

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

Vol. 45.

CONTENTS FOR SEPTEMBER, 1928

No. 6.

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Published on the first day of each month by American Carpenter and Builder Co.; Wm. A. Radford, *President, Treasurer and Editor-in-Chief*; Wm. A. Radford, Jr., *Vice-President*; E. L. Hatfield, *Vice-President and General Manager*; Bernard L. Johnson, *Vice-President and Editor*; Roland D. Radford, *Secretary*; S. C. Kellenberger, *Dealer Service*; Charles G. Peker, *Eastern Editor*; Juan Homs, *Export Editor*; Delbert W. Smith, E. B. Wolfrom, C. R. W. Edgcumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement, *Advertising Staff*.

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

Be sure in writing to advertisers to say: "I saw your advertisement in the AMERICAN BUILDER."

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MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

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WINDOW BEAUTY

TRUSCON
Standard
CASEMENTS
MODEL No 5

TRUSCON STEEL COMPANY, Youngstown, Ohio
STEEL WINDOW AND STEEL DOOR DIVISION
Warehouses and Offices in all Principal Cities

SLIDE THE *Slidetite*

Think of having garage doors that work as easily as the front door of your home!

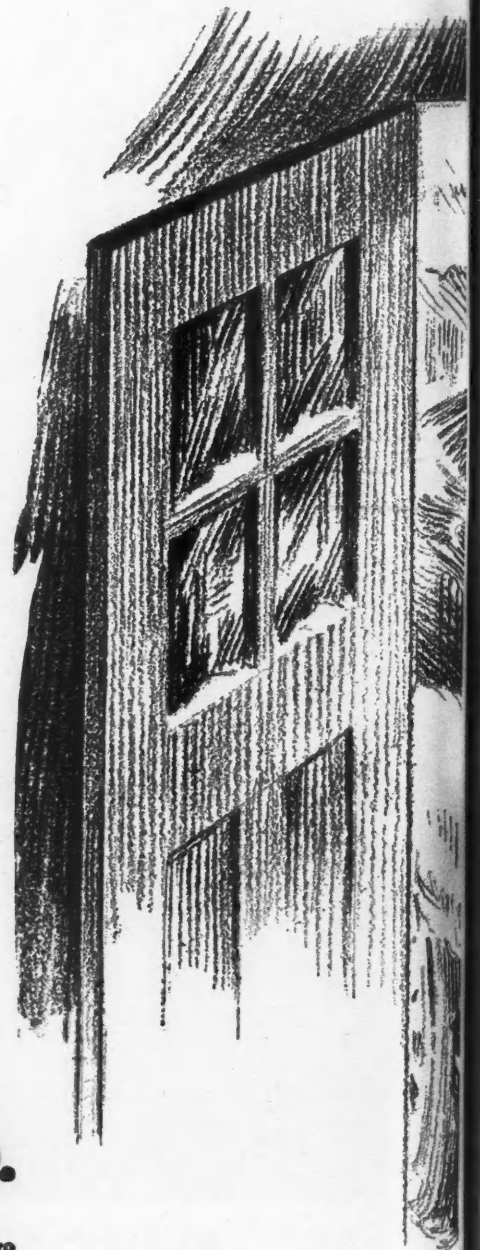
This you are sure of when you install *Slidetite* garage door hardware.

Because the doors slide *inside* the garage, they are forever free from the elements.

They can't blow shut. They are trouble-free the year 'round. They won't stick. They won't sag, swell or shrink.

And because all the hardware is inside, *Slidetite* will not rust. Remember, too, that dangerous center posts are done away with, thus giving you an unobstructed, full-width opening.

Slidetite, with lock-joint brackets, is packed in complete sets for 3, 4, 5, 6 and 8 doors. To insure satisfaction, buy complete sets *only*.



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

DOORS INSIDE

the best method for doorways of any width



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Carter Block, Indianapolis. E. H. Dalby, Designer and Contractor. An example of a moderate-priced store building built of Variegated Indiana Limestone Random Ashlar.

Reap the Sound Profits in Stone Construction

We'll help you get started. Residence costs when Indiana Limestone facing is used run only 5% to 6% more than with other materials.

Write today for free plan books



Portable electric saw replaces old mallet and chisel method of breaking stone. One man at ordinary wages now keeps six stone-masons busy!

a new development. The stone is sawed into strips four inches thick at the quarries. Then shipped di-

THE use of Indiana Limestone as a veneer for all sorts of moderate-priced construction is the newest thing in building, especially the new shot-sawed finish stone. Indiana Limestone itself is not new, of course. It is the beautiful natural stone that has been used for years in the finest of our great buildings.

But Random Ashlar facing construction is

rect to the job. There it is jointed with an ordinary buck-saw or an electric portable carborundum saw. Stone-masons or bricklayers lay it up in the wall.

This use of stone is, you see, entirely unlike the cut-stone jobs you are familiar with. The costs are vastly less, so low in fact that you will be amazed when you get the figures.

It has been proved over and over again that the total cost of a residence faced with Indiana Limestone Random Ashlar will run only 5% to 6% more than if other materials were used.

Yet in beauty, permanency, and re-sale value the Indiana Limestone house is far above the ordinary residence. Wherever these beautiful houses have been built they attract marked attention.

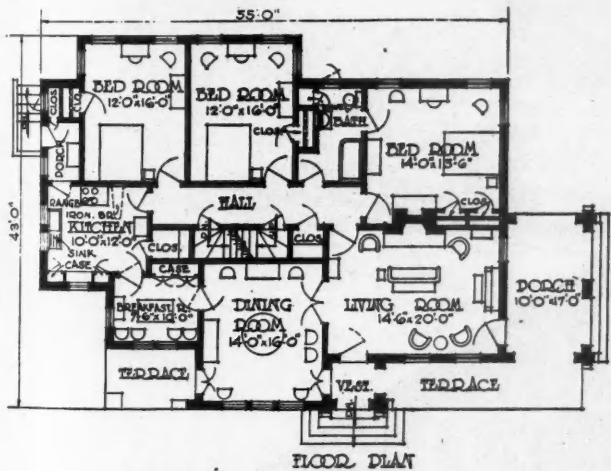
To the contractor, Indiana Limestone offers a new profit opportunity, a specialty that will take you out of the class of ordinary competition. Why not get

INDIANA LIMESTONE COMPANY, GENERAL OFFICES: BEDFORD/

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Charles A. Rushin residence, Macon, Georgia. Claude W. Shelverton, Architect.
 Built of sawed Indiana Limestone Random Ashlar.



FLOOR PLAN
 Floor plan of Rushin residence.

on your competitor. Stone houses will give you something that you can make a good quick profit on and at the same time build up 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 of the better type 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.

-----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.....

into this attractive new field? Write today for full information, using the handy coupon.

Big re-sale value

Obviously, a stone house has a big re-sale value. It immediately stamps its owner as having the best there is.

We will help live builders to start stone construction in their localities. Here is a way to get the jump

INDIANA • EXECUTIVE OFFICES: TRIBUNE TOWER, CHICAGO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

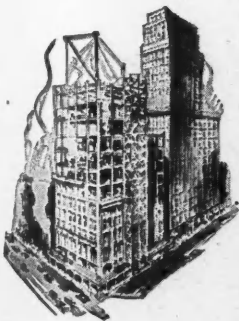


**Costs little more than
standard portland cement
Makes concrete you can
use in 24 hours**

Place it today -use it tomorrow

America's prosperity has been attained by speeding industrial processes. Now Prestolith Velo Cement brings new acceleration to the building industry.

ALL over the world, at any moment, men are waiting for concrete to harden. Often this means the loss of many thousands of dollars in wasted time while overhead goes on. But concrete—the most versatile building material the world has ever known—has still another chapter to write in the progress of construction—a chapter which introduces Prestolith Velo, a high early strength cement that makes concrete you can place today and use tomorrow.



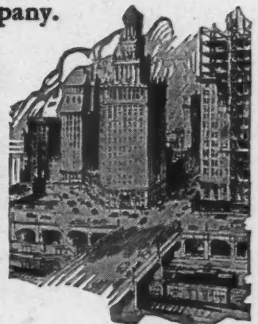
Imagine a concrete street in a busy city on which traffic can be admitted 24 hours after it is poured. Consider a factory whose production is valued at many thousands of dollars a day, saving weeks of time on construction or replacements. Think of the construction of a large office or store building on an expensive site. Its earning power begins only with occupancy. Every

floor delays all the work above it until it is finished. With Prestolith Velo, many days can be saved on each floor. Yet for all its remarkable time-saving qualities, it costs only

slightly more than standard portland cement.

The introduction of Prestolith Velo to the building industry indicates an inherent capacity for engineering service which has had a vital part in the rather unusual growth of the Missouri Portland Cement Company.

It represents an absorbing interest in the improvement of construction methods and materials which has prompted the investment of ability and money in the most exhaustive and conclusive tests of Prestolith Velo Cement in the laboratory and in actual work on a commercial scale over a period of five years.



And it represents the vision of complete usefulness which has caused, as a result of these tests, the building of a new \$2,000,000 plant at Prospect Hill, St. Louis, for the exclusive and commercially adequate production of Prestolith Velo Cement.

Further tests and inquiries are heartily invited. Send for our interesting booklet, "24-Hour Cement." The coupon below will bring it to you by return mail.

MISSOURI PORTLAND CEMENT CO.

ST. LOUIS · KANSAS CITY · MEMPHIS

Manufacturers of Red Ring Portland Cement, Prestolith Velo Cement; producers and distributors of sand, gravel and Bethany Falls crushed stone.



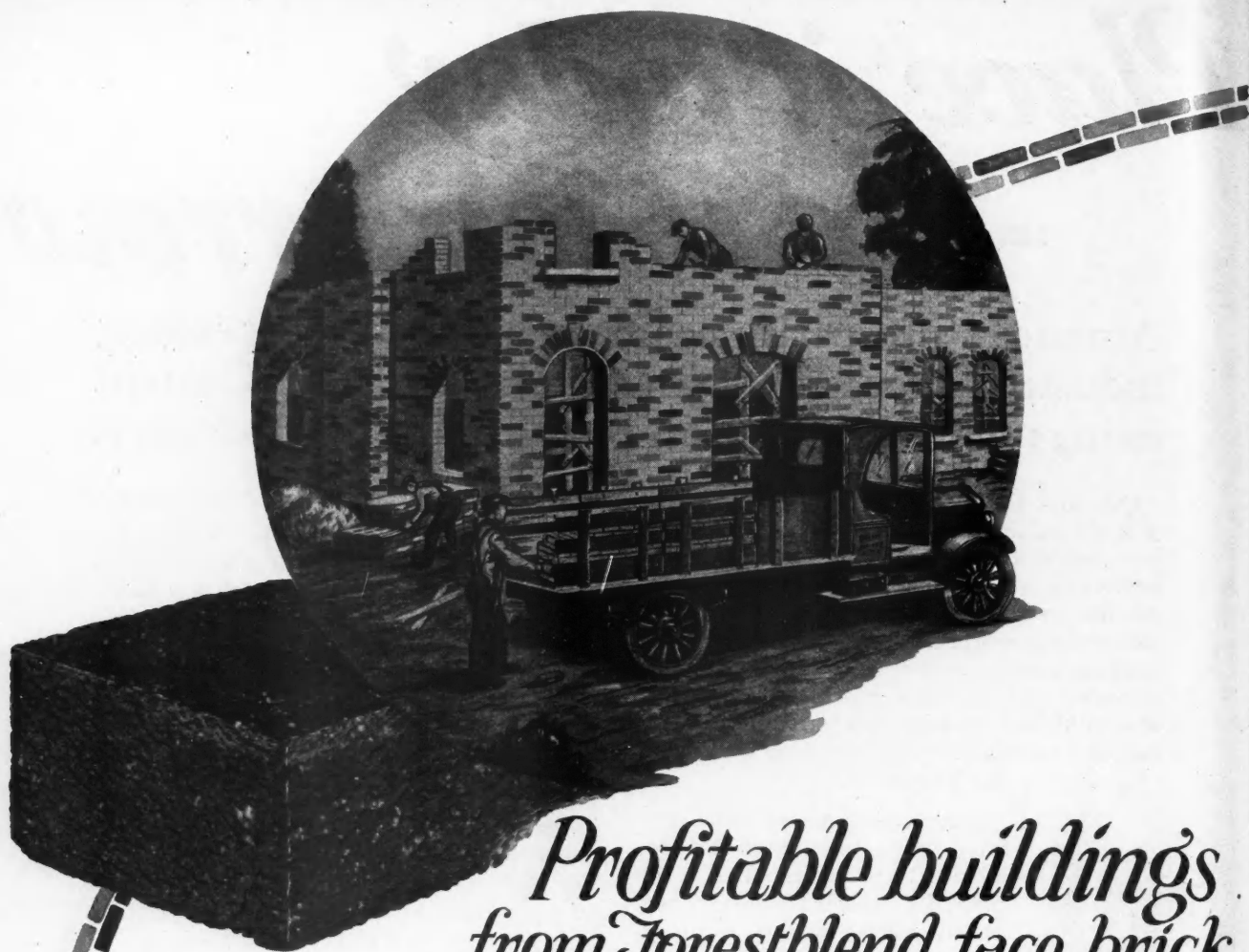
This is the emblem of the authorized dealer in Prestolith Velo and Red Ring Portland Cement. Through him, as the representative of the Missouri Portland Cement Company, is available the advice and engineering assistance of this entire organization.



MISSOURI PORTLAND CEMENT CO.
1311 Telephone Building, St. Louis, Mo.
Please send me, without charge, your descriptive booklet, "24-Hour Cement."

Name.....
Firm.....
Street and No.....
City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



The above illustration shows the random texture of Forestblends.

Profitable buildings from Forestblend face brick

Forestblend face brick is colorful. In shade 455 full range of Finzer line, you secure color with the warmth and friendliness that only nature herself can give. Too, you get the unique Forestblend texture secured by our patented method of manufacture. These advantages also are secured at low cost so that the houses you build can be sold quickly at a good profit.

Write today and get full information on the Finzer line. Ask particularly for "Beauty in Brick," the Finzer plan book of 50 model homes. Through the use of the method suggested in this book you can secure free plans for the houses you are building. The cost is only 50 cents and the coupon is a convenient method of securing full information promptly.

FINZER BROS. CLAY CO.,
Sugarcreek, Ohio

Finzer Bros. Clay Co.
Sugarcreek, Ohio
Gentlemen: I am enclosing 50c for which please send me promptly your new plan book, "Beauty in Brick."

Name.....
Street.....
Town.....

Forestblend'

CLINTON FACE BRICK

Money Back Guarantee

Performance Guarantee

A Double Guarantee

THE Clarke Sanding Machine Company offers the most definite, the most inclusive, the strongest guarantee ever made on any sanding machine—and the only written guarantee of actual performance—backed by a **COLD CASH MONEY BACK PLEDGE**. When you buy a Clarke Vacuum Portable Sander, you are buying the actual ability to do the work you want it to do.

Since the first Clarke was sold—over eleven years ago—every Clarke has been sold on cold, uncolored, unvarnished facts—downright facts of highest quality material—workmanship and performance—quality work and quantity work. We do not sell the Clarke on a five or ten-day trial basis, for no one can prove what a sander will do in that space of time.

But we do **SELL** it on the definite, positive written guarantee that we must prove that it does everything we represent it to do within sixty days of its purchase, or **WE WILL RETURN EVERY CENT YOU HAVE PAID TO US**.

Such a guarantee is positive protection to the purchaser; it is absolute proof that the manufacturer knows positively that he has put into the Clarke—the quality—the most practical design—the careful workmanship—all that proves itself in long life and actual performance.

When you buy a sander, do not be side-tracked; demand an **ACTUAL—MONEY BACK—GUARANTEE** of **PERFORMANCE**, for there, and there **ONLY**, is your profit.

FREE "Pointing the Way To Greater Profits"



You should have "Pointing the Way," whether you are considering the purchase of a sander or not. It's full of facts—interesting facts—and money-making suggestions to every one in the building trade. Here are signed statements from men who are making \$25 to \$75 a day with the Clarke and illustration after illustration showing Clarke superiority of design and construction as well as photographs of the Clarke at work—on big floors—in hallways—closets—little nooks—stair landings, etc.

Nothing like "Pointing the Way" has ever been published for the practical builder and contractor. It's **FREE**. Just send the coupon **NOW**.



Here Is the Sander FOR YOU

Below are some Performance Facts. **WE BACK THEM** with our positive definite money back guarantee:

- The Clarke Vacuum Portable Sander finishes 800 to 1,600 square feet of new floor in eight hours;
 - Refinishes 300 to 800 square feet of old varnished floor in a day without the aid of varnish remover or neutralizer;
 - Is dustless in operation, with in-built vacuum;
 - Is almost as easy to operate as a vacuum cleaner;
 - Finishes floors to unequalled smoothness—barely brushing the surface or hogging a heavy cut;
 - Works so close that the quarter round and baseboard covers what's left;
 - Operates off any light socket—no special wiring required;
 - Carried anywhere—upstairs—downstairs—in street car or subway—with one hand;
 - Does the work of larger machines easier and much more economically.
- Get **ALL** the facts. See the Proof of Performance in "Pointing the Way." **ACT RIGHT NOW FOR PROFIT**. Send the coupon.

Clarke Sanding Machine Co.
Dept. A-29 3815 Cortland Street, Chicago, Ill.

Originators, and for over 11 years, manufacturers of Portable Sanding Machines

POWERFUL - FAST CUTTING

CLARKE

VACUUM PORTABLE SANDER

Do not buy any sander, at any place, at any time, at any price, until you see what work the Clarke can do for you.

—answers all calls

Clarke Sanding Machine Co., Dept. A-29, 3815 Cortland St., Chicago, Illinois.

Please send me illustrated copy of "Pointing the Way to Greater Profits," and full information on the Clarke Vacuum Portable Sander.

For Floor Work For Shop Work

Name

Address

City..... State....

TRADE MARK

Fade? Bloom? **Never!**

Eternit colors are absolutely fast

Eternit Asbestos Shingles, designed to dovetail the modern demand for color, offer an unusual opportunity to builders

NOWHERE is the sweep to color more pronounced than in the construction and decoration of homes. Eternits are riding the crest of the wave. For this reason: *There's a complete range of unusual Eternit colors that never fade.*

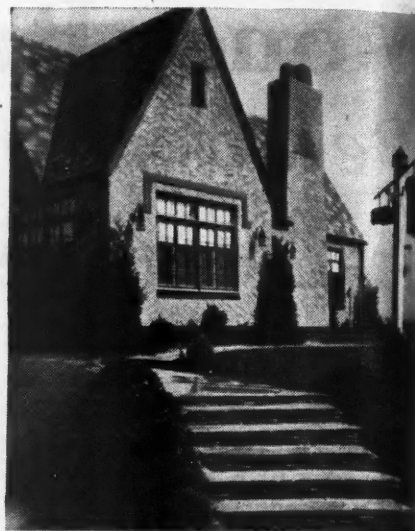
Builders, architects and home-owners demand color—but it must be permanent color. Through an exclusive process, Eternit colors are so permanently set that they last as long as a building stands. Eternits never bloom. Never

dull. Time and weather are as ineffective as is fire.

Eternit colors for every need and preference

Eternits come in five handsome colors—Indian Red, Autumn Bronze, Colonial Gray, Emerald Green and Quarry Blue. Each color is obtainable in the American, Hexagonal and the exclusive Eternit Horizontal methods of application. There is also a combination of five special colors . . . Heatherblends . . . furnished in the American method.

But color is not the only reason why builders everywhere are using Eternits. They know that in every particular these are the most satisfactory shingles made. The choicest Portland cement and asbestos fiber are used. Because of the Eternit method of manufacture the asbestos is evenly distributed in a manner which makes Eternits tougher, stronger and more resilient. They do not break so



A sweep of rich color that will not yield to fiercest sun or saltiest ocean breezes.

readily in handling. They are more quickly and easily laid.

Modern shingles for modern building codes

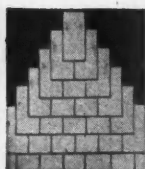
Eternits are absolutely fire-proof. It is impossible to burn them. They are given highest ratings by the Underwriters' Laboratories and conform with the most stringent of the fire-safety rules now rapidly going into effect.

For full particulars, illustrations and samples, write to Eternit, Inc., 15th and Locust Streets, Philadelphia. Offices and warehouses at Philadelphia, New Orleans, Jacksonville, Houston, St. Louis. Plant at St. Louis.

Eternit Big Seven Asbestos Corrugated Sheets—for industrial roofing and siding—are made by the same process as Eternit Shingles. Strong, economical and good-looking. Absolutely fire-proof. No paint is needed.



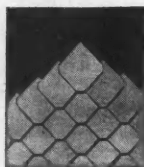
Eternit Heatherblends used on the Ideal Home at Asbury Gables, N. J.



American



Horizontal



Hexagonal

The exclusive Eternit Horizontal method of application gives unusual shadow effects.

Eternit

REG. U.S. PAT. OFF.

ASBESTOS SHINGLES

ABSOLUTELY COLORFAST

ETERNIT, Inc., Dept. A, 15th and Locust Sts., Philadelphia, Pa.
Please send me full details, roofing directions and samples.

Name _____

Street _____

City and State _____

Dealer's Name _____

The Home-Electric is the Home That Sells

Home Buyers Are Getting Wonderfully Educated, and Now Expect and Insist Upon Electrical Installations Which Five Years Ago Would Have Been Considered Extravagant and Impossible

By **BERNARD L. JOHNSON**,
Editor, American Builder

THE fact that city housewives no longer wipe the dirty tracks of the iceman from their kitchen floors made suburban matrons from coast to coast rise up and clamor for electric refrigeration, according to L. Porter Moore, president of the Home Owners' Institute, which organization is engaged in building electrical homes of nationally advertised trademarked products as master model homes in key cities throughout the country.

In obscure towns on the Western plains, as well as in the busy territories adjacent to our large cities, three out of five women buying



The Use of Electricity to Dramatize the Model Home. The institute master model home electric at Bayside, L. I., floodlighted to catch the eye of night drivers.

or building new homes expect to pay their ice bills in kilowatts, says Mr. Moore, in part of a survey of the millions of people who have inspected the Institute houses.

This appetite of the 1928 home seeker for all kinds of electrical equipment, as well as refrigerators, is due in part to the foresight of apartment house builders who began to include such conveniences in moderate priced apartments three or four years ago. The tenants of these quarters spread the word. Their feminine visitors were filled with jealousy, and many builders were confronted by prospective purchasers who said that



The Wrong Kind of Lighting Fixtures Would Spoil This Room. Well made, of conservative design, and of materials that will stand up under wear, these fixtures will always add to the sale or rental value of this home, one of the Red Seal Ideal Homes Electric.

they expected provision for the new electrical equipment—and that was that!

Another reason for this demand, which is really a demand for adequate wiring, as the latter is useless without the former, has been stimulated by the great volume of advertising and publicity given to the electric idea by such organizations as the Society for Electrical Development and the General Electric Company, 2,000,000 copies of whose advertising is placed before the public eye every day of the year.

The electric home of today is no longer created by the electric light companies to show their products, says Mr. Moore. It has become a force with which the modern builder fights the intense competition he encounters constantly. The business of selling homes has become so highly competitive that successful operators are relying on new features to make their sales, and the home electric provides a selling talk that will meet competition.

Millions of women are accustomed to using electrical equipment and devices. They are using curling irons, vacuum cleaners, shaded wall fixtures, and electric toasters in their old homes, and they certainly expect to use them in their new abodes.

Three out of every five women inspecting the Institute model homes, in cities from New York to San Francisco, inquired as to the adequacy of the wiring system. The very definite ideas held by these visitors as to the number of convenience outlets that, in all decency, should be in the various rooms throughout the house, made the builders exceedingly glad that they had paid so much attention to this feature.

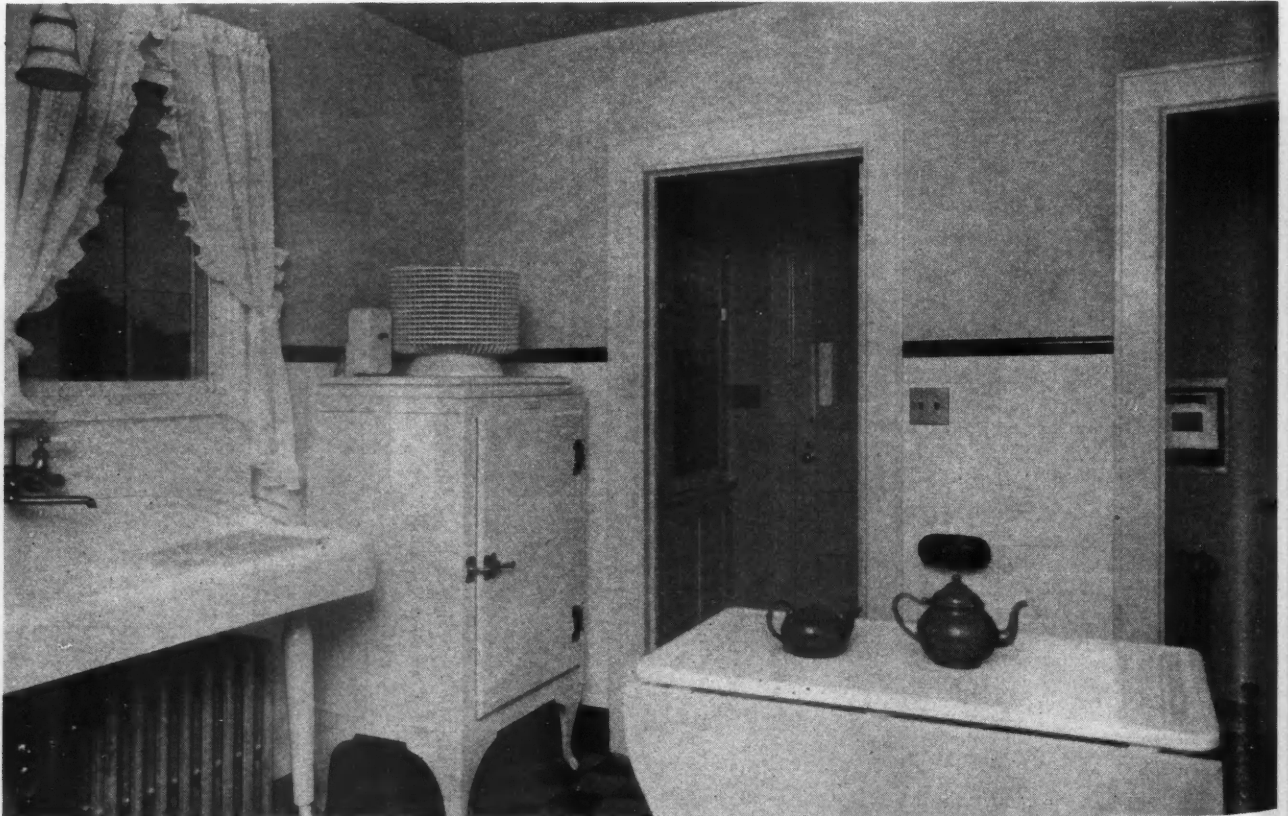
The surprising thing, however, is the fact that this country-wide and intense demand for electric refrigeration and provision for washing machines and ironers has grown in such a short period of time. It is only three or four years ago that these three important pieces of equipment

were first used to entice the public into rental apartment buildings. And it has been only during the past year or two that the average small home buyer or builder has aspired to the same labor-saving devices heretofore enjoyed only by the very wealthy. It is in this time that the electrical outfitting of the home has become an important factor in the selling campaign of the contractor and builder.

The education of the public to the advantages and convenience of electrical features was begun by the Society for Electrical Development, originators of the famous "Red Seal" system of licensing. This Society, pledged to develop new ways and means to increase the efficiency of electricity in all types of buildings, for a number of years has been urging their member lighting companies and others in this field to feature electric homes in all parts of the country. Working with the builders and through local electrical leagues in many cities, this organization has made its Red Seal the symbol of adequate wiring.

The Institute master model homes are wired under the specifications of the General Electric Company's system that calls for a convenience outlet for every fifty square feet of floor space, and which in all cases meets the rigid requirements of the local Red Seal plan, and in some cases better these requirements.

The General Electric Company recently issued an interesting brochure which demonstrates the far-reaching effects of the Institute activities in many centers. The brochure describes the experience of a builder, C. P. Dean, of Summit, N. J., who used the General Electric wiring system and who was recently given a contract for the wiring of all the houses in a \$2,500,000.00 development in this town, this development having been inspired by the Institute model electric homes in Summit. The General Electric Company literature, of course, points out, and rightly so, that Mr. Dean secured this large order as a result of the General Electric Company advertising which listed his name



The Electric Refrigerator That Banished the Ice Man from the Kitchen and Thereby Made Thousands of Housewives Happy. No more dirty tracks to wash up, no more emergencies when there is no ice. Now all food is kept at the same even low temperature. All the Home Owners' Institute houses are equipped with these electric refrigerators.



"Tea for Two," When the Hostess Can Devote All Her Attention to Making the Guest's Visit Enjoyable, with Percolator (or Hot Water Jug for Tea) and Toaster on the Table and No Running Back and Forth to the Kitchen. Provision for these little touches seem important to the modern woman, trying to decide between four or five houses.

as the local contractor handling the G. E. system.

But the builder was moved to launch a \$2,500,000.00 undertaking and to use only nationally advertised products because of the response he had observed on the part of the public towards the Institute model homes in Summit. This builder saw that the model homes visitors were highly interested in the electrical features in these structures and that the Institute builder quickly sold the model houses and several others. This builder saw that it pays to make new houses electrically efficient.

I have said a great deal about convenience outlets and labor-saving devices and I must not overlook the importance of lighting fixtures, which, while not quite so new a factor in the sale of houses, must receive careful consideration. Nothing makes a house look quite so shoddy and run down as cheap or badly designed lighting fixtures, and nothing can add more to its prosperous appearance than beautiful fixtures executed in good taste. The wall brackets especially, so widely in use at present, show up badly if made of substitute or inferior materials, for they can be inspected more readily than the overhead chandelier which formerly furnished the entire lighting of a room with the exception of the floor or table lamps.

In cities where there is a special current rate for electric ranges, or where the general prevailing rate is low enough to make the operation of the electric range economical, provision for this installation also should be made by the progressive builder. Electric ranges, with electric heat control and timer attachments, in which the housewife can place the food at any time and have cooking begin at an hour set by the timer, charm the modern woman who wants to get out of her kitchen often and quickly.

It is astonishing to view the number of electrical appliances, pieces of equipment, and labor-saving devices on the market today. All of these are being advertised



extensively. The public wants them and is being made to want them more and more. These include, in addition to those mentioned above, a wired tea wagon for percolator and toaster, door opener, fire logs, hair drier, milk warmer, immersion heater, sewing machine, plate warmer, fan, piano player, vacuum cleaner, egg boiler, vibrator, floor polisher, water heater, kitchen ventilator, toys, furnace stoker, and last, but not least, the radio. Nor does this list half cover the many items within reach of the pocket book of the family of modest means.

People want to use electric curling irons and electric foot pads, they want a place to conveniently plug in the iron and the bridge lamp. They are buying these houses in which provision has been made for the amazing number of electrical appliances this progressive age has given us. The wise builder will lay his plans with this in mind.

The following organizations are represented in the Home Owners' Institute master model homes electric: Cephas B. Rogers, Inc., lighting fixtures; Hurley Machine Co., "Thor" Washer and Ironer; General Electric Company, wiring system, refrigerator; Edison Electric Appliance Co., Division, "Hot Point" Iron, Toaster, Percolator, Curling Iron, and other appliances, and where electric rate is favorable, "Hot Point" electric range.



The Electric Stove by Means of Which the Woman on the Modest Income Can Take Up Golf. The electric heat control and timer starts a dinner at 5 p. m. while the housewife is on the links. The recreation argument for the modern woman is packed with appeal.

"Standard"

PLUMBING FIXTURES



THE "TEMPLETON"

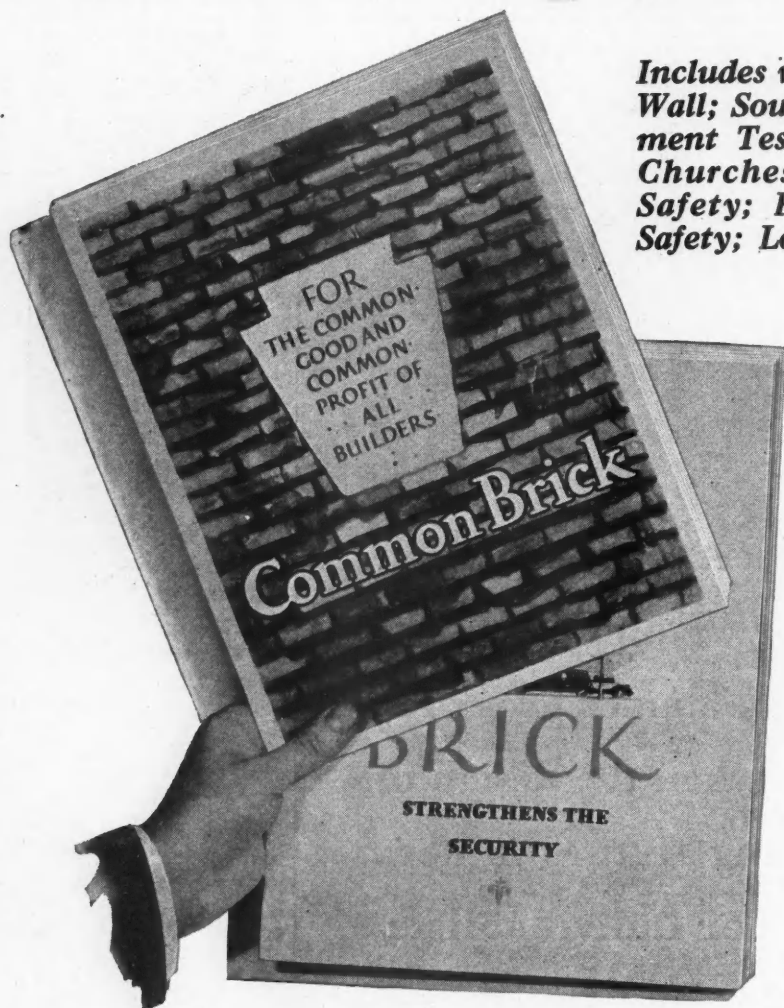
A new and individualized lavatory design in Genuine Vitreous China by "Standard". The "Templeton", like all "Standard" Plumbing Fixtures, is available in black, white, and several beautiful colors.

THERE is a certain lively charm about color in plumbing fixtures—but how much greater is that charm when the design of the plumbing fixture is new, different. For individualism, both in color and design, see the new styled fixtures at a
“Standard” Showroom.

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“Standard”
PLUMBING FIXTURES

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Every builder and contractor will find in these two books facts that will give him a new appreciation of common brick. Facts that will assist in planning and building the type of structures that build reputation.

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634 Chamber of Commerce
New York City...1716 Grand Cent. Term.

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offers you this construction

YOUR customer is looking for permanent beauty all through your house. The picture shows how we have built our white toilet seat so that it will never crack, split, or warp. This laminated, alternating-grain hardwood interior is exactly the same as is used in the Whale-bone-ite Seat of our manufacture. The Whale-bone-ite Seat is specified by architects for fine buildings, hotels, schools, and hospitals. A large majority of all such buildings, we estimate, are Whale-bone-ite equipped.

Now in this Brunswick White Seat we offer this construction that's proved the best for toilet seats. No other seat has this construction. Only Brunswick offers it.

The gleaming surface of the Brunswick White Seat is like white china. This white surface is extremely durable. It will not crack, chip or dis-

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By the makers of the famous Whale-bone-ite Seat



Laminated, alternating-grain, hardwood interior gives tremendous strength to the Brunswick White Seat



Lincoln Hotel, New York City. One of the newer buildings equipped throughout with the Brunswick White Seat

color. Its white exactly matches the white of the other bathroom fixtures.

We guarantee the Brunswick White Seat for FIVE YEARS. Its cost is low. Specify the Brunswick White Seat in letting your plumbing contract. Any manufacturer of plumbing supplies can furnish it. Don't accept a substitute.

Booklet free

Send now for booklet picturing the Brunswick White Seat and modern bathrooms.



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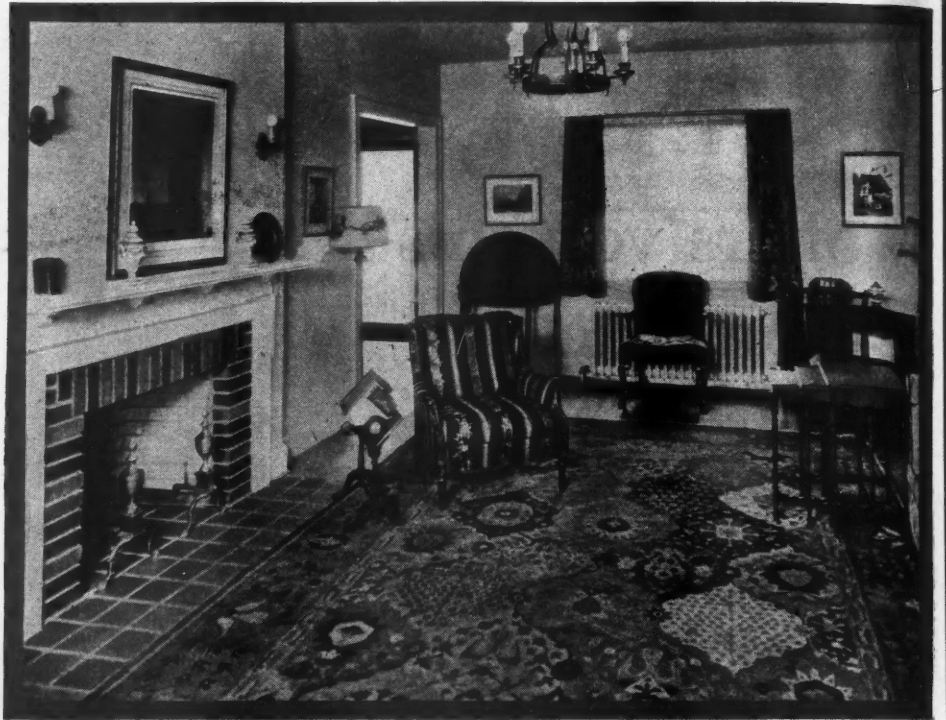
Dept. 276, Seat Division,
The Brunswick-Balke-Collender Co.,
623 S. Wabash Ave., Chicago.

Please send me your booklet picturing the Brunswick White Seat and modern bathrooms.

Name.....

Address.....

Add beauty and charm
with
Tiger!



"Spreads Like
Warm Butter"



THE BEAUTY and charm of walls constitute one of the greatest selling forces in the building business. Interior finish appeal, through the medium of texture or color, sells a greater number of homes. Significant, then, is the fact that the interiors of all of the 360 Model Homes to be built this year under the direction of the *Home Owners Institute* will be plastered and finished with *Tiger*.

This famous finishing lime adds the beauty and charm that sells homes.

You can obtain it by insisting upon the use of lime with the *Tiger* on the bag.

THE KELLEY ISLAND LIME & TRANSPORT CO.

"World's Largest Producer of Lime"

LEADER BUILDING . . . CLEVELAND, OHIO

The Famous

TIGER

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And—Tiger Mason's, Tiger Agricultural, Tiger Chemical, Tiger All-Purpose Hydrate in 10-pound Packages, and High Calcium and Magnesium Lump Limes. Also Quicklake (ground Quicklime) in paper-lined jute sacks.

This clean-cut pipe insulation helps sell houses

The neat, attractive appearance of Asbestocel is an important finishing touch

THE family wanting to buy a house demands one which has the air of being well built and properly finished throughout. Consequently no builder can afford to overlook the important matter of insulation for heater pipes.

For an expenditure which is trifling compared with most building costs, the heater pipes can be covered with Johns-Manville Improved Asbestocel. Wherever sold, Asbestocel is uniform in size and quality. It can always be counted on to provide a clean-cut, neat, substantial pipe covering which impresses the prospective buyer with its obvious quality.

Besides its other merits, Asbestocel is being advertised extensively as a part of the Johns-Manville national advertising campaign. The public will recognize Asbestocel and regard its use as evidence that you have selected good materials.

Write us about the use of Asbestocel in housing developments. A coupon is attached for your convenience.



Johns-Manville Asbestos Cement on the boiler and Asbestocel on the heater pipes is evidence that convinces home buyers.

JOHNS-MANVILLE Asbestos Shingles are backed by the biggest advertising campaign ever devoted to roofing. They provide a fireproof, permanent, good-looking roof for any home.



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IMPROVED ASBESTOCEL

JOHNS-MANVILLE CORPORATION
New York Chicago Cleveland San Francisco

Branches in all large cities

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Please send me information about the use of Improved Asbestocel in speculatively built houses.

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Address.....

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

The Finishing Touch



When the plans for a home or apartment are completed—add the General Electric Refrigerator as the finishing touch. Your client will thank you.

—adds value to any home

PROGRESSIVE architects and builders regularly include General Electric Refrigerators in the homes and apartments they design or build. It adds honest value to any home and makes selling or renting appreciably easier.

General Electric Refrigerators are different from all others—"years ahead" in design. The mechanism is all sealed in an airtight steel casing, up on top, forever free from dust and dirt. This entirely automatic, worry-proof refrig-

erator never even needs oiling. It is backed by a General Electric guarantee.

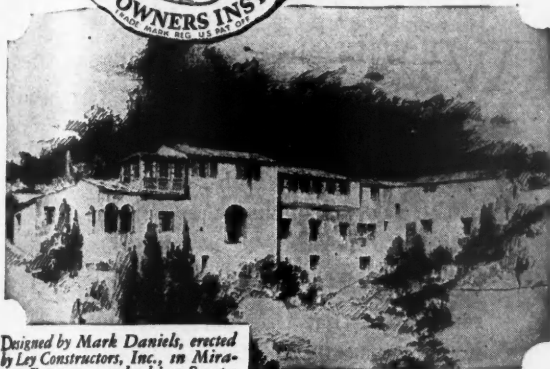
There is a suitable type and size for every home, including models with ample food space, yet built to fit the most limited floor space.

Send for Catalog AB-9

It gives complete specifications of each of the various models. Similar information in briefer form is contained on pages C 3056 to C 3059 of Sweets' Architectural Catalog.

GENERAL  ELECTRIC
Refrigerator

"Makes it Safe to be Hungry"



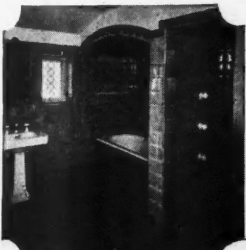
Designed by Mark Daniels, erected by Ley Constructors, Inc., in Miramar Estates, overlooking Santa Monica Bay.

More than 100,000 Visit this Master Model Home

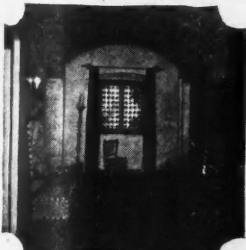
Los Angeles Times-Home Owners Masterpiece of Homebuilding Attracts Throng of Prospects to Miramar Estates



A corner of the living room.



Beauty in the bathroom. Hand-carved tile of distinctive pattern is used in all three bathrooms.



In the main entrance hall.



"THE man who owns this home has a happy sense of security," says Ralph W. Trueblood, Managing Editor of the Los Angeles Times. "No man ever worked or fought for a boarding house. Home ownership is a barometer of community character. In keeping with its 40-year policy to encourage home building, The Times takes great pride in its Demonstration



Home, built to bear Home Owners Institute Master Model Home Seal."

Master Model Homes reduce realtor-builder sales costs. Thousands of prospects see these homes and the visitors all favorably know the trade-marked, nationally advertised products used. These products include:

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Anaconda Brass Pipe, Gutters, Rain-Pipes, and Flashings of Anaconda Copper, Screens of Anaconda Bronze Wire
THE AMERICAN BRASS COMPANY
- New Ideal Redflash Boilers, New Ideal Hotcoil Water Heaters, American Corto Radiators**
AMERICAN RADIATOR COMPANY
- Brunswick Panatrophe, Radio and Billiard Table**
THE BRUNSWICK-BALKE-COLLENDER CO.
- Common Brick**
COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA
- G-E Wiring System, G-E Refrigerator, G-E Vacuum Cleaner, G-E Fans**
GENERAL ELECTRIC COMPANY
- Rigid Asbestos Shingles; Improved Asbestocel Pipe Insulation**
JOHNS-MANVILLE CORPORATION
- ★ ★ ★
Kernerator Chimney-Fed Incinerator
KERNER INCINERATOR COMPANY
- Tiger Finish (Hydrated Lime) Walls; Lime for Plastering and Brick Mortar**
THE KELLEY ISLAND LIME & TRANSPORT COMPANY
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HOME OWNERS INSTITUTE, INC.

441 Lexington Avenue

L. Porter Moore, President

New York City



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.

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"Balsam-Wool is the insulation to use because it is almost a *perfect insulator*. And it is *flexible*. It *tucks in*. It stops the cracks. It keeps the wind out and the warmth in."

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Northern Hard Maple Floors in Color—what a powerful selling story they give to the builder who features them! Consider the facts:

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Your prospects want color and beauty. Northern Hard Maple Floors in Color make possible new standards of beauty and harmonious effects in interior decoration.

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It explains how you can duplicate these results—easily and at small cost. It tells why these beautiful color effects can be obtained only when the flooring is Northern Hard Maple.

It points out the many advantages of Northern Hard Maple over other flooring materials.

Certainly, in this age of color and modernization, you will want to know the facts about this important new opportunity in residential flooring. The book will be sent you free. Mail the coupon.

Contains page after page of authentic interiors illustrated in full colors. Shows Northern Hard Maple Floors in gray, blue, green, black, and a variety of charming browns—with standard formulae for finishing. Gives valuable information on the grading, measuring, uses, laying and finishing of Maple, Beech and Birch Floorings. An indispensable book for the modern builder.

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EARLY AMERICAN AUTUMN BROWN DOVE GRAY PASTEL GREEN SEAL BLACK
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MAPLE FLOORING MANUFACTURERS ASSOCIATION
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The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use. **MFMA**

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1777 McCormick Bldg., Chicago, Ill.

Gentlemen:
Please send me, free of cost or obligation, your book,
"The New Color Enchantment in Hard Maple Floors."

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Floor with Maple



*acknowledged
advancement
in sheet metal*

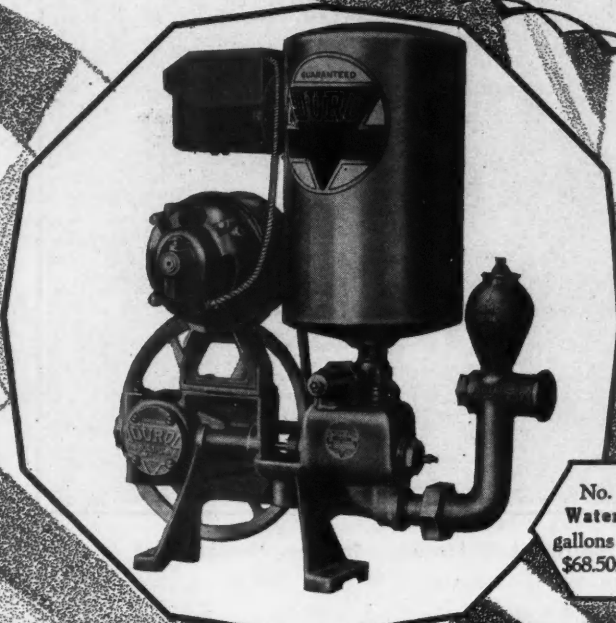
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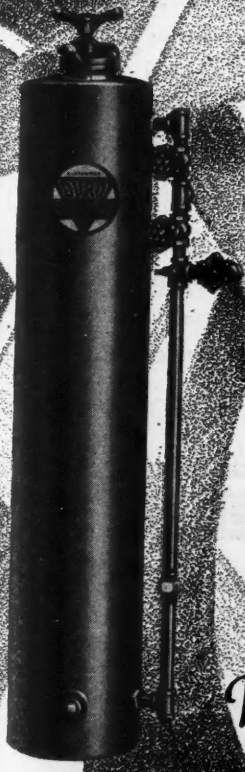
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Never before has the Building Industry been offered Duro world's standard quality at so little cost. Only Duro, world's largest maker of water systems and water softeners, could offer such values. The nearest Duro dealer or factory representative will be glad to give you complete details.

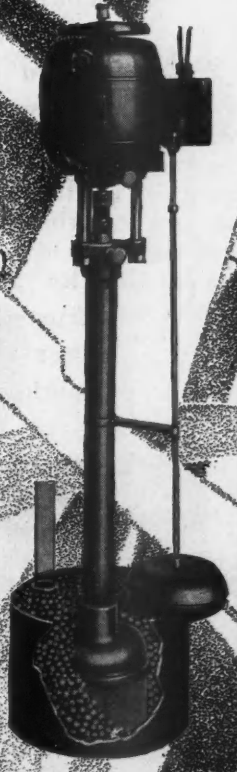
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THE DURO PUMP COMPANY, Monument Ave., Dayton, Ohio

DURO

Water Systems - Water Softeners



Rapid Flow Softener. Capacity 650 gallons on 20 grains hardness, only \$75 f. o. b. Dayton

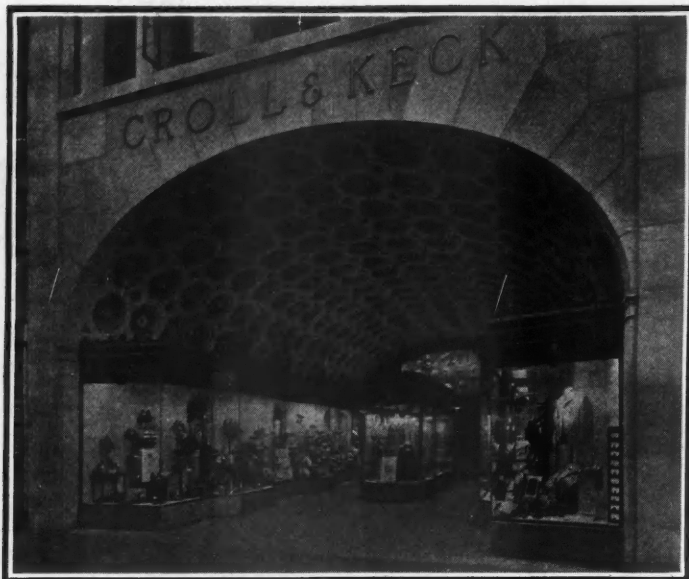


Cellar Drainer. Capacity 2500 gallons per hour. Complete with filter box, only \$90 f. o. b. Dayton

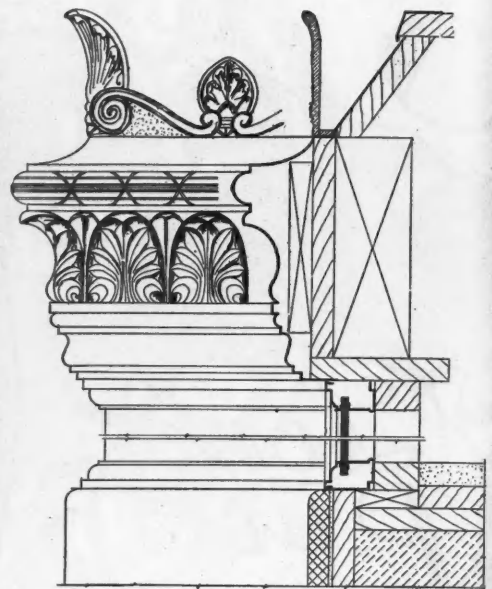
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Store Front Effectiveness



Frederick A. Muhlenberg, Architect, Reading, Pa.



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The glazing sections are constructed so that no screws whatever are visible in the face mouldings. This is most desirable.

All members are rolled from HEAVY gauge bronze or copper and are furnished in the natural finishes of those metals or can be artificially colored in many pleasing effects.

The Extruded Bronze details of our associate company, the Modern Bronze Store Front Company, are now being distributed—make sure you get your copy.

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in Drilling, Chipping or Channelling.
Extremely light in Weight.
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*A Complete line of Portable Electric Tools.
Hammers, Drills, Grinders, Saws.*

Does the Work of 10 Men

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Any architect, builder or contractor can have the new Sanitas Sample Book showing 150 styles, free on request. Write on your letterhead, and please mention wholesaler's name.

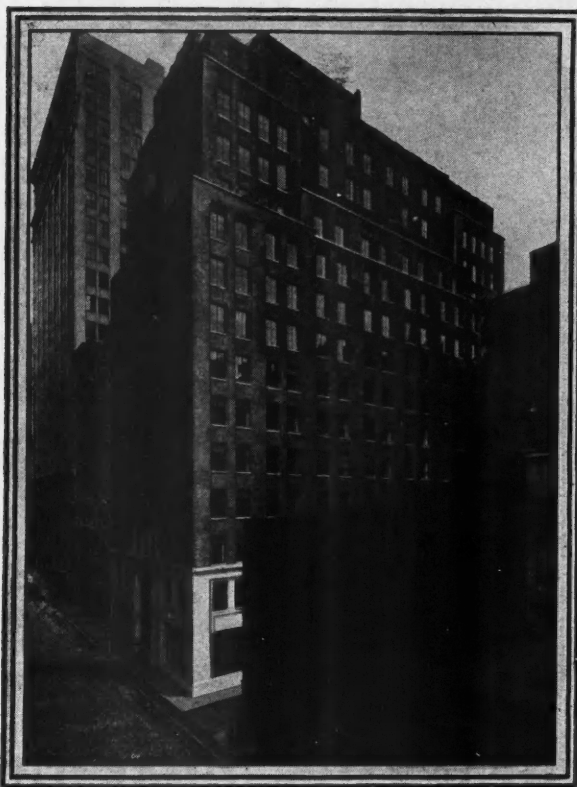
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National Board of Fire Underwriters' Bldg., N. Y. C.—Tontine-equipped.

YOU want your buildings to be the final word in attractiveness—and you want that attractiveness to last—with the necessity for as little replacement expense as possible.

When you consider equipment, compare ordinary shades with du Pont Tontine.

Du Pont Tontine, the washable window shade, can be kept clean as the windows. Through years of service without replacement it more than saves its original cost.

Tontine is made by a special du Pont process. It contains no "filler" and cannot crack or pinhole. It is impregnated with pyroxylin, the basic substance of that other famous du Pont product—

Duco—which has brought enduring beauty to the American highway and home.

To assure yourself of maximum shade service and satisfaction, ask your dealer to mount your du Pont TONTINE shades on the companion product—TONTINE Rollers.

Always clean and attractive, new and spotless, du Pont Tontine shades will dress up your windows for many years. Investigate the Tontine story now. Mail the coupon today.



E. I. DU PONT DE NEMOURS & CO., Inc.
NEWBURGH, N. Y.

Canadian Distributors:
CANADIAN FABRIKOID Limited
New Toronto, Ontario, Canada



TONTINE

REG. U. S. PAT. OFF.

THE WASHABLE WINDOW SHADE

E. I. DU PONT DE NEMOURS & CO., Inc.
Desk AB-17, Newburgh, N. Y.

Please send me sample and full information about Tontine, the washable window shade.

Name

Address

City State

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Rooms like this *make* houses sell!

WITH the usual flooring this room would have been just another room—pleasant enough, it's true but still lacking in particular distinction.

But notice what ceramic tiles have done. Visualize the play of sunshine over the pleasant pattern of *real* tiles! Here's a room that is different—completely charming—something to make your house stand out in the buyer's mind.

Yet such floors cost the builder nothing.

The slight difference in cost between real tiles and other materials is more than returned in the higher prices that can be secured, the

prompter sale of the houses in which they are found.

There are many more places where you can use ceramic tiles to definite advantage in your houses.

Colorful bathrooms in keeping with modern trends. Sparkling kitchens to catch the housewife's eye. Extra tiled rooms in the basement where children may play or men may gather in careless comfort.

And wherever you use tiles, you add selling value, outward evidence of good construction. Consult your local contractor for patterns, colors, finishes.



ASSOCIATED TILE MANUFACTURERS

420 Lexington Avenue, New York, N. Y.

ALHAMBRA TILE CO.
AMERICAN ENCAUSTIC TILING CO., Ltd.
CAMBRIDGE TILE MANUFACTURING CO.
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MATAWAN TILE CO.
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K E R A M I C T I L E S

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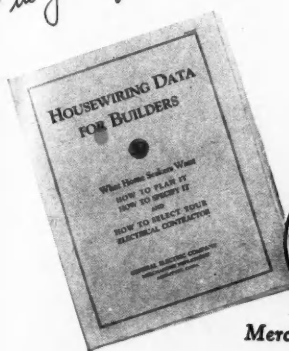


Does advertised wiring bring builder profits?

The quickest answer to this question is the ever-growing number of houses built for sale that are equipped with General Electric Wiring Systems.

Builders have found that there is an active demand (fostered by constant G-E advertising) for complete installations of unquestioned quality. They have found that the General Electric name is accepted as a symbol of service....and that the G-E Wiring System adds forceful selling points to every room.

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

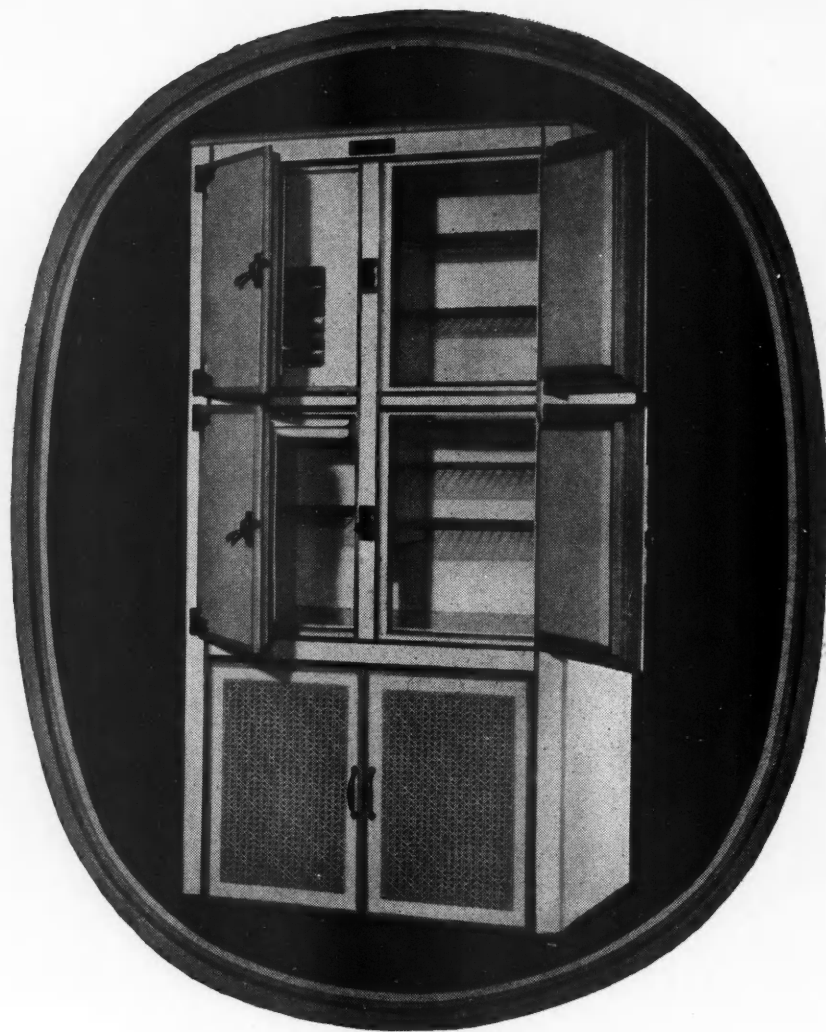


WIRING SYSTEM

—for lifetime service

Merchandise Department
Section 39
General Electric Company
Bridgeport, Connecticut

GENERAL ELECTRIC



The Kelvinator-equipped home or apartment rents or sells more quickly

PEOPLE have come to look for electric refrigeration among the first requisites of home making. People have learned, too, to look for the Kelvinator Electric Refrigerator. They have learned through the years since 1915 to associate the name Kelvinator with domestic electric refrigeration and to expect from it a high standard of refrigeration service.

You are definitely adding value to the home or apartment in which you recommend Kelvinator equipment. There is a size and style to meet your every building requirement, from the great multiple-unit installations to the small self-contained "portable" unit. Write for our builders' book, giving complete and interesting data.

Kelvinator Corporation
DETROIT



What Makes a Good House GOOD?

The INSULITE sign on a newly built house is a double sign of *goodness*.

It means that the home is guarded against winter cold and summer heat; it means a stronger, more durable house—more quiet; free from dampness.

INSULITE is a double-purpose material—with structural strength and high insulating value in one sturdy wood-fiber board.

Used as sheathing, plaster base, wall board, roof insulation, attic and garage lining, or in other ways, INSULITE makes houses more salable at the start and more livable as long as occupied.

Write for free samples, also for copy of booklet—"Increasing Home Enjoyment."

INSULITE

the Wood-Fiber Insulating Board

THE INSULITE COMPANY

1202 Builders Exchange

Dept. No. 1, - Minneapolis, Minn.

THE INSULITE CO.,
1202 Builders Exchange, Dept. No. 1,
Minneapolis, Minn.

Please send samples and booklet to

Name


Address

City State

Here is Hoover's latest word on Grade Marking

Form 1201

CLASS OF SERVICE	SYMBOL
TELEGRAM	
DAY LETTER	BLUE
NIGHT MESSAGE	NITE
NIGHT LETTER	N L



WESTERN UNION TELEGRAM

CLASS OF SERVICE	SYMBOL
TELEGRAM	
DAY LETTER	BLUE
NIGHT MESSAGE	NITE
NIGHT LETTER	N L

If none of these three symbols appears after the check (number of words) this is a telegram. Otherwise its character is indicated by the symbol appearing after the check.

NEWCOMB CARLTON, PRESIDENT GEORGE W. E. ATKINS, FIRST VICE-PRESIDENT

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1928 JUL 13 AM 11 49

PRA197 44 GOVT
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 WM L RAWN SECRETARY
 WESTERN DOOR MANUFACTURERS ASSOCIATION TACOMA WASH
 YOUR TEL FIFTH THE GRADE MARKING OF LUMBER AND WOOD PRODUCTS
 WITH SUITABLE GUARANTEE MAKES FOR MORE EFFICIENT
 MERCHANDISING OF BENEFIT TO MANUFACTURER DISTRIBUTOR AND
 ESPECIALLY THE CONSUMER STOP IT HELPS STABILIZE TRADE AND
 DECREASE DISTRIBUTION COSTS THROUGH ESTABLISHING STEADY
 DEMAND AND LESSENING QUALITY COMPLAINTS
 HERBERT HOOVER

FOR the past three months the members of the Western Door Manufacturers' Association have been Grade Marking and Trade Marking their—

The letters ~~WDM~~ 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.

Douglas Fir HOUSE & GARAGE Doors

WESTERN DOOR MANUFACTURERS' ASSOCIATION / / TACOMA, WASHINGTON

- | | | |
|---|--|--|
| Robinson Mfg. Co. Everett, Wash. | Clear Fir Lumber Co. Tacoma, Wash. | Nicolai Door Mfg. Co. Portland, Ore. |
| Buffelen Lumber & Mfg. Co. Tacoma, Wash. | Washington Door Co. Tacoma, Wash. | M. & M. Wood Working Co. Portland, Ore. |
| Wheeler, Osgood Co. Tacoma, Wash. | Henry McCleary Timber Co. McCleary, Wash. | Central Door & Lumber Co. Portland, Ore. |
| | Albany Door Company Albany, Oregon | |

TRADE **WDM** MARK

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

WDMAS

CUTTING · THREADING · BENDING



23 Plumbers

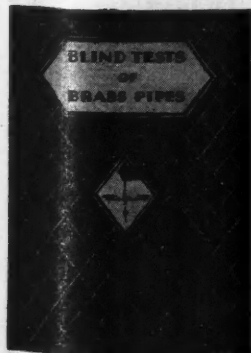
choose the best brass pipe

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."

Name.....

Position.....

Company.....

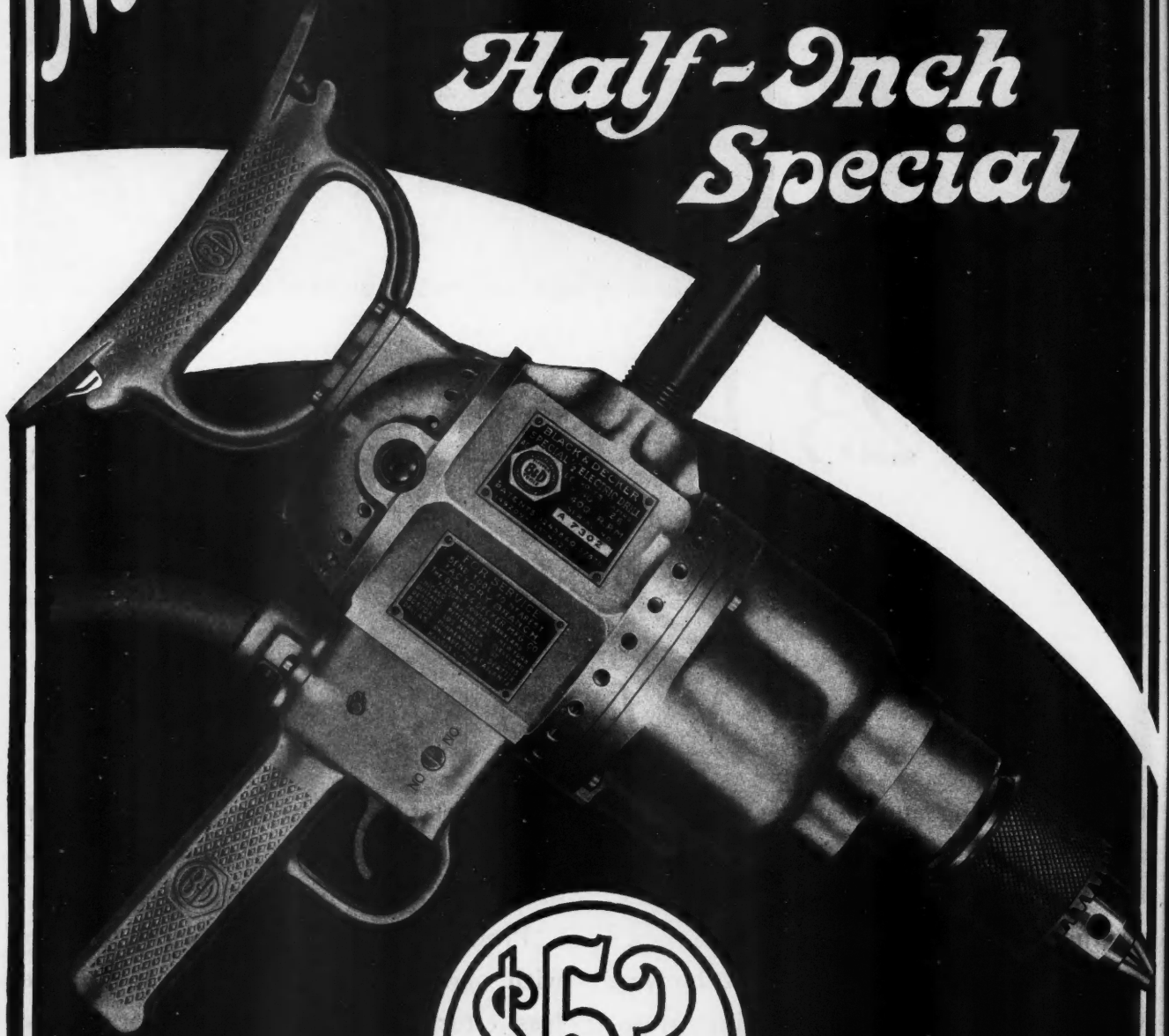
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New BLACK & DECKER

Half-Inch Special



BALL BEARING

The BLACK & DECKER MFG. CO.

TOWSON, MD., U. S. A.

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

Black & Decker, Limited,
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When the Quality MUST Be Right



SHELTON HOTEL, NEW YORK

Arthur Loomis Harmon, Architect; Shelton Holding Corporation, Owner and Builder
This building glazed with LIBBEY-OWENS Flat-Drawn Clear Sheet Glass.

When architects must be sure that buildings they design are glazed with the very best window glass obtainable, they specify LIBBEY-OWENS "A" quality flat-drawn clear sheet glass.

It is precisely for this reason, that LIBBEY-OWENS glass was specified for the beautiful new Shelton Hotel in New York.

We have prepared an interesting booklet on flat glass which is yours for the asking.
 Use this coupon.

LIBBEY-OWENS SHEET GLASS CO.,
 TOLEDO, OHIO

Please send us your free booklet "Flat Glass and LIBBEY-OWENS."

Name _____

Address _____

Libbey-Owens

FLAT-DRAWN CLEAR SHEET GLASS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



“—and it
must have
**RUNNING
WATER!**”



RUNNING WATER is a *sales* feature *A Complete Shallow Well System for Only \$70*

It is the feminine side of the partnership that has the final say on *which* home they will purchase. And you can safely bet that she will insist on **RUNNING WATER**. No one blames her, of course, but many a sale has been ruined because the lady won't put up with pump-and-carry drudgery.

The wise contractor or builder always includes this feature. The slight additional cost is more than offset by the increased ease of sale and the better price obtainable. Whether you build a home for personal residence or for resale, the investment in a Fairbanks-Morse Home Water System will bring big returns. Write for booklets giving full information and practical installation helps.

FAIRBANKS, MORSE & CO., Dept. H. 9, 900 S. Wabash Ave., Chicago

EQUIPMENT for any water service problem

In the complete line of F-M Equipment you can find the solution to any water service problem regardless of source of water supply or kind of power available.



A Complete system for only **\$70**

cash, f. o. b. factory. Capacity 210 gal. per hour. Complete with motor for 60 cycles or direct current. A 420 gal. per hour size for \$100. Both systems for use where source of water is not more than 22 feet below the unit.

FAIRBANKS-MORSE **Home Water Systems**

Fairbanks-Morse Products



“Every Line a Leader”

the new **MORTON** Georgian and Vanitie Venetian



Artistic lines—distinctive beauty—rich design—these are the chief characteristics of two new all-mirror door bathroom cabinets which are offered for your consideration in 1928.

THE Vanitie Venetian will be approved by architects, builders and realtors who appreciate the unusual in bathroom cabinets. It is made in one size only, with standard etched mirror, 18 x 32 in., and side wings 8 in. wide. The absence of miter lines permits a clear 3-way vision. The cabinet, 5 in. deep, recesses in a wall opening 14¾ x 25½ in., and is completely concealed when the door is closed. There is no cabinet space behind the wings.

The Georgian was designed to meet the demand for an attractive cabinet between Models A and B and the Venetian type. It is made in one size only, a 16 x 20 in. beveled, etched mirror, having slightly rounded corners, decorative rosettes and clear vision. It requires a wall opening 12¾ x 16¾ in.—recessing a full 5 in. if desired.

A Complete Line

11 models in the MORTON Line of Bathroom Cabinets, to recess or hang on the wall. Built of steel, electrically welded; finished in a beautiful white enamel, permanently baked on. Many distinctive features of construction. Installed instantly—"Out of the carton into the wall."

Send the Coupon for a MORTON Catalog

MORTON MANUFACTURING COMPANY

5102 WEST LAKE STREET-CHICAGO, ILL. U.S.A.

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

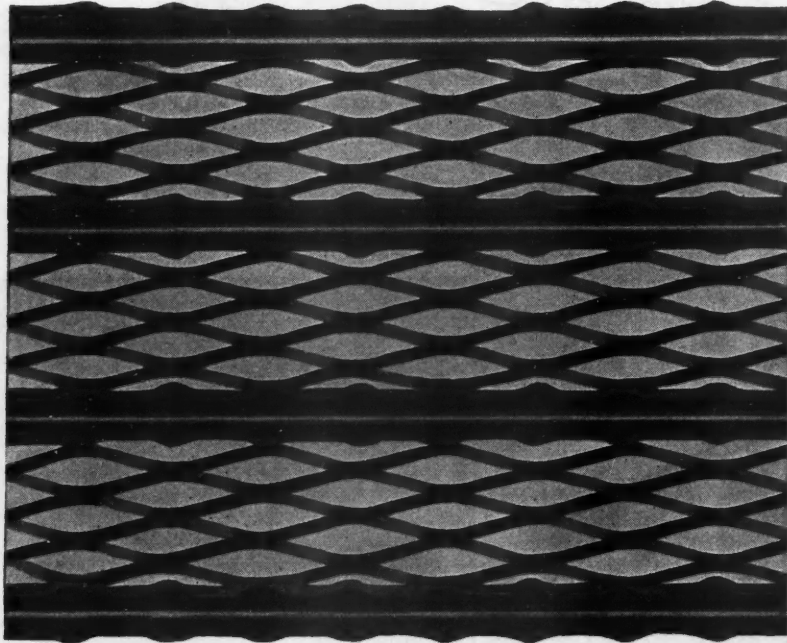
Without obligation, please send me a catalog of the MORTON Line of Steel Bathroom Cabinets.



Name _____
 Address _____
 City _____
 State _____

Please check business or profession:
 Architect _____ Builder _____ Contractor _____ Realtor _____ Home Builder _____

Steelcrete Diamond Flat Rib Lath



*The ribs
make it rigid*



The Diamonds Make it a Positive Mechanical Bond!

STEELCRETE Diamond Flat Rib Lath cuts plaster costs, reduces application costs—all because it is a combination of two distinct laths, each recognized for special merit.

The Diamonds insure a positive mechanical bond. The Ribs provide additional strength, acting as a guide for the plasterer and assisting rapid, efficient plastering. Also as stops to

prevent plaster squeezing through in wasteful quantities.

You will find it profitable to use Steelcrete Diamond Flat Rib Lath, easy to erect, costs less per square yard to plaster. Sheets are fully expanded from corner to corner. Size 24" x 96". Packed 9 sheets to the bundle, 16 square yards. Weight painted 3.4 lbs. per square yard.

Let us send you samples, prices and complete information. Write us today.

The Consolidated Expanded Metal Companies

Steelcrete Building, Wheeling, West Va.

Atlanta Boston Cleveland Philadelphia Pittsburgh
Chicago New York Buffalo



Steelcrete Lathers Tie Wire

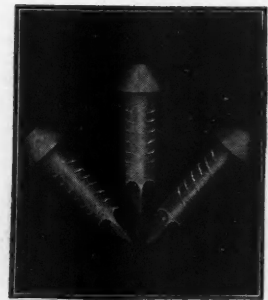
Here is a Tie Wire designed for the Lather. A product of unusual strength, yet soft and pliable for quick and efficient workmanship. Wrapped in sanitary packages, a safeguard to the Lather like sterilized nails. Supplied in hanks 25 lbs. each.



Sample Offer

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

Write to us today



Steelcrete Stub Nails

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



Residence of Doctor Berry, Okmulgee, Oklahoma. Architects, Smith, Rea, Lovitt & Senter. This photograph shows the application of large Union Metal Columns and Square Pilasters.

Union Metal Columns— A Mark of Distinction

Distinctive homes owe their charm not to any one feature, but to the proper combination of many different things.

When it comes to porches and entrances, Union Metal Fluted Steel Columns truly express the architect's conception. For these columns are faithful reproductions of classical designs and architecturally correct in every detail. They harmonize with the remainder of the building and help produce the happy effect of quiet beauty which is characteristic of a well-planned and well-built home.

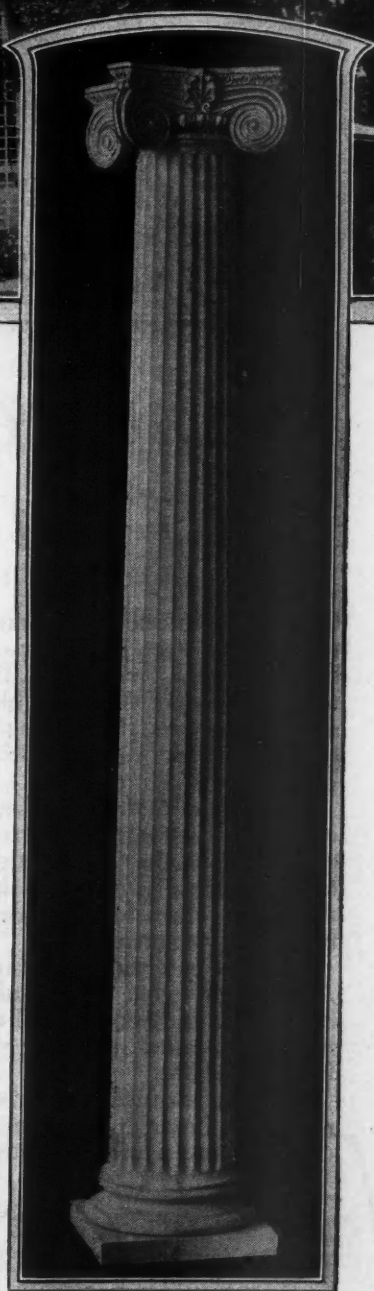
A generation later these columns will still preserve their sharp, clean-cut lines. There's no danger of joints opening, of cracking or checking. No trouble with rust, but a lifetime of service.

Not only for large residences, but for modest homes—in fact wherever columns are used, Union Metal Columns will prove the most economical and satisfactory.

THE UNION METAL MANUFACTURING COMPANY
General Offices and Factory: Canton, Ohio.

Branches — New York, Chicago, Philadelphia, Cleveland,
Pittsburgh, St. Louis, Los Angeles, San Francisco, Jacksonville

UNION METAL COLUMNS



Union Metal Design No. 237, Modern Ionic, as used on the Berry residence, Okmulgee, Okla. One of ten classical designs made in diameters from 8" to 42", heights 5' to 35'.



Another ROOF OF WINTHROPS —in Greenfield Blend

Greenfield Blend is a blend of two greens—sea and mist—and two blues—mist and silver. From among a score of Winthrop blends and solid colors, it was the selection of Mr. George E. Ruchty for his home in Hinsdale, Illinois.

Greenfield Blend was a happy choice. The cool color harmony in the roof is in pleasing contrast with the warm reddish brown color of the walls. The roof helps also to bring the house close to the green lawn and low foliage of its setting.

Careful selection of Winthrop Tapered Asphalt Shingles will result every time in fitting the roof color to the house and the house to its surroundings—all in a pleasing, lasting picture.

Lasting because Winthrop colors are permanent. They are the natural colors of slate, crushed and firmly embedded in the ever-



lasting asphalt that covers the extra heavy felt core. Lasting because the thick butts, built up of extra coats of asphalt, double the wearing thickness where ex-

posure to weather comes. Lasting because Winthrops are fire-resisting and bear the Class C Label of Underwriters' Laboratories.

Winthrops lie flat and snug—are unequaled over old roofs. The blends come ready mixed—right for laying. Winthrops do not rot, curl, crack, split, rust nor saw through their nails.

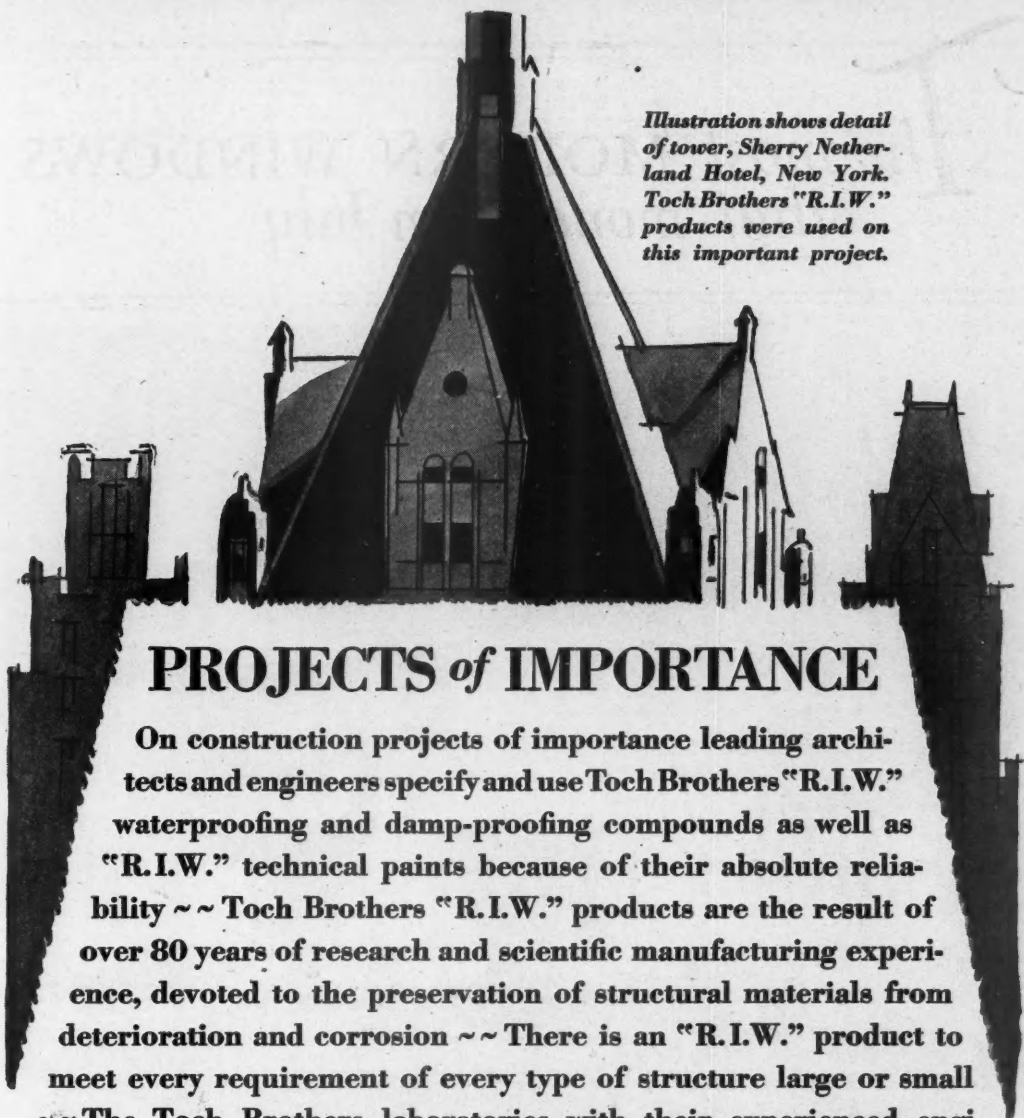
Samples Free

Your request for samples will bring you a set of the full-sized Greenfield Blend. Also, if you mention it, a sample of Argotex Building Felt—a product of high insulating value. Write today for these free samples. Greenfield Blend is a mighty popular color.

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

—the Big Butt Shingle
Winthrop
Tapered Asphalt Shingles

Illustration shows detail of tower, Sherry Netherland Hotel, New York. Toch Brothers "R.I.W." products were used on this important project.



PROJECTS of IMPORTANCE

On construction projects of importance leading architects and engineers specify and use Toch Brothers "R.I.W." waterproofing and damp-proofing compounds as well as "R.I.W." technical paints because of their absolute reliability ~ ~ Toch Brothers "R.I.W." products are the result of over 80 years of research and scientific manufacturing experience, devoted to the preservation of structural materials from deterioration and corrosion ~ ~ There is an "R.I.W." product to meet every requirement of every type of structure large or small ~ ~ The Toch Brothers laboratories with their experienced engineering staff, welcome the opportunity to cooperate with architects, engineers and building supply dealers in the selection and use of the most suitable products for the preservation and protection of structural material, and in those cases where unusual conditions are to be overcome.

SEE SECTION A, PAGE 86, SWEET'S ARCHITECTURAL CATALOGUE

The Authority of Accomplishment Since 1848

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DAMP-PROOFING & WATERPROOFING COMPOUNDS ~ TECHNICAL PAINTS

"R.I.W." PRODUCTS for specific uses

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State Requirements Use Coupon Opposite!



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Gentlemen:— I am particularly interested in further information about Toch Brothers' products for checked uses:

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Please send me complete literature on these subjects

Name

Firm

Address

The most MODERN WINDOWS
that money can buy



Residence of Mr. Paul Rogers, Glendale, Ohio, Stanley Mathews, Architect; A. D. Denison & A. M. Jenkins, Associate Architects. Herman J. Hooper, Contractor. J. K. Nickerson, Co., Dealers

yet their cost is remarkably low

CONSIDER the added sales value and real value that Lupton Copper Steel Casement Windows give the house in which they are installed, and you will agree that their cost is remarkably low.

Lupton Steel Casements are the last word in residence windows—charming in appearance, easy-opening, tight-closing against wind and weather, easy to clean from within the house and long-lived in service. They never fail to appeal to prospective home buyers and



Another home equipped throughout with Lupton Casements. The list price of the windows here was only \$466

tenants and many recent sales by investment builders have been materially assisted by the presence of Lupton Windows in the properties under construction. Yet, with all these advantages, Lupton Steel Casements cost little or nothing extra to buy and install.

You, too, will find that you can use these modern windows with profit to yourself and satisfaction to your clients. Write to the address below for a free copy of the 20 page Catalogue C-217 which describes the windows in detail.

DAVID LUPTON'S SONS COMPANY



2203 E. Allegheny Ave., Philadelphia

Lupton STEEL Windows

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Whenever there is sawing to do anywhere, SKILSAW, the electric hand saw, will do it faster, cheaper, and better. SKILSAW positively

saves { **TIME**
MONEY
MUSCLE

SKILSAW has the power and speed to rip, crosscut, or bevel 1", 2", 3", and 4" lumber in a matter of seconds. There are four sizes for any work. They are all easy to handle, easy to operate (from the nearest electric light socket), and safe to use.

Try SKILSAW on your own work. We will demonstrate without obligation. Just put your name and address on this coupon and mail it to us.

NAME

ADDRESS

Skilsaw Inc., 3822 Ravenswood Ave., Chicago, Ill.

How fifty days could undermine what FIFTY YEARS have built . . .

For more than half a hundred years, The Philip Carey Company have been specialists in roofing problems and roofing products. For more than fifty years Carey materials have represented the best there is.

There have been temptations, of course, to lessen the quality of Carey products. Competition has been keen, you know. Cut a corner here, cut a corner there—a cent a shingle would make a big difference.

But . . . don't you agree that it would be rather bad business to tear down, in fifty days, the well-earned reputation that Carey has enjoyed for fifty years?

So Carey knows no compromises. We maintain today, as we have in the past and as we shall in years to come, that honest quality which results from the best of materials, the best of tools, the best of workmanship and the best of brains. Carey recognizes no short cuts to "bargain" quality.

THE PHILIP CAREY COMPANY, Lockland, Cincinnati, Ohio

Carey
ROOFING PRODUCTS

Operation builders: You have a real talking point with Sargent Hardware on your houses!

WHEN you are showing prospective home buyers through the houses you have built, you can make a point of the Sargent Hardware you have used. Month by month the national advertising done by Sargent is impressing more and more home owners with the permanent satisfaction assured by Sargent Hardware made of solid brass or solid bronze.

Sargent Hardware is hardware that is made to last. Its materials will be sound for years . . . time can only mellow them. They are rust-resisting . . . wear-defying. The moving parts are exactly machined and precisely fitted to assure smooth, silent operation. Years of quiet, certain action are built into Sargent Hardware. It will last as long as the building in which it is put.

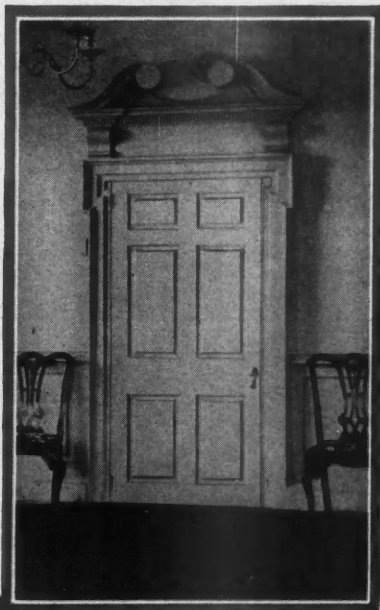
People have to take certain things for granted when they buy houses. There are many details they cannot see, details that are more important than many they can see. And people form their judgment about these invisible details by what they find true of the visible details. One of the important aids is the hardware item. They come in contact with hardware from the time they enter the house to when they leave. It is on the entrance doorway . . . cylinder lock, and handle or doorknob. It is on the door of every room they enter . . . on windows and on closet doors. If they find it cheap, shoddy hardware, they suspect that the hidden details are no better. If they find it to be Sargent Hardware of solid brass and solid bronze, they have faith in the care and honesty with which you have built.

Freedom from repair or replacements are other factors that make Sargent bronze and brass hardware an economical investment for builders. Of course, unlike some cheaper grades and plated goods, it won't be run down and shabby before your houses have been sold. But, more than that, it will very seldom give you trouble after your houses have been sold. You won't suffer needless expense for repairs

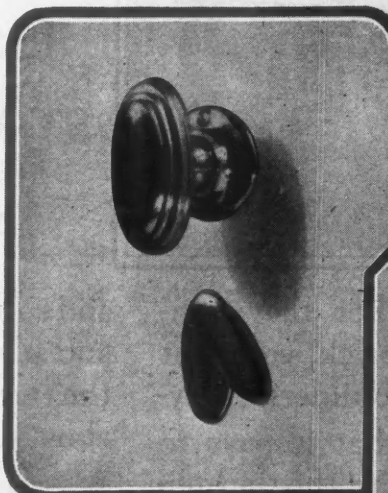
or replacements. Customers won't be coming to you, just after having bought their houses, complaining of sagging hinges, door latches and locks that won't work.

And, with all the economy of lowered expenses and more easily sold homes, you will be earning for yourself a reputation, complaining of putting the best of everything into your operations. Such a reputation is a real asset, a tangible help to your business success.

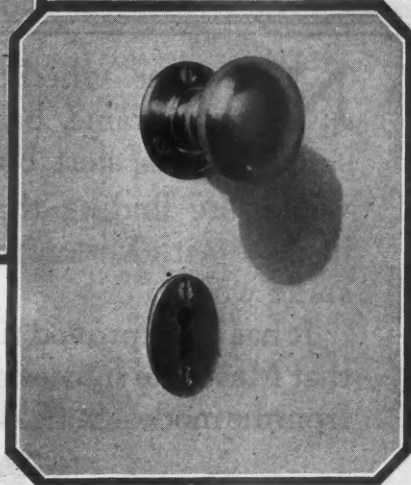
There is a representative Sargent dealer near you, who will be glad to furnish estimates and help you select Sargent Hardware. Send for our illustrated book, "Hardware for Utility and Ornamentation," listing the different styles. A post-card will bring it free. Sargent & Company, 51 Water St., New Haven, Connecticut.



Here is pictured the door of the Assembly Room in the American Wing, restored from a photograph in the possession of the Metropolitan Museum. On it is displayed Sargent Hardware of solid brass, in a design that might have been selected by its very builders in the 1790's. Knob No. 1606. Keyplate 817.



No. 1982 (shown above) is a Colonial knob, similar to one used in the Marmon Room of the American Wing. With it ask for keyplate No. 811. This plain, round brass knob (at right) with its simple keyplate would also be correct on the door above. The keyplate is No. 711. The knob is No. 1602 in the book of Sargent designs. These are but two of many designs by Sargent.

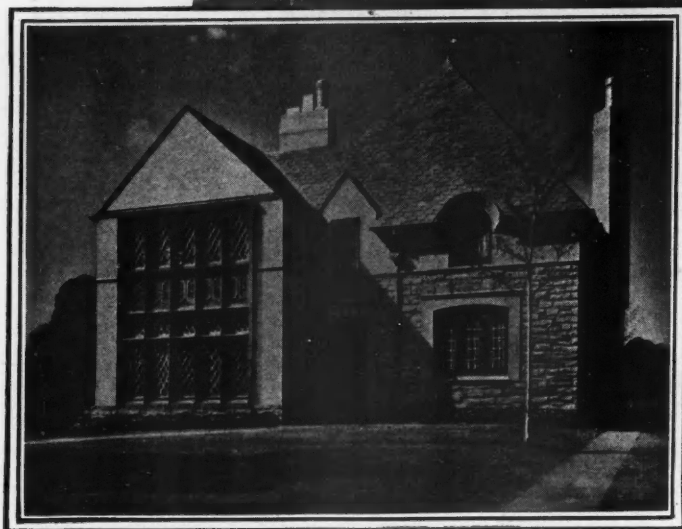


SARGENT

LOCKS AND HARDWARE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Location: Shaker Heights, in the Van Swearingen Addition, Cleveland, Ohio. Architect: James Reese, Constructor: E. M. Bell. Masonite supplied by the Cuyahoga Lumber Company.



Masonite Insulating Lath was used as a plaster base in both of these fine homes

Builders find Masonite helps to sell homes

NO matter whether they construct frame, brick, stone or stucco homes, alert builders everywhere are finding that it pays to insulate with Masonite, the thermostatic wood.

It has been proved time and again that Masonite houses of every type, from the modest bungalow to fine city

and suburban residences, sell quicker and at a better price. Note, also, that the two attractive residences shown above sold 15 additional Masonite jobs.

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Mills: Laurel, Mississippi

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THERMOSTATIC WOOD FOR
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WHAT A WONDERFUL OPPORTUNITY

This street represents for some contractor in Akron

HERE is a business street—typical of the business sections of your city—as well as Akron. A street of antiquated store fronts dotted here and there by the more imposing fronts of the successful merchants.

STORE FRONT SPECIALIZATION is the one field of contracting and building that is uncrowded today. Investigate its possibilities. The Kawneer Company, pioneers in Store Front construction, is at your service.

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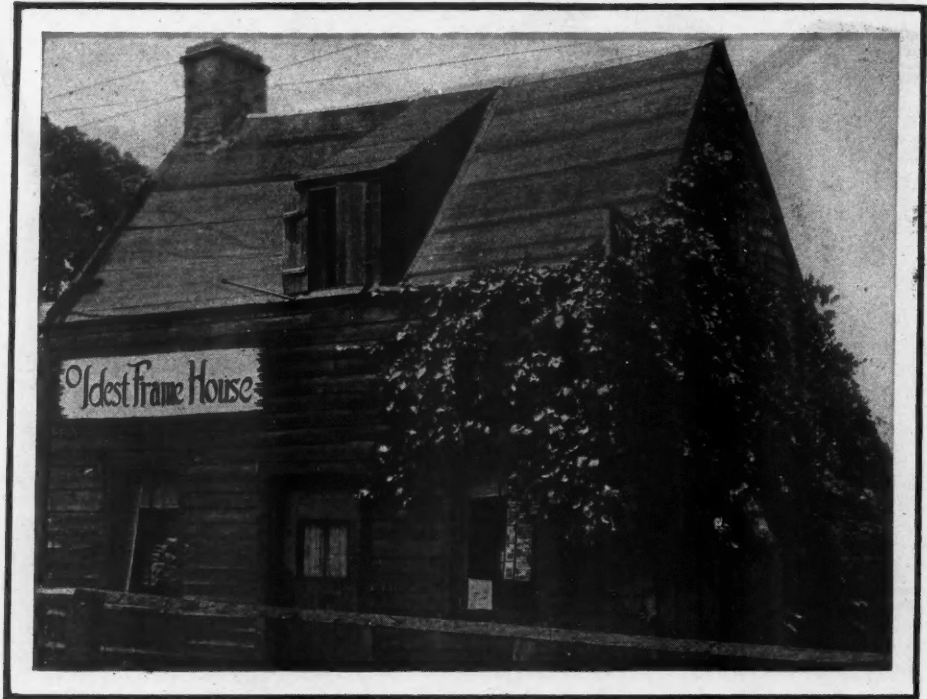
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STORE FRONTS

THE KAWNEER COMPANY, 3026 Front Street, Niles, Michigan
Send Contractor's Book of Store Front Designs to

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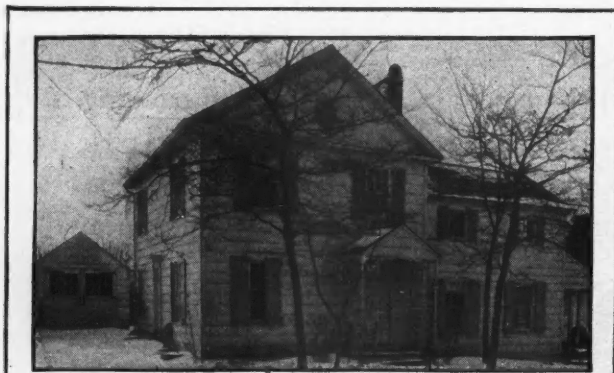


The oldest frame house in the oldest American settlement. Built in St. Augustine, Florida, more than 250 years ago. The original cypress, unpainted, is weathertight today.



A wood that fights its own battles —whether you paint it or not

EVEN without the protection of paint, heart grade Tidewater Red Cypress defeats weather at every turn. To achieve better appearance and even greater dura-



The architect, Mr. Aymar Embury II, built this house for himself. Practically all the exterior is of Tidewater Red Cypress.

bility, paint is, of course, desirable. But artificial protection is not absolutely necessary. For half-timber construction, and for every location where an unpainted effect is desired, Tidewater Red Cypress is an ideal wood to employ. Wherever wood meets weather, it knows no peer in endurance.

For exterior uses the correct specification for this Wood Eternal is "heart grade Tidewater Red Cypress," or "heart grade red cypress, coastal type." For interiors, sapwood may be used to good advantage.

Complete information on this long-lived wood will gladly be sent on your request. Southern Cypress Manufacturers Association, Dept. (AB-9), Jacksonville, Florida.

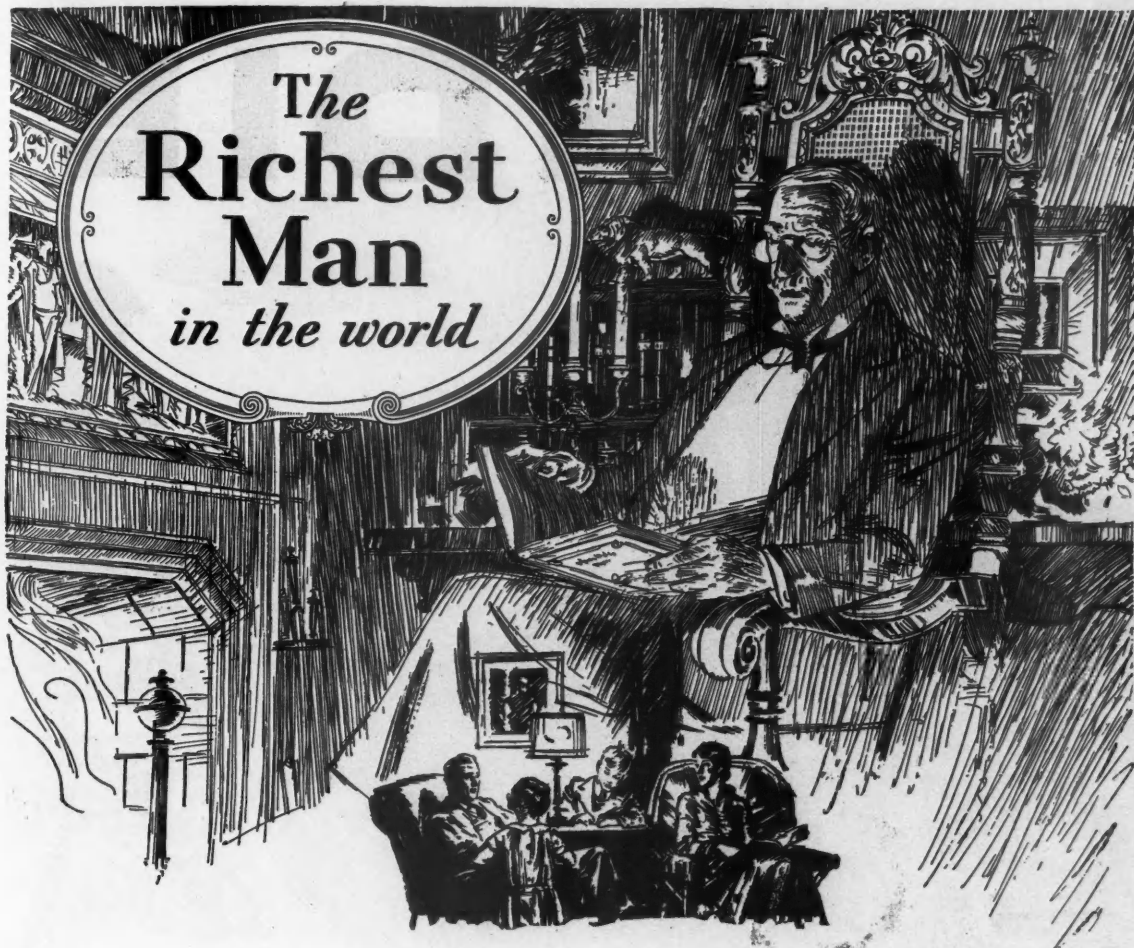
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CYPRESS

THE WOOD ETERNAL



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Every Holland System is installed under direct factory supervision to meet the individual requirements of the home it serves. We assume full responsibility. Heating comfort, cleanliness, economy and satisfaction are guaranteed by an ironclad written bond that has no parallel in the heating industry. You reduce sales resistance and expense—speed turnover and increase your profits—by letting Holland help you sell your homes.

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Load skip from the ground—no need of platforms!

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High, narrow drum means fast discharge!

From materials in the wheel-barrow to concrete in the drum it's a high-speed one bagger!

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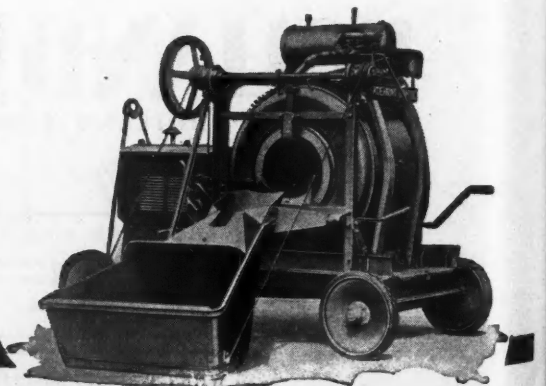
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Your regular dealer will be glad to show you these drills. Try them out. Notice how easy they are to handle—how nicely balanced. Send the coupon for Catalog Sm59. It contains full description of this new line of Stanley Electric Tools.

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CORRUGATING COMPANY

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Arch Lath can be installed in every home without additional cost, because of the fact that Arch Lath saves time, labor, and plaster, so that the completed job costs no more than inflammable plaster base construction.

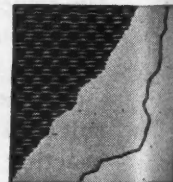
The distinctive arch-design construction of Arch Lath permits use of only the correct amount of plaster for perfect "key". Arch Lath saves time and labor because it permits double-back plastering. The first coat of plaster can be scratched and made ready for the second coat without removing the scaffolding.

Arch Lath is practically a solid piece of sheet steel

and therefore very rigid—easy to handle and erect. The sheets are 27 inches wide, instead of 24 inches, enabling the lather to cover more surface in less time and at less cost.

Arch Lath advertising in national magazines has made Arch Lath well-known as the fire-safe and permanent wall-and-ceiling construction—"Added value that builds prestige and profits".

Write for additional information and sample.

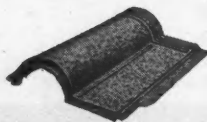


One sheet of Arch Lath (27 x 96) grips the plaster at 8064 points; making the wall an integral unit of rigidity and strength, while minimizing possibility of cracking.

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By *B. E. Sibbe*

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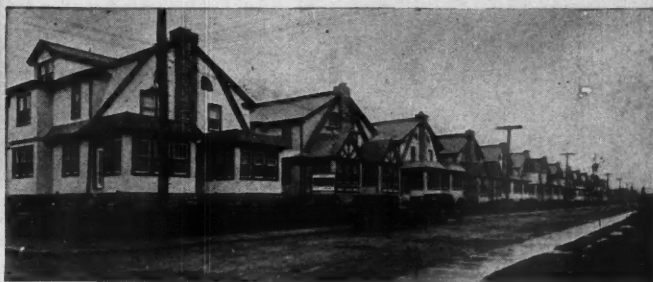
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WHERE doors lock without keys—

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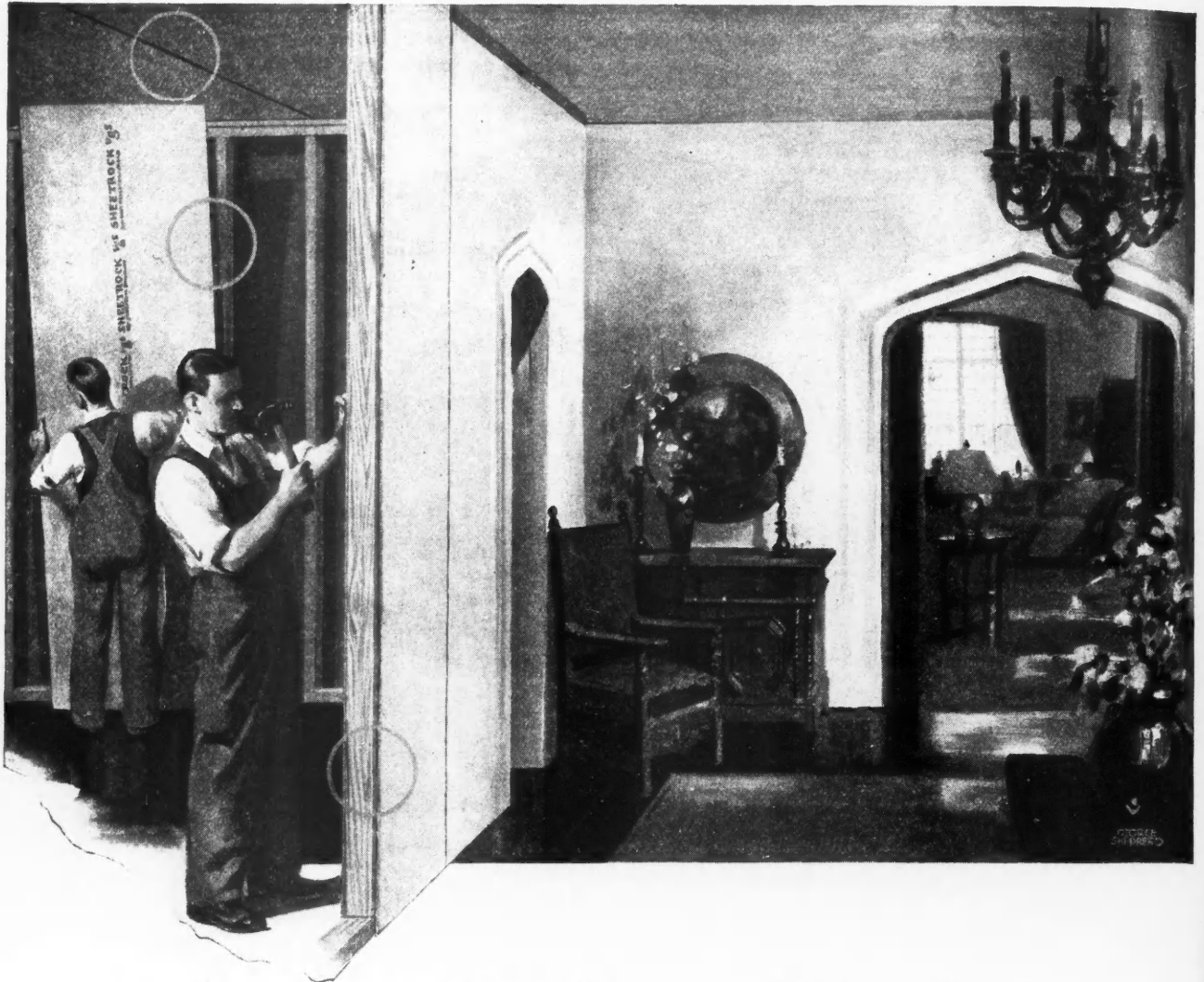
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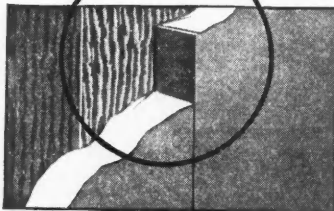
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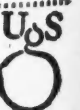
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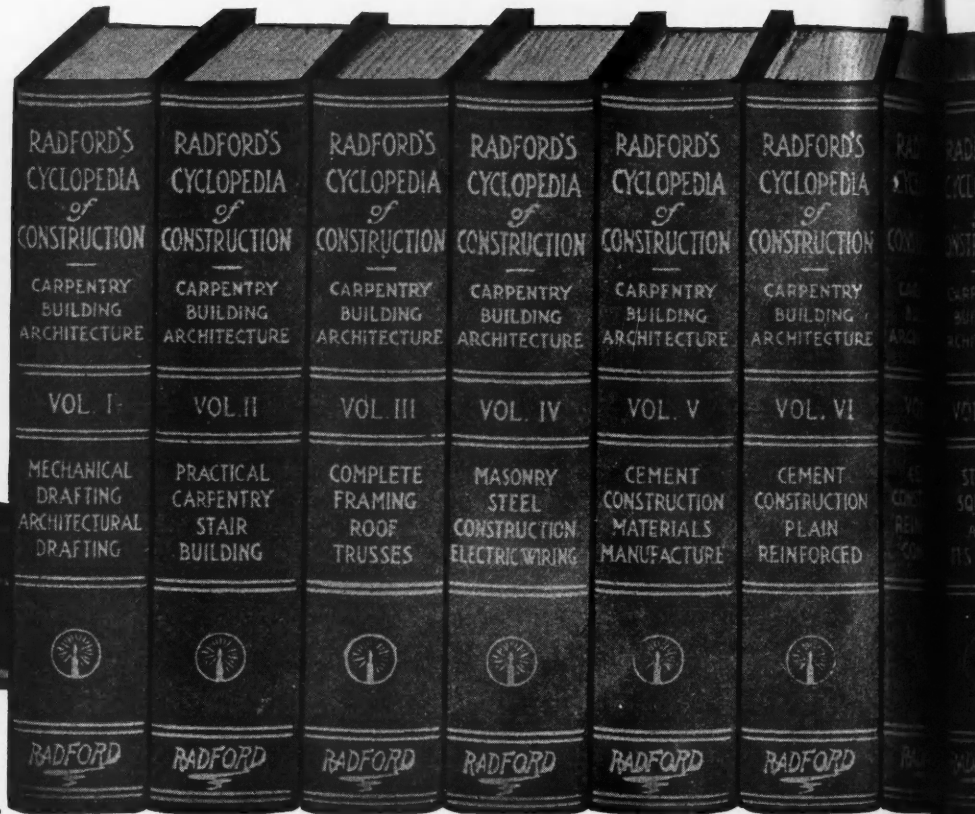
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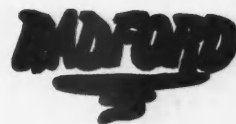
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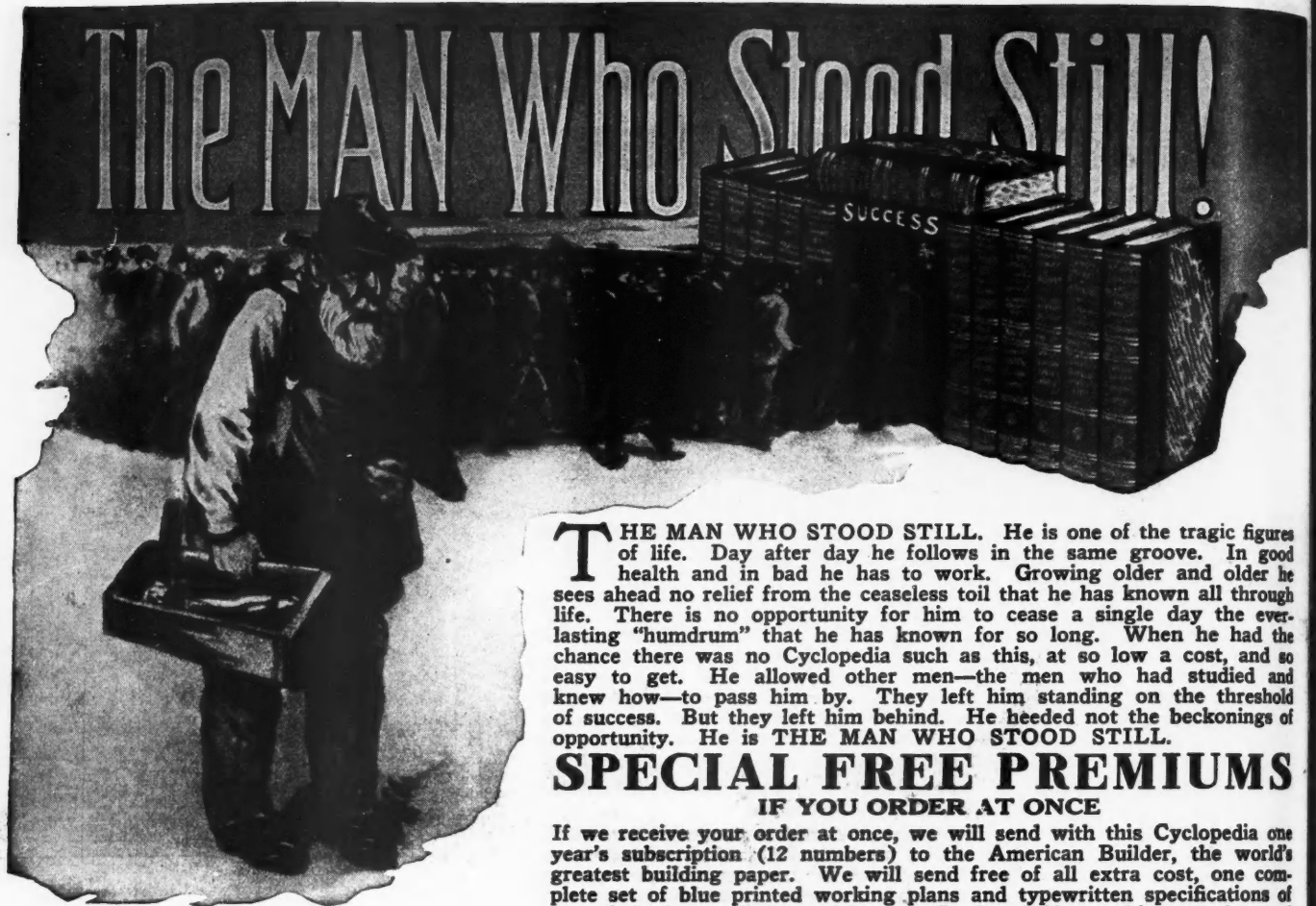
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All you have to do is to write your name and address plainly on the coupon at the bottom of the next page, pin a dollar bill to it and mail it to us. We trust you as a member of the building trade and send you the entire set of books immediately. We prepay all express charges and thus it does not cost you one penny for examination. When you get the books they are yours for five days to examine them just as leisurely and as carefully as you please. You have the privilege of calling in your family, your friends, your associates to look them over and help you to make a decision. After you have had the chance to go through them page by page, if you should decide that you do not want to keep the books, all that you have to do is drop us a postal telling us so. We will immediately send back to you the payment of \$1.00 which you sent us with the order blank. We do this without any argument, without any red tape and without any haggling whatever. Furthermore, we will remove the set of books without cost to you at once. Therefore, you are nothing out on the deal, you have not spent a cent, you have lost nothing whatever.

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A.B. 9-28

The SECOND HALF of this year's CROMAR Full-Page Schedule in The Saturday Evening Post

THE SATURDAY EVENING POST

A CROMAR OAK FLOOR is laid and used the same day

Because the preparation, it is completely finished at the factory—scrapped, sanded, filled, twice varnished, and treated to resist moisture!

WITNESS the most amazingly simple way of buying an Oak Floor. It is completely finished at the factory—scrapped, sanded, filled, twice varnished, and treated to resist moisture!

CROMAR OAK FLOORING

THE CROMAR COMPANY, WILLIAMSPORT, PA.

THE SATURDAY EVENING POST

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

CROMAR OAK FLOORING

THE CROMAR COMPANY, WILLIAMSPORT, PA.

IN ONE DAY... you can change to a Hardwood Floor!

CROMAR OAK FLOORING

THE CROMAR COMPANY, WILLIAMSPORT, PA.

This CROMAR National Advertising Campaign is only ONE of the reasons why contractors and jobbing carpenters are selling more than twice as much CROMAR Oak Flooring this year as they sold last year. The other reason is CROMAR itself—the only flooring in the world which is completely finished at the factory—scrapped, sanded, filled, twice varnished, and treated to resist moisture. Nail it down—that's all!

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The Realization of Anticipation



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

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The above close up unretouched photograph of an actual roof of dormer and part of main roof of a model home, shows the definite charm and distinctive effect produced by this sturdy asbestos fire-proof shingle, known as—

English Thatch

The shingles come in random widths and when applied in irregular courses the heavy ragged butts and rough surface produce a texture roof that cannot be duplicated with any other material, they completely fulfill the owners' and architects' desires for a *serviceable, fireproof and artistic* roof.

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FIRE-PROOF

Tapered Ambler Asbestos Shingles are absolutely non-burnable, not merely "fire resistant." Ask your fire insurance agent what the difference is, he will tell you 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.



THE bathroom—of all rooms in the house—should be planned for aristocratic distinction and correctness. And to be ultra-modern, its surfacing should reflect the new-day treatments in color and design.

For these purposes, and for permanent satisfaction and constant cleanliness, no other material can equal Vitrolite—the vitreous slab material. It has endless possibilities for modern color, texture and decorative treatments. Note the beauty of the bathroom shown here, with its walls of ivory, jade and black and decorations in harmonious design.

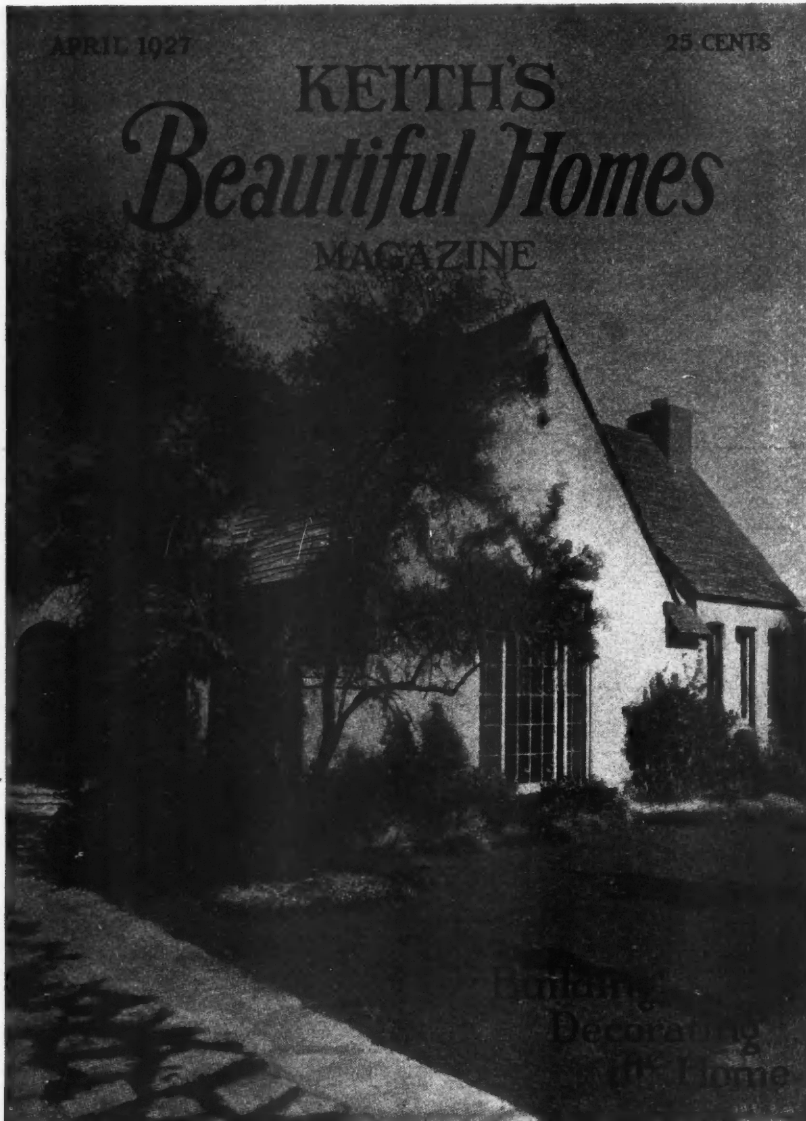
Leading Architects and Builders, recognizing its outstanding superiorities, are using Vitrolite more and more. Our Service Department is available for the preparation of color sketches and for technical details of Vitrolite installations. Write for complete information.

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Take advantage of this offer today

KEITH CORPORATION
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A revolutionary new machine. Tilting Arbor Saw Bench — Sturdy, compact, self-contained. Motor built in; saw completely guarded.

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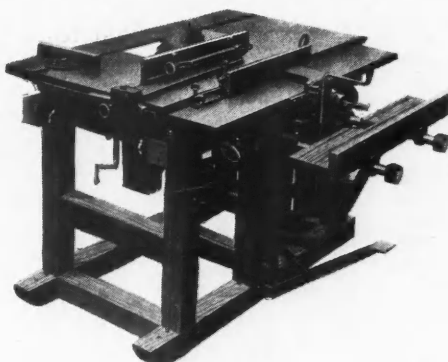
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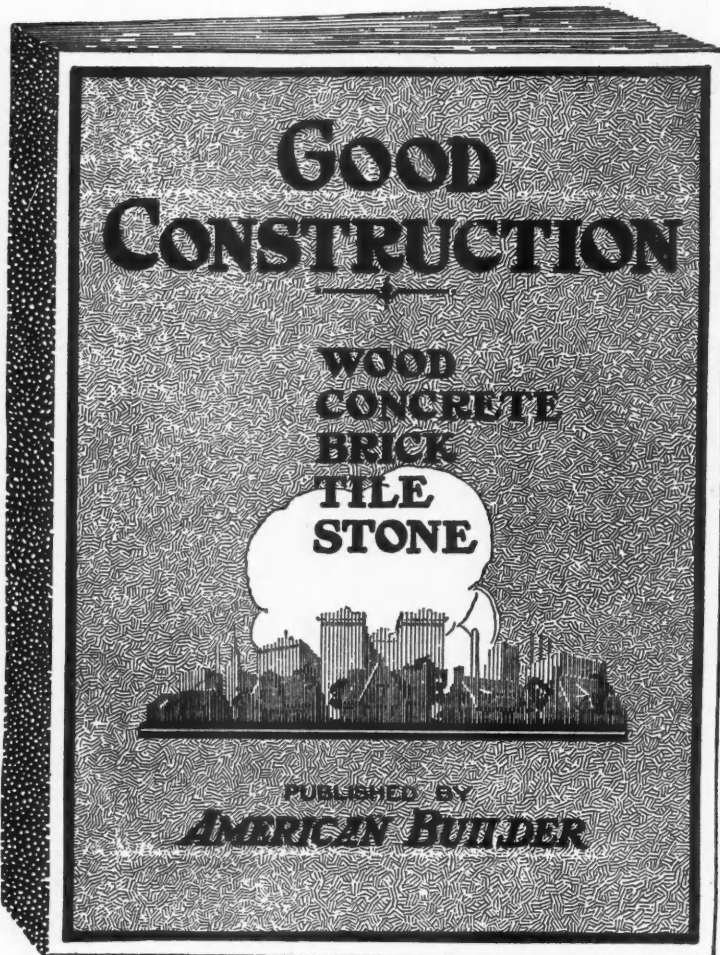
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This book will be of great help to every practical builder. Limited space prevents a complete summary of the contents, but some of the more important subjects covered are:

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The Country Gentleman

SATURDAY

THE SATURDAY EVENING POST

Genuine Ruberoid shingles and roofings offer types, styles and color ranges most desired by home owners, by those about to build and by building and roofing contractors.



Genuine Ruberoid Shingles are weatherproof and fire-resisting—double protection.

THOSE who chose Genuine Ruberoid 25-30 or 35 years ago, bought it for its durability. Now you have an added incentive—beauty, beauty that endures. You may have, at your pleasure, Genuine Ruberoid Roofs in various attractive colors and blends—non-fading, mineral surfaced finishes.

The shingles come in several styles and designs. They offer single, double or triple thickness according to the building you wish to roof or the price you wish to pay.

The first ready-to-lay asphalt roofing was Genuine Ruberoid and the oldest ready-to-lay asphalt roofs in existence are all Genuine Ruberoid. It is not the mere outside appearance that has made this Roof life possible, but their inside ingredients and hidden quality. True roof value can only be measured in years of service. That is where Genuine Ruberoid Roofs excel.

Genuine Ruberoid Shingles appeal to the dogmatic and the thrifty. No roofs to stain or paint. No repair bills because of rust or decay. No worry about sparks and flying brands. But instead, years of trouble-free service provided by quarried slates and minerals imbedded in a body that has proved, for a third of a century, its ability to resist the weather.

This is the kind of roof you want. It's the kind you will get if you ask for and insist upon Genuine Ruberoid. If the Lumber or Building Supply Dealer you ordinarily deal with does not have Genuine Ruberoid Shingles or Roofings, tell us the type of building you wish to roof hereafter. And we will also forward the name of the dealer in your community who takes pride in displaying the sign—Distributors of Genuine Ruberoid.



The wide choice of styles and colors makes the most discriminating taste.



Lean asphalt. No need to stain or paint—no rust or decay.



A new roof over the old saves money and double protection.

Genuine RUBER-OID SHINGLES - ROOFINGS

The RUBEROID Co. New York and Chicago. Offices and Warehouses in Principal Cities

We aim through our authorized dealers not only to supply you with a dependable line of colorful fire-resisting roofing but also to help you secure a well-applied Genuine Ruberoid Roof. The carpenter, contractor and roofer recommended by the dealer in your community has the long years of service it is built to give. Indicate on the coupon the type of building you desire to roof or reroof.

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If you build for others—or build to sell be sure to point out that you use GENUINE RUBEROID SHINGLES...

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Send for samples and catalog covering the entire line. The coupon is for your convenience.

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MONTH after month over six million families—those who own homes—those who intend to—are reading about the importance of using *Genuine Ruberoid Shingles and Roofings*.
 When you order asphalt shingles or roll-roofings from your local dealer, be sure to specify *Genuine Ruberoid*. It is your assurance of a trouble-free roof and protects your reputation for good workmanship.

The RUBEROID Co., (Dept. 4), 95 Madison Ave., New York, N. Y.

Send along your catalog covering *Genuine Ruberoid Shingles and Roofings*—also samples of those products checked.

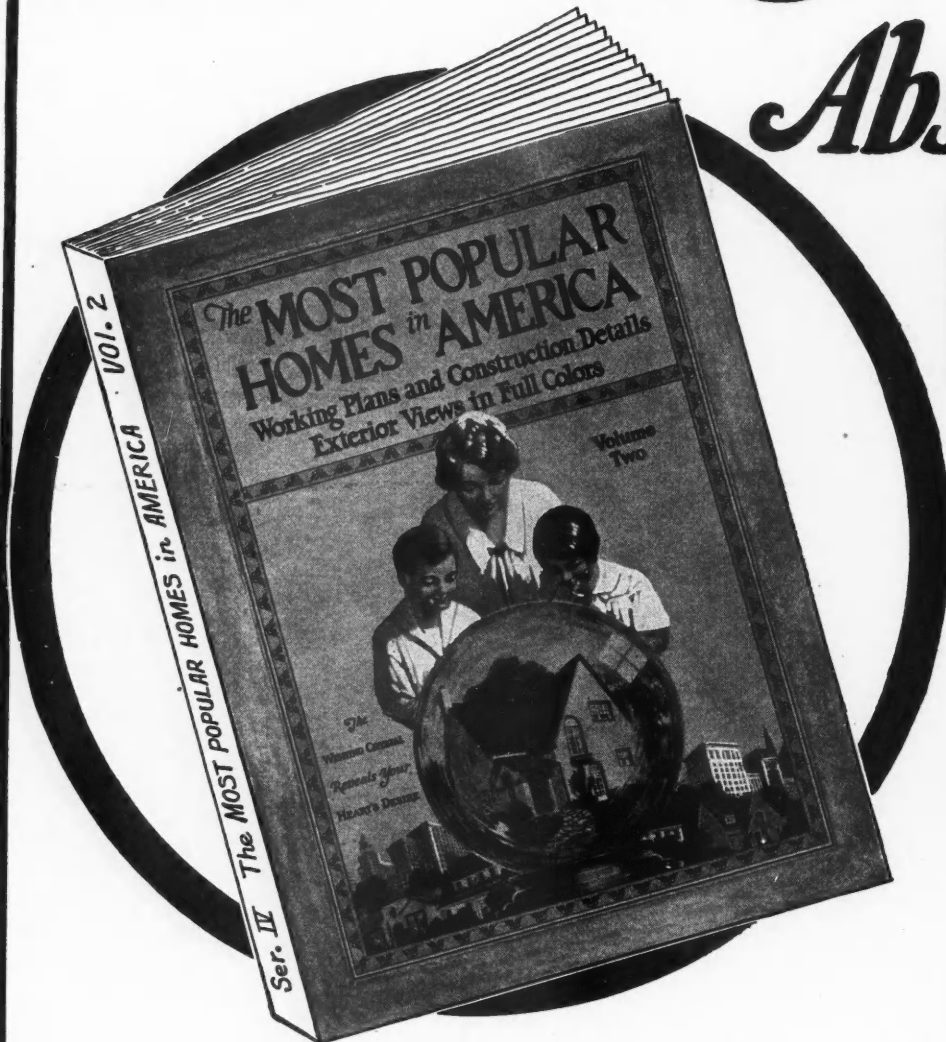
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The new book, “*Volume Two*”, is even more beautiful in appearance and contains 20 more full color plates than *Volume One*. If you already have *Volume One*, you will certainly be delighted with *Volume Two*.

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FIFTEEN of the home designs in this wonderful book have complete working-drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

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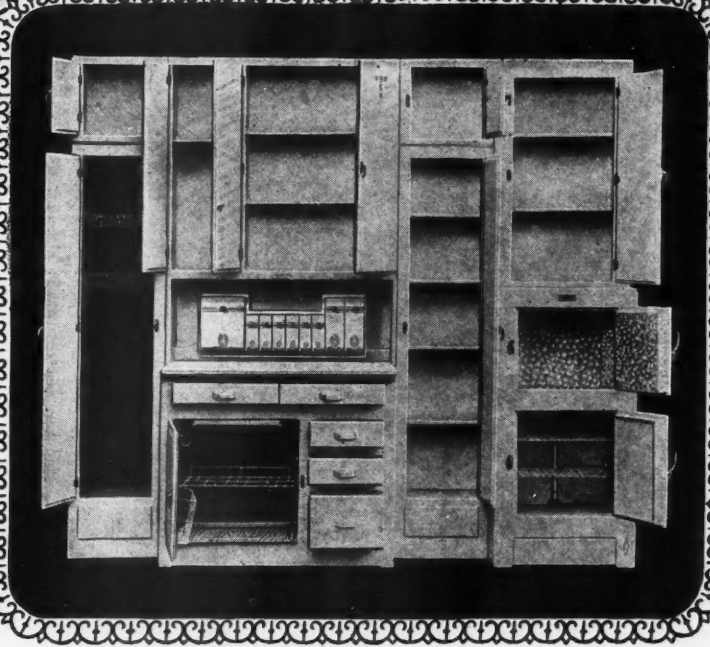
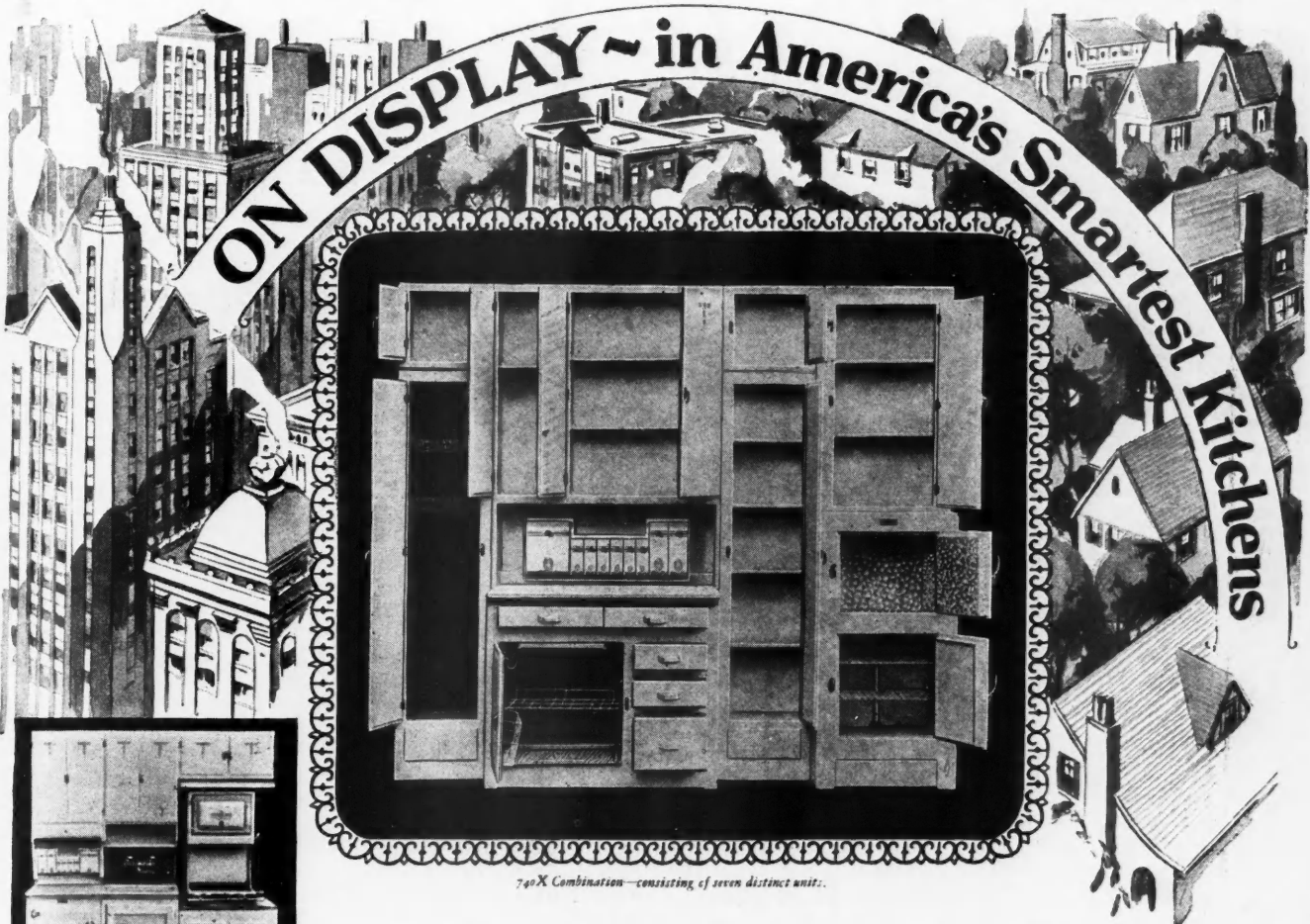
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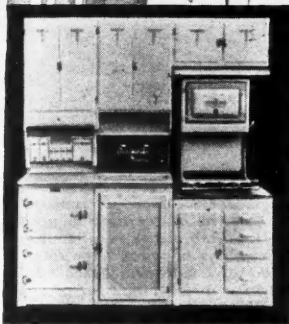
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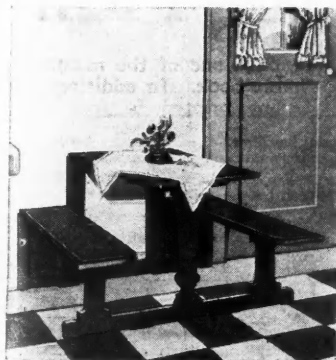
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740X Combination—consisting of seven distinct units.



Kitchenette assemblage. A compact combination including refrigerator, range and sink



DINOFOLD—a "breakfast nook" of table and seats for four. Entire unit folds up with one single, simple operation

There's a large part of your selling job done when you show a woman a kitchen furnished with Kitchen Maid Units. She feels, intuitively, that the house or apartment lacks no element of what is new and fine.

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If in Canada, address Branch Office Waterloo, Ontario

"Wood is the Right Material



for these
Houses,
MR. SPALDING"

*How the Builder Benefited
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on Wood . . .*



"WE planned this group of houses to be attractive, comfortable homes that would sell at moderate prices," states J. R. Spalding, of the Spalding Construction Co. Inc., builders of this Colonial colony in Ridgeway Village, White Plains, N. Y.

"Wood construction throughout made it possible for us to erect the job quickly and economically. We should be able to sell them at an attractive price and make a good profit.

"But the important thing for us was the fidelity with which we were able to follow the architectural treatment. We would not have been able to keep the true Colonial spirit had we attempted to use any other material—nor would we have saved on erection costs.

"As it is, we had a group of houses that brought us the type of buyers we wanted. Without a cent of added cost, wood gave us a real selling point in the perfect

execution of the popular Colonial design that it makes possible."

Architectural fidelity is but one of the characteristics that makes wood the ideal material for medium-priced houses built for prompt turnover. The well constructed frame house, architecturally faithful in each detail, attracts quick buyers, turns promptly and gives the builder full use of his money. In the majority of cases, such a house can be constructed for less money than one built of other materials.

You will find it to your advantage in such construction to specify American Standard Lumber, manufactured to standards advocated by the National Lumber

Manufacturers Association and endorsed by the United States Departments of Commerce and Agriculture. Bulletins setting forth these standards may be secured from the National Lumber Manufacturers Association, Washington, D. C.

The designers of these Colonial houses, Small House Service Bureau, insisted that wood was the material to be used throughout. They wrote lumber into the specifications because they knew wood would give the character that was needed for quick turnover of the property



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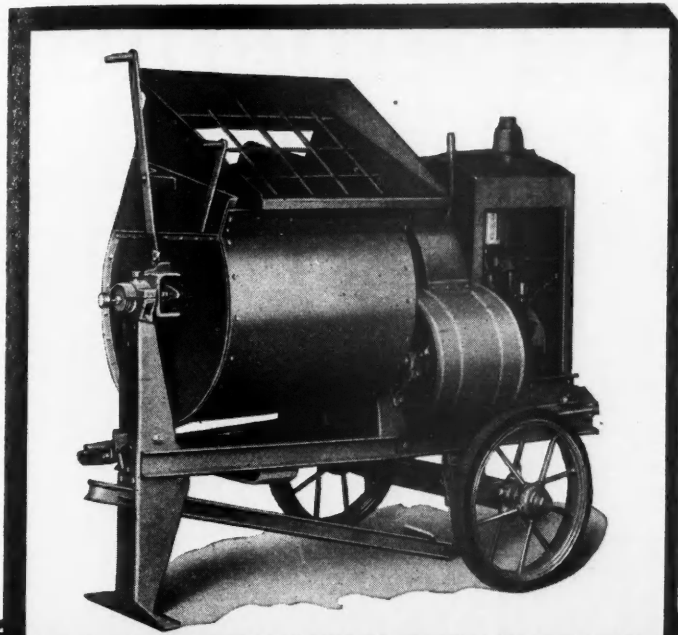
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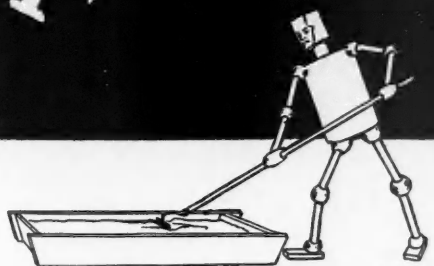
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MEN who know the plaster contractors problems from A to Z build this mixer. The wages of two, three and even more men are saved—Speeds up work of plasterers, brick-layers and tile setters. Delivers plaster that spreads easier and faster and gives 10% more actual spread yardage on the wall. Ask any contractor who owns one.

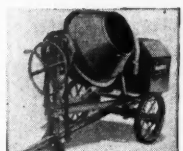
The Mechanical Hoeman



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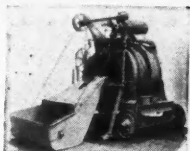
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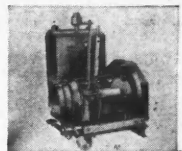
Wonder Tilting 3 1/2 Trailer—Full 1/2 Bag capacity.



Wonder Tilting loader—7 cu. ft. capacity.



Marsh-Capron, Non-Tilting loader—10 cu. ft. capacity.



C. M. C. Hoists. 3 Series. Light—Medium—Heavy Duty.

Mail the coupon for details of the complete Wonder-Marsh-Capron Line of Equipment.

Construction Machinery Company

103 Vinton St. WATERLOO, IOWA
Factories at Waterloo, Ia.—Chicago Heights, Ill.

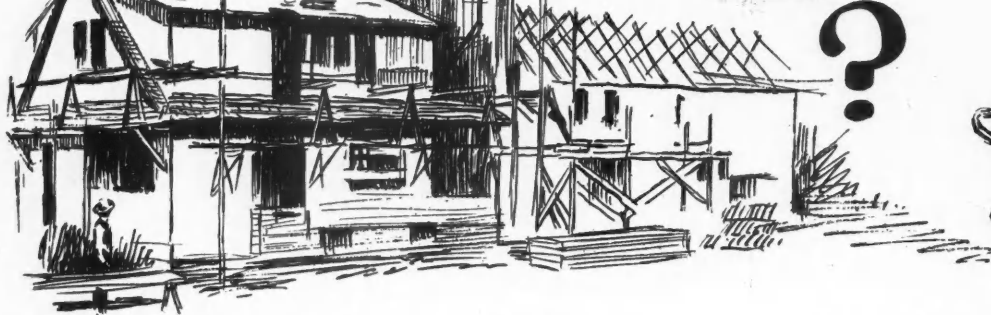
CONSTRUCTION MACHINERY CO.
103 VINTON ST., WATERLOO, IOWA

Send me your Free Plastering Handbook, also the dope on:

<input type="checkbox"/> Mechanical Hoeman	<input type="checkbox"/> Hoists
<input type="checkbox"/> Plaster Mixer	
<input type="checkbox"/> Tilting Mixers	<input type="checkbox"/> Diaphragm Pumps
<input type="checkbox"/> Non-Tilting Mixers	<input type="checkbox"/> Saw Rigs

Name _____
Address _____
City _____

Has Your Competitor A Monopoly On the Bigger Profit Work



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

Read American Builder Advertisements

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

Will Your Profits Increase This Year?

Expanded business requires new and improved production methods. One or more new machines or an improved method of estimating may solve your problem. If you are interested in any kind of building materials, contractors' equipment and machinery, power shop equipment, heating systems, plumbing supplies, water supply systems, lighting systems, elevators, school, church or theatre equipment, farm building equipment, building hardware, home conveniences or anything that is used in constructing or equipping any kind of building—we will help you get all information.

Obtain Valuable Reference Data

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

Free Service to American Builder Readers

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



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

A.B. 9-28

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

.....

Name.....

Address.....

Please check your occupation:

Building Contractor Dealer in Building Materials Prospective Home Builder Architect

Firestone —newest DUNTILE manufacturer

Great Rubber Company Chooses Duntile for Construction in Liberia

On the million acre Firestone rubber plantation in Liberia, Duntile construction will be the standard. In this gigantic jungle enterprise where the primitive is being transformed into the most efficient and modern that money can buy, Duntile naturally becomes the chosen building unit.

To insure an ample supply, Firestone becomes the newest of over 400 Duntile manufacturers, operating a central plant as the base of supply and contemplating the operation of smaller plants moved out into the field as the frontiers of civilization press outward.

What Greater Tribute ?

For years Firestone has been one of the world's leading examples of progressive big business. Time after time it has pointed the way for the world to follow. Firestone's choice of Duntile is naturally

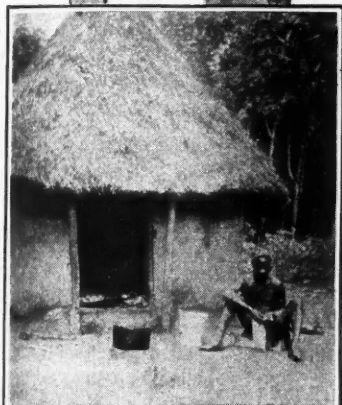
of the greatest interest to every man working with or interested in Duntile.

Because Duntile is a standardized product, any builder buying from his local manufacturer, secures advantages identical with those which directed Firestone's decision for Duntile. The great strength, easy laying and labor savings in construction. The very effective insulating qualities, vital in tropics and important everywhere. The handsome appearance and durable colors—desirable in all high grade construction. The supreme advantage in getting all these other advantages at a cost 30% below construction of any comparable quality.

Will You Too Learn the Facts

Many a man has started in a small way to manufacture Duntile for his locality and grown to independence through the sheer force of Duntile building advantages and the earning capacity of Duntile manufacturing plants. Such men as Lind, Fraunfelder, Lyons, Sewall, and many another pioneer Duntile manufacturer now have added to their ranks one of the world's greatest corporations. Territories are rapidly being granted and machinery supplied for immediate production. If you too are ambitious to grow to manufacturing independence from a modest start, investigate at once. Use coupon below.

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



From
Primitive Huts

to Ultra Advanced
Duntile Masonry



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

- Show me how I can become the owner of an exclusive Duntile manufacturing plant in my community. Explain how Duntile can be produced at a profit of 30-60 percent and still make possible building masonry walls at cost of frame.
- Contractor and Builders: Learn how you can make more money for yourself by supplying permanent masonry construction with Duntile at cost of frame.

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



BEFORE Bates Multi-Wall Paper Bags leave any of the Bates plants, sample bags from each lot undergo tests far more severe than they would ever get from actual weather and working conditions. So, when you receive cement or plaster in Bates Bags, it has already been proved that these containers will deliver 100% of their contents in excellent condition.

This explains why a plastering con-



~ no loss

tractor will write us as follows:

"I have ordered plaster in Bates Bags to be shipped in heavy rains or snowstorms. Whatever the forecast, the plaster has been delivered and unloaded without loss to me."

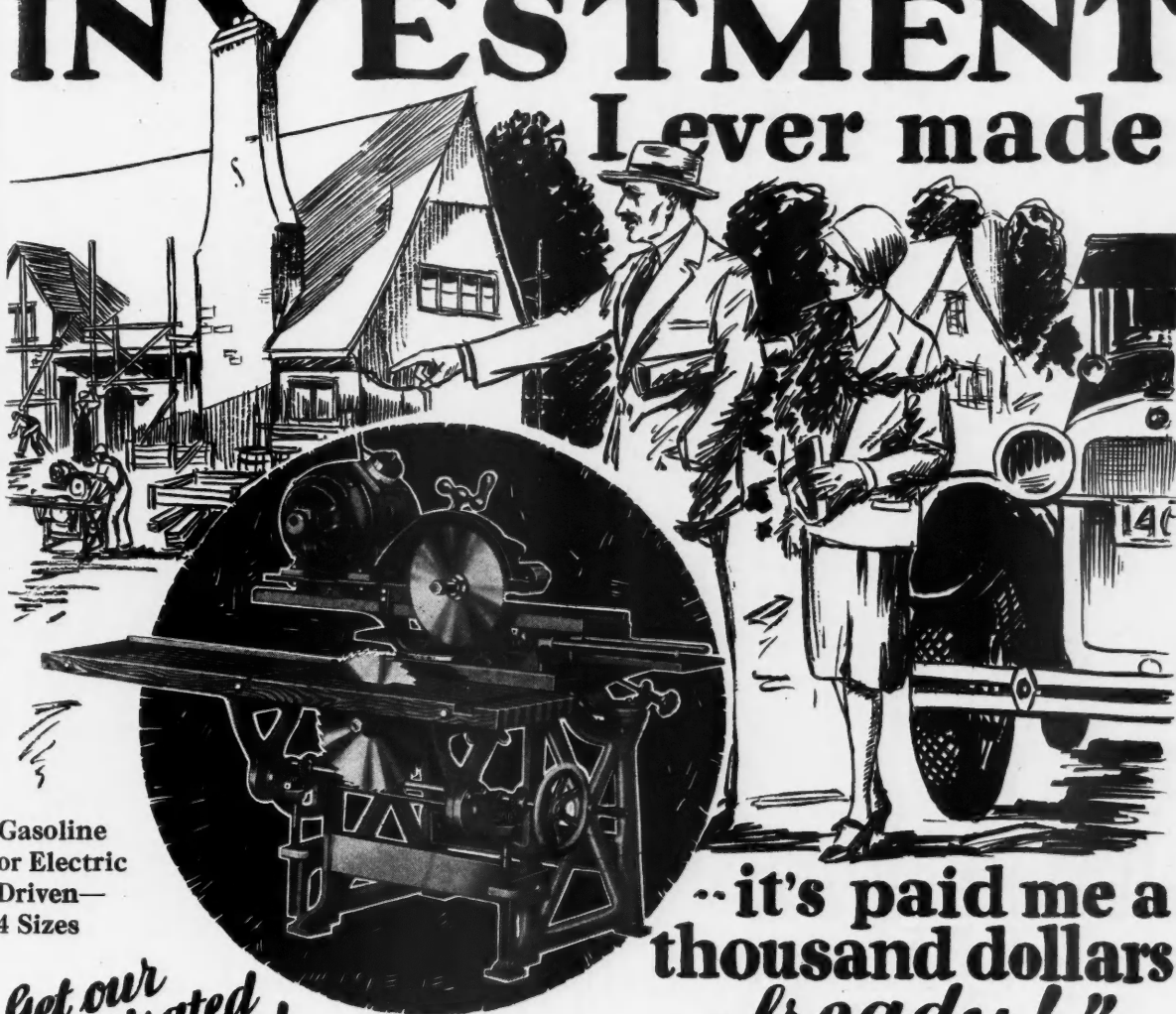
We have published an interesting little book describing the tests which establish the strength and moisture-resisting qualities of Bates 5-wall Bags and will be glad to send a copy. Ask for "Tested and Approved."

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

"That's the best INVESTMENT I ever made"



Gasoline or Electric Driven— 4 Sizes

..it's paid me a thousand dollars already!"

Get our Illustrated Book!
WRITE TODAY

"Remember how long I hesitated before I bought the 'Master Woodworker', Helen? Well, there it is. And it sure has proved a money maker. We've had it only a short time and it's paid for itself and made us a nice profit besides."

"Too bad you didn't make up your mind sooner, Frank. We would have been money ahead."

"Yes, I know that, but I didn't realize then how useful the machine could be, or we would have had one long ago."

Builders are enthusiastic about the "Master Woodworker." They learn from experience what a labor saver it is, how they can make more profit and get their jobs done on time.

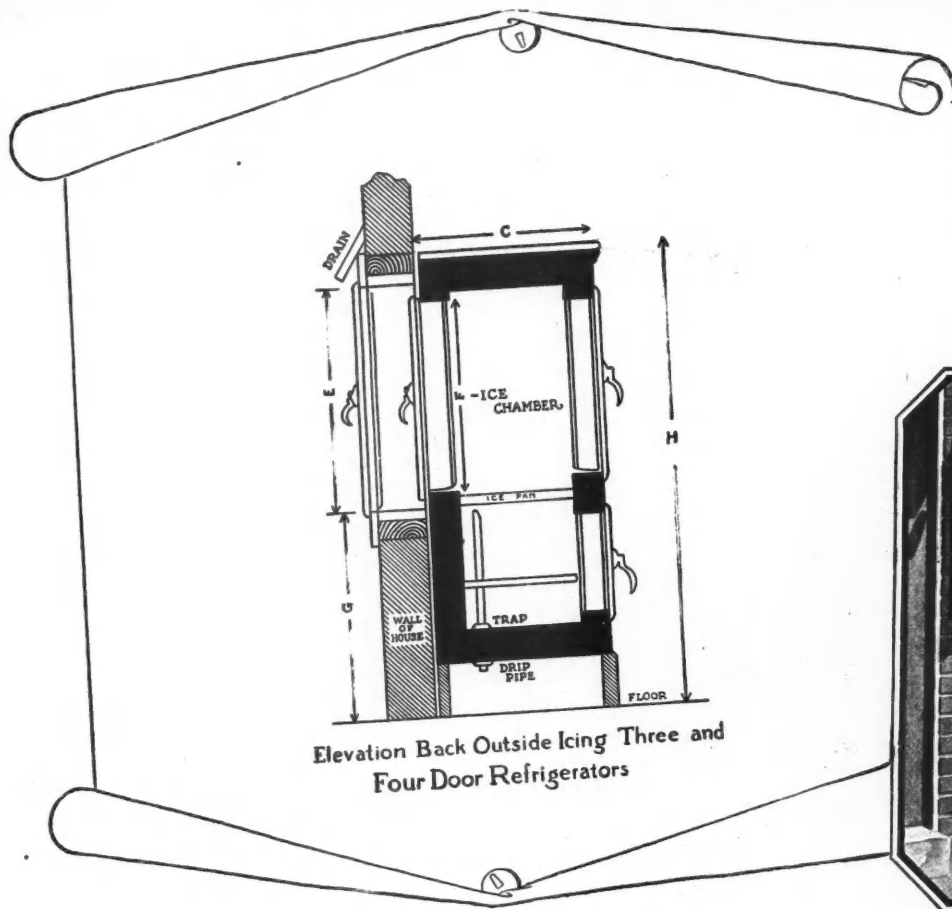
Not just a saw rig but 12 MACHINES IN ONE. It will do every woodworking job—and do it better, quicker, more accurately and economically. Sold on Easy Payments.

MASTER WOODWORKER MFG. CO.
 Congress & Brush Sts.,
 DETROIT, MICHIGAN
 Send me your catalogue and easy
 payment plan.

NAME.....
 ADDRESS.....

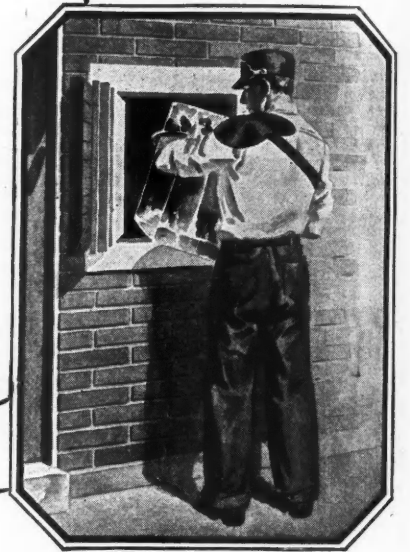
The "Master WOODWORKER"

Congress @ Brush Sts., DETROIT, MICHIGAN - (Established 1917)



Elevation Back Outside Icing Three and Four Door Refrigerators

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

THE growing popularity of "outside icers," which permit the iceman to deliver ice without entering the kitchen, is evidenced by the increasing number of new homes, apartment buildings and residential hotels equipped with such facilities.

Many refrigerator manufacturers build special models designed for outside icing. These manufacturers gladly furnish blue prints which are very helpful to architects and builders who wish to include the

"outside icing" feature in their plans.

Ice refrigeration is so economical and satisfactory that a great many people prefer it. With outside icing facilities, it is the last word in convenience. The iceman relieves the housewife from any responsibility for keeping the ice chamber filled. That's *his* job.

The architect who incorporates this valuable feature in his plans is rendering a service which his clients will appreciate very highly.

NATIONAL ASSOCIATION OF ICE INDUSTRIES



163 WEST WASHINGTON STREET, CHICAGO, ILL.

Announcing the New **Kalmantruss Joist**

Made by an entirely new process
of manufacture—

Designed in accordance with the
best engineering practice—

Without bolts, rivets or welds in
tension—

The chords and web members
of one piece of steel—

A true one-piece joint.



KALMANTRUSS

J O I S T S

KALMAN STEEL COMPANY

CHICAGO
NEW YORK
BUFFALO
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BALTIMORE
PITTSBURGH
SYRACUSE

MILWAUKEE
PHILADELPHIA
ST. PAUL
ATLANTA
NEWARK

HOUSTON
KANSAS CITY
DAYTON
MINNEAPOLIS

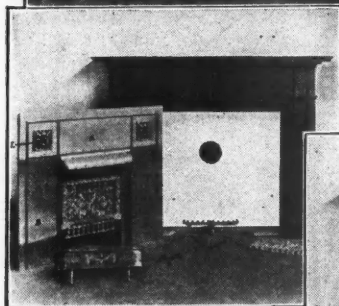
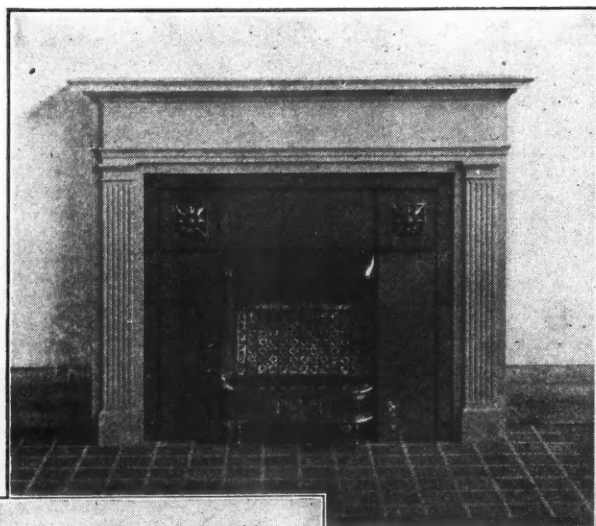
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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

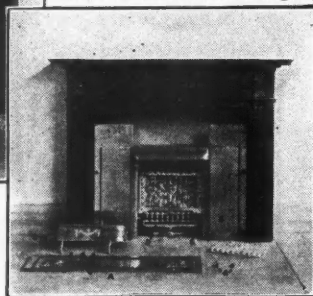
A NEW IMPORTANT CONTRIBUTION TO HOME BUILDING

For the Apartment or Home ' ' Save Money by Using the HUMPHREY RADIANTFIRE MANTEL ' ' Instant Heat



Installation is very simple. No skilled labor required. The mantel is fastened securely to the wall by two turn-buckles that are attached

Completely assembled and installed Radiantfire Mantel. The mantel comes in two finishes—one, in flat white, to be repainted, and dark brown mahogany



Showing method of installing sheet metal front after mantel has been secured to the wall and burner connected

HOUSES and apartments sell and rent quicker where you have installed the Humphrey Radiantfire Mantel. As a builder you are naturally interested in making the houses you build more saleable. As a service to your client you should be interested. Moreover, Humphrey Radiantfire Mantels will save you money. It is estimated that you can save over two-thirds of the cost of an ordinary fireplace—no masonry, chimney and ash pit necessary. Simply install the mantel of your selection to a gas connection. They require no skilled labor to do this—it is simple and easy. The Humphrey Radiantfire Mantel will give you extraordinary efficient warm rooms by comparison. They are cleaner and absolutely odorless. They are always ready for use—in spring, fall, or winter. They can be used as an auxiliary heating system or they can, in the milder climates, assume the entire burden of heating homes all year round. Regardless, they give you warm cozy rooms without any soot or trouble. They make more satisfied tenants and home owners. Let us furnish you with details. For full information write to:

GENERAL GAS LIGHT COMPANY
Kalamazoo, Mich.

New York:
44 West Broadway

San Francisco:
135 Bluxome Street

The HUMPHREY Radiantfire Mantel

No smoke — No odor No ashes — No dust

The Humphrey Radiantfire Mantel can be furnished with electric heating elements where gas is not available.

IF IT ISN'T A HUMPHREY, IT ISN'T A RADIANTFIRE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

AROUND *the* FAMILY TABLE



Not His Fault

The foreman had come across Bill slacking and smoking on his job, and spoke his mind thus: "Look here, Bill. This 'er's a contract job, and it ought ter 'ave been finished by now. Jest shove that pipe away an' get on wiv yer work, else it will be the sack for you."

"Well," said Bill, deliberately, "yer know Rome wasn't built in a day."

"Don't want none o' yer back answers," said the foreman. He paused and then added: "Sides, I wasn't the foreman on that job, neither."—*Toronto Globe*.

"Wussen 'at. It's wussen murdah, Brothah Jackson!" "Den Ah knows," shouted the preacher, coming down from the pulpit, peeling his coat. "De good Lawd kin fo'give yo' effen he feels dat a way, but Ah's gwine to climb yo' frame. Yo's de skunk what stole mah 'possum."

Bet He Couldn't

She (*sotto voce*)—"Georgie, dear, it's a burglar!"

He—"Sh-h! Don't move, maybe he can get that window up; it's the one we haven't been able to open since the painters left."—*Life*.

Well Earned

That's our general superintendent—son of the president—he began at the bottom and worked up—started as an oiler, right after he left college.

"When was that?"

"Oh, he graduated last June."—*Wall Street Journal*.

THE QUESTION ARISES, WHICH CAUSES THE GREATEST STRAIN ON THE VOCABULARY—GOLF PLAYING?—OR FALL FURNACE CLEANING?



[Reprinted by permission of the Kenney, Neb., "Daily Hub."]

That's Simple

Builder—This is the house, sir, in the Tudor style.

Prospective Buyer—I don't care for the Tudor style.

Builder—Soon alter that, sir. George! Just bring a pail of water and wash out those oak beams.

Business Ethics

Little Abie heard people talking about "Business Ethics," and asked his father the meaning of the term. "Well," said his daddy, "I will explain. A customer comes in the store and buys a six-dollar pair of shoes. He hands me a ten-dollar bill. On the way to the cash register I notice that there are two ten-dollar bills sticking together. Now, here's where the business ethics comes in—should I tell my partner?"

Fire Protection

Now they say some one has been trying to corner all the asbestos. Well, there is nothing like being prepared.—*American Lumberman*.

Unforgivable

Rev. George Washington Jackson had lost a fine, fat 'possum. Later, at a revival, one of the grief-stricken mourners would not be comforted.

"Cheer up, brothah," exhorted Rev. Jackson. "No mattar what yo' sin, it will be fo'given."

"But not diss'un," sobbed the mourner. "Ah sho' am a pow'ful sannah."

"Yo' stole some white man's chickens?"

"Wussen 'at!"

"Oh, Lawd, help dis po' lamb. Has yo' used a rassuh?"

Mistaken Identity

"Come, come, my man, you have been looking around a long time without buying. What do you want?"

"Guess I want another floor-walker," said the gentleman addressed. "I'm the owner of this outfit."—*Pot & Kettle*.

Destructive Birds

Banker—"You have sold all your cotton and you want a loan anyway?"

Rastus—"Ya sah—de ducks got it."

Banker—"The ducks got it?"

Rastus—"Ya sah, de ducks got it. Dey deducted fo' freight, deducted fo' weighing and deducted fo' commission. De ducks got it all."

"A good thing to remember
And a better thing to do
Is, work with the construction gang
Not with the wrecking crew."

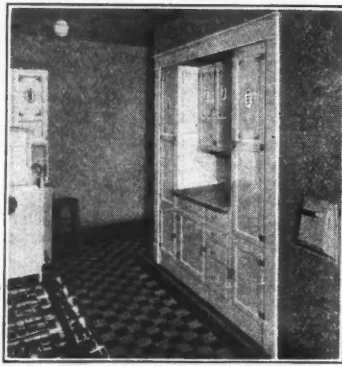
Business as Usual

Commercial Traveler (to proprietor he found playing checkers in back of store): "Do you know there are two customers in the store?"

The dealer kept right on playing, and whispered: "That's all right. Keep quiet and they'll go away again."



Kitchenettes and dinettes of the new Dune-way Arms, Gary, Ind., are equipped with Sellers Sectional Kitchen Equipment and Breakfast Sets. Dalton Bros., of Gary, erected the building, and Mr. L. Harry Warriner was the Architect.





The whole story in detail to fit your file

This 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.

Colorful

“SELLERS” Kitchens

*installed throughout
this new
apartment building*

A choice of four fashionable colors in the beautiful Sellers-equipped kitchenettes of these new apartments pleases prospective renters. Dinettes, too, are furnished with Sellers breakfast sets in harmony with the colorful kitchens.

This Sellers installation—in every one of the Dune-way Arms' 85 apartments—is another example of the recognition prominent architects and builders are giving women's preference for Sellers. The name “Sellers” is an important aid in the sale or rental of the homes you build. Its reputation at once suggests that all other equipment is **quality**, too.

Sellers Sectional Kitchen Equipment offers further advantages to builders. Fifty-four separate units afford almost endless combinations to suit the largest or smallest kitchen, without extra millwork. Installation is very easy. Merely set a few bolts in holes already bored and tighten them. A simple quarter round finishes the job.

Sellers Sectional Units are finished in the same exquisite colors and retain the principal time- and labor-saving features that have made Sellers Kitchen Cabinets used in millions of kitchens.

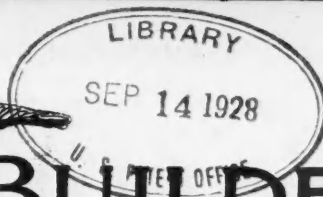
Send today for our booklet. Builders find that Sellers Sectional Units are often more moderately priced than “average” built-in equipment.

G. I. SELLERS & SONS CO.
Dept. 809 Elwood, Indiana

SELLERS

Sectional

Kitchen Equipment



AMERICAN BUILDER



Formerly AMERICAN CARPENTER AND BUILDER

1827 Prairie Ave., Chicago—120 West 42nd St., New York City

July Contracts Set Record

JULY construction contracts in the territory east of the Rocky Mountains reached a total of \$583,432,400, according to F. W. Dodge Corporation. The area covered in this record consists of 37 states and includes about 91 per cent of the total building. This figure was the highest July contract total on record. It was 9 per cent ahead of the total for the same month of last year, but there was a drop of 10 per cent from the total for June of this year.

Last month's record brought the total amount of new building and engineering work started since the first of this year up to \$4,028,299,900, establishing a new high record for new construction contracted for during the first seven months. The increase over the first seven months of 1927 was 8 per cent.

Analysis of the July building record showed the following outstanding items: \$228,734,800, or 39 per cent of the total, for residential construction; \$137,074,700, or 23 per cent, for public works and utilities; \$95,696,800, or 16 per cent, for commercial buildings; \$36,926,400, or 6 per cent, for educational projects, and \$31,399,800, or 5 per cent, for industrial projects.

An outstanding feature of the Dodge figures is the report for the Central West, which includes Illinois, Indiana, Iowa, Wisconsin, Southern Michigan, Missouri, Kansas, Oklahoma and Nebraska. New construction started in this territory, in July, amounted to \$201,981,400, and was the largest monthly total ever recorded for the territory. It was 5 per cent ahead of the June, 1928, record and was 35 per cent in excess of the July, 1927, total.

The July total brought the amount of new building and engineering work started in this district since the first of the year up to \$1,217,766,000, being 19 per cent ahead of the total for the corresponding period of 1927.



Build More Grain Bins

A CHARGE of 15 cents per bushel for storing wheat four or five months seems unreasonably high. But

that is what wheat producers have paid in the past when they dumped their crop on the market at harvest time instead of putting it in the bin and holding it for a better market after the seasonal rush was over. During the five-year period from 1921 to 1925, 51.9 per cent of our wheat crop found its way to the market during the three harvest months, July, August and September. Farm prices during those periods averaged only \$1.08 to \$1.10, the low points of the year. The three high months, from the standpoint of farm price, were January, February and March, averaging from \$1.23 to \$1.27, a period when receipts totaled only 11.8 per cent of the crop.

This disorderly marketing is caused partly by a lack of knowledge of market trends, partly because some producers are unable to get bank credit to enable them to carry their crops, and in a large part by insufficient storage space on the farm. Here, then, is an excellent opportunity for the builder who will get out and sell the farmer on the advantages of storage space for his grain.



A Pointer on Closing Sales

“WHAT the average man needs is more practice in making decisions,” said A. J. Berge, sales counsellor of the National Association of Real Estate Boards, speaking of the members of the Sales Managers' Division at the twenty-first annual convention of the association.

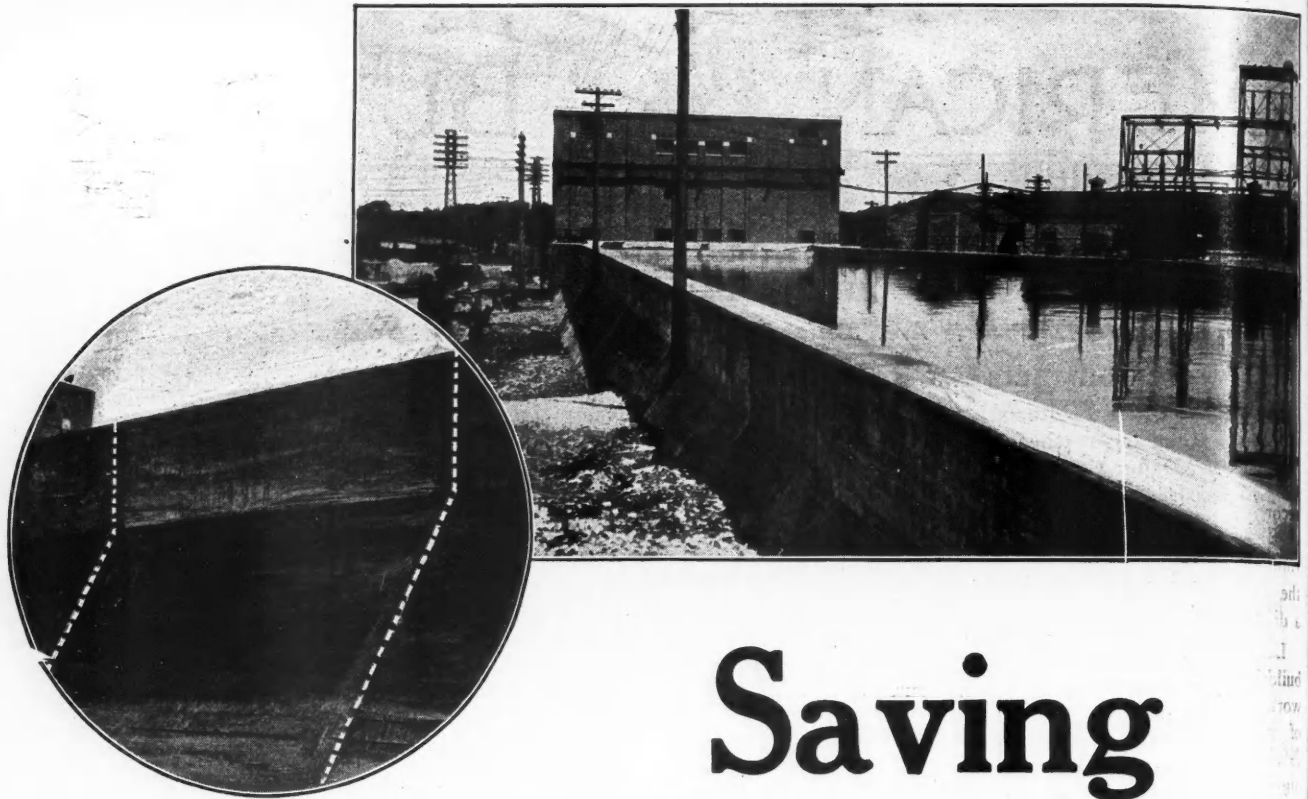
“Old Ben Franklin used an idea on himself that is an idea on himself that is just as good today as it was then. When he was up against a difficult decision he made up what I call Ben Franklin's balance sheet. He took a piece of paper and, drawing a line down the center, divided it into two halves. At the top of one he put the word 'yes' and at the top of the other 'no.' Under 'yes' he wrote all the reasons why he should take a certain action and under 'no' all the reasons why he shouldn't. Do that for your prospect and his decision becomes automatically made for him.

“Most salesmen think closing is the hardest part of making a sale. As a matter of fact it is the easiest. When a salesman can't get his prospect over the dotted line it is because of some mistake he has made earlier in the game.”

The American Home
As Pictured by the Honorable Herbert Hoover in His Speech Accepting the Presidential Nomination

“Home ownership has grown. While during this period the number of families has increased by about 2,300,000, we have built more than 3,500,000 new and better homes. In this short time we have equipped nearly nine million more homes with electricity, and through it drudgery has been lifted from the lives of women. The barriers of time and distance have been swept away and life made freer and larger by the installation of six million more telephones, seven million radio sets, and the service of an additional fourteen million automobiles. Our cities are growing magnificent with beautiful buildings, parks and playgrounds. Our countryside has been knit together with splendid roads. . . .

“I especially rejoice in the effect of our increased efficiency upon the improvement of the American home. That is the sanctuary of our loftiest ideals, the source of the spiritual energy of our people. The better home surroundings, the expanded schools and playgrounds, and the enlarged leisure which have come with our economic progress have brought to the average family a fuller life, a wider outlook, a stirred imagination, and a lift in aspirations.”



Saving \$ 100 Per Day

After completing a new hydro-electric plant at Kaukauna, Wis., the Green Bay and Mississippi Canal Co. had to build a flume to divert the water to the new turbines. During part of this period the company was forced to buy outside electric current for \$100 per day more than it cost them to produce it.

High-Early-Strength Universal Concrete was specified to fill a gap in the wall left for trucks to pass thru while the barrier to the new flume was being cut away. As a result, water was admitted to the new flume 3½ days after the last concrete was placed—about 24 days earlier than

would have been possible had ordinary concrete been used.

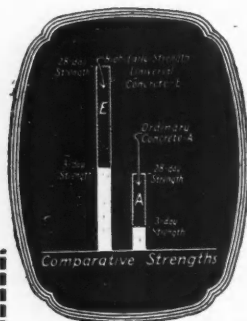
This substantial saving is another example of what *High-Early-Strength* Universal Concrete means when time is money.

Such concrete is made with the usual materials, usual labor, usual equipment and usual Universal cement—all applied according to fully tested methods. The coupon will bring you complete details promptly.

Universal Portland Cement Co.

Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

Concrete for Permanence



UNIVERSAL PORTLAND CEMENT CO.
208 South La Salle Street, Chicago.

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

Name.....

Address.....

A.B. 28

EVERYBODY'S BUSINESS



Neither Heaven Nor Hell

By FLOYD W. PARSONS

IT is only natural that we prefer to turn our faces toward romance and our backs on the annoying evils that hound our every step. But the fact remains that the commonplace realities of life cannot be ignored. Practicalities must rank above theories. The fellow who wins today is the one who searches out the truth and rids himself of fallacy. Therefore, let me stir the reader's thought by setting forth a number of pertinent facts and asking a few questions that beg for an answer.

First let us remember that as human beings, nature has made no exception in our case to most of the principles that control living things. We hand down from generation to generation the characteristics of our ancestors just as do the trees of the woods. The forester knows that like produces like even to shapes and sizes. Rapid-growing trees produce fast growers. Trees that are tall, short or shaggy always produce the same type. Those with crooked trunks have a definite tendency to produce offspring with crooked trunks.

So it is with us. Our characteristics have varied but little from those of our forefathers. The revolutionary changes which have taken place in our practices, machines and environment have not been accompanied by equally radical changes in man himself. Nature, human or otherwise, appears to proceed undisturbed along the same old road.

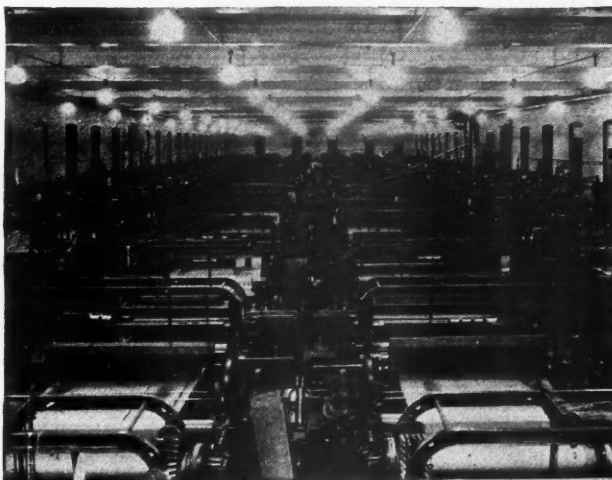
Right now throughout Europe the desire for peace is great. The leading statesmen of that Continent today would find it difficult to lead their peoples into war. But how long will this condition last? War is always unpopular for several years after each great conflict. But eventually people forget and the old problems crop up again. Boundary disputes become acute and so many alliances are formed for protective purposes that a random shot is sufficient to set the war-pot boiling once more.

A glance at Europe shows that disarmament is making no more progress than it did prior to 1914. Europe is

again being tied in a knot by innumerable treaties. Discordant nationalisms have already set forth purposes that cannot be attained except by war. France enters into a treaty guaranteeing the integrity of two small countries, and Italy promptly retaliates by forming a defensive alliance. The League of Nations is regarded by the latter as an instrument of the French—not as a seat of justice. The sense of insecurity grows. Such was the situation yesterday—so it is today.

We talk about being finished with the evils that have cursed us. We have broken the force of the business cycle, say many. How idle is such talk when even a cursory investigation will disclose that trade slumps are brought on by numerous factors not of business origin. Oftentimes the causes are international in character. Frequently depressions have been brought on by adverse weather conditions, the uncertainty of business men's forecasts, emotional waves, unexpected innovations, saving and investing, widespread overproduction, banking operations, the flow of money income and profit-making. How nonsensical it is to assume that we can completely do away with periodic sinking spells in industry.

We boast about our handling of money, closing our eyes to the truth that this country, as well as the rest of the world, continues to stagger along without any stable unit of measurement for the currency we employ. As a standard of value, the American dollar is nothing more than a dismal joke. There never has been a safe bond in the United States and never will be until we have a safe dollar. People who put their trust in our best bonds 25 years ago now find that there has been an impairment of their principal of from 40 to 80 per cent.



The New World vs. the Old.



© Publishers' Photo Service.

How ridiculous it is for a corporation to issue a bond that it guarantees to redeem for \$1,000 at some future date when no one has the slightest idea what the value of the dollar will be in purchasing power when the designated day arrives. Fifty thousand dollars invested in 5 per cent bonds in 1900 yields the investor the same \$2,500 today that it did then. But to live on this income he must now reduce his standard of living by half. The truth is that there was no interest paid for the use of capital in America during the decade ending in 1924. The value of the dollar decreased at a faster rate than interest accumulated during this period.

Good bonds for the present generation of Americans have been veritable "gold bricks." The careful and conservative investor has been exploited as never before. Stockholders have picked the pockets of bondholders to the tune of \$60,000,000,000 in 15 years. And yet our bankers continue to sit in solemn conference and argue whether a new bond issue shall be sold to net the investor 4.80 or 4.90 per cent interest, when they must know that the principal amount of the bond is just as likely to be paid on a 60 per cent as on a 100 per cent basis.

Here, as elsewhere, instead of solving the problem and getting it out of the way, we pursue the weak plan of merely building a road around it. We accept the advice to buy common stocks and have our incomes grow as the country grows. But later when an extended period of deflation succeeds the present era of inflation, we will recognize the folly of applying a remedy that does not cure.

In time we will again witness the exploitation of one group by another. The tables will be turned and bondholders will profit at the expense of stockholders. So it will continue until some day wise leaders will decide to turn the cold light of scientific thought on the problem and the dollar will quickly be made a standard of true value as well as a medium of exchange.

Being human, we generally seek the easiest way around our difficulties. Our thoughts do not travel far beyond the immediate moment. That is why conservation of natural resources in America has been a joke. It is why we have assembled here in the United States many of the worst representatives of all the races of mankind. A while back we wanted greater production, and this meant cheap labor, so we closed our eyes to early ideals and brought in some millions of unskilled laborers from the lowest levels of European populations.

What a change in breed from the pioneer days when convicts and camp-followers represented only a small sprinkling among the hardy, adventurous settlers who sought refuge as well as opportunity in the New World overseas. There was nothing particularly angelic about our forefathers, and most of them came here to avoid poverty and oppression. But they did love their newly adopted country and were ready to give their all for the perpetuation of its established institutions. Our finest stock came from this breed, and it is far superior to that being produced by the malcontents, paupers and defectives who were brought in thoughtlessly by those who gave ear only to the cry for mass production.

Now we are paying for our carelessness in the handling of this problem by having to face the menace of low mentality and an alarming amount of crime and insanity. In our midst is now an army of people who, instead of being thankful for the advantages of America, hasten to display an antagonism toward our most cherished ideals and principles.

Fortunately we have put an end to the United States being used as a dumping ground for foreign undesirables. But this change of policy came too late to prevent an interbreeding which brought a serious mental and physical decline in our human stock. The reports of the Draft Boards during the late war showed conclusively that we

do not live up to the reputation which had been established by our pioneers and present-day athletes.

And whether we can handle today's problems better than yesterday's is a doubtful question. Mass production was carried to an extreme and we are now witnessing the rapid development of a new aim—mass distribution. It is to be one of our new cures and we are expecting much of it. The independent retailer has almost entirely disappeared from the tobacco field. Now almost every shop is merely a link in a great chain. One-third of the grocery business of the country has already been wrested from the private dealers serving but a single neighborhood.

One big corporation operating a grocery chain had only 4,500 stores seven years ago—now it has nearly 18,000. In big cities like New York and Philadelphia, 70 cents out of every dollar spent by the public today for groceries go into a chain system. This one company owns five out of every 100 grocery stores in the United States, and it does an annual business of approximately three-quarters of a billion dollars.

In competition with this concern are 850 other chain grocery companies operating more than 64,000 stores. The number of chain shoe stores has jumped from 1,600 to over 6,000 in three years. One chain of restaurants serves 15,000,000 meals annually in 34 cities, and the movement goes on apace in nearly every line, including bakeries, hardware, sporting goods, clothing, meat, music, furniture, stationery, drugs, candy and barber shops.

The policy of mass distribution, like mass production, appears to be founded on logic. There is the lure of immense savings from curtailed overhead, lower advertising costs and substantial reductions in practically all departments, extending from the one that makes purchases to the one that handles deliveries. Thirty-seven buyers make all the purchases for the great Woolworth Company. More than 2,000 buyers would be needed if the stores were independent.

Where will the movement end? Surely we will have super-chains handling the products of a variety of industries. In addition to assuming the functions of the middleman, the chains will reach into the field of the manufacturer. Already some of them are making their own cans, producing their own drugs and slaughtering their own cattle.

Stifling competition between these giant chains themselves will force the consummation of still greater amalgamations of national and international interests. Perhaps then we will save the \$8,000,000,000 said to be wasted annually in the United States through our present inefficient marketing methods. Money will be made available for research on a grand scale and still more labor-saving devices will be installed on every side.

In the end, another great purpose will have been accomplished. A new chapter will have been added to the endless story of the exploitation of one group by another. Once more it will be driven home to us that progress exacts a price. We will see for the hundredth time the futility of trying to picture the future of America as either a heaven or a hell. We are better than we were, but not nearly as wise or as efficient as we might be.

Agitators will go on distorting facts. There will be no stopping the efforts of those now engaged in teaching the farmers to believe that they are being victimized by the industrial classes. Slogans will be coined and fed to many to prevent any exercise of original thought.

One of the astounding characteristics of the present era is the seeming determination of the average person to arrive at the solution of all problems by a system of trial and error in which all of the obviously worthless remedies are first applied. The ease with which we are induced to pursue fallacies and close our eyes to simple fundamentals is a sad reflection on our boasted intelligence.



Adolph Zukor, Left; Jesse Lasky, Right; Big Chiefs of Paramount, Looking Over New Studio Construction Work.

The REALITY behind the MAKE-BELIEVE



Builders' Skill Responsible for the Illusions of the Picture Stage

An Interview with

J. A. SUTER

Head of the Mill at the
Paramount Famous Lasky Studio

THE theatre lights dim and the drama of life begins to unroll on the silver screen. The audience picks up the story at once, living and feeling in imagination with the actors. Every detail of costuming and of scenic background is so natural and so complete in every detail that we lose all thought of play-acting. It is life itself we are watching.

Here before us is the main street of a busy small city. A substantial, well designed bank of stone construction is to the left in the foreground. A typical main street of shops and stores stretches away to the right to an intersecting street. A high priced car has drawn up before the bank. Pedestrians hurry along the concrete walk.

It is a real street scene we are looking at—nothing artificial or "stagey" about it, so far as we can see. It's a real bank—all set for the real bank robbery which comes a moment later.

Make-believe! Clever faking! This substantial stone bank and its entire street were made to order by skillful builders and set up on the stage—on the film producer's "lot"—to be photographed and then torn down. The acme of the stage carpenter's art goes into the movies and contributes its very large but usually unsung part to the success of every film star.

A glimpse behind the scenes and into the great producing shop of the Paramount Pictures studio at Hollywood is granted us by the men in charge; and to builders it is the most interesting part of the very interesting motion picture industry.

One of the largest carpenter shops on the Pacific Coast is found at the Paramount Pictures studio. A good view of

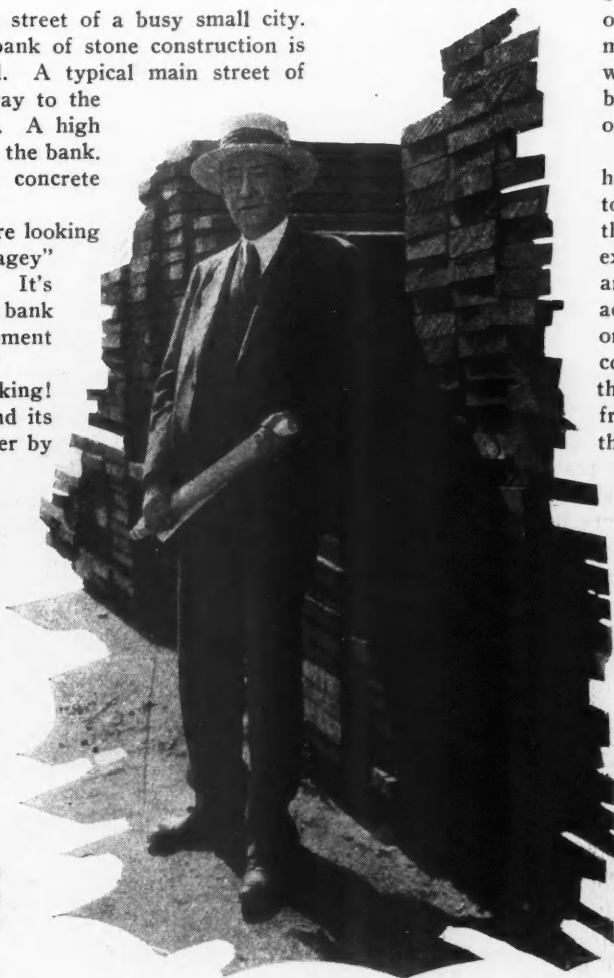
this shop is given in one of the accompanying photographs.

As high as 1,500 carpenters are employed at one time when there is a rush to get the work out for some big production. The regular number employed is in the neighborhood of 500. There is a superintendent and several foremen for this shop and all work is from carefully prepared blue prints. A considerable amount of fine cabinet work is turned out, much of the furniture and cabinet work appearing in the pictures being made specially for the various scenes.

Not so long ago it was quite the habit with some movie producers to "fake" certain scenes—that is, they'd build sets in miniature in exact duplicates of the real things and then photograph them so adroitly that when they appeared on the screen the average spectator couldn't tell the difference. But those days are gone forever, judging from the present methods and the things said on the subject by various top notch film executives.

As the result of banning miniature work in favor of "practical" sets there is a very interesting story of unique building operations which constitutes a remarkable chapter in the history of the American building industry.

"It's an odd thing about pictures and stage productions," said J. A. Suter, superintendent of the Paramount Pictures carpenter shop, in Hollywood, the other day. "The public will stand for any sort of old faked stuff on the stage—flapping scenery and all that sort of thing—but demands the real article in motion pictures. Well, the producers are wise to this fact. They realize that the public



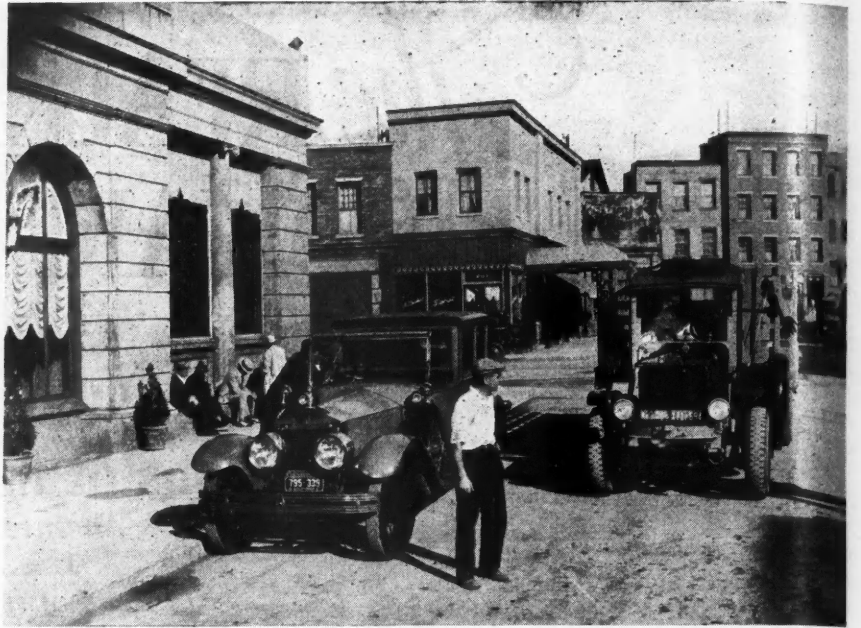
J. A. Suter Is in Charge of the Actual Building of Every Piece of Wooden Set Which Is Used in Paramount Pictures.

wants the real thing, so that's why Paramount, for instance, regularly employs 500 men in its construction department building sets, with the number of employes running up to a thousand or fifteen hundred when particularly big pictures are being readied for production. Faking is definitely out so far as this company is concerned. We build the real thing nowadays. Of course we build only the scenes the camera takes—that is, if the camera is going to shoot so that only 10 feet of a wall is visible in the picture, we don't go any higher than 10 feet. But we do build everything nowadays as seen in our pictures. And that's why we have such a big department now and why our costs are so high."

Then, telling about some of the problems that his department faces from time to time, Mr. Suter had this to say:

"Before I got in this business about ten years ago I was a millman and then a building contractor. Building houses was tame, I want to tell you, compared with the stuff we have to build nowadays in the movies. Just this last month here are some of the things we've been called on to build here in this shop and on this lot: An apartment house set of three rooms for a new Pola Negri picture. This set cost us \$6,000 to build—this cost going for lumber, carpentry work, plastering, special staff work, painting and wiring. A couple of outdoor sets—these being a complete tumble-down cabin supposed to be the home of a bootlegger in one of our pictures, and a Kansas bungalow to be used in another picture. A street scene and a police station and a whole lot of window sash, doors, furniture and what not.

"We can turn out anything that is built in the way of woodwork in this shop. We have the best equipment that can be purchased and the most skilled men possible. We have two moulding machines, two shapers, three band saws, three turning lathes, four rip saws, a planer, a mortiser and tenor, all grinding tools for sharpening and



Realistic Scene Outside a Small City Bank—All Set for the Film "Hold Up."

a great lot of hand tools. Among our employes are top notch cabinet makers, carpenters, rough carpenters, bench men and mill men of all kinds. The average number of carpenters employed is 150, with 125 laborers to do the digging, etc. The other men employed in the construction department of our plant consist of plumbers, plasterers, painters, blacksmith shop men, decorators, electricians, and so on. These, mind you, are simply the mechanical force which build the sets and get them ready for dressing and for film taking. In the dressing of the sets and in the handling of the lights on sets while pictures are being taken there are hundreds of other men employed.

"While we have the equipment and the men and the experience in making just about everything that can be made out of wood, we are up against one really bad problem always and that is the problem of time. We are always having to do things in a terrific hurry so as to have sets all up and ready for picture taking at specified



It Cost Over \$75,000 to Build This Street Scene for a Russian Village Movie Setting.



Largest Carpenter Shop in the West. Section of the tremendous construction department at Paramount Hollywood studio. Hundreds of expert workmen make everything called for by Famous Players-Lasky films, from a toy to a huge house, from a propeller blade to a wooden frigate cannon. It is one of the finest studio industrial plants in the world.

times and this means a lot of night work and Sunday work. We pay a minimum of a dollar an hour for carpenters and time and a half for overtime, and we generally run overtime on every picture. But though we are always so rushed for time and though it does, often, seem just about impossible to get the sets ready when they are wanted, we manage to pull through somehow. We can't alibi ourselves out of it. No alibis are accepted in this business. We simply have to turn the work out and that's all there is to it, because if we didn't we might hold up a lot of expensive stars who are getting \$5,000 or \$6,000 a week; and so the little we'd save by not running overtime would be more than lost in the money paid the stars for the time they were waiting."

There are three executives in the construction department of Paramount Pictures. In charge of all construction is Harry Strite, a former western builder, who has been with Paramount for some time. He oversees all of the concern's construction work—the erection of new permanent buildings, such as stages, office buildings, etc., as well as all construction of sets. Mr. Suter is in charge of the carpenter shop, as has been stated, and J. F. Mays is stage manager.

The duties of these executives are arranged in this way:

When a new picture is to be placed in production a supervisor for the picture and a business manager for the picture are named, as well as the men who will direct the picture. These three men go over the picture in detail and determine just about what the total cost of the pro-

duction will be and how it should be divided—so much for players' salaries, so much for sets, so much for business administration expense and so forth. The main office then O. K.'s this budget and the business manager of the picture then confers with Mr. Strite as to the sets that must be constructed and about what the cost of each of these sets will be. A tentative estimate is made for each set and this estimate adhered to unless the director feels that some particularly strong dramatic scene demands a more elaborate setting or something of that sort. If this is the case, the building of the set will be changed accordingly.

In other words, before a picture is placed in production, a complete survey of the necessary construction operations is made with an estimated cost for each set.

Of course, the costs of construction work for pictures and for individual sets vary greatly according to the nature of the pictures, the budget for the production, and so on. On an average, though, at least fifteen sets are made for each picture of an average cost of from \$5,000 to \$6,000 per set. But every now and then Paramount stages some unusually elaborate production with as high as sixty sets constructed for the picture and with the cost of some of the sets running to unbelievable sums.

For instance, the most expensive set built so far this year at the Paramount lot was a Russian street scene. This set complete, ready for "shooting," cost \$75,000, this being the cost of the complete building operations and materials for the set.

When the probable costs per set have been estimated,

the director of the picture confers with the art department of the studio. The art department has a number of accredited architects and draftsmen. Some of these are assigned to the picture and make sketches, according to the director's ideas, of what the various scenes should look like. Generally, some three or four or more sketches for each scene are necessary before the director's ideas are gotten onto paper.

After the sketches are O. K.'d by the director, regular construction blue prints are made and sent to the carpenter shop with notations as to when the scenes must be ready for shooting.

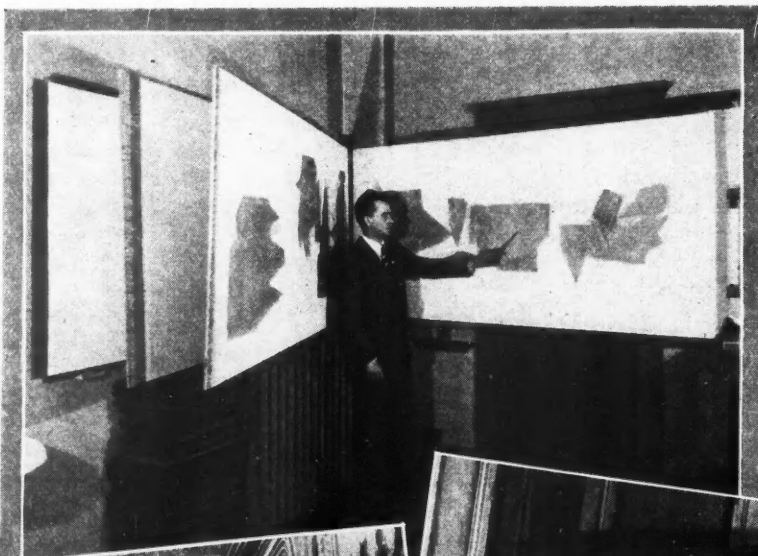
Mr. Suter then goes to Mr. Mays, the stage manager, to have the various sets "spotted" on the stages. To aid him in "spotting" the various sets Mr. Mays has charts of each of the five huge stages on the Paramount's twenty-three acre Hollywood lot where much of the picture taking is done. (Paramount also has a 2,300 acre ranch near Ventura where many outdoor scenes and some interiors are taken.) These charts are made according to a one-fourth inch scale and the blue prints are made to the same scale when floor plans are given.

Mr. Mays can, then, take the blue prints and place them right on his charts and see just how much space the completed sets will occupy and where he can "spot" them to the best advantage. When he does "spot" a set he tacks the floor plan of that set onto the chart for the stage and the plan remains there until the set is struck. In this way Mr. Mays can see at a glance just what un-

occupied space he has on the various stages and in this way can "spot" sets that much more easily and effectively.

Once a set has been spotted the actual construction work begins and, generally, all available men in the carpenter shop are put on the one job, with the result that a \$6,000 set can be constructed complete, with all staff work and painting done, in about three days' time. If there is a particularly big job with an extra rush on it, outside men are hired and are brought in to work.

Sets remain on the stages from the time they are constructed until the whole picture has been taken, the film cut and pasted together in the way it will be seen by the public, the positive films made and the production released. The reason for this is that, owing to imperfections or changes or a feeling that the dramatic scenes haven't been played as well as they might be, "retakes" of various scenes may be necessary at any time. So if the set is still standing it is an easy matter to secure such retakes at a small cost. But if the set had been struck and it was necessary to rebuild the whole thing again, then the retake



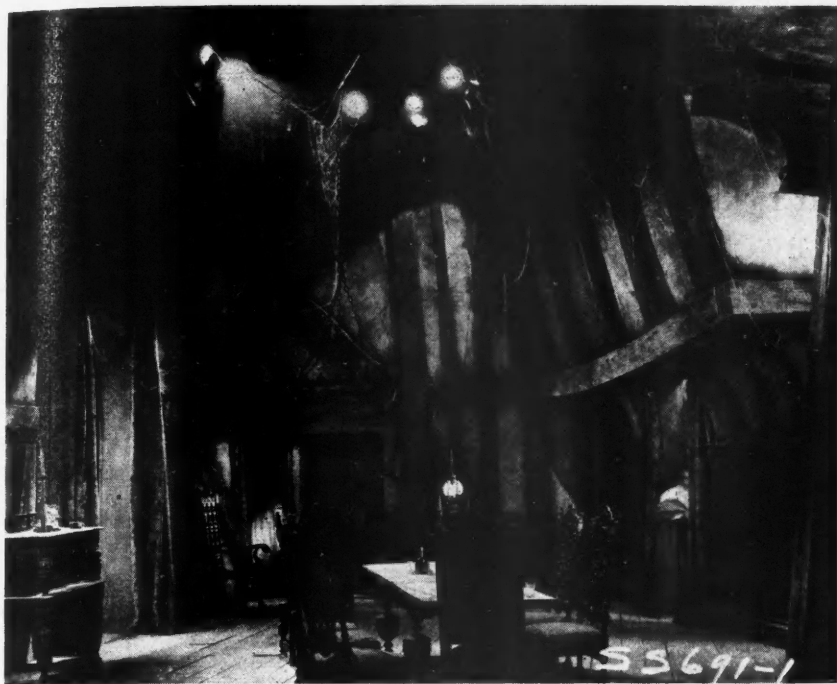
Joe Mays, Stage Manager of the Paramount Famous Lasky Studio. Mr. Mays is shown beside his charts of the stages of the studio. He is pointing to the ground plot of Stage Two. The darker patches designate the location of the sets on the stage. It is up to Mr. Mays to see that every set finds a place to be built on one of the ten stages of the Paramount plant.



Harry Strite, Head of the Construction Department of the Paramount Famous Lasky Studio. Mr. Strite is shown in one of the finished sets for Victor Schertzinger's production, "The Perfumed Trap," featuring Clive Brook, Mary Brian and William Powell. Mr. Strite estimates the cost of the finished set before it is constructed and oversees the entire building until it appears before the camera.



Henry Holt, Foreman of the Paint Shop of the Paramount Famous Lasky Studio. Mr. Holt is in charge of painting scenic effects, walls, props and any paint job which is done around the studio.



This Interior of a Mystery House Required Massive Old-Time Heavy Timber Framing.

cost would be almost prohibitive.

This is the reason why such tremendous stages and so much outdoor space are needed in the movie business. Often it takes months to film a picture and if there are anywhere from fifteen to sixty sets constructed for that picture it is evident that a great amount of stage space and outdoor space will be taken up by these sets. So, in order not to be cramped and in order to be able to operate many different units at once without waiting for a picture to be finished and the sets struck, a great deal of stage space is absolutely imperative.

No sets are struck—which means, torn down—until the word comes from the main office. Even then the stage manager has a complete photographic record of each set for each picture, so that if it does become necessary to duplicate the set even after it has been struck, it can be done to even the most minute details. Each picture is numbered and this number appears on all records and on all the stage manager's pictures. The negatives are, of course, preserved and filed according to number, so additional prints can be secured at any time.

On an average set sixty-five per cent of the construction cost goes for lumber and for carpentry work. The other expense is for staff work, painting and decorating, plumbing and wiring. It must be realized that all sets are wired just as in real life in addition to being wired for Kleig lights with which the scenes are illuminated when pictures are being taken. But the only wiring cost charged up against the construction work is that which makes it the same as in real life. The Kleig lights and other wiring necessary for illuminating the set are charged up against the studio operation costs. It costs about \$250 to rig a set for lighting for picture taking.

It is estimated that if Paramount had to take out building permits for all of its construction work in building scenes for picture taking, its permits would run about \$175,000 a month—which gives about as comprehensive an idea of the extent of its building operations as could be given.

Of course, to engage in such extensive building operations and to do so much building in such short time, it is necessary for the concern always to carry a considerable stock of building materials on hand. A stock of lumber which would be a credit to many a lumber supply company is kept constantly on hand. This stock is replenished by frequent purchases from various lumber companies. Also, of course, a big stock of paints, cement, nails, etc., is carried at all times and a careful inventory system keeps track of all such materials used and makes it certain that the carpenter shop won't be caught short on any of the materials just when they are most needed.

All construction costs are very carefully kept and actual costs charged against the various pictures. These costs include wages, materials, rent of carpenter shop—this being charged on a conservative basis, as the concern, of course, owns the whole thing—and office expense. If the actual construction cost on a picture exceeds the estimated cost it is possible to see just where the excess cost came in, as there is a detailed record of costs for each set. If the actual cost is very much out of line with the estimated cost and if an increased expenditure hasn't been O. K.'d by the supervisor, there is an immediate inspection to find out the reason.

In addition to these records of costs, inventories, time sheets, and so on, the stage manager also has a com-

(Continued to page 100)



"How Deep Is the Grand Canal?" This corner of the Paramount lot where old sets are stored answers this question so far as the movies are concerned.

Making Concrete Floors Available for Homes

Here is a System by Which the Contractor Can Furnish a Concrete Floor Without Investing in Expensive Equipment

By CHARLES E. ELLIS

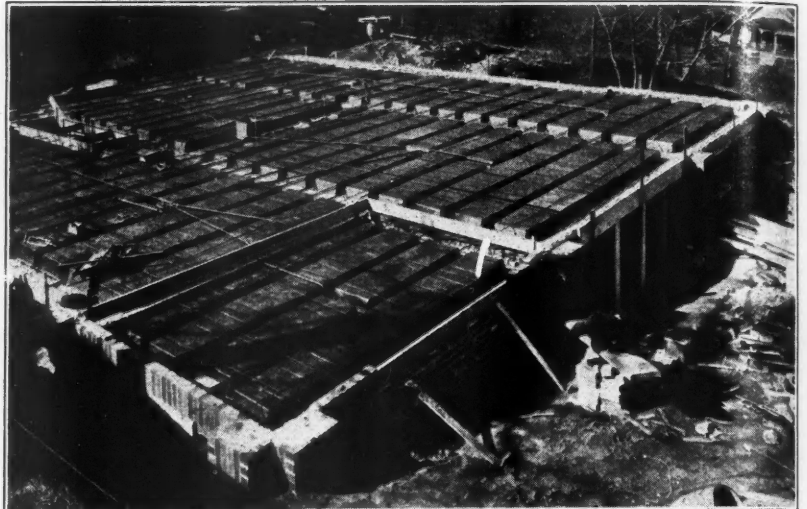
WHILE concrete flooring for residences has passed entirely beyond the experimental stage, few home owners and prospective home owners realize that such floors have won recognition for comfort and beauty quite as much as for safety and economy.

The fact is, however, that experts now name greater beauty as one of the five major advantages reinforced concrete holds over ordinary construction for home flooring. Concrete floors are given preference because they are:

1. Firesafe.
2. Economical.
3. Vermin-proof.
4. Soundproof.
5. Capable of wider range of beautiful decorative effects.

The principal objection to reinforced concrete floors in residences voiced by architects and contractors has been that the installation of such flooring requires too great an investment in equipment and too great a technical knowledge of concrete construction on the part of the builder. This difficulty has now been overcome in a very practical and economical way by a concrete engineering company located in a mid-west city.

This company has developed a complete concrete flooring service which carries the work of construction right through from floor plans and specifications to the last detail of the setting of steel forms and reinforcing materials. All that



Here is a Construction View Showing the Patented Steel Forms, Reinforcing Bars and Welded Fabric, Used in This System of Concrete Floor Construction, in Place Ready for the Concrete to Be Poured.

is required of the architect or contractor is to supervise the placing of the concrete.

This saving to the builder in time and equipment expense is accomplished through three distinct services combined into one—what the concrete engineering company terms its Meyer service. These three services are:

A Complete Engineering Service: Working from sketches, or the architect's finished drawings, the concrete engineering company's engineers design a suitable type of floor construction and prepare accurate cost estimates. This work is done and submitted for approval without charge or obligation on the part of the architect or contractor.

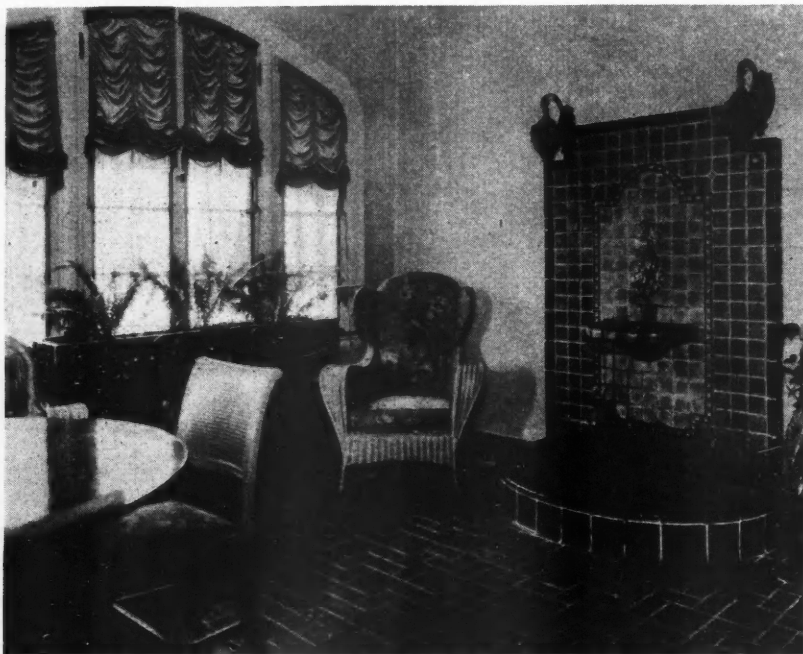
If the design and estimates are approved, the company's engineers complete the necessary working drawings.

A Complete Form Service: Guided by these working drawings, engineering company workmen take over the job, setting in place the patented formwork to form the concrete.

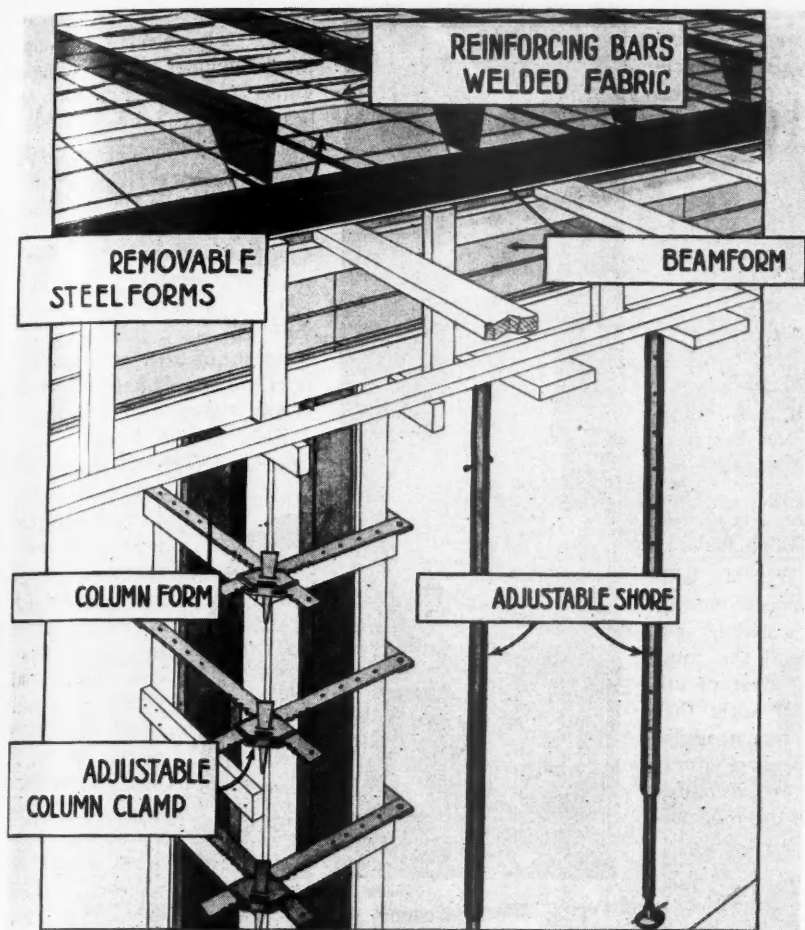
These appliances are supplied at a moderate rental, saving the builder the heavy expense of owning costly equipment which must lie idle between jobs.

A Complete Reinforcing Service: When the last detail of form setting has been completed the proper scientific reinforcement, reinforcing bars and fabric, are set in the forms and wired securely in place by experienced workmen employed by the company.

When the pouring has been completed and the concrete is set, these trained and experienced workmen remove



Concrete Floors Have Won Recognition, Comfort and Beauty as Well as Safety and Economy, Lending Themselves to All the Usual Floor Finishes.



This Drawing Illustrates the Patented Equipment Used in Constructing the Centering of a Floor Built by this System.

the formwork and the floor is complete.

By the use of these service methods a firesafe reinforced concrete floor can be installed for but 1½ to 2 per cent additional cost.

Statistics showing that fire takes an annual toll of 14,000 lives—more than thirty deaths a day—have emphasized strikingly the value of having a reinforced concrete fire-wall between the living quarters and the ever-present fire hazards of the basement. Ira H. Woolson, consulting engineer of the National Board of Fire Underwriters, discussing the growing need for a fire-resistive first floor, says:

"A fire-resistive first floor with no openings through it except a stairway enclosed by a fire-resistive partition and door at the bottom is a wonderful protection in a home against spread of fire from a cellar, and that is where a large portion of dwelling house fires originate. With superior construction such a fire could burn itself out without injuring other portions of the house, and any good construction should resist fire long enough to enable fire-fighting equipment to extinguish it."

The 1½ to 2 per cent additional cost of a concrete floor will be repaid many times over in the lifetime of the house due to the fact that concrete floors eliminate costly and unsightly wall or ceiling cracks. Ordinary wood flooring moving slightly because of shrinkage or settling will crack wall or ceiling plaster. Not only are the subsequent redecorating costs heavy but such cracks lower materially the resale value of

the home. Concrete, properly placed, will not warp, buckle, or shrink.

The virtue of being vermin-proof has brought concrete into widespread use in those districts subject to the invasion of termites, or white ants. These ant hordes destroy wood construction and joists in an incredibly short time, frequently causing the collapse of the structure. Ants cannot injure concrete. Nor can rats or mice gnaw holes in concrete through which the pests of the basement can reach the living portion of the house.

The importance of having a soundproof first floor has grown increasingly important as the modern basement has become more and more equipped with motor-driven heating, refrigerating, washing, and other time and labor saving equipment. The basement garage is a prominent noise maker. Not only does concrete shut this sound off from the rest of the house, but a concrete floor eliminates vibration. And it has the added advantage of having no cracks and crevices through which dust and dirt can filter into the upstairs.

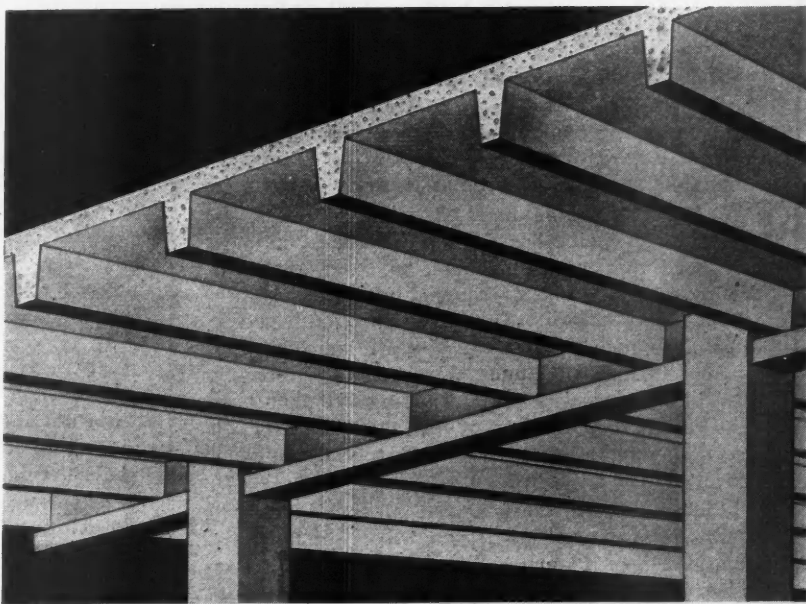
The beautiful decorative effects to be gained through the use of a concrete floor have been well covered by Homer Grant in an article in the Chicago Sunday Tribune.

Mr. Grant says:

"Hardwood flooring, oak, maple, etc., can be nailed directly to the wooden sleepers embedded in the concrete. The firm concrete support does away with any cracking or warping of the wood and the home owner, who prefers the floor surfacing of

lovely hardwood can still have it, even with the fire-safe concrete under flooring.

"Or other popular surfacing, such as linoleums, rubber tile, cork tile, can well be cemented to the concrete slab. There is no danger of any pulling loose here, or warping, as these surfacings become an integral part of the concrete. Then, lastly, comes the concrete floor, standing on its own merits, uncovered by any other surfacing, but so



An Underneath View of a Completed Concrete Floor Built by this Complete System in Which All the Work Is Done by Specialists.

treated as to afford really beautiful effects. A concrete floor may be made to look like flooring, or it can be stained and waxed in handsome dark shades without any pattern attempt.

"There are many pigment preparations for concrete, various reds, yellows and soft browns which combine well with the neutral gray of the concrete and result in effective dark tones. Designs in contrasting colors can be worked out if desired, interesting appearances created by the different stains, charming effects produced by waterproof enamels."

The structural advantages of concrete floors are numerous. Besides firesafeness, which is perhaps their most important feature, they are entirely free from that sagging, deflection or lateral movement to which ordinary floors are subject and which results in costly wall and ceiling cracks. Concrete gives greater rigidity to the building, insuring long life; it eliminates vibration, and deadens the noises of the basement.

Irving J. Gill, architect, sums up the advantages of a concrete floor in a recent article in *Sunset Magazine*:

"Twenty years ago I built a concrete floor," says Mr. Gill. "I expected it to be cold. I expected it to be damp. I expected it to be all the uncomfortable things people said it would be. I found it warm and dry and all the comfortable things people said it would not be. Best of all, I knew it would never harbor the vermin of sorts that infest ordinary old flooring, like mice that scamper at night. . . . Concrete floors are cheaper for the first story; they are enduring, they require a minimum of care, they are comfortable and healthful, and they can be more beautiful than any other floor."



Chicago Aerial Beacon

A CHICAGO central aerial beacon on Roanoke Tower, La Salle and Madison streets, has been erected and will be maintained by the Greenebaum Sons Investment Company. Holabird & Roche, architects, designed the steel structure which rises 45 feet from the roof to an eleva-



This Aerial Beacon, in Chicago, Is Visible for 100 Miles in Clear Weather to Planes at Certain Altitudes.

It is expected that the light will be visible in clear weather for a distance of 100 miles to those flying at certain altitudes. This was the first central aerial beacon to receive approval by the Department of Commerce, including the U. S. Bureau of Lighthouses, over a year ago.



Moving Picture Scene Making

(Continued from page 97)

plete construction record for each picture, giving the name of the picture, description of each set, the number of each set, the date when plans were received, the date and location given for set, the date when construction work was completed, the date when the painters and decorators finished with the work, the date when the set was dressed ready for shooting, the date when the scenes were taken, the date when the stills on each set were received, the date when O. K. was received for striking and name of person giving the order and the date when struck.

By glancing at this record it is possible for the studio executives to see just what progress is being made on any particular production and if there is a hold-up anywhere it is possible to see at once where the fault lies.

It is very interesting to know that the construction department practically never holds up a production. The construction department gets the sets built and builds the furniture and fixtures for them and does so on time. And it does so with a speed that might make some builders in the usual lines open their eyes with amazement.

Of course, the work done by the Paramount construction department is not permanent work, except where stages, etc., are built and so it can be rushed more speedily than the usual kind of work but, just the same, there's a tremendous amount of building work on the average set as the costs show.

FRANK H. WILLIAMS.

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.

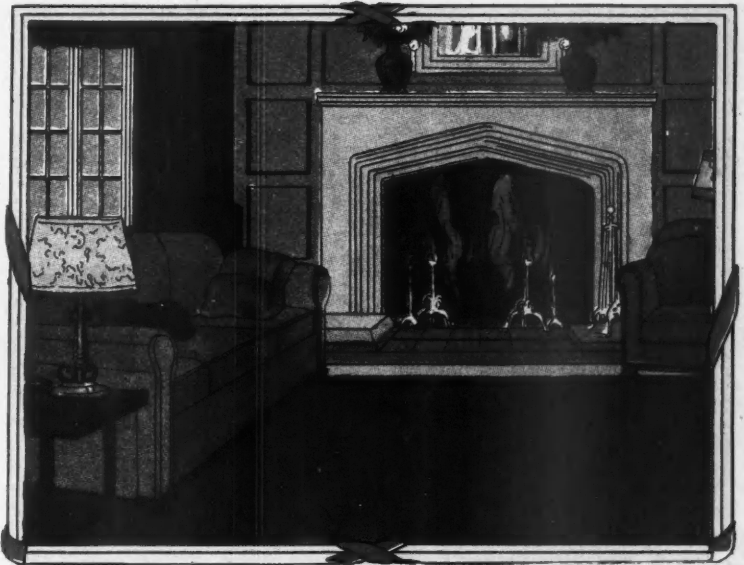
Limited space in the magazine prevents publishing all this information; but if you will write AMERICAN BUILDER Home Planning Service, 1827 Prairie Ave., Chicago, we will be very glad to give you direct by mail any information desired.

The VALLEY FORGE

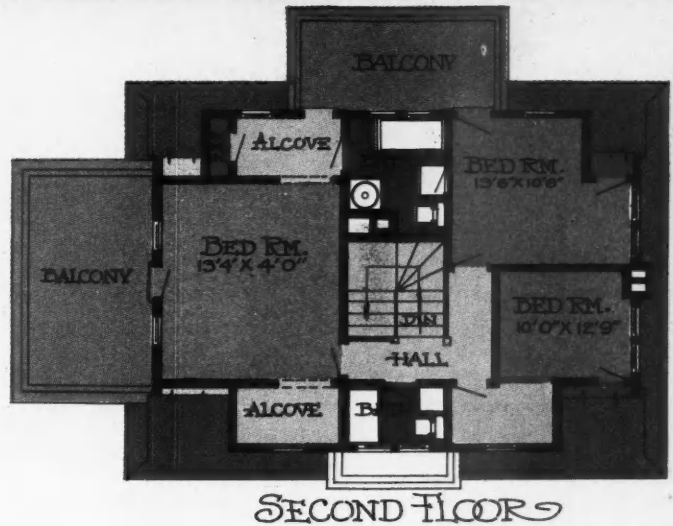
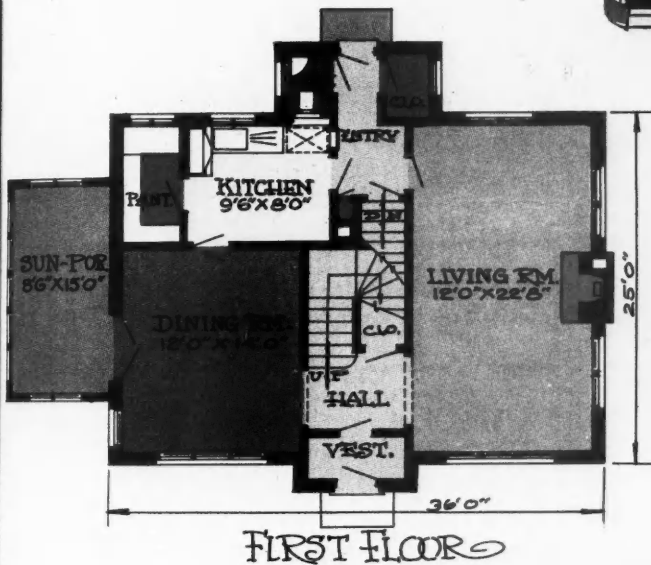
A WELL constructed Dutch Colonial home of stucco on tile or concrete masonry with exposed ornamental brick work for the first story and wide siding and a colorful roof above is presented here.

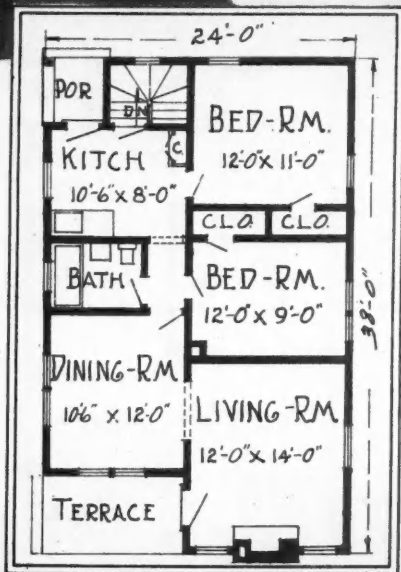
The floor plan as illustrated is very interesting with central stair hall, living room, dining room, sun porch and kitchen downstairs and three large bedrooms and two baths upstairs. The front bedroom with double alcoves and porch, opening onto two balconies, is especially attractive.

Color sketch to right shows fireplace treatment and furnishings for the big living room.

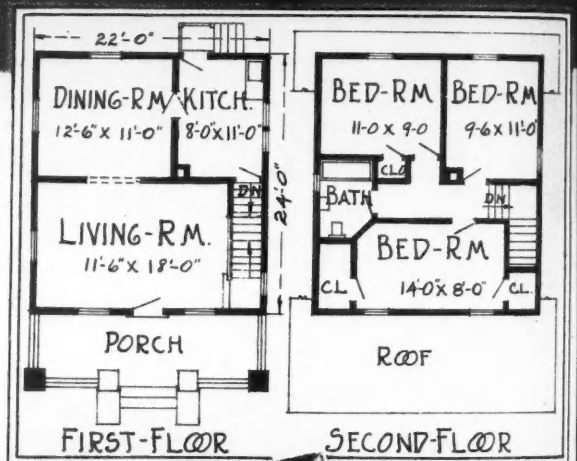


Copyright, 1928, by William A. Radford, New York and Chicago. Pat. March 15, 1921, and Sept. 30, 1924. ColorKeed Plan Patented April 19, 1927.





(Above)
The OYSTER BAY
 A well designed five-room bungalow, 24 by 38 feet.



(Below)
The OZONE PARK
 Floor plan to the right shows arrangement of this pretty, little home, 22 by 25 feet, containing six rooms and lath.

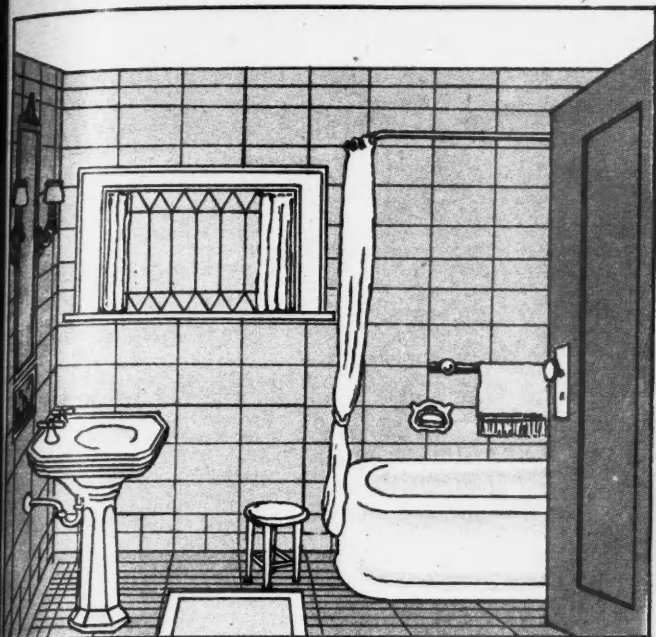


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The VALLIANT

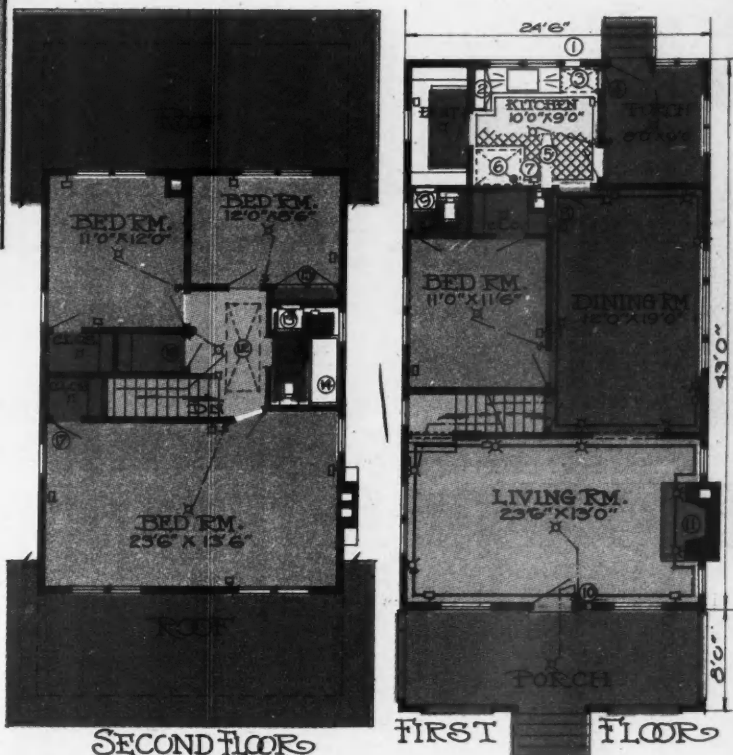
A DELIGHTFUL story-and-a-half bungalow of Colonial lines, yet retaining much of the old style popular western bungalow flavor, is illustrated below. Five rooms are provided on the first floor and three upstairs. This packs a lot of house into the comparatively small space of 24 feet six inches by 43 feet.

Color sketch to left shows the modern bathroom in this home with walls of glass tiling.



Key to Equipment

- | | | |
|--------------------------------|-----------------------|------------------------------|
| ① Kitchen Ventilating Fan | ⑭ Medicine Case | Coal Chute |
| ② Kitchen Cases | ⑮ Shower Bath | Heating Plant |
| ③ Refrigerator | ⑯ Wardrobe | Oil Burner |
| ④ Package Receiver | ⑰ Moth Proof Closet | Water Supply System |
| ⑤ Ironing Board | ⑱ Mirror Door | Hot Water Supply |
| ⑥ Gas or Electric Range | ⑲ Weatherstrips | Water Softener |
| ⑦ Incinerator | ⑳ Storm Sash | Radiant Gas Heaters |
| ⑧ Thermostat | ㉑ Screens | Electric Wall Type Heaters |
| ⑨ Medicine Case | ㉒ Lighting Fixtures | Casement Windows |
| ⑩ Built-in Mail Box | ㉓ Convenience Outlets | Dishwashing Sink |
| ⑪ Fireplace Throat and Damper | ㉔ Electric Panel | Automatic Cellar Drainer |
| ⑫ Disappearing Stairs to Attic | ㉕ Washing Machine | Radiator Covers or Furniture |
| | ㉖ Ironing Machine | |
| | ㉗ Clothes Dryer | |



SECOND FLOOR

FIRST FLOOR





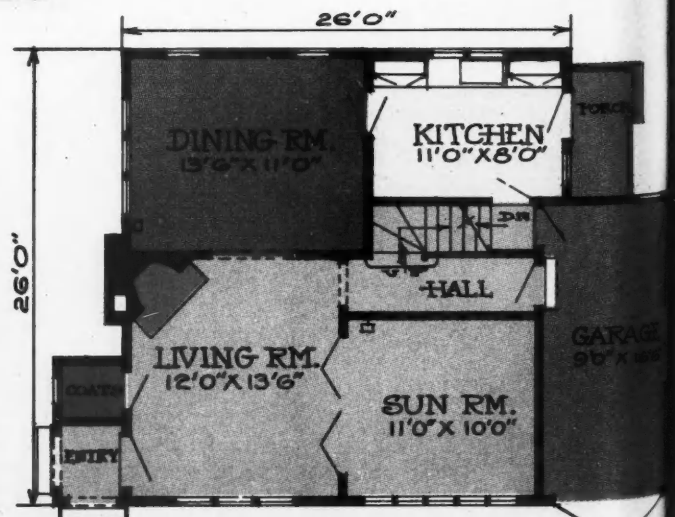
The VANDERBILT

HERE we have an ideal corner lot design with attached garage. The main entrance is from one street and the garage driveway from the other. This is a design with high gable roof and prominent casement windows in the English style. Seven rooms are provided, arranged as indicated in the ColorKeeD Floor Plan below.

Color sketch to left shows a glimpse of the sun room.



SECOND FLOOR



FIRST FLOOR

OUR FRONT COVER HOME



An Attractive Home with a Floor Plan Offering Several Unusual Features Including All Bedrooms with Front Outlook

THE plan of the house which is presented as Our Front Cover Home this month is not only an exceedingly attractive one, but also a most unusual one, and unusual in a way which adds much to its desirability. This is a six-room and breakfast room house of no unusual proportions and yet the three bedrooms which are provided on the second floor are all front rooms. It is a rare thing to find a house plan which has nothing but front bedrooms.

Aside from this unusual feature there is much about this plan to recommend it to the prospective home owner. The bedrooms are all of good size with two that are particularly roomy. Each is provided with a closet of more than ordinary proportion and this feature alone should make an almost irresistible appeal to the real head of the household, the woman who bears the responsibility of housekeeping.

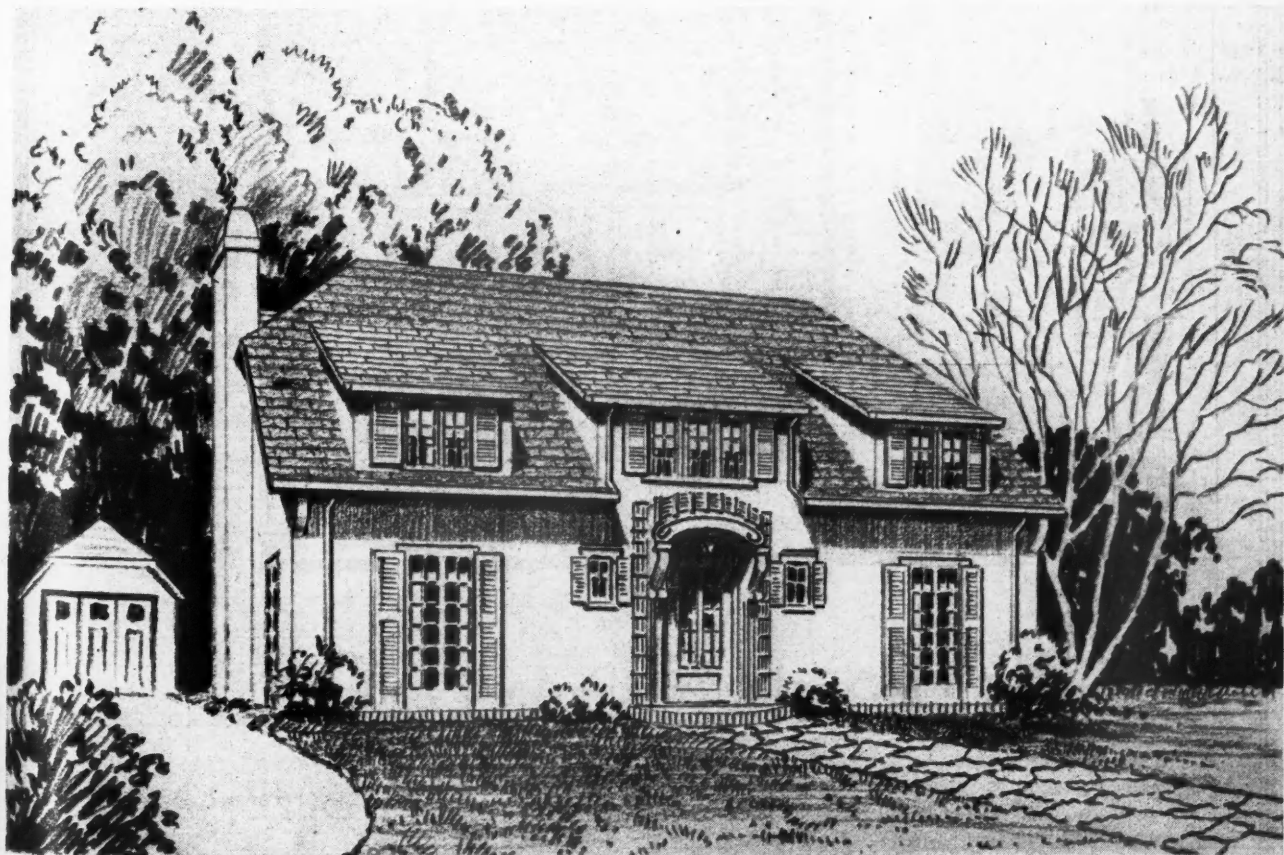
All of these bedrooms, too, have cross ventilation, a truly important point, for it is one that plays a large part in determining the good health of the family. While the

center bedroom does not have windows on more than one side, it opens onto a hallway with ample window ventilation and the arrangement is such that the doors of any of the bedrooms may be left open at night without interfering with privacy.

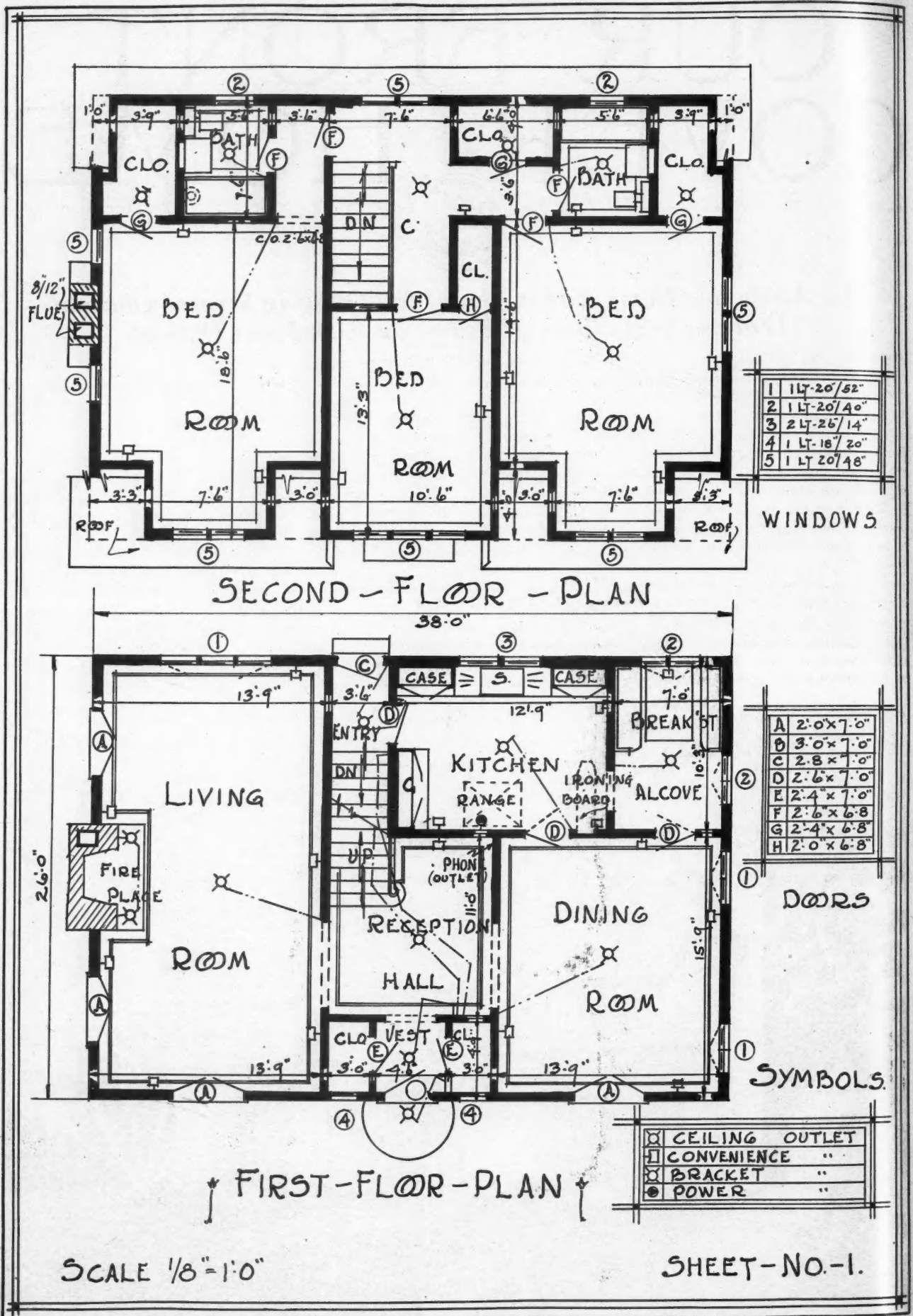
Then, too, there are two bathrooms. One directly adjacent to each of the larger bedrooms and both easily accessible from the smaller room. An extra bathroom in the home is a feature which is rapidly being recognized as an exceedingly desirable convenience, not to say a necessity.

Nor is the first floor completely overshadowed by the second in the matter of comfort and convenience. It is well planned in every detail. There is a central reception hall entered through a vestibule which contains a coat closet at each side.

At either side of the reception hall, through arched doorways, are the living room and dining room.



This Charming Home, Which Is Shown in Full Colors on Page 1 of This Issue, Possesses an Unusual and Interesting Floor Plan as Will Be Seen by Reference to Pages Following This.



1	11'-20"/52"
2	11'-20"/40"
3	2'-7-26"/14"
4	1'-17-18"/20"
5	1'-17-20"/48"

WINDOWS

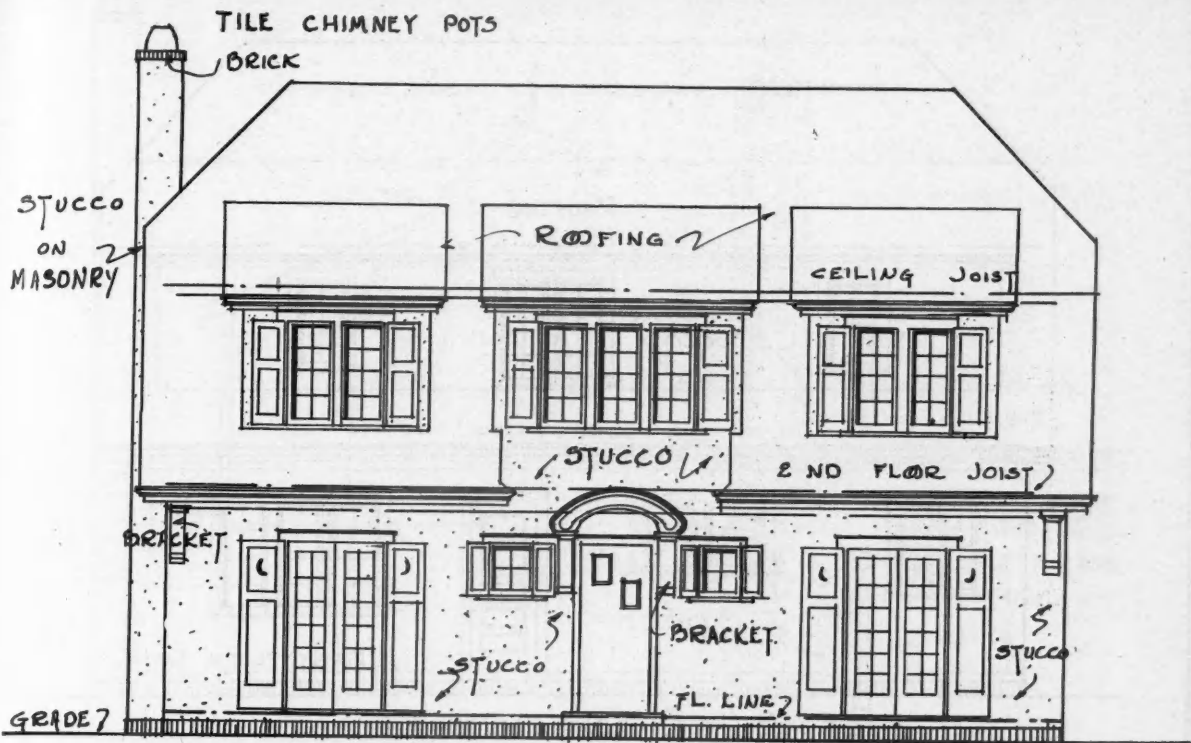
A	2'-0" x 7'-0"
B	3'-0" x 7'-0"
C	2'-8" x 7'-0"
D	2'-6" x 7'-0"
E	2'-4" x 7'-0"
F	2'-6" x 6'-8"
G	2'-4" x 6'-8"
H	2'-0" x 6'-8"

DOORS

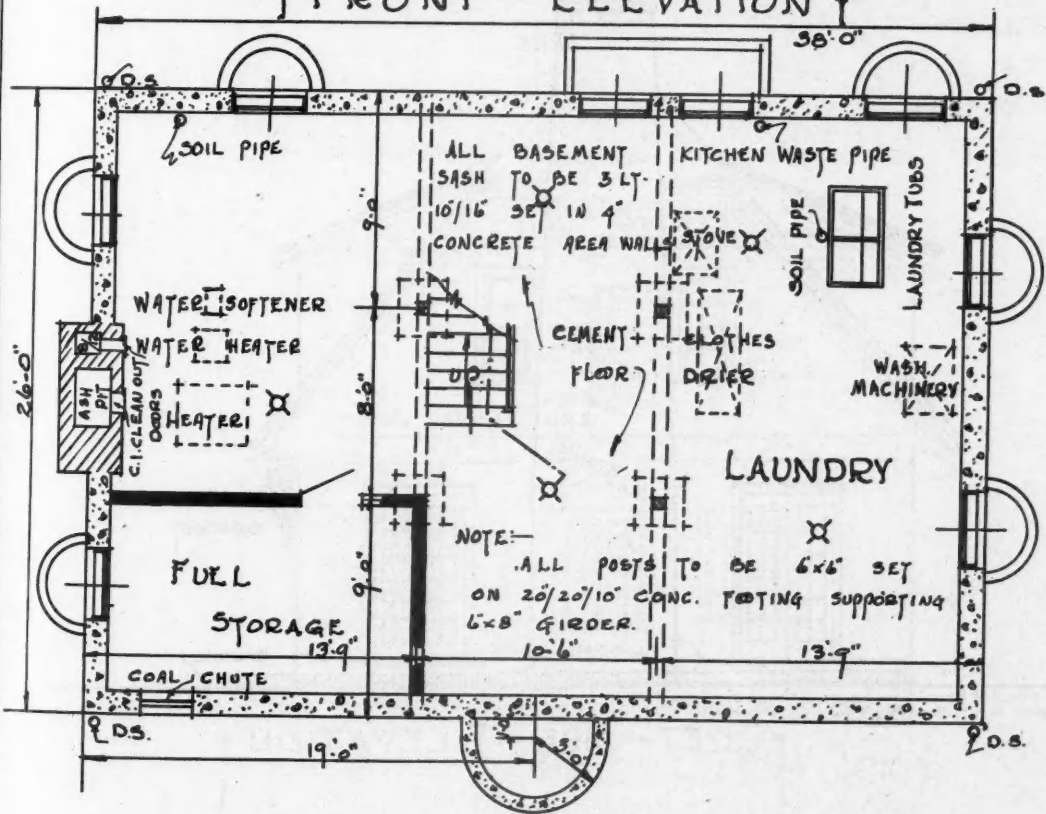
SYMBOLS

⊗	CEILING OUTLET
□	CONVENIENCE
⊠	BRACKET
●	POWER

The Floor Plans of Our Front Cover Home Are Unusual in Many Respects.



↑ FRONT - ELEVATION ↓

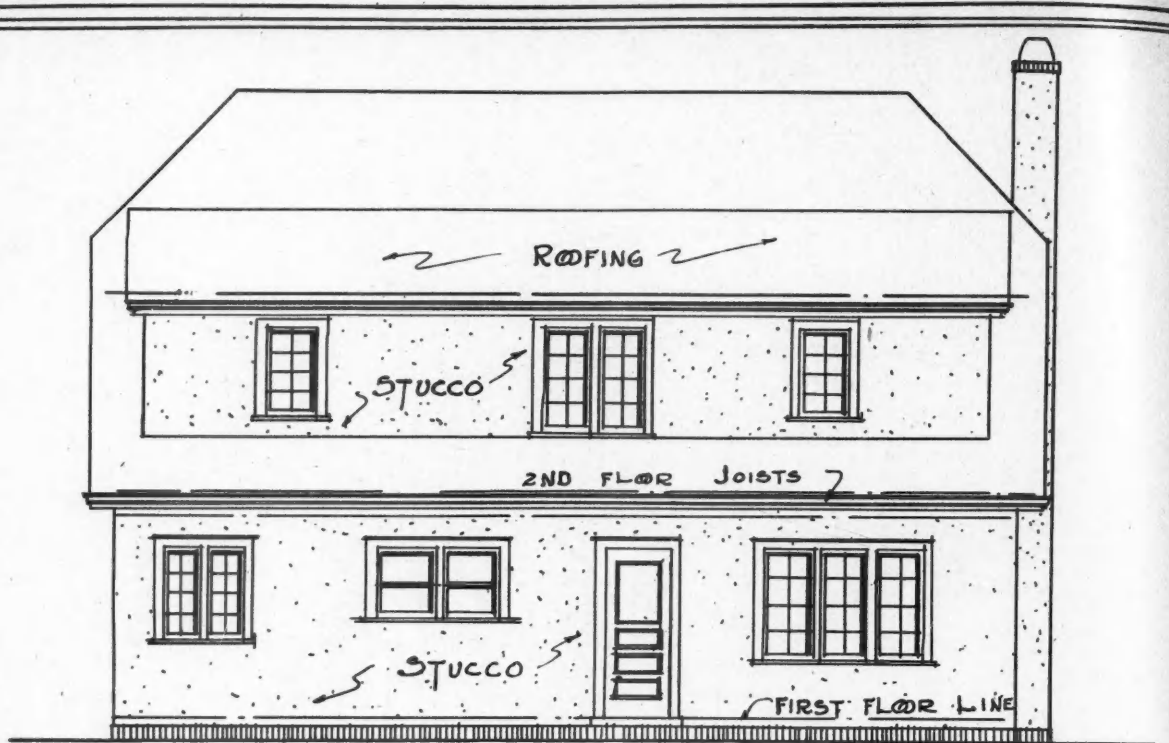


↑ BASEMENT - PLAN ↓

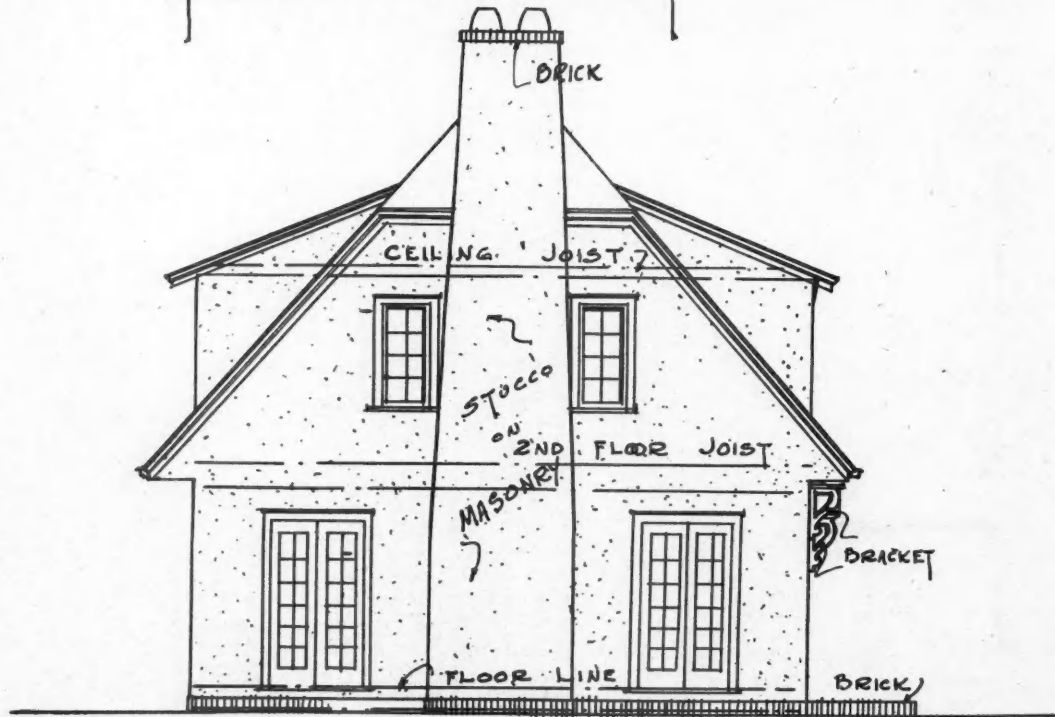
SCALE 1/8" = 1'-0"

SHEET-NO-2.

Other Drawings Supplementing This Elevation and Basement Plan are Reproduced on the Next Two Pages.



↑ REAR - ELEVATION ↓

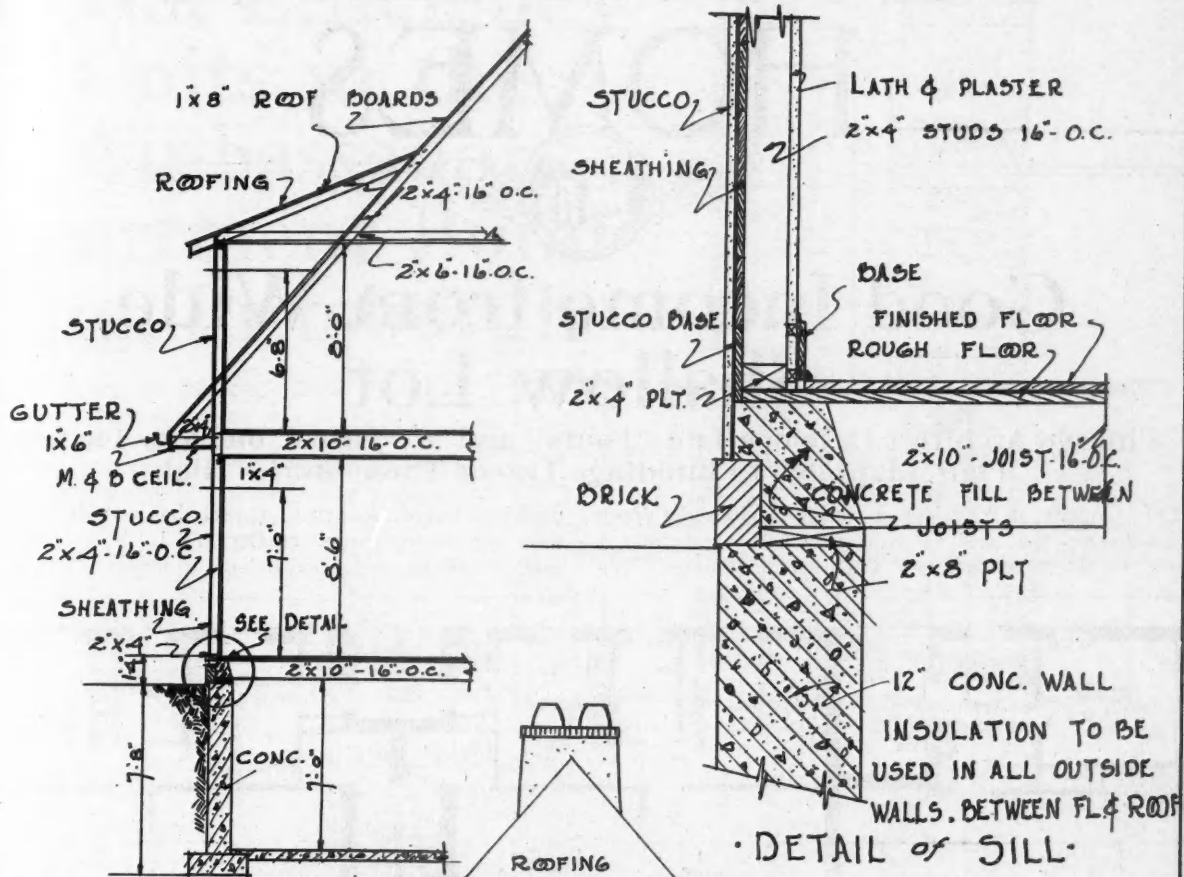


↑ LEFT-SIDE - ELEVATION ↓

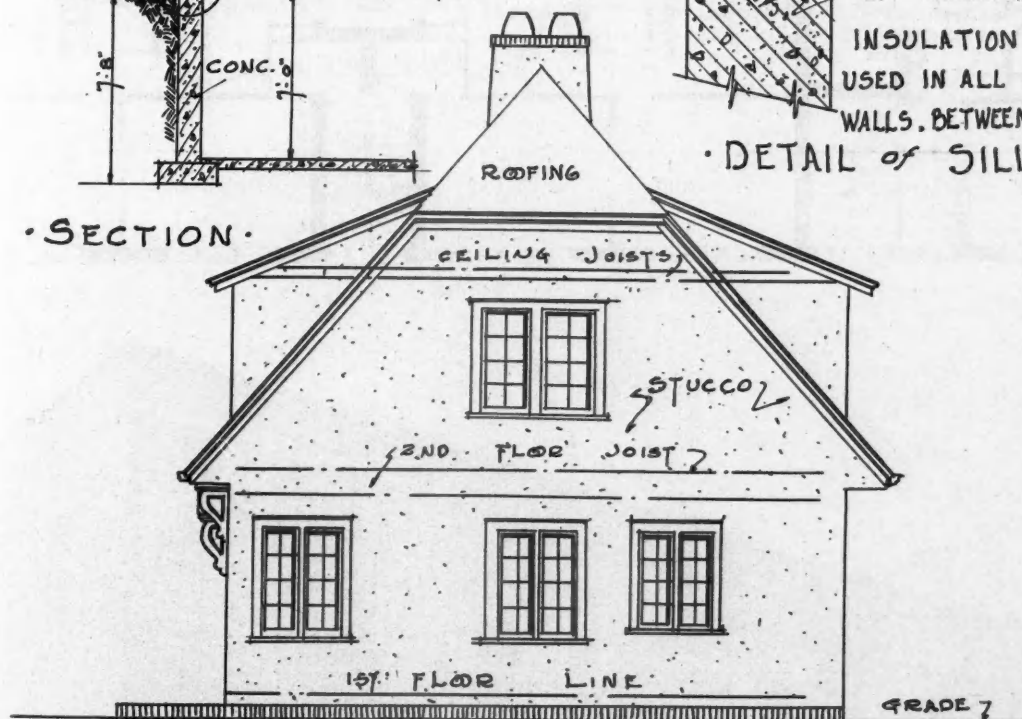
SCALE 1/8" = 1'-0"

SHEET-NO-3.

Here Are Two More Interesting Elevations of Our Front Cover Home.



SECTION



RIGHT - SIDE - ELEVATION

SCALE 1/8" = 1'-0"

SHEET - NO. 4.

These Sections and Detail Drawings Have Been Drawn to Scale to Aid in Reproducing This Attractive Home.

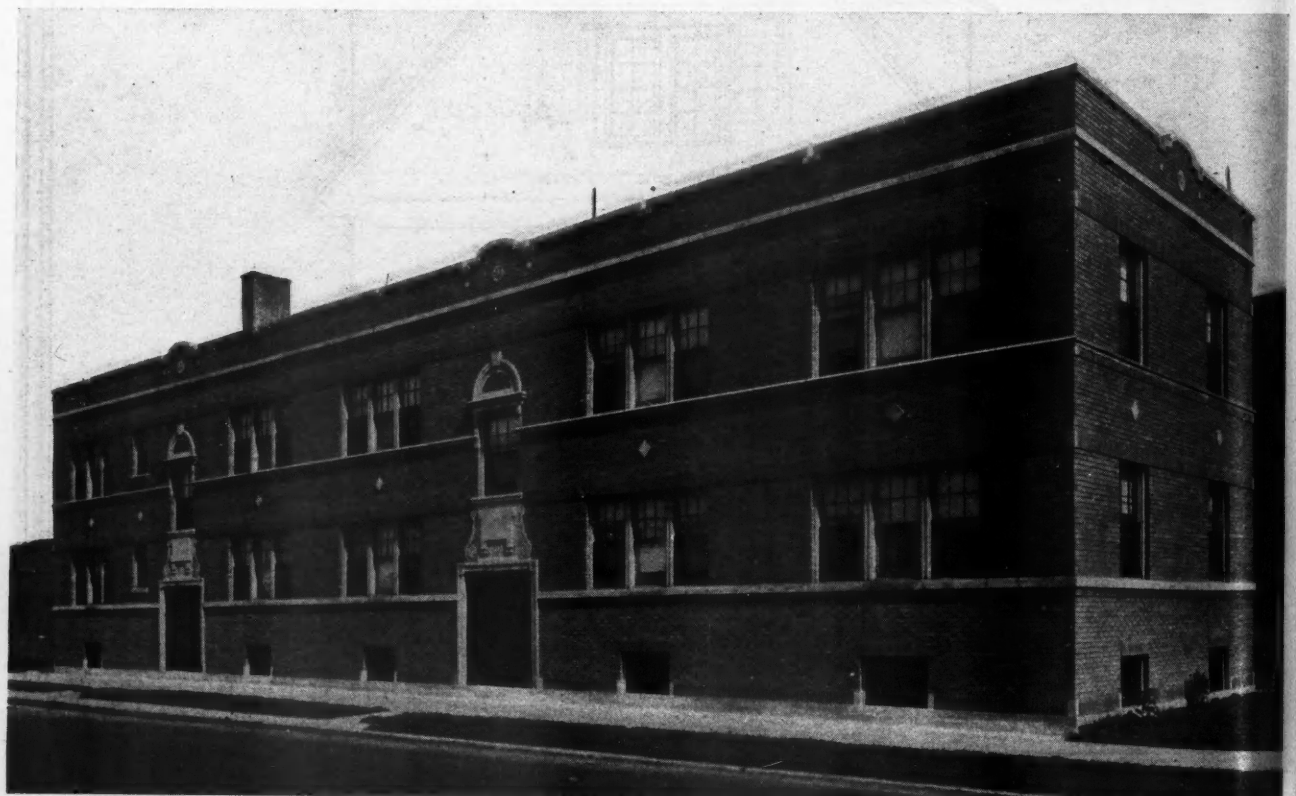
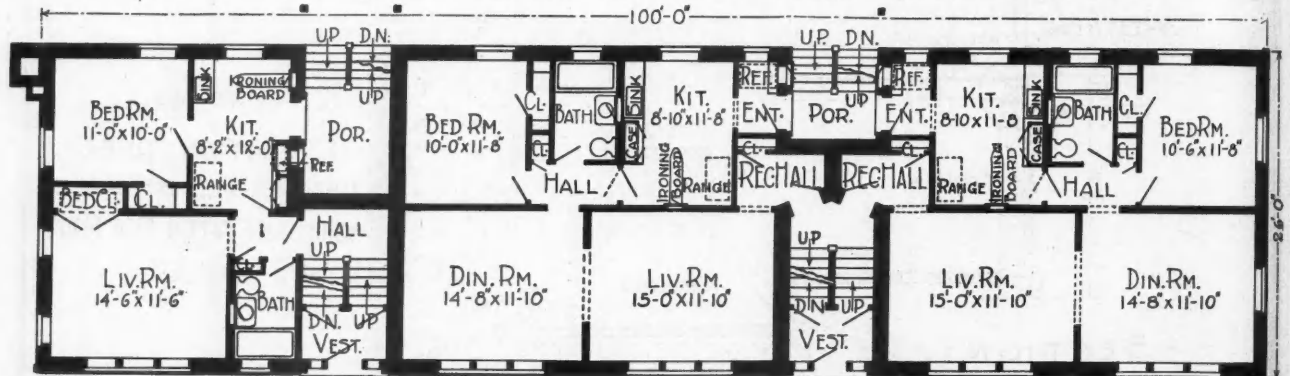
APARTMENT HOMES



Good Income from Wide, Shallow Lot

Chicago Architect Develops Two "Fours" and a "Three" on 26 by 100 feet, Plan Adaptable to Buildings Two or Three Stories High

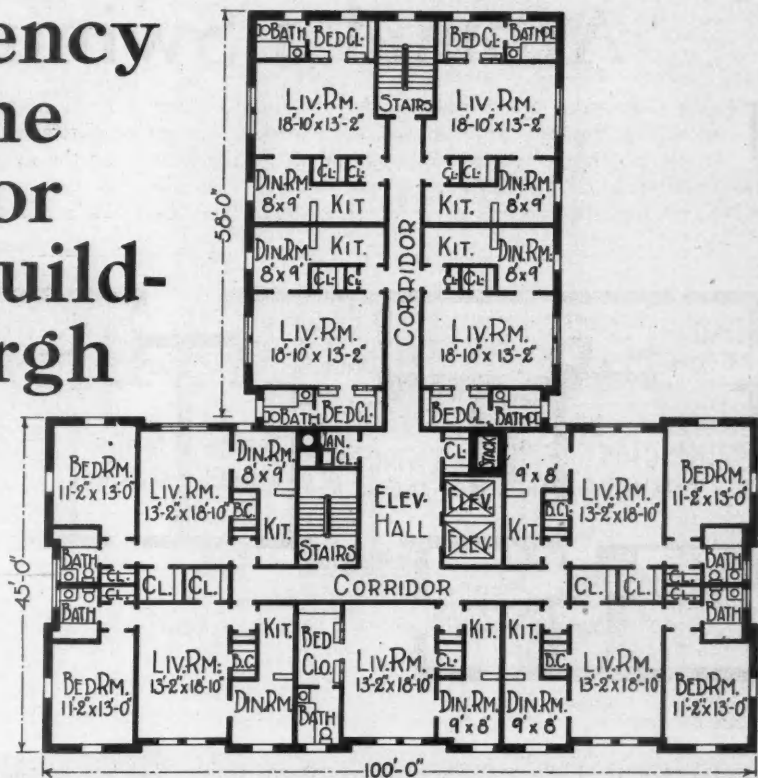
A LONG many of the widened streets of cities the depth of the lots has been cut back to a narrowness that is difficult to use efficiently for apartment buildings. We illustrate below, however, a very happy working out of this problem by Architect Bernard L. Roos, of Chicago. Such a building is a good income producer.



Six-Apartment Building for a Wide Shallow Lot Erected on West Addison Street, Chicago; Bernard L. Roos, Architect.

Two and Three Room Efficiency Units in the Ambassador Apartment Building, Pittsburgh

HOW to get the greatest number of rentable units into a given area is the problem of the present-day builder and architect. Disappearing beds, compact dressing closet equipment, and small dining rooms with clever kitchenettes in connection offer the solution. And the buying and renting public have set their stamp of approval on these efficiency living units. The Ambassador Apartments, Pittsburgh, give an ideal working out of these modern ideas in a group of two-room and three-room apartments in an eight-story building as illustrated.

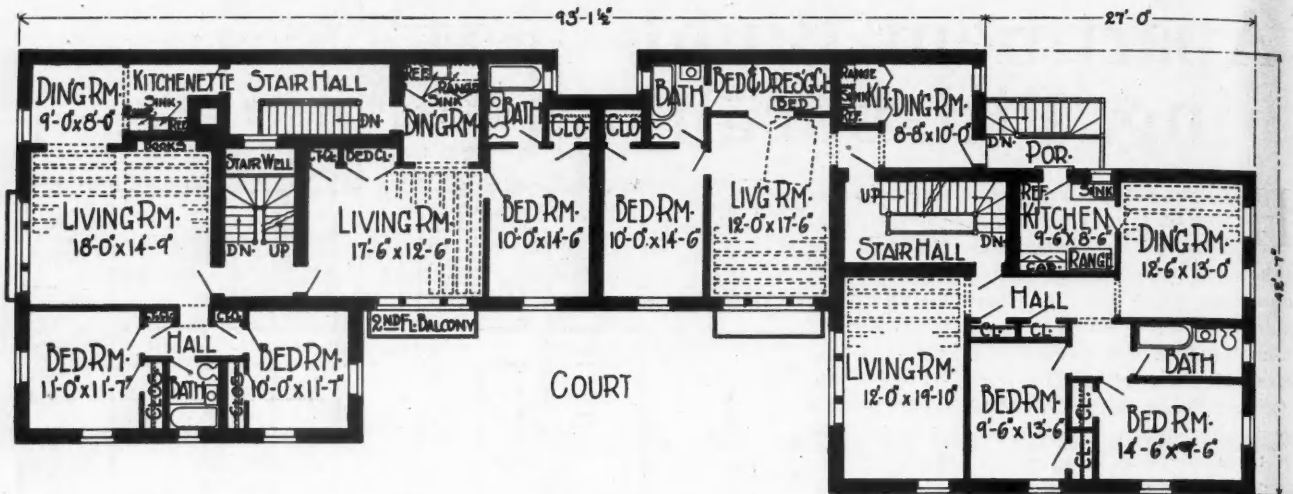


Ambassador Apartments, Pittsburgh; Marks & Kann, Architects.

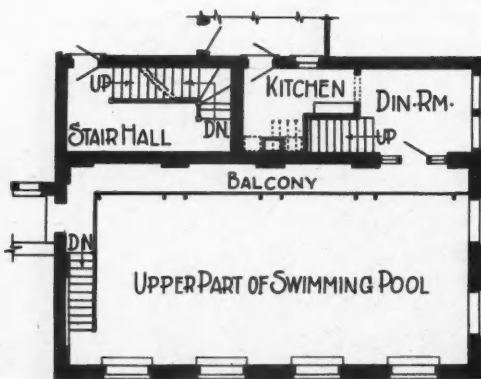
Unique Apartment Home Built Around a Swimming Pool

IN the fashionable North Side district of Chicago a very interesting building problem has been worked out for Mr. R. A. Ilg, secretary and treasurer of the Ilg Electric Ventilating Co. A swimming pool occupied the rear of the building site, and was to be incorporated in the plans

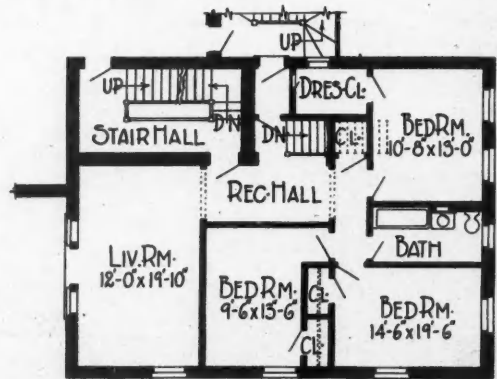
for a modern 12-unit, three-story and English basement apartment building. The plans below and the photographs on the next page show how successfully Robert De Golyer & Co., architects, handled this unusual proposition. Mr. Ilg's apartment is the duplex at rear overlooking pool.



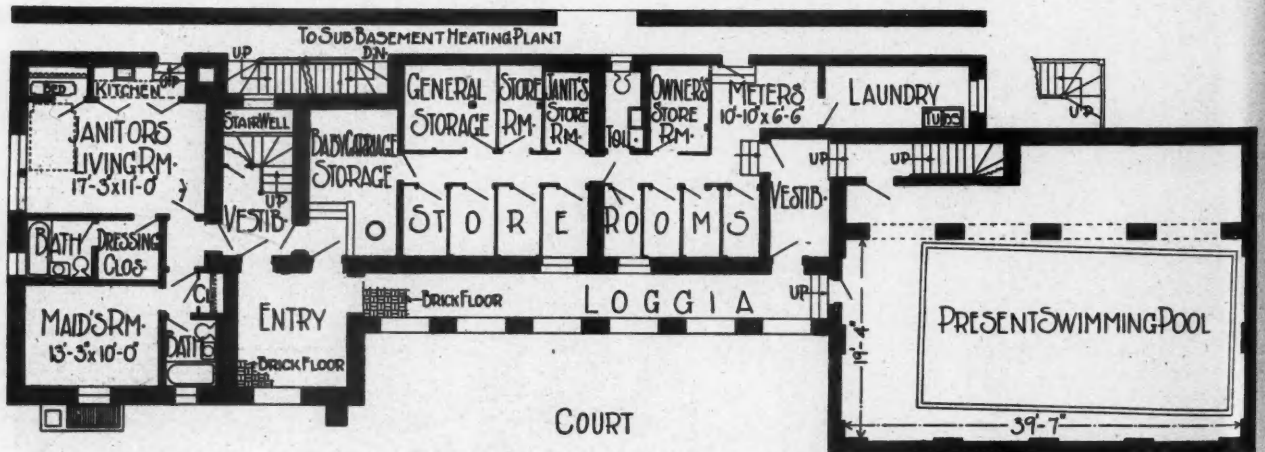
Layout of Third Floor with Its Four Apartment Units. The second and first floors are identical except for the rear wing, which is arranged as a duplex, as illustrated just below.



Rear Part of First Floor Plan.



Rear Part of Second Floor Plan.

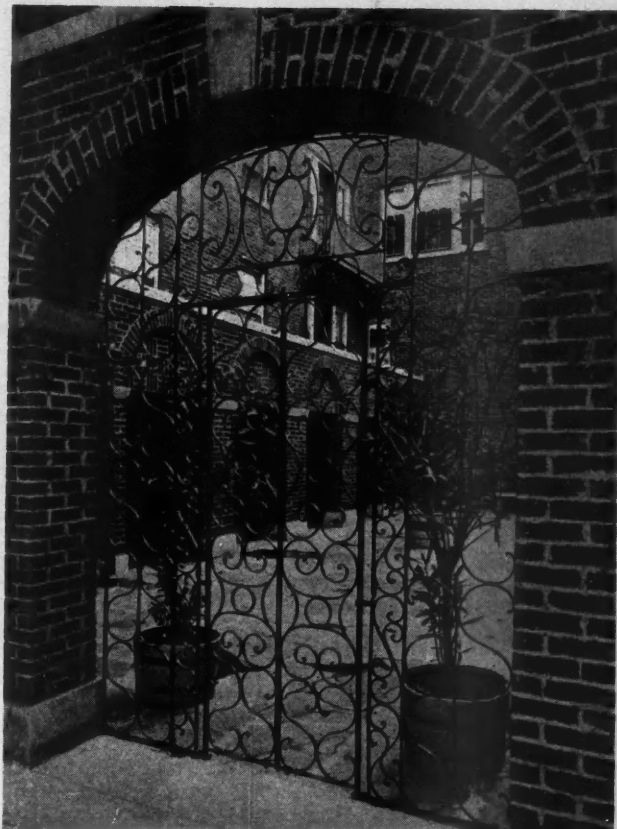


The Layout of the English Basement Shows the Swimming Pool at the Rear. The dining room of the R. A. Ilg Apartment on the first floor overlooks this pool.

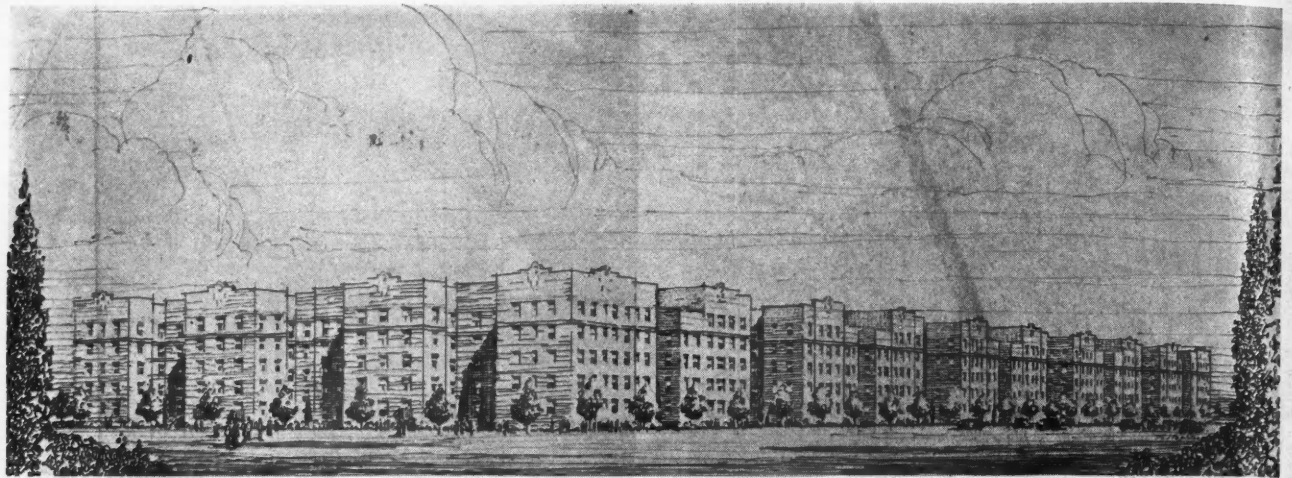
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An Apartment Building of Unusual Beauty and Individuality at 643 Roscoe Street, Chicago; Designed by Robert S. De Golyer & Co., Architects, for the Chicago Title & Trust Co., and Mr. R. A. Ilg, Who Occupies the Duplex, with Swimming Pool, at the Rear. Note the antique wrought iron screens and gate imported from Havana.



An Elevation Sketch Suggesting How the Entire Group of 10 Buildings Planned for the Marshall Field Project Will Appear When Completed.

Homes for Six Hundred Families

The Marshall Field Project is Planned to Provide Homes for Chicago Families of Small Income

ANDREW J. THOMAS, Architect

TEN buildings of four and five stories in height, with apartments ranging from three rooms and bath to six rooms and two baths, and planned two deep so that all rooms will have ample sunlight and cross-ventilation, that is the first great housing development for families of small income which Marshall Field III has planned for Chicago. The total investment in land and buildings will be in excess of \$4,000,000, and it represents Mr. Field's first experiment toward solution of the housing problem of the city where his family fortune was made.

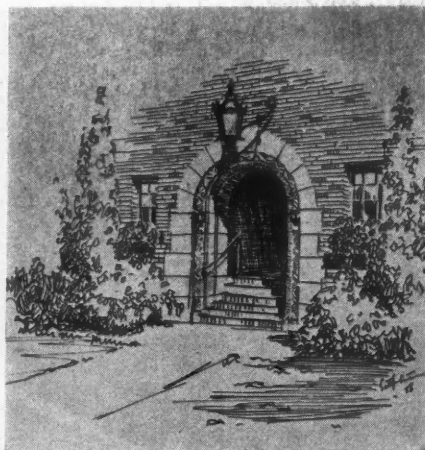
Homes for about six hundred families are to be supplied. They are to be located in the two blocks bounded by Blackhawk, Sedgwick and Siegel Streets and Hudson Avenue, recently purchased for Mr. Field by Albert H. Wetten & Co. This area is about two miles north of the congested downtown skyscraper district and one

mile west of Lake Michigan. The apartments are to be built around more than three acres of gardens, with playgrounds for children of the tenants. Houses in the area are being razed to make way for the improvement.

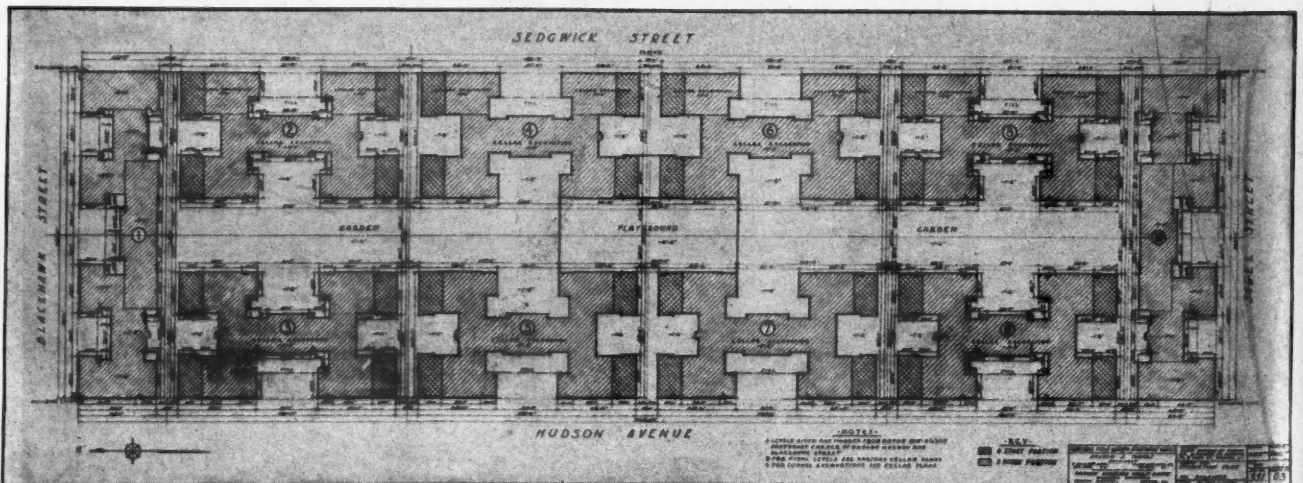
The plans differ from those of any other known housing project in this country or abroad, it is learned. Stores are to be arranged along the Sedgwick Street frontage to serve a druggist, market men and other retail merchants catering to the neighborhood.

Buildings were designed by Andrew J. Thomas, of New York City, architect of the modern housing sponsored by John D. Rockefeller, Jr., in Manhattan and Bronx, New York, and at Bayonne, N. J., and by the Metropolitan Life Insurance Company in Queens, New York.

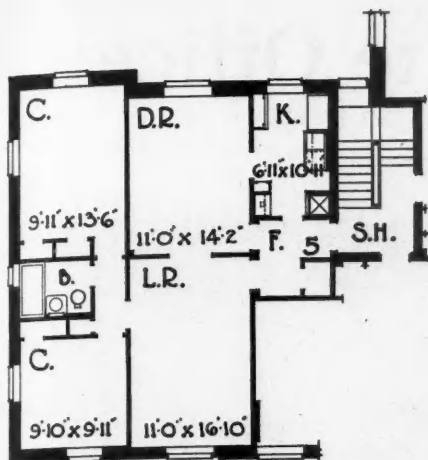
The buildings are to cover 46 per cent of the ground space and the remainder of the site is to be devoted



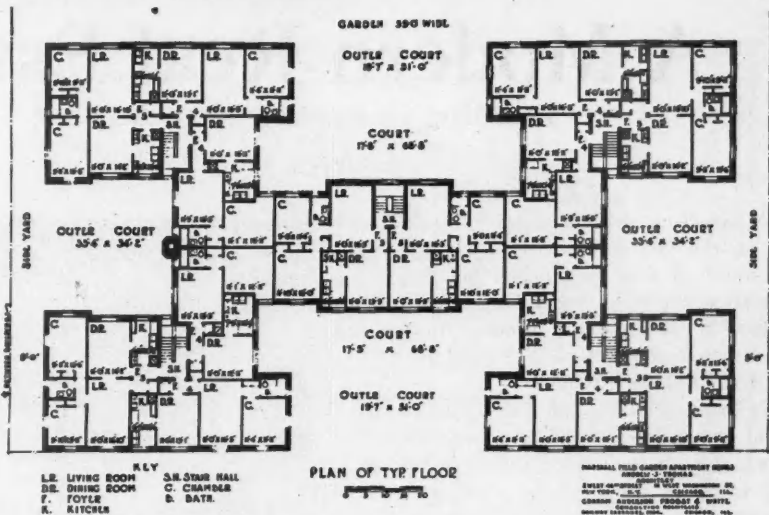
An Entrance Detail, Showing That Beauty as Well as Modern Efficiency Will Be a Part of These Homes.



The Plot Plan of the Marshall Field Project Shows 10 Buildings, of Four and Five Stories, Grouped About Central Gardens and Playgrounds, a Community of About 600 Families.



Plan of a Typical Apartment of Five Rooms and Bath in An End Wing. Every Apartment Will Have Ample Sunlight and Cross Ventilation.



A Typical Floor Plan of a Typical Unit in the Projected Marshall Field Group. The apartments will range in size from three rooms and one bath to six rooms and two baths.

to gardens and playgrounds. The apartments are to be of brick and will be embellished with entrance doorways of stone and designed patterns of specially ground face brick, slate and stone. The walls of the top story and the parapets are to be embellished with stone ornaments.

Boston ivy is to be planted along the building walls and in the courts, which will provide a beautiful covering for bare brick walls in several years, it is anticipated.

First floors are to be fireproof, while brick fire walls will separate the various portions of each structure. Further fire resistance will be provided in stairs of steel and the stair halls and dumbwaiter shafts are to be built of fire-resisting material.

The interior finish of the buildings is to be of substantial and attractive character. Floors are to be double, the top or finishing floor to be of oak throughout each apartment, excepting in the bath rooms, where they are to be of tile. The walls and ceilings are to be of three-coat plaster, except in the stair and entrance halls and vestibules, where the walls will be of texture brick, with the floors green and

purple split face slate. The walls will be heavily painted with a stippled finish in the apartments.

Mechanical equipment of the apartments, such as plumbing, hot water heater and storage tanks, will be of the latest design and most durable quality, it is planned. Each bath room will be equipped with a lavatory, built-in tub and toilet and each apartment will have its individual refrigerator equipment.

A feature is that provision is made for drying laundry on roofs of these buildings. Racks for hanging clothes will be provided, including platforms, too, thus sparing dwellers the spectacle of draped lines of laundry across the courts. Dumbwaiters are to be provided to save the trouble of carrying clothes to the roofs.

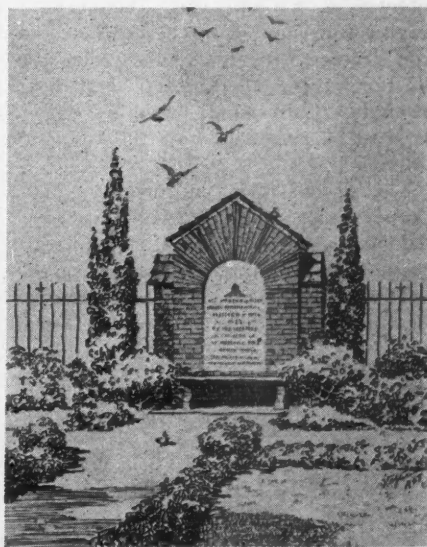
Another interesting feature is provision on the ground floor of each building of rooms for baby carriages and special comfort and nursing rooms for mothers and babies. The playgrounds will be equipped with sand piles, swings, slides and other devices and have comfort stations conveniently located.

Preference will be given in rentals to families with children. Men who work on the buildings and have done their best will also be given preference.

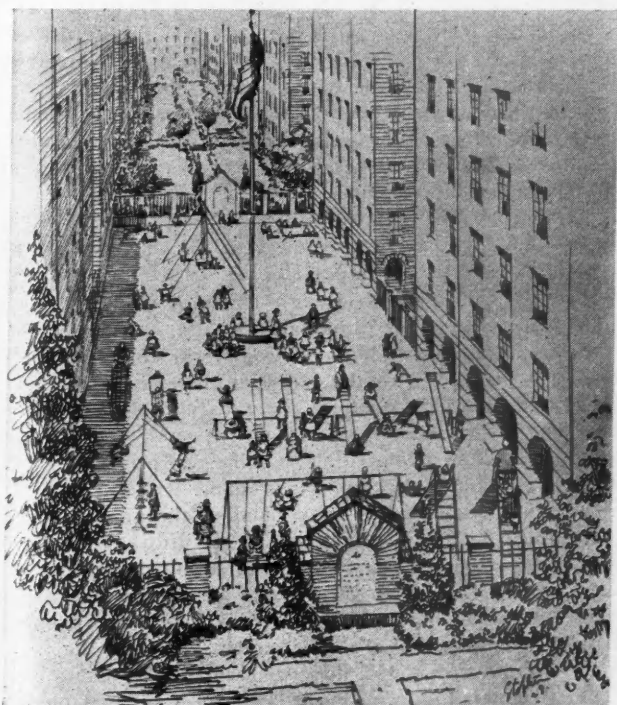
Before the location was selected a city-wide survey was conducted under the direction of Dr. Edith Abbott, dean of the University of Chicago, Graduate School of Social Service Administration. She told this writer that she regards this project as outstandingly significant and said that it will be watched with considerable interest by promoters of better housing throughout the world.

It has been intimated that if the plan operates successfully in Chicago, it will probably be repeated in other cities

RHYS G. THACKWELL.



The Beauty of the Gardens Will Be Enhanced by Features Such as This.



The Buildings Will Be Grouped About Central Gardens and Playgrounds Forming a Community Center for the Tenants.

A Modern Real Estate Office

Building in Replica of an Ancient Venetian Palace

FRANK TRIPPUTI, Architect

IN selecting the Contarini-Fasan Palace on the Grand Canal in Venice as the motif of their new office building, the officials of the E. J. Maier Corporation have realized an ambition to produce in reality the intent of the motto, "A Palace for Service in Real Estate."

As in all buildings of a style artistically novel to America, the interiors must be thoroughly in harmony with the facade; and from an architectural viewpoint, this has been accomplished, while not interfering with the efficiency of the use of the building.

The first floor lobby leads by stairways to the upper floors, and the basement, respectively. Under foot is rough-hewn, natural cleft, Vermont slate flooring in random pattern, while the stair treads are single slabs of slate, vari-colored. In the lobby is a wrought iron chandelier portraying four lighted torches socketed in an iron framework ornamented with leaves. In fact, the wall brackets and fixtures throughout are hand wrought, especially designed in keeping with the rest of the building.

The second floor, entirely occupied by the E. J. Maier Corporation, is also treated with rough plastic art material on walls and ceilings. The floor is paved with composition marble blocks of various colors in random pattern.

The office of the president, however, excels in lavish treatment any other part of the building. Here tapering



The Office of the President of the E. J. Maier Corporation is a Lavishly Furnished Example of an Interior in Harmony with the Venetian Palace Exterior of the Building.

pedestals in each corner bear golden gargoyles and hidden lights cast streaming shadows across the heavy walnut beam ceiling. Built-in bookcases form a series of Renaissance arches lighted from the rear. The fireplace, mantel, and hood are exact duplicates of those in European palaces. A hand wrought scissor chair with a red velvet cushion is a typical example of the furniture. The 80-inch esri-toire is of pure walnut, Venetian design, to which is matched a cabinet.

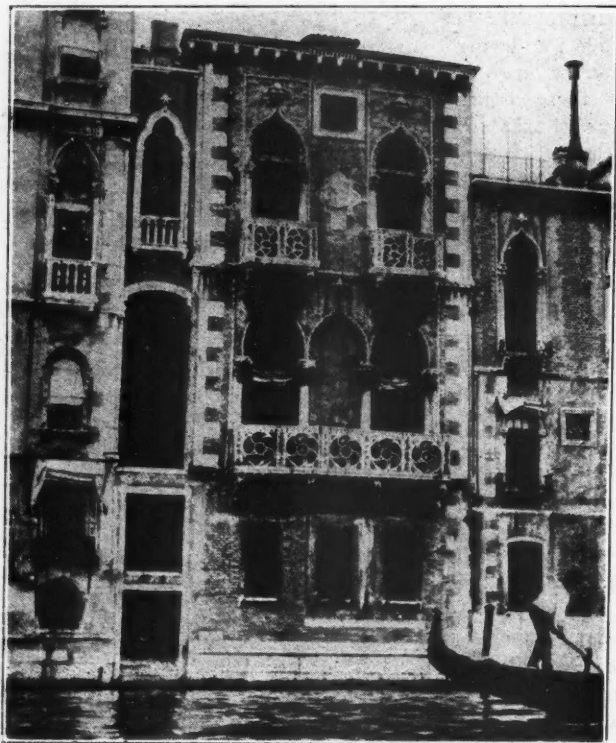
The facade itself is an exact replica of the Contarini-Fasan Palace on the Grand Canal, noted for centuries as the headquarters of the ruling princes of Venice. Its marble balconies are of delicate workmanship, and might have been designed in some precious metal, from their splendid fragile appearance. These delicate lines have been traced in bands of polychrome terra cotta, faithfully reproducing the artistry of the original.

The unusual requirements in the design and coloring for this building have caused new developments, and the preparations and tinting of polychrome terra cotta for which the beauty of the present facade is responsible.

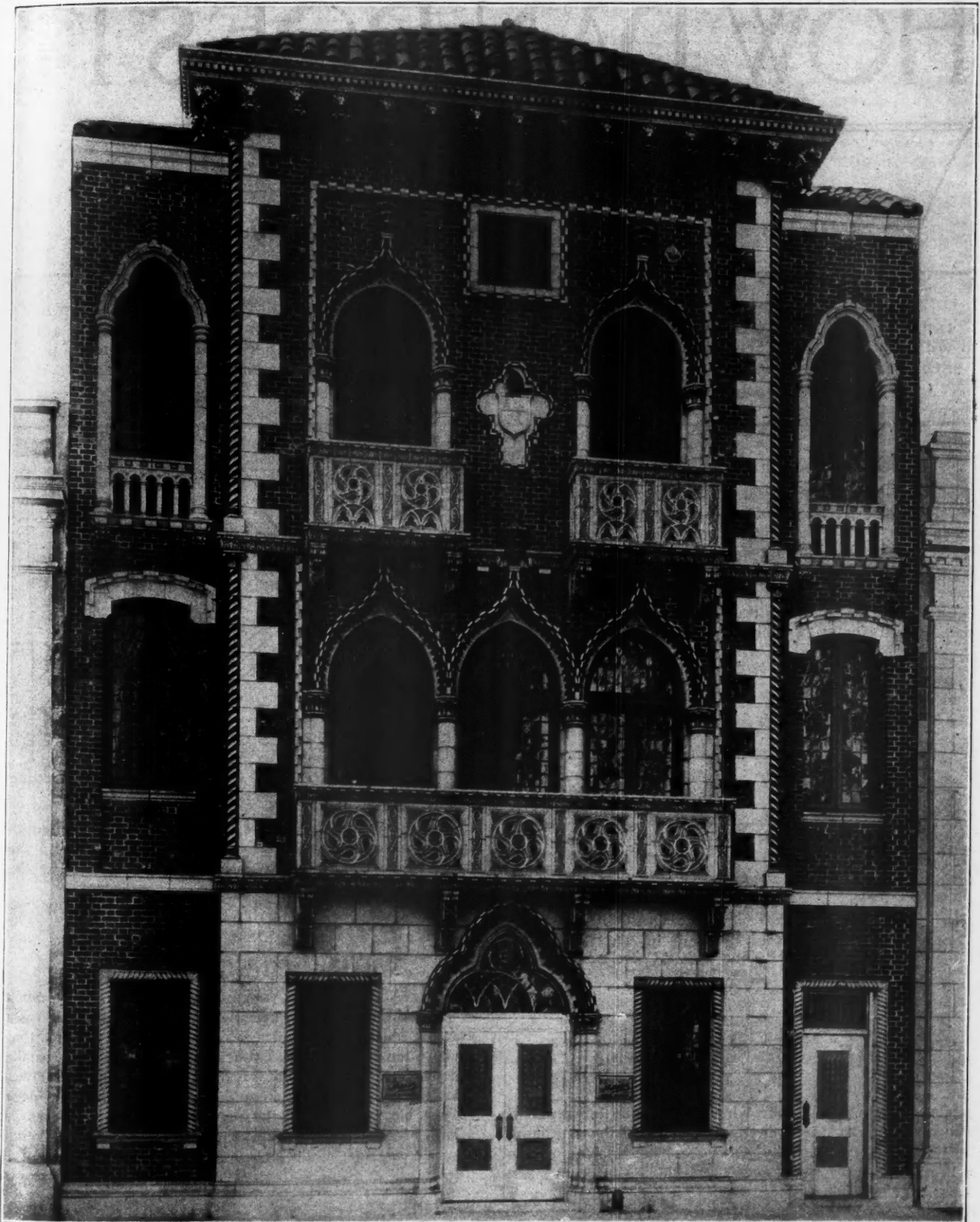
The structure is of three stories and basement, and is of fireproof construction. The interior is, of course, closely in keeping with the Venetian Renaissance design, the floors in the halls being of rough natural cleft Vermont slate, laid in irregular random pattern; stair treads being single slabs of vari-colored slate. The walls are of plastic art in light and dark tan. Iron hand wrought fixtures of Venetian design have been installed throughout.

The third floor has been leased to Mr. Edward C. Epple and Ethelbert Furlong, well-known architects and landscape engineers, whose large suite of offices have also been decorated thoroughly in keeping with the original design. Negotiations are now under way for the leasing of the entire ground floor to a financial organization.

The original, Contarini-Fasan Palace, is situated on the Grand Canal between the Palazzo Fini and the Palazzo Barozzi Wedman, which was designed by Longhena. These



The Contarini-Fasan Palace, on the Grand Canal in Venice, Italy, a 14th Century Creation Which Furnished the Motif of the New E. J. Maier Corporation Building.



The New Building of the E. J. Maier Corporation, in Newark, N. J., Which Produces in Reality the Intent of the Company's Motto, "A Palace for Service in Real Estate." It is a replica of the ancient Contarini-Fasan Palace, in Venice, Italy. The architect, Frank Tripputi, of Newark, formerly practiced his profession in Italy.

three palaces together with several others in the same block were built in the fourteenth century. The architecture in this block, because of the great influence prevailing in Venice during and before the fourteenth century, leans toward the Byzantine and the Saracen.

Created in the fourteenth century by an unknown artist (although the design and architecture of the adjoining

Barozzi Palace hints strongly that the Contarini-Fasan Palace is also the work of Longhena), the building has had ample time to accumulate dozens of historical significances, among the greatest of which is the fact that it was occupied over a period of several hundred years by the famous Contarini-Fasan family, which from the year 1043 to 1667 presented eight doges (or kings) to rule over Venice.

HOW DAN DOES IT



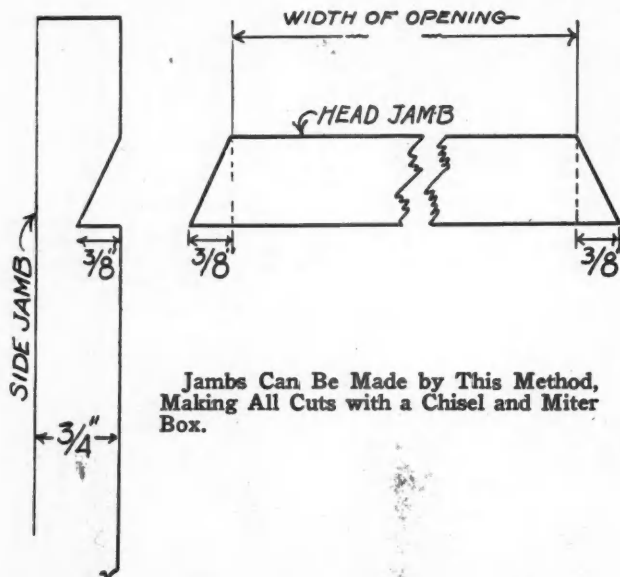
A Department for Passing "Life Savers" along to other Builders

\$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it. Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

Making Door and Window Jambs

I AM enclosing a sketch showing a good method of making door jambs and window frames. All cuts can be made with a chisel and miter box and it is quicker and better than dading the old way. Cut the jambs the correct length. Set the miter box saw to cut $\frac{3}{8}$ inch deep and cut all side jambs the proper length. Chisel out the bevel. Cut all heads in the miter box on the same bevel and nail in the usual way. This makes a tight joint and the

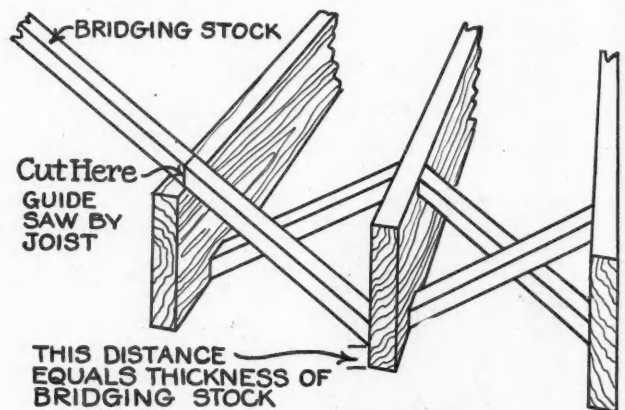


Jambs Can Be Made by This Method, Making All Cuts with a Chisel and Miter Box.

jambs can all be cut alike which saves time in measuring and marking. If one wants to he can dado the side jambs out with a dado plane by putting a bevel block on it for a depth gauge.—H. J. ACKERMAN, 11218 S. Normandie Ave., Los Angeles, Calif.

How to Cut Bridging

A QUICK way to cut bridging and have it fit is shown in the accompanying sketch. To start, cut the proper bevel on one end of the bridging stock and place this end as shown, with the bottom edge of the bevel at a distance above the bottom edge of the joist just equal to the thickness of the bridging stock. This can be judged by eye and does not need to be measured. Now, with the bridging stock resting on the next joist, saw vertically, using the



Here Is a Quick Method of Cutting Bridging and Getting the Bevel to Fit the Space Between Joists.

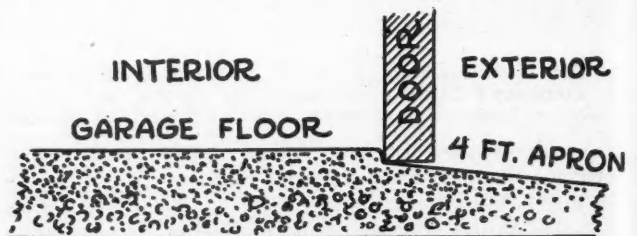
side of the joist as a guide. This gives the correct length and correct bevel and also leaves the stock with the proper bevel for the next piece already cut so that the operation can be repeated.

H. P. SIMMONS, Northfork, W. Va.

Weathertight Garage Doors

IN the April issue of AMERICAN BUILDER, Frank Rezabek offered an idea for keeping snow and rain out of a garage. Although his idea was a good one, I think that I can offer a better one. When building a garage I make the concrete apron about seven-eighths of an inch lower than the floor of the garage. Then, by setting the door to just clear the apron, the regular garage floor serves as a stop for snow and rain and also wind. The sketch shows how such a job looks when completed.

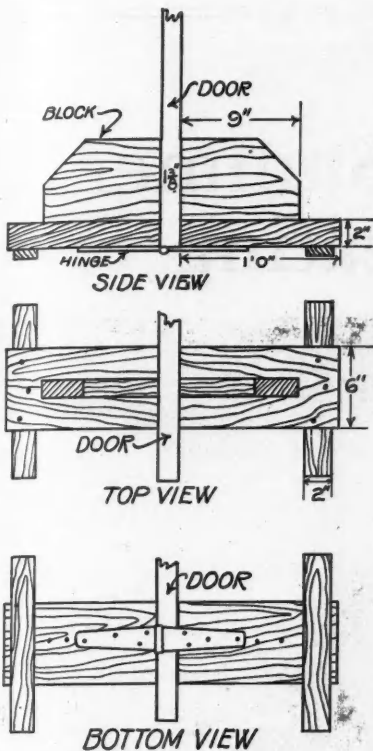
EDWARD J. TACINELLI, 47 Wilson St., New Haven, Conn.



If the Garage Floor Is Made as Shown Here and the Door Hung This Way the Garage Will Be Weathertight.

Another Door Jack

I AM offering still another type of door jack or clamp which I have used for the last five years and found highly satisfactory, especially for work in cramped places.



This jack will take either 1 3/8-inch or 1 3/4-inch doors. It is easy to move from one job to another and requires very little room to use, less than any other jack that I have seen. I can carry it around in my car, as it folds together and takes a space only about a foot square when folded.

The drawings explain how this jack is made. Six pieces of wood are used and these are put together to form two similar sections. The sections are hinged together with a space 1 3/8 inches between. The weight of the door and pressure from above, hold the door firmly in the jack while it is being fitted.

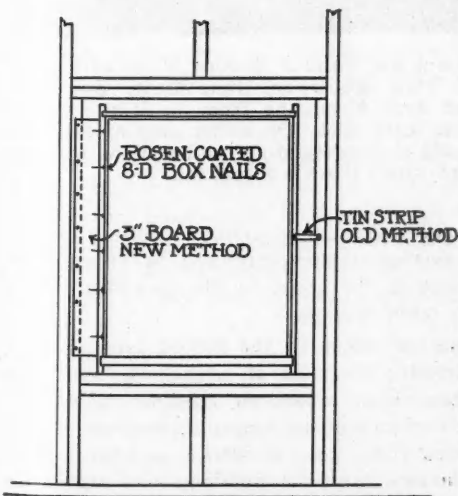
H. M. PHELPS, 405 Lyon St., Fulton, N. Y.

This Door Jack Folds Into a Space a Foot Square for Carrying About and Works Well in Cramped Places.



Holding Window Jambs True

HERE is a better way of working than to depend upon a narrow strip of tin to hold the window jambs straight while the rooms are being plastered. This way



is to take a board three inches wide and as long as the full length of the window frame and as thick as the finished plaster is to be. Nail it securely to the stud, as shown in the accompanying sketch, making sure that the edge next to the jamb is jointed straight. Nail through the jamb into this board and you can be sure

If You Want to Keep Your Jambs Perfectly True, Here Is a Method of Working Which You Will Find Satisfactory.

that the mason will not crowd the frame out of line. This also keeps moisture away from the frame to a large extent

L. W. PIKE, 17 Brattle St., Brattleboro, Vt.

New Figures on the Square

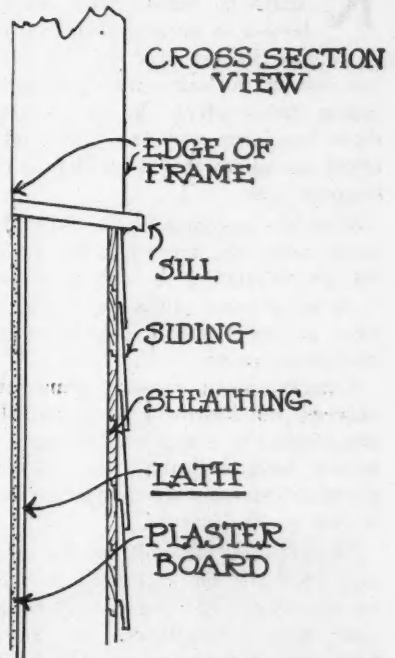
WHEN your steel square becomes so tarnished that the figures and marks are hardly distinguishable, clean the indentures for both the marks and figures thoroughly, and paint the square with white enamel, then lay the square aside, permitting the enamel to dry. After the enamel is thoroughly dry, take a sharp chisel and cut the enamel off. The chisel should be held at an angle of about 10 degrees. An old safety razor blade, held with a pair of pliers, will do the work also. Cutting the enamel off the surface of the square will leave the enamel in the indentures and bring out the figures and the marks as white as ever.

H. H. SIEGELE, Emporia, Kan.



When Using Wallboard

HERE is an idea which I have found useful but which I seldom see used. It is for jobs of putting on wallboard. In old buildings, or any building where the frames are not made to order, the frame made for plaster and lath projects past the studding too far for plaster board to come flush with the edge of the frame. To overcome this most conveniently, I nail lath up and down on all studding in the walls that contain any window or door openings. Then I nail the plaster board over the lath. This usually brings the walls flush with the edges of the frames and casings fit on without doing any rabbetting of casings.



EMERY G. SCHILLER, Vida, Mont.

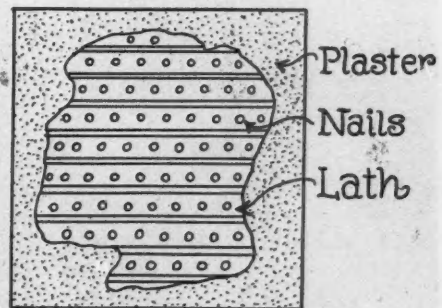
In Using Plaster Board, Lath Nailed Along the Studs Will Make the Board Come Flush with Stock Window Frames.



For Patching Plaster

IN my work I have considerable plaster patching to do on patent or combination lath. Anyone who has ever tried to dig cement plaster out of the grooves knows that it is an almost endless job, but I have learned a way to avoid this labor and make a good job of patching.

I take 3/8-inch, large headed, roofing nails, drive one every four or five inches each way in the lath. I leave 3/16 inch protruding. This gives the plaster a good hold and it will stay better than in the grooves. The sketch shows how these nails are placed.



—ED. ZIMMERMAN, Garden City, Mo.

Nails Placed as Shown Here Give the Plaster a Good Hold When Patching Must Be Done.

FURNACE HEATING



Motor-Fan Units for Summer Cooling and for Heating

KEEPING the home cool in summer is almost as much a reason why many people insulate their houses as keeping them warm in winter. Now comes an advance in this direction. By the installation of a motor-fan unit in the same warm air heating plant which keeps indoor temperatures at the comfort-level during winter, there has been provided a method for creating a cooling effect equivalent to a drop of four to 10 degrees in summer temperatures.

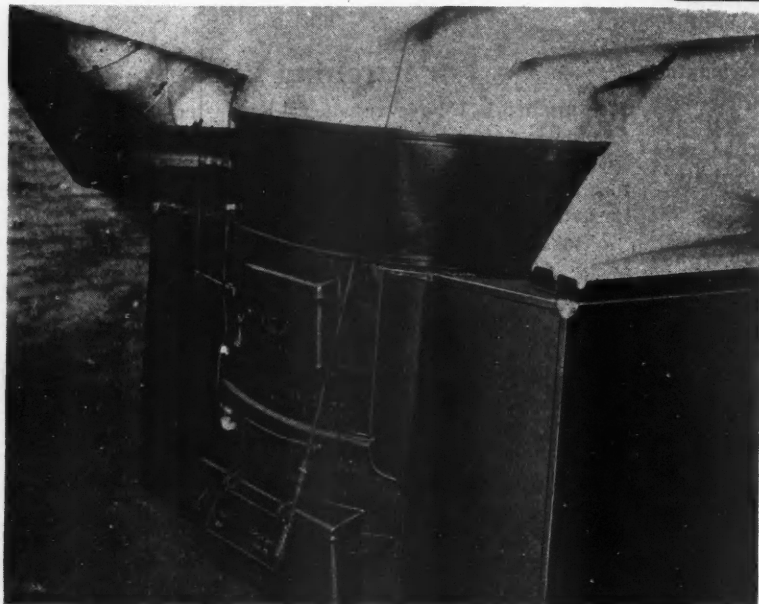
With the gravity warm air system, there is no circulation of air when the furnace is not heating. But the fan keeps the air circulating as long as is wanted. In the summer, it draws the hot stuffy air in the house down to the furnace, passes it over the cool castings and re-delivers it to the rooms above.

Usually, when upstairs temperatures range around 80 degrees, the basement is below 70. The furnace castings are about the same temperature. Tests in actual installations have indicated that the fan system reduces the prevalent summer temperatures in a home an equivalent of four to 10 degrees.

This is due, not only to the fact that the furnace castings cool the air, but also to the forced circulation set up throughout the house. The cooler air tends to lie stagnant close to the floors. The warmer air at or above the breathing level is what makes the house oppressive in summer. By constantly mixing the cool with the warm,



Warm Air, Central Heating Plant with Over-head Type Motor-fan Unit, Motor Suspended on an Arm Extending from an Iron Standard on the Left Side. On either side of the front are cold air intakes of a type becoming standard except where there is a rear fan.

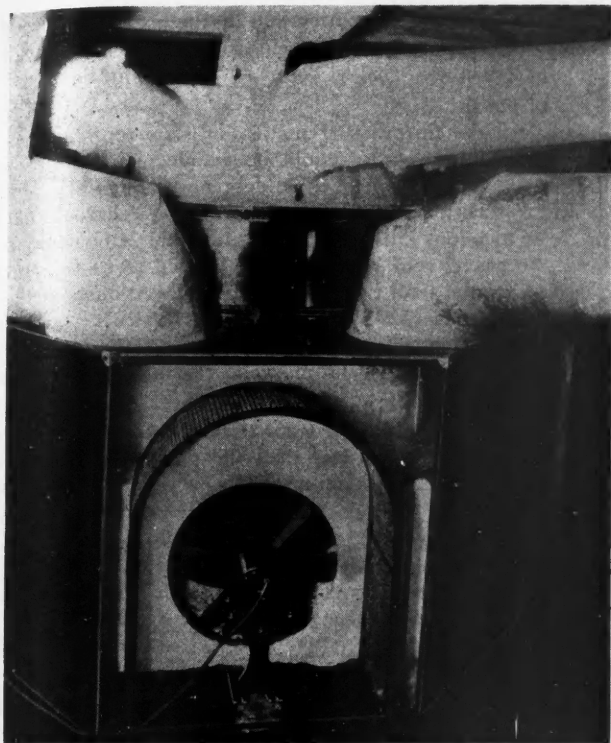


Super-circulating, Warm Air, Central Heating Plant with Motor-fan Unit Installed Above Floor at Rear. Inside the air chambers that skirt the casing is a system of valves which separate the filtered air from the fan, from cold air brought from the rooms.

the super-circulating system tends to reduce the average temperature and to enhance the comfort of the house by the fact that the air is in rapid motion.

Another effect of the forced air system is to broaden the field of structures which may be heated by warm air systems. With this improved equipment, warm air heating is available for three story residences and large country houses, three-flat buildings and even some larger apartment houses, schools, amusement places, churches, public garages and factories of moderate size.

Warm air heating men always have accepted certain limitations on warm air furnaces with gravity circulation. Those limitations have not been absolute, but in general they have included four points. First, any house where the heat leads have had to exceed 20 feet has



Motor-fan Unit of the Super-Circulator. It is surrounded by a filter of copper screens through which the cold air is drawn before being propelled into the heating chamber.

been considered a doubtful risk. Second, the basement has had to be at least 7 feet deep; if shallower, it has been necessary to pit the furnace, which is questionable procedure especially in soils where water may be encountered. Third, 10 or 12 rooms have been about the limit for the average furnace. Two stories have marked another limit, for rarely are all favorable conditions found in a structure exceeding that height.

With the introduction of forced circulation, all these limitations are removed. Two obvious effects of the fan system are, first, to overcome the back-pressure in the warm air leader-pipes; second, to draw the air through long horizontal cold air ducts where gravity pressure is only partially effective. In consequence, warm air leaders of lengths prohibitive in a gravity system can be used effectively and there is practically no limit to the number of rooms that can be heated, provided that the leaders are correctly engineered.

Another important effect is that the steep pitch of the warm air leaders as they leave the furnace, which is necessary in a gravity system, is not required when the fan is included. This means that warm air heating can be installed in shallower basements. Only six or eight inches of clearance above the actual height of the furnace is necessary. Finally, the two story limitation no longer is in force.

The key-features of the new development are a four or six blade fan ranging from 1,500 cubic feet per minute to 3,500 cubic feet per minute in capacity, a $\frac{1}{8}$ H. P. motor and an air-conditioning chamber which replaces the old type of cold air intake. There are two types of installation; the overhead, which is the lower in cost and may be added to heating systems already installed; and the rear-fan type, intended for new equipment in buildings where forced circulation is desirable or necessary.

In the over-head type, an iron pipe grounded through the basement floor stands beside the furnace with an extension over the top. The motor is attached to this extension and drives the fan, which rotates horizontally within the sheet metal bonnet. In the other type, the motor

stands on small posts grounded through the floor at the rear of the furnace and the fan, directly attached to the drive-shaft, projects into the air-conditioning chamber.

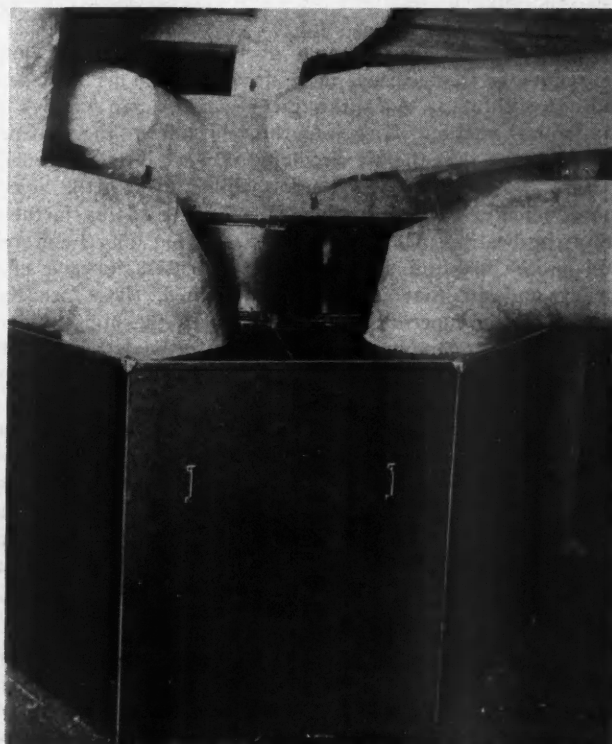
This chamber is octagonal in shape and fits around the lower half of the heating plant. Within it are fabric valves on aluminum frames, light, flexible and noiseless, which extend against the walls of the chamber, to overcome the back-pressure created by the fan. With these valves extended, air entering the plant is forced by the fan through a filter which removes particles of dust and other foreign matter, then into the interior mixing chamber where the air passes over the furnace castings and then to the warm air leader pipes.

Fan operation in both types is controlled by an electric switch which usually is placed beside the draft control in the kitchen. Automatic thermostatic control, which operates the fan in conjunction with the draft dampers, also is available to complete the equipment.

Operation of this improved system is as simple as that of electric lights. It is inexpensive, too, the small motor of standard make required for the fan consumes only as much current as is required by a large light bulb; its cost is less than a cent an hour during operation.

But this is not continuous. In the winter, the fan-unit runs only when the temperature of the house requires it. Usually it is turned on for a few minutes early in the morning. This "boosts" the convection current in the various rooms, so that the house is heated quickly. During the day and evening the fan is turned on occasionally, as the family desires.

Air-velocity at the register of the gravity warm air system averages about 170 feet per minute. The fan increases this to between 300 and 400 feet per minute. Obviously, the first result is a shorter time required to warm up the house. This means lower heating costs, for the time that the drafts are open is reduced to a minimum. Whereas the gravity system takes from 45 minutes to an hour to heat the whole house, not more than half an hour



The Rear of the Super-Circulator with the Panel Giving Access to the Fan and Motor in Place. The actual space required for this improved equipment is less than for a non-motorized warm air plant with the old type cold air intakes.

is required with the super-circulating system.

Another consequence is a marked improvement of air-circulation. According to Professor A. C. Willard of the University of Illinois, the air changes completely from one and a half to two times an hour in each room of a house with a gravity warm air system. The fan increases the air turnover to from four to six changes an hour:

This fact holds practical results in more uniform and healthful temperatures. The ordinary difference of 10 to 12 degrees between temperatures at the floor and the ceiling is reduced to three or four degrees. Air leaves the register at an average of 160 to 165 degrees in a gravity job. This average is reduced to 140 or 150 degrees when the fan is installed, for the air has less time in contact with the hot castings of the furnace.

So the fan unit increases furnace efficiency and decreases heating costs, not only because the temperature of the whole system is lowered, but also because heat losses from the plant and heat carrying pipes are reduced. Normally, the loss into the basement is 25 per cent of the total heat generated. Of course, this "lost" heat helps to warm the first story floors; but the fan unit decreases the escaping heat to 12¾ per cent of the total, which is ample for that purpose, and less expensive to maintain.

Combined with other features of warm air heating, the fan unit introduces new health features into the home. Three years ago, a patented automatic humidifier was built into the plant. Whereas the old water pan evaporated approximately a gallon of water in 24 hours, the new device evaporates as much as 21 gallons in the same period. In a home of average size, evaporation of a gallon a day increases the average relative humidity indoors from two to three per cent. The records of actual installations over several years have shown the new humidifier capable of maintaining from 40 to 64 per cent. The latter, of course, is excessive. Forty per cent is generally accepted as the ideal in the home during the winter. The new humidifier has no difficulty in maintaining it and, with the fan, uniform humidity at a proper percentage is assured.

Moreover, the air is drawn over the hot castings and consequently is sterilized, more frequently. This makes it more healthful as does the fact that the fan creates a mechanical suction of air into the house from the outside, which means that the air circulated is constantly freshened.

Ease and economy of operation, ability to heat the house more quickly, correct heating of even the rooms farthest from the heating plant, improved circulation, more uniform and more healthful temperatures, increased furnace efficiency and air that is better conditioned, these are the results of the super-circulating system to the householder. In addition it opens up an entirely new field of comfortable living conditions by the fact that it cools the house in summer.

In appearance as well as in mechanism and function, the super-circulator is new. It is finished in an attractive combination of red and black. Its compactness and attractive appearance puts the equipment in line with the present tendency toward using the basement for a variety of working and pleasurable functions rather than simply relegating it to unsightliness and storage purposes.



"Mark Your Town" Week

INSPIRED by their success as sponsors of "Know Your City Week," realtors of Arkansas busily promoted a "Mark Your Town Week" for the encouragement of aviation. "The aviators are going to do their share to develop the state and it is up to us to help them all we can by making the state attractive to air travel," the realtors say.

And so from June 10-16 all towns in the state were urged

by governmental proclamation and by the organized encouragement of realtors to paint their name on the tallest building in letters at least six feet high. Other specifications were:

Type of Roofs:

Tile, shingle, tin or other metals, or slate roofs are best. Gravel and pitch roofs should be avoided if possible. If the roof has a slope of over 30 degrees the sign should be painted on both sides. Where gravel or pitch roofs offer the best location, individual wood or metal letters may be used, the gravel roof beneath being treated so as to give it a darker ground than the gray of the roof. Another method of handling gravel or pitch roofs is to construct a wooden deck on short legs above the roof proper, painting this deck a dark color and using chrome yellow paint for the letters.

Size:

As large as possible. Letters should not be less than 6 feet in height. Letters less than this minimum cannot be seen at a considerable height.

Style:

Simple block style. The width of letters such as "M" or "W" should equal two-thirds their height—other letters in proportion.

A spacing of one-fourth the height should be used between letters.

Color:

Chrome yellow with a dull black background is best. Strive for a contrast. On red roofs, black letters with yellow outline is good.

Kind of Paint:

Waterproof to withstand weather.

Number of Coats:

Two, or three if possible.

Varnish:

Varnishing over the painted letters will help in preservation.

Letter "N":

To be painted on the roof with the name of the town in order to give the direction, north. To be placed so that the top of the letter "N" is towards the north, superimposed on an arrow pointing north.

Arrow to the Airport:

If there is a landing field or airport adjoining the town, then, unless totally impossible, a large arrow should be painted pointing toward the field, giving the distance to it by the number, for the miles distant.

Cost

The cost is very small and will vary somewhat with the charges of the local sign painter and the type of roof painted. The cost will run from \$25.00 up. Ask your painter today to figure on this for you, giving him the above specifications.

How to Start

Decide on the organization to sponsor the move, then select from that organization a committee whose duty it shall be to (1) select the site; (2) employ the painter; (3) raise the money, by taking it out of the treasury, assessing each member, or even passing the hat; (4) notify Chas. M. Taylor, secretary Arkansas Real Estate Association, 1022 Home Insurance Building, Little Rock, when the sign is painted.

Publicity was sent to all the newspapers with a letter from President O. I. Bodenhamer of the Arkansas Real Estate Association. Other organizations co-operated, including the Mayors' Association, all the railroads in the state and chambers of commerce. Two or three hundred messages from these various organizations were delivered by plane. This plane delivery was contributed by the local and commercial fliers and by the National Guard Aero squadron.

Within a short time twenty-five towns had agreed to mark their names where those who fly may read.

LAW for the BUILDER



Right of Contractor to Rely on Verbal Grant of Additional Time by Architect for Completion of Work When Contract Provides Time Extensions Shall Be in Writing

THE question of the right of an architect to verbally grant an extension of time for the completion of a building, where the contract provides that all time extensions shall be in writing, is one of particular importance to every contractor and builder. The point has been the cause of much litigation and a reading of the cases upon it is very impressive of the importance, from the contractor's standpoint, of care in relying upon the verbal orders of an architect in situations of this kind.

In the first place, if the written contract provides for the verbal extension of time by the architect all may be well and good. But in the absence of such a provision, and in the face of a clear stipulation that all extensions of time for the completion of the work shall be in writing, the contractor, for his own protection, should not as a general rule rely upon verbal permission from the architect; but rather should he follow closely the words of the contract, and if an extension of time is required the same should be certified to in writing.

This point of building law was up for decision in *Wagner Co. vs. Cawker, et al.*, 112 Wis. 532, and owing to the facts involved, and the clear reasoning of the court, the case becomes one of great value to every contractor and builder. The case was long, and involved a number of points, but for the purpose of this article the facts out of which the action grew may be briefly stated as follows:

Contract Provided Damages for Delay

A contract was entered into whereby the contractor agreed to furnish and set up the steel and iron to be used in the erection of a certain building. The contract provided that the framework was to be completed by October 9th, and that all the work on the building was to be completed by November 15th. It was also provided that if the work was not completed within the time specified the owners were to be allowed \$50 for each day beyond the time fixed.

The contract also provided that in case the contractor was delayed by the "act, neglect, delay, or default of the owner, architect, or other contractor," the completion time should be extended for a period equal to the time delayed. This, however, was conditioned as follows: "But no such

allowance shall be made unless a claim therefor is presented in writing to the architect within 24 hours of the occurrence of such delay. The duration of such extension shall be certified by the architect."

The building was completed but not on time, and a dispute arose over the final settlement in which the contractor claimed a balance due of \$2,808. The contractor thereafter filed the instant suit to enforce payment of this alleged balance. The owners defended on the grounds, among other things, that there had been a delay of 32 days in the completion of the work, which at \$50 per day, as provided in the contract, would amount to a counter claim of \$1,600.

It seems to have been admitted that there was certain delay, but the contractor replied that the architect had verbally agreed to such delay; at any rate, it seems the architect had assured the contractor at the time that there was no need for reducing the grant of delay to writing, and this had not been done. The owners, however, insisted that as the contract provided that no extension of time should be granted unless in writing the mere verbal assurance of the architect should not excuse the contractor for the delay.

Upon the trial of the case in the lower court a judgment was rendered in favor of the contractor. The owners appealed and the higher court in passing upon the right of the contractor to rely upon

the verbal assurance of the architect, that no writing was necessary to secure an extension of time, in the face of the written stipulation in the contract, that all extensions of time should be in writing, among other things, said:

Contractor Failed to Get Written Extension of Time

"It is admitted that no claim in writing for each delay was ever presented to the architect. It is also true that plaintiff (contractor) had no communication with the defendants (owners) on the subject prior to the final completion of the building. The plaintiff rests its failure to comply with the condition of the contract upon a conversation had by its general manager with the architect during the progress of the work, in which the latter told him that it would not be necessary to give a written notice or demand for additional time. . . ."

(Continued to page 126)



The Contractor Should Not Rely Upon the Verbal Promise or Opinion of the Architect, Assuming That the Architect Is Not Expressly Given Such Authority.

INSTRUCTIONS *in* ROOF FRAMING



A Problem in Valleys and Jacks

By JOHN T. NEUFELD

A VERY interesting problem was sent in by one of our readers. Figure 1 shows the problem as it was sent in. As seen from the sketch, the problem is to frame a new roof to an old roof, the new roof being larger than the old roof. In this case the writer wished to use valleys, but generally where the old roof framing is in good condition it will only be necessary to remove the old roof covering and nail two pieces of boards along the lines "D" and "C" in place of valley rafters and nail the lower ends of the rafters "M," "N," "H," "G," etc., to this board. As the problem stands we will treat it as a new roof altogether.

It is not possible to go into detail in every case when discussing a complete problem of this kind, but it is assumed that those interested have studied the elementary principles as they were given heretofore. In practice we would take certain information from tables so that the work takes less time, in fact we might say that the use of tables is common practice among building engineers in general.

Data for Rafters with $5\frac{1}{2}$ " Rise Per Foot Run

Length of common rafter per foot run, 13.20 inches.
Deduct for $1\frac{5}{8}$ -inch ridge, $\frac{7}{8}$ inch.
Cuts for top and bottom, 12 and $5\frac{1}{2}$.
Length of hip per foot run of common 17.84 inches.
Deduct from length of hip for $1\frac{5}{8}$ -inch ridge, $1\frac{1}{16}$ inches.
Top and bottom cut of hip, 17 and $5\frac{1}{2}$.
Side cut of hip, 18 and 17.
Backing hip by square $5\frac{1}{2}$ and 18.
Length of jack per foot run (same as common rafter).
Side cut of jack, 12 and $13\frac{3}{4}$.

Rafter "E" Solved

Run is 13 feet.
Length per foot run, 13.20 inches.
Length $13.20 \times 13 = 171.6$ inches = 14 feet, $3\frac{3}{8}$ inches.
Deduct for ridge $\frac{7}{8}$ -inch.
Net length, 14 feet, $3\frac{3}{8}$ inches less $\frac{7}{8}$ -inch = 14 feet, $2\frac{3}{4}$ inches.

Rafter "C" Solved

Length per foot run 17.84 inches (always same as hip)
Length is $17.84 \times 13 = 231.92$ or 19 feet, $3\frac{15}{16}$ inches.
Deduct for ridge same as for a hip $1\frac{1}{16}$ inches.
Net length, 19 feet, $3\frac{15}{16}$ less $1\frac{1}{16}$ inches = 19 feet, $2\frac{1}{16}$ inches.
Side cut (same as hip) 18 and 17, mark on 18.
Plumb and seat cut 17, $5\frac{1}{2}$.

Rafter "D" Solved

Length per foot run, 17.84 inches $\times 8 = 142.72$ inches or 11 feet, $10\frac{11}{16}$.
Deduct for $\frac{1}{2}$ of valley "C" $\frac{7}{8}$ -inch, because rafter "D" meets rafter "C" the same as a common rafter to the ridge.
Net length 11 feet, $10\frac{11}{16}$ inches less $\frac{7}{8}$ inch = $9\frac{13}{16}$.
Plumb and seat cut 12 and $5\frac{1}{2}$.
No side cut.

Jack Rafters "F", "G", "H", etc.

Length per foot run, same as for common rafters, 13.20 inches, or
Rafter "F" is same length as common rafter "E", 171.6 inches.
The difference in run of each succeeding jack is 2 feet.
Difference in length of each succeeding jack, 13.20 inches $\times 2 = 26.40$ inches.
Length of rafter "G" is 171.6 inches less 26.40 inches = 145.20 inches.
Length of rafter "H" is 145.20 inches less 26.40 inches = 118.80 inches.
Length of rafter "I" is 118.80 inches less 26.40 inches = 92.40 inches.

Proceed in the same manner for "J", "K", and "L".

The length of these jack rafters may also be found in the same way as the length of the common rafter is found, by multiplying the length per foot run by the run.

Length of rafter "H" is 13.20 inches $\times 9 = 118.80$ inches.

Length of rafter "I" is 13.20 inches $\times 7 = 92.40$ inches.

The length thus obtained is from center of valley "C" to center of ridge "A". Deduct for ridge $\frac{7}{8}$ -inch and for $\frac{1}{2}$ of valley, $1\frac{1}{16}$ inches; total deduction, $1\frac{1}{16}$ + $\frac{7}{8}$ -inch = $2\frac{1}{16}$ inches. Note the deduction varies with the pitch, the same as the length varies with the pitch.

The deduction at the lower end need not be made if the length is measured on the long side of the jack.

The side cut for the jack at the lower end is 12 and $13\frac{3}{4}$. See application of square in figure 3.

Plumb cut 12 and $5\frac{1}{2}$.

Note there is a plumb cut at the upper end, and a plumb and side cut at the lower end.

Rafter "O" and "P" Solved

Run is 8 feet.
Length per foot run 13.20 inches.
Length $13.20 \times 8 = 105.6$ inches.
Deduct $1\frac{1}{16}$ inches for both ends or measure along the

(Continued to page 126)

Instructions in Roof Framing

(Continued from page 124)

long side of the rafter which will come out approximately the same.

Length of rafter "P" is $13.20 \times 4 = 52.80$ inches.

In working a solution of this kind in practice you will often find that the measurements do not all come out exactly, very often due to slight errors in the layout of the plate, etc. There is hardly ever a building for which the plates are absolutely accurate or square as we might call it, therefore slight adjustments must be made when framing the rafters.

Problems

(1) Find the length of rafter "E" for a roof with an 8-inch rise per foot run. The data for this pitch is as follows:

Length per foot run, 14.42 inches.

Deduct for $1\frac{5}{8}$ inches ridge, 1 inch.

Length of hip per foot run, 18.76 inches.

Deduct for $1\frac{5}{8}$ inches ridge, $1\frac{1}{4}$ inches.

(2) Find the length of rafters X, Y, and Z, for the same pitch.

(3) What is the length of rafter "D"?

(4) Give the side cut for rafter "H".

(5) What is the difference in the lengths of succeeding jacks if spaced 2 feet on centers?

Answers

(1) The run is 13 feet. The length per foot run, 14.42 inches.

Length of rafter $14.42 \text{ inches} \times 13 = 187.46 \text{ inches}$, or 15 feet $7\frac{1}{16}$ inches.

Deduct for ridge 1 inch.

Net length of rafter "E" is 15 feet $6\frac{1}{16}$ inches.

(2) Length of rafter "X" is $14.42 \text{ inches} \times 6 = 86.52$ inches or 7 feet, $2\frac{1}{2}$ inches.

Length of rafter "Y" is $14.42 \text{ inches} \times 4 = 57.68$ inches or 4 feet $9\frac{11}{16}$ inches.

Length of rafter "Z" is $14.42 \text{ inches} \times 2 = 28.84$ inches, or 2 feet $4\frac{13}{16}$ inches.

(3) Length of rafter "D" is $18.76 \times 8 = 150.08$ inches, or 12 feet $6\frac{1}{16}$ inches.

Deduct for $\frac{1}{2}$ of valley "C" 1 inch.

Net length of valley "D", 12 feet $5\frac{1}{16}$ inches.

(4) Side cut for rafter "H" take 14.42 on blade and 12 on tongue, mark along blade.

*Rule: To lay out side cut for jack rafters take the length per foot run on one arm of the square and the run (12) on the other arm.

(5) The length per foot run is 14.42 inches. If the jack rafters are spaced 2 feet on centers then the difference in length is $14.42 \text{ inches} \times 2 = 28.84$ inches.



Law for the Builder

(Continued from page 123)

After the foregoing statement of the substance of the claim and defense of the contractor and the owners the court directed its attention to a consideration of whether or not the architect had the power, under the contract, to bind the owners by a verbal assurance that a written demand or notice for delay was not necessary. In this connection it was, in part, said:

"The importance of this stipulation, as well as its purpose, is manifest. The very contest that has arisen in this case demonstrates the necessity of some such cautious provision. Disputes frequently arise between different contractors, or the owner, and the architect, as to responsibility for delays in the work. The owners are very much in the power of contractors and architects. To avoid uncer-

tainty of verbal disputes, and to prevent the contractors from making claims for delay after the building has been finished, is clearly the purpose of such provisions.

"They are for the benefit of both, especially for the owner. The plaintiff knew that it could have no claim for delay for any reason unless it made a claim in writing within 24 hours after its occurrence. If, relying on the assurance of the architect, it chose to go on with the work without placing itself within the protection of the contract, it must bear the consequences, unless we can say the architect had authority to waive this condition.

Architect Had No Power to Waive Conditions

"As we have already said, the purpose of this stipulation was to protect the defendants from stale claims for delay, which might be based upon oral understandings, and made when it might be difficult to prove the facts in relation thereto. The giving of notice was a condition precedent to any authority on the part of the architect to act. The latter was not a general agent of defendants. He had only such authority as was given him under the contract. . . ."

In conclusion, after considering other points not material to this discussion, the court reversed the judgment of the lower court in favor of the contractor. Holding, in effect, that upon the facts of this case the architect did not have the power to waive the condition for written notice of delays provided in the contract. And that the contractor was not entitled to rely upon a verbal waiver of this condition made by the architect.

The foregoing case was carefully considered and is a decision of great value to contractors and builders on the point decided. Of course, it is possible for an owner, by his actions, to waive a stipulation in a contract such as we have been considering, but as a general rule if a contract requires the contractor to make his demand for delay in writing it had better be complied with to the letter. Certainly, in the light of the foregoing decision the contractor should not rely upon the verbal promise or opinion of the architect. This, of course, assuming that the architect is not expressly given such authority in the contract.

LESLIE CHILDS.



Ranges in Any Color

THE demand for color in the kitchen has reached the point where you can obtain a gas range in any hue desired. All that is necessary, says Miss Isobel Allobach, home service director of the Southern Counties Gas Co., Los Angeles, is a sample of the kitchen tile or a piece of the curtains, preferably the tile.

Miss Allobach believes that color in the kitchen prolongs life, makes food taste better and results in other benefits.

"What could be more interesting," she asks, "than a kitchen with soft lavender walls, a warm ivory trim, curtains carrying out the same tender tones, or all-green or green and white range, or a range with lavender tints?"

A woman could work in such a kitchen for hours and not become fagged, Miss Allobach says.

"I had a letter from a bride in the East recently," she states. "She was finishing the kitchen of her new home first and giving it much more attention than the balance of the house because, as she explained, she would be in it much more than any other room and she wanted to be happy there. She explained naively 'she just knew the food she prepared for friend husband would taste much better under these conditions.' Her kitchen was a warm ivory with orange curtains. The range was to have a yellow trim. These bright, warm colors were intended to bring a semblance of sunshine to Pittsburgh's cloudy weather."

Some twenty manufacturers have combined to produce kitchen equipment in standard colors so that the housewife with a flair for the artistic may satisfy her soul.

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Handsome Refreshment Stand Uses Hinged Steel Sash

Puttyless Window Panes Fastened with Clips May be Replaced with Steel Sheets During the Winter Closed Season

WHEN a barbecue stand is to be erected in such a beautiful spot as Sunset Circles, Lake Front, in the City of Muskegon, Mich., it is only right that it should be made a beautiful building to fit its location. And so the City of Muskegon itself undertook the building of the roadside refreshment stand which is pictured at the bottom of this page. It is a 30 by 20 foot building of brick and concrete with windows all around and in no way detracts from the natural beauty of the location.

Of course a roadside refreshment stand is of little use during a portion of the year and the common practice is to close such a place during the winter. When it comes time to reopen in the spring, the building is often found to have been broken into by vandals and nearly always window panes must be replaced. In this stand, however, these misfortunes have been entirely avoided by the use of a certain type of window.

These are installed in sections of 15 panes each. The lower 10 light section is fastened by steel hinges to the upper five light section. The lower sections swing outward and up, entirely out of the way, as may be seen from the close-up illustration. It is held open by steel buttons.

But the particular feature of these windows is the method by which the glass is fastened into the sash. The glass is held against a cushion of cork, by means of patented clips, especially designed for use with this type of window, and somewhat on the order of Pullman window clips, and held in by brass screws. These clips entirely eliminate the use of putty.

Because of this method of fastening the glass, a new pane can be fitted in a few moments time, in case a pane is broken. It is not necessary to call a glazier. The owner can put in the new pane himself.

At the close of the business season, all the panes of glass can be removed and sheets of steel can be placed in the openings in their stead. The glass can be wrapped and packed away for the winter where it will be safe until spring. With the steel sheets replacing the glass and the windows secured by small padlocks attached to locks with which the windows are equipped, the stand is secure against molestation during the months when it stands idle and unprotected.

The doors of this refreshment stand are made in two sections. The lower half is of wood, to be used as a counter. The upper half is fitted with glass, like the windows, is hinged to the frame at the top and is held open by means of a 1/2-inch steel rod.



These Steel Windows Are Hinged to Be Raised Out of the Way as Shown. They are also equipped with glass which can be replaced with steel sheets during the closed season.



This Refreshment Stand, Built by the City of Muskegon, Mich., is a Real Ornament to the Beautiful Lake Front Drive on Which It Is Located, and Is Equipped with Certain Practical Features Which Make It an Outstanding Example of Refreshment Stand Construction.

Steel Roof Blankets Fire in Severe Government Test

THAT a galvanized sheet steel roof of the type usually found on industrial and farm buildings will serve somewhat as a blanket on relatively severe fires and will effectually reduce the hazard from flying sparks and burning embers was indicated in connection with a fire test just conducted by the United States Bureau of Standards.

A five-story building, 30 feet wide and 75 feet long stood in Washington about midway between the Capitol and the White House. The building, about 21 years old and for years used as a seed and feed store, was of open joist construction. The walls were of brick. The floors were wood and the joists were of timber, supported by heavy wood columns.

Owing to the progress of civilization and a desire on the part of Congress to further beautify the capitol city, it was decided that the building must come down to make way for more imposing structures. This opportunity the Bureau of Standards made use of to test all types of steel safes under actual fire conditions, an opportunity to learn just what would happen to valuable records inside of a safe after the safe had gone through a fire, fallen several floors, landed perhaps on its side and remained buried in the smouldering debris until cooled off enough to be recovered.

Authority was granted the Bureau of Standards to use the building for this test. Various types of safes, 32 in number, were donated by safe manufacturers interested in learning just how much punishment their particular product could stand. True, similar safes had been tested in laboratory tests, but never had the opportunity presented itself to test them in a five-story structure under actual fire conditions and on such an elaborate scale.

Only one thing might make the conduct of the test dangerous under certain weather conditions. The building to be destroyed was located adjacent to the wholesale and

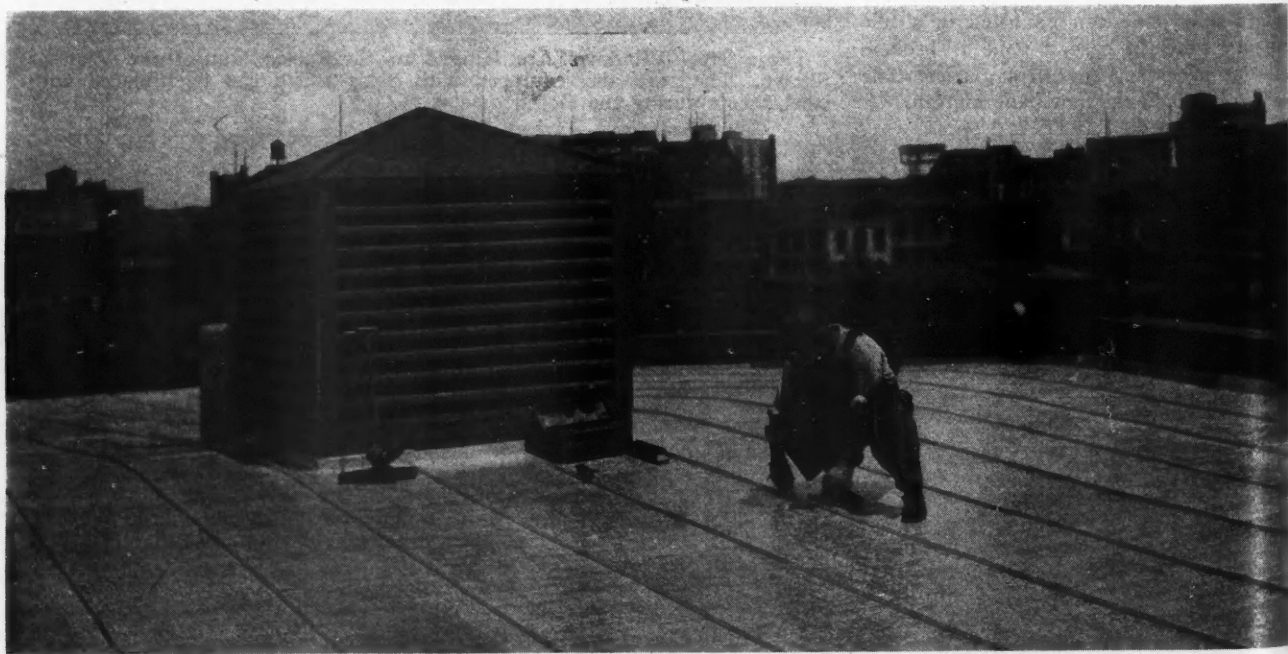
retail produce market districts, on Little B Street, between 10th Street and 11th Street, N.W. Only 200 feet away was a theater building. The building housing the Post Office Department was only 250 feet removed. With a wind blowing toward these or other less imposing buildings they might be endangered by the hot blast from the fire or by flying sparks or fire brands.

The old roof of the building to be burned was of such composition that it would quickly catch fire in such a test. Under the terrific heat generated by the burning of the old dry lumber, purposely piled on floors below, this roof would soon be burned through, thus providing a chimney-like avenue of escape for any sparks or fire brands that might be borne in the inferno underneath.

Because of this condition the U. S. Bureau of Standards invited the Sheet Steel Trade Extension Committee to co-operate in the test by placing a steel roof over the old roof. Double standing seam galvanized steel roofing was used. The roof was applied by John A. Pierpoint, Past President of the National Association of Sheet Metal Contractors and a Washington business man. The type of roof was selected by W. D. Markle, Secretary of the National Association of Sheet Metal Workers and for years a practical sheet metal man.

The fire was started at 5:31 Sunday morning, June 17. In a few minutes smoke and flame were bursting through the windows at the front and rear of the building. Within ten minutes the structure was a roaring furnace and clouds of black smoke cast a pall over the city. Most of the district's available fire apparatus was placed at strategic points around the building. Several hundred extra police and firemen were on duty. Thousands of Washingtonians, sleep still in their eyes, stood outside of carefully guarded police lines and watched the biggest bonfire that had ever been staged in the Capitol.

Observers stationed on a nearby roof kept careful watch



Prior to Burning an Old Five-Story Building, in a Fire Test Conducted by the United States Bureau of Standards, a Double Standing Seam, Galvanized Steel Roof Was Applied Over the Old Roof, and During the Burning it Proved an Effective Protection Against Sparks and Fire Brands Which Might Have Ignited Other Nearby Buildings.

on the steel roof of the burning building. Whenever a slight change in the direction of the wind blew the smoke to one side and revealed the galvanized steel underneath, it was inevitably heralded by the remark: "She's still tight," uttered by someone of the group of firemen posted there as precaution.

Following, in part, are the observations of the Bureau of Standards:

"The framing carrying the elevator penthouse at the front of the building fell at 22 minutes after the fire was started, carrying a portion of the roof with it. Further collapse of roof supports in this part of the building occurred during the next 5 minutes, leaving the front part of the metal roof unsupported. At 28 minutes portions of the front wall fell and between 36 to 39 minutes there was a collapse of the upper portions of the side-walls. This would, of course, remove all support for any roofing.

"However, particularly with masonry walled buildings, the danger from hot blasts and brands is largely over when this stage is reached. The period of protection of the metal roof during this particular fire extended up to 30 minutes after the fire started, which represents a portion of the most intense period of the fire. The metal roof for this time undoubtedly helped to prevent a chimney effect, compelling the flames and hot gases to escape mainly through the front and rear of the buildings.

"We greatly appreciate the courtesy shown in placing the steel roof on the building as a safeguard against a potential hazard that fortunately did not develop, under conditions present during the test, to such extent as was apprehended."

No effort was made to extinguish the flames at any time. It was the desire of the Bureau to allow the fire to burn itself out so as to subject the safes and the roof to the utmost punishment. As a result no water was thrown on the fire, but the firemen centered their efforts on preventing radiated heat from igniting nearby buildings.

The highest temperature recorded in the interior of the building during the test was near 2,400 degrees Fahrenheit. Each safe was equipped with a maximum indicating thermometer to reveal interior temperatures. The interior of the building at numerous points was connected up electrically with a sheltered observation post outside and away from the building. This enabled observers to constantly check the temperature during the fire. Similar connections also were made to various places in the walls of the building.

A two-story building adjoining the five-story structure also was included in the test. This building had an old tin

roof on it and although the fire produced openings in this roof at about the same time as the other building, no flying fire brands escaped from it before it was buried by the collapse of the adjacent wall of the five-story building at 39 minutes after the start of the fire.

Mr. John A. Pierpoint, Past President of the National Association of Sheet Metal Contractors, who laid the steel roof and closely observed the test, reports as follows concerning the behavior of the roof:

"I observed the burning from the south (front) of the building. From the time the fire was started it was only a few minutes until it reached the elevator shaft and soon spread to the four floors above. The front cornice soon gave way and allowed the upper part of the front wall to fall, which gave a fine view under the roof at the front.

"The roof rafters and old composition roof were soon burned away, leaving the sheet steel roof suspended over the fire. The steel roof continued to wave up and down over the fire until a part of the wall at the southeast corner near the elevator shaft gave way.

"All of the floors at the front had been burned out and had fallen before this. The fire appeared to burn from the front toward the back, but the steel roof was still waving up and down after everything else had burned up.

"I only wish every sheet metal contractor in the country could have seen how the sheet steel roof continued to wave up and down, even

though it was red hot from the terrific heat below, and at the same time prevented all burning embers from going above the line of the roof. As a fire blanket or retardant, I feel that the sheet steel roof was a complete success."



Another Competition Announced

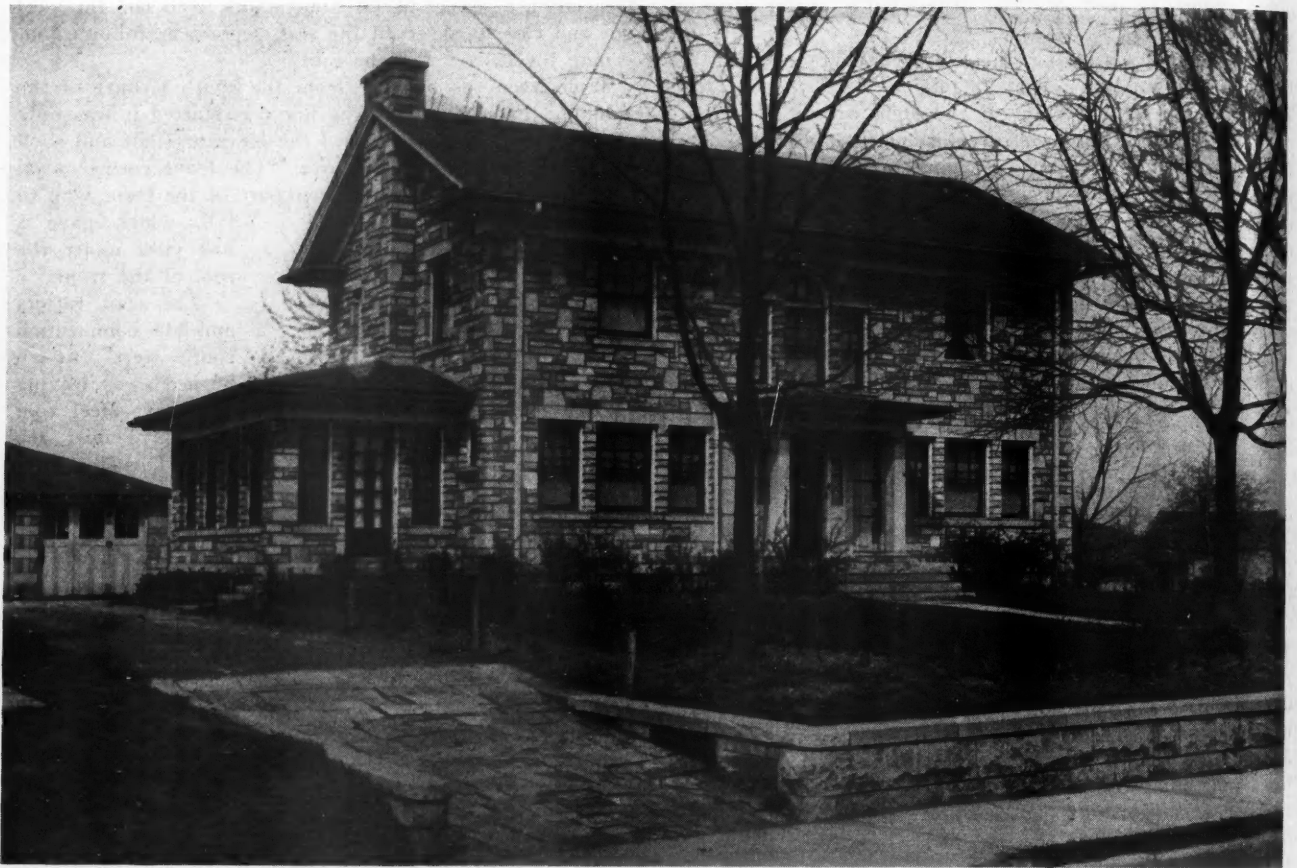
ANNOUNCEMENT has been made of a Third Wayside Refreshment-Stand Competition. This series of competitions was initiated by Mrs. John D. Rockefeller, Jr., through The Art Center of New York and The American Civic Society of Washington, D. C., for the purpose of improving the design of wayside refreshment stands. Sixteen cash prizes, amounting to \$1,000, are to be awarded for photographs showing the most orderly arrangement of refreshment stands and their premises. In conjunction with this contest \$100 each will be awarded for the first 15 stands to be built from prize-winning designs of the second competition. A booklet showing all of the prize-winning designs may be obtained by writing to the Secretary of Wayside Refreshment-Stand Competitions, The Art Center, 65 E. 56th St., New York City.



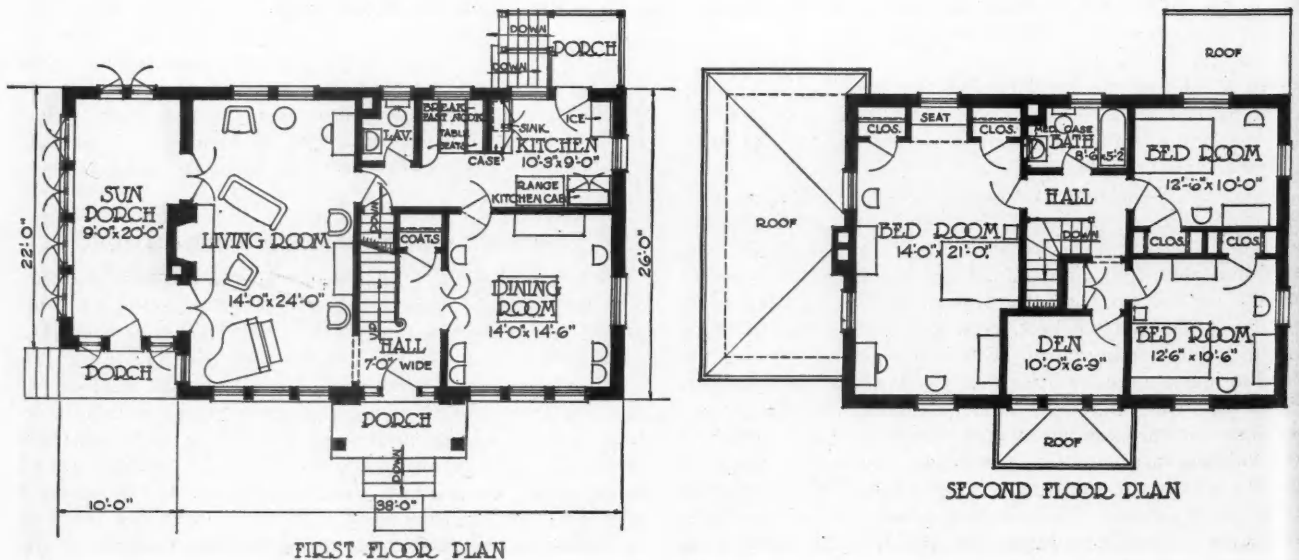
During the Actual Burning, the Steel Roof Remained Intact, an Effective Protection, Until the Entire Interior Was Burned Out, Practically Ending the Danger of Fire Brands, and Only Fell When the Brick Walls Collapsed.

A Home of Indiana Limestone

This Material Which We Associate with Big Buildings is Equally Appropriate for Homes and is Being so Used with Gratifying Results



The Residence of Martin Benson, in Bedford, Indiana, Is an Example of the Effective Use of Limestone in a Medium Sized Home. Both the house and garage are of Indiana limestone, random ashlar being used, and the semi-rough finish makes an attractive exterior which requires no expense for upkeep and the beauty of which is only enhanced by the passage of years. The most surprising and interesting thing about this house, however, is that, in spite of popular conception to the contrary, it was built at a cost which is not greatly in excess of the cost of a similar house, of good construction, of other materials. Add to this the elimination of painting and other upkeep expense and the stone house need not be considered a luxury beyond the reach of the average home owner.



The Floor Plans of This Limestone House Show Us a Home of Six Rooms, Sun Porch and Den, Just Such a House as Will Meet the Needs of the Average Family.

The New Vogue in Radiator Heating Equipment

IN the better homes, offices, banks, hospitals and similar buildings radiator heat has earned its acceptance because it has contributed more in the way of comfort, convenience, control and economy than any other form of heating. But, despite its almost universal acceptance, architects, engineers and building owners have never become entirely reconciled to the appearance of space-wasting radiators.

While the matter of concealing radiators behind ornamental grilles or cabinets has improved the appearance of furnished rooms to some extent, these accessories are costly and present added complications in the matter of cleaning, opening and closing of radiator valves and reduce the heating efficiency of the radiator itself. Then again, the matter of wasted room space and the complexity in the furniture and decorative scheme is ever present.

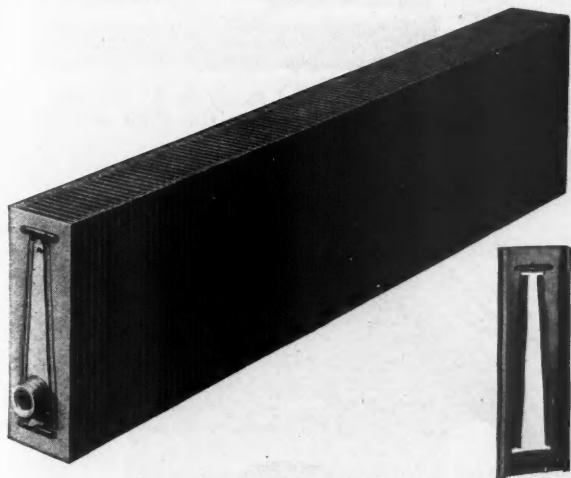
A certain firm, conspicuous in the manufacture of heating and ventilating equipment, had spent years in developing a small, light, compact and indestructible radiator for its unit ventilator. Ordinary sheet metal or light weight automobile type radiators failed in this service, where cold air, often 30 degrees below zero, was blown through the radiator for heating.

The result of this research work was a new type of radiator. It consists of a core, cast of aluminum and aluminum alloy in one piece, which acts as the steam container. A plurality of aluminum plates are mounted on the core in perfect metal to metal contact and act as heating surface. The heat in the steam within the core is transferred through the metal and delivered from the surface of the plates to the surrounding air.

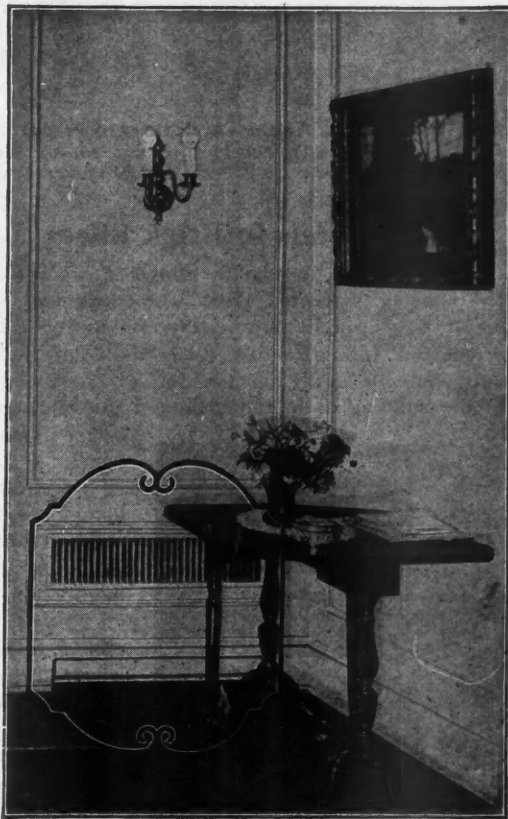
Aluminum, because it is one of the best conductors of heat of all known metals, and also because with its lightness of weight and indestructible properties, is exceptionally suited to heating service.

Not long after the results of the radiator had been demonstrated in the unit ventilation service there grew an insistent demand on the part of architects and builders for this radiator to be used for direct heating to replace former types of radiation.

Out of the invention of this new type of radiator and the demand for an improved method of radiation was born a



This New Type of Radiator Consists of a Core Cast, in One Piece, of Aluminum and Aluminum Alloy, Which Acts as a Steam Container and on Which Are Mounted, in Metal to Metal Contact, a Plurality of Aluminum Plates Which Act as Heating Surface.



The New Radiator Is Designed to Be Placed in the Wall or Partition with Only a Neat Opening at the Bottom and Warm Air Grill at the Top Visible.

new contribution to the art of heating, an invisible radiator.

This invisible radiator is a complete unit, as illustrated. The radiator itself is enclosed in a heavy steel cabinet, having a cold air inlet opening at the base and a hot air outlet grille with damper at the top. The unit is designed to be placed in a wall or partition, covered with metal lath and plastered, so that nothing will show but a neat opening at the bottom and the attractive outlet grille. No pipe work is exposed and no valves are required, since control of the temperature is secured by the heat control damper at the outlet grille.

These radiators are furnished in various sizes and capacities for either steam, vapor, vacuum or hot water heating service. The space-saving advantages, together with the added beauty and sanitary features of the invisible radiator, has caused it to revolutionize the heating practice in the better homes and monumental buildings.

Complete literature will be gladly sent to architects and builders by the manufacturers upon request.



"**Miniature Boat Building**," by Albert C. Leitch, published by The Norman Henley Publishing Company, 2 West 45th St., New York City, is a concise and complete, practical treatise, covering in detail the construction of working models of eleven famous racing, sail and power boats and their power plants; model-making in general, its history and latest simplified construction methods. It is fully illustrated with drawings and diagrams. The author is naval architect at the Brooklyn Navy Yard. Price \$3.00.

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, Ill.*

Wood Mantels in Brick Effect

THE accompanying illustration shows a new fixture which is being marketed through the regular dealer channels. It was brought out in response to the rapidly growing demand for attractive ready-built and built-in fixtures and may be easily installed at low cost. Either in new home building or in remodeling it makes a strong



These All-Wood Mantels Are Shipped Ready-Built and Have the Appearance of Handsome Brick or Tile Pieces.

appeal to the home owner or prospective home owner. This mantel is made of thoroughly kiln dried cypress and poplar and finished to resemble either brick or tile. In solid colors, with contrasting mortar joints, it gives the appearance of brick while with a soft blended color finish it gives a tile effect.

The mantel is ready-built and is shipped knocked-down so that it takes little space either in shipping or in storage in stock and can be sent to the job in the original crate, like fine furniture, to be reassembled in place. Six models are available, four with stippled, Tiffany blend finish and two painted. These provide a wide range of price to meet all requirements. They may also be had primed white only, at a reduced price, to be finished on the job as desired. The manufacturers, however, recommend that the first mantels be stocked fully finished as their finishing department has had experience in this work which assures perfect results.

While these mantels are stocked in standard sizes only, they can be furnished in any width fireplace which may be desired at an additional cost for extra sizes.



New Paint and Lacquer Spray

THERE has, recently, been introduced a new rotary, compressor type, electric spray machine, designed to round out a well-known line of portable, electric spraying devices. This new model was designed for the application of paints, enamels, varnishes, lacquers and shellacs where a fine finish is necessary, such as one coat of enamel on fixtures and chandeliers, or where it is cus-

tomary to rub down between coats as in automobile and fine cabinet work.

The pressure, for the break-up of materials to be applied, is obtained by the self-contained, direct connected, rotary compressor, the rotor of which is mounted on the armature shaft of the motor. This three-bladed rotor is self-lubricated. The pressure developed in this device is stepped up in the especially designed fluid tip and nozzle to a point sufficient to handle practically any type of material.



A Spray Paint Machine for Applying Paint, Enamel or Lacquer on Such Jobs as Fine Cabinet Work.



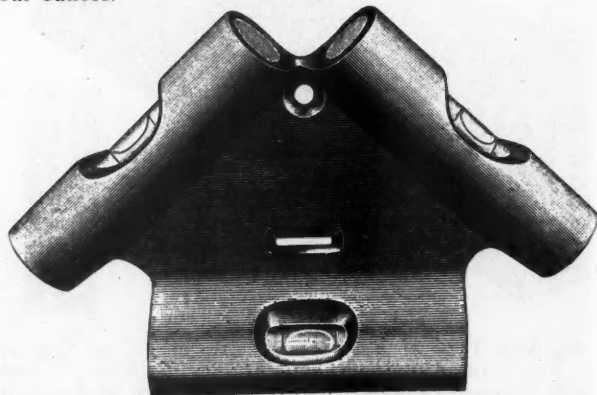
Two New Levels

THE illustration shows two levels which are of the most highly perfected sort. The first is an aluminum line and surface level, which weighs but one-half ounce. It has a flat base for use on flat surfaces and hooks for attaching to a line, when desired as a line level. The vials are set with this manufacturer's special compound.

The other level is a three in one type, used as a straight edge, plumb level and 45 degree. By means of two screws it is easily attached to any straight edge. It is especially adapted to use in building 45 degree rafters. It weighs only four ounces.



A Simple and Accurate Line and Surface Level Weighing But Half an Ounce.



Another New Level Especially Adapted to Use in Building 45-Degree Rafters.

Lovelier walls at less cost

Show these 5 advantages of
Johnson's Liquid Wax Glaze
to your paint foreman

- 1 **Any color effect**—mottled, shaded, pastel, gold, or silver—can be obtained with Johnson's Liquid Wax Glaze on textured or sand finished walls.
- 2 **Perfection of color.** Wax glaze is transparent and blends readily with oil colors to produce a delicacy and exactness of tone hitherto undreamed of. Overlapping, streaking, and brush marks do not show.
- 3 **Permanently fadeless colors**, uninjured by sunlight, dampness, or room temperatures. Soap and water do not harm them. Not subject to oxidation, as are paints, wax glaze is practically imperishable.
- 4 **700 sq. ft. per gallon** covering capacity. Painters say it saves 50% in cost. Also applied with minimum of time and effort. Larger wall sections can be completed in one operation. Save resetting of ladders or scaffolding.
- 5 **Readily removed** or changed by the simple use of Natural Liquid Wax Glaze itself. Particularly desirable for apartments and other frequently re-decorated buildings.

Talk this over with your paint foreman. Give him the coupon to send for a Free Quart Sample of Johnson's Liquid Wax Glaze. Then have him show you the results. Clip the coupon for him *now*.

*Paint foreman's letterhead
or business card to be attached*

A BETTER PROFIT MAKER

"Surpasses anything I have ever used."
Dallas, Texas.

"Saved 50% in cost."
San Jose, Calif.

"The architect building the new \$35,000 church here changed his specifications from tint to your wall wax when he saw my samples."
Martinez, Calif.

"None of the glazing liquids can approach the easy blending colors in this wax."
Oakland, Calif.

"In all my experience as a painter, working at the trade for sixty years, I have not found any material of that kind to equal your liquid wax glaze."
Cape May, N. J.

"Gives a very beautiful glazed effect."
Philadelphia, Pa.

"I can remove the finish any time and put on a different one in a few minutes which can not be done as quickly with any other process."
Ontario, Ore.

"A little goes a long way."
Augusta, Wis.

"The easiest finish I have ever been able to find for textured walls."
Jackson Heights, L. I.

S. C. JOHNSON & SON
Dept. AB 9, Racine, Wisconsin

"The Interior Finishing Authorities."

Please send me a Free Quart Sample of Johnson's Liquid Wax Glaze and complete instructions for use.

Name.....

Address.....

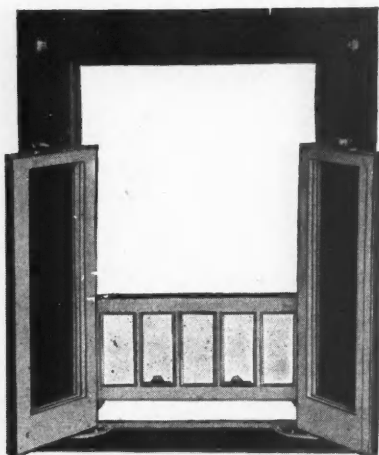
City.....

State.....

Sliding-Casement Windows

THERE has recently been placed on the market, through the medium of retail lumber dealers and sash and door plants, a new window sash which is both sliding and casement in type. This sash, it is claimed, combines the advantages of the sliding type sash with those of the casement sash and also offers certain advantages of its own. The sash itself is not manufactured by the company which has introduced it, only the necessary hardware. The sash and door plant or dealer handling it builds the window and fits the hardware to it. The right to manufacture the type of sash for this window goes with the buying of the hardware which is fully patented.

A general idea of this window may be obtained from the illustration. As may be seen, it is in three parts, two casement sash that both slide up and down and swing open and shut, and one transom, ordinarily kept at the top, but which may be slid to the bottom to act as a guard-rail or for easy cleaning. No special frames are required.



Windows Which Both Slide Up and Down and Also Swing Open Like a Casement.

The operation of this window is based on the patented channels which are fitted between the frame and sash. Instead of the sash itself sliding up and down in the frame, as in ordinary windows, the sliding is done by the channels, strips of pure zinc attached to the sash by hinges. These hinges permit the casement to be swung open and, as the entire channel moves with the sash, allow the latter to be used as a casement whether the window

is at the top of the frame, at the bottom or at any point between.

This combination permits almost any desired ventilation. The casements may be swung wide open or, by means of stool-plates furnished with each set, for attachment to the sill, they may be opened to angles of 15, 30, 45, 60, 75 or 90 degrees, and held in that position. The window may be raised as in the sliding type, or slid part way up, and then swung open and the supply of air may be controlled further by raising or lowering the transom.

Besides acting as a sliding hinge connector, the channel also serves as weatherstripping, forming an almost air-tight joint between the sash and frame, it is said. Zinc and copper weatherstrips for sealing the other joints are also included in the set, making the window weathertight.

The sashes are controlled in the frame either by the ordinary sash weights or by a special sash holder. The latter is a strip of tempered, lock-spring steel, shaped somewhat like a double U and fitting into a groove in the sash, holding the sash to the frame by friction. This sash holder is furnished with each set but may or may not be used according to desire.

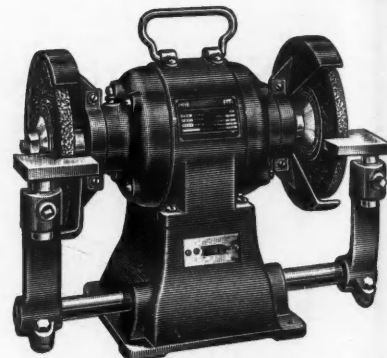


Two New Electric Tools

TWO new electric tools, a drill and a bench grinder, have been added to the line manufactured by one of the leading companies in this field. The new $\frac{5}{16}$ -inch

drill combines all the many attractive features of this company's electric drills, it is stated. Straight, graceful lines are maintained and this, combined with a powerful motor, gives a light, powerful drill. The special ventilation system is maintained in these new drills, which permits continuous production work with a minimum of heat. A special recess for the chuck key adds to the convenience of this tool.

The bench grinder is designed especially for sharpening as well as for general grinding work. It is furnished with two 6-inch grinder wheels, one coarse and one fine, wheel guards, adjustable tool rests, cable and switch. It is furnished for A. C. current circuit, 110 or 220 volts, and is provided with a handle for convenient carrying.



Above: The New Electric Drill. Below: The New Bench Grinder for Sharpening and Grinding.



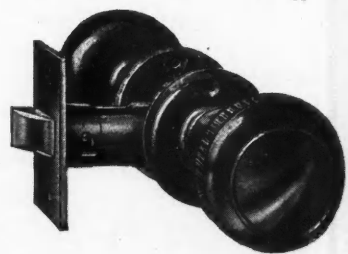
Door Knobs of Bakelite

KNOBS and roses of bakelite, in either dead black or walnut finish, with perfect walnut grain and color, adorn the new models of a well-known line of tubular latch sets. The advantages of the bakelite knobs and roses, over the usual brass or steel parts, as pointed out by this company, are that the finish, aside from being unusually harmonious and attractive, is absolutely permanent. It is acid-proof, fire-proof and cannot wear off, as it permeates the entire material of which these parts are moulded.

As for the durability of the bakelite parts themselves, it is claimed that they will stand indefinitely more abuse with less apparent effect than those made of brass, that a blow of a hammer, sufficiently severe to mutilate a brass knob, would have little effect on the bakelite knob.

Contrary to general opinion, bakelite is exceptionally tough, and is difficult to break or chip. This is clearly evidenced in the number of uses to which the material is put where this quality is required, such as ball bearing retainers, pump valves, airplane propellers, gears and pinions, billiard balls, etc.

All the exterior metal parts of these latch sets, including the locking roses when this type of latch is required, are made of solid brass, procurable in any finish desired. The mechanism is this company's regular tubular type which requires no mortising and is installed by simply boring two holes. These sets are now being offered at prices considerably lower than the average solid brass set, it is stated, and closely approaching the price of steel sets.



These Bakelite Door Knobs Are Finished Either Dead Black or in Grained Walnut Finish.



Mr. Leake
says they make money
with CARNEY CEMENT!

THE Leake Construction Company was erecting the Rock Island shops at Silvis, Illinois. When Mr. Leake gave us the order, we expressed the hope that he would find the brickwork profitable. His reply was: "Yes, we usually do make money with Carney Cement."

His company is not the only large railroad contractor using Carney. Among others, you will find such builders as Jos. C. Nelson & Sons, G. A. Johnson & Sons, W. J. Zitterell Company, J. A. Moss, Ellington Miller Company and H. A. Peters Company who use Carney Cement regularly.

The reason is simple. Carney Cement mortar produces as fine a bonded wall as you'd care to look at—and at a cost far below the average.

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Since 1883

Specifications

1 part Carney Cement to 3 or 4 parts sand depending upon quality of sand.

CARNEY CEMENT
for Brick and Tile Mortar

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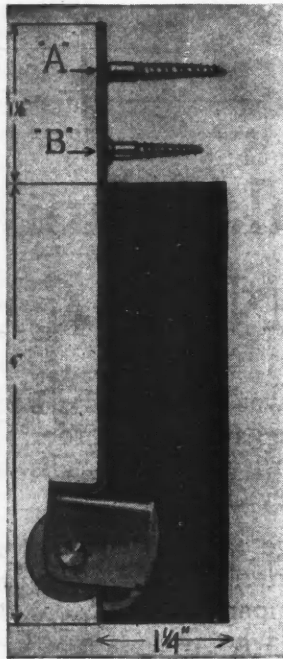
Spring Sash Sustainers

WEIGHTS, pulleys and cords are no longer necessary for sliding sash windows if the sustainer shown in the accompanying illustration is used in their place. Two of these sustainers will hold one sash weighing not more than 18 pounds—if the two sash are of light weight, only two sustainers are required, one on the right of the lower sash and one on the left of the upper sash.

These sustainers consist of a spring of specially tempered spring steel, roller of cold rolled steel and pivots of bronze. With the exception of the bronze pivots, the entire fixture is thoroughly electro galvanized. The cost of this device is placed at about one-half to two-thirds the cost of ordinary double hung window equipment and the labor of installing is only one-half that for the ordinary equipment. Because of the small weight and bulk, the cost of handling and storage is greatly reduced over the old equipment.

It is claimed that this sustainer will entirely eliminate the rattling of sash and it makes possible a plank frame construction and narrow mullion. By the use of plank frames the interior trim may be reduced to 2 inches by $2\frac{1}{2}$ inches in width, which is both economical and architecturally desirable.

A mortise $\frac{7}{8}$ inch wide, $1\frac{1}{4}$ inches deep and 4 inches long is cut in the sash opposite, or slightly above, the center. The spring is set flush with the surface of the sash. If additional tension is required it is provided by slightly loosening the upper screw "A" and elevating the lower screw "B," which is an adjusting screw, and then again tightening the upper screw.



A Sash Sustainer to Replace Ropes, Weights and Pulleys.

A New One Man Floor Sander

HERE is a new machine that has been designed to meet every need of floor sanding. It is small enough to be operated in places where many sanding machines cannot be used, such as closets, alcoves and breakfast nooks. It is light enough for any man to carry it alone by removing the quickly detachable motor. It is fast enough to turn out the big jobs in record breaking time and is so easily operated that little effort is required in the work. This is the way the manufacturers describe its general characteristics.



New Model of a Popular Sander.

It is stated that you can crowd this machine as much as you like without slighting the job in the least and that on some jobs you will find it moving along, cutting cleanly and perfectly, faster than you would care to walk. This ease of operation is explained by the fact that the pressure is applied to the drum by lowering the for-

ward end of machine to the floor, not by lifting the rear end up as is done with many machines where the drum is rigidly mounted.

When idle, this sander rests on three wheels, two immediately behind the drum and a swiveling caster at the extreme rear of the machine. In operation, the truck wheels are raised, into recesses in the frame, by means of the control handle, permitting the drum to come in contact with the floor. Pressure is controlled by an automatic pressure regulator which permits taking a very fine cut or the entire weight of the machine can be thrown on the drum, giving maximum cutting pressure. In this way practically no physical effort on the part of the operator is required.

This new machine is designed according to a radically new principle. It is almost entirely of aluminum construction, it is compactly and sturdily built. The 8-inch drum of $7\frac{1}{4}$ -inch diameter is driven at a high rate of speed by a sturdy, $1\frac{1}{2}$ horsepower aluminum cased motor and specially adapted gears. There are no belts, no chains, no drum arms.

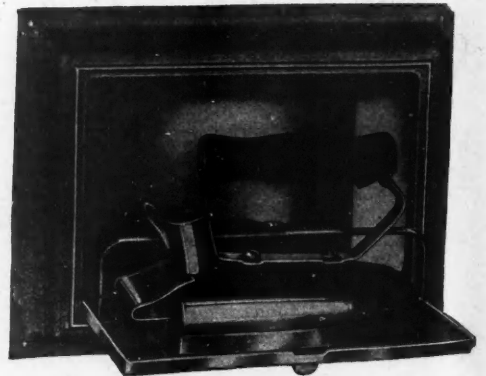
The cast aluminum frame has been so designed that it serves as a gear case, drum retainer, suction system housing and gear case cover. The drum driving gears are mounted right in the frame. This simplicity of construction insures perfect performance, it is stated.

The one-piece drum is covered with a resilient material. Full length paper clamps grip the paper for the entire width of the drum. The steering handle is a rigid and solid piece of steel tubing. The dust pipe is one piece, drawn steel and the tool box is built right on the machine, where it is handy, but out of the way. The aluminum truck wheels and caster are rubber tired. The automatic pressure control gives a definite, fixed pressure without tilting. The removable, cast iron pressure weight weighs 35 pounds. This machine has a capacity of 200 to 600 feet per hour of oak flooring, it is stated, and a proportionate capacity on other types of flooring.



A Fireproof Flat-Iron Cabinet

THIS new, built-in fixture is a fireproof, electric flat-iron cabinet which provides a permanent place for the iron and cord when not in use. With this cabinet there is no necessity of cooling the iron before putting it away. The cabinet is all metal with an inner lining covered with heavy asbestos. The open cabinet door forms a rest for the iron when in use, thus saving its space on the ironing board.



Built-In Cabinet for the Electric Iron.

It is only necessary to disconnect the cord from its socket and close the cabinet to dispose of both iron and cord. The outside dimensions of the frame are $12\frac{1}{4}$ inches wide by $9\frac{1}{2}$ inches high. The outward projection from the wall is $1\frac{7}{8}$ inches over all. The asbestos covered lining is $9\frac{3}{4}$ inches wide by 7 inches high and extends $3\frac{3}{4}$ inches into the wall.



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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.

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AMAZING OPPORTUNITIES

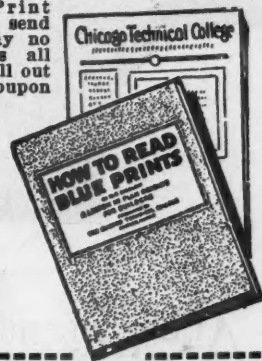
Over seven billion dollars will be spent this year in new construction! No wonder, then, such tremendous opportunities are open to you when you have this "head-work" training in Blue Prints.

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Shevlin Pine Gives



Stairway and hall, first floor level, George Read II House, New Castle, Delaware. The generous use of Pine woodwork gives an unusual charm to this old home, built about 1791.

ALL of the millwork in the home of W. B. McEwen at High Point, North Carolina, is of Shevlin California White Pine from the Shevlin mill at McCloud, California.

When you are welcomed in a home like this by a graceful Pine staircase, a fire-place in a Pine setting, and Pine built-in-features, you sense immediately an atmosphere of distinction. And the

SHEVLIN PINE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

An Air of Distinction

more completely Pine is used, the more you feel its traditional beauty.

Note the similarity of the stairway and hall of the modern home of Mr. McEwen, where Shevlin Pine imparts an air of distinction, with that in the home of George Read II, on the opposite page, which was built about 1791.

The generous use of Pine contributed greatly to the undeniable charm of many of our old colonial homes.

"Certified by Centuries of Service"

There is no guesswork about a home properly constructed of Shevlin Pine. The nation's oldest homes certify to the centuries of service given by Pine like this.

The fine texture and even grain of Shevlin Pine is extremely workable and lends itself to precise angular designs or beautifully rounded carvings. It takes practically any finish readily and retains it tenaciously. The smooth texture produces a satiny surface that stays sleek.



Stairway and hall of the W. B. McEwen home at High Point, North Carolina. Woodwork of Shevlin Pine gives an air of distinction throughout this modern home, completed in 1928.

Abundant Supply of Shevlin Pine

There is no shortage of the wood of our ancestors. The Shevlin interests have stands of selected Pine timber sufficient to last for many decades. Leading lumber dealers can supply you with Shevlin California White Pine, Shevlin Northern White Pine, Shevlin California Sugar Pine, Shevlin Norway Pine or Shevlin Pongosa Pine.

Learn More About Pine

If you wish to know more about Pine—its characteristics, physical properties, and uses—write for the booklet "Specify Shevlin Pine."

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.



Dining room in the McEwen home. Shevlin Pine millwork, supplied by the Snow Lumber Company, High Point, North Carolina; R. T. Cottam, builder and supervising architect.

SHEVLIN PINE

Hangers for Heavy Doors

THE two accompanying illustrations show a roller bearing door hanger and the track on which it is hung. This hanger is designed to handle doors weighing up to 1,000 pounds and the track is equipped with spring cushion stops



Door Track with Spring Stop.

which can be seen at the end where the track casing is cut away to show the spring. These stops are inserted at the ends of the track after the doors are hung and before the end stop is put on. They require no adjustment of any kind and cannot be put in wrong.

The hinge is provided with lateral or vertical adjustment and also adjustments for thickness of doors. Pressed steel, ball wheels, $2\frac{1}{4}$ inches in diameter, are used and 10 cold rolled, steel bearings, $\frac{1}{4}$ inch by $1\frac{3}{16}$ inches are used in each wheel. Heavy, underslung, double tandem trucks with flexible joints are used.

The pressed steel door strap is $10\frac{1}{4}$ inches long, 4 inches wide and $\frac{3}{16}$ inch thick. It is punched for five $\frac{3}{8}$ -inch bolts, and can be used for doors from $1\frac{3}{4}$ to 3 inches thick. The vertical adjustment permits the doors to be raised or lowered at either end by turning the suspension bolt which connects the stirrup with the door strap. The heavy pressed steel piece which fits around the adjusting bolt and lies flat on top of the door strap locks the adjusting bolt as shown in the illustration. By lifting this piece up clear of the door strap bolts, it can be used as a wrench to turn the adjusting bolt and raise or lower the door.

The clearance between the bottom of the track and the top of the door is $3\frac{1}{2}$ to $4\frac{1}{4}$ inches; bottom of the track to the center of the hole in the bracket, $5\frac{1}{8}$ inches. These hangers are finished in black japan and are packed in pairs with bolts, springs and all parts complete. Two stops are furnished with each pair of hangers.

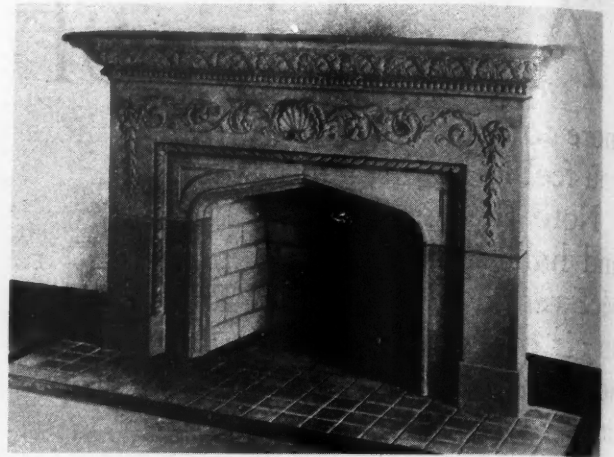


Beauty in Composition Mantels

BECAUSE of the demand for architectural beauty, in fireplaces, which will harmonize with the new types of wall treatment, both in plaster and wallpaper, there has been brought out the new type of fireplace shown here. These fireplaces are cast, by a special process, from a mixture of Georgia marble, white portland cement and other ingredients, in many beautiful designs and colors.

Fireplaces of this type are available in several plain colors to correspond with the natural stone mantel, but at a much lower cost, it is stated. There is also a two-tone effect which is especially effective, in both color and texture, with the present-day rough plaster wall treatment. The combination of beautiful moulding and blended colors makes a rich and satisfying effect. The ornamentation has clean-cut lines and detail equal to that produced by the expert stone cutter, it is claimed.

These mantels, according to the manufacturer, are harder



Composition Mantel of Real Beauty.

than natural stone itself and they are guaranteed to last a lifetime. They are not affected in any way by heat. They can be used with equal success where either gas, electricity, coal or wood are used in the fireplace. They may be cleaned with an ordinary scrubbing brush, soap and water.

Because of this company's experience and methods of manufacture, it is able to market these mantels at a price which makes them available for the less expensive home, while other models are more elaborate in design and larger in size to meet the requirements of the more costly home.

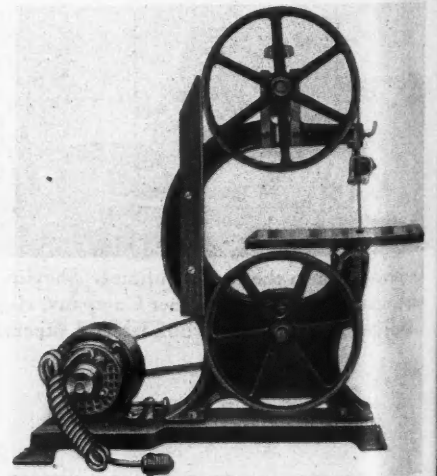
The jointing of the mantels has been worked out to make the greatest ease in setting so that any brick mason can install any of the models quite easily in a couple of hours. In shipping, a small diagram and a few simple instructions are enclosed showing the easiest way of setting that particular model. A small container of material is also furnished for the two or three joints, so that no special materials need be purchased.



Portable Electric Band Saw

HERE is a 12-inch, portable, electric band saw, constructed with a one-piece, solid, cast iron frame, with removable base. It can be attached permanently to a bench. The wheels are 12 inches in diameter with a $\frac{7}{8}$ -inch face bored and turned true. The saw wheels are fitted with positively adhering and sturdy rubber tires. The upper wheel is adjusted by a well machined, adjustment slide so as to align the saw blade and vary its tension.

The saw blades are preserved against breaking by a spring absorber in this adjustment slide. The saw table is $10\frac{1}{2}$ by 14 inches, machined and absolutely level. It is so constructed as to give it a tilting angle of 45 degrees.



An Up-to-Date Machine, 12-Inch Size.



Consider Balance

CUSHION—traction—mileage—these qualities *must* be in every solid truck tire in proper balance to give long and satisfactory service.

These three vital factors are properly balanced in Fisk Giant Solids with the result that they absorb shocks, grip any going, and give extreme mileage.

In the complete Fisk Commercial Line there is a tire for every kind of commercial vehicle and every kind of service—all are *balanced* tires that cut haulage costs per mile.

The Fisk Tire Company, Inc.
Chicopee Falls, Mass.

FISK TIRES

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The upper saw guide raises so as to give a $4\frac{1}{2}$ -inch cutting clearance. Both upper and lower guides are adjustable for perfect alignment with the saw blade.

The bearings are of ample length, reamed smooth so as to cause the least possible friction. The saw base, which comes separate from the band saw proper, is of cast iron. It is fitted with slots which make possible setting on this base either a $\frac{1}{4}$ or $\frac{1}{3}$ -horsepower motor. The shafts on the saw are hardened and ground.

It is equipped with a 5-inch, $1\frac{1}{2}$ -inch face, pulley for a flat belt. One saw blade, either $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$ or $\frac{3}{8}$ inch, is supplied. The roller guide bushing is of bronze. Every saw is tested and guaranteed to the fullest extent. This machine is surprisingly low in cost and at a slight additional cost may be equipped with a guard consisting of a single, solid aluminum casting machined and fitted to the machine.



New Steel Joists

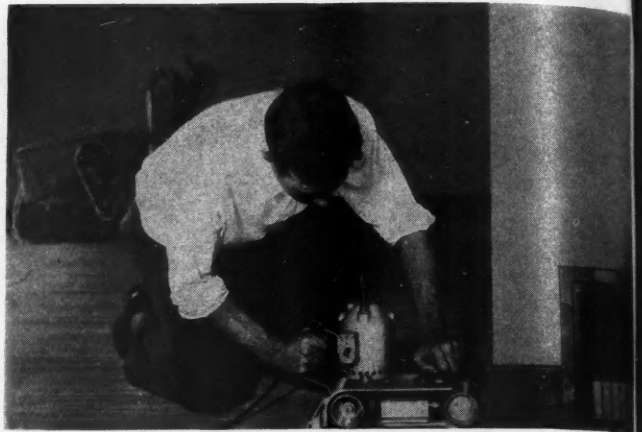
IN the United States, fire accounts for a property loss amounting to over one-half billion dollars each year. Realizing this tremendous annual drain upon our national resources, engineers have been engaged for some time in the investigation of structural steel members for the floors and roofs of light occupancy buildings.

With the perfection of steel joists, the solution of a good part of this problem has been found. The accompanying illustration shows the firesafe, permanent construction through the use of steel joists, metal lath and accessories, which has proven to be economical even in comparison to wood.

A new joist has been placed on the market, which is manufactured from one piece of steel, and which does not depend on welds, rivets, or bolts. By a new process, the chords and inclined web members are continuous, and formed from the same piece of steel.

A complete line of accessories for the supporting, placing and spacing of the joists is now offered, incorporating many improvements in design. The need for a special metal lath to be used with steel joists for floors and ceilings has been answered by another new and highly improved product.

For all of these new products see illustration below.

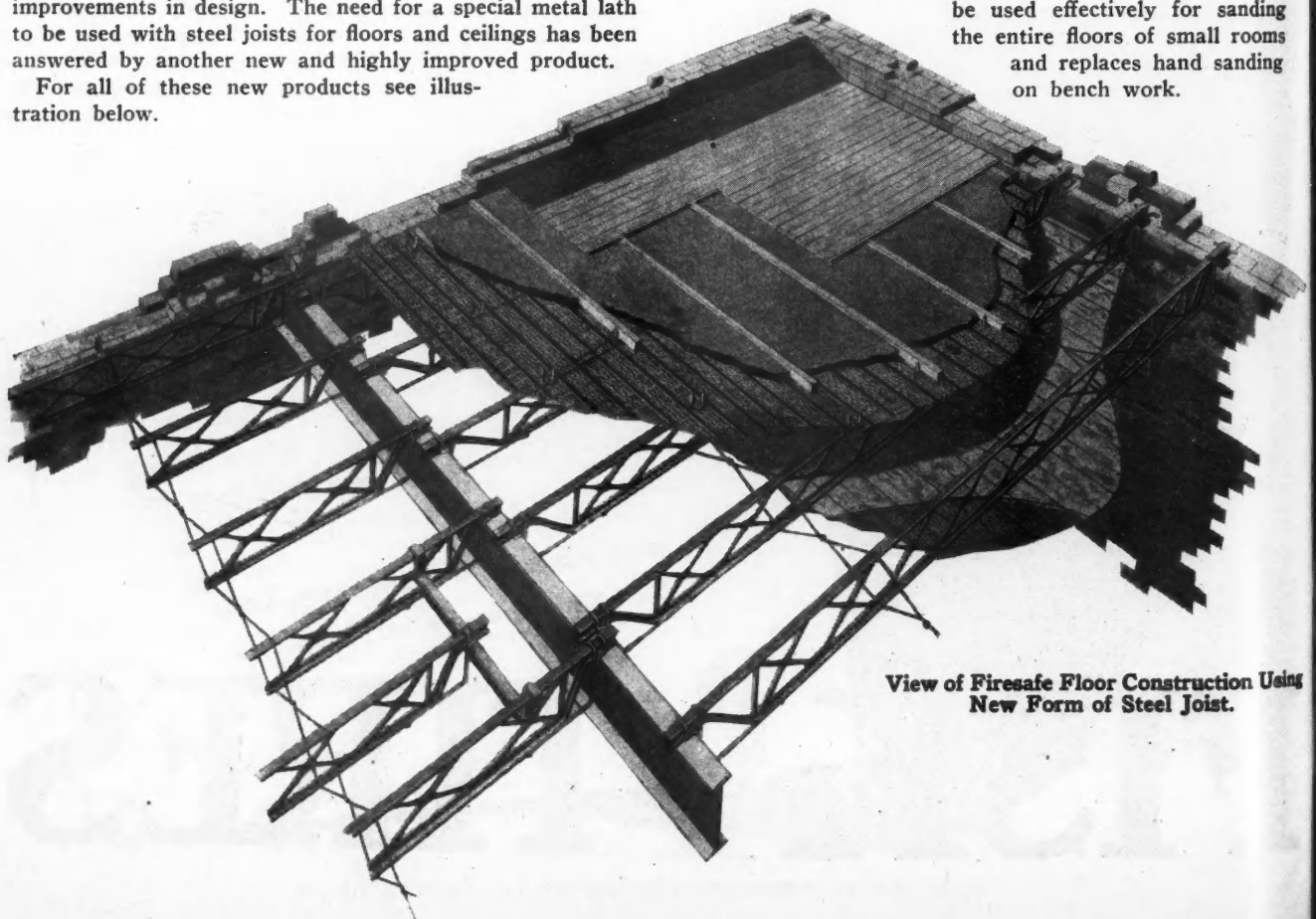


Edging Attachment for Sander

THE manufacturer of a well-known belt sander has just brought out an edging attachment for one of their machines which sands the butt ends of the floor with the grain, eliminating the hand scraping formerly required. This attachment is simply a pad which clamps on the bottom of the machine, replacing the regular shoe and extending a trifle ahead of the front pulley.

This carries the belt forward and beyond the front pulley and over the slightly rounded nose of the attachment, allowing the belt to sand right up to the baseboard.

The attachment is of aluminum construction with the front part covered with felt and thin steel over which the belt runs evenly, giving a finish free of ripples and hand-scraping marks, the same shade as the rest of the floor. With this new attachment, this scraper can now take over the complete floor edging job, eliminating laborious hand scraping and those long rest-periods that a workman must take when scraping. This machine is light and can be worked steadily without tiring and easily does the floor edges of the room. It can also be used effectively for sanding the entire floors of small rooms and replaces hand sanding on bench work.



View of Firesafe Floor Construction Using New Form of Steel Joist.

A Frame for Every Kind of Building



It is easier to sell Homes made weather-tight

Fisher bodies make automobiles easier to sell. Just as surely Kohler plumbing, the right kind of advertised insulation, roofing, paint, heating plant and window frames make houses easier to sell and more satisfactory to live in.

Remember this: the more nationally advertised, time-tested, quality materials you put into a building, the better chance you have to sell that building at a profit and to build the kind of a

reputation that turns prospects into customers.

Andersen Window Frames* are designed and manufactured to make buildings comfortable, weather-tight and permanent. You can get them at a reasonable cost from any Andersen dealer.

Fill out and mail the coupon below to learn the complete story of the nationally advertised Andersen Window and Door Frames.

* Look for the Andersen Trade Mark on every frame.



Andersen FRAMES

Andersen

Distinctive Features

- 1 Patented, noiseless, long wearing Andersen Pulleys used exclusively.
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- 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

ANDERSEN LUMBER COMPANY
Box 2109, 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.

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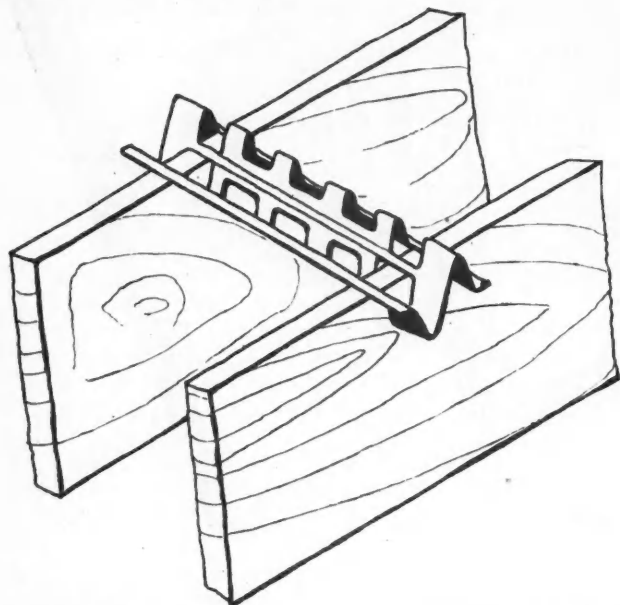
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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Device Simplifies Form Work

AFTER several years of experiment one of the members of a large firm of architects and builders perfected a device for economical construction of concrete forms. This company then put the device into practical use in its own construction work. With three years' testing of this sort the device proved out and was placed on the market so that it is now available to all builders. This device is a small steel piece designed to replace wires and spreaders but it actually does even more.

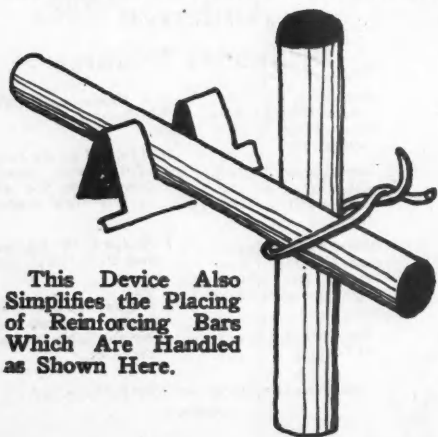


This Illustrates How Concrete Forms May Be Tied Together With a Simple Device Which Effects a Considerable Economy in Form Work.

Using this device it is only necessary to build the line wall with studs. The studs may be placed from four to six feet apart instead of the usual two feet apart. No studs are required for the other form wall so that from two-thirds to three-quarters of the studs are eliminated. The device absolutely prevents the form from spreading or collapsing and holds each board firmly in place, thus eliminating both wiring and spacer blocks and the labor of placing them.

The device is easy to use, as it is only necessary to place it over the board, as shown in the illustration, crimp it slightly so that it will cling to the board. When one row is placed simply set another form board on top and repeat the process until the line wall is of sufficient height. Next insert a form board under the other ends of the devices and shove it into position. And so on with the rest of the boards.

After the concrete has set, bend up the outside ends of one row of the devices and slide out the board. It is then easy to remove the other boards which are left in good condition to use over again in other forms. The short projecting ends of the devices, that protrude from the concrete are easily removed by cutting with a straight hoe or a spading tool, such as is used



This Device Also Simplifies the Placing of Reinforcing Bars Which Are Handled as Shown Here.

for spading or mixing concrete.

As the pressure on a four inch wall is practically the same as on a 12 inch wall, the device is made of uniform tensile strength in all sizes, 24 gauge, annealed, mild steel, and all are of the same width, the only difference being in length. Each device is three inches longer than the thickness of the wall to be built. They come in sizes for 4, 6, 8, 9, 10, 12 and 13 inch walls. The 6, 8 and 12 inch sizes are most popular, but all are carried in stock and special sizes can be furnished to special order.

Due to its construction, the device not only has great tensile strength, withstanding over 1,000 pounds per square foot of wall surface, but also great compressive strength which permits its use under water where it is necessary to hold the sides of the form apart and resist outside pressure. Due to the openings or vents, the air is allowed to escape and voids or holes in the wall are prevented. The concrete fills in and around the device so that it is completely embedded and this type of steel, when embedded in concrete, is preserved.

The device also serves as an excellent anchor for a brick veneer and for this purpose it is only necessary to flatten the ends and set in the mortar when laying the brick. Where metal lath is to be attached the device also serves as a furring.



Expansion Anchors for Nailing

THE hammer drive anchor shown here is a real time-saver, especially where a great number of uniform fastenings are required. It requires a smaller hole than an expansion bolt of equal strength and will support a greater load than an expansion bolt of corresponding diameter, it is stated. Less skill is required to attach it satisfactorily. While the holding power is exceptionally high, it may be extracted by withdrawing the nail first, causing the anchor to collapse, and then withdrawing the anchor.

These anchors are made of zinc, a highly non-corroding metal of sufficient tensile strength to develop extremely high holding power in the anchor. The nails are of steel, smoothly and durably galvanized by a process of hot dip galvanizing. The interior taper of the anchor is so designed as to permit the nail to be driven part way quite easily, after which the thicker walls of the anchor cause the nail to displace a larger volume of the zinc, giving a powerful expansion first in one direction and finally in the opposite direction, at the inner end. The inner end expansion is what causes the great holding power without cracking the face of the wall.

These anchors are made in sizes varying from $\frac{3}{16}$ by $\frac{3}{8}$ inch up to $\frac{1}{2}$ by $3\frac{1}{2}$ inches, to meet all requirements. Holes in masonry for these anchors may be drilled with standard commercial drills of the same diameter as the shield. The sizes of the anchors designated are the dimensions of the shield and the nails are furnished of the correct dimensions to suit the shield.



These Hammer Drive, Expansion Anchors Permit Nailing Without Danger of Cracking the Face of the Wall.

A NEW ONE MAN FLOOR SANDER

**That
Can Be Carried By One
Man Anywhere, After
Removing the Quick
Detachable Motor**

You don't need a truck nor any help to move this machine from job to job. You can pick it up, carry it out, put in your car, and away you go, and yet



"Easily Carried by One Man"

ALUMINUM CONSTRUCTION

It is constructed entirely of aluminum to give it the required lightness for carrying by one man and at the same time of sufficient size and a sufficiently large motor of enough horse power to insure the quality and quantity of work over a long period of time that make for success in floor surfacing.

**NO CHAINS—NO BELTS
NO SPROCKETS—NO DUST**

*Truly the Most Perfect Sanding
Machine of the Age*

INVESTIGATE

No matter what anybody says, no matter what they tell you, remember that this company which is the oldest and largest manufacturers of floor machines in the world stands unqualifiedly back of every statement made in this advertisement and that

A COMPETITIVE DEMONSTRATION

on any wood floor, anywhere, against any sanding machine, will conclusively convince and entirely satisfy you that the American High Production Floor Sander will do everything and more than we say.

THE AMERICAN HIGH PRODUCTION FLOOR SANDER

is so perfectly constructed of aluminum that it is actually

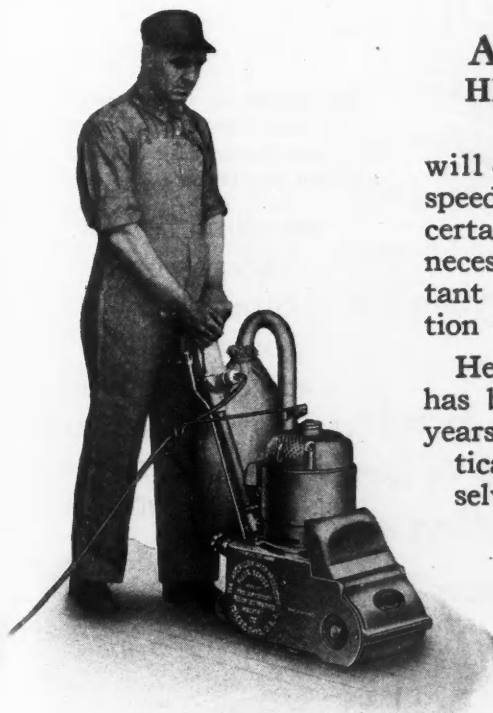
DOES DOUBLE THE WORK

of any other sanding machine made, barring none. No other sanding machine will do for you what

THE AMERICAN HIGH PRODUCTION FLOOR SANDER

will do. Light weight and speed alone will not suffice. A certain amount of weight is necessary, but more important is mechanical construction and engineering design.

Here is a machine which has been developed through years of experience by practical engineers who themselves are floor experts.



THE AMERICAN HIGH PRODUCTION FLOOR SANDER

Mail the Coupon—Investigate Today

THE AMERICAN FLOOR SURFACING MACHINE CO.
515 SO. ST. CLAIR ST., TOLEDO, OHIO

Gentlemen:

I'd like to see that American High Production Floor Sander in operation. Tell me how I can see it without obligation.

NAME.....

STREET.....

CITY..... STATE.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

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.

FINISHING LUMBER

BEVEL SIDING

COLONIAL SIDING

DROP SIDING

SOFTWOOD FLOORING

CEILING AND PARTITION

SHELVING · STEPPING

CASING · BASE · MOULDINGS

WEYERHAEUSER FOREST PRODUCTS

General Sales Offices: WEYERHAEUSER

District Sales Offices: MINNEAPOLIS · KANSAS CITY · CHICAGO

achievement - Wasteless Lumber!

packaged ready to use

The end of labor waste at the ends of lumber

EVERY conscientious builder who has had to compete with cheap, shoddy construction will welcome Weyerhaeuser's new 4-Square Lumber.

The time heretofore spent in hand-trimming of lumber on the job can now be spent in finer construction. For every piece of 4-Square Lumber is trimmed square and smooth at both ends—it is ready to use just as taken from the 4-Square package.

And it is better lumber throughout. Properly seasoned first. Then manufactured to exacting standards of size and finish. Cut to exact lengths. Uniform quality throughout. Faces and ends thoroughly protected in the 4-Square package.

The species and grade are plainly printed on the label to insure your getting exactly what you order and to prove to the owner that you are using *quality* materials.

4-Square Lumber is just the thing honest builders have needed—and wanted. It is now being distributed by local lumber dealers. If your dealer cannot supply it, write us.

SAINT PAUL · MINNESOTA

SALES COMPANY · Spokane, Washington

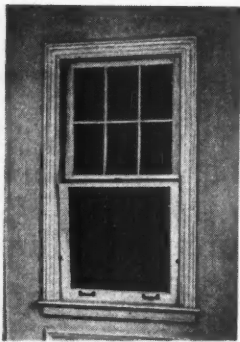
TOLEDO · PITTSBURGH · PHILADELPHIA · NEW YORK

A New Tilting Window

THE illustrations show how a certain window may be tilted in at various angles and locked in position so that rain cannot blow in or the curtains blow out and so that the washing of the window is made simple and easy. The first feature is a real aid to healthful ventilation and will not only be appreciated in the home but will be found especially beneficial in such buildings as hospitals and schools.

For washing the window one simply tilts both sash in and commences the washing with no fuss, no muss and no removal of screens, stops or furniture. This permits perfect safety in window washing, as it is never necessary to balance on the window sill or to stand on a chair or ladder.

These windows are easily installed. They do not require any "trick" hardware, each item of hardware on them being familiar to every builder. Both the window and frame are made of standard stock. The window can be entirely



Two Views Showing How This New Type of Tilting Window Operates, Permitting Easy and Safe Washing from the Inside.

removed from the opening without tools and without removing screens or stops.

Each window comes onto the job provided with a high grade weatherstrip. This strip is fitted into a slot in the jamb as well as into the sash and makes the window wind, storm, dust and draught proof. The arrangement of hardware makes the window easy to operate and allows no sticking or rattling.



An Improved Chisel

THE new chisel illustrated here has been brought out by a company specializing in the manufacture of high grade tools. It has a blade $4\frac{1}{2}$ inches long with socket somewhat shorter than the standard socket firmer and a somewhat shorter handle. The blade is ground thin. This is a general use chisel, one that the carpenter can use as either a firmer or butt. It has the



This New Chisel Is One of a High Grade Line of Tools and Is a General Use Type.

same general shape as the foreign chisel that has lately been placed on the market whose shape has met with the approval of the trade. This chisel not only has this shape but has also the quality for which this company's line is known.



Automatic Electric Glue Pot

THE illustration shows an automatic, electric glue pot which gives a high degree of economy. It is made in sizes from one pint to five gallons and either aluminum or copper containers can be supplied. Using the one quart

size, on 110 volt current, two amperes are used in starting. After 20 minutes the automatic heat control cuts off two-thirds of the current, leaving two-thirds of one ampere for the remaining $7\frac{2}{3}$ hours of the eight hour working day. With current at five cents per Kw. hour, this makes an operating cost of only three cents a day.

All of the glue is used, not wasted, with this pot. There is no boiling over, burning or over-cooking until discolored or lifeless. The automatic control makes overheating impossible. It is built to last a lifetime and saves expense of repairs and delay. In addition it keeps the glue always ready for use with no waiting for the glue to heat and with no time wasted in cleaning up burned or boiled over glue. It is only necessary to turn the current on in the morning and off at night.



Here is an Electric Glue Pot That Is Automatic, Assuring Against Over-Heating.



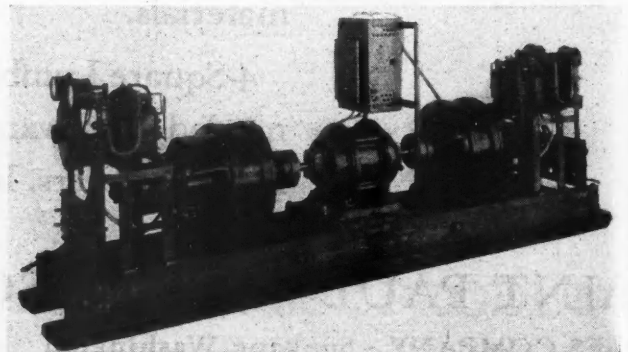
Two Operator Welding Outfit

THE welding equipment shown here has been brought out in response to a demand by users of electric welding for multiple type electric arc welding equipment that would afford facilities for two operators to work from one equipment. With some types of equipment there has been some dissatisfaction because it really did not afford each operator as efficient an arc as would be the case with a single operator device. This equipment has been designed to overcome that dissatisfaction.

In operation this equipment is identically the same as having two distinct, single operator type equipments, because in reality that is what the outfit comprises, namely, two welding generator equipments, complete with control apparatus, reactance coil, etc., but instead of employing a motor for each generator, this equipment has been designed in such a way that both generators can be operated successfully by one motor that has the shaft extension on both sides.

This construction has the advantage of giving no interference between the operators. In other words, one operator can be welding with 150 amperes, possibly using $\frac{1}{8}$ inch wire, while the other operator is welding with 200 amperes, using $\frac{5}{32}$ inch wire and both equipments functioning perfectly. This is attributed to the fact that there is no electrical connection between the two generators. There is simply a common source of motive power.

Another advantage of this equipment is that when a carbon arc cutting or welding is desired, it is possible to connect the leads of the two generators, affording a single operator equipment of either 400 or 600 ampere capacity for carbon arc cutting or welding.



With This Welding Outfit Two Operators Are Able To Work at the Same Time as Independently as Though Two Separate Outfits Were Used.

for Economical Transportation



The Lowest-Priced Truck

equipped with
4 Speeds Forward-4 Wheel Brakes

In the few weeks since the new Utility Truck was announced, it has received an enthusiastic reception from thousands of truck buyers throughout the nation—

—for it not only embodies the most recent advancements in truck engineering and construction, but it sells for the lowest price ever placed on a truck equipped with four-speed transmission and four-wheel brakes!

In addition to the scores of truck features for which Chevrolet has long been famous, there is now provided the new 4-speed transmission, with an extra low gear that gives tre-

mendous pulling power for steep hills and heavy roads—and reduces to the very minimum the starting strain on motor, clutch and rear axle...powerful 4-wheel brakes that safely control the heaviest loads under every condition of highway... a new ball bearing steering mechanism which makes it easy to drive over rough and muddy roads.

Visit your Chevrolet dealer today and see this remarkable truck. You'll find that it offers every feature needed for dependable transportation—plus amazing economy of ownership and operation.

The UTILITY TRUCK

\$520

(Chassis Only)

f. o. b. Flint, Michigan

The Light Delivery Chassis, \$375, f. o. b. Flint, Michigan

CHEVROLET MOTOR COMPANY, DETROIT, MICHIGAN
Division of General Motors Corporation

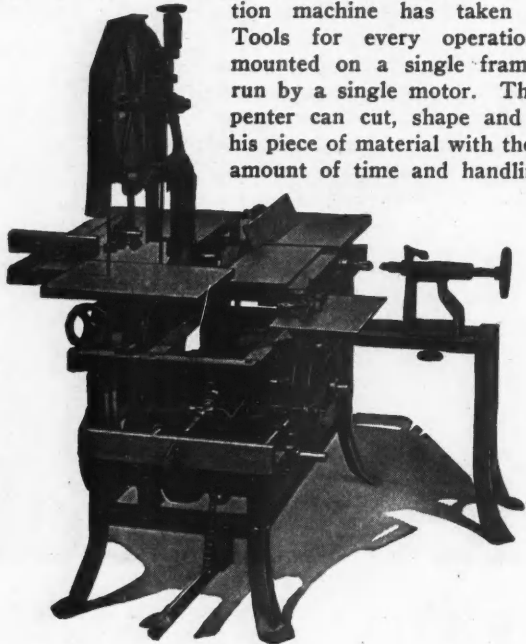
WORLD'S LARGEST BUILDER OF TRUCKS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A New Stationary Woodworker

THERE are, fundamentally, two types of woodworking machines. In using one type the carpenter takes the work to the tool. In using the other type he takes the tool to the work. Which type to use is simple to decide. If you can't handle the work, then you must handle the tool, which means hand tools, either with or without power. But if the work is light and convenient to handle taking the work to the tool is most efficient.

Because much of the carpenter's work is of the latter character, a great development of the stationary, combination machine has taken place. Tools for every operation are mounted on a single frame and run by a single motor. The carpenter can cut, shape and finish his piece of material with the least amount of time and handling.



This Stationary Woodworking Machine Embodies All of the Latest Refinements Developed by a Company Which Has Specialized in Such Equipment.

One of the latest refinements of this type of machine is illustrated here. Its design is the development of over 4 years' experience in building woodworking machines and the manufacturers believe that it combines all the features that the majority of practical carpenters have found desirable. The various tools or units are arranged so that it is handy to work material at the machine and also so that two or three men can use different units at the same time without getting in each other's way.

Separate drives are also provided for safety and it is not necessary for a saw to be running when only the jointer is in use. Ball bearings are used throughout. Their long life, even under abuse, has been proved in the automobile and on this woodworker the saving in cost and trouble of reabbiting and reduction of lubricating trouble provides a real advantage.

This machine includes an 18 inch saw; nine inch jointer; 16 inch lathe; 10 inch circular saw; hollow chisel mortiser, quick reverse spindle shaper, with ball bearings and independent drive on every unit, together with a two horsepower motor. These units are all so compactly combined that the machine requires a floor space only 3½ by 6½ feet.

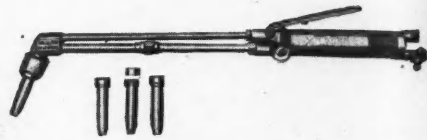


Combined Cutting-Welding Torch

WELDING and cutting operations have been speeded up and labor and gases saved by the introduction of the combination cutting and welding torch shown here. To change from cutting to welding, with this torch, it is only necessary to change the tip. A convertible feature of the tip changes it from a cutting to a welding tip, or vice versa,

by a mere turn of the tip. In one position the gases are automatically passed through the preheated gas passages while the high pressure oxygen is carried through the central hole for cutting. In the next position, made by a quarter turn of the tip, the cutting oxygen is cut off and the welding gases are conveyed through the central passage of the cutting tip, making a perfect welding flame.

This combination torch saves the expense of one torch as well as saving time in changing torches. Torch heads, valves, bases and other parts of bronze forgings, having a tensile strength upwards of 5,000 pounds per square inch, are responsible for the lightness and durability of this equipment. The seamless, high pressure tube is specially drawn with triple thick walls and is of nicked silver, which has double the strength of brass tubing. Flashback is eliminated even though the tip should be inserted in molten metal. The new tips are so constructed that, even when the tip may have outlived its usefulness as a cutting tip, it is still serviceable as a welding tip.



With Equipment Which Serves for Both Cutting and Welding It Is Not Necessary To Have Two Torches.

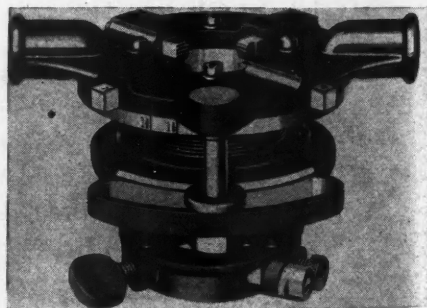


Two Improved Die Stocks

TWO new self-contained and adjustable one to two inch die stocks have been placed on the market, superseding older models made by the same company. One of these is a plain and the other a ratchet tool. While retaining all the labor saving advantages of the older tools, the new die stocks are lighter in weight, easier working, simpler in construction and lower in price and are as durable as the previous models.

In these new tools one set of dies is quickly set to thread one, 1¼, 1½ or two inch, without changing dies. The dies cannot become lost or mislaid because they are always in the tool ready for use. Dies are quickly adjusted to thread under or over standard without affecting the length of the thread. Either of these dies cuts perfect thread on any kind of pipe and no special dies are needed for brass pipe. The threading dies are made of high grade alloy steel, specially treated with respect to hardening and tempering, thus giving especially long threading life.

In these dies the die head and threaded barrel are two separate parts so that when repairs are required only one part need be bought. The work holder, or pipe gripping device is of new design and centers the pipe more accurately than former model did. Two knurled screws are set and hold firmly to pipe size, leaving only the thumb screw to be tightened after the die stock is placed on the pipe. Loose bushings are eliminated. When this new work holder is set to size nothing but a straight thread can be cut, but it can be quickly and easily adjusted to cut crooked or drip threads if desired. It will also grip any size coupling for threading short nipples.



One of Two New Die Stocks Which Are Self-Contained and Adjustable, One Plain and One Ratchet Type.

EACH YEAR EVERY YEAR— SAVINGS

From the first day a Federal truck is in service, a part of the savings characteristic of Federal operation comes from the perfect fitting of the truck to the job. With 43 chassis and more than 100 body-and-chassis combinations, there is a Federal available that will save money on any task from light delivery to the heaviest haulage. And Federal helps you select the truck you need.

As the months grow into years and Federals become veterans, their thoroughbred, all-truck construction makes their economy still more noticeable. The honest, rugged, all-truck sinews of them display almost unbelievable endurance, and year after year sees them living up to their "Certified Earning Ability". Each of Federal's eighteen successful years has brought thousands of new converts to the complete haulage service that Federal sells. Your first Federal will tell you why. Then you will join the ranks of those "repeat" buyers who take 72% of the Federal output.



**CERTIFIED
EARNING
ABILITY**

ASK for the free "Federal System of Truck Expense Control" that is doing so much to lower haulage costs. No obligation. . . . THE FEDERAL MOTOR TRUCK CO., 5842 FEDERAL AVE., DETROIT, MICH.

"Leading Specialists in Commercial Transportation"

FEDERAL TRUCKS

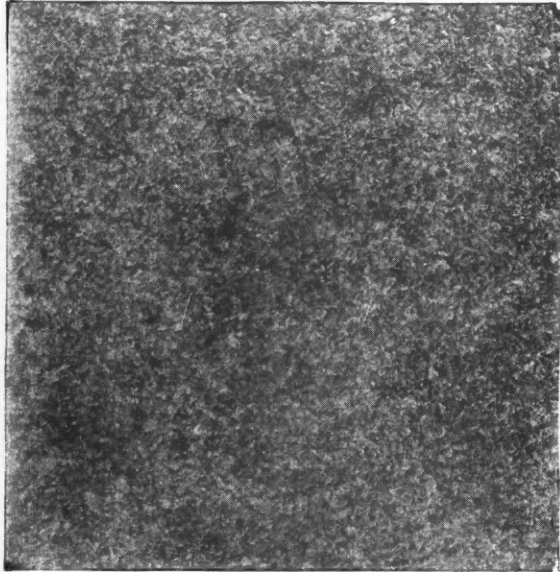
ALL SIZES—FOURS AND SIXES

(194)

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Cork Tile for All Floors

BECAUSE the essential characteristics of a good floor covering are the same wherever a floor covering is needed, the cork tile illustrated here can be used to advantage in every type of building from the smallest home to the largest institution. In the first place, it comes in various sizes, suitable for any floor, running all the way from three by six inches up to 12 by 36 inches, and in varying shades of color. These variations of color shade



Here Is a Cork Floor Tile Made in Sizes from Three by Six Inches Up to 12 by 36 Inches and in Various Color Shades.

being accomplished by varying the temperatures when baking. No coloring matter is used.

Only pure cork is used in the manufacture of this tile and, because it is highly compressed, it is strong, firm and durable. It will not shrink or warp, splinter, tear, corrode, rot or crumble. In addition to this it is absolutely immune to grease, ink and most liquids, it can not absorb dirt or moisture and when soiled can be cleaned easily by washing with soap and water.

Because of the natural elasticity of cork a floor covered with this material possesses a resiliency which saves energy and health as compared with the tiring effect of walking and standing on hard, unyielding surfaces, and even hard heels are noiseless when walking on it. It also makes for safety because, even when wet, it is not slippery. Because of the rich tan and brown tones, it is both beautiful and restful to the eye. Cork being one of the best insulating materials it adds to the cozy warmth of the room in which it is laid and does away with disagreeable, cold floors. There are no cracks or crevices to collect dust or moisture.



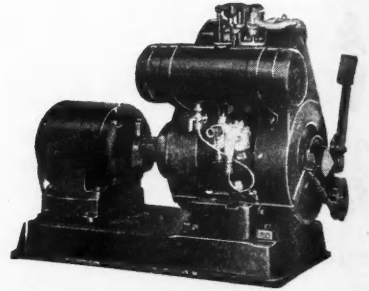
A Portable Electric Plant

THE equipment shown in the accompanying illustration is a complete, portable, electric plant, furnishing 110 volt, direct current. It is adapted to use on farms, in homes, summer cottages, or anywhere that electric current is desired but is not available from a central plant. It is said to have been found especially useful in industry where electric drills, chipping tools and other portable electric tools are used, including general construction work, where current is not available on the job. Universal tools of any capacity up to ¼ H. P., 110 volt, can be operated from it.

This plant is particularly adapted to installation on gaso-

line cranes, dredges, ditching machines and any kind of gasoline operated equipment where it is no longer possible to use turbine steam generators. It is capable of operating from 10 to 15, 25 watt lights brilliant, steady without flicker.

The total weight of this plant is 135 pounds and the dimensions are 26 inches long, overall, 14 inches wide, and 22 inches high. It can be hauled in the back of any automobile or on the running board and set up in any place convenient for operation. The engine is a one H.P., air cooled, four cycle, with magneto, carburetor and one gallon gasoline tank and two quart oil base. It is particularly adapted to long, constant service under the most extreme conditions, it is stated. The cost of operation is low, producing current at about four cents per kilowatt hour.



This Complete Electric Generating Plant Is Easily Portable and Is Suitable for Homes, Farms and Summer Cottages.

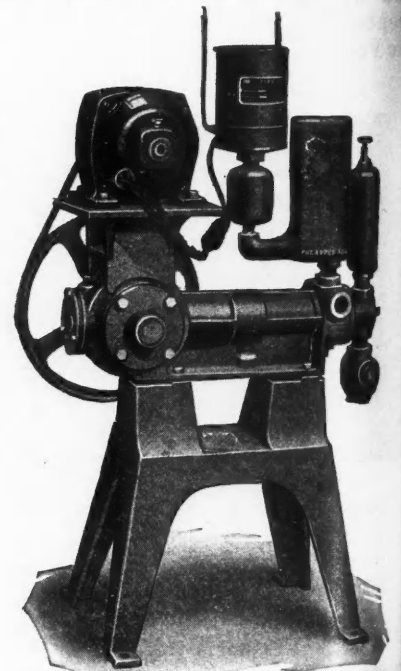


Efficient Small Water System

A WELL known manufacturer has recently announced the water system illustrated here which, it is claimed, offers the equivalent of a complete city water system at an unusually low price. This new, compact outfit is designed for small suburban and country homes, summer cottages, pleasure boats and similar purposes. It supplies water direct from the source to the faucet and will pump from a cistern, shallow well, lake, stream or spring, wherever the water level of the source of supply is not more than 22 feet below the pump.

This outfit is fully automatic and whenever any faucet connected with it is opened the pump starts to deliver water under pressure. When the faucet is closed the pump stops. No attention is required. It has a capacity of 215 gallons per hour. A new feature is a non-pulsating device, specially designed to eliminate entirely the pulsating motion of the system and insuring quiet operation. The pump is fully automatic, not only in starting and stopping but also in oiling and priming.

The equipment includes a high grade, constant duty, full rated, repulsion-induction type motor with automatic controller, a completely brass fitted pump, large air-water chamber and the non-pulsating device. Installation is said to be simple as only two connections are required and the pump is equipped with its own base.



For Small Suburban Homes and Similar Places Where City Water Service Is Not Available This Compact, Low Price System Is Well Adapted.

That's the reason why Laminex doors never swell, shrink or warp

Read how the inherent tendency of wood to expand or contract with changes in moisture content is scientifically neutralized in these remarkable doors. Learn how to obtain doors that are genuinely trouble-proof, regardless of climatic conditions.



[Laminex doors are now being manufactured of Philippine Hardwood, (commonly known as Philippine Mahogany), as well as of Douglas Fir.]

LAMINEX stiles and cross-rails are built up on a core of blocks with grain so crossed that expansion and contraction are neutralized. Flawless sheets of wood are cemented permanently to these cores with secret-formula Laminex cement, which is absolutely waterproof and actually stronger than wood. Laminex door panels, with the adjacent layers running cross-wise, are also waterproof-cemented with the same powerful adhesive. Larger dowels are used in uniting these stiles and cross-rails of Laminex doors. Many doors have dowels that are only 1/2 inch in diameter. Laminex doors have 5/8 inch dowels that are 5 inches long. These over-sized dowels give 50% more strength and 30% greater holding surface than 1/2 inch dowels. There are four of these 5/8 inch dowels, where the stiles meet the bottom rail in a Laminex door, instead of the three half-inch dowels in ordinary doors.

Laminex doors are moderately priced, despite their beauty and their trouble-proof serviceability. Progressive lumber and millwork dealers can supply you from their ample stock. If you are unable to get Laminex doors from your local dealer, write us and we will give you the name of a dealer who will supply you.

THE WHEELER, OSGOOD COMPANY
Tacoma, Washington

Gentlemen:
Please send me your new book about Laminex doors and names of nearby distributors.
Name.....
Address.....
City..... State.....
I buy.....doors per year.

LAMINEX DOORS
WILL NOT SHRINK, SWELL OR WARP

Moisture has positively no effect on Laminex doors

SO successful is Laminex construction that Laminex doors may be soaked in water for days at a time, without warping, splitting or coming apart. In fact, the soaking of Laminex doors in water is a test that is frequently made by distributors and retail lumber and millwork dealers to prove that Laminex construction is absolutely immune to any condition of dampness.

In damp climates, or when doors are installed before plaster is thoroughly dry, ordinary doors may swell, warp, or split, but no matter what the climate or how green the plaster, a Laminex door will never give trouble.



The famous Laminex door soaking test, that retail dealers make publicly in all parts of the country, proves that dampness will never make a Laminex door warp, split or come apart.

Here we show the old reliable two-panel door, as built by the Laminex method—a sound structural design. We have added the non-warping advantages of lamination, with all parts firmly welded together by that powerful adhesive, Laminex waterproof cement.

Each genuine Laminex door bears the name "LAMINEX" and our yellow replacement guarantee label. The door must make good, or we will.

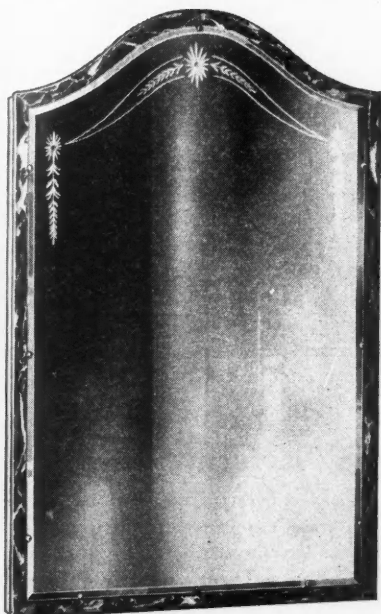
THIS matter of a guaranteed door is, or should be, of tremendous importance to everyone engaged in the building business. The Laminex guarantee, backed by the largest door manufacturer in the world, is your assurance that Laminex doors will give you trouble-proof

service. It costs more to refit, refinish and rehang one ordinary door than any slight additional price you might have to pay for Laminex doors throughout an entire house. Any thinking person will agree that it is far wiser to play safe and install Laminex doors in the first place.

LAMINEX REG. U. S. PAT. OFF. **DOORS**
WILL NOT SHRINK, SWELL OR WARP

Venetian Bath Room Cabinets

VENETIAN cabinets, for the bath room, have taken hold of the public interest just as Venetian mirrors, for other parts of the house, have done. To meet this growing demand, a leading manufacturer of cabinets has developed a line of Venetian bath room cabinets which are described as being different from anything heretofore manu-



factured. They embody principles of construction which are said to practically eliminate the great possibility of mirror breakage which has formerly been prevalent in this type of cabinet.

This makes the new cabinets as practical for any installation as were the old style cabinets with heavy framed mirrors. The doors can be slammed, as will happen in homes where there are children, as well as in hotels and apartments where guests or tenants are not overly careful, without damage.

Because of the Popularity of the Venetian Mirror This Venetian Bathroom Cabinet Should Be in Demand.

These mirrors are being made in sizes and styles ranging

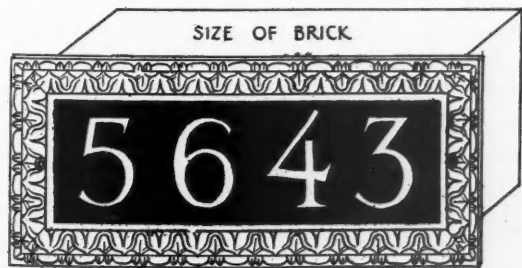
from a de luxe type with side wings and ornamental light fixtures, appropriate to the finest homes, to the smaller and simpler type better suited to the small home or the needs of the investment builder. Though quite recently introduced these mirrors have already been received with great interest by the building public.



Illuminated House Numbers

THE old-fashioned house number has long been inadequate in that it could only be seen in the daytime. But now there are available house numbers that can be seen equally well at night. This innovation serves a truly useful purpose for who has not tried, at much inconvenience, to find a house after dark when the number was invisible. For the home owner, the new number eliminates the need for strangers to prowl around the front porch after darkness, lighting matches and peering through the darkness trying to see the number, and for taxi drivers to throw their spotlights onto the privacy of the porch or vestibule.

The illustration shows the general appearance of this



Here Is a House Number Which Can Be Set Right Into the Brick Wall and Is Illuminated at Night for Visibility.

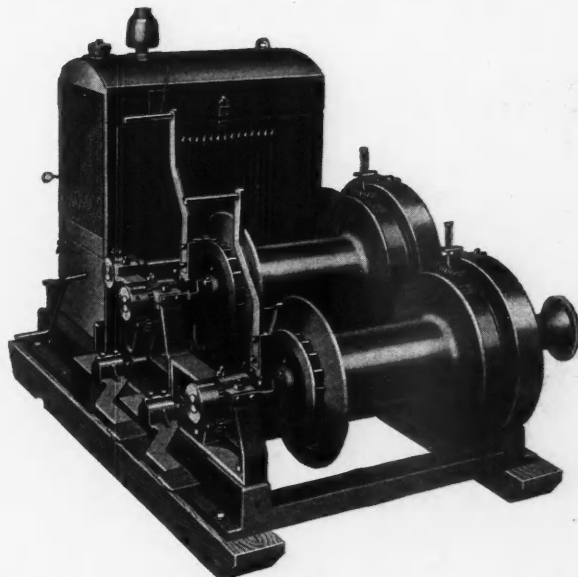
new type of house number which can be seen at night. The moulding or frame, containing the brass number panel is set flush with the face of the bricks or siding. The metal box, which contains a lamp socket, is set into the wall. It is exactly the same size as a brick so that it can be laid right into the wall when laying the walls of a brick house. It is constructed of heavy galvanized iron and will last a lifetime.

The frame is beautiful in design and will add to the appearance of the home. The panel consists of an imported opal glass with the background sandblasted away leaving the numerals raised. The background is finished in a dark color to form a contrast with the white numerals. The glass is securely fastened in the frame which is made of rustless, moulded steel. The complete panel is attached to the box, containing one, 10 or 25-watt, standard Mazda lamp.



Complete Line of Hoists

THE double drum hoist shown in the illustration is one of a line of hoists manufactured by a company well known in the production of this type of equipment. It is designed for all kinds of non-reversible service within its capacity of 2,000 pounds line pull and ideally adapted to two wheelbarrow and other heavy duty, double elevator



A Double Drum Hoist Which Is One of a Complete Line of Hoists Produced by a Well Known Manufacturer in This Field.

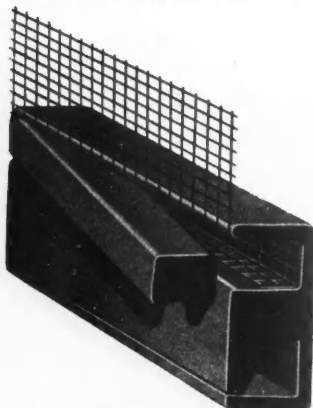
work, at 150 feet per minute, elevating materials, erecting girders, excavating, scraping, pile driving, drag line work and other industrial applications. It is gear driven by electric motor or belt drive. It is also furnished in a single drum type.

The power is furnished by a 15 H. P., four cylinder unit. The drum is eight inches in diameter, with 17 inch flanges, 16 inches apart, accommodating 1,300 feet of 3/8 inch or 900 feet of 1/2 inch cable. It is mounted loose on a two inch steel shaft fitted with heavy bronze bushings. The rear drum is 10 inches in diameter for drag line work.

The control is a hand lever, operating through an exclusive, heavy bronze screw thrust, positive in both engaging and releasing the large asbestos lined, cone clutch. This feature eliminates the drilling of the shaft for the ordinary screw and retains the full strength of the shaft throughout. Alemite-Zerk lubrication to all bearings is standard equipment. Full machine cut gear drive is provided throughout. A steel pawl, within easy reach of the operator, holds loads at any desired point. The brake is spring suspended, asbestos lined, oversize and easily controlled with a convenient foot pedal making it safe and dependable.

Aluminum Screens Perfected

THERE is now being offered a new metal screen which does not warp, sag or lose its shape, that will not rust or discolor, that is suitable for the finest homes and yet is not expensive, that is extremely light in weight, yet exceedingly strong. This screen is made in one piece, of a special aluminum alloy, one of the strongest non-ferrous metals, with great tensile strength, elasticity and rigidity.



Screens with One Piece Aluminum Frames Are Light and Strong and Will Last Indefinitely.

It cannot rust, corrode or oxidize and forms no colored salts to discolor or stain the draperies or other material with which it comes in contact. Because of their light weight these screens are especially easy to install and they are not unnecessarily conspicuous; in fact, they really enhance the appearance of the home or other building. The frames are constructed of extruded bars, cut to proper length with mitered corners and welded to shape, forming a single solid frame which, it is said, will withstand the most severe tests. The wire cloth is held in place by an extruded aluminum bar forced into a channel on the back of the frame and firmly locked by friction. This insures a tight screen at all times and precludes the wire sagging or bulging.

The screen cloth used is a 16 mesh wire cloth woven from 32 gauge bronze wire. Though designed for permanence the wire cloth can be removed and replaced easily, without special tools, by merely removing the holding bar. These screens may be had in dull (platinum-like), or polished aluminum, or finished in any standard color of paint, enamel, lacquer or grained effect to match adjoining trim. They are completely fitted with solid aluminum hardware and come in both sliding and casement styles.



Plaster Mixer for Concrete

USING a plaster mixer for mixing concrete for the floors of a large Buffalo, N. Y., school, the contractors averaged 3,000 square feet of floor per day and ran as high as 3,500 square feet on some days. The blades of the plaster mixer were set out about $\frac{1}{8}$ inch away from the drum,



This Type of Plaster Mixer Has Been Used with Excellent Results for Mixing Concrete for Floors.

so that no trouble was caused by stones catching between the drum and blades. Otherwise there were no changes made on the mixer which was a well known make.

On this job the mixing gang was started to work about five o'clock in the morning, and by nine o'clock they would pour all the floor the finishers could handle in the same day. Among the advantages of using the plaster mixer for this work, it is stated, was the fact that the concrete could be mixed very stiff, giving a stronger concrete, which could be put in place easily and finished.

The concrete bases of the floors were first coated with a mixture of water and neat cement to give better bond between the concrete already in place and the new concrete, the latter averaging between $\frac{3}{4}$ inch and $1\frac{1}{4}$ inch in thickness. Only one check or surface crack was discovered and this was in a portion of the floor directly over a steam line. The contractors report that the practical elimination of surface cracks was very remarkable and another advantage gained by using the plaster mixer for this purpose.

In a similar way another large contracting firm in Buffalo used the same type of plaster mixer in building a large store. This company not only mixed the concrete for the floors with the machine, but also mixed colored terrazzo.



An Improved Platform Ladder

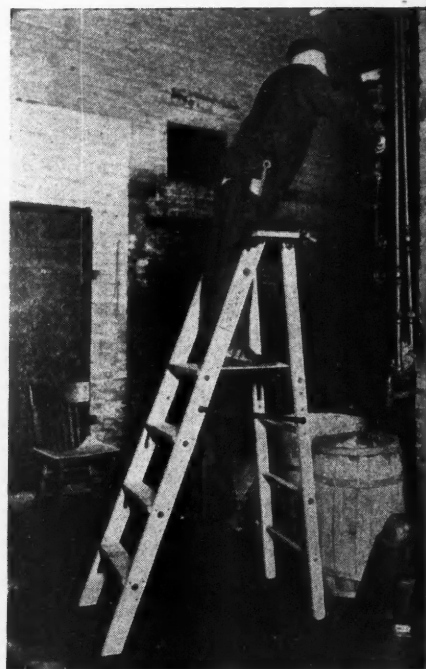
A NEW ladder has recently been placed on the market and is shown here. The chief feature distinguishing this ladder from others is an automatically folding platform which provides ample area for the feet and gives the user a wider scope of action. The position of the side rails and curved top guard afford an unusual degree of protection, it is said.

With the addition of a plank or featherweight platform, two ladders are ideally adapted to the construction of a temporary scaffold as the back rungs coincide in elevation with the steps. Each step is doubly reinforced with steel angle braces and truss ties, thus insuring an inflexible ladder.

Mounting this ladder is comparable, it is stated, with

ascending a flight of stairs. Once the platform has been reached it is no longer necessary to watch your step.

This ladder is constructed of straight grained, Canadian spruce, carefully air dried to preserve its natural strength, and selected hardwood. The metal parts are steel and malleable castings. The sizes in which the ladder is made, range from three feet to 18 feet. If desired it can be fitted with two accessories, a sliding compartment for tools, etc., and a hook which slips over the edge of a pail to hold it in position.



Here Is a New Type of Ladder with a Folding Platform Which Facilitates Work.

**He uses his
head instead
of his back—
and works six/
times faster!**

Why keep your skilled men on endless hand-sawing—when one man operating a DeWalt is six times as fast and much more accurate?

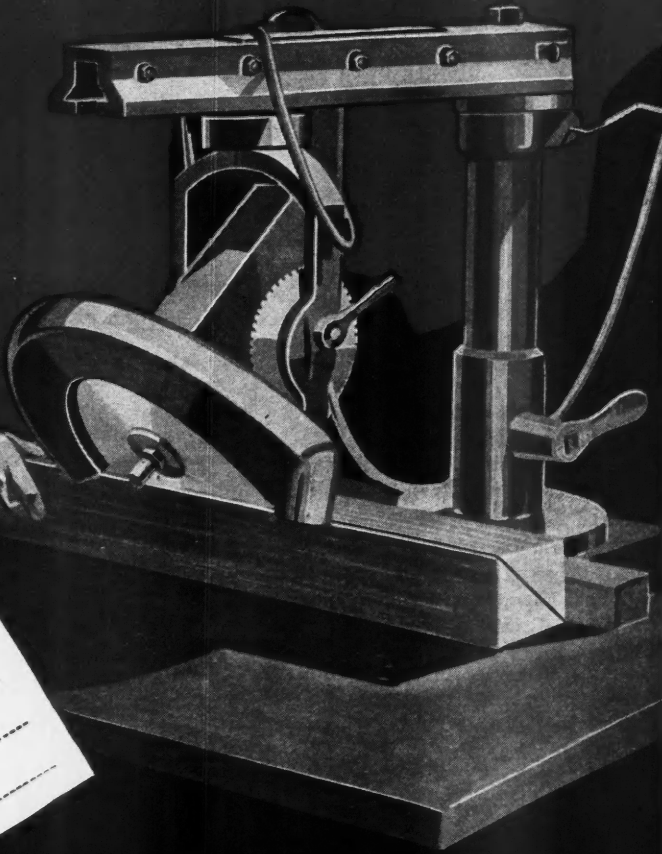
Variety of work handled. With a DeWalt Wonder Worker on the job you can quickly cut all framing, sub-flooring, concrete forms, sheathing, interior trim, cabinet work and any other wood work found on frame, brick or row house developments.

Save material. Lots of odds and ends that are usually thrown away can be used for chamfer strips, wedges, bridging for floor joists and other useful purposes.

Practical—powerful—portable. Quick set-up and quick change of set-up make the DeWalt Wonder Worker a practical machine. Direct drive makes it twice as powerful as any other saw its size. And it's so light two men can easily carry it anywhere on the job.

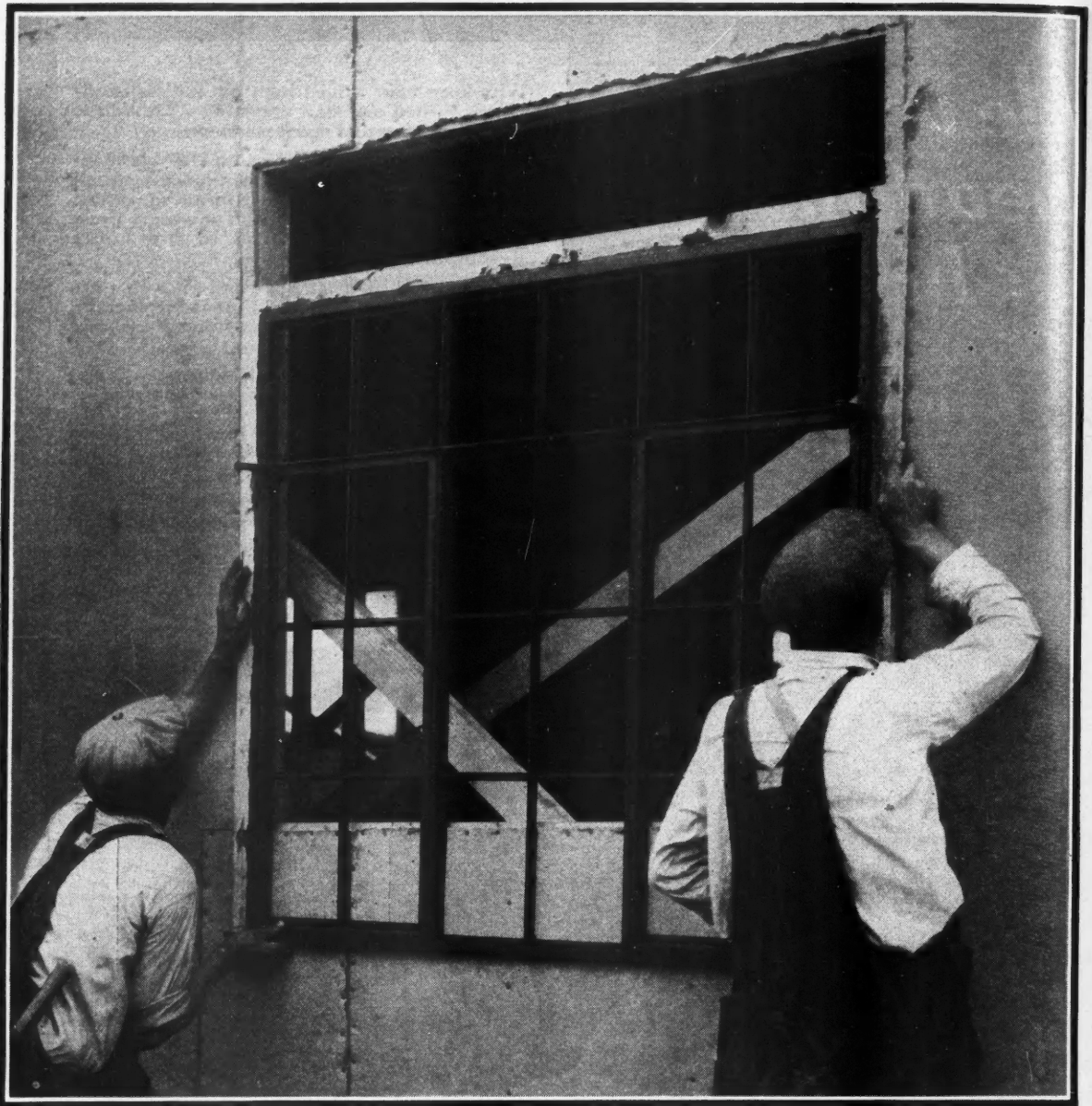
Ask for demonstration. At any time we'll gladly arrange a DeWalt demonstration on your job.

Write for work sheets. Without any obligation on your part, we'll gladly send you, free of charge, a supply of our Working Cost and Estimate Sheets. They're a simple method of keeping cost records of your work.



DeWalt Products Company FREE
 671 New Holland Ave., Leola, Pa.
 I'd like you to send me a supply of your Working
 Cost and Estimate Sheets—without obligating me
 in any way.
 Your Name.....
 Firm Name.....
 Address.....

DEWALT
 Wonder Worker
 The Economy Wood Worker



IN the house of frame construction, wood strips are screwed to the Fenestra Casement along the jambs and across the head. Then two men lift the window into the wall opening and quickly nail it in position through the wood strips.

*Made by America's
Oldest and Largest
Steel Window
Manufacturers*

Fenestra Casement

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

You save LABOR

You save MATERIAL

Fenestra Casement Windows of steel are factory-built units: they reach your job COMPLETE, with swing-leaves in place and hinged, and primed with a coat of paint. The hardware comes with the window and is quickly attached.

All this work is done in the factory

Because all this work has been done in the factory, you do not have to set a frame in a wall, then trim and fit sash, paint sash and frame with a prime coat, attach sash cords and weights, or install weatherstrips.

Nor do you have to buy separate frames and sash, weights, lifts, locks, sash cord or weatherstrips.

Thus the use of Fenestra Casements saves you the cost of half a dozen or more *labor* operations, and, in addition, seven or eight *material* items.

A big saving on inside trim, in addition

With double-hung wood windows you have to buy for the inside trim: one head casing, two jamb casings and one apron and stool. And you have to fit, install and paint this trim.

With Fenestra Casement Windows you can return the plaster to the window, eliminating the head and the two jamb casings, and install only the apron and stool. Thus you save both material and labor for inside trim.

And you get windows of uniformly high quality

Fenestra Casements are built by skilled tradesmen working under excellent conditions with complete machinery equipment and rigid inspection. Thus the hazards of careless or incompetent workmanship are eliminated, and every Fenestra Window is a unit of high quality.

At low cost

Because Fenestra Casements are made in standard sizes, in large quantities, by machinery, their cost is very low.

*You can get your Fenestra Windows quickly from a lumber or building supply dealer.
Try them in the next house you build, and see for yourself how they save you money.*

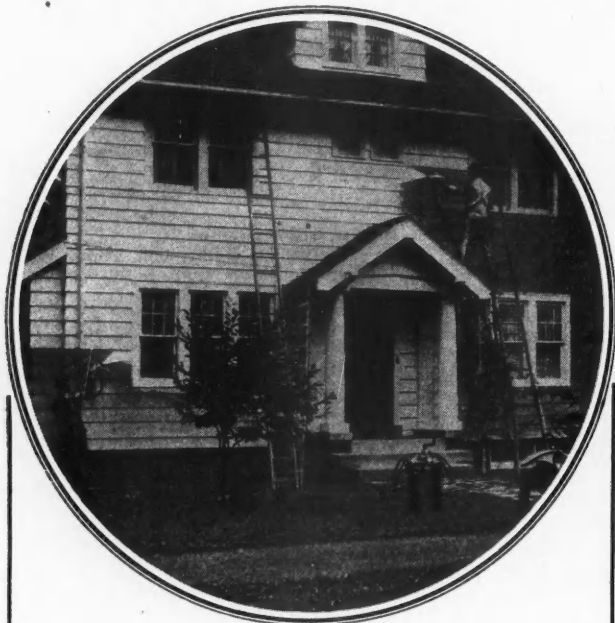
DETROIT STEEL PRODUCTS COMPANY / 2304 EAST GRAND BOULEVARD, DETROIT, MICHIGAN
Factories: Detroit, Michigan, and Oakland, California / Convenient Warehouse Stocks

Fenestra

Windows of STEEL

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

DeVilbiss Spray-painting System



The Most Modern Equipment for the Most Modern Method

It has been thoroughly proved that spray-painting with DeVilbiss equipment definitely reduces the cost of a complete structure, enhances the appearance, and affords a greater measure of protection than is consistently practicable with other methods.

The efficiency, economy and satisfaction enjoyed by the user of spray-painting equipment depend squarely upon the character of the equipment used, hence in adopting this quicker, better and more modern method of painting look carefully into the advantages offered by DeVilbiss equipment.

You cannot get in any other spray gun made today the features of design and construction which make the DeVilbiss Spray Gun the most modern and efficient. DeVilbiss Spray Guns are different and these differences are easily seen and understood. They are the direct results of a greater effort for perfection than has been exercised by any other designer or builder of spray-painting devices, a longer experience and a far greater specialized knowledge of the requirements of the spray painter. Do your painting in the modern way, and with the most modern equipment. Find out now how DeVilbiss can help you.

THE DEVILBISS COMPANY

238 Phillips Avenue TOLEDO, OHIO

Sales and Service Branches:

New York, Philadelphia, Cleveland, Detroit, Indianapolis, Chicago, St. Louis, San Francisco, Windsor, Ont.

Direct factory representatives in all other territories

NEWS of the FIELD



Douglas Fir Plywood Manufacturers Organize

THE announcement of the formation of the Douglas Fir Plywood Institute, with offices in Tacoma, Wash., is the result of months of careful organization work on the part of several of the leading manufacturers of Douglas fir plywood in the Pacific Northwest. This organization is one that has been contemplated for some time, and the successful conclusion of the preliminary work is of great importance.

The objects of the Institute are set forth in the articles of association. In part, they are: To encourage and increase the use of Douglas fir plywood in the United States by co-operative advertising. To establish and maintain all such lawful trade customs and usages for the protection of the members as the association may deem advisable. To collect and disseminate statistics concerning the Douglas fir plywood industry. To establish uniform grades and standards of products. To provide architects, dealers and builders with an organized and always available guarantee of quality. To constantly improve methods of manufacture.

An official inspection service has already been started by the members of the Institute. Competent men are constantly inspecting the product of the members, maintaining a strict uniformity of grades.

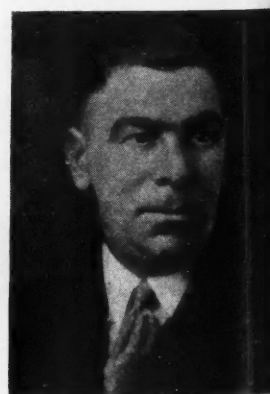
Standard grading rules for Douglas fir plywood have been adopted by the trustees and the



Phil Garland, President.



Wm. L. Rawn,
Secretary.



Ed Westman,
Vice-President.



The *CELLized 9-inch Oak Floor Block



A complete unit of four flooring strips, splined together



Dipping bottom side in Everbond, a plastic cement



Everbond adheres to bottom, enough for perfect bond



Driving in the wooden slip tongue



Slight tapping quickly fixes the block in position



Low Cost — permanently beautiful — complete square units of Oak laid in plastic cement, without nails

Permanent, tight, and level; easily kept in condition; never needs replacement. The *CELLized oak floor block solves the floor problem for big buildings such as hotels, offices, schools, clubs—everywhere where style and beauty should be combined with durability and economy.

*CELLizing,—a deep-cell chemical treat, protects each unit block from distortion by moisture. The result is a smoother and more perfect hardwood floor,—one whose beauty mellows with age.

Faster to lay than strip flooring, because each block is a complete unit and is laid in EVERBOND (a plastic coal-tar base

cement) without nails, directly over concrete or wood subfloor. Squeaking is eliminated. Three sizes, 6 $\frac{3}{4}$ ”, 9”, and 11 $\frac{1}{4}$ ” squares, in all grades. Laid over any subfloor in remodeling.

Takes a superior and more lasting finish, with less finishing material. Sound deadening and comfortable under foot. Insect, and decay proof.

Laying directly over concrete, eliminates the material and labor cost of subfloor, screeds, and cinder fill, and saves also approximately 2 $\frac{1}{2}$ ” in height per story, without loss of headroom. These combined savings exceed the entire cost of the floor, laid and finished.

*CELLized oak floor blocks are sold through lumber dealers everywhere; manufactured by

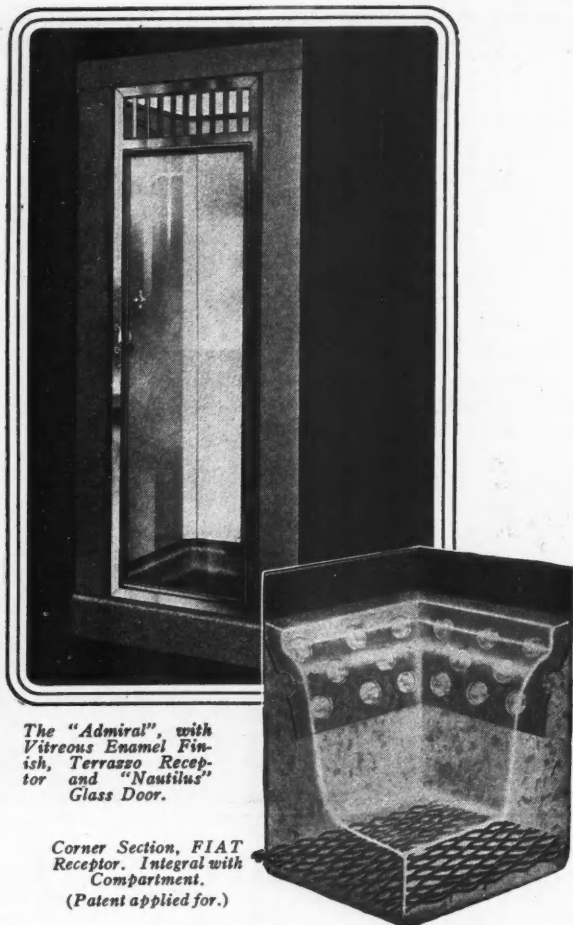
- | | |
|--|------------------|
| TENNESSEE OAK FLOORING CO. | Nashville, Tenn. |
| NASHVILLE HARDWOOD FLOORING CO. | Nashville, Tenn. |
| BRADLEY LUMBER CO. of Arkansas | Warren, Ark. |
| E. L. BRUCE COMPANY | Memphis, Tenn. |
| THE LONG-BELL LUMBER CO. | Kansas City, Mo. |
| ARKANSAS OAK FLOORING CO. | Pine Bluff, Ark. |

The more commonly used strip flooring, and Oak Floor Planks are also obtainable. *CELLized.



FREE on request

Write for book "Style in Oak Floors" to → ***CELLized Oak Flooring Inc.**
MEMPHIS — TENNESSEE



The "Admiral", with Vitreous Enamel Finish, Terrazzo Receptor and "Nautilus" Glass Door.

Corner Section, FIAT Receptor. Integral with Compartment. (Patent applied for.)

The Modern Bath

for modern homes

The Fiat Shower Bath Compartment is in keeping with modern developments in bathing equipment. Today, everyone wants a shower because it is the quickest, cleanest, most economical way to bathe. The Fiat Enclosure doubles the bathing facilities of every home or apartment, adding to daily enjoyment and greatly assisting the buying or selling of buildings.

FIAT SHOWER BATH COMPARTMENT

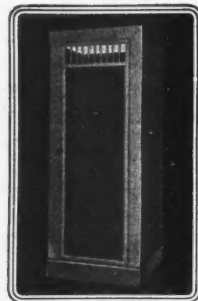
The last word in shower enclosures. A complete unit that "rides" the building. Not affected by expansion, contraction or settling. Ideal for both new and old homes. Expensive remodeling not required—plumber does complete job. Only minimum space required in corner or closet. Permanent leakproof construction and no spoiled decorations. Shower doors or curtains optional. Beautifully finished—vitreous enamel in several colors, also galvanized steel with shop coat of paint. Seven models, reasonably priced.

Write for complete 32-page illustrated catalog and learn all about the superior FIAT Shower Bath Compartment features

FIAT METAL MFG. CO.
1201 Roscoe St. Chicago, Ill.



The "Admiral", with Extended Receptor.



The "Ensign", with "Marine" Door.

FIAT METAL MANUFACTURING CO.
1201 Roscoe St., Chicago, Ill.

Please send me full information regarding Fiat Shower Bath Compartments.

Name

Street

City, State

Please check—I am a Contractor , Plumber , Architect , Dealer , Realtor , Home Owner .

member mills, and are now in effect. Each manufacturer is endeavoring to produce a product that will strictly conform to the grading rules adopted and the results of this rigid grading is already being reflected in the uniformity of the product of the member mills.

A program of advertising will be outlined, designed to educate the various marketing factors to the multitude of users for Douglas fir plywood. This advertising will be directed to retail dealers, contractors and builders, manufacturers and consumers.

The establishment of a research laboratory is one of the most important features of the Institute. Experienced chemists and practical men will combine their efforts in this laboratory to find a method of producing plywood that will give long and satisfactory service under strenuous conditions.

The officers and trustees of the Institute are all men who have been identified with the plywood industry for many years. They are: Mr. Phil Garland, Tacoma Veneer Co., Tacoma, Wash., president; Mr. Ed Westman, Washington Veneer Co., Olympia, Wash., vice-president; Mr. K. W Steinhardt, Elliott Bay Mill Co, Seattle, Wash., treasurer; Mr. Wm. L. Rawn, Tacoma, Wash., secretary.

The following companies are members of the Institute: Buffelen Lumber & Manufacturing Co., Tacoma, Wash.; Elliott Bay Mill Company, Seattle, Wash.; Henry McCleary Timber Co., McCleary, Wash.; Portland Manufacturing Company, Portland, Ore.; Robinson Manufacturing Co., Everett, Wash.; Tacoma Veneer Co., Tacoma, Wash.; Walton Veneer Co., Everett, Wash.; Washington Veneer Co., Olympia, Wash.; Wheeler-Osgood Co., Tacoma, Wash.



Yocum Made Managing Director

TRELL W. YOCUM, one of the executives of the American Petroleum Institute and well known in both the oil and publishing fields, has been elected managing director of the Oil Heating Institute and the American Oil Burner Association. He will succeed Leod D. Becker, who has been at the head of the two organizations since their establishment six years ago and is retiring to devote all of his time to his publishing business.



Announce Convention Date

THE next convention of the National Association of Real Estate Boards will be held in Boston, Mass., June 24 to 29, 1929, inclusive, according to a decision recently announced by President Henry G. Zander, of Chicago. Headquarters for the convention will be at the Statler Hotel.



Appoint District Manager

THE Waterproofing Division of the A. C. Horn Company, Long Island City, N. Y., has announced the appointment of N. C. Chaney as a district manager for the states of Ohio, Indiana and Kentucky. Mr. Chaney will maintain offices at 202 South Ohio Bank Building, Cincinnati, Ohio.



Transferred to Los Angeles

THE Wagner Electric Corporation announces that Fred Johnson, formerly in charge of the company's St. Louis sales office, has been made manager of the Los Angeles branch office. This change brings to a close 21 years of service as district manager of the St. Louis territory on the part of Mr. Johnson.

COMPLETE



PRICES	
MERCHANTS EXPRESS	
—110" wheelbase	\$ 665
COMMERCIAL TRUCK	
—120" wheelbase	775
1/4-TON—130" wheelbase	995
1/4-TON—140" wheelbase	1065
1/4-TON—150" wheelbase	1345
1/4-TON—165" wheelbase	1415
2 1/2-TON—150" wheelbase	1595
2 1/2-TON—165" wheelbase	1665

Chassis f. o. b. Detroit

COMPLETE trucks . . . a complete line of trucks . . . complete owner satisfaction . . . So runs public appraisal of Graham Brothers Trucks.

They are built by one manufacturer—chassis and bodies. They are sold by one dealer—complete, ready to work.

Graham Brothers Trucks are all sixes. All have 4-wheel brakes. Six cylinder power . . . Six cylinder speed . . . Six cylinder flexibility and operating ease . . . The snap of six-cylinder acceleration and the safety of 4-wheel brake deceleration . . . Four speed

transmission on 1 1/4, 1 3/4 and 2 1/2-ton trucks.

All these features at extremely low cost—and without sacrifice of the rugged dependability and operating economy the world has learned to associate with everything Dodge Brothers builds.

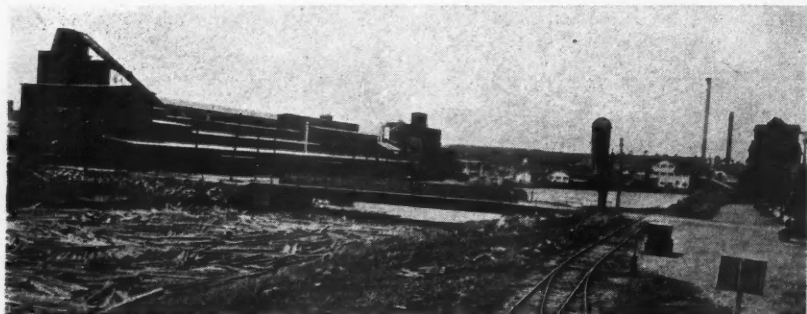
Let your Dodge Brothers Dealer show you the exact size and type for your business. Compare it—for price, for value, for appearance, for its ability to do your work and make you money—with any truck you ever considered good value.

GRAHAM BROTHERS TRUCKS

BUILT BY
DODGE BROTHERS DIVISION
OF CHRYSLER CORPORATION

SOLD AND SERVICED BY
DODGE BROTHERS
DEALERS EVERYWHERE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



This New Unit of the Wood Conversion Company's Plant for Manufacturing Balsam-Wool, at Cloquet, Minn., Was Put in Operation at 1 o'Clock July 5 by Secretary of Agriculture William N. Jardine, Who Pressed a Button on His Desk in Washington That Was Through-Connected with the Machinery in the New Factory.

New Balsam-Wool Plant Opened

AS chief executive of the U. S. Forest Service, which is interested in the complete and economical use of the timber resources of the country, William M. Jardine, Secretary of Agriculture, on July 5, pressed a button in Washington, D. C., which set in motion a new plant of the Wood Conversion Company, of Cloquet, Minn., 1,300 miles away. This ceremony marked the opening of an important chapter in the development of the utilization of wood waste by the Weyerhaeuser interests. The new Balsam-Wool fabrication unit increases the floor area of the Wood Conversion Company's plant to 230,000 square feet. The manufacture of this product utilizes, as its raw material, wood waste which is ordinarily burned by the lumber mill.

A RECENT announcement states that F. E. Wadhams is now affiliated with the Electric Rotary Machine Co., 3825 W. Lake St., Chicago, in capacity of sales manager.

Extra-Mural Control Upheld

PROVISIONS of the Ohio general code requiring plats of land within three miles of the city limits to have the written approval of the city planning commission as a condition precedent to the right of the owner of the land to record his plat has been upheld as constitutional by a decision of the Supreme Court of Ohio. Judicial decisions upholding the right of the state legislature to give cities extra-mural powers in subdivision control has been handed down previously in Michigan and the District of Columbia.

Will Celebrate Ceramic Week

ANNOUNCEMENT has been made that plans have been completed for a national celebration of American Ceramic Week, in connection with the thirty-first annual convention of the American Ceramic Society, at the new Stevens Hotel, Chicago, February 4 to 9, 1929.

Will Manufacture Dinofold

AS a result of recent negotiations between the Nichols & Cox Lumber Company, of Grand Rapids, Mich., and the Wasmuth-Endicott Company, of Andrews, Ind., the latter firm will, hereafter, hold all manufacturing and selling rights to the patented Dinofold breakfast nook, formerly held by Nichols & Cox. This breakfast nook has been taken over by the Wasmuth-Endicott Company as a logical addition to the extensive line of standardized kitchen units which it manufactures.



Malleable Asphalt (Mastic) is a remarkable material different from ordinary roof paints and coatings—in ingredients, different in method of manufacture, and different in results on the roof, yet as easily applied. No special tools or heating required.

Used by Henry Ford on his tractor plant, Marshall Field & Company on their store, the Crane Co. on their new foundry; Butler Bros. saved \$15,000.00 by resurfacing old composition roof on their Chicago warehouse.

What more need we say to establish your confidence in Malleable Asphalt (Mastic)?

Dealer or Individual Agents Wanted

Substantial profits await you, every roof that leaks is a prospect. Jump in on this money-making proposition now. Secure Exclusive Sales-Franchise and cinch your territory. We put on a direct-by-mail campaign to your prospects and send an experienced Sales Supervisor to help you close big deals.

Write for full information now

Malleable Asphalt Company

6355 BROADWAY
CHICAGO, ILLINOIS

a pair of profits
SELL and APPLY
MALLEABLE
Asphalt [Mastic] Roofing
for
OLD or NEW
ROOFS

Fill out the coupon below and mail it to us today. We will send you a sample and complete information free of charge.

<p>MALLEABLE ASPHALT COMPANY 6355 Broadway, Chicago, Illinois</p> <p>Please send sample and complete information.</p>	
Name.....
Address.....
City.....	State.....
<p>Am interested in Exclusive Sales Franchise <input type="checkbox"/></p> <p>Am interested in material for use only <input type="checkbox"/></p>	

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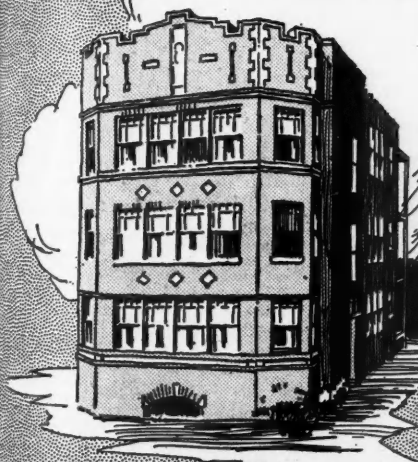
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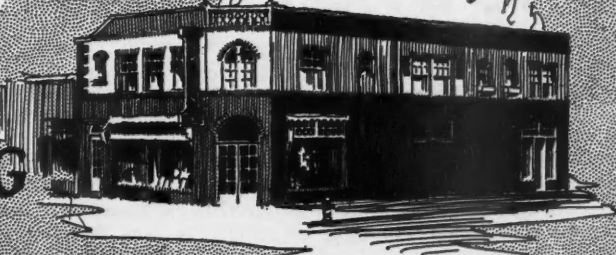
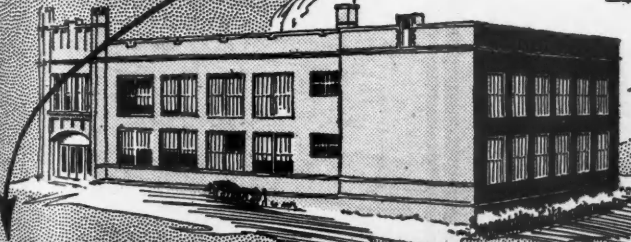
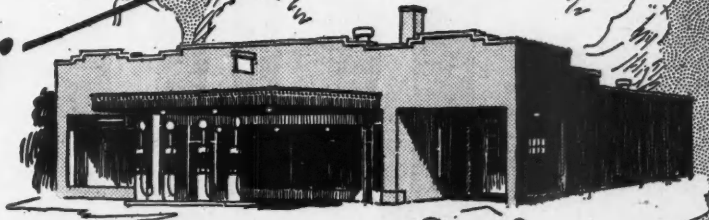
THE MOST PRACTICAL METHOD IN THE BUILDING FIELD



For pricing and de-
veloping sales of—

- HOMES
- APARTMENTS
- STORES
- GARAGES
- OTHER BUILDINGS

for



ACCURATELY FIGURING
BUILDING COSTS

\$100

Brings HoltBid for Your Examination

SPECIFICATIONS.

OUTSIDE DOORS with frames as detailed, " casg. No. _____
 Dra. _____ No. _____

INTERIOR DOORS with
 Dra. _____
 French Dra. _____
 Mirror Dra. _____
 Casd Ogrs. _____

WINDOWS to be _____ " thick, with _____
 with _____
 without pulleys, weights, sash cords and _____
 Dbl. Hung _____
 Dbl. Hung _____

SCREENS for _____ doors, all w/ _____
 and _____

CELLAR SASH _____
 GABLE SASH _____

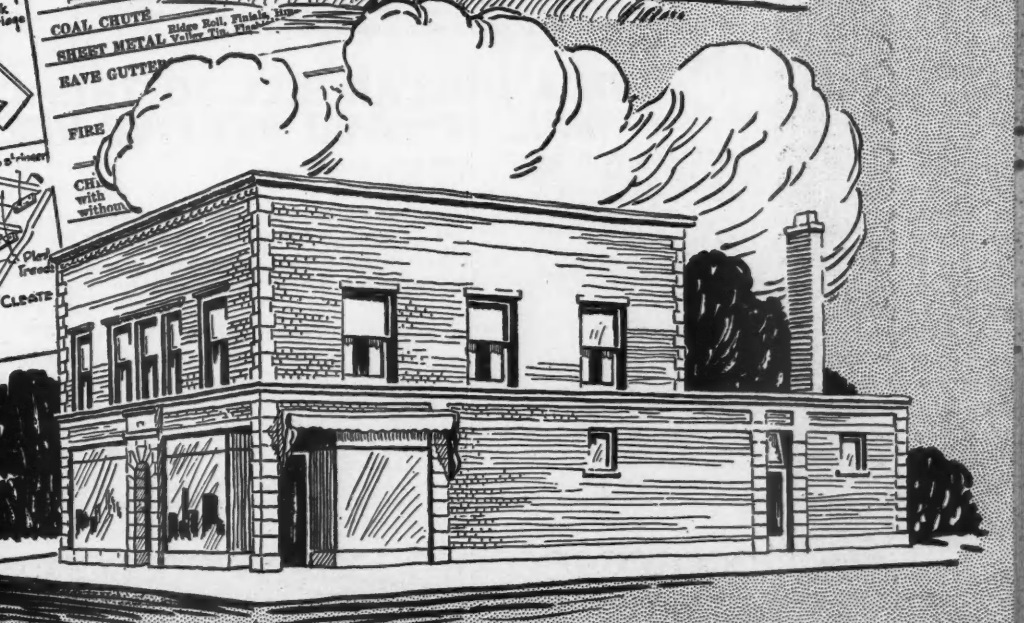
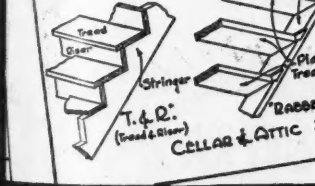
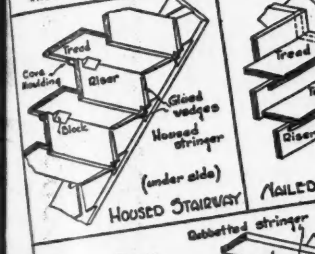
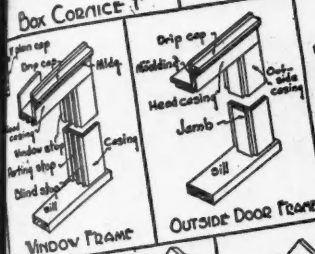
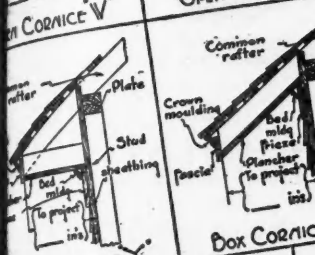
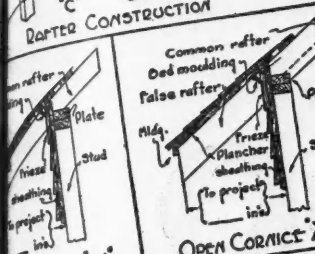
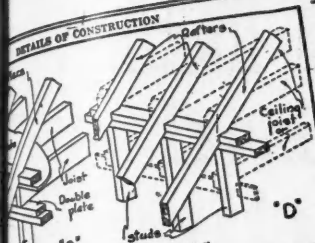
MAIN STAIRS as ch _____
 St'g New _____
 No. _____
 Rail around Stair _____

CELLAR STAIRS _____
 BASE BOARDS to be _____
 rooms except _____
 PICTURE MLDG. _____
 TRIM. All inside _____

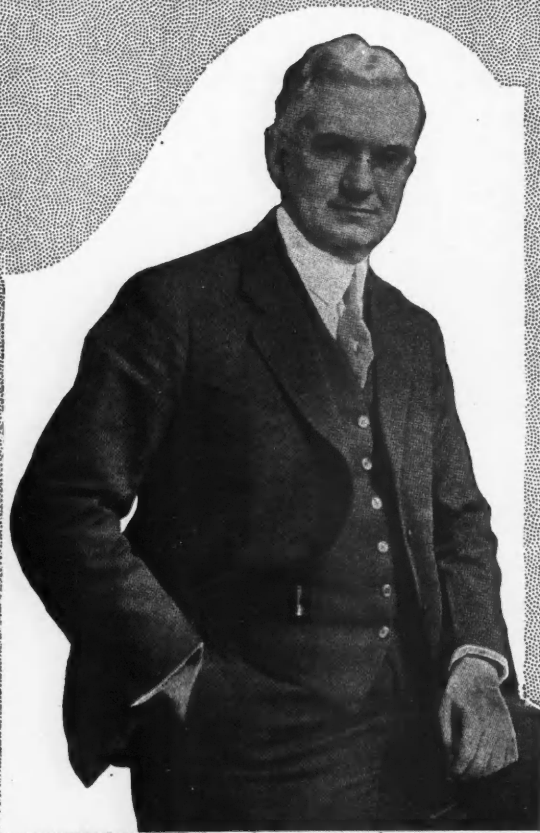
CABINET WORK _____

COAL CHUTE _____
 SHEET METAL _____
 HAVE GUTTER _____

FIRE _____
 CELLAR _____
 with _____



The Holt Bidder Gets
 The Contract
\$100
 puts Holt Bid in Your Hands



**I WANT YOU TO
SEE HOLT BID**
You will find it
worth many times
its cost

\$100

**Brings this Remarkable
System for your approval**

MY PERSONAL GUARANTEE

A.B. 9-28

I GUARANTEE that the HoltBid Method of Estimate 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 HoltBid 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
MAIL IT—AND RECEIVE HOLT BID**

**WILLIAM A. RADFORD, President,
HOLT BID SERVICE CO.,
1827 to 1901 Prairie Ave., Chicago, Ill.**

Please send at once **HOLT BID SERVICE** of accurately estimating building costs. Enclosed find \$1.00. If I keep **HOLT BID** more than thirty days, it is understood that I wish to keep the service and I will pay you \$5.00 per month until the balance of the **SPECIAL INTRODUCTORY Price** of \$85 has been paid. The **HOLT BID SERVICE** includes all units, as well as a year's subscription to **American Builder**, the World's Greatest Building Paper.

Name.....

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

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

Note:—The service must be entered in the name of the individual and not the firm.

(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.)



Adopt Sustained Yield Policy

THE St. Paul & Tacoma Lumber Co., Tacoma, Wash., has joined the ever increasing number of large timber land owners that are handling their forests on a sustained yield basis, according to a recent announcement, which states that a definite program for keeping the company's land continuously productive, payrolls permanent and service to consumers dependable has been adopted. A recent survey of privately owned timber lands revealed that more than 21,000,000 acres, mostly owned by large lumber and paper companies, were being managed with a view to reforestation, and that many of these companies are already operating on a sustained yield basis.



Appoint Advertising Manager

THE T. L. Smith Company, of Milwaukee, Wis., announces the appointment of A. J. Gerlach as advertising manager. Mr. Gerlach will be responsible for the preparation of the company's advertising literature and will co-operate with the George J. Kirkgasser Company, of Chicago, in trade paper advertising.



Universal Makes Appointments

NEW appointments by the Universal Portland Cement Co. have been announced by F. L. Stone, general sales manager, as follows: A. C. Cronkrite, assistant general sales manager; Edward Quebbeman, western sales manager; W L. Greenly, division sales manager for Chicago; Harry A. Craig, division sales manager for Illinois and Missouri; Earle D. McKay, division sales manager at Duluth, Minn.



Employees' Club Gives Dinner

THE Segal Benevolent and Social Club, an organization of the employees of the Segal Lock & Hardware Co., Inc., of New York City, recently held its annual dinner at Feltman's Coney Island. Most of the officers and several of the directors of the company were present. Memberships in this organization is limited to employees who have been with the company for a year or more and its purpose is to promote welfare and fellowship among its members. Since its organization about 10 years ago, it has expended many thousands of dollars in benevolent and social work.



The General Electric Company, Schenectady, N. Y., has published two new booklets on the subject of electric arc welding, under the titles, "Arc Welding in Industry" and "Arc Welding in G-E Factories," the former illustrating the application of arc welding to groups of basic operations commonly found in industrial plants and the latter designed to promote a further use of arc welding by portraying the company's accomplishments in this field.

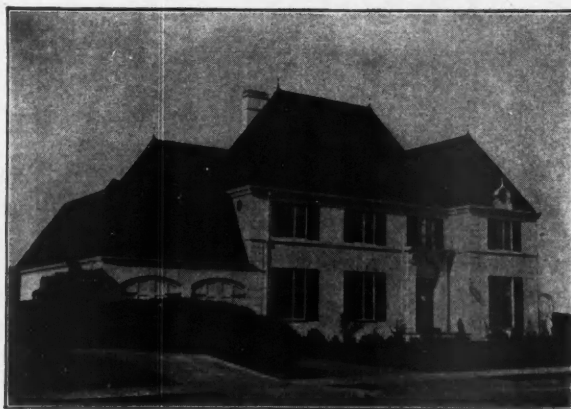
The Major Equipment Company, 4603 Fullerton Ave., Chicago, has published a General Catalog, No. 11, covering its complete line of stage, theater, flood, sign and window lighting equipment.

The Macomber Steel Company, 909 Belden, N. E., Canton, Ohio, offers two pamphlets on the subjects "Massillon Roof Trusses," and "Massillon Roof Purlin Construction," both containing designing data and standard specifications.

Heston & Anderson, 207 Western Ave., Fairfield, Iowa, has published a complete new catalog of the H & A line of woodworking equipment.



Cuts First Cost of Building



House at Stockton, California, John Upton Cloudsley, Architect. Roof of Cabot's Creosote Stained Shingles. Stucco walls finished with Cabot's DOUBLE WHITE. Insulated with Cabot's Quilt.

You can buy Cabot's Quilt, an insulating material, tested over more than thirty years of successful use, which will actually reduce the first cost of homes you are building, because of savings in heating plant and plastering, and because of its lower price.

We thus make it possible for you (1) to offer homes at a lower price, and (2) to sell them more easily because they are insulated with Cabot's Quilt, an insulator that really works.

No sawing or expensive fitting. Cabot's Quilt bends around corners, goes on with a minimum of time and expense. Scientific tests in the laboratories of the U. S. Bureau of Standards prove that it has more insulating value than any solid or semi-rigid wall-board of equal cost and thickness.

See your lumber dealer today for prices or use the coupon below. No obligation.

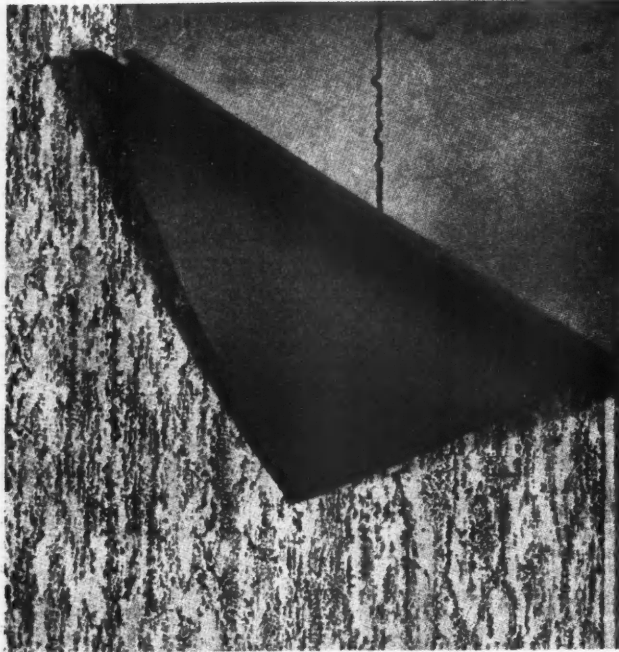
Cabot's Quilt
In Successful Use for Over 30 Years



Oil-Textd

Reg. U. S. Pat. Off.

New—
Permanent—
Textured—
Wall Covering



Applied to Plaster or Wall Board

Inexpensive—Easily Applied—Washable—Decorative
—Built up in Linseed Oil—No Surface Cracks—Easily
Repaired.

Made in any color and in a variety of designs suitable
for any room in the home, public halls, stores, etc.

The wall is finished in one operation without smudg-
ing the woodwork and a uniform texture is assured.
Applied like wallpaper.

Can be removed leaving the wall in its original state.
FREE SAMPLES and literature sent upon request.

Write today

Lincrusta-Walton Co.
Hackensack New Jersey



BINDERS AND PANEL MOULDINGS TO MATCH

Books, Bulletins and Catalogs for You

THE literature and publications listed here are avail-
able 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.

"Doorways," the monthly house organ of the Richards-
Wilcox Mfg. Co., Aurora, Ill., in the August issue, con-
tains an article on the application of this company's door
hangers to the new and rapidly developing field of air-
plane hangars.

The Direct Control Valve Company, 332 S. Michigan
Ave., Chicago, has prepared a booklet on the subject of its
valves under the title "The Direct Control System of
Automatic Temperature Regulation," which contains use-
ful information for those interested in heating problems.

The Berger Manufacturing Company, Canton, Ohio,
has published a "Concrete Form Construction Handbook,"
containing very complete information on the use of its
Berloy metal forms in concrete work and also a booklet
on the subject of "Berloy Bar Joists—Fireproof Construc-
tion for Modern Buildings."

The Everhot Manufacturing Company, Maywood, Ill.,
offers several pamphlets on the importance of marking
tools and equipment and its branding equipment for this
purpose.

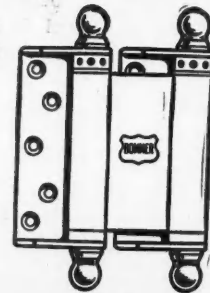
John A. Brooks, 14528 Second Blvd., Detroit, Mich.,
has published an attractive and interesting booklet on the
clock operated, underground irrigation systems for gar-
dens and landscaping, which his company has perfected.

The Superior Spring Hinge Company, 550 W. Lake
St., Chicago, has published a catalog, No. 16, covering
its complete line of hardware specialties for doors and
windows.

Bommer

Spring Hinges

are
the best



are
the best

Millions and Millions

of People are Pushing

Them

whenever they open a door

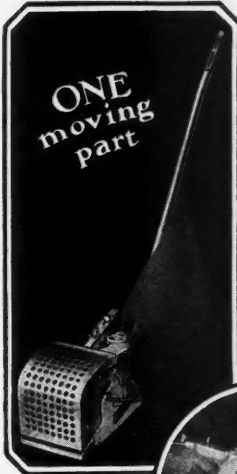
Follow the line of least resistance

Use **Bommer** Always
They are the best

Bommer Spring Hinge Co., Brooklyn, N.Y.

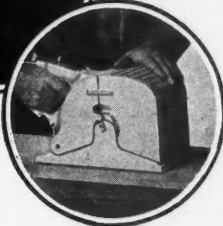
The Reid-Way

Vacuum Convertible SANDER



Growing in popularity every day, the new Reid-Way Vacuum Sander has revolutionized sanding practice. The revolving field motor, exclusive Reid-Way feature, has one moving part. No belts, chains, gears, no friction, no lost power. The only light weight sander using an induction motor—no commutator, no brushes to wear out. Extreme simplicity brings the price within the reach of all.

Write for free circulars



The REID-WAY is instantly convertible from floor sander to bench sander or jointer. New vacuum principle eliminates dust.

**Light
Strong
Durable**

The REID-WAY Company

718 North 16th Street
Cedar Rapids, Iowa



REID-WAY Co.
718 North 16th St.
Cedar Rapids, Iowa.

With no obligation on my part you may send circular describing the new Reid-Way Vacuum Sander.

Name

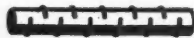
Address

Just clip this to your letterhead if more convenient.

Polishing Wax With a Reid-Way

By simply replacing the sandpaper with an inexpensive polishing cloth the Reid-Way becomes an excellent floor polisher.

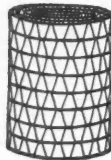
Buy Reinforcing and Building Steel from Headquarters



Round and
Square
Deformed
Bars



High Chair



Triangle
Wire Mesh
Reinforcing



Lower Slab
Bar Spacer

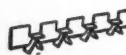
Continuous
Stirrups



Bar Chair

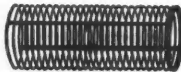


Step
Reinforcement



Lower Beam
Bar Spacer

Spirals



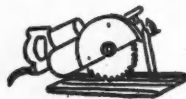
Joist Beam
Spacer



Welded Solid
Steel Sash



Expanded
Metal
Reinforcing



Portable
Electric
Hand Saw



Expanded
Metal Lath



Ryerson combined service 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 unequaled 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

RYERSON

STEEL SERVICE

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.

"Advertising for Community Promotion" is a U. S. Dept. of Commerce booklet by Wroe Alderson, listed as No. 21 of the Domestic Commerce Series. It should be of interest to all builders and developers whose business is closely tied up with community development. It is sold by the Supt. of Documents, U. S. Government Printing Office, Washington, D. C. Price 10 cents.

"Does It Pay to Install an Oil Heater?" is the title of a new booklet prepared by the Oil Heating Institute, 420 Madison Ave., New York City, for the purpose of showing that oil fuel, automatically controlled, is the cheapest fuel.

"Are Oil Heaters Perfected?" is the title of a new booklet published by the Oil Heating Institute, 420 Madison Ave., New York City, which discusses the requirements of a perfected heating unit, and shows comparative cost charts for coal and oil heating.

"Spray Painting—Its Hazards and Safeguards," published by the Hartford Accident and Indemnity Co., Hartford, Conn., has been revised and brought up to date and republished in a second edition.

"Southern Pine Lath as a Money Maker" is the title of a booklet published as Bulletin No. 2 of the Committee on Production and Refinement of the Southern Pine Association, New Orleans, La.

The Beckley Perforating Co., Garwood, N. J., offers a pattern sheet showing some of the perforations in metal which it is able to produce in both sheet metal and plate work.

"Window Beauty," is the title of a new booklet published by the Truscon Steel Company, Youngstown, Ohio, as a catalog of its new Model No. 5 steel casement window. It is illustrated with photographs and pencil sketches and contains complete information.

Bird & Son, Inc., East Walpole, Mass., offers a pamphlet covering its Paroid roll roofing.

The Beaton & Caldwell Mfg. Co., New Britain, Conn., offers a small booklet, Catalog No. 2, containing complete information on its Simplex flush valves.

The General Electric Company, Schenectady, N. Y., has issued a pamphlet on its Squirrel-Cage Induction Motors, Riveted Frame "900" Series; Travel Carriage for Automatic Arc Welders; Magnetic Switches; and Sheath-Wire Resistor Units.

"Prize Homes of the West Coast Woods," is the title of a new booklet published by the West Coast Lumber Trade Extension Bureau, 5562 Stuart Bldg., Seattle, Wash., illustrating the prize-winning house designs selected in the recent West Coast Woods Architectural Competition.

The T. L. Smith Company, Milwaukee, Wis., has published a new 72-page catalog covering its full line and containing 11 full-page views in colors showing its mixers in service on outstanding construction projects.

The Benjamin Electric Mfg. Co., 128 S. Sangamon St., Chicago, has issued a booklet on its new Apartment Compact electric ranges designed for modern small apartments for built-in or floor installation.

The Building Products Co., Toledo, Ohio, has issued three pamphlets on Removable Steel Forms for Ribbed Slab Concrete Floor Construction; Removable Steel Forms for Flat Slab Concrete Floor Construction; and Adjustable Steel Forms for Circular Concrete Columns; featuring the Blaw-Knox equipment for which it is distributor.

The Keuffel & Esser Co., Hoboken, N. J., has published the 37th edition of its catalog, a 500-page book, covering this company's complete line of drawing materials, mathematical and surveying instruments and measuring tapes.

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
1106-7 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

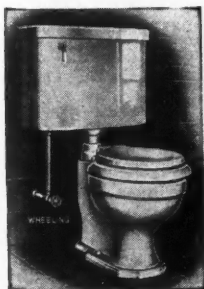


Plate 126-E "The Tranquil" all white Siphon Jet Water Closet Combination.

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.

WHEELING SANITARY MFG. CO.
WHEELING, W. VA.

Manufacturers of High Grade Plumbing Fixtures



Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.

7
UNITS
2
BUNDLES



**ACCURATE
 IN CONSTRUCTION**

We pride ourselves on the accurate workmanship in a Bradley-Miller Frame. All pieces are assembled into sill, head, casing and head jamb, which forms one bundle and side casings and side jambs comprise the height bundle. Can anything be more convenient than just two bundles to handle?

Bradley-Millers are free from warping, splitting, cracking and rotting. Made of (Pinus Strobus) considered the best of material. Order from your dealer or if he does not handle Bradley-Miller frames, send us the coupon below.



BRADLEY-MILLER & CO.
 1200 Marquette St.,
 Bay City, Mich.

Gentlemen: Please send me booklet describing Bradley-Miller Michigan White Pine Frames.

**Send
 this
 Coupon**

Name

Address

Dealer's Name

Address

Does Your Dealer Handle Bradley-Miller Frames?

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.

"Automobile Parking in Business Districts," is the title of a new booklet published by the Civic Development Department of the Chamber of Commerce of the United States, Washington, D. C. It covers the means to be used in solving the parking problem which is so serious a matter to all business men.

The Truscon Steel Company, Youngstown, Ohio, has just published two new booklets under the titles "Truscon Copper Alloy Steel Doors," and "Truscon Continuous Steel Windows and Mechanical Operators." These are indicated as catalogs 110 and 126 respectively.

Harvey Hubbell, Inc., Bridgeport, Conn., offers a new pamphlet on "The New Hubbell Tip-Top Switch," which is described as a fine switch at a popular price.

The Craftex Company, Brighton Station, Boston, Mass., has prepared a pamphlet on the subject of its product Sunflex, an interior flat white which is described as making light work twice, and also a circular of directions for the use of this paint.

The L. F. Diddie Co., Marshfield, Wis., has published a large sheet containing various letters and reports showing that "Cities Need Lightning Rods."

"Sabinite Controlled Sound" is the title of a new booklet published by the United States Gypsum Company, 300 W. Adams St., Chicago, which discusses the solution of acoustical problems in auditoriums and similar interiors and the use of this company's Sabinite acoustical plaster.

"A Program of Procedure," has been published by the Board of Governors of the Mortgage Bankers Association of America, 112 W. Adams St., Chicago, as the result of a nation wide study of real estate mortgage investments.

The Wolf Company, 2057 W. Fulton St., Chicago, has published a complete General Catalog "G", in loose leaf form with embossed, hard covers, which handsomely illustrates its entire line of Superior plumbing fixtures, and also offers a booklet showing its various colored enamels for bath fixtures.

The Badger Wire & Iron Works, Milwaukee, Wis., offers a complete catalog No. 8, illustrating its line of ornamental iron work, grilles, partitions, fire escapes and similar products.

The Stockade Corporation, 228 N. La Salle St., Chicago, offers its "Contractor's Hand Book on a New and Better Method of Home Construction with Proven Units," which very completely describes and illustrates the method of construction by the Stockade system of reinforced blocks.

The Western Brick Company, 1604 Builders' Bldg., Chicago, offers its Unit Bulletin No. 1, "Featherweight Haydite Building Units," which covers the subject of the application of these units in wall construction.

"The Uponizer," the monthly house organ of The Upon Company, Lockport, N. Y., contains, in the May issue, an interesting and informative description and illustrations of the new Upon plant and offices.

The Steel Frame House Company, Pittsburgh, Pa., has published an interesting pamphlet under the title "Steel Framing for Gasoline Service Stations."

The A. C. Horn Company, 1412 Horn Bldg., Long Island City, N. Y., has published a new booklet under the title "Hornac—The Violet Ray Snubber for Outside Painting," which describes the paint developed by this company to resist the action of ultra-violet rays.

PLASTERING IS 90% OF THE VISIBLE INTERIOR

Specify
**LIME
PLASTER**



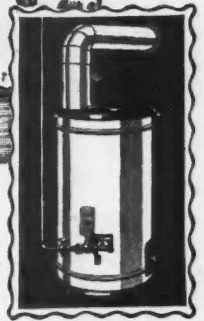
Architects naturally think of lime plaster because of its ready adaptability to the authentic treatment of period walls and ceilings. It affords an assured base for decorating or papering—at only 10% of the total building cost . . . Specify Gibsonburg, Ohio's Super-Finish—snow-white, pure, easily worked, uniform. The perfect lime for fine plastering. Build better walls.

Plaster is a word too often used in a broad sense. There are many kinds of plaster. Specify LIME plaster for this important building item.

Gibsonburg
Finishing Lime

THE GIBSONBURG LIME PRODUCTS CO., Gibsonburg, Ohio

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



The biggest
\$100 investment
you ever made

You put \$100 into an Incinor, and you guarantee a ready sale for that house at your price.

You will *save* interest, taxes, sales expense. You will *make* money.

We know these statements are true, because we see them pay out every day.

People want to *burn* their garbage, trash and rubbish. When you show them home incineration, you show them *the sign of a modern home*.

Built-in incinerators are expensive. And often there is a "kick-back" from them, when the chute becomes slimy, a breeding place for roaches and mice, or clogs up.

You can show your prospects everything they want—and *better*—with Incinor, the Home Incinerator. Simple, compact, *gas-fired*, Incinor installs as easily as a gas range.

Burns everything—garbage, rubbish, trash—cleanly, quickly and cheaply.

Investigate Incinor and you'll put it in.

See it at your gas office, the Incinor dealer in your community, or write us for full information.

For as little as \$100 f. o. b. factory

HOME INCINERATOR Co., Security Building
Milwaukee, Wisconsin

• INCINOR •

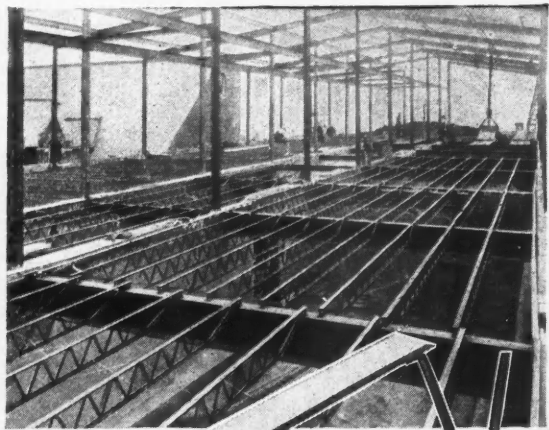
THE HOME INCINERATOR

Good Riddance

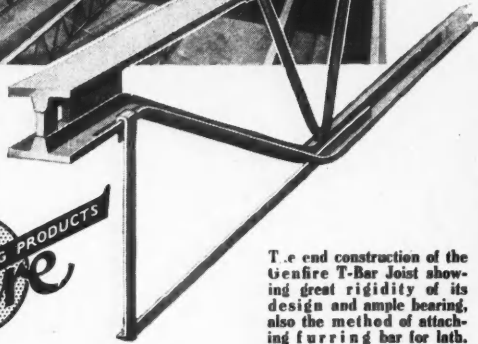
GARBAGE • RUBBISH • TRASH



©1928, H. I. Co.



Genfire
FIRESAFE BUILDING PRODUCTS



The end construction of the Genfire T-Bar Joist showing great rigidity of its design and ample bearing, also the method of attaching furring bar for lath.

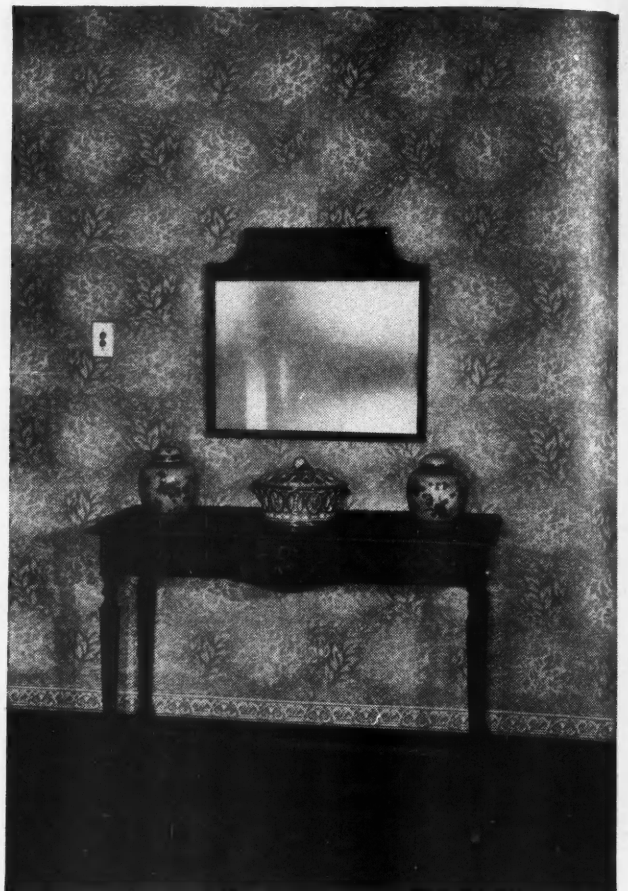
T-Bar JOISTS

You save time and money, and get a better job by using Genfire T-Bar Joists for fireproof floor construction. Joists are completely shop fabricated and reach the job ready for placing. Pipes and conduits can be run in any direction through the open web. Several floors can be installed at one time, and the joists themselves serve as a working platform for other trades. The continuous T-Bar section for top and bottom chords, the one-piece web member, and the superior welding assure maximum strength. Ample bearing and unusual rigidity is provided at the supports. The lightness of the construction also saves on the supporting framewall and foundation. For any fireproof construction you have, let us submit estimates and suggestions.


Write for catalog and data book

GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO

Manufacturers of a Complete Line of Firesafe Building Products, also Water-proofings, and Concrete Preservatives



For walls of permanent beauty

 WHEN you finish a room with Wall-Tex, you add strength to its walls . . . and lasting beauty. Wall-Tex is a fabric wall-covering, hung just like wall-paper. Wall-Tex is strong and flexible—it hides cracks in old walls and ceilings, and helps prevent new plaster from cracking.

Wall-Tex comes in a large number of beautiful patterns. Suitable for any decorative plan, in any room. Both dull and glossy finishes. And plain whites,

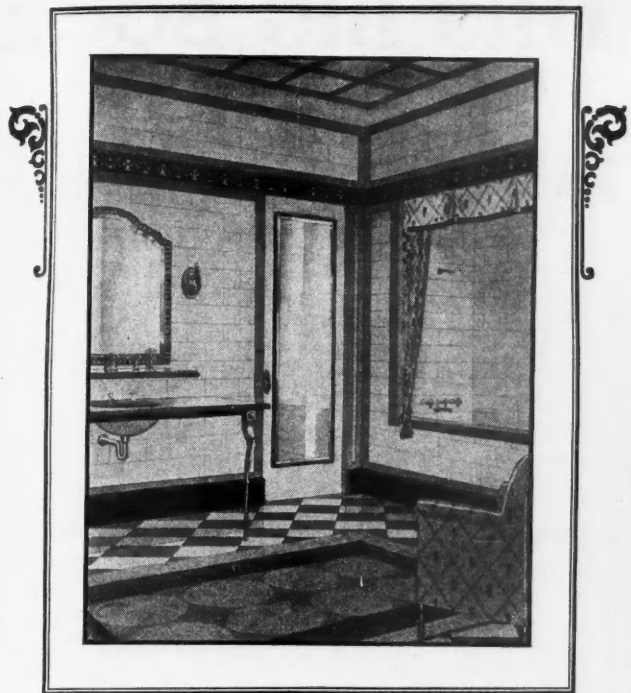
for stenciling, frescoing, rough-cast plaster, or modern applied finishes.

Spots, finger-prints, the collected dust and grime of city air can't permanently mar the beauty of Wall-Tex. It can be wiped clean with a damp cloth . . . time after time. No other wall-covering gives such satisfaction in a modern home.

Architects, builders, decorators: write for information on your particular requirements. The Columbus-Union Oilcloth Co., Columbus, Ohio.

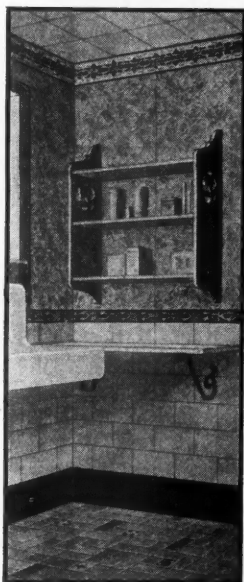
WALL-TEX
PERMANENT
WALL-COVERING

With the name that's easy to say and hard to forget



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

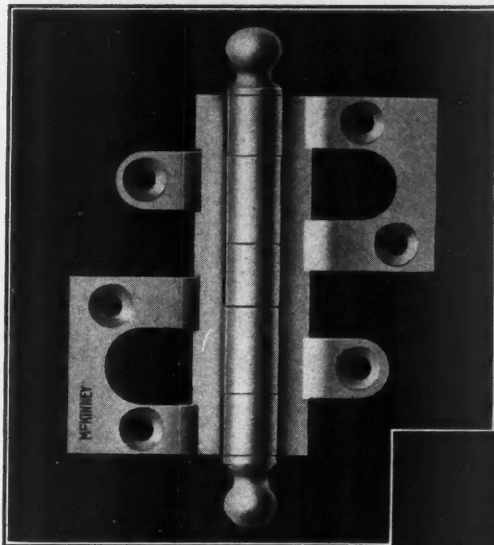
Sani Onyx, the new material for walls, ceilings, wainscoting, etc., is literally "hard as flint" because it is fused from rock ingredients. It may be had in plain sheets or tile pattern slabs.

[We have some choice territory available for Construction Houses or representatives. **]**
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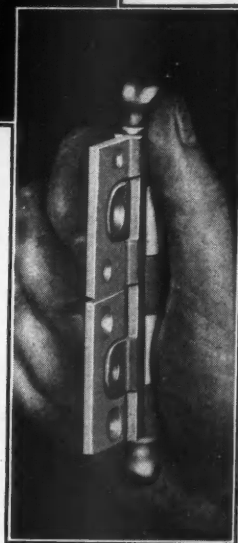
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is setting new records
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enables a man
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in less than
10 minutes



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THE leaves of this McKinney "Non-Mortis" Butt close one within the other to the thinness of a single leaf. You do not mortise either the door or the jamb. Just mark the location for your butts and screw them in position. Result: a true hanging door, a neat appearing job and a remarkable saving of time and labor.

McKinney "Non-Mortis" Butt comes in two weights and in all standard finishes. Data Sheet on the new "Non-Mortis" Butt shows photographs and gives complete information. The attached coupon will bring it to you by return mail.

McKINNEY MFG. Co.
Pittsburgh, Pa.

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AD 9-28



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In the Charity Hospital in Cleveland, O., Clinton Wire Lath was used to serve as re-enforcement as well as lath in constructing the two-inch non-bearing partitions.

The door frames were set instead of bucks and grounds. A single layer of lath was erected on the centre line of the partitions. Then the plaster applied first on one side and then on the other. Clinton Wire Lath is made of finely tempered wire woven with a close, even mesh. A double key, both vertical and horizontal, is provided irrespective of the direction of the stroke used in plastering. It may be had black painted, made of galvanized wire or hot dipped galvanized after the fabric is woven.

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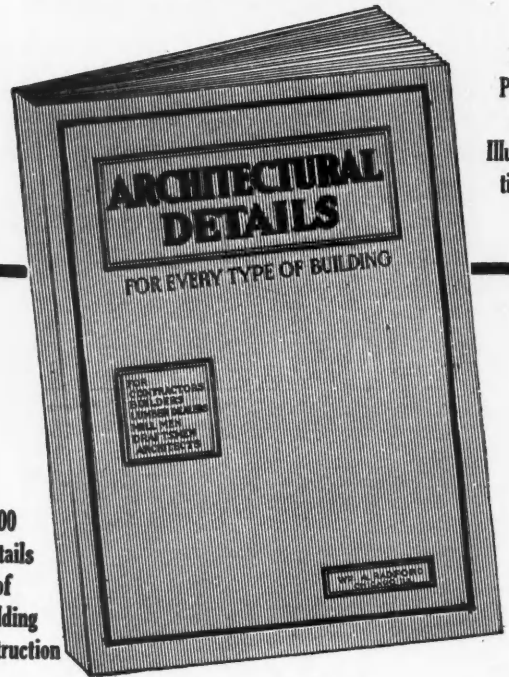
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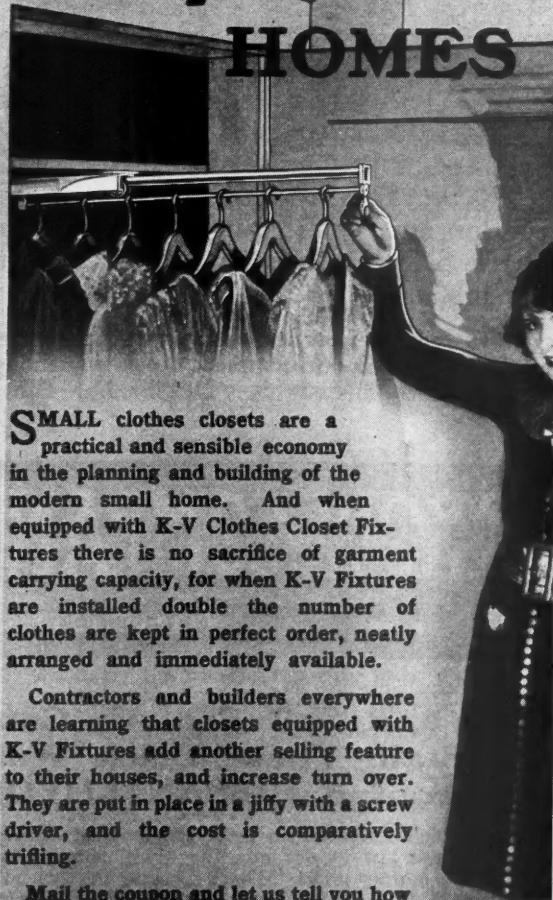
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opens both doors at the turn of one key.

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Quicklock



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Driving Rains and Salt Sea Air Cannot Penetrate or Stain These Brick Walls—They're Waterproofed with "ANTI-HYDRO"



ALTHOUGH this large hotel is situated on the ocean front at Asbury Park, New Jersey, the walls are always dry and the brick cannot stain from efflorescence coming from the mortar joints. That's because the cement mortar is mixed with "ANTI-HYDRO."

Driving rains, wintry winds and salt sea air have no effect on this masonry. "ANTI-HYDRO" waterproofs and dampproofs portland cement mortar and concrete *permanently*. Its small additional cost guarantees dry and stainless walls and is a profitable investment for any building, large or small.

Being a liquid compound which mixes readily with water, "ANTI-HYDRO" is extremely easy and economical to use. No additional labor is required for the mixing. And in addition to its many other advantages, "ANTI-HYDRO" makes cement mortar extremely plastic so that it spreads more easily. "ANTI-HYDRO" has been in continuous use for 24 years. It will pay you to use it on your next brick job.

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WARREN & WETMORE, ARCHITECTS—TURNER CONSTRUCTION CO., CONTRACTORS.

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“Tom Dawson was speaking about it today. ‘Gee,’ he said, ‘I wish I had started studying with the I. C. S. when you did. Here I am plugging away at the same old job and the same old salary while you've gone 'way up. I bet you're making twice as much as I am. And to think that two years ago we were working side by side.’

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“I hope he does, because an I. C. S. course is the very thing he needs to get out of the rut. I wouldn't be making anywhere near \$75 a week if I hadn't started to study just when I did.”

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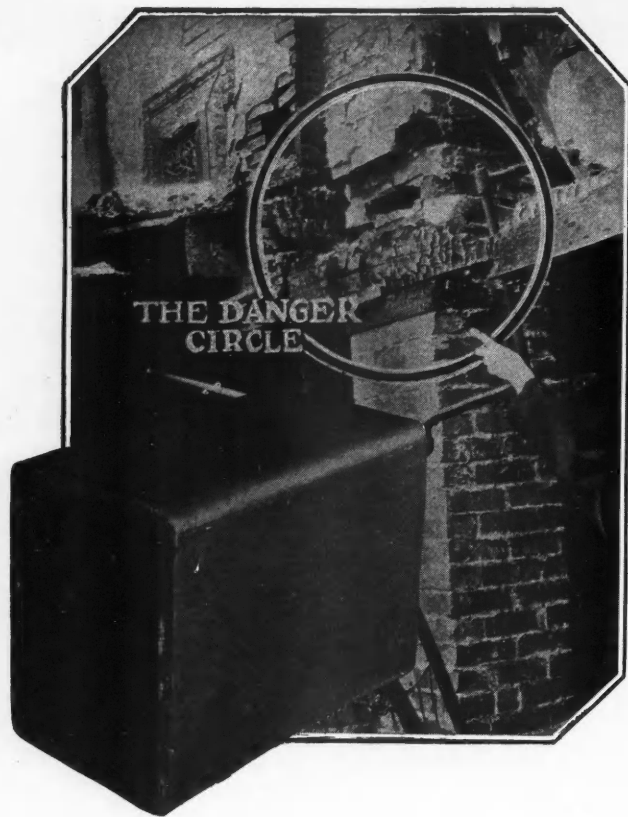
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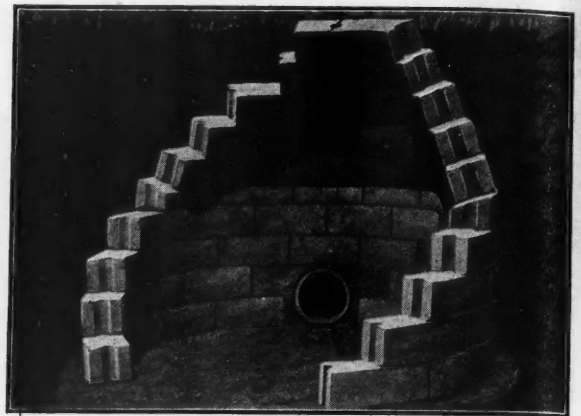
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No more chimney fires when every house is built with fire clay flue lining

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FIRE CLAY
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Open section showing one method of laying up.

A New Way to Build Concrete Manholes and Catch Basins

Municipal engineers have long sought an improved method for laying up manholes and catch basins—a method that would reduce costs, speed the work and provide a strong, permanent, waterproof job.

Concrete Manhole and Catch Basin Block solve the problem.

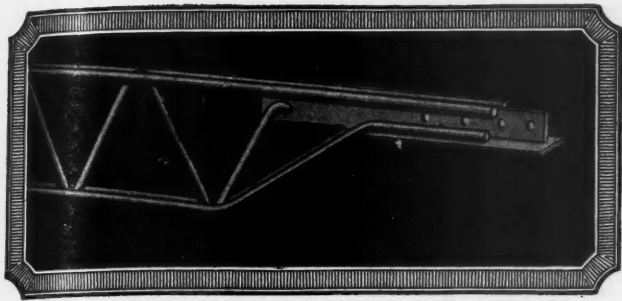
One mason with two helpers can ordinarily complete an average sized concrete block manhole in an hour's time—some contractors do it in considerably less time.

The advantage of curved concrete units for work of this character are many. The easily handled unit saves time, streets can be opened sooner and, when compared with the common brick method of building, labor costs are reduced and less material (units and mortar) is required.

The demand for concrete Manhole and Catch Basin Block is steadily increasing and to meet it adequately Consolidated engineers have developed and perfected two simple, speedy machines for manufacturing these units in quantity and at low cost.

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Consolidated Concrete Machinery Corp.
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—a practical steel floor joist for use in homes and buildings where the funds available do not warrant the use of strictly fireproof concrete slab floors. Strength, elimination of shrinkage and warping, shipments from stock and a high degree of fire resistance are features of the construction—all at a cost approaching that of wood joist floors.

Wood flooring is nailed directly to a wood nailing screed forming part of the top member of the joist. Metal lath and plaster, plaster board or other standard ceilings are readily attached to the bottom bars.

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909 Belden Ave., Canton, Ohio

Manufacturers

Sales Representatives in all principal cities

The Very Latest Development

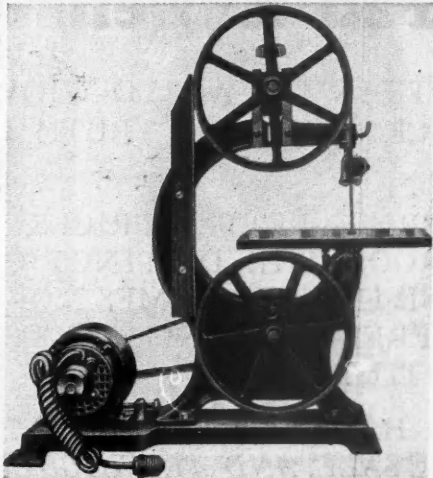
This 12-inch Bandsaw has reached the height of perfection and leaves nothing to be desired in bandsaw equipment.

\$35⁰⁰

F. O. B. Chicago
Without Base
or Motor

It may also be purchased on the time payment plan at \$39.00; \$10.00 down and \$10.00 per month.

In design, material and construction it is unexcelled. It features a 45 degree tilting table 10"x 14 1/2". The entire frame is of semi-steel. The steel-hardened ground shafts on which the flywheels rotate are micromically accurate so as to give perfect speed and absence of vibration. Write for further information on this and other money-making machines. We manufacture a complete line of light woodworking machinery and accessories.



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The money-earning ability of the National Electric Floor Surfacing Machine gives it a unique place in equipment of this kind.

It attracts business because of its better work.

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It works with a super-speed that multiplies profit.

BUILT FOR SPEED

When we say the National is built for speed—good work plus speed is understood as a matter of course. Without the highest class of work, speed is worse than useless.

The National Electric is built for fast operation just as the high class automobiles are built for mileage. It has the construction that stands up to the "no speed limit."

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Big Production Keeps Down Costs

The big demand for the National has made possible mass production which keeps the cost of the National way below what might be expected for a machine of its high caliber.

5-Day FREE Trial

Try out a NATIONAL and let it sell itself—or there's no sale

Five-year Guarantee!
Ten Months to Pay!

NATIONAL SANDING MACHINE CO.

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Please send me further particulars on the National Floor Sanding Machine. I'm especially interested in a Sander that makes more money but costs less.

Mail This Coupon Today

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TAKE-ABOUT Sander Sands Butt Ends of Floor with Grain

With the NEW EDGING ATTACHMENT the SUPER TAKE-ABOUT Sander entirely eliminates tedious edgescraping—speeding up the job—easy to handle—no long rests—and gives a finish the same as rest of floor. The Smooth even action of the belt gives that rippleless finish which pleases. Snap the switch, let the belt work, you merely guide it. One H. P. universal motor and 4 inch wide belt. Sands small rooms, closets, stairs, trim and bench work, eliminating much hand planing, scraping and sanding. Floor handle makes it easy to work standing up.

Ask us to arrange free demonstration and see for yourself why you can't go wrong on this moderate investment.

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Why Is a Slate Roof Considered Expensive?

FOR NO OTHER REASON THAN ITS WORLD-WIDE REPUTATION FOR ENDURANCE! YET, THE TRUTH IS, IT IS NOT EXPENSIVE.

BETTER THINGS ALWAYS BRING BETTER PRICES, BUT IN THE CASE OF A SLATE ROOF THE DISTINCTION AND GREATER SELLING POWER GIVEN YOUR HOMES MORE THAN ABSORBS THE SLIGHT DIFFERENCE IN INITIAL COST OVER THAT OF ARTIFICIAL SUBSTITUTES.

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Our Special "Quarry Cleft Slate" is a recent development for homes built for re-sale. Send for our descriptive literature.

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CUT EXPENSES O-K PORTABLE ELEVATORS

Do away with expensive methods of erecting hoist towers of lumber.

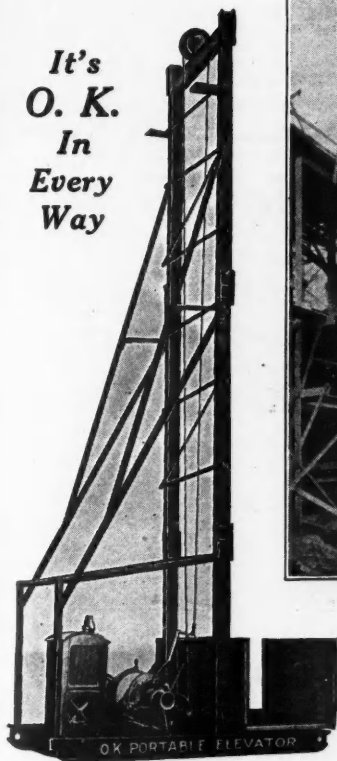
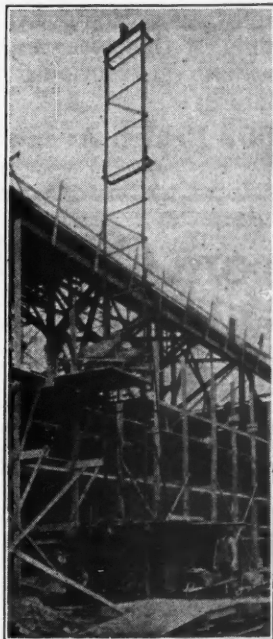
O. K. Elevators are all steel construction, electric welded ten foot sections can be added to the O. K. Elevators to reach any desired height. These sections are easily erected and quickly dismantled when ready to move to a new job.

O. K. Elevators are equipped with a single drum O. K. Hoist and 8 or 12 h.p. gasoline engine. If you are in the market for an elevator we can supply you from our complete line of gasoline or electric hoists in all capacities. We also manufacture portable air compressors.

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Please send your latest catalogs of equipment as checked.
 PORTABLE HOISTS PORTABLE AIR
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JAEGER'S Spring Mounted

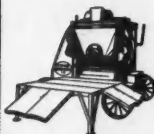
7-S Mixer
at a \$200 saving
under market prices
~ 100% BALL BEARING EQUIPPED ~



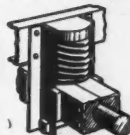
ALL STEEL
*50% Stronger
and 1/2 ton
lighter!*

**ONE MAN
CONTROL**

**7-S
SPEED QUEEN**



LOW CHARGE



**SPRING HUNG
CHASSIS-adds
Years to Life!**



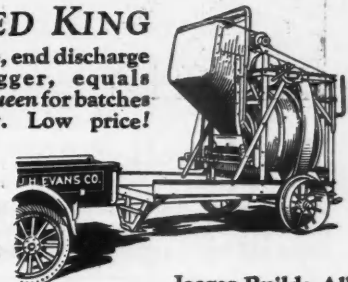
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SHAKER**

EVERY production advantage as the world's biggest makers of concrete mixers has gone into this one-bag mixer. It means a saving of \$200 to you at the start, plus more batches a day and longer life.

Short coupled, with 100% roller bearing steel disc wheels, men handle it nicely on soft ground. Weighs about 3500 lbs. complete with 2 cylinder Le Roi engine, Accurate Measure Water Tank.

SPEED KING

portable, end discharge one bagger, equals *Speed Queen* for batches per day. Low price!



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Jaeger Builds All
Sizes from 3 1/2 S up to 28 S Mixers

MAIL THIS FOR CATALOG, PRICES AND TERMS!

The Jaeger Machine Co. Date.....


521 Dublin Avenue, Columbus, Ohio

NON-TILT MIXERS TILTERS PLASTER
MORTAR MIXERS (Check where desired)

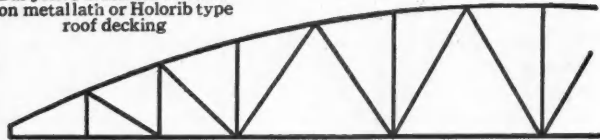
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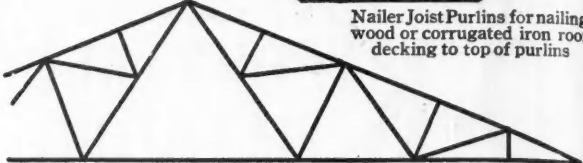
Bar Joist Purlins for concrete on metallath or Holorib type roof decking



Massillon Curve Chord Trusses



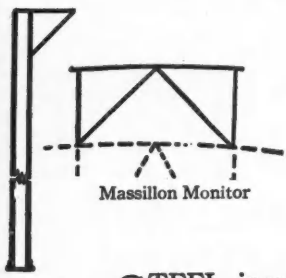
Nailor Joist Purlins for nailing wood or corrugated iron roof decking to top of purlins



Massillon "A" Type Trusses

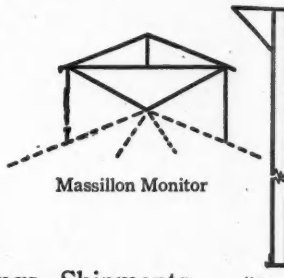
Steel Construction

for Commercial and Industrial Buildings, Airplane Hangars and Garage Buildings



Massillon Monitor

"H" Columns



Massillon Monitor

"H" Columns

STEEL insures **STRENGTH** and **SECURITY** where "Massillon Standardized Steel Building Products" are used. The standardization of these products invariably speeds up the completion of the building and results in lower costs.

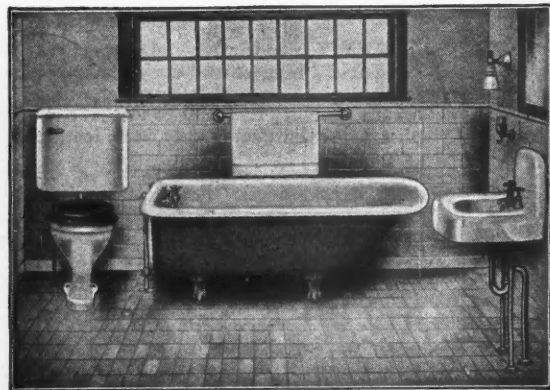
As an example of this standardization, standard stock size roof trusses are provided for all loads for spans up to 100 feet. In a similar manner, standard stock size purlin sections are provided for all types of roof deckings. Shipments are always prompt.

The contractor who builds with Massillon products has every advantage of the "standard steel building" plus the fact that these standardized products can be provided to meet the individual requirements of his client.

Send us a sketch or set of plans for your next building of this type and let us show you how Massillon construction can benefit you.

THE MACOMBER STEEL COMPANY, 909 Belden Avenue, CANTON, OHIO

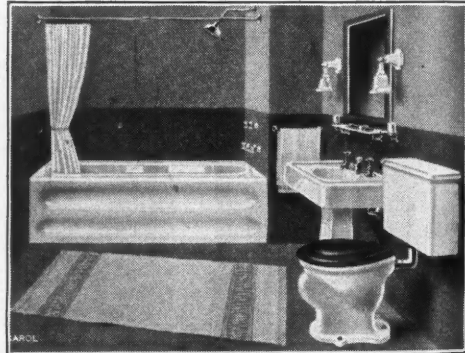
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The Jewell An inexpensive high grade outfit of latest style that carries the stamp of perfection, priced very low at..... **\$55**

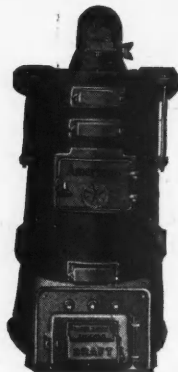
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BOSS 3 1/2 S TILTER

LOW CHARGING TYPE

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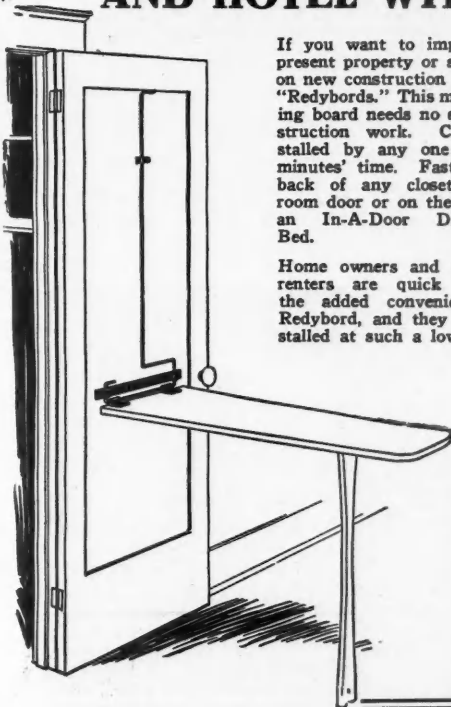
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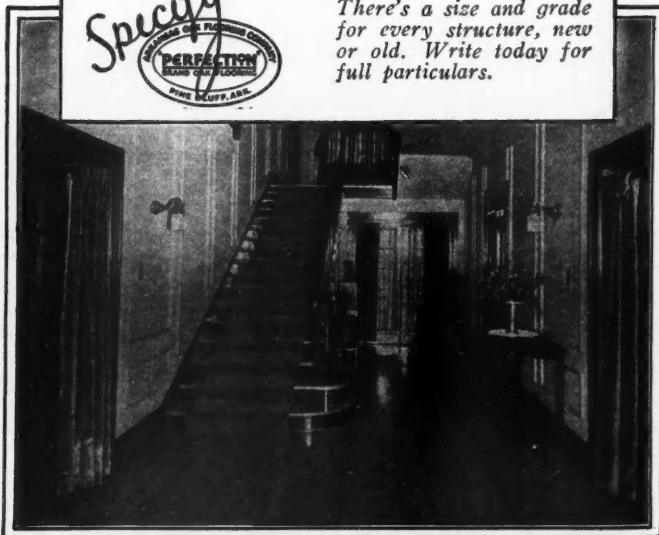
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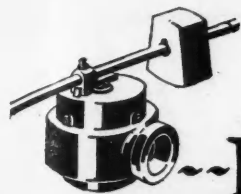
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Thrush System is nationally advertised and we are telling thousands of interested home builders about it monthly.



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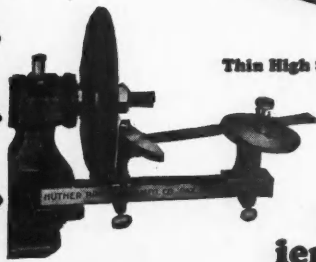
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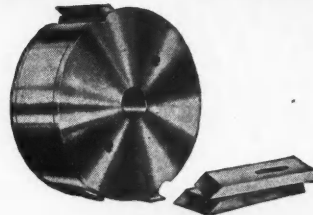
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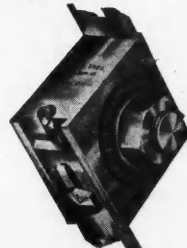


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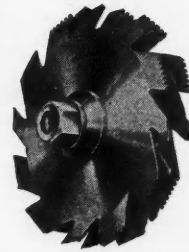
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Cutter Head



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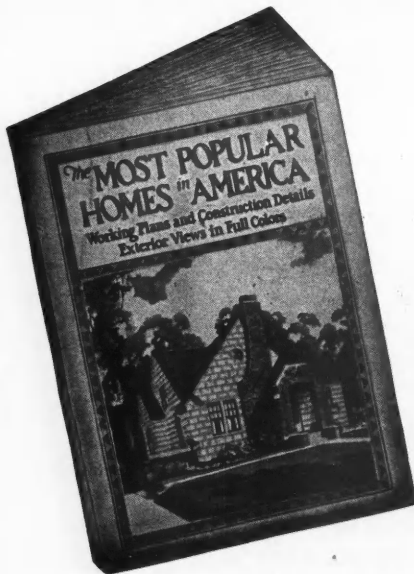


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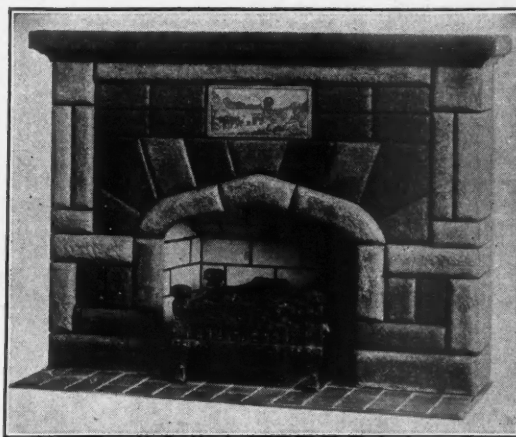
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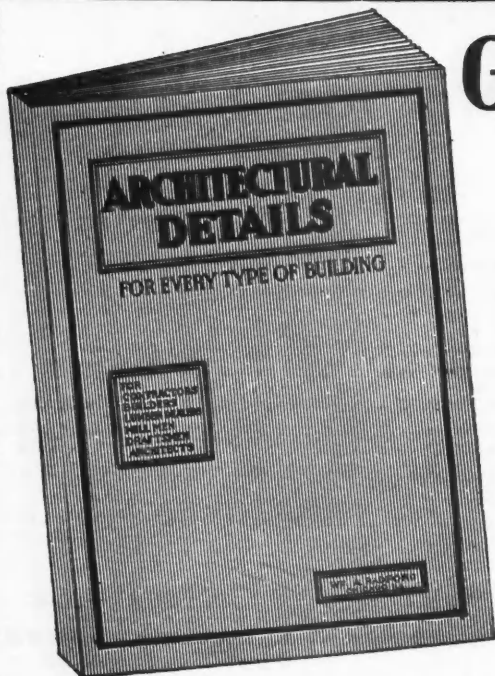
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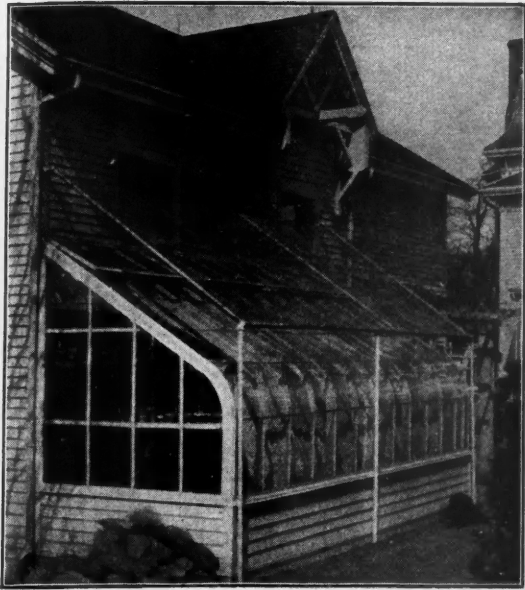
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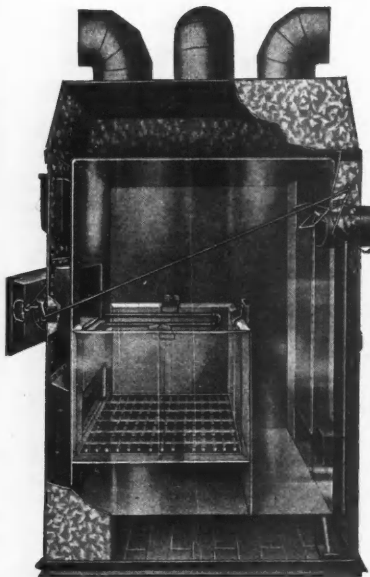
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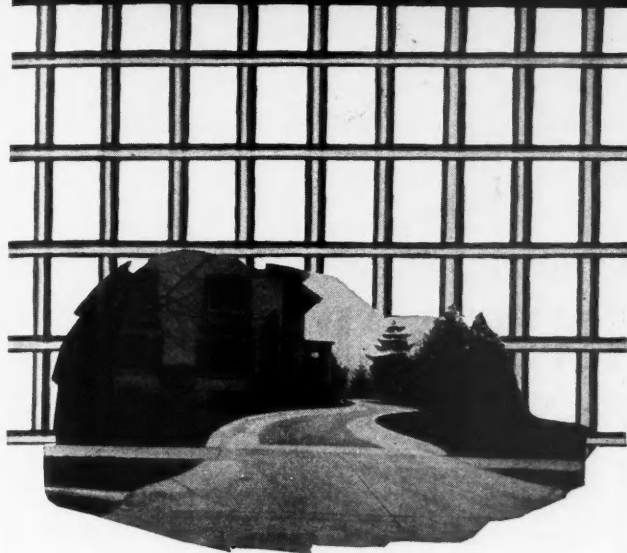
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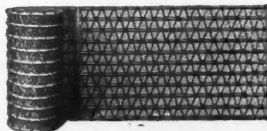
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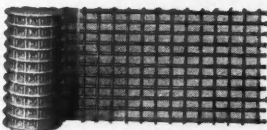
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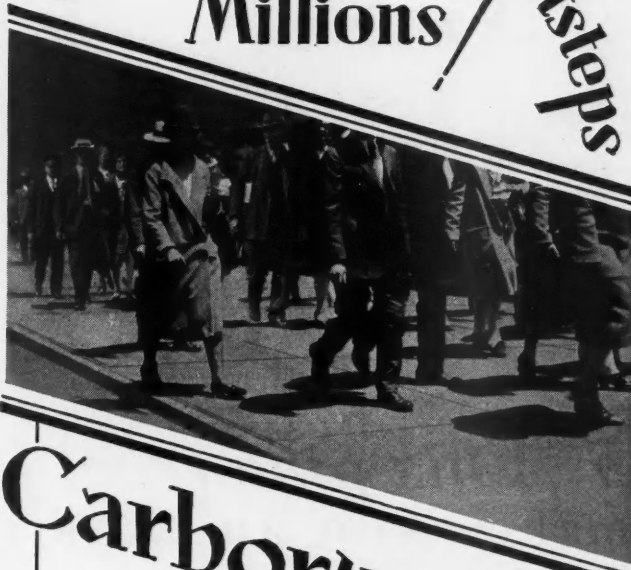
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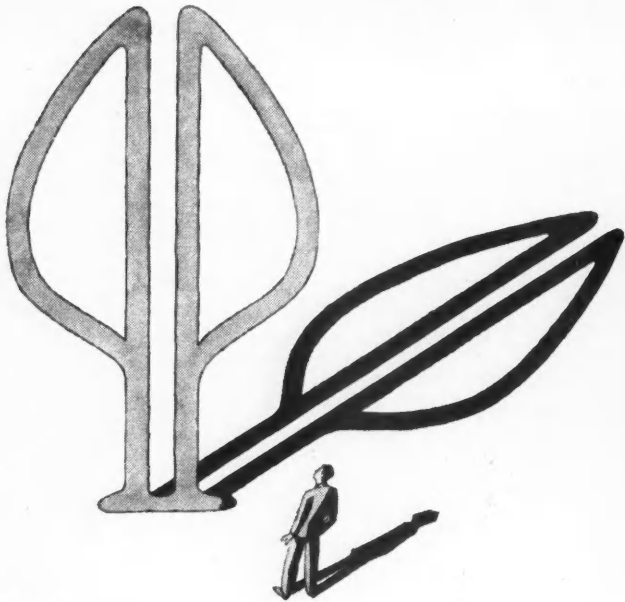
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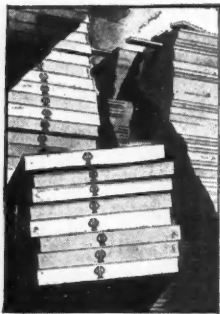
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So when offered the New Knickerbocker Trailer Type Tilter, which must necessarily sell at a low price, the mixer buyer has the distinct opportunity of purchasing a machine made by an organization that has always designed and built in terms of "quality first."

The machine itself is the best proof of this. The drum bottom is one solid piece of cast semi-steel. The unique design of the drum itself and the shape and placement of the mixing blades (there are four of them—two long and two short) increase the capacity and provide a mixing action similar to our non-tilting line. The mixing can always be seen—it is fast—every batch is thoroughly mixed. The drum can be locked in any position, is easily tilted and perfectly balanced. To complete the picture, Timken thrust bearings and Dot lubrication add a final touch to an unusually fine piece of equipment, priced so reasonably that no builder can afford to be without it.

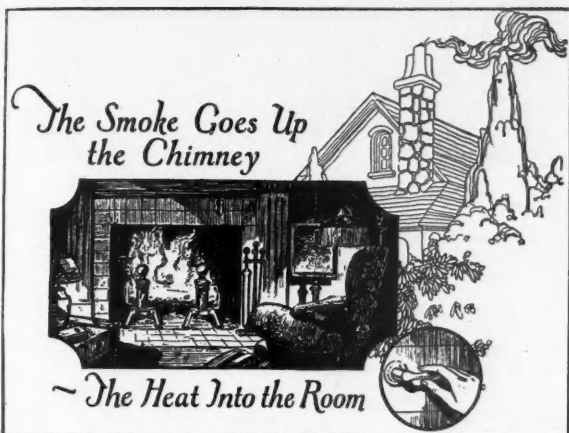
Our illustrated bulletin describing this mixer, together with prices, will be gladly sent upon request.

The Knickerbocker Co.
 Jackson, Michigan



PEERLESS

Building Specialties



Many times the opposite is true—the heat goes up the chimney, the smoke into the room. Because of this many owners of fireplaces have become discouraged in their efforts to create a homey atmosphere which only the real open fireplace can give. But this condition of faulty fireplace draft can be easily remedied and is



being overcome by the use of Peerless Fireplace Dome Dampers. This necessary fireplace accessory forms a perfect throat and allows complete control of the draft. When the fireplace is not in use it is helpful in preventing drafts and keeping out falling soot. Make the fireplace part of the next home you plan and then make it useful and practical by specifying the Peerless Dome Damper.

PEERLESS MANUFACTURING CO.
324 W. MAIN ST.
LOUISVILLE, KENTUCKY

PEERLESS MFG. CO.,
324 W. Main St., 9-28
Louisville, Ky.

Kindly Check

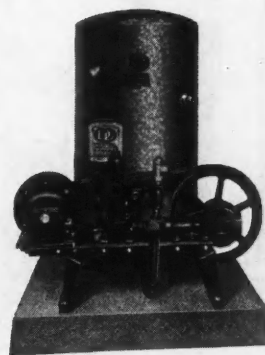
- Contractor Architect
 Home Owner Dealer

Please send Peerless Fireplace Damper Information.

Name.....

Address.....

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



Use a D pump on building jobs

The handling of water in building operations need cause you no worry. Turn over the burden of that job to a D electric pump. Many thousands of them are being used every day, under all conditions. They're dependable!

D pumps are built with heavier parts and more durable materials. They're belt driven . . . the same V-belt used on General Motors automobiles . . . quiet, non-slipping, cool-running.

And that D pumps overcome the failings of ordinary types is shown by the model on life test. Having started and stopped over four million times, or better than a thousand years of actual use, this pump has had just *one* belt replaced! *That's* efficiency at low cost!

There are many unusual features about D pumps. Let us tell you more about them . . . and also about the low prices and easy terms. Simply return the coupon . . . today.

DELCO-LIGHT COMPANY
Subsidiary of General Motors Corporation
Dept. R-118, Dayton, Ohio

D ELECTRIC

WATER

SYSTEMS

PRODUCTS OF GENERAL MOTORS

Also Manufacturers of
DELCO-LIGHT Electric Plants

DELCO-LIGHT COMPANY,
Dept. R-118, Dayton, Ohio.

Please send details of all D electric pumps for Building Contractors . . . without cost or obligation.

Name.....

Address.....



Reading Cut Nails Reduce Assembling Costs—

Driving seven Reading Cut Nails to hold what requires twelve round wire nails has proved a sure method to increase production. The saving in time in this assembling operation amounts to a tremendous item in the course of a week's work.

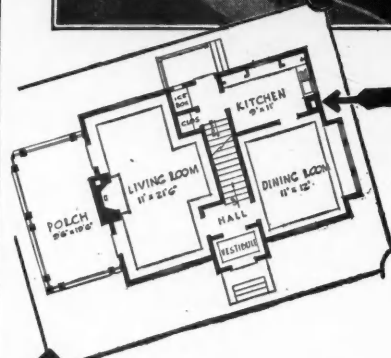
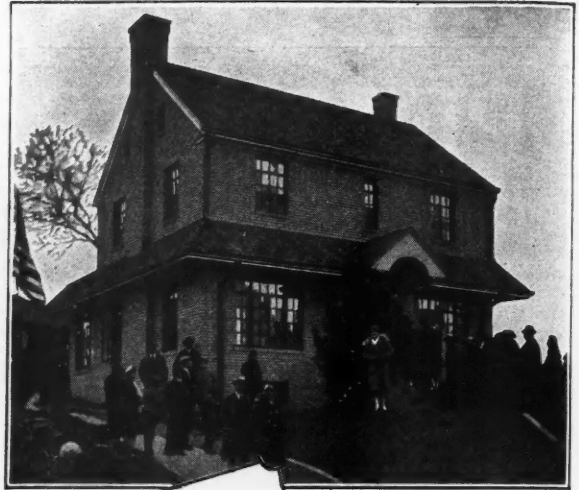
With 72% greater holding power than the round wire nail, Reading Cut Nails grip the wood at every point. Because it spreads the wood with the grain—not across it—a Reading Cut Nail will not split the wood. No matter how it is driven, the head stays on.

For all work which depends on the grip of the nail, you need something better than wire nails. Reading Cut Nails are the answer in every case, plus a saving of 57% in assembling operation.

Write for Quotations

READING IRON COMPANY
READING, PENNA.

READING CUT NAILS



Right in the kitchen—only an arm's length from the sink—is the Kernerator handy hopper door. All garbage, waste and trash of all kinds is out of the way in a jiffy—drops to the brick combustion chamber in the basement where an occasional match burns the air dried accumulation without odor.

Kernerator - equipped. Pittsburgh Press Model Home, Plan 901X Home Owners Institute. Constructed by Fort Pitt Real Estate Co., Pittsburgh. Also built in Cleveland, Detroit, Chattanooga and Omaha.

No Garbage Cans In Home Owners Institute Model Homes

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

Anyone who has watched the crowds of visitors to any Model Home, listened to their comments, has quickly noticed that the Kernerator Chimney-Fed Incinerator, for garbage and waste disposal, is one of the foremost attractions.

An Inexpensive Talking Point

There is really not a house built to sell at \$7,500 and up where the small additional cost of the Kernerator cannot be added, and the house sold quicker than others of the same size and price. Only \$95 buys a Kernerator small residence model. Regular chimney is used and the extra masonry for basement combustion chamber costs but little more. What a big sales advantage and constant advertisement for the builder who has the foresight to banish the garbage can nuisance with the Kernerator!

Over 2500 architects and contractors use and recommend the Kernerator. See Sweet's, write for Catalog or 'phone your local Kernerator representative. Offices in 89 cities.

KERNER INCINERATOR COMPANY
753 East Water St. Milwaukee, Wis.

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

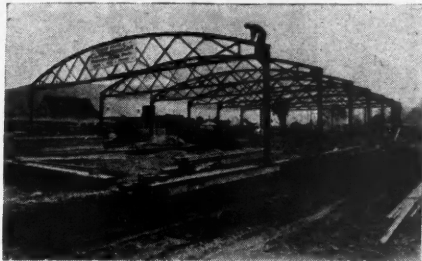
Garbage and
Waste Disposal



without Leaving
the Kitchen

Drop All Waste Here—Then FORGET IT!

Get the Big Jobs With International Standardized Steel Bowstring Trusses!



Help to Reliable Contractors Given FREE! The International Engineering Department will be glad to co-operate with you in designing plans and figuring estimates—at no cost to you. Just write us the details of your construction problems, and we'll work closely with you to help you land the profitable contracts. Write for free catalog.

THE strength and economy of International Standardized Steel Bowstring Trusses has won many jobs for aggressive contractors all over the country. With this construction, you can offer your customers: 1, maximum economy without sacrifice of strength; 2, graceful appearance; 3, a great saving of wall and roof materials; 4, easy erection; 5, superior lighting and ventilating possibilities; 6, minimum fire risk; 7, highest quality and lowest ultimate cost. It will pay you to investigate!

PRODUCTS of INTERNATIONAL
Store Fronts - Steel Columns
Steel Ceilings - Skylights
Steel Windows
Steel Girders - Steel Trusses

INTERNATIONAL STEEL & IRON COMPANY
DEPARTMENT 18
EVANSVILLE INDIANA

PRODUCTS of INTERNATIONAL
Sidewalk Lights - Coal Chutes
Public Garages - Roof Ventilators
Airplane Hangars
—and many more listed in our Catalog!



*It's Out Now
Ready to Mail to You Today*

New Catalog Illustrating the NEW MIAMI CABINETS

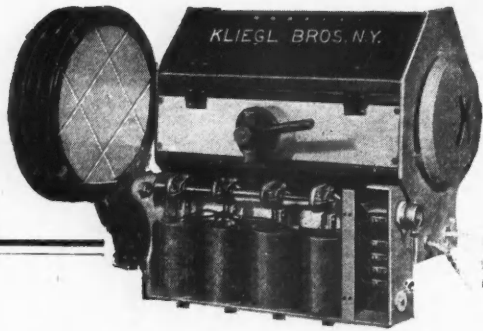
CHOCK full of interesting data on America's greatest line of cabinets . . . filled from cover to cover with pictures and details on the cabinets which modern building methods demand.

Send for YOUR COPY . . . IF YOU HAVE A SPECIAL PROBLEM PUT IT UP TO OUR ENGINEERS FOR QUICK AND PRACTICAL SOLUTION. WRITE TODAY!

Miami Cabinets are the last word in efficiency, beauty and economy . . . for the home, apartment houses, hotels, office buildings, public institutions . . . wherever cabinets are needed.

THE MIAMI CABINET CO.
MIDDLETOWN, OHIO

THE MIAMI CABINET CO.
Middletown, Ohio Date
Gentlemen: Please send me, without obligation, copy of your new 1928 Catalog.
Name
Address
City
 Owner Architect Contractor Dealer



SPOTLIGHTS with Remote-Control Color Frames



WRITE for full details on this new spotlight which has made available the many desirable advantages of remote control . . . for obtaining beautiful color-lighting effects in theatres, auditoriums, etc.



OTHER KLIEGL LIGHTING SPECIALTIES

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| Footlights | Exit Signs | Floor Pockets | Floodlights |
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UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.

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NEW YORK, N. Y.

HESS CABINETS and MIRRORS

Snow-White Steel

COLONIAL
Another De Luxe Style

Beautiful — Distinctive.

The mirror entirely conceals the cabinet. Suitable for the finest bath room. Made in six sizes. We make five other popular styles.

Ask your jobber; or write for illustrated booklet.
HESS WARMING & VENTILATING CO.
Makers of Hess Welded Steel Furnaces
1220 S. Western Avenue, Chicago.

The FARRAND Rapid Rule

There is something new in craftsmen's fine tools.

It is this **RAPID RULE**—a good rule that works both ways.

Measure vertical or horizontal surfaces. *It is rigid.*

Measure around corners or circumferences. *It is flexible.*

Coiled in a neat, nickel-plated cup—a dignified companion for your watch, this six-foot measuring instrument is instantly ready to spring forth to serve you—to do for you all things which you have heretofore demanded of both wooden rule and steel tape. It possesses great speed and is unusually accurate.

Six feet of the world's best steel, nicked, highly polished, and the figures easily read in dim corners.

A Modern Tool for Modern Craftsmen

Rules Now Made in the Following Scales:

- 72 inch with 1/16 inch graduations
- 6 feet with 1/100 foot graduations
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Price \$5. Ask Your Dealer or Write

H. A. Farrand, Mfr., Room 689A, 149 Broadway
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CONVENIENCE



FLEXIBILITY

Save the labor of one man — and do a better job!



SISALKRAFT

"more than a building paper"

Sisalkraft is so tough and strong that it is easily handled by one man without any breaks or other grief. The fact that Sisalkraft is easy to put up in a smooth, weather-tight layer, without any accidental cracks or openings means better protection in the finished job. Remember that Sisalkraft is wind-proof and so waterproof that when formed into a cup it will hold water for three or four months by actual test.

Try one roll and you'll see why Sisalkraft is *"more than a building paper."*

THE SISALKRAFT COMPANY

205 West Wacker Drive :: :: Chicago, Illinois

AD 9-GRAY



KIMBALL ELEVATORS in the Home

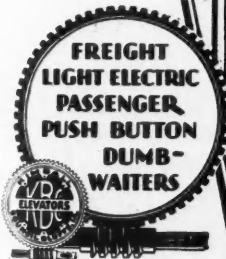
Put a Kimball in your home—Why climb the stairs when there is a Kimball Push Button Elevator ready to install at your home?

The cost of installation and operation is small and it will add greatly to the comfort of your guests and self.

Kimball Elevators have beautiful cabs built to beautify and carry out the design of your home—and the machine is compact, efficient and easily installed.

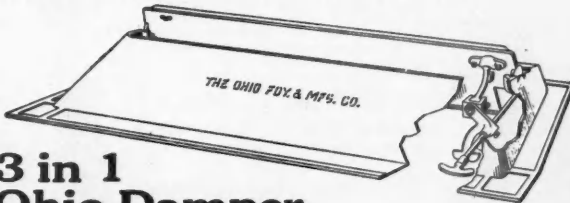
Write for Particulars.

KIMBALL BROS. CO.
989-97 Ninth St., Council Bluffs, Ia.



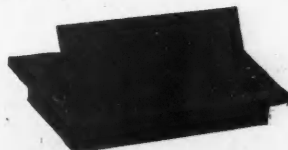
Ohio Fireplace Accessories

You will find in the Ohio line a wide selection of complete fireplace equipment, including Brilliant Fire Gas Heaters, Andirons, Fire Sets, Screens, or anything necessary to make the fireplace practical and beautiful. Large plant facilities, coupled with our eighty years' experience, are your guarantee of honest merchandise and fair prices. Send for complete information with your dealer's name.



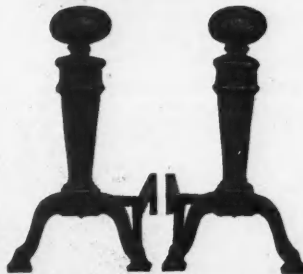
3 in 1 Ohio Damper

This damper is scientifically designed for correct draw and ease of installation and operation with our exclusive patented three-in-one control. It is shipped equipped for operation either through the face of the mantle or with the underslung lever control. The lid is so arranged that the chain pull can be added easily without disturbing the other control and without additional cost. It simplifies the carrying of stock to meet the demands of the builder or home owner.



Ash Dump

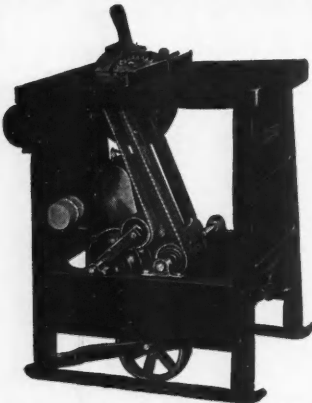
This Ohio No. 5 Ash Dump has double doors, insuring easy and automatic disposal of the ashes. It is very substantially framed in iron. Made in two sizes, 6" x 9" and 9" x 12".



Ohio Andirons

Ohio Andirons are made in a large number of attractive designs and patterns. They may be secured in almost any finish and at a price you can afford to pay.

THE OHIO FOUNDRY & MFG. CO.
Steubenville Established 1846 Ohio



One man moves it (wheels provided).

WHY SAW LUMBER BY HAND?

When You Can Take A Power Saw Out On Every Job The Saving You Make With Its Use Is A Real Profit

Here is a Powerful, Portable, Carpenter, Sawing Machine not dependent on electric service or skill of the operator. Will cut rafters, studs, stairhorses and bridging; square long dimensions as fast as you can handle the lumber. For trimming sash, doors, screens, fitting casing and flooring. Will do those smooth, accurate jobs with 50% of the cost of hand fitting.


Cross Cuts, Rips, Miters, Dados

Furnished with either gasoline or electric power, or both. Gasoline equipment weighs 300 pounds and is positively without vibration. Runs all day long on a couple of gallons of gas and a little oil. Will saw as much lumber as a crew with hand saws. Build 1928 buildings 1928 way.


If you will write, we will make you a trial offer that will interest you. Delivery from stock or warehouse near you.

Manufactured by
4450 Royalston Ave., D. W. ONAN & SONS, Minneapolis, Minn.

Gasoline or Electric Power



Starter Provided



Two men load it.



FIREPLACE BEAUTY OF CENTURIES

Installed In One Hour

Probably no other item of construction adds so much cheer and comfort to a home as a fireplace. And no other fireplace offers so much beauty and distinction with economy as a Readybuilt fireplace.

In one hour's time a house that is completed or under construction, is enriched by the beauty and homelike atmosphere of a fireplace which represents the final development of centuries.

As beautiful as the finest brick built—yet far more perfectly constructed. Many designs, colors and sizes to harmonize with any interior. Shipped complete ready to install anywhere.

Dealers—Builders—Homeowners Write for Full Information

The Readybuilt Products Company
2404 Frederick Ave. Baltimore, Md.

READYBUILT
REG. U. S. PAT. OFF.
FIREPLACES

Readybuilt has imitators—but no equals

\$2,000,000

to make the

M^cALPIN

New York's Finest

HOTEL!

Inside and out, the famous McAlpin is enjoying complete restoration. Look over these outstanding features of the \$2,000,000 improvement plan:

NEW carpets—NEW draperies and furniture throughout—NEW modern decorations and lighting effects—11 high-speed, self-leveling elevators—every room with bath.

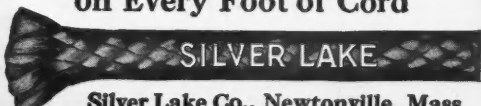
All improvements are being executed without interruption of service . . . you are invited to inspect the exceptional accommodations the McAlpin now offers—bright, cheerful, spacious rooms of immaculate cleanliness—with prompt, courteous, efficient service to enthuse the most critical guest.

FRANK A. DUGGAN, *President and Managing Director*

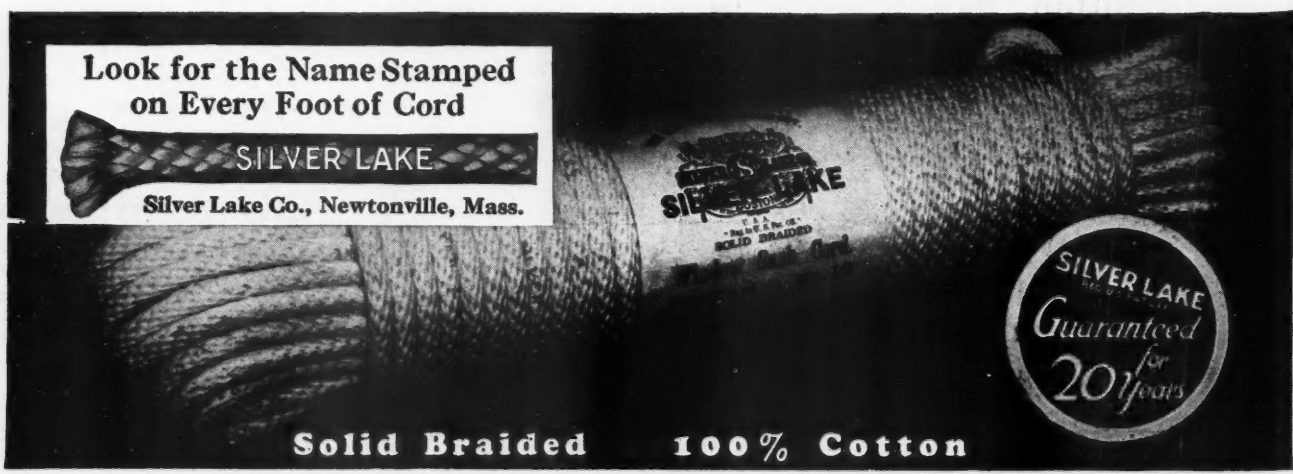
HOTEL M^cALPIN

ONE BLOCK from PENNSYLVANIA STATION
BROADWAY at 34th STREET

Look for the Name Stamped on Every Foot of Cord



Silver Lake Co., Newtonville, Mass.



SILVER LAKE
Guaranteed for 20 years

Solid Braided 100% Cotton

Gimco ROCK WOOL



Insulation

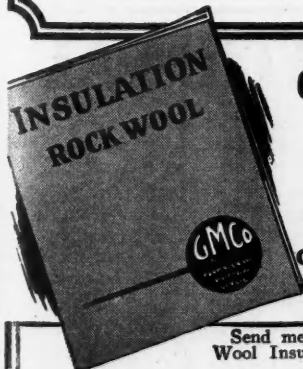
The low cost and ease of application of Gimco Rock Wool gives it preference over any other insulation. It not only insulates against cold and heat, but also against Fire, water, vermin and Sound.

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.

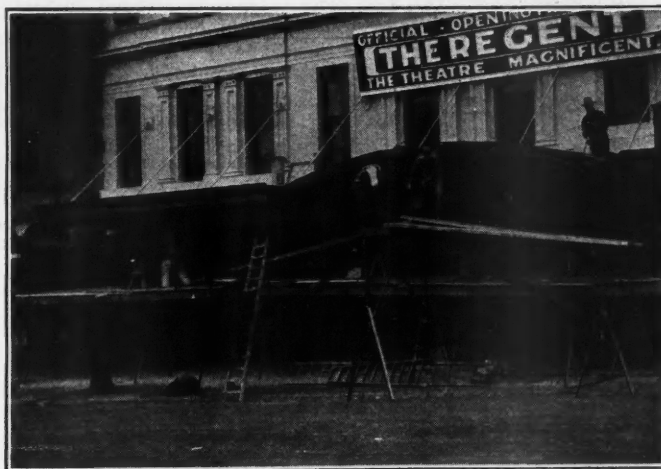
*Send for This
New Book on
Insulation*

Send me copy of free book on Rock Wool Insulation.

Name.....
Company.....
Address.....

Everlasting Money Makers

New Zealand Theater Used Trouble Saver Steel Trestles—

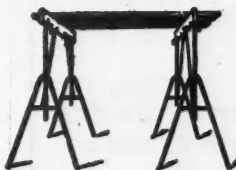


Job Completed in Record Time

60 Trouble Saver Adjustable Steel Trestles were used on this 2000 seat New Zealand Theater. In 29 weeks the job was completed—including the time spent in clearing the site.

The same sets of Trouble Saver Adjustable Steel Trestles that were used on the exterior of the building were used on the interior.

Are erected in a few minutes. Disassembled, compactly folded and moved to another part of a structure in a jiffy. Each trestle supports a ton. Practically everlasting—no repair or replacement expense.



Trouble Saver Adjustable Steel Trestles (Patented) quickly adjusted to desired heights. 8 sizes. Each size adjustable from 4 to 15 different heights, giving a range from 16 inches to 12 feet by 3 inch lifts. Save countless sets of wooden horses.



Trouble Saver Studding Brackets support a ton. Will not bend. Hook around studding. Braced by two legs. Fold compactly for cartage or storage.



Trouble Saver Nail Attached Brackets support a ton. Held by four nails and braced by two legs. Fold compactly for cartage or storage.



Trouble Saver Bolt Brackets approved by State Industrial Commissions. Detachable rail standards. Held by 1/2" bolts. Fold for cartage or storage.

Trouble Saver Steel Products

- | | |
|-----------------------------------|-----------------------------|
| Studding Brackets | Ladder Jacks |
| Nail Attached Brackets | Wood Shinglers |
| Bolt Brackets with Safety Railing | Mortar Board Stands |
| Adjustable Trestles | Sectional Steel Scaffolding |

The Steel Scaffolding Company

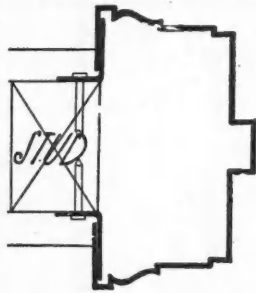
1101 No. Governor St., Evansville, Ind.

Money Back Trial Offer

Please send us details on your 30-day free trial offer and full information and prices on Trouble Savers.

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

ROLLED STEEL DOOR FRAMES WILL INCREASE YOUR PROFITS



Showing buck applied to wood stud

The combination buck jamb and trim eliminates separate wood or steel bucks and trim and thereby reduces erection costs two-thirds as the entire unit is installed at one time. Cold rolled of 16 gauge steel—it withstands and absorbs the shock of the heaviest door.

Units made for single or double doors, transom openings, etc. Jambs reinforced securely and drilled and tapped for application of hardware.

Furnished in prime coat ready for finish painting.

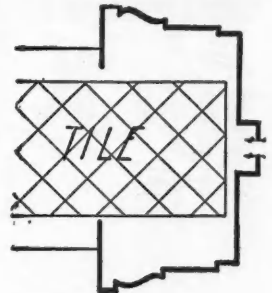
Prompt shipment, low in cost and easy to install.

LEONARD SHEET METAL WORKS, HOBOKEN, N. J.

Established 1900

Also Manufacturers of Steel Windows, Kalamein Work and Bronze Doors.

Representatives in: Miami, Florida. Atlanta, Georgia. Washington, D. C., New Haven, Conn. Baltimore, Md. Cincinnati, Ohio

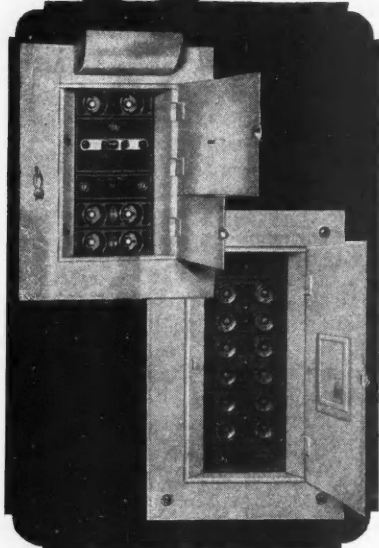


Showing buck applied to hollow tile partition



Panelboards for

Residences
Small Buildings
Stores



Give earnest attention to the panelboard in the houses you build. **FA** Panelboards are the "Sign of a Better Job."

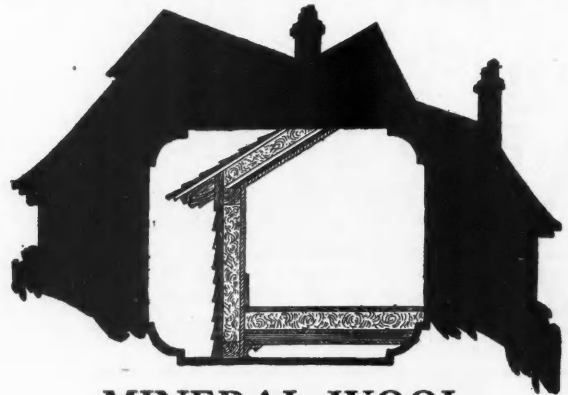
Frank Adam
ELECTRIC COMPANY
ST. LOUIS, MISSOURI

Stocks carried by most Jobbers

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Omaha, Neb.
Philadelphia, Pa.

Pittsburgh, Pa.
San Francisco, Calif.
Seattle, Wash.
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MINERAL WOOL The Perfect Insulator REDUCES UPKEEP

The proper insulation of any building is a real economy and an added comfort. Mineral Wool has conclusively proven to builders and home owners that its effective insulating qualities are exceptional and the cost insignificant for the advantages it supplies.

It keeps out both summer heat and winter cold and the saving it effects in winter fuel will pay for installation cost within a short period.

It is indestructible, vermin-proof and sound-proof and reduces the hazard of fire.

Sample and illustrated booklet on request.

U. S. MINERAL WOOL COMPANY
280 Madison Avenue, New York

Western Connection:
COLUMBIA MINERAL WOOL CO.
South Milwaukee, Wisc.

A Real Home Comfort Mallory Shutter Workers MALLORY MFG. CO.

700 BROAD STREET

FLEMINGTON, N. J.

Stop!

See Our Ad on Page 13

Do not buy any sander, at any place, at any time, at any price, until you see what work the Clarke can do for you.

INTERNATIONAL HARVESTER TRUCKS COMPANY

Trucks: ¾-ton "Special Delivery", 1¼, 1½ and 2-ton Speed Trucks and Heavy-Duty Trucks up to 5-ton. Also McCormick-Deering Industrial Tractors. Write for information.

Service: Through our justly famous Company-owned truck service organization. 146 branches in the United States safeguard International Trucks.
At your service.

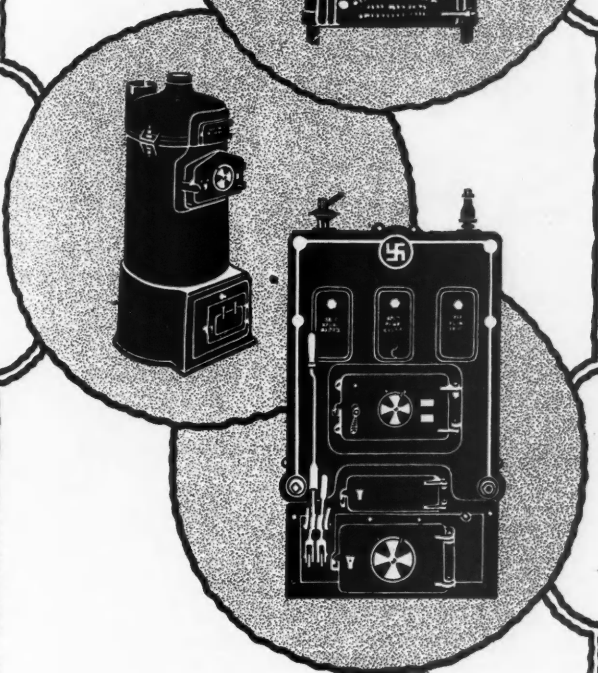
INTERNATIONAL HARVESTER COMPANY
OF AMERICA
(Incorporated)

606 S. Michigan Ave.

Chicago, Ill.

For Hot Water Supply

Burnham Boilers



A Cross Section of Hot Water Supply

ALL of them are carried in stock at all our plants and warehouses, and ready for immediate delivery. And, of course, they are priced right.

Laundry Stove and Junior Boiler can be furnished with brass firepot for your all-brass installations.

- 1—Burnham Laundry Stove—
for up to 80 gallons.
- 2—Burnham Junior Boiler—
up to 700 gallons.
- 3—Burnham High Pressure
Boiler up to 3,800 gallons.

Measurements and ratings in our new catalogue 67.

Burnham Boiler Corporation

Irvington New York

Representatives in all principal cities of the United States and Canada.



Look at this tape

—the Starrett No. 530, for example, in its sturdy, handsome black imitation leather case—you'd never believe you could buy such a fine steel tape at such a modest price.

Every Starrett Tape is easy to read, accurate and long lived—the most tape for your money. Ask your tool dealer to show you his full assortment of Starrett Tapes, You'll find just the ones you need.

Write us for Catalog 24 "6" containing complete descriptions and prices of these and 2500 other 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.*



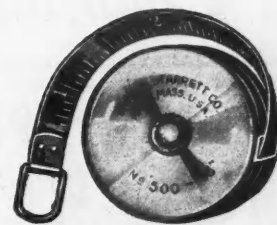
Starrett Steel Tape No. 530



Starrett Tape Hook No. 514



Starrett Stainless Steel Tape No. 520

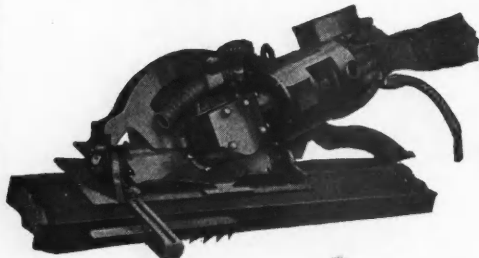


Starrett Pocket Steel Tape No. 500

Use Starrett Tools

WANTED—Two 6-Room Houses and 300 Doors

—for immediate possession



TENANTS
Mr. Wodack Saw.
Mr. Lock Mortiser.

REFERENCES
We'll pay our cost in these two houses or on the 300 doors, and let you prove it before we move in.

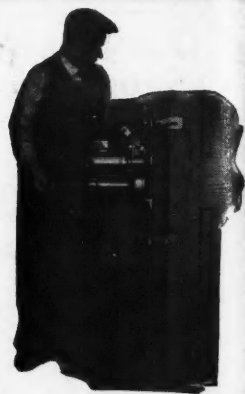
Write for particulars.

F. L. ROGERS & CO.
23 S. Jefferson St., CHICAGO

Also New York

Wodack Saws come in 3 models. Model B is most complete hand saw on market. Has tilting base for bevel cuts in 60°. Also special Rip and Depth Gauges. Saws lumber up to 4 1/2" thick in ONE CUT with 11" blade, therefore has capacity for hip rafter cuts. 3/4 h.p. G. E. Universal motor for both AC and DC Perfect Safety. Connect up to your neighbor's light socket.

Combination Lock Mortiser and Router—sold separately if desired. Cuts out both face-plate and barrel of a door lock in one operation without stopping. Will cut 60 mortises per hour even after the doors are hung. 1/2 h.p. motor is removable to convert to Router.



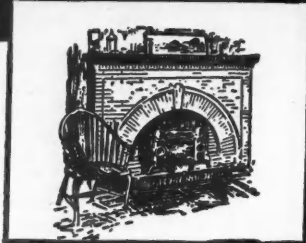
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COLONIAL DAMPER

The new style "G" of the reliable Colonial Damper can be set two or three courses of brick above the opening where best results are obtained. Operating handle slides out of sight under the opening. Pulls forward and moves right or left to open or close. Controls draft perfectly.

Colonial Damper, Ash Traps, Ash Pit Doors, etc., at your dealers.

Write for details of fireplace constructions FREE.



Glo-Hot Grate Electric—Heats. Fits any fireplace, looks like live coals, heats from concealed "Glo-Bar" under hood.



COLONIAL FIREPLACE COMPANY
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Colonial Head-Throat and Damper



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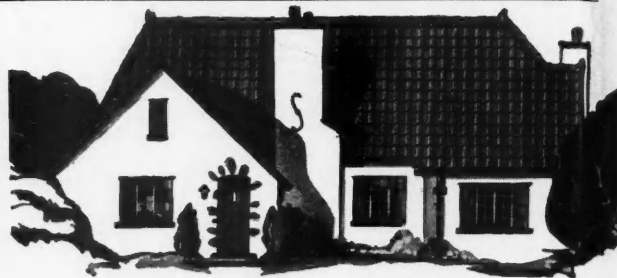
Save money wherever there is a rope or cable to pull. Made in two sizes, 1,200 to 2,000 lbs. capacity. Reversible and non-reversible—single and double drum, with or without engine. Write today for complete information.

UNIVERSAL HOIST & MFG. CO.
196 East 14th St. Cedar Falls, Iowa

BE SAFE

See Our Ad on Page 13

Do not buy any sander, at any place, at any time, at any price, until you see what work the Clarke can do for you.



LEADCLAD Spanish Tiles - Long Life and Beauty

Since time immemorial, enduring lead has played a leading role in roofing fine buildings. Through the Leadclad process, lead is now made available, at very moderate cost, in the form of Spanish Tiles, Shingles, or as flat and standing seam roofing, for buildings of every type and style of architecture. Leadclad Spanish Tiles afford perfect protection against lightning, fire, breakage, or the ravages of time. Furnished red or green; look exactly like clay tiles, but are much lighter and stronger. Send for free book, "Defying Age and Time."

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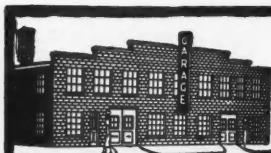
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SPANISH TILES

REG. U.S. PAT. OFFICE 1923

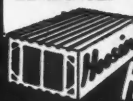


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HOOSIER Building Tile offers you durability, fire-resistance, beauty, adaptability to any kind of building, economy of labor cost in construction and the elimination of upkeep expense for interior and exterior finished wall construction. Smooth glazed or wire-cut finish furnished. Write for literature.

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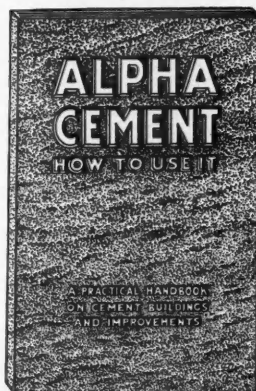
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Equipment

Brand them with
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Definitely
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Saves its small cost many times over every year.
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A real
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It's full of practical suggestions on the
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placing, reinforcing, water-proofing, etc. Con-
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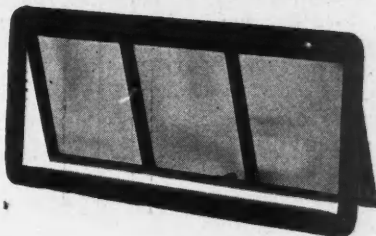
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COPPER STEEL

BASEMENT WINDOWS



Wise Builders Realize the Importance of
Installing These Modern Windows for
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KEWANEE COPPER STEEL BASEMENT WINDOWS insure the
maximum in durability and convenience. They are sturdy—do not swell,
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These windows make the basement pleasant and attractive and increase
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"Does Work of 5 MEN"
HB PAINT SPRAY



EASY TERMS
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**More Profits
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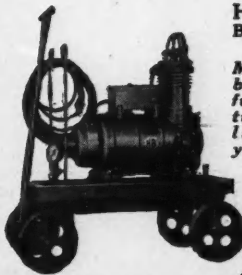
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And there are so many other uses for an HB Portable
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fillers, varnishes and lacquers as well as all kinds of
oil and water paints.

Easy Monthly Payments—30 Days Trial at Our Risk
So confident are we that you wouldn't be without an
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it that we offer you 30 days trial in your own work
—at our risk—under our absolute moneyback guarantee.
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**COSTS
ONLY
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MONTHLY**

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EASILY
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Without obligating
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bigger profits with an
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and give full details of easy
terms and 30 day Trial Plan.

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Humidifying Radiator Cabinets

MAKE ALL ROOMS MORE LIVABLE

An Added Sales Feature

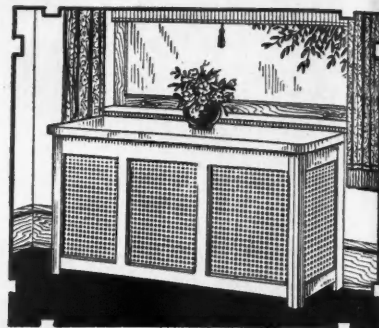
Winchester Radiator Cabinets and Covers make the Home, Apartment, Public Building or office easier to sell or rent. They properly humidify the air, prevent wall smudge and ruined drapery.

Made of heavy furniture steel. Finished in baked enamel colors or wood grains to match any decorative scheme. Made in all styles and sizes.

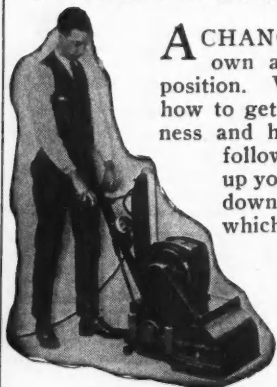
Dealers Secure Your Franchise Now

This fast selling building specialty will make you a handsome profit. Don't delay, but write us at once. Your territory won't be open long.

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Get Into the Floor Surfacing Business While the Field is Fresh



A CHANCE to have a business of your own and still retain your present position. Write today—let us tell you how to get started in this Paying Business and how you can make good by following our method in working up your business. Free Trial. Part down—balance easy payments, which machine will earn for you.

\$40 to \$50 a day easily earned with the AUTOMATIC—the result of 16 years' manufacturing experience. Will save the wages of 5 men and do

work that will stand inspection against the light. SKF ball bearings, carefully protected from dust—Whitney Silent Chain—Roller Pressure Regulator—Force Feed Lubrication—Edge Roller Border Work Eliminated—Steel, not cast iron construction—all dust taken up on forward operation with New Vacuum Nozzle—all working parts inclosed.

The Little Automatic Surfacing Machine is a wonder for removing varnish from desk tops, counters, etc., or for all sorts of new work.

WAYVELL CHAPPELL & CO.
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Increase Your Income! We Tell You How



Carload Order for Georgia Man

H. J. Ryle, of East Macon, Georgia, sold a carload of "Utility" porch and garden furniture to a Florida city just recently. He started manufacturing this beautiful porch and garden furniture in a little shed in his back yard. Today he has a big shop and show room and carries on hand, for prompt delivery, a \$5,000 stock for which there is a steady demand. Mr. Ryle is set for life in a business that earns him a big profit the year around.

Everywhere men are earning extra money in this spare time, part time or full time business. H. G. Young, of New Jersey, in spare time, cleared \$2,700 on a \$97.00 investment in "Utility" molds. Mr. Browning, a contractor, made \$781.00 in spare time—and hundreds of others.

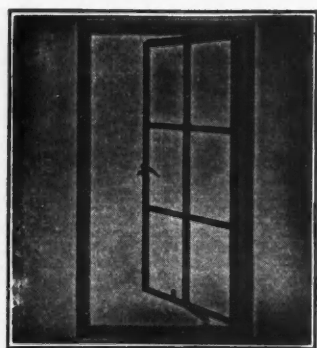
The "Utility" Book started them on the way to big profits. Let it start you, too. Easy to make, materials cost but a few cents, and are available locally. Complete instructions in catalog. Small investment starts you. Send for "Utility" Book today—also machinery catalog of Brick, Block and Tile Machines.

Concrete Equipment Co.,
500 Ottawa Ave.,
Holland, Mich.



Send for Catalog

THESE WINDOWS WILL MAKE A PROFIT!

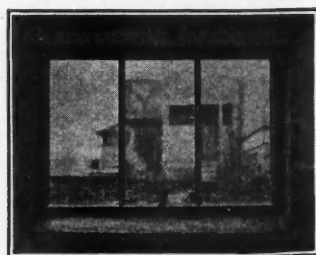


Residence Casement

DEALERS are making money in handling Bayley-Springfield Steel Windows. Designed for all types of buildings. Bayley construction features make for great strength and economical installation, and are the result of 45 years' experience in architectural ironwork. Carried in stock so that a dealer's turnover makes the Bayley line an attractive proposition.

THE WM. BAYLEY COMPANY
128 West North Street SPRINGFIELD, OHIO
Sales Offices and Warehouses in Principal Cities

Bayley-Springfield Steel Windows



Windows for Basements
The Bayley Window for basements in residences, apartments and other buildings. Fine for side walls in garages and small buildings. Cost no more than wood, yet give 50 per cent more light—made in four standard sizes.



CARDINAL Toggery Racks

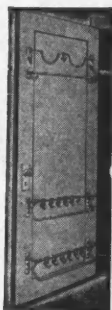
**SELL HOMES EASIER
RENT THEM FASTER**

A small investment but a big talking point the minute you swing open any closet door. The housewife appreciates this modern convenience that gives her the space of two closets in one. Equally indispensable as standard equipment in hotels, clubs and dormitories, new or remodeled.

Make Every Door an Extra Closet

Keep toggery smooth. Hats in shape. Shoes off floor. All in plain sight and instant reach. Lighten the woman's work.

Beautiful Duco finish. Jade Green—Old Rose and Silver Color Cadmium. All metal. Strong. Easily attached on the inside of any closet door. Write us for price and quantity discount.



**CHAS. FISCHER SPRING
COMPANY**

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REPUBLIC Roller Bearing Mixers



New Catalogs Now Ready

See These New Models—3½ - 5 - 7 - 10 ft. Sizes

**TILTERS AND 2 In Stock by
NON-TILTERS 6 Republic Dealers**
REPUBLIC IRON WORKS, Tecumseh, Mich.

NEW!

**Decorative Stone
Fireplaces**

**Help Sell Your
Home**

**now available for the
average Builder and
Home Owner**



Our fireplaces are reproductions of models designed and ordered from us by architects. The beautiful mouldings and ornaments are made by skilled craftsmen.

The Duotone (two-tone) coloring harmonizes both in color and texture with present day rough plaster or wall paper.

Decatone mantels are harder than natural stone and guaranteed to last a lifetime. Not affected by heat (gas, coal or electric). Used in the most expensive homes as well as those of smaller types.

SOME MODELS AS LOW AS \$35.00.

Agents wanted. Good territories now open. Our local dealer averages 8 per day.

Mail coupon for catalog

**DECATONE FIREPLACE CO. 13133 Northlawn
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Please send catalog on Decatone Fireplaces.

Owner.....

Name Builder.....

Agent.....

Address.....

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

370 Rafters.... 506 Studdings.... all the Roofing....

Ball Bearing



Tilting
Table
14" x 17"

The Safety-Saw arrived O. K., as I was just starting a building 170 ft. long and 30 ft. wide, 2-story, for summer colony. Last week we cut 370 rafters and 506 studdings and all the roofing for this job, and did every bit of it on this Safety-Saw machine. One man did the sawing and seven men nailed up.

**C. A. MRYZEK,
Union Pier, Mich.**

Box 92.

Safety-Saw

\$48⁵⁰

For Ripping, Cross-cutting, Mitering, Dadoing, Grooving, Ploughing, Beveling, Jointing, Boring, Tenoning, Sanding, Grinding, etc.

This machine will save many hours of hand labor and will handle all your material up to 2½" in thickness. Runs from light socket.

Do not confuse the Safety-Saw with the cheap toys on the market. This rig is built to last for years and stand up under heavy work.

Including ¼ h.-p., 110-v., 60-cycle A. C. Motor, Belt, Pulley, Guard, 8" Combination Saw, 2 Guides.

**\$35⁰⁰ Without
Motor**

**\$67⁰⁰ With ½ h.-p.
Motor**

FREE TRIAL

**Our Money-Back Guarantee
protects you from risking a
single cent.**

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SAFE TOOL MFG. CO., Bridgeport, Pa.

Please send your free folder describing the Safety-Saw, also full details regarding free trial and money-back offer.

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The only machine that you can tilt the table to 45° without removing insert. Big advantage on pattern work.

S & B-8" COMBINATION SAW: 18 Tools In One **Money Back Guarantee**
GREATEST MACHINE YOU EVER SAW! 12" Band Saw

Sent to You on 15 Days' Approval

Price includes 1/3 H.P. A. C. Motor



\$35
F. O. B. CHICAGO

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 1/3 H. P. Motor, 60-cycle, 110-Volt A. C. Price \$35.00 F. O. B. Chicago. Shipping weight 100 lbs. (Planer attachment to fit on table top will smooth pieces up to 2 inches wide, \$10 extra.)

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12" Band Saw

Positively a sensation and at this LOW PRICE you can NOW do the 1001 things you wanted quickly and easy. This 12" BAND SAW has a tilting table with Miter and sturdy built. Ideal for the shop or home. Motor \$15 extra.



1/3 H. P. Motor-40%-100% overload Double Shaft Extension

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CHICAGO

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400 Newly Furnished Rooms \$2.50 a day and up
 Sample Rooms \$4.00, \$5.00, \$6.00, \$7.00 and \$8.00

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SHOWING PROCESS OF DRAWING FROM MOLTEN STATE TO FINISHED PRODUCT

ADAMSTON FLAT GLASS COMPANY
 CLARKSBURG, W. VA.



Fully Enjoy
MILLER DRIP EDGE

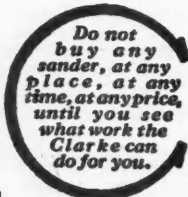
It easily re-inforces, protects, supports and finishes prepared roofing or shingles at the roof edges. Millions of feet sold.

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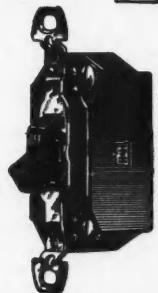
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Tumbler and Push-Button Switches for houses, offices and apartments. Every latest style and improvement: reliable quality in any price-class. Also Convenience Outlets, Warning Lights, the new Art Plates and all needed Wiring Devices. Write for new Catalogue "T"—to see what your new jobs should have.



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

State Portable Saw & Jointer



Patented

Save Time and Power by the Use of these Machines. Learn how you may own them Yourself at a Small Cost.

Take the State Universal Saw or Jointer to the job with you. See how economical and accurate you can finish a job by the use of State machines.

Both machines are easy to operate; a guard is provided assuring perfect safety. The Universal Saw will cut wood fibre, asbestos, carbon, soft metal, etc.

Let us tell you how to own these machines yourself at a small cost. Write today using the convenient coupon attached.

STATE MFG. & ENG. CO.
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TAYLOR COLLAPSIBLE HORSES

Taylor Collapsible Horses are easily taken apart or assembled. Can be carried or delivered to different jobs conveniently.



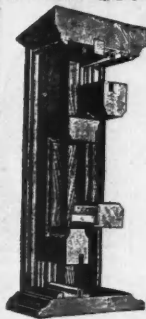
Can be made any size, length or height.

Will carry 8,600 pounds without a creak. No nails or braces.

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GREATEST VALUE EVER OFFERED



Imperial Weatherstrips AT WHOLESALE PRICES

Never before have you been able to buy Quality Weatherstripping at such low prices. Our tremendous production allows us to offer you this opportunity.

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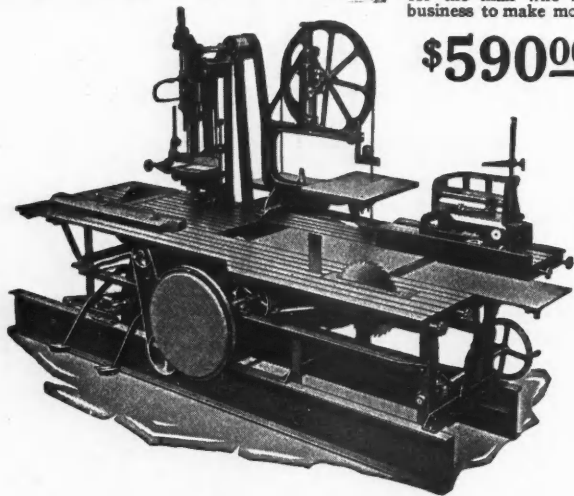
99 ⁸⁵/₁₀₀ % PURE ZINC
CORRUGATED AND PLAIN RIB TYPE—ACCURATELY FORMED

39 CENTS PER OPENING OF AVERAGE SIZE
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OUR NEW QUICK INSTALLATION FEATURE
WILL SAVE YOU MONEY. SAMPLES
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The "Planing Mill Special"—an old friend of the carpenter still way out in front in popularity because it is built for real work, yet priced for the man who is in business to make money.

\$590⁰⁰

For years the Parks Planing Mill Special has been the standard of carpenters' woodworking machinery values. Other machines were "higher than a Parks" or "cheaper than a Parks."

Because everybody knows Parks

prices—always plainly advertised in big, bold type—always the same price to everybody. And always the same tried-and-true quality and design—no "trick stunts" to have to learn—always the handy machine you're used to.

A real machine, for real work, at a real price! More for your money and more work at less cost. Get a Parks.

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Fergus & C. H. & D.

Cincinnati, Ohio

Canadian Factory: 208 Notre Dame East, Montreal, Canada

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Roof and Deck Cloth



The ideal covering for Porch Floors, Decks or Piazzas, Sun Parlors, etc.

Waterproof
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Durable
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Lays flat
Stays flat

Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

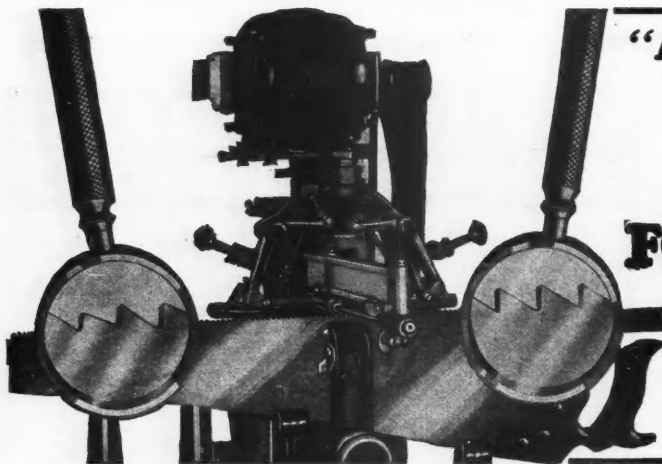
Write today for our Sample Booklet "P."

JOHN BOYLE & CO. Inc.

Established 1860

112-114 Duane St.,
1317-1319 Pine St.,

New York
St. Louis, Mo.



**"I never had better filed saws
in my 20 years of carpentry"!**

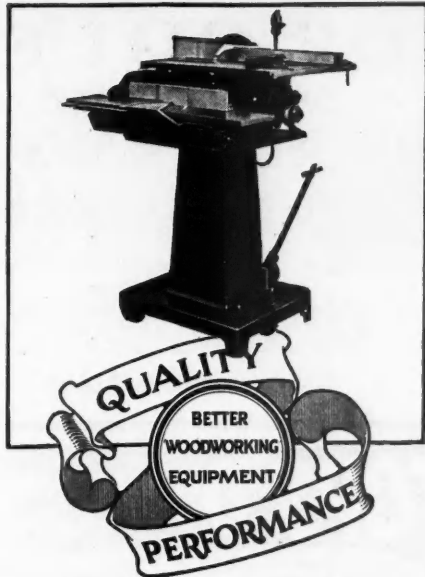
—T. Hafner, Box 149, Westmont, Ill.

Old hand filers are taking notice of the easy, quick way saws are kept in perfect cutting condition with a Foley. It automatically files and joints in one operation—"Saws cut better than new," writes another user. "It's saving my eyes," says another.

FOLEY AUTO MATIC SAW FILER

Files all kinds of hand saws in 10 minutes and less (re-tooths old hand saws.) Files hand saws 1/4" to 4 1/2" wide—cross-cut circular saws 3" to 16" diameter in less than half filing time. Quickly pays for itself in time saved. You can also make money filing saws for others in your spare time. Write for details of the Foley Filer, and FREE plan on how to start a saw filing business of your own.

FOLEY SAW TOOL CO., Inc.
133 FOLEY BLDG., 11 Main St. N. E., MINNEAPOLIS, MINN.



Two Machines in One

The Union combination six inch jointer and Universal saw bench marks a great development in woodworking machinery. It has money saving features without parallel anywhere. You cross cut, rip, dado, groove, mitre, joint, rabbet, etc., all on one machine. Think of the saving this means to you—cuts labor costs in half—You have the upkeep of one machine instead of two—Initial investment is less and on top of all a machine unsurpassed in quality and performance.

All Union Machines are portable. Easily moved from one job to another.

For more efficient operation, lower costs and greater profits, Union Woodworking Machines are being used. Write today for detailed information.

Send for Catalog, it's free

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206 Straight Ave. Grand Rapids, Mich.

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GET THE

"Pyramid" Franchise

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Mail the coupon for details. Start now on your most profitable Fall and Winter.

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Without obligation, send details of **PYRAMID** Selling Plan.

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City

"It's Gotta Have Guts!"

Old Tom Monahan has surfaced floors for twenty years and more, and when he said a Floor Surfacer's "gotta have guts" he knew what he was talking about.

The Improved Schlueter has "guts"—the **WEIGHT**, power and stamina without which no surfacer can do a large volume of work and do it right. Use the Schlueter on your next job.

Order it for a trial. It wont cost you anything. The trial is **FREE**. Write today.



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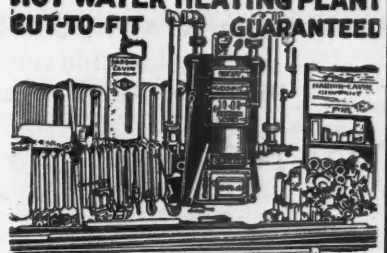
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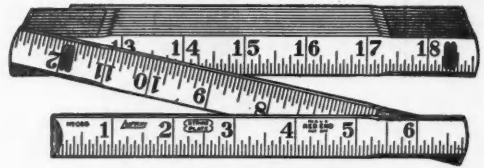
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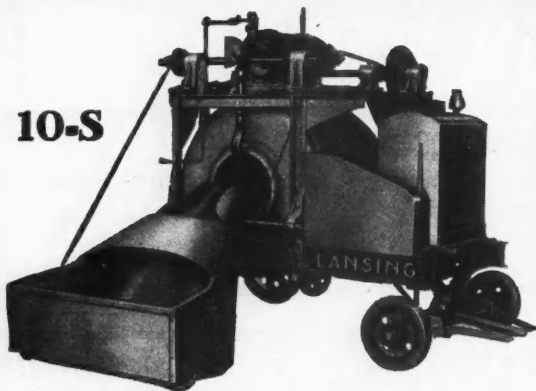
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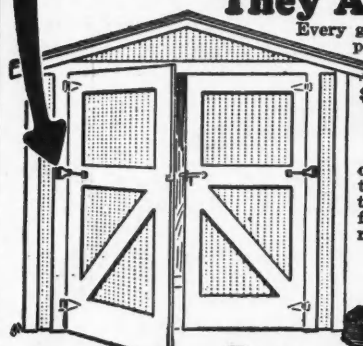
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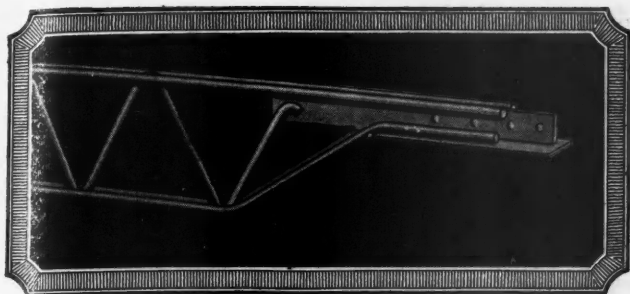
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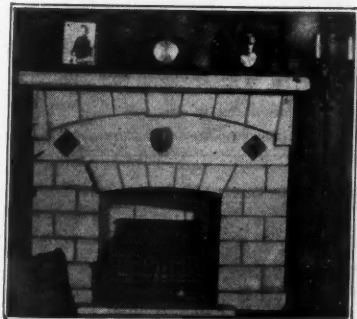
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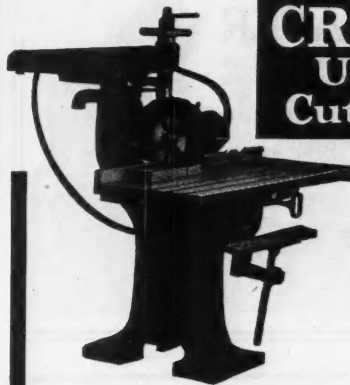
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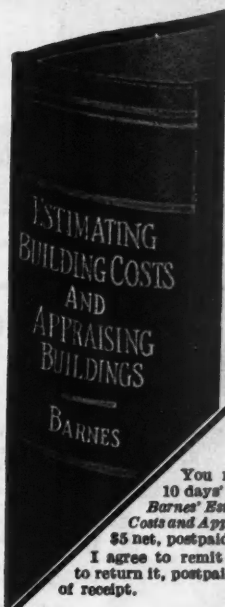
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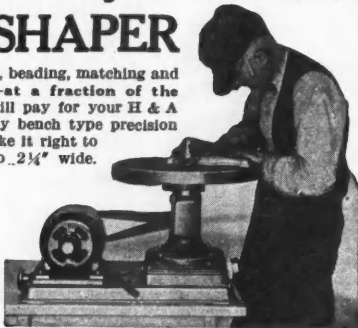
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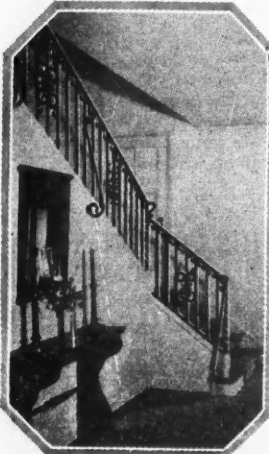
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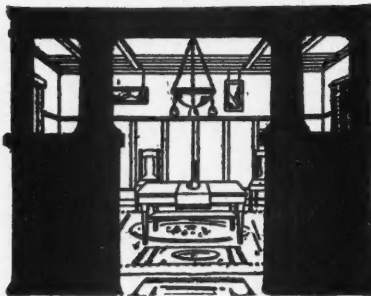


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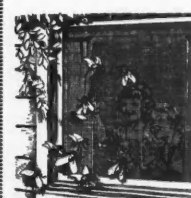


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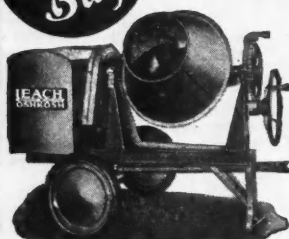
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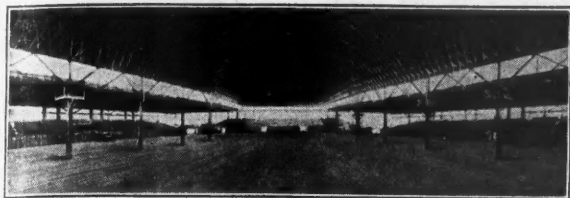


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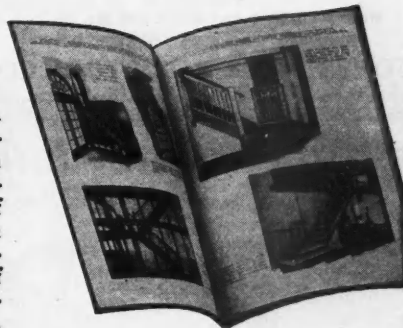
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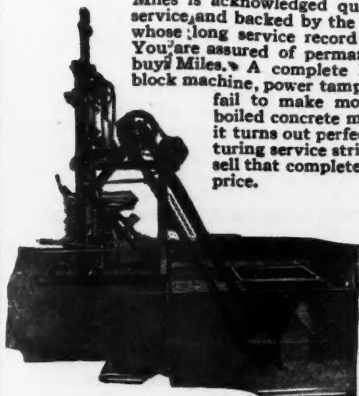
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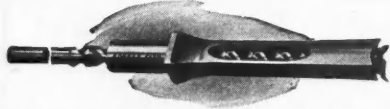
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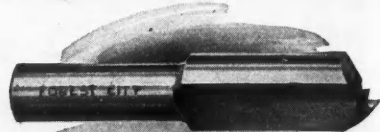


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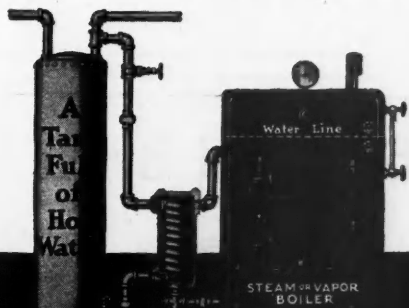
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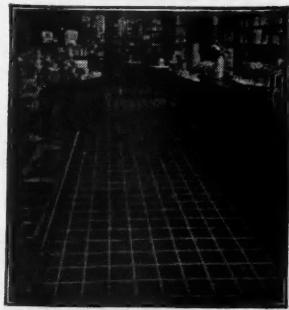
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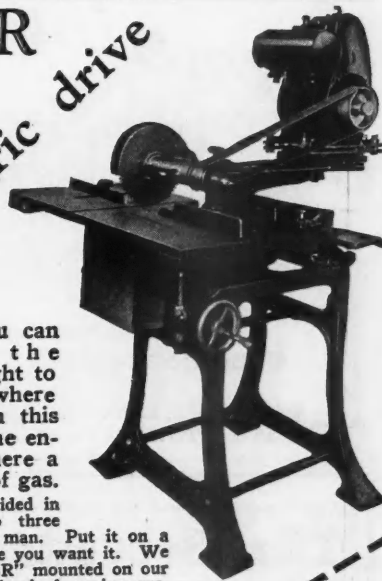
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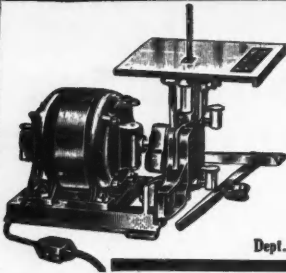
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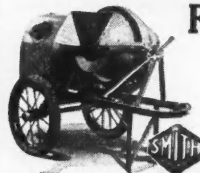
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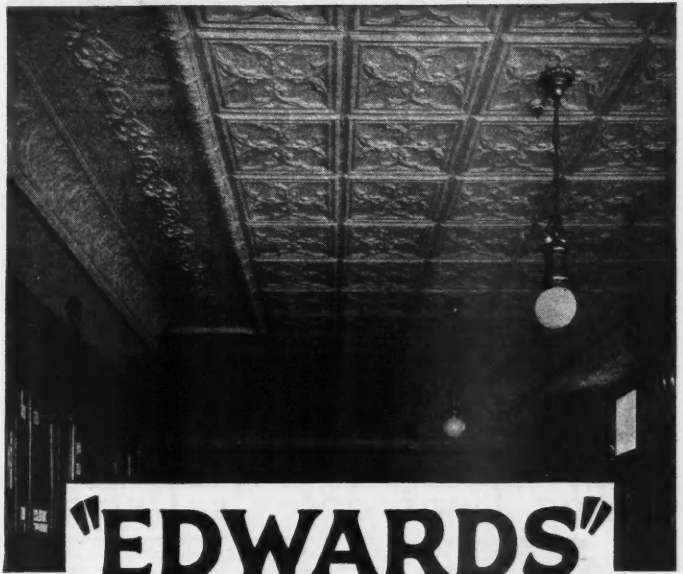


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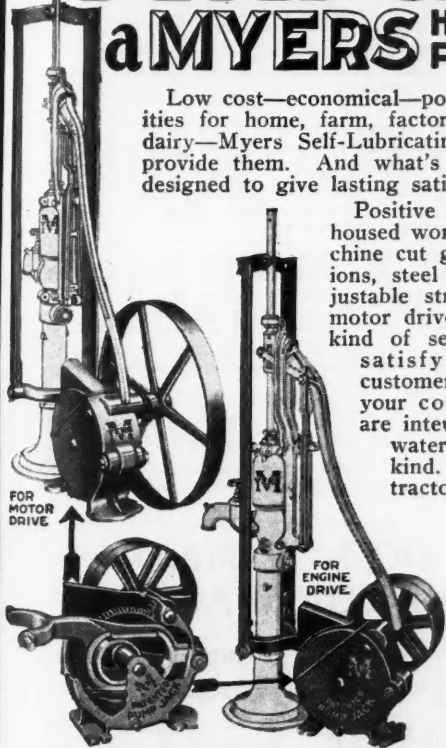
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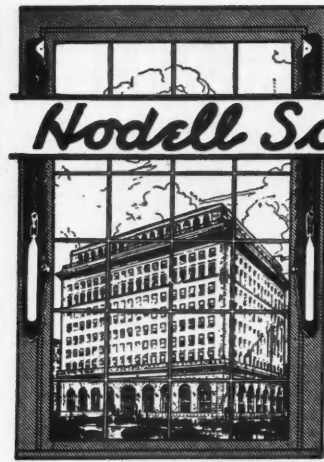
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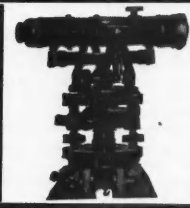


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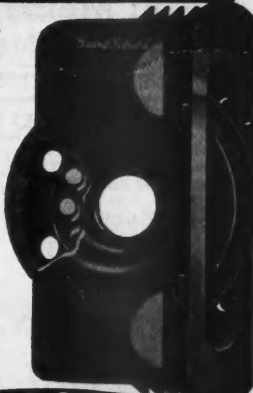
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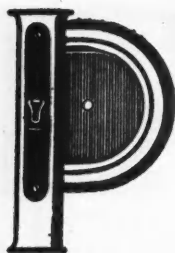


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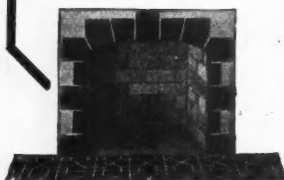


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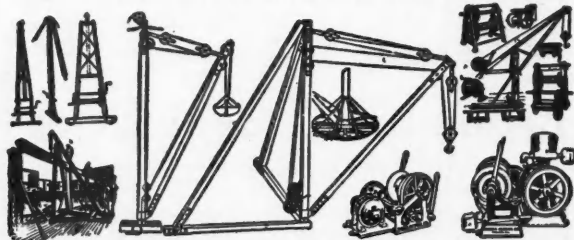
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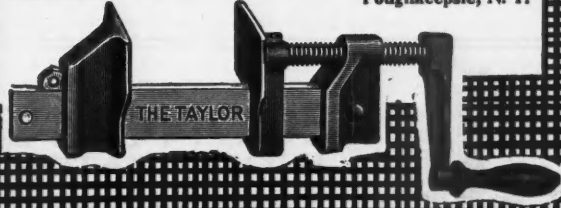
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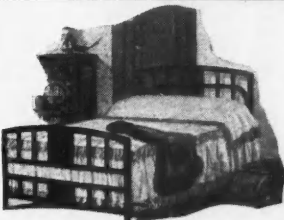
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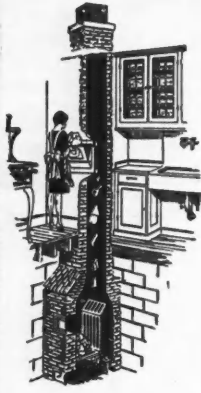
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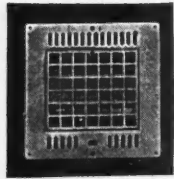
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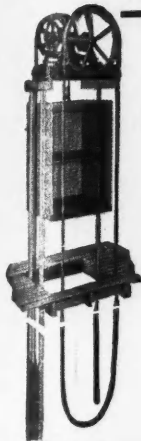


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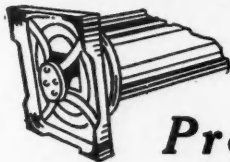
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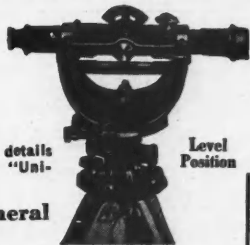
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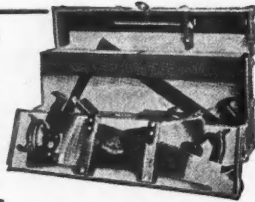
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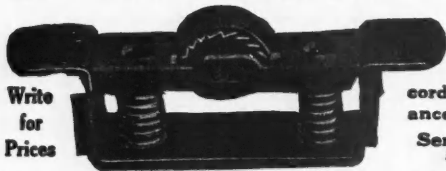
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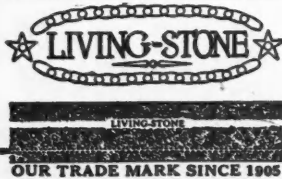
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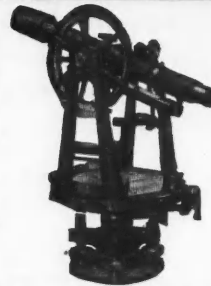
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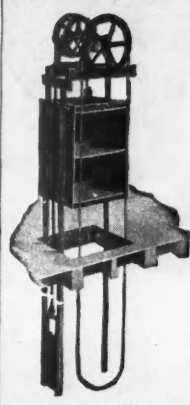


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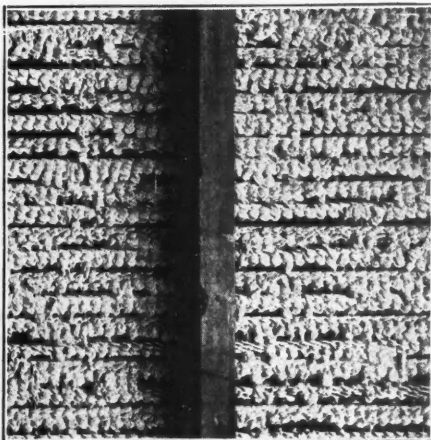
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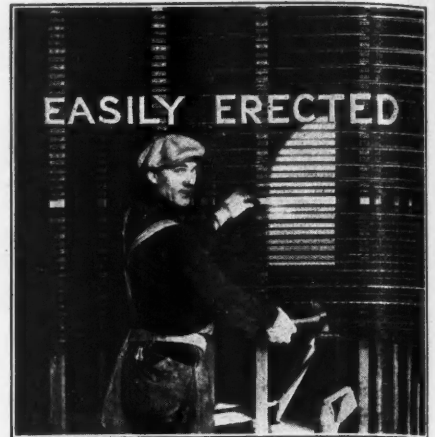
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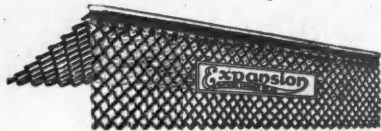
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NOTICE TO ADVERTISERS

Forms for the October number of the American Builder will close promptly on September 10. New Copy, changes and orders for omissions of advertisements must reach our business office, 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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