

AMERICAN CARPENTER AND BUILDER



THE WORLD'S GREATEST BUILDING PAPER

NOVEMBER **Important Features** NOVEMBER

Special Articles

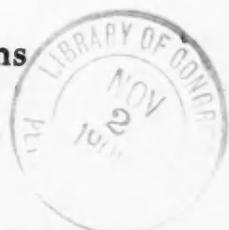
"A Cottage While You Wait"—Built in a Day
Suburban Residence in Cement Plaster
How to Make the Home Cozy

Building Plans

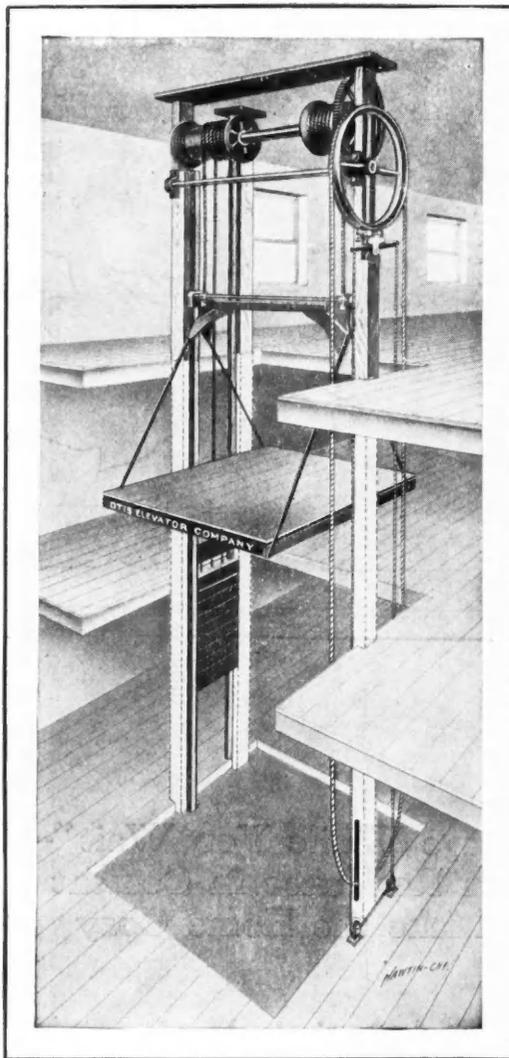
Practical and Artistic Residence Designs
Small Bank, Store and Office Building
A Desirable Horse Barn

Recommended Practice

Stencils and their Use in Modern Decoration
Shingling the Sides of a Building
Timely Furnace "Don'ts"



HAND POWER ELEVATORS
AND
DUMB-WAITERS
AT
SPECIAL PRICES



WRITE FOR COMPLETE INFORMATION

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OTIS ELEVATOR COMPANY

NEW YORK

CHICAGO

SAN FRANCISCO

WE MANUFACTURE ALL TYPES OF ELEVATORS—WRITE FOR CATALOG

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

THE "LITTLE SHAVEN" FLOOR SCRAPER

Sold to You at **FACTORY PRICES**

It will pay you to write us this month, as we are positively selling at factory prices

We are going to move five hundred scrapers the next few months and your inquiry at this time will not only save you money, but get you the best floor scraper on the market. Write us.

INTER-STATE EQUIPMENT & ENGINEERING CO.

OLD COLONY BLDG.

CHICAGO, ILL.



Write Us Now— Don't Wait

The Floor Scraper

THAT'S ABSOLUTELY PERFECT

Of all the floor scrapers on the market not one can be quite as good as the Star, because no other embraces such durable features.

There's practically nothing about it to wear out. Consider the benefit obtained by the new mechanical principle. The principle that means better work and quicker.

The Star does **clean** work. A patented Ball and Socket device allows the blade to be set diagonally at any angle. This gives a shearing cut to the machine. It means a finished floor **free from planer marks and "waves"**. It works the same on old floors as it does on new.

Star Scraper Co. - Elkhart, Ind.

Five Days Free Trial

As a duty to yourselves you are asked to test this machine before you spend a cent on floor scrapers. A postal stating you will use the star for five days brings one to your door. We want you to be the judge of the best floor scraper. We want you to be thoroughly convinced of Star superiority.

We pay the Freight

Particular literature on request



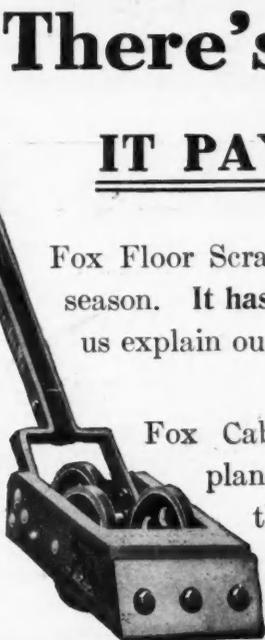
There's a Bounty on the Fox

IT PAYS FOR ITSELF

Fox Floor Scraper No. 1 sold by the carload this season. It has no equal. None just as good. Let us explain our extraordinary proposition.

Fox Floor Scraper No. 1

The best device for perfect work. No waves. No humps.



Fox Cabinet Scraper works like a plane. Only tool of its kind on the market. Price delivered to you, \$1.25. Let us tell you about it.



Fox Cabinet Scraper



Milwaukee, Wis.



The American Floor Surfacing Machine

Does the Work of 20 Men

BETTER

QUICKER

CHEAPER

The only machine whose work is specified by architects and meets the requirements of contractors and owners, giving a level, smooth, sand-papered finish, that harmonizes with the balance of the interior wood work.

It has surfaced and polished millions of square feet on every kind of floors, from common pine to the finest parquet, from bowling alleys to sky scrapers. It is self-propelling, no pushing or pulling, no blades to dull or sharpen. Used and indorsed by leading contractors everywhere. Big money in floor surfacing as a business, one machine earned over \$1850.00 in seven weeks. Guaranteed and sold on its merits.

Write for our New Booklet. "Surfacing Floors as a business"

The American Floor Surfacing Machine Company
TOLEDO, OHIO

With a Man's Life at Stake

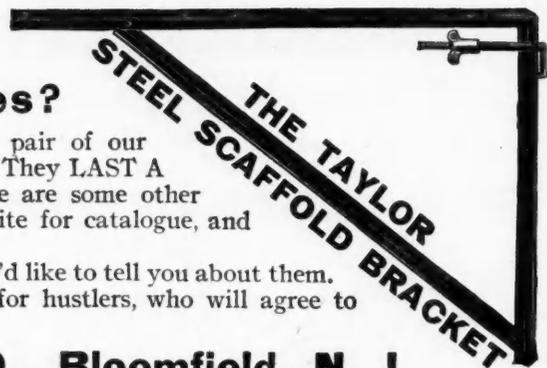
Does it Pay to Take Chances?

Use brackets that are **ABSOLUTELY SAFE**—a pair of our smallest ones carry a ton weight, without even springing. They **LAST A LIFETIME**, and what is more, they are **CHEAP**; there are some other features, too, you will find well worth investigating. Write for catalogue, and special trial offer.

Our **SHINGLE BRACKETS** surprisingly strong—we'd like to tell you about them.

Agents Wanted.—We have a first class proposition for hustlers, who will agree to canvass thoroughly.

JAMES L. TAYLOR MFG. CO., Bloomfield, N. J.



LATEST IMPROVED ALL IRON SWING CUT-OFF SAW

alone of its kind

Properly
Counter-
Balanced

Adjustable
Hanger

With Six Inch Adjustment

CAN BE HUNG
ANYWHERE

On the Floor
Under the Floor
On the Wall

With same ease of operation

Write for **FREE** Catalog
of our complete line.

LOVELL MACHINE WORKS, Gardner, Mass.



STARRETT

Universal Scraper

Eight sharp cutting edges. Instantly adjusted by ball joint connection. Blade may be instantly set at any angle. Neatest and best scraper made.

Send for free Catalogue No. 186

The L. S. Starrett Co. Athol, Mass. U.S.A.

CARPENTERS

In these days of close competition need the best possible equipment, and this they can have in

Barnes' Hand and Foot Power Machinery

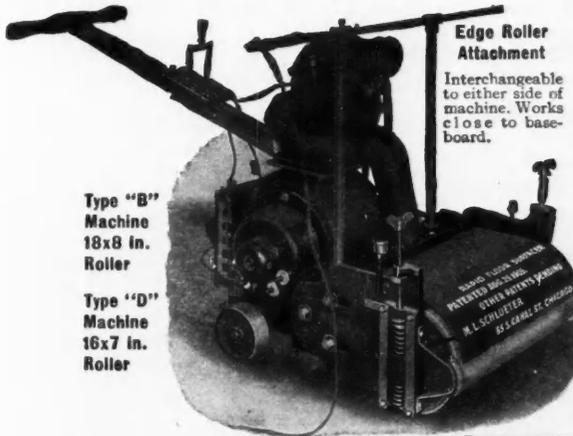
Our new foot and hand power **Circular Saw No. 4**, the strongest, most powerful and in every way the best machine of its kind ever made. For ripping, cross cutting, boring and grooving.

SEND FOR OUR
NEW CATALOGUE

W. F. & John Barnes Co.

74 RUBY ST., ROCKFORD, ILL.





Type "B" Machine 18x8 in. Roller

Type "D" Machine 16x7 in. Roller

Edge Roller Attachment
Interchangeable to either side of machine. Works close to base-board.

Perfect Results Easily Obtained Schlüeter Rapid Floor Surfacer

Built on the only correct principle. Guaranteed to be **THE BEST** machine with which to produce an even, smooth surface on any kind of wood floor old or new, hard or soft, and in all buildings; Residences, Stores, Factories, Bowling Alleys, Roller Skating Rinks, Reception and Dance Halls, etc. **THE SCHLÜETER** will remove all joints or warped edges, and leave the floor perfectly smooth. Will remove shellac, varnish, oil, wax, lime stains or the "muck" from skate wheels in a most satisfactory manner.

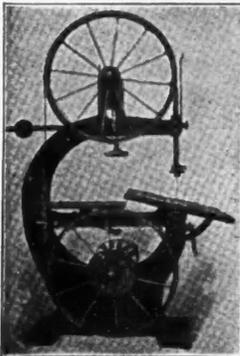
WE SELL MACHINE OR SURFACE YOUR FLOOR

EASY TO OPERATE. NO DUST. Over 700 contractors are now using our Machines. Made in two sizes. We will surface your floor. Mail us size of floor, new or old, and kind of electric power. **In eight hours will sandpaper 4,000 to 5,000 sq. ft. once over.** Write for new prices, catalogue and our **FREE TRIAL** proposition.

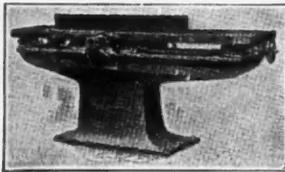
Sandpaper the Only Perfect Way

The **SCHLÜETER RAPID FLOOR SURFACER** is so constructed that a roller, to which a sheet of sandpaper is quickly adjusted, is brought in contact with the floor surface while revolving at a speed of **600 revolutions a minute.** It is guaranteed to do the work cheaper and smoother than any other machine or method. This machine will surface from one to two thousand square feet in eight hours. Cost of sandpaper and electric power from \$1.00 to \$2.00 per day

FREE Illustrated booklet containing full information sent free to contractors. **M. L. SCHLÜETER** 28 S. Canal St. CHICAGO



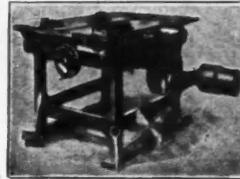
Right Prices Prompt Shipments



Woodworking Machinery Merchants

COMPLETE WOOD-WORKING SHOPS For CARPENTERS and CONTRACTORS

These Four Machines with a Gasoline Engine or Motor make a Model Shop

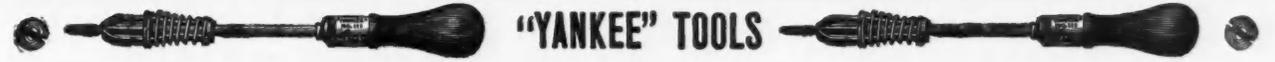


You can save time and money by being in a position to manufacture your own millwork.

We also carry a **LARGE STOCK OF UP-TO-DATE, BUT SLIGHTLY USED MACHINES.** We can surprise you with the small investment it requires to be independent. Write us today for full information

CHICAGO MACHINERY EXCHANGE (INC.)

9 to 10 North Canal St., CHICAGO



"YANKEE" TOOLS

One Driver for all Screws "YANKEE" TOOL No. 65

?

Have you seen all our Labor-Saving Tools? There are 22 kinds. Send for our new **TOOL-BOOK**—It's worth having. Full of new ideas in time-and-labor-saving tools for all classes of mechanics. A postal brings it if you say "American Carpenter and Builder." "YANKEE" TOOLS are sold by all leading dealers. Ask to see them.

Fits any screw from No. 2 to 14. Carries 4 tool steel blades in the handle magazine—quickly reached and slipped into the shank, with no screw-cap to bother you.

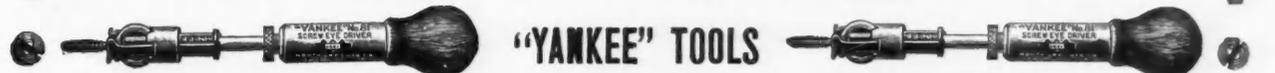
Saves space and the price of several tools.

Strong and compact. Two sizes, 1 or 6 inch shank. A very handy tool for the box or bench.

Fits the hand—Fits the purse. Fit for any man.



NORTH BROS. MFG. Co., Philadelphia, Pa.



"YANKEE" TOOLS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

TOOLS FOR SLATERS MANUFACTURED BY BELDEN ARE GUARANTEED

Their superiority over others is acknowledged by thousands of users. Made-to-order steel used in their manufacture adopted only after most careful experimenting gives them their value.

- ONE HAMMER
- ONE RIPPER
- ONE STAKE
- ONE PUNCH
- Constitute a Set



OUR HAMMERS are perfectly balanced and are provided with **Leather Handles** to prevent hand from slipping. Our Tools Bear an International Reputation

If Your Dealer Cannot Supply You, Write Us Direct

THE BELDEN MCH. CO.,

Whalley Ave. and Tryon St. NEW HAVEN, CONN., U. S. A.

FIRE PROOF WINDOWS

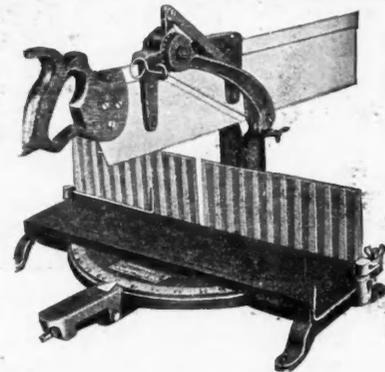
Pivoted or Double Hung Automatic Closing. Skylights, Ventilation and General Sheet Metal Work for Buildings. Write Dept. "F."

THE J. A. RITZLER CORNICE & ORNAMENTAL CO.

2412 E. 18th St. KANSAS CITY, MO.

Improved Union Mitre Box

Write for our Circular B. It tells all about the many superior features and quotes prices.



The **Dosch Mfg. Co.**
823 R. R. Ave.
Bridgeport, - Conn.

NO QUESTION ABOUT IT

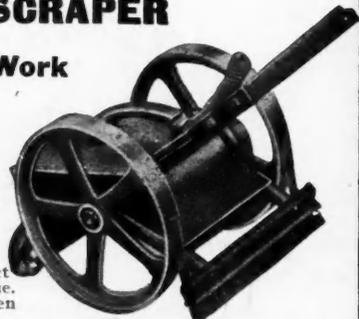
IT'S THE BEST ACKERMANN'S RAPID FLOOR SCRAPER

Is Guaranteed to do More, Better and Easier Work than any other on the market.

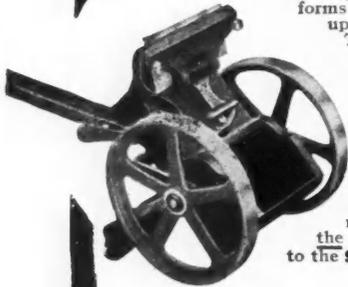
Knife Advantages
By means of a simple eccentric device, the knife blades of the "Rapid" can be instantly moved or set at any angle, thus securing a "drawing out." No floor scraper can be a success that does not bring the knife blade across the floor surface with a natural, hand-like movement. The "Rapid" does this perfectly. Any size blade up to 4 1/2 x 8 inches can be used on this machine.

Exclusive Knife Sharpening Feature
By simply reversing the position of the machine (turning it over) it forms its own knife sharpening vise, the blade being brought into a perfect upright position, ready to sharpen, without removing it from the machine. This saves time, and time is money. The operator proceeds to sharpen the knife, then turns the machine over and goes ahead with his work.

Our Special Guarantee Offer
We will ship a **Rapid Floor Scraper**, charges prepaid, subject to use **FREE** for three days, by any responsible person. If you are then satisfied the machine is all we claim for it you can purchase it, if not we will have the machine returned at our expense. Further; if, after you purchase this machine, you find that, at any time under equal conditions it will not do "More," "Better" and "Easier" work in a given number of hours than any other floor scraper, will return your money and you can keep the machine free of cost. This is a straight offer, without any strings to it, made to anyone desiring to secure the best floor scraper made without risking their money until **THEY KNOW** what they are buying. We refer to the **State Bank of Michigan**, Grand Rapids, Mich., as to our guarantee and responsibility.



This Brush is an Exclusive Patented Feature. **NO OTHER MACHINE HAS OR CAN USE IT.** Patent Allowed Nov. 1907



Cut Showing Machine in Reverse Position Ready to Sharpen the Knife-Blade

J. B. ACKERMANN CO.

Sole Manufacturers

Board of Trade Building GRAND RAPIDS, MICH.

You Prove its Value

You can be the sole judge of the supremacy of the "Little Giant" Floor Scraper. This is the way we make you the judge and jury:

Your name and address on the coupon below brings a machine to your door. All expenses being paid by us. Test it on your own floor, just as thoroughly as you know how.

If satisfactory (and it's never anything else), pay for it. If not (a very remote possibility), ship it back at our expense.

20,000 "Little Giants" Sold Already

20,000 "Little Giants" in use in various parts of the world testify to its remarkable utility.

The machine is as honest as our selling plan. We could not have sold 20,000 if it was anything else.

Write today for catalog and details.

Hurley Machine Co.

General Office and Works
155 S. Jefferson Street
CHICAGO

Branches: New York, San Francisco
Toronto and London, Eng.

FILL IN NAME AND ADDRESS AND SEND THIS COUPON

3
A.C.B.

I am interested in your offer of free trial and special terms on the "Little Giant."
Please send me catalog and complete information.

Name.....

Town.....

State.....



CUSTOM MADE FLY SCREENS

Our work is far superior to the usual output of local mills and has a style and finish not obtainable from those who do not make a specialty of screens.

For outside screens we use the identical finish of the outside of Pullman cars.

The best grades of Wire Cloth, enameled, galvanized, genuine bronze, etc. Fastened by tacks or by the "lock-strip" process.

Intending purchasers may have free by mail samples of woods, finishes, and wire cloth and copy of catalog and price list. Agencies in many cities. Special terms to contractors and builders.

The A. J. PHILLIPS CO.
FENTON, MICH.

23 Years' Experience

3 1/2 Acres of Floors

PLUMBERS' SUPPLIES AT WHOLESALE



If you need anything in my line and wish to

SAVE 20 to 40 Per Cent

on every article, write for my free illustrated Catalog. Shipments promptly made from a very complete stock of guaranteed goods.

Small orders are as carefully handled as large ones.

B. B. KAROL, 233 W. Harrison St., Chicago, Ill.

PLATE GLASS Bath Room Fixtures

FOR RESIDENCES, HOTELS, OFFICE AND APARTMENT BUILDINGS

Absolutely sanitary, require no cleaning, never wear out or show the effects of use. Not affected by hot or cold water. The modern 20th century toilet and lavatory fittings.

PLATE GLASS TOWEL BAR



Price \$1.50

No. 141 24 inches, adjustable. Also made in 30, 36, 42 and 48 inch lengths at slightly higher prices.

Round glass towel bars, \$2.00

Adjustable glass towel shelves, \$3.50, \$4.00, \$6.00

We also sell plate glass with polished edges for table tops, any size, and glass push plates for use in fine residences and apartments, manufacture and re-silver mirrors, etc.

CATALOGUE SENT FREE ON APPLICATION

Geo. H. Anderson & Co.

Manufacturers and Jobbers of Plate Glass Specialties
281-291 W. Superior Street - - CHICAGO



"A Bit Of Utility"

Guided by its circular rim—instead of its centre—the Forstner Labor-Saving Auger Bit will bore any arc of a circle, and can be guided in any direction.

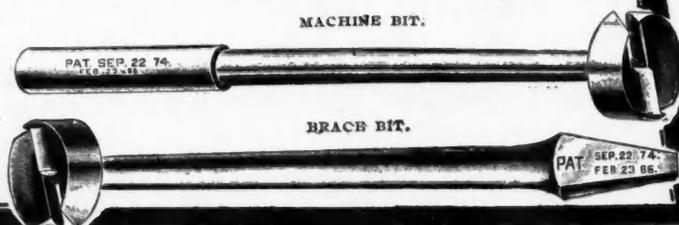
Doesn't matter how hard the wood is, no consequence whether it is full of knots, or the grain awkward to negotiate. The Forstner Bit works with equal smoothness under any condition and leaves a true polished surface on every job.

Unequaled for Delicate Work

Supersedes chisels, gauges, scroll-saws, or lath tools combined, for all kinds of delicate work. Cabinet and pattern makers and carpenters are enthusiastic because they do more work than other bits and cost no more.

We can offer something special in the matter of price on sets packed in a sensible box. Send today for particulars and catalog.

The Progressive Mfg. Co.
Torrington, Conn.



"Last a Lifetime and give Satisfaction to the End"



TRADE MARK
D. R. BARTON
1832
ROCHESTER, N. Y.

The Celebrated Barton Planes and Edge Tools for carpenters and all other woodworkers are unequaled by any other make for keen, hard, smooth cutting edges. If your hardware dealer does not handle **The Celebrated Barton Tools**, send direct for Catalog. Be sure and specify "CARPENTER'S CATALOG"
MACK & CO., 20 Brown's Race, Rochester, N. Y.

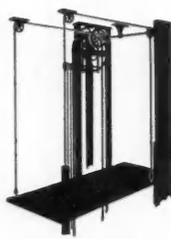
EATON & PRINCE

HAND-POWER

ELEVATORS



CORNER
LIFT

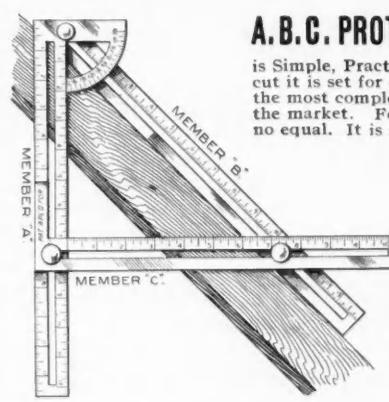


CENTER
LIFT

FOLDER No. 99 GIVES FULL DETAILS



EATON & PRINCE COMPANY
CHICAGO



The A.B.C. PROTRACTOR SQUARE

is Simple, Practical and Correct. In this cut it is set for common Rafters. It is the most complete STAIR FINDER on the market. For Polygon work it has no equal. It is simple and easy to operate. Directions with each tool. Send

\$3.00

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**CROOKSTON
TOOL CO.**
MANUFACTURERS
CROOKSTON,
MINN.

Buy Art Glass

From the Manufacturers

We are actual manufacturers of Art Leaded Glass in all the latest and best styles, with Copper and Brass settings. Also Colored Glass of all kinds for making lamp shades, etc.

25% Discount to Contractors

Let us give you an estimate on your next job. Quality of goods is all it should be, prompt shipment is certain, price is always low.

Estimates and Designs Furnished Promptly

McCULLY & MILES CO.

76 Wabash Avenue : : CHICAGO

The WEBER DOUBLE ACTING Floor Scraper



The only scraper which will scrape forward and backward.

This is the Only Scraper that Scrapes Any Kind of Wood Floor

Most scrapers will not scrape Georgia Pine, Yellow Pine and Oak. They are not the Weber kind. Its adjustable blade holder and flexible frame adapt the Weber to any wooden floor laid.

Thousands of practical carpenters have proved it. Why should not YOU prove it for yourself? Let us convince you—let us send you a Weber on FREE TRIAL! Remember you will be under no expense—no obligation to buy.

Simply write me, send me your dealer's name and tell me for how long you want to try the Weber and I'll send you one to test for yourself.

Write me personally today.



The Weber Automatic Sharpening Device enables the operator to sharpen a blade without removing it from the machine. The blade can't be sharpened at a wrong angle—so simple a child can use it.

JOHN F. WEBER, PRESIDENT, WEBER MFG. CO. 670 71ST AVENUE WEST ALLIS, WIS.

FAR AHEAD for Smooth, easy work and holding edge will be YOUR VERDICT ON TRYING

CHAPLIN'S IMPROVED PLANES

Patented Feb. 14, 1899; Oct. 30, 1900; Dec. 24, 1902

We invite the Severest Comparative Tests



We want you to have a copy of our booklet

"A 'Plane' Talk About a Good Plane!"

We want you to have a copy, for it is a booklet you really need in your business. We'll gladly send you this booklet with our compliments, promptly upon receipt of your request.

Tower & Lyon Company, 95 Chambers Street, New York

FOOT, HAND AND POWER

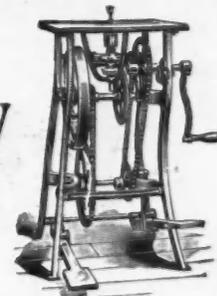
Wood-Working Machinery

For Carpenters, Builders, Cabinet-Makers, and Other Wood-Workers

BUILT FOR HARD WORK, ACCURATE WORK AND LONG SERVICE

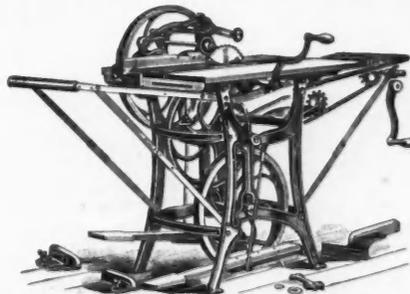


"Victor" Scroll Saw "Diamond" Mortiser



"Rex" Moulder

ONE MAN with one of these machines will do the work of four to six men using hand tools; will do it easier, will do it better.



"Union" Combination Self-Feed-Rip and Cross-Cut Saw

WE GUARANTEE each machine to be thoroughly practical and accurate. Machines sent on trial, and if not found entirely satisfactory, may be returned at our expense.

(96).

Enterprising mechanics are quick to see the superior merits of our machines. It will pay you to investigate these advantages.

SEND FOR CATALOG "A"

The Seneca Falls Manufacturing Co.

218 Water Street, Seneca Falls, N. Y., U. S. A.



No. 8 "Union" Power Saw



No. 6 "Union" Combination Saw

**SEND FOR A SAMPLE OF
SAMSON SPOT CORD**

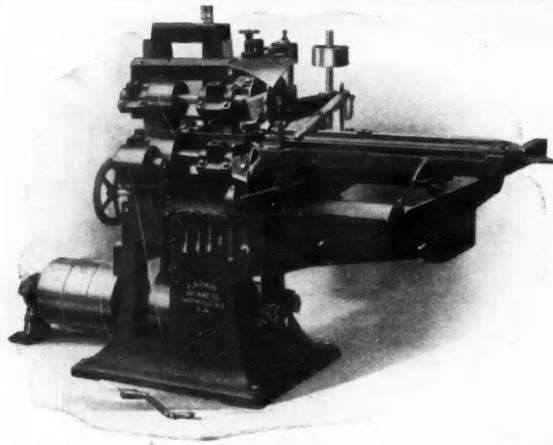
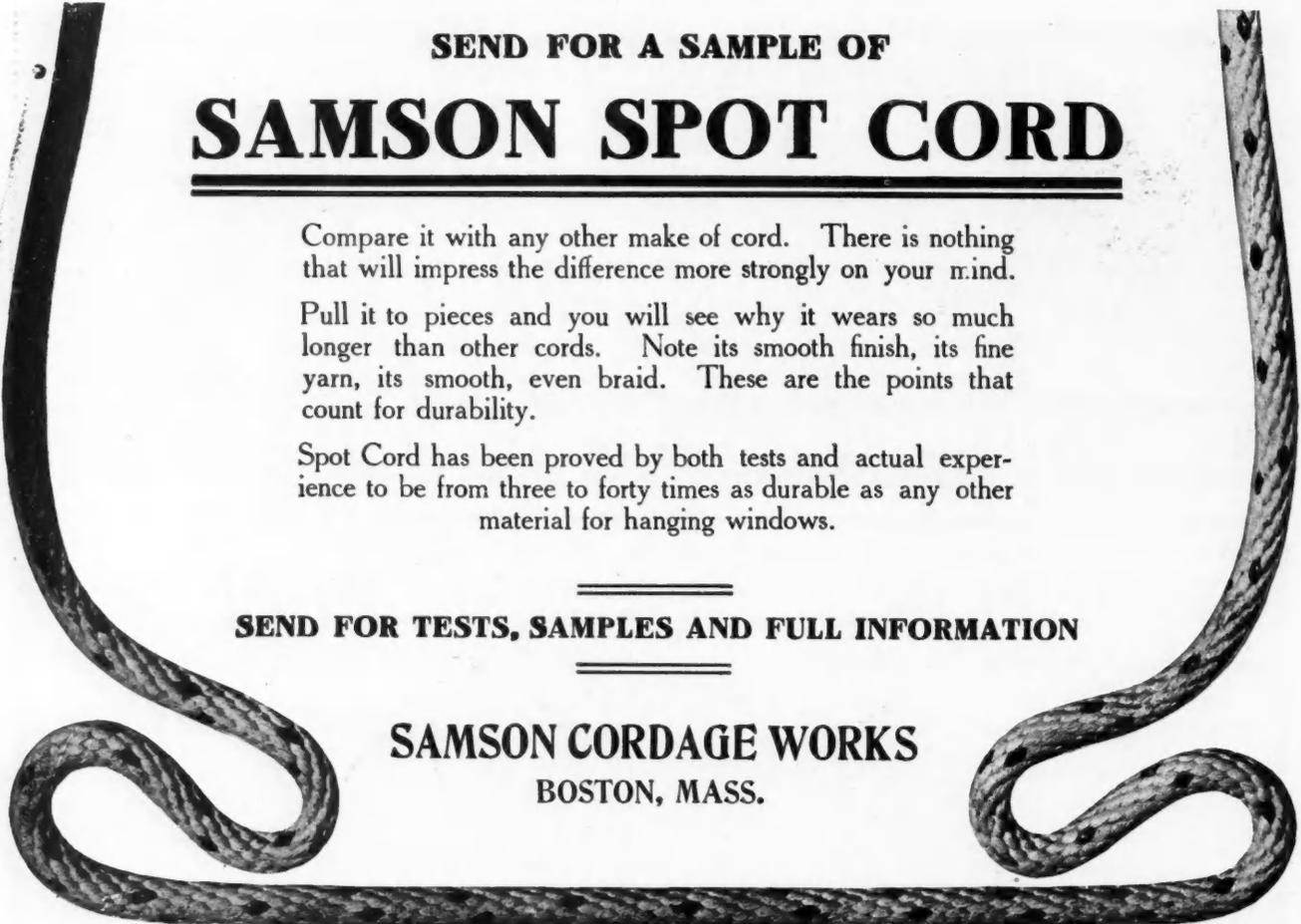
Compare it with any other make of cord. There is nothing that will impress the difference more strongly on your mind.

Pull it to pieces and you will see why it wears so much longer than other cords. Note its smooth finish, its fine yarn, its smooth, even braid. These are the points that count for durability.

Spot Cord has been proved by both tests and actual experience to be from three to forty times as durable as any other material for hanging windows.

SEND FOR TESTS, SAMPLES AND FULL INFORMATION

**SAMSON CORDAGE WORKS
BOSTON, MASS.**



☐The annexed cut represents our Improved No. 225 **Ce Single-end Tenoner**, showing the **Roller Bearing Table** and all late improvements.

☐Also makers of **Double-end Tenoners** and more than 150 other different machines for **Working Wood**.

ADDRESS

H. B. SMITH MACHINE CO.
Smithville, N. J., U. S. A.

Branches—NEW YORK CHICAGO ATLANTA

**DUMB WAITERS
AND
HAND ELEVATORS**
OF THE MOST IMPROVED
AUTOMATIC CONSTRUCTION

INVALID LIFTS
TRUNK, CARRIAGE,
SIDEWALK AND
FREIGHT ELEVATORS

SEDGWICK MACHINE WORKS
POUGHKEEPSIE, N. Y.
AND
128 LIBERTY ST. NEW YORK

CATALOGS AND
ESTIMATES FURNISHED
SEE SWEET'S INDEX

PUMPS, DOOR-HANGERS, STORE LADDERS

The Pump That Pumps SPRAY PUMPS Double-acting, Lift, Tank and Spray

MYERS PUMPS
Store Ladders, Etc.
Hay Tools of all kinds
Write for circulars and prices.

Myers Stayon Flexible Door Hangers
with steel roller bearings, easy to push and to pull cannot be thrown off the track — hence its name — "Stayon." Write for descriptive circular and prices. Exclusive agency given to right party who will buy in quantity.

F. E. MYERS & BRO.
Ashland, Ohio.

Noiseless Cushion Tires

LADDERS



Have You Taken Advantage of My **FREE TRIAL OFFER**

IF not, you have neglected an important proposition. You do not know what a **PERFECT FLOOR SCRAPING OUTFIT** is, unless you have seen and worked with the ACME.

My offer is to send the ACME FLOOR SCRAPING OUTFIT, as here illustrated, to you for **ONE WEEK'S FREE TRIAL** at my expense. If the same does not meet with your entire satisfaction, send it back. No fairer proposition was ever made—will you investigate? Then do so today.

The Acme Floor Scraping Outfit consists of the Floor Scraper, Blade, Sharpener, Sander, One Dozen Blades, File, Gauge, Oil Stone, Two Wrenches, Two Bolts, Burnisher and Box of Tallow.

Illustrated Booklet Mailed on Request

JOS. MIOTKE, 247 Lake Street, Milwaukee

BUILDERS OF CATALOGS

From The Foundation To The Last Brick

We are experts in producing designs, illustrations, zinc etchings, half tones and color plates, for all advertising purposes.

We print folders, circulars, booklets and catalogues.

In fact, we handle your advertising from start to finish.

You do yourself an injustice by not conferring with us on your next order for engraving and printing.

Write for "Graven Message"

Dearborn Engraving Company
ENGRAVERS PRINTERS

1322 Wabash Avenue, Chicago, Ill.



GRILLES COLUMNS AND CONSOLS

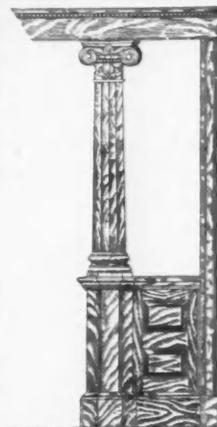
In quality and price our work is not surpassed.

You will make no mistake in writing us before ordering elsewhere.

Send for 48 Page Catalog No. 15

It contains many fine designs of modern Grilles, Columns and Consols.

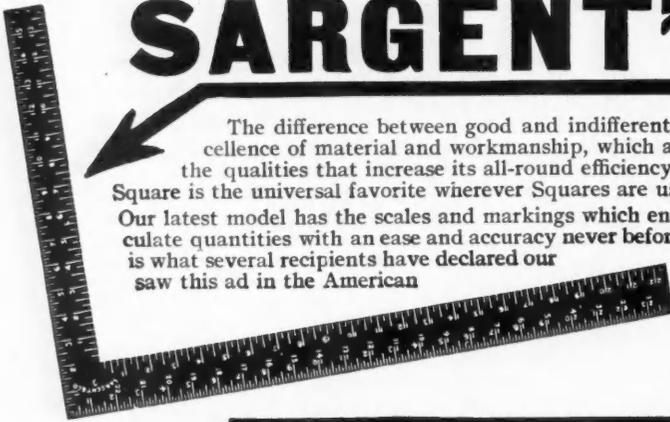
Illustration at right shows half-section of Column design No. 552.



Northwestern Grille Works

CHRISTENSON BROS., Props. 1452 Milwaukee Ave., Chicago

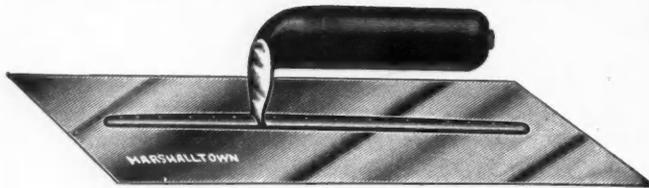
SARGENT'S IMPROVED STEEL SQUARE



The difference between good and indifferent Carpenters' Squares lies in something more than excellence of material and workmanship, which are, of course, among other "Sargent" features—it is in the qualities that increase its all-round efficiency. That is why the practical "Sargent" Standard Steel Square is the universal favorite wherever Squares are used.

Our latest model has the scales and markings which enable the carpenter to lay out all kinds of work and to calculate quantities with an ease and accuracy never before thought possible. "A practical treatise on Steel Square" is what several recipients have declared our little publication. Copy free simply by mentioning you saw this ad in the American Carpenter and Builder.

Sargent & Company
Street New York

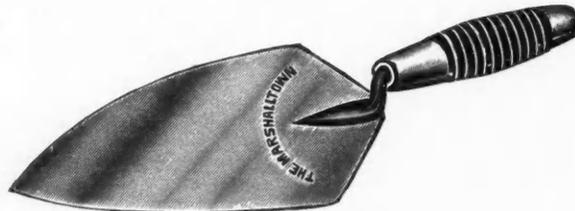


The Marshalltown Plastering Trowel

The Best 3 Made

EVERY TROWEL GUARANTEED

No Mistake in Insisting on MARSHALLTOWN

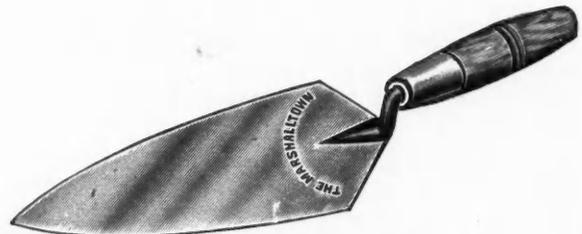


The Marshalltown Wide Heel Leather Handle Brick Trowel

We manufacture a full line of **High Grade Plasterers' Tools**, and it would be well for every plasterer, bricklayer and contractor to have one of our catalogues.

Marshalltown Trowel Co.

Marshalltown, Iowa, U. S. A.



The Marshalltown Philadelphia Pattern Brick Trowel

"Sterling" Transits and Levels

Represent the experience of a quarter of a century in making for a very critical clientele the highest types of Precision Instruments.



"STERLING" Profile and Cross Section Papers are the best made.

Send for Samples

Headquarters for Barometers, Anemometers and Field Glasses, Engineering Field Equipments and Drafting Room Supplies of the highest quality.

At very moderate prices.

Catalogue on request.

ISZARD-WARREN CO., Inc.

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LUFKIN STEEL TAPES and RULES



ARE INDISPENSABLE FOR ACCURATE WORK

MADE BY

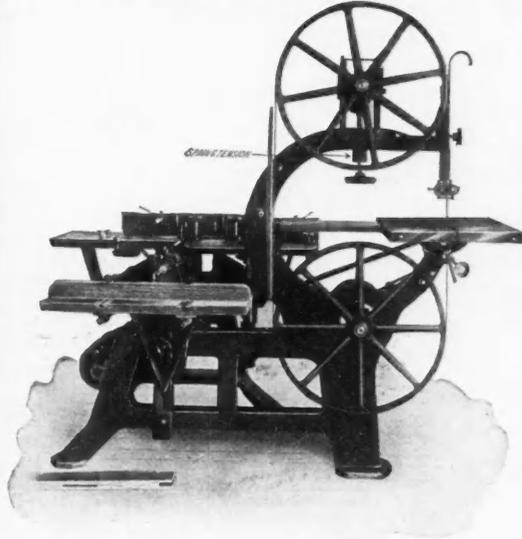
The Lufkin Rule Co.

Saginaw, Mich., U. S. A. New York London

For Sale Everywhere. Send for Catalogue.

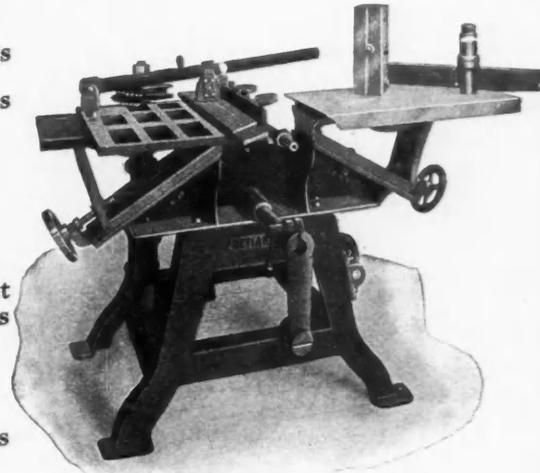
"DEFIANCE"

Cuts shown below will give you a fairly good idea of our Universal Variety wood worker with its various attachments. If you will write us immediately for our 1908 catalogue, it will describe to you thoroughly the great variety of work that can be done on this machine; as well as many other wood working machines we build, consisting of:



Universal Wood Worker, showing the Mortising Attachment and 27" band saw.

- Band Saws
- Saw Tables
- Jointers
- Shapers
- Planers
- Swing Cut Off Saws
- Lathes
- Boring Machines



Universal Wood Worker, showing the Tenoning Attachment with traveling table.

THE SIDNEY TOOL CO.
SIDNEY, OHIO

On the Square



every builder should have my little works and be a constant reader of the "Cement World," the leading paper of its kind published.



- STEEL SQUARE POCKET BOOK.....\$.50
- FOLDER (in case with pockets)..... .25
- DESIGNING (finely illustrated)..... .50
- CEMENT WORLD..... 1.00

All for \$1.75. \$2.25
DWIGHT L. STODDARD, Author of "Steel Square Pocket Book," 328 W. Raymond St., Indianapolis, Ind.
 Send for other Combination Offers.

Find Out About

our improved gripping device—
it saves time;
the special grade of steel we use—
can't break it.

19 STYLES OF CLAMPS. CATALOGUE ON REQUEST



JAMES L. TAYLOR MFG. CO.
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MONTROSS METAL SHINGLES

Carpenters—Wouldn't you like to roof school-houses, churches, fine residences, etc? Wooden shingles aren't good enough to receive consideration, but **Montross Metal Shingles** will win out every time if you explain their advantages to the owner. Easily laid—only hammer and nails required. Large margin of profit. Illustrated book free on request.



MONTROSS METAL SHINGLE CO. CAMDEN, N. J.



Wood Bar Clamp Fixtures Per Set 50c

OVER 18,000 OF OUR STEEL RACK VISES IN USE

25 doz. Clamp Fixtures bought by one mill last year. We ship on approval to rated firms, and guarantee our goods unconditionally. Write for list of Steel Bar Clamps, Vises, Bench Stops, etc.

E. H. SHELDON & CO.
84 North May St., CHICAGO



Price \$2.80 to \$4.00

RAPID-ACTING WOODWORKER'S VISE No. 3

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

**ASHBY
SCHOOL HOUSES**

display a composition of utility, durability and good, pure architecture without any "gingerbread."

No buildings are too large or too small for our personal and prompt attention.

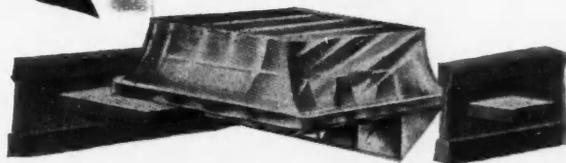
We develop your own ideas into a practical set of plans and specifications with which they can be executed to the smallest details into a building that can be built within your means and to your entire satisfaction.

Ashby's Portfolio of School Houses will be sent to parties interested in the erection of a school building for which plans have not yet been procured.

G. W. ASHBY—ARCHITECT
11th Floor, Medinah Bldg.
CHICAGO, ILL.

100% More Light

3-Way Prism



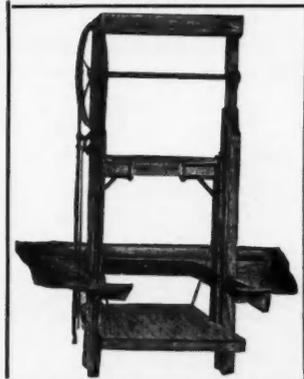
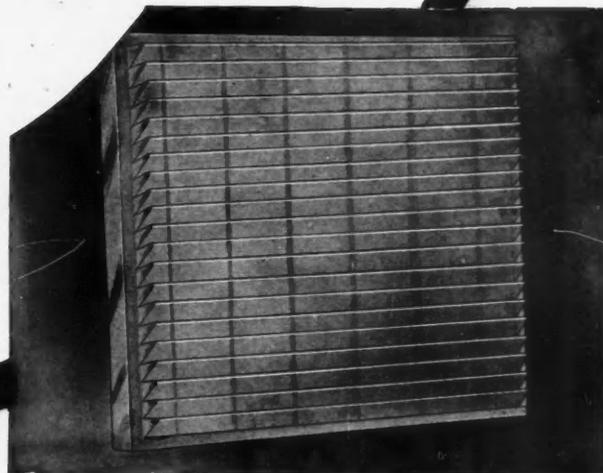
The construction is practical and thorough in every detail. Made of wrought steel, 1 1/2 inch by 1/2 inch beam, with 1 inch by 1/2 inch flat bar running through at right angles, forming a net work to receive either Plain Lens or 3-Way Prisms, and is made to size as ordered in black, and then galvanized, making it positively immune from corrosion.

Small cut shows sectional view of construction with Prism Lens, and is intended to be used as sidewalk or vault lights, same construction with Plain Lens is used as a floor or skylight. Leading architects and engineers have heartily indorsed the principle.

Large cut shows the 3-Way Prisms that are saving money for hundreds of concerns throughout the country. By installing them in the lobby of the Broad Street Station at Philadelphia, the Pennsylvania Railroad were enabled to dispense with eight hundred incandescent lights. The natural light from the sky is diffused to a distance of three hundred feet of what was previously darkness. This is the story that is being told wherever 3-Way Prisms are used. More light—better light—expense eliminated are three features effected by this system. All are explained in the catalog, free to anybody interested.

American 3-Way Prism Company
134 North 10th St. PHILADELPHIA

in dark interiors, basements, etc., is obtained by installing 3-Way Prisms. Eliminates use of artificial lights, such as electric lights, gas, etc., and allows sweet, pure, sanitary daylight to enter.



PERFECTION ELEVATORS

ARE
"BEST BY EVERY TEST"

For PASSENGER or FREIGHT SERVICE in Factories, Stores and Dwelling Houses.

Our Elevators are noted for their Easy Running and Serviceable Qualities. They are practically self contained and can be erected by any carpenter in a few hours. We furnish Plans for erecting. When writing, state your requirements.

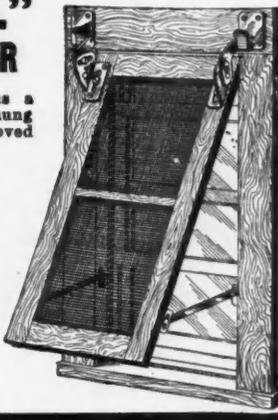
Sidney Elevator & Mfg. Co., Sidney, O.

The "UNIVERSAL" ADJUSTABLE HANGER

can be used anywhere. It forms a perfect, practicable lock; sash hung with it cannot be opened or removed from the outside; it cannot be blown open by storms; makes practicable the only substitute for the half-sash sliding screen; is sold in sets, half sets, or in any other way the trade demands; indestructible; will wear out a dozen screens.

Ask your hardware dealer or write for free sample and catalog.

THE ADJUSTABLE HANGER CO.
415 Huron St., Toledo, Ohio, U. S. A.



DON'T PUT SASH WEIGHTS IN YOUR WINDOWS—THEY ARE OUT OF DATE

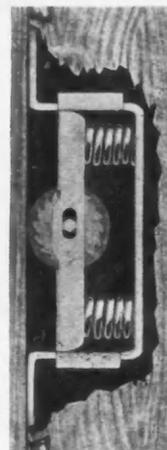
The "AUTOMATIC" SASH HOLDER

The "Automatic" Sash Holder is the new, modern, up-to-date device that dispenses with cumbersome sash weights, kinking cords or ribbons, useless weight pockets, misfit pulleys and reluctant balances, and saves all the time, labor and expense of fitting them in place.

Prevent rattling and permit the window to be moved up and down with ease. Hold it safely at any point desired.

A sample set of four sent, postpaid, for \$1.20. Ask your dealer, or write to us direct.

Automatic Sash Holder Company
277 Broadway, New York City.



DISSTON

SAWS

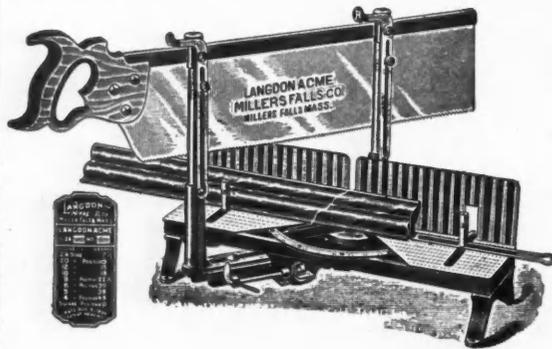


The Largest Saw Manufacturing Plant in the World and its Trade Mark—

EMBLEMATIC

of the Principle Upon Which the High Reputation for Quality, Workmanship and Utility has been built.

HENRY DISSTON & SONS, Inc. PHILADELPHIA, PA.



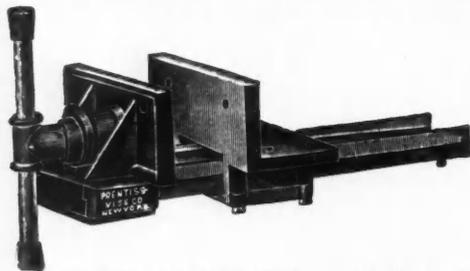
Are You Interested in Mitre Boxes ?

If you are it will pay you to investigate the Langdon Acme. It has all the advantages of any other box made and several that others do not comprise. Our pocket catalogue "D," representing our full line of tools, will be sent if asked for.

MILLERS FALLS COMPANY

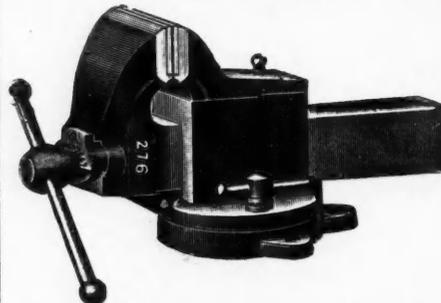
28 Warren Street, NEW YORK;

BLAKE QUICK ACTING VISE



For Cabinet Makers and Wood Workers. Simplest—Strongest—Cheapest—Best
Send for Catalogue of all kinds of Vises
PRENTISS VISE COMPANY, MAKERS
44 Barclay Street, New York, U. S. A.

PARKER VISES



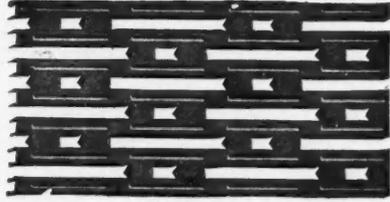
MADE ESPECIALLY FOR WOOD WORKERS

FOR SALE BY DEALERS

SEND FOR CATALOG

CHAS. PARKER CO.
MERIDEN, CONN.

ECONOMY FROM START TO FINISH



Coming right down to the economy question Clincher Lath has got everything beaten.

As a practical man you can understand the principle by the illustration. Notice the level

plastering surface—the construction that's different.

Sagging Is Impossible

Sagging between the studding is rendered absolutely impossible if Clincher Lath is used. Read what progressive carpenters have to say about it.

Easier to handle and easier to erect than any other lath on the market. Prove this by sending to Department C for samples. Free to anybody interested.

The American Rolling Mill Co.

**MIDDLETON
OHIO**

Hotel Touraine BUFFALO, N. Y.



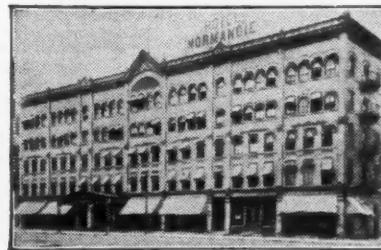
Delaware Avenue at Chippewa Street
ABSOLUTELY FIREPROOF
250 Rooms with Bath and Long Distance Telephone

**European Plan
\$1.50 per Day Up**

With Bath Connections.
Excellent Music and Grill Room. Send for booklet
C. N. OWEN, Prop.

HOTEL NORMANDIE

CONGRESS STREET
Near Woodward Avenue
DETROIT, MICHIGAN



American Plan \$2.50 per Day and upwards.
European Plan \$1.00 per Day and upwards.
Rooms with Bath Extra.
A High Grade Cafe.
Restaurant and Buffet in connection.

GEORGE FULWELL, Proprietor



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Draftsmanship

TAUGHT PERSONALLY AND INDIVIDUALLY BY

CHIEF DRAFTSMAN

of large concern, who guarantees you a first-class drafting-room knowledge, experience and high salaried position in few months, home instruction.

Complete Drawing Outfits, Highest Quality, FREE

Address, **CHIEF DRAFTSMAN, DIV. 17,**
Engineers' Equipment Co. (Inc.), Chicago, Ill.

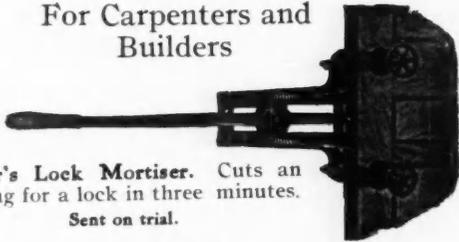


VALUE \$13.85

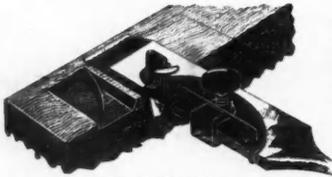
FREE TO MY STUDENTS
Delivered at once

Miller's Labor Savers

For Carpenters and Builders

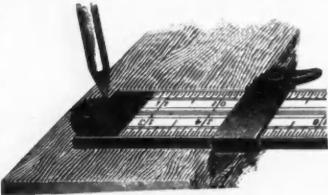


Miller's Lock Mortiser. Cuts an opening for a lock in three minutes.
Sent on trial.



We are now manufacturing a Butt Mortiser. Cuts the seats for Butt Hinges on Doors, etc. Does it accurately and in one-third the time.

Butt Mortiser



This handy device every carpenter will appreciate. If your hardware dealer does not have it, we will send a sample Butt Mortiser and rule gauge for 75 cents, P. O. money order.

Rule Gauge

A. W. MILLER MFG. CO.
Nevada Building CINCINNATI, OHIO

PHOENIX

INSIDE SLIDING BLINDS

WILKES BARRE, PA.

The Phoenix Sliding Blind Co.
Enclosed find my check for blinds. I am pleased with them and sorry I did not have them put throughout the whole house.
O. W. MILLER.

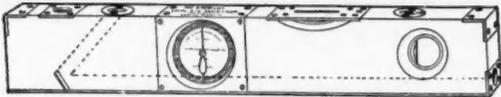
Comfort!
Economy!
Convenience!

The lately improved springs and corrugated steel rods put the "PHOENIX" far in lead of less improved styles. Write for Catalogue 'C' and free samples, showing construction.

PHOENIX SLIDING BLIND CO.
BRIDGE & CANAL STS. PHOENIX, N. Y.

THE AMERICAN

Combined Level and Grade Finder



All Progressive and Up-to-date Mechanics as well as Manufacturers having use of a Level, are getting one

An instrument with which at one glance you can get the true slant on any line or grade either in degrees, inches or percentage, or all at the same time, and will at once give the exact distance need to plum up to a true level.

A Civil Engineer that you may have with you at all times.
The most practical, durable and convenient instrument of the day.
The longitudinal recess which is shown in cut is well worth the low price of the instrument.
Write at once for large list of testimonials from all over the United States, and special introductory price given only to first applicants with privilege of taking agency. Address Edward Helb, Railroad, Pa.



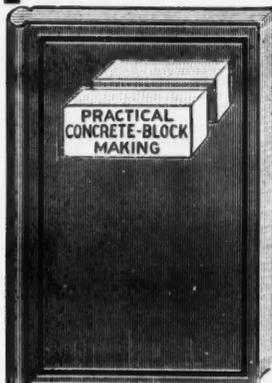
COMPO-BOARD

A substitute for Lath and Plaster
Can be put on by any Carpenter.
It is Warmer, more Durable,
Quicker and more Easily Applied.
Manufactured all 4 ft. wide, 8, 9, 10,
11, 12, 13, 14, 15, 16, 17 and 18 ft. long.

For Sample, Price and
full Description, Write

Northwestern Compo-Board Co.
MINNEAPOLIS :: :: MINN.

PRACTICAL Concrete Block Making



A Simple Instruction Book for the Use of the Practical Workman

By CHARLES PALLISER

75 Pages, (5x7 inches)

Elaborately Illustrated and Handsomely Bound in Cloth

Only 50 Cents Postpaid

Money Refunded if Not Satisfied

THIS new, practical book, written by a well known expert, gives reliable directions in simple language about every step necessary to make good, substantial concrete blocks. The book will be especially valuable to the beginner in this line of work, as the hints about how to avoid faulty work will save him the loss of many dollars.

The book tells about cement, concrete, blocks, molds and machines. How to select sand, gravel, crushed stone, how to find the right quantity of cement and sand to use, how to mix the aggregates, how to make the blocks and bricks, curing and seasoning, placing in wall, coloring, how to make wood molds for special ornamental work, rock facing, together with many practical hints and suggestions on how to obtain the best architectural effects, the standard specifications, and directions for testing the strength and durability of blocks.

Industrial Publication Co.

16 Thomas Street, - - - NEW YORK

ARE YOU A Carpenter?

Have you seen the NEW BRACE?

Adjustable 6, 8, or 10 inch!

It will bore a hole centered one inch from a corner where ordinary brace cannot work: : :



Send for Circular

The E. S. Brace Co.

NIAGARA FALLS

NEW YORK

Cut Down Insurance Cost

and make the building absolutely safe by using

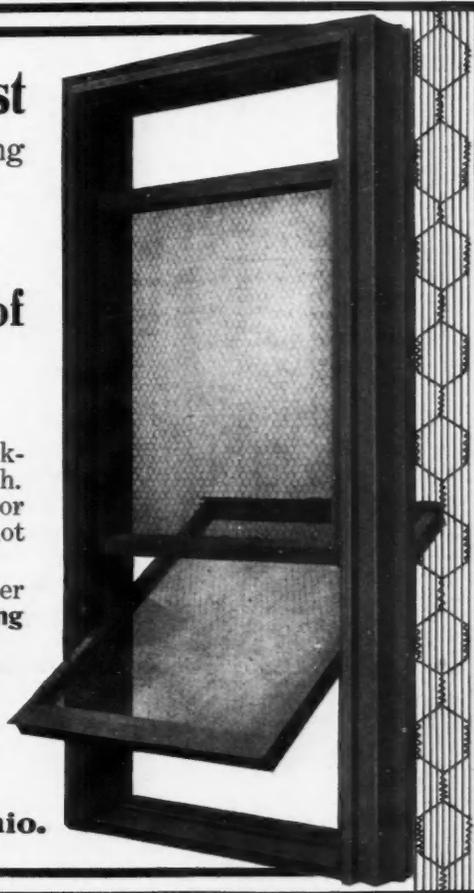
Mullins Fire-Proof—Storm-Proof—Dust-Proof Windows

The most effective fireproof windows made. Entirely lock-seamed metal, no soldered joints in frame, sill or sash. Their perfect construction does not admit of warping or buckling, and heat contraction or expansion does not affect them in any way.

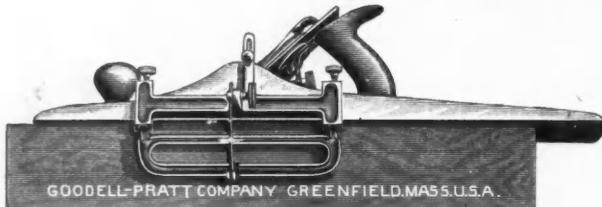
Mullins Fireproof Windows are manufactured under supervision of **Underwriters' Laboratories, Inc.**, according to the latest specifications of the **National Board of Fire Underwriters'** and every window is inspected, approved and labeled with their official label.

Send for descriptive catalog.

W. H. Mullins Co.
214 Franklin St. Salem, Ohio.



Plane Gauge No. 333



GOODELL-PRATT COMPANY GREENFIELD, MASS. U.S.A.

Carpenters will find this tool of great assistance in all cases where it is necessary to plane a bevel.

This tool can be attached to any Iron Plane and with a little practice an inexperienced workman can do as good a job as an old carpenter, and in so short a time as to put the other man to shame.

All up-to-date carpenters should provide themselves with this labor-saving and time-saving attachment.

Catalog giving complete description will be sent free on request.

GOODELL-PRATT COMPANY
GREENFIELD, MASS., U. S. A.

BMC

Only the very
best tools
have this
brand



We will
send a sample
Nail Set either 1-32,
2-32, 3-32 or 4-32 and
our booklet, "Tools that
Last," for 8c.

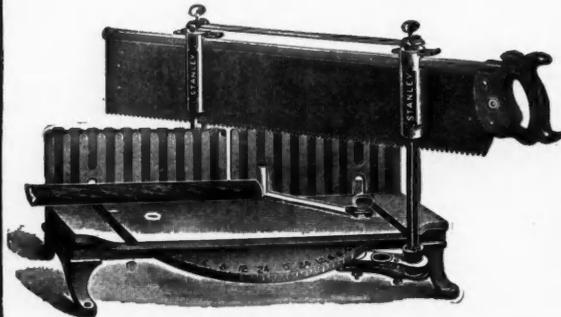
Manufactured by

BRAUNSDORF-MUELLER CO.

201-211 Madison Ave.

ELIZABETH, N. J.

STANLEY MITRE BOX



On the edge of the Solid Metal Base (where they will always remain correct), degrees are accurately graduated.

As the Swivel will automatically lock at any point, the operator can quickly set the Saw to cut the angle needed.

For duplicating work, a stock guide can be screwed in a threaded Plate. Inserted in base board, making a perfect length gauge.

With these new features, the **Stanley Mitre Box** is more than ever a necessity to all wood-workers.

For full description, sizes, and prices, write for Catalogue No. 34.

Sold by all Hardware Dealers.

Stanley Rule & Level Co.

New Britain, Conn., U. S. A.



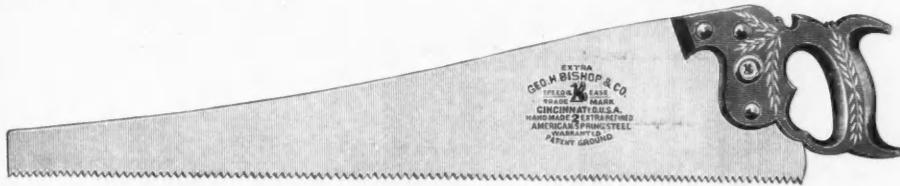
Geo. H. Bishop & Co. HAND-MADE SAWS

A good reputation is very pleasing. We are proud of ours. But goods made on honor and sold on merit each and every one **MUST** have intrinsic value.

A SAW OF QUALITY

**BISHOP
No. 2**

Mechanics value a good saw particularly when narrowed down by use. To meet this demand we have placed on the market our No. 2 Hand Saw. Hand Smithed, Hand Blocked, Hand Filed and Set. The life of this Saw is fully equal to the regulation width. The Blade is narrow and shapely. The 26-inch is 1½ inches at point, and about 6 inches at heel. Shorter lengths than 26-inch, while the same width at point, vary to 5 inches at heel. Light and rigid, full taper ground to the back. Made in Skew back of all lengths, either Rip or Cross Cut tooth.



RIP

If your dealers will not supply you we will deliver one 26-in. Saw for \$2.00

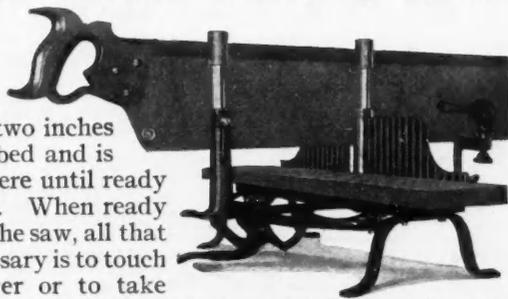
Made on honor and sold on merit. Warranted.

GEO. H. BISHOP & CO., Factories, Lawrenceburg, Ind.

THE TRUE MITER BOX

Cut shows saw raised

about two inches above bed and is held there until ready for use. When ready to use the saw, all that is necessary is to touch the lever or to take hold of the handle and the saw will drop down to the stock.



This miter box is so constructed that any piece broken or stolen can easily be replaced
NICHOLLS MFG. CO., OTTUMWA, IOWA

Ball-Bearing Spring Hinges.

THAT ARE PRACTICAL

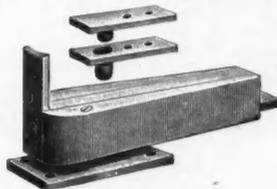
The Shelby Chief Double Acting Floor Hinge has solved the problem of easily get-at-able, hinges, impervious to water and dampness.

Doesn't go in the floor but rests on top. Easily applied, and very economical.

The labor saving feature is being appreciated by carpenters and builders everywhere.

Send for our free catalog which contains some sensible hinge talk, and also shows our full line of Double Acting Ball-Bearing Spring Butts and Builders Hardware. Free on request.

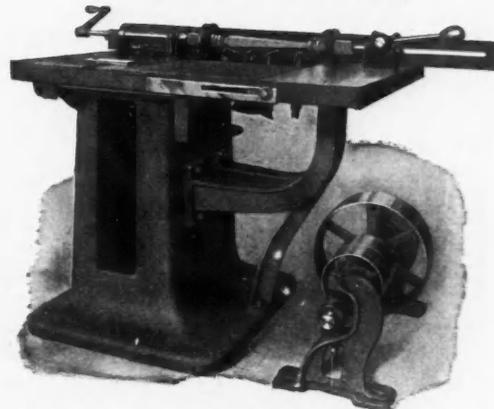
Write Today.



**The Shelby Spring Hinge Co.,
Shelby, Ohio**

Write for Illustrated Circular of our

No. 6 Universal Turning and Block Machine



It shows the machine set up for making twisted center balusters, for square turned work, for ornamenting ends and center of corner beads, for fan and sunrise panels, and as a saw table, all clearly illustrated.

There are also 28 other varieties of work our machine will do, so that it can be kept busy more than any other tool in the shop, to the constant profit of the owner.

Our circular also pictures the setting-up box, showing method of setting up and fitting knives to pattern, which is interesting, instructive and convincing as to their method of arrangement and their ability to make as clean a shear cut as a hand turner can do with a chisel.

Better send for that circular today.

C. Mattison Machine Works
879 Fifth Street. :: :: :: :: BELOIT, WIS.



Here is a Gimlet

Equal in quality and usefulness to any Brace Bit

HANDLE OF
SELECTED
COCOBOLO
WOOD

THREE SIZES ONLY
Cutting 4-32, 6-32, and 8-32 Holes

Price Postpaid **15 cents** each

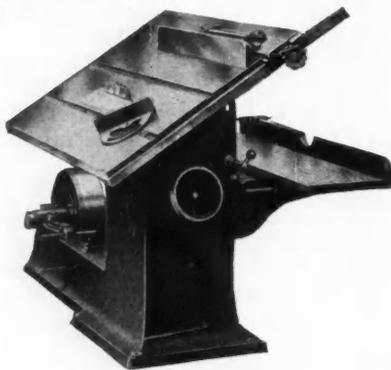
H. H. MAYHEW COMPANY

SHELBURNE FALLS, MASS.

You will increase your profits and save a lot of time by making

Crescent Machines

an important part of your shop equipment. They are well built by mechanics skilled in building wood working machinery, and only the best materials are used in their construction.

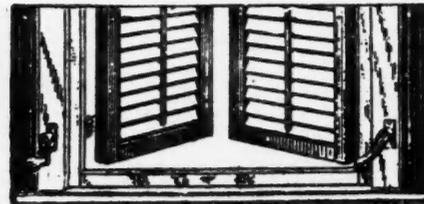


THIS is the No. 2 Crescent Saw Table illustrated and described on pages 28 and 29 of 1908 catalog. It is a thoroughly substantial machine, well suited for general work. Can be furnished with Boring Attachment if you want it that way. Table tilts to 45 degrees, and mandrel is made long enough so dado head may be used. Machine is self-contained; no countershaft required. It is complete with saw and endless belt when it reaches you. Send for 1908 catalog giving complete description and telling about our line of Band Saws, Saw Tables, Jointers, Shapers, Borer, Swing Cut-Off Saw, Disk Grinder, Planers, and Planer and Matcher.

The Crescent Machine Company

224 Main Street - - - Leetonia, Ohio

MALLORY'S



Standard
Shutter
Worker

New and improved patterns and designs.

Opens and closes the blinds without raising the window. Automatically locks the blinds in any position desired. Made of gray and malleable iron. The best and most durable blind hinge. Incomparable for strength, durability and power. Can be applied to old or new houses of brick, stone or frame. Send for Illustrated Circular. If your hardware dealer does not keep them send direct to MALLORY MANUFACTURING CO.

204 Flemington National Bank Building, FLEMINGTON, N. J.

YOUR OUTFIT IS NOT COMPLETE WITHOUT A

BOSTROM Improved Builders' Level No. 3



We say that because those who buy from us tell us so. For all general work it answers the purpose as well as any instrument, regardless of price

At \$25.00 for the complete outfit, including Tripod and Target Rod, they all buy as soon as they read descriptive matter, which is sent upon request

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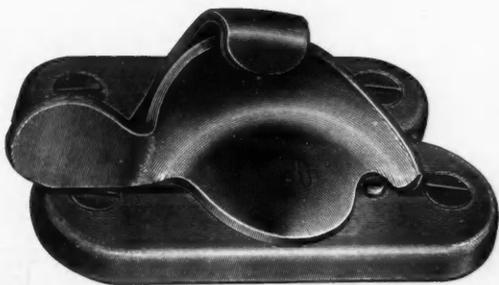
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substitute, as our name is stamped in red on the cord. Silver Lake Sash Cord is the Original Solid Braided Cotton Sash Cord and has been the standard since 1868. No other is just as good.

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BECAUSE THEY ARE MADE OF VERY HEAVY GAUGE METAL AND PERFECTLY CONSTRUCTED

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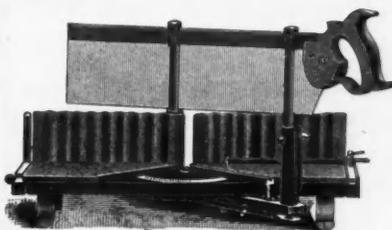
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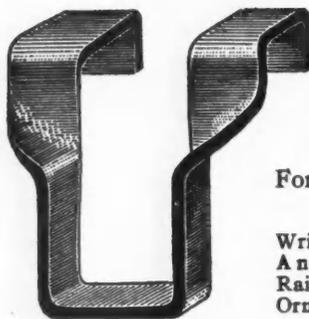
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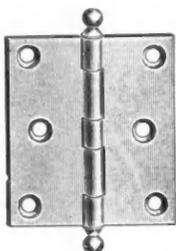
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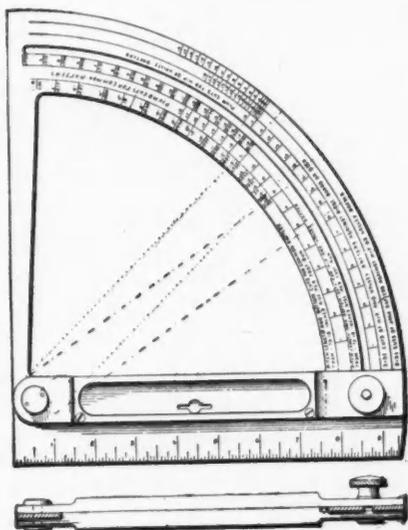
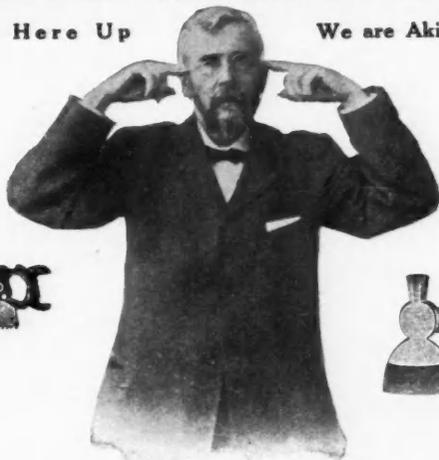
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From Here Up

We are Akin to the Gods

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We are Akin to the Ox



THE CALHOON Rafter and Polygon Bevel

Every bevel in the universe is contained in a quadrant; pass a line through it, from the center of the square to any degree or pitch, register on it the length (per foot run) and the opposite blades of the square will automatically (from that line) give bevels desired. See ?

All calculations are based on 12 inches the unit of *base run* and 24 inches the unit of *pitch* or *rise*, and all hip, valley, octagon and jack, or cripple rafters on run and rise of principal or common rafter. We all know how difficult it is to read and apply the square. This tool will help you do both, or, rather, do both for you, as it is a practical tool.

The relative use of this tool in a carpenter's hands is that of an X-Ray machine to the surgeon, or of an interest book to a banker, or the computing scale or cash register to the merchant.

It is an organization of draft-board, square, tri-square, bevel-square, plumb, level and bevel-protractor into one tool.

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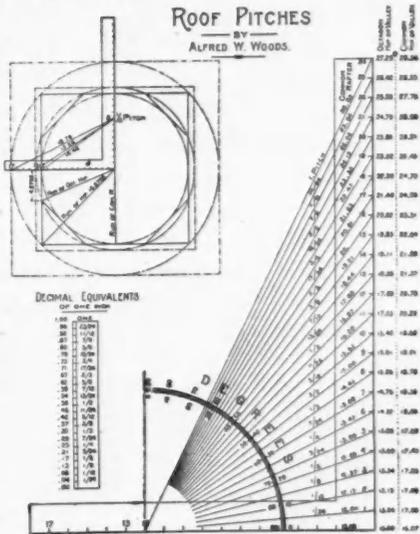
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This illustration gives an idea of adjustment. The book of instruction will explain its full uses and application. Booklet of instruction with each tool.



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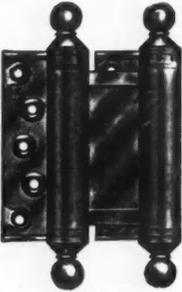
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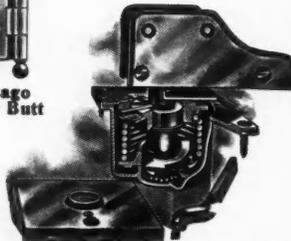
Or Send \$3.50 to - **A. O. CALHOON & COMPANY** - Perry, Mo.

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LOOK!
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**World's Greatest
Building Paper**

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The
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Building Paper**

American Carpenter and Builder

Entered as second-class matter July 1, 1905, at the postoffice at Chicago, Ill under the Act of Congress of March 3, 1879.

Published monthly by

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185 JACKSON BOULEVARD, CHICAGO.

VOL. VI NOVEMBER, 1908 No. 2

The AMERICAN CARPENTER AND BUILDER is issued promptly on the first of each month. It aims to furnish the latest and the most practical and authoritative information on all matters relating to the carpentry and building trades.

Short practical letters and articles on subjects pertaining to the carpentry and building trades are requested.

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Furnished on application. The value of the AMERICAN CARPENTER AND BUILDER as an advertising medium is unquestioned. The character of the advertisements now in its columns, and the number of them, tell the whole story. Circulation considered, it is the cheapest trade journal in the United States to advertise in. Advertisements, to insure insertion in the issue of any month, should reach this office not later than the 20th of the month preceding.

THE discouraged man is not worth his salt in any field of labor.

WISE is the man who knows what not to say, and remembers not to say it.

THE slogan of the future in the saw mill should be, not how many feet of lumber a day, but how much good stock from a given quantity of logs.

A LITTLE extra thinking will save much wasted energy and prevent a good many jobs from getting spoiled.

FROM an English journal we note that "Jacob Block, contractor, 16 years' standing, is going to Australia for health." We would suggest that he might try sitting down on the voyage out.

THE greatest gift in the world is the power to be happy, to be agreeable, to be optimistic. Friends will gather about such a man; his enemies will depart and the people will love him. As a radiator of good cheer and encouragement, he is a desirable citizen and death to the grumps.

The Cement Show

PEOPLE out through the country are talking about the cement show. They realize its advantages. They believe in it. They are coming. Time and place—Feb. 18-24, Coliseum, Chicago.

Actual Cost Plus a Fair Profit

IT IS generally supposed that the building contractor is about the last man in the world who would need to be cautioned of the danger of *bidding too low*. Popular opinion has it that he usually looks out pretty well for his profits!

In connection with the present Build-Now campaign, however, it has developed that a goodly number of contracts have been let at too low a figure. In some cases this has been due to sheer public-spiritedness on the part of the contractor—he wanted to get things started, help the situation along and keep his men busy. With others there has been a too ready acceptance of other men's figures that such and such work could be done at so much off the regular price.

Competition has been keener than ever.

Altogether, conditions have led to much work being undertaken at prices that do not and can not provide

an adequate return for the investment necessary in order to assume the work.

This is surely a mistake, one that leads to trouble first or last. The only safe method in the conduct of any business is to carefully figure actual costs and then add a fair profit. Any other method arouses just suspicions.

We all appreciate the unselfish efforts of the men who have been willing to contribute their profits for the public good. The danger is that some will try to make it up "out of the job"—to the future discredit and hurt of the building trades.



The Drain Botcher

THERE are some words which explain themselves without any context, suggestion or hint; and the verb "to botch" is one of these. In the last annual report of the Health Department of an Eastern city it was stated that the sanitary inspectors had experienced considerable trouble with the drain "botcher." How expressive the word is!

There is an idea abroad that anybody can reconstruct a drain; and these idealistic people are the botchers. It is so in every business, every trade, calling and pursuit. They all have their botchers; but for some reason or other the botch becomes more crying and insistent when connected with a drain. The consequences are often more disastrous; and that is why the Health Department is to be congratulated on having selected so happy a title for the faker who gives it out that anybody can do a drain. The day will come when everybody will have to prove his capability before he sets to work—"botching!"



Business Letters Good and Bad

PROBABLY the first experience for most of us with "business letters" was 'way back there in school days when we used to write home (using our very best style and most persuasive arguments): "Dear Dad: Please send Five." We learned then the importance and great worth of the *good* business letter.

The value of a clean, business-like appearance—good letter-head paper, legible script or type, etc.—has already been mentioned in these columns.

Back of the appearance, however, the thing of first importance is what the letter says, or rather—*how* it says it. There are about as many different ways of expressing a thought as there are people writing. Some ways, all right when spoken, are nothing but trouble-makers when put into a letter.

A man of wide experience in conducting business by correspondence points out the following, taken from letters that have proved to be business-getting and business-keeping:

Do not say: "We will proceed to collect this account by due process of law."

Say, rather: "We do not believe you desire to com-

pel us to collect this account by process of law."

Do not say: "This charge is unjust, and we never will pay it."

Say, rather: "We have too good an opinion of you to suppose you want us to pay a charge as unjust as this is."

Do not say: "We need this money, and you must get it here by the 10th."

Say, rather: "If you knew how much we needed this money, you certainly would get it here by the 10th."

Do not say: "*You must*, etc."

Say, rather: "You will please us if, etc."

Do not say: "After we have done you so many favors, we are surprised that you, etc."

Say, rather: "The favors we may have extended to you have been a pleasure to us, and we hope to be in a position to extend many more in the future, etc."



Roof Patching

ROOF patching is a job that not many carpenters like; some so detest it that it looks as though soon very little of it will be done. This applies specifically to shingle roofs. This class of work is called for mostly during the spring and fall. More of it is called for in the fall because every man with a leaky roof wants to get it secure before the winter rains and snows. The great trouble with patching a shingle roof is that when it is old, even if you patch all the visible leaks, the first rain that comes develops the fact that there are still other leaks. In fact, the job is seldom satisfactory.

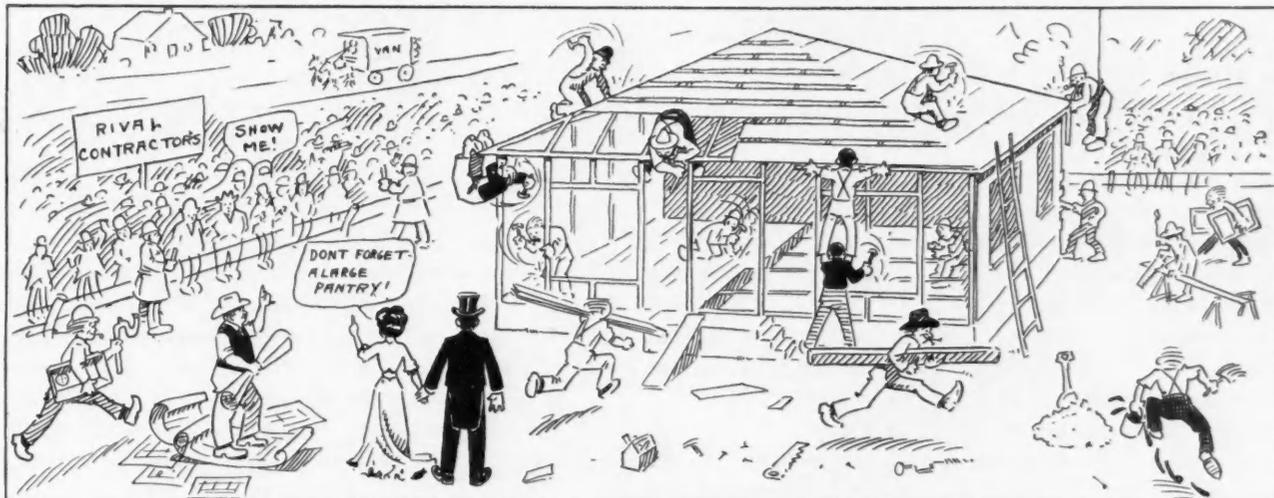
It is quite difficult at times to locate a leak in a roof. You cannot rely on the wet spots in the overhead ceiling or plaster because you don't know how far the water has followed down a rafter before dropping off. Frequently, after making the most careful inspection of the roof, both from underneath and from on top, and then patching the visible leaks, there are some missed and the job must be gone back to three and four times. It is not pleasant in the first place to climb up on an old roof and patch around here and there. Some men have grown so disgusted with it that the only way they will patch a shingle roof is to rip the roof off entirely and put a new one on. This is a pretty good way, too. While it is possible to go to extremes and sometimes tear off a roof that would still give good service, with a little patching, it is not a bad idea for a carpenter to keep these things in mind and use his influence to encourage the replacing of old roofs with new ones.

Frequently the advice of the carpenter will be the deciding factor in these things. After a new roof is put on and paid for the man having the work done will forget the cost and will be glad he was counseled to replace instead of patching the roof. So, while it may not be wise to shirk roof patching, limit it within reasonable bounds and make re-roofing take the place of it, wherever it is justified or can be done.

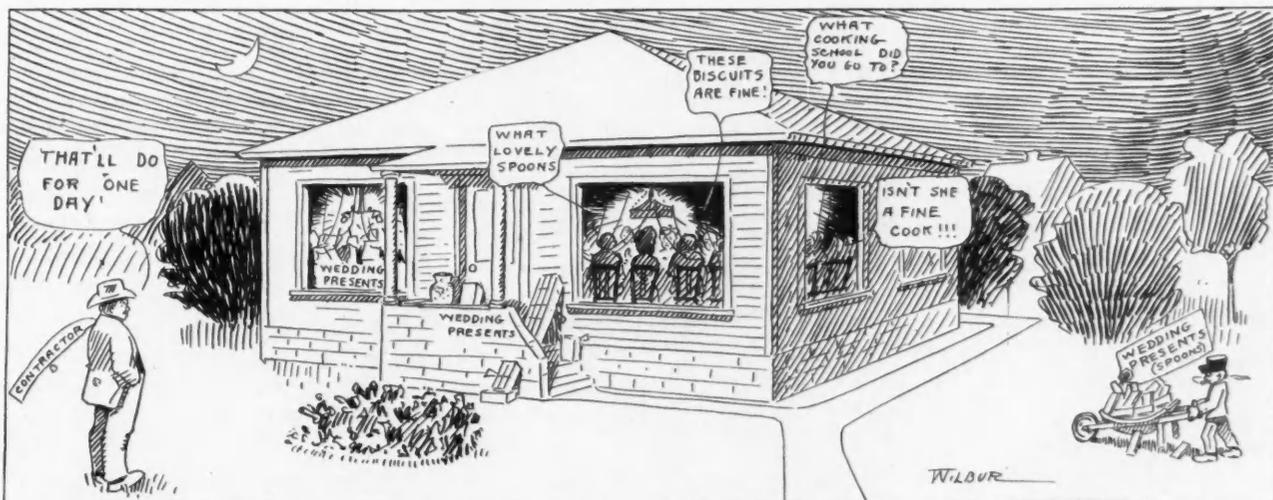
The "One Day" House



No. 1. Once upon a time, not long ago, a Young Couple who had just been made One, beheld a sign "Build Now," not having a Home of their own, they ordered one to be Built immediately.

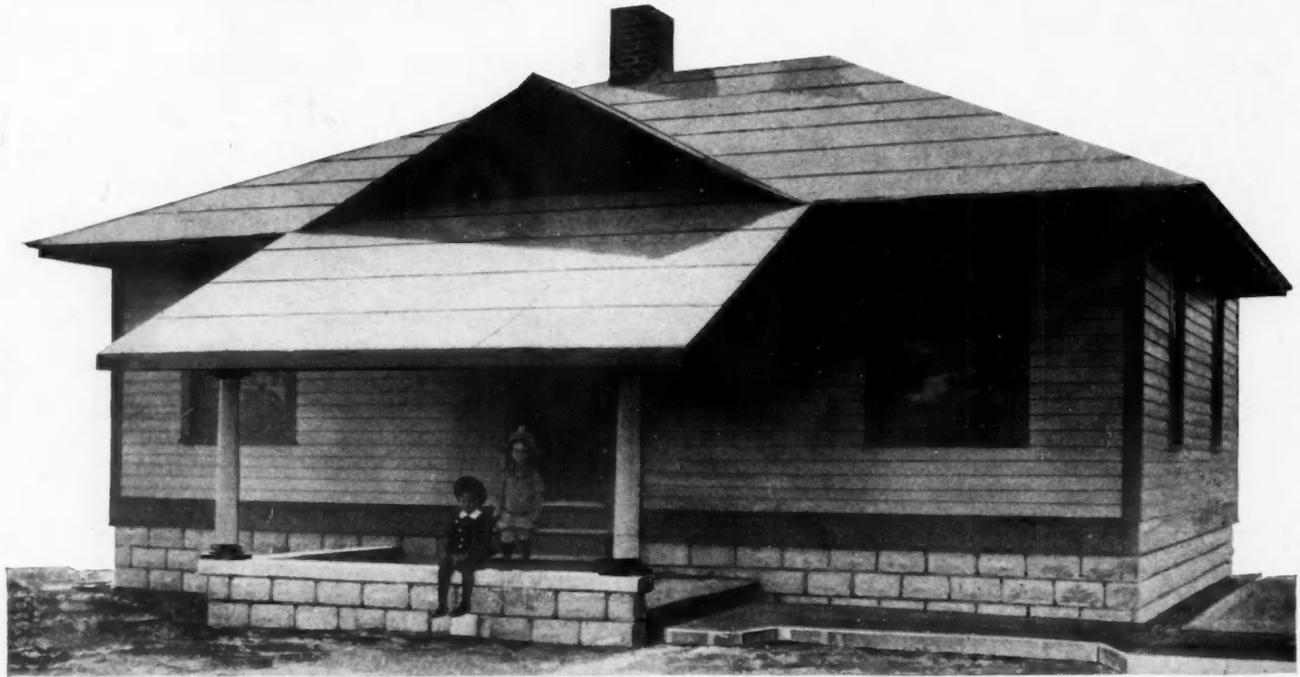


No. 2. The Fairy Contractor and a force of men Tackled the Job, and with one Wave of his Magic Wand, a House took the place of what had been Golden-rod and Thistle; much to the Chagrin of the Unbelievers



No. 3. The House was finished in Due Time (one day) and the Bride and Groom entertained a host of Friends and Relatives with Dinner at 7 P. M., and they lived Happily ever after.

A Cottage While You Wait



The Finished Cottage as It Looked on the Evening of October Second

THERE is no hope of ever stirring up more than a very gentle ripple of wonder, any more; this blasé old world simply refuses to be astonished. It received the steam engine and then the telephone with many "ahs" and "ohs," and with much wonder and incredulity—but it hasn't let out one sign of astonishment since! Wireless telegraphy, the talking machine, liquid air, radio-activity, evolution, the 50-story office building, dirigible balloons and flying machines—all are taken as matters of course. Aladdin with his lamp would hardly draw a small tent full at a county fair, any more; Aladdin rubbing up his old lamp by hand! Humph, *we* would polish it with an electric motor.

Still, in a way, this latest performance reminds us of Aladdin, in spite of the difference of atmosphere between Bagdad and East St. Louis, Ill. "Oh, how I *do wish* we had a nice little cottage to move into," the bride murmured; and the next evening at six o'clock a four-room cottage was delivered to them, complete in every detail; and they immediately, straightway moved in!

W. C. Carl, a contractor of East St. Louis, is the man who now has the right to hang out the sign, "Houses Built While You Wait." He accomplished

the feat a few days ago of building a four room cottage with bath room, complete, in less than twelve hours. Before that day he was little known outside of East St. Louis, where he has held his own with other enterprising contractors, but now he is known the world over on account of his achievement.

"I read in the AMERICAN CARPENTER AND BUILDER the timely advice to 'Build Now,'" he said. "'Now,' of course, means today, not tomorrow or next day, so I took your advice and built 'now.'"

It was explained to Mr. Carl that when we said to build "Now" we did not mean to build a house in a day. But he took the advice literally and made good.

He made good in the face of the fact that the other contractors from St. Louis stood around in the crowd watching the operations and gave advice, all intended to confuse the builder, for the one day house was considered an impossibility "because it never had been done before."

"But I paid no attention to them," he says. "I kept right on sawing and let them josh. Those fellows across the river wanted to be shown, that's all."

As with many great things there's a pretty little



The Bride Who Took Possession and Served Supper at 7:00 P. M.

romance connected with this story, for a bride and groom took possession of the house the evening of the day it was built and entertained their friends at dinner cooked on a gas stove. The two children on the porch in the picture have nothing to do with the case.

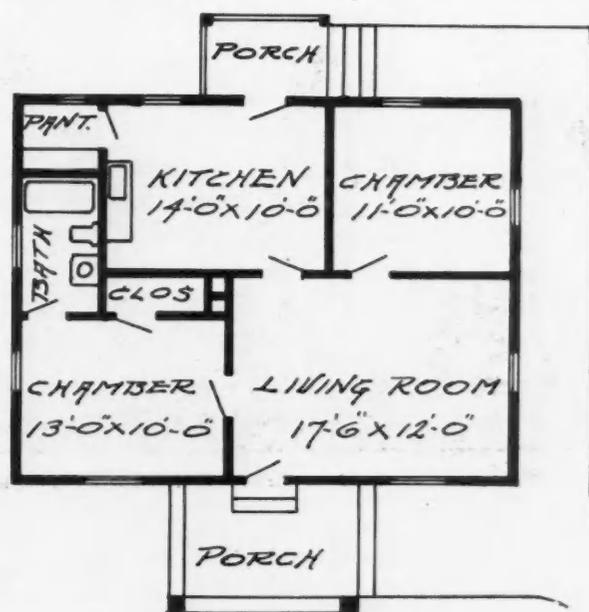
Twelve hours before the evening meal was served the lot where the house stood showed not a sign of the activity that was to bring about the quick change. Rag-weed and golden-rod greeted the sunrise and the scene was absolutely innocent of a stick of timber, piece of stone, brick or other material. But when the 7 o'clock whistles blew on the morning of October 2 there was a concerted movement of workmen and of wagons loaded with material towards the lot. The exact location is at Harding and Forest avenues. First came the workmen with Mr. Carl at their head and then followed numerous wagons loaded with materials.

In the crowd that awaited the first operations were the bride and groom for whom the house was to be built, Mr. and Mrs. James Poort, who blushing withstood the good-natured raillery from the crowd. Mrs. Poort, young, petite and pretty, showed keen interest in the work as it progressed during the day.

How fifty workmen representing all the trades necessary in the construction of a house could operate without getting into one another's way was the problem Mr. Carl had to solve before operations were commenced.

That problem was solved and the division of labor mapped out several days before the job was commenced, and the men worked on this house without a false motion or the loss of a minute of time, completing the dwelling at a cost of \$2,000 in the day. It was possible only through a perfect organization, a system in which each man did his work promptly and well, following the plans and the contractor's schedule.

And now to the manner in which the house was built. As has been said the material and 37 men arrived on the ground at 7 a. m. While the materials were being unloaded Mr. Carl and an assistant drove



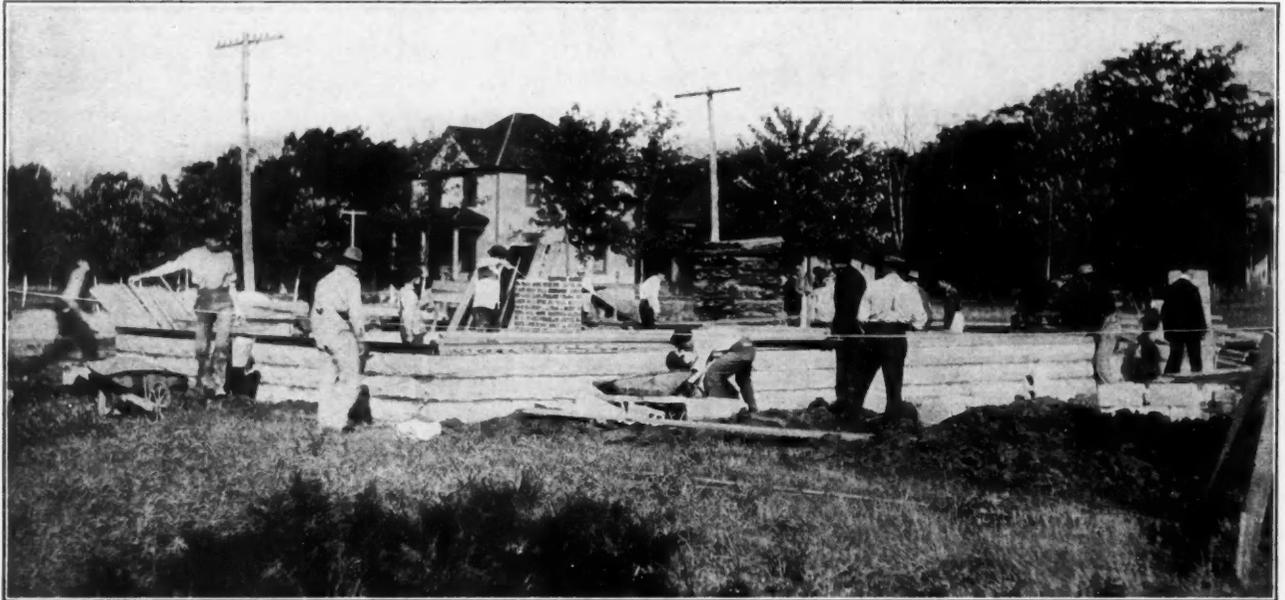
FLOOR PLAN

the stakes and set the lines for the foundation trenches. Then the shovels commenced to fly. The excavation was carried quickly to the required depth of one foot at one end and masons jumped into the trench to lay the concrete blocks for the foundation, the mortar having been prepared since the work of excavating commenced.

While the masons were placing the concrete blocks for the foundation, carpenters were sawing the boards according to plans, and painters were priming lumber. At the same time the water and gas pipes were being



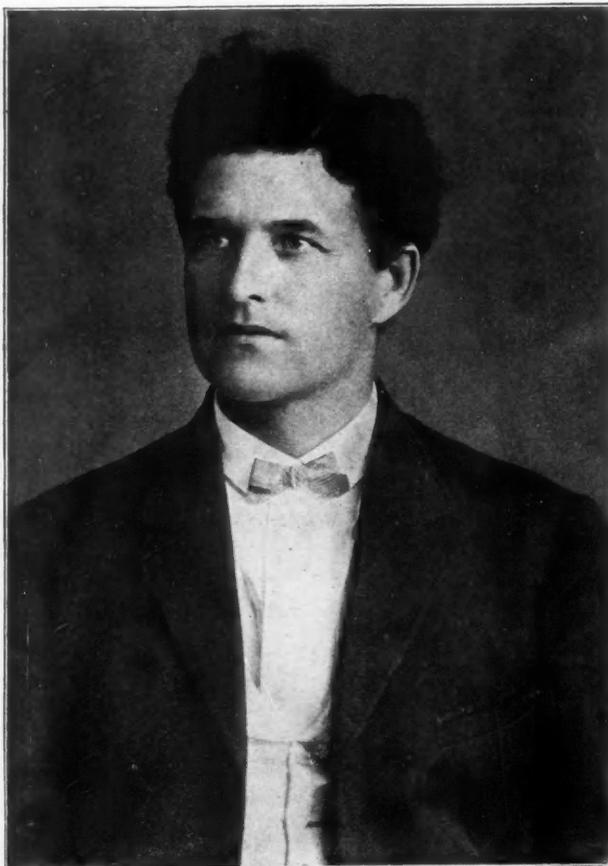
7:30 A. M.: Materials on the Ground—Foundation and Chimney Under Way



9:00 A. M.: Block Foundation Complete, Ready for the Framing. Already Cut

laid from the street to the building lot, and, as the work on the structure progressed, these men continued with the pipes, having everything completed for water and gas service before the roof was on.

Everywhere at once seemed the general-in-chief, the brawny, quietly forceful Carl. Here he spurred on the labor, if it was a few seconds behind the careful schedule he had prepared, and there he praised a "bank" of masons who had anticipated the schedule.



The Contractor, W. C. Carl
"Houses Built While You Wait"

A quiet suggestion cut off several minutes' unnecessary work at one spot; at another the workers were enjoined not to sacrifice thoroughness to haste.

As soon as the foundation was laid, the carpenters placed the joists and laid the floor, while others erected the other sections of the frame work. One band encircled the house on the outside, and by their efforts the weatherboarding seemed fairly to fling itself upon the walls. Those inside covered the walls with lath, and the thunder of dozens of hammers and the screams of saws resounded for blocks.

At the same time another group was laying the floor; still another was building at a distance the roof of a front porch, to be borne to its place when finished. At the same time the bricklayers erected the chimney, and the electrician strung his wires.

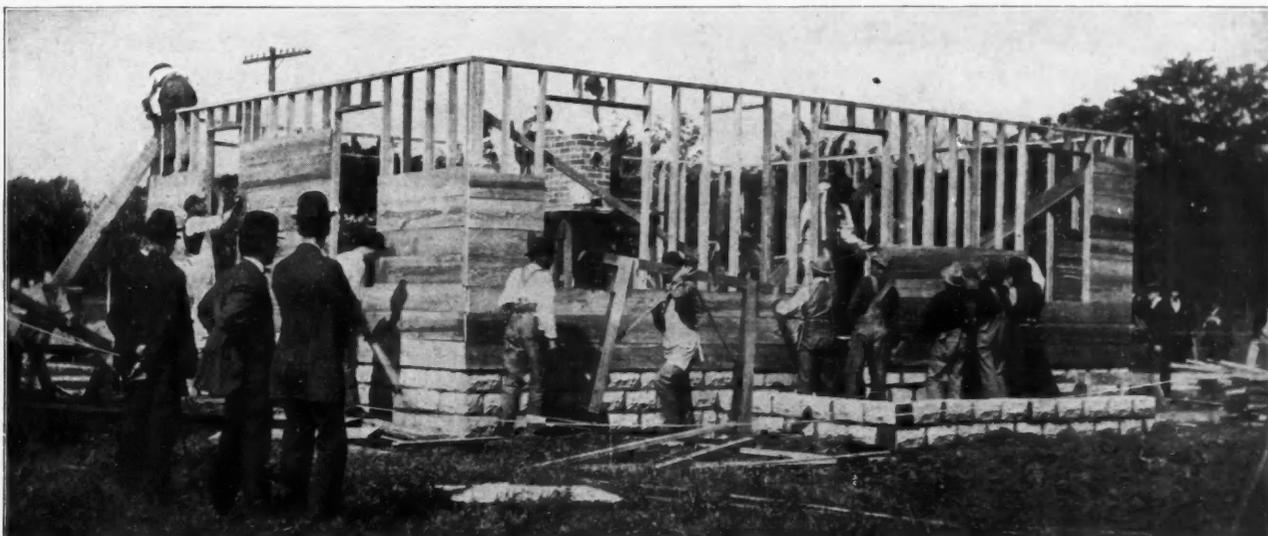
When the work had progressed thus far, the dinner bell was sounded and some 50 men were served with the midday meal by Mrs. Carl at her home, one block distant.

Serving dinner to 50 men did not seem to ruffle her any more than serving for two, and she conducted this feature of the operations as smoothly as her husband did the work on the cottage—another example of system.

After dinner the work of completing the structure was resumed. The plasterers, using a hard wall plaster, soon had the walls plastered, using a rough sand finish. The plaster was dry and hard by the time the carpenters had finished the roof, which is of asbestos fireproof material, which was put on in a very short space of time.

While the roof was being placed the painters were giving the exterior a second coat of paint, the plumbers were placing the bath room fixtures and the hot water heater, the gas men were placing the burners on the fixtures and the gas stove was connected.

These workmen had scarcely finished their work before Mr. and Mrs. Poort, aided by their friends,



10:30 A. M.: Studding Up and Sheathing Going On

were cleaning the floors of the rooms, and shortly thereafter the moving men arrived with the couple's furniture, which was placed in position in a jiffy, and the couple were at home to their friends.

"There, now," said the bride, "that is going fast for one day. I hope we will not have to live at that rate all our lives."

Then supper was announced shortly—the crowd left, and a pleasant little home occupied the spot where at sunrise the rag-weeds waved in the breeze.

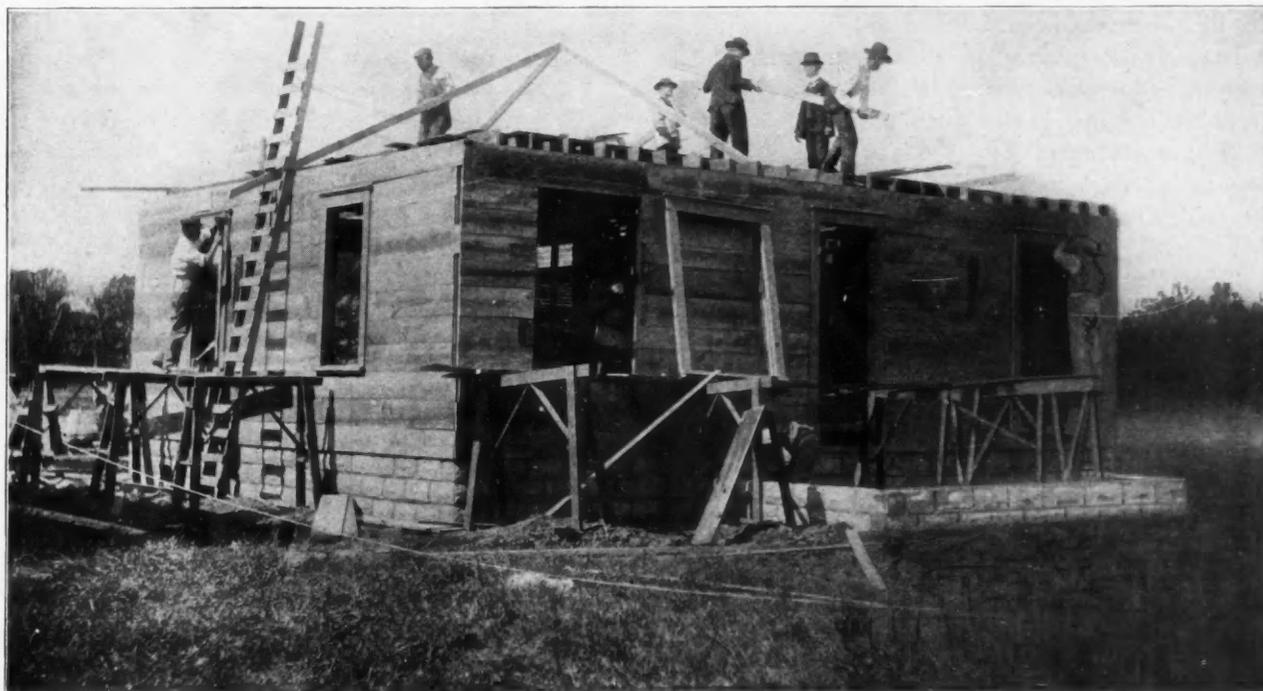
Mr. Carl says his object in erecting the building in one day was to demonstrate that, with modern building material, any ordinary frame cottage can be erected in one day with the right kind of workmen. He kept an accurate record of the number of men engaged in each part of the work and the amount

of time used. This record checks out very closely with the schedule of work laid out by Mr. Carl before the operations commenced.

The Record Is as Follows

- 18 carpenters worked 10 hours.
- 3 carpenters worked 12 hours.
- 4 carpenters worked 14 hours.
- 12 lathers worked 1½ hours.
- 12 plasterers worked 1½ hours.
- 2 masons built chimney in 5 hours.
- 4 men laid roofing in 3 hours.
- 2 men did plumbing and gas fitting in 10 hours.
- 1 man did electric wiring in 1½ hours.
- 4 men did painting in 9 hours.

The work was witnessed by contractors, real estate men, and other people from St. Louis, East St.



1:30 P. M.: Clapboards On—Inside Ready for the Plasterers



3:00 P. M.: The Cottage Happy-on-the-Way Toward Completion

Louis, and other nearby cities, several thousand persons being about the structure from start to finish. It was necessary to stretch ropes to keep the crowd back so as not to interfere with the workmen.

The house is a one story frame cottage, with four rooms, a bath room, a reception hall, a front porch and a back stoop. Its walls were painted a light green, with white trimmings. With its foundation of concrete blocks, its pointed roof and excellent proportions, it presents an artistic appearance. The woodwork, both interior and exterior, is of cypress.

The newly wedded Mr. and Mrs. Poort had been familiar with the neighborhood and had tried to rent a house in the vicinity, but could find none. They happened to meet Mr. Carl and told him their troubles, how they had hunted and hunted and hunted.

"I have a lot up at Harding and Forest avenues," he said, "but there is no house on it."

"How long will it take to build one?" they asked him.

"It usually takes from four weeks to a whole summer, but I guess I can turn you out one in a day."

The couple were aghast, but it was agreed that they were to have their house on October 2, and Carl said he would start the building on the morning of the same day, beginning at 7 o'clock.

He does not look upon the accomplishment as anything very remarkable.

"You can do most anything if you make up your mind to it and have the right kind of men to help you," he said. "I think I could do it quicker next time."

This was in half apology for taking a whole day for the job. "I could build another in shorter time," he said. "I could make it higher and more elaborate, too."

"I think there will be but a slight saving in cost over what the expense would have been under the usual method of erection. The cost of the material, of course, is the same in both cases.

"The artisans worked with much more than their usual zeal, because their pride was enlisted in the

experiment. But what was gained in this respect was probably lost through their numbers, which caused considerable jostling and interference.

"I have proved, however, that an immense saving in time may be effected in the building of houses. Why should a man wait two months for a house, any more than for the half-soling of a pair of shoes? With proper management, one hereafter may be given possession of his house the day after he orders it built.

The Old Way and the New

BECAUSE of lack of organization and persistence, it required 800 years, or 219,000 days, to build the cathedral at Cologne. Popular superstition attempted to explain the protracted delay by declaring that "the Devil had stolen the architect's plans."

Westminster Abbey, begun before the reign of Henry VIII, is still uncompleted, as its steeple has never been built, though 400 years have passed since the building was commenced.

The Episcopal Cathedral of St. John the Divine, in New York, has been over twenty years in the building, and its uncompleted pile is one of the sights of the city. Little has been accomplished save the framework.

NOW, William C. Carl, of East St. Louis, Ill., builds complete from start to finish a \$2,000 cottage in 12 hours. On the same scale, the Cologne Cathedral could have been finished in a year, Westminster Abbey in six months and New York's Episcopal Cathedral in three months.

STEEL SQUARE

ALFRED W. WOODS

How to Use the Steel Square

THE RELATION OF HOPPER MITER CUTS TO THE FRAMING OF ROOF BOARDS—HOW TO OBTAIN THE ANGLES AND CUTS BY MEANS OF THE STEEL SQUARE

AS WE have said before, the building of a hopper is simply roof framing on a smaller scale; yet we have known men that could frame a hip roof but when asked to make a hopper joint were up against it. The trouble is that in framing the roof after the rafters are up, the cutting of the boards to fit over the hip or in the valley, is done on a cut and try method, or just guessed at; it is not required to be a close or tight joint for this purpose, because it is covered up with the shingles or other roofing material. So it is allowed to pass without any further thought.

But when a hopper joint is wanted, it is at once known that it must be a tight joint; one that will hold water, and the cut and try method will not go. Not having studied the principles involved, they do not know what to do nor how to go about it. This, as a rule, is more so among the young carpenters of today than with the old time carpenters, men who learned their trade when a carpenter was an all around man at wood work in general. That was in the days before the advent of the present day planing mill with its improved machinery for doing all kinds of joinery

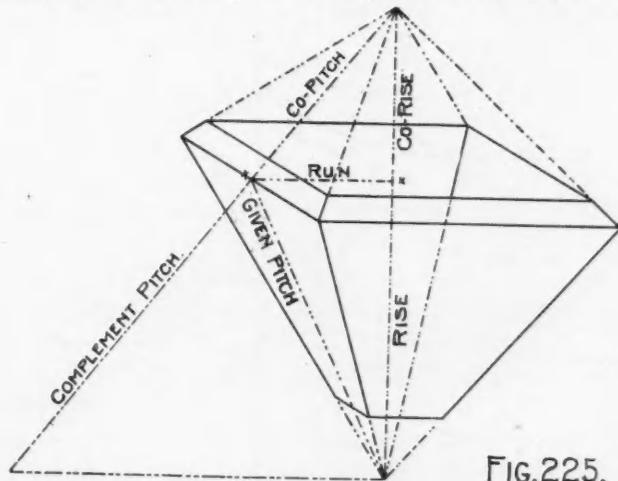
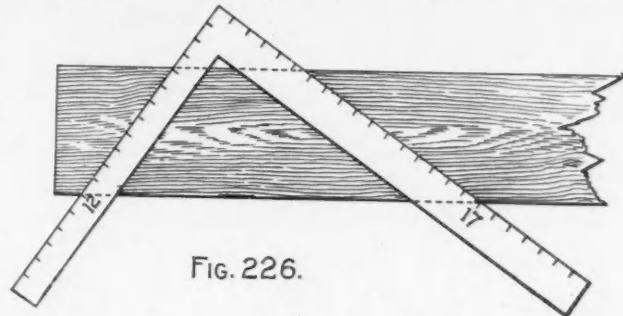


FIG. 225.

work. But these fellows,—the old timers, we mean,—have not forgotten how to make close joints, or rather refuse to make them otherwise even when they are not particularly necessary. It hurts their mechanical tastes to see gaping joints, when, as they think, they could be made reasonably close just as easily and without extra expense, which is true,—but times and ways of doing work have changed. The older carpenters

did not, as a rule, use the steel square when laying out miters but depended almost entirely upon the laying out of a draft, as they called it, and from it obtained the angles by means of the bevel square.

But our object is to show how the angles may be obtained direct on the timber with the aid of the steel square, for with it any angle in degrees can be ob-



tained because the arms of the square form 90 degrees. Then 45 degrees is the halfway point between the blade and tongue and by letting 12 on the tongue represent unity, or the central point of a circle from which the degrees radiate as we have shown a number of times in course of our articles, the degrees pass off the blade at a little less than 24 inches, which is 18 above 45 degrees. Now, as a matter of fact, any angle in degrees can be had on the steel square below 45 degrees. Therefore, the 18 above 45 degrees is simply a repetition of as many degrees below 45. For example, 54 degrees ($16\frac{1}{2}$) on the blade will give the miter for the pentagon, the tongue giving the angle. Or 36 degrees ($8\frac{17}{24}$) on the blade will give the same thing. But in this case, the blade gives the angle; or take 60 degrees, ($20\frac{3}{4}$) will give the hexagon miter. For 30 degrees, ($6\frac{11}{12}$) will give the same thing, the tongue giving the angle in the former and the blade in the latter. (The sum of these degrees equals 90, as 54 and 36; 60 and 30.) But at 45 degrees, only 12 on the blade will give the angle; and, as 12 is the stationary point on the tongue, it will of course give the same angle.

Thus, in the cutting of roof boards, the angles required partake both above and below 45 degrees, but when the roof is at 45 degrees, or one-half pitch, they are the same and for that reason one set of figures answers for both face and the edge cut of the board, which are 12 and 17. These figures also give the seat

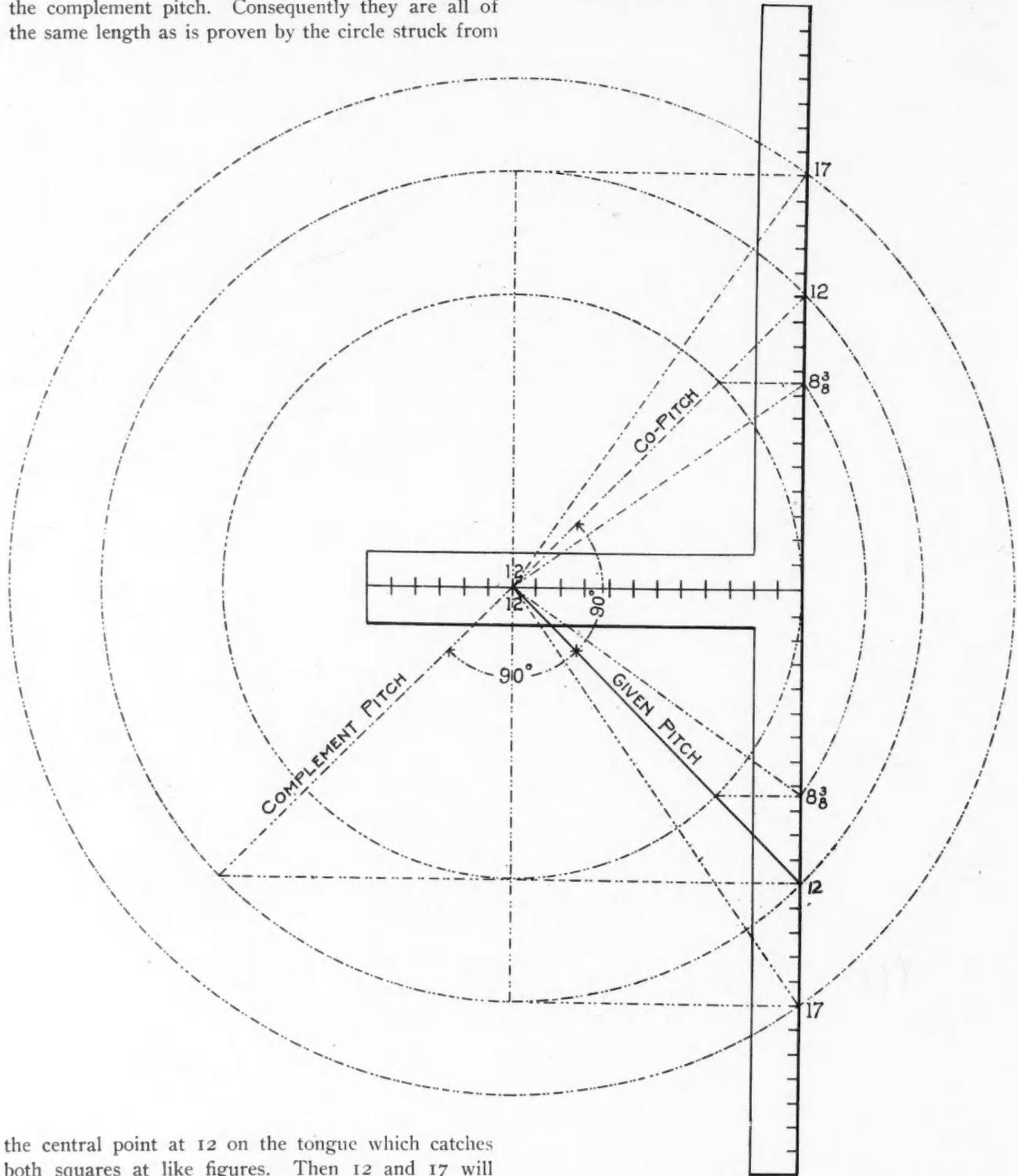
and plumb cut of the hip while 12 and 12 give the same for the common rafter. 17 is used because it is the diagonal of 12 and 12.

Now let us apply this to a one-half pitch hopper.

In Figure 224 is shown the angles in connection with two squares. The given pitch is at 12 and 12. The co-pitch rests at 90 degrees from it, as also does the complement pitch. Consequently they are all of the same length as is proven by the circle struck from

miters described above, as will be seen, the given pitch is at the half-way place between these two angles.

In Fig. 225, the parts to take on the square are shown in connection with a hopper. However, in this illustration, the sides of the hopper are shown to have a much steeper incline than for the 1/2 pitch, but the principle is the same. In the one-half pitch



the central point at 12 on the tongue which catches both squares at like figures. Then 12 and 17 will give the cut across the face of the board. They also give the edge cut of the board for either a miter or butt joint. The cut being along the tongue in either case. Or 12 and 8 3/8 will give the same result; but the cut will be along the blade. The same reason applies to this as for the pentagon and hexagon

the dotted line marked "RUN" would drop down to the center of the altitude line marked "Rise" and "CO-RISE" and of course would intersect the hypotenuse line at the center. Then all of the pitches would be of the same length as would also the run and the two rises. Hence the same figures on the square will give

all the cuts required for either a miter or butt joint hopper for the one-half pitch.

To prove this, lay a square on a board at 12 and 17, as shown in Fig. 226, and mark along the tongue. Now turn the square over on the edge of the board,

leaving the figures at the same points and again mark along the tongue and cut to these lines. Cut four pieces with the right and left miters and place them together with either butt, or miter joint, and it will be found that the sides will rest at 45 degrees.

Can You Answer These?

QUESTIONS ASKED IN A RECENT COMPETITIVE EXAMINATION FOR THE POSITION OF ASSISTANT BUILDING INSPECTOR OF A WESTERN CITY

THE things that the city building inspector and his assistants must know are both numerous and varied. Below is a fair sample of what his regular working knowledge is supposed to be.

1. How would you test a hole for a foundation post under a frame cottage?
2. Would you allow a contractor to build a cottage over a stump; give reason for your answer.
3. Is it necessary to remove surface soil from the proposed site of a one or two story frame residence; give reason for your answer.
4. There are several places within the limits of the City where the soil consists of peat and bog; describe the construction of a wooden foundation under a two story frame residence to be erected on such ground without using piles.
5. When inspecting materials on the ground for concrete work, for what reasons would you condemn the following materials: (a) Cinders, (b) Sand, (c) Gravel, (d) Crushed rock, (e) Cement.
6. When inspecting materials on the ground, for what reasons would you condemn (a) Brick, burnt clay; (b) Wood joists, or beams; (c) Posts or studs; (d) Concrete blocks; (e) Cast iron columns.
7. When inspecting a three-flue chimney in a frame residence state the most important points you would examine, other than the quality of brick and mortar.
8. Name two defective conditions for which you would condemn a chimney, other than the quality of brick and mortar.
9. An owner proposes to run a stove-pipe through a stud and plastered partition to a flue in an adjacent room. Draw a rough sketch and state what instruction you would give to make the job fireproof.
10. When inspecting a warm air heating system in a frame residence before lathing is commenced, state the most important points you would examine.
11. Name two conditions for which you would condemn the heating work.
12. How close would you allow a furnace smoke pipe in the basement of a residence to be to the lower edge of the ground floor joist.
13. If it was impossible to obtain the proper distance between the lower edge of joist and smoke pipe; state what directions you would give to insure protection of joist from fire.
14. What is (a) dry rot, (b) wet rot, (c) name two methods you would advise for preventing dry rot on ends of wooden joists and beams.
15. Describe two methods of forming fire stops in stud partitions.
16. (a) Give two reasons why separators are used between steel beams when bolted together to form a girder. (b) Draw sketch showing two types of separators.
17. (a) Why are bed or padstones and cast iron or steel plates used under ends of girders resting on masonry walls or piers. (b) Draw sketches showing two types of wrought iron wall anchors.
18. Draw single line sketches showing framing for (a) Cellar tie roof, (b) King-post roof, (c) Queen-post roof, (d) Mansard roof.
19. When inspecting a public assembly hall, theatre or music hall, name three conditions necessary for public safety that you would examine.
20. A cast iron column is set up in a building, it is a sound and true casting $5\frac{1}{4}$ inches in diameter and 15 feet high, and the metal is 1 in. thick; the column supports a steel girder carrying part of the front of two story brick building; would you condemn this column or allow it to remain; give reasons for your answer.
21. Calculate and mark down on the sketch provided, the loads on roof girders 4th floor posts, 3rd floor girders and posts, 2nd floor girders and posts, first floor girders and posts, and basement girders and posts, using floor and roof loads as marked, and which are supposed to include the weight of roof and weight of floors, loads considered as equally distributed.
22. Calculate, using formula given below:
 - (a) Safe load for Douglas Fir beam 12 inches wide, 16 inches deep, and 16 feet long.
 - (b) Safe load for Douglas Fir joist 3 inches wide, 12 inches deep, and 20 feet long.
 - (c) Safe load for Douglas Fir joist, 2 inches wide, 8 inches deep, and 12 feet long.
 Safe load equals $2 \times \text{width in inches} \times \text{square of depth in inches} \times 100$.
23. After taking out trenches for the wall of a building, it is found that an old well or cess pit say 3 feet wide and 8 feet below bottom of trench comes within lines of walls, state how you would overcome this difficulty, (a) in the case of a two story frame house with concrete basement, (b) in case of three story and basement, brick building.

State age, nationality and place of residence during last five years.

State what connection you have had with the building business and for how long.



Suburban Residence in Cement Plaster

CEMENT SURFACING AND HOW IT IS APPLIED—A BEAUTIFUL HOMELIKE RESIDENCE OF THIS MATERIAL ILLUSTRATED AND DESCRIBED

By John Lawrence Heaton

A CEMENT residence of exceptionally pleasing design and finish is that of Mr. and Mrs. Americus B. Melville, of Oak Park, Ill. It was designed by E. E. Roberts, architect.

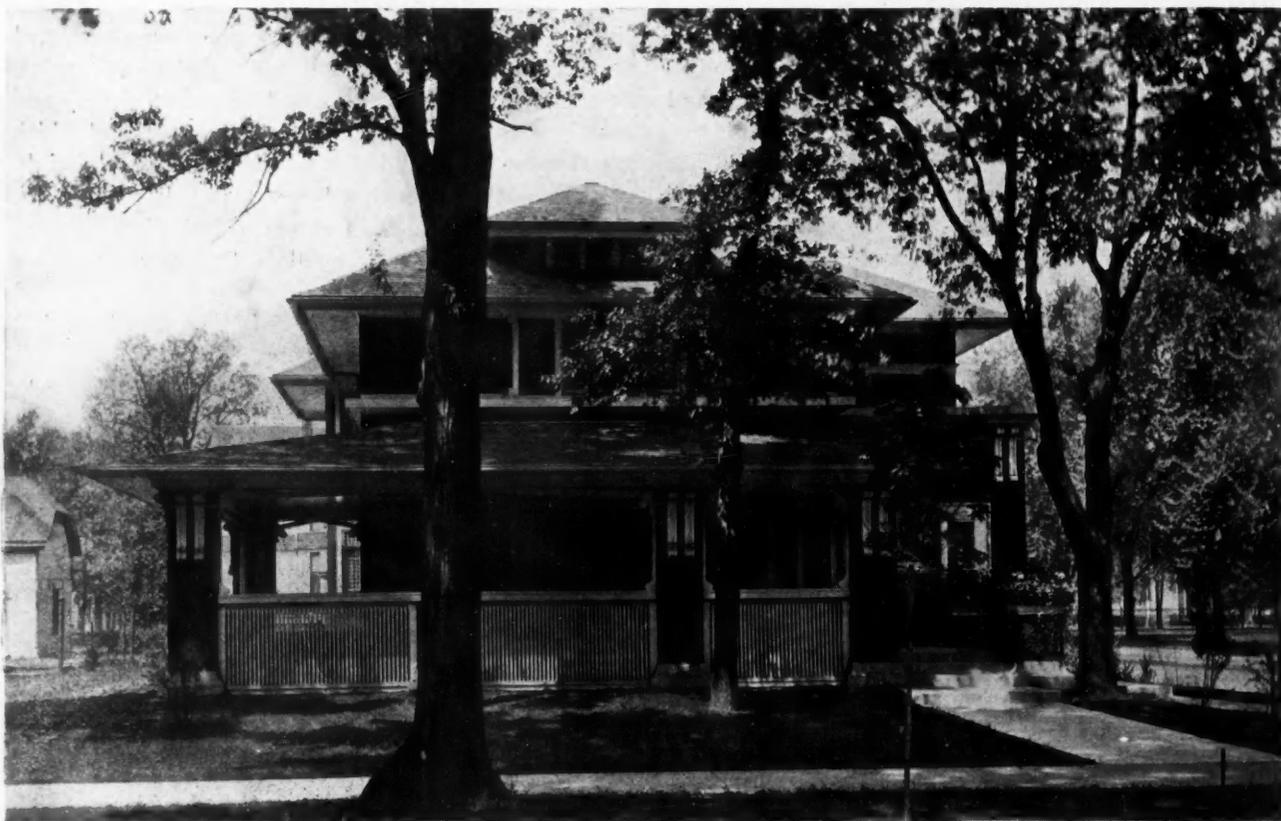
The exterior illustrates quite well what can be done in the way of producing artistic effects with cement siding, while the interior shows a treatment which, for attention to detail and general effect, is quite unusual. A restfulness, an invitation to be comfortable, seems to pervade the different rooms. There is a richness of treatment, yet the quietness of it and its simplicity and sincerity create in one a feeling far different from that produced by the rich but ornate and elaborate.

Mrs. Melville, in speaking of their home, says, "We did not have plans or desires for anything pretentious,

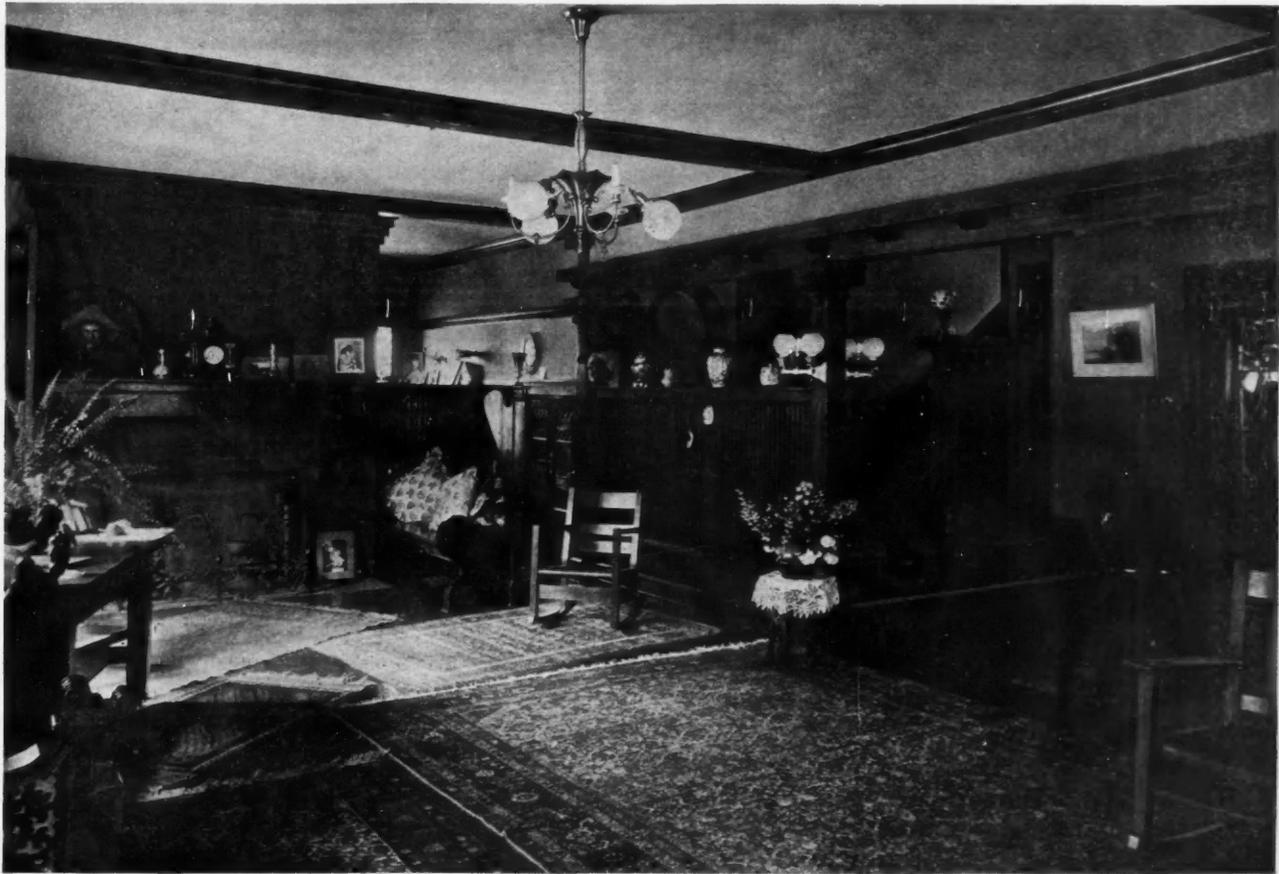
but rather for an attractive, artistic, practical, 'homey' residence for a medium sized family." How successfully their desires have been carried out the pictures well show.

The exterior is of stucco, rough cast, and is painted a dark red. The trimmings are painted white and contrast strikingly with the deep body color.

The superiority of cement as a material for siding is well illustrated in this house. There might have been the same proportioning of the wall spaces, the same placing and the same size of windows, yet with a siding of wood the effect produced would have been entirely different. The broad, low hanging eaves, the predominance of horizontal lines in cornice and trim could not, of themselves, produce that substantial, "homey" appearance. Nor could there have been



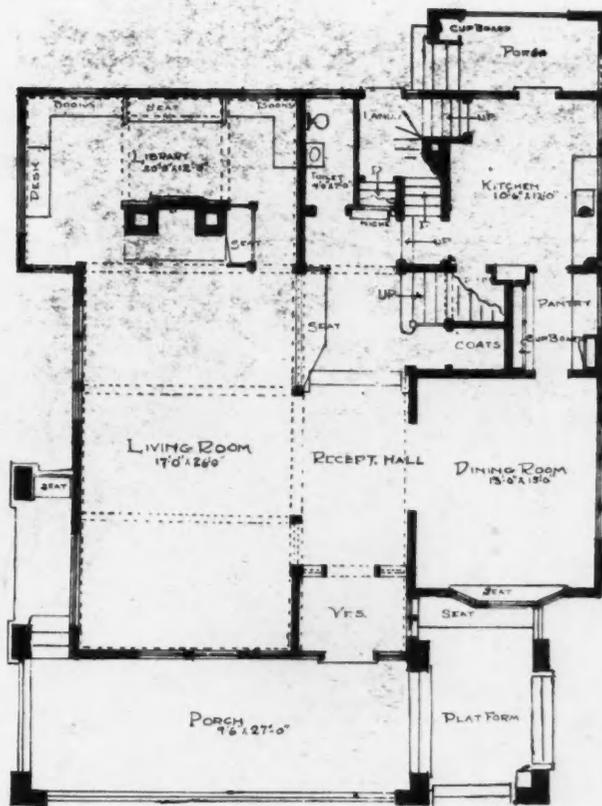
Residence of A. B. Melville, Oak Park, Ill., Rough-Cast Maroon Cement, White Trimming—E. E. Roberts, Architect



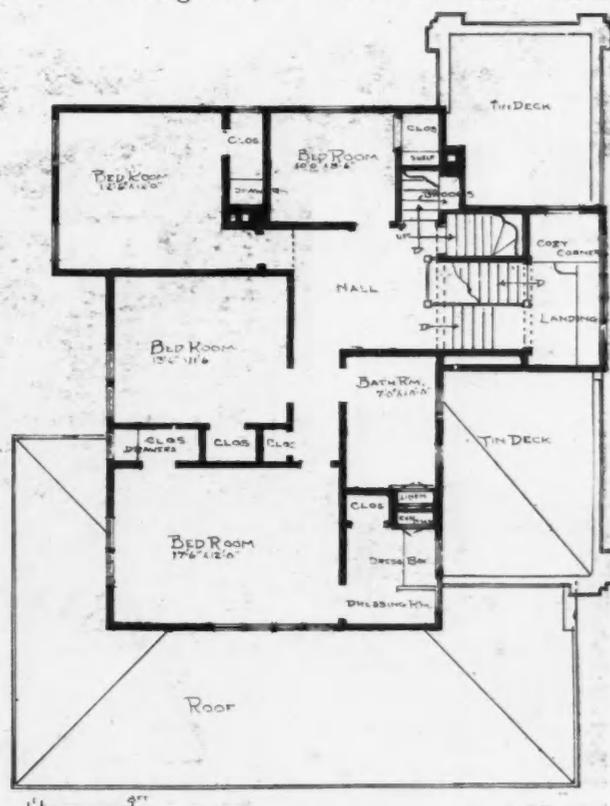
The Comfortable Living Room, Looking Toward the Stair Platform

the boldness of color treatment with a material other than cement. The roughened cement surface gives variety and overcomes monotony, yet does it with a

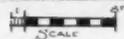
complete preservation of that unity necessary to every successful treatment of broad expanses. When to this is added an agreeable spacing and sizing of openings, and intervening wall, with a harmonious movement



First Floor Plan



Second Floor Plan



of lines, the effect is certain to be a very pleasing one.

Not alone in appearance is cement siding superior to wood. With the growing scarcity of good white pine timber has come a lowering of the old standards of grading lumber. The siding we used to get was well calculated to withstand the elements if kept properly protected with paint. The same grade siding of today, not only is more subject to decay because of knots, sap, etc., but is prone to push off the preservative about as fast as it can be put on. Cement, properly applied, grows harder, and hence more impervious to the elements as time goes on.

The frame of this house is of wood put up in the usual manner with sheathing on the outside. Upon this sheathing was placed heavy tar building paper. Vertical furrings, spaced one foot apart, were next nailed to the sheathing, and upon these were fastened one-inch lath. Experience has shown that more numerous clinches are needed for exterior than interior plastering, hence, the narrower lath.

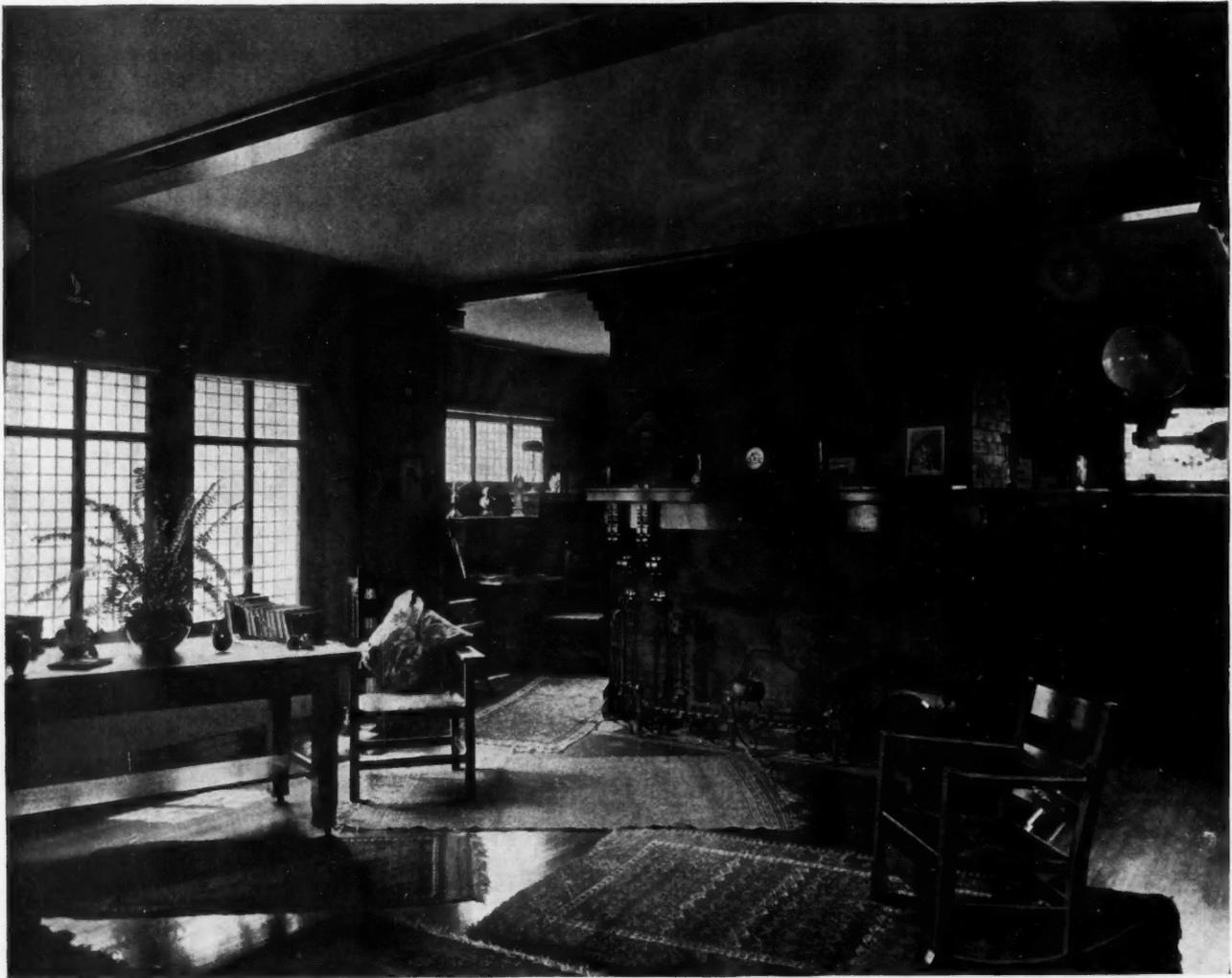
It must be admitted that cement exteriors have been more or less experimental until within very recent years. Some very notable successes may be pointed out which are many years old; at the same time some very notable failures might be pointed which are more

recent. These failures, we now see, were not the fault of the material but were, without exception, due to the ignorance of the worker. Cement is now being used upon most all of the high-class residences which are being built in progressive places.

There still seems, however, to be a lack of unanimity upon the part of builders as to the relative advantages of wood and metal lath. The architect of this residence is a strong advocate of wood lath because of the liability of the metal lath to rust. On the other hand, we find others who point out the liability of the wood lath to shrink, buckle and "kick" off the plaster. It is quite possible that galvanized metal lath will help to overcome this greatest of objections to metal lath for exteriors.

Upon the lath there was placed a one-half inch coat of plaster. Two coats were applied. The first was composed of lime-mortar and Portland cement mixed in the following proportions: One barrel of best Portland cement and three casks of hair and lime mixed as is usually done for plastering upon wood. To prevent the cement from "setting up" before it could be used, the lime mortar was divided into batches and the cement mixed in in small quantities as needed.

The proportions of the second coat were one barrel



A Corner of the Living Room, Showing the Huge Fire Place and a Glimpse of the Library-Den



Unique and Cozy Library-Den Back of Fire Place

of Portland cement to two barrels of coarse sharp sand.

The rough coat effect was obtained by mixing cement and water until it was like thin paste, adding fine washed gravel which had been screened through a three-eighths inch mesh, and slapping this mixture upon the surface of the second coat by means of a scoop-like wooden paddle. After this had dried hard,

the wood work, which had previously been "primed" with lead and oil, was cleaned with stiff bristle brushes. The cement surface was covered with a maroon colored, water proofing paint, and the wood work was given two more coats of white lead and oil.

The chief attraction of the exterior is the fifty-foot porch which extends across the east and south sides. It is ten feet wide and is almost entirely enclosed by the deep railing and the low projecting eaves.

As the house is on a corner lot, careful attention was given to the entrance. Wide cement walks lead from both the front and side streets to a large cement platform. Steps connect this platform to the north end of the porch. Flower boxes, on stucco pedestals, are placed where the walk joins the platform and assist materially in making the first view a pleasing one.

The main entrance to the house is made beautiful by the soft colorings of the "side lights." The windows and most of the other lights are almost entirely of plain plate glass and depend upon the spacings, so clearly shown in the photographs, for their pleasing effects.

The especial feature of the interior is the large living-room. This room is seventeen feet wide by forty feet long. It has a massive fireplace of red



A Spacious, Well-Lighted Bed Room



The Simple, Tastefully Furnished Dining Room

Roman brick, built at one end. The breast of the fireplace is nine feet wide and is in entire keeping with the size of the room.

There is a seven-foot space between the fireplace and the west wall, making possible a unique den or library. This den can be entered from either side of the fireplace. It is fitted with stationary book cases, writing desk and seats.

Directly behind the fireplace is a built-in settle with shelf above. The space underneath the settle is shut off by small doors and makes an ideal place to file away magazines. There is a reading table conveniently placed.

Another attractive feature of the living room is a very large landscape window. This window has a south outlook, and one can view four blocks of green lawns and beautiful oak trees.

The first floor is finished in oak—old English. The floors are of red oak.

The hall is thirty-five feet long by ten feet wide. At its west end two steps lead to a large platform from which the staircase is recessed. By this arrangement the entire hall and platform are available for seating when entertaining.

It has been possible to entertain—seated—one hundred and twenty-five guests in this drawing or living room and hall.

Between the hall and drawing room, and between the hall and vestibule, are square spindled partitions,

four and one-half feet high. The lower floor is singularly free from solid partition walls, which gives a very open roomy effect, with great perspective.

The dining room is in the northeast corner of the house, at the front. It is separated from the hall by beautiful art glass doors, eight feet in width. These doors were made from especial designs, as was the electric dome in the dining room; both have the same motif and treatment in their decorations.

A butler's pantry is between the dining room and kitchen. Like the kitchen, it is finished entirely in white enamel.

The walls of the dining room are a soft red with a conventional frieze. The walls of the other rooms are tan. Upstairs the wood work is finished mostly in white with tan walls. The guest room has blue walls.

The basement is complete in its appointments, with laundry, fuel rooms and fruit room.

✦
Sad

Master—"I'm sorry to hear, Pat, that your wife is dead."

Pat—"Faith, an' 'tis a sad day for us all, sir! The hand that rocked the cradle has kicked the bucket."



Piano manufacturers have the rest of us all beaten to a mushy pulp when it comes to being square and upright in their dealings.

Framing for Gambrel Roofs

POPULARITY OF THIS TYPE OF CONSTRUCTION—A PRACTICAL METHOD OF FRAMING WHICH DOES NOT REDUCE THE SIZE NOR USEFULNESS OF THE UPSTAIRS ROOMS

By I. P. Hicks

MANY people, when they come to build a house for themselves—and we can not blame them for the feeling—want something *different*, a house practical and homelike, but at the same time one different from the ordinary straight, square house. To such people, the gambrel-roof house often appeals.

As ordinarily constructed, however, the sloping sides cut into the second story rooms, taking away much valuable space that ought to go into the rooms, but which has to be sacrificed on account of the gambrel roof.

To plaster up on the sloping side walls makes the room in such shape that it is an ungainly thing to furnish, it never being possible to use the side of the room next to the roof to advantage.

So, to erect a house with a gambrel roof, not sacrificing valuable floor space on the second floor, is an interesting problem.

The first rafters of the gambrel-roof house should slope in from 24 to 30 inches to produce the proper outside appearance. Now, if these rafters start from the plate, directly over the first story, we have either sloping side walls, which are objectionable, or else upstairs rooms fully two feet smaller all the way

around than those on the first floor. If, however, we extend the second story joist over the plate sufficiently to make the cornice, Fig. 1, and then set a plate on top of the floor joists, setting the same in about 8 inches, with the studding for the second story on it, cutting in the sloping rafters to bear on the ends of the extended floor joists and against the perpendicular studding, then we have the proper gambrel-roof effect on the outside walls; and on the inside we have as nice square rooms as can be had in any house. Moreover, instead of sacrificing 24 inches of space all along both sides of the house, we have lost only about 8 inches space on each side.

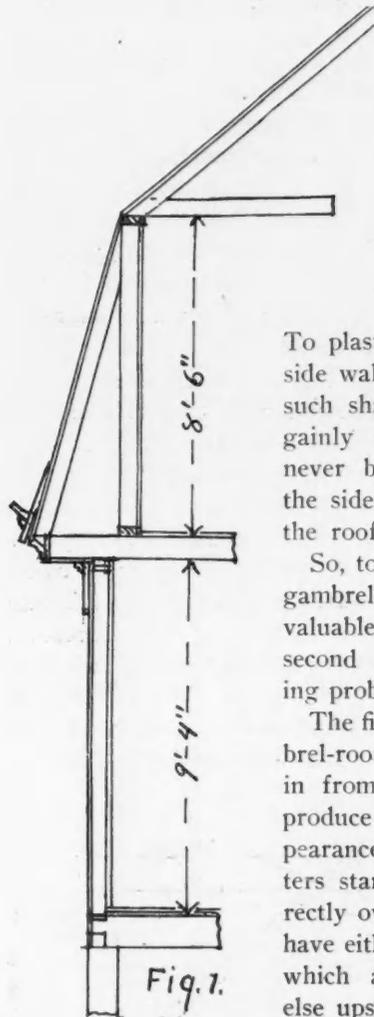
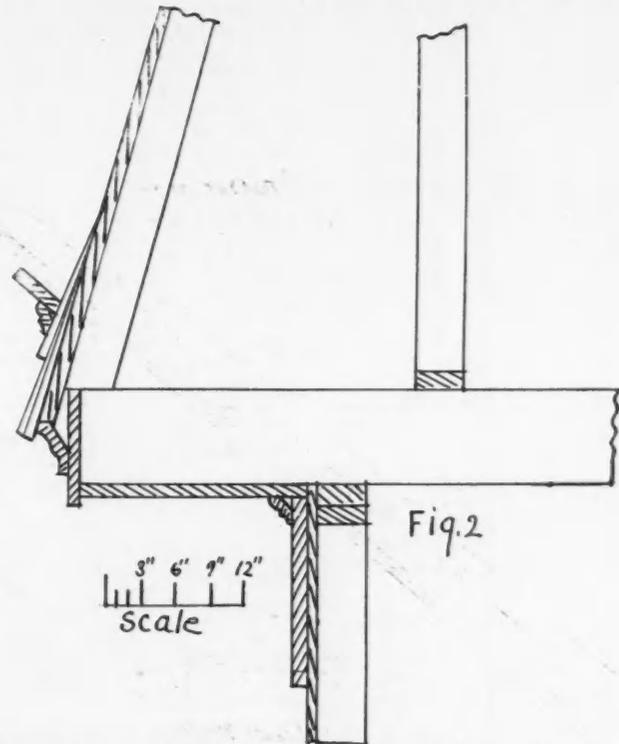


Fig. 1.

Dormers can be cut in this kind of a house very easily and without making any deep cuts into the rooms. It is the most satisfactory and economical way to build a gambrel-roof house. It insures a good strong job, since the sloping rafters on the first section of the roof serve as braces as well as rafters; it is nearly as strong as the hip roof.

The gambrel-roof house, besides cutting down the room upstairs to some extent, increases the cost of the building in the matter of labor. This is due to the extra amount of piecework necessarily required in the construction. It is safe to say that a gambrel-roof house will cost at least \$100 more to build than a square house of the same dimensions, houses, say, of 24 by 30 feet floor space in size.

Figure 1 shows the general construction as regards the pitch of the two sections of the roof, height of stories and the setting of the studding for the outside wall on the second floor. Fig. 2 is an enlarged detail of the cornice construction, showing the cornice mold-



ings and roof gutter. An eave gutter can be substituted for the roof gutter if it is desired. On this kind of a roof there is no difficulty in getting all the pitch for the gutter that is required.

+

Not His Troubles

A kind old gentleman, seeing a little boy carrying a lot of newspapers under his arm, said:

"Don't all those papers make you tired, my boy?"

"No; I don't read 'em," replied the lad.



The Simple, Tastefully Furnished Dining Room

Roman brick, built at one end. The breast of the fireplace is nine feet wide and is in entire keeping with the size of the room.

There is a seven-foot space between the fireplace and the west wall, making possible a unique den or library. This den can be entered from either side of the fireplace. It is fitted with stationary book cases, writing desk and seats.

Directly behind the fireplace is a built-in settle with shelf above. The space underneath the settle is shut off by small doors and makes an ideal place to file away magazines. There is a reading table conveniently placed.

Another attractive feature of the living room is a very large landscape window. This window has a south outlook, and one can view four blocks of green lawns and beautiful oak trees.

The first floor is finished in oak—old English. The floors are of red oak.

The hall is thirty-five feet long by ten feet wide. At its west end two steps lead to a large platform from which the staircase is recessed. By this arrangement the entire hall and platform are available for seating when entertaining.

It has been possible to entertain—seated—one hundred and twenty-five guests in this drawing or living room and hall.

Between the hall and drawing room, and between the hall and vestibule, are square spindled partitions,

four and one-half feet high. The lower floor is singularly free from solid partition walls, which gives a very open roomy effect, with great perspective.

The dining room is in the northeast corner of the house, at the front. It is separated from the hall by beautiful art glass doors, eight feet in width. These doors were made from especial designs, as was the electric dome in the dining room; both have the same motif and treatment in their decorations.

A butler's pantry is between the dining room and kitchen. Like the kitchen, it is finished entirely in white enamel.

The walls of the dining room are a soft red with a conventional frieze. The walls of the other rooms are tan. Upstairs the wood work is finished mostly in white with tan walls. The guest room has blue walls.

The basement is complete in its appointments, with laundry, fuel rooms and fruit room.

♣
Sad

Master—"I'm sorry to hear, Pat, that your wife is dead."

Pat—"Faith, an' 'tis a sad day for us all, sir! The hand that rocked the cradle has kicked the bucket."



Piano manufacturers have the rest of us all beaten to a mushy pulp when it comes to being square and upright in their dealings.

Framing for Gambrel Roofs

POPULARITY OF THIS TYPE OF CONSTRUCTION—A PRACTICAL METHOD OF FRAMING WHICH DOES NOT REDUCE THE SIZE NOR USEFULNESS OF THE UPSTAIRS ROOMS

By I. P. Hicks

MANY people, when they come to build a house for themselves—and we can not blame them for the feeling—want something *different*, a house practical and homelike, but at the same time one different from the ordinary straight, square house. To such people, the gambrel-roof house often appeals.

As ordinarily constructed, however, the sloping sides cut into the second story rooms, taking away much valuable space that ought to go into the rooms, but which has to be sacrificed on account of the gambrel roof.

To plaster up on the sloping side walls makes the room in such shape that it is an ungainly thing to furnish, it never being possible to use the side of the room next to the roof to advantage.

So, to erect a house with a gambrel roof, not sacrificing valuable floor space on the second floor, is an interesting problem.

The first rafters of the gambrel-roof house should slope in from 24 to 30 inches to produce the proper outside appearance. Now, if these rafters start from the plate, directly over the first story, we have either sloping side walls, which are objectionable, or else upstairs rooms fully two feet smaller all the way

around than those on the first floor. If, however, we extend the second story joist over the plate sufficiently to make the cornice, Fig. 1, and then set a plate on top of the floor joists, setting the same in about 8 inches, with the studding for the second story on it, cutting in the sloping rafters to bear on the ends of the extended floor joists and against the perpendicular studding, then we have the proper gambrel-roof effect on the outside walls; and on the inside we have as nice square rooms as can be had in any house. Moreover, instead of sacrificing 24 inches of space all along both sides of the house, we have lost only about 8 inches space on each side.

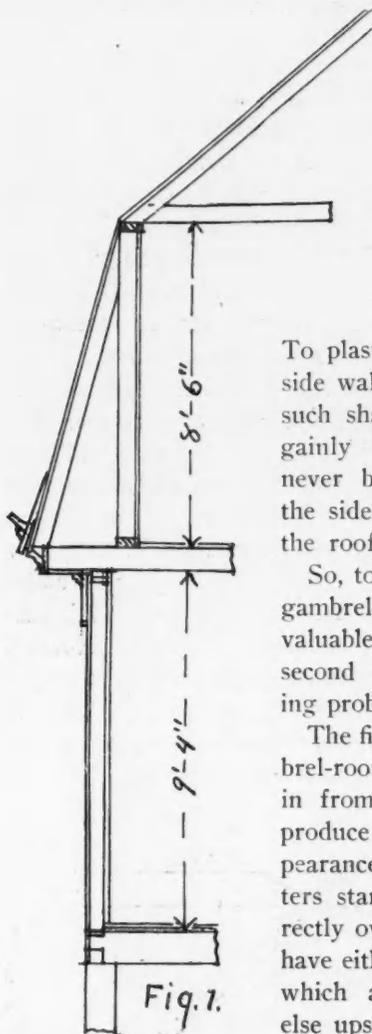


Fig. 1.

Dormers can be cut in this kind of a house very easily and without making any deep cuts into the rooms. It is the most satisfactory and economical way to build a gambrel-roof house. It insures a good strong job, since the sloping rafters on the first section of the roof serve as braces as well as rafters; it is nearly as strong as the hip roof.

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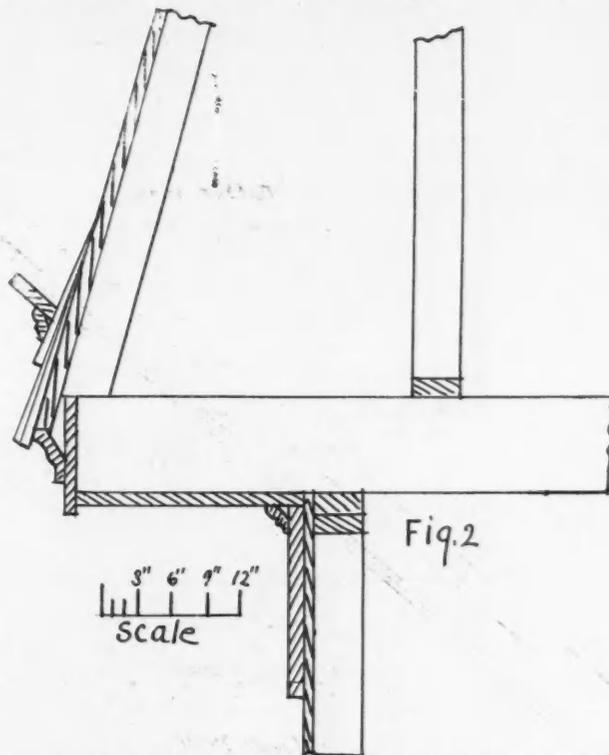


Fig. 2

ings and roof gutter. An eave gutter can be substituted for the roof gutter if it is desired. On this kind of a roof there is no difficulty in getting all the pitch for the gutter that is required.



Not His Troubles

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"Don't all those papers make you tired, my boy?"

"No; I don't read 'em," replied the lad.

PRACTICAL CARPENTRY

Roof Framing by Plan

HOW A ROOF FRAMING PLAN IS PREPARED AND HOW IT SHOULD BE USED IN CONNECTION WITH IMPORTANT AND COMPLICATED WORK

THE accompanying illustrations show a rafter plan for a church building now being erected in Indiana; it was prepared by Mr. A. W. Woods from a blue print.

The builder desired a plan showing the spacing and number of rafters required, together with their lengths and cuts. The rise is 10 inches to the foot, or 5/12 pitch and the lengths are given for each rafter from plate to purlin and from purlin to the center of the ridge for the common rafters, and from the center of the

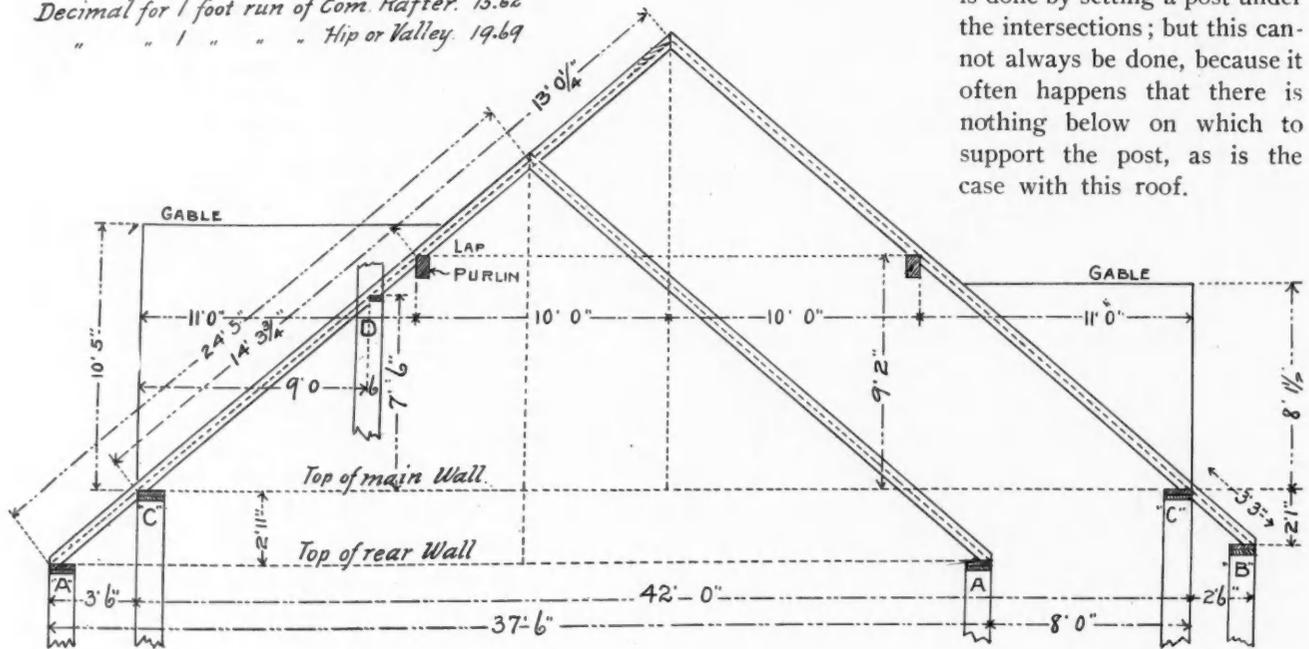
rafters, as they will appear on the building. The main part is 42 feet wide and has purlins on either side, set 11 feet in from the face of the outer walls, leaving a span of 20 feet at the center. The top of the purlins should be 9 feet 2 inches above the top of the wall plate, because the roof having a rise of 10 inches to one foot for 11 feet it will be 110 inches, or 9 feet 11 inches. The blue print did not call for any purlins for the rear part of the roof but it is presumed that the long rafters are to have collar beams.

CUTS AND BEVELS.

- Seat and Plumb Cut 12 & 10" C.R. No. 17 & 10 Hip or Val.
- Side cut of Jack " 12 & 15 7/8" - Cut on 15 7/8"
- " " Hip " 17 & 19 1/2" " " 19 1/2"
- Backing of Hip 10 & 19 1/2" Bevel on 10

- Decimal for 1 foot run of Com. Rafter. 15.62
- " " " " Hip or Valley. 19.69

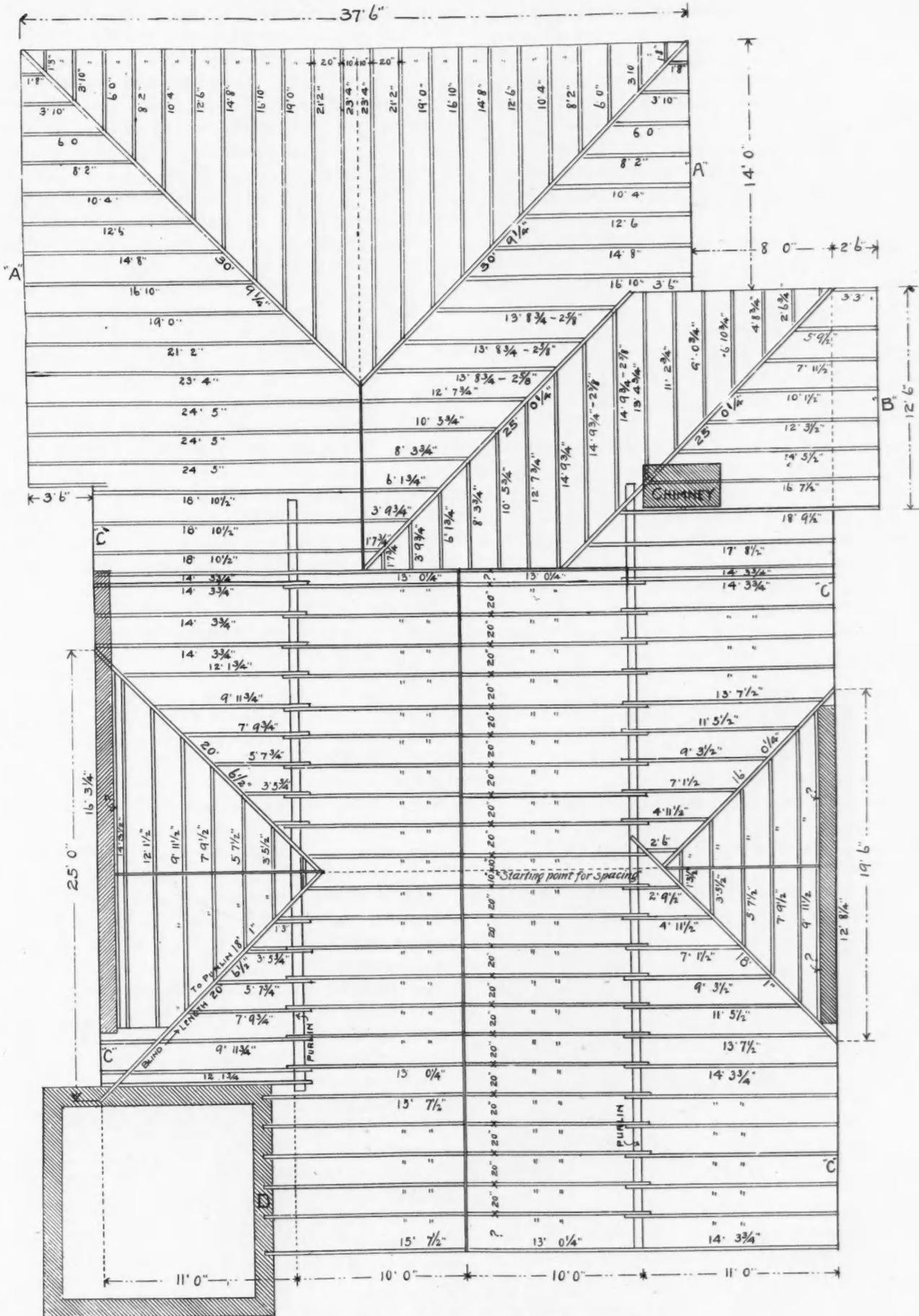
There will be two gables with pitch same as that for the main roof. The one with 25 feet span will have a rise of 10 feet 5 inches and the other will have 8 feet 1 1/2 inches. As will be seen, the latter falls below the purlin so that it is necessary that the valleys should be supported at the intersection. Usually this is done by setting a post under the intersections; but this cannot always be done, because it often happens that there is nothing below on which to support the post, as is the case with this roof.



ELEVATION OF RAFTERS.

valley to the center of ridge, or edge of purlin for the jacks. There are different heights of walls, as will be seen by referring to the elevation. Like letters represent the same walls on the plan, so that it is an easy matter to get at the positions of the different

We have often seen carpenters frame these rafters without any support, simply depending on the hanging valley rafters and sheathing to hold the valleys in place. This is poor construction and is sure to settle and thereby sway the roof. The better way is to let



PLAN OF RAFTERS.

one of the valleys extend up to the ridge board or purlin, as the case may be, and let the other cut against it, which is simply a plumb cut of the valley. That part above the juncture is what is generally termed a blind valley, because it lies in the plane of the common rafters and is covered up, or in other words, it is out of sight. This rafter should be an extra strong timber; it is better still, if it is for a large gable, to use two timbers and back them one way, right and left; then spike them together so that the top forms a V. The lower point of this is at the measurement line for the rafters and, when set in place, forms an excellent nailing space for the sheathing boards. The backing above the juncture, or blind part, should all be one way, necessitating the reverse of the bevel for the inner rafter; but this is a small matter and readily explains itself when set in position. All that is necessary is to hew it down to the plane of the outer one.

A rafter plan is very useful to the builder in more ways than one. He can readily see the amount of pieces and quantities wanted, together with their exact lengths for the cuts, and more than all, he can cut his rafters on the ground before hoisting a single piece upon the scaffold. When there every piece will fit to its respective place. Of course there are likely to be mistakes in figuring out a rafter plan; still there should not be, any more than in any other part of the building, provided the operator understands the figures to use. The main thing is to start right; that is, to

have the correct figures for a basis, as to the size of the building and decimal to use for the different rafters. Then again, a rafter plan may be made absolutely correct, but if the builders have not followed the dimension figures or have gotten the walls out of square, the roof framing will be affected accordingly and the plan is seemingly wrong when the fault is with the building.

In connection with this plan, the decimals are given for a one foot run of the common rafter and valley. No allowance is made for the thickness of the ridge piece. The proper reduction of which may be had by measuring square back from the plumb cut of the common rafter, one-half the thickness of the piece and lay off another plumb line which will be the one to cut on. Proceed the same for the hip but the measurement should be made from the top cut for the full length. The lengths given for the jacks are all right for the long side of the jack without any reduction, but jacks coming in between two valleys should be reduced in length the thickness of one of the valleys, which may be found by measuring square out from the top cut. This method answers for any pitch; or the correct lengths in this example may be had by measuring back on the line of the rafter $2\frac{5}{8}$ inches.

The cuts and bevels may be had with the steel square as shown by the figures on the plan, as shown under the head of Cuts and Bevels.

Shingling the Sides of a Building

HOW THE WORK IS DONE TO ATTAIN THE BEST RESULTS—SPECIAL FEATURES DIFFERING FROM ROOF SHINGLING THAT SHOULD BE OBSERVED

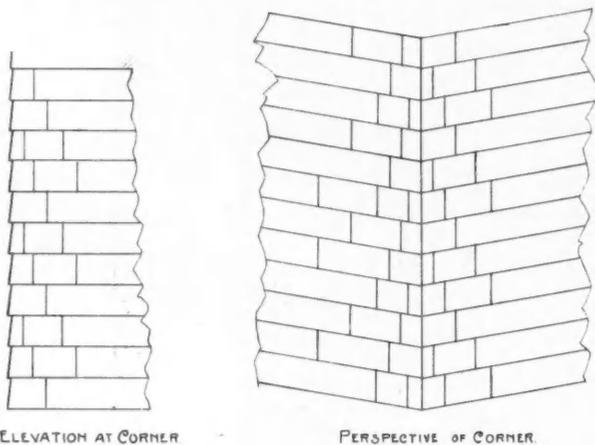
By John Upton

IT IS quite the style in many sections of the country, to shingle the sides of buildings, not only for the smaller class of buildings but for public buildings as well.

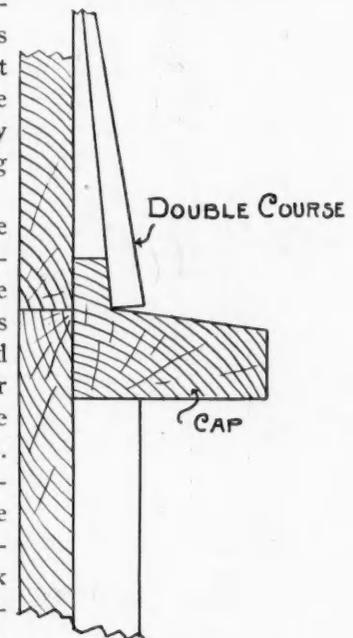
When properly done, it makes a good-looking building and the cost is generally less than for any other

about 150 square feet of surface and a man will put on about as many in a day as he can on the ordinary roof in the same length of time. As this kind of work is comparatively new, differing in some respects from roof shingling, it may be that some of the readers will be benefited by a few pointers concerning the work.

The building may have corner boards and water-table, though these are generally omitted. It makes a more weather-proof and at the same time a better looking job to run the shingles out to the corners. The first course at the bottom should be double. The first, or under course, furnishes a good place to work in some of the poorer shingles. In shingling the corners the shingles on one side should be kept flush with

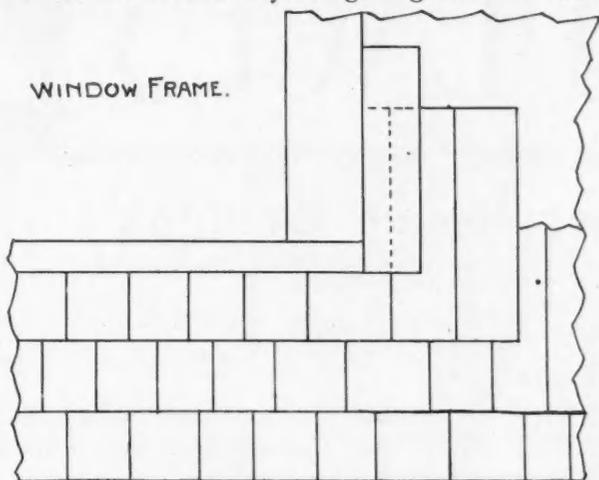


siding material, since wall shingles can be put on with more space exposed than in regular roof work; also a cheaper grade of shingles can be used for this purpose with good satisfaction. One thousand will cover



the corner and those on the other side should be flush with the butts or a little beyond, so that they may be trimmed even by sawing in on the edge and cutting out with a knife.

There are several ways of getting the first course



straight; a straight edge can be used by tacking a shingle at each end to hold it in place and should be used for each course thereafter. The siding boards should be straight and level and the first course should extend a little below to form a water drip. The courses should come even with the top and bottom of

the window frames, which can be easily done by varying the courses the same as in clap-board siding. It will be necessary to cut the tops of the two last courses under the windows but the pieces can be used at the tops of the windows, which should have a rabbeted cap. The shingles should be doubled at this point,—one row should be put above the cap and the other should drop below these. At the corners of the window frames, it is better to cut out a corner of a few shingles so as to break joints.

When a first class job is desired, it is better to put the cornice on and cut the shingles to fit under it. For some classes of buildings it is all right to put the cornice on over the shingles, or in case the cornice is already on, to drive the shingles up under it.

Do not use too large nails for shingling. If the boards are sound, three-penny nails are large enough.

Paper may be put under the shingles, and in some cases this is the best method; but as so many nails are driven through the paper, it seems better to put it on the inside of the sheathing between the studs.

As to the cost of this method of building, boards for less than \$20.00 per thousand may be used which will answer. The shingles will cost about the same. Plaster will cost about one cent per square foot, so that five cents per square foot will cover the cost.

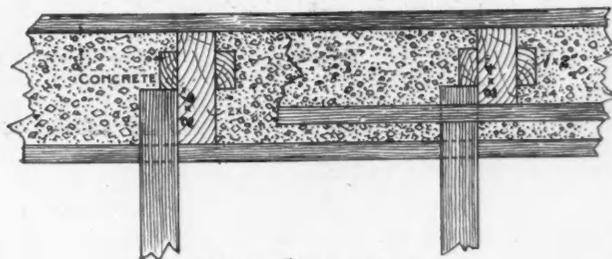
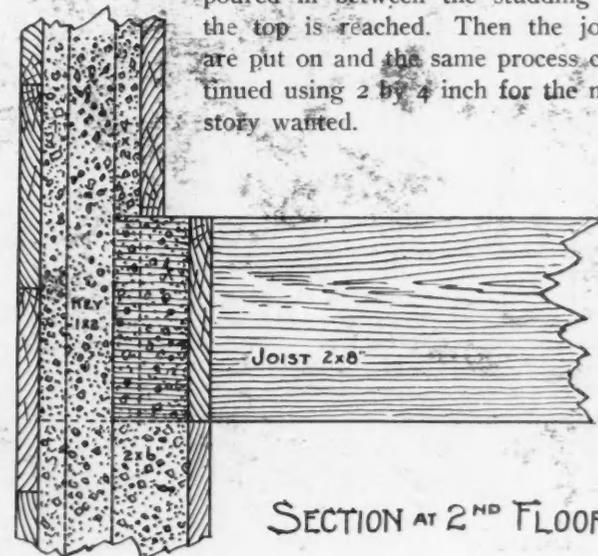
Half-Timber Poured Cement House

A NEW METHOD OF CONSTRUCTION OF SPECIAL INTEREST AND MERIT—AN ARTISTIC DURABLE HOUSE AT SLIGHT ADDED EXPENSE.

GORDON EDWARDS of Calgary, Alberta, has sent to this journal a sketch and a short description of how to erect a cement house, giving a timbered frame effect, so commonly seen in English construction. The idea presented deserves more than a passing notice and we take pleasure in reproducing Mr. Edward's sketch, along with his description, as follows:

For some time, the writer has been studying for a cheaper way of constructing the ordinary cement house, than that now in general use. He now feels sure that with this method which he has worked out, taking into consideration the saving in lumber, the bungalow style of dwellings can be erected of concrete at only about 20 per cent more than for the ordinary frame and clap-board construction. A house built after this

on this 2 by 6 inch studding are set and sheathed on both sides. A 1 by 2 inch strip is nailed on each side of the studding to form a key. The concrete is then poured in between the studding till the top is reached. Then the joists are put on and the same process continued using 2 by 4 inch for the next story wanted.

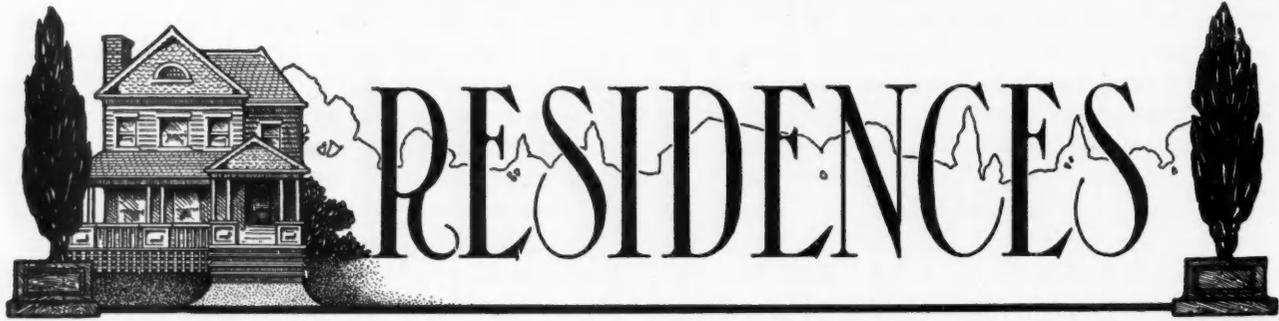


method will be vastly more attractive than concrete blocks or of brick or stone.

The basement walls are built solid up to grade and

When the building is completed, the outside sheathing is taken off and 1 by 3 inch battens are nailed on the studding and a timber frame effect is produced.

The sheathing is left on the inside to bind the building. It is covered with two layers of tar paper, then stripped and lathed and plastered in the usual way. The house thus built is strong, warm and dry.



RESIDENCES

Practical and Artistic House Designs

FULL WORKING DRAWINGS WITH DETAILS OF CONSTRUCTION AND INTERIOR FINISH OF TWO SATISFACTORY LITTLE DWELLINGS

FOR many people the cottage is the only type of dwelling which is within reach when it comes to figuring the cost of building, and also it squares up better than any other to their fixed notions as to what a residence should be, in the way of home-like cozyness. In many localities the demand for such

The accompanying photo is typical of this class of work. It shows a building in perfect harmony with its site.

The floor plan shows five nice rooms besides reception hall, bath room and pantry. This hall is one of the striking features of the design. It is very broad



Cozy, Homelike Little Cottage Containing Five Rooms and Bath

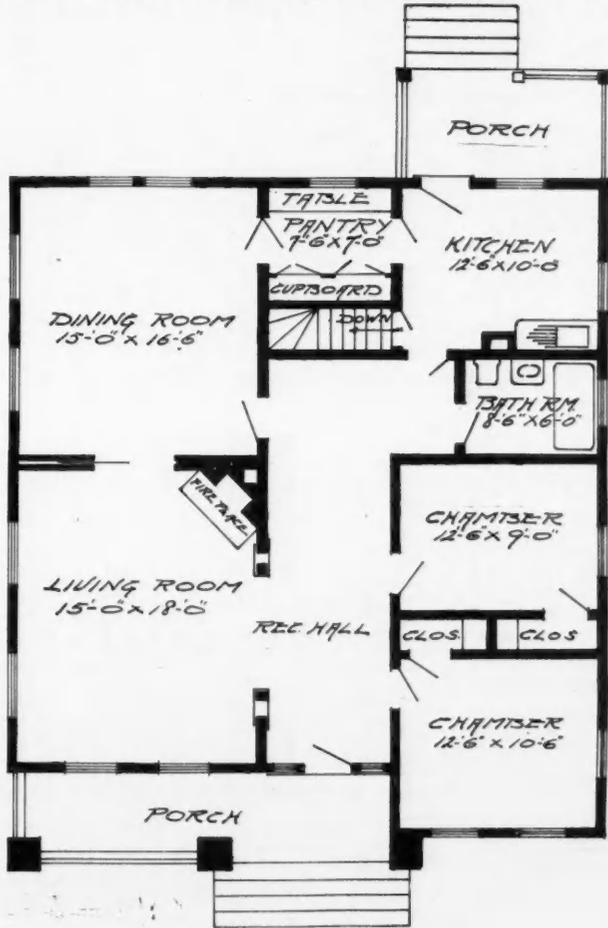
houses is so much greater than the supply that it is next to impossible to rent one of them.

For these reasons a great many cottages and bungalows are being put up—attractive, homey little dwelling places that are so easy to furnish and so convenient to live in.

and well lighted and serves to distribute light and fresh air all through the house. Also, every room is accessible from the front door without going through any other room. The arrangement of kitchen, pantry and dining room is good. The two bedrooms are easily accessible. The floor plan is given on next page.

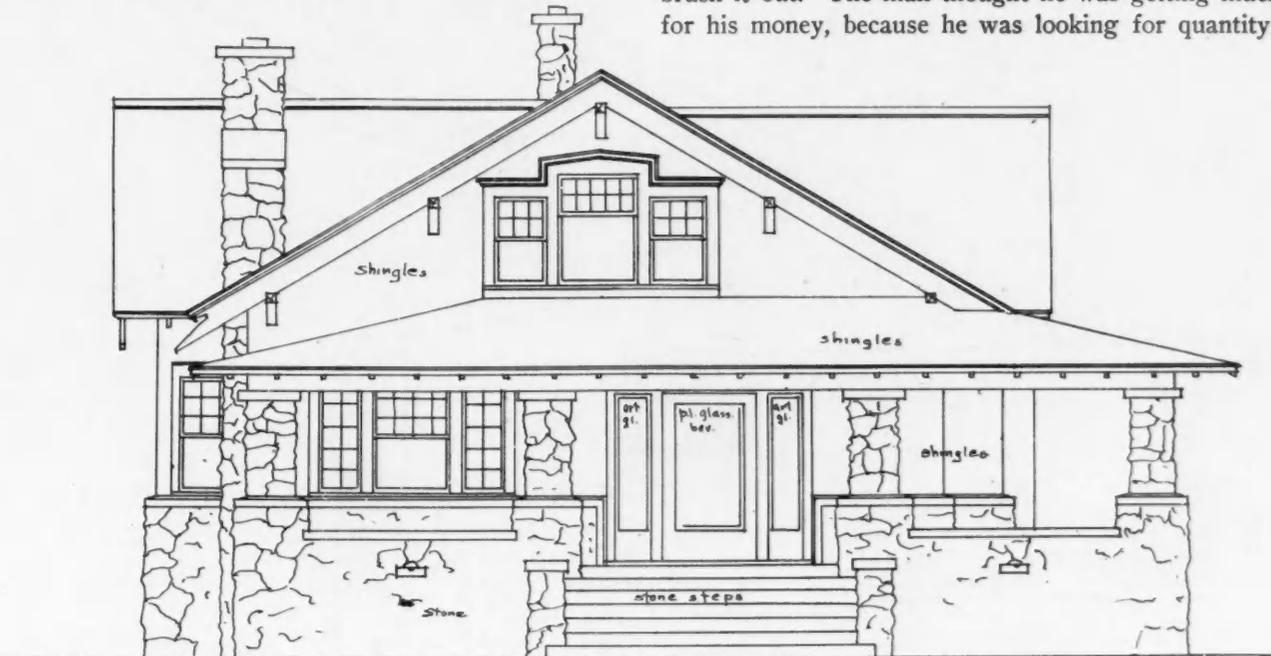
Shingle and Stone House

The complete set of working drawings of a substantial story and a half cottage of exceptional beauty and harmony of design is given on the pages follow-



Floor Plan, Five Room Cottage

ing. The exterior material is shingles, the high foundation course, porch pillars and chimneys being of



FRONT ELEVATION.

random field stone. The entire effect of the exterior is that of snug hominess. The lines are informal, with a touch of the picturesque; at the same time the house is dignified in appearance.

Glancing at the floor plans, we see that there are five nicely arranged rooms, four closets, bath room and pantry on the first floor. Thus, if desired, the design could be very easily carried out leaving the second floor, for the time, unfinished. It is a first-class bungalow design.

A special feature of this plan is the size, number and location of the windows, making all the rooms remarkably well lighted. The living room is very attractive and the arrangement of dining room, pantry and kitchen, and of bed rooms and bath room, is good.

On the second floor three nice bed rooms with an abundance of closet and storage room are provided.

The details given, exterior and interior, are interesting and instructive. They show a type of straight line trim that is becoming very popular.

How to Do It

"I like the way you fellows paint," said a house-owner to the boss-painter, as the latter and his men were industriously slapping the paint on with full brushes.

"Yes?" said the boss with a note of inquiry in his voice.

"Yes," continued the gratified owner, "you aren't afraid to use a little paint and you work fast."

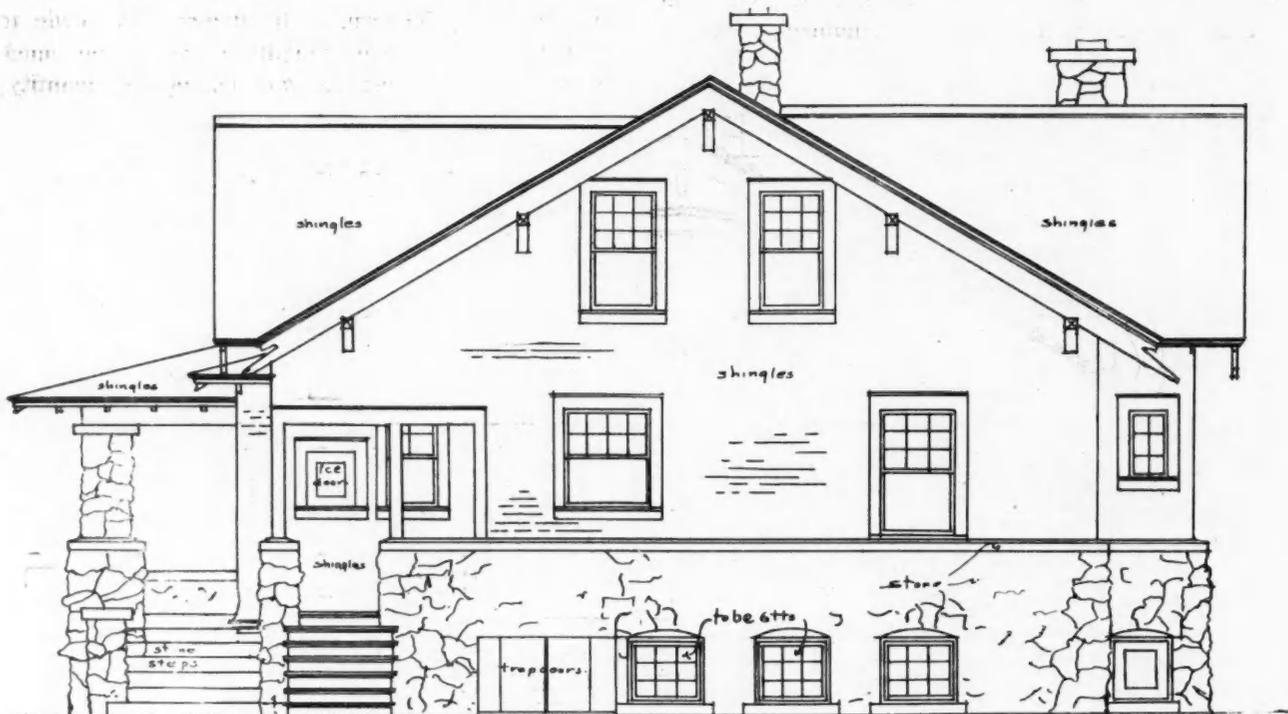
The fact was the painters were giving this client a "bum" job and they knew it. It was taken at a low price, and they were rushing through it. The paint was being flowed on with full brushes and a long sweep of the arm. No attempt was made to brush it out. The man thought he was getting much for his money, because he was looking for quantity;



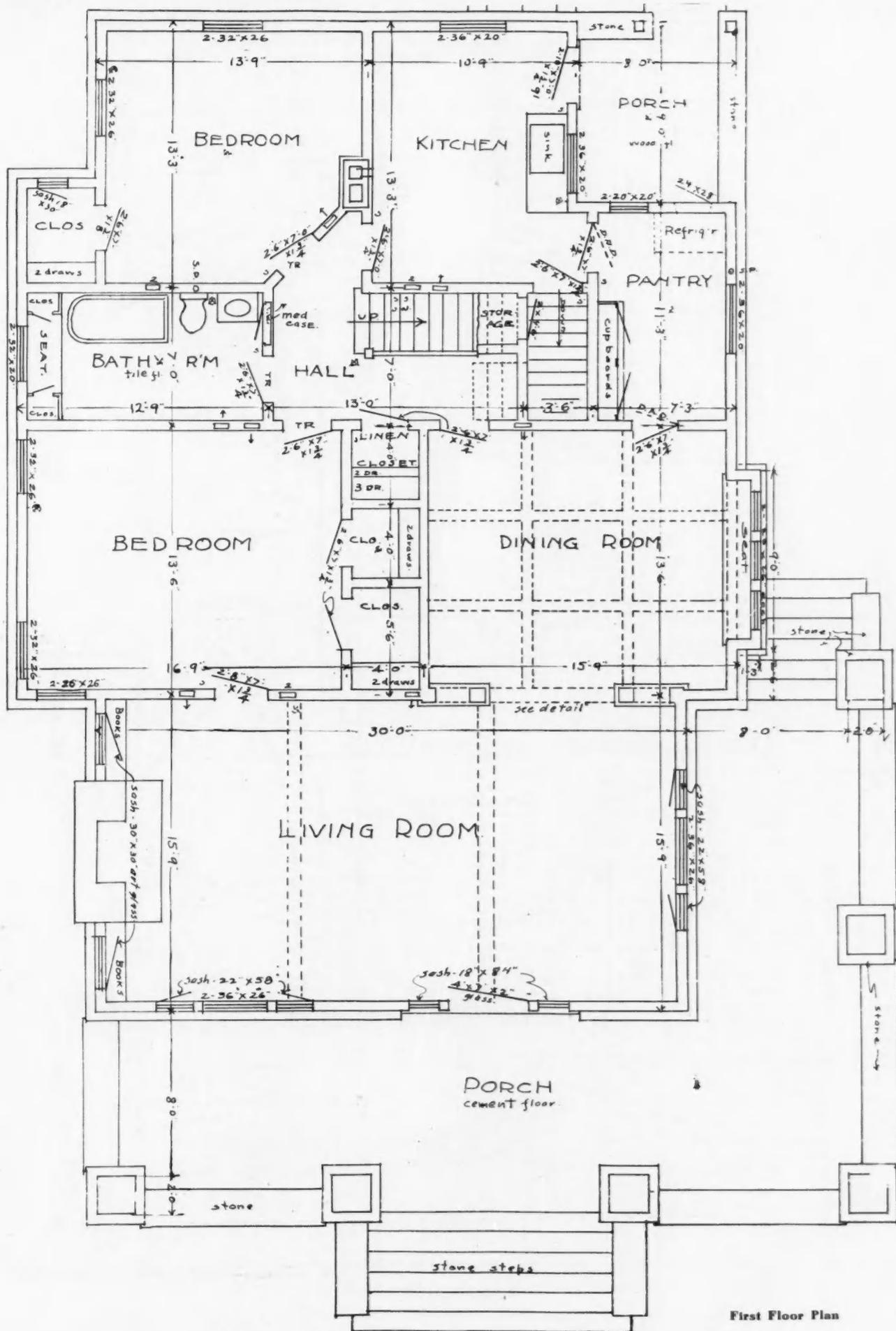
SIDE ELEVATION



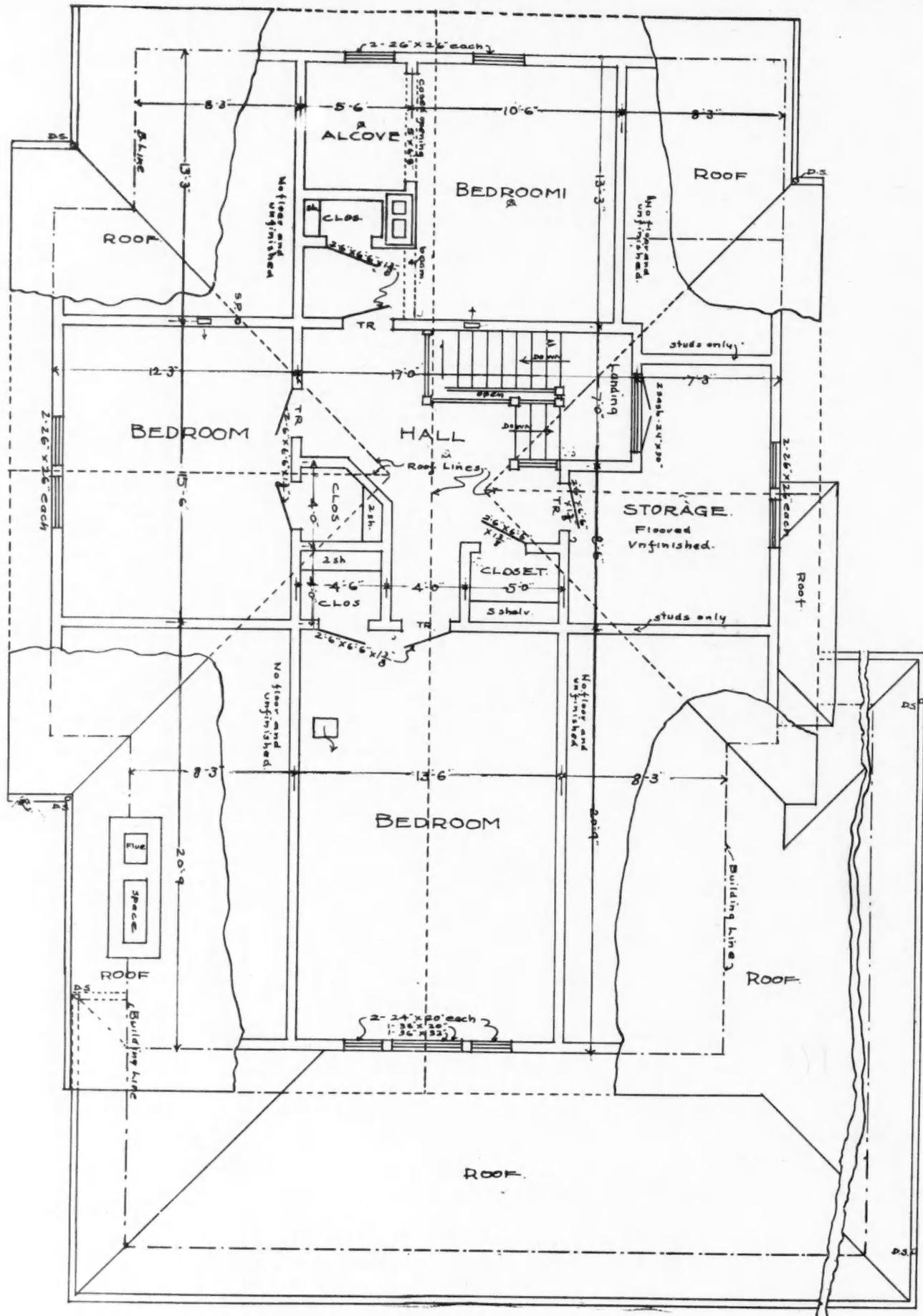
SIDE ELEVATION



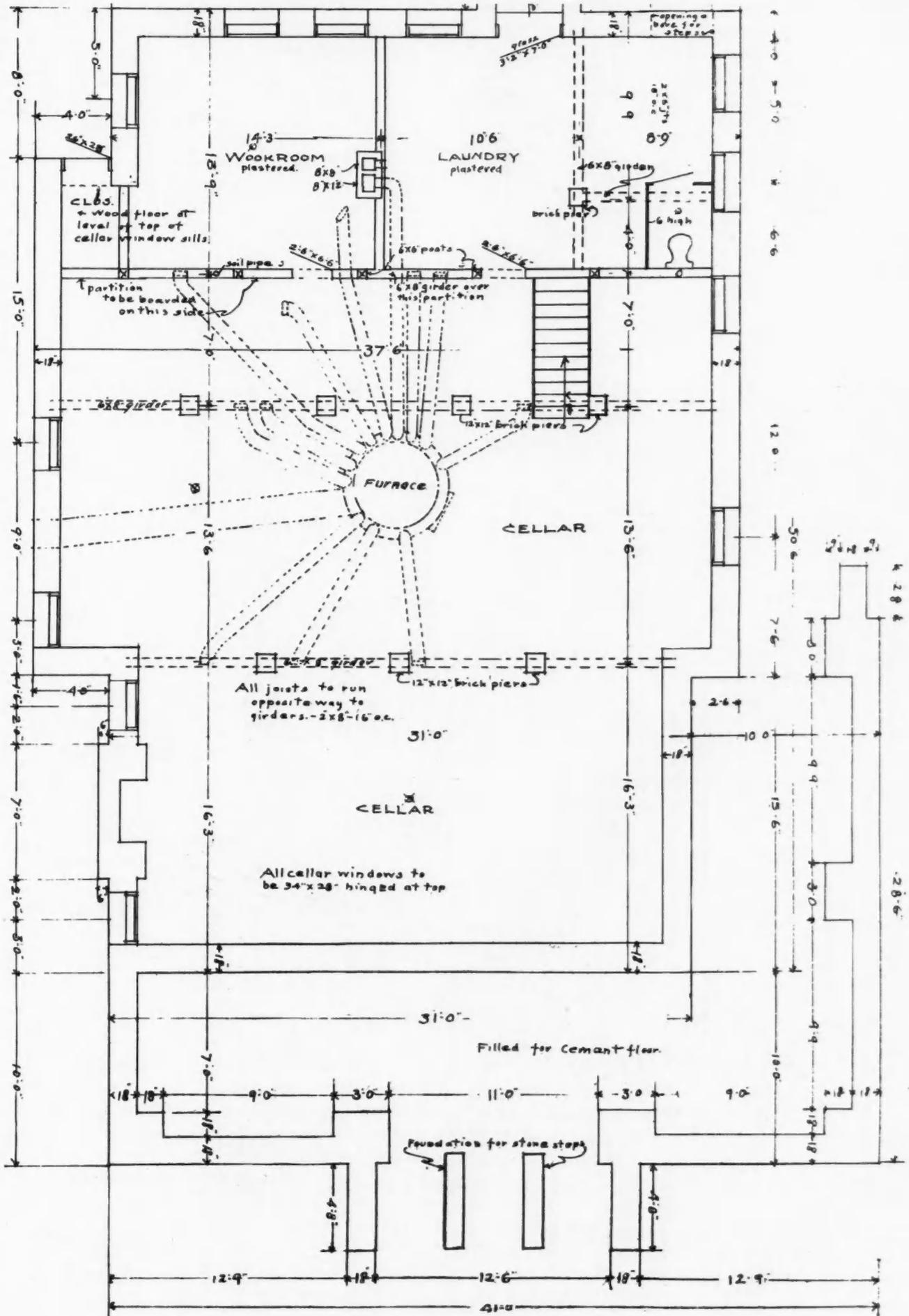
REAR ELEVATION



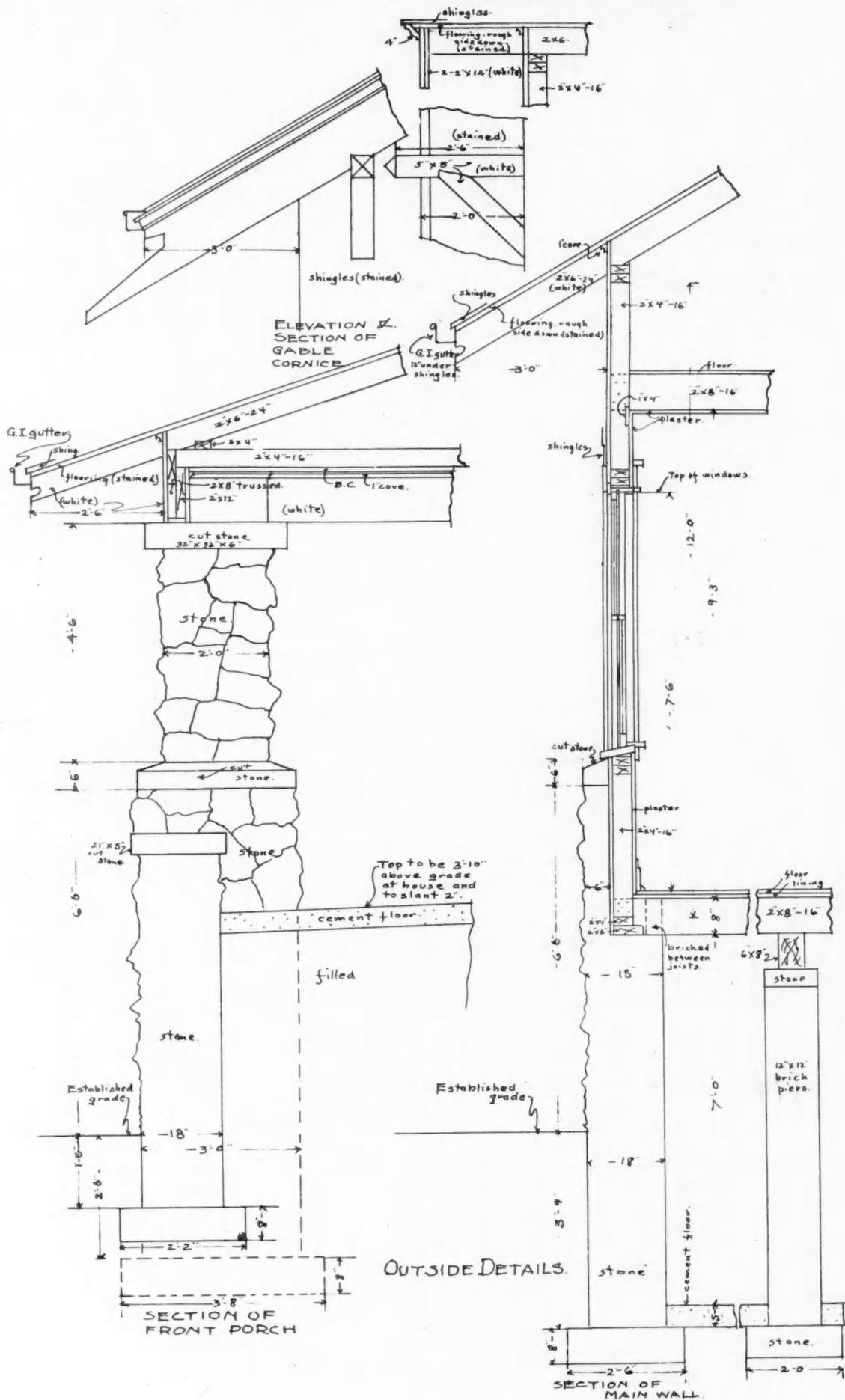
First Floor Plan

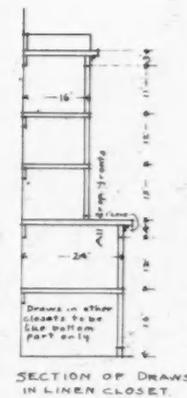
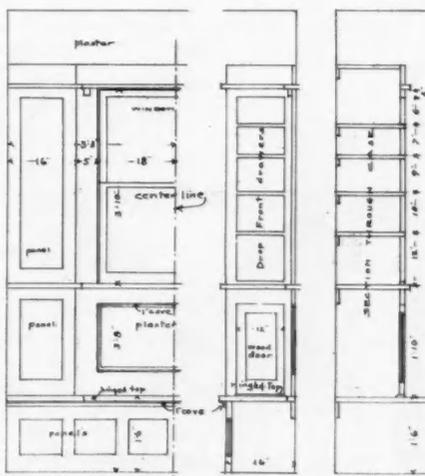
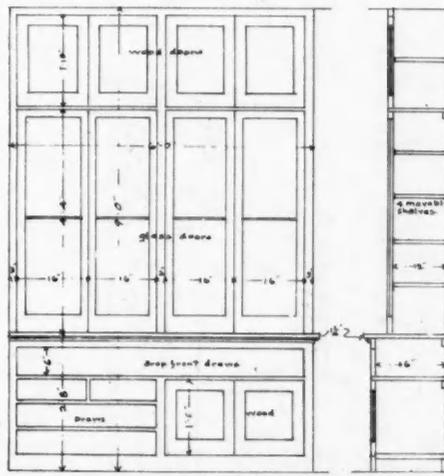
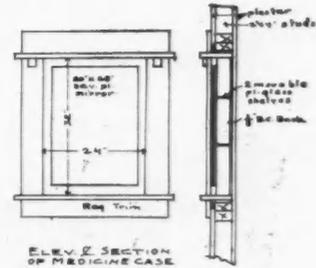
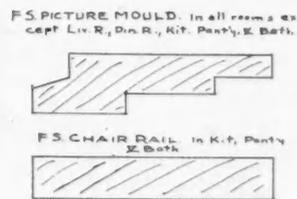
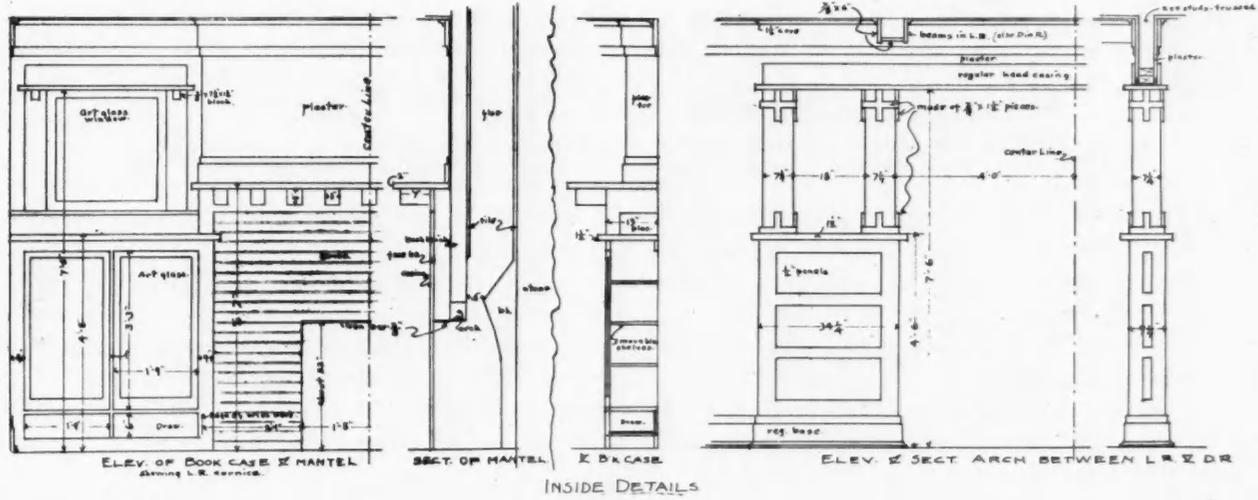
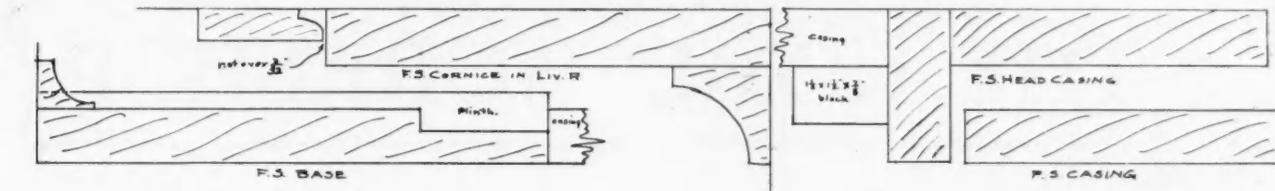


Second Floor Plan



Basement and Foundation Plan





INSIDE DETAILS

but he was getting the poorest kind of service.

Even though pure white lead and pure linseed oil had been specified and used, such painting would make the paint go wrong. Believing the painters had done the work well, the owner would naturally lay the blame upon the materials used.

If the house owners will give painters time to do the work right, even if it does cost a little more, they will find it will pay in the end.

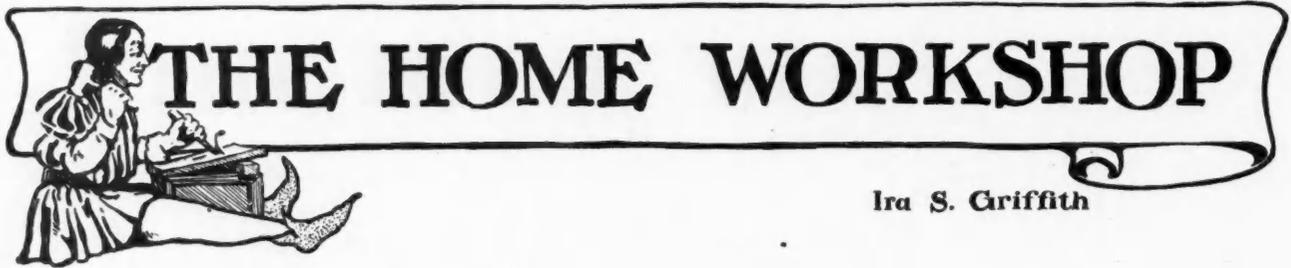
Paint should be put on thick, but brushed out thin. Two thin coats are much more durable than one coat

of the same thickness as the two thin ones would be.

On the Sea of Matrimony

An Iowa clergyman boasts that he can marry twenty couples in an hour. Twenty knots an hour is pretty good speed for a clergyman to make.

A little chap came home, and his mother asked him what he thought about the new colt. "I like him pretty well," was the reply. "He's real tame in front, but he's awful wild behind."



Ira S. Griffith

How to Make the Home Cozy

COMFORTABLE FURNITURE FOR THE DEN OR LIBRARY—VALUABLE PIECES OF CRAFTSMAN DESIGN
EASILY MADE AT ODD TIMES—CONSTRUCTION AND MATERIALS DESCRIBED

AT THE present time when the luxuries of yesterday are the necessities of today, the accompanying sketches of library or den furniture will be taken as a matter of course. His majesty, The American Citizen, likes nothing better than to sink far into the soft cushions of a comfortably inclined chair, to get his feet above their usual level, a good book or his paper in his hands and—sometimes—a good cigar in his mouth. At such times the magnanimous spirit prevades his presence and he is ready to bestow favors.

The Home Workshop has prepared for such as he—

and, in fact, for the gentler sex too, should they be willing to overlook the match box on the light-stand.

In Fig. 1 is shown a group of pieces that will make home attractive for any man who is so fortunate as to possess one. Nor need the home be unattractive because of the absence of such pieces, for they are not difficult to make.

In this day of large living rooms and no sitting

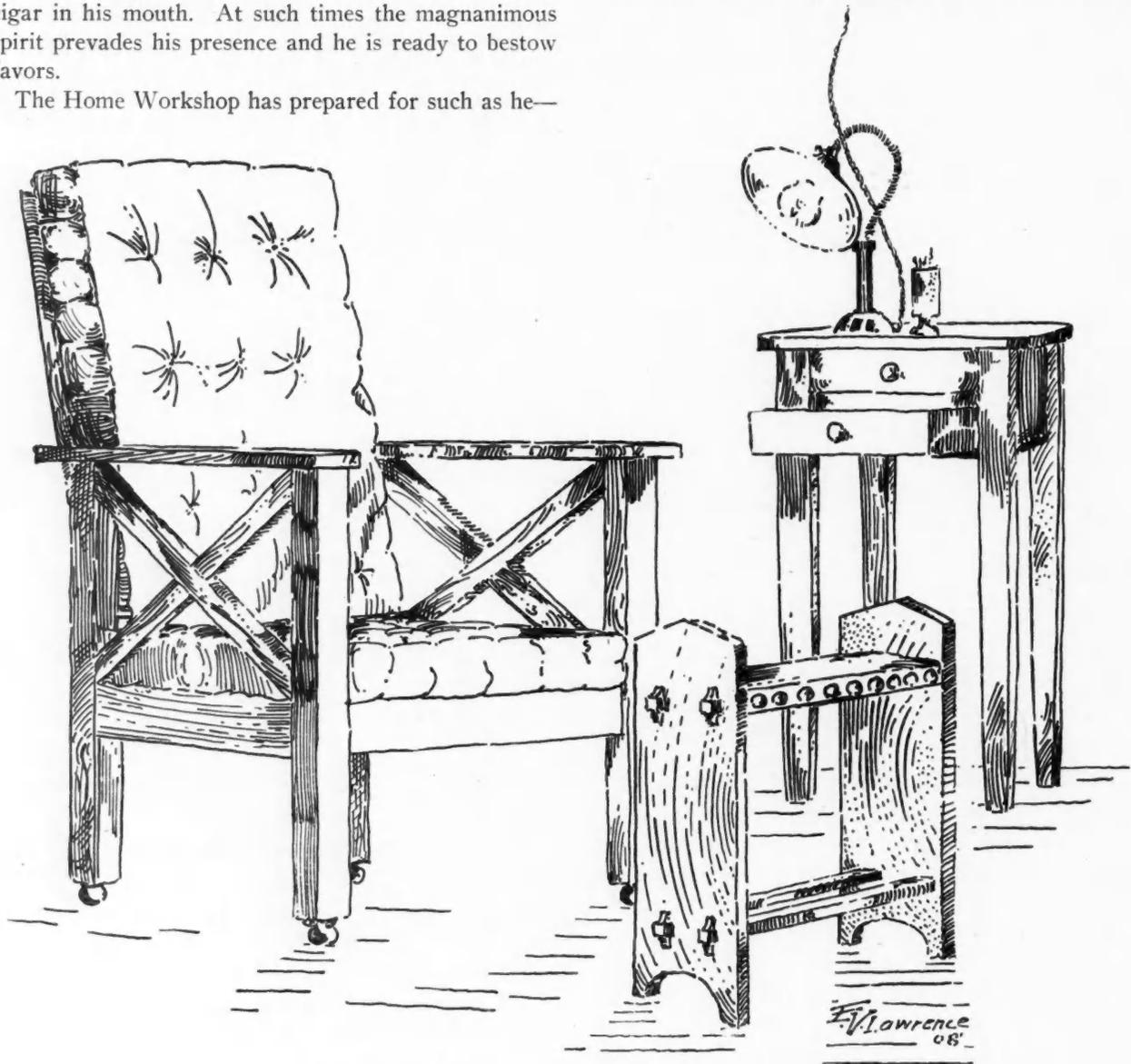


Fig. 1. Equipment for Comfort—Easy Chair, Foot Rest and Table for the Den

rooms nor parlors, when there is no place for privacy where the man of the house can throw aside his coat and vest and indulge in his petty sin of smoking, the den offers a fine retreat. It may be called a den, it may be made a library, too, by the addition of a table and a case for books, Fig. 2.

The Morris chair, Fig. 1, is of very simple design. Proportions for it are as follows: Legs two and one-quarter inches square, and twenty-four inches long; seat twenty-one inches square from post to post; back

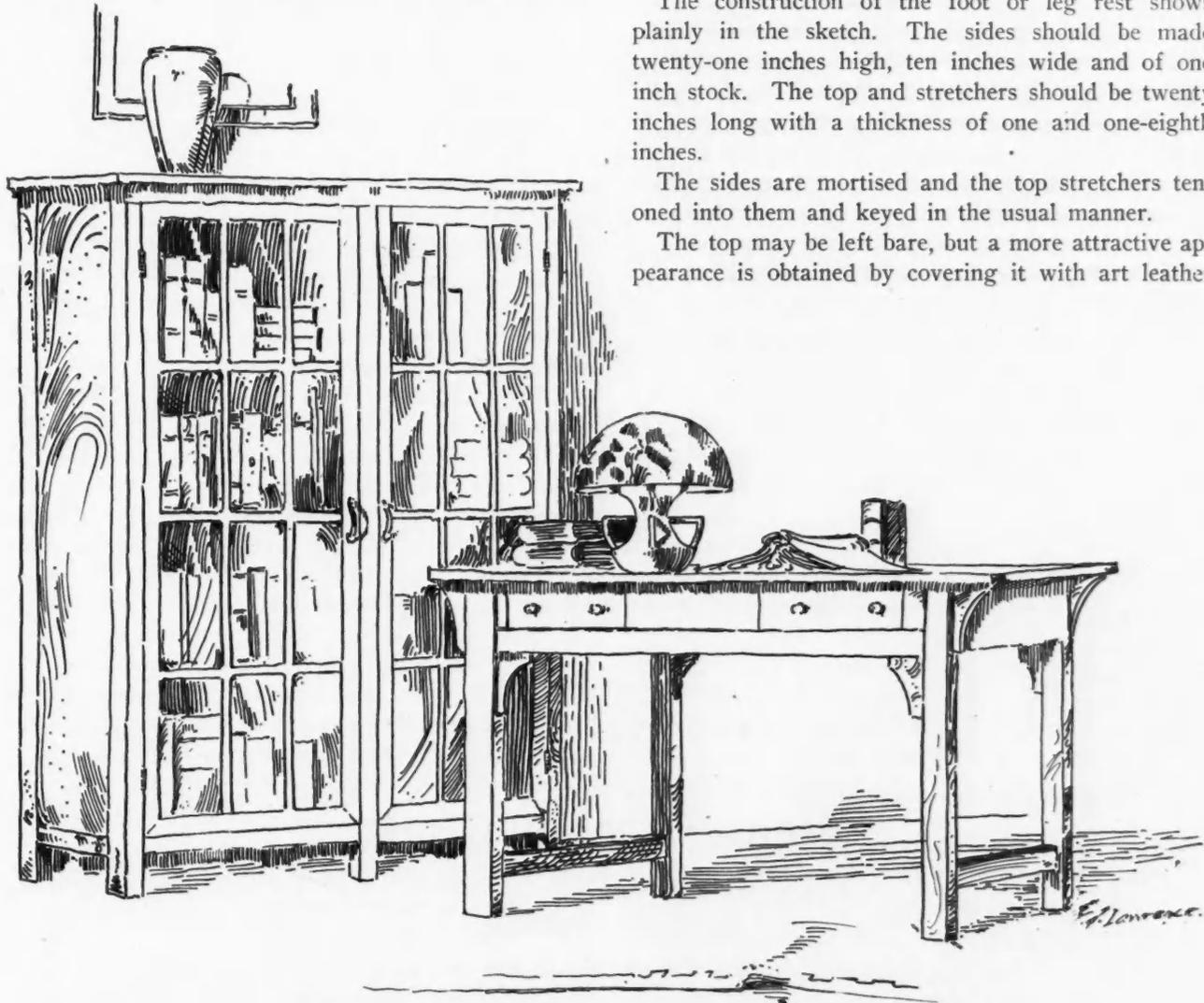


Fig. 2. Book Case and Table for Library or Living Room—A Credit to Any Home Work-Shop

twenty-eight inches high. The arms are of one and one-eighth inch stock and project back beyond the rear leg about ten inches.

The back is hinged to the rear rail of the chair by means of ordinary strap hinges, and is adjusted by means of a cross rod which fits into notches cut out of the inner edges of the arms. Tenons should be thoroughly pinned to the mortises, as well as glued.

Cushions may be bought at most any furniture store. Good Denim or Burlap covered cushions will cost from six to nine dollars, depending on whether they are cotton or hair filled. Cushions covered with art leather such as Spanish Roan will cost from sixteen

to twenty dollars. Cushions could be made by the home craftsman if he so desired. Leather stores, however, will not sell part of a hide, and to buy more than one might happen to need would be a poor proposition with the cost of leather as high as it is.

The bottom of the Morris chair might be finished by merely putting slats across at frequent intervals. A much more satisfactory way is to put in webbing and springs, upholstering over them with some cheap but strong material.

The construction of the foot or leg rest shows plainly in the sketch. The sides should be made twenty-one inches high, ten inches wide and of one inch stock. The top and stretchers should be twenty inches long with a thickness of one and one-eighth inches.

The sides are mortised and the top stretchers tenoned into them and keyed in the usual manner.

The top may be left bare, but a more attractive appearance is obtained by covering it with art leather

to match that of the cushions. It should be padded to make a comfortable place for the feet to rest upon. Ornamental headed nails are used to fasten the leather to the edges of the top. These may be obtained in colors to harmonize with that of the leather.

The light-stand would make a suitable piece of furniture for most any room of the house, but is especially appropriate for the den where it is desired to have the light close at hand. The drawers furnish an excellent place for keeping materials necessary for the pleasure of a quiet evening at home.

The top of such a stand should be about eighteen inches square. The legs should be thirty inches long

and two inches square. The drawer fronts should be three inches wide each. A one inch rail under each drawer would therefore necessitate side and back rails of a width equal to eight inches. These rails should be thoroughly mortised into the legs and, like the top and drawer fronts, should have a thickness of seven-eighths of an inch.

On small drawer construction, such as for these, too much care cannot be taken. The parts should be as thoroughly prepared and fitted together as are the legs or top. No better evidence of a good workman exists than the manner in which he makes and finishes the drawers. A slovenly workman thinks it does not matter whether he is careful or not, since the work is to be concealed most of the time. Not so with the good workman—blind dovetail joints are not too expensive for him, even if they do not show all the time.

The bookcase and table of Fig. 2 should be made of the same kind of wood and finished in a manner similar to those pieces just described.

Quarter-sawed white oak, well seasoned and especially selected, can in the writer's estimation be finished into as pretty pieces as many of the higher priced woods. Plain sawed oak takes Mission finishes nicely and is liked even better by some people whose tastes are too conservative to enjoy the striking "figures" of the oak when quarter-sawed.

The bookcase is of what might be called shell construction. The ends are single boards eleven inches wide, and seven-eighths of an inch thick. The shelves are of the same thickness. There are four shelves including the bottom, and these are fastened firmly to the end pieces by nails. They are not adjustable.

The front is of one and one-quarter inch stock, framed together and nailed to the shelves.

The doors are of one and one-eighth inch stock and have the rails placed so that each covers the edge of a shelf. Double strength glass is used for filling the panels. This glass should be "bedded" by placing soft putty in the rabbets and between the fillet and glass.

The back is framed out of one-quarter inch stock and paneled, and fastened to the shelves and end pieces by means of screws. The top is made wide enough and long enough to "over hang" the front. It is fastened to back, front and ends with finishing nails. All nail holes to be filled with putty colored to match the finish to be put on.

The size of the case will depend upon what it is wanted for. For a case thirty inches long or less, but one door should be used. Fifty-four inches is a good height with the depth as previously described. Forty, forty-eight and fifty-four inches are standard lengths.

The library table, Fig. 2, has nothing unusual in its construction. The legs may be made three inches square, or if an unusually massive effect is desired three and one-half inches, with a length of thirty inches. The top may be thirty-six by sixty or thirty-six by seventy-two inches with a thickness of one and one-quarter or one and one-half inches.

There is no shelf planned for below that it may be possible to draw a chair to the table and do writing or other literary work upon it conveniently. There are two drawers of small size designed to care for papers and writing materials.

Designs such as have been described may be finished appropriately in almost any of the prevailing styles. They look especially well with soft colored stains in dull waxed effects. If perfectly smooth surfaces are desired, colored fillers should be used, these to be followed with wax, rubbed down to a dull glow finish.

Stencil Decoration

THE DEVELOPMENT OF STENCILING AND ITS USE IN MODERN DECORATION—HOW THE STENCIL SHOULD BE DESIGNED, CUT AND APPLIED

By Sidney Phillips

THE art of stenciling is almost as old as that of decoration itself, although in its earlier forms it was but a crude and clumsy method for the duplication of a design. Nevertheless, the idea is such an elementary one that it was early conceived that a design might be indefinitely repeated if it were cut in thin sheet of metal, or any other substance, such as paper, parchment or the like, and the paint brushed on the surface to be decorated, through the openings or perforations left in the stencil plate. Stenciling was much used in medieval work, but began to be neglected in Europe at the time of the Renaissance, when decorative art was copied from the classic style rather than originating with the workman. The churches and palaces were ornamented with original paintings by great masters, while the people's homes went bare.

But as time passed on and the people began to grow

richer, they demanded ornament in their houses; and the art of stenciling was again revived as a decoration. It was ordinarily crude in design and usually consisted of an attempt to imitate those forms of ornament which would be difficult to paint, except in free-hand work. In order to overcome the mechanical difficulties of making the stencil, the ties that are necessary to hold the parts together were left wherever they might be needed for strength, and hence became mere meaningless breaks in the continuity of the ornament, which must necessarily be touched out by hand before the design was perfect. As this added materially to the expense, the ordinary stencil borders and other ornamental work in moderate priced dwelling houses, and even in the churches and public buildings, up to a comparatively recent period, were crude in design, and inartistic in character and finish.

When Japanese art began to be popular, about thirty years ago, it was found that these clever little brown men of the East had carried the art of stencil cutting and reproduction by means of stencils to a stage of perfection which we have been unable to equal even yet.



Fig. 1.

The most intricate ornamental designs, pictures of men, birds and fishes, are all reproduced by means of stencils, with a delicacy that the clumsy fingers of the western peoples cannot hope to imitate. Nevertheless our designers have been able to study the principles of design used by the Japanese, and by applying them, the art of stenciling has advanced wonderfully within the past score of years. It was seen that the Japanese so designed their ornaments which were to be reproduced by stenciling that the ties formed a natural part of the design, rather than a break across places which should be continuous. In other words, they adapted the design of their ornament to the limitations of the stencil, instead of making an attempt to produce ornament by stenciling that is adapted only for free-hand reproduction. The growth of the New Art, which had its origin with William Morris and has since been wonderfully developed both in England, Germany and France, and has been the actuating spirit in the Misson and the Craftsman styles in this country, has given a great impetus to stencil decoration, since the spirit of the new art is to let the construction be frank.

Stencil decoration, although a mechanical method of reproduction, is nevertheless capable of greater individuality in both its treatment and its execution than any other method of ornamentation except actual free-hand painting. Not only is it possible for the decorator to design and cut his own stencils to suit the requirement of the work in hand, and so impress his own originality on their design—a thing he cannot do with wall paper or other applied ornament—but by varying the color and the methods of handling the brush, he can produce many different treatments with the same stencil, and can change the effect very much in different parts of the same room, when desirable.



Fig. 2.

The interest taken by decorators and the public alike, in this new art of stenciling, has made it possible to obtain high class cut paper stencils adapted to all purposes and in almost all the period styles. There are several stencil designers, principally in New York and Chicago, who make a business of supplying decorators with these stencils, ready cut, and who not only issue catalogues containing large numbers of

designs which will be cut and supplied on short notice, but who will also design a special decoration for any room and will furnish all the necessary stencils for it as well as a color scheme, if desired.

Using the Stencil

The stencils used by decorators are usually cut from a tough manila paper that has been treated so that it will not be affected by either oil or water color paint. A tough and not too heavy paper should be selected, such as architects use for making detail drawings, and saturated with boiled linseed oil, after which it should be hung up until thoroughly dry. Then a thin coat of shellac varnish should be applied to both sides of the paper. This treatment makes the paper very tough and durable, while the shellac makes it impervious to the color. Some painters use an ordinary oil paint instead of shellac. Ready prepared paper may be bought, if the designer does not care to go to the trouble of making it for himself. Where stencils are subjected to a great deal of rough use, such as those used in railroad car shops that are employed for lettering freight cars, they are sometimes made of shade cloth or of this material fastened to a paper backing by means of shellac, and then painted both on the face and back. These stencils, however, lack the delicacy of the cut paper stencils first described, because their greater thickness makes it more difficult for the operator to get the brush down into the corners of the design, which therefore lacks sharpness.

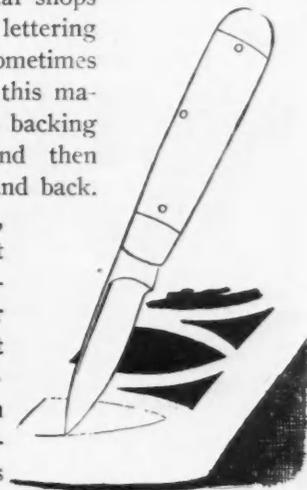


Figure 3

In using a border or frieze stencil, a chalk line should first be snapped around the room as a guide line. Some decorators prefer to use charcoal instead of chalk, because the latter leaves a mark of a somewhat greasy nature, which is difficult to erase, while charcoal may readily be dusted off. Moreover, the chalk has a tendency to cause peeling in the paint. Where a design is continuous, as in the case of a border, it is sometimes the custom to punch four quarter-inch holes, at the corners of a rectangle, the sides of which are the repeat lines of the design, produced above and below the pattern, as guides or register marks, the same as are used in color printing. This is needed when two or more stencils of different colors are used; but where only a single stencil is employed, it is not required if the same opening occurs at both the right and the left ends of the stencil. It is merely necessary to see that the opening at the left exactly covers the last portion of the ornament to the right of that already stenciled, in order to get the distance that the stencil is to be moved

to the right; while notches cut in the edges of the stencil to the right and left, and kept on the chalk line, will insure the pattern running straight or level. In any but the smallest patterns the stencil should be secured by two or more push pins or thumb tacks to insure that it is not moved during the operation of stenciling.

In order to insure sharp outlines, the stencil must be cleaned off occasionally with a rag dampened with turpentine or benzine, if using oil paint, or with a rag dampened with water if using water color. Lay the plate face down on a piece of clean paper laid on a table, exposing the smeared side of the stencil, and gathering the rag into a bunch so that the edges will not catch on the stencil, rub carefully with a circular movement. When the work is finished, the stencil should be carefully cleaned before putting away.

The brushes used for stenciling should have flat or square ends, and are indicated in Figs. 1 and 2. Special brushes are made for the purpose by all manufacturers of paint brushes. For small work, where a special brush is not obtainable, a shaving brush may be cut off so as to have a flat end. For large stencils, special brushes are made, shaped like those shown in

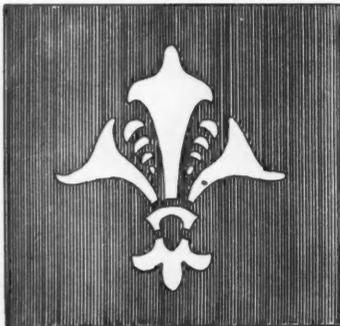


Figure 4



Figure 5

Fig. 2. In any case, the handle should be short, the brush being held between the thumb and middle finger, with the fore finger on the end of the handle. Held in this position, the workman is soon able to judge by the sense of touch whether the paint is being properly applied or not. Japanese brushes made of soft fine hair can be obtained that are much better than ordinary bristle brushes.

Whether oil or water colors are used, the paint must be mixed stouter or thicker than for ordinary painting, or say about the consistency of thick cream or thin paste. The paint must not be very quick drying, except for textile fabrics or other surfaces that have not been newly painted. The paint must be strained through wire gauze or cheese cloth before using, in order to avoid lumps of any kind.

The stencil brush, which must be clean and dry, to begin with, is dipped lightly in the paint and then rubbed two or three times on a palette or piece of stout paper that must be kept handy, in order to remove any surplus paint in the brush. The paint is applied by a gentle hammering or tapping of the brush, known as "stippling." The brush must not

be rubbed as in ordinary painting or the color will be scraped off and carried under the edge of the stencil, giving smeared or woolly edges, such as one sees on boxes when they have been carelessly lettered by means of brass stencils. The stippling should be started on the largest openings, where too much color on the brush will not be so disastrous as it would be

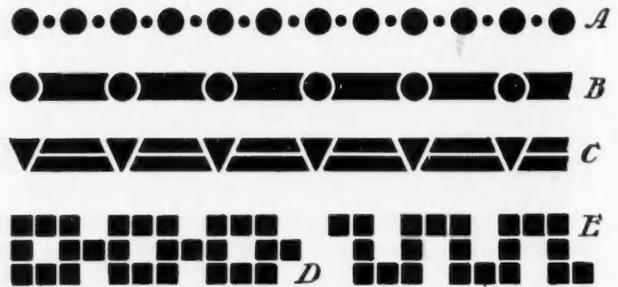


Figure 6

on the smaller openings, and the brush must be worked from the edges toward the center in every case. Whenever practicable, keep the edge of the opening under the brush, and never brush toward the edge or the color will run under it. The smaller details of the design should be finished with a very moderately charged brush. Before lifting the stencil, it should be carefully examined to see whether any place has been left uncolored, especially in the sharp corners and angles. Defects of this kind are much more apparent after the stencil has been lifted than before, so great care must be exercised. The plate must be lifted very carefully, after the pins have been removed, in order to avoid sliding the stencil over the wet paint and producing smears.

Very beautiful effects can be obtained by the use of two colors on the same stencil, using two brushes and blending one color into the other. Or different parts of the design may be stenciled in different colors. Odd and beautiful effects are sometimes obtained by wiping out a portion of the color, here and there, by means of a soft cotton rag held over the thumb. This must be done while the stencil plate still remains on the work.

Stenciling may also be done by means of a spraying apparatus. This gives very soft results, especially with water colors. Where the special apparatus made



Figure 7

for this purpose is not obtainable, an atomizer, such as is used in spraying perfumes, can be employed. It can be obtained at small cost at any drug store. For this, a thin and very fluid color will be needed to avoid clogging, and Diamond dyes have been recommended.

Cutting Stencils

Before cutting a stencil, the design should be transferred to the stencil paper by means of a carbon transfer sheet, such as is used for duplicating on the type-

writer. This is laid, face downward, on the stencil sheet, and the design is pinned down above it, face upward. Its outlines are then followed with a sharp, hard lead pencil. On removing the design and carbon sheet, the outlines will be found transferred to the stencil sheet. The cutting must be done with the sharp point of a knife, held in the position indicated by Figure 3, always cutting toward the operator. The surface to cut on must be either a sheet of glass or zinc, the former being preferable. An oilstone must be kept at hand and the knife sharpened frequently. A pocket knife with a short, stiff blade, of the shape indicated, may be used for cutting. A shoe knife, or one of the knives used by bookkeepers for erasing, can be employed if desired. A clean, sharp cut must always be made, and the stencil paper should be turned as the work progresses.

Figure 4 indicates a sheet of stencil paper with a design of a modified fleur-de-lis cut in it, while Fig. 5 shows the same design as it would appear when stenciled.

Suggestions for Simple Stencils

While stencil decoration may be of the most elaborate character, it will be sufficient, for the purpose of this article, to illustrate only a few simple stencils, rather as types than for any other purpose. A number of narrow borders are shown by Fig. 6. "A" shows a border made up of a series of circles, alternately larger and smaller. These can either be cut out by a knife, as already described; in which case

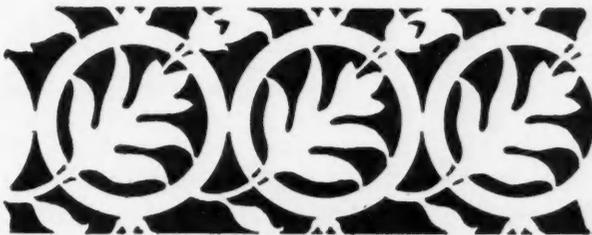


Figure 8

they will be slightly irregular, or they may be punched with steel punches that can be obtained in a number of sizes, varying by an eighth inch in diameter. In making a stencil plate for a border of this kind, from a foot to eighteen inches should be made, in order to save time in stenciling.

A very useful border, that can frequently be combined with other designs as a part of an elaborate frieze, is shown at "B." "C" gives a hint for another border of a simple type that is capable of many variations. Diamonds or squares may take the place of the triangular figures, or three or more bars may be employed, instead of two, as shown.

Mosaic patterns are specially adapted for simple stenciling, types of them being shown by "D" and "E." These may be further elaborated into Greek fret and other complicated designs, all based on the repetition of squares. For work near the eye the squares should be from a half to three-quarters of an

inch. These few borders will show that it is possible to build up quite elaborate schemes of decoration from very simple elements, when used in differing combinations or arrangements.

A type of stencil that is very effective is known as the background stencil, because the background is stenciled in, and the design stands out upon it in the ground color to which the stenciling has been applied. Fig. 7 is a simple border of this type that is very effective. A lattice pattern may be made up of the



Figure 9

same general character. Fig. 8 is a much more elaborate border, based on the principle of the background stencil. In a design of this kind, care must be exercised to make it of such a character that the strength of the paper will not be impaired by too much cutting away. Angles projecting into the openings must also be avoided as much as possible. It will be noticed that any design suited for a background stencil is also adapted for executing in fretwork.

Figure 9 is a simple and effective border in the new art style, that shows how readily the ties may be made to become an essential part of the design. Depending on the size to which this is enlarged, this design is capable of many uses, from a simple dado cap to a narrow frieze.

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In the Realm of the Housewife

To make biscuits light—drench with gasoline and ignite before serving.

How to keep servants—chloroform them and lock them in the cellar.

Quickest way to get rid of peddlers—buy all they have.

How to remove fruit stains from linen—use scissors.

To keep rats out of the pantry—place all food in the cellar.

To entertain men visitors—feed the brutes.

To keep the children at home—lock up all their clothes.

To keep hubby at home—hide his toupee.

In order to prevent accidents in the kitchen—fill the gasoline can with water.

To stop leaks in pipes—send for the nearest plumber.

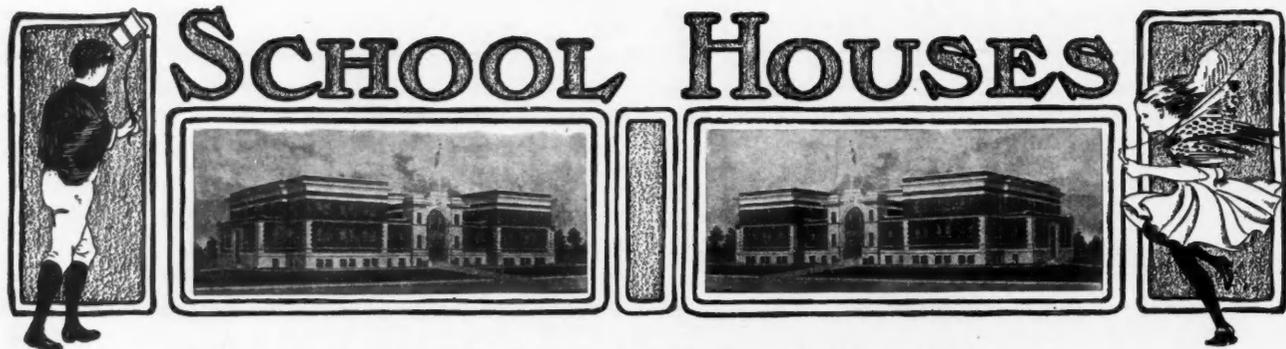
To economize on coal—get a gas range.

To test the freshness of eggs—drop them on some hard surface.

To propitiate the janitor—it can't be done.

+

As a rule chesty men are narrow minded.



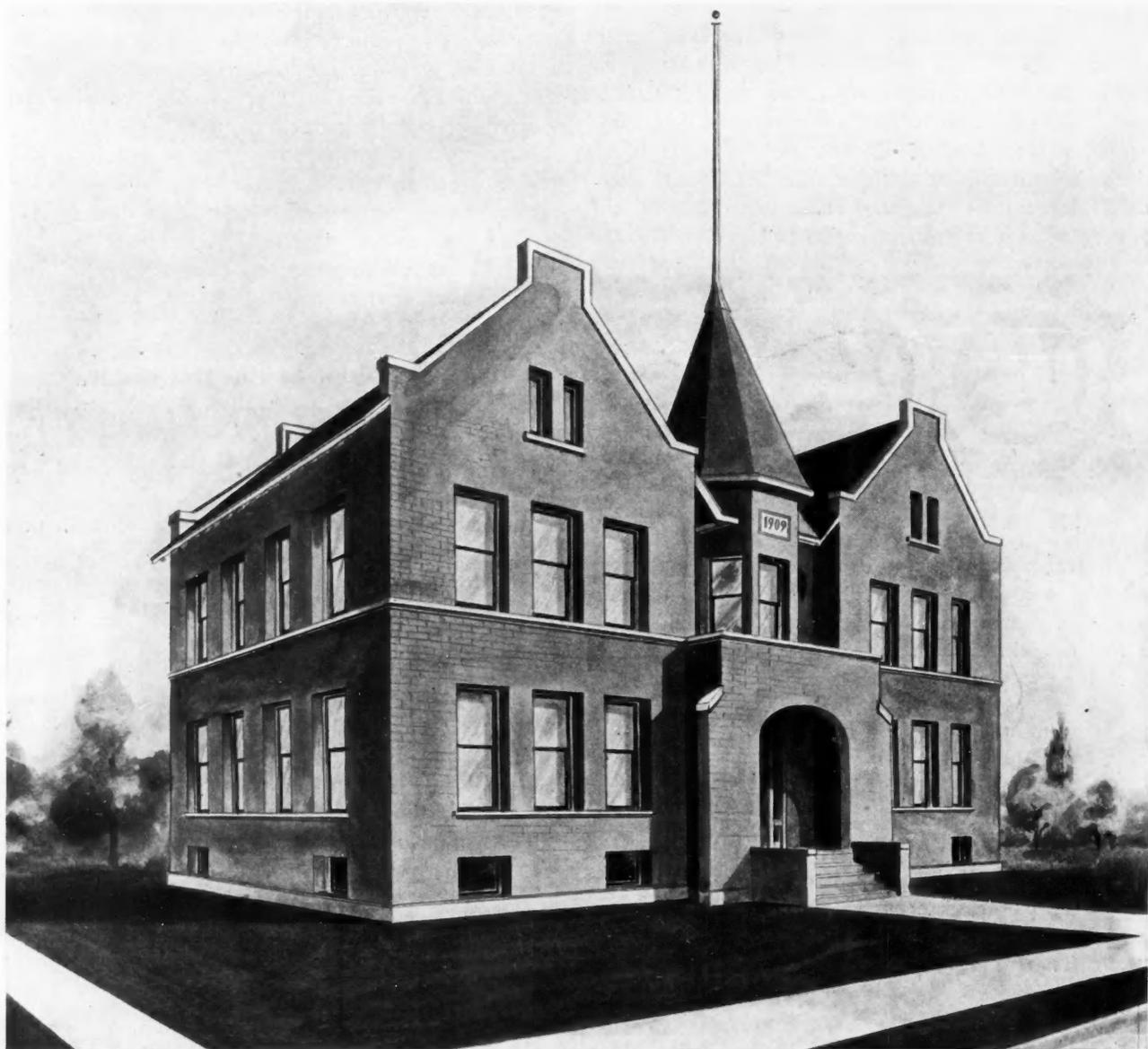
An Attractive School Building

PERSPECTIVE AND FLOOR PLANS OF A PLEASING, THOROUGHLY MODERN BUILDING OF SMALL SIZE—FEATURES OF SPECIAL INTEREST POINTED OUT

WE ARE showing this month a modern four-room school building of very satisfactory design—the work of Geo. W. Ashby, architect. In exterior treatment the effort has been to avoid the use of extravagant material and ornamentation, and the striving for effect not justified by the purposes of the building. The walls are of brick, mixed as to

color and laid up with a large bed joint in pleasing bond. Stone is used sparingly.

The building is of fireproof construction, except the pitched roofs, which for economical reasons are of "mill construction." All outer and interior bearing walls are of hard brick laid in Portland cement mortar. Interior non-bearing partitions are of hollow tile,



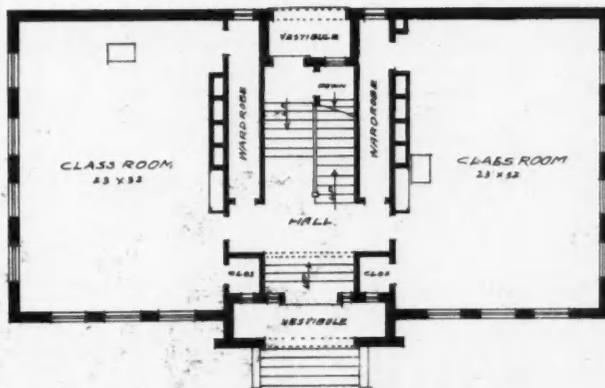
and the building is plastered with cement plaster.

The interior finish is reduced to a minimum, such woodwork as is used being of oak in plain design. Class rooms and corridors are painted in lead and oil, the colors being carefully selected with respect to the location of each room. A simple stencil frieze is provided for each class room, while the kindergarten is decorated with mural paintings typifying the life of childhood.

The floor plans show very well the simple, commodious arrangement of the rooms and halls. The basement is nicely finished for heating plant, toilet rooms and play rooms.

Cement Concrete Fireproofing

Many persons who, ten years ago, were opposed (on account of the general lack of knowledge) to this form of construction, but who have followed up the baptism of the material in fire and water, through



School Building—First Floor Plan

which it has come unscathed, can now defend this construction with complete success.

Ten years ago the public knew comparatively little of the merits of cement concrete for fireproofing purposes. There was at that time a greatly increased demand for a homogeneous fireproofing material which could be scientifically and expeditiously made; which would become uniform throughout the floor, in irregular places as well as in square panels; which would unite with and protect all parts of steel members from rust as well as from heat; which could be designed to carry any desired load; which could be made in any shape to suit conditions; which could be made in the lightest forms to save the weight of supporting steel.

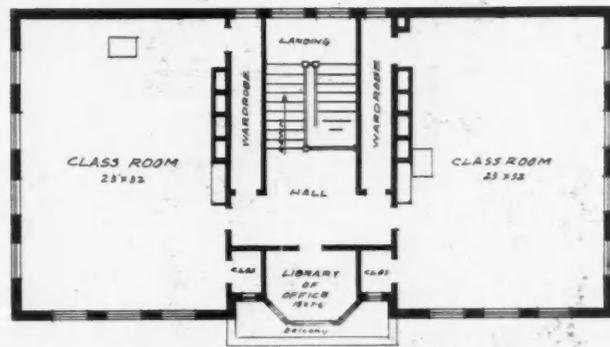
Since the New York City building laws of 1899 every form of fireproof construction made of cement concrete has had to pass very rigid tests prescribed in Sec. 106 of the law. All of the cement concrete fireproofing now installed in New York City has been subjected to the several tests and has had the approval of the superintendent of buildings.

The requirement of four hours of heat, much higher than ever attained in a building conflagration, followed by the regulation stream of cold water under high pressure, all on a loaded full sized floor panel; finally

loaded to 600 pounds per square feet, was sufficient evidence of the merits of the material, as a fireproofing, to everyone witnessing these tests.

After the fire test, and the approval of the construction, any such flooring, designed to carry more than a safe floor load of 150 pounds per square foot, was subjected to a load test of ten times the safe load required. The testing of this form of construction was persisted in by the department of buildings, by architects and by engineers for several years, and the success of these tests was phenomenal to all concerned.

The reports of unbiased engineers of prominence and professors in engineering colleges on the great conflagrations of recent years (principally Baltimore and San Francisco) has done much towards educating the public in the merits of cement concrete and popularizing it as a building construction. On account of the lightness of cinders and the peculiar elasticity of the concrete from them, to expand and contract in re-



School Building—Second Floor Plan

sisting heat, the cinder concrete fireproofing has generally been used for floors between steel beams.

Great improvements in recent years in the practical manipulation of centering, mixing, handling and reinforcing cinder concrete has greatly facilitated and cheapened its construction for this kind of floors.

It is now recognized as by far the speediest and most convenient form of floor construction. There are at present no fireproof contractors, not even those who formerly erected other kinds exclusively, who do not construct largely of this material.

Forgetfulness

"My wife," growled Kadley, "is the most forgetful woman."

"Indeed?" inquired his friend politely.

"Yes; she can never remember in the morning where I left my pipe the night before."

Often the Way

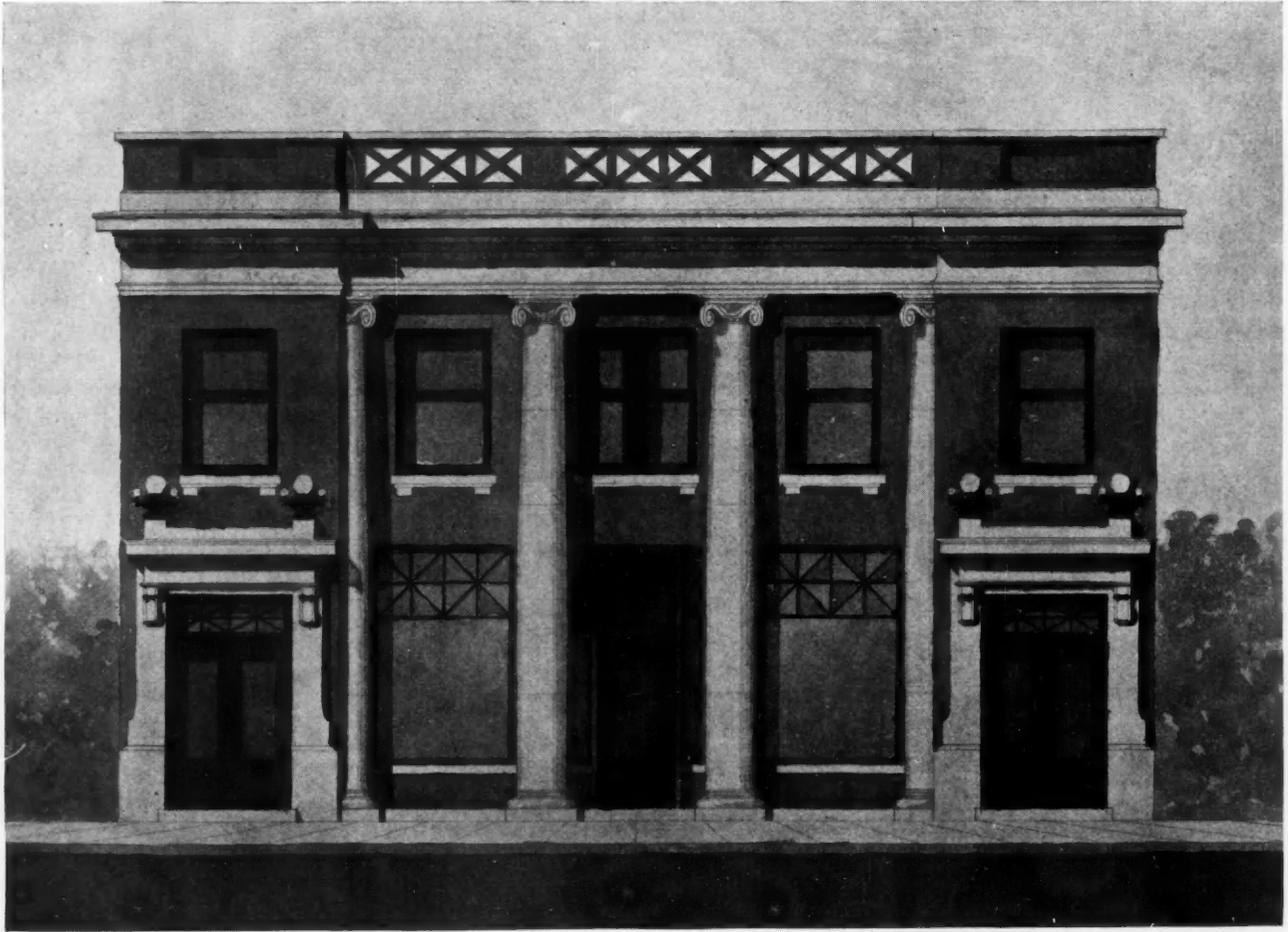
When the candidate's speech of acceptance had dragged into the second hour he felt his coat plucked by a member of the committee. "Say, old man," was the hoarse whisper, "we didn't nominate you for president; you've been nominated for hog reeve."

Bank Store and Office Building

A CLASSIC DESIGN PRESENTED FOR A COMBINATION BUSINESS BLOCK OF EXCEPTIONAL STRENGTH AND BEAUTY—SPECIAL FEATURES POINTED OUT

THE time has past—if indeed there ever was such a time—when general appearances did not play a very important part in the success of any business enterprise. The principle is now thoroughly

as regards strength and richness of appearance, for a small business block. The illustration shows very well how the problem was handled. The materials used are dark brown vitrified brick, columns and trim-



Small Business Block of Classic Design

well recognized that it is sound economy to house a business well—extravagantly even, but in any case richly—that to make money it is necessary first to spend it. Offices are now furnished and business blocks are erected and equipped in a way to startle the old conservatives; yet experience has taught that it pays.

The accompanying design, by G. W. Ashby, architect, was made to meet the most exacting demands

of Bedford lime stone, light clusters and window bars of bronze and doors mahogany veneer. The interior, first floor, is finished in mahogany.

The floor plans show the interior arrangement. The first floor provides for bank and store, the second floor for one three office suite, one five room flat and one four room flat. The arrangement is modern and convenient in each case. Dimensioned floor plans are given on the adjoining page.

Some Timely Furnace "Don'ts"

DON'T put your furnaces in too small—it is poor economy and expensive in the long run.

Don't fail to give the owner a few instructions before turning the job over to him—a word in time often saves angry words later and a dissatisfied customer—which is the poorest kind of an ad.

Don't fail to damper all pipes and connect up the drafts to the chain plate upstairs. These are little things, but it is the little things in the heating business that count.

Don't fail to examine the chimney carefully when estimating; a good draft is absolutely essential—a poor draft will condemn the best of jobs. No furnace flue

should be smaller than 8 inches, and from that to 12 inches.

Don't leave heat pipes uncovered—asbestos paper is cheap and coal expensive.

Don't forget the smoke-pipe damper—the check damper is good, but both are better.

Don't let the mistress of the house or the owner tell you where the registers should be placed—you know, and they only think they do.

Don't guess on the size of the cold air box—be exact. More mistakes are made in cold air supply than in any other part of hot air heating. With inside air have full capacity of heat pipes; with outside air, one-third less.

Don't locate cold air faces in side walls, under stairs, or in air-bound corners—many have already tried it unsuccessfully.

Don't agree to heat the building with "very, very little coal"—the age of fuelless heaters is still far

same length and as short as practical. However, pipes running to exposed rooms should be larger and if possible shorter than the others.

Don't make sharp bends in the heat pipes, and avoid all unnecessary elbows.

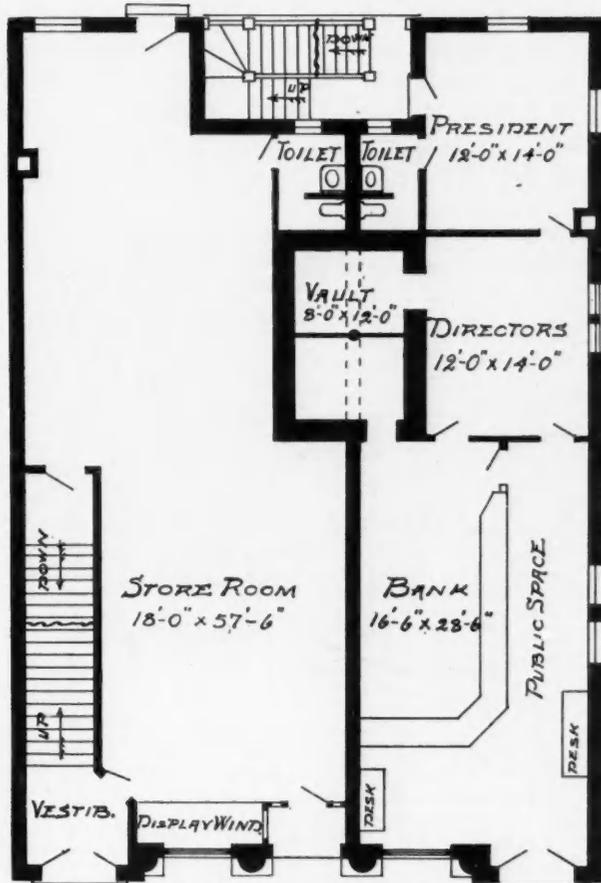
Don't run pipes in outside walls unless absolutely necessary in order to reach the upper rooms—oval pipes can be run in partitions and round pipes in closets and chimneys.

Don't neglect to pack carefully all joints, and to cement around the door frames—the furnace which leaks gas is an abomination.

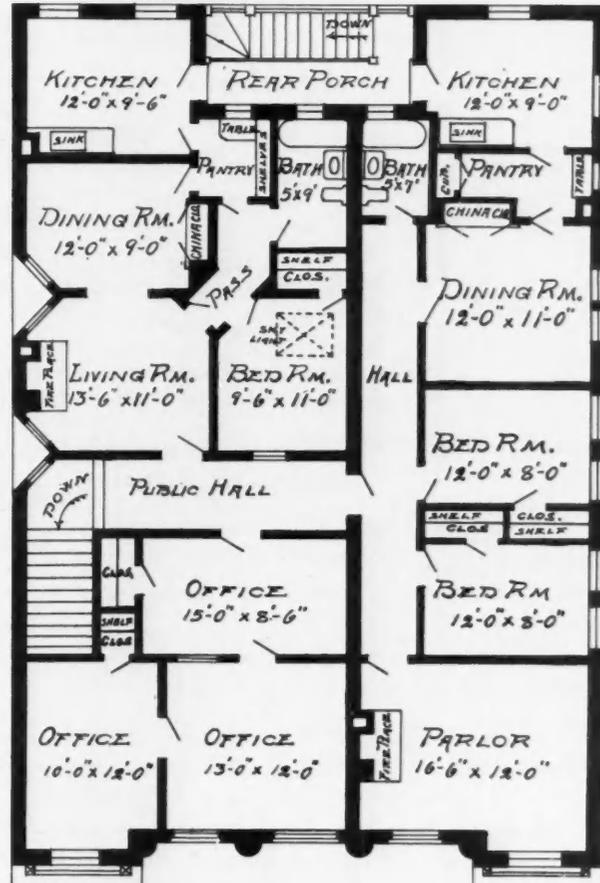
Don't face the furnace directly away from the coal bin.

Don't take the job unless you can get a price which will enable you to do it right—better to lose the work than to install an unsatisfactory job.

Don't use smaller than 7-inch round pipe for any cellar connection, no matter how small the room—the



Plan—Store and Banking Floor



Plan Second Floor—Offices and Flats

distant and your promises are apt to come back to you when the bill is presented for payment.

Don't take some pipes off the top of the casing and some off the side—it won't work.

Don't fail to elevate all pipes as much as possible—hot air will not travel horizontally, and all pipes should have a gradual and appreciable rise from the furnace to the register.

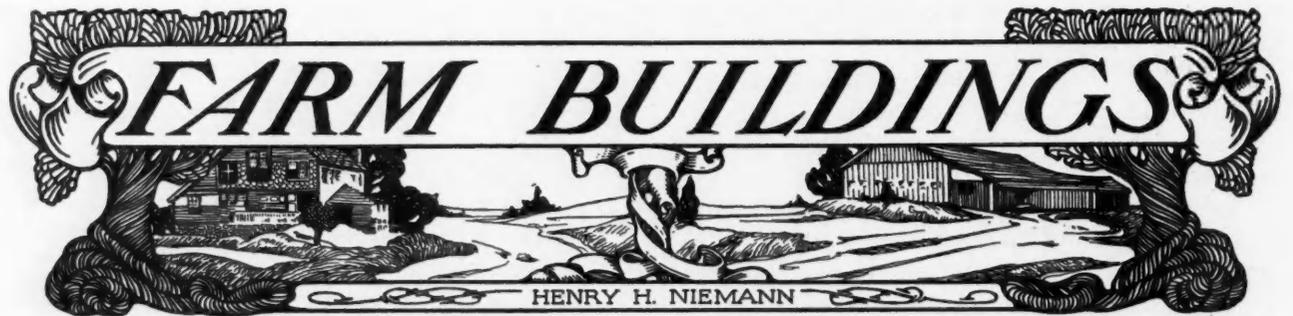
Don't set the furnace at one end of the cellar—locate it centrally, about one-third nearer the more exposed side of the building, and have all pipes as near the

usual residence size is 8 inches to 12 inches.

Don't run round cellar pipes directly into the square pipe—use a boot or foot piece. All pipes should be on a level when they leave the casing, no matter what the size.

Don't fail to line the woodwork with tin or asbestos paper, wherever any smoke-pipe or hot air pipe comes close to it.

Don't forget that satisfaction is remembered long after the price is forgotten—in nothing is this more true than in heating.



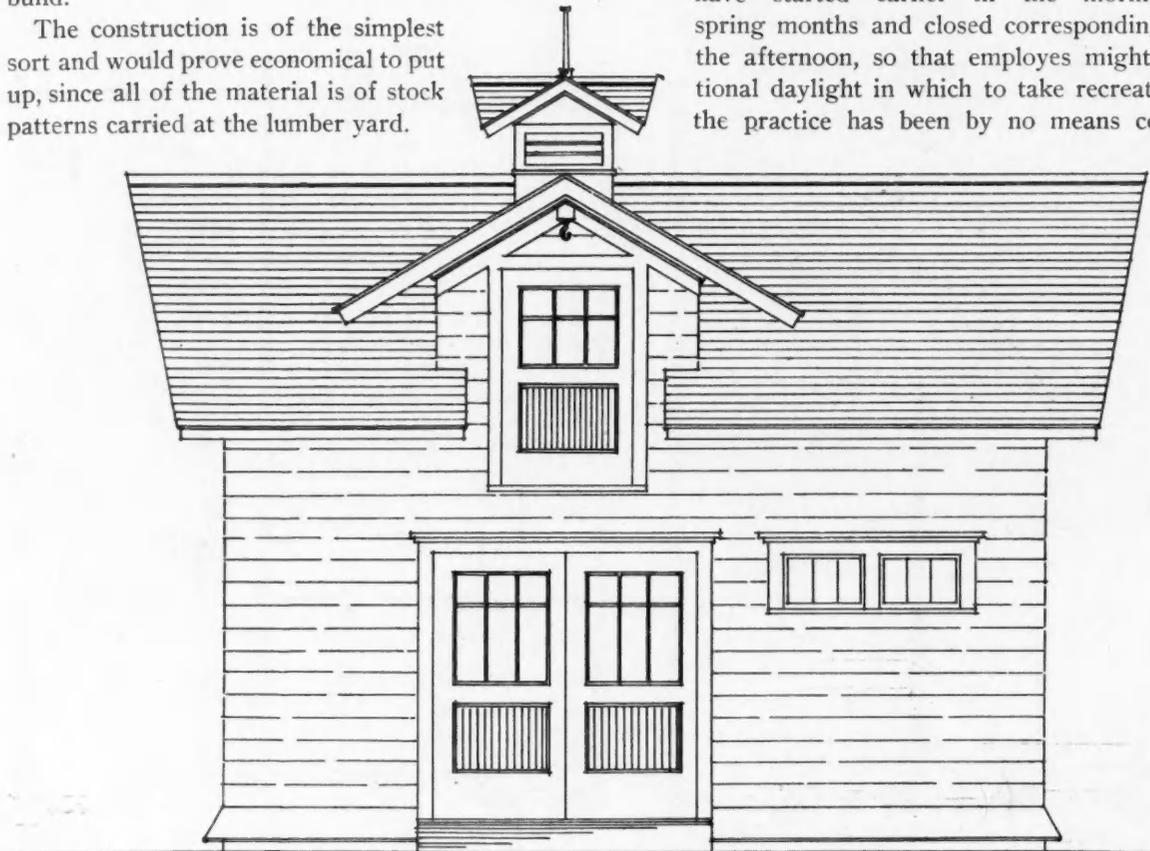
A Small Desirable Horse Barn

DESIGN FOR AN ATTRACTIVE, INEXPENSIVE LITTLE STRUCTURE SUITABLE FOR TOWN OR COUNTRY—
FOR DOBBIN-CHAISE OR SNEEZE-WAGON

PLANS for a small barn of simple yet pleasing design are presented herewith. Its general appearance is such that it would do credit to the grounds of any town or suburban house—harmonizing with almost any style of architecture. It is small, just about the size that the average man wants to build.

The construction is of the simplest sort and would prove economical to put up, since all of the material is of stock patterns carried at the lumber yard.

all the clocks ahead an hour or so in the spring, so that the people will get greater benefit from the long daylight, is generally regarded in this country as impracticable. Yet it recalls that there is a sort of precedent for the suggested custom in American industry. In some trades in New England the factories have started earlier in the morning in the spring months and closed correspondingly early in the afternoon, so that employes might have additional daylight in which to take recreation. While the practice has been by no means common, yet



Front Elevation

The floor plans show a square layout, the first floor being divided into a large carriage room and two horse stalls, and the second floor making provision for hay and grain storage and a man's room with closets. A ceiled and finished room of this kind in a barn is often of great use and convenience as a safe and dry storage place for trunks, extra household goods, etc.

Earlier Working Hours

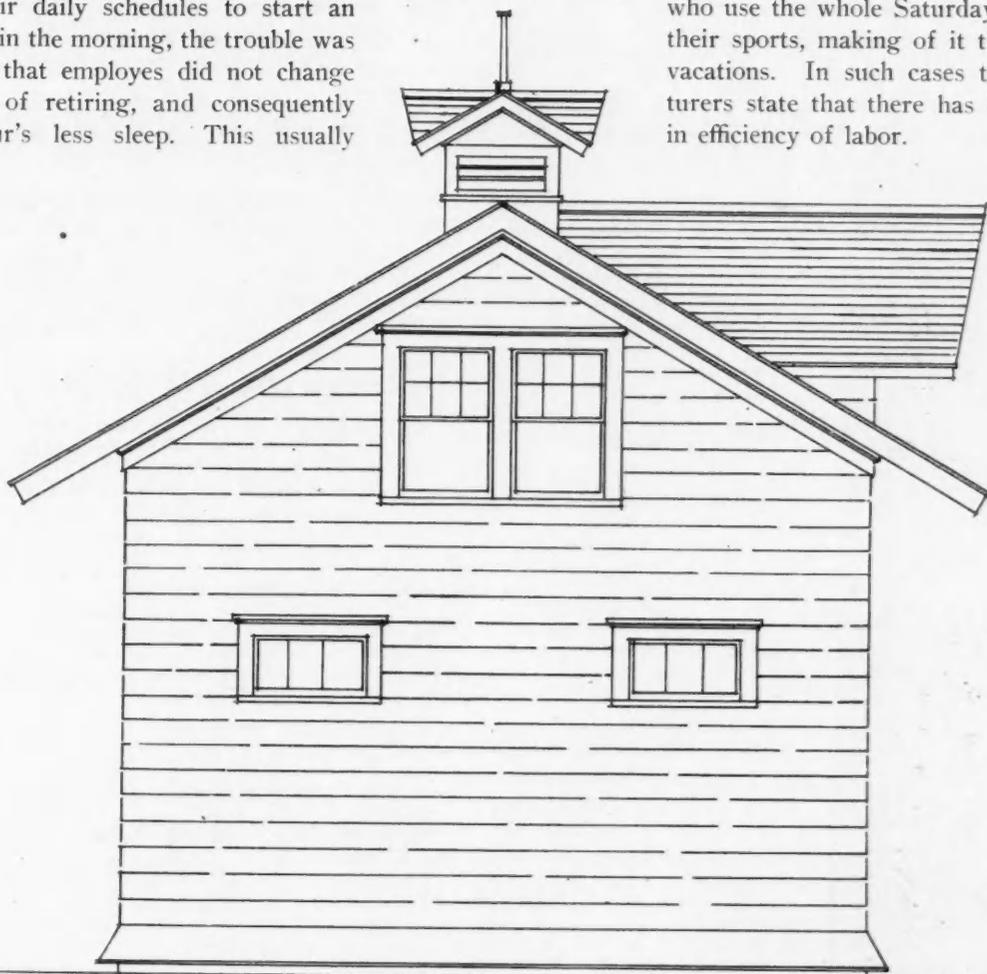
The movement in the British Parliament to set

it formerly existed, and even now instances of it might readily be cited.

The English idea is to set the clocks of the country about an hour ahead in the early spring so that while the morning work will start at the same time by the clock, it will really be an hour earlier. It would be 7 a. m. when it is now 6. Bed time would be correspondingly earlier. The people, however, would have more daylight in their waking hours. In general theory the idea is not an impossible one. Each spring the clocks

would be set ahead, to be put back again in the autumn. It is stated that in those American works which changed their daily schedules to start an hour earlier in the morning, the trouble was experienced that employes did not change their hours of retiring, and consequently got an hour's less sleep. This usually

loss of time. This custom has been followed for years in certain textile mills employing English workmen, who use the whole Saturday holiday for their sports, making of it their summer vacations. In such cases the manufacturers state that there has been no loss in efficiency of labor.



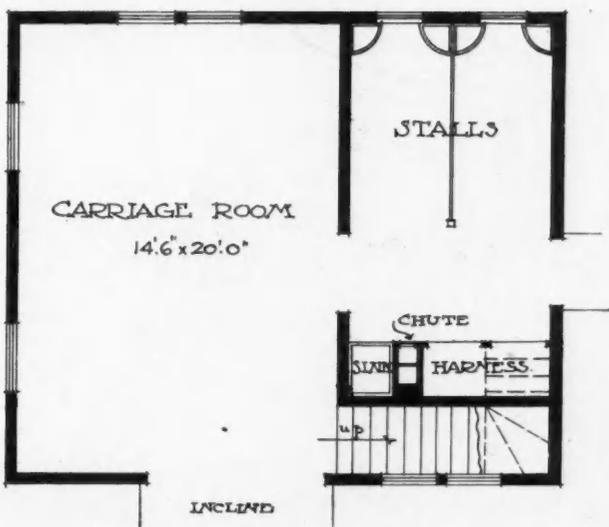
Side Elevation

meant a loss in production, because a sleepy workman loses some of his efficiency.

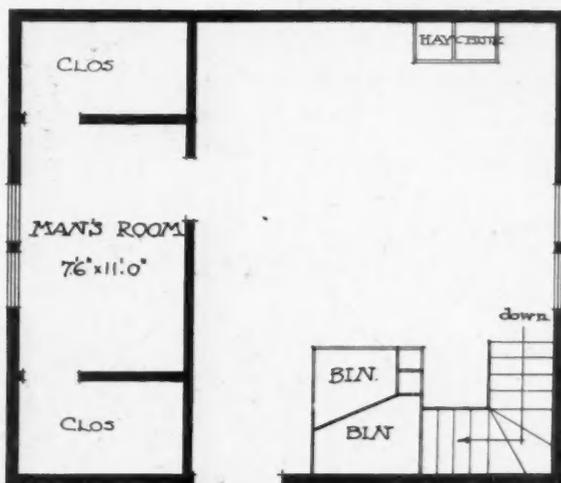
Another manner of changing schedules in the spring

Reassuring

A lady on one of the ocean liners who seemed very much afraid of icebergs asked the captain what



First Floor Plan

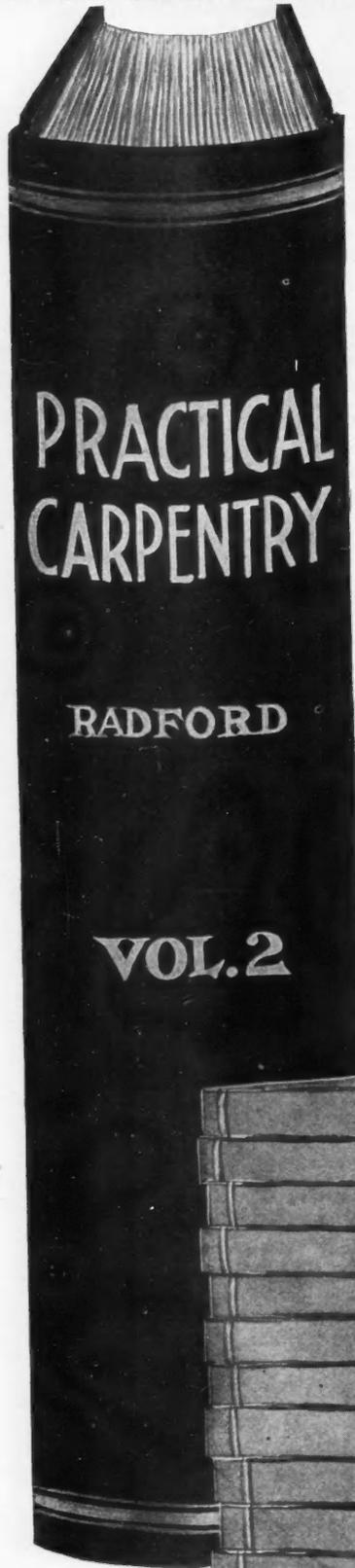


Second Floor Plan

has been to run 11 hours a day for five days, starting at 6:30 a. m. and allowing but half an hour at noon, thus making up for a Saturday half holiday without

would happen in case of a collision. The captain replied: "The iceberg would move right along, madam, just as if nothing had happened," and the old lady seemed greatly relieved.

A Library so Simple, so that any intelligent man



IF you are a carpenter, contractor, builder, draftsman or apprentice you must learn all you can about the vital principles of your own work. You must keep up-to-date in the latest and best methods of building and construction work. You cannot stick to "rule-of-thumb" methods in this age of progress. You cannot apply the principles that may do for a barn or a cottage when you are working on a modern twenty-story sky-scraper; neither can you experiment on that kind of a job in order to find ways to make old methods solve new problems. You have got to know how or get off the job, and you can find out through

Practical Carpentry

New and Revised Up-to-date Two big volumes. Size of volumes, 6½ x 9 inches; handsomely and durably bound in red art canvas; over 700 pages of text; hundreds of plates, designs, diagrams, and special drawings; a large number of full-page plans correctly and accurately drawn to scale; hundreds of worked-out problems to show just how to do the work that is described.

The library is just what its name says it is, a practical, down-to-the-point work, that explains itself. There are no heavy technicalities or intricate mathematical problems to bewilder the man whose education is limited. It shows how to do the work just as you would show a fellow workman how to do a certain piece of work; it illustrates the explanation with pictures, drawings, diagrams and charts, just as you would have to do to make your explanation clear to him. That's Practical Carpentry, the most thorough and practical set of books on Carpentry and Building in existence. It is a work that takes you over the thousand and one problems that constantly confront you in your daily work. It shows you how to cut out the drudgery of your work, simply by adopting new time-saving short cuts that are described and explained. If there is one problem that bothers you, if there is a single obscure point in your work that worries you, this library will set you right.

From foundation to roof is a life's trip for a man that learns the way from experience. This set of books contains the whole story within its covers.

It is prepared by the best known authorities on building and construction in the world, and it is yours now almost for the asking.

The Library—What it is

It is impossible here to give any adequate description of the vital nature of the contents of this big set of books. It would take a book in itself to tell you all the benefits within your reach through this special library offer. The library consists of two big volumes on Practical Carpentry and a full year's subscription to the greatest building paper in the world—the American Carpenter and Builder. If you are not a subscriber—this is an unusual chance to subscribe. It offers the old reader the best opportunity to renew.

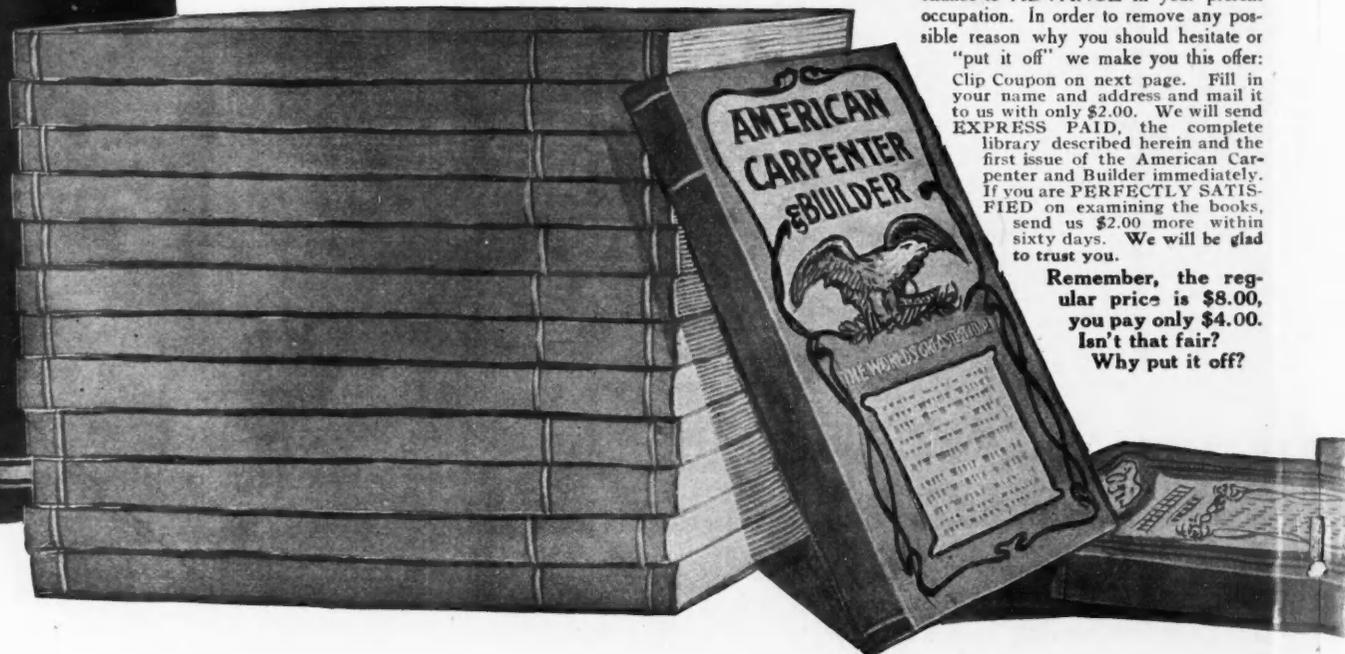
The Regular Price

Practical Carpentry is \$3.00 a volume, making the set cost \$6.00. The American Carpenter and Builder costs \$2.00 a year, therefore, the library consisting of the two volumes of Practical Carpentry and a full year's subscription to the American Carpenter and Builder will regularly bring \$8.00. For the next 30 days, however, to introduce these books, we will make a

Half Price Special "Easy Payment Offer"

We want you to take advantage of this chance to ADVANCE in your present occupation. In order to remove any possible reason why you should hesitate or "put it off" we make you this offer: Clip Coupon on next page. Fill in your name and address and mail it to us with only \$2.00. We will send EXPRESS PAID, the complete library described herein and the first issue of the American Carpenter and Builder immediately. If you are PERFECTLY SATISFIED on examining the books, send us \$2.00 more within sixty days. We will be glad to trust you.

Remember, the regular price is \$8.00, you pay only \$4.00. Isn't that fair? Why put it off?



so Thorough, so Practical, an can get real help from it.

WHEN you are in doubt about a difficult piece of work, what do **you** do to settle the thing right? The Lawyer has his Blackstone in such cases; he does not guess or work in the dark. The Physician has his big Medical Library to consult if he strikes a strange or difficult case; it means life or death for him to **know**. In this up-to-date age every profession, every trade, every business has its own way to get accurate, up-to-date information about new happenings in its field and complete descriptions of the latest and best methods employed. **You** in your work have the same chance to keep posted through

The American Carpenter and Builder

It is the biggest and best and most authoritative building magazine in the world. With its many plans and details of all kinds of private and public buildings, together with its numerous departments covering every feature of construction work, it keeps you posted on all that is happening in your trade. Every issue has practical articles on every conceivable subject of interest to the carpenter and builder; every article in the magazine is written by an expert; every plan or detail is one that has been used somewhere and can be depended upon to be absolutely correct. There is not a line of reading matter in this big, practical, up-to-date building magazine that is not useful and helpful to you. The ideas and suggestions contained in each number can be turned into dollars and cents profits. Every illustration contains its own story and there are more of them in every issue than can be found in any similar publication in the world.

The Library Tells How:

- | | | |
|--|--|---|
| <ul style="list-style-type: none"> To use queen rafter To add one-half story To support gambrel roof To lay out a gothic ceiling To construct a circular porch To make scaffold brackets To make a tool chest To finish white pine To cut siding for gable To look after little things To finish porch floors To make a transom window frame To put ropes in windows To plan a barn To support a ceiling To join the crown mould To construct "saw horses" To prevent leaky window frame To quarter-saw oak To file saws To construct ordinary stairs To paint a shingle roof To cut a pitch board To put risers and treads together To hang sliding parlor doors | <ul style="list-style-type: none"> To construct a fireplace To finish a store front To use metal lath To roof a store building To ventilate a barn To brace a roof To make barn doors To shingle hips and valleys To finish bar tops To shingle a circular roof To install furnace pipes To oil a floor To drain a floor To frame a house To tell a faulty construction To construct the sill To construct a cornice To construct the box sills To frame ordinary studding To construct a porch To cut window openings To halve sills To make a good corner To frame a joist bearer To set studding | <ul style="list-style-type: none"> To cut openings in frame work To affix joinery work To construct all kinds of roofs To construct lean-to or shed roof To construct a saddle roof To construct simple form of truss To construct scissors truss To construct hammer beam To construct king-post roofs To construct flat pitched roofs To construct queen-post roofs To find dimensions of tie beam To find dimensions of king-post To find dimensions of struts To find dimensions of queen-post To find dimensions of straining beam To find dimensions of purlins To find dimensions of common rafters To find dimensions of hip roof To find dimensions of backing To find dimensions of hip rafter To find dimensions of shoulder purlin To pierce a circular roof |
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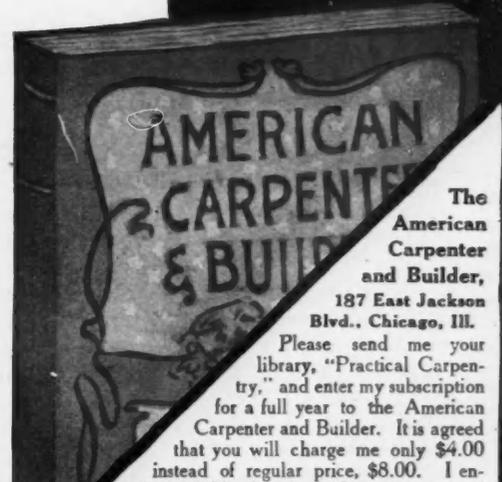
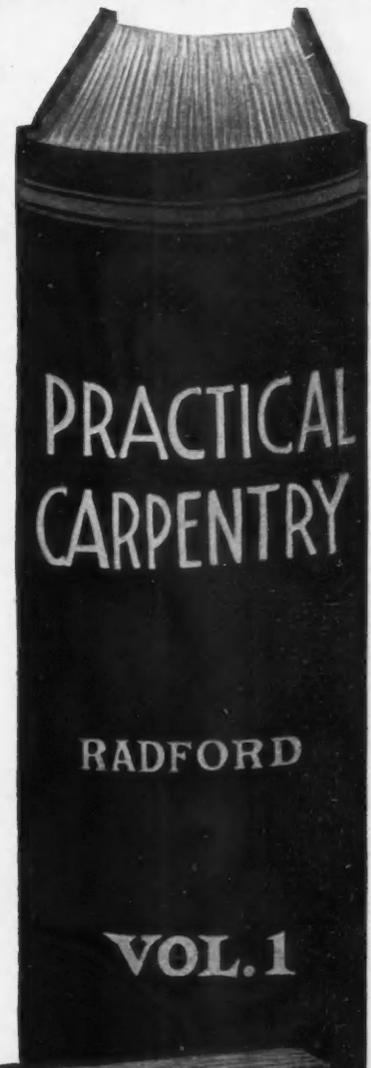
It Tells You What You Should Know About:

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| <ul style="list-style-type: none"> Geometry Arches Centers Window and door heads The steel square in carpentry House framing Roofs and roof construction Strength of beams Foundations Materials commonly used in walls of buildings | <ul style="list-style-type: none"> Bonding stretchers Lime, cement and mortar Cellar windows Girders Use of inside blinds Placing radiators Covering of roofs Shingling over a hip-ridge Moldings Clamping Keying | <ul style="list-style-type: none"> Scribing Chamfering Match boarding Joints, straps and other fastenings Resistance at the joint Effects of shrinkage and expansion Maxims to follow Stair building |
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It tells a thousand and one other things just as important. Why not sign the coupon now—either one—cash or "Easy Payment." We make the thing easy,

A simple plan described on page 725 of the September issue on "How to Keep Tools from Rusting" would doubtless save you many hard dollars in the course of a year, and yet that was only one little article out of the hundreds in that one issue. It is just little helpful hints like this one that makes the money you pay for the magazine **NOT AN EXPENSE** but **AN INVESTMENT**—a good investment that will bring you back many times over the amount you put into it.

"Easy Payment" Offer—



The American Carpenter and Builder, 187 East Jackson Blvd., Chicago, Ill. Please send me your library, "Practical Carpentry," and enter my subscription for a full year to the American Carpenter and Builder. It is agreed that you will charge me only \$4.00 instead of regular price, \$8.00. I enclose \$2.00 deposit and agree to send \$2.00 more within 60 days. If I am not satisfied you agree to remove books and give back my \$2.00 deposit. (10% discount for cash.)

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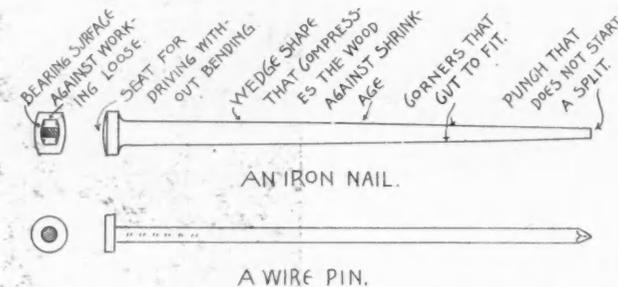


Wire vs. Iron Nails

To the Editor: Chicago, Ill.

There has been considerable discussion recently on the "nail" question, that is as to the relative durability and holding qualities of iron and wire nails. I am old-fashioned enough to prefer the square iron nail (along with some of the other good, sturdy old building methods). Doubtless all of you have observed the well preserved condition of the iron nails found in old buildings.

The reason that the iron nails were not rusted out is because of their shape. Their tapering sides wedge the wood



past the possibility of shrinking away from the iron and letting the water in. The point of an iron nail is also made to cut a hole through the wood as it is driven, while the pointed wire nail splits a hole through. This little split widens both sides of the nail as the wood seasons and lets moisture in. Then again the iron nail has a square bearing surface in the sides that resists working out. The round wire nail has no such grip.

Few people who drive a real nail appreciate what a complicated instrument it is. A person who stops to think why a nail is a nail would not recognize a nail in the wire article. That is a pin.

C. B. SCHAEFER.

Cess-pool for Bath-tub Drain

To the Editor: Meeker, Col.

I wish to inquire whether it would be advisable to construct a cess-pool for water from bath-tub and wash-basin only, in the following manner: With a patent post-hole digger or auger excavate a circular hole from 6 to 8 inches in diameter down to gravel, which in times gone by was a river bed. Insert 6 or 8 inch light iron or steel casing, make connections with waste pipes, and cover with, say, 4 inches of earth—below frost line.

Soil in this section is mostly a clay, and there is very little danger of caving. Several cess-pools, about 4 by 4 feet, have been dug, ranging from 20 to 35 feet in depth; and, in all, the walls were so solid that nothing was done toward curbing till excavations were completed.

The use of casing, as I have suggested, would lessen the expense materially, but whether it would be practicable or not is the question. The casing would hold a bath-tubful of water, and it seems to me would have ample time to drain off, that is to say in from 6 to 12 hours. What think you?

Have you ever heard of any such systems, and if so what kind of success is reported?

H. A. WILDHACK.

Answer: The authorities are against any system of drainage from habitations which depends upon the porosity of the sub-soil for the escape of the waste. The contention is that in time the interstices of the gravel are bound to become choked and a lateral spread of the sewerage take place.

A few years ago the writer took part in an agitation for the installation of a sewage system in a town having precisely the same condition of soil as described in the question. Many of the inhabitants objected to the provision of sewers as unnecessary, as the old cess-pools contained nothing when opened but dry sludge; the liquid effluent having passed away through the gravel. A few test holes were dug with the idea of refuting this contention and in the older and more densely populated portions of the town, the soil was found to be saturated with sewage in all directions.

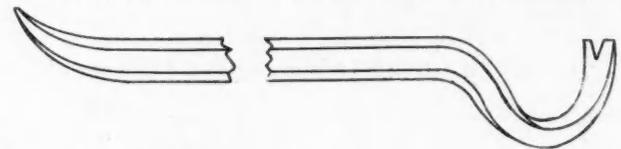
If nothing but bath and wash-bowl waste is to enter the drain, the period during which the subsoil would remain open and porous would be greatly prolonged and it may be that there is no serious objection to be raised in this instance. As a matter of principle, however, the method is unsound and cannot be recommended.

T. B. KIDNER.

A Convenient Wrecking Bar

To the Editor: Springfield, Ohio.

I am back again with another device for pulling nails and for ripping out old work. It is a small pinch bar which does



not need a block under the end to form a pry, as the end is curved and has a claw for drawing nails. It saves hammer handles and is one of the most handy tools in a shop for shifting machinery. I find it a very useful tool to have around.

WM. F. SINFIELD.

What Figures to Use

To the Editor: Wilmette, Ill.

I have a building 36 feet wide and 46 feet long, which is to have a roof with a rise of 6 feet. I would like to know a way of getting the length of hip and jack rafters by figures.

C. W. CHAPMAN.

Answer: This building being 36 feet wide and having a rise of 6 feet, the pitch must be as the rise is to the span, which in this case is $1/6$. Now, by using the scale one inch to the foot, 18 (one-half the span) and 6 (the rise) would give the seat and plumb cuts for the common rafter, and the diagonal from 18 to 6 would be its length per scale. The same scale cannot be used for the hip, because the figures required are on the diagonal of a square 18 by 18, which is practically $25\frac{1}{2}$, and is therefore beyond the length of the blade of the square. So other figures must be substituted

which are found in the same ratio of 18 and 6, as 9 and 3, 12 and 4, etc. It is better to use 12 and 4 because 12 is equal to one foot and is therefore full scale for one foot run of the common rafter. Then 12 and 4 will give the seat and plumb cuts for the common rafter. 17 and 4 will give the same for the hip. 17 is used because it is the practical length of the diagonal of 12 and 12. The diagonal from 12 to 4 is $12\frac{5}{8}$, and from 17 to 4 is $17\frac{5}{12}$, which represents the length of the common and hip rafters per foot run of the building.

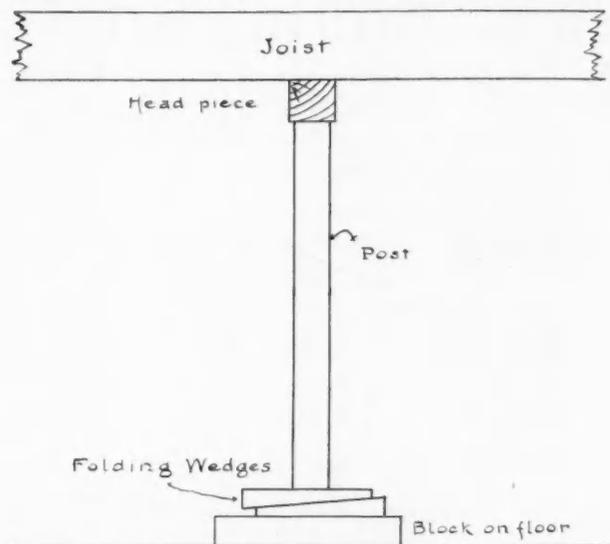
If the jacks are set on 24 inch centers, the common difference will be 2 times $12\frac{5}{8}$ or $25\frac{1}{4}$ inches; if 18 inches, $1\frac{1}{2}$ times $12\frac{5}{8}$; if 16 inches, $1\frac{1}{3}$ times $12\frac{5}{8}$ and so on for whatever the spacing might be. To find the side cut of the jack, take 12 on the tongue and $12\frac{5}{8}$ on the blade; the latter will give the cut. For the side cut of the hip, take 17 on the tongue and $17\frac{5}{12}$ on the blade; the latter will give the cut. Thus it will be seen that there are but a few figures used and that it is best to work on the full scale for a one foot run, regardless of the width of the building. The square with the figures that give the seat and plumb cuts placed along the edge of the rafter as many times as there are feet in the run, will give the length. If there are fractions of a foot in the run, simply make a mark along the plumb side of the square at the last movement, and from this measure square out the amount of the fraction, which will be the proper point for the plumb cut.

With this method, the practical length of the rafter is obtained without any further measurement, and the figures given above answer for the cuts for any roof of like pitch, regardless of its width.

A. W. Woods.

Substitute for Jack Screw

To the Editor: Pasadena, Calif.
 What is best and simplest rig to use to camber floor joists when reinforcing with 1 by 6 boards? WALTER S. CHASE.
 Answer: Most carpenters nowadays find a small screw



jack very handy for this work, but if that appliance is not available a pair of folding wedges of hardwood can be made to serve the purpose. The wedges should have very little taper and should be applied as in annexed sketch.

T. B. KIDNER.

Bench for Assembling Sash

To the Editor: Pittsfield, Mass.
 I should like to see in the columns of your instructive trade journal a design and description of the best bench, or table, for squaring and nailing up window frames upon. By this

I mean a table on which the sill and jambs can be held perfectly square by means of wedges, screws or some other device (not in the way of driving the nails), then nailed together—then to receive the blind stops and casings, and if need be, a brace to be nailed across the frame, to hold it square before the frame is removed from table.

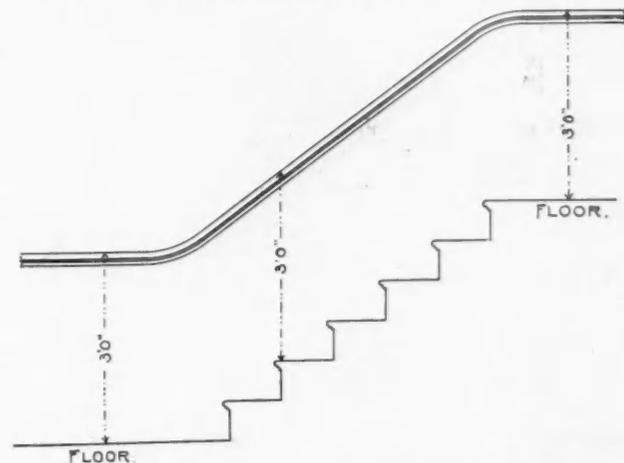
No doubt some large builder of frames has a quick and accurate way of doing this work, and if he will kindly help us out I think it will be appreciated by many of your subscribers.

Hope to see this matter agitated at an early date.

CHAS. J. GOODRICH.

Height of Wainscoting

To the Editor: Butte, Mont.
 Will you please tell me the proper way to determine the height of wainscoting running up the stairs to correspond to the wainscoting on the walls?
 H. J. GRIMES.
 Answer: The accepted custom is to continue the same



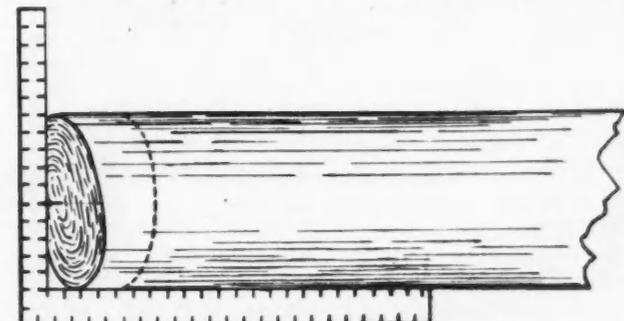
height up the stairway as wanted on the level part. The measurement should be taken at a point directly above the face of the risers, as shown in the accompanying sketch.

A. W. Woods.

Square Cut on Round Timbers

To the Editor: Pullman, Ill.
 I am sending herewith a sketch of a very simple way of squaring off the end of a round stick of timber. The method is as follows:

Drive a nail in the center of the end of the stick, leaving enough of it out of the wood to clear the largest radius. By placing the square on the nail, as shown in the illustration, and reading the distance to the cut and marking same all



round the stick at intervals of from 2 to 6 inches according to the size of the timber, a perfect cut can be obtained. I have been using this method for years and thought perhaps it would be of some help to others.

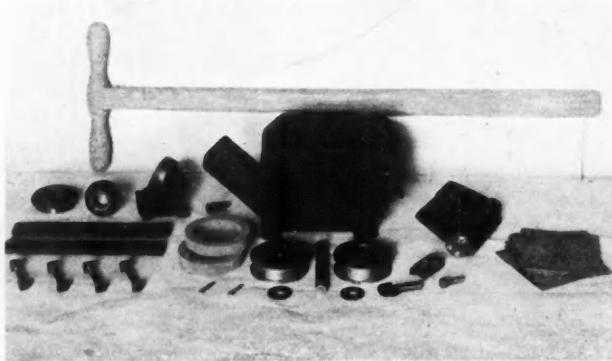
T. P. ELLIS.

PRACTICAL TRADE APPLIANCES

Star Floor Scraper

A few months ago there appeared in the pages of the AMERICAN CARPENTER AND BUILDER a full-page advertisement of the Star floor scraper, and on the front page of this issue the machine is again reproduced.

This floor scraper, as will be easily seen, has many good features never before used on a machine of this character.



The ball and socket device will allow the operator to place the cutting blade on an angle with the grain of the floor, which not only makes the work easier but also eliminates all

planer marks and little "waves." A large number of these machines are already on the market and are meeting with success in every case.

The Star Scraper Company manufacture their machines at Elkhart, Ind., and have fitted themselves with enough machinery to allow an output of fifty machines per day. In owning their own plant they are in a position to deliver machines as fast as orders are received, giving special attention to jobbers as well as carpenters and contractors.

The machine is put out under as liberal a guarantee as can be made—the watchword to their advertising being, "We Pay the Freight."

News Item

Mr. G. K. McMullen, for over ten years past sales manager of the Fox Machine Company, Grand Rapids, Mich., has tendered his resignation, to take effect November 15th, and will at that time engage in business for himself, announcement of which will be made later.

Combined Planer and Jointer

The Sidney Tool Company have recently brought out a power feed planing attachment, to be used on jointers from 12-inch to 20-inch sizes. This attachment can be used on any jointer by sending specifications or dimensions of the table and base. This makes a very complete planing attachment allowing the user to plane from 1/8 to 6 inches thick perfectly, as it is adjustable in every way. It is equipped



Residence of Mr. C. P. Taft, brother of Wm. H. Taft.

The following letter is one of the best testimonials of Burt Ventilators we have ever received.

"In reply to yours of recent date, will say that these ventilators are to go on Mr. C. P. Taft's residence, Cincinnati, Ohio.

Elzner and Anderson are the architects and they stated positively that nothing but the Burt Ventilators would be allowed to go on, so you see that speaks well for you."

Burt Ventilators have an extraordinary capacity for properly ventilating any building. They are made with metal or sky light glass tops with patented sliding sleeve dampers adjusted to any degree, are storm and dust proof at all times whether open or closed, and never shut out the light. Burt Ventilators are the standard ventilators of America.

Send for our 96-page catalog, giving fine illustrations of mills, shops, factories and residences where Burt Ventilators are in successful use.

The Burt Mfg. Co., 500 Main St., Akron, Ohio.

Geo. W. Reed & Co., Montreal, Sole Manufacturers of Burt Ventilators for Canada.

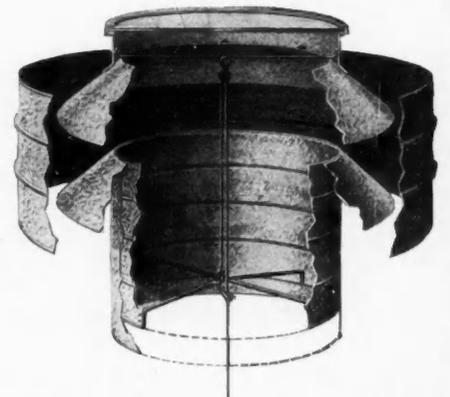
For Good Ventilation and Light

The attic of the average house is hot and dark. It can be easily changed into a pleasant habitable room by the use of the Burt Ventilator.

The residence of Mr. C. P. Taft, brother of the presidential candidate was remodeled and furnished with

Burt Ventilators

which has done wonders in providing fresh air and light to the darker rooms of the house.



Notice Sliding Sleeve Damper. (Patented.)

"A Company is known by its Products"

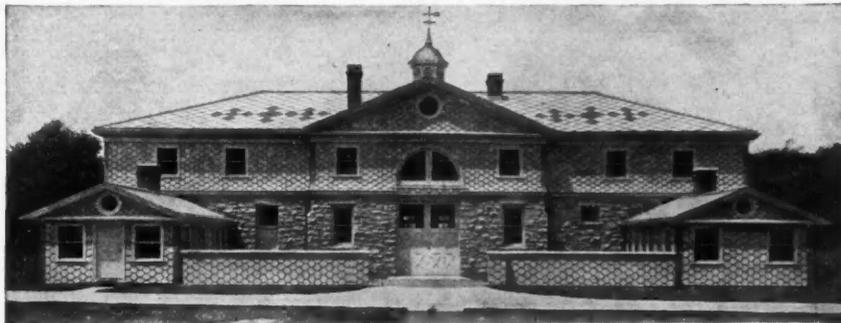
Keasbey & Mattison Co.

Ambler, Penna.

offers

Asbestos "Flawless" Flooring

A superior monolithic fireproof mastic combination of unusual excellence—not liable to check or crack—easy to the tread—generally satisfactory to owners. *Germ Proof, Inexpensive and Highly Sanitary.*



Asbestos "Century" Shingle Roof and Sheathing—Bushy Park, Newport, R. I.
J. D. Johnson, Newport, Architect; B. F. Tanner, Newport, Builder

Asbestos "Century" Shingles

"The roof that outlives the building"

Immeasurably superior to the best natural Slates ever quarried. *Greatly Reduced Prices.* Ask your Roofer for new quotations.

85% Magnesia Sectional Coverings 85%

The original, best known, and most efficient Magnesia Coverings known to the Trade. *Superior in quality.*

Specify Keasbey & Mattison Company's and get the best. Headquarters for Asbestos Fibre and Asbestos Products of every description. Largest manufacturers in the World of Asbestos and Magnesia Products.

Correspondence Solicited—Write for Booklet "Roofing 1908"

Keasbey & Mattison Co., Ambler, Penna.

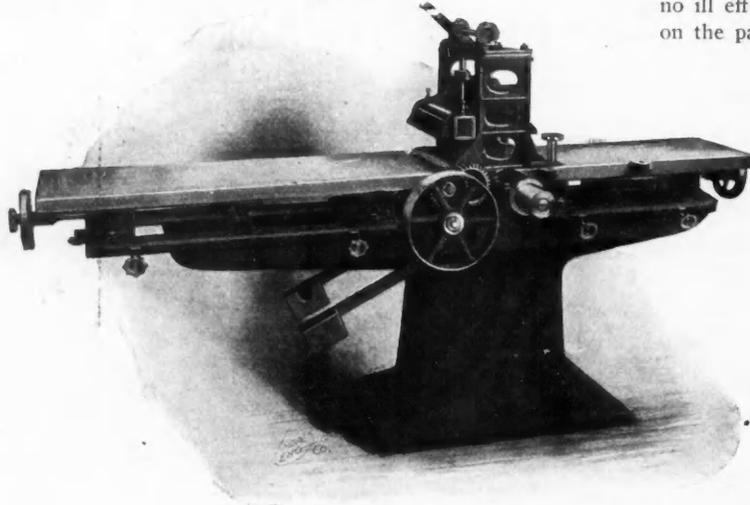
Mines: Theford, Canada

Branches in all the Principal Cities

Factories: Ambler, Penna.

"If it's made of Asbestos, we've got it"

with grooved $\frac{3}{8}$ power feed, weighted rolls, as illustrated in cut. This will be found to be very useful in small shops where there is not a great deal of planing done, as it will not necessitate the purchase of two machines. It is a jointer and pony planer combined in one, a complete pony planer upside down, and will do the same work just as accurately as any pony planer on the market. It will save a great deal of expense in purchasing two machines, and is also a great convenience in small shops on account of the extra space which would be taken up by two machines.



The change from a jointer to a pony planer is very quickly made, as it will only take from two to three minutes to make the change. The company especially recommend it for pattern shops for sizing and taking the wind out of pattern lumber. It is also very useful for making all kinds of flat molds such as can be made on a jointer. This attachment is furnished complete with weighted belt tightener to regulate the speed of the feed in planing different thicknesses of boards. The feed is driven from the countershaft, an extra pulley being furnished with the attachment to go on the shaft.

It will interest you to get the catalogue and specifications of this attachment and also the special prices which they are offering to introduce this attachment to the trade. The catalogue will also show the high-grade line of wood working machinery which they manufacture. Their wide practical experience in the wood working line enables them to bring out the latest and most up-to-date machines at the very lowest cost, as well as the most practical machines for your work. Write them for any information or details you might require.

Is Tar Injurious

A short time ago there appeared in the columns of the *New York Tribune* a cablegram to the effect that the French minister of public works proposed to abandon the use of tar on their thoroughfares and repave them in the old fashioned manner. The reason given was that the fine particles of the tarred surface thrown up by automobile traffic is killing trees and other vegetation along the highways so treated.

The *Good Roads Magazine* made an investigation of the subject, and in their issue of October published an article, which contains the opinions of some of the leading road authorities in this country and abroad.

Investigations made by the Barrett Manufacturing Co., who are deeply interested in this subject because of the extensive use of tar in their well known "Barrett Specification" Roofs, also proved conclusively that there is no basis for the statements made in the *Tribune* article.

The opinion of Mr. John R. Rablin, engineer, Metropolitan Park Commission, Boston, Mass., is given:

"There is little that I can add to the many discussions and

papers on the use of tar which have already been published, and will merely state in a general way that we have for the last two years used tar and its derivatives on our parkway roads both for surface treatment and by incorporating it with the stone in surfacing. The results of its use have proved quite satisfactory, and in my opinion the benefits derived in the preservation of the road surfaces have been well worth the cost.

"Regarding the published reports of damage to trees and vegetation from the use of tar on the roads, I would say that no ill effects whatever have been apparent on the work done on the parkway roads in this section."

The Marsh-Ayer Miter Box

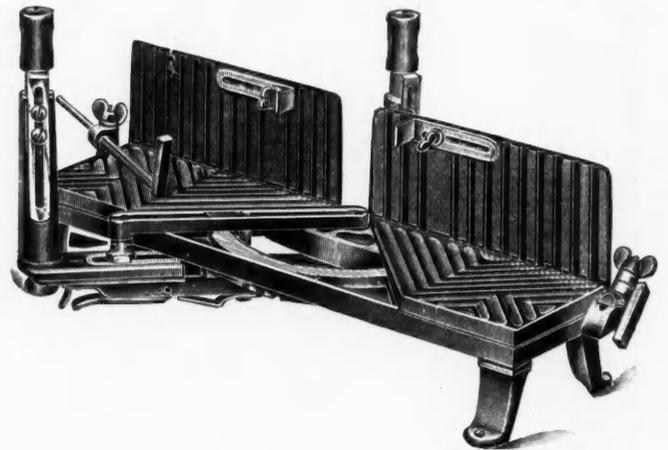
A new miter box known as the Marsh-Ayer has just been put onto the market which contains certain new features that are worthy of notice.

The frame is made up of the bed, and metal plates, cast integral, giving a solid, rigid and almost indestructible box. The back and face plates are ribbed, allowing a sawdust clearance on both working surfaces.

The degree scale showing the angle of the saw has been cut directly onto the solid frame, thus avoiding any possibility of its shifting.

The brake for locking the swinging lever in any position is operated by the finger latch. The first movement of the latch disengages it from the notches in the under side of the frame and allows a free manipulation of the lever. A

further upward movement of the latch clamps the lever firmly to the frame. The detent for holding up the saw and the stop for preventing the saw guides from being with-



drawn from the posts are entirely contained within the saw guides, and are thus out of sight. The action of both is entirely automatic and quite satisfactory.

A stop gauge on the back of the box where it can be left set when moldings and casings are being cut alternately, the length gauge swiveled at the end of the box which may be used as a back rest or instantly swung behind the frame, and unusually long saw guides are some of the other features noted. The finish of the box is a new departure in this line, being a dull white nickel with certain parts polished, giving a decided attractive and rich appearance.

Damage from Forest Fires

The city of Chisholm, Minn., with a population of about 6,000 inhabitants, is located about sixty-five miles north of Duluth, and is surrounded by iron mines of the Mesaba range.

Some years ago a small steam-driven electric light plant

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The Chicago House Wrecking Company is the largest concern on earth devoted to the sale of Building Material and General Supplies direct to the Carpenter and the Contractor. By dealing with us you are purchasing at first hands. This company was organized in 1893 for the purpose of dismantling the Columbian Exposition at Chicago. Since that time we have successfully purchased and dismantled every Exposition of any note. We have from this one source alone sold over One Hundred and Sixty-five Million feet of lumber. It was from this natural cause that we engaged in the lumber business. We found that it was impossible for us to successfully take care of the thousands of our customers and supply them with lumber from this one source. As a consequence we purchased outright various saw mills and also bought at forced sales millions of feet of high grade, brand new lumber. In addition we have for sale a complete stock of mill work, plumbing material, heating apparatus, structural iron, hardware and everything that enters into the construction of a building of any kind or for any purpose. Our fame is National. No other firm can make the sweeping statement that we do: That you can come into our establishment and buy everything needed both to build the building and completely equip it. We invite inspection of our stock.

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At the present time, we have for quick sale over fifty million feet of brand new, first class, high grade lumber of every kind. We can furnish you lumber for building houses, churches, barns, stores and factories. And it is the best grade of lumber. Just as good lumber as is to be found anywhere on earth. We are making special prices to those who buy at once. Never in years has lumber been offered at such prices as we offer it. The best proof of this is to allow us to make a bid on your estimates. Just make a complete list of everything you need for any particular job you may have on hand and it will surprise you what we can do in the way of prices. Nothing like it was ever heard of. The best and most convincing proof of our prices is the fact that during the past sixty days while others have been bewailing poor business, we have steadily increased and have sold vast quantities of lumber and building material. Much more in fact than we have ever sold in any corresponding period in the history of this business. You will save in dealing with us. Our broad and binding guarantee protects you absolutely. You will get from us just the material that you purchase. It stands to reason that our goods must be right. How else could our business have attained its wonderful commercial proportions? All we ask is an opportunity to convince you. Or, better yet, come on to Chicago, visit our yards, see our goods. We will show you it is all that we represent. Then and there we will make you a price so low that it is bound to secure your business. You can't overlook such a chance as we offer. It is the opportunity of a lifetime. You will never again be able to purchase lumber and building material at such low prices as we offer today. Write for particulars.

Satisfaction Guaranteed.

We guarantee absolute satisfaction. We mean every word of that. We want your business only on a square business-like basis. We will deal honestly and fairly with you. If you buy any material not fully up to our description, we will either refund the purchase price or exchange it for correct material. This company has a capital stock and surplus of over One Million Dollars. We refer you to any Bank or Banker anywhere. Write to any commercial agency or ask us for names of people who have bought their lumber from us recently and we will send you copies of hundreds of letters received by us daily. Our best advertisement is the vast number of satisfied customers. **Write Today For Our Low Lumber Prices** Ask us to send you our latest lumber price list. It will be sent you so clearly and plainly that you can tell at a glance just what our quotations are. The grades are clearly defined. No attempt to humbug you on quality. We want to furnish you just what you buy. We want you to be able to say you "bought your lumber and building material from us and get value for your investment." That's the way we built up this business. That's the way we intend to continue to build. We require your patronage and good will. Out-line your needs and we will make you a reply so convincing and clear that you can't help but give us the business.

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5000 4-panel Doors 1 3/8 in. thick, size 2 ft. 6 in. x 6 ft. 6 in. 98c each. Size 2 ft. 8 in. x 6 ft. 8 in. \$1.05 each. We carry a complete stock of brand new doors of all sizes and in every specification. Handsome high grade front and vestibule Doors, strictly "A" quality and the best of their respective kind. They are set with bevel plate glass, or we can furnish them glazed with fancy lace design, double strength glass. They range in price from \$3.75 to \$20.00. High grade Front Doors, brand new, strictly "A" quality White Pine, glazed with sand blast glass size 2 ft. 6 in. x 6 ft. 6 in., \$3.15. Other sizes at proportionate prices. California Redwood Sash Doors strictly first class glazed with clear glass, 2 ft 6 in x 6 ft 6 in. \$2.50. 2 ft. 8 in. x 6 ft 8 in. \$2.60. Double Sash Doors for stores or vestibule strictly "A" quality White Pine, 1 3/4 in. thick, glazed, size 6 ft. x 7 ft. with double strength glass \$9.00. All sizes in stock up to 6 ft. x 8 ft. Brand new 5 cross panel O. G. Doors with panels raised both sides, size 2 ft. 6 in. x 6 ft. 6 in., \$2.07. Size 2 ft. x 7 ft. 6 in. \$3.00. A complete stock of all sizes. Four Panel O. G. Doors White Pine size 2 ft. x 6 ft. \$1.22. 10,000 Used Doors from various wrecking operations. In this lot we have doors taken from small cottages and buildings ranging from 2 ft. x 6 ft. up to 4 ft. x 8 ft. in good condition at 40c. Also fancy glazed Front Doors for residences ranging in various sizes at \$1.50, and up. One lot of large barn doors used at the St. Louis Exposition, fancy designs, strongly built, each \$2.00. Write at once for full particulars.

HIGH GRADE NEW MILL WORK

We are in better shape to quote low prices than any other concern on earth. We do not buy our goods in the regular way. We purchase at Sheriffs' Sales, Receivers' Sales and Manufacturers' Sales. We can furnish you mill work of every kind and character. We can furnish everything needed in mill work, both regular and special. Send us memorandum of your requirements. Let us make you an estimate. Note our low quotations: Colonial Porch Columns strictly No. 1 Poplar, trimmed, sizes, 6 in. x 6 in. 4 ft. long at \$1.25; 8 in. x 8 in., 4 ft. long at \$1.45. 6 in. x 6 in. 8 ft. long at \$1.70. 8 in. x 8 in. 8 ft. long at \$2.70. Fancy Porch Columns size, 4 in. x 4 in., 8 ft. long at 65c; 5 in. x 5 in., 9 ft. long at \$1.15. 6 in. x 6 in., 10 ft. long at \$1.80. Fancy Porch Newels 4 in. x 4 in., 4 ft. long at 30c. Stair Newels at \$3.15 and up. Angle Newels at \$1.90. Fancy Stair Balusters at 9c. Porch Balusters 5c. Corner Boards at 10c. Base Angles per 100 ft., \$1.90. Porch Spindles at 2c. Porch Brackets at 7c. Fancy Face Brackets at 30c. Adjustable Gable Ornaments at \$1.25. Corner Blocks 2 1/4-4c. Head Blocks at 4 1/2-5c. Base Blocks at 4c. Top Rail, per 100 ft., \$3.90. Bottom Rail per 100 ft., \$3.90. Quarter Round per 100 ft., 30c. In fact we can furnish at exceedingly low prices everything you can possibly require in mill work. Get our prices on Flooring, Shingles, Ceiling, etc.

BARGAINS IN WINDOWS

5000 Windows from various wrecking operations at prices ranging from 29c up. In this lot are a number of windows that are very fancy that will be sold at half the price of new ones. Fancy Front Windows brand new, high grade 1 3/8 in. check rail, they are up-to-date in design, bottom sash glazed with double strength clear glass, top sash with fancy ornamentals, size 3 ft. 8 in. x 5 ft. 2 in. \$4.80. 4 ft. x 5 ft. 10 in. \$6.35. Cottage Front Windows size 2 ft. 8 in. x 4 ft. 2 in., \$3.52. 4 ft. x 5 ft. 2 in., \$4.20. 4 ft. 6 in. x 6 ft. 2 in., \$6.69. Two light check rail Windows size 1 ft. 8 in. x 3 ft. 2 in., 63c. 1 ft. 11-9 in. x 4 ft. 6 in., 74c. 2 ft. 1-8 in. x 3 ft. 10 in., 81c. 2 ft. 2-8 in. x 4 ft. 10 in., 90c. Four light check rail Windows size 2 ft. 1 in. x 3 ft. 10 in., 70c. 2 ft. 5 in. x 4 ft. 6 in. 95c. Eight light check rail Windows size 5 ft. x 4 ft. 6 in. 77c. Cellar Sash two lights, size 2 ft. 1 in. x 16 in. 30c. 2 ft. 9 in. x 20 in. 62c. 500 Storm Sash, first class, two light brand new at 74c. 205 Fancy Windows from the St. Louis Exposition, each 60c. 1000 second-hand Barn Sash, each 52c. 5000 Used Sash from the St. Louis Exposition glazed with 1-8 in. ribbed factory glass in all sizes which we will sell at per sq. ft. 8c. All kinds of Window Glass, Plate Glass, Ribbed Sky-light Glass and everything required in Window Glass and Sash.

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Rubberized Galvo Roofing

\$1.25 Per 108 Square Feet.
The greatest Roofing value on earth. No higher grade manufactured. Unexcelled as to quality, wear and economy. Easy to put on. Requires no previous experience. Can be put on over shingles without removing them. Does not require a coating after it is on the roof. Weather-proof and fire-proof. Contains no coal, tar, residuum or injurious compositions. This roofing is bought direct from manufacturers and is usually sold at double our price. It is guaranteed to give lasting service. Rubberized Galvo Roofing is slate color, tough, leather-like material made of a combination of wood felt and highest grade of natural, pure asphalt. Makes buildings warmer in winter and cooler in summer. Not affected by acids or gases. Has rubbery surface and on this account we call it Rubberized Galvo Roofing. It toughens and hardens with age. We furnish with each order sufficient cement to make the laps and large head nails to put it on with. It is appropriate for any kind of building. **1 ply per sq., \$1.25. 2 ply per sq., \$1.40. 3 ply per sq., \$1.75.** These prices are per sq. of 108 sq. ft., and are F. O. B. Cars, Chicago. Also have in stock 1000 sq. of pure asphalt rock surfaced roofing bought by us at manufacturers' sale. Put up two to five lengths to a roll and each roll contains 108 sq. ft. Price per 108 sq. ft. including nails and caps, \$1.50. Red, Rosinized Building Paper per roll 500 sq. ft. 45c. Slaters Roofing Felt, per roll of 500 sq. ft. 75c. Write for free samples.

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\$1.25 for a White Enamelled Kitchen Sink. 3,000 handsome cast iron, flat rim, white porcelain enameled, brand new kitchen sinks 18 in. wide and 24 in. long, with nickel plated strainer and collar for connection, all ready to install. Kitchen sinks with backs, made in one piece at prices ranging from **\$7 to \$15.**

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\$3.50 for a White Enamel Lavatory. In assorted styles and shapes for straight wall or corner of room. Our price is for lavatory slab, including waste plug, nickel plated overflow and brackets. Other styles including supply pipes, basin cocks and all nickel plated appliances, ranging in price to **\$20.00.** We carry in stock at all times everything needed for installing plumbing for a building of any kind. No other concern on earth has such an enormous quantity of brand new material for sale. Send today for our plumbing catalog.

White Enamelled Bath Tub

\$6.00 buys a White Enamelled Bath Tub. 600 "New Style" bath tubs, finest galvanized steel with the enamel baked on the inside, nicely finished on the outside, heavy wood rim, 5 ft. long. **Bath Room Outfits \$25.** With steel enameled tub, vitreous earthen closet bowl, polished, hardwood seat and tank, complete with nickel trimmings ready to install. Other complete outfits from **\$35.00 to \$150.00.**

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| No. 125, Mission Oak | No. 128, Light Mahogany | No. 172, Flemish Oak |
| No. 130, Weathered Oak | No. 129, Dark Mahogany | No. 178, Brown Flemish Oak |
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Gallon cans, \$3.00; quart cans, 85 cents; pint cans, 50 cents; half pints, 30 cents.

Johnson's Wood Dyes are made in 15 shades. They are not stains. They contain no varnish. They are dyes which penetrate the wood grain, bringing out the beauty of the wood. They will not lap or streak. They are always to be depended upon for color. No labor, time nor trouble in mixing. Re-order by number and get the effect you originally planned. Johnson's Wood Dyes are sold by the best dealers everywhere. Get the sample—see list of shades and ask for 2—to be sent you free.

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"The Wood Finishing Authorities"

Racine, Wisconsin

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THE sample of Johnson's Electric Solvo will prove to you how quickly it softens any kind of old finish on wood, metal and glass so it can be removed with a putty knife. Its advantages are many. It is the only finish remover which leaves the wood in the natural state—which does not affect the new finish, which will not raise the grain—will not harm the hands, is odorless and has no injurious effect on metal or glass. Use it to clean paint brushes and to remove putty from glass. Gallon cans, \$2.50; quart cans, 75c; pint cans.

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S. C. Johnson & Son

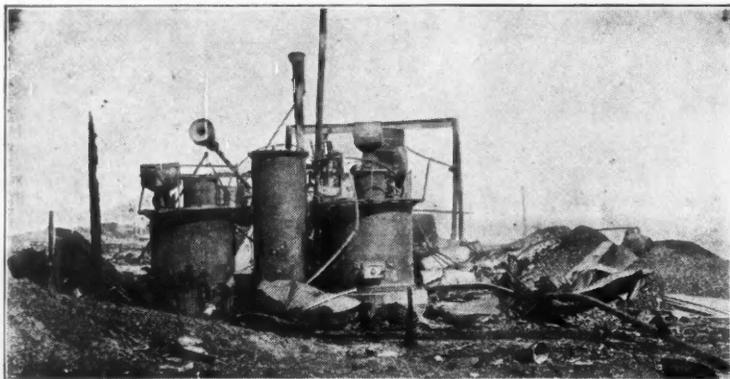
"The Wood Finishing Authorities"

Racine, Wisconsin



was installed by local private parties, but in 1906 was taken over by the Range Power Company, who entered into a

fifty Fleming arc lamps, and everything about their plant was put in most excellent condition to meet the increased demand for the fall and winter load.



twenty-year contract for the city street lighting. The plant was enlarged by the installation of a 350 h. p. Weber three-cylinder, vertical gas engine, direct-driving a 225 kw. Allis-Chalmers alternator, 60-cycle, 2,300 volts. The engine was supplied with gas from a Weber suction gas producer, which is shown in illustration, and has been in operation about a year. The fuel used has been the screenings from anthracite, also coke breeze, which is a by-product at the receiving docks in the Duluth mines.

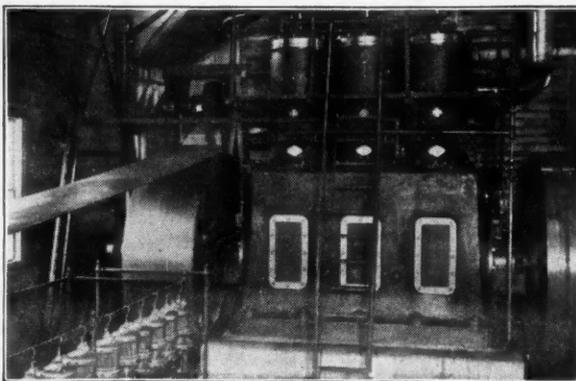
They also tried out charcoal breeze, all of which fuels worked out entirely satisfactorily in their producer gas plant, the consumption in regular service being from .93 to 1.05 pounds per brake horsepower hour.

The growth of this town has been reasonably rapid, owing to the opening up of a number of large iron mines in the immediate vicinity; so that with the increasing demand the Range Power Company installed, during the summer, over

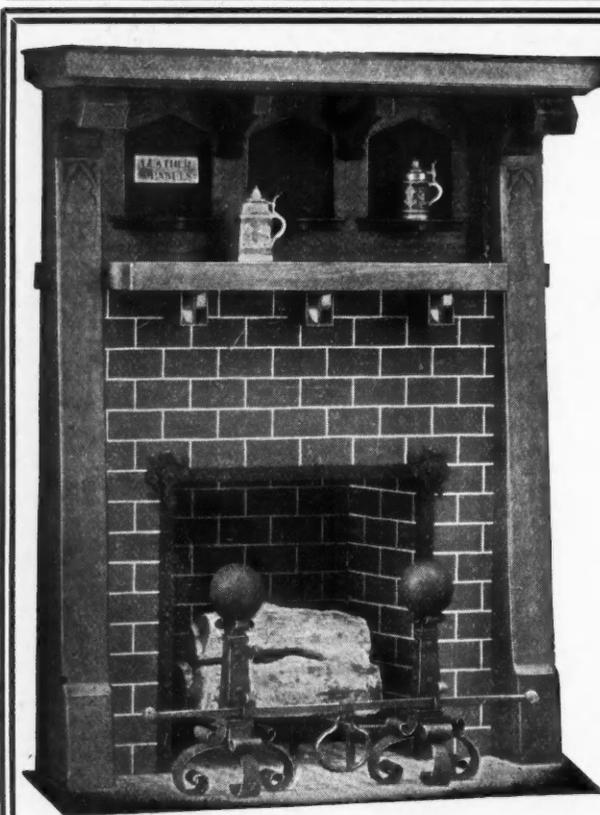
During the last week of August the forest fires throughout the range became very threatening, and on the afternoon of the 30th they overcame the heroic effort to combat the flame, and swept through the town, destroying every building with but a single exception.

The Range Company had rigged up a temporary pumping plant, which was being used, and the engineer stuck to his post gallantly until the power house was in flames, and he had to jump into the lake and swim out to a boat for refuge. He returned the next day and photographed what remained of the light plant.

The owners, with remarkable fortitude, immedi-



ately placed an order with the Weber Gas Engine Company for a 150 h. p. gas engine and gas producer, and the city



No. 468.—Modern Mission Style 5 feet 11 inches high and 5 feet wide; heavy plan, shelves, recessed leather panels; the brackets supporting main shelf are carved with Spanish insignia. Forian-Vitrea tile hearth and facing. Hand-wrought Andirons of Romanesque design.

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For sixty years **Vulcanite Ready Roofing** has reigned supreme among roofing materials. For sixty years we have been improving and developing Vulcanite and today—as ever—it is the “Roofing of Ultimate Saving.”

Incomparable Quality

No question about the quality. Not only as ‘pliable as rubber,’ but actually **is** rubber—mined exclusively by us and costing \$100.00 per ton—the most expensive material used to manufacture ready-to-lay roofing. It cost you no more.

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Vulcanite is effective in all climates, in all regions, from the Arctic to the Tropics in midwinter or midsummer. Positively cannot freeze or crack in cold weather—crumble in dry weather—leak in wet weather. A weather resisting material unequaled.

Passes all tests. Convinces the most skeptical.

We Guarantee Vulcanite

Vulcanite is positively guaranteed for many years. Dealers and contractors are authorized to guarantee Vulcanite.

Users can obtain guarantee from the dealer, the contractor, or from us.

If your dealer does not carry “Vulcanite,” write us for samples and free booklet. See “Vulcanite” before you buy other roofings.

Free Booklet of Valuable Information. Get the free booklet

which tells all about Vulcanite—how it is made and what

it is used for. And don't forget to ask for samples

Send for free samples and book of roof information.

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This Label on Every Roll is a Guarantee of the Quality.

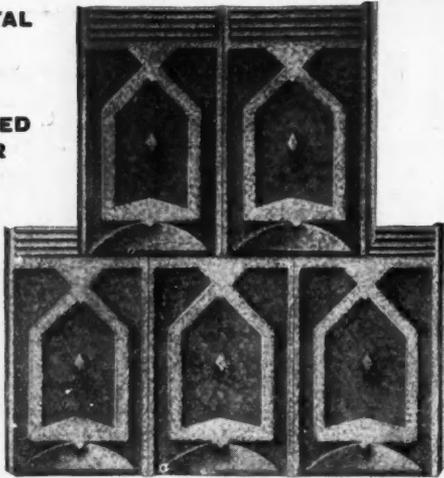


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- How to cut the roofing to fit corners, angles, and odd spaces, without waste;
- Where to nail; how to cement laps;
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- How to secure contracts, and how to make good money easily in the roofing business.

FREE SAMPLES FOR EXAMINATION AND TEST

Learn all about the roofing that is made of genuine asphalt without a trace of tar. Examine the coatings of mica and flint. Note the extreme toughness of the long-fibre wool felt. Get the facts about our wonderful process of water-proofing under intense heat and tremendous pressure.

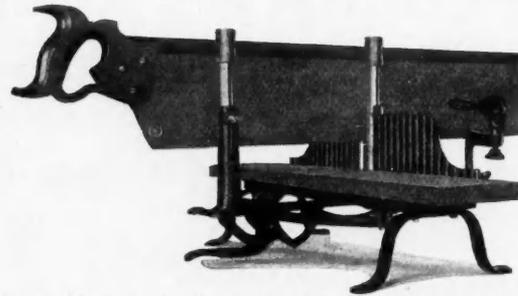
Everything about this popular roofing is told in the free Roof Book. Send today.

THE HEPPES CO. 647 S. 45th Ave. CHICAGO

council of Chisholm has voted an issue of \$250,000 in bonds for the reconstruction of the sidewalks and street paving, and the 6,000 inhabitants are all busy re-establishing their homes.

The True Miter Box

We desire to call the attention of the carpenters to the True Miter Box, now being manufactured by the Nicholls Manufacturing Co., of Ottumwa, Iowa. They have so constructed this box that if any part of it should, by accident, be broken or stolen you can get a new part and easily repair



the box. Each and all parts are accurately machined and each hole is drilled with a jig, which makes every part fit without any trouble.

You will notice in the cut that the saw is raised about two inches above the bed and is held there until ready for use. When ready to use the saw, all that is necessary is to touch the lever or to take hold of the handle and the saw will drop down to the stock.

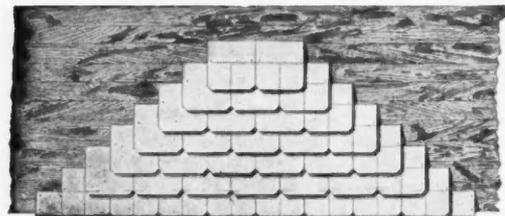


The second cut shows the saw raised to full height so the operator may use both hands in placing stock to be cut. When ready to use the saw all that is necessary is to take hold of the handle of the saw or give the saw guides a light tap on the top and the saw will drop into position ready for use.

Fireproofing the Roof

Fireproof construction has been able heretofore to take care of every part of the building but the roof. From foundation to roof frame the modern building is as resistant to fire as the use of wood for interior trimmings and furnishings will allow.

Both asbestos and cement have been known for centuries as absolutely proof against fire, but neither by itself makes



a good roofing. Asbestos "Century" Shingles combine the desirable qualities of both into the ideal roofing—pure hydraulic cement and asbestos fibre, intimately mixed by ma-

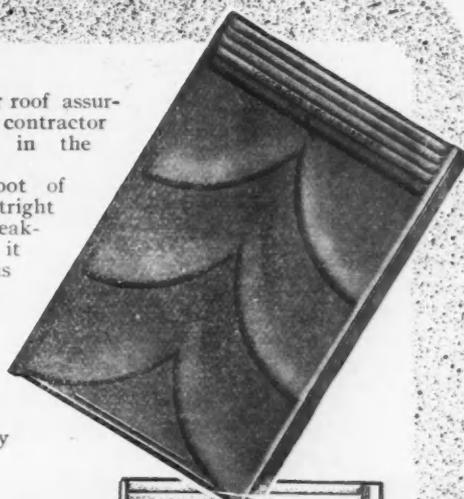


Here's Roof Assurance

You are looking for roof assurance. So is every contractor and house owner in the country.

Every square foot of roof covered with Cortright Metal Shingles is leak-proof. Furthermore it stops that way just as long as the building lasts.

Cortright Metal Shingles are made of heavily coated tin plate and after being stamped are either painted or galvanized. The provision that is made for the expansion and contraction of the metal increases its durability by many years.



Tin Is the Best Roof Material

Experts say tin has no equal as a roofing material. We say Cortright Metal Shingles have double the efficiency of the ordinary tin roof. What's more, we have proved it.

But durability is not all.

The ease of laying is a feature interesting alike to contractors and owners. Experienced labor is eliminated altogether, because any handy man or laborer, with hammer and nails, can lay Cortright Shingles with ease.

Resists Any Kind of Weather

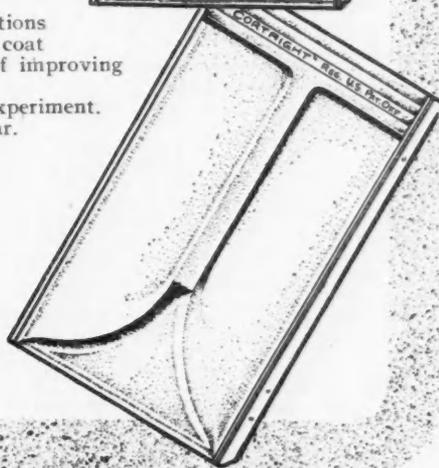
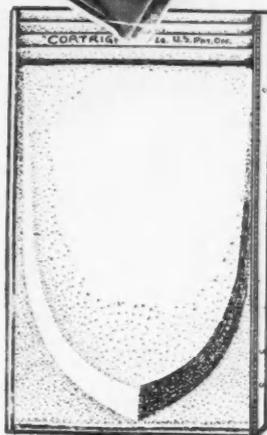
Weather-resisting qualities need considering.

Rain has no effect whatever upon it. Neither has extreme heat or cold, lightning, frost, hail—any of the elements, in fact. It is the one roofing that resists them all. Every time. On any roof. In any place.

Weighing about one-eighth as much as slate, Cortright Shingles can be laid on roofs at any angle. Roof joists do not need to be so heavy as formerly. Extra bracing, generally necessary where heavy roofing is laid, is dispensed with entirely.

Again, Cortright Shingles need no attention. Laid according to directions at the beginning, they will last as long as the building they cover. A coat of paint once in every five years or so is suggested as a means of improving durability.

Better get acquainted with a proven roofing that is not an experiment. Cortright roofing has been proved a success by twenty years of hard wear.



Literature, important and interesting to contractors and house owners, on request.

Cortright Metal Roofing Co.

Philadelphia

Chicago

chinery, and formed and compacted under tremendous hydraulic pressure into slate-like sheets, variously shaped and of several sizes and colors.

These shingles stand up against every fire test that can be devised. Heated to a glowing red and quenched with cold water, they do not chip or crack, even at the nail holes, proving the perfect safety of a roof when deluged by a fire engine.

Asbestos "Century" Shingles are a positive protection from sparks, or burning matter of any kind falling on the roof, which is the cause of one-fifth the fires the country over. Even blazing timbers from a neighboring fire do not crack the shingles, and they burn themselves out harmlessly.

In all locations where sparks are frequent, as alongside railroads, Asbestos "Century" Shingles form the one absolute

the roof intact and so help to smother the flames. A recently invented device, which holds the tips of the shingles together while allowing individual expansion and contraction, makes the shingles self-supporting should the roof frames burn away. What this means in preventing the spread of fire need not be emphasized.

Asbestos "Century" Roofs mean lower insurance rates—that is the fact that counts. Builders who wish to keep their clients posted on the best things will do well to get into touch with the Keasbey & Mattison Company, Ambler, Pennsylvania, and mention the AMERICAN CARPENTER AND BUILDER.

Book Review

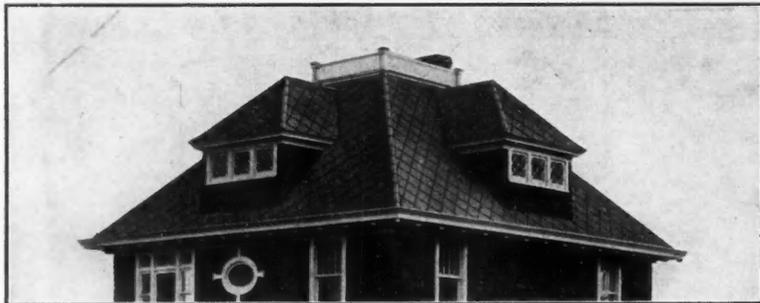
"Practical Concrete Block Making," by Charles Palliser, 75 pages, 25 illustrations, 12 mo., cloth. Price, 50 cents. Published by Industrial Publication Company, 16 Thomas street, New York.

Concrete block making is an industry of such importance now that any book giving new information on the subject is to be welcomed. This book by Mr. Palliser is different from other books on the subject. It is not prepared or intended for the use of engineers, but for the use of workmen who are to earn their livelihood out of the concrete block industry. Everything in it is stated in the simplest language and so clearly that any workman can understand the subject thoroughly; with but little practice he ought to

be enabled to manufacture good substantial blocks.

The author treats the subject in a way that shows that he has had a good deal of practical experience. He cautions the reader against errors that are likely to occur to the beginner. His advice on many points will cut down the cost of block making.

We agree heartily with the author that no one should



safeguard against fire—a fact of which the railroads themselves are taking advantage by roofing and sheathing their frame buildings with these shingles.

So much for protection from fires outside the building. There is another phase—the service done by these Asbestos "Century" Shingles in confining a fire to the building where it originated. Unaffected by the flames, these shingles keep

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Direct to the Consumer at Factory Prices

Our perfect ALL IRON PIPE system of plumbing will enable any handy mechanic to install the material on farm or in city. Send us a list of your needs. *All we ask is an opportunity to figure on your wants.* We carry everything necessary for installing this class of work. Soil pipe, lead and water pipe and fittings of all kinds, etc. All goods are brand new and high grade.

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FARMERS SUPPLIES
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GALVANIZED RANGE BOILERS
All tested to 200 pounds pressure; 30 gallons.
Only \$4.90.
Complete with Stand, Tube and Couplings,
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White Enameled Iron Sinks 18x30 for \$1.85

READY ROOFING
Mill Ends of #2 and #3 grades of Vulcan Roofing, several pieces to each roll of 108 square feet at
95c Per Roll
Order quick while it lasts.

WHITE ENAMELED ROLL RIM SINK BACKS for \$2.25.

HANDSOME ROLL RIM KITCHEN SINKS
All kinds of Porcelain Enameled Kitchen Sinks, with backs, drain boards, etc. Our stock is complete with sinks of every description, both for corner or straight wall.

IMPROVED ROTARY WASHING MACHINES. Made to sell at \$6.50 each. We bought them from the Underwriters. They are a little scorched but not otherwise damaged. A snap at \$1.95 each while they last.

Bath Tubs, \$5.40 and Up.

COMPLETE BATHROOM OUTFITS, from \$24.50 to \$125.00.

CEMENT STONWARE LAUNDRY TUBS
Cast seamless in hydraulic mould, with zinc metallic rim—furnished with cast iron legs—
\$3.95 AND UP.

Low Tank Closet Like shown in bathroom cut for \$11.25.

HEATING PLANTS
Don't think you cannot afford a modern Hot Water or Steam Heating Plant till you get our figures. Special price for first plant in each locality. Plans free. Tools loaned.

This Complete Closet Outfit, \$11.50.

We send **FREE** detailed estimate on receipt of rough sketch or plan of the building to be heated. Prompt attention. **Quick shipment in time for this winter.**

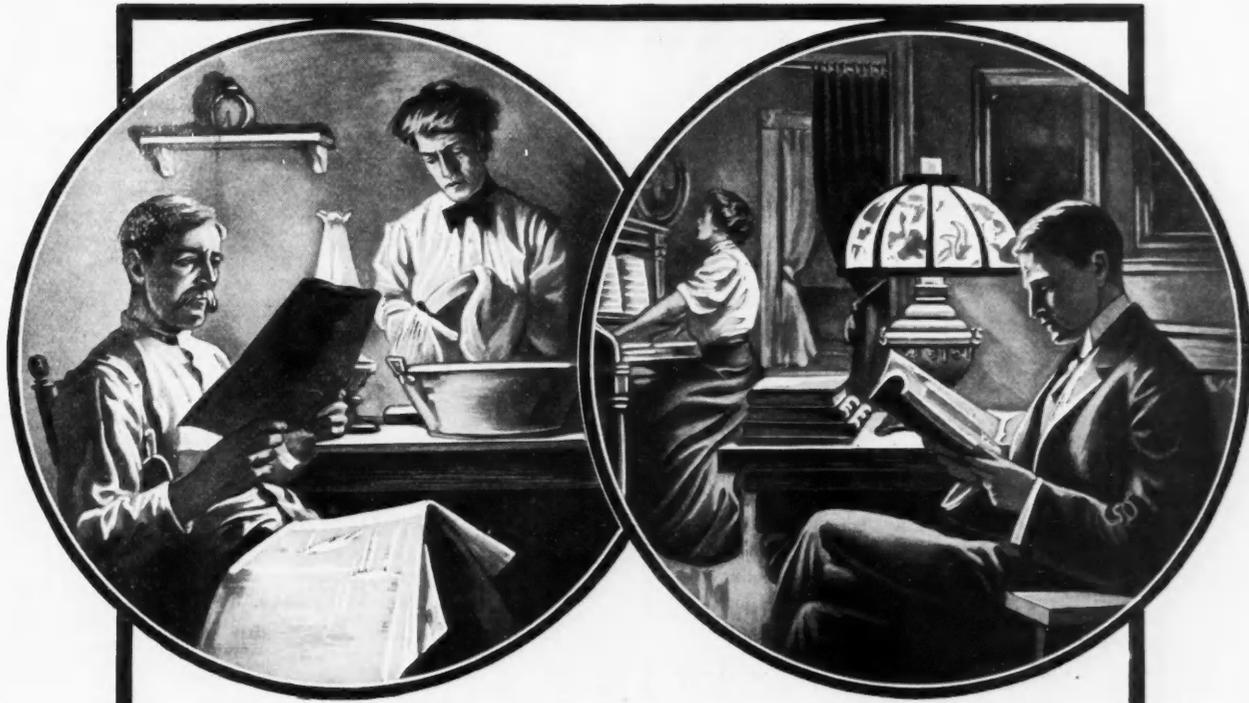
Write today for new enlarged Catalog No. 108 covering Home Builders supplies. All prices revised to "Hard Times" basis.

Central Machinery & Supply Co.

553 S. State St. Chicago

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Which is the Trained Man's Home?

It's in the home where training affects you most. It's in the home where the size of your pay envelope really counts. The **trained** man who holds a responsible position paying a good salary is able to have a home in which are found the luxuries of life. This greatly increases his happiness and lengthens his life.

The **untrained** man who cannot do any one thing well, who must work by the day at jobs paying low wages, must put up with many hardships and do without a great many of the comforts of life.

But such a man can better himself if he chooses. An institution backed with a capital of six million dollars, whose sole business for 17 years has been to raise the salaries of ambitious men, will help him.

If **you** wish to better your position, increase your salary, and secure a happy and successful life, it is your duty to mark and mail this coupon. If your work is uncongenial, if you desire to advance in your trade, if you are a young man wishing to enter an occupation with a good salary at the start, mark and mail this coupon. This is the way that thousands upon thousands of men have made their start for promotion and multiplied earnings. You do not have to leave home, buy books, or give up your present work. This is the most practical and simplest way in the world to secure promotion, so **if you really want a better salary and a happy life, make a definite attempt to get it by sending in this coupon NOW.**

International Correspondence Schools Box 910, SCRANTON, PA.

Please explain, without further obligation on my part, how I can qualify for a larger salary and advancement to the position before which I have marked **X**.

Architect	Estimating Clerk	Foreman Machinist
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Contractor & Build.	Civil Engineer	Mining Engineer
Building Inspector	Surveyor	Textile Expert
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Struct'l Draftsman	Mechan'l Drafts'n	Stenographer
Plum. & Heat. Con.	Stationary Eng.	Ad Writer
Supt. of Plumbing	Electrical Engineer	Window Trimmer
Form. Steam Fitter	Electrician	Illustrator
Plumbing Inspect'r	Elec.-Light. Supt.	Civ. Service Exams.
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Made of Trinidad Lake Asphalt—

Genasco Ready Roofing

Does what roofing ought to do—gives you absolute weather-protection all the year round. Outlives every other ready roofing. Doesn't dry-out, rot, crack, or break.

Keeps out heat and cold. Resists fire. Is proof against lightning. Can be laid on any surface; and by any handy man. Cement and nails in every roll and a written guarantee backed by a thirty-two-million-dollar company.

Ask your dealer for Genasco. Mineral and smooth surface. Look for the hemisphere trade-mark.

Write for Book 76 and samples, free.

THE BARBER ASPHALT PAVING COMPANY



Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

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Are you beginning to wonder what to buy for this year's gifts? Write today for a FREE copy of this great Catalog No. 94—700 pages full of illustrations of useful and beautiful things suitable for holiday presents. Over 75,000 articles are described so clearly you can select as safely and satisfactorily as if you were right here on the ground. No store in the largest city shows the great variety of goods covered by this catalog. No store anywhere makes such low prices. We sell in small or large lots at wholesale prices. We can't begin to tell you here how complete the Catalog is. You must see it yourself. This book costs us one dollar each to print—but we send it FREE to anyone who writes for it in good faith.

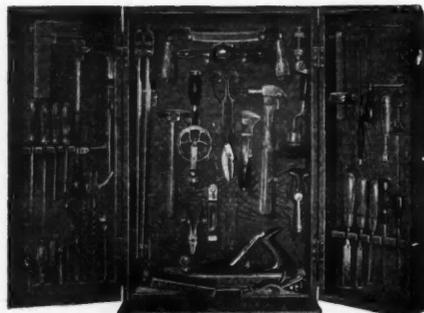
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TOOL CABINETS MAKE POPULAR CHRISTMAS GIFTS

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attempt to go into the block business with the idea that he can turn out shoddy work and prosper—good substantial blocks, honestly made, are wanted, and they will find a ready sale at a good price.

To a man starting in to make blocks, the book is invaluable, and we feel sure that experienced men also can find more than one suggestion in this useful manual that will be new to them.

The author's discussion on wood molds for making ornamental block is especially instructive and valuable; other parts of the book treat of cement, concrete, blocks, machines, cement brick, how to select the various materials, filling the voids, and the making of the block. This is gone into fully, and illustrated with pictures showing the men at the actual work. There are also directions for curing the blocks, together with the standard specifications and directions for testing the strength of the finished product.

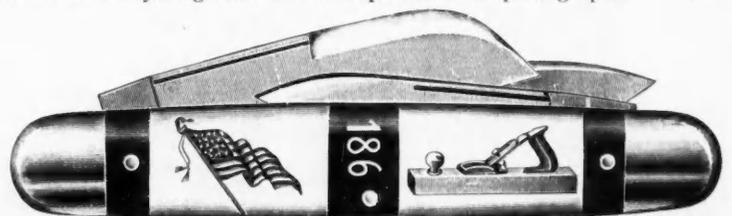
It is a really practical book on this important subject and is one that we highly recommend to our readers who want reliable information on this subject. The book is well printed and elegantly illustrated, and is neatly and substantially bound in cloth, and is worth many times the price.

The Novelty Knife

It is a pleasure to call the attention of our readers to the Novelty Knife illustrated herewith, and made by The Novelty Cutlery Co., of Canton, Ohio, whose factory is located just across the valley from the new McKinley Monument. This knife, advertised in another column, has been on the market for over twenty years, and has given universal satisfaction. The blades are forged from a high grade razor steel and are ground by hand in such a manner that they are slightly hollowed. The manufacturers furnish a six months' guarantee as to quality with every knife and also instruct the purchaser how he can secure a keen edge with a very few strokes on the stone.

The knives are practically made to order for each customer, for after selecting the size and style of handle the customer can have it fitted with the particular combination of blades that will serve his purpose best. There are ten different styles or shapes of blades from which to select.

A Novelty Knife gets its name from the fact that the handle is made of an indestructible transparent material, underneath which can be placed the owner's name and address or other printed matter, personal photos, lodge emblems, trade designs or in fact anything that can be reproduced in photographic



form. Every man's knife differs from that of his neighbors, and it has a fair chance of being returned if lost, and it has often served the useful purpose of identification in case of accidents. Nothing could make a more pleasing or more useful gift than a first-class knife of this kind, which for many years would be a daily reminder of the giver.

Sales are made direct and through canvassing agents, and this may be taken as a suggestion by carpenters who wish to have their incomes continue throughout the winter season.

The Test of Time

Roofs of good tin have recently been rated as the best type of roof covering for all buildings except those of strictly fireproof construction, where the use of wooden sheathing-boards is prohibited.

The Underwriters' Laboratories, at Chicago, have made

Prices Cut on Roofing!

The most important event in the building world this year is **Our Move** in marketing ready roofing for the first time as **A Staple** instead of a High Priced Specialty.

This means that your local dealer can now sell you our brands of roofing at a lower price than you have ever before been able to purchase a high-grade standard roofing.

A 10 Year Guarantee Behind every Roll

The Two Best Selling Brands in the U. S. "Compo-Rubber" Roofing and Weather Proof Roofing

We own our own asphalt mine—the only one in the United States producing asphalt that is **99% pure Bitumen**. We manufacture our own wool felt and saturate it with our own compounds and apply our own coatings. In fact we produce everything from beginning to end that is used in making our roofings.

Our "Ten-Year-Roof-Insurance" Guarantee

Knowing that we are making the most durable and lasting roofing fabric that can be produced, we back this knowledge with a legal document form of "Ten-Year-Roof-Insurance" Guarantee which can be obtained from any dealer.

Five Exclusive Points

"Compo-Rubber" and "Weather Proof" Roofings possess five exclusive features over other roofings.

1. Ten-Year guarantee in legal documentary form.
 2. The lowest-priced, high-standard guaranteed roof on the market.
 3. These roofings, by our methods, can be laid in one quarter of the time required for shingles (at a reduced cost for laying); or tin (without any noise or clatter); or tar (without the smell and smoke).
 4. Make buildings cost 25 per cent less for fire insurance than shingle roofing.
 5. Are non-conductors of heat and cold, save coal in winter, keep homes cool in summer.
- These brands possess the longest durability and shortest cost of any prepared roofing on the market.

YOUR MOVE: Test the above statement.

Send to-day for information as to our "Ten-Year-Roof-Insurance" Policy and **FREE SAMPLES** of these roofings.

General Roofing Mfg. Co. 2224 Lumber St., CHICAGO
East St. Louis San Francisco



CEILING'S STEEL

Some Ceiling Facts

Whether you want a ceiling to be fireproof, artistic, sanitary, modern, durable or inexpensive, you cannot possibly do better than use **Eller's Stamped Metal Ceilings** because every one of the above features are embodied.

Every room fitted with this most modern ceiling looks good. Doesn't matter what the shape is. Nook and crook look as good, and are practically as easy to arrange, as a perfectly square ceiling.

In **Eller's Ceilings** the modeler's skill has produced patterns that please the eye and harmonize with the classical arts and make lasting beauty. After the modeler has done his part, the experienced mechanic steps in and brings the manufacturing end to mechanical perfection. The combination produces a ceiling incomparably beautiful, of wonderful durability, and one that is easily fitted.

Eller Steel Ceilings

Are the Most Modern, Sanitary and Inexpensive. They Practically Last Forever

Let us figure on your requirements. Give us dimensions and we will give you an estimate on any job in contemplation.

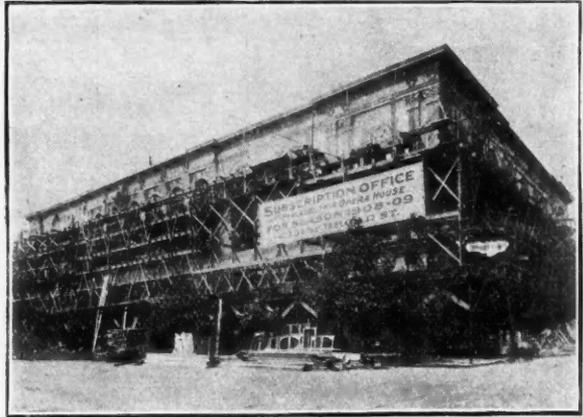
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THE ELLER MANUFACTURING CO.
CANTON, OHIO, U. S. A.

tests of various patent roll and composition roofings and have reported that—

"These tests indicate that the fire-retardent properties of these materials are inferior to those of slate, metal, or good tin-clad roofs; but in a class with those of good slag and good gravel roofs, and superior to those of wooden shingles."

By a subsequent ruling, tin roofs are rated ahead of slate, tile, corrugated iron, and other metal roofs, the tests proving that good tin combines many advantages which other roofings enjoy only in part. It is taken for granted, however, that



good tin must be used—the old-time hand-made roofing-tin offered for sale today by leading sheet-metal supply houses throughout the country.

The satisfaction secured from the use of tin on the roof depends upon the judgment of the buyer. A safe plan is to reject any tinplate that is not made in the old-time hand-dipped way, without the use of rolls or machinery. Such plates are furnished in the "Target and Arrow Old Style" brand, made by the old Philadelphia tinplate house of N. & G. Taylor Company, established in 1810. These plates are the same durable grade of tin that this house has been selling for more than fifty years. The value of this tin as a permanent roof covering for the highest class of work has been fully proven by the only sure test, the test of time.

—Combined Planer and Jointer

Points of Interest

A careful description of the various features of the Improved Union Mitre Box manufactured by the Dosch Manufacturing Co. of Bridgeport, Conn., will convince you more strongly of its undoubted merit than mere assertions and claims.

It has an open front. There is positively nothing in the way. Whether the lumber is sixteen feet or sixteen inches long makes no difference. The operator places the wood, releases the saw and commences to cut at the desired point. No holding the saw up with one hand while awkwardly trying to place the wood under it with the other. When through sawing, the operator merely lifts the saw and the pawl automatically locks the machine. A slight pressure on the locking pawl rod is all that is necessary to release the saw, and until this pressure is exerted the saw cannot come down. The locking pawl does not interfere nor strike the wood when sawing, being always above the work, even when sawing a board the full height of the saw.

This machine is adjustable so that it cannot cut out of square. The vertical posts are cast in one piece. The lower end fits in a countersink in the swinging lever and is held rigid by a screw bolt and set screw. The whole superstructure can, if desired, be removed and quickly set up again. The saw can always be adjusted at right angles with the back so that it cannot cut out of square.

The swinging lever moves on a brass tapered plug which

FORD'S Galvanized RUBBER ROOFING

Our Crow Has Spurs Behind It

From first to last we know every ounce of the material entering into the manufacture of our roofing products. This roofing has behind it **Forty Years of Success** under our own individual process of manufacture. Like our Rooster it is "thoroughbred" throughout. Our special process of making this roofing involves extreme heat and great pressure and absolutely the purest asphalt, coating and highest grade wool-felt the world affords.

The result is an elastic, mineral quality that no extreme of weather or temperature can effect.

WARNING This roofing cannot be bought of "mail-order" or "catalogue houses" and the public are warned against cheap imitations sold under names closely resembling our brand.



Has Successfully Satisfied For Forty Years

Send for our Booklet on Roofing. All Our Products Satisfy

Our "Quality" Crow

"Quality", backed with positive guarantees, is the key note of everything we claim for Ford's Galvanized Rubber Roofing. There's no "ifs" or "ands" about our protecting Dealers who handle this roofing.

Send today for our Special Co-operative plan under which we help dealers make sales. That word "Galvanized" means something. It distinguishes the special manufacturing process briefly referred to above. For your own and our protection insist on having Ford's Galvanized Rubber Roofing for all buildings.

The Guarantees We Give

The guarantees named below are positive and are Based on Actual Time Tests in all climates and under all conditions.

On 3-Ply

We give guarantee through dealers direct to consumer or contractor for **15 years** on Three Ply.

On 2-Ply

We give guarantee through dealers direct to consumer or contractor for **10 years** on Two Ply

On 1-Ply

We give guarantee through dealers direct to consumer or contractor for **5 years** on One Ply.

Send for Free Samples and Specify Ford's Galvanized Rubber Roofing

FORD MAN'FG CO. 163 W. Wash. St. CHICAGO

The WINTHROP Asphalt Shingle

↙ A SOLID TAPERED
Asphalt Shingle

All the durability of asphalt, the appearance of slate, the light weight and low cost of wood shingles.

COOL, GRAY, SLATE COLOR

Indestructible as an Asphalt Pavement

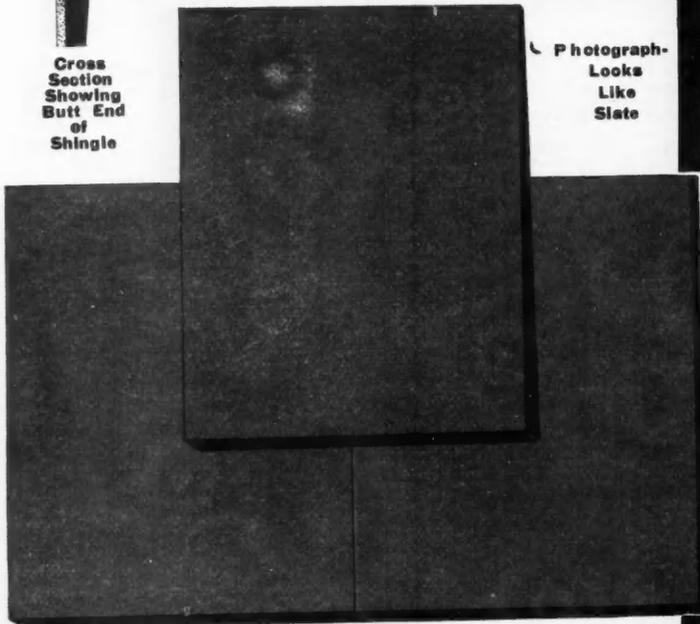
Not another roofing in existence can show such real advantage. None can offer such material—such wearing qualities at such a price.

Winthrop Asphalt Shingles have the appearance and durability of slate, are lighter in weight, less trouble to lay, cost much less and never require painting. Never leak, crack, break, or fall off.

No Cement or Dope Required to Lay These Shingles

Cross
Section
Showing
Butt End
of
Shingle

Photograph
Looks
Like
Slate



CONTRACTORS! BUILDERS! OWNERS!

This is a Residence Roofing, Can be Applied on a Building at about the Cost of Wood Shingles.

Winthrop Asphalt Shingles are laid with regular shingle nails the same as wood shingles, they are fire-resisting, weather proof, wind and sun proof and are the best substitute for slate, wood or metal.

SPECIAL INDUCEMENTS OFFERED FOR APPLYING FIRST ROOF OF THESE SHINGLES IN EACH TOWN.

Write to-day for Free Booklet

WINTHROP ASPHALT SHINGLE CO. 1102 Womens Temple
CHICAGO.

admits of take-up at all times. This is the best possible kind of a joint, will wear for many years and insures positive rigidity, yet smooth movement without binding. The arms, at the lower end, swing on hardened centers, and do not rub against the vertical posts. There is not the least looseness at this point. Where the swinging arms and the saw guide are clamped together ball bearings are placed. These remove any opportunity for looseness or binding and afford a very easy movement. You will readily appreciate that with such a construction easy action is assured and lack of rigidity an impossibility.

To set the saw for cutting tenons or dados it is but necessary to turn the winged screw in the rear of the vertical post and the saw guide and swinging arms are raised or lowered to the desired level. This is positive, very quick and does away with all the annoying trouble of setting one end of a saw and then the other in order to have back and front cut alike in depth.

Mosaic Floor Surfacing Machine

The American Floor Surfacing Machine Co. have perfected and placed upon the market the only one that will satisfactorily surface mosaic, marble tile, terrazzo and composition floors of all kinds in a satisfactory manner without circular scratches and disc marks; which so disfigure these beautiful and permanent as well as costly floors.

This machine has six (6) abrasive carborundum blocks, the sharpest and best abrasive substance known to science today, operated with a shuffling movement, similar to the movement used by hand in this work, with this important exception. There are six blocks moving very much faster, driven by an electric motor which also propels the machine, and which can be reversed, and operated in any direction, without stopping the machine, thus insuring smooth and rapid work.

In every particular, the machine is made of the best materials, all gears and wearing parts are made of steel, the pinions of phosphor bronze, all slides and shafts of cold rolled steel, the sprockets are carbonized steel, with brass bushings, all bearings are lubricated by oil and grease cups. Every part of it is built with the greatest care and accuracy and in the most substantial manner, under the supervision of the inventor and patentee, who has spent years in perfecting this, the only practical floor surfacing machine in use today. These have not only proven efficient and popular from the start, but are big money makers for their owners.

After years of experimenting at a great deal of cost and labor, this company now offer you a practical Mosaic floor surfacing machine, which is destined to become as popular as the American wood floor surfacing machine is in its field of surfacing hard wood and parquet floors, both of which are covered by the broadest basic patents in the United States and foreign countries.

A Fine Exhibit

Considerable interest centered in the booth of W. J. Burton Company, in the main exhibition building at the Michigan state fair, held recently at Detroit. Their exhibit consisted of their own make of roofing, steel ceilings, gutters and conductor pipes, also weather vanes for farm buildings, etc. The booth itself was made entirely of goods of their own manufacture and showed the many uses to which their products may be put.

During the fair the company inaugurated a "Farmer's Guessing Contest," consisting of the following proposition: First prize, horse weather vane, to the one guessing the nearest correct amount of square feet in "East Lake" metal shingles for roofing manufactured and sold by this company from Sept. 11, 1907, to Sept. 11, 1908. Second prize, rooster weather

NATIONAL

"National" Butts and Hinges have four distinct points of superiority over the old style products. Four tangible reasons why most carpenters and contractors insist on seeing the name "National" on every hinge and butt they use.

The first reason is because they save labor. A highly paid mechanic is entirely unnecessary. Any carpenter of ordinary ability can hang *twice* as many doors, using **"National" Butts and Hinges**, as a first class man could using common ones. There is absolutely no chance of anything going wrong—the method of hanging the **"National Way"** is simplified to the last degree.

The second reason is an important one. The screws used in the ornamental leaf of "National" Butts are subjected to a shearing strain—not a drawing strain. This alone enables them to sustain enormous weight, far greater than common butts can possibly do.

How Strength is Increased

The third reason lies in the fact that the lower tip has a slot for a screw driver. This slot enables the contractor to tell at a glance which is the false tip. Then the ease of removing pin from butt is a point much admired.

"National" Individuality

The fourth reason is their artistic appearance — their individuality. **"National" Butts and Hinges** are furnished in steel, brass, bronze, etc., in all the standard finishes—or we can match any special finish desired. Plated to match finish of wood gives fine results.

Made in sizes from 1 1-2 to 4 1-2 inches inclusive;—a size for every purpose. Suitable for exteriors and interiors of public and private buildings.

The simple principle, real practicability, and the thousands already in use, have proven them to be the standard in butt construction.

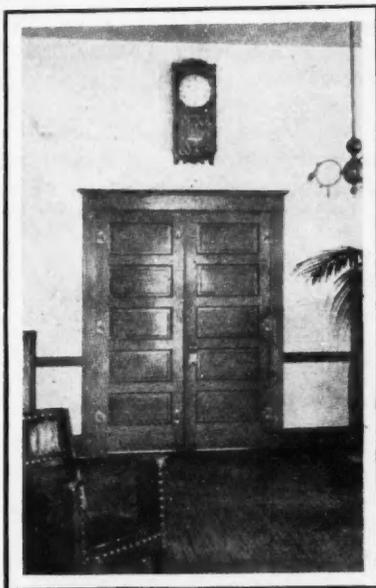
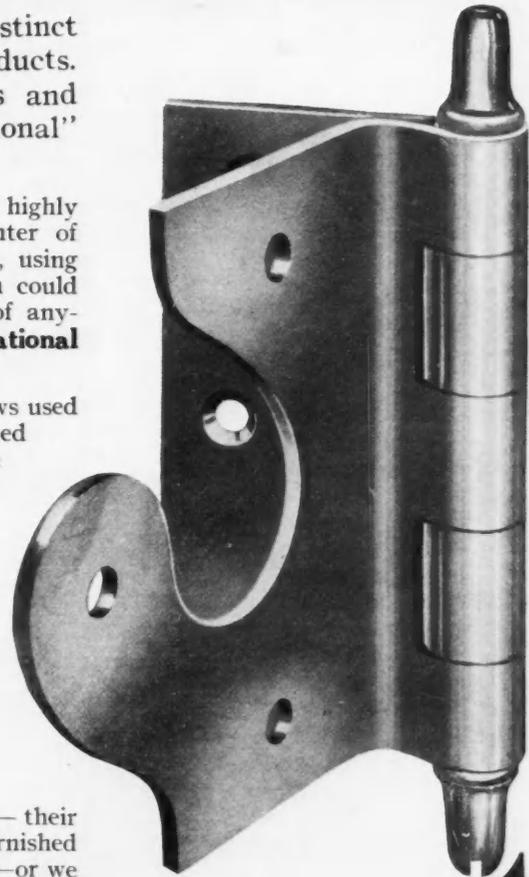
Send for Free Booklet

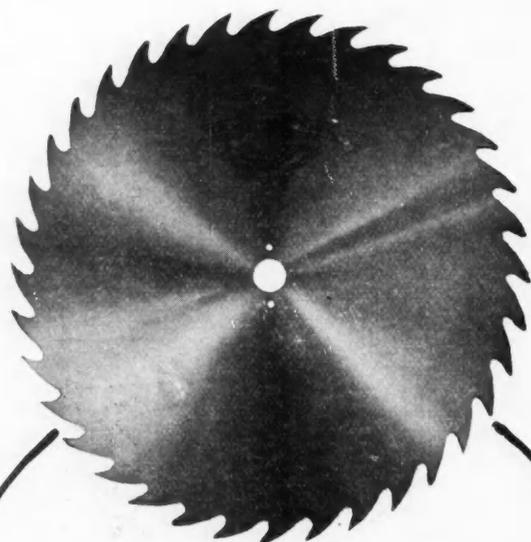
"Ornamental Ideas" is the booklet that gives useful pointers on the butt and hinge question. Carpenters can obtain it free simply by mentioning their dealer's name.

National Mfg. Co.

Sterling

Illinois





SIMONDS SAWS

Why you should buy them

There is only one reason why you should buy one thing rather than another when there is a choice of several kinds.

That reason is the best value for your money.

Simonds Saws will give you full value for every cent you pay for them. That's the way they are made. That's the way they are warranted.

We are not talking about cheap goods—you pay a fair price, but you get what you pay for. They are **Made of Simonds Steel**, the best saw steel in the country. Teeth that hold their cutting edge longer and require less filing than other saws. A blade that saws true. Evenly tempered. Nicely finished. Well fitted, carved and polished apple handles. These are some of the evidences of quality in our saws.

Tell us what saw you want and we will send address of Hardware Dealers near you handling Simonds Saws, and we will also send you a free copy of an interesting booklet, "Simonds Carpenters Guide"

SIMONDS MFG. CO.

Fitchburg, Mass.

Chicago San Francisco
New Orleans Seattle
Portland New York
London, Eng.
Montreal



Look for this trade mark etched on every saw.

vane, to the one guessing nearest the number of lineal feet of gutter and conductor pipe and ridge roll the company has manufactured and sold in the same length of time. Third prize, eagle weather vane, to the one guessing nearest the number of square feet of asphalt smooth finished and gravel finished roofing sold by them during the same period.

The above prizes, all made of metal and finished in gold, are shown in this company's extensive catalogue, which is in the hands of all hardware and implement dealers.

This company last year was awarded a first prize diploma for their exhibit. The interest taken in their exhibit this year proves that the farmers appreciate the fact that the roofing and roof trimmings manufactured by this firm are becoming staple goods and becoming better known in every vicinity, where the farming people insist on the dealer handling them.

A visit to this booth proved interesting as well as instructive to anyone owning property. The clerks in charge of the booth were found very accommodating and visitors went away carrying some very interesting booklets on roofing and roof trimmings, also a souvenir ash tray.

The main office of W. J. Burton Co. is located at 159-161 West Congress street, Detroit, Mich., where anyone unable to obtain their goods from dealers will be accommodated.

Store Front Construction

After making a careful study of the Universal Sash Bar and Store Front, made by the Voltz Manufacturing Co., St. Joseph, Missouri, we find that it is no copy or modification of any other make. But it is a departure from all known lines, and stands alone as a practical, sensible mechanical production, and appeals to the practical mind; the patents covering it are fundamental and not combination; it will meet any and all conditions that may be submitted, and it accomplishes what no other Sash Bar seems to have done.

It provides for the expansion and contraction of glass and the settling of buildings without crushing the costly plates. It works at any and all angles, and where the windows are enclosed the glass will not frost. It requires no ventilation.

It is mechanically made; it is an all-metal Bar, and is fire, dust and waterproof. It is strong enough to stand wind pressure, and requires no stay bolts, braces or frame work. There is more brass in one foot of this Bar than in several feet of most any make.

Every job sent out is first set up and fitted in the factory, and each piece numbered before taking down, and is sent out, fitted all ready to put up.

As the Universal is an all-metal bar, and put together with machine screws and bolts, you can readily see why a screw driver is the elading tool on the job. The fitting is done in the factory and not out on the work.

This Bar is simple and most easily installed. There is no front so easily put up as the Universal. When preferred, however, an experienced mechanic who thoroughly understands every detail of store-front construction is sent out.

The E. J. Johnson Co.

This company has been engaged exclusively in the business of slate for 25 years, at the present time owning and operating quarries from which are produced black, green, red and purple slate. The buyer may here find a larger variety of slate than is to be found with any other slate producing concern. The advantages to the buyer are therefore very considerable in that any of his requirements may be filled promptly, he may feel that he is reaching first hands whatever his needs may be and that he is saved time and annoyance in hunting for any particular slate which may be required in his business.

With headquarters at New York City, they are in close

Luxfer Prisms

Turn Darkness *Into* Light

Luxfer Prisms take the light of the sky and focus it to any part of the building.

Luxfer Prisms flood the dark places with daylight and render artificial light unnecessary.

The secret of the successful results that always follow Luxfer Prisms is in the sharp, accurately cut angles. Sheet prisms cannot give such results; they merely throw the light on one spot—Luxfer Prisms distribute it into every nook and corner. The light rays are merely reflected; they are scientifically directed—bent—focused. They are drawn from the sky to places they would otherwise never reach.

Contractors Can Install Luxfer Prisms

Ninety per cent of the total installations are on our principle. This is appreciable evidence of superiority of the Luxfer system. It is testimony of the fact that architects and contractors are not risking their reputation by installing imitations.

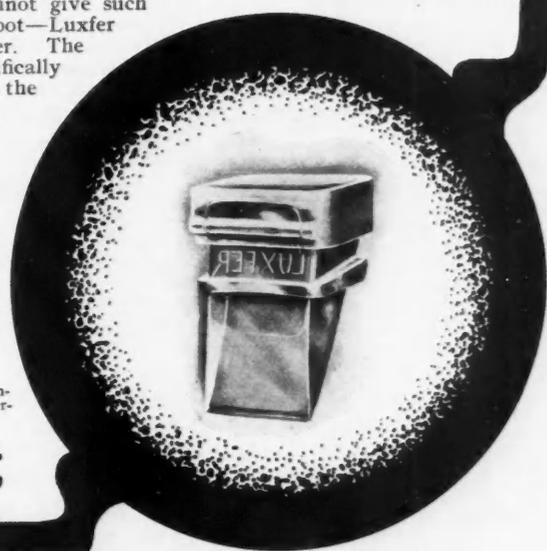
Wherever a dark room or basement exists there is a need for Luxfer Prisms. The rental value of each room is increased, while the utility of a daylight basement is unquestionable.

Contractors contemplating Luxfer Prisms can obtain ready-to-lay slabs made up to any specifications, at our shops.

Send for "Daylighting"

Drop a postal for our booklet—"Daylighting." Gives you an insight into the most advanced method of daylighting and makes interesting reading for contractors.

American Luxfer Prism Co.
1600 Hegworth Building Chicago



Your Success ^{IS} OUR Necessity!

We Want to Show You Why

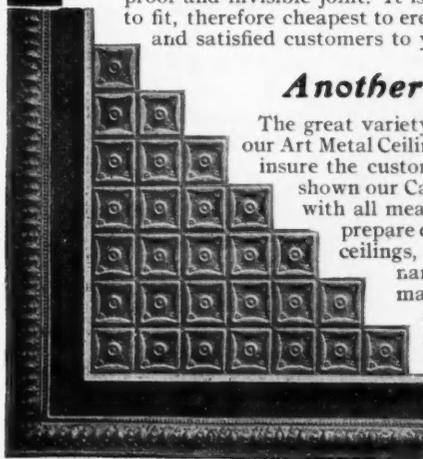
Can you afford to figure a job of Metal Ceiling unless you are sure the cost of erecting will not exceed your estimate? Your success is our necessity because you will not buy our ceilings unless there is profit in them for you and satisfaction for your customers. Most of your success depends upon the fit.

We Have Solved the Problem

Our Double Bead Lap produces a thoroughly dust-proof and invisible joint. It is simplicity itself. Easy to fit, therefore cheapest to erect. This means profit and satisfied customers to you.

Another Secret

The great variety and high character of our Art Metal Ceiling and Sidewall Designs insure the customer's preference when shown our Catalogue. Send us plans with all measurements and we will prepare drawings of appropriate ceilings, without charge, and name you low price on all material, F. O. B. your station. Get our catalog right away.



The "Never Leak" Shingle

Made on a modern scientific principle, of Apallo Vandegrift Galvanized Iron, this latest and most remarkable roofing supersedes anything made. Rather a sweeping statement—but read the reasons on which it is based.

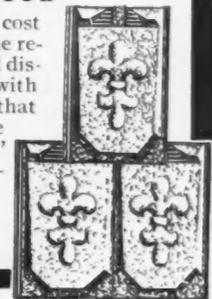
Unique Features of a Unique Roofing

First: A roof fitted with this shingle cannot leak. The interlocking principle is so complete that for water to get through the shingles is against the laws of nature. Water cannot run uphill, yet that's the only way it could enter a roof of "Never Leak" Shingles.

Then they positively cannot warp, rot, split or absorb water and remain damp. And of course they're fire-proof. Sun doesn't affect them. Neither do the severest climate conditions.

Cost Compared with Wood

Figure up what wood shingles have cost you for the last ten years. Consider the repair bills, inconvenience and ail around disadvantages, and compare the cost with everlasting "Never Leak" shingles that remain as good as new as long as the building lasts. We tell you "Never Leak" shingles are cheaper. Send for literature and be convinced.



THE TIFFIN ART METAL CO., Tiffin, O.
39 Broad St.

PEARSON'S IMPROVED NAILER

A Hand Nailing Tool!



Especially adapted for driving shingle nails. Its weight is about two pounds and can be used with gloves or mittens on in any season. It can be used on a roof of any pitch as well as on a level surface. It is a time saver and a money maker and a great advantage over old way of driving nails.

Ask your dealer for it or write.

Pearson Mfg. Co.
Robbinsdale, - Minnesota

EVERYBODY



USES

CLIMAX or **VERIBEST**
ASPHALT RUBBER

ROOFING

YOU CAN LAY IT YOURSELF

It Costs So Little. Costs one-fourth as much as shingles, and lasts twice as long. We are manufacturers. Our prices lowest. **We pay the freight.** We guarantee safe delivery—making good any damage or shortage of R. R. Co.

So Quickly Done. We ship from the nearest Branch Warehouse same day order is received. Roofing is in Rolls 108 sq. ft. each. Covers 100 sq. ft. of surface. All materials furnished. Anybody can lay it who can drive nails. Can be laid over old shingles.

So Durable. Long fibre felt—every thread thoroughly saturated with pure Asphalt. No coal tar. Coated with pure Asphalt. Light—strong—elastic—almost everlasting—more so than metal or shingles. Adapted for flat or pitched roofs, and for sides.

Weather-Resisting. Coldest weather can't damage it, nor make it hard or brittle. Always flexible and elastic—can't crack, chip, buckle, or shrink. Will not melt or get sticky in hottest weather. Cannot dry out, rot or rust. Soft and pliable like a sheet of rubber—clings close and snug to any roof. Snow, rain, wind and sun can't affect it.

Fire-Resisting. Contains no tar or other inflammable material. Spark and fire-brand proof. Insurance companies make same rate as on tin and iron roofs.

Guaranteed. If goods are not exactly as claimed, return them and we will refund your money. Is that plain? Your own judgment tells you we **must** make and sell you the **best** roofing to stand that plain guarantee.

Free Book and Samples. Write today for our Roofing Book, Samples and Prices.

McHenry=Millhouse Manufacturing Co.
STA. D. SOUTH BEND, IND.

touch with their quarries in both the Vermont and Pennsylvania districts, enabling them to give prompt and satisfactory attention to all shipments.

Their branch office at 626 Park Building (corner Smithfield street and Fifth avenue), Pittsburg, will be convenient to buyers in that district. Connection with **both phones.**

Practical people will be found in all departments conducting operations in a manner highly satisfactory to all patrons.

Durable Sash Cord

Solid braided cords have proved themselves by long experience and careful tests in running over pulleys to be much more durable than twisted, cable laid or hollow braided cords, or than metal chains or tapes.

An examination shows that with the strands doubling on each other as they do, having freedom of play without slipping, the strain in running over pulleys is quite equally distributed over all the strands, while in twisted or hollow braided cord the strain is largely on the outside strands, at the point where it surrounds the pulley. It is also free from the internal stresses which destroy laid cord so quickly.

Thirty-five years' experience in the manufacture of solid braided cord enables the Samson Cordage Works, Boston, Mass., to turn out goods much superior in quality to those found under a variety of labels on the market, many of which are made of poor material, unevenly and softly braided and poorly finished. Such cords stretch badly or wear out quickly, owing to the uneven strain on the strands and abrasion.

To protect themselves against these unsatisfactory goods, it is important that buyers should insist upon having cords with a well-known and reliable label as a guarantee of their quality. We therefore take pleasure in emphasizing our former announcements that the "Samson" trade mark is a guarantee of quality, and that all goods bearing the same are the best of their class. All purchasers should insist upon having sash cord marked with the colored spot in the braid and having the Samson and the Lion on the label.

Sheet Iron or Steel Roofing

Common black sheet iron, painted, has been used for roofing purposes, in both Europe and America, for more than a century past, and by practical tests and comparisons with other roofing materials, has proven itself to be the best for all general purposes, where perfect protection from the elements, combined with durability and economy, are desired.

A new era is now opened in metallic roofing by the use of a fine quality of sheet iron and steel and the application of new and improved devices for fastening the sheets. The enormous quantity of iron and steel that has been used for roofing purposes during the present decade, evinces the high favor in which it is held by the general public. They have learned that good sheet iron or steel of suitable weight, if properly laid and taken care of, will give better satisfaction than any other known roofing material.

We will say, for the information of those who are not familiar with the lasting qualities of iron or steel roofing, that there are now in existence many cities and towns throughout this country, iron roofs, in excellent state of preservation, that were laid between twenty and fifty years ago, and have had no repairs made upon them since, except having been cared for by coating with metallic paint once within every three to five years.

This sets at rest any claim that they rust out, if taken care of. Within the last twenty years, hundreds of iron and steel roofs have been laid, that are yet in first-class condition and doing the property owners good service.

All iron and steel roofing sheets are heavily coated with metallic paint on both sides before laying, and, as there is no wear upon the under side, a periodical coat of paint on the upper surface will preserve them indefinitely.

The Sykes Iron & Steel Roofing Co., Chicago, Ill., received



FLOOR FINISH

is a TRIUMPH OF THE VARNISH MAKING ART

No other Floor Varnish or Floor Finish of a varnish nature is so tough, so elastic or so durable. It produces a smooth, handsome gloss finish unaffected by water or atmospheric conditions. It will not crack, chip or mark white.

If you are interested in a high-class article for floor work—a finish that is made to walk on and to stand the severe wear to which floors are subjected, write us for further information.

Our New Catalogue "D" listing our complete lines of "Nice" Varnishes, Fillers, Paints, Stains, Enamels, Colors, etc., will be ready very soon. We wish to send it to every reader of this paper who will write for it.

EUGENE E. NICE
272-274 No. 2nd St. PHILADELPHIA
201-3-5-7 Spruce St.



Here's the Roofing You Ought to Use

Just as ready roofing has demonstrated its superiority over shingle, slate and tin roofs, so has MONARCH Asphalt Roofing conclusively proven its superiority over the usual ready roofing.

Genuine asphalt is acknowledged to be the most satisfactory roofing and coating so far known. We use genuine Pitch Lake Trinidad Asphalt and all wool felt in the manufacture of MONARCH, and our method of applying the asphalt saturation, coating and mineral surfacing makes MONARCH a solid and perfectly combined whole — impervious to water and proof against flying fire-brands.

Know what you are buying — there is no substitute for genuine asphalt roofing. Send for Sample Set M-2.

Carpenters and Builders.—We know Monarch will justify our claims. You cannot find a better Roofing at any price. We earnestly desire you to give it a trial. If your dealer does not carry Monarch we will see that you are supplied direct.

Stowell Mfg. Co., Jersey City, N. J.
Philadelphia Chicago Kansas City

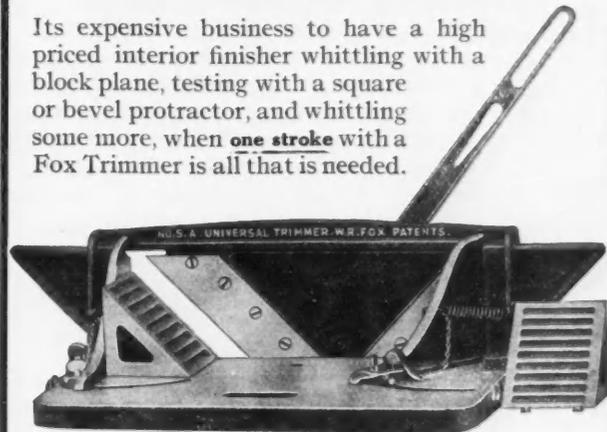
GET A

Fox Trimmer

FOR

Interior Finish

Its expensive business to have a high priced interior finisher whittling with a block plane, testing with a square or bevel protractor, and whittling some more, when **one stroke** with a Fox Trimmer is all that is needed.



We'll send our new Trimmer catalog on request

FOX MACHINE COMPANY

756-776 N. Front St.

GRAND RAPIDS, MICH.

May We Tell You More



about the handsomest and strongest store front construction made? Its clean-cut, artistic appearance, its strength and rigidity, and its ease in installing, and in inserting and removing glass, give it precedence over all other forms of store front construction.

Our booklet "Modern Store Fronts" gives complete details of the "Petz" system, and illustrates the different styles of bar and their method of application. Write for a copy.

DETROIT SHOW CASE COMPANY
SOLE MAKERS

491 West Fort Street DETROIT, MICH.
For sale by Pittsburg Plate Glass Co. at all branches



the highest award at the World's Columbian Exposition for the lasting qualities, strength, lightness and method of fastening of their product, consisting of Sykes patent improved standing seam roofing, and V crimped corrugated roofing and siding, sheet metal clapboarding, corrugated and beaded ceilings, sheet steel brick, etc., from sheet iron and steel, black, painted or galvanized.

Notice

The building season is advancing rapidly. If you haven't sent your usual list of prospective builders in your locality to Cortright, do so today.

Slaters' Tools

Although the life of anything depends more or less upon the care taken of it, as much more depends upon the stuff it is made of. So it is with tools. Any tool will wear out in time. Any tool in time will show the effect of improper use and abuse. But as the workman, whatever he may be, buys his tools intending to use them, not as ornaments, but as instruments with which to perform his various duties—and in their execution he does not always remember to handle his implements with care—the most economical tools for him in the end are those that will stand the most wear and tear, and last the longest. Quality counts. Quality is economy.

In New Haven, Conn., The Belden Machine Company makes slaters' tools of this nature—quality tools. Only the best of high-grade American steel is used in their construction. As each article is drop forged the already good quality material is even more improved by the operation. Most careful and strict attention is given to tempering, and years of experience have eliminated all trouble arising from that source. The models have stood the tests of slate roofers the world over, and are universally approved of. Each tool is absolutely guaranteed against defects.

A complete outfit, or set, consists of a hammer, ripper, stake and punch. Left hand hammers are also carried in stock, and attention is gladly given to customers desiring tools especially suited to their own requirements.

Fox Floor Scrapers

The Fox Manufacturing Co., of No. 346 Broadway, Milwaukee, Wis., are just closing one of the most successful years of their business career in the manufacture of their floor and cabinet scrapers. In the spring it was necessary for them to move into larger quarters, and they are now manufacturing all parts of their floor scrapers. As the success of a floor scraper depends mostly upon the knives, it requires a special grade of spring steel, accurately tempered, in order that they may withstand the grit and sand encountered on different floors. For this reason they have installed new machinery for making and tempering their knives and the results are very satisfactory.

The Fox Manufacturing Co. are making three styles of floor scrapers. One is the Junior floor scraper, which is a small machine; another is the Fox No. 2, a heavy machine made for smooth work where evenness and a perfect finish are required. The third, and the machine which has become the leader throughout the entire country, is the Fox Floor Scraper No. 1. During the present season it was necessary to keep the factory running day and night to fill the orders. Carload after carload are being shipped to all parts of this country, and to foreign countries. This machine, owing to the fact of its simplicity and lightness of running, in comparison to its weight, makes it the one machine for contractors who desire a machine that will do good and rapid work, and at the same time one that will not tire their workmen. It is the one machine on the market at the pres-

An Eighty-year-old Tin Roof Prevents Destruction by Fire of All Surrounding Property

THE fire occurred at the White Lead Works of Wetherill & Brother, Philadelphia, Pa. The buildings indicated by the arrows were completely destroyed inside, but the roofs remained almost intact, smothering the flames and preventing the spread of the fire to the adjoining structures and lumber yards. The buildings have been covered with tin for upwards of eighty years.

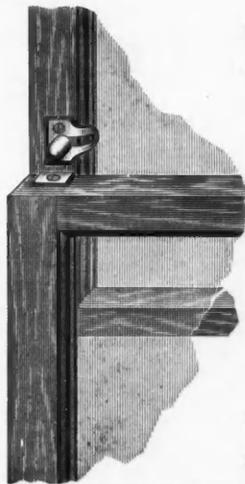
WHEN these buildings were reconstructed "Target-and-Arrow Old Style" tin was selected for the roofs over other leading brands, the owners desiring to get the same kind of tin as that which had given such excellent service on the old roofs. "Target-and-Arrow Old Style" is the only tin now made by the old-fashioned, hand-dipped process—a process that has given this country its eighty-year roofs.

We have a book for architects or for the clients of architects called "A Guide to Good Roofs," which we send free on request.

N. & G. TAYLOR CO., Est. 1810
PHILADELPHIA



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER



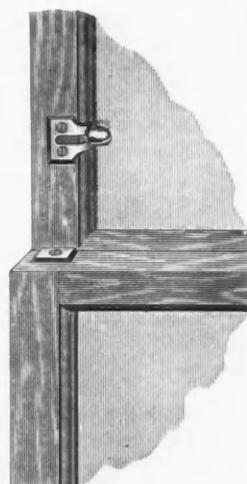
Ventilation Without Risk

IVES PATENT VENTILATING LOCK

A safeguard for ventilating rooms, allowing windows to be left open at the top, the bottom, or both top and bottom with entire security against intrusion, a permanent fixture easily applied and quickly operated, affording three times more protection to the window than the ordinary sash fastener.

THE H. B. IVES COMPANY
NEW HAVEN, CONN., U. S. A.

88-page Catalogue Hardware Specialties mailed free



You're Losing Money Every Day You Wait
THE
Shrp-Shavr Safety Razor

At 25 Cents

is the quickest selling and biggest business-building proposition you've ever had a chance to get in on.



A complete Safety Razor, with a money-back guarantee FOR 25

CENTS—an absolutely virgin field of customers to draw from—A CONTINUOUS SALE OF BLADES—a magnet that pulls a mass of new buyers into your store for shaving-soap, strops and all shaving accessories—and a clear profit of 50 per cent on every single one of the hundreds of razor sales—that's exactly what you're losing every day you delay in putting in a stock of Shrp-Shavr Razors.

We're spending thousands of dollars to create customers for you. Co-operate with us. Do your share and get your share. We're working tooth and nail for you in the magazines. Won't you take your part of the profits that are waiting for you?

Write your jobber, or if he will not supply you, order direct, and get your share of the Shrp-Shavr business.

PRICES

SHRP-SHAVR RAZOR with one blade, per dozen - - - \$2.00
SHRP-SHAVR BLADES, 5 in a pkg., per dozen pkgs. - - - 2.10
SHRP-SHAVR STROPPERS, per dozen - - - - - .75

SHRP-SHAVR RAZOR COMPANY

70 Duane St.

NEW YORK CITY

CYCLOPEDIA OF CIVIL ENGINEERING



8 VOLUMES—page size 7x10 inches—nearly 4,000 pages—3,000 illustrations, diagrams, plates, formulae, etc. Bound in HALF RED MOROCCO

The progressive Carpenter or Contractor, who is ambitious to advance, surrounds himself with the latest and best information, not only on the work he is now doing but on any work he is likely to get. Civil Engineering is so closely allied with building that many good contracts are lost for lack of a little knowledge of the elements of civil engineering.

This Cyclopedia enables an ambitious man to get a complete reference work covering the entire field at a very small cost. This set of books will prepare him to face any problem that may come up in surveying, leveling, house drainage, water supply, plumbing, sewage disposal, reinforced concrete, masonry, steel construction, foundations, roof trusses, and hundreds of other subjects.

This is the first great reference work ever published covering the entire field of Civil Engineering. Nothing so complete or practical has ever been published, and no builder who is ambitious to do big work can afford to be without it. To introduce these books to carpenters and builders, we make this special

FREE FIVE-DAY OFFER

Without deposit. Sent by prepaid express for 5 days' free examination if you mention the name of your employer and occupation.

If you wish to keep the books, pay \$2.00 within 5 days and \$2.00 a month until you have paid the special \$24.00 price; otherwise return them at our expense. Regular price is \$48.00. Order promptly and we will include FREE for one year, as a monthly supplement, the

TECHNICAL WORLD MAGAZINE

A popular magazine with a technical turn containing the latest discussion on timely topics in Science, Invention, Discovery and Industry, also the best Fiction, Biography, Travel and Humor, in fact, the best of everything. Illustrated with scores of interesting photographs.

Brief List of Contents

Reinforced Concrete; Steel and Masonry Construction; Skyscrapers—Practical Problems in Construction, Strength of Materials; Roof Trusses; Sewers and Drains—House Connections, Sewage Disposal; House Drainage and Sanitation—Plumbing, Pipes and Connections; Mechanical Drawing; Plane Surveying; Plotting and Topography; Railroad Engineering; Statics; Bridge Engineering; Highway Construction; Hydraulics; Water Supply—Water Works, Wells, Reservoirs and Dams; Purification; Irrigation; Pumping Systems; Arid Lands; Water Power Development; River and Harbor Improvements.

American School of Correspondence, Chicago, U. S. A.
Mention American Carpenter and Builder, Nov. '08



The modern home is not complete without a Fire-Place which is its most attractive feature

You will be interested in our line of Patented Grates. They are guaranteed to heat from 8,000 to 10,000 cubic feet of space in zero weather. Request descriptive circular or send 7 cents to cover postage on large, handsomely illustrated catalogue of Artistic Wood Mantels.

We pay the freight. Contractors, kindly send your business card and we shall quote interesting prices.

Estimates furnished promptly on Tile Floors and Wainscoting, etc.

Heitland Grate & Mantel Company

No. 124 South Fifth Street :: :: QUINCY, ILLINOIS, U. S. A.

CLASSIFIED DEPARTMENT

Do You Want Help?
Do You Want a Situation?
Have You Anything for Sale?
Do You Want Machinery or Supplies?

An advertisement in the "Classified Department" of the American Carpenter and Builder will be the least expensive and the most thorough way of letting your desires be known. Rates: 5 cents a word each insertion.

CASH MUST ALWAYS ACCOMPANY ORDER

For Sale.

SOUTHERN COLONIAL HOMES—Starting in our September number, "Southern Colonial Homes," full page pictures illustrating the finest types of architecture of that period, the most complete collection in existence will appear, to run a year or more. September issue free to architects. Write today. Southern Architect, Box 846, Atlanta, Ga.

TO MANUFACTURERS—We can market any specialty required in building operations. Make us an offer. Mill Work Specialty Co., Milwaukee Wis.

FURNACES—Furnaces only \$15.00 before approval. \$125.00 outfits \$67.00. Book free. 1900 Furnace Co., Youngstown, Ohio.

Patents.

C. L. PARKER, Solicitor of Patents, McGill Bldg., Washington, D. C. Handbook for inventors sent free upon request.

Wanted.

Floor Scrapers, Cabinet Scrapers and Knives.

WANTED—Carpenter to know how to obtain a Floor Scraper free and become acquainted with our Cabinet Scrapers, Burnishers and Scraper Knives. Write. Fox Manufacturing Co., Milwaukee, Wis.

"Creole"
"Etowah"
"Cherokee"
"Kennesaw" } **Georgia Marble**
THE GEORGIA MARBLE CO., - - TATE, GA.

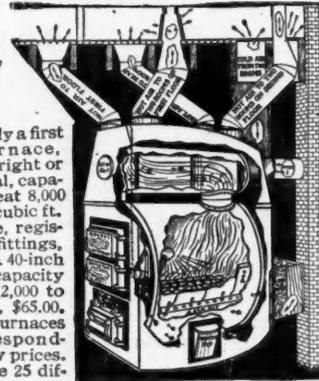
WANTED: To manufacture special machinery models, dies and tools. We take contracts for stampings and manufacture patent specialties and novelties in metal of all kinds. **NATIONAL STAMPING & ELECTRIC WORKS, 153-159 S. Jefferson St., Chicago, Ill.**

DO YOU WANT SLATE?

Roofing Slate for Houses, Barns, Sheds and Railroad Stations. Clean and ornamental, rain, wind and fireproof.
Blackboards for Schools, Colleges, etc., are being used all over the World, need no better commendation, "it is just the thing."
Structural and Electrical Stock, Steps, Sink Tops, Wash Tubs, Window Sills, etc., superior to all other stone for such purposes.
Slaters' Supplies, Hand-made Slaters' Tools, Snow Guards, Slaters' Cement, Nails, Felt, Slate Punching and Cutting Machines, etc. Write for prices and I will tell you all about Slate. **D. McKenna, Slatington, Pa. U. S. A.**

FURNACE AND FITTINGS \$55.00

OUR
SPECIAL
OFFER



Absolutely a first class furnace, either upright or horizontal, capacity to heat 8,000 to 12,000 cubic ft. with pipe, registers and fittings, \$55.00. A 40-inch furnace, capacity to heat 12,000 to 16,000 ft., \$65.00. Larger furnaces at correspondingly low prices. We make 25 different furnaces, and can ship everything ready fitted so that any handy man can install a furnace in two days. Send for FREE CATALOGUE.

Bovee Grinder & Furnace Works
50 W. EIGHT ST., WATERLOO, IOWA

The Hanger which will Last a Life Time

The **LAWRENCE Steel Trolley**

Barn Door Hanger - No. 30



Runs on roller bearings, noiseless and without friction. Has a **SCREW ADJUSTMENT** which adjusts the door close to the building. Swings the door out at right angles.

No Sticking, Binding or Scraping in the Track
"See That Off-Sat Prevents It."

BIRDS CANNOT NEST IN THE TRACK NOR CAN IT BE CLOGGED BY SLEET OR SNOW. A post card will bring our booklet "TROLLEY PROGRESS," which explains it fully.
LAWRENCE BROTHERS, - Sterling, Ill.

SLATE WE HAVE WHAT YOU WANT

*In Roofing Slate, Slate Blackboards
Structural and Plumbers' Slate*

SATISFACTION GUARANTEED IN QUALITY AND PRICE

ASK FOR DELIVERED PRICES

J. K. HOWER, Station C., Slatington, Pa.

H. J. KICHLINE, Sales Agent



Send us two or more names of persons who are interested in or want to buy Hot Water Heating Plants and we will send this Scale - Back inches are divided into 6, 10, 12, 16, 20 and 40 parts. Also free catalog on request. See our two-page ad in American Carpenter and Builder for January, 1907.
ANDREWS HEATING CO. 949 Heating Bldg., Minneapolis. 978 La Salle Bldg., Chicago.

ent time that finishes its work without the aid of a sander. The Fox cabinet scraper is especially adapted for even finishing and rapid work. The body slides on the floor and it works in the same manner as a plane. By doing so it eliminates chattering and waves. It is just the thing for bench work.

Ventilators That Ventilate

The necessity of good ventilation is universally admitted. As pointed out in another part of this magazine, a building, whether it is residence, factory, hall, or office building, commands a higher rental and so is a better paying investment if it is properly ventilated. With proper ventilation the occupants are healthy and contented.

The Canton Manufacturing Co., of Canton, Ohio, has perfected and placed on the market an improved storm-proof ventilator which *does* ventilate—the "Canton." With it there is absolutely no back or down draught as in so many of the older types. It is constructed with either metal or glass tops. One form is so constructed that the ventilation and temperature of a room can be regulated as desired. A fusible link is furnished with each ventilator of this type, so that in the event of fire the ventilator will close automatically and thus shut off all draught.

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Bangor Slates

The East Bangor Consolidated Slate Company, of East Bangor, Pa., manufacturers of roofing and structural slates, gives the following reasons why slate is superior to all other materials for roofing:

1. It is cheaper. A good slate roof will last from seventy-five to one hundred years, and the first cost is less than tin, iron, steel, or gravel, and but little more than shingles. It will last from three to five times longer than any of these.
2. It never requires paint.
3. It never gathers moss or other impure vegetable growth deleterious to water, and is beyond comparison the best roof in existence for cistern water.
4. It is fire-proof. Any experienced insurance man will tell you that a building covered with slate is less hazardous than any other, especially in thickly settled districts where flying sparks from a fire are liable to ignite shingles, or where excessive heat easily melts the solder on tin roofs and warps and curls up sheets of iron, thereby exposing the inflammable material beneath to the flying sparks. The saving in insurance premiums is an additional item in the score of cheapness.

The fact that railroad companies, manufacturers, and practical builders everywhere, cover the roofs of their most substantial buildings with slate, attests the truth of the foregoing statements. The United States Government uses Genuine Bangor Slates almost exclusively, and this company has furnished thousands of squares for government buildings.



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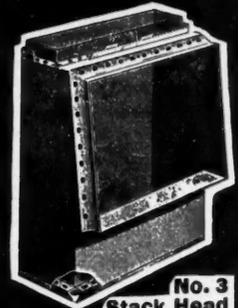
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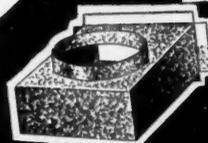
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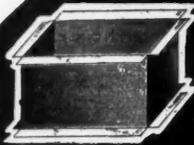
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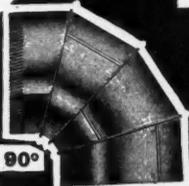
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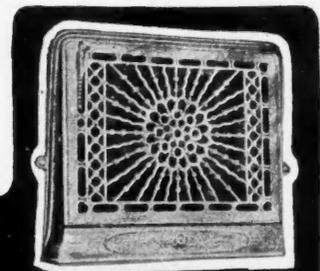
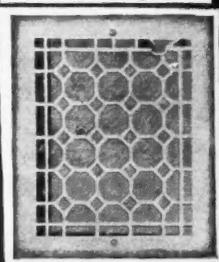


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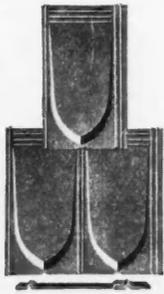
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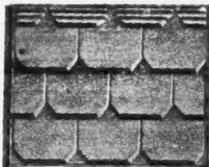
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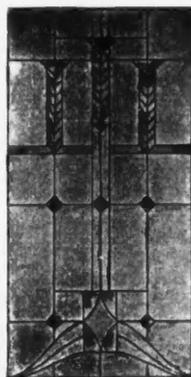
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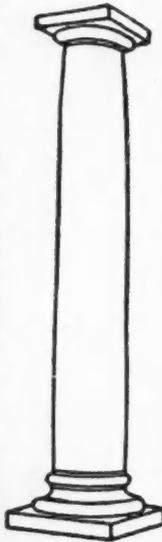
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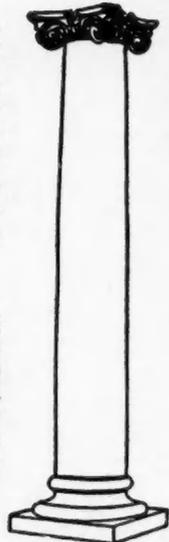
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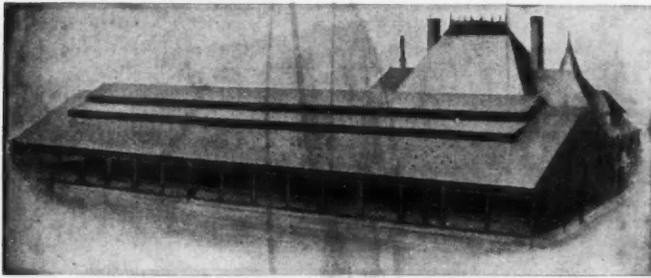
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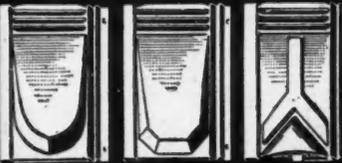
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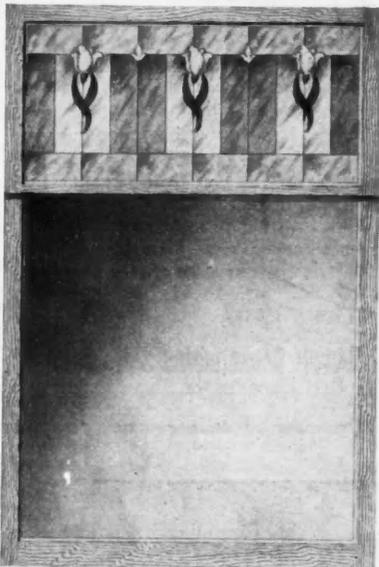
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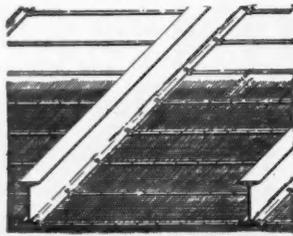
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Mechanical, Architectural, Perspective, Isometric, and Free-hand Drawing; Blue Printing; Mechanical and Architectural Lettering; Rendering in Pen, Ink and Water Colors; Water Color Hints for Draftsmen; Shades and Shadows; The Greek and Roman Orders of Architecture; Shop Drawings; Machine Drawing; Machine Design; Sheet Metal Pattern Drafting; Tinsmithing; Architectural Sheet Metal Work, Skylights; Cornices; Roofing, etc.

AMERICAN SCHOOL OF CORRESPONDENCE

CHICAGO, U.S.A.

Mention Amer. Carp. & Bldr., Nov. '08



Here's Fire Protection—Sure

Experience and various exhibitions have proven mortar is the best fire retardant for the inside of buildings. Applied right it is far superior to steel and other covering.

Hitherto the trouble has been in applying it. With the **Voss Wire Lathing** the problem is solved. Being made of a special high drawn carbon wire, enormous durability is assured. This wire, in fact, cannot break; every foot of the finished lath being able to carry a weight of 2,500 pounds.

Can be used for applying on walls, ceilings, around columns, joists, etc. Under enormous heat even the heaviest steel would bend or melt. Protected with Voss

Wire Lathing it would not be the least bit affected.

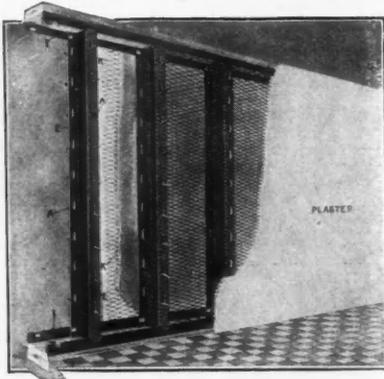
The claims made for this lathing are pertinent and impossible to misconstrue. It is positively fire-proof, prevents mortar becoming detached from lath; is easily and cheaply applied; ceilings, walls, etc. cannot chip or crack; stands the test of time better than any lath known.

Send for booklet showing full details and names of well known users.

Frederick Voss, 617-21 Austin Ave. CHICAGO



You Are Missing Something Worth While, Mr. Contractor and Builder, If You Do Not Know About



BERGER PRONG LOCK STUDS and FURRING for use with expanded metal lath.

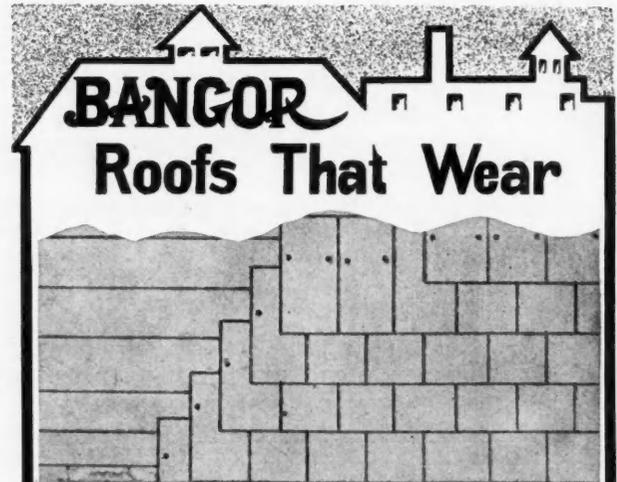
It is a system you ought to be posted about. It is both simple and effective. One man can hang the lath on the prongs and clinch them securely with the tap of a hammer. Berger Prong Locks save time and money. There's no wiring and the lath can't get away.

Write **TODAY** for catalog F-55-S, which shows how this system is applied to various classes of construction.

THE BERGER MFG. CO.

CANTON, OHIO

New York, Philadelphia, Boston, Chicago, St. Louis, Minneapolis, San Francisco, Atlanta



BANGOR Roofs That Wear

Supersedes shingles, tin or prepared roofing materials from every standpoint. Color, strength or durability—it's got everything beaten.

Forty-five years is the time it has been on one roof—and then it's as good as new.

Bangor roofing slate will last from seventy-five years to a century, and we do not know how much longer—and retain its qualities to the end.

Fire proof and weather proof, neat appearing and ornamental, it is the expert's choice throughout the country.

Full literature on request.

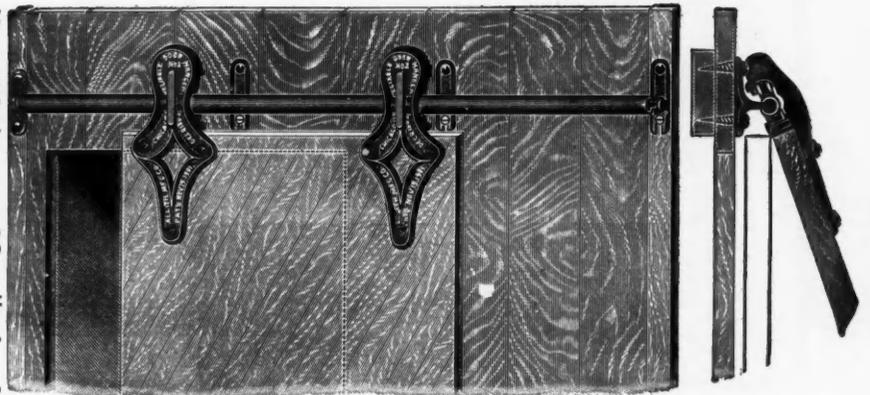
The East Bangor Consolidated Slate Co.
East Bangor, Pa.

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ROUND TRACK DOOR HANGERS

Impossible to Derail
Easy Running, Great Strength

—FOR—
BARN, WAREHOUSE and FIRE DOORS
Send for Catalog "A"

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Copper Roofing Material

Carried in Our New York Warehouse ready for immediate shipment

Copper Leader or Conductor Pipe
Copper Eaves Trough, Copper Elbows

SHEET COPPER
OVER 500,000 POUNDS
SOFT AND COLD ROLLED, ALL SIZES AND THICKNESSES
In Stock in New York ready for Prompt Shipment

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SHEET ZINC BRASS CORNICE BOLTS

Catalogue Showing Full Line Mailed On Request

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**Current is Coal
Coal is Currency**

What Does this Mean to You?



Tungsten



Tantalum

Sunbeam TUNGSTEN Lamps give 20 candle power, consuming only 25 watts, as compared with the ordinary lamps giving 16 candle power and consuming 56 watts.

Sunbeam TANTALUM Lamps give 20 candle power, consuming only 40 watts, as compared with the ordinary lamps giving 16 candle power and consuming 56 watts.

Either will pay for themselves in a short time.

Which Do You Want? Write For Prices

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STAR

EXPANSION BOLT

FOR
Quick, Secure

FASTENINGS TO MASONRY
USE THE MODERN IMPROVED



STAR EXPANSION BOLT PAT. APR. 14, 03

One of one hundred different styles.

Application: { Drill Hole.
Insert Expansion Shield.
Put Screw Through Material into Shield and Fasten Tight.

Advantages: { Smallest Hole for Insertion.
Simplest and Quickest Application.
Adaptability to all Bolts and Screws.
Maximum Holding Power.

STAR EXPANSION BOLTS are made in all sizes (1/8" to 2" diam.). They are universally used in all modern construction work. Don't fail to investigate. Catalog and samples free.

STAR EXPANSION BOLT CO.
BAYONNE, N.J., U.S.A.

METAL COVERED MOULDINGS

CONTRACTORS on the look out for superior Metal Covered Mouldings—the different kind—should investigate the merit of "Chicago" mouldings. At our own modern factory is manufactured the finest line of metal covered wood mouldings in the country.

We constantly keep in stock and in wonderful variety a large selection of mouldings covered with Polished German Silver, Brass, Copper, Oxidized copper, etc.

Let us hear from you by return mail. Let us estimate on whatever you want in any quantity. Write for Catalogue No. 15—Our prices are right.



Chicago Metal Covering Company

69-71 North Green Street
CHICAGO

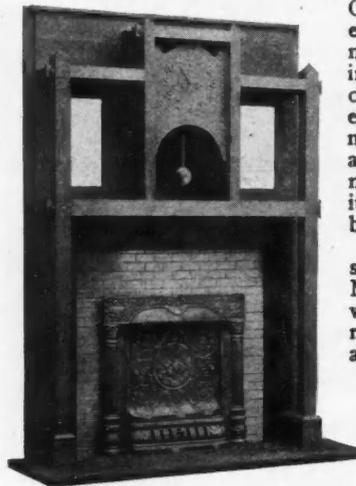


The Interior

of your home is where you live and derive the most comfort, and a well designed mantel contributes more to the interior appearance of the home and comfort of its occupant than any other article of furniture or decoration.

CENTRAL MANTELS

are distinctive in character, workmanship and finish. Twenty years' experience catering to the wants of the home builder enables us to know and meet their wants.



Our factory being equipped with all of the most modern labor saving devices and keeping on hand constantly an enormous stock of raw materials, places us in a position to sell better mantels cheaper than it is possible for you to buy elsewhere.

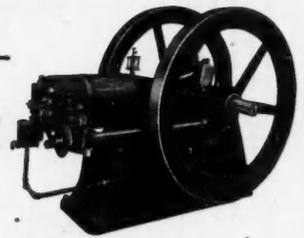
We can furnish any style from Colonial to Mission, and in any wood or finish at prices ranging from \$10.00 and up.

The above is one of the many designs shown in our 112 page catalog, which is the finest, most complete and expensive

mantel catalog ever issued. Catalog sent free on request to Carpenters, Builders or anyone building a home.

CENTRAL MANTEL COMPANY
No. 1247 Olive Street - - - St. Louis, Mo.
"Reputation and Quality Count"

Power for Your Shop



Write for our Special Proposition on
3 H. P. and 6 H. P. Engines
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Backed by Five Years' Guarantee

Weber Gas and Gasoline Engines

Built on the Experience of 25 years
of good Engine Building
Write for Illustrated Catalogue

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Makes Screen Hanging Easy

Because of the Patent Guide Flanges on the Gossett Hinges, screen hanging is simplified by fully a hundred per cent.

No need to cut holes in storm window frames for ventilation purposes. Gossett Hinges make screen and storm sash interchangeable; the set of parts attached to building answers for both.

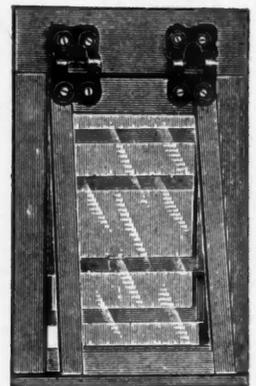
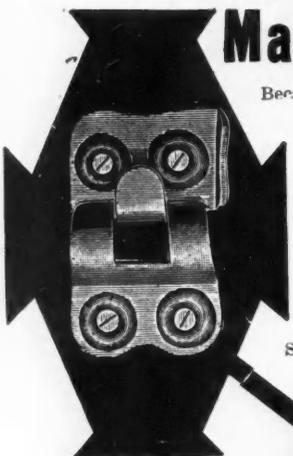
Easily Applied — Easily Removed

Special fasteners lock screens securely—opened or closed. No trouble to affix or remove. Just hook them on or off. Full length screens can be hung with same fittings.

A Gossett Hinge consists of two pieces. One is attached to screen, other piece to window casing. No loose parts to get lost—nothing that can possibly wear out.

Send for explanatory booklet— or order a complete set for a thorough test.

F. D. Kees Mfg. Co., Box 523, Beatrice, Neb.



GRAND MILLWORK

CATALOG *for* HOME BUILDERS

EVERYTHING IN SASH, DOORS, ROOFING AND BUILDING MATERIALS



FROM THE FOREST TO THE HOME

GORDON-VAN TINE CO. DAVENPORT IOWA U.S.A.

FREE TO BUILDERS!

The new 1908-9 Gordon-Van Tine Catalog is now being mailed broadcast to carpenters and contractors. Is your name on our Free Mailing List? If not, write for the big Cut-Price Catalog at once and in addition you will receive our special Cut-Price Bulletins, which keep you posted on all important developments in the building material situation. Our new catalog is a hummer. It cuts prices right and left, offering over 5000 bargains in Sash, Doors, Millwork and Lumber. We undersell everybody. We do the largest "mill-to-contractor" business in the world. Everything shipped direct to you from our big warehouses. Quality and safe delivery absolutely guaranteed. Money back if goods are not found bright, fresh, clean, high-grade and perfect in every way.

....Our Mammoth Stock of High-Grade, Guaranteed.... Sash, Doors, Millwork and Lumber AT 50 CENTS ON THE DOLLAR!

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Cut Prices to Carpenters and Contractors on All Material Required for Building

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You can build anything from a mansion to a cottage complete from Gordon-Van Tine Materials. All the rough lumber, all the doors, windows, inside finish, stairs, porches, roofing, mantels, etc., at Cut Prices.

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We sell everything needed to build church, school and other public buildings, including magnificent art windows, massive doors, flooring and interior finish of finest hardwoods. Get our prices.

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We sell everything from rough lumber to the prism glass for reflecting daylight to every nook and corner of the building. We offer an immense variety of millwork styles in many different kinds of wood. Our prices cut the cost.

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Buy rough lumber, finishing lumber and heavy timbers at Saw Mill Prices. We save you \$100 to \$300 on a car of lumber. Our grades guaranteed. Send lumber list for Free Estimate, **delivered**.

Write for Grand, Free Catalog at Once

Get Your Name on Our Free Mailing List



Gordon-Van Tine Company

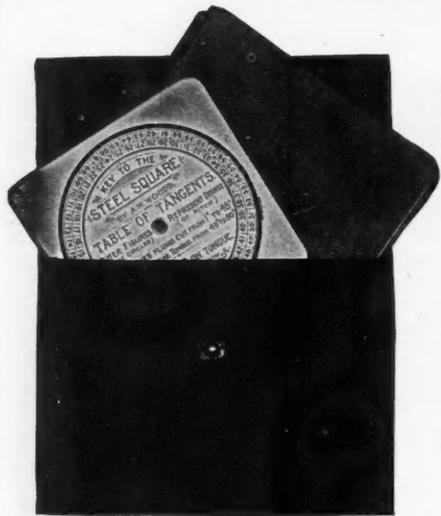
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CANTON, OHIO

ALFRED W. WOODS' KEY TO THE STEEL SQUARE.



This is it.

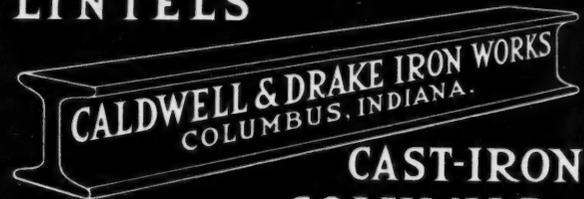
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Book of
Instruction
and
Morocco
Case.
Full Size
4x5 inches.

It tells the whole story of how to use the common steel square for all kinds of framing.

Price \$1.50, Postpaid

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NEW ORLEANS
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DRAWING MATERIAL

Drawing Instruments, Drawing Paper, Blue Print Paper, Tracing Cloth Builders' Levels
Everything for Drafting and Surveying. Send for catalogue A

Don't Pay Cash for Your Millwork

Every contractor knows the advantage—in the securing of contracts—of getting **guaranteed** material at a **low** price. We will not only supply you with Sash, Doors, Interior Trim, Porchwork, etc., at extremely low factory-to-buyer prices, but **we will assume all risk** of the goods being satisfactory in every way.

We Ship on Credit Here is the plan: Let us send you one of our 208-page catalogs showing our full line of guaranteed millwork and building material.

Pick out what you want and send us the order, but **don't send any money.** When the shipment reaches you, examine it carefully and see that it is exactly what you ordered. Satisfy yourself that in both material and workmanship the goods received are equal to the more costly supplies you can buy at home or from houses that demand cash in advance. If you are entirely satisfied send us your check covering our bill any time within thirty days; if **not** satisfied, notify us and the shipment will be taken off your hands.

We depend absolutely upon the quality of our goods to make our credit plan a success. We have never been obliged to take back a shipment.

Mantels -- \$5.25 and Up

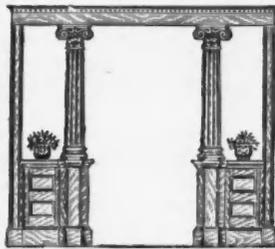


We carry a full line of Mantels, Consols, Odorless Gas Grates, Direct Draft and Return Draft Coal Grates.

Our Mantels are made of carefully selected, thoroughly seasoned and kiln-dried woods. They are hand fitted, hand smoothed, and hand polished, and go through seven different operations in our finishing room before we consider them perfect. In making our grates we use nothing but the best stove plate, and there is nothing of the cheap, second-grade appearance about it.

Mantels from \$5.25 to \$41.25
Grates from 4.00 to 33.25

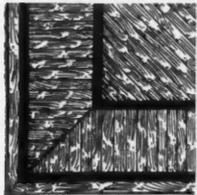
Parlor Columns, Grilles, Etc.



All the special designs for grilles and parlor columns which have been so popular and which are being so universally specified by architects for all up-to-date houses are shown in our new catalog.

Our prices are the lowest ever quoted by any manufacturer, and we back our guarantee on quality of material and workmanship by shipping to you **strictly on approval.** The parlor columns shown herewith are only \$10.00, less 5%, or \$9.50, \$18.60 per pair. Grilles, per lineal foot, from 57c to \$ 2.00 Arch Opening. Colonnades from \$8.55 to 41.75

Hardwood Flooring at Less Than Yellow Pine Prices



This illustration shows our strip flooring, which we carry in stock in Maple, plain and quartered White and Red Oak, unmatched. It lies evenly, and is easy to put down. Has the same appearance as matched hardwood flooring and **costs less than half as much.**

To lay a room 10x12 feet with this flooring would cost \$5.50 (net) for Maple or \$6.55 (net) for oak.

We also have hardwood flooring, matched side and end, from \$28.50 to \$152.00 per thousand.

Don't Estimate Without the Help of Our Catalog

If you are figuring a bill of millwork, wait until you have seen our prices and terms, before you put in your bid. You'll be able to bid lower and you can **guarantee satisfaction** to your customer, because our credit plan protects you in every way.

This catalog, our new Fall edition, shows the latest and most popular designs and quotes extremely low prices. For example: 1 3/4-inch **check** rail windows, glazed, 64 cents (net); doors, 86 cents and up; mouldings, 29 cents per hundred feet and up. Other prices equally low. Cut out and send us the coupon, and we will send you a copy by return mail.

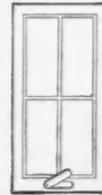
SCHALLER-HOERR CO

CHICAGO

121 Douglas Station, CHICAGO, ILL.

Storm Sash and Doors

By giving double protection, storm sash and doors keep out cold and dampness, make the house more comfortable and



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Our prices are the lowest quoted. You can save time by ordering direct from our catalog, but if you have special size openings to be fitted, send us your measurements, and we will promptly mail you our estimate.

You will save **considerably** more than the cost of freight on all goods ordered of us, and in addition get **guaranteed** material.

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Send, without cost, your new 1908-09 Catalog, showing your complete line of Guaranteed Millwork and Building Material and explaining your Credit Plan.

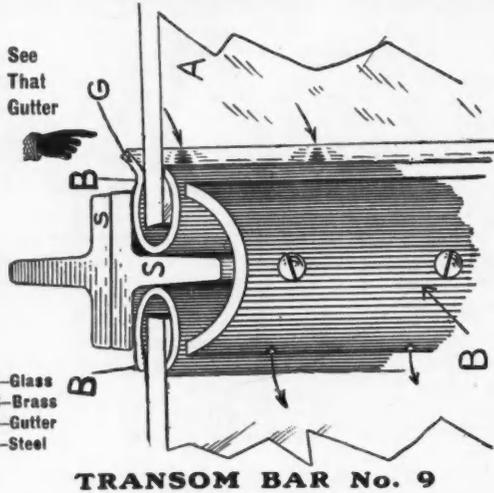
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Street.....

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

Universal Store Front Construction

The Standard Store Front Construction of the World



A—Glass
B—Brass
G—Gutter
S—Steel

TRANSOM BAR No. 9

THE EDGE of the glass is set in a dead air space—not in wood or putty. This air space keeps the edge of the glass at one temperature and therefore renders it absolutely frost proof. The "Universal" sash bar holds the glass in a grip of iron yet with a touch of velvet. Fact is, no wood or putty being inside the sash, the glass has ample room to expand. Of course it is held perfectly rigid—just as much in the center as at the ends.

Glass Held Perfectly Rigid

Suitable for any angle while it easily supersedes other makes when used for circles or domes. Sash for the last two are not forged but rolled and are guaranteed true to any given radius. Durable? They will last as long as the building. You are told everything in our catalog. It's Free.

Voltz Manufacturing Co.,

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WRITE to us for preliminary opinions on all legal matters. No charge unless retained. Associates throughout Continental Europe, Great Britain, the Colonies, South America and Canada enable us to investigate and prosecute foreign interests with dispatch. Our Pamphlet for the Asking.

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☐ We furnish the iron work complete with plans and instructions for building the platform and overhead frame; your carpenter can do the rest.

YOU SAVE ONE-THIRD

☐ Our data sheet, sent on request, helps you tell us what you want.

☐ We also manufacture Electric and Power elevators for any service.

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Sixteen years in our present location

Our designs are strictly up-to-date

We show a large line of column-openings

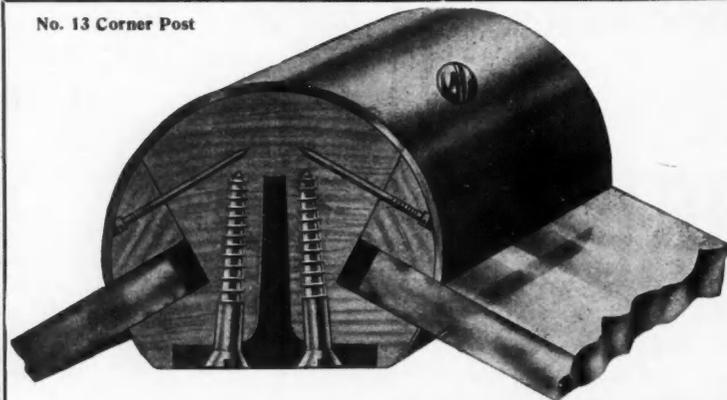
Design "Electra"

We have never had a complaint from a customer—the fact is significant.

Get our large catalog, sent free on request. See for yourself what advantages we offer.

Chicago Grille Works
243-251 Wells St., Chicago

No. 13 Corner Post



THE COULSON Patent Store Front Construction

There are many ways in which the stores of today are more complete and convenient than in the past. This is not only noticeable in the work of the architects, but by the application of many of the new inventions. One of the most noticeable features being the use of light construction for the store fronts, doing away with heavy columns and pilasters and large, cumbersome wood posts which obstruct the light and makes it almost impossible for the merchant to display his goods. About eight years ago the Coulson Patent Store Front Construction was placed on the market, and its merits have surpassed any other device for supporting large plate glass, and for the convenience of setting, at the same time covering all difficulties experienced by the use of other devices, that it has met with universal success, wherever introduced. If you are contemplating building or re-modeling store fronts, write for one of our latest catalogues "D800."

J. W. COULSON & CO., Sole Owners and Manufacturers
Main Office, 234 N. Third St. COLUMBUS, O.



This Catalogue and a "Little" Money Builds a "Big" House Now!

FROM
MANUFACTURER
DIRECT



ECONOMICS OF MILLWORK BUYING

Every important economic movement, marking the progress of commerce during the past twenty-five years has been centered upon one bull's eye—the elimination of the middleman. This has been and is true the world over.

Competition, in solving the problem of marketing manufactured products, has naturally sought the avenue that does away with paying somebody an unnecessary profit between the producer and consumer.

Realizing the opportunity that existed for establishing the business of selling high-grade or **"Quality"** millwork—"From the manufacturer direct"—the **Chicago Millwork Supply Co.** was established as the pioneer concern of its class, that took for its foundation **"Quality"** at a price that means no middleman's profit paid by the consumer.

In this day and age **the Economics of Millwork Buying** mean that every owner, prospective owner, contractor, builder and jobbing carpenter should thoroughly investigate the possibilities and advantages of buying their construction material direct from the manufacturer.

TO THE OWNER

To the owner buying direct this means immense saving and that means **Interest earned in advance** on any building investment. It means better and guaranteed qualities in all the material because the manufacturer is directly responsible to the owner for what he sells and ships.

TO THE CONTRACTOR

Every contractor and jobbing carpenter owes it to himself, as a shrewd business man, to make his iron clad policy to buy **direct** whenever possible. It not only saves you middlemen's profit but it enables you, **under our system**, to expand your business without investing great additional capital and helps you estimate on a basis that means more and bigger contracts, executed with more satisfaction to yourselves and customers.

The buying Direct policy keeps you in close touch with the outside markets and broadens your business experience.

OUR SPECIAL EQUIPMENT

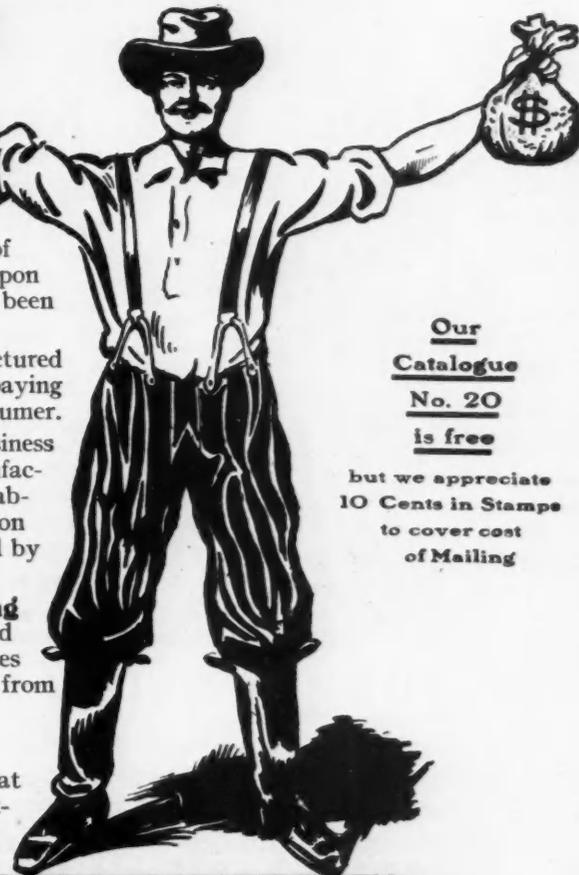
The equipment of the **Chicago Millwork Supply Co.** consists of our immense warehouse located at Chicago, **"The Great Central Market"** supplemented by two large factories at the base of supply. We carry immense stocks, fill orders for all stock stuff without delay and offer you superior service and best qualities at lowest prices. We, as manufacturers, have to keep ahead of the times and constantly on the alert in producing what we sell, and you get the benefit.

Estimates cheerfully furnished
Write for our catalog No. 20 today

Chicago Millwork Supply Co. 236-242 W. 20th St.
Chicago

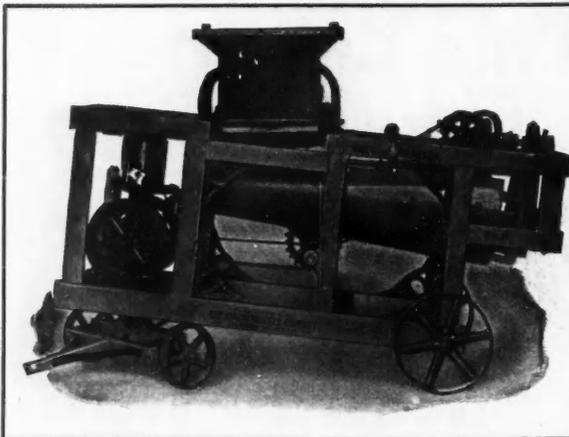
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Catalogue
No. 20
is free

but we appreciate
10 Cents in Stamp
to cover cost
of Mailing



FROM
MANUFACTURER
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FROM
MANUFACTURER
DIRECT



"I Think the Coltrin is the Best Mixer I Have Seen"

Beloit, Kan., May 24, 1908.

The Knickerbocker Co., Jackson, Mich.
Gentlemen: I am well pleased with your No. 6 Coltrin Mixer you shipped me April 7th, and if you have any prospective buyer in this part of Kansas that you cannot deal with unless he sees the mixer work, you just send him to me. If I cannot make a sale for you, then the man does not want a mixer, for I think the Coltrin is the best mixer that I have seen.

Yours truly,

J. W. TRON.

The Coltrin Concrete Mixer

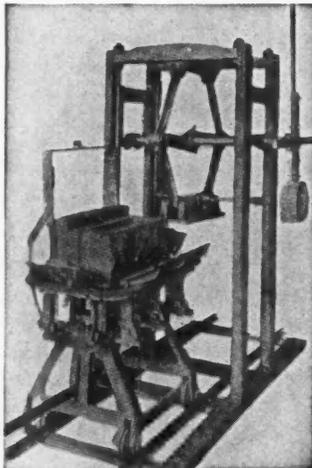
Manufactured By

The Knickerbocker Company

Jackson

Michigan

"SOMERS" PRESSURE Block Machines



Chief Features are

The enormous pressure of 30 tons which creates a Dense, Compact Block and

Our Guarantee

That 3 men can make two perfect blocks per minute on this machine, and by adding two molds its capacity can be doubled.

Fully described in illustrated catalog. 

SOMERS BROS., Mfrs.
URBANA, ILLINOIS

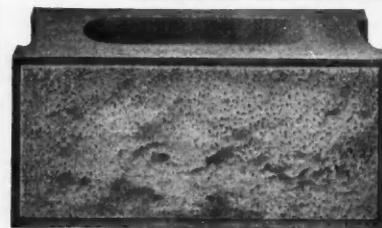


"The Miles" Improved Block Machines

Make the Best Block Face down, Adjustable, Rigid, no Springs or Cogs to bother. Wet mix used. Prices right. Ask about our Metal Lined Universal Adjustable Sill, Cap and Step Mold.

The Miles Mfg. Co. (Inc.)
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\$12.—COMPLETE 8x8x16 BLOCK OUTFIT



We meet all competition with our X-L-ALL cement tools with our years of experience together with our well equipped factory and up-to-date methods of manufacturing. We are able to meet any competition, whether it be a mail order house, a manufacturer or a tinker. We can fill your wants at a better price with equal goods. Now, understand us we can furnish you a complete machine to make 8x8x16,

rock and plain face blocks, half blocks and gable blocks for the net sum of \$12.00. Note cut of block that was made with this machine. We can also furnish you a block machine at a higher price, but it will be in accordance with the price.

We guarantee all our tools, give five days trial, money back if they are not what we claim for them. Can anyone do any more? We could not do this if our tools were not "A No. 1" and backed by our statement. Write for catalog No. 6-D today. This year's catalog will soon be all gone.

BURRELL MFG. CO., 106 Grove St., Bradley, Ill.

Wet Process Concrete Blocks

By the Pettyjohn System

The manufacturing of Concrete Blocks is rapidly nearing perfection, but the up-to-date manufacturer must use modern machinery and employ improved methods. Three features are important in perfect block making:

WET PROCESS

FACE DOWN

DAMP CURING

These splendid features are combined in the new Pettyjohn Invincible Machine, and no other. Made in three lengths, 16-inch, 24-inch and 40-inch. Tandem Invincible makes two blocks at once. Price \$65 and up. Single Invincible, \$35 and up. Sold on trial always, guaranteed to give satisfaction or money refunded.

With our **TRIPLE TIER RACKING SYSTEM** green blocks can be stacked three high direct from machine with inexpensive home-made rigging. This economizes space, reduces off-bearing distance, and above all insures slow, even, damp, perfect curing and bleaching. Plans and blue prints free to customers.

Send for our latest edition of "Stone Making" (just published), a book of valuable data for the block maker—FREE.

THE PETTYJOHN COMPANY, - - - 634 No. Sixth St., Terre Haute, Ind.

Don't! Tamp Your Life Away " Money "

WHY?

Make 100 Strokes to produce a block
Make 100 Blocks a day

WHEN

You can produce a block with one stroke
You can make 2000 Blocks a day on
a machine that don't cost any more.

We could not show cut of Multiplex here and do it justice. But our catalog "R" illustrates and explains it in every detail.

You can make all styles and sizes as well as chimney block on the one machine.

These statements are not advertising statements, we can prove it. Write

for catalog "R" and you will readily see the reason. Our chimney block is the only one of its kind.

THE MULTIPLEX CONCRETE MACHINE CO.

744 Ohio Building
TOLEDO, OHIO.



"TRUS^{TRADE} CON^{MARK}" JOIST HANGERS

Strongest

as shown by
University Tests.

Made from OPEN
HEARTH STEEL.

SAVES cutting and weaken-
ing of timber. ∴ ∴ ∴

SAVES labor in installation.

LOWEST FIRST COST.

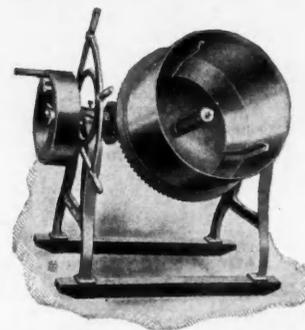
All styles and sizes for Brick
and Concrete Walls, Steel and
Wooden Beams. ∴ ∴ ∴



WRITE TODAY FOR PRICES
TO SPECIALTY DEPT.

TRUSSED CONCRETE STEEL CO.
624 Trussed Concrete Bldg., DETROIT, MICH.

"Standard" Concrete Machinery "Machines of Quality"



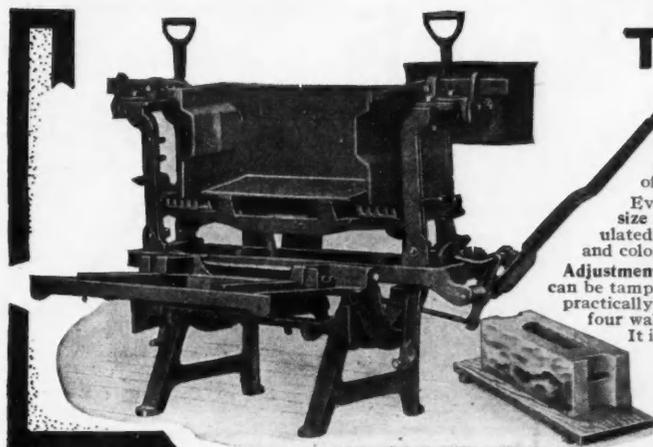
Handles wet or dry mix; requires little power to
operate; mixes bath perfectly in one minute; self-
cleaning; easily charged and dumped; 3 sizes.

Send for catalogue giving complete line of Mixers
and Brick Machines.

South Bend Machine Mfg. Co.

General Sales Offices

108 La Salle Street Chicago, Ill.



THE "OLIVER"

AUTOMATIC BLOCK MACHINE

The "Oliver" Automatic Block Machine follows the principle of construction of the first and most successful face down machine made. It differs in the fact that it has a wonderful range of work with positively no complications in the adjustments.

Every block made on the "Oliver" is made face down and on the one size pallet. Cores are interchangeable, and weight of block can be regulated simply by using larger or smaller cores. Coarse or wet mixture and colored facings can be used.

Adjustments are made without loosening or tightening a screw or bar, and blocks can be tamped without danger of springing the machine. Range of uses is practically unlimited. Makes chimney blocks in various sizes that lay all four walls; makes hand-hold on end of block, makes porch pier blocks, etc. It is thoroughly milled and backed by a liberal guarantee. Catalog free.

Concrete Stone Mould & Machine Co.
CLARK'S LAKE, MICHIGAN

Take It—Try It And You'll Find It will Do All we claim



It makes Face Down, Side Face, Two Piece Wall and Veneer Construction. No limit to size, number of shapes or variety of designs. Wood pallets. A very wet mixture can be used, which makes hard, dense and non-absorbent blocks. Absolutely no loss from chipped edges or cracked blocks.

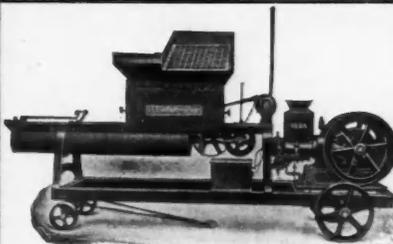
\$40.00

The Dunn Combination Cement Block Machine

You can prove these facts for yourself on the machine in your own home town, before you accept it. The machine will stand on its merits. That's probably the way you would like to buy. That's the way we are willing to sell.

Send for our illustrated catalog. It shows what the machine is and just how it works

W. E. Dunn & Company
339 Grand Avenue Chicago, Ill.



The U. S. Standard Concrete Mixer

CLAIMS

1. To mix as well as the best.
2. To divide the different ingredients more reliably into any desired proportion.
3. To measure the ingredients more accurately than any known mixer.

The U. S. Standard Cement Block Machine Claims Superiority

1. For accuracy and perfection in construction.
2. For adaptability to an almost endless variety of blocks.
3. For strength and beauty of blocks.
4. For speed.
5. For moderation in price.

Manufactured by
**THE ASHLAND STEEL
RANGE & MFG. CO.**
Ashland, Ohio

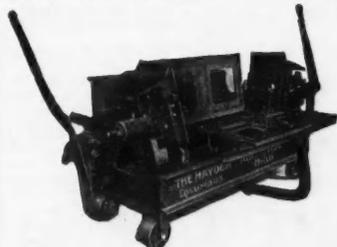
Government and Foreign
Sales Department, B-21, Pro-
duce Exchange, New York,
U. S. A.

Catalogue A sent free
upon application!



All blocks made face down; automatic in action; great strength; easy to operate; very rapid; large range; simple in construction.

HAYDEN Concrete Block Machines and Mixers



The Hayden Down Face Machine
Two sizes—24-inch and 32-inch

NEW YORK AND FOREIGN REPRESENTATIVE
H. W. REMINGTON
19 SOUTH STREET, NEW YORK, N. Y.

The Standard of Excellence

Send for Catalog "M" Today

The Hayden Automatic Block Machine Co.

Manufacturers of High-Grade Concrete
Block Machines, Power Mixers, Porch
Moulds, Engines, Cars, Pneumatic
Tamping Outfits.

Concrete Plants Equipped Throughout

112 West Broad St., Columbus, Ohio

The Hayden Concrete Mixer
mixes sand, gravel or crushed stone — any proportion.
Maximum capacity 70 yards per day. Water arrangement
perfect. Uniformity and thoroughness absolute



View of mixer on steel skids, showing clean out door open.
Also mounted on trucks with power.



BURRITT Mantels

are gaining new friends every day among CARPENTERS and BUILDERS because of excellent design, perfectly seasoned stock, thorough workmanship and beautiful finish. Write today for Catalogue "A." We are prepared to furnish Mantels in special sizes and woods or build same from Architect's sketches. Let us hear from you.

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The A. W. Burritt Co.

349-473 Knowlton St. "THE MANTEL FOLKS"

Bridgeport, Conn.

60,000 columns at an average of \$5.00 each, or 6,000 at \$50.00 each, gives you an idea of the annual capacity of our plant.

We own the largest factory building in the world devoted exclusively to the manufacture of high grade column and porch work.

Send for catalogue M19 of columns, and M29 of sun dials and pedestals.

HARTMAN - SANDERS COMPANY

Sole Manufacturers of
KOLL'S PATENT LOCK JOINT COLUMNS

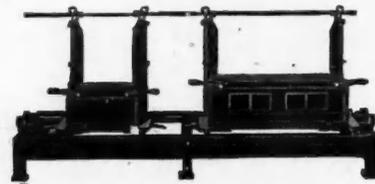
Elston and Webster Aves., CHICAGO, ILL.
Eastern Office, 1123 Broadway, NEW YORK CITY.

The Best Columns for Porch, Pergolas or Interior Use.

If you are going to open a Concrete Block Plant, don't handicap yourself by starting wrong. Get a reliable machine—one with a reputation back of it.

HERCULES CONCRETE BLOCK MACHINES

ARE NOT EXPERIMENTS



They have the reputation of years behind them; the world's best engineers endorse them, because

They are Unlimited as to Production

They Enable you to Supply Superior Grade of Stone

They are Simple in Construction

Easy to Operate

Send to-day for beautifully illustrated catalogue, showing our complete line of Concrete Machines. IT WILL PAY YOU.

CENTURY CEMENT MACHINE CO

273 Main St. West,

ROCHESTER, N. Y.



A Roll
Ready for Use

Union Fibre Co., 72 Fibre Ave., Winona, Minn.

Dear Sirs: Send Samples and Specifications (for sheathing and sound-deadener) of the new linen building felt—LINO FELT—“38 times as effective as BUILDING Paper.”

(Sign your name and let us prove it to you.)

LINO FELT is Made by the Makers of "LITH"—the Cold Storage and Refrigerator Insulation

Not Expensive

500 Million Yards in Use
Adds less than 1 per cent
to cost of buildings.

The Philip Carey Company
Distributors,
Cincinnati

Branches & Warehouses
in all large cities in the
U. S., Canada and Mexico

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Wire & Iron Works

(Incorporated)

LOUISVILLE, KY.

IRON LINTELS

Beams, Angles, Anchors, Hangers,
Ornamental Cast Iron Fronts and Stairways.

Classified List of Advertisers

For Index See Next Page

BLACKBOARDS

Johnson & Co., E. J.
Best Bangor Cons. Slate Co.

BLINDS

Burlington Venetian Blind Co.
Phoenix Sliding Blind Co.

BOOKS

Readt Publishing Co.
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Adjustable Hanger Co.
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Hungerford Mfg. Co., U. T.
Ives Co., H. B.
Kees Manufacturing Co., F. D.
Lawrence Bros.
Mallory Manufacturing Co.
Mulvey Manufacturing Co.
National Manufacturing Co.
Fullman Manufacturing Co.
Behm Hardware Co.
Samson Cordage Works.
Shelby Spring Hinge Co.
Silver Lake Co.
Star Expansion Bolt Co.
Zimmerman, Harry.

BUILDING STONE

Georgia Marble Co.

CEMENT BLOCK MACHINES

Ashland Steel Range & Mfg. Co.
Burrell Mfg. Co.
Century Cement Machine Co.
Concrete Stone Mould & Machine Co.
Dunn & Co., W. E.
Hayden Automatic Block Machine Co.
Miles Manufacturing Co., The P. B.
Miracle Pressed Stone Co.
Multiplex Cone. Block Mach. Co.
Pettyjohn Co.
Somers Brothers.
So. Bend Machine Mfg. Co.

CEMENT BRICK MACHINES

Miracle Pressed Stone Co.

CEMENT WORKERS' TOOLS

Miracle Pressed Stone Co.

COAL CHUTES

Swalts, C. H.

COLUMNS

Hartman-Sanders Co.

CONCRETE MIXERS

Hayden Automatic Block Machine Co.
Knickerbocker Co., The.
So. Bend Machine Mfg. Co.

CORNICES

Eller Manufacturing Co.

DRAWING MATERIALS

Andrews Heating Co.
Dietzen, Eugene.
Engineers Equipment Co.
Iszard-Warren Co.

ELEVATORS

Eaton & Prince Co.
Hollister-Whitney Co.
Otis Elevator Co.
Sedgwick Machine Works.
Sidney Elevator & Mfg. Co.

ENGRAVERS

Dearborn Engraving Co.

FLOOR SURFACERS

Ackermann & Co., John B.
American Floor Surfacing Machine Co.
Fox Manufacturing Co.
Hurley Machine Co.
Interstate Equip. & Eng. Co.
Miotke, Jos.
Schleuter, M. L.
Star Scraper Co.
Weber Manufacturing Co.

GAS ENGINES

Weber Gas & Gasoline Engine Co.

GLASS

American Luxfer Prism Co.
American 3-Way Prism Co.
Anderson & Co., Geo. H.
Flanagan & Biedenweg Co.
McCully & Miles Mfg. Co.

GRILLES

Chicago Grille Wks.
Northwestern Grille Works.

HEATERS

Andrews Heating Co.
Bovee Grinder & Furnace Works.
Hess Warming & Ventilating Co.
Honeywell Heating Specialty.

HOTELS

Hotel Normandie.
Hotel Touraine.

HOUSE PLANS

Ashby, G. W.

INSTRUCTION

American School of Correspondence.
Engineers Equipment Co.
Industrial Law League.
International Correspondence Schools.

IRON WORK

Caldwell & Drake Iron Works.
Dow Wire & Iron Works.
Trussed Concrete Steel Co.

LEVEL AND GRADE FINDERS

Am. Comb. Level & Gr. Finder.

LINOFELT

Union Fibre Co.

MANTELS

Burritt Co., The A. W.
Central Mantel Co.
Heitland Grate & Mantel Co.
Lorenzen & Co., Chas. F.

METAL CEILINGS

Berger Manufacturing Co.
Canton Mfg. Co.
Edwards Manufacturing Co.
Eller Manufacturing Co.
Kanneberg Roofing & Ceiling Co.
Tiffin Art Metal Co.

METAL SHINGLES

Burton Co., The W. J.
Cortright Metal Roofing Co.
Edwards Manufacturing Co.
Montross Metal Shingle Co.
National Sheet Metal Roofing Co.
Taylor Co., N. & G.

METAL WORK

American Rolling Mill Co.
Burt Manufacturing Co.
Mullins Co., W. H.
Ritzler Cornice & Ornament Co., The J. A.
Sykes Metal Lath & Roofing Co.
Voss, Frederick.

MILLWORK

Bayer Bros. & Co.
Chicago Embossed Moulding Co.
Chicago House Wrecking Co.
Chicago Millwork Supply Co.
Foster-Munger Co.
Gordon Van Tine Co.
Schaller-Hoerr Co.

PAINTS, VARNISHES, ETC.

Nice, Eugene E.
Johnson & Son, S. C.

PLASTER BOARD

Northwestern Compo-Board Co.

PLUMBERS SUPPLIES

Central Machinery & Supply Co.
Karol, B. B.

PUMPS, TANKS, ETC.

Myers & Bro., F. E.

RAZORS

Shrp-Shvr. Razor Co.

ROOFING MATERIALS

Barber Asphalt Roofing Co.
Ford Manufacturing Co.
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Heppes Co., The.
House Wrecking Salvage & Lumber Co.
Keasbey & Mattison.
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Stowell Mfg. Co.
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Burt Manufacturing Co.
Canton Art Metal Co.
Canton Mfg. Co.

SLATE ROOFING, ETC.

East Bangor Consolidated Slate Co.
Hower, J. K.
Johnson & Co., E. J.
McKenna, David

STORE FRONT CONSTRUCTION

Coulson & Co., J. W.
Detroit Show Case Co.
Kawneer Manufacturing Co.
Shultz, C. H.
Volts Mfg. Co.

TOOLS

Am. Combined Level & Grade Finder.
Belden Machine Co., The.
Bishop & Co., Geo. H.
Bostrum Brady Mfg. Co.
Brace Co., E. S.
Braunsdorf-Mueller Co.
Calhoun, J. R.
Crockston Tool Co.
Diston & Sons, Inc., Henry.
Dixon Crucible Co., Jos.
Dosh Manufacturing Co., The Gage Tool Co.
Goodell Manufacturing Co.
Goodell-Pratt Co.
Lufkin Rule Co.
Izard-Warren Co.
Mack & Co.
Marsh, H. C.
Marshalltown Trowel Co.
Mayhew Co., H. H.
Miller Manufacturing Co., A. W.
Millers Falls Co.
Morrill, Chas.
Nicholls Manufacturing Co.
North Bros. Manufacturing Co.
Novelty Cutlery Co.
Orr & Lockett Hardware Co.
Parker Co., The Chas.
Pearson Mfg. Co.
Pike Manufacturing Co.
Prentiss Cise Co.
Progressive Manufacturing Co.
Sargent & Co.
Sheldon & Co., S. H.
Simonds Manufacturing Co.
Stanley Rule & Level Co.
Starrett & Co., L. S.
Taylor Mfg. Co., James L.
Tower & Lyon Co.
White Van Glahn & Co.

VENTILATORS

Burt Manufacturing Co.

WIRE SCREENS

Phillips Co., The A. J.

WOODWORKING MACHINERY

Barnes Co., W. F. & Jno.
Chicago Machinery Exchange.
Crescent Machine Co.
Fox Machine Co.
Lovell Machine Works.
Mattison Machine Works, C.
Seneca Falls Manufacturing Co.
Sidney Tool Co.
Smith Machine Co., H. B.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

CONTENTS FOR NOVEMBER, 1908

	Page		Page		Page
Actual Cost Plus a Fair Profit.....	147	Farm Buildings	186	Reassuring	187
Attractive School Building, An.....	182	Forgetfulness	183	Residences	168
Bank, Store and Office Building.....	184	Framing for Gambrel Roofs.....	163	Roof Framing by Plan.....	164
Bench for Assembling Sash.....	193	Half-Timber Poured Cement House.....	167	Roof Patching	148
Business Letters, Good and Bad.....	148	Height of Wainscoting.....	193	Sad	162
Can You Answer These?.....	157	Home Workshop, The.....	176	School Houses	182
Cartoon	149	How to Do It.....	169	Shingle and Stone House.....	169
Cement Building Construction.....	158	How to Make the Home Cozy.....	176	Shingling the Sides of a Building.....	166
Cement Concrete Fireproofing.....	183	How to Use the Steel Square.....	155	Small Horse Barn, A.....	186
Cement Show, The.....	147	In the Realm of the Housewife.....	181	Some Furnace "Don'ts".....	184
Cess-Pool for Bath-tub Drain.....	190	Not His Troubles.....	163	Square Cut on Round Timbers.....	191
Correspondence	190	Often the Way.....	183	Steel Square	155
Cottage While You Wait, A.....	150	On the Sea of Matrimony.....	175	Stencil Decoration.....	178
Drain Botcher, The.....	148	Practical and Artistic House Designs.....	168	Suburban Residence in Cement Plaster.....	158
Earlier Working Hours.....	186	Practical Carpentry.....	164	Substitute for Jack Screw.....	191
Editorial	147			What Figures to Use.....	190
				Wite vs. Iron Nails.....	190

INDEX TO ADVERTISEMENTS, NOVEMBER, 1908

For Classified List of Advertisers see preceding page

	Page		Page		Page
Ackerman & Co., John B.....	126	Planagan & Biedenweg Co., The.....	221	National Manufacturing Co.....	209
Adjustable Hanger Co.....	185	Ford Manufacturing Co.....	207	National Sheet Metal Roofing Co.....	223
Allith Mfg. Co.....	224	Foster Mungler Co., The.....	223	National Stamping & Electric Works.....	216
American Combined Level & Grade Finder	138	Fox Machine Co.....	213	Nice, Eugene E.....	213
American Floor Surfacing Machine Co.....	124	Fox Manufacturing Co.....	123	Nicholls Manufacturing Co.....	141
American Luxfer Prism Co.....	211	Gage Tool Co.....	143	North Bros. Manufacturing Co.....	125
American Rolling Mill Co.....	137	General Roofing & Manufacturing Co.....	205	Northwestern Compound-Board Co.....	138
American School of Correspondence.....	215, 217, 221, 223	Georgia Marble Co., The.....	218	Northwestern Grille Works.....	181
American 8-Way Prism Co.....	135	Goodell Manufacturing Co.....	143	Novelty Cutlery Co.....	217
Anderson & Co., Geo. H.....	127	Goodell Pratt Co.....	140	Otis Elevator Co.....	Cover
Andrews Heating Co.....	216	Gordon Van Tine & Co.....	227	Orr & Lockett Co.....	146
Ashby, Geo. W.....	134	Grand Rapids Hardware Co.....	143	Parker Co., The Chas.....	136
Ashland Steel Range & Mfg. Co.....	235	Hartman-Sanders Co.....	236	Patent Vulcanite Roofing Co.....	199
Automatic Sash & Holder Co.....	135	Hayden Automatic Block Machine Co.....	235	Pearson Manufacturing Co.....	212
Barber Asphalt Paving Co., The.....	204	Heitland Grate & Mantel Co.....	215	Pettyjohn Co., The.....	232
Barnes Co., W. F. & Jno.....	124	Heppes Co., The.....	200	Phillips Co., A. J.....	127
Bayer Bros. Sash & Door Co.....	222	Hess Warming & Ventilating Co.....	220	Phoenix Sliding Blind Co.....	138
Belden Machine Co., The.....	126	Hollister-Whitney Co.....	230	Pike Manufacturing Co.....	Cover
Bergen Iron Works, The.....	144	Honeywell Heating Specialty Co.....	144	Prentiss Vise Co.....	136
Berger Mfg. Co., The.....	224	Hotel Normandie.....	137	Progressive Manufacturing Co.....	128
Bishop & Co., Geo. H.....	141	Hotel Touraine.....	137	Pullman Manufacturing Co.....	146
Bovee Grinder & Furnace Works.....	216	Housewrecking Salvage & Lumber Co.....	222	Rehm Hardware Co.....	144
Bostrom-Brady Mfg. Co.....	132	Hower, J. K.....	216	Ritzler Cornice & Ornament Co., The.....	126
Brace Co., The E. S.....	139	Hungerford, U. T.....	225	Rock Asphalt Roof Co.....	223
Bradford Pressed Brick Co.....	233	Hurley Machine Co.....	127	Samson Cordage Works.....	180
Bradt Publishing Co.....	228	Industrial Law League, The.....	230	Sargent & Co.....	132
Braunsdorf Mueller Co.....	140	Industrial Publication Co.....	139-219	Schaller Hoerr Co.....	229
Burlington Venetian Blind Co.....	143	International Correspondence Schools.....	203	Schleuter, M. L.....	125
Burritt Mfg. Co., A. W.....	236	Interstate Equipment and Eng. Co.....	123	Sedgwick Machine Works.....	130
Burrell Mfg. Co.....	232	Izard-Warren Co., Inc.....	132	Seneca Falls Manufacturing Co.....	129
Burt Mfg. Co.....	192	Ives Co., The H. B.....	215	Shelby Spring Hinge Co., The.....	141
Burton Co., The W. J.....	221	Johnson Co., The E. J.....	228	Sheldon, E. H.....	133
Caldwell & Drake Iron Works.....	228	Johnston & Son, S. C.....	196-197	Shrp-Shvr. Razor Co.....	215
Calhoun & Co., A. O.....	145	Kanneberg Roofing & Ceiling Co.....	218	Shults, C. H.....	218
Canton Art Metal Co.....	228	Karol, B. B.....	127	Sidney Elevator Manufacturing Co.....	135
Canton Mfg. Co.....	200	Kawner Manufacturing Co.....	222	Sidney Tool Co., The.....	133
Central Machinery & Supply Co.....	202	Keasbey & Mattison.....	193	Silver Lake Co.....	143
Central Mantel Co.....	226	Kees Manufacturing Co., F. D.....	226	Simonds Manufacturing Co.....	210
Century Cement Machine Co.....	236	Knickerbocker Co., The.....	232	Smith Machine Co., H. B.....	130
Champion Safety Lock Co.....	143	Lawrence Bros.....	216	Somers Brothers.....	232
Chicago Embossed Moulding Co.....	218	Lorenzen, Chas. F.....	198	South Bend Machine Mfg. Co.....	234
Chicago Grille Works.....	230	Lovell Machine Works.....	124	Stanley Rule & Level Co.....	140
Chicago House Wrecking Co.....	195	Lufkin Rule Co.....	132	Star Expansion Bolt Co.....	225
Chicago Machinery Exchange.....	125	McCully & Miles Co.....	128	Starret & Co., L. S.....	124
Chicago Metal Covering Co.....	226	McHenry-Millhouse Manufacturing Co.....	212	Star Scraper Co.....	123
Chicago Millwork Supply Co.....	231	McKenna, David.....	216	Stoddard, Dwight L.....	133
Chicago Spring Butt Co.....	146	Mack & Co.....	128	Stowell Manufacturing Co.....	213
Concrete Stone Mould & Machine Co.....	235	Mallory Manufacturing Co.....	142	Sunbeam Incandescent Lamp Co.....	225
Cortright Metal Roofing Co.....	201	Marsh, H. C.....	146	Sykes Metal Lath & Roofing Co.....	Cover
Coulson & Co., J. W.....	230	Marshalltown Trowel Co.....	152	Taylor Manufacturing Co., James L.....	124-133
Crescent Machine Co., The.....	142	Mattison Machine Works.....	141	Taylor Co., N. & G.....	214
Crookston Tool Co.....	128	Mayhew Co., H. H.....	142	Tiffin Art Metal Co.....	211
Dearborn Engraving Co.....	131	Miles Manufacturing Co., The P. B.....	232	Tower & Lyon Co.....	129
Defiance Machine Works.....	Cover	Millers Falls Co.....	136	Trussed Concrete Steel Co.....	234
Detroit Show Case Co.....	213	Miller Manufacturing Co., A. W.....	138	Union Fibre Co.....	236
Dietzen Co., Eugene.....	228	Miotke, Joseph.....	131	Voltz Manufacturing Co.....	230
Diaston & Sons, Inc., Henry.....	186	Miracle Pressed Stone Co.....	233	Voss, Frederick.....	224
Dixon Crucible Co., Jos.....	144	Montross Metal Shingle Co.....	133	Weber Gas & Gasoline Engine Co.....	226
Dosch Mfg. Co., The.....	126	Morrill, Chas.....	146	Weber Manufacturing Co.....	129
Dow Wire & Iron Works.....	236	Mullins Co., The W. H.....	139	White Van Glahn & Co.....	204
Dunn & Co., W. E.....	235	Multiplex Concrete Block Machine Co.....	234	Winthrop Asphalt Shingle Co.....	208
East Bangor Consolidated Slate Co.....	224	Mulvey Manufacturing Co., Chas.....	144	Woods, A. W.....	228
Eaton & Prince Co.....	128	Myers & Bro., F. E.....	130	Zimmerman & Co., Harry.....	233
Edwards Manufacturing Co., The.....	221				
Eller Manufacturing Co., The.....	206				
Engineers Equipment Co., Inc.....	138				

NOTICE TO ADVERTISERS

New copy, changes and corrections for advertisements must reach office of American Carpenter and Builder, 185 Jackson Boulevard, Chicago, not later than November 20 in order to insure insertion in December number.

INDIA OILSTONES



COMBINATION STONE

For carpenters' use. One side coarse for fast work on dull tools; the other to set a keen working edge.

THE MARK OF QUALITY

No Matter
What the
Tool, There is
an India to
Sharpen It.



Will Cut
Metal on
Which a File
Will Slip.

ON EVERY INDIA STONE

We will send a descriptive price list and sample stone to any carpenter who will ask for them.

Write us! We want to show you what India Oilstones are—and why they are superior to other oilstones.

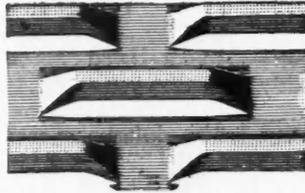
Sole Selling Agents

Pike Manufacturing Co.

PIKE, N. H. Dept. 6.

NORTON COMPANY, Worcester, Mass., Mnfrs.

SYKES METAL LATH



The lath that is positively different to anything else made; different because it combines more good features.

Cup lath is the only Expanded Metal Lath that can be plastered on either side—cannot be applied wrong because both sides are alike.

We make two kinds—Sykes Expanded Cup Lath, and Sykes Trough Lath. Both are supreme for their own purpose.

The top illustration shows Trough Lath, bottom cut depicts Cup Lath.

NO PICKLED LATH

Sykes Lath is absolutely guaranteed not to have been pickled in an acid bath. This means that the weight and thickness is not reduced and is less susceptible to rust. Requires no furring out from studs because it is self furring.

It has been approved by U. S. Government and by leading architects, carpenters and builders throughout the country. In fact, when we say it is the best ever made we are simply stating a proven fact.

Samples and prices mailed upon request.

Sykes Metal Lath & Roofing Co.
NILES, OHIO

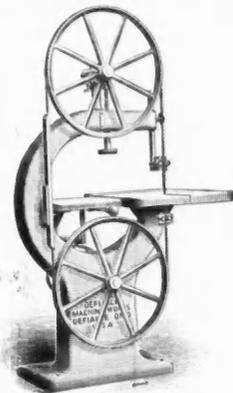


“DEFIANCE”

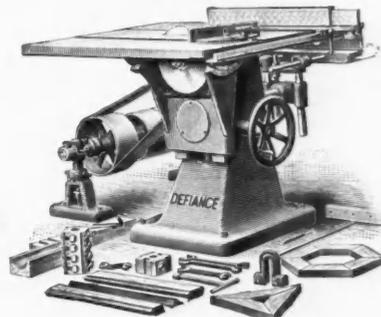
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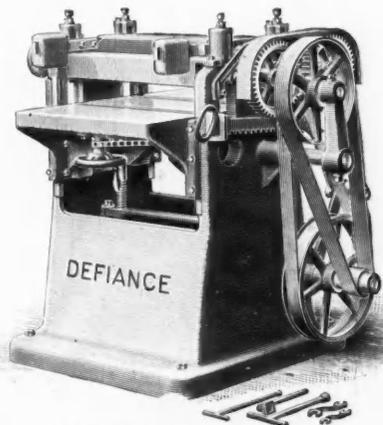
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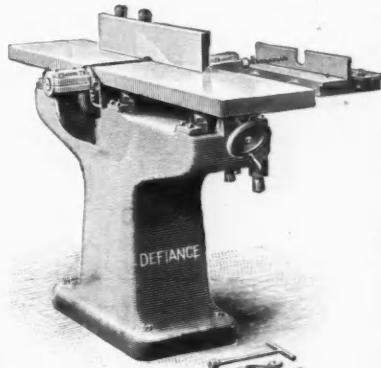
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