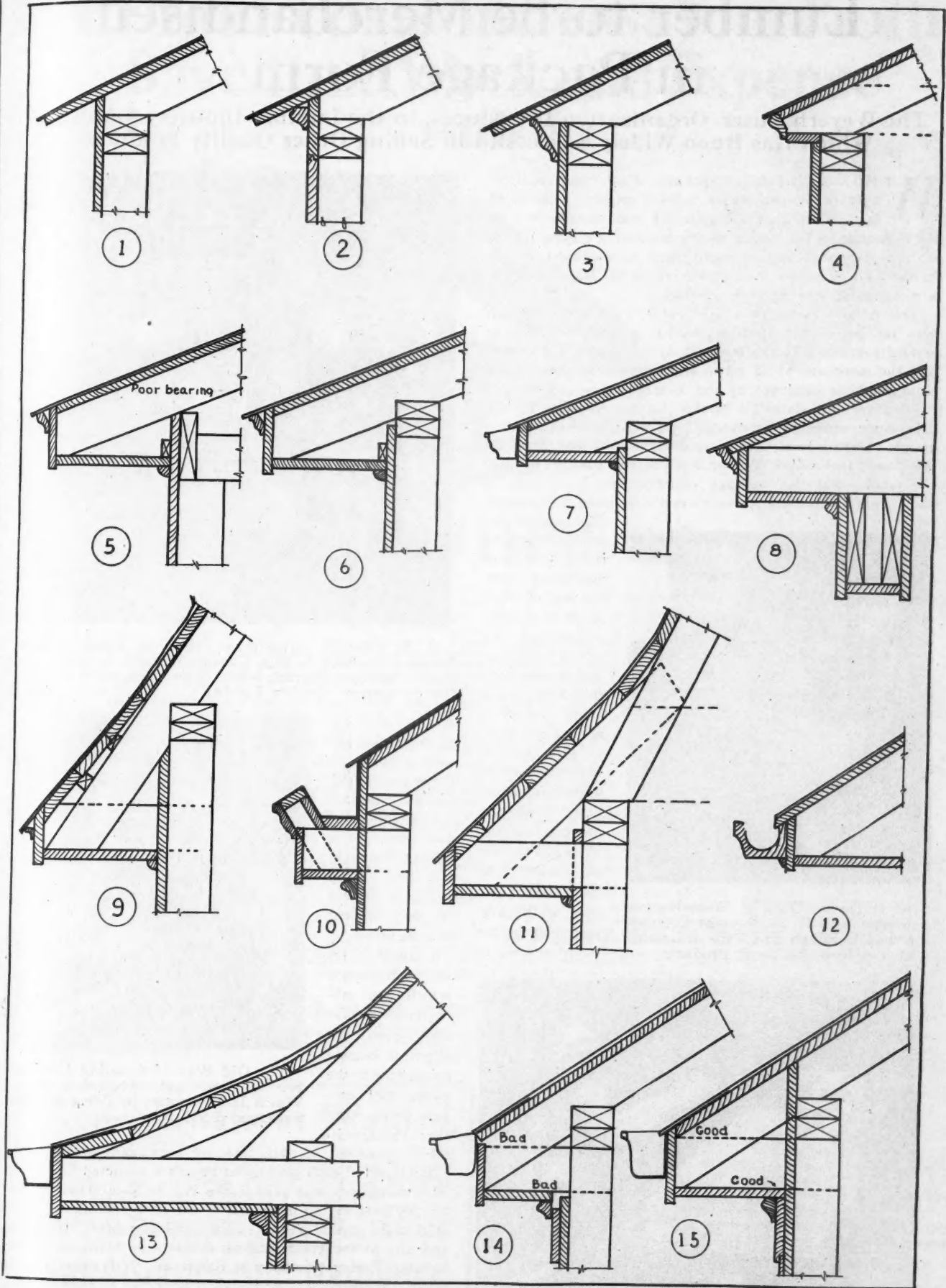
Correct Your Data

THE article appearing in this department, on page 170 of the April, 1928, issue, under the heading, "Rafter Details for a Hip Roof," contained, in the tabulations of data, several typographical errors. Those readers who save this department for reference may have the correct figures by writing in the following corrections on their copies. Under "Common Rafter 'A,'" the third line, the figure 13.27 should read 13.42 and the figure 73.94 should read 93.94. Under "Common Rafter 'C,'" in the third line, the figure 6 feet 10½ inches should read 6 feet 8½ inches. Under "Common Rafter 'D,'" in the second line, the figure 6 feet 10½ inches should read 6 feet 8½ inches, and the figure 6 feet 9¾ inches should read 6 feet 7¾ inches. Under "Jack Rafters 'I' and 'J,'" in the second line, the figure 3 feet 6¼ inches should read 3 feet 4¼ inches.



Agency Takes Larger Office

ON May 12, Fecheimer, Frank & Spedden, Inc., of Detroit, Mich., moved its offices to new and larger quarters at 1224-30 Maccabee Building. The new telephone number is Northway 1750.



Cornices Which Have Been Developed To Meet the Needs for Small Buildings and Which Are the Product of Development Under the Conditions of Severe Competition.

Lumber to be Merchandised in Package Form

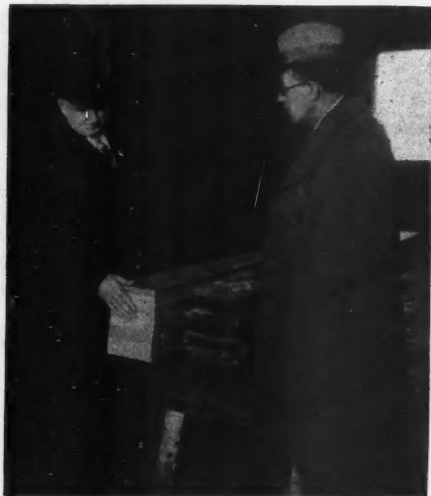
The Weyerhaeuser Organization Introduces, in the Lumber Industry a Method Which Has Been Widely Successful in Selling Other Quality Products

WHEN I. N. Tate, of Spokane, Wash., general manager of Weyerhaeuser Sales Company, announced last month that the affiliated mills represented by his organization had begun to manufacture a quality-line of sawmill products and to ship them in packages, many lumbermen wondered just how it could be done. Here is a pictorial answer to their questions.

This is the way the plan in its entirety evolved: First, it was recognized that lumber needed a label, to improve selling conditions in the business by enabling the producer and the merchant to advertise and promote lumber by the same methods employed by the competitive specialties; and to improve the status of lumber on the building lot by carrying a consumer guarantee that would prevent substitution. During 18 months of experimentation and testing, it was found that a fibre end-cap was the ideal package to carry the label. But this package required that both ends of each piece be absolutely smooth and absolutely four-square.

This necessitated the invention and installation of machinery costing tens of thousands of dollars.

One of the illustrations shows the new re-butting saw being tested in one of the mills at Potlatch, Idaho, one of the important white pine producing centers of the Weyerhaeuser affiliation. The distinctive feature of the new equipment is the circular saw, of



A. J. Taylor, Dean of Weyerhaeuser Salesmen, and H. H. Payzant Comparing the Old Rough End Type of Lumber with the New Packaged Product.



The First Shipment of "4 Square" Lumber, in Packages, Being Loaded at the Weyerhaeuser Mill at Cloquet, Minn.



H. H. Payzant, Inventor of the New Rebutting Saw, Showing Sherman L. Coy, General Manager of the Weyerhaeuser Mills at Cloquet, Minn., How This Machine Turns Out "4 Square" Quality Lumber.

which every tooth is so set that it does an equal part of the work. This saw is mounted in the center of a re-trim bench 36 feet long. Each group of boards is held against the guides by pneumatically operated clamps which are rubber-faced to prevent even the slightest damage being done to the edges and corners of the lumber. The saw itself

is operated, in this case, by an electric push-button.

Each end of each package of boards is trimmed separately. This machinery was built in the Pacific Northwest and has already been set up in several of the 17 Weyerhaeuser-affiliated mills in that region, Idaho and Northern Minnesota, and also at the great Eastern distributing plant of Weyerhaeuser Timber Company at Baltimore. It is expected that additional plants will be installed later.

Another contrast between the new and old type of lumber is shown in the picture showing the finished product. This, also, was taken at Cloquet, Minn., and shows A. J. Taylor,



The Old Way of Squaring Up Lumber Is Slow and Involves a Waste Which Is Eliminated in Using the New Packaged Product.

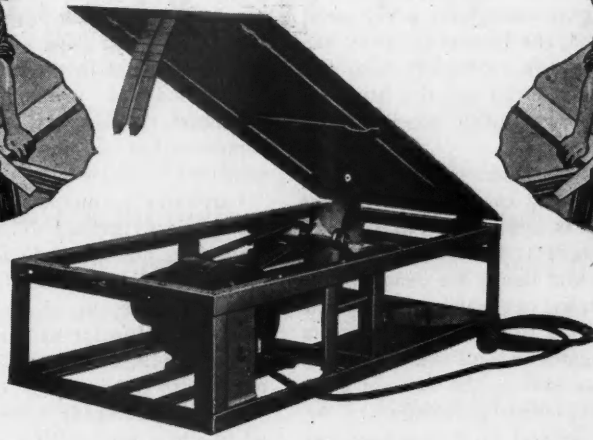
Cut Your Costs-Increase Your Profits Save Time, Work and Expense with the



Does the Work of Five Men with Hand Saws



Saves Time, Money and Muscle Wasted by Hand



TIME CUTTING SAW

You need not pay for hand sawing. The Time Cutting Saw does the work faster, cheaper and better. Helps you get work completed far ahead of your old schedule. Saves days and weeks on a single building. Enables you to move to the next building much sooner. Will help you take care of several building jobs each season you could not have attempted otherwise.

Does All Kinds of Sawing

Rips, cross cuts, miters, grooves, rabbets and bevels. The cross cut gauges are graduated to ninety degrees and are interchangeable for right or left hand use. Gauge for grooving assures absolutely uniform work.

Helps Win More Jobs

You cannot meet competition and use hand sawing when competitors are saving 10 per cent on labor cost by using the Time Cutting Saw. With it you can lower your bid—get the job—and still make more profit.

Sturdy and Durable

The Time Cutting Saw stands up under long use and rough service. All steel construction. G. E. high efficiency motor. Genuine Swedish SKF bearings. Disston saws. Special alloy steel saw shaft. Special endless speed belt. Rockwood pulleys. No exposed moving parts. Motor may be used as power unit for driving other tools.

Portable and Accurate

Can be carried easily by one man from place to place, wherever there is sawing to be done, from cellar to attic. Portability has not been secured at the expense of accuracy. The Time Cutting Saw is sturdily built. Produces work that is much more accurate than possible by hand sawing.

Cuts 2-Inch Lumber

With the Time Cutting Saw you can rip 2-inch lumber with ease. It cuts cleanly, accurately and speedily.



RIPS

CROSS CUTS



BEVELS

MITRES



GROOVES

RABBETS



GROOVES

RABBETS



HANDY

PORTABLE



Representatives Wanted

Wherever the Time Cutting Saw has been demonstrated contractors and carpenters have been enthusiastic about the saving of time, money and expense which it effects. It sells itself wherever the advantages of its use are shown. There are a few desirable territories still open in which The Time Cutting Saw has not yet been demonstrated to the building trade. If you wish to make good money demonstrating and selling this portable, speedy, accurate saw get in touch immediately with—

THE TIME CUTTING TOOL CORP.
115 Loomis Street Rockford, Illinois

—USE THIS COUPON FOR ORDERING OR DEMONSTRATION—

TIME CUTTING TOOL CORP.
115 Loomis St., Rockford, Ill.

I enclose herewith \$75.00 for which send me, prepaid, your Time Cutting Saw complete and ready for operation. I understand that if this saw does not do everything you claim for it it may be returned within ten days and my money will be refunded.

I am interested in having one of your representatives demonstrate to me how the Time Cutting Saw will save time, work and wages for me in my building operations.

Name.....

Address.....

the vigorous dean of Weyerhaeuser salesmen, and Mr. Payzant, the inventor of the rebutting saw, looking over a group of boards turned out by the re-manufacturing plant together with a group picked out of ordinary stock.

Coffee distributors used to ship their product in jute sacks. The grocer would dump 25 or 50 pounds of it into a large enameled tin container, from which he would scoop out a pound or two for each customer. That was years ago. The grocery trade has learned many tricks in merchandising since then, and as a result it now attracts customers by offering its product, ground ready for the coffee pot, in clean, bright-colored, nicely designed containers. Yet, until this new departure was introduced, the lumber industry has gone on trying to attract prospective customers with the rough dirty ends of boards—which often are the principal parts of the material which show when it is piled in a yard or a dealer's warehouse.

As the lumber leaves the re-trim bench, and after it has been re-inspected to make certain that each piece is perfect in every particular, the package is adjusted. Attached to the labeled cap are two side-flanges and a top and bottom flange. On either side of the bottom flange are heavy wrappers which fold around the group of boards. Then the top and bottom flanges are attached to the top and bottom wrap-boards. Their faces are turned in, and the method of attaching is such that the marks left on the reverse sides of the wrap-boards are almost indistinguishable.

In short, the carton fits over the end of the package like a sleeve. There is a certain give in it, a sort of hinge-action, which enables the boards to shift slightly during handling without detaching the fibre caps. Its practicability in this respect is excellently illustrated by the picture showing the loading of the first shipment of "4-Square" lumber from Cloquet. In each of the mills where this process has been introduced, the new machinery has been installed near the loading platform. The re-butted lumber is placed on trucks where the package is applied. These trucks then are moved out to the platform, where the lumber is loaded for shipment. The old loading-jack method still is retained, and many carloads of the packaged goods have been loaded and shipped without the flexure of the boards breaking the packages open.



Homes Built by Boys?

(Continued from page 100)

out and the various operations done in a systematic order.

Students must have foresight and an understanding of trade principles before they can satisfactorily proceed with their work. The science, trade and technical information that should be known are products of investigation, research and study and should form the basic foundation upon which all trade courses of study should be built. Teach the young people to use their heads as well as their hands.

Second—O is for Observe. Visual aids are an important teaching device that every instructor should take advantage of, if he is going to get his subject over easily and quickly. Every one is an imitator. Boys learn what a good job looks like by seeing one. They learn quickly the various operations in the sequence in which they should be performed by seeing them worked out step by step. They learn to do and how to do by watching others until finally they gain the self-confidence that gives them their first real start as a leader.

Train boys to watch attentively the demonstrations and instructions given by their teachers, train them to take some interest in other work that may be going on about them, train them to use the library and with the interchange of ideas found there, in magazines and books, help them to develop and broaden so that as they are thrown on their own resources they will be equipped to do the proper thing at the proper time and in the proper way.

Third—P is for Practice. Young people need to be taught how to put into practice the things they know and apply their knowledge to the real things of life. Develop in them the ability to intelligently select and use the proper tool at the proper time and in the proper way. Teach them to do more effective work with the least amount of effort and expenditure of man power, teach them to take orders from others that they in turn will develop the ability to engineer a job through from start to finish.

Let us not worry about a boy thus equipped giving a good account of himself. He may reach the top sooner than expected with credit not only to himself but also to his alma mater that gave him the start. Let us have boys get their experience in the industry where they come under the jurisdiction of proper organizations, the journeyman mechanic, the foreman, the employer, the labor unions, the compensation commission and others that might be mentioned.

Carpentry is one of those subject in which the use of the project method of teaching is not very promising. This does not mean, however, that those now in the trade cannot be helped and that those who want to get into the trade are out of luck and that nothing can be done for them. Insofar as teaching the subject of carpentry to carpenters is concerned, the writer's only real success has been with the use of exercise method.

Men in the trade know what they want and also know when they are getting satisfied. The equipment in the carpenter shop of Pratt Institute includes 52 benches and for a number of years we have had a waiting list from three to four men for every bench. The age of the students run from 19 years to 52 years with an average age of over 30 years. Some of the men travel two hours in either direction after work to get to the Institute or four hours' travel, three nights per week. The success of our graduates, as they are given an opportunity to apply the knowledge thus gained in their spare time attending an evening school is testimony that there must be many merits to the exercise method of teaching as applied to carpentry.

To illustrate one or two problems used at Pratt Institute in training trade workers, one of the photographs shows the present method of teaching roof framing and steel square problems. In the industry the plan would probably be laid out to one inch scale. The students lay their job out to the same scale and for practice purposes build the roof to the same scale. All measurements are taken from the top edge of the stock and on a center line so that, whether the stock is $\frac{3}{8}$ inch thick or three inches thick, the method for obtaining the length with the steel square is the same. They make many mistakes in getting the various cuts. They frame a dozen roofs in less time than they would one roof in the industry. What they need is practice before working on full size stock.

The other illustration shows the method of teaching stair building. It is approximately one-third full size. Large enough to be practical, small enough to be individual. Each student makes his foreman's layout, mills and assembles the stair complete. ✦

"A History of Architecture," by Sir Banister Fletcher, published by B. T. Batsford, Ltd., of London, England, and by Charles Scribner's Sons, 597-9 Fifth Ave., New York City, has been revised and enlarged and an eighth edition, which contains about 3,500 illustrations, brought out for the use of students, craftsmen and amateurs. It "aims at displaying clearly the characteristic features of the architecture of each country by comparing one style with another and by giving prominence to the special influences—geographical, geological, climatic, religious, social and historical—which have contributed to the formation of each style." Price, \$12.

On Projects of Importance

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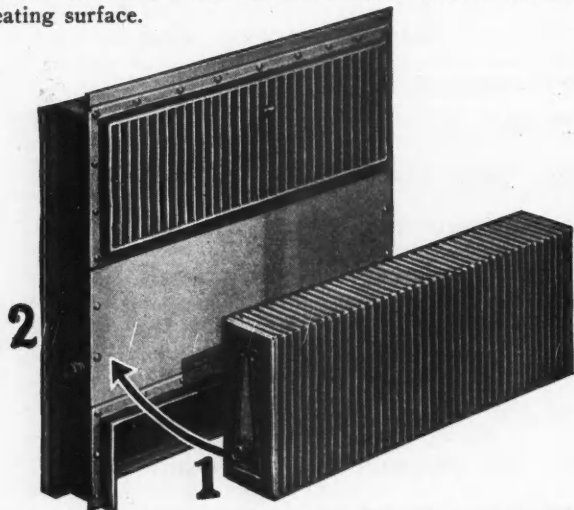
WHAT'S NEW ?



EDITOR'S NOTE: *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 1827 Prairie Ave., Chicago.*

Invisible Extended Surface Radiators

A PROMINENT manufacturer of radiators and ventilators has produced an "extended surface type" of radiator which is described as indestructible. It consists of a wedge shaped, aluminum alloy core, cast in one piece. Pure aluminum plates are driven onto this core and form an intimate metal contact with it, insuring excellent conduction of heat from the core walls to the extended aluminum heating surface.



Invisible Radiators of the Extended Surface Type Mark a Forward Step in the Development of Heating Equipment.

The illustration shows the wedge core radiator section after it has been completely assembled ready to install in the sheet steel cabinet which is shown just back of the core. The latter, with the core installed in the position indicated by the arrow, forms a complete invisible radiator for installation in the wall or partition.

This radiator is completely assembled before leaving the factory and is placed in the wall and connected to supply and return pipes in the same manner as the ordinary cast iron radiator.

Small Spray Painting Units

TWO new spray painting units have recently been brought out by a leading manufacturer of spray painting equipment. They are especially designed for small jobs and the contractor will find them useful and economical in finishing millwork and special furnishings which are furnished in the white. They will do clean, smooth work in a fraction of the time required for application with a brush.

The first of these units is hand pump operated outfit consisting of a hand pump, tank with gauge, eight-foot hose and sprayer with 1/2 pint jar, forming a complete lacquering unit ready for operation. Additional jars, with screw covers can be supplied so that a separate jar will be available for each color to be used.

The other unit is electrically operated. It can be plugged

into any lamp socket and is then ready for operation. It consists of a 1/6 horsepower compressor with a 110 volt, A.C. motor, gauge and fittings, a 1/2 pint sprayer, 12-foot hose and couplings and 108 feet of masking tape. If desired, it can be supplied for 110 volt, D.C. current at a small extra charge.

With these units it is possible to accomplish shading, blending decorating, stippling, veiling effects and stenciling as well as plain painting and lacquering.

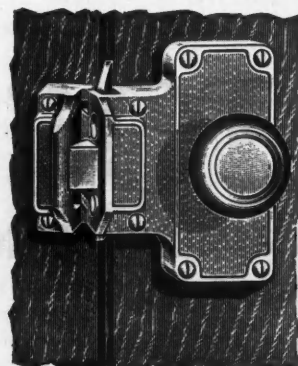
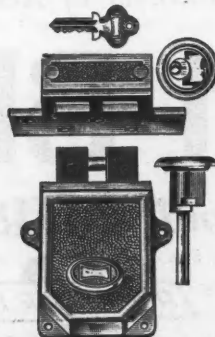


Either This Electrical or a Hand Pump Outfit Is Now Available to Anyone Who Requires a Small Spray Painting Unit.

"Jimmy-Proof" Rim Latch Lock

THE illustration shows a rim latch lock set which is described as being "jimmy-proof." It embodies the clutch principle for which the company manufacturing it is well known. The front case interlocks with the strike so that both are inseparable when the door is closed. A lock of this type saves time and expense in installation and the full strength of the door is retained. It removes the need for accessory locks, saving the cost of that additional protection and eliminates the repair and replacement of mutilated doors.

Constructed as a single jimmy-proof bolt, it serves as a dead bolt and latch by reason of its latch control. The exterior knob is securely fastened to the escutcheon and cannot be pried off or worked loose. The escutcheon is firmly fastened by machine screws from the inside, eliminating wood screws on the outside, which adds to the security and attractiveness of the set. It is made of solid bronze, including cast bronze knobs and trim, and may be had in trims of various designs and furnished to match all standard and special finishes.



This Lock Is Built on a Clutch Principle and Is Said to Be Safe Against Opening by Means of a Jimmy.



A Frame for Every Kind of Building

SUPERIORITY
 GUARANTEED by this trade mark

Genuine White Pine Sills and Casings

1 White Pine for PERMANENCE 2 Styles and Sizes for BEAUTY
 3 Weather-tight for HOME COMFORT 4 Available at dealers for CONVENIENCE
 5 Standardized Quantity Production for ECONOMY

You can use one standard frame for every wall with

Andersen FRAMES

Andersen

Distinctive Features

- 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.

Sold by Leading Building Material Dealers

Whether you are building wood siding, stucco, brick veneer, or solid masonry buildings you need buy only one kind of window frame—the Andersen standard frame for a stud wall.

Don't you see the immense advantage of this in time, money and convenience? Your dealer has these Andersen Frames in all sizes. You can get immediate delivery of the

sizes you want and then use these standard frames in any kind of a wall.

Changing the frame is A. B. C. for any carpenter. We will be glad to send you literature explaining the simplicity of this conversion and other reasons why conscientious contractors everywhere are insisting on Andersen Frames.* Fill out the coupon below.

*Look for the Andersen Trade Mark on every frame.

ANDERSEN LUMBER COMPANY
 Box 2106, Bayport, Minnesota.

Please send me without cost or obligation the material checked in squares on this coupon.

Set of illustrated folders describing construction and uses of Andersen Frames.
 "How to Make Your New Home More Comfortable"—an illustrated booklet of interest to all home builders.

Name _____
 Business _____ Street Address _____
 City _____ State _____
 Name Lumber Dealer _____

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

An Ironing Board for Every Room

HOTEL men have found that it is impossible to keep hotel guests from pressing clothes in their rooms and using the table for an ironing board. The result is that many pieces of furniture are ruined and much expense refinishing is necessary. It is a serious problem for hotels and even for apartment house owners, but it is a problem that is easily solved by the installation of ironing boards like that shown in the photograph. Such a board in every room makes a better and more convenient place for pressing than the table top and saves the table. The original cost is not great and the saving on refinishing bills is an important item.



An Ironing Board Like This in Every Hotel Room Is an Inexpensive Convenience for Guests and Saves the Tables That Would Otherwise Be Used.

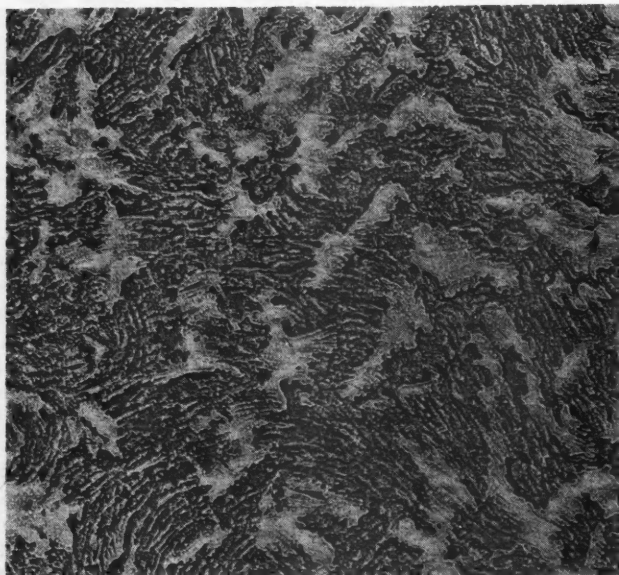
ing on refinishing bills is an important item.

This handy little board can be placed on the back of any closet door by means of six screws or it may be attached to the springs of a disappearing bed. There is a fastener at the large end and at the other end a hinged leg. When the board is lowered the leg drops into position naturally and supports the board firmly. The board is 41 inches long and 11¾ inches wide at one end, 8½ inches at the other, big enough for the pressing of any sort of clothes.



Rough Textured Wall Covering

ROUGH plastered walls, now so popular, when in their original state or done with the different plastic materials, can never be papered without first replastering or resurfacing the walls. In producing the wall covering shown in the accompanying illustration the manufacturers state that they had in mind a modern craft design particu-



This Wall Covering Gives the Popular Rough Texture Wall, but Can Be Removed and Replaced if Desired Without Requiring Any Replastering.

larly desirable for private home decoration which would avoid this objection to rough plaster effects.

This design is one of a very complete line of wall coverings built up on a fiber back of a combination of linseed oil, lithophone, wood flour and other materials forming a tough pliable sheet through which surface cracks in the plaster will not show. It can be removed quite easily, leaving the wall in its original state. It is impervious to water and can be washed with soap and water if it becomes soiled.

Using this material you are assured of a uniform texture regardless of the size of the room or the number of workmen applying it. It can be repaired, if damaged, by cutting out the damaged portion and replacing with the same material, assuring the same texture.



Better Laundry Equipment

A GREAT deal of thought has been given in recent years to making the kitchen a more efficient working place. Now it is the turn of the laundry and much attention to the planning of laundry efficiency has developed the equip-



With This Modern Laundry Tub Equipment and Washing Machine a Big Step Forward Has Been Made in the Equipment of the Basement Portion of the Home.

ment illustrated here. This equipment, designed to save time and eliminate waste motion, includes a set of free standing laundry trays and an electric clothes washer.

These free standing trays are preferred because they give the worker all-around freedom of operation. The old style trays had a sloping front designed to accommodate a washboard which, with the new equipment, is now obsolete. The new trays have a steeper slope which increases the bottom area and the working capacity. The corners are smoothly rounded, leaving no sharp angles where dirt can collect.

There are no clothes snagging faucets projecting from the back of the tray. A bracket places the fittings out of the way. A swinging mixing spout serves both trays and there is a separate hose connection for filling the washing machine so the washer and tray or both trays may be filled at the same time with water of the desired temperature.

These trays may be set at any desired working height and the washer also has adjustable legs, making it easy to provide ample clearance for using the swinging wringer. The washer is equipped with a wringer which may be placed in any desired position for wringing from washer to rinsing water, from rinsing water to bluing and from bluing to basket, without moving the washer an inch. Both the trays and the washer may be had in white or any of six colors so that the two will match. The trays have a hard, acid-resisting enamel and chromium plated fittings.

Why push the extra weight of wide-blade saws?

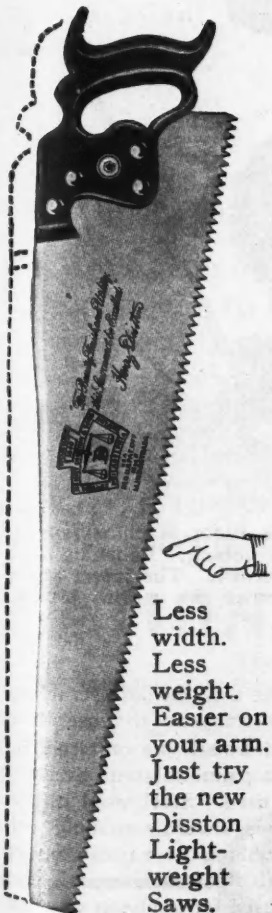
Just think how much of your sawing is in light materials, and how much easier your sawing would be if you used

DISSTON LIGHTWEIGHTS

the modern saws for modern sawing. Balance, hang and "feel" just as you like them. The same patterns you have been accustomed to—No. 7, D-8, No. 16, No. 12, etc., narrower and lighter than in the models made for heavier work.

The illustration below shows the difference in width between a regular Disston D-8 and the new Disston Lightweight D-8.

Ask your dealer to show you these easier-working saws.



a NEW SAW FILE!

helps you do an easier and better saw filing job

Designed shaped and cut especially for filing saws

SPECIAL TEETH PARALLEL SIDES EXTRA-SLIM DISSTON-MADE STEEL

DISSTON
Special extra-slim blunt saw files

5" 20¢
5½" 20¢
6" 25¢
7" 30¢

Made by Henry Disston & Sons, Inc., Makers of "The Saw Most Carpenters Use"

Look for this case on your dealer's counter

You will want these new saw files

YOU want saw files with the right bite, cut, and steel—files of Disston quality.

But never until now have you been able to get files such as the new Disston Special Extra-Slim Blunt Saw Files.

No taper, but the same thickness from tang to end, giving a level, uniform stroke.

File "finds its bearing" against the tooth more quickly; extra-

slim, so you can see just where and how the file is cutting.

Special cut, with plenty of bite, which cuts smoothly, lasts longer.

Made of the same tough Disston Steel that Disston puts into the files used in making Disston Saws.

Your own test will prove to you that these new Disston Files will outwear two ordinary files. You can get them now at the store where you buy your Disston Saws.

HENRY DISSTON & SONS, Inc.
Makers of "The Saw Most Carpenters Use"
Philadelphia, U.S.A.

DISSTON

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Complete Home Gymnasium

HERE is a home gymnasium, combining all the essential gymnasium equipment, furnished complete and ready to set up in the home for the benefit of the health of every member of the family. It requires no further equipment to complete, no electrical connection or motors are necessary. It occupies a space $7\frac{1}{2}$ by 9 feet and $7\frac{1}{2}$ feet high. For smaller spaces the side extension braces can be eliminated and overhead braces used against the ceiling, taking a space only about $2\frac{1}{2}$ by 6 feet. This means that it can be set up and used in a spare room, basement, attic, garage or corner of a large room.



Here Is a Complete Set of Gymnasium Apparatus, Suitable for Use in the Home, Which Will Benefit the Health of Every Member of the Family.

The apparatus includes a rowing machine, chest weights, punching bag, chinning bar, parallel bars, reducing apparatus and other gymnastic equipment. It is suitable not only for homes but also for camps, community centers, hotels, welfare rooms, clubs, churches, schools, hospitals, bathing beaches and playgrounds, fire and police stations and many other similar places. All parts, except the punching bag, are noiseless in use and will disturb no one.

The frame and parts are of tough malleable iron. Except the chest weight cords and punching bag there is nothing to wear out. It is possible for three people to use the apparatus simultaneously and the chest weights may be used from any of the four sides.

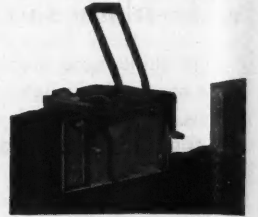


Concrete Wall Building Machine

A NEW, concrete wall building machine has recently been placed on the market and has demonstrated its remarkable efficiency in the construction of either solid or hollow, reinforced walls of various thicknesses. This machine is designed to build concrete walls of all designs without the use of forms. Its simplicity and great working speed make it an exceedingly economical means of constructing heavy, load bearing, fireproof walls.

In using this machine tamping is almost entirely eliminated. The operation consists of merely filling the machine with concrete, raising the lever, which compresses the concrete into a solid mass and also moves the machines forward, and lowering the lever again before refilling, when the process is repeated. All the concrete is released under pressure and one man can easily handle the operation.

Ordinary reinforcement can be used with this type of construction and the machine can be changed from one size of wall to another without changing any bolts. The price of the machine is very moderate and the economy of construction which it makes possible will very quickly return the first cost of the machine.



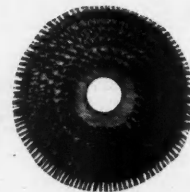
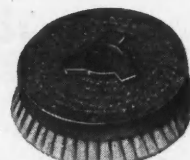
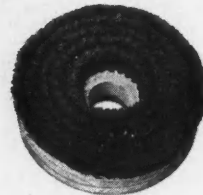
Either Solid or Hollow, Reinforced, Concrete Walls Can Be Built Rapidly and Economically with This Simple Machine.



New Simple Floor Machine

THE simplicity of the floor machine illustrated here should make it interesting to contractors as well as to home owners, stores, clubs and institutions. All moving parts can be inspected readily without taking the machine apart. The $\frac{1}{4}$ horsepower motor is mounted with four bolts, to an aluminum casting, in a horizontal position. A small pinion gear on the motor shaft meshes with the bevel gear and the spiral, steel, bevel gears are located in a cast aluminum gear housing. This also is bolted to the large aluminum casting on which the motor rests.

The gear housing has an aluminum cover which prys off easily and permits instant inspection of the gears and the quantity of gear grease. Ordinarily it is necessary to replace the grease only once every six months. The use of the steel bevel gears makes the machine noiseless in operation and permits it to be used for both scrubbing and polishing of floors without any annoyance to those about.



This Simple Floor Machine Is Suitable for Scrubbing, Polishing and Removing Varnish. The insert at the upper left shows the various brushes used.

This machine will do a clean, thorough job of scrubbing on any floor job for which either a palmetto scrub brush or a steel wire scrub brush can be used. Steel wool can be placed beneath either of the brushes, should scrubbing with steel wool be desired. The scrubbing of varnish off of floors is quickly accomplished with this machine as is also light sandpapering and it may be used for applying wax and polishing. The machine weighs 45 pounds and the brushes are $10\frac{1}{2}$ inches in diameter.

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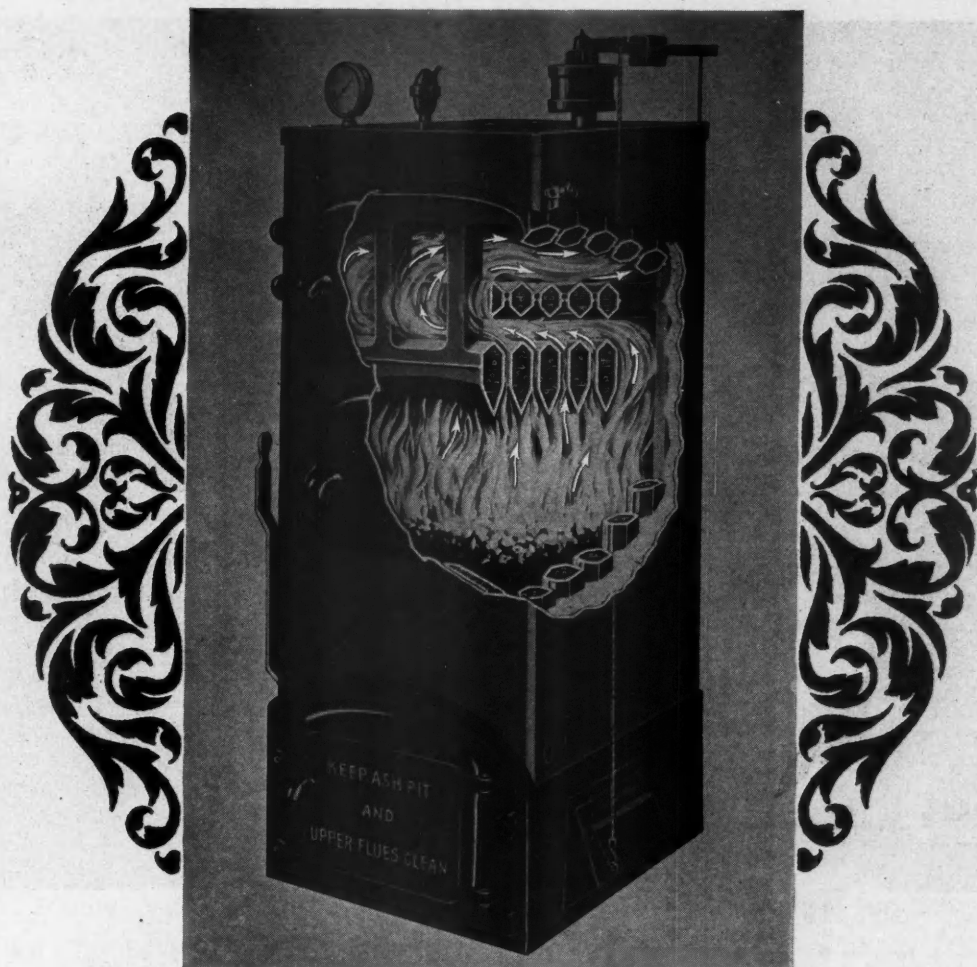
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The exceptionally deep fire box permits heavy fuel charges, gives ample space for proper combustion, and makes long firing periods possible. Long fire travel promotes maximum heat transfer, boosts effectiveness. A thick layer of rock wool insulation decreases heat loss.

GOOD LOOKING

BUT AFTER ALL, ITS MAIN JOB IS HEATING!

COLOR helps to sell a boiler in the show room, helps to lift it from the drab and commonplace. Hence the durable, dirt defying empire green finish, with trimmings of glossy black, on the National Jacketed Boiler. It's a fine looking unit—there is none better.

But, after all, a boiler's job is to keep the building warm—not just to add snap to the base-

ment. So the National Boiler *inside the jacket* was exhaustively tested, and the factors of its dependability, economy and convenience conclusively demonstrated before it was marketed.

The National Jacketed Boiler's *appearance* proves its attractiveness; its *record* proves its performance; the fact that it's a *National Product* gives assurance of complete and lasting satisfaction.

NATIONAL RADIATOR CORPORATION

Ten Plants devoted to National Service through these Branch Offices and Warehouses:

- | | | | |
|---|---|--|--|
| Baltimore, Md.—2622 Frisby Street | Boston, Mass.—93-97 Oliver Street | Louisville, Ky.—1126 W. Breckensidge St. | Milwaukee, Wis.—124-130 Jefferson St. |
| Chicago, Ill.—2445 N. Keeler Avenue | Buffalo, N. Y.—259-265 Delaware Avenue | New York, N. Y.—55 W. 42nd St. | New York, N. Y.—55 W. 42nd St. |
| Cincinnati, Ohio—Spring Grove and Elmira Avenue | Cleveland, Ohio—935 E. 63rd Street | Omaha, Neb.—108-112 S. Tenth St. | Philadelphia, Pa.—121 N. Broad St. |
| Indianapolis, Ind.—431 W. Georgia Street | Cincinnati, Ohio—Spring Grove and Elmira Avenue | Pittsburgh, Pa.—1509 Arrott Building | Pittsburgh, Pa.—1509 Arrott Building |
| Johnstown, Pa.—221 Central Ave. | Johnstown, Pa.—221 Central Ave. | Richmond, Va.—3032 Norfolk St. | St. Louis, Mo.—1042 Central Industrial St. |
| Washington, D. C.—2205 Fifth Street, N. E. | Washington, D. C.—2205 Fifth Street, N. E. | | |



NATIONAL JACKETED BOILER





“Certified by Centuries of Service”

“CERTIFIED by Centuries of Service,” the prize winning slogan adopted by the National Lumber Manufacturers Association, applies particularly to Shevlin Pine. For centuries, Pine like this has proven its worth as the nation’s building material.

Colonial housewrights recognized the workable qualities of Pine and employed it to produce attractive woodwork. Many of the homes they built are still standing today and stamp Pine as the economical building material in the long run.

Today it is Shevlin Pine

Today Shevlin Pine is the ideal building material. Its close, fine grain and uniformly even texture work under tools with a willingness.

Nails feel at home in its close fibre and fine texture. They readily penetrate this wood even at the very edge without splitting it. The fibre closes in, grips the nails tightly and the boards stay put.

The nation’s oldest homes testify to the ability of Pine to withstand centuries of abusing weather.

SHEVLIN PINE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

**A New Source of "Old Fashioned"
White Pine**

There is no shortage of quality Pine lumber. Shevlin has sufficient Pine holdings in selected districts to meet the demand for decades.

The new Shevlin Northern White Pine mill at Blind River, Ontario, will supply 100,000,000 feet of lumber yearly and 90% will be exactly the same species of Pine used in colonial days.

The stand is said to be the largest virgin tract of Northern White Pine on the continent. Selective logging and scientific reforestation promises an indefinite supply.

Specializing in Pine

When you select Pine make certain that it is produced by specialists as there are many kinds and many sources. For more than forty years the Shevlin interests have logged and milled selected Pine for all purposes.

You can secure Shevlin Pine from



Detail of front entrance of the Gov. Jonathan Trumbull House at Lebanon, Connecticut. Built in 1740, this home certifies to the centuries of service given by Pine.



The Henry House at North Bennington, Vt. was built in 1769. The wide Pine clapboards and the porch with its square Pine columns give an atmosphere unique in old homes of the North.

leading lumber dealers. There are five varieties: Shevlin Ponderosa Pine, Shevlin California Sugar Pine, Shevlin Northern White Pine, Shevlin Norway Pine and Shevlin California White Pine.

Use Coupon for Booklet

The coupon below is for your convenience in obtaining "Specify Shevlin Pine." This thirty-two page booklet is full of information about Pine—its uses, characteristics and physical properties.

Shevlin, Carpenter & Clarke Company

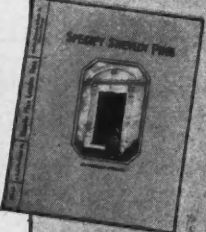
903 First National-Soo Line Bldg., Minneapolis, Minn.

Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.

San Francisco Sales Office: 1028 Monadnock Building.

Toronto, Ontario Sales Office: 606 Royal Bank Building

Sold in New York by N. H. Morgan, 1205 Graybar Bldg.



Shevlin, Carpenter & Clarke Company
903 First National-Soo Line Bldg.,
Minneapolis, Minn.

Please send me the booklet, "Specify Shevlin Pine."

NAME _____

BUSINESS _____

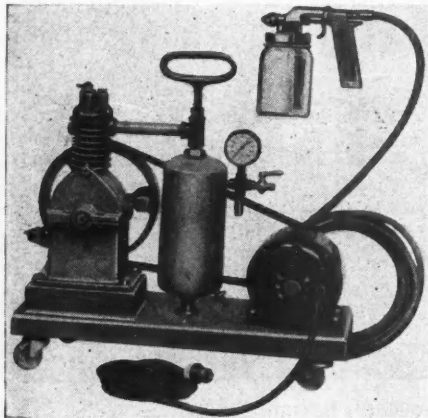
ADDRESS _____

CITY _____

SHEVLIN PINE

Small Spray Painting Outfit

NO longer are the advantages of spray painting limited to the larger jobs because of the size and cost of the spray painting equipment. The portable outfit shown here



This Portable Outfit Makes the Spray Method of Painting Available Even Where Only a Small Amount of Painting Is Done.

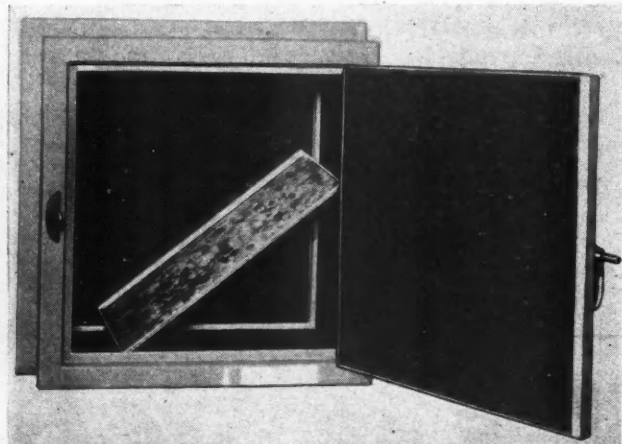
A spray outfit for such purposes must often be operated by persons who are inexperienced or at least not specialists and therefore must be simple and reliable. For this reason simplicity has been the basic principle in the design of this outfit. It comes complete so that one need only connect the compressor unit to an electric socket, place paint or finish material in the container and, with a light pull of the trigger on the gun, a perfectly atomized round or conical spray responds.

The compressor unit is light in weight and is mounted on a castor base, making it easy to move about. The spray gun is designed to give a smoothly applied coat of paint, varnish or lacquer. It is built along sturdy lines of construction, such as used in this company's standard spray guns and will operate with a minimum of air pressure. The body and handle are a single piece, aluminum alloy casting and the adjustable nozzle head, which regulates the spray, is of brass. The material container is a standard mason glass jar of one pint capacity. The simplicity of the brush permits it to be quickly cleaned for changing color or for storing, after use, without the usual necessity of taking the spray brush apart.



Steel Milk Service Cabinet

A NEW milk service cabinet design has been announced by an organization recently formed for the distribution



Here Is a Milk Service Cabinet Which Is of Steel Construction, Cork Insulated and Protected Against Odors.

makes this quick, easy and superior method available for all kinds of work where there is only a limited amount of painting to be done. It is suitable for applying paints, lacquers, varnishes, enamels, etc., to radiators, wicker and ordinary furniture, screens and hundreds of other objects.

A spray outfit

of a number of articles used in building construction. This cabinet is said to vary in a number of respects from other devices of this kind. Being made of steel there is no danger of warping and, being finished in enamel, which is baked on, there is little likelihood of the formation of rust.

The inside of the cabinet is lined with cork, in much the same fashion as the best grade ice boxes. The cork lining is treated with creosote, a powerful germicide and disinfectant. This prevents odors from accumulating on account of spilled milk or food. Over the cork surface a coat of lacquer is placed, which prevents the odor of the creosote from contaminating the milk or butter.

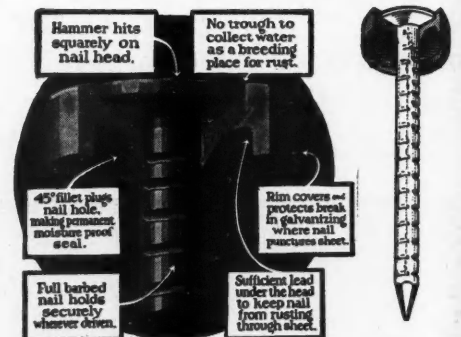
A removable bottom of galvanized iron, as shown in the illustration, is used to facilitate cleaning. This serves as a drip-pan for liquids or a small piece of ice may be placed on it to keep the compartment cool and fresh. Doors on either side are beveled to insure a close, air-tight fit. When the doors are latched the cabinet is said to be virtually hermetically sealed. It is frost-proof, dust-proof and heat-proof. The cabinet can be installed in five minutes either at the side of the service door or the grade door and it is unnecessary to cut or mar the building.



New Type of Lead Headed Nail

HERE is a lead headed nail of new design which possesses a number of features recommending it for various roofing purposes. It was originally designed for laying corrugated sheet steel roofing, but is also being used successfully for flat sheets, slate, crushed slate roll roofing and shingles. It is made in three sizes, 1½ inch, 1¾ inch and 2 inch, No. 10 gauge, either bright wire or galvanized or pure copper.

As can be seen from the illustration, in driving this nail the hammer hits squarely on the nail head, not on the lead, and there is no chance of knocking the lead off the top of the nail or of knocking it loose or out of shape.



A Nail for Use with Sheet Steel and Other Types of Roofing, with a Lead Head That Will Not Come Off.

Also it is possible to drive this nail through sheet steel roofing without first punching a hole. The lead is pressed on under the nail head and just enough is used to make a perfect seal without any waste.

The seal effected by this nail is a double one. The fillet plug underneath the nail head plugs up the hole and the harder the nail is driven the tighter the hole is plugged. The rim on the under side of the head conforms to the shape of the roofing and seals the break in the galvanizing or enamel of the roofing. This forms an absolute and permanent assurance against leakage or rust.

On the upper side of the nail head there is no trough to collect water and start rusting of the nail head. The shank of the nail is full barbed and will hold securely wherever driven. The manufacturers estimate that 100 nails will be required for a square of sheet steel roofing, 100 square feet, and that a 100 pound keg will lay 80 squares.



"The Saw Kerf" is a house organ published quarterly by E. C. Atkins & Company, 402 S. Illinois St., Indianapolis, Ind., principally for the friends of the company, and contains much interesting and useful information.

A Bath of the Future The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enameled Iron Ware

Its Advantages:

- A Seat, Foot, Shower and Child's Bath, all in one.
- Comfortable because the bather assumes a sitting position.
- Easy operation of valves.
- No grip rails needed.
- Saves space. Size of Bath Tub, 44x30 inches. For tiling in recess or corner of room.

Write Us for Descriptive Booklet Giving Measurements and Other Details

LOUIS G. DITTOE
ARCHITECT
1108-7 INGALLS BUILDING
CINCINNATI, OHIO

ENGINEERING AND CONSULTATIONS

Cincinnati, Ohio.
December 2, 1927.

Wheeling Sanitary Mfg. Co.,
315 Wrigley Building,
Chicago, Illinois.

Attention Mr. F. W. Wheelock.

Gentlemen:

I wish to take occasion to compliment you upon your new combination shower and bath tub fixture, sixty-eight of which I recently had installed in the new St. James efficiency apartments in this city.

While this building is not entirely completed in all its details it has proven so attractive that it is already 90% rented, which success I believe is due largely to this plumbing installation, as substantially all the tenants expressed themselves as being much pleased with this feature.

Considering the satisfaction that this installation is giving, I have just contracted for fifty nine similar installations for the proposed Auburn Apartments, also this city, making these jobs for Wheeling Sanitary Mfg. Co's installation.

Yours very truly,

Louis G. Dittoe
Architect.

LGD:VP



PLATE 11-E
Enameled Iron Ware, 44x30 inches to tile in right or left hand corner. Enameled white all exposed parts. Same as Plate 10-E except for corner installation.



PLATE 10-E
Enameled Iron Ware, 44x30 inches to tile in recess, only. Enameled white front. Waste in foot section either right or left hand end.



100%

**Wheeling Sanitary Mfg. Co.'s
Installations**

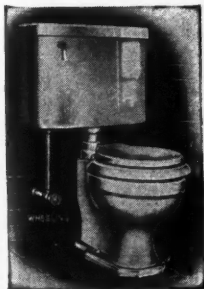


Plate 126-E "The Tranquil" all white Siphon Jet Water Closet Combination.

We manufacture a complete line of Plumbing Fixtures of Vitreous China, Enameled Iron, Semi-Vitreous Porcelain, comprising Water Closet Bowls and Flush Tanks, Lavatories, Regular Bath Tubs, Kitchen Sinks, Laundry Trays, Urinal Stalls, etc.

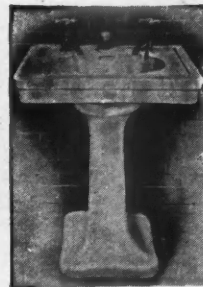
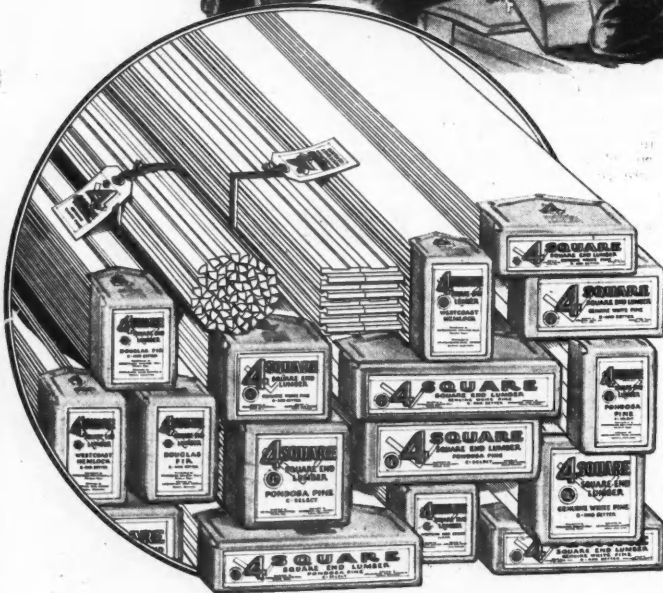


Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.

**WHEELING SANITARY MFG. CO.
WHEELING, W. VA.**

Manufacturers of High Grade Plumbing Fixtures

Another Weyerhaeuser *trimmed square at both ends..*



The Mark of 4 SQUARE Lumber



Packaged and Guaranteed

These items can now be purchased under the 4-Square label. Each carefully manufactured for the particular purpose for which it is intended.

- SQUARE EDGE FINISHING LUMBER
- BEVEL SIDING
- COLONIAL SIDING
- DROP SIDING
- SOFTWOOD FLOORING
- END MATCHED SOFTWOOD FLOORING
- CEILING AND PARTITION
- SHELVING · STEPPING
- CASING · BASE · MOULDINGS

WEYERHAEUSER FOREST PRODUCTS SALES

General Sales Offices: WEYERHAEUSER SALES

District Sales Offices: MINNEAPOLIS · KANSAS CITY · CHICAGO · ST. LOUIS

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

achievement - Wasteless Lumber!

packaged ready to use

The saving in labor buys better quality lumber

WEYERHAEUSER'S new 4-Square Lumber was developed to enable you to deliver a better job without increasing your costs.

FIRST, 4-Square Lumber is *finer* lumber in every respect. It is properly seasoned. Then it is milled to precise standards of dimension and finish. Cut to exact lengths. Packaged. Plainly labeled with the species and grade. And guaranteed by Weyerhaeuser.

SECOND, the ends of 4-Square Lumber are cut square and smooth at the mill—ready for use just as taken from the 4-Square package. All unnecessary hand-trimming is eliminated. The saving in labor buys better quality lumber. It gives you time to do a first-class job throughout.

THIRD, 4-Square Lumber is being nationally advertised. Builders who use it will be recognized as quality builders and will be given the preference when jobs are let.

Distribution of 4-Square Lumber is now being arranged through local lumber dealers everywhere. Ask your dealer about it or if he is unable to supply it, write us.

CTS SAINT PAUL • MINNESOTA

USER SALES COMPANY • Spokane, Washington

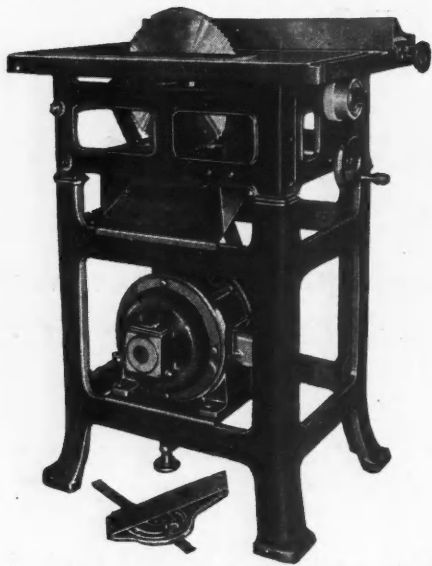
AGO TOLEDO • PITTSBURGH • PHILADELPHIA • NEW YORK

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Saw Table for Heavy Work

A NEW, heavy-duty, saw table has been added to a well known line of portable, electric, bench woodworking machines, to meet the demand of lumber yards and building contractors for a machine suitable for their heavier work. It is a complete, self-contained, motor-driven unit that can be moved around from place to place and used right on the job or in the shop or yard.

This saw table is fitted with a two horsepower motor and will use saws up to 12 inches in diameter. The arbor is



A Self-Contained and Portable Saw Table Designed for Heavy Duty.

extended so as to use dado and cutter heads up to two inches in width. The table is 20 by 30 inches and is fitted with aluminum ripping fence and miter gauge, so that it can be used for ripping, mitering, dadoing, grooving, rabbetting and other operations. The heavy duty motor and the ball bearing saw arbor allow the use of this machine on the heaviest sawing, up to four-inch material. It will

handle this work as rapidly as it can be fed into the saw.

One of the novel features of this machine is the raising and lowering of the saw arbor by the hand wheel on the front of the machine. This permits the most accurate adjustment for depth when using the machine for grooving and dadoing. The gages are also graduated so as to permit easy adjustment for cutting any width or angle, without the necessity of using a rule or protractor.

The ball bearing arbor and idler pulleys and waste packed bearings of the motor eliminate all needs for careful attention to this machine. It is simple in operation so that it can be operated by any unskilled labor.

The net weight of the complete machine, with 2 H.P. motor, is 370 pounds. The machine has been thoroughly tried out by lumber yards and contractors and is guaranteed by the manufacturer. In addition to the regular fence this machine can also be supplied with a tilting fence for bevel sawing up to 45 degrees.

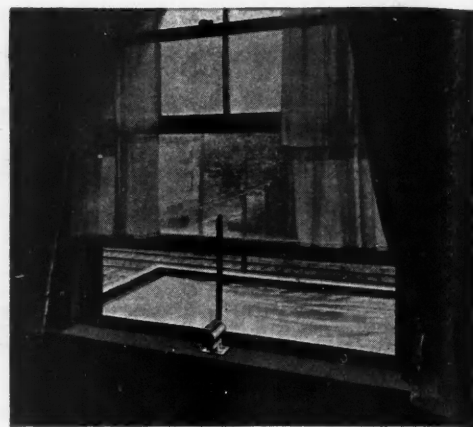


An Automatic Window Closer

YEARS ago no one ever slept with a window open for the "night air" was supposed to be very dangerous to the health. Today we have learned that plenty of good fresh air, day or night, is necessary to good health and few if any of us sleep with windows closed. However, there are times, in cold winter weather, when we all hesitate to open the window before going to bed as we picture the discomfort of getting out of a warm bed in the morning into the chill of the room. It is not only a disagreeable thing to have to do but also rather dangerous for sudden chilling is one of the most frequent causes of colds and sickness.

Now, however, there has been perfected a little device which can be attached to any bed room window in 10 or 15 minutes' time, which will permit us to open the window 7,

10 or 14 inches, as preferred, and will at a definite time in the morning close the window while you still sleep, permitting the room to warm up and become comfortable before the alarm clock calls you out of bed.



Here Is a Simple, Clock-Operated Device That Closes Your Window at Any Desired Time in the Morning.

This device is a simple and reliable one containing no wires or gears, merely a small, noiseless and reliable clock, and is entirely self-contained. It is small, measuring only 4¼ by 4 inches, inconspicuous and neatly finished in the best enamel of attractive shade.

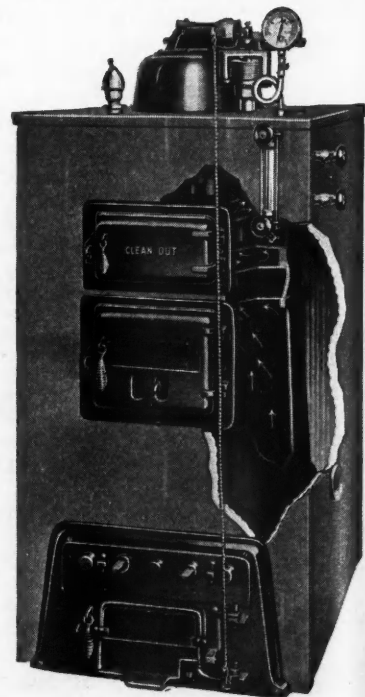


Boilers With Colored Casing

IN design and appearance the new boiler, for steam, hot water and vapor systems, which is illustrated here, is a striking departure. Color has become the keynote of the modern home, for kitchen, bath room and every other room. Now it is being introduced into the basement and this long neglected portion of the house is being brightened up, made cheerful and useful. This new boiler is one of the basement fixtures which now helps to provide color and to transform the basement into a play room, billiard room, den or room devoted to any of the extra needs of the home owner.

The outer casing is finished with high lustre, blue Japan that is durable, easy to clean and will not peel or crack. The doors, ashpit front and smoke-box, in other words all cast iron pots not covered by the casing, are coated with black enamel. It is as easily kept clean as any piece of furniture and will retain its beautiful finish for many years.

This new, square cased boiler, is not an experiment but an improvement over a principle that is already successful. It retains all the time tested and proven advantages of the round boiler which is manufactured by this company and with which the company has established a wide reputation for quality heating plants. In every way this new boiler incorporates the features of this company's products, and is distributed under its usual guarantee.

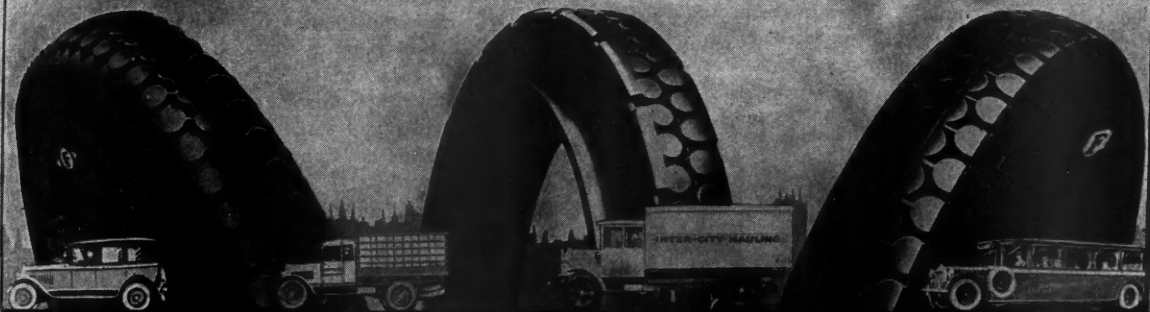


Boilers with Colored Casings Are Now Available for Those Who Wish to Convert the Basement to General Use.

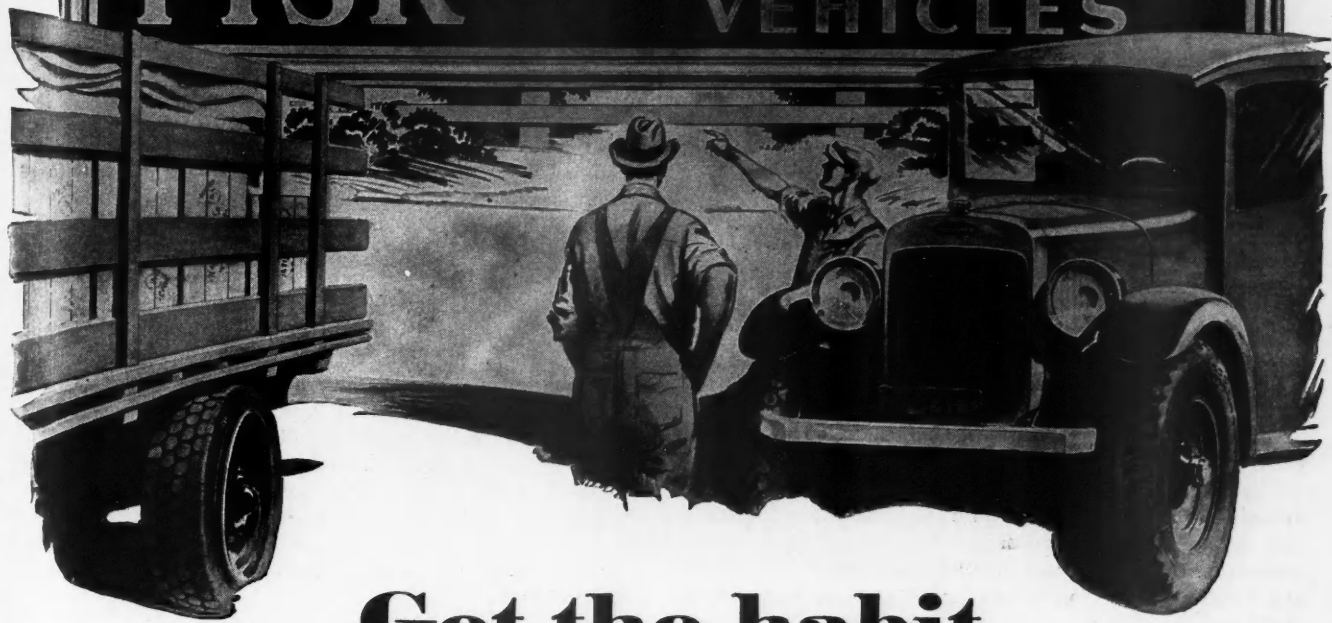
FISK
Transportation Cord

FISK
Solid Cushion

FISK
Motor Coach Balloon



FISK for **COMMERCIAL VEHICLES**



Get the habit

LET the buying habits of big fleet operators guide you to real tire economy. Judge tires as they do, on a cost per mile basis.

This habit will lead you to worth-while savings in operating expense, when it is "Time to Re-Tire."

Especially when you form the habit of saying



"Put On Fisk"... Only a transportation specialist can advise you in the selection of the most suitable tires for commercial vehicles and the service in which they operate. Consult the nearest Fisk distributor. The Fisk Tire Company, Inc., Chicopee Falls, Massachusetts.

Listen to the "Time to Re-Tire" Boys over WEA F and 36 stations every Monday evening

FISK TIRES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Apartment Mail Box Units

A LEADING manufacturer of built-in mail boxes has now placed on the market an automatic, unit-locking, apartment house mail box, of the type approved by the U. S. Post Office Department. These boxes are so designed as to give a large capacity sufficient to accommodate all mail including the largest magazines, and easy delivery. They have a patented locking device on each individual receiving door, operating it in connection with the master



A New, Automatic, Unit-Locking Mail Box for Apartments, of the Type Approved by the Post Office Department.

or carrier's lock. This, with the substantial Yale lock on each tenant's door, insures absolute safety of the mail.

Though a very high quality product, these boxes are available at a low price, making them practical for installation in any apartment building. They are furnished with fronts of either solid brass or cold rolled steel. The standard finish is matted gold with other finishes furnished at slight additional cost.



New Transit for Contractors

A NEW transit for contractors has been placed on the market which combines the structural features of the former instruments made by this manufacturer with a number of departures from the usual construction. The tripod plate has a corrugated edge affording a convenient handhold for setting up or taking down. The leveling head has eight reinforcing ribs and is non-cramping. The horizontal limb, of hard bronze, is $6\frac{1}{4}$ inches in diameter at the graduated edge and reinforced with 24 full length, deep, radial ribs about $\frac{1}{4}$ inch deep on the under side of the limb. These ribs afford a convenient finger-hold in setting the limb to the vernier and prevent bent plates and centers even with unusually severe handling. The figures on the limb and verniers are differentiated by both size and slant to indicate the correct direction of reading.

The top plate, of hard bronze, has a triple system of reading, insuring adequate protection for the horizontal limb and rigid support for the standards. Radial ribs extend to the extreme edge of the plate, beneath and beyond the standards. Two sets of cross ribs, about $\frac{3}{8}$ inch deep, are provided, which are carried in line with the standards on the under side of the plate, serving as trusses and giving the advantage of the one-piece U-shaped standards without the disadvantages, uncertainty of fitting and unequal tension usually present in that type.

The standards are of hard bronze having a deep L-shaped section with wide and heavy footing block which enables them to be securely fastened to the top plate entirely free from internal strain. The telescope axle is of hard bell metal, of sturdy design, having cylindrical pivots which rest in V bearings in the standards. The standard top pieces do not touch the telescope axle at any point.

The telescope is 11 inches long, balanced and dust-proof, with $1\frac{1}{4}$ -inch objective and magnifying power of 24 diameters. The lenses afford a bright, flat field with abundant light and permit an absolutely sharp focus as close as $4\frac{1}{2}$ feet.



This New, Contractors' Transit Incorporates a Number of Unusual Features of Construction.

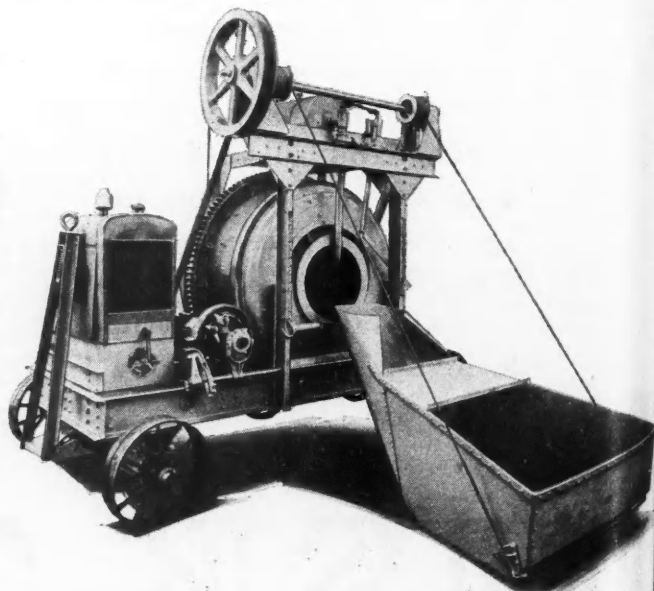
Simple Three Bag Mixer

SIMPLICITY is the outstanding feature of a new 14-S standard building mixer which has recently been put on the market by a leading manufacturer of mixers. This mixer is capable of handling a three bag batch $1:2\frac{1}{2}:4$ concrete. The accessibility of the parts which was outstanding on this company's old model has been greatly increased, it is stated.

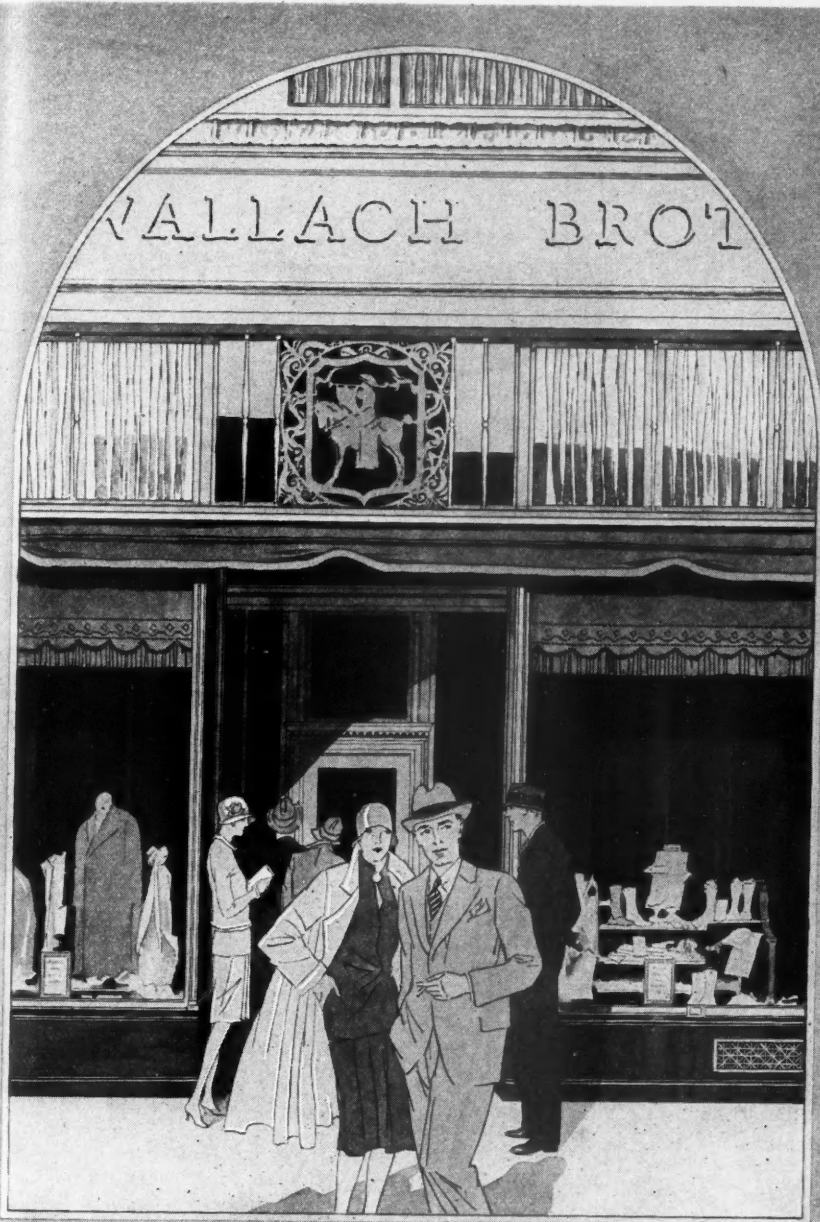
The drum is 57 by 42 inches with large radius corners. The feed and discharge openings are 22 inches and there is ample room for handling the three bag batch. The countershaft is of high carbon steel running in Hyatt roller bearings in self-aligning boxes. The cut gears run in a bath of oil and Alemite lubrication is provided.

The power loader takes a full load without crowding and goes up in seven seconds. There is an automatic knockout on the loader. An overhead shaft is carried in self-aligning boxes and the mixer is self-sustained with the power loader, no braces are required. All control levers are at the drum end and the operator sees both power loader and discharge.

This mixer comes equipped with either gasoline or steam engine or with electric motor. The water measuring tank is 16 by 40 inches with a capacity of 32.8 gallons and is tested to 200 pounds pressure.



A Mixer Capable of Handling a Three Bag Batch in the Design of Which Simplicity Has Been the Principal Aim.

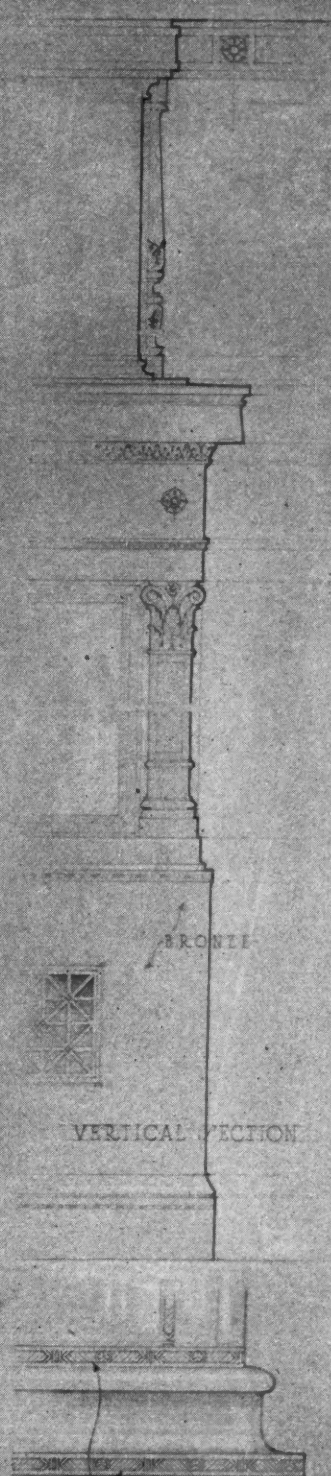


HOLMES & WINSLOW, Architects

There's Plenty of Money to Be Made in Store Front Installations

Go after the store front business. Many contractors have found the installation of Kawneer store fronts so remunerative that they now devote their entire efforts to this work. Your prospects are easily found — Kawneer will help you sell them.

Write us today for information.



THIS ENCHASING ON KAWNEER STORE FRONT CONSTRUCTION IS ONE OF THE 1928 IMPROVEMENTS

THE
Kawneer
COMPANY

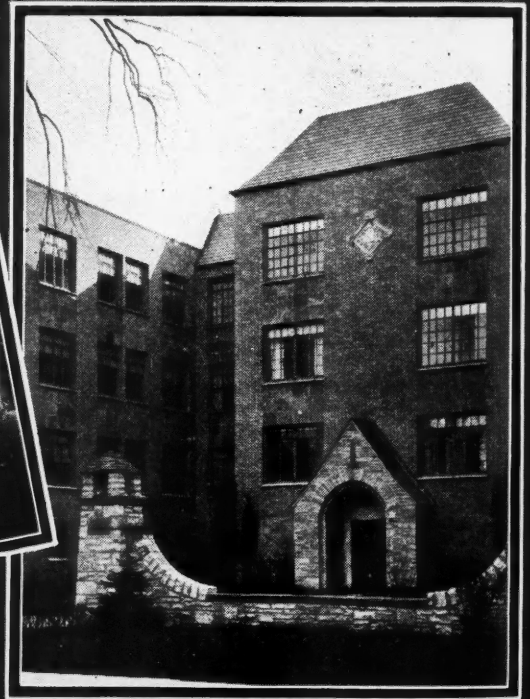
2726 Front St., NILES, MICHIGAN



SEND CONTRACTOR BOOK OF DESIGNS AND FULL SIZE DETAILS

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

for every window opening



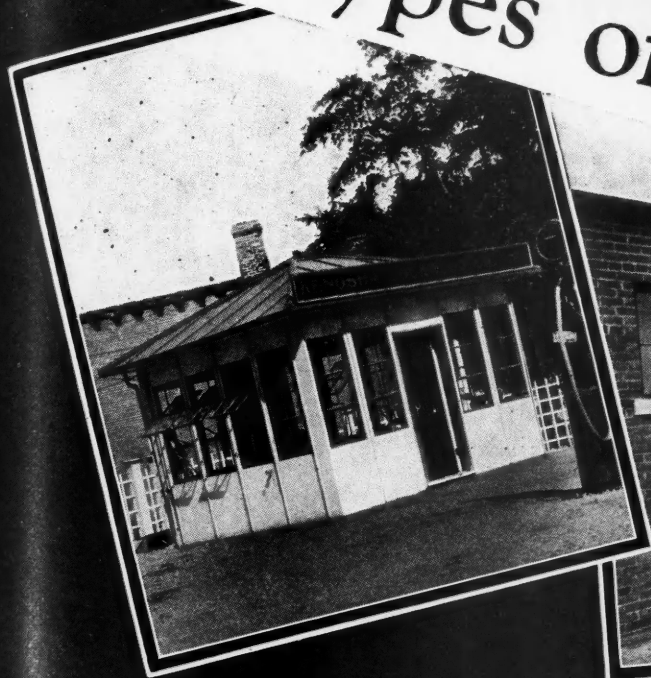
THERE are builders today—in practically every section of the country—who have found by actual experience that Fenestra Steel Windows cost less than ordinary windows of wood. Try Fenestra on your next building operation—save money and speed up sales.

DETROIT STEEL PRODUCTS COMPANY
2304 East Grand Boulevard
DETROIT, MICHIGAN

Fenestra
steel windows



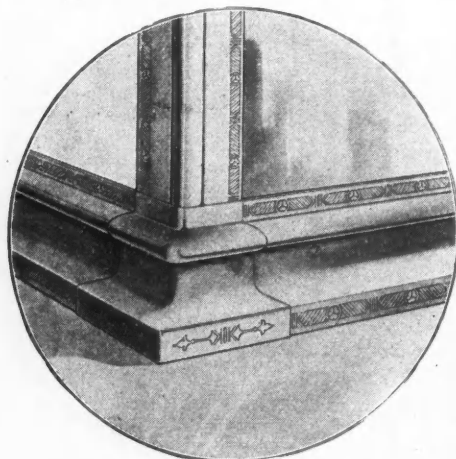
g
in all types of buildings



estra
l windows

New Ornamental Store Fronts

THE accompanying illustration shows a small section of store front equipped with a new ornamental type of metal work. The chased design seen here is now used on all the quality store front construction of this manufacturer



A New Chased Design Now Being Used on All the Quality Store Front Construction of a Prominent Manufacturer.

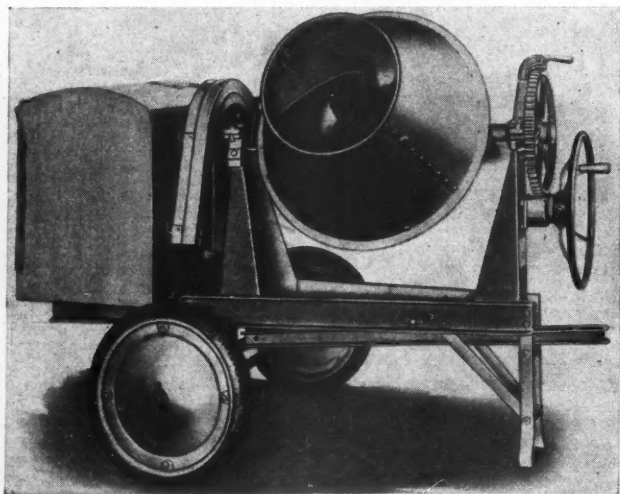
and is an exclusive feature with this company. It adds much to the beauty and character of the store front and is in line with the modern trend of improvement in the architectural design of commercial buildings. New architectural beauty has been achieved by this company in design and ornamentation without sacrificing the time-tested and proven principles that have brought its products recognition as standard everywhere. One of these features is resiliency, assuring the plate glass ample protection against breakage. Others are drainage and ventilation which play an important role in these store fronts.



Mixer Built for Hard Service

A NEW, 1928 model mixer of well known make is illustrated here. It is described as an outstanding machine of its size because of the following features: All-steel construction, alemite lubrication (gun furnished), towing tongue, disappearing type; channel section; genuine semi-steel drum with hardened teeth; well founded cast bottom with strong steel top; lip reinforced with heavy steel rod. The frame is of steel channels with gusset plates reinforcing all corners.

This heavy construction insures longer life and enables the mixer to stand the strains of being moved about from job to job over rough roads. The machine is mounted on



Here Is a New Model Mixer Which Is of a Heavy Construction, Insuring a Long Life Under the Rough Treatment of Constant Moving.

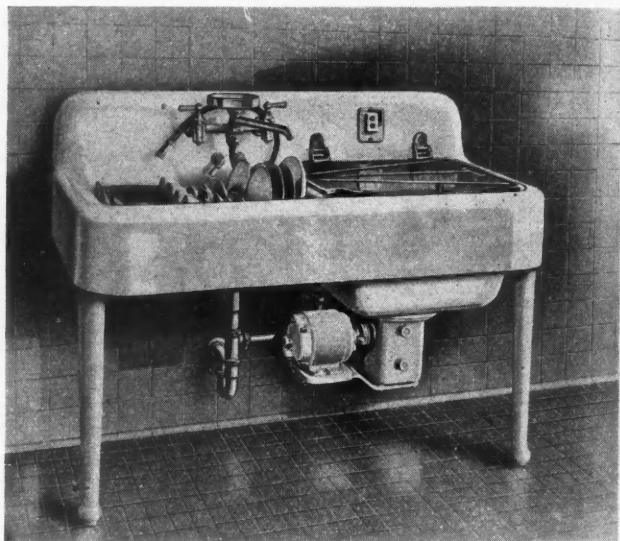
rubber tired, disc wheels. This tilting mixer can be hitched to the back of an automobile and hauled to another job at the rate of 30 miles an hour or better without any damage to the mixer.



Combination Sink and Clothes Washer

A KITCHEN sink and an electric clothes washer, combined in a single unit, that is the latest development announced by one of the leading manufacturers of plumbing fixtures. The popularity of this company's regular combination sink and laundry trays, in apartments and homes, was taken as evidence that housewives favored a sink which would serve as a kitchen sink and also as a fixture in which children's clothes, lingerie, hose and other wearing apparel could be washed conveniently. This new fixture was the result.

The enameled tub, in which the clothes washer is installed, presents an absolutely smooth surface, with no seams,



This Combined Kitchen Sink and Clothes Washer Is One of the Latest Developments to Provide the Utmost Convenience in Household Equipment.

cleats, bolt heads or other projections to injure the clothes. It is available in either the regular enamel supplied by this company or in a hard, acid-resisting enamel. It is easy to clean and will last indefinitely.

There is nothing complicated about the clothes washer. It is easily installed by the plumber and its operation is simple for the housewife. There is only one exposed moving part, the impeller, which does the washing. This is a smooth, one-piece aluminum casting which runs and reverses quietly. Each sink is equipped with a hand wringer, easily removable when the washer is not in use.

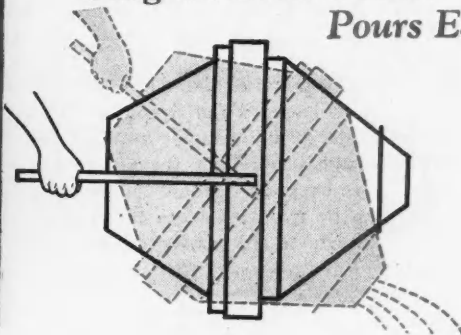
The sink compartment in this fixture has many of the features which distinguish this company's line of sinks. This includes a duo-strainer drain, hand or lever operated, which enables the sink to hold water without using a pan. The removable cup strainer makes it easy to dispose of food debris. A handy hose and spray is convenient for rinsing dishes, cleaning vegetables and fruit and sprinkling clothes.

The sink is eight inches deep and serves as a place for rinsing clothes when a washing is done. The back is only eight inches high so that it will fit under the kitchen window. An apron eight inches wide adds much to the fine appearance of the fixture. The legs are adjustable to the most convenient working height and the brass fittings may be had in either nickel or in chromium plate. This electric clothes washer sink is made in various combination models in addition to the one illustrated and can be furnished in white or in any of six other colors.

These Advantages Mean More Concrete Per Day

Low, wide hopper—easier to charge.
 Back to charging position faster—more batches in less time.
 Discharges dry or wet concrete easily and completely.
 The same proven design as in Smiths that pour the world's largest projects.

“Sticky” Concrete Can't Clog a Smith Drum—
Pours Easily



ONLY a Smith has the double cone drum that requires but a short pull of the handle to discharge—and drops back into charging position in a second. The drum rides on rollers—smooth running. No punishing strains, and the batch is always balanced at the center.

Among small mixers, only a Smith has a charging hopper—a hopper that is low, wide and easy to shovel into. Men work faster, and “stay on the job” because of this easier shoveling. Because of all these Smith advantages you get jobs done far quicker—and you can do many more jobs a month.

Coolidge Dam—Muscle Shoals—Moffat Tunnel —the BIG Projects are “Smith-Mixed”

The best construction and engineering talent in the country run the big jobs. These men choose Smiths—and in small Smiths you get the same thorough mixing action, the same speed of discharge, the same smoothness and dependability that these leading construction experts have found in the big models.

A 2½-S, 3½-S, 5-S or 7-S Smith will give you more profits—in greater production, freedom from trouble and longer life.

Have a Smith THIS Year!

Let Smith dependability start working for you now—on THIS year's work. Because a Smith is the finest mixer you can buy does not mean it is higher in price. Mail the coupon for the big NEW Smith catalog No. 528, and new prices.

THE T. L. SMITH COMPANY

1026 32nd St., MILWAUKEE, WIS.

Sales Offices and Service Stations in All Principal Cities

Quick and Easy to Charge



Smith Mascot is the **ONLY** small mixer with charging hopper

SMITH MIXERS

THE T. L. SMITH COMPANY
 Milwaukee, Wisconsin

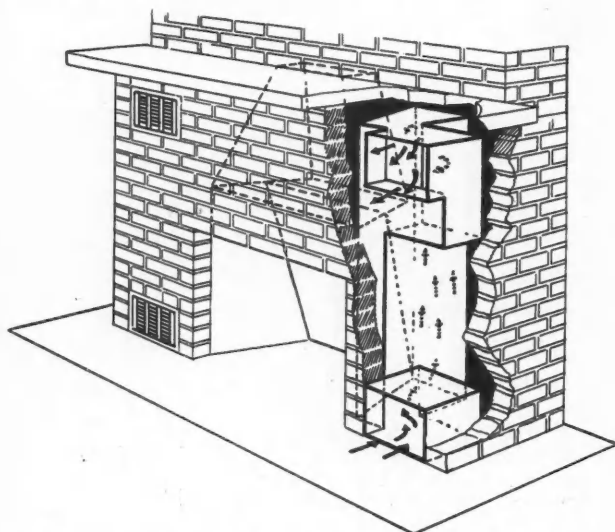
Please send me a copy of your Water Catalog No. 528
 We are especially interested in (small mixer)

Name _____ Date _____
 Address _____ City _____ State _____

Fireplace Units Improved

THERE has been on the market, for some time, a fireplace unit which is designed to assure a wholly successful fireplace that draws without smoking and eliminates drafts, really warming the room without heat waste through the chimney, by means of a special feature which is found in no other fireplace. This unit has now been improved so that it gives a greater flexibility of installation and has been so simplified and production increased that the price is reduced.

This unit is a boiler-plate form which is built into the masonry of the fireplace, a complete unit up to the chimney flue which can be installed in either new construction or in remodeling. It takes the place of the firebrick on the sides, top and back of the fireplace. It has a double wall shell with a large air chamber between the walls. The inner wall is shaped to reflect the radiated heat into the room, from top, back and sides. This reflected heat is greater than can be expected from the general run of fireplaces, many of which are poorly constructed.



This Well Known Fireplace Unit Is Now Being Made to Provide Greater Flexibility of Installation.

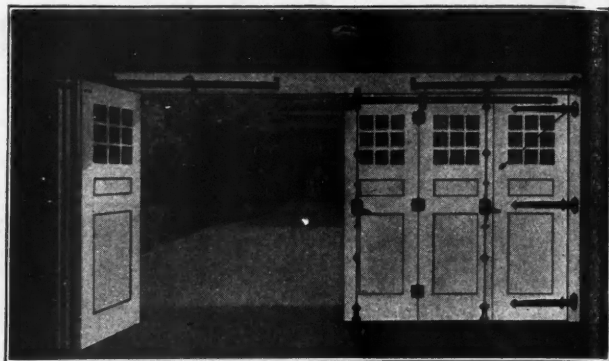
An entirely new source of heat comes from the double walls. The outer wall prevents heat from being wasted in brick or flue. The space between the walls is a hot air reservoir with a fresh air intake and hot air outlet controlled by a register. The outlet extends forward to the face of the mantle above the fireplace opening. The intake extends back through the chimney base at floor level or to a cold air box such as feeds a furnace and draws in fresh air from outdoors. In this way the heating efficiency of a well built fireplace plus much of the action of a furnace is obtained and no heat is wasted.

With the new model of this fireplace unit it is now possible to have intake and outlet boxes of any shape or length so that the openings fit into the design of the mantle and may be covered with masonry or grilles and may be placed at the sides, in front or wherever desired. This also makes possible an inside intake, giving the same effect as recirculation in furnace heating.



Multiple Door Operating Arm

THIS multiple door operating arm is adjustable to a series of three or four doors folding one way. If desired, two units may be used to operate, satisfactorily, six, seven or eight doors, three or more of which fold to one side of the openings. The arm proper consists of a hinged channel extending across the top of the doors nearest the jamb. Where four doors operate, the fourth door is



Operating Arms for Multiple Doors Are Made in Two Sizes and Are Adjustable to Series of Three or Four Doors Folding One Way.

simply hinged to the others and is controlled by their action. All the doors operate simultaneously, as a unit, regardless of which door is being worked.

The arm requires a space of three inches above the top hinge. When the doors are open, it projects approximately the width of one door beyond the doors. The projection from the face of the door is $3\frac{1}{2}$ inches.

This arm is made in two sizes, one for small, manually operated doors and the other for large manually operated doors or power operated doors.



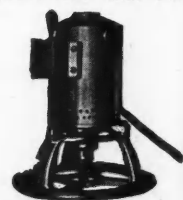
Combination Mortiser and Router

A NEW combination electric tool, a lock mortiser and a router, has been placed on the market by a leading manufacturer. The particular distinctive feature of this tool, it is stated, is that it will cut out all of the barrel and most of the face plate of a door lock in one operation, without stopping the machine for the purpose of changing cutters or for measurements. It will cut out an ordinary inside lock in an average time of 20 seconds and, it is claimed, will mortise an average of 60 doors an hour, counting the time required to put on and take off of each door.

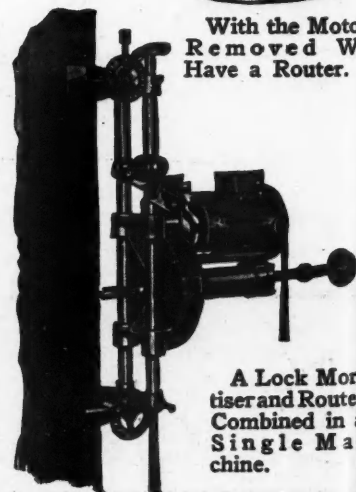
Another feature is that the motor can be taken off of the mortiser and converted into a separate and distinct tool, called a router. In other words, the purchaser has two tools available at the price of one, both of which can be used in most all wood-working operations, particularly where portability is desired on job construction. The work of changing the motor from router to mortiser, or vice versa, is a matter of only two or three minutes.

The motor on this machine is a powerful, universal type, for both A.C. and D.C. current, $\frac{3}{4}$ h.p., 110 or 220 volts. When operating as a router, the motor turns over a speed of 12,000 r.p.m., thus insuring perfect work in grooving and routing.

This machine is of aluminum construction to reduce the weight, equipped with Timken bearings and all refinements necessary to make a tool of this nature practical for builders.



With the Motor Removed We Have a Router.



A Lock Mortiser and Router Combined in a Single Machine.



FREE BLUE PRINTS

AND FREE BOOK "HOW TO READ BLUE PRINTS"

Show You The Way To

9 BIG PAY JOBS

- | | |
|---|--|
| 1 Building Superintendent—\$5,000 to \$12,000. | 6 Building Estimator—\$6,000 to \$10,000. |
| 2 Building Inspector—\$4,800 to \$8,000. | 7 Real Estate Expert—\$5,500 to \$12,000. |
| 3 Appraiser—\$6,000 to \$10,000. | 8 Construction Foreman—\$4,500 to \$8,500. |
| 4 Material Buyer—\$5,000 to \$7,500. | 9 CONTRACTOR AND BUILDER IN A BUSINESS OF YOUR OWN—\$5,000 to \$12,000. |
| 5 Material Salesman—\$5,000 to \$12,000. | |

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NO longer need you spend years trying to pick up the "mysteries" of Blue Print Plan Reading—for now a quick, sure practical method has been perfected that has made thousands of men Blue Print Experts in a surprisingly short time.

THE SECRET OF BIG MONEY

This is no ordinary "school course." It is practical from start to finish. It is based on many sets of real Blue Prints—plans that would cost thousands of dollars if purchased from the architects. Twenty famous experts in all lines of construction work talk over these Blue Prints with you in plain, simple language. Show you every detail. Explain every short cut. Tell you the "secrets" of quick, accurate estimating. Explain superintending. Give you for the first time many inside facts and money-making methods used by the "giants" of the Building Industry."

IF YOU LIVE NEARBY

Visit our big day or evening school attended by over 1,000 Builders. You can get the same training at home by mail—same plans, lessons and instructions. Your spare time is enough.

NO EDUCATION NEEDED

This is the kind of training that quickly puts men into \$4,500 to \$12,000 a year jobs—or into profitable contracting businesses of their own. Yet now you get it right at home in only 2 or 3 months. It requires no extensive education. If you can read and understand what is written here you can easily master it.

See what this training has done for others: Bartholomew, Calif., became a contractor at an increase of over 300% his first year; Blair, Okla., stepped up to Superintendent at 100% increase; Dickerson, R. I., increased his salary 700% in 12 months; Marchand, La., says: "My income has increased 200% and I now have more contracting work than I can do."

AMAZING OPPORTUNITIES

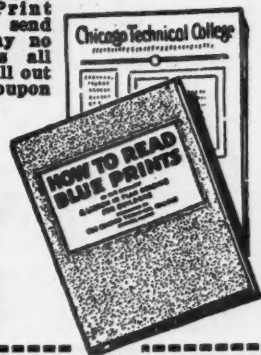
Over seven billion dollars will be spent this year in new construction! No wonder, then, such tremendous opportunities are open to you when you have this "head-work" training in Blue Prints.

If you want more money—real big money—then choose a "Blue Print" job in Building. Here is the one field where there are unlimited opportunities for advancement.

MAIL COUPON TODAY

So accept my FREE gift of a complete set of real working Blue Prints and my

fascinating Book "How to Read Blue Prints" that tells all the interesting and instructive facts about Blue Print Plans. Don't send one penny—pay no C. O. D.—it's all FREE. Just fill out and mail the coupon today—NOW!



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Please send me your free book "How to Read Blue Prints," and complete set of real Blue Prints. I understand these are mine to keep without obligation. It is also understood that no salesman will call on me.

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

Chicago Technical SCHOOL for BUILDERS

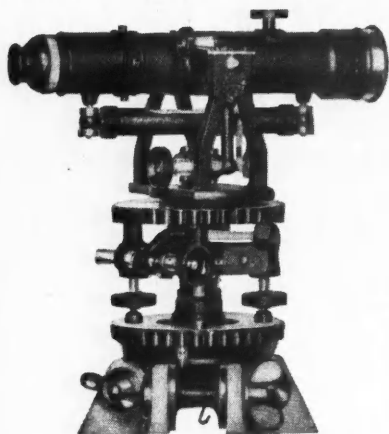


Dept. G-121, 118 East 26th Street, Chicago, Ill.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Improved Contractors Level

THE new tilting level, seen in the accompanying picture, has been designed, so it is stated, to give to the contractor an unusually high grade instrument with which he can quickly, easily and accurately establish grades, obtain differences in elevation, line up and plumb columns, walls and forms for concrete and lay off the occasional



Here is a Tilting Level Especially Designed to Meet the Requirements of the Contractor.

angles called for in general construction work. It presents a new idea in instruments for this kind of work and combines the functions of the engineer's transit and level in so simplified a form that the most inexperienced user of instruments can rapidly acquire proficiency in doing accurate work with it, it is claimed.

The telescope is 10 inches long and magnifies 22 diameters. It focuses 5½ feet from center of the instrument. The horizontal circle, 3½ inches in diameter, reads to five minutes. It is equipped with accurately ground and positively adjusted level vials, clamp and slow motion screw to telescope and leveling head. It has a shifting center, trivet points and is mounted on a full-sized tripod and provided with a mahogany carrying case. The total weight of the instrument is 5½ pounds and with the carrying case 10 pounds 3 ounces. The tripod weighs 9½ pounds.



New Vertical Power Stripper

HERE is a self-contained vertical power stripper which is a big capacity unit for the economical manufacture of concrete blocks and tile, and embodies a number of important features. The unit is self-contained with the tamper, feeder and stripper permanently mounted in one frame. When placed in the plant it needs only one belt connection to be ready for operation.

The power strike-off is a rugged and simple mechanism of improved design, eliminating the use of clutches entirely. It is immediately reversible so that it cannot jam or break if its operation is impeded.

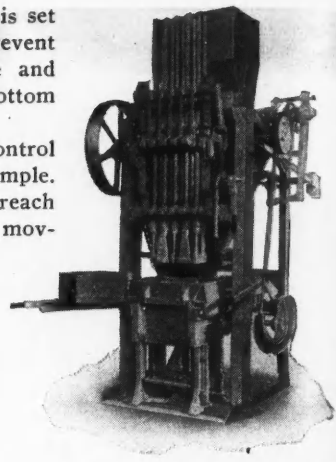
An unusually simple and effective method is used in applying power to the stripping mechanism. The net result is a very rapid stripping action, bringing the block to rest gently. Here all clutches are eliminated. The only part to wear out is the rope and the wear on that is remarkably slow. Replacement is simple and rarely required.

The tamp bars, arranged in a double row and dropping independently, distribute thorough tamping over the front and back of the mold box. In making two 8 by 4 by 16 inch slabs at one time, it will be found that both slabs are tamped to a uniform density.

The power feeder consists of a divided drum rotated under a hopper. This is driven by a Geneva stop. When the clutch handle is pushed in, one shot of concrete is introduced into the mold box. If the clutch handle is held down the feeder con-

tinues to feed. The feeder is set at such an angle as to prevent the adherence of concrete and the removable galvanized bottom liner makes cleaning easy.

Central grouping of control levers makes operation simple. Every lever is within easy reach of the operator without his moving. In every detail the construction is rugged and heavy. Vibration is reduced to a minimum and particular attention has been paid to the materials and workmanship on all working parts. There is little need for adjustments and the entire simplicity of the machine's operation insures rapid and uninterrupted production.



A Big Capacity Stripper for the Economical Production of Concrete Blocks and Tile.

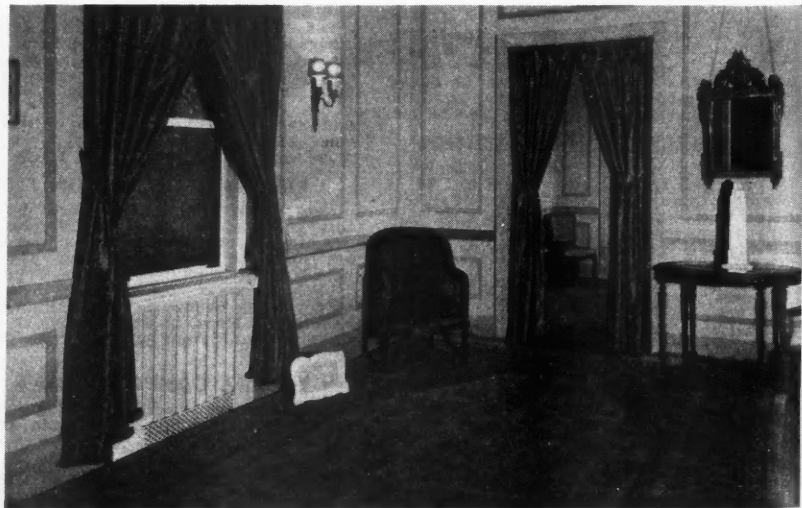


An Improved Radiator System

IN the average American dwelling or apartment building, and also in schools, hospitals, offices and other buildings, the heat loss of almost every room is more or less the function of the windows. This is especially the case in recent years since wall surfaces have become smaller, window surfaces have been largely increased and single windows are almost exclusively used.

It is a well known and fundamental fact that radiators give greater satisfaction if they are located underneath or very near to the surfaces having the greatest cooling effect. As these surfaces are, almost without exception, the windows, the idea arose to make the radiators and the windows a unit whereby the radiator brackets form an integral part of the window and this solution has been worked out by one of the largest manufacturers of radiators.

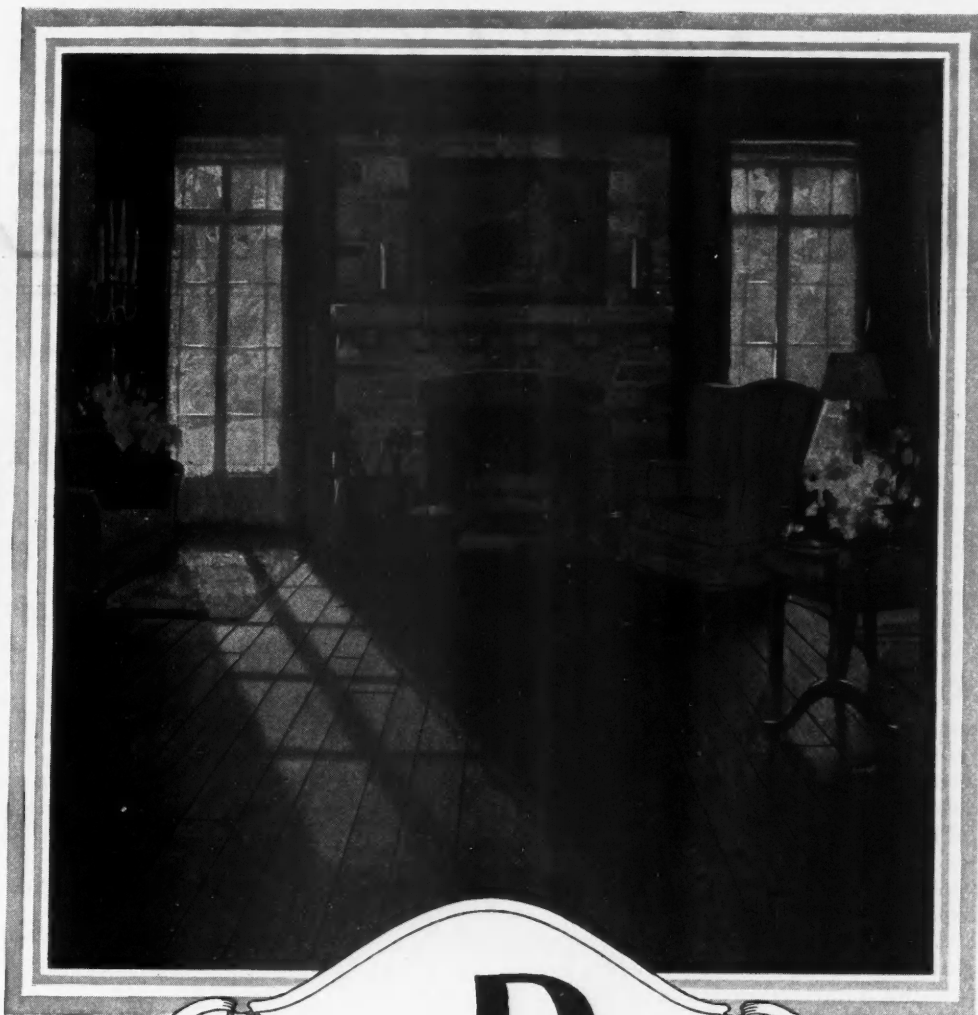
Radiators installed in this way can be partially or totally recessed so that their flat front surface is almost flush with the wall. They can be installed in their permanent places immediately after the windows are set even if the walls and floors are not finished. The radiator brackets are supported by a rail which is part of the window construction itself. In this way no holes in the walls for radiator brackets have to be made, which results in a saving of labor expense.



This Radiator Has Been Developed by a Leading Manufacturer to Take Advantage of the Well Known Principle That Heating Units Are Most Effective When Nearest the Source of Cooling Effect.

***CELLizing**
has made
STYLE in
Oak Floors
available for
every home.

We maintain our
own chemical,
technological and
engineering de-
partments which
have definitely
proved every
point through ex-
haustive tests and
which are at your
service without
obligation.



The commonly
used strip floor-
ing, as well as
Oak Floor Blocks
are obtainable
*CELLized.

Plank floors of Solid Oak

—unaffected by moisture
—easily laid and finished

Just what the builder has long searched for—a true Colonial floor of SOLID oak planks—that will not cup or shrink, and that can be laid and finished as easily and economically as strip flooring.

Possible only because Bruce planks are *CELLized, a remarkable chemical treat which prevents distortion by moisture. Wide boards are specially susceptible to moisture and till now expensive laminating or veneering has been necessary to avoid the usual cupping. *CELLizing permits the use of solid oak planks—and being solid, the cost is greatly reduced. Blind nailed like strip flooring.

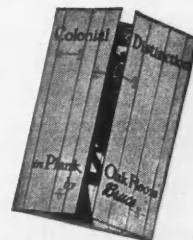
*CELLizing has the highest moisture-proofing efficiency of any treat for wood which permits the usual finishing process. As a matter of fact, *CELLizing improves the finished appearance of the floor. Also proof against wood-boring insects.

Colonial plank floors may now be figured into any flooring estimate. The modest home, as well as club houses and build-

ings where limiting the expense is a factor, may thus be made more interesting and attractive at moderate cost.

E. L. Bruce Co.
MEMPHIS, TENNESSEE

Largest manufacturers of oak flooring in the world



Write for this book
How *CELLizing solves the
plank floor problem is fully
explained in this booklet—
"Colonial Distinction in
Plank Floors." It is free.

Bruce *CELLized Oak Floor Planks

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

MOTOR TRUCKS *and* TRAILERS



Points on Truck Maintenance

Part II—Brakes, Gaskets and Backfiring

FEW owners understand the manner in which brakes require lubrication, but this is an extremely important point in maintenance. It may be a matter of life or death.

Brake Lubrication and Relining

When the bearing surfaces of the brakes are not regularly lubricated, they will tend to bind, due to the action of rust and dirt. Eventually this will cause premature wear of the lining and the added friction will increase the work required of the engine. The mechanism of the brakes should be oiled regularly as well as the brake tubes which operate on the rear axle housing. All brake adjustments should be made by an experienced mechanic.

Dirt and grit in the brake lining will cause squeaking and chattering sounds to develop. The brake bands should be removed when this symptom occurs, and the lining cleaned by scrubbing with a wire brush and kerosene. Often, when the grit is difficult to remove, a mixture of powdered resin and castor oil applied to the lining will remedy this. The squeaking of brakes may be stopped temporarily by spraying water between the brake surfaces and the brake lining will usually be improved by wetting. It is important, of course, to replace the linings when they have been worn to the point where the rivet heads touch the drums.

Relining the brakes on a motor car is simple enough after the owner has once mastered the details. Do not be persuaded to invest in cheap brake lining any more than you would buy cheap rope for use on Alpine glaciers. Your life depends upon the action of the brakes and the best lining is none too good. The best will cost only a little more than the cheapest for the whole set of brakes, and the few pennies gained are not worth the risk involved. Cheap linings will also wear out much faster than the first quality. With the former, you will have to repeat the relining process

often, while the superior quality will, in most cases, last an entire year.

Many defects that occur in motor car engines, when finally they are traced, show that they are caused by weak or poorly fitted gaskets. Gaskets are made of various materials, such as heavy oiled paper, asbestos, rubber, and a combination of asbestos and copper. The material used depends upon the place on the engine where the gasket is to be fitted and whether heat is present or not. Heated portions of the engine require a gasket that will successfully withstand high temperatures, and copper asbestos gaskets have been found best for the purpose.

When the parts between which a gasket has been used are separated, gaskets sometimes blow out. Their replacement is thus quite frequently required, especially when parts have been disassembled.

Look for Gasket Trouble

Leaky gaskets cause defects similar to carburetion and ignition troubles, and often lead the repairer to believe that these latter units are at fault when in reality leaking gaskets are causing the trouble. Compression will escape through a poorly fitting head gasket and lubricant will be lost if the gasket and fastening bolts are not drawn tight. Water may enter the lubricating system, the exhaust becomes noisy, and many other defects may occur that can be directly laid to poor fitting or blown-out gaskets which cause annoyance to the truck owner and often result in serious injury to the parts.



The Truck Which Is a Faithful Servant When Properly Handled May Become a Dangerous and Costly Machine if Its Brakes Are Neglected.

✱
The National Fire Protection Association, 40 Central St., Boston, Mass., has published advance copies of reports to be presented at its annual meeting which include the following subjects: Blower Systems; Automatic Sprinklers; Garages; Tanks; Building Exits Code; Building Construction; Flammable Liquids; Protection of Openings in Walls; Gases.

If You Are Planning an Investment in Truck Equipment..read this carefully

Important Facts regarding INTERNATIONAL MODEL S D DUMP TRUCKS

THE International Model SD Speed Trucks were designed particularly for use with automatic dump bodies or hoists. They are ideal trucks for all kinds of material hauling in the service of builders.

Outstanding Performance...

In every department of the building industry the Model SD truck has established records for ruggedness and endurance. Long truck life is built into every model. Dependability under all conditions and loads is assured by exacting care in the manufacture of every component part and each individual unit.

Model SD trucks are powered by engines that are famous the world over for their excellence and fuel economy. The Model SD frames are made of hydraulic pressed steel channel sections, well reenforced with stout cross-members and angular gusset plates that provide tremendous strength.



The Model SD is an efficient, light, fast dumping unit. It is popular with material men because of its low operating expense and because it is quickly serviced by convenient Company-owned branches located everywhere.



Wherever you go you will find International Model SD Dump Trucks rendering profitable service for builders. This view shows an SD-46 owned by A. G. Baxter of Calgary, Alberta, Canada. Every day it hauls from 45 to 60 yards of washed gravel swept out of the Bow River.

...Assured by These Features

The Model SD International (rated capacity 2 tons) is available with either 4 or 6-cylinder, detachable L-head type engine. Force feed oil system. High-tension magneto ignition. Fuel-saving carburetor. A 117-inch wheelbase and an irreversible, worm-and-gear sector type steering system makes it easy to turn very short. Chassis is pressure lubricated. Dry plate, double-disk clutch. Sliding gear, selective type transmission with 4 forward speeds and 1 reverse. Chrome-molybdenum steel rear axle shafts with spiral bevel-gear drive. Accelerator, clutch and service brake foot operated. Internal expanding type brakes operating in rear wheel drums. Five-inch braking surface. Half elliptic front, inverted cantilever rear springs. Heavy truck cord tires.

Twelve-gallon fuel tank mounted in cowl.

Dump Bodies in Several Styles

Automatic or gravity type steel dump bodies and dump bodies with hydraulic underbody hoists are available for either SD-44 or SD-46. Can be furnished in square or round cornered, rattle-proof types. Swinging partitions for "batch mixes" or gate restricting devices for material spreading can be supplied.

If you are planning in investment in truck equipment, visit the nearest International Branch or dealer and ask for more information about the Model SD Dump Truck, or any of the seven other Internationals available for your business. Ask also for particulars about the "160 company-owned branch service stations." Write direct for illustrated descriptive catalog.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave. of America Chicago, Illinois
(Incorporated)

INTERNATIONAL HARVESTER TRUCKS COMPANY

Democratic Convention Hall Boasts Largest Wood Arch Roof

PRESENT day possibilities of wood construction reached the acme of realization when structural framework was completed for the great auditorium at Houston, Texas, which is being erected to house the Democratic National Convention. With a seating capacity of 25,000 persons this hall will be one of the largest in the world and possibly the most outstanding instance of its kind in the use of wood type of construction.

What is considered an engineering feat without parallel has been accomplished in the roof construction of the auditorium. Under a roof covering 80,000 square feet of floor space equal to the area of one and one-third city blocks in Houston, there are only 12 supporting posts. This was realized by the use of what is known as the "Lamella" type of roof construction which by a process of self-bracing eliminates the need for supporting columns.

The construction of the convention hall in its great size has attracted the attention of structural engineers and builders from all parts of the country. The lumber used throughout the roof and in the structural framework of the entire building is southern pine.

The Lamella trussless roof is constructed through a combination of two principles, that of the arch, and that of a network. Utilization of these two points permits the use of short, uniform pieces of lumber.

A large center span in the roof structure is 120 feet wide and 326 feet in length. It rises 60 feet from the floor level. Two side spans which connect with the center support are 76 feet in width and 265 feet in length. These three roof spans cover the area of 80,000 square feet, and form three

large vaults in the general architectural scheme of the building.

The magnitude of the task of building the convention hall is revealed by the fact that 2,060 3-inch by 14-inch by 12-foot timbers went into the main vault. The two side vaults accounted for 3,738 2-inch by 10-inch by 9-foot timbers.

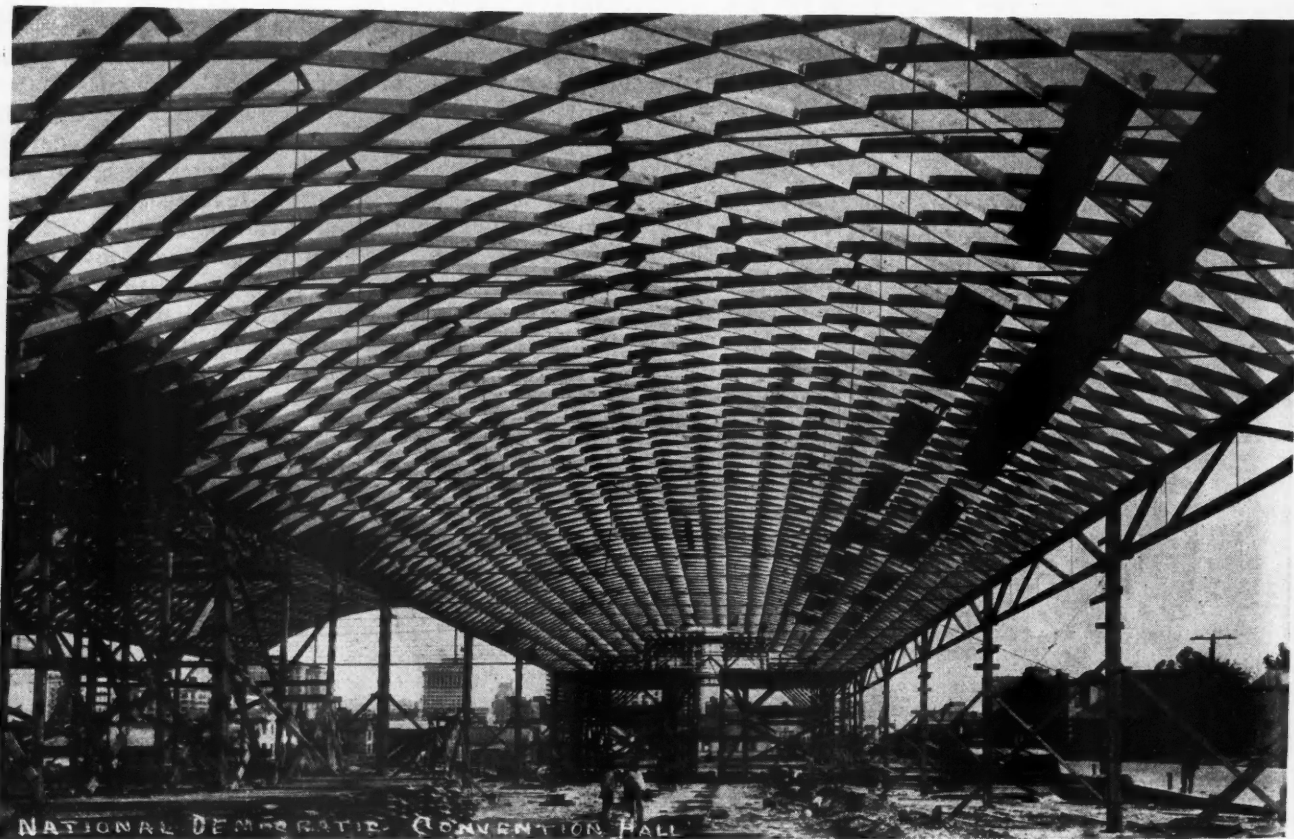
Arch spread is taken care of by steel rods extending across the 120-foot span of the main vault and the 76-foot spans of the side vaults.

Almost a mile of standard gauge railroad was laid within the hall. On these tracks moved the scaffolds on which the crews placing the lattice-like roof supports in place, worked. The material was hoisted up to the crews with a huge crane.

In describing the southern pine used in construction of the convention hall, W. H. O'Brien, field engineer of the Southern Pine Association, said:

"The Lamella construction was specified in long leaf southern pine and the roof is decked with southern pine shiplap. The roof construction of the interior will be left exposed because of the harmonious effect of the symmetrical, diamond-shaped network forms of the Lamella construction. This is truly a remarkable building and an example of what can be accomplished economically and satisfactorily in wood construction."

Mr. O'Brien called attention to the time required for construction of the structural framing as an outstanding example of the advantages of the lumber type of building. It was completed by actual construction time in 22 days. This is 18 days less than the building schedule called for.



View of the Central Span of the Democratic Convention Hall, 120 Feet Wide and 326 Feet Long, Carried by Only 12 Supporting Posts. Kenneth Franzheim, New York, architect; Universal Construction Co., Houston, contractor.

Hot Bid



30 to 50
Minutes
to Estimate
this
HOME



Check them all off

- No Material List to Struggle Over.**
- No Sets of Blue Prints to Buy.**
- No Worry About Leaving Out Items.**
- No Wasted Time in Finding Comparative Costs.**
- No Doubts As to the Accuracy of Your Bids.**

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Other HOLT BIDDERS Have Said

Clear and Accurate

"I received the HoltBid and found it perfectly clear to me after a few evenings' reading the HoltBidder's Instructions. I have checked it up and find it accurate far beyond my expectations." *Exeter, N. H.*

Uses While Learns

"Have finished about half of the HoltBid Instructions and like it very much. Already sold one house and figured several other buildings. I find in checking with houses we have completed that the HoltBid checks up very closely." *Laceyville, Penna.*

Most Complete

"In my fifty years of building, I have seen many estimating outfits but HoltBid is the most complete I have seen." *Jackson, Miss.*

Best and Instructions Very Plain

"I have been giving what time I could conveniently spare to the study of the HoltBid Method of estimating building costs and so far have found it to be the best method I have ever tried. I have not bothered yet about sending in any requests to your Service Department, because you have made your Instructions very plain indeed." *Richmond, Va.*

It's Great!

"Have just received my HoltBid System and wish to thank you for the layout. I think it is GREAT. I am enclosing \$5.00 herewith to prove my satisfaction as my first month's payment." *New York, New York.*

HoltBids After 7 or 8 Hours' Study

"I had not put in over seven or eight hours learning to HoltBid before I figured a house and sold it and came out about 2% to the good." *Logansport, Ind.*



The worst job in contracting or carpentering is estimating the cost. It is not only the most tedious work, it is also the most important—because the profit is determined before the job is even started.

HoltBid is a system that guarantees greater accuracy in figuring costs than any method that has ever been developed.

There is no stumbling block on the road to success that trips more men than inability to make accurate bids.

That is why HoltBid has met with such tremendous success—thousands of men are using it.

HoltBid



How often have you been in this predicament when you were pressed for time? How many hours have you wasted in figuring up jobs that your competitor got?

Your Questions A

The entire profit on a job is sometimes lost by the low-bidder because he left out some item in his estimate.

There is no chance for errors of this kind in using HoltBid. The HoltBid Forms preclude any omissions or losses through carelessness or oversight.

Practically every builder has spent money for plans only to have the customer switch to another design or not build at all.

HoltBid will save the expense of plans in developing a sale. All you need is floor plans and picture—such as shown in any plan book.

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HoltBid

Honest Words of Praise

Pays For Itself

"Sold four or five houses and many smaller buildings, due primarily to the knowledge gained from HoltBid Service, so already feel fully repaid for the money spent with you."
Waterloo, Iowa.

Lands Nice Jobs

"Local attorney says the HoltBid Forms were the best specifications for contracts that could be gotten. I feel that the HoltBid had a lot to do with my landing a couple nice house jobs last year."
Amery, Wisc.

Even Easy For Beginners

"I sure appreciate your books because they explain in such detail that a beginner like myself should have little if any trouble to understand them."
Toledo, Ohio.

Promoted

"I want you to know that I feel the HoltBid System is largely responsible for my recent promotion."
 Fargo, No. Dak.

Not Difficult to Learn

"The HoltBid is well organized and am convinced that it is practical and absolutely reliable—not difficult to master—very much pleased—in the beginning I was skeptical as I could not see how it was possible to fit different localities—now I know I shall obtain great benefits and save hours of hard, tiresome estimating which has been my previous experience."
Littleton, New Hampshire.

Greatly Benefited

"It certainly is interesting and I feel greatly benefited already. Can see where it will make building a profession instead of a mere vocation."
Haure, Montana.



A HoltBidder can submit estimates in a fraction of the time required by old methods—and he will know his bids are absolutely accurate.

Answers Here

Sometimes a builder lets a profitable job slip through his hands because of lack of confidence in figuring the cost. He sticks to the ordinary jobs that he has done over and over.

Every table in HoltBid is based on actual figures. No approximating or averaging was done. A HoltBidder is competent to discuss building costs intelligently and snap up those chances that offer more than ordinary success.

One of Nature's laws is that no man may stand still—he either must progress or fall back. It is the natural instinct of every man to become independent and successful.

HoltBid will help you succeed because it increases your efficiency. HoltBidders have an advantage over all competitors that can neither be over-estimated or overcome.

Regardless of how much experience you may have had—how thoroughly you understand your work—you will admit you have got to keep up with modern methods in this day of keen competition.

HoltBid will enable you to make more money because it will assist you in keeping your business on the basis of service. It's the jobs that went to the other builder that gives you the feeling of failure.

After all, ability is the deciding factor in any profession or trade. There can be no success unless you know how to carry out your work as well as your fellow men.

We know that HoltBid is worthy of your investigation and that you owe it to yourself to give our method a personal trial. Order coupon on next page is for your convenience.



\$100 Brings HoltBid

For Your Examination My Personal Guarantee



I GUARANTEE that the HoltBid Method of Estimating Building Costs will be satisfactory to you in every respect. All I ask is that you give it a fair trial, and that is the only condition. If at the end of thirty days you do not find the HoltBid Method exactly as represented, I will refund the small down payment you have made. During the thirty days of free examination it is understood that our corps of expert HoltBidders will hold themselves in readiness to answer any question, and to give you true appreciation of the great value of the Holt-Bid Method. In accepting your order I place my full confidence in your intentions to give the HoltBid Method a fair trial.

WILLIAM A. RADFORD, President,
The HoltBid Service Company.

PIN A DOLLAR BILL TO THIS COUPON AND MAIL TODAY

William A. Radford, President,
HoltBid Service Company,
1827 to 1901 Prairie Ave., Chicago, Ill.

I would like to give your HoltBid Method a personal trial. I enclose herewith \$1.00 that you may send me the complete service on 30 days' approval under your money-return guarantee. If I keep the material more than thirty days it is understood that I wish to continue with HoltBid Service and will pay you \$5.00 per month until the full price of \$85.00 has been paid. The shipment I am to receive includes all units and a year's subscription to American Builder.

Name

Town State

Street Address..... Occupation

Note:—The service must be entered in the name of the individual and not the firm.

A.B. 6-28

(Without the American Builder, we shall deduct \$1.00 from the total purchase price. If you already are a subscriber, we can readily extend your subscription for a year.)

NEWS of the FIELD



Founder of G. E. is Honored

IN the presence of more than 10,000 employes, the board of directors and a few invited guests, a bronze tablet honoring the memory of Charles A. Coffin, founder of the General Electric Company, was unveiled on May 8, at the Schenectady plant of the company. Elaborate ceremonies were arranged for the unveiling, including an address of E. W. Rice, Jr., honorary chairman of the General Electric board. The fund which made the tablet possible was established 25 years ago by the company employes. The tablet was unveiled by Miss Alice Coffin, daughter of the late Mr. Coffin.



Lendon Joins Milcor

G. C. LENDON, formerly purchasing agent of the G. United Fuel and Supply Company, of Detroit, has joined the sales organization of the Milwaukee Corrugating

Company as Detroit district manager of the Fireproof Material Division. Mr. Lendon has been in the building material business in Detroit for many years and has a wide acquaintance with the trade and knowledge of building materials.



Change in Ownership

ON April 30, the partnership interest of W. O. Washburn in the American Hoist & Derrick Co., St. Paul, Minn., was purchased and taken over by Frank J. Johnson, the senior partner and one of the founders of the business. The business will be continued under the same name as a corporation with the following officers: F. J. Johnson, president and treasurer; Howard S. Johnson, vice-president in charge of sales; Frederic Crosby, vice-president in charge of production.

This company has also announced the appointment of J. T. Seaver, Inc., Fairmount Building, Cleveland, Ohio, as its representative for the Cleveland district.



Appoint New York Representative

THE Steel Frame House Company, of Pittsburgh, Pa., has announced the appointment of Edward Moore as its district representative in New York City and surrounding territory. Mr. Moore will make his headquarters in the New York office of the McClintic-Marshall Corporation, 39 Broadway.

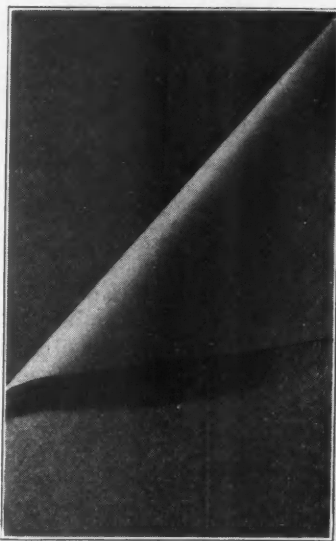


New Chain Belt Director Named

THE Chain Belt Company, Milwaukee, Wis., has announced the election of Robert W. Baird, Milwaukee banker, as a director of the company, to fill the vacancy caused by the death of H. O. Seymour.

A NEW Wall Covering

Lintex is a new washable wall covering built up from linseed oil, lithophone, and wood flour. It can be quickly and easily applied to any smooth wall surface. It gives uniform texture to an entire room with hand decorated, multicolored effects. Simple to repair. Easy to remove. Practically everlasting.

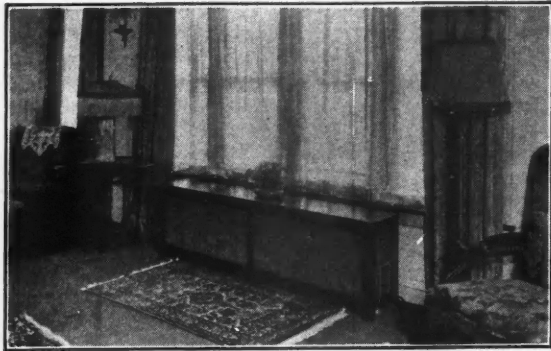


for Down Stairs ROOMS

There's nothing like Lintex for residences, hotels, banks, stores, apartment houses or offices. Wide variety of patterns and colors. Fine for strengthening old walls—surface cracks do not show through. Contractors and builders are enthusiastic. Send now for sample and complete information about Lintex. Address: Richard E. Thibaut, Inc., Sole Distributor, 24 W. 40th Street, New York City.

Thibaut L I N T E X

Manufactured by Lincrusta-Walton Company, Hackensack, N. J. Division Tait Paper and Color Industries, Inc.



Buildings Rent Faster sell easier—when radiators are equipped with Trico

Trico Radiator furniture transforms all unsightly radiators into beautiful and useful pieces of furniture—shelves, window seats, consoles. They are furnished in any desired color to harmonize with other room furniture.

They stop smudge. Cleaning and redecorating costs are greatly reduced, often as much as 75%.

The patent Trico humidifying waterpan concealed beneath the cover maintains proper moisture in the air, making the rooms far more comfortable and healthful. This moisture is absolutely essential in preventing furniture and woodwork from drying.

Ten years of development in radiator furniture have made Trico the leader in this field. A district manager in every principal city will be glad to consult with you and serve you. Let us estimate on Trico Radiator enclosures. No charge.

Contractors' and Builders' Franchise Plan

If you haven't received a copy of the New Trico Franchise plan, fill out the coupon now. It means money to you and there is no investment on your part.

A copy of the latest Trico book of ideas on interior decoration will also be sent you on request. Simply check attached coupon.

TRICO, INC.

TRICO, Inc., Subsidiary to Art Metal Radiator Cover Co.,
1719a N. Kolmar Avenue, Chicago, U. S. A.

Gentlemen:

- Send New Trico Franchise Plan.
- Send estimate and Trico book on interior decorating.

Name _____

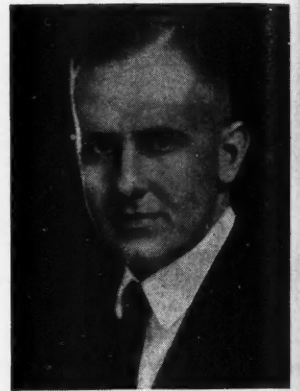
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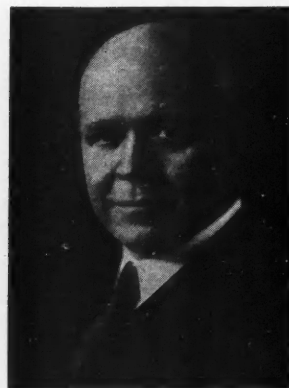
Western Door Manufacturers Associ- ation Organized

THE announcement of the newly formed Western Door Manufacturers' Association is the most recent and one of the most important developments in the door industry and the lumber trade. The growth of Douglas fir door manufacturing plants on the West Coast has been little short of phenomenal and this group of western door manufacturers, comprising the leaders in the Douglas fir industry, has been organized in a far-sighted movement to safeguard this industry by safeguarding the buyer and user of Douglas fir doors.

It will be the aim of the new association to see that every Douglas fir door bearing the trade mark WDMA comes up to the uniformly high standard. A rigid inspection service will constitute an important department of the association work. Experienced inspectors will be maintained to travel among the various manufacturing plants, constantly watching



William L. Rawn, Secretary and Manager.



Left—George J. Osgood, President; Right—J. P. Simpson, Vice-President, of the Newly Organized Western Door Manufacturers' Association.

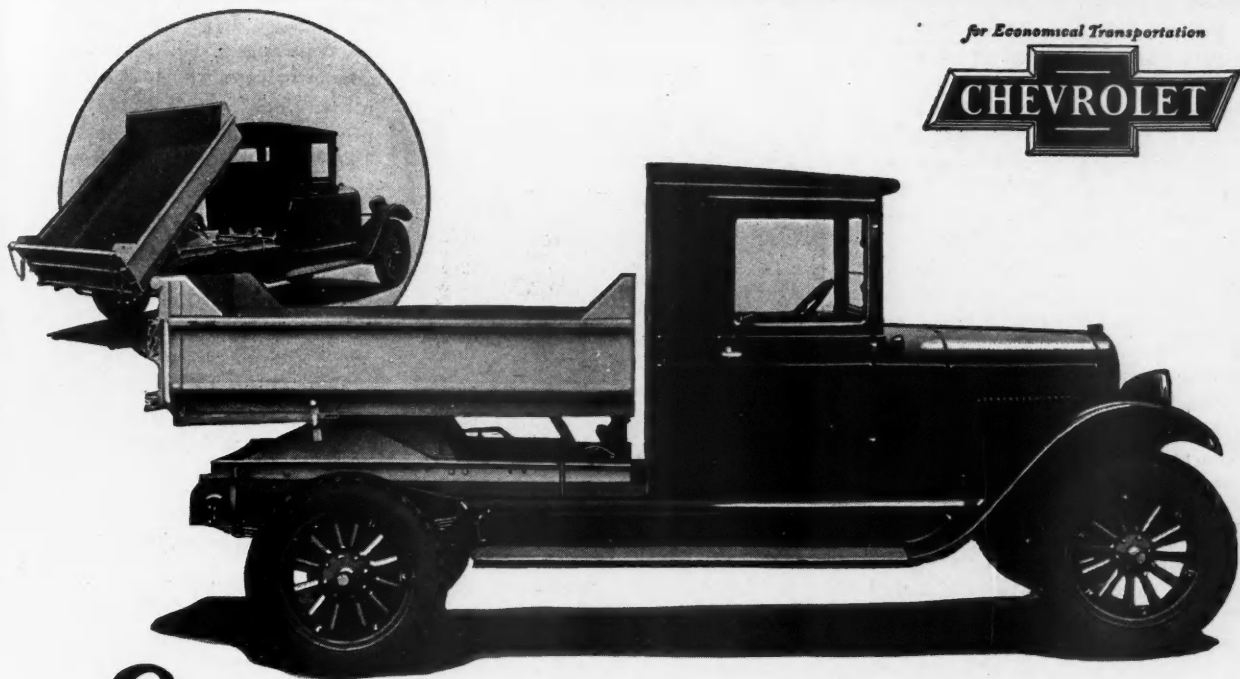
the grades and seeing that the various firm members are adhering to the standard grade rules, as adopted by the association.

Some of the objects of the association, as set forth in the form of the articles of association, are to encourage and increase the use of Douglas fir doors in the United States by co-operative advertising; to establish uniform grades and standards of products, and to constantly improve methods of manufacture.

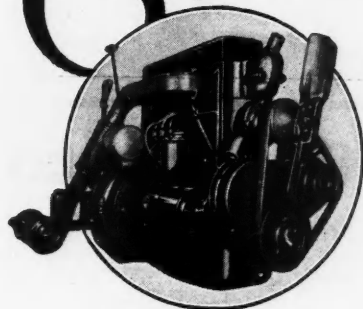
The general offices of the new association have been established in the Washington Building, Tacoma, Wash. The officers are: George J. Osgood, Wheeler, Osgood Co., Tacoma, Wash., president; Phil Simpson, Buffelen Lumber & Mfg. Co., Tacoma, Wash., vice-president; John E. Manley, Washington Door Co., Tacoma, Wash., treasurer; W. L. Rawn, secretary and manager.

The following companies are members of the association: Robinson Mfg. Co., Everett, Wash.; Tregoning Mfg. Co., Seattle, Wash.; Buffelen Lumber & Mfg. Co., Tacoma, Wash.; Wheeler, Osgood Co., Tacoma, Wash.; Cedar Fir Lumber Co., Tacoma, Wash.; Henry McCleary Timber Co., McCleary, Wash.; Nicolai Door Mfg. Co., Portland, Ore.; M. & M. Wood Working Co., Portland, Ore.; Central Door & Lumber Co., Portland, Ore.; Albany Door Co., Albany, Ore.

for Economical Transportation



Engine Features that provide Better Performance • Greater Dependability and Economy



—at these
Low Prices

LIGHT DELIVERY

\$375

Chassis Only

UTILITY TRUCK

\$495

Chassis Only

Prices f. o. b. Flint, Mich.

The engine features listed below are typical of the basic superiorities in modern design and construction that have made Chevrolet such a sensational success as the world's largest builder of trucks. See these trucks at any Chevrolet Dealer's—and learn for yourself what these features mean in terms of performance, dependability and economy of operation.

Adjustable Valve Tappets

Chevrolet valve tappets can be easily adjusted to eliminate loss of power and acceleration during life of truck.

Large Bearing Surfaces

Exceptionally large bearing surfaces provide increased dependability, quieter engine operation, greater power and longer life.

Positive Lubrication System

Chevrolet's positive vane type oil pump insures a plentiful supply of oil to the bearing surfaces at all times.

Air Cleaner

The AC air cleaner is another motor safeguard that removes dust from the air taken into the carburetor—adding life to the motor and increasing its efficiency.

Oil Filter

The AC oil filter removes dust and grit from the oil, making fewer oil changes necessary and adding thousands of miles to the engine's life.

Crankcase Breathing System

A breathing system which clears the crankcase of vapors prior to condensation, minimizes oil dilution, and adds materially to the long life of the motor.

Thermostatic Control

A thermostat in the cylinder head controls the water circulation, assuring the proper degree of cooling for any temperature.

Completely Enclosed Motor

A complete motor enclosure protects the exterior working parts against dust and dirt—adding to the motor's life and efficiency.

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

Q U A L I T Y A T L O W C O S T

Occupy New Quarters

THE Black & Decker Mfg. Co., of Towson, Md., announces that it has secured an excellent location for its Detroit branch at 11501 Woodward Ave., and has just finished moving into the new quarters. The new office space is larger, the service station has greatly improved facilities and building provides unusual display facilities. An advertising feature is a colossal cut-out of a Black & Decker drill mounted on the roof of the building and outlined with a thin red line of fiery light. The front of the building is flood lighted and makes an effective corner.

This company also announces that it has recently made several changes in its sales force and the following men are now selling the line in the territories indicated: H. L. Balke is with the Kansas City branch covering the territory around Omaha, formerly covered by S. D. Shawgo; G. F. Parr is with the Buffalo office and has taken over the territory of J. H. Hutton; G. N. McCarthy has filled the vacancy at the Buffalo office made by H. B. Austin, who has been transferred to Chicago; J. A. Murray is working in Baltimore taking over the accounts formerly sold by Curtiss Watts.

H. B. Hazerodt has resigned as manager of the Detroit branch to take up another line of work and J. H. Walker, who has been a salesman in that territory for almost five years, has been appointed manager.



New Quarters of the Detroit Branch Office of the Black & Decker Co.

T. L. Smith Names Distributors

THE T. L. Smith Company, of Milwaukee, Wis., announces the appointment of the following distributors: The Service Supply Corporation, of Philadelphia, for eastern Pennsylvania, southern New Jersey and northern Delaware, will carry a complete stock of mixers and repairs for both mixers and pavers; the Woodward-Wight Company, of New Orleans, La., for Louisiana and southern Mississippi, will carry a full stock of mixers and repair parts; the Leland Truck Equipment Company, of Tulsa, Okla., for the entire state of Oklahoma, will carrying a complete stock of mixers.



Alpha Buys Phoenix Plant

THE Alpha Portland Cement Company, of Easton, Pa., has purchased the property of the Phoenix Portland Cement Corporation, at Birmingham, Ala. This acquisition will increase the company's production capacity to 12,500,000 barrels yearly. The plant which was built in 1926 is well designed and modern in every respect and has ample reserves of material whether it is operated at its present capacity or increased in size. It is so designed that an increase of 50 per cent in capacity can be readily and economically made.

Unusual Service for the Contractor



Round and Square Deformed Bars

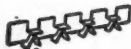


High Chair



Lower Slab Bar Spacer

Bar Chair



Lower Beam Bar Spacer



Joist Beam Spacer

Welded Solid Steel Sash



Portable Electric Hand Saw

Ryerson combined service on all steel products saves time, money and trouble

The Special Contractors and Builders Division of Ryerson Steel-Service is without parallel in the building fields.

This department has its own warehouses and provides complete service on all reinforcing for concrete, Steel Joist, Metal Lath, Steel Sash, and all the various steel building products are also included.

In addition, structurals, bars, plates, sheets, rivets, bolts, wire, etc., are furnished from the general steel departments. Trench braces, jacks, electric drills, and hundreds of other tools needed on every job are supplied by the machinery and small tool departments.

Contractors use the Ryerson Warehouses as if they were their own. Reinforcing steel, lath, sash and other miscellaneous materials are kept under cover until they are ready to use each item. Delivery is according to their schedule.

Large fleets of trucks and private switch tracks help provide service unequalled by any other source of supply.

All types of jobs are figured and lump sum or pound price quotations prepared.

Write for Complete Information.

JOSEPH T. RYERSON & SON INC.

CHICAGO
CINCINNATI
BUFFALO

MILWAUKEE
DETROIT
JERSEY CITY

ST. LOUIS
CLEVELAND
BOSTON



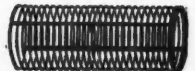
Triangle Wire Mesh Reinforcing

Continuous Stirrups



Step Reinforcement

Spirals



Expanded Metal Reinforcing

Expanded Metal Lath



RYERSON REINFORCING-SERVICE

and **ENDURANCE**
At a Low price



Wonder Tilting Loaders built in 5-7-10-14 cubic foot capacities.

Wonder Non-Tilt Loaders built in 7-10-14 cubic foot capacities.

This 3 1/2 S Wonder Mixer

GIVES the contractor a speedy, durable and reliable trailer outfit for the 1/2-bag mixing job. It will help you pour more sidewalks, driveways, house foundations, curbs and gutters, and other small and scattered jobs better and faster—more jobs with more profit per job.

This 3 1/2-S Wonder Tilting Mixer has all those improved and exclusive features that have made Wonder Mixers always the leaders wherever speed on the job and endurance under long service are required.

There is the Wonder Figure-8 Mixing Action—sturdy Mixing Drum on ball-bearings, guaranteed for the life of the mixer—Bronze-bushed Drive Shaft—Convenient Hose Connection—Quick and Easy Tilting Action—Discharge from either side—Spring-cushion Frame—Real Dependable Power Plant—Roller-bearing Wheels—Alemite Lubrication.

All of this you get—backed by Wonder Mixer reputation—along with the economy of **LOW PRICE**. Send the Coupon now for detailed specifications and prices of the Wonder Mixer suited to your work.

The Wonder Catalog of Tilting Mixers describes fully all sizes of Wonder Mixers. You'll find the equipment listed for any kind and size of mixing job.

Construction Machinery Company
 103 Vinton Street Waterloo, Iowa
Originators of the Single Opening Tilting Mixer

Construction Mehly Co., 103 Waterloo, Iowa

I'm certainly interested in bigger profits this year. Please send me catalog and prices on machine checked below.

Tilting Loader Models

— 3 1/2-S — 5-S — 7-S

— 10-S — 14-S

— Non-Tilt Mixers

Tilting Trailers

— 3-S — 3 1/2-S

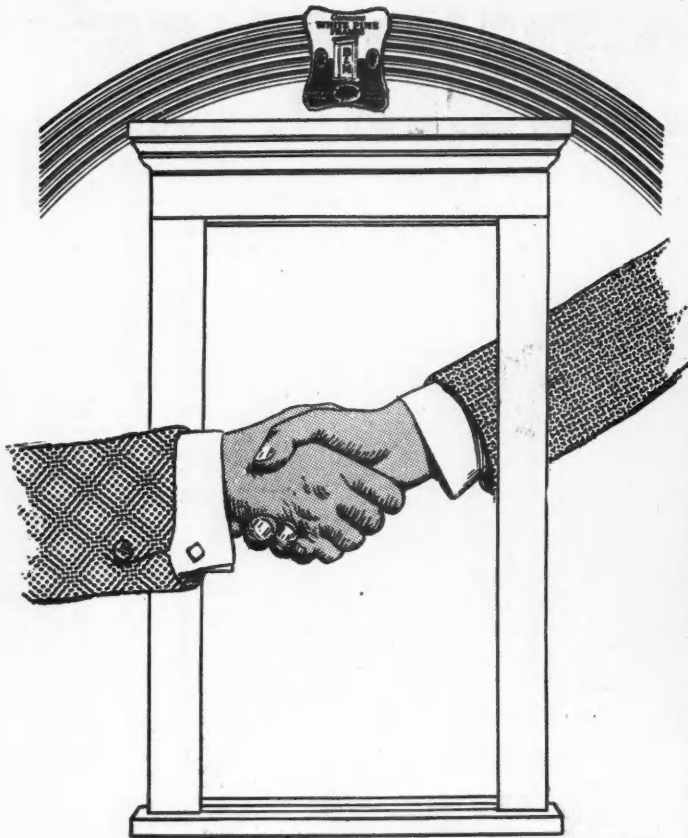
— 5-S With Auxiliary Hoist for plaster.

Name _____

Street _____

City _____

State _____



The Frames That Make Friends for Dealers

The customer who buys Bradley-Miller frames from you becomes a permanently satisfied customer who knows from experience that the products you sell deliver satisfaction.

The customer who doesn't know a good frame from a bad one today will know in six months or a year. With Bradley-Miller frames, he will still be your friend.

The genuine Michigan White Pine we use insures durability and freedom from splitting, warping and rotting. The result is frames that stay straight and true and make tight, weather-proof windows and doors.

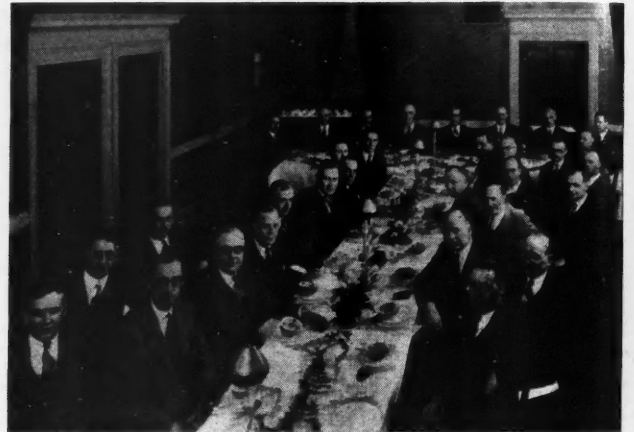
Write for the Bradley-Miller Booklet

BRADLEY-MILLER & Co.

Marquette Street,
BAY CITY, MICHIGAN

Lehigh Holds Testimonial Dinner

A TESTIMONIAL dinner was recently tendered by the Lehigh Portland Cement Company, at the Engineers' Club, New York City, to the educational and industrial leaders who have co-operated with this company in its dealer program. This program, which has been under way for several months, consists of aiding building material dealers throughout the country, both those who handle Lehigh products and those who do not, through scientific investigation of their most difficult problems.



The Lehigh Portland Cement Co. Entertains Educational and Industrial Leaders Who Have Aided in Its Dealer Help Program.

Hundreds of dealers have been interviewed on each problem, averages compiled and conclusions deduced. Practical solutions reached by progressive dealers are explained in detail, while special articles are written by leading "outside" experts on each subject. The total findings are then published in attractive illustrated books and distributed, free of cost, to thousands of dealers in every part of the country.

Thus far "Delivery Costs" and "Credits and Collections" have been treated in this way. Other subjects yet to be investigated include "Advertising," "Specialties" and "Yard Layout."

At the speakers' table, at the testimonial dinner, were Dr. James C. Egbert, Director of the Columbia School of Business; Professor Hugh Agnew, Professor of Marketing, New York University; Dr. H. K. Nixon, Director of Advertising Research, Columbia School of Business; Mr. Ernest I. Kilcup, Director of the National Association of Credit Men; Mr. F. W. Lovejoy, Sales Manager of the Vacuum Oil Company; Mr. Fred Cyr, Credit Manager of the United States Rubber Company, and Mr. H. B. Anderson, of the Seaboard National Bank.



Take Over Steel Fixture Business

THE Northwestern Expanded Metal Co., 407 S. Dearborn Street, Chicago, has recently taken over the business of the Federal Steel Fixture Company, of Chicago, and will market the latter company's line of high grade steel lockers, steel shelving, bins, racks, blue print cabinets and other steel equipment, under the trade name "Federal-Norwest." The Northwestern Expanded Metal Co. has in the past been identified exclusively with the manufacture of expanded metal products. Taking over of the Federal business is in line with the trend of the times which indicates the growing possibilities afforded by the increasing demand for steel equipment. Because of the many distinctive features of this line and because of the increased manufacturing, engineering and promotional facilities now available, the line should prove exceedingly interesting to dealers.

C E R T I F I E D E A R N I N G A B I L I T Y



The **BIGGEST SAVINGS** in the **BUILDING INDUSTRY** can be made in **HAULAGE**

Dissipation of profits through unregulated haulage and unknown delivery costs is the biggest drain on business today. Haulage too often remains haphazard, despite the fact that modern efficiency methods have been applied to every other department of commerce and industry.

Federal's Certified Earning Ability has done more to put

haulage and delivery into the same *known controlled* class with rent, payroll, etc., than any one thing in the transportation field. With 43 chassis, one to 7½ tons, and more than 100 body-and-chassis combinations, Federal offers this Certified Earning Ability to every branch of industry concerned with the moving of merchandise or materials.



ASK FOR

The Federal System of Truck Expense Control
20,000 business men have received this simple key to more economical truck operation. It gives absolute control of every item of haulage or delivery expense. You need it, regardless of how many or what make of Trucks you own or what cost accounting system you use. It's free—write for it.

THE FEDERAL MOTOR TRUCK COMPANY, 5842 Federal Ave., DETROIT, MICH.
"Leading Specialists in Commercial Transportation"

FEDERAL TRUCKS

ALL SIZES—FOURS & SIXES

(167)

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Cool Nights In Hot Weather



*Residence of Harry W. Rubloff, Glencoe, Illinois.
Cabot's Quilt and Stained Shingles used.*

When you are building your own or some one else's summer home, give comfort the right of way.

A roof, red-hot after a long day under the sun, will spoil the comfort of any sleeping quarters.

A roof, quickly, easily and cheaply insulated with Cabot's Quilt will protect you against the heat, and always give you

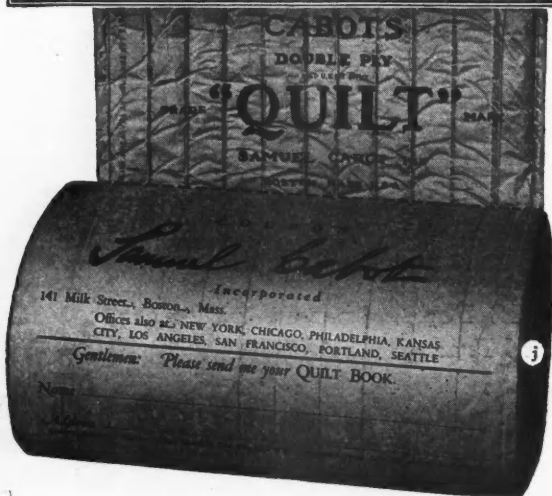
Cool Nights in Hot Weather

Simply apply Cabot's Quilt between the rafters.

Cut the coupon below (Roll of Quilt) and send it today for full information on Quilt.

Cabot's Quilt

In Successful Use for Over 30 Years



Wagner Engineer is Honored

C. P. POTTER, engineer in charge of the large motor and transformer divisions of the Wagner Electric Corporation, of St. Louis, Mo., was recently elected chairman of the St. Louis section of the A. I. E. E., an honor bestowed upon him in recognition of his many years of activity in the organization which he has served since his graduation from the University of Illinois in 1909.

The Wagner Electric Corporation also announces the removal of its New York branch sales office from 50 Church St. The New York City service station, however, remains at 321 W. 54th St.



Announce New Product

THE International Cement Corporation, 342 Madison Ave., New York City, announces a new product, a perfected portland cement which produces concrete ready for use in 24 hours. This product is described as a true portland cement containing no admixtures and requiring no special methods in its use. It is made by a special process and will be marketed under the copyrighted name Inco Cement.



Inland Steel Announcement

THE Inland Steel Company, First National Bank Building, Chicago, announces the following change in personnel: F. A. Ernst has been appointed assistant district sales manager of the company's St. Louis office, succeeding W. F. Brumm, who was advanced to the district sales managership of this office last August.



Lupton Moves Chicago Office

THE Chicago branch office of David Lupton's Sons Company, steel window manufacturers, has been moved from the Steger Building to new and larger quarters at 333 N. Michigan Ave., Suite 523-528. Roy A. Sanborn in the district manager in charge.



A. S. T. M. Holds Annual Meeting

THE thirty-first annual meeting of the American Society for Testing Materials will be held at Chalfonte-Haddon Hall, Atlantic City, N. J., June 25 to 29, 1928.



Hawley Elected President

ANNOUNCEMENT has been made that George E. Hawley has been made president and general manager of the Master Woodworker Mfg. Co., to succeed W. T. Fisk. Mr. Fisk, who through pressure of other business found it necessary to resign from the presidency of the company, has been made vice-president and will remain on the board of directors.

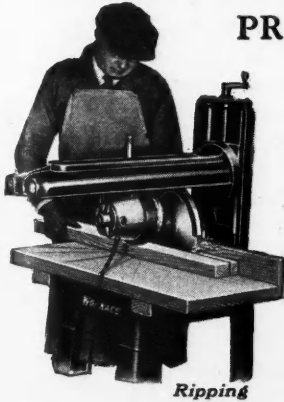


Shingles in New Colors

THE Asbestos Shingle, Slate & Sheathing Company, of Ambler, Pennsylvania, has added to its line two new colors of Ambler asbestos shingles for application by the French honeycomb method. These shingles are now being made in the purple and buff shades which heretofore have been available only in Ambler asbestos shingles for application by the American method. These two additional colors add to the variety of tones that can be used in a roof and make it possible to carry out almost any desired color scheme. These shingles are also available in red, green, brown and black, as heretofore.



PRODUCT OF J. D. WALLACE & CO.



Ripping



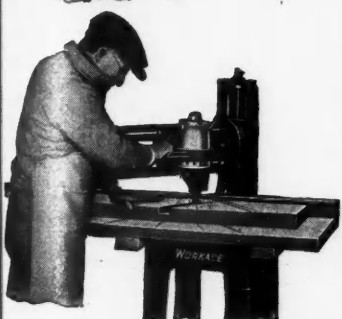
Cross Cutting



Bevel Cutting



Dado Cutting



Routing, Shaping, Tenoning



Greatest Value Ever Offered

Here is a high grade machine built to take care of all cutting operations—any angle—compound meters—cutoff—ripping, dadoing—tenoning and routing, shaping, fluting, boring, sanding—practically all operations required in the shop or on the job.

Amazing low price
Sold on Easy Terms
if Desired

Send the coupon for full description
and time payment plan



J. D. Wallace & Company
136 S. California Ave., Chicago, Ill.

Send full description of
Work Ace Radial Saw
and time payment plan.

If interested in other
individual portable machines check here

Name.....

Address.....

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

"Convenient?"



....*Why,*
it works like magic!"

There's surely no secret connected with the popularity of Higgin's new rolling screen. It has the usual advantages of other rolling screens, with certain *exclusive* features of its own!

Its improved construction is based on the specialized skill of men who know *their* work as thoroughly as you know *yours!* In every detail, whether it be one of beauty or construction, this screen is a revelation of modern efficiency. There's *magic in the way it operates!* And since it's a Higgin product, you know it will *continue* to operate.

The coupon will bring you our new illustrated booklet on rolling screens. Mail it now.

THE HIGGIN MFG. CO.

Specialists in Screens since 1893

General Offices: Washington Ave., Newport, Ky.
Kansas City, Mo., Toronto, Ont.

HIGGIN

ALL METAL
SCREENS

The Higgin Mfg. Co.
502 Washington Ave.
Newport, Ky.

Please send complete information
regarding your new rolling screen.

Name _____

Street _____

City _____ State _____

Screens that last longest, cost least -- Higgin Screens last!

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.

"Diesel and Oil Engineering Handbook" by Julius Rosbloom, published by The Industrial Institute, Inc., Brooklyn, N. Y., has been revised and republished in a fourth edition. It is a practical book of instruction and ready reference on Diesel and other oil engines of both land and marine types. Price \$5.

The United Hardware & Tool Corporation, 74 Reade St., New York City, has issued a new 80-page catalog, No. 40, covering its line of hardware and tool items.

Francis Keil & Son, Inc., 401-425 E. 163rd St., New York City, has issued a new 1928 catalog under the title "Miscellaneous Hardware and Electrical Goods."

The Honeywell Heating Specialties Co., Wabash, Ind., offers a pamphlet illustrating and describing its various "Automatic Controls for the Oil Burner."

Standard Sanitary Mfg. Co., Pittsburgh, Pa., offers two pamphlets in full colors, illustrating its line of colored bathroom fixtures and furniture.

"A City Planning Primer" has been published by the Advisory Committee on Zoning, appointed by Secretary Hoover, of the U. S. Department of Commerce, and may be secured from the Superintendent of Documents, Government Printing Office, Washington, D. C. Price 5 cents.

The Celotex Company, 645 N. Michigan Ave., Chicago, has issued a pamphlet containing a report made by the Investigating Committee of Architects and Engineers on an investigation of the manufacture of its Acousti-Celotex and inspected installations.

The Kolstad Mail Box Co., 318 West First St., Duluth, Minn., offers a new catalog of its built-in mail boxes containing a number of additions and improvements in the line.

The Chamber of Commerce of the United States, Washington, D. C., has published a report compiled by the Civic Development Department entitled "City Planning and Zoning Accomplishments."

The Richards-Wilcox Mfg. Co., Aurora, Ill., has brought out a new catalog No. 44 under the title "Distinctive Elevator Door Hardware which is very completely illustrated with installations and diagrams and contains complete information.

"Second Mortgages and Land Contracts," by Samuel N. Reep, published by Prentice-Hall, Inc., 70 Fifth Ave., New York City, is described by the publishers as "the first complete, authoritative and thoroughly comprehensive treatise covering every phase of second mortgage financing." Price, \$5.

"Joint Wiping and Lead Work," by William Hutton, published by the Scientific Book Corporation, 15 East 26th St., New York City, is described as "A Practical Treatise on the Preparation of Lead Pipe and Connections and the Wiping of Joints in Various Positions." Price, \$1.

"Cutting the Traffic Knot" is the title of a booklet published by the Universal Portland Cement Co., prepared from data issued by various state highway departments showing the facts on traffic congestion and methods of relieving it.

The Indiana Limestone Company, Box 757, Bedford, Ind., has issued a circular under the title, "The Vogue for Color-As Reflected in Building Stone."

Geier & Bluhm, Inc., 670 River St., Troy, N. Y., offers a pamphlet describing its convertible level, Model 45, for contractors and builders.

Nature's Permanent Mineral Colors

Not Just
MORTAR COLOR
but the best!

WHEN you select materials, mortar colors for example, to go into the homes you build, you have but one choice. You may select "just any" colors without reference to trade name, reputation or proved worth. Or you may select Clinton Colors, because you believe that reliability, uniformity and permanence are factors worthy of consideration.

For more than forty years builders and architects have looked upon Clinton Mortar Colors as they would upon a trusted friend—a friend always reliable and long since proved worthy of their faith.

Complete information on Clinton Mortar and Cement Colors and their use will be sent upon request.

CLINTON METALLIC PAINT CO.

568 Clinton Road
Clinton, New York

Clinton Mortar Colors

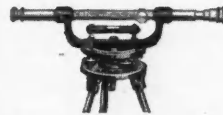
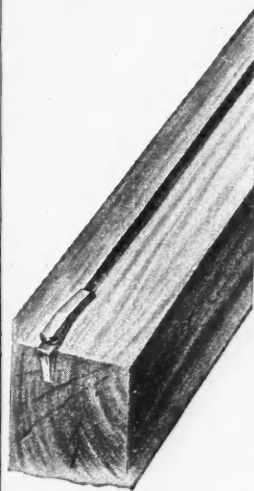
CLINTON METALLIC

PAINT COMPANY

CLINTON N. Y.



Be sure they're
Starrett's



No. 101C Leveling Instrument with telescope, long legs and ground level vial. Only \$25.00. Others as low as \$15.00.



Starrett No. 550 Steel Tape. A fine tape at a low price.



No. 514 Tape Hook, used as shown. Mighty handy.



No. 690 Tape. Handsome, strong metal-lined leather case, nickel trim.

Ask for Starrett Steel Tapes. They give you the most for your money. The bright steel graduations stand out sharply against the jet black background. There, at a glance, is the correct reading in feet and inches. There's a Starrett Steel Tape for every need, including the Starrett No. 520 Stainless Steel Tape for use in wet and mud.

Starrett Leveling Instruments and Transits are easy to operate accurately; and their prices are low. Ask your dealer to show you them.

Write us for a copy of the new Starrett Catalog No. 24 "6" illustrating and describing more than 2500 Starrett Tools.

THE L. S. STARRETT CO.

World's Greatest Toolmakers
Manufacturers of Hacksaws Unexcelled
Steel Tapes—Standard for Accuracy

ATHOL, MASS., U. S. A.

Use Starrett Tools

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 W. S. Dickey Clay Mfg. Co., 200 New York Life Bldg., Kansas City, Mo., has prepared a small folder on the new Dickey Round-Square flue lining, a new product with a square exterior for easy setting and a round interior for efficient draft.

The Adensite Company, Inc., 116 W. 39th St., New York City, offers a folder on its product, Adafint, an applied hardener for cement floors, in crystal form.

The Murray Tile Co., Inc., Cloverport, Ky., offers a folder illustrating in colors its Murtico quarry tile.

The American Enameled Products Co., Chicago, presents a folder in colors illustrating its line of bathroom cabinets in various colors.

The Fairbanks Company, New York City, publishes a catalog covering its complete line of wheelbarrows for all purposes.

Chas. Morrill, Inc., 100 LaFayette St., New York City, offers two folders, one a catalog sheet showing its various sawsets and punches and the other, a reprint of an article on "How to 'Fit' or Joint, Set and File Saws."

The Cornell Iron Works, Inc., 26th St. and 11th Ave., New York City, publishes a booklet entitled "Cornell Rolling Doors," illustrating its doors and presenting detail drawing of installation.

The Laco Gas Burner Company, Griswold, Iowa, offers a group of circulars describing the gas, or oil, burners which it manufactures for heating purposes.

"Dry-Ice—A New Refrigerant," is the title of a new booklet published by the Dry-Ice Corporation of America, 50 E. 42nd St., New York City, describing the manufacture

and use of this new refrigerant, frozen carbon dioxide gas.

The Concrete Engineering Co., 1141 N. 11th St., Omaha, Neb., has published a booklet under the title, "Reinforce—With Ceco Welded and Triangle Fabric," covering the use of its product in reinforced concrete.

The Bell & Grasset Company, 3000 Wallace St., Chicago, offers a folder illustrating and describing its indirect water heaters.

The Nash Engineering Company, South Norwalk, Conn., offers its Bulletin No. 71 on the Jennings vacuum heating pump, manifold type, for return line heating systems and other vacuum work where liquid is handled with gas.

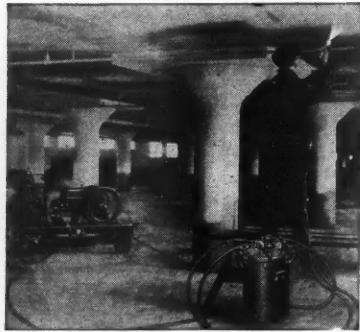
"Spray Coating—Its Hazards and Safeguards" is the title of a booklet published by the Hartford Accident and Indemnity Company of Hartford, Conn., which is the result of an investigation into the health and property hazards connected with the use of spray lacquers.

"The Story of Rope" is a new booklet published by The E. T. Rugg Co., Newark, Ohio, telling of the process of manufacture of rope and twine and of the Rugg rope products.

"Trade Ethics and Marketing Policies" is the title of a new booklet published by the Indiana Portland Cement Co., Indianapolis, Ind., a subsidiary of the International Cement Corporation, of New York. The title applies to the ethics and policies of this company in the selling of its Lone Star cement.

The Ingersoll-Rand Company, 11 Broadway, New York City, offers a condensed catalog describing such of its products as portable compressors, rock drills, paving breakers, hoists, clay diggers, pneumatic tools, hose, steel, etc.

The General Insulating & Mfg. Co., Alexandria, Ind., offers two booklets under the titles "Insulation—Rock Wool Cork" and "Insulation—Rock Wool Flexfelt." These cover the subject of insulation and the qualities of these products in a most thorough manner.



Outside or In—

Painting the DeVilbiss way saves time and money

No matter what nor when you paint, painting with the DeVilbiss Spray-painting System speeds up your work 3 to 5 times. Hours of time are saved and more dollars of profit made.

Besides, improved work is done on every sprayed job and you have better satisfied customers.

Investigate this well established, greater profit DeVilbiss way of painting. Interesting facts will be gladly mailed. Address—

THE DEVILBISS CO. 238 Phillips Ave. TOLEDO, OHIO

New York
Chicago
Detroit
Philadelphia
Indianapolis
San Francisco

DeVilbiss
Spray-painting System

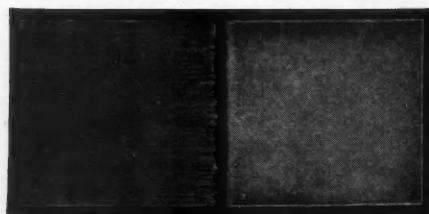
Pittsburgh
Cleveland
Cincinnati
Milwaukee
St. Louis
Minneapolis
Windsor, Ontario

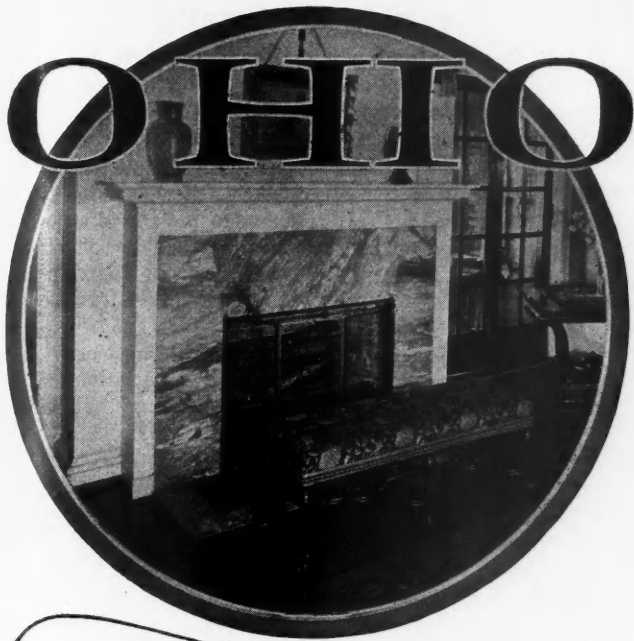
Illustrating the Comparative Hiding Power of Brushed and Sprayed Coats of Paint

The hand brush puts on an uneven coating and the thin paint in the grooves wears away quickly. . . . The DeVilbiss Spray Gun applies a strong, even paint film that covers perfectly, that is durable and that wears down uniformly.

(Illustration shows same paint applied on identical surfaces—Photograph is unretouched and greatly reduced in size.)

One brushed coat -- One sprayed coat





Beautiful!
But Will It
WORK
?



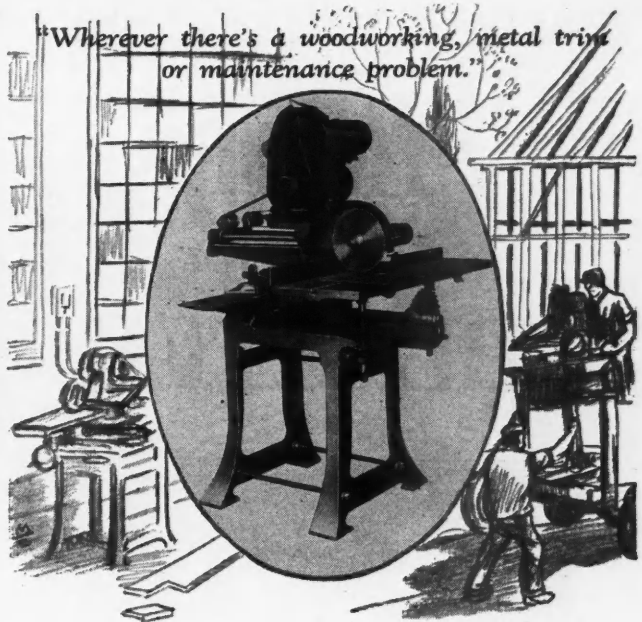
Yes

That is the answer to the prospective home owner's query. A fireplace that actually functions as a heating unit presents a great appeal to all home lovers. We manufacture a complete line of fireplace equipment, from gas logs, gas heaters, andirons, portable fireplace baskets to dome dampers, etc. All are fully guaranteed. We invite you to inspect our line. Coupon below brings our illustrated catalog.

The Ohio Foundry & Mfg. Co.
Steubenville, Ohio
Established 1846

THE OHIO FOUNDRY & MFG. CO.
Steubenville, Ohio.
Gentlemen: Please send me your catalog.
My Dealer's name is.....
Name.....
Street.....
City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Better Work—More Money—No Fatigue

When the 20th Century Woodworker is in use, a steady flow of accurate work is produced. More money is made, because of augmented production facilities. Back-breaking fatigue vanishes, because of the ease and smoothness of 20th Century operation. This is real efficiency.

This sturdily-built, ball bearing machine outstrips all others in performance. Gas or electric motor. There is no machine like it. Others are merely similar. Investigate it, now.

20th Century Wood Worker

THE LARGE ILLUSTRATION ABOVE SHOWS GAS MOTOR.

Electric motors furnished A. C. 2-phase or 3-phase, 110, 220 or 440 volts. Single-phase connected for either 110 or 220 volts. D. C. 110 or 220 volts. Information on other motors cheerfully furnished. This is the best combination woodworker that can be driven by electricity or gasoline.

MAIL THIS COUPON NOW

Twentieth Century Sales Agency, Agents for Manufacturers
1321 Arch St., Philadelphia, Pa., Dept. P
Please send me, without obligation, full details concerning the ownership and operation of the 20th Century Woodworker.

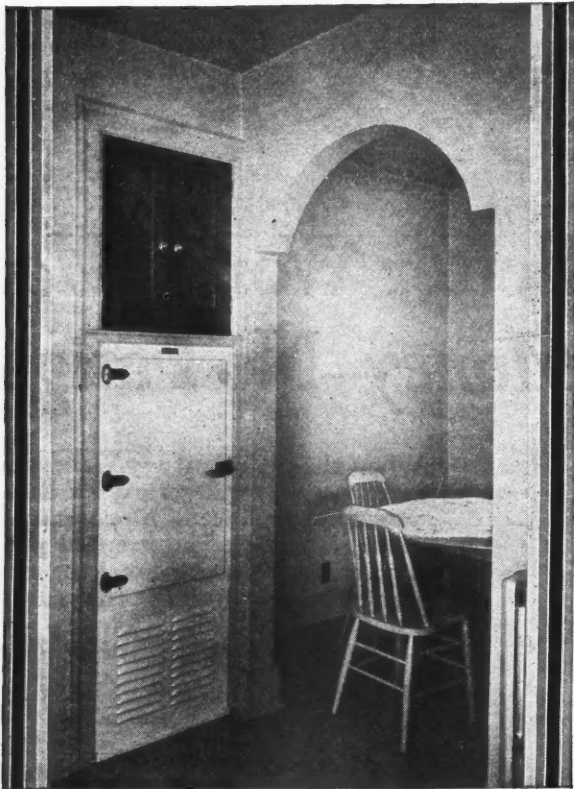
Name.....
Firm.....
Address.....

PLASTERING IS 90% OF
THE VISIBLE INTERIOR

LIME

—best for

PLASTER



Give the plasterer an opportunity to display the artistry of his craft. He can give you the highest type of lime-plastered walls and ceilings for as little as 10% of your total building appropriation. He knows the superior working qualities of lime plaster over the many substitutes . . . Specify Gibsonburg Lime, Ohio's Super-Finish.

Plaster is a word too often used in a broad sense. There are many kinds of plaster. LIME plaster gives an assured base for decorating and papering.

Gibsonburg

Finishing  Lime

THE GIBSONBURG LIME PRODUCTS CO., Gibsonburg, Ohio

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

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 Sheet Steel Trade Extension Committee, Oliver Bldg., Pittsburgh, Pa., has published a new booklet, "How to Lay Steel Roofing." It is intended for free distribution to farmers and is described as the first booklet of its kind ever produced. There is also available from this organization another booklet entitled, "Steel Roofing—Its Use and Application."

"The Key to Firesafe Homes" is the title of a new booklet published by the Portland Cement Association, 33 W. Grand Ave., Chicago, presenting the advantages of concrete construction for homes.

The Certain-teed Products Corporation, 310 S. Michigan Ave., Chicago, has issued a folder illustrating a number of the important buildings in which its linoleum has been used, and entitled "Big Business Eliminates Guesswork from Buying."

"Steel Doors Made Silent" is the title of a new folder prepared by L. Mundet & Son, Inc., 461 Eighth Ave., New York City, illustrating the construction by which this company eliminates vibration and annoying sounds from its doors.

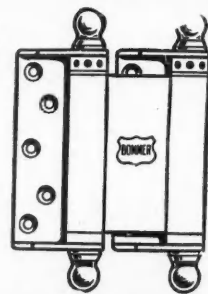
The Orna-Metal Corporation, Carolina and Fourth Sts., Buffalo, N. Y., offers a folder of "Detail Specifications of Orna-Metal Lavatory Enclosures."

The John S. Tilley Ladders Co., Inc., 100-122 Second St., Watervliet, N. Y., offers a folder illustrating its various ladders, scaffolding, trestles, window jacks, brackets, etc.

Bommer

Spring Hinges

are
the best



to
use

Millions and Millions

of People are Pushing

Them

whenever they open a door

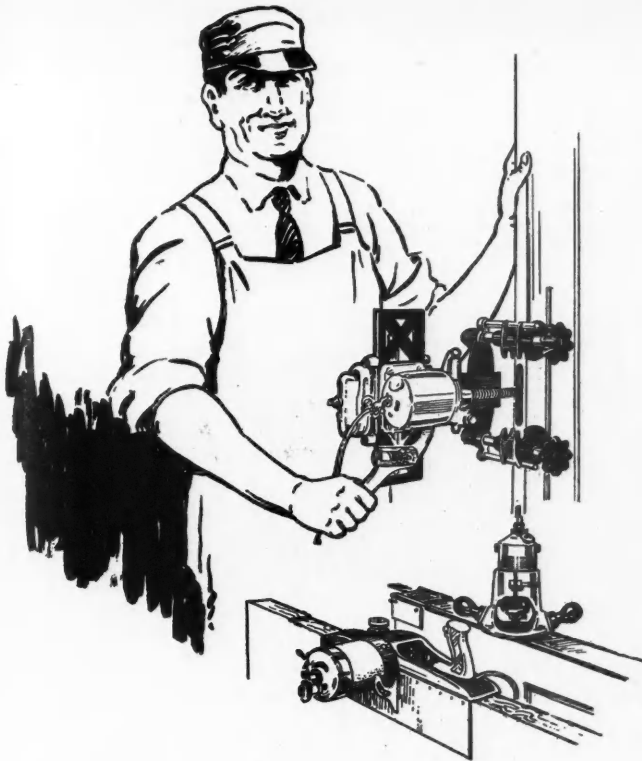
Follow the line of least resistance
Use **Bommer** Always

They are the best

Bommer Spring Hinge Co., Brooklyn, N. Y.

20 r
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"TH
and
me
only
Pow
"Tir
is th
door
butt
18,00
blad

12
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D
R. L. C
Please
Name.



“25 doors
a day!

“WITH this Carter Door Set I can fit, hang and lock a door complete in 20 minutes easy. This whole outfit has paid for itself in less than three weeks.

“This Carter lock-mortiser, for instance. It clamps on and centers itself, no matter how thick the door. Give me two minutes and I'll have this lock put in! Why it only took ten minutes to fit the door with the Carter Power Plane.

“Tired? I should say not—the heaviest tool of the three is this 23-pound lock-mortiser and it clamps on the door. The power hand plane weighs 9½ lbs., and the butt-router only 5 lbs. You don't need weight; it's the 18,000 r.p.m. of the motor and the patented Carter blades that do the work—fast and smooth.”

Write for details and Folder A.

R. L. CARTER CO., Inc.

1281 CHESTNUT STREET PHOENIX, NEW YORK

Branches in Principal Cities.

CARTER DOOR SET

R. L. Carter Co., Inc., 1281 Chestnut St., Phoenix, N. Y.

Please send detailed information and Folder A without charge or obligation.

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

Gimco ROCK WOOL

Quick
Easy
Low Cost



Insulation

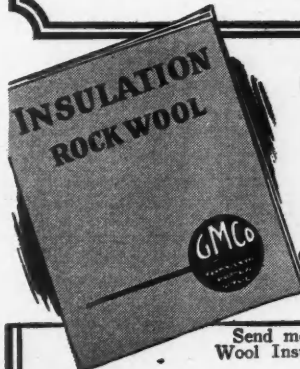
The low cost and ease of application of Gimco Rock Wool gives it preference over any other insulation. It not only insulates against cold and heat, but also against Fire, water, vermin and Sound.

This silica rock is found only at one place—Alexandria, Ind., U.S.A.

Three Convenient Forms

1. LOOSE ROCK WOOL—Light, fluffy and easy to handle. Packed in handy 50-pound bags.
2. FELTED ROCK WOOL (Flexfelt)—Easy-handling, blanket-like form, fabricated between metal lath, providing stucco or plastering base.
3. Granulated Rock Wool—Loose Rock Wool ground into uniformly small particles. Ideal for hard-to-get-at applications.

Ask your building supply dealer about Gimco Rock Wool. If he doesn't handle, write us direct.

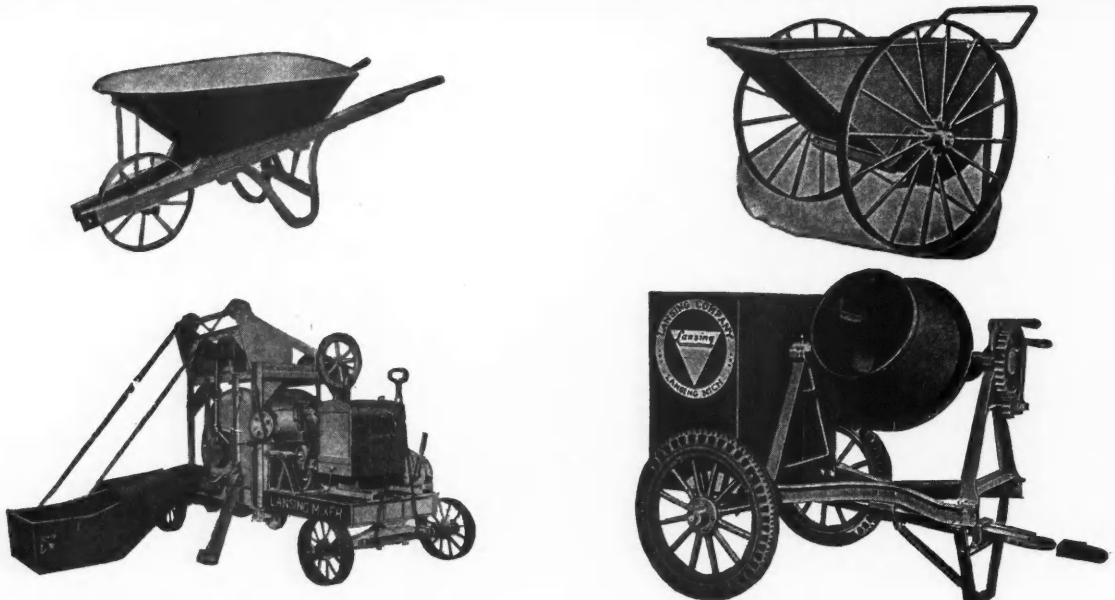


General Insulating
& Mfg. Co.
ALEXANDRIA, IND.

Send for This
New Book on
Insulation

Send me copy of free book on Rock Wool Insulation.

Name.....
Company.....
Address.....



Nearly half a century of manufacturing and distributing experience is back of Lansing Products. Buyers of Lansing equipment are assured of prompt shipment, efficient repair service and low freight rates. Send for our General Catalog.

"There is a Lansing Dealer in your vicinity"

LANSING - COMPANY

Factory: LANSING, MICHIGAN
Branches: Boston, Kansas City, Minneapolis, Chicago, New York, Philadelphia

SAMSON SPOT SASH CORD

SOLID BRAIDED COTTON

SAMSON SPOT SASH CORD is made of extra quality cotton yarn spun in our own mills and is guaranteed to be free from imperfections of braid or finish. It is the most durable material for hanging windows. It can be easily distinguished by our trade-mark, the Colored Spots. Send for samples.

SAMSON CORDAGE WORKS - BOSTON, MASS.

"There is a Difference in Sash Cord"



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Now!



Only \$95⁰⁰

for this new portable
SYNTRON

Motorless
Electric
Hammer



HERE'S the lowest priced portable electric hammer on the market. It operates from the light socket, doing the work of ten men. Delivers 3600 powerful, speedy blows a minute, easily plowing its way through masonry, brick, stone, tile or marble, drilling, chipping, scaling or channeling. Type MK-60, drills up to 5/8-inch diameter at rate of 2 1/2 inches or more per minute. Outfit consists of Hammer, Controller, 50-ft. Extension Line, Drill Chuck, Draft Pin, 1 pint oil, carrying case and instruction card.

Price—net
Only \$95.00

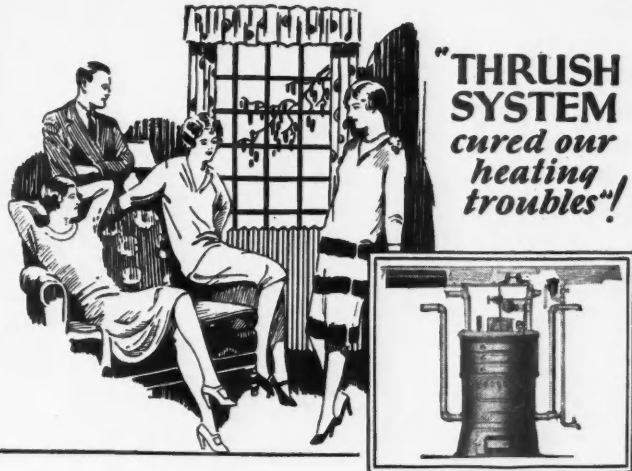
SYNTRON COMPANY

Dept. A-6, Lexington Ave. Pittsburgh, Pa.

SYNTRON CO., Pittsburgh, Pa.

Please send me complete information at once concerning your new SYNTRON Portable Hammer at new low prices.

Name
Address.....



Put **THRUSH SYSTEM**
on your Sales Force!

THE HEATING plant you put in the homes you build has much to do with the ease with which the sale may be made. Nothing is quite so important in the enjoyment of a home as good heating. Hot Water heat is the best form of heating for homes and when it is Thrush equipped, it is the most economical and entirely satisfying method of heating known. Thrush Equipment saves 20 to 40% of the fuel and maintains healthful, uniform temperatures automatically.

If You Remodel Homes Use
THRUSH SYSTEM!

Thrush System may be put on an old Hot Water Heating plant or a new one. It makes any hot water job work better. When you remodel a home, remodel the heating plant too—inexpensively but efficiently. Put Thrush Equipment on it and you may save yourself the cost of having to put in a new heating plant.

You can build a reputation that will increase your prestige as a builder of homes—and your profit too—by adopting the Thrush System of Hot Water Heating for all of your houses

Specify
THRUSH SYSTEM
OF HOT WATER HEATING

Which HEATING PLANT for my Home?

H. A. THRUSH & CO., Dept. B
Peru, Indiana
Send your booklet "Which Heating Plant for My Home?" and more information.

Name _____
Address _____
Business _____

Never a Drop of Water in This Basement —It's Waterproofed with "ANTI-HYDRO"

The concrete basement in this building had to be absolutely dry because it contains a restaurant, also the equipment and storage rooms for the theater. In order to eliminate the slightest possibility of dampness the entire basement was waterproofed with a plaster coat mixed with "ANTI-HYDRO." It is *permanently* dry and free from the slightest suggestion of moisture.

You will find "ANTI-HYDRO" extremely easy to use. Being a liquid integral compound it mixes easily with water without the aid of skilled labor. It waterproofs, hardens and dustproofs concrete in one operation—accelerates the set of concrete, increases its strength and actually saves you money.

For 24 years "ANTI-HYDRO" has proved its merit on every type of concrete work. Results are *guaranteed permanent*. Use it on your next job.

ANTI-HYDRO WATERPROOFING G.

265-269 Badger Ave.

Newark, N. J.

ANTI-HYDRO
FOR PERMANENT CONCRETE
HARDENS WATERPROOFS



APOLLO THEATRE, INDIANAPOLIS, IND.

VONNEGUT, BOHN & MUELLER, ARCHTS.
BEDFORD STONE & CONSTR. CO., CONTR.

Re-Roofing With Natural Slate



EVERYWHERE, a common sight, is warning the public of this eventual necessity if they buy a home roofed with anything but material that is *known* to be durable. And what roofing material is better known to have withstood the test of time than Genuine Natural Slate?

Would not, therefore, the very sight of "A Slate Roofed House" invoke exceptional interest in the mind of your prospective buyer?

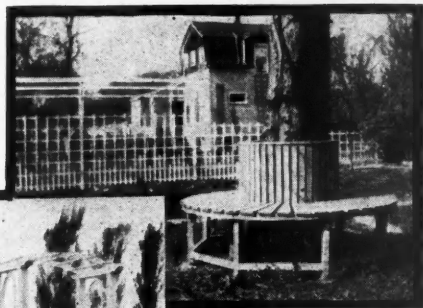
Literature on our special Quarry Cleft Slate as well as standard varieties will be mailed upon request, or return of this advertisement.



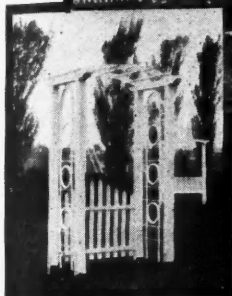
VENDOR SLATE CO.
INCORPORATED
EASTON, PENNSYLVANIA



GARDEN FURNITURE for Every Purpose

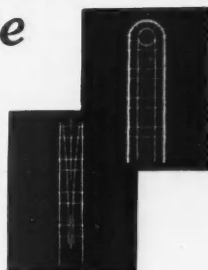


Mr. Schroyer, Setting Congress Park, Ill.



Merrill Gateway, Hinsdale, Ill.

All Designs Copyrighted June, 1926.



Dr. Read Fountain, Chicago, Ill. Tufa Rockeries of all kinds. A formation of petrified seaweed.

The Finishing Touch that adds beauty and distinction to the home, garden, summer resort, roadhouse, playground, etc.

We manufacture EZY KLING Trellises, Palmettos, Ornamental Wood Fences, Arches of all styles, Arbors of all descriptions, Benches, Tree Seats for around any tree, Bird Houses of Decorative Design, Stepping Stones for yards, Tufa Rockeries of all kinds, Cement Garden Furniture, Fountains, and any other kind of decoration wished. Dowell system of construction used.

We will gladly help you solve your decorating problems

EZY KLING GARDEN FURNITURE CO., Inc.

1116 Lake Street

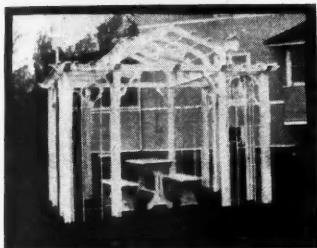
Village 7573

OAK PARK, ILL.

MAIL THIS COUPON FOR COMPLETE INFORMATION

Please send me more information.

Name.....
Street.....
City..... State.....



Villa Park Arbor.

FAMOUS ACHIEVEMENT!

Here is a machine which fills a long-felt want—a woodworker to which the individual motor drive principle has been applied.

Equipped with five motors, each with its own starting switch, it provides a complete equipment of woodworking machinery without belts or clutches. It has every good feature for which the FAMOUS Woodworker has been long noted—with the additional advantages which only individual motor drive for each unit can produce.

No belts to shorten or replace when they become worn—

No clutches to adjust—

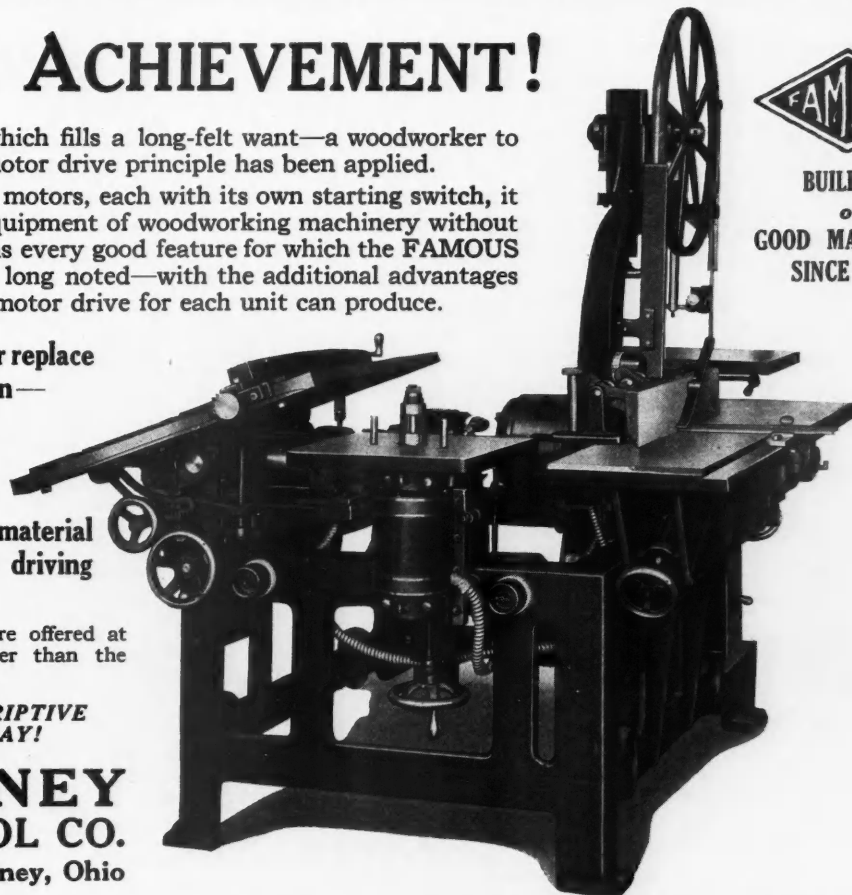
No possibility of small pieces of waste material falling into belts or driving mechanism—

All of these features are offered at a cost only slightly higher than the belt driven machine.

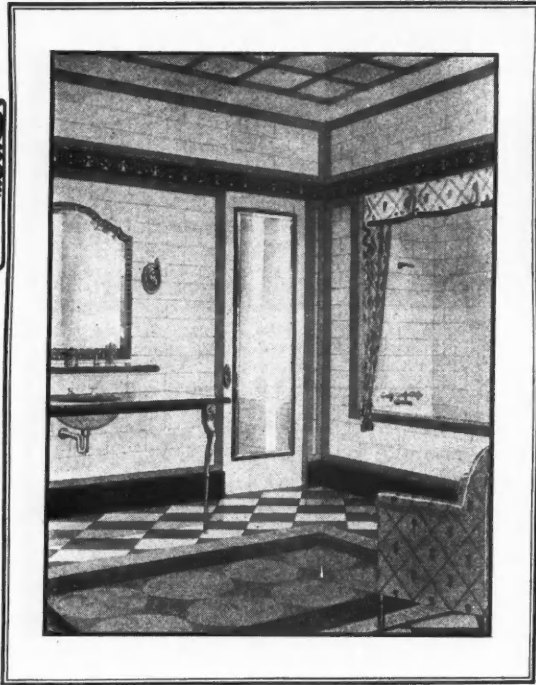
WRITE FOR DESCRIPTIVE BULLETIN TODAY!

THE SIDNEY MACHINE TOOL CO.

857 Highland Ave., Sidney, Ohio

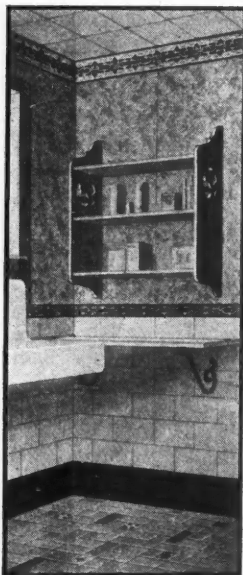


BUILDERS of GOOD MACHINERY SINCE 1904



A NEW WALL that Makes Homes Easy to Sell

Sameness has blocked many a sale. You know it's the touches of distinctive "differentness" that makes a woman prefer your property. Sani Onyx in bathroom and kitchen costs no more than commonplace materials. It *means* much more. New surface textures! New colors! Modern-to-the-minute. And as easy to clean and keep clean as a china dish.



Write now for a beautiful book showing installations in full color.

SANI ONYX A VITREOUS MARBLE

Sani Onyx, the new material for walls, ceilings, wainscoting, etc., is literally "hard as flint" because it is fused from rock ingredients. It may be had in plain sheets or tile pattern slabs.

[[We have some choice territory available for Construction Houses or representatives. If interested, write for particulars.]]

MARIETTA MANUFACTURING COMPANY
80 Brookside, Indianapolis, Indiana

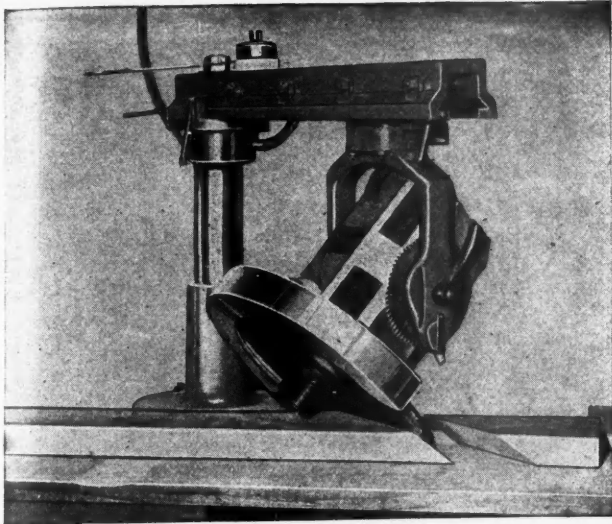
KIMBALL SA ELECTRIC ELEVATORS

Now, a Light Electric Elevator for every class of retail store, warehouses, hospitals, apartments, bakeries, mortuaries, office buildings, factories and other institutions where fast, safe, low cost elevator service is an absolute business necessity.

It meets a need for a safe, practical, inexpensive outfit for smaller business institutions.

Furnished complete. Information and prices upon request.





Saves 5 Men's Labor . . .

And then the Nason Construction Co., Swampscott, Mass., follow this up by saying:

"We cut sills, joists, studding, braces, frames, rout studs for belt, make Jack rafter cuts, all angle cuts of various degrees, rout for stair risers and treads, make window frames, use the machine in cutting flooring, trim and in fact from the commencement of the construction to its completion.

"We figure that we save 5 men's labor by using the DeWalt Wonder Worker and advance the completion of our job fully 25% sooner than we could without it."

Need we say more? Except that two men can easily carry it about—has direct drive—and is fully guaranteed, of course.

Let us arrange a DeWalt demonstration on your job. Send the coupon for details.

DEWALT

Wonder Worker

The Economy Wood Worker

DeWalt Products Co.,
665 New Holland Ave., Leola, Pa.
Please send me a supply of your Working Cost & Estimate Sheets which I understand you furnish on request.

Your Name

Firm Name

Address

Type of Business

FREE

Cash for Your Spare Time This Summer!

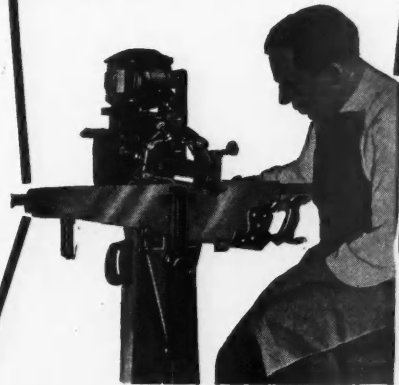
You can make lots of extra money in spare time this summer filing saws automatically with the Foley Filer. Think of the cash S. C. Moller, Long Beach, California, is making—"I file about 200 saws a month with the Foley." You are the logical man to get the saw-filing business from contractors, builders, carpenters, schools, factories, farmers, woodworking plants, and homes. File saws more than twice as fast as hand filers, and they'll cut better than ever. Get 50c or more for each saw.

Perfect Cutting Saws for Your Own Work

You'd find it hard to believe how smooth, fast and true a Foley-filed saw cuts until you've tried it! Users tell us the most expert hand filing can't compare with it. You'll get more work done with the same crew, and better work. The Foley Filer quickly pays for itself in wages saved and increased profits per job.

FOLEY AUTO MATIC SAW FILER

Files and joints in one operation— all kinds of hand saws (retooths old ones)—band saws 1/8" to 4 1/2" wide and cross-cut circular saws 3" to 24" in diameter. Mechanically accurate work. Easy to operate— no eyestrain.



Special Offer!

You can make real cash with a Foley this Summer—in fact, all year round. Send the coupon right now for FREE. Plan telling how to start a saw-filing business of your own.

FOLEY SAW TOOL CO. Inc.

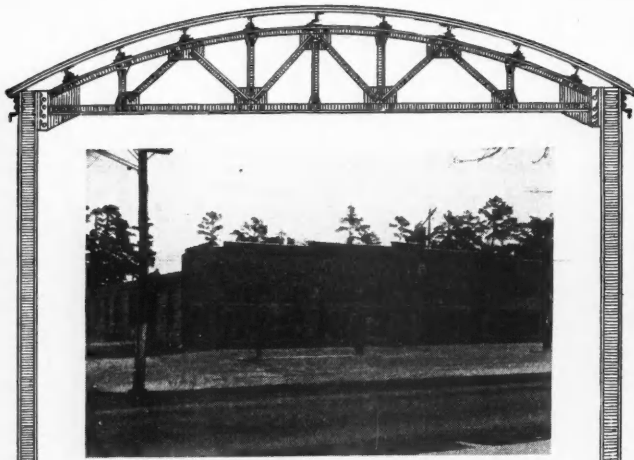
130 Foley Building, 9 Main St., N. E.
MINNEAPOLIS, MINN.

Please send FREE plan telling how to start a saw filing business in spare time, and details about the Foley Filer.

Name

Street

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



HARRY R. STILES GARAGE, MILLVILLE, N. J.

~of Importance to Contractors~

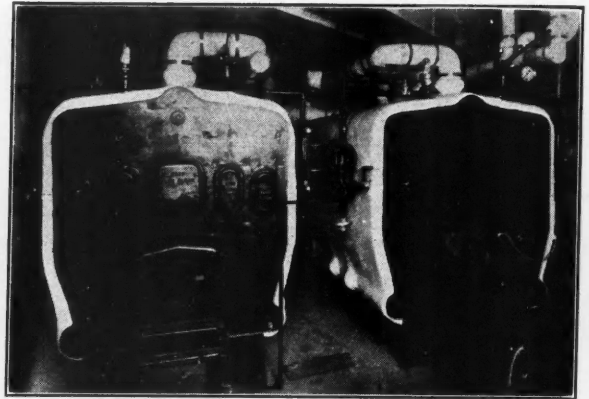
GENERAL MOTORS predicts the biggest year in the history of its business. All of the "independent" manufacturers look to this as the greatest year the automobile industry ever had. What does this mean to aggressive contractors? More business—more garage contracts! It will pay you to keep your finger on the pulse of building conditions in your territory. When you get a prospect for a new garage, jot down the specifications (roughly) and send them to us. Our Garage Construction Department will be glad to draw up plans and quote delivered prices on steel building products. No charge, of course! Write for our Garage and Steel Catalog.

**INTERNATIONAL STEEL
& IRON COMPANY**
Evansville Dept. 18 Indiana

INTERNATIONAL PRODUCTS

Store Fronts	Public Garages	Steel Trusses
Steel Columns	Steel Girders	Steel Windows
Steel Ceilings	Elevators	Skylights
Sidewalk Lights	Roof Ventilators	Coal Chutes

Our Complete Stocks Assure Prompt Delivery



Public School, District No. 1, Chester, New York, where a bad heating situation was corrected by putting in Burnham Boilers.

This Burnham Made a Better Than 1 to 5 Record in School Heat Saving

Four hot air furnaces and one large steam boiler couldn't keep the big brick school building at Chester, N. Y., warm all winter. The hill-top location is exposed to every wind that blows, and near-zero days are frequent.

The Children had to be sent home day after day because the rooms were too cold to keep them in. Five members of the Board of Education said so in their letters stating facts.

Last summer two Burnham S-36-11 square boilers were put in, one equipped to burn oil, the other, as a reserve, to burn coal.

The second boiler was not used last winter. The oil-fed Burnham, fired for only a total period of 1½ hours each day, kept the thermometer at 70 degrees all day on the coldest days.

You can get the facts of this installation from us, or from any of the members of the Chester Board of Education, who cordially invite inquiries from interested persons.

For descriptions, measurements and ratings, see Catalog 67.

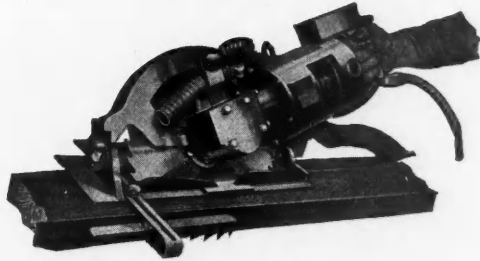


Burnham Boiler Corporation

Irvington, New York

Representatives in all principal cities of
the United States and Canada

Wodack Saws "Do the Work"



Model "B" for Bevel Cuts

Wodack Electric Hand Saw comes in 3 models. Model "B" has a tilting base for bevel cuts to 60°. The 11" diameter blade cuts 4 1/8 inches; therefore has the capacity for bevel cuts on large lumber. Also has rip and depth gauges, 3/4 h. p. G. E. universal motor for both A. C. and D. C. 60 cycles or less. Perfect Safety Guard. Operates from neighbor's light socket.

Write today for name of nearest demonstrator



F.L. ROGERS & CO.

23 S. Jefferson Street
CHICAGO, ILL.

FROM PITTSBURGH

"... The saw is O. K. and earned its cost on one job."
R. H. Uhlinger, Builder.

FROM NEW YORK

"... proven all that you claimed for it, and we have made a considerable saving in the cost of our jobs."
McKeown Bros. Co., Inc.

FROM WISCONSIN

"... have wished many times that the hours I spent sawing by hand could have been done with your power saw. I use it for everything—to make work easier."
Otto F. Rupnow, Wauwatosa.

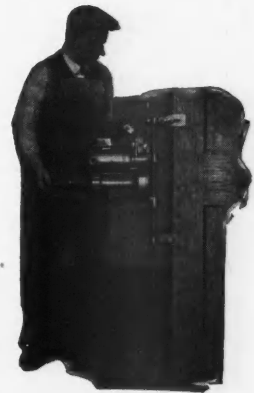
FROM MICHIGAN

"... we cut rafters eighteen at a time, each operation requiring about two minutes."
C. J. Samuelson & Sons,
Traverse City.

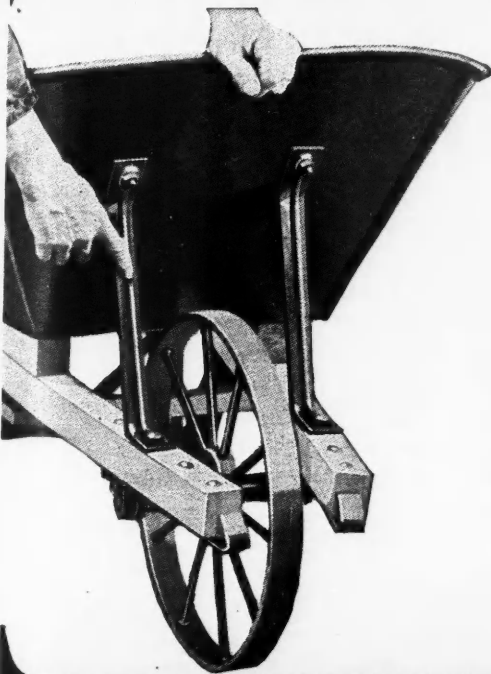
2 Tools in 1

Combination Lock Mortiser and Router

Cuts out both faceplate and barrel of a door lock in one operation without stopping. Will cut 60 doors an hour. If desired, Router sold separately. 1/2 h.p. G. E. universal motor.



ACCEPT NO SUBSTITUTE



Sterling

"V-formed" front braces give greatest strength and rigidity to both tray and frame.

Properly balanced barrows carry the load over the wheel. Therefore the greatest stress and weaving is at the front. Ordinary braces of flat stock or even angle iron were found not strong enough to meet Sterling requirements. Sterling designed, scientifically, a special "V-formed" front brace. It gives to Sterling barrows a strength and rigidity not found in any other barrow. *They can't wobble.* This is another reason why *they cost less per job to use.* Buy them for your next job.

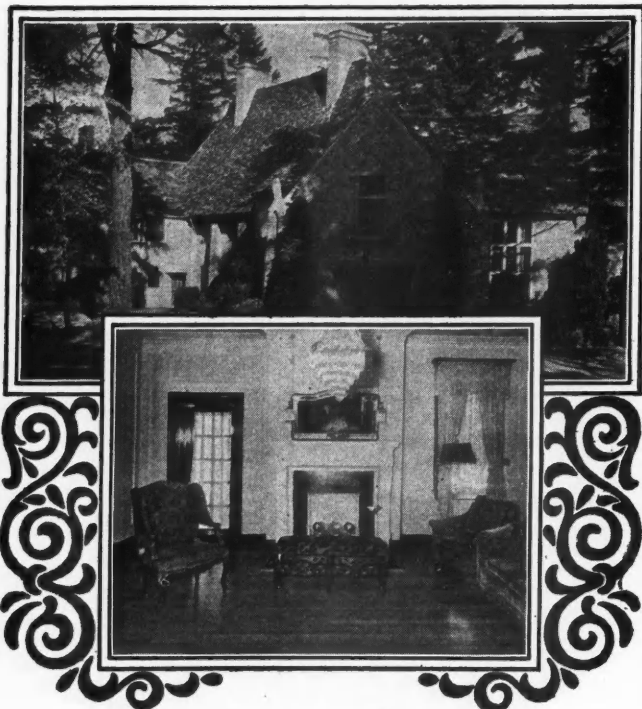
Leading Hardware and Equipment dealers have them—or they can get them quickly from our complete stock warehouses at Chicago, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, St. Louis.

STERLING WHEELBARROW COMPANY

STERLING ON A WHEELBARROW MEANS MORE THAN STERLING ON SILVER

Milwaukee

Wisconsin



**OAK FLOORS
enhance their value**

Houses laid with "Perfection" Brand Oak Flooring command a better price on the open market.

You can depend upon "Perfection." In two modern plants operated by skilled lumbermen, only the finest oak is selected. After proper seasoning and kiln-drying, it is perfectly milled and matched so that it lays smooth and stays smooth. It is graded and handled so carefully that upon arrival anywhere, it is always in perfect condition. Leading lumber dealers gladly feature this nationally advertised brand.



There's a size and grade for every structure, new or old. Write today for full particulars

ARKANSAS OAK FLOORING CO., Pine Bluff, Ark.

PERFECTION

Brand Oak Flooring



**Quiet casements
guarding their sleep**

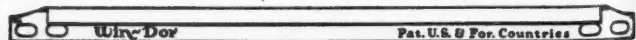
Have you ever been startled awake in the night because an insecure casement banged open or shut? Perhaps shattering the glass? Bad enough for adults! And far worse for children, because the latest psychological studies point to a loud noise as one of the only basic fears in a child's mind. You and your children can go to bed, secure in the knowledge that your rest will be undisturbed. Stay or Operators. They'll be as silent as themselves because they lock positively and firmly in any position. Endorsed by leading architects for their beauty and efficiency. In window or wood sash, new or old. Or write us for interesting free obligation.

Win-Dor
CASEMENT
HARDWARE
The Casement Hardware Co.
402-A North Wood Street, Chicago
HEADQUARTERS
Pat. U.S. & For. Countries

**221,000
families
will read
this ad
this month**

Above is shown one of a series of attractive advertisements which are appearing in House and Garden, and House Beautiful every month. Your prospects and customers know and appreciate Win-Dor Casement Hardware already—now they'll know it even better. Are you using it? Send for catalog.

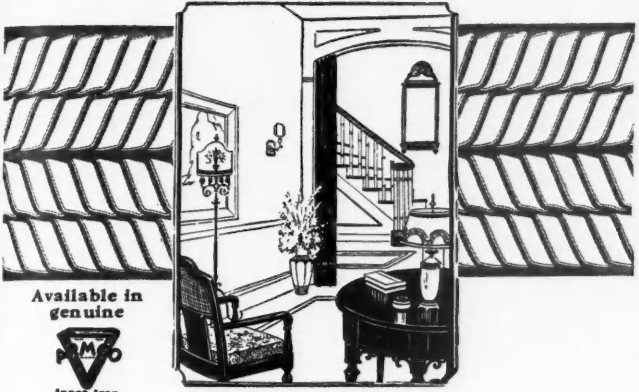
Win-Dor
CASEMENT HARDWARE
The Casement Hardware Co.
402-A North Wood Street, Chicago
CASEMENT HARDWARE HEADQUARTERS



Its Name is Foremost!
Its Value is Foremost!

"Herringbone"

The Best Base
For a Good Plaster Job



Available in
genuine

Ingot Iron

THE reason lies in the design. Rigid reinforcing ribs spaced one inch apart lie at an *angle* to the plane of the sheet and act as shelves upon which the plaster rests while setting. The mesh is small—eight to the square inch—and formed to guide thin leaves of plaster through to embed all the metal. And the lath is easy to erect, being smooth, with square ends and interlocking edges, and easily handled by one man.

Genfire also manufactures various other types of metal lath, Steel Casement and Basement Windows, T-Bar and Plate Girder Joists, Duplex Steel Bridging, Steel Lintels, and other firesafe building products.

GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO

Branches in All Principal Cities. Dealers Everywhere,
Member of the National Council for Better Plastering.



Herringbone Doublemesh Metal Lath

Consider these Concealed Bed facts -and Holmes Concealed Beds Will be Your Choice!



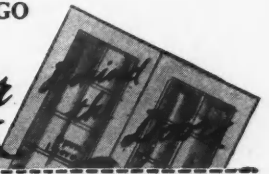
- 1 Holmes Beds add extra room efficiency that appeals to women. They make renting easier and lower building costs.
- 2 The beauty of Holmes Beds wins the most discriminating. Cane and wood period designs in head and foot ends harmonize with finest interior decorations.
- 3 Holmes Beds occupy a minimum of space—only 30" required for full size. All Holmes beds operate through standard door frames.
- 4 All sizes—single, twin, three quarter and full width. Comfortable full coil springs.
- 5 Ball bearing action. Automatic safety lock and balancer. Holmes Concealed beds cannot jack-knife. *They are known everywhere as the easiest to operate.*

Our engineering department will gladly assist you in suggesting plans adaptable to your building requirements. Write for book "BEHIND THE DOORS" showing details and newest development in the efficient use of concealed beds.

Concealed Bed Corporation

Distributors for Holmes and Marshall & Stearns Co.
58 E. Washington Street
CHICAGO

Write to-day for
FREE BOOK



CONCEALED BED CORPORATION, 58 E. Washington St., Chicago, Illinois Dept. 62

Gentlemen:— Please send a copy of the Catalog on Holmes Concealed Beds and how they solve the Extra Room problem.

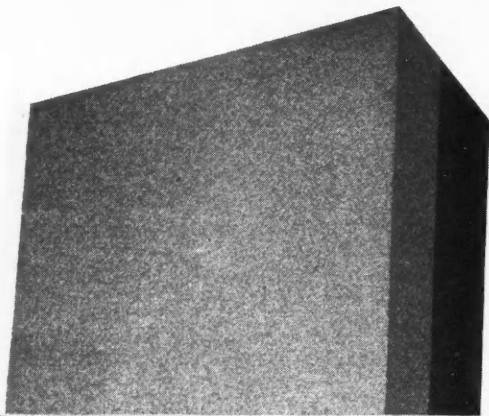
Name _____

Address _____

City _____ State _____

Name of your Architect or Contractor _____

Home Owner Home Builder Architect Contractor



**The Sharpening Stone that
Completes Your Kit!**

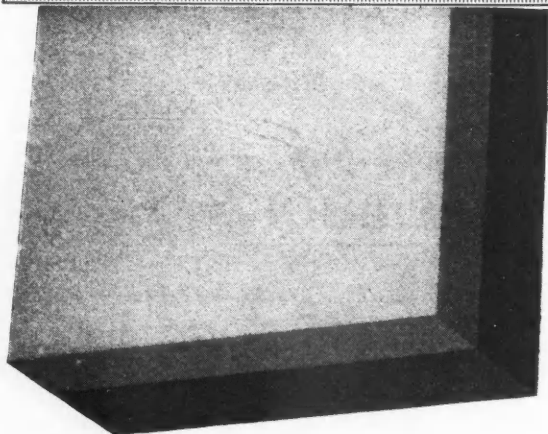
THOUSANDS of carpenters and craftsmen have learned the advantages of using the

**Carborundum
Combination
Stone**

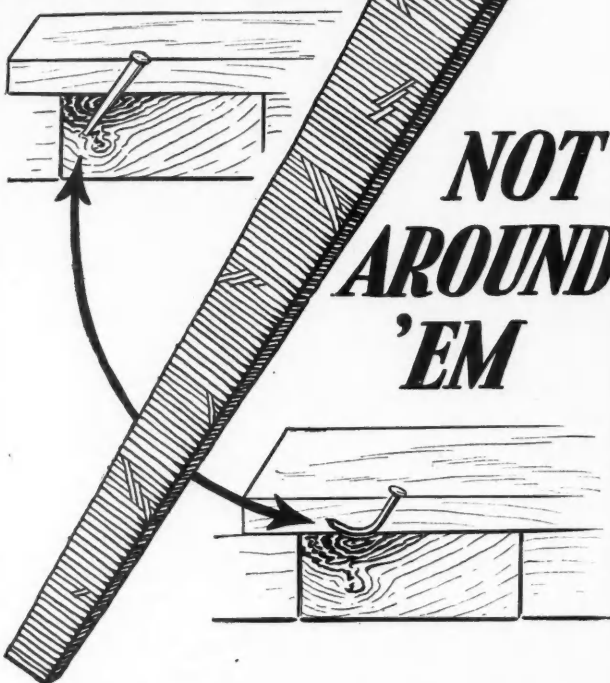
You also need a Carborundum "Combination" Stone to keep your edge tools right—one side coarse grit to start the edge and a fine grit side for finishing the edge—and its a stone that keeps sharp—always cuts free and clean. Made in seven sizes.

Carried by Hardware Dealers Everywhere
SEND FOR OUR CATALOG C-2

THE CARBORUNDUM COMPANY, NIAGARA FALLS, N. Y.
Reg. U. S. Pat. Off.
CANADIAN CARBORUNDUM CO., LTD., NIAGARA FALLS, ONT.



**THEY GO
THRU KNOTS**



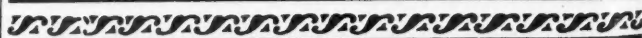
**NOT
AROUND
'EM**

SOFT cut nails have an unhappy way of slipping off knots and, in bending, pry up the flooring or damage it to such an extent that it must be sawed out. Reading Hard Cut Floor Nails, on the other hand, because of their strength and rectangular shape, drive through knots and all, grip tight all along the line and help to turn out satisfactory jobs.

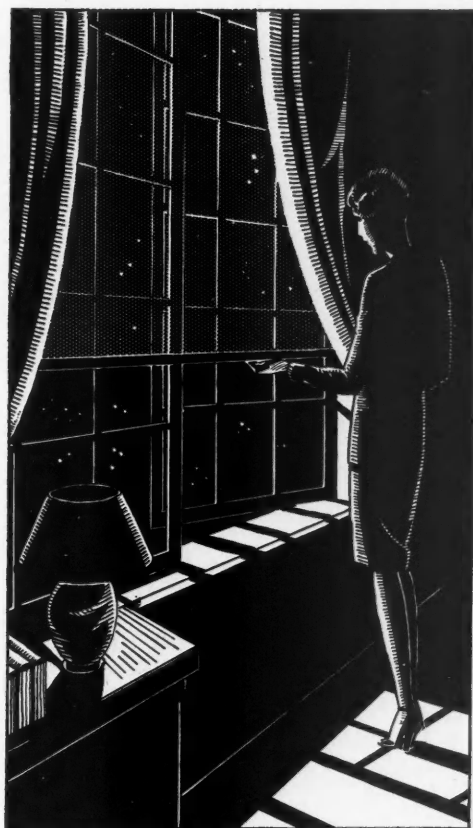
No matter how hard you drive them their heads stay on and sink firmly into the wood. You will scarcely find a warped or squeaky floor where Reading Cut Nails have been used. Contractors who watch such things closely find that they are cutting labor costs and building good-will since using Reading Cut Nails.

READING IRON COMPANY
READING, PA.

RICO HARD FLOOR **NAILS**



Rolscreens
TRADE MARK



ROLSCREENS are as different from the window screens of yesterday as are your convenient homes of today.

ROLSCREENS have attained a beauty and convenience never before thought of in connection with window screens.

Rolscreens are scarcely visible. There are no unsightly frames to mar the beauty of the windows. They are all metal construction and are built in with the windows. Rolscreens roll up and down—up, they are completely hidden and a touch lowers them, automatically locking firmly into place on the inside.

Of course, Rolscreens save the labor and expense of taking down and rehangng each season but home owners have discovered many new conveniences in having Rolscreens always ready for service the entire year.

Architects and builders everywhere are specifying the genuine Rolscreens (Trademark shown above). If you wish more detailed information we will send you an illustrated booklet which shows also some of the hundreds of homes, apartments, hotels and hospitals that are Rolscreened.

Illustrated
Rolscreen
Booklet.
Sent on
Request



ROLSCREEN COMPANY
52 Main Street, Pella, Iowa

Avoid costly delays in handling water

WHENEVER your construction work calls for the handling of water, start the job with a dependable **D** electric pump. It will see you through on time. For here's a pump built heavier, stronger, and of better materials. It stands up under hard usage. It has patented features found in no other pump. These account for its durability and long life. Its operating cost is unusually low . . . its upkeep cost is trivial.

Learn all the **D** pump features. Get the low prices and General Motors terms. Mail the coupon *today*.

DELCO-LIGHT COMPANY
Subsidiary of General Motors Corporation
Dept. Z-603 Dayton, Ohio

Also Manufacturers of DELCO-LIGHT Electric Plants



D ELECTRIC WATER SYSTEMS

A Product of General Motors

DELCO-LIGHT COMPANY
Dept. Z-603, Dayton, Ohio
Send information about **D** pumps
used by Building Contractors.

**MAIL
THIS
NOW**

Name.....

Address.....



Wall-Tex boasts amazing strength as well as beauty

WALL-TEX fabric wall-covering combines utility and decoration. A prominent interior decorator selected Wall-Tex No. 3860 for the living-room illustrated above. Un-sightly cracks can never mar the beauty of its walls, because Wall-Tex is wear-and-tear-resisting. It hides cracks in old plaster, and helps keep new plaster from cracking. For old walls and ceilings, no other wall-covering gives equal satisfaction.

For 1928, Wall-Tex is



being produced in a wider variety of designs and colors. There are designs suitable for every room. Plain patterns for painting, stenciling, Tiffany finishes or rough-cast plastering. All Wall-Tex is hung just like wall-paper. It can be wiped clean with a damp cloth.

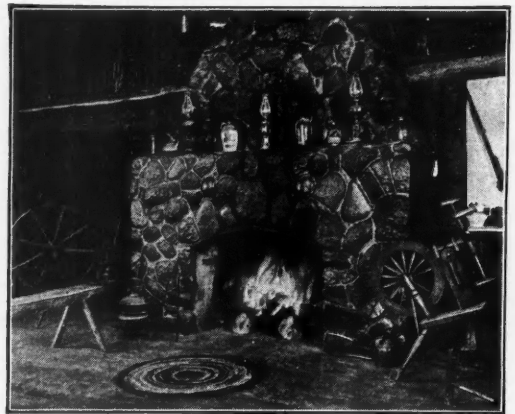
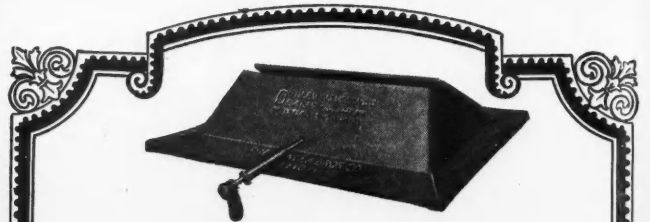
Architects, builders, decorators should write for full information on their

particular requirements. The Columbus-Union Oilcloth Company, Columbus, Ohio.

WALL-TEX

PERMANENT
WALL-COVERING

With the name that's easy to say and hard to forget



Fireplaces Can Be Unusual and Efficient!

BECAUSE a home owner wants his fireplace unusual or unique is no reason why a builder cannot make it practical and efficient. Appearance and utility have little or no relationship.

The efficiency of a fireplace depends entirely upon internal construction and equipment used. No matter how odd the external design, if you build the fireplace according to Donley Construction Plans, using a Donley Damper and other Donley Equipment, it will be practical.

And if you seek unusual and beautiful designs to show customers, you can get them, together with complete construction plans, in the Donley Book of Successful Fireplaces by sending 25c in stamps or coins to cover mailing costs.

The Donley Brothers Co.
13910 Miles Avenue . . . Cleveland, Ohio

**DONLEY
DEVICES**
Complete the Home



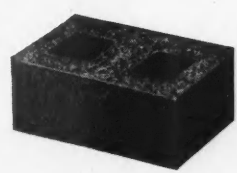
Curved Lawn Bench No. 845-840

Make Ornamental Concrete Products

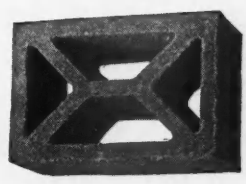
The market for concrete lawn, garden and porch furniture is constantly increasing. No other manufacturer offers such a wide range of molds for making vases, urns, flower boxes, lawn seats, sun-dial pedestals, balusters, and porch columns. Ask for our illustrated Ornamental Mold Catalog and learn how easily these fast-selling products are made.



Junior Grecian Urn No. 933



At the left—5x8x 12" two-core concrete building tile.



At the right—5x8x 12" High Test concrete building tile —bottom view.

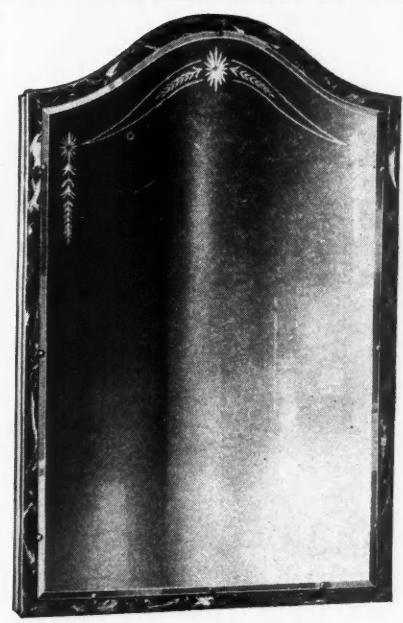
Build with Concrete Tile

Concrete building tile are economical. Light in weight, they have plenty of strength. Ideal as a stucco surface, they are also widely used as a low-cost back-up for brick.

In rural communities they are used for all types of construction. On farms the High-test type, laid on edge, make excel-

lent corn cribs. In cities architects are specifying these tile for the largest buildings.

If good concrete tile are not available in your community, start a plant. Write us and learn about our big line of tile machines—everything from a hand operated unit to a big power machine making four tile at a time.



Five Models to Choose from:
De Luxe Victorian Renaissance
Colonial Roman

The Cabinet Builders have been waiting for! NEW MIAMI CABINETS

OUTSTANDING in design, attractiveness and construction. Ultra modern fixtures that mark the conveniently built home, apartment or hotel. Easily installed . . . and the prices are reasonable. Five designs to show. Illustrated is

"The Renaissance"

So cleverly arranged that when the cabinet is closed it gives the appearance of a mirror set flush with the wall. The door front is black and gold marble finished steel. The 18x28" Venetian Mirror is artistically etched in silver and gold. Breakage, heretofore a "bugbear" in shipping and installation, is held to a minimum with three carefully tested Miami features:

- 1 Mirror is held by ornamental clips . . . no holes to lessen strength of glass,
- 2 Air-cushioned door absorbs shocks of slamming,
- 3 Full length piano hinge.

MIAMI LAUNDRY QUEEN IRONING BOARD CABINET
Everything neat . . . everything compact. Saves space and adds to kitchen convenience.

Write today for full details about the entire list of 1928 models. Catalog No. 7 on request.
THE MIAMI CABINET CO.
MIDDLETOWN, OHIO

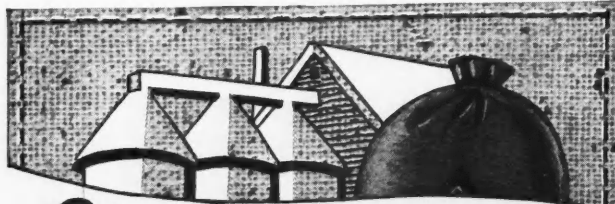
THE MIAMI CABINET CO., Middletown, Ohio.
Please send me full particulars about MIAMI CABINETS.

Name


Address

City

Owner Contractor
 Architect Dealer

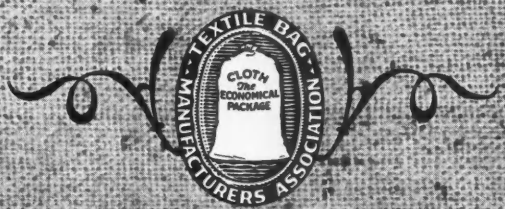


Cloth *the economical cement package*



You can't escape the fact that non-returnable cement bags waste your money. *Cloth Sacks are exchangeable.. for actual cash!*

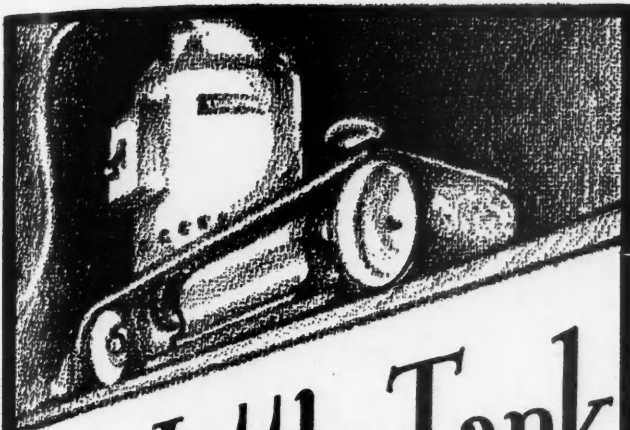
TEXTILE BAG
 MANUFACTURERS ASSOCIATION
 7310 WOODWARD AVE., DETROIT, MICH.




First choice for sewers because it lasts—vitrified clay pipe

CLAY PRODUCTS ASSOCIATION
 CONWAY BUILDING
 Chicago

VITRIFIED *Salt Glazed* CLAY
Sanitary Sewer Pipe AB 6-Gray



The Little Tank of INDUSTRY



1917



Illustrations show use of the Super Take-About with and without floor handle.



Like its big brother of war time this little tank of industry is a fighter. It fights cost. Users the country over are praising its range of usefulness, its ease of handling and the quality of the work it does.

TAKE-ABOUT Sander

is a big edition of the Take-About. It is rugged, covers more surface, has more power and yet it is a handy machine to use in out of the way places. Saves hand planing, scraping and sanding, doing it many times faster.

An added feature is the new handle attachment which makes it a valuable machine for the sanding of large areas, floors, floor edges, etc.

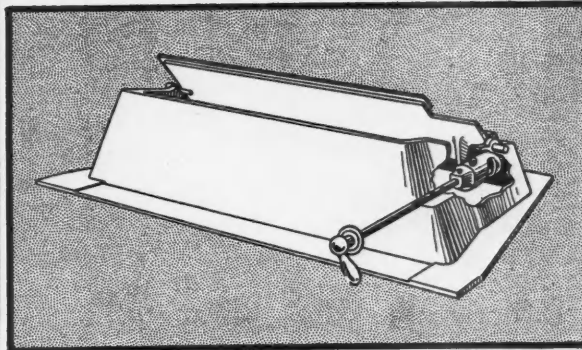
Special Features

- New type motor, developing 1 H.P.
- Wide belt (4-inch).
- Special construction makes the Super Take-About a portable production sander. Floor handle not standard equipment.

Write us for additional information.

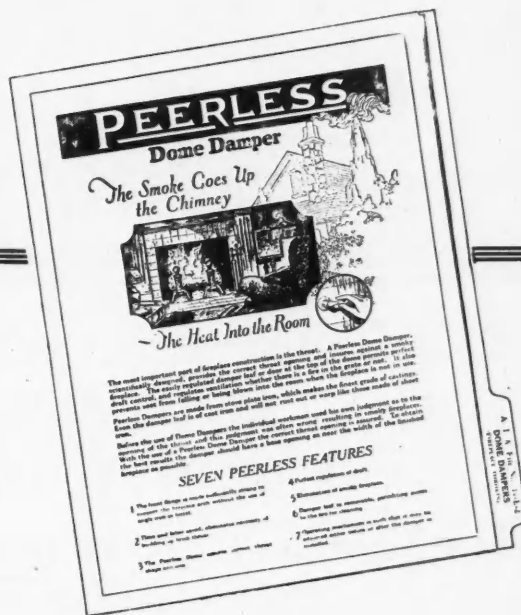
PORTER-CABLE MACHINE CO.

1721 N. Salina St. Syracuse, N. Y.



A PEERLESS FIREPLACE DAMPER

for Satisfactory Fireplace Construction



The full story of the Peerless Fireplace Damper, what it is, what it will do, and why it is the leader in its particular field, is all told clearly in this folder which we will gladly send on request to any one interested. It is just the right size for the regular letter size file and will always be a ready reference when the question of proper fireplace throat construction comes up. Your copy is ready.

PEERLESS MFG. CO.,
324 W. Main St., 6-28
Louisville, Ky.

Kindly Check

- Contractor
- Architect
- Home Owner
- Dealer

Please send me the Peerless Fireplace Damper Folder.

Name

Address

Town....., State.....

BATHROOM **CSM** ACCESSORIES

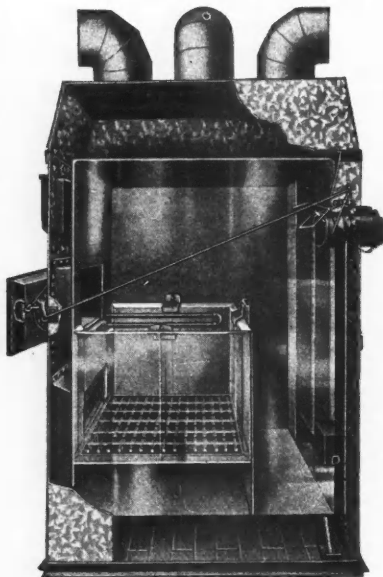
**COLORED
PORCELAIN ENAMELED
SURFACE AND SEMI RECESS
BATHROOM
ACCESSORIES**

MANUFACTURED BY
CENTRAL SPEC. MFG. CO.
CHICAGO, ILL.

Write For Catalog

INSTALL YOUR OWN FURNACE SAVE MONEY AND GET SOLID COMFORT

For 55 years we have specialized in home heating with our
HESS WELDED STEEL FURNACES



WE OFFER YOU THE FOLLOWING ADVANTAGES

A **perfect heater**, every seam welded and guaranteed never to leak.

The benefit of our 55 years experience in planning the arrangement of heating equipments and a binding guarantee of success.

A low **one profit price**. When you buy from us you **buy from the makers**. No middlemen's profit.

Easy terms, a payment with your order, the balance monthly, to suit your income.

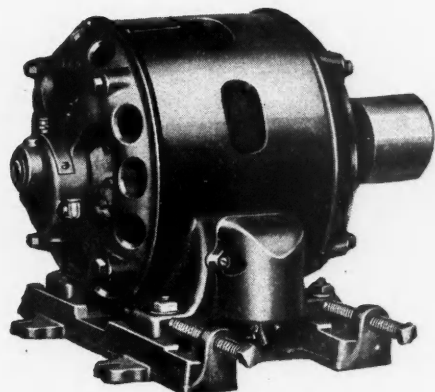
Hess Furnaces burn any fuel— easy to install— simple in operation. Many thousands are in use, some in your own neighborhood.

Send us a sketch of your house and let us tell you how we would heat it and what it will cost. No obligation and you will be pleased.

A free booklet, 48 pages, illustrated, describes our method, useful for any furnace; a postal card brings one to you.

HESS WARMING & VENTILATING COMPANY
1220 South Western Avenue, Chicago, Illinois

"They Keep a-Running"



1 Horse Power Century Type RS Repulsion Start Induction Single Phase Motor

For Electric Refrigerators, Oil Burners and House Pumps

The ability of Century Type RS Repulsion Start Induction Single Phase Motors to continuously meet all of the service and power supply requirements of such installations as electric refrigerators, oil burners and house pumps makes them the logical choice for these and other installations, especially where high starting torque and low starting current are desirable.

They operate quietly. Static and running balance tests are applied to each armature, eliminating vibration to the greatest degree commercially practical . . . At least one year's continuous 24-hour-per-day operation, without reiling, is assured by the Century Wool-yarn System of Lubrication, used in 1 horse power and smaller motors. Bearings are long lived. They are machined from phosphor bronze castings, the highest grade bearing material obtainable . . . Ball bearings can be furnished when needed . . . Brushes and commutators last. Brushes touch the commutator only during the starting period, about 1/900th part of the time the motor is operating.

Built in standard sizes from 1/8 to 40 horse power.

CENTURY ELECTRIC COMPANY
1806 Pine St. St. Louis, Mo.

33 Stock Points in the United States
And More Than 50 Outside Thereof



1/8 to 40 H. P.

1/8 to 40 H. P.



Free Yourself from the Menace of the Hanging Sword!

ABOVE the heads of thousands of men, as a keen-edge sword that hangs by a tiny thread, lurks the Menace of Unemployment.

It throws a shadow over the work and pleasures of Today. It makes men fearful of Tomorrow, for they know not what the coming dawn will bring.

Resolve now to free yourself forever from this grim, foreboding Menace of Unemployment. Decide today that you are going to get the training that you must have if you are ever going to get—and keep—a real job at a real salary.

Right at home, in the odds and ends of spare time that now go to waste, you can prepare yourself for the position you want in the work you like best. The International Correspondence Schools will train you just as they are training thousands of other men—no matter where you live or what your circumstances.

At least find out how, by marking and mailing the coupon that has helped so many other men. There's no cost or obligation—it takes only a moment—but it may be the means of changing your entire life.

INTERNATIONAL CORRESPONDENCE SCHOOLS

"The Universal University"
Box 8170-C, Scranton, Penna.

Without cost or obligation, please send me a copy of your booklet, "Who Wins and Why," and full particulars about the subject before which I have marked X:

- | | | |
|---|--|---|
| <input type="checkbox"/> Architect | <input type="checkbox"/> Telegraph Engineer | <input type="checkbox"/> Bookkeeper |
| <input type="checkbox"/> Architectural Draftsman | <input type="checkbox"/> Practical Telephony | <input type="checkbox"/> Stenographer and Typist |
| <input type="checkbox"/> Architects' Blueprints | <input type="checkbox"/> Mechanical Engineer | <input type="checkbox"/> Higher Accounting |
| <input type="checkbox"/> Contractor and Builder | <input type="checkbox"/> Mechanical Draftsman | <input type="checkbox"/> Common School Subjects |
| <input type="checkbox"/> Building Foreman | <input type="checkbox"/> Toolmaker | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Concrete Builder | <input type="checkbox"/> Machine Shop Practice | <input type="checkbox"/> English |
| <input type="checkbox"/> Structural Engineer | <input type="checkbox"/> Stationary Engineer | <input type="checkbox"/> Illustrating |
| <input type="checkbox"/> Structural Draftsman | <input type="checkbox"/> Chemist | <input type="checkbox"/> Railway Mail Clerk |
| <input type="checkbox"/> Plumber and Steam Fitter | <input type="checkbox"/> Pharmacy | <input type="checkbox"/> Civil Service |
| <input type="checkbox"/> Heating and Ventilation | <input type="checkbox"/> Navigation | <input type="checkbox"/> Mining Engineer |
| <input type="checkbox"/> Plumbing Inspector | <input type="checkbox"/> Salesmanship | <input type="checkbox"/> Gas Engine Operating |
| <input type="checkbox"/> Foreman Plumber | <input type="checkbox"/> Advertising | <input type="checkbox"/> Textile Overseer or Supt. |
| <input type="checkbox"/> Sheet Metal Worker | <input type="checkbox"/> Window Display | <input type="checkbox"/> Traffic Manager |
| <input type="checkbox"/> Civil Engineer | <input type="checkbox"/> Show Card and Sign | <input type="checkbox"/> Airplane Engines |
| <input type="checkbox"/> Surveying and Mapping | <input type="checkbox"/> Lettering | <input type="checkbox"/> Automobiles |
| <input type="checkbox"/> Electrical Engineer | <input type="checkbox"/> Industrial Management | <input type="checkbox"/> Agriculture |
| <input type="checkbox"/> Electric Lighting | <input type="checkbox"/> Secretarial Work | <input type="checkbox"/> Spanish <input type="checkbox"/> French |
| <input type="checkbox"/> Electric Wiring | <input type="checkbox"/> Business Correspondence | <input type="checkbox"/> Poultry Raising <input type="checkbox"/> Radio |

Name.....

Street Address.....

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

Occupation.....

If you reside in Canada, please send this coupon to International Correspondence Schools Canadian, Limited, Montreal, Canada

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Original *Genuine*
CEL-O-GLASS
 admits more of the Sun's
 Ultra-Violet Rays

The Ultra-Violet Rays of the sun with their great health-building value are far too important for the builder of today to ignore.

BUILD health into your buildings! Health is dependent on sunshine just as much as it is on heating, ventilation and sanitary plumbing—if not more so.

But sunlight loses its health value after it passes through ordinary glass. Window glass strains out the vitalizing, body-building Ultra-Violet rays of the sun. All that is left is light and heat—but no Ultra-Violet rays.

Simply by glazing one or more windows with CEL-O-GLASS, you bring pure unskimmed sunlight with all of its health value *indoors*.

CEL-O-GLASS is *unbreakable*, highly translucent, flexible, light in weight, easy to install, economical. Once you try it, you will find many uses for this remarkable material.

If your supply dealer does not carry genuine CEL-O-GLASS, write us for the name of one near you who does. Sample and interesting folder No. 60 gladly sent on request.

ACETOL PRODUCTS, INC.
 21 Spruce St., New York, N. Y.

© 1928, Acetol Products, Inc.

CEL-O-GLASS
 REG. U. S. PAT. OFF.
WON'T BREAK
 AN UNBREAKABLE TRANSLUCENT

Use a little head work and save a lot of back work

Trade your hammer for a pencil and your shears for a postage stamp. Why should you spend your time cutting, trimming and fitting when you can get all kinds of sheet metal building products tailor made from us. If it is sheet metal skylights, ventilators, cupolas, marquee, plain and molded gutters, conductors, fittings, metal lath, corner bead, roofings, sidings, steel basement windows, coal chutes, clean-out doors, ash dumps, fireplace dampers, under-



ground garbage receivers, fire-proof doors and windows — use your pencil. Send for our catalog No. 8 and a request for an estimate. My boss guarantees to save you time, cost and trouble; guarantees to make it possible for you to do a better job at less expense and increase your reputation as a builder and contractor who knows what is best on every job. I say "the sooner you write the quicker you profit."

Willie Willis.

WILLIS MANUFACTURING CO.
 Dept. 128 Galesburg, Ill.



KUHLS

Elastic Glazing Composition

UNEQUALLED

You will find KUHLS' ELASTIC GLAZING COMPOSITION unequalled for bedding and glazing sash, skylights, conservatories and glass construction work, tile-setting, etc. Fine for pointing stone and terra cotta work. Ideal for window calking.

Kuhls' Composition is elastic, never sets hard, adheres strongly to wood, metal, glass, concrete, etc. Never cracks or crumbles. Stands heat and cold and is not affected by moisture or changing weather.

Kuhls' Elastic Glazing Composition can be economically and efficiently used in all construction work—from a four-room cottage to a 25-story building. It is now used by the best builders, contractors and architects and greenhouse builders in the country.

If your dealer does not carry it, write for your free sample today

H. B. FRED KUHLS
6415-21 Third Ave. Brooklyn, N. Y.

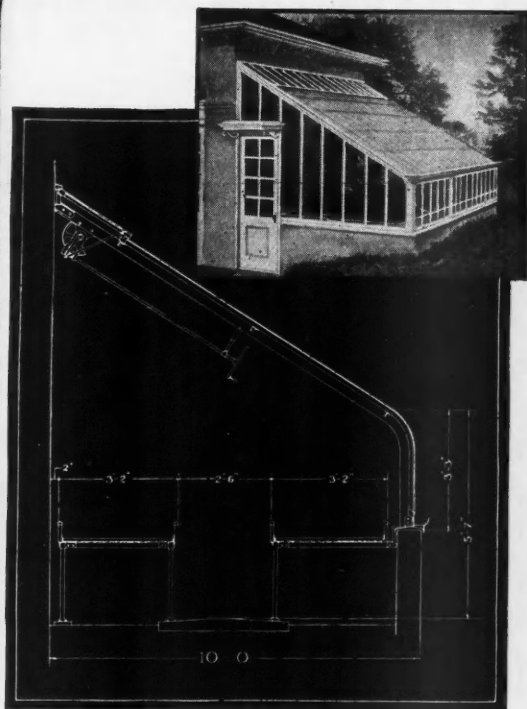


Get These Booklets and FREE SAMPLE

H. B. FRED KUHLS
6415 Third Ave., Brooklyn, N. Y.

Please send me free of charge your literature and a sample of KUHLS' Elastic Glazing Composition.

Name.....
Street.....
City.....
State.....



Complete Plans and Specifications with Every Hitchings Sunshine Room

YOU don't have any guessing to do, when you put up a Hitchings Sunshine Room.

The metal frame is all cut to measure, all holes are punched or drilled, all bolts are ready for the holes.

Every wooden part is cut to fit, so far as possible.

Every part is located on the plans we furnish. The specifications are clear.

You know just what you are getting and what to do with it.

You can fit in your Hitchings Sunshine Room as easily as you set in a refrigerator or the boiler.

Not a hitch with any average workmen. Builders tell us these Sunshine Rooms are worth twice what they cost, as a selling proposition.

Send in the coupon and get the facts and figures. See for yourself.

Hitchings Company

General Offices and Factory:
ELIZABETH, N. J.

New York	Oak Lane, Philadelphia
101 Park Avenue	6709 North Broad Street
Wilkes-Barre	Boston
402 Coal Exchange Bldg.	161 Massachusetts Ave.
Albany, N. Y.	
100 State Street	

(Please print plainly—Name and Address)

Send me full facts about your Sunshine Room.

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

A.B. 6-28

There's more profit in a **HUTHER SAW**



Thin High Speed Steel Knife



Grinding Attachment



Cylinder Cutter Head



Cutter Head

Backed by fifty years experience in the making of highest grade saws, each Huther Saw has a quality built into it that insures maximum length of service.



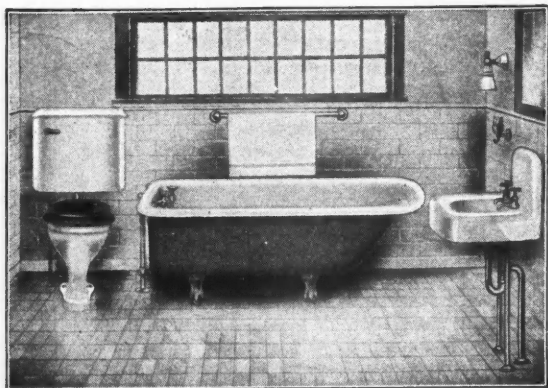
Circular Mitre Saw with Cleaner Tooth



Dado Head

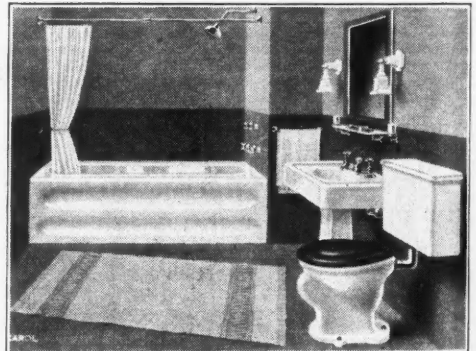
Huther Bros. Saw Mfg. Co.
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The Peerless Beautiful Complete **\$102**
Highest type of Bathroom. Fixtures are solid and massive. Tub, Closet and Lavatory, heavily enameled inside and out. Closet is deep seal syphon action, wash-down type with jet. Solid porcelain tank. Shower equipment shown \$11 extra.



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PREMIER Bathroom Dresser

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PREMIER
Standardized Woodwork
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Everyone who has tried to keep a bathroom orderly will appreciate the convenience of this *bathroom dresser*. Space for toilet articles on dresser top, towels on open shelf, room for sponges, brushes, linens, hot water bottle and all the bathroom miscellany... and a ventilated compartment for soiled linens.



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Helps Sell HOMES

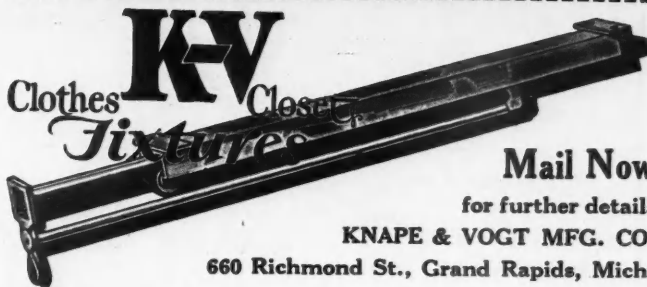
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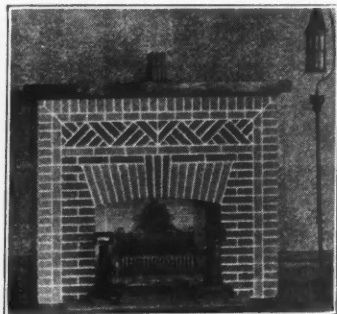
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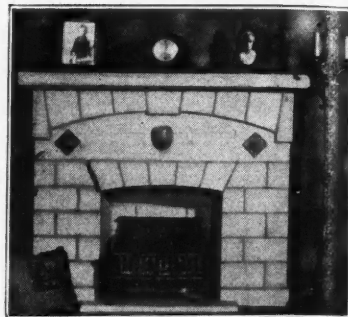
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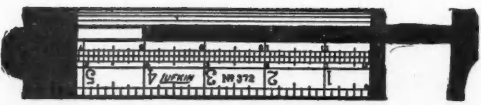


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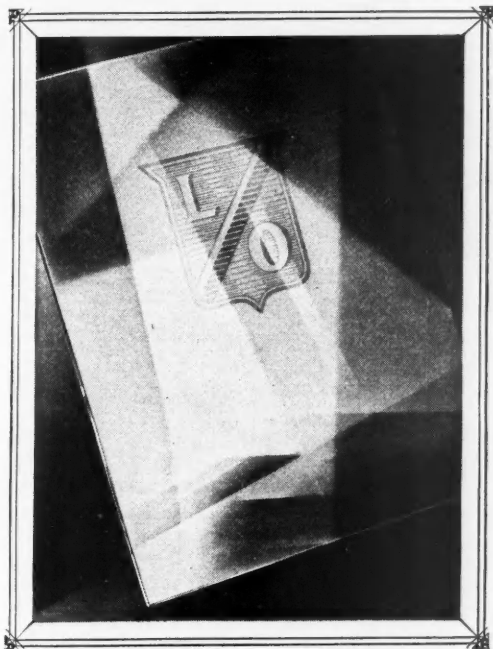
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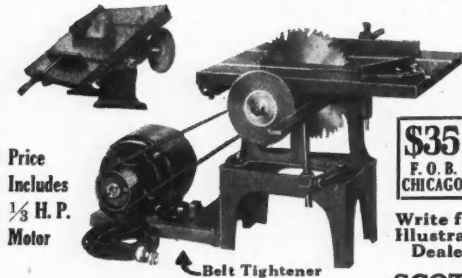


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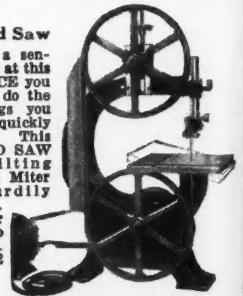
THE S & B 8-in. COMBINATION SAW (18 tools in one) is the ideal machine for the shop, factory or the home; will rip, cross cut, bevel, miter, mortise, groove, drill, tenon, grind, rabbet, buff and polish. Motor is mounted on a base that is a part of the machine proper. Run from any light socket, also provides for other purposes when the saw is not in use. Complete with attachments and price includes 1/8 H. P. Motor, 60-cycle, 110-Volt A. C. Price \$35.00 F. O. B. Chicago. Shipping weight 100 lbs.

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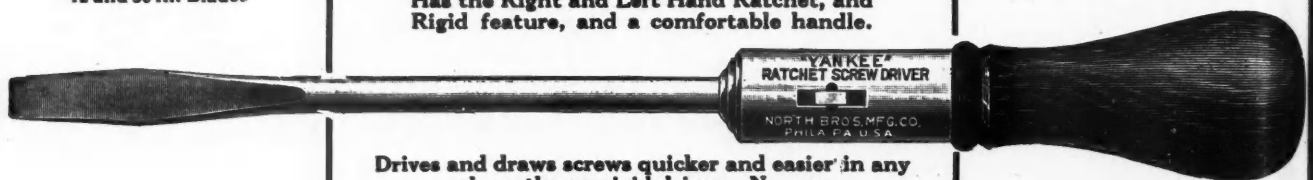
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*The Popular Bath Made Practical—
It Doubles the Bathing Facilities of the Home*

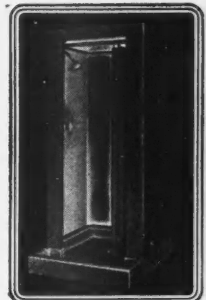
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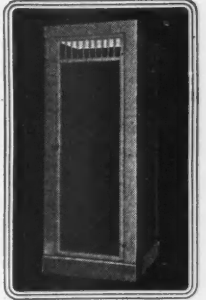
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FIAT METAL MANUFACTURING CO.
1201 Roscoe St., Chicago, ILL
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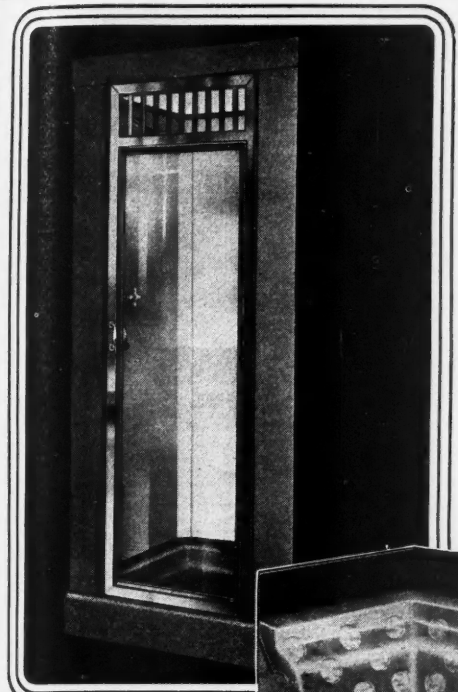
Name.....
Street.....
City..... State.....
Please check—I am a Contractor Plumber Architect
Dealer Realtor Home Owner



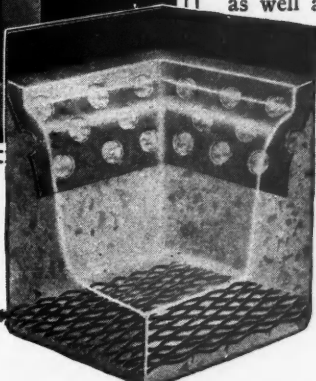
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The "Ensign" with "Marine" Door



The "Admiral" with Vitreous Enamel Finish, Terrazzo Receptor and "Nautilus" Glass Door.



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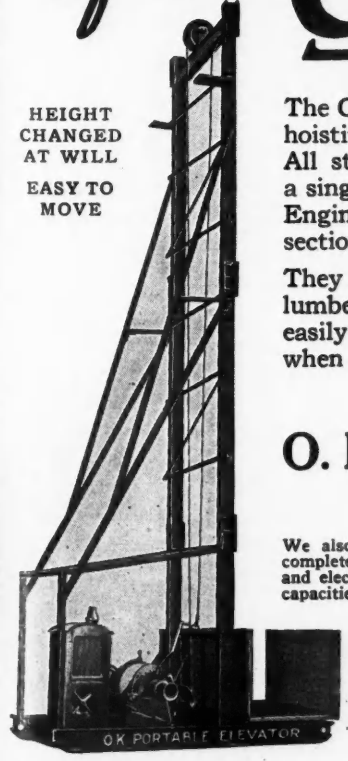
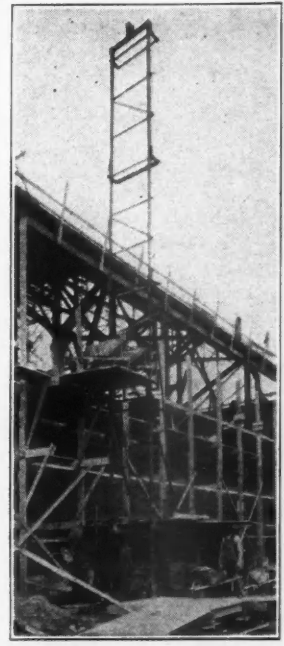
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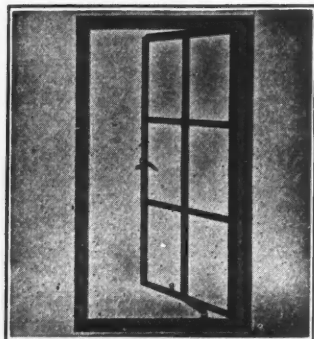
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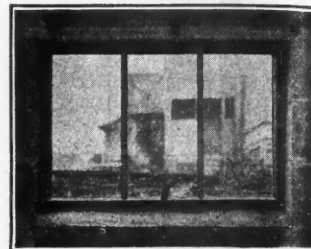


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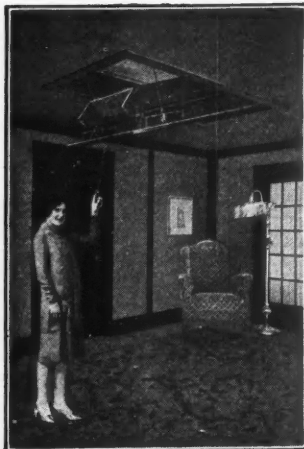
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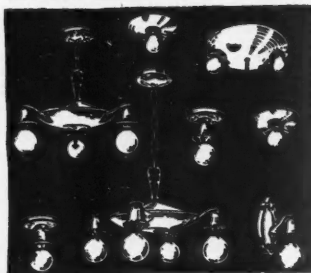
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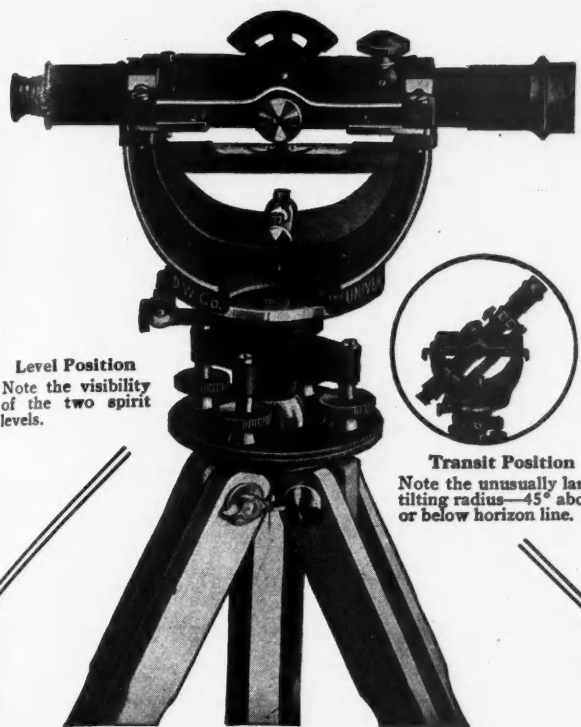
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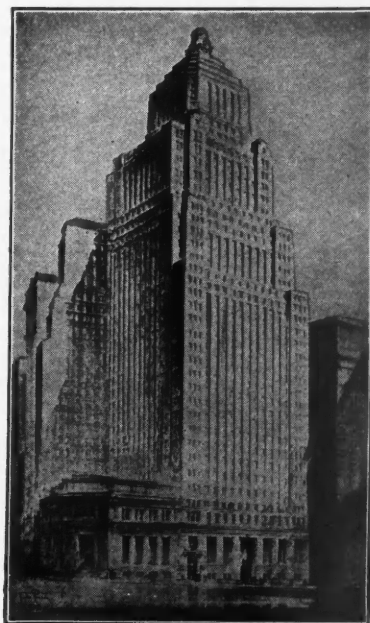
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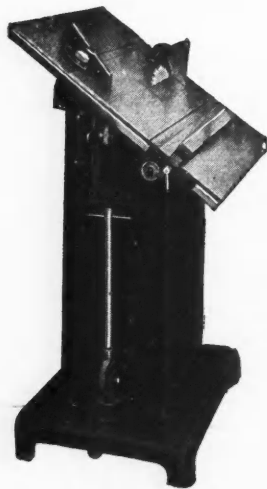
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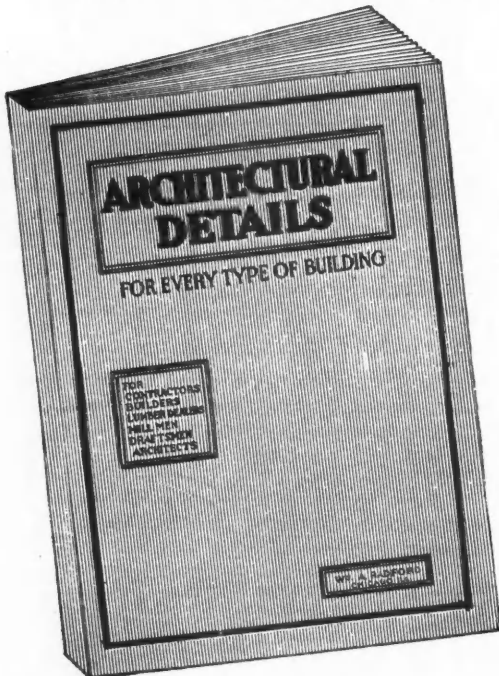
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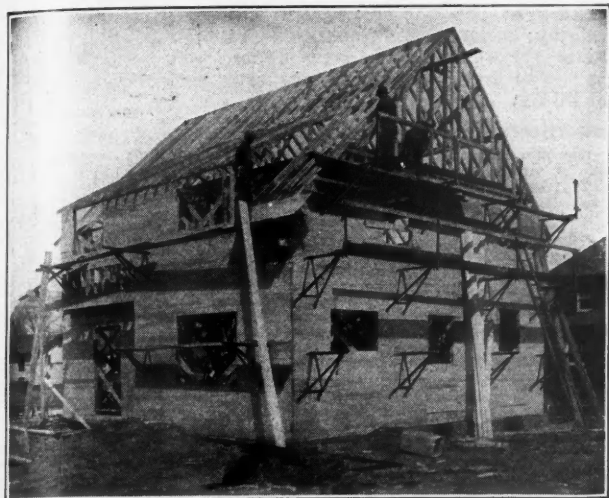
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And they go right on saving their cost on every job thereafter—they last a life time with no repair or replacement expense.

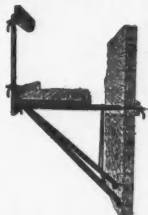
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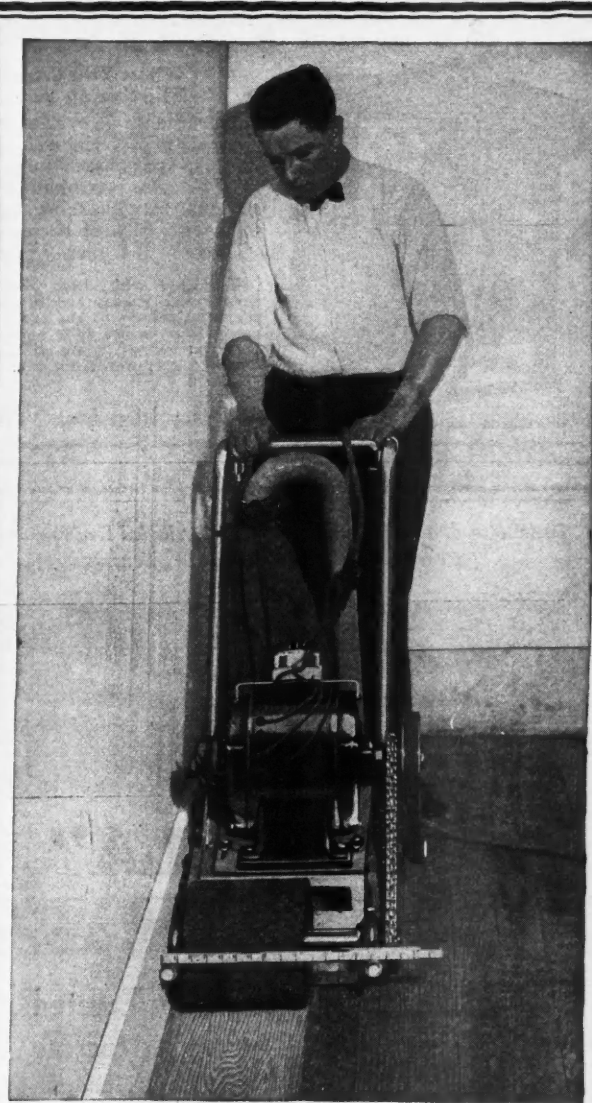
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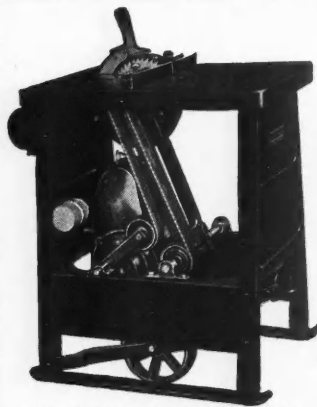
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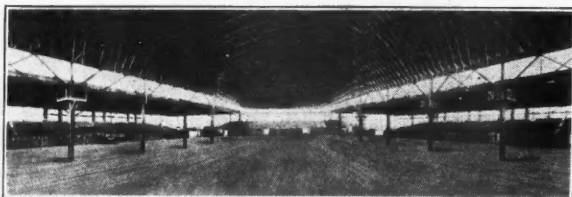
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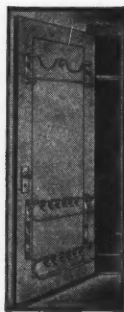
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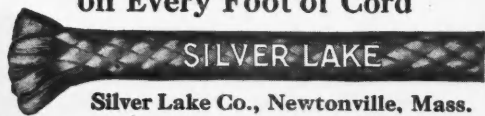
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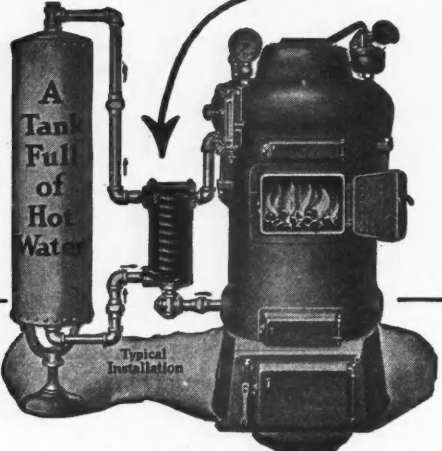
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14 mesh, **4c** 16 mesh, **5c** 18 mesh, **6c**
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14 mesh copper... 5c per sq. ft. 16 mesh bronze... 5½c per sq. ft.
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We have in stock all sizes of wire in the above meshes.

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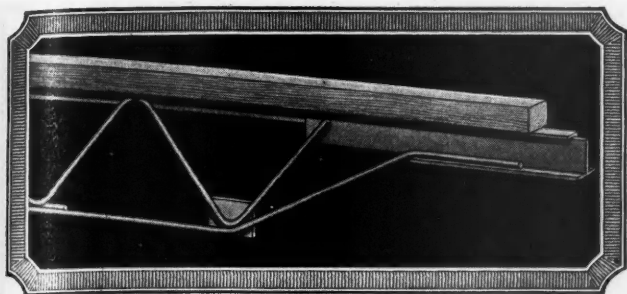
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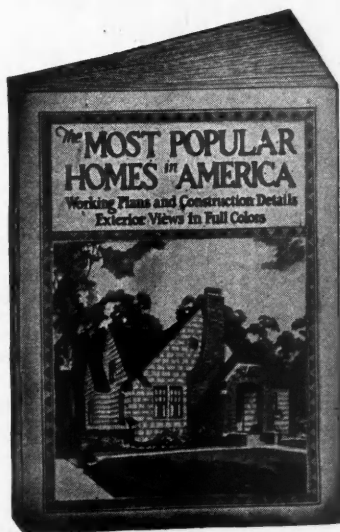


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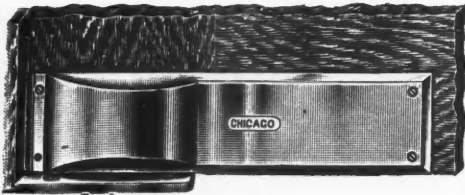


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TYPE 3001

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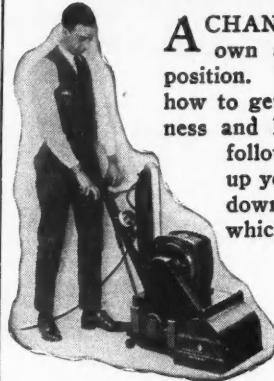
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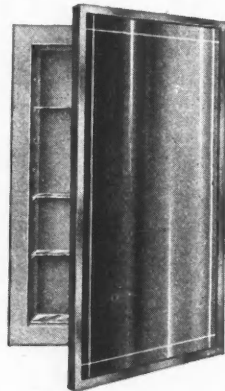
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Snow-White Steel



Still Another De Luxe Cabinet
THE PARISIAN

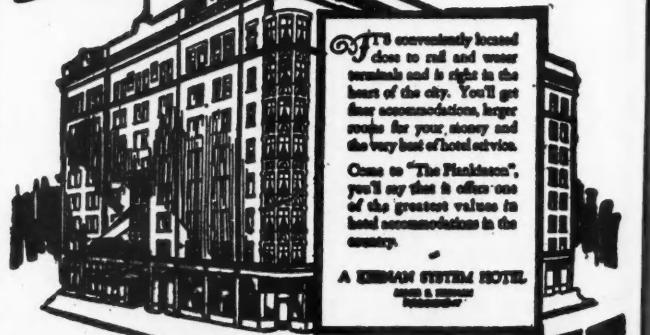
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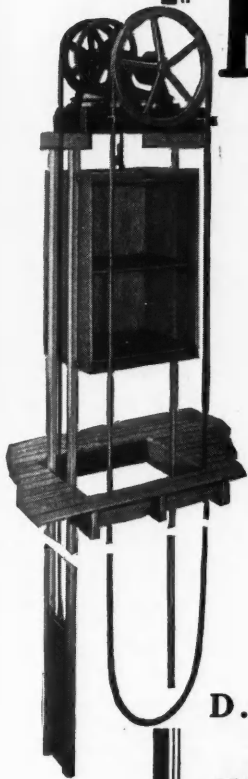


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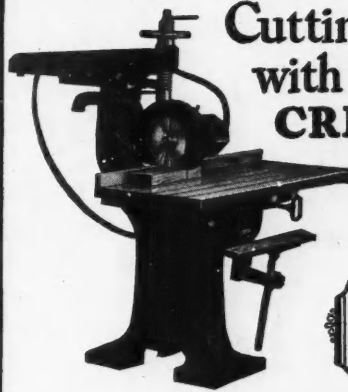
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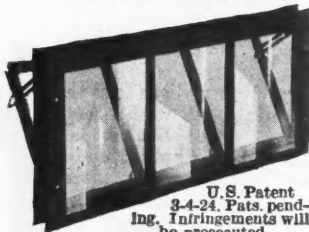
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Banks (Patented) Removable Steel Clothes Posts for Wash Day

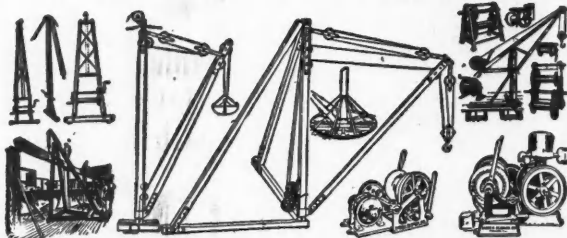
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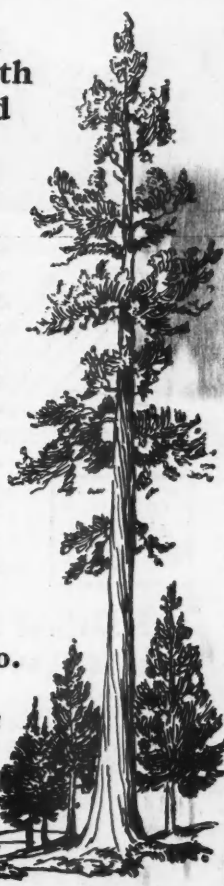
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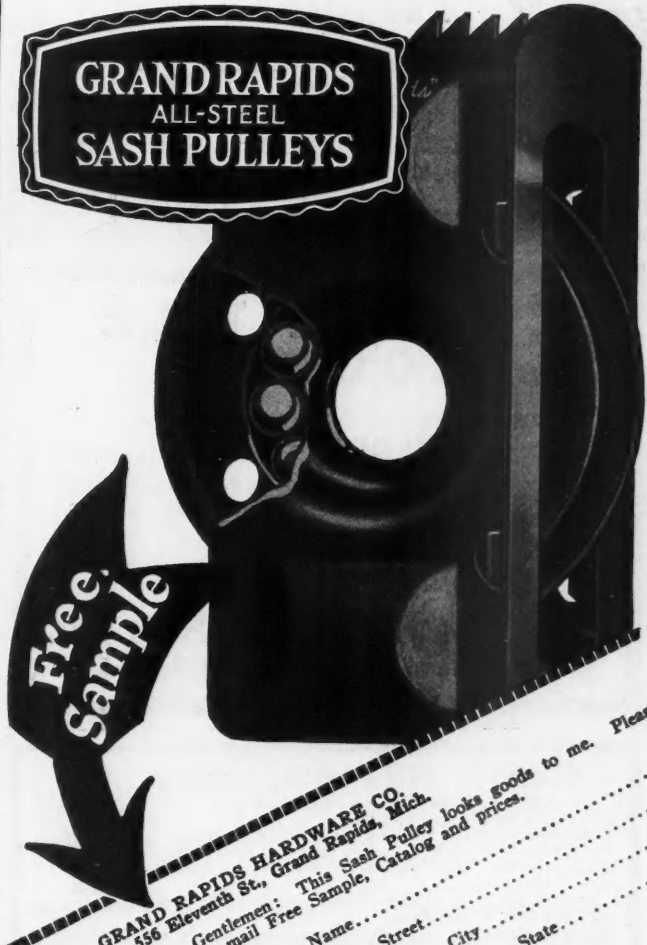
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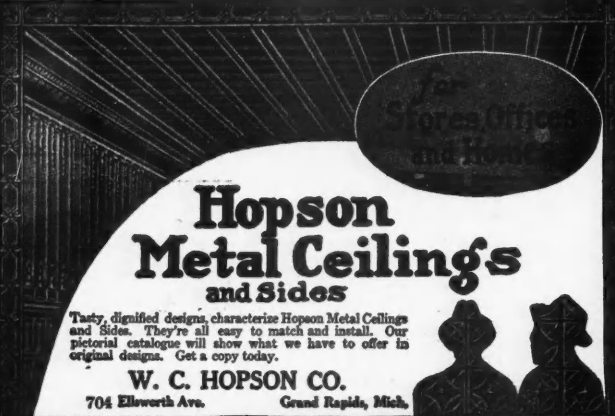
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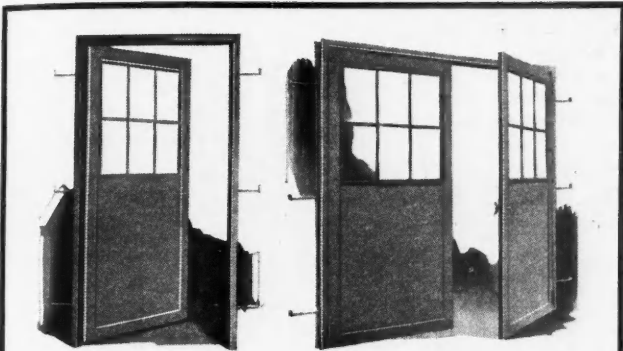
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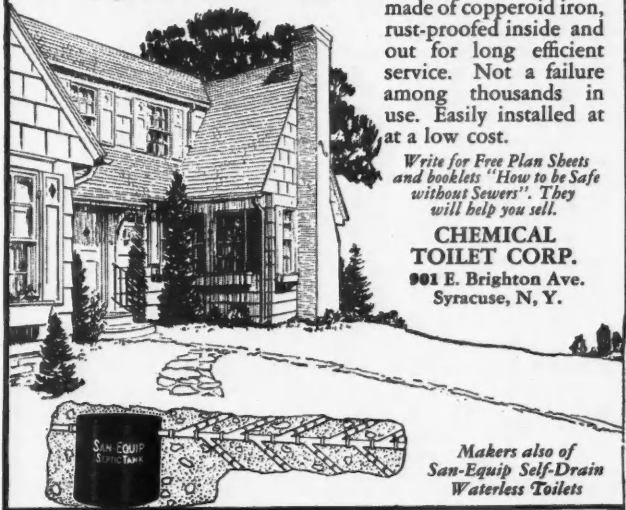
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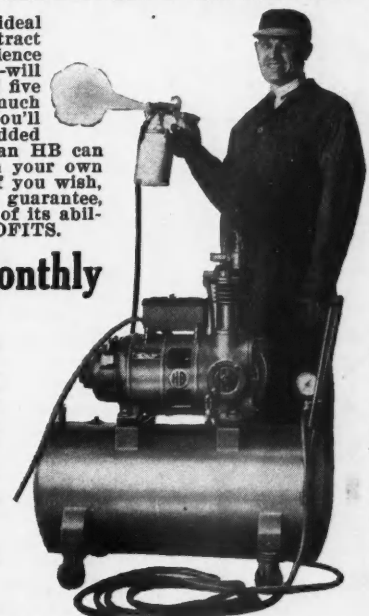
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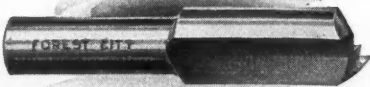


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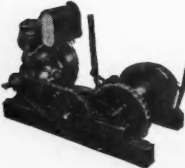
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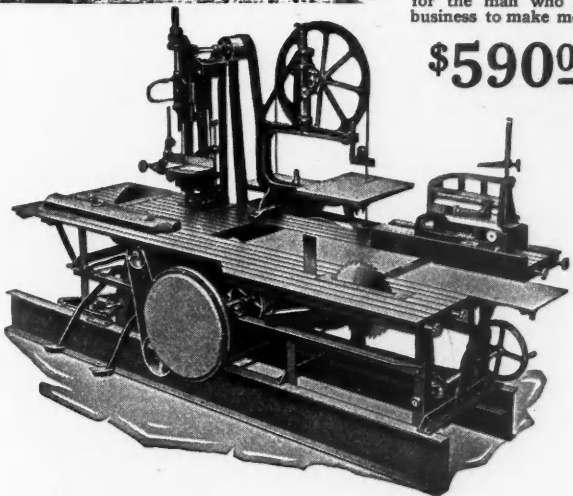
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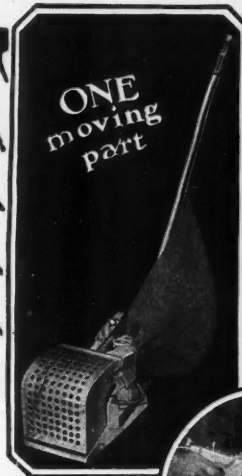
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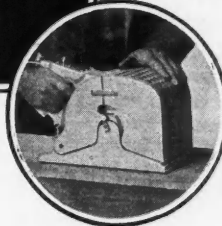
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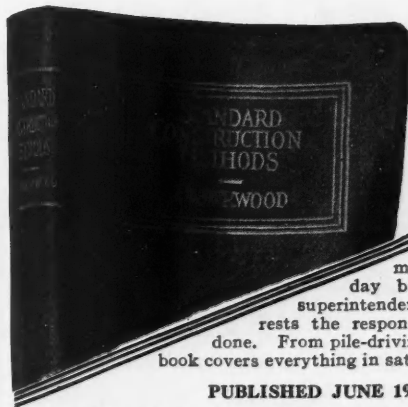
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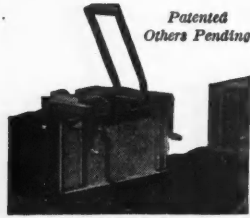
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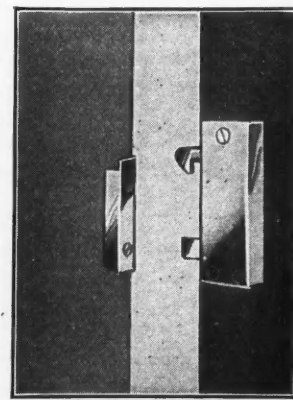
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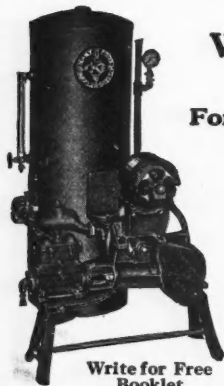
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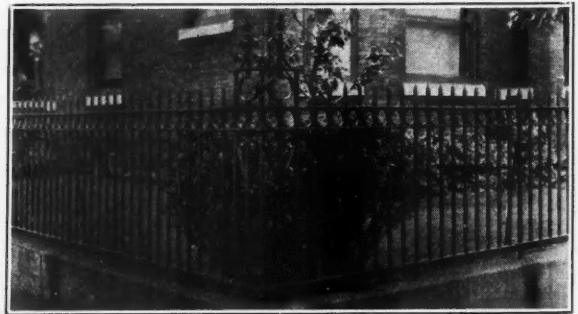
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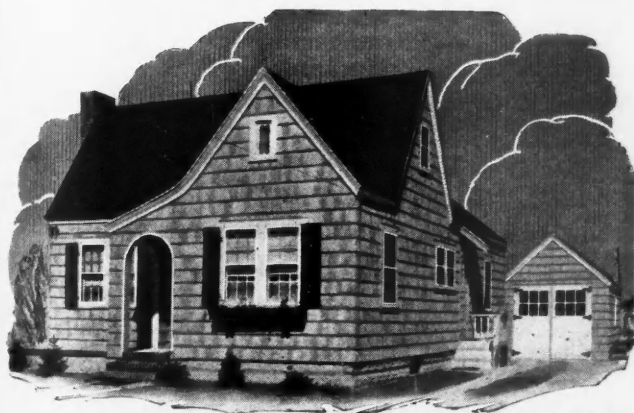
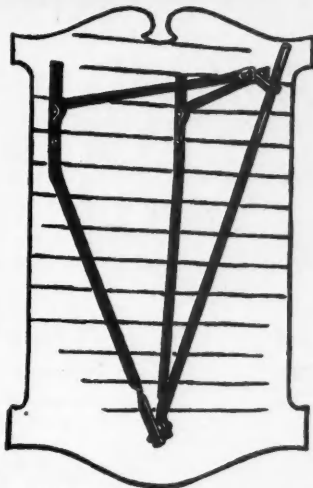
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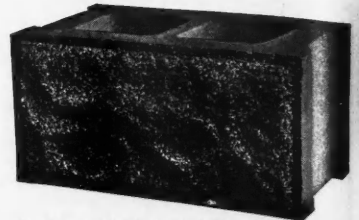
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LAPLANT-CHOATE HOUSE-MOVING TRUCKS

La-Plant-Choate House-Moving Trucks are recognized leaders. They were designed and perfected by the veteran house-mover -- E. W. LaPlant. This modern equipment makes present-day house-moving extremely profitable for wide-awake contractors. You should know complete facts about La-Plant-Choate House-Moving Trucks. Write for Descriptive Catalog... A

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3115 First Avenue,
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Boost Weekly Income \$50



Many contractors and carpenters are installing Federal Metal Weather Strips and making easy profits—as much as \$50 a week extra. You can do the same. The economical, practical and serviceable qualities of Federal Metal Weather Strips are easily explained. Practically every building in your town is a prospect.

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Federal Metal Weather Strip Co.
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Folding Stairs \$35.00

adds a ROOM to your HOME

Make better use of your attic

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with an Electric

FREE-O-DUST

Floor Sanding and Resurfacing Machine

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OLD EUROPEAN SLATE ROOFS

Exactly duplicate the old slate roofs of Europe with their rich colorings and strong natural texture.

Roof Suggestions on Request.

KNICKERBOCKER SLATE CORP.
E. J. Johnson, President
355 West 26th St. New York

See Pages 121-122-123-124 for Remarkable Special Bargain Offers

BIG PROFITS
Selling HILD Electric Floor Machines

The simplest, most practical electrically operated floor machine for home, office, store, church, school, hospital, showroom, garage, factory, etc. Finishes old or new floors; waxes, scrubs, polishes.

Write today for complete information. Your territory won't be open long.

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Fully Enjoy MILLER DRIP EDGE

It easily re-inforces, protects, supports and finishes prepared roofing or shingles at the roof edges. Millions of feet sold.

Free sample and folder

MILLER & GLEASON, Div. D, OLEAN, N. Y.



MYERS

SELF-OILING
A REGISTERED
TRADE NAME

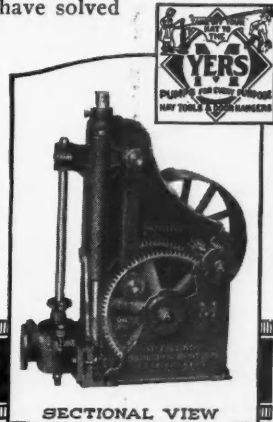
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POWER
PUMPS**

Industry uses water in large volume — manufacturing and curing processes, sanitation and fire protection require an abundant supply of water at all times. It's the first problem to be solved, always an item of overhead that must necessarily enter into production costs.

Myers Self-Oiling Power Pumps have solved water problems in hundreds of manufacturing plants. Where the hourly consumption of water is under ten thousand gallons per hour, there is a Myers Self-Oiling Power Pump for the purpose.

Motor or engine drive for shallow or deep operation—positive self-lubrication, housed working parts and other exclusive improvements provide dependable water facilities on a low cost basis.

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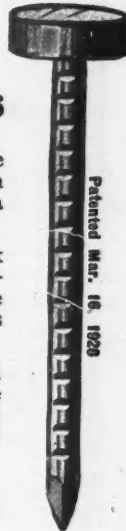


MYERS
PUMPS FOR EVERY PURPOSE
HAY TOOLS & POWER RANGERS

THE F. E. MYERS & BRO. CO.
ASHLAND, OHIO
ASHLAND PUMP AND HAY TOOL WORKS

"led-hed" Nails

**A Better Nail
For Roofing Purposes**



Patented Mar. 16, 1928



Here is a nail that plugs the hole caused by driving it through any roofing material. It makes a **DOUBLE** water-tight seal.

Nails rust away at the shank — **UNDERNEATH** the head — but "led-hed" nails keep the moisture away which prevents rusting and protects roofing.

A "led-hed" has all the lead under the head. In driving, the hammer hits squarely on the steel nail head and the harder you drive it, the tighter it seals.

Especially designed for Corrugated Sheet Steel; Metal Shingles; Metal Tile, etc.

Pure Copper "led-heds" are perfect nails for laying Slate Shingles. The lead packs in around the nail hole and prevents slate from cutting off nails.

WRITE FOR SAMPLES AND PRICES

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**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**

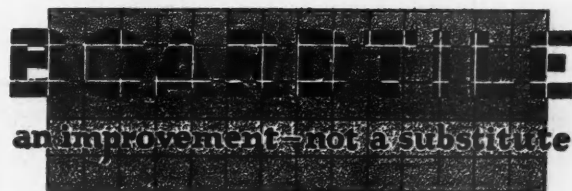
Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

Write today for our Sample Booklet "P."

JOHN BOYLE & CO. Inc.
Established 1860

112-114 Duane St., New York
1317-1319 Pine St., St. Louis, Mo.

**BIG PROFITS in this New Product for
State Rights Representatives and
Local and District Agents**



Boardtile is not to be confused with ordinary building boards, altho it may be installed in a similar manner. When put up in bath room, kitchen, office or other places where tile is desirable, it can not be told from actual tile installation. The finish is hard and the glaze will not crack or chip.

**Costs Less—Looks Better—Wears Longer—
Holds Color Indefinitely**

For less than one-half the cost of tile, Boardtile will make a better job and one that will last as long, without the muss, fuss or delays of tile work. Boardtile has proven its superiority in actual use. It offers immense possibilities to state, district, county and local agents, contractors and others for building their own homes and other owners of homes not having the advantages of tile in bath-rooms, kitchens and halls.

Send for Sample and Representative's Proposition

and learn how easy it is to build a handsome business with this attractive new building product. Send the coupon today.

Gibbs Boardtile Corp.,
344-50 N. Ogden Ave., Chicago, Ill.

Please send me complete details regarding Boardtile and your State, District and Local Representatives' proposition (check the one you wish to hear about).

Name

Address

City

State

SLIDE—

This Rule for
INSIDE MEASUREMENTS

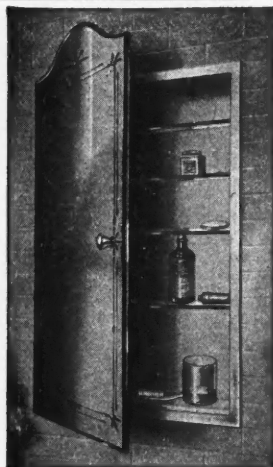


Cut out "guesswork"—use the **MASTER SLIDE RULE** and always be accurate—exact—safe! This scientific measuring device is the last word in rules. No rule supersedes the **MASTER SLIDE RULE** for accuracy and simplicity.

For taking inside measurements order a **MASTER SLIDE RULE** from your dealer, or if he does not carry them, write directly to us. **MASTER RULE CO., 815 East 136th St., New York City**

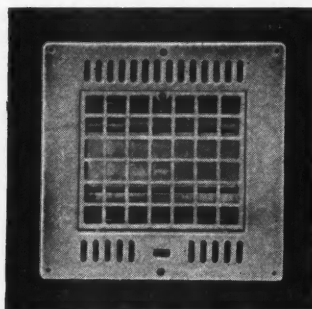
Something Finer!

*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 enameled. Every builder should have the complete Bulletin of our comprehensive De Luxe line on hand. Write for it today.

Majestic Steel Cabinet Co.
Household Steel Cabinet Headquarters
4211 Belle Plaine Ave. Chicago



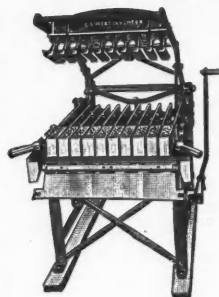
RADIA ELECTRIC HEATERS

The wall type heater illustrated here is the very thing for the bathroom or dressing room. A permanent installation that will add 100% to home comfort and appeal. The Globar heating element, unharmed by water, makes it ideal for bathrooms.

There is a **RADIA Electric Heater** for every need.
Write for complete catalog and prices.
They are yours for the asking.

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1300 Sheffield St., Pittsburgh, Pa.

TAPESTRY BRICK MACHINE



The WERT Tapestry Brick Machine is a Money Maker for the **CONTRACTOR** and **BUILDER**. Are built to be operated by either Hand or Power. I also manufacture a Two, and a Three Core Block Machine, operated by either Hand or Power. A Chimney Brick or Block Machine. Well, Cistern and Silo. Molds. Hollow Wall Brick Machine. A Floor Tile Machine. Before purchasing any of the above line of concrete machinery, Investigate the **WERT LINE**.

Write for Free Catalog No. 8

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BERRIMAN BILTIN-WARDROB

Save Furniture Cost

Converts waste space into utmost efficiency or monthly income. The appeal to tenants, guest and owners of a fully equipped wardrobe permanently, built-in is instant and universal.

HOMES, APARTMENTS, HOTELS

Contractors—Architects—Owners write for complete information and price.

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Unit A, Unit B
Height 6'8" Width 4'
Depth 1'8"

No Deposit Required

USE—TEST—COMPARE

A "Sterling"

Convertible Wye Level
Model No. 40



Gold Medal
Sesqui-
Centennial
Exposition—
1926

on your job for 10 days at our expense.
No obligation to purchase.
No expense of any kind.
Express charges prepaid.

Return this coupon with your letterhead.

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Send me new folder PL-25 giving full information about the "Sterling" Level with details of **FREE TRIAL** offer and easy payment plan on which it can be purchased.

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48th Street, West of Broadway, New York City—Times Square's Finest Hotel

Within convenient walking distance to important business centers and theatres. Ideal transit facilities; **450 rooms, 450 baths**. Every room an outside room—with two large windows. Large single rooms, size 11' 6" by 20' with bath, \$4.00 per day. For two, \$5.00—twin beds, \$6.00. Large double rooms, twin beds, bath, \$6.00 per day. Special weekly rates. Furnished or unfurnished suites with serving pantries, \$95 to \$150 per month. Moderately priced restaurant featuring a peerless cuisine.

Illustrated booklet free on request.

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Don't Overlook

The

REMARKABLE OPPORTUNITIES

Offered

On Pages 121, 122, 123 and 124

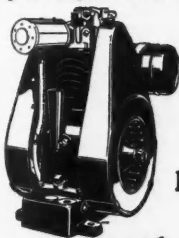
Why are

Fullpower
 4-Cycle
 Air-Cooled
**GASOLINE
 ENGINES**

Used as Standard Equip-
 ment by so many manufacturers
 of Contractors' and Builders' Machinery?

FULLPOWER engines, through their compact design, light weight with great power, precision-built construction and dependability, have made an enviable reputation in the contracting field.

Users of FULLPOWER-equipped machines have learned to place implicit faith in these sturdy, well-built engines. Manufacturers know their product is "half-sold" when the fact becomes known that power is supplied by a Briggs & Stratton FULLPOWER engine.



If you are developing a machine in this field that can use a 1/2 to 1 1/2 H.P. gas engine, consult our engineering department, get the benefit of our experience on your special power application problem.

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A Golden Offer

WE WANT FRANCHISE AGENTS

Start Your Own Business Selling and Applying
MALLEABLE ASPHALT (MASTIC)
FLOOR AND ROOFS

An unusual mastic composition that is different from other similar products in ingredients method of manufacture and in results.

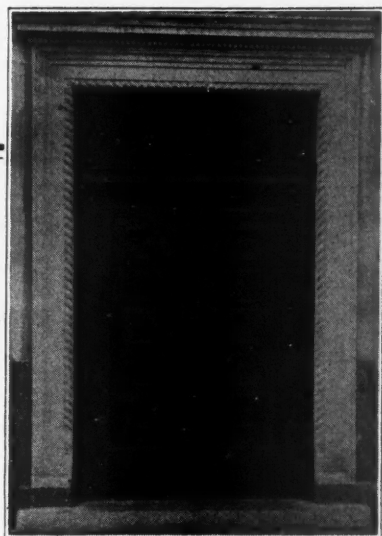
Easily Applied—No Heat—No Special Tools

We appoint one Franchise agent in each town and our specialty salesmen help our Franchise agent sell. No large investment required. An ideal line for contractors and building material men. Two way profits—one on material—one on the installation.

Write today for full information. Your territory won't be open long, so act at once. Please state your occupation.

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 6355 Broadway, Chicago, Illinois

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 OF A PAIR OF BRONZE DOORS**



Better Building at Less Cost

Builders and Contractors know Leonard Products to be of the highest quality. Bronze Store Fronts, metal covered doors and windows, high grade bronze covered doors for office buildings and banks, rolled steel door frames, kalamein work and Leonard steel windows are building equipment known to every builder. Let our engineering department help you in your problems.

LEONARD SHEET METAL WORKS, Hoboken, N. J.
 Established 1900

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Our reputation since 1900 is your guarantee of high grade work.

AUSTRAL

Sash Sustainers



SEND TODAY

The countrywide response from Builders to the Austral Sash Sustainer PROVES THAT IT IS NEEDED FOR SMALL HOUSES, BUNGALOWS, ETC., wherever they may be located. It saves the extra expense and labor necessary for the use of weights and cords.

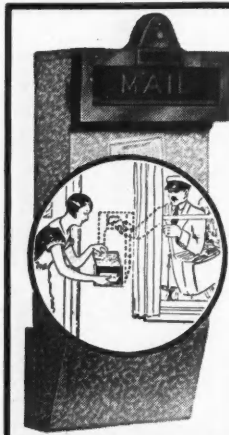
Over 12000 Builders sent in fifty cents for samples!

Austral Window Co.
 101 Park Ave.
 NEW YORK, N. Y.

Please send me a sample pair of AUSTRAL SASH SUSTAINERS for which I enclose 50c (this covers only actual production cost and postage)

AUSTRAL WINDOW COMPANY
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Name.....
 Address.....



It's New!
The Built-in Mailo-Box

No woman wants the old-fashioned, inconvenient, rust-collecting, outside mail box. She wants the new, good-looking built-in Mailo-Box. She likes its convenience. Put the Mailo-Box in every home. Notice how it appeals to the women. There are many styles suited for any type of home. Priced, \$4.75 to \$12.00. We want live dealers. Liberal terms.

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809 University Ave. St. Paul, Minn.



—For permanence specify the famous

Hodell Sash Chain

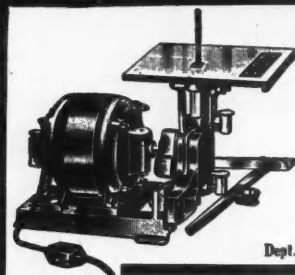


Hodell No. 75 Apartment Sash Chain offers the most modest home or apartment building all the advantages of noiseless, permanent, smooth-running sash chain at no greater cost than for cord. Formed from a cold-drawn ribbon of polished steel, NOT STAMPED FROM SHEET; every link is uniform. See Sweet's. Ask for A. I. A. Specification File, Class 27-A1, and No. 75 folder.

We have some open territory on an exclusive basis for reliable resident agents handling several builders specialties.

Address
THE CHAIN PRODUCTS CO.
Established 1886
CLEVELAND, OHIO

Sawing Jobs Simplified



The International MOTOR SAW

does everything a bench saw should do. Cross cutting, mitering, ripping, beveling, scroll work—inside and outside—all are accomplished without changing blades or parts. Press the button and start sawing. Ideal for carpenters, builders, shop and home owners, manual training, etc. Portable, weighing less than 50 pounds.

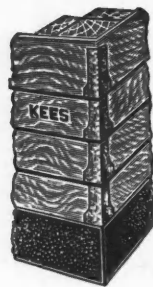
Write for Particulars

The International Stamping Company
Dept. B, 400 North Leavitt Street, Chicago, Illinois

Building Corners

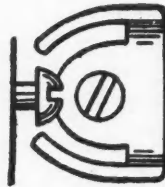
Accurate angles and bends. Fit perfectly; give cleancut effect of mitred joint. Paint sticks; no "weathering." Can scarcely be noticed after painting.

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BLECK'S SCREEN and SASH LOCKS



This "Lock" eliminates all screen troubles.

¼ turn of lock on inside of screen, opposite old button, locks screen to frame. Full size screens are installed or removed on all stories inside of a building. The convenience, time saved and protection warrant change to Bleck's Screen Locks. It retails at 5c. Ask your dealer for supply.



Protected with patents in U. S. and Canada

HERMAN BLECK
Inventor - Manufacturer

415 Eaton St. Hammond, Ind.

ZIMMERMAN PATENT IRON BASE

NO MORE WATER SOAKED BASES

The Zimmerman Patent Iron Base prevents rotting of wood columns.

The Zimmerman is the only base having center bearings. Lifts the column from 1¼ to 6 inches off the floor, allowing the air to circulate between the column and the floor. Water runs off without wetting the bottom of column. Specify this base by name.

S. CHENEY & SON, Manlius, N. Y.

WONDER-LINE Built-In Specialties

IRONING BOARDS All types. Made of clear Spruce, rigid and lasting. The best buy at the best price on the market.

MEDICINE CABINETS Venetian Models. Regular type or tilting.

TELEPHONE CABINETS Saves marring of walls when telephone is installed or disconnected. Two models.

WRITE TODAY FOR OUR LATEST CIRCULAR

Hugo M. Carlson Co. 1809 Balmoral Ave. Chicago, Illinois

WANTED WEATHERSTRIP MEN SEEKING \$7500 A YEAR

We want one weatherstrip man in each of 10 cities to handle the most valuable franchise in weatherstrip history. We're looking for the kind of men who'll make us prove what we say. If you can sell weatherstrips and want to be financially independent, we want you in this organization. You'll get the full benefit of our national advertising now appearing. You'll get a hard-hitting direct mail campaign to customers you pick out yourself. You'll get Ceco super service—on shipments and in quality of strips. Your prices and discounts will be right! Find out why 91 per cent of the original Ceco dealers are still with us after many years. Write at once.



Ceco Weatherstrip Co.
1926 So. 52nd Ave.
CHICAGO, ILL.

KENT

INCREASE YOUR PROFITS

Contractors are demanding a light weight portable floor-finishing machine that can be easily wheeled from job to job—plugs in any light socket or wall outlet.

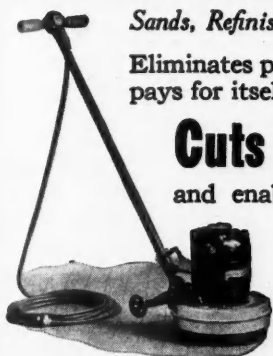
Does the Work of Five Men!

Sands, Refinishes, Waxes, Polishes, Scrubs
Eliminates practically all hand work—pays for itself in a short time.

Cuts Your Costs—

and enables you to save money that now goes to waste. It has done it for others. Why not for you?

Write for 10-day FREE TRIAL OFFER and easy payment plan.



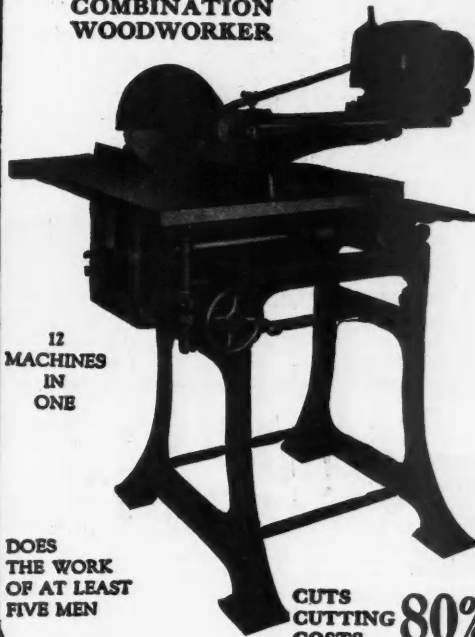
FREE TRIAL

101 Canal St. **The KENT Co.** Rome, N. Y.

BUILT TO LAST

BEAVER

COMBINATION
WOODWORKER



12
MACHINES
IN
ONE

DOES
THE WORK
OF AT LEAST
FIVE MEN

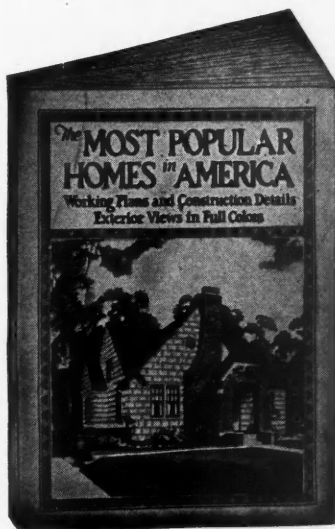
CUTS
CUTTING
COSTS **80%**

Write for Free Folder B.A.B-6

HUTCHINSON MFG. CO., INC.
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This Big Book FREE

148 Pages — 20 Pages in Full Colors



15
Sets
Building
Plans

60
Pages
Detail
Plates

For Full Information

See Pages 121 to 124

This Issue

DANDIE

KOEHRING

10-S



VALUE! High speed operation, liberal power, strong, enduring, dependable construction—and still within the price range for easily-portable mixers! Know about its fast clean charging, thorough mixing, fast discharge and ease of operation. *Send for catalog D-1.*

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

KOEHRING COMPANY, MILWAUKEE, WISCONSIN
PAVERS, MIXERS—GASOLINE SHOVELS, CRANES AND DRAGLINES
Sales Offices and Service Warehouses in all principal cities
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BUILT-IN WOODWORK

Adds the touch of Refinement. Beauty that increases renting and selling values.

SEE OUR OFFERS

Bookcase Colonnades—Sideboards, Medicine Cabinets, etc., are of Distinctive Design and give living comfort to any home.

Send for Free Catalog

STEPHEN BILEK CO.
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MITERED CASINGS ARE THE BEST CASINGS

CLAMP-NAILS



MAKE THEM SO
The Best, Fastest and most Economical METHOD

Write us for information and samples.

\$15.00

This is all the extra equipment that is required for making the finest mitered casings.

CLAMP NAIL CO. 4540 Palmer St., Cragin Station **CHICAGO, ILL.**

Hoosier Blox
for All Permanent Building

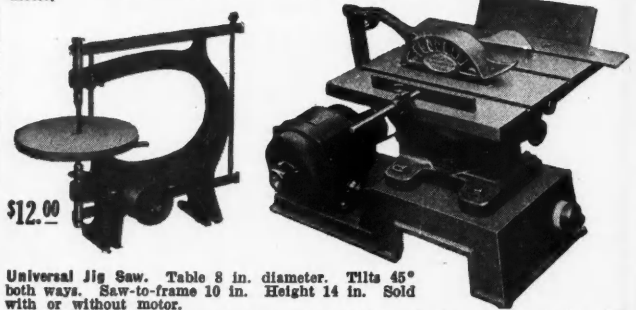
The ideal material for every city or country building use is HOOSIER Hollow Building Blox. Easy to lay up, economical buy, eliminate repairs, painting, etc.; fire resisting. Harmonious coloring, smooth glaze or beautiful mat-face finish. Extensively used and recommended for homes, public buildings, farm structures, factories, etc.

Write for free literature. Send plans for estimate. Address Dept. B5.

Hoosier BUILDING TILE COMPANY
Albany, Indiana

Boice Leads in Saw Values

Compare the two Boice Bench machines shown here with similar saws for size, capacity and price. Only enlarged production facilities and big demand for Boice products could permit such prices for this high quality. Universal Handisaw cuts 2 1/2" stock. Table 15x17 in. elevates for grooving. Sold with or without motor.



\$12.00

Universal Jig Saw. Table 8 in. diameter. Tilts 45° both ways. Saw-to-frame 10 in. Height 14 in. Sold with or without motor.

All Boice machines operate from light socket. Send for new catalog "B" describing complete line of Boice-Crane band saws, jig saws, circular saws, jointers, mortisers, lathes, etc.

W. B. & J. E. BOICE, Dept. AB 6-D, Toledo, Ohio

Saw Rigs
Concrete Mixers
Mortar and Plaster Mixers

KNICKERBOCKER
BUILT TO LAST AND LAST

Write for special circular on the machine that interests you.

The Knickerbocker Co.
Jackson, Michigan

Crofoot
SCREEN TACKER

--knows no speed laws

and insures greatest economy and maximum profit. Holds 78 staples at one loading. Reloads completely in 3 seconds.

Fully Guaranteed—5 Days Free Trial

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only \$9.75 (postpaid when check accompanies order)

Credit to rated concerns

cash, f. o. b. factory complete with 60 cycle electric motor

Now!! only \$70

Biggest capacity for price

Due to quantity production, world wide distribution, long experience in water plant building and F-M manufacturing efficiency, this modern 210-gallon-per-hour home water system can be offered at the lowest price ever placed on a unit of this capacity. Enclosed and fully protected. Automatic. Built with F-M dependability—and unmistakably the greatest water system value ever offered! There's a size and type F-M water system for every purse and purpose. Write for new catalog—just published.

FAIRBANKS, MORSE & CO.
Manufacturers Chicago, U. S. A. Dept. H-6

FAIRBANKS-MORSE HOME WATER SYSTEMS

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Send for Our BIG New FREE Catalog

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Also describes fixtures for Churches, Theatres, Auditoriums and Public Buildings

Contractors, Builders, Electricians are invited to write for our proposition

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Imperial Maitainer

is not an ordinary mail box. Its design breathes the spirit of Old England and it is hand made by skilled metal craftsmen. Only the finest materials are used—wrought iron, wrought brass, etc.

Yet the retail price is only **\$8.00**

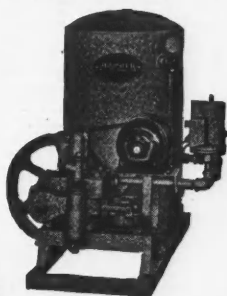
Write us for complete catalog and details.

Manufactured by
PATENT NOVELTY CO., INC.
Metal Craft Dept.
Fulton, Illinois, U. S. A.

America's Leading Mail Box Manufacturers

The New HOOSIER FOR BETTER WATER SERVICE!

NEW refrigeration type motor runs cool and smooth; NEW rubber motor mounting for quiet operation; NEW "V" type belt does away with noisy idlers; plus GalVAZink coating inside and out, pump design that keeps oil from water supply and other HOOSIER features.



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Low Cost Steel Mixing Boxes



Why waste money on one wood mixing box after another when HELTZEL steel mixing boxes cost so little and last indefinitely. No more delays, wasted material or damage to building due to leaky boxes.

Perfectly smooth bottom and sides. Nothing to catch your mixing tools. Three sizes.

Write for prices.

The Heltzel Steel Form & Iron Company
Warren, Ohio

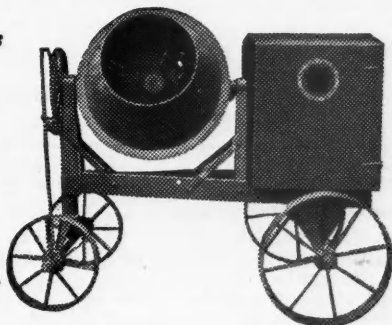
HELTZEL

KEYSTONE—Concrete Mixer of Merit

New 1928 Models now ready.

Distributors and dealers wanted

GRAY IRON FOUNDRY CO.
Reading, Penna.
Est. 1903



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.

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2 Ways to Identify

PEARL WIRE CLOTH

Due to its metallic coating, a secret process exclusive with G. & B. PEARL is an exceptional rust resister. Because of its long life, smooth finish and even mesh PEARL is and has been for over 30 years the most satisfactory screen wire cloth.

Our round red tag and two copper wires in the selvage identify PEARL.

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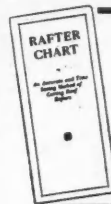
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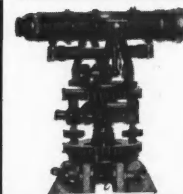
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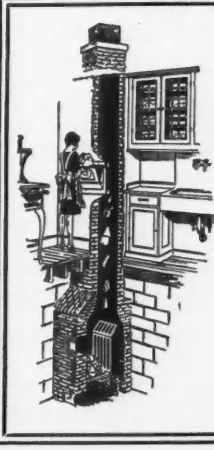
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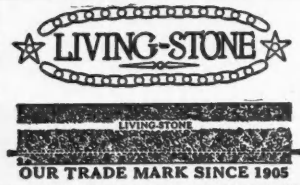
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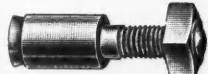
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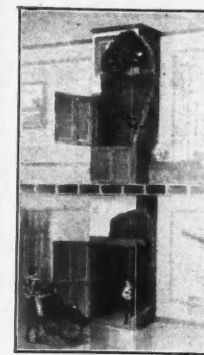


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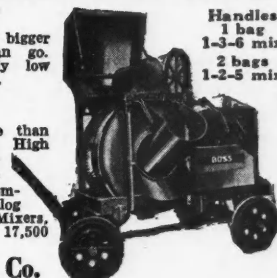
Just right size. Makes small jobs pay bigger profits. Goes anywhere a truck can go. Built of steel. Write for amazingly low prices and learn about the big saving.

Boss 10S One-Two Bagger

Extremely compact. Weighs no more than some one baggers. BOSS Patented High Speed Remixing Action and Rapid Discharge give 25 to 30 more batches daily.

WRITE! Get BOSS prices and compare with others. Catalog illustrates complete line of Drum Mixers, Tilters, Pavers and Hoists. Ok'd by 17,500 users.

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Handles
1 bag
1-3-6 mix
2 bags
1-2-5 mix

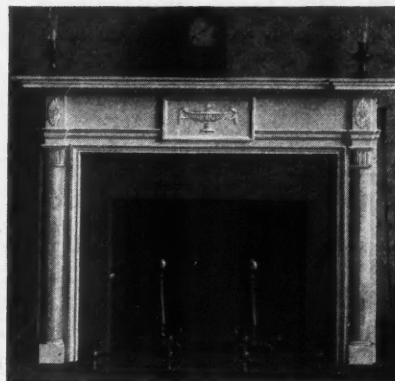
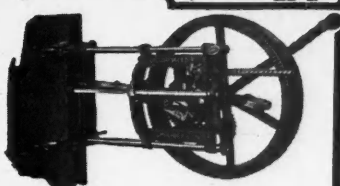
Saves 84c of every \$1

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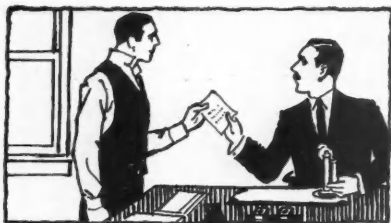
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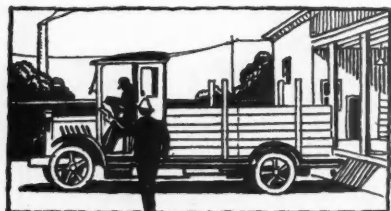
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We use Over 55 Designs—



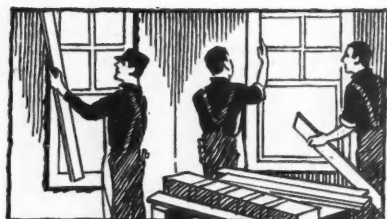
4 P. M.—“Here, Jack, phone this TrimPak order—the boys will be ready to trim the Lincoln house in the morning.”



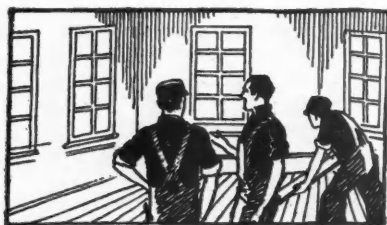
4.30 P. M.—At the lumber yard. TrimPak order all loaded, ready for delivery.



8 A. M.—TrimPak being unloaded on the job.



8 A. M.—Carpenters start putting up TrimPak.



NOON—TrimPak all up on first floor.



5 P. M.—House has been completely trimmed, at close of day after order was placed.

Three Carpenters can completely trim a 6-room house in one day with

TRIMPAK
TRADE MARK
Highest Grade
INTERIOR FINISH

The Ultimate Interior Finish for Doors and Windows



Why Builders Demand this New Time-Saving Trim

IN any building operation today, “an hour saved is a dollar earned.” When time comes to install the trim, the builder needs a good job quickly performed, and that is why TrimPak has become so popular among thousands of builders in the three years it has been available to them.

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By always ordering TrimPak you can forget the troubles you used to have from unwieldy, imperfectly dried and finished long length trim. TrimPak is sold by the best lumber dealers everywhere in the desired woods and patterns.

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44 Whitehall Street, New York

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TRIMPAK CORPORATION, 44 Whitehall Street, New York, N. Y.

A.B. 6-28

Please send complete information on TrimPak.

Name _____

Address _____

Please check the square that identifies you, so we may reply most intelligently:

Architect Builder Contractor Retail Lumber Dealer Home Builder

"Like a dollar lies over a dime"

says Mr. Thomas.



MY TRADE MARK "QUALITY"
J. A. THOMAS
 FLOOR SURFACING
 AND
 FINISHING
 201 MAY STREET
 MONTGOMERY, ALA. Feb. 23 - 1928

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 WORK
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I have tried and used eight different brands and kinds of paper but I have never used any that gave the satisfaction that your DURUNDUM has given me.

The first shipment of it that I used I got from Birmingham and I liked it so well that I got the Central Cement & Supply Co. to stock it here for my convenience, and I guess that their business has been appreciated by you, and your Company.

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When I began using your DURUNDUM paper I was able to cut my price One Half Ct. per ft. and still make my regular profit because of the speed that it cut and the durability of it.

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So hoping you will continue to make DURUNDUM as good as you have been making it I beg to remain as ever,
 Yours truly,
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 The Floor Man,
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Get acquainted with *Speed-grits* DURUNDUM PAPER. Let us tell you more about it.

MANNING ABRASIVE CO. Inc.
 TROY, NEW YORK

ADVERTISERS' INDEX



June, 1928

Page	Page	Page
Acetol Products, Inc. 200	Bates Expanded Steel Truss Co. 206	Century Electric Co. 190
Ackerman-Johnson Co. 239	Bates Valve Bag Corp. 42	Chain Belt Co. 2
Adam Electric Co., Frank. 204	Bayley Co., Wm. 208	Chain Products Co. 232
Adamston Flat Glass Co. 223	Beckman-Dawson Roofing Co. 49	Chappell & Co., Wayvell. 218
Ajax Building Bracket Co. 237	Beckmann Co., L. 237	Chemical Toilet Corp. 223
Almetal Weatherstrip Co. 237	Bessler Disappearing Stairway Co. 210	Chency & Son, S. 232
Aloe Co., A. S. 227	Bilek Co., Stephen. 234	Chevrolet Motor Co. 169
Alpha Portland Cement Co. 78	Binks Spray Equipment Co. 210	Chicago Spring Hinge Co. 218
American Cement Machine Co., Inc. 239	Black & Decker Mfg. Co. 238	Chicago Technical College. 157-238
American Chain Co., Inc. 63	Bleck, Herman. 232	Cincinnati Iron Fence Co. 226
American Chime Clock Co. 238	Boice, W. B. & J. E. 234	Clamp Nail Co. 234
American Face Brick Assn. 76	Bommer Spring Hinge Co. 180	Clarke Sanding Machine Co. 13
American Floor Surfacing Machine Co. 209	Bonafide Buildings, Inc. 238	Clay Products Assn. 196
American Saw Mill Machinery Co. 237	Boyle & Co., Inc., John. 229	Clinton Metallic Paint Co. 177
American Steel & Wire Co. 211	Bradley, Miller & Co. 172	Coddington Mfg. Co., E. D. 221
American Stove Co. 40	Brecher Co., The. 239	Coleman, Watson E. 238
Andersen Lumber Co. 137	Briggs-Stratton Corp. 231	Colgan Machinery & Supply Co. 239
Andrews Heating Co. 237	Bruce Co., E. L. 159	Colonial Fireplace Co. 216
Anti-Hydro Waterproofing Co. 184	Brunning Co., Charles. 238	Columbus Union Oil Cloth Co. 194
Arkansas Oak Flooring Co. 190	Buff & Buff. 238	Common Brick Mfrs. Assn. 31
Arkansas Soft Pine Bureau. 59	Burnham Boiler Corp. 188	Concealed Bed Corp. 191
Art Metal Radiator Cover Co. 168		Concrete Equipment Co. 212
Asbestos Shingle, Slate & Sheathing Co. 46		Consolidated Concrete Machinery Corp. 195
Associated Tile Mfrs. 84	Cabot, Inc., Samuel. 174	Consolidated Expanded Metal Co. 74
Athey Co. 236	Carborundum Co., The. 192	Construction Machinery Co. 171
Atlas Weatherstrip Co. 238	Carey Co., The Philip. 52	Coppes Bros. & Zook. 45
Austral Window Co. 231	Carlson Co., Hugo M. 232	Crane Co. 58
Automatic Electric Heater Co. 237	Carter, B. L. 181	Crescent Machine Co., The. 219
	Casement Hardware Co. 190	Crofoot Co., J. B. 234
Babs Lighting Fixture Co. 210	Ceco Weatherstrip Co. 232	Cromar Co., The. 14
Banks Steel Post Co. 220	Central Specialty Mfg. Co. 198	

ADVERTISERS' INDEX CONTINUED TO PAGE 243



Metal Lath "Proves" Itself In Time of Stress

—In the Tokyo and California earthquakes, when buildings everywhere collapsed like veritable houses of cards, structures reinforced with Metal Lath showed but a few, easily repaired cracks.

—Again, when the mad fury of a West Indian hurricane brought death and millions of dollars' damage to Southern Florida, Metal Lath reinforced buildings established another "honor" record.

—Moreover, Metal Lath is also daily—almost hourly—practically proving its worth as a fire retardant.

* * *

A plastering base which yields so great a measure of protection in times of extraordinary stress is, of course, also insurance against everyday emergencies—a preventive of the causes which result in streaked, cracked or falling plastering.

And by using the 1/8 inch flat rib North Western PLASTA-SAVER Metal Lath, you have the added satisfaction of knowing that you have supplied this much desired protection at the lowest possible cost to your customer.

NORTH WESTERN EXPANDED METAL CO.
1203 Old Colony Building
CHICAGO

North Western Expanded Metal Co.

Send samples of this very economical PLASTA-SAVER Metal Lath and literature.

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1/8" FLAT RIB
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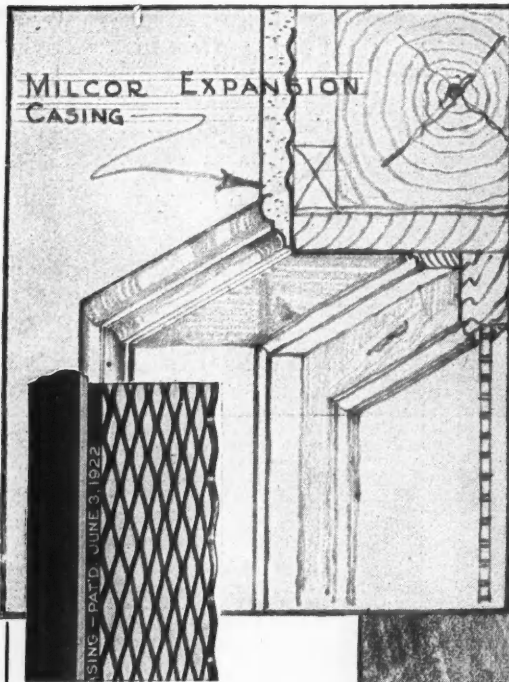
Page		Page		Page	
Delco-Light Co.	193	Kalman Steel Co.	62	Rapid Wall Builder Koons Mfg. Co.	226
Deniston Co., The	220	Karol & Sons Co., B.	202	Reading Iron Co.	192
Detroit Steel Products Co.	152-153	Kawneer Co., The	151	Redybord Co., Inc.	209
De Vilbiss Co., The	178	Kees Mfg. Co., F. D.	232	Readybuilt Products Co.	210
DeVitt, Paul J.	216	Kent Co., The	233	Reid-Way Co., The	225
De Walt Products Co.	187	Kerner Incinerator Co.	28	Republic Iron Works	217
Diamond Metal Weatherstrip Co.	239	Kimball Brothers Co.	186	Richards-Wilcox Mfg. Co.	6-7
Diddle Co., L. F.	238	Kimmel, George P.	238	Rogers & Co., F. L.	189
Disappearing Stairway Co.	222	Kliegl Brothers	226	Rolscreen Co.	193
Disston & Sons, Inc., Henry	139	Knape & Vogt Mfg. Co.	203	Rowles Co., E. W. A.	220
Donley Brothers Co., The	194	Knickerbocker Co.	234	Ryerson & Son, Joseph T.	170
Dunn Mfg. Co., W. E.	81	Knickerbocker Slate Corp.	228		
Duro Co., The	224	Koehring Co.	233		
		Kuhlman Metal Weather Strip Co.	217		
		Kuhls, H. B. Fred.	201		
Economy Incinerator Co.	237				
Edwards Mfg. Co., The	227				
Electric Rotary Machine Co.	228				
Elite Manufacturing Co.	227				
El Paso Sash & Door Co.	203				
Eric Fixture & Supply Co.	220				
Eternit, Inc.	16				
Excelsio Products Corp.	216				
Fay-Kling Garden Furniture Co., Inc.	185				
Fairbanks-Morse Co.	234				
Fairlyland Co.	222				
Farrand, Hiram A.	221				
Federal Metal Weatherstrip Co.	228				
Federal Motor Truck Co.	173				
Fiat Metal Mfg. Co.	207				
Fischer Spring Co., Charles	214				
Fisk Tire Co., Inc.	149				
Flint & Walling Mfg. Co.	235				
Foley Saw Tool Co.	187				
Forest City Bit & Tool Co.	224				
Fort Wayne Engineering & Mfg. Co.	225				
Frantz Mfg. Co., The	3				
Frazier Stair Co.	221				
Gallmeyer & Livingston Co.	212				
Garden City Plating & Mfg. Co.	235				
Gas-Gard Co.	238				
Gas-O-Matic Corp.	219				
Geier & Blumh.	235				
General Electric Co.	24-25-36				
General Gas Light Co.	245				
General Insulating & Mfg. Co.	181				
Genfire Steel Co.	191				
Gibbs Boardtile Co.	229				
Gibsonburg Lime Products Co.	180				
Gilbert & Bennett Co.	235				
Glow Electric Co.	238				
Goodyear Tire & Rubber Co.	222				
Gowing, F. H.	227				
Grand Rapids Hardware Co.	235				
Gray Iron Foundry Co.	235				
Gurley, W. & L. E.	236				
Hagstrom Mfg. Co.	225				
Hardin-Lavin Co.	67				
Hardware Sales Co., Inc.	238				
Hart & Hegeman Mfg. Co.	60				
Heltzel Steel Form & Iron Co.	235				
Hess Warming & Ventilating Co.	198-218				
Heston & Anderson	239				
Higin Mfg. Co.	176				
Hild Floor Machine Co.	228				
Hitchings & Co.	201				
Hobart Brothers	223				
Holland Furnace Co.	47				
HoltBid Service Co.	163-164-165-166				
Home Owners' Institute.	32-33				
Hoosier Bldg. Tile & Silo Co.	234				
Hopson Co., W. C.	222				
Hotel Belvedere	230				
Hotel Hollenden	236				
Hotel Martinique	212				
Hutchinson Mfg. Co.	233				
Huther Bros. Saw Mfg. Co.	202				
Ilg Electric Ventilating Co.	43				
Indiana Limestone Co.	8-9				
Insulate Co., The	61				
International Casement Co., Inc.	66				
International Correspondence Schools	199				
International Harvester Co.	161				
International Stamping Co.	232				
International Steel & Iron Co.	188				
Jaeger Machine Co.	53				
Johns-Manville Corp.	29				
Johnson Plumbing Supply Co.	236				
Jones Superior Machine Co.	236				
Lamella Roof Syndicate, Inc.	214				
Lansing Co.	182				
Lathing Device	226				
La Plant-Choate Mfg. Co.	228				
Leach Company	215				
Leonard Sheet Metal Works, Inc.	231				
Libbey-Owens Sheet Glass Co.	205				
Lincoln-Schlueter Machinery Co.	216				
Lincrusta-Walton Co.	167				
Living Stone Co.	239				
Lloyd Floor & Wall Tile Co.	224				
Louisville Cement Co.	86				
Lufkin Rule Co.	204				
McGraw-Hill Book Co.	225				
McKinney Mfg. Co.	30				
Macomber Steel Co.	217				
Majestic Company, The	38				
Majestic Steel Cabinet Co.	230				
Malleable Asphalt Co.	231				
Mallory Mfg. Co.	238				
Manitowoc Brass Works	238				
Manning Abrasive Co., Inc.	241				
Marietta Manufacturing Co.	186				
Marschke Co., The	228				
Martin, T. W.	236				
Mason Fibre Co.	54				
Master Rule Mfg. Co., Inc.	230				
Master Woodworker Mfg. Co.	15				
Mast, Foss & Co.	226				
Matot Co., D. A.	219				
Mayfair Hotel	215				
Mesker & Co., George L.	222				
Metal Forms Corp.	224				
Miami Cabinet Co.	195				
Mid-West Metal Products Co.	226				
Miles Mfg. Co.	204				
Miller & Gleason	228				
Milwaukee Corrugating Co.	244				
Morriss & Co., R. M.	230				
Morton Mfg. Co.	39				
Myers & Bro. Co., The F. E.	229				
Myers, J. C.	236				
National Association of Ice Industries.	68				
National Fireproofing Co.	44				
National Mfg. Co.	246				
National Radiator Corp.	141				
National Sanding Machine Co.	224				
National Sheet Metal Roofing Co.	222				
North Brothers Mfg. Co.	206				
North Western Expanded Metal Co.	242				
Northfield Iron Co.	226				
Novo Engine Co.	51				
Ohio Foundry & Mfg. Co.	179				
Oil Heating Institute.	35				
O. K. Clutch & Machinery Co.	207				
Onan & Sons, D. W.	214				
Ornamental Products Co.	236				
Overhead Door Corp.	77				
Paramount Electric Co.	234				
Parks Woodworking Machine Co.	225				
Pass & Seymour	238				
Patent Novelty Co.	235				
Peerless Mfg. Co.	197				
Penn-Greg Mfg. Co.	232				
Phenix Mfg. Co.	224				
Pioneer Fireplace Co.	204				
Plankington Hotel	218				
Porter Cable Machine Co.	197				
Premier Standardized Woodwork	203				
Progressive Mfg. Co.	222				
Pullman Mfg. Co., Inc.	220				
Radford Architectural Co.	69-70-71-72				
Ransome Concrete Machinery Co.	83				
Safe Tool Mfg. Co.	215				
Samson Cordage Works	182				
Sasgen Derrick Co.	220				
Schlage Lock Co.	57				
Scott Bansbach Machinery Co.	206				
Sedgwick Machine Works	239				
Segal Lock & Hardware Co.	239				
Sellers & Sons Co., G. I.	88				
Seng Co.	41				
Shebel, Anthony P.	239				
Sheet Steel Trade Extension Committee	48				
Shepler Stove Co., F. W.	230				
Shevlin, Carpenter & Clarke Co.	142-143				
Sidney Elevator Mfg. Co.	222				
Sidney Machine Tool Co.	185				
Silver Lake Co.	214				
Sisakraft Co., The	206				
Skilsaw, Inc.	73				
Slatington Bangor Slate Syndicate	236				
Smith Co., T. L.	155				
Smith Typewriter Sales Corp.	220				
Snow & Co., C. A.	236				
Sprayo-Flake Co.	205				
Stairway Mfg. Co.	237				
Standard Sanitary Mfg. Co.	26-27				
Standard Textile Products Co.	75				
Stanley Plumbing Supply Co.	224				
Starrett Co., L. S.	177				
Steel Scaffolding Co.	213				
Sterling Wheelbarrow Co.	189				
Stimmel Winch & Machine Works	236				
Structural Slate Co.	208				
Strutzel Rubber Co., J. D.	222				
Superior Sheet Steel Co.	80				
Syntron Co.	183				
Taylor Mfg. Co., James L.	235				
Taylor Collapsible Horse Co.	220				
Textile Bag Mfg. Mfrs. Assn.	196				
Thibaut, Inc., Richard E.	167				
Thrush & Co., H. A.	183				
Thurston Manual Training Supply Co.	238				
Time Cutting Tool Corp.	133				
Toch Brothers	135				
Trane Co., The	37				
Trico, Inc.	168				
Trimpak Corp.	240				
Truscon Steel Co.	5-22-23-223				
Twentieth Century Sales Agency	170				
United Electric Motor Co.	236				
U. S. Gypsum Co.	65				
United Tool & Mfg. Co.	213				
Universal Hoist & Mfg. Co.	224				
Universal Portland Cement Co.	90				
Vendor Slate Co.	184				
Vento Steel Sash Co.	220				
Wallace & Co., J. D.	175				
Warren-Knight Co.	230				
Wasmuth Endicott Co.	12				
Waterston, J. M.	238				
Watt Mfg. Co.	10-11				
Weatherbest Stained Shingle Co.	227				
Wedell & Boers	224				
Wert, C. S.	230				
Western Door Mfrs. Assn.	34				
Weyerhaeuser Forest Products	146-147				
Wheeler, Osgood Co.	55				
Wheeling Corrugating Co.	56				
Wheeling Sanitary Mfg. Co.	145				
White Co., Inc., David	211				
Williams & Co., C. K.	220				
Willis Manufacturing Co.	200				
Wilson School of Stairbuilding	238				
Wright Rubber Products Co.	210				
Zagelmeyer Cast Stone Block Machinery Co.	228				
Zouri Drawn Metals Co.	82				

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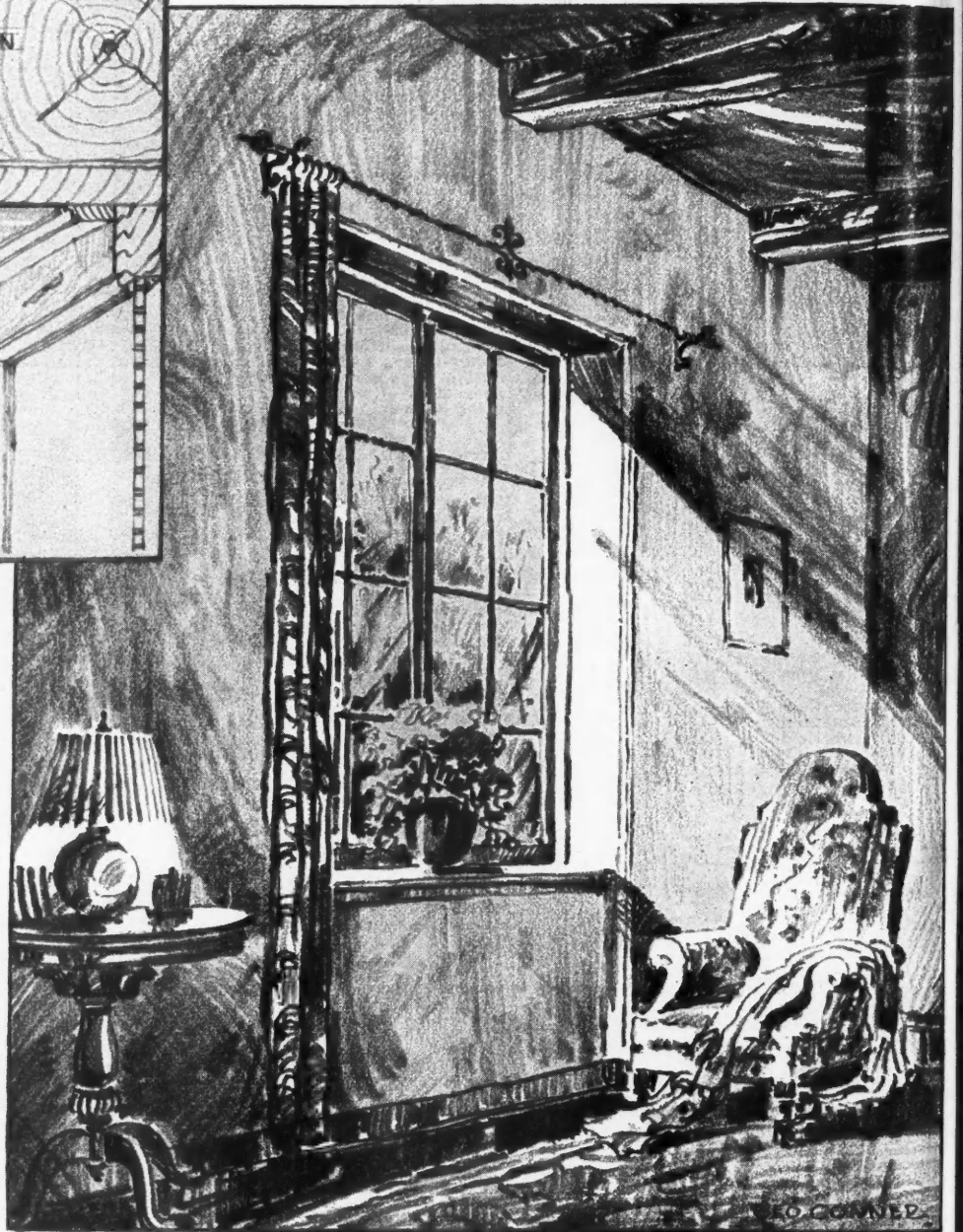
Forms for the July number of the American Builder will close promptly on June 10. New Copy, changes and orders for omissions of advertisements must reach our business office, 1827 Prairie Ave., Chicago, not later than the above date. If new copy is not received by the 10th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

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USE MILCOR EXPANSION CASINGS



Milcor Expansion window casings are available in 4 profiles suitable for all types of interior decoration. They cost less than solid wood trim and effect considerable savings in erection costs.



WHEN your plans call for plaster reveal in window openings — remember that Milcor Expansion Metal Casing, because of its expanded metal wing, provides a means for a close, permanent bond at the junction of the plaster and casing . . . this positively prevents cleavage cracks and is a patented exclusive Milcor feature.

MILCOR

The new Milcor Manual gives complete information about Expansion Casing and other Milcor Firesafe Building Materials. Send for a complimentary copy.

MILWAUKEE CORRUGATING COMPANY - MILWAUKEE, WISCONSIN

No Door is too Big nor too Heavy for "GLIDE" Hangers and Track

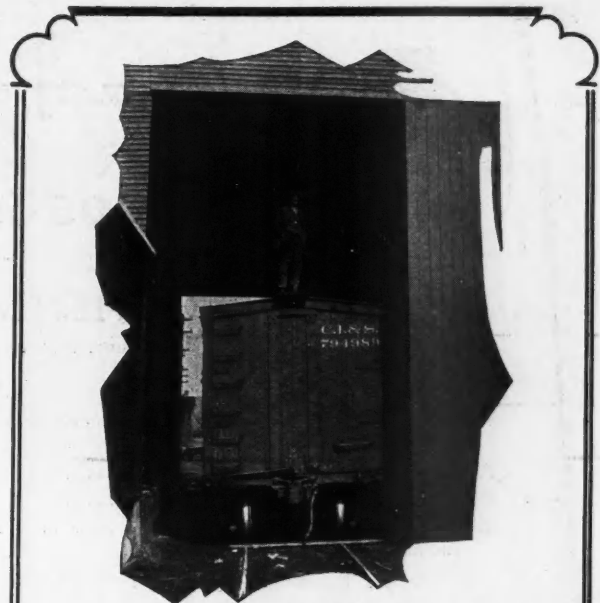
The world famous "Glide" is the original covered hanger and track. The track combines a wheel tread and a water shed cover in one piece. The runway for the hanger is wide and the shape of its tread minimizes friction. Heavy gauge, open hearth steel accounts for the tremendous strength and weather-resisting properties of this track. Patented, telescoping joints eliminate the necessity of joint brackets—yet make the track weatherproof.

The "Glide" Hanger is so constructed that the drop strap to which the door is bolted is nearest the building. Blocking is unnecessary and the door is always held the same distance from the building regardless of the door's thickness. The weight of the door is carried directly below a point where the track is fastened to the building, which accounts for the tremendous strength of this hanger and the ease with which it rolls. Being hinged, the drop strap permits the door to be swung out at bottom if ever necessary.

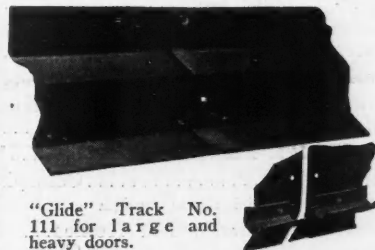
Get acquainted today with "Glide" and the other Frantz Hangers and Tracks at your dealer's. See for yourself how well made they are and how easily they can be installed.

Write for the FREE Chart "How to Select the Correct Hanger and Track for any Type of Door." This chart will save time and money for you and help you solve your door hanging problems.

FRANTZ MANUFACTURING CO.
Dept. A-7 STERLING, ILL., U. S. A.

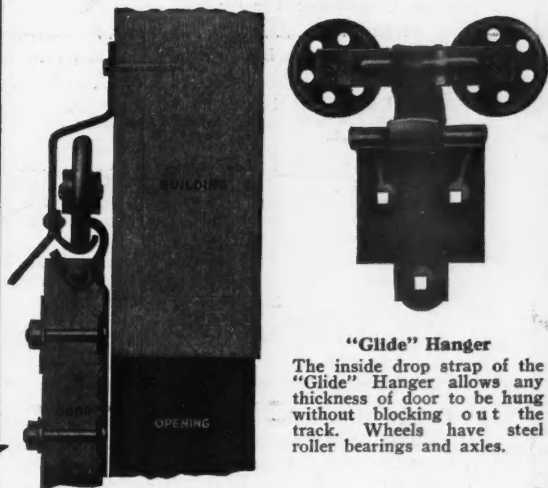


In 1911 a Pair of "Glide" Hangers and Track were installed on this 1,500 lb. door measuring 24 feet high and 20 feet wide. Six years later the same ones were put on the doors of a new building. Today, after 15 years, they are still giving highly satisfactory service. That's reliability.



"Glide" Track No. 111 for large and heavy doors.

Perfect weather protection. One piece construction. No joint brackets required. Has patented telescoping joint feature.



"Glide" Hanger

The inside drop strap of the "Glide" Hanger allows any thickness of door to be hung without blocking out the track. Wheels have steel roller bearings and axles.

"No Hardware is Genuine FRANTZ QUALITY Without the Red Label"



Door Hangers and Tracks
In all Styles and Sizes
Garage Door Fixtures
In all Styles and Sizes
Door Latches
Foot and Chain Bolts
Door Holders

Door Pulls
Strap and Tee Hinges
Ornamental Hinges
Butts Haps
Screen Door Sets
Plated-Finish Hardware
Cupboard Catches

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