

# AMERICAN CARPENTER AND BUILDER



THE WORLD'S GREATEST BUILDING PAPER



# Two Famous Silver Steel Saws

We want to call particular attention to the two Saws shown in the pictures below. Both blades are of SILVER STEEL—both are Taper Ground—both are genuine ATKINS SILVER STEEL SAWS—BUT the handles are constructed on entirely different principles.



No. 53—Genuine Perfection Handle.



No. 51—Old Style Handle.

## “Pay Your Money and Take Your Choice”

### ATKINS NO. 53.

The picture to the left shows ATKINS NO. 53 SILVER STEEL SAW equipped with ATKINS Genuine Perfection Handle and illustrates plainly why this type of handle is easiest on the saw arm. While it may feel strange to the beginner—a few days use will demonstrate that the Perfection Handle is the most scientifically constructed and much easier on the saw arm than any other style.

Note the line running through the saw arm straight through the blade to the cutting edge. See how every ounce of power is directed to the point of contact. Observe the wrist and saw arm, how easy and natural the blade drops into its work without pressure.

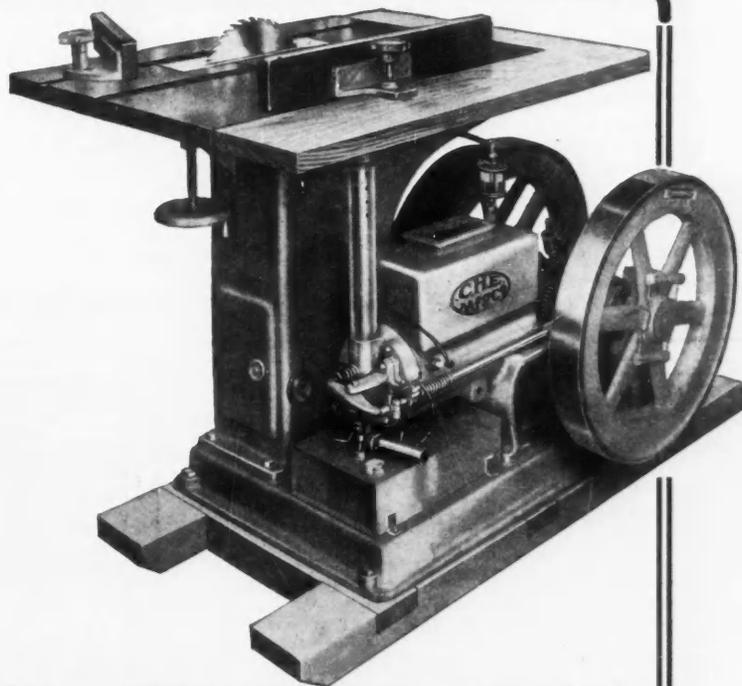
If you do not wish to try the Perfection Handle, then try the No. 51. Either of these saws or any of our other popular numbers may be purchased through your regular dealer, who should order for you from his wholesale house in case he does not carry them in stock. If he will not order for you, let us know and we will see that you are taken care of. Be sure to see that our name, E. C. ATKINS & COMPANY, and the words “SILVER STEEL” are on the blade. None other are genuine.

### OUR FREE OFFER

We are securing the names of high class mechanics who appreciate fine tools and if you will send us ten cents in stamps to pay postage, we will mail you one of our fine carpenter's nail aprons, Saw Sense Book, Time Book, and a great deal of useful information on the purchase and care of saws. Write to-day and learn “Who's Who” in the saw world.

**E. C. ATKINS & CO., Inc.**  
INDIANAPOLIS, IND.

MORE  
**C. H. & E.**  
 Portable Saw Rigs  
 Now in Use Than  
 All of Our  
 Imitators Combined



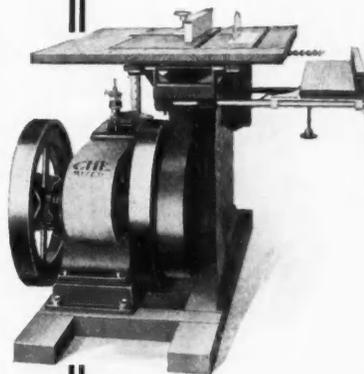
We are

# PIONEERS

In the Manufacture of Portable Saw Rigs

**4** Sizes:

- 3 H.P. Gasoline Engine or Motor Drive.
- 4 H.P. Gasoline Engine or Motor Drive.
- 5 H.P. Gasoline Engine or Motor Drive.
- 6 H.P. Gasoline Engine or Motor Drive.



We also manufacture a Builders' Hoist, Hand Derrick, Double-Cage Material Elevator, Power-Driven Trench Pump, Concrete Chutes, Column Clamps, Mortar Mixer, Gravel Heater—in fact, a complete line of contractors' equipment.

Write for our Catalogues.

**C. H. & E. Mfg. Co., Inc.**

322 Mineral Street

Milwaukee, Wis.

When Writing Advertisers Please Mention the American Carpenter and Builder.

## The American Floor Surfacing Machine

**IS NO EXPERIMENT.** Its work since 1903 has established a standard for finely surfaced and polished floors. It is the only machine whose work is specified by leading architects and used in the best government buildings and will surface and polish any kind of a floor from common pine to the finest parquet.

**IT IS THE ORIGINAL** and only two-roll, self propelled, dust collecting machine, that surfaces close to the wall and can be used in small rooms. Anyone can operate it.

**ITS WORK IS RAPID, regular smooth and even** because the power that drives the rolls, also propels the machine at the same ratio of speed. It has surfaced and polished millions of square feet of the finest floors in America and Europe.

**GET A MACHINE** that does first class work and in paying quantities, that is fully guaranteed and sold on its merits. Don't be fooled with an imitation.

Write for Our Free Book, "Surfacing Floors as a Business."

Manufactured By **The American Floor Surfacing Machine Co., TOLEDO, O.**



**We Make Panels of any Thickness and Any Kind of Wood — Curved or Flat.**

FOR  
Wainscoting  
Ceiling  
Mantels  
Doors  
Counter Tops  
Partitions  
Cabinets  
Shelving  
Drawer Bottoms

Our products excel in Quality and Durability, because we concentrate our best efforts in their manufacture.

We specialize in Panels and have the facilities for producing best results.

Try us with your next order. Send us your specifications and ask for our prices.

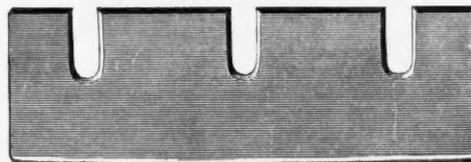
### AMERICAN VENEER CO.

Specialists and Manufacturers of Built-up Veneer Panels

We appreciate small orders as well as large ones

12 Market St., KENILWORTH, N. J.

### FLOOR SCRAPER BLADES



A Carpenter profits most when he buys a good Floor Scraper Knife. He gets something substantial for his money, value for value. A Scraper Knife made from extra quality steel, tempered right, ground right. In short a *Blade Made of Fox Steel*, and by the FOX SUPPLY COMPANY'S workmen.

The price is no higher than for the common kind; \$6.00 per dozen, \$3.00 for one-half dozen. Express charges prepaid.

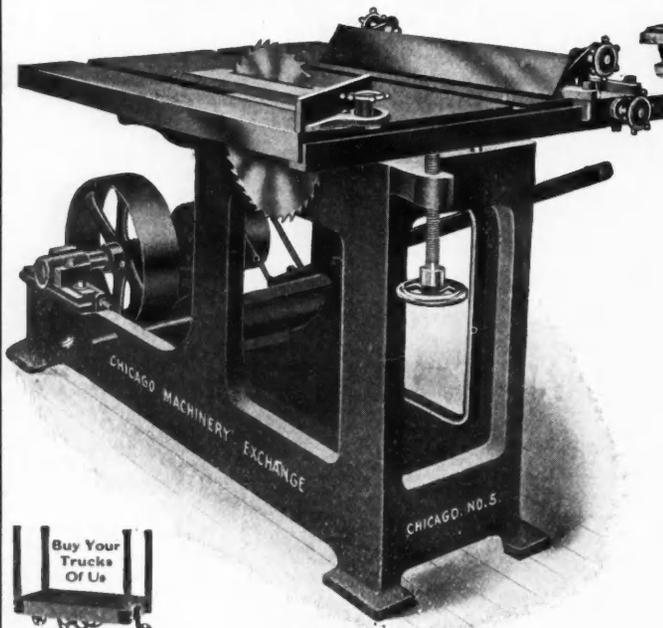
### FOX SUPPLY COMPANY

MANUFACTURERS

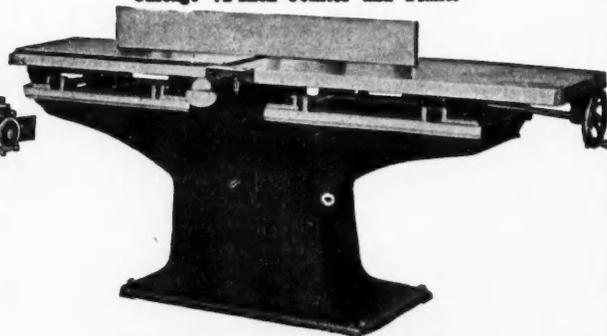
Factory and Sales Office Brooklyn, Wisconsin

## Get Our Special Offer To Contractors and Builders FOR APRIL

Chicago No. 5 Combination Saw Table



Chicago 12-Inch Jointer and Planer



Used for Planing, Jointing, Shaping, Matching, Rabbeting, Grooving, Chamfering, Beading and Making Mouldings.

Read What Contractors Think of Our Machines

Charleston, Ill.  
July 13th, 1911.

Chicago Machinery Exchange, Chicago.

Dear Sirs:

Your saw table which I bought of you last fall is a complete success, the best I ever saw for the money, and I worked in a good mill for ten years. You can refer anybody to me in regard to your saw table No. 5.

Yours, CLARENCE B. MUCHMORE

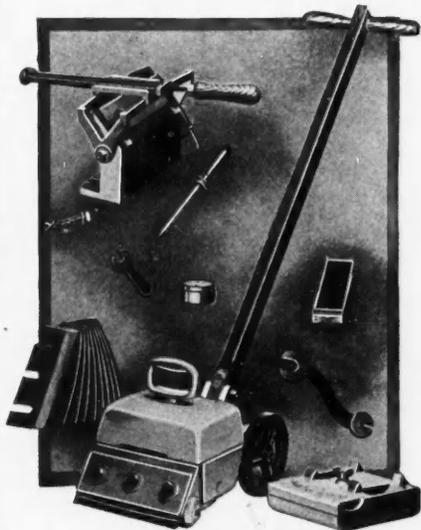
Send for our Free Special Catalogue to-day. We issue a catalogue of machines especially adapted to Contractor's use.

**CHICAGO MACHINERY EXCHANGE, 1219-1227 W. Washington Blvd., CHICAGO, ILL.**

When Writing Advertisers Please Mention the American Carpenter and Builder.



**OVER \$100,000.00**



Has  
been  
**SAVED**  
by  
**USERS**  
of the

**Acme Floor Scraping Outfit**

during the past five years. Thousands of machines are now in daily operation, and every mail brings letters from users commenting upon the satisfactory work their outfits are doing and the vast amount of labor expense they are saving.

Now, Mr. Contractor, you do not have to rely upon what I say regarding the merits of my machines, but I want you to let me send an outfit to you on **one week's free trial**, and you can then let the machine demonstrate on your own work just what they can do. If, after working with the equipment for one week, you are not convinced that the same will save you many dollars, and do your floor scraping better than it was ever done before, just pack up the machines, return them to me, and you will owe me nothing.

Write to-day for booklet and full details of my proposition.



**The Acme Handy Mitre Gauge**

is another labor saving tool. It is absolutely accurate, can be set at any angle and fits in the pocket where it is always ready for instant use. If your dealer does not carry them in stock, then write to me for circular describing this wonderful little tool.

**JOSEPH MIOTKE**  
247 Lake Street : : Milwaukee, Wis.

DO YOU USE

**The WEBER DOUBLE ACTING Floor Scraper**

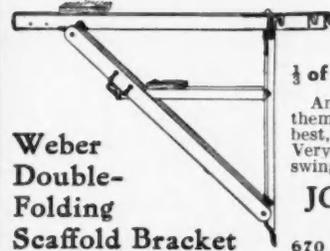
No? Read This Offer!

Send for a Weber floor scraper on five days' free trial. Give it a thorough floor scraping test. If it doesn't suit you, return it at our expense. If you want to keep it, we will give you

**10% Off If You Order Before April 1, 1912**

Here's your chance. Write for further details quick.

**Five Days Free Trial**



**Weber Double-Folding Scaffold Bracket**

**SAVES 1/3 of Your Time and Money**

Any contractor who has used them will tell you they are the best, handiest brackets made. Very light and strong—can't swing. Write for details.

**JOHN F. WEBER**  
Pres. Weber Mfg. Co  
670 71st Ave., West Allis, Wis.

**DON'T BUY A FLOOR SCRAPER**  
of any kind until you have tested the

**LITTLE GIANT**

at our expense. Sold only on its merits. Shipped to you prepaid for a free trial. If not satisfactory in every particular, return it to us, at our expense.

Easy to operate. Will scrape your floors rapidly, perfectly and economically.

Ask for special price on the **LITTLE GIANT**



**The Thor Electric Home Laundry Machine**

permanently solves the laundry problem in the home. More than 34,000 now in use. Sizes, designs and prices to meet every requirement. Free trial. Easy payments.

Write for full particulars.

**Hurley Machine Company**  
1008 Flatiron Building NEW YORK 37 So. Clinton St. CHICAGO

# PAINE LUMBER CO., LTD.

OSHKOSH, WISCONSIN, U. S. A.

These Plants Produce TWO THIRDS of All the



*We Make Everything in Mill*

OUR SPECIALTY

## Korelock Veneered Doors

Cost but little more than Pine

WRITE FOR CATALOGUE A

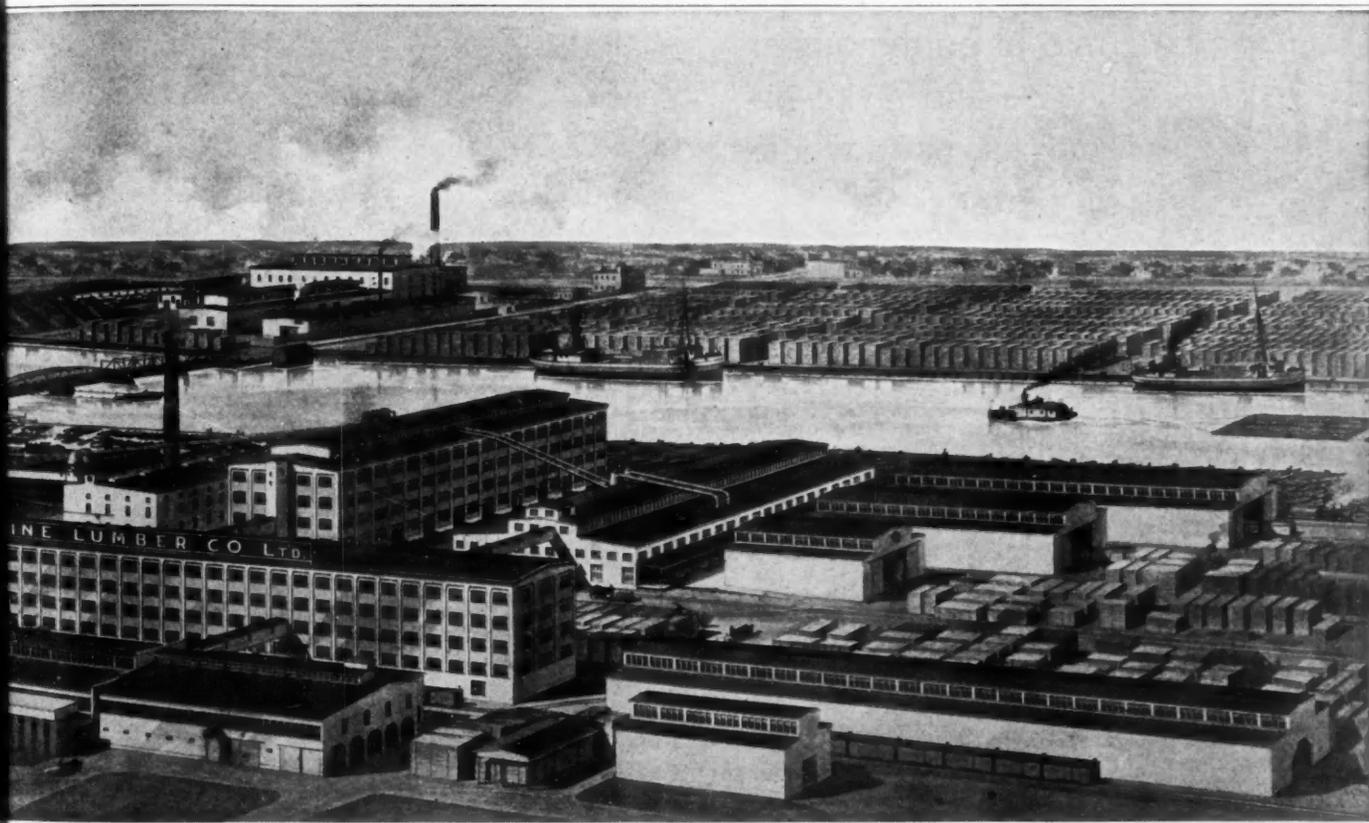
Whenever you See a Korelock Joint Think

When Writing Advertisers Please Mention the American Carpenter and Builder.

# PAINE LUMBER CO., LTD.

OSHKOSH, WISCONSIN, U. S. A.

All the Standard Veneered Doors Used in the World



*Work in any Kind of Wood*

OUR SPECIALTY

## Korelock Veneered Doors

Birch and Oak Doors Ready to Ship

WRITE FOR CATALOGUE A

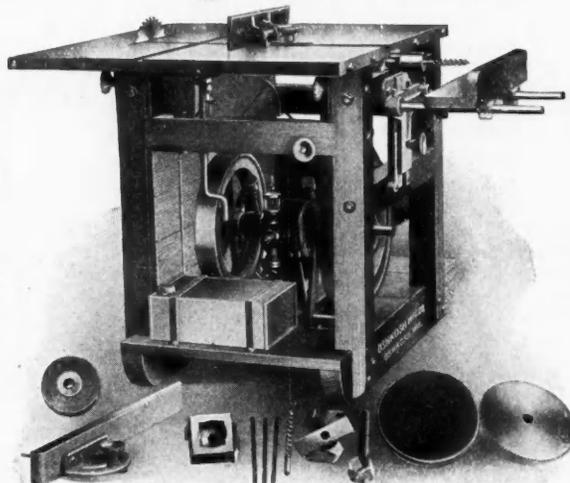
of Paine Lumber Co.—The Originators

When Writing Advertisers Please Mention the American Carpenter and Builder.



**“Every Contractor certainly ought to own a rig like that!”**

“Then he could put more of his men’s time in on the bigger work—and make his contracts pay a whole lot better profit.”



TRADE MARK  
**OSHKOSH**

“Guaranteed  
for Life”

**EVEREADY**

“Guaranteed  
for Life”

## SAW RIG

“Ripping hard pine and oak stuff by hand takes a lot of time. So do boring in hard wood—sanding—dadoing—and many other things that come up on every job a contractor takes. Get an “Eveready” saw rig, and you can save a big share of this lost time. It rips, cross cuts, miters, jig-saws, sands, joints, grinds tools, etc.—nice clean-cut work—in just about **one twenty-fifth** of the time your best man can do it by hand. And all it costs to do this is **2 cents** an hour. Can you beat it? The Eveready can be loaded into a cart by two men and taken right out on the job. There you can swap it around from cellar to garret—anywhere the work is.

“It’s frame and skids are of the best air and kiln dried maple. They’ll never warp a particle. The engine’s a beauty—a 4 h. p. of the latest design out. And it’s mighty easy to run. Give her a spin and she’s off—for ten minutes or all day. Any bright boy can operate it.

“You wouldn’t be without the Eveready a day if you had the least idea of the time, money and back-breaking labor is saved!

“Why—you’d mighty soon gain enough in extra profits to make up the little you paid for the rig.

“Contractors—and even the smallest carpenters—are making the Eveready a part of their regular outfit. It’s a whole planing mill in itself and they find it just as necessary—yes, a great deal more so—than any machine they own.

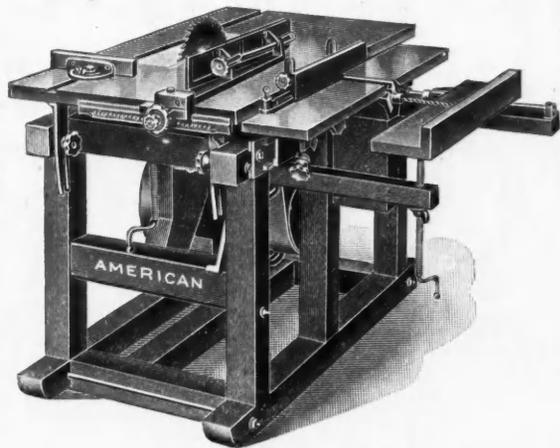
### These Attachments FREE

Rip Saw	Cross-Cut Saw
Jointer Head	Boring Attachment
Jig Saw	Sander
Saw Gauge	Mitre Device
Dado Head	Emery Wheel

### Try It Six Days FREE

*Then, if you can get along without it, return it at our expense.* And if you keep it, it’s actually **guaranteed for life**. Spring is just the time when everybody is getting ready to build. Get in shape to bid lower than anybody else—on good, profit paying work. The Eveready will help you do it by cutting down your men’s time. Why not write today for the whole proposition.

**OSHKOSH MFG. CO., 316 South Main St., Oshkosh, Wis.**



**“American” Contractors’ Portable Variety Wood-Worker**

This is more than a saw bench. It's a miniature planing mill, to be taken right to the job, on which three men can work at three different operations at one time, without interference or change in the machine.

On the table you can rip, cut off or saw mitres; dado, groove, rabbett. At the side is a 6-inch planer, matcher, jointer or moulder, with sander drum, disk sander, or emery wheel. And beyond this is the boring table, furnishing a rest for sanding or grinding.

Can you find as many valuable functions as this in any other portable machine? Yet the price is but a trifle higher than that of a plain saw bench.

Write Us for the Circular.

**AMERICAN SAW MILL MACHINERY CO.**  
82 Main Street HACKETTSTOWN, N. J. 1655 Hudson Terminal NEW YORK CITY



**WOODWORKING MACHINES**

Will complete any Planing Mill operation, such as ripping, cutting off, sizing, jointing, planing, plowing, jig-sawing, boring, moulding, shaping, rabbeting, mitering, mortising, tenoning, sanding and emery wheels. It will pay you to own a

**“GRIMM”**



Belt Drive

Built to operate with Electric Motor or Belt Drive; also with Gasoline Engine for portable use.

No more delays in going outside for your wood-working. The “Grimm” will do them all. What a saving you will make, both in time and money, with a “Grimm.”

Catalogue and prices on application.

**Grimm Manufacturing Company**  
46 Erie Street, Buffalo, New York

NOTE—Our Special brand Clamps, have notches on the bottom of the bar, instead of on the top.

Per pair, 1 foot.....	\$2 70
“ 1 1/2 feet.....	2 85
“ 2 “.....	3 00
“ 2 1/2 “.....	3 75
“ 3 “.....	4 00
“ 4 “.....	4 50
“ 5 “.....	5 00
“ 6 “ heavy.....	7 50
“ 7 “.....	8 50
“ 8 “.....	9 50
“ 9 “.....	11 00
“ 10 “.....	12 50
“ 10 “.....	14 00

These clamps have steel bars and screws and malleable iron parts.

The New Adjustable and Perfection Clamps are made in the following lengths and sizes:

2 1/2, 3, 4 and 5 foot have 1 1/2 x 3/4 inch bars.  
5, 6, 7, 8, 9 and 10 foot have 1 1/2 x 1 inch bars.

Joiners' Clamps—1, 1 1/2, and 2 foot have hand-wheels for rapid work, 1 1/2 x 3-16 inch bars.

In ordering parts always make sketch, to avoid delay.

**Hargrave's New Adjustable SPECIAL Clamp.**



**Hargrave's Perfection SPECIAL Clamp.**



**Hargrave's Joiners' SPECIAL Clamp.**



Write for circular Dept. H.

**THE CINCINNATI TOOL CO.,** CINCINNATI, O., U. S. A.

**COMPLETE OUTFIT PRICE \$15.00 HAND AND FOOT-POWER MACHINERY**

Our No. 7 Scroll Saw is warranted to be made of good material and workmanship, and to saw pine 3 inches thick at the rate of one foot a minute.

Send for Catalogue.

**W.F. & Jno. Barnes Co.**

74 Ruby St. ROCKFORD, ILL.



**Taylor Portable Steel Derrick**

Tested at factory, is hoisted and swung a complete circle 1900 lbs. Shipped ready to operate. No wrench or tools required to set derrick on job. Made in two sections. Beam section connects post by tipping in a vertical position and projects at such an angle to clear side wall of building and has sufficient height to hoist wheel-barrows, window frames and timbers. One man can climb a ladder with either section. Consider the durability of a derrick constructed entirely of malleable iron and steel and that of wood, more compact, more powerful.

Derrick complete with three way block, channel steel brackets, bolts for attaching to building, price \$40.00, and four and one-half cents per ft. for crucible steel cable attached. Drum capacity 300 ft.

Special platform and chains for attaching derrick to gondola railroad cars, price \$15. Chains for hoisting wheel-barrows, price \$2.

**JOHN L. TAYLOR, Manufacturer**  
Taylor Portable Steel Derricks  
Phone Monroe 3066 1034 W. Lake St., Chicago



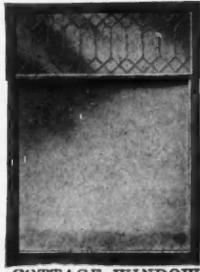


**Low Prices : Quality : Quick Shipments**  
(Our Headliners)



Colonial Porch Columns \$1.33

For cap as shown add 50c net.



**COTTAGE WINDOW**  
1 1/2 in. Thick.  
Glazed Clear.....\$3.75  
With Leaded Top.... 4.50



**FRONT DOOR**  
2-8 x 6-8 1 1/2 in. thick. Glazed \$3.67

**SURROUNDED**

By Extraordinary Bargains which are only a few of the many Money savers shown in our new Catalog of High Grade Sash, Doors, Frames, Blinds, Mouldings, Inside Trim, Grilles, Colonnades, Stair and Porch Work, Mantels, Grates, Tiling, Art Glass, Roofing and Building Papers, Wall Boards, Hardware, Paints, Hardwood and Parquetry Flooring, Rolling Partitions, Screens, Steel Ceilings, Gutters, Shingles, etc.

Write Today for Free Copy. The Huber Builders Material Co. 45-49 Vine St., Cincinnati, O.



**BASE**  
Yellow Pine  
1 1/2 x 7 1/2 in.  
\$2.77  
per 100 lin. ft.

**CLEAT**  
Yellow Pine  
3/4 x 1 1/2 in.  
35c  
per 100 lin. ft.



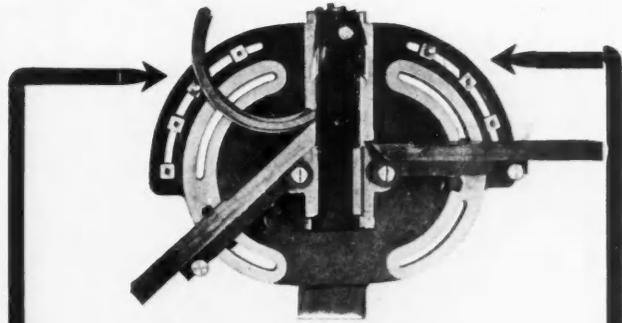
Front Door Set  
Antique Copper  
\$1.60 Inside  
Door Set. 49c



**CASING—Yellow Pine**  
4 1/4 in.  
\$1.89 per 100 lin. ft.



**Quarter Round**  
Yellow Pine.  
3/4 in., 30c  
per 100 lin. ft.



**Why be satisfied with Small Profits when Large Profits can be made in an easier way**

Whittling the joints of fancy sash with a jack knife and chisel is slow and tedious work, and the profits from it are small.

Those stops on our sash fitting machine make the work of fitting curved and straight sash bar equally easy, and with the machine a man can fit up more fancy sash in one hour than he can in from three to five hours by hand, also producing better work.

Can you not see how this machine would increase the profits from your sash department?

Machines sent on approval to responsible concerns.

**THE HEALD MACHINE COMPANY**  
2 New Bond Street Worcester, Mass.



**Office Buildings, Stores, Schools, Churches, Public Buildings**

In the finishing of all buildings the question of sanitary, durable, economical and attractive wall coverings is most important. In large contracts it is customary to have efficiency tests of the various materials. In every such test

**JOHNSTON'S DULL KOTE PAINT**

leads them all. But that is only natural when you realize that DULL KOTE is the Best Sanitary paint that contains no white lead or other poisonous substance, does not rub, flake or peel off, is hard and elastic, and that can be cleaned with soap and water like tile. In appearance it has that soft beautiful look of undressed kid, without a trace of brush marks or laps.

These are the qualities that make it so popular in the home—the same qualities are desirable in public buildings and business houses. Get our 24-color card and list of buildings using DULL KOTE. For sale by dealers everywhere, or by

**The R. F. Johnston Paint Co.**

Pearl and Main Streets Cincinnati, Ohio



**"It Works Like a Plane"**

**The Boss Floor Scraper**

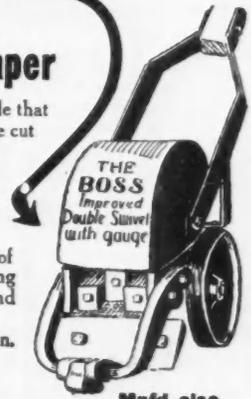
The "Boss" is the only Floor Scraper made that will plane a floor without leaving a square cut where knife first starts cutting. Why? Because the "Boss" is made with a gauge on front, to which is attached a pear-shaped wheel which raises when machine is pulled and lets the knife down gradually.

The "Boss" can be set for any thickness of shaving, it also can be set for any shearing cut right or left up or down to suit the kind of Lumber.

It is guaranteed to give absolute satisfaction.

**G. J. KEPPLINGER**

Main Office: - DWIGHT, ILL.



Mfld. also in Canada.

**FOOT, HAND AND LIGHT POWER WOOD-WORKING MACHINES**



"Victor" Scroll Saw



"Diamond" Mortiser

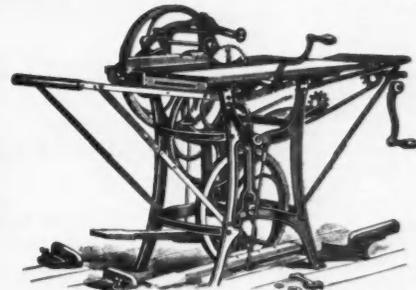
Carpenters, Builders, Cabinet-Makers and other wood-workers can successfully compete with large shops by using our labor saving machinery. Save for yourself some of the profits you have been paying to the mills. With our machines one man will do as much work as four to six men using hand tools; will do it easier; will do it better.

Send for Catalog "A" describing our complete line

**THE SENECA FALLS MFG. CO.**

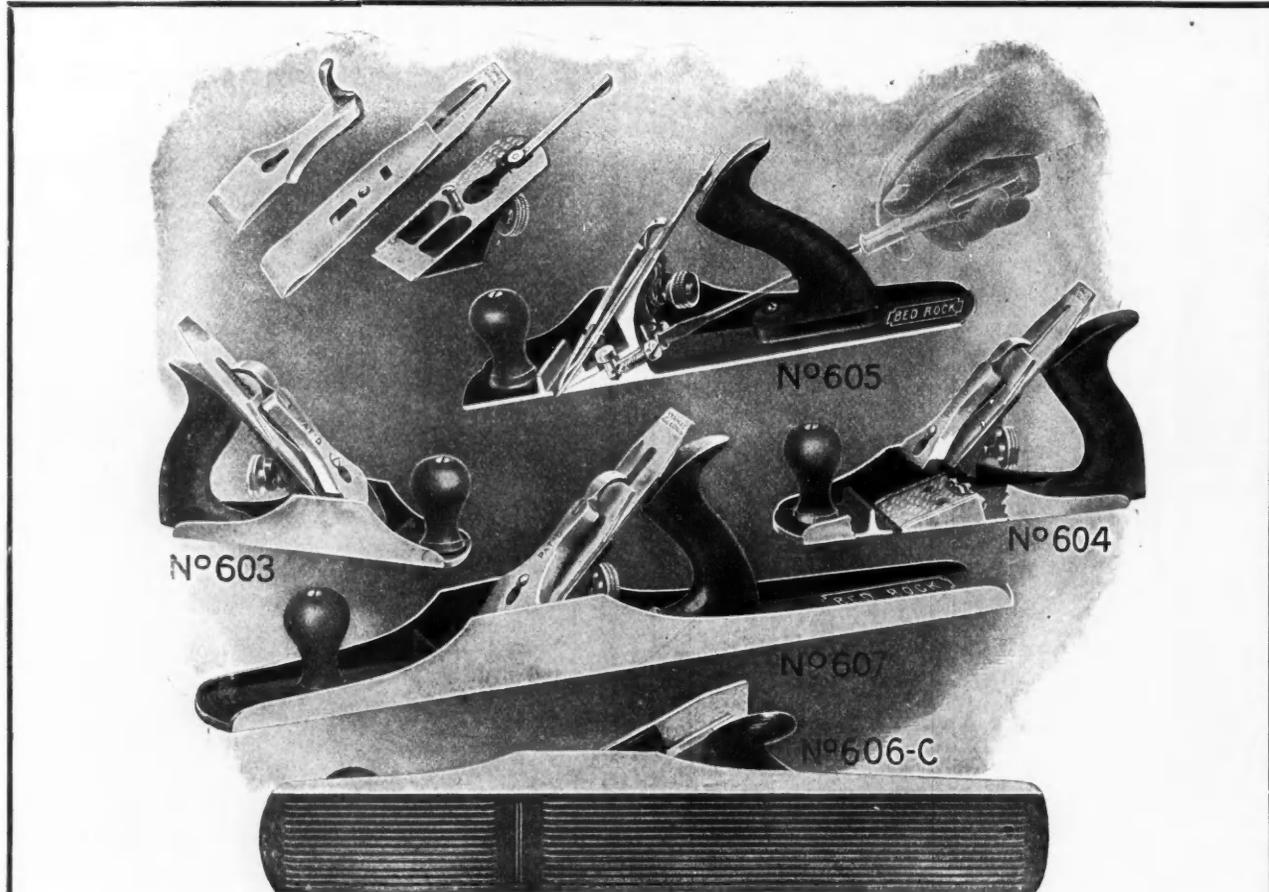
218 Water Street

SENECA FALLS, N. Y., U. S. A. (249)



No. 5 "Union" Self Feed Rip and Cross-Cut Saw

When Writing Advertisers Please Mention the American Carpenter and Builder.



Copyrighted 1909 by the Stanley Rule & Level Co.

## Stanley Tools

In the well known STANLEY "BED ROCK" PLANES as now constructed, we offer the user of high grade tools, a Plane that is the strongest and most perfect in adjustment of any Plane ever manufactured.

The design of the sides, which is a new and distinctive feature, adds greatly to the strength and attractiveness of the Plane, as will readily be seen from the illustration.

The new method of fastening the frog to the seat permits of the frog being adjusted either forward or backward without moving the lever or the cutter.

The shape of the knob has been changed, the new shape permitting a much firmer and easier grip than before.

The high grade of material used and the great care taken in their manufacture enables us to guarantee these Planes in every respect and repeat what we have already stated, that they surpass all other Planes ever offered to users of wood-working tools.

STANDARD  
THE WORLD  
OVER

**Stanley Rule & Level Co.**  
NEW BRITAIN, CONN. U.S.A.

EVERY  
TOOL  
GUARANTEED



**STARRETT**  
**Universal Scraper**

Right 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.

Straight-grained cedar that cuts like cheese; smooth, tough leads that make clean-cut, strong marks—that's the way Dixon's Carpenter Pencils are described. Send 16c for generous sample lot 183J.

**JOSEPH DIXON CRUCIBLE CO.**  
JERSEY CITY, N. J.

When Writing Advertisers Please Mention the American Carpenter and Builder.



# the Saw-Table on the FAMOUS Universal Wood- worker is Made of IRON!

—so is the ripping gauge!

This substitution of iron for wood furnishes another example of FAMOUS durability, and our determination to *maintain* the prestige of the FAMOUS Universal Woodworker as the *unquestioned leader*.

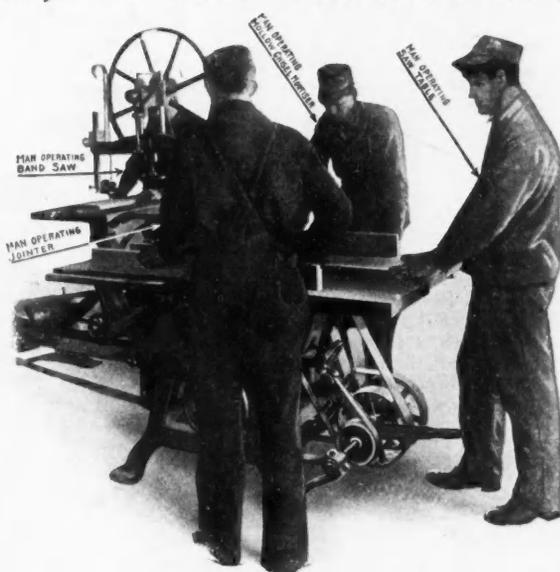
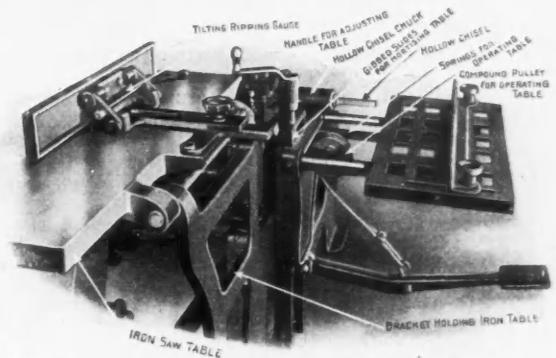
Over eleven hundred (1100) FAMOUS Universal Woodworkers are in use today. You are not experimenting—or taking risks—when eleven hundred carpenters and contractors have proved that, as an investment, the FAMOUS has no equal in woodworking machinery. Eleven hundred machines of one type is *proof positive* of efficiency and satisfaction.

Look at this woodworker proposition from any angle—Strength, Durability, Adaptability, Working Conditions, Simplicity of Operation, and Price the FAMOUS has *no competitor*. Study the Strength—the FAMOUS is all iron and steel; others are not! Consider the durability—the FAMOUS lasts a lifetime because we unreservedly guarantee it; you cannot get that kind of service from others! Look at the adaptability—the FAMOUS does *sixteen* different kinds of work; far more than the next best could ever hope to!

Think of the working conditions—the FAMOUS permits four men to work at one time; can any other machine excel that? The simplicity of operation means that any machine hand can operate the FAMOUS without any previous experience! The prices are so low, and so easy to pay, that every contractor or carpenter can easily afford one.

The FAMOUS Universal Woodworker consists of: 27" Band Saw; 12" Jointer; Saw Table (with raising or lowering arbor); Single Spindle Shaper; Borer; Pony Planer; Tongue and Pole Rounder; Hollow Chisel Mortiser; Single End Tenoner; Drum Sander; Disc Sander; Knife Grinder; Emery Grinder; Band Re-Saw; Spoke Tenoner, Rim Borer and Wheel Equalizer; Adjustable Felloe Rounder—a total of sixteen.

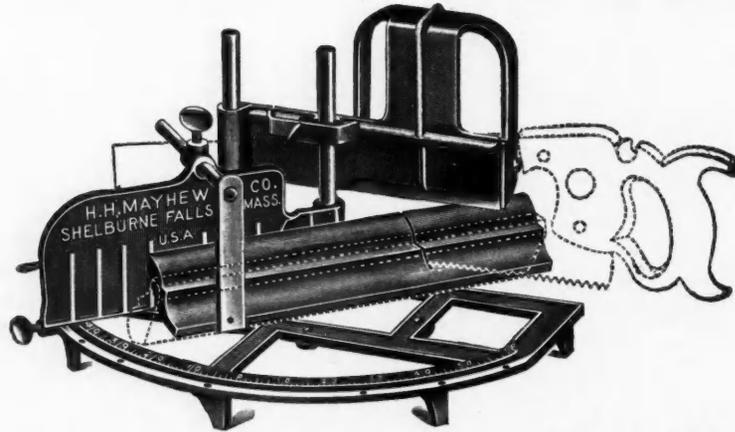
Notice, by the accompanying illustrations, how practical they are arranged and how easy they are to operate. Then write for catalog and full particulars.



**THE SIDNEY TOOL CO.,** ===== **SIDNEY, O.**

When Writing Advertisers Please Mention the American Carpenter and Builder.

# MAYHEW 60° MITRE BOX



This box embodies more distinctive features than any other made  
 Designed for Simplicity, Accuracy, and Durability.  
 Strictly a right hand tool for mitering.  
 Box embodies a new feature in reversing the principle commonly used on other boxes.  
 Any of three saws may be used — Panel — Hand or Back saw.  
 Saw guide adjustable for any thickness of saw.

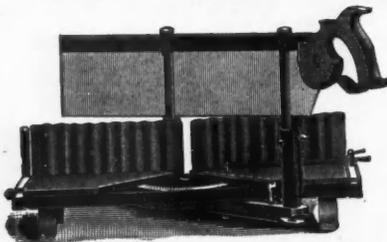
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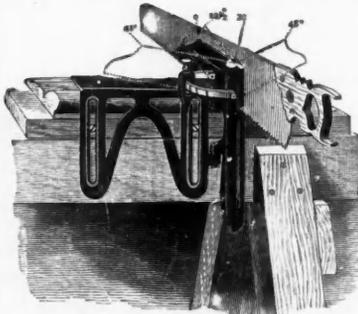
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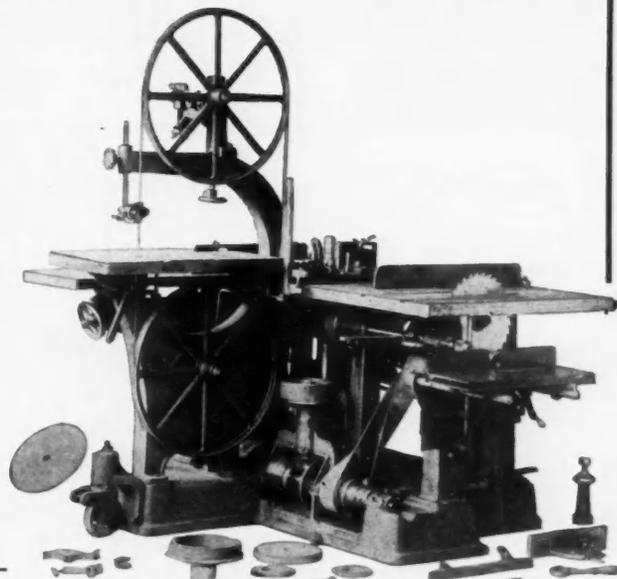
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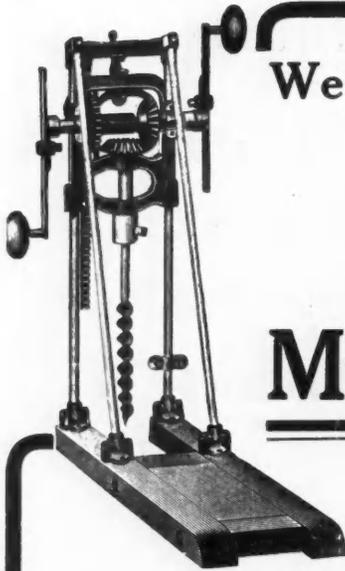
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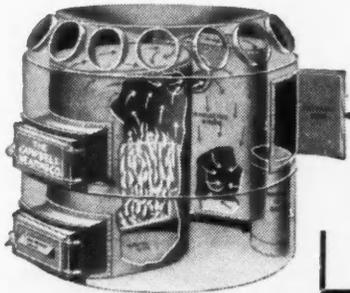
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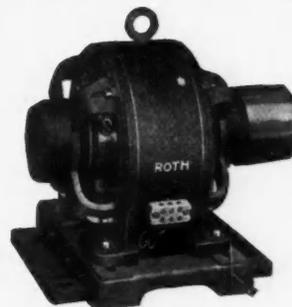
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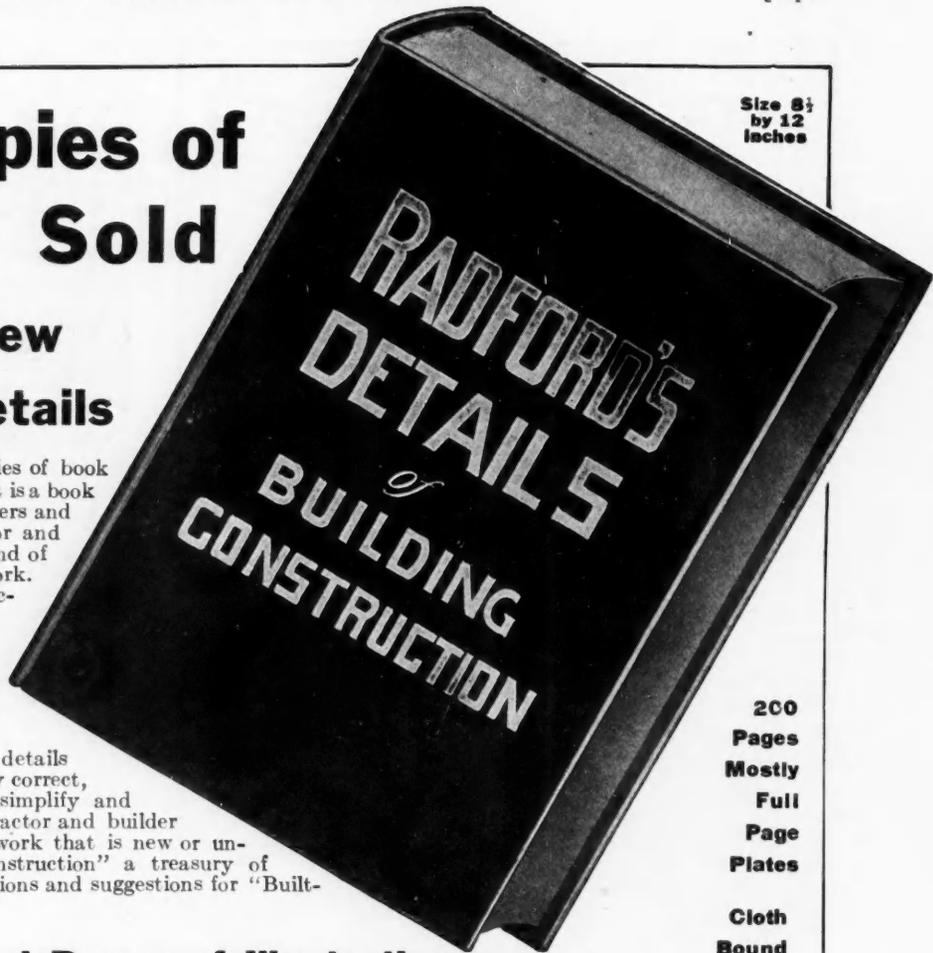
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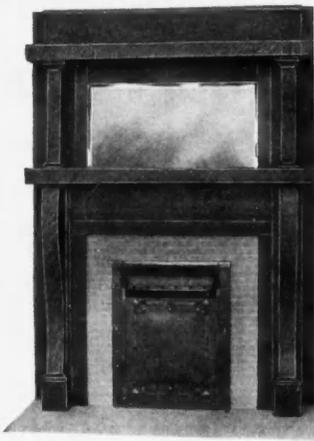


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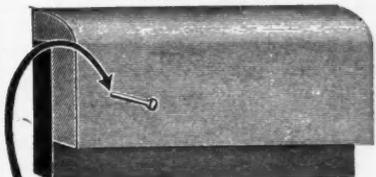
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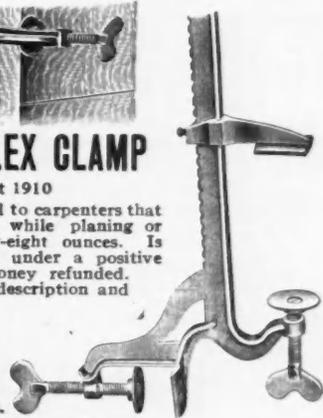
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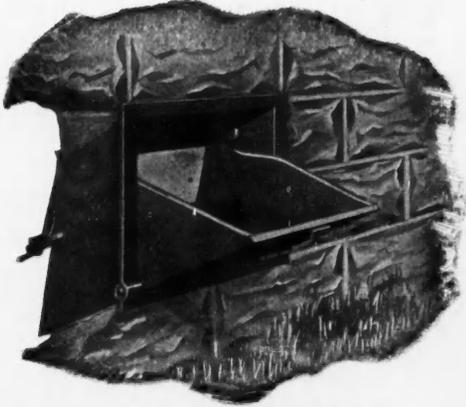
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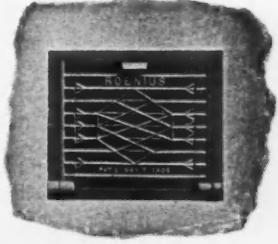
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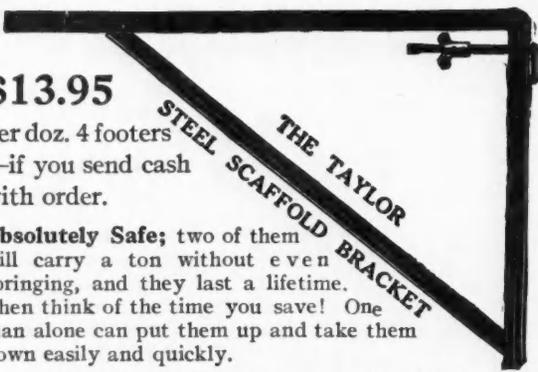
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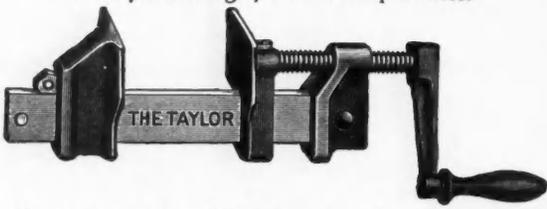


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**James L. Taylor Mfg. Co.**  
Poughkeepsie, N. Y., U. S. A.



**No. 2 Centennial Surfacer**

**A Surfacer for the Carpenter and Builder's Shop.**

The No. 2 Centennial Surfacer produces extra high-grade work. Made in three sizes to plane 16", 20" and 24" wide, and 6" thick.

It is strong in construction, the frame being cast in one piece, with plenty of weight, and with good floor support.

*Write for details, prices, etc.*

**J. A. Fay & Egan Co.**  
545-565 W. Front Street, Cincinnati, Ohio

**INTRODUCTORY TRIAL OFFER**

If the SELF-SETTING PLANES are not sold in your town and you write us saying, "I saw your trial offer in A. C. & B.," we will send you particulars, a carpenter's pencil and our \$1.00 Certificate, which we will receive as \$1.00 in payment for a SELF-SETTING PLANE as stated in our \$1.00 Certificate, and if this S. S. Plane is unsatisfactory and returned to us at our expense, we will send you \$1.00 more than you sent us, as the \$1.00 Certificate says.

As this paper guarantees we will do as our advertisement says, you know the plane must be O. K.

ALL WE ASK is to have you TRY the SELF-SETTING PLANE on your own bench, in your own way, with or against the grain, on the WORST cross-grained, easy, knurley, knotty, hard or soft wood you can find, THAT IS FREE FROM SAND OR DIRT.

If it is not worth to YOU, OR YOUR MEN, TWICE ITS COST, return it at our expense as above stated.

If you send us the addresses of ten carpenters, no matter where they live, we will send you another hard, tough carpenter's pencil.

Give the SELF-SETTING PLANE a chance to PROVE ITS WORTH, if it FAILS, return it and we will return your money.

Carpenters' Hard, Tough Pencils, 30c per dozen, postage prepaid.

**GAGE TOOL CO., Vineland, N. J.**

**Dumb Waiters**

Dumb Waiters and Hand Power Elevators are seldom used in some communities, and when it is considered what some Dumb Waiters are you do not wonder.

In other communities almost every house has a Dumb Waiter, every new house in fact. In Poughkeepsie, N. Y., more Dumb Waiters are used than in any other city of its size. The Sedgwick Dumb Waiters are manufactured in Poughkeepsie.

Send to the Sedgwick Machine Works, 132 Liberty St., New York, for catalogue, and you will see why Hand Power Elevators and Dumb Waiters are so popular where best known.

**THE FOLDING DRAW KNIFE**

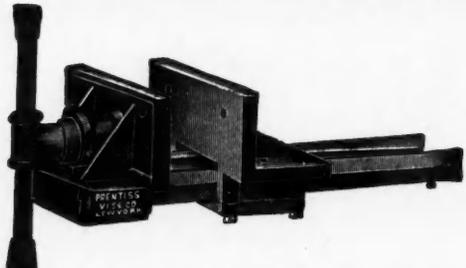
It's the Draw Knife that's the seller  
Right up to the Draw Knife law;  
It's the workman's prize and treasure,  
And the Draw Knife that will draw.



If your hardware dealer does not keep it, we will send it to your address postage paid. : :

**A. J. WILKINSON & CO., 180 to 188 Washington St., BOSTON, MASS.**

**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**  
106-110 La Fayette St., New York, U. S. A.

When Writing Advertisers Please Mention the American Carpenter and Builder.



**Carpenters, Builders,  
Cabinet Makers and  
Every Kind  
of Mechanic!**

Do Not Forget  
That the

**Master  
Slide Rule**

This illustration shows the Master Slide Rule in use for inside measurements. The Master Slide Rule shows exact dimensions without figuring or calculations as indicated with pencil. No guess work.

is the only practical rule in the world for inside measuring of doors, windows, etc. Will become absolutely indispensable after once using it. For speedy operation no other rule can compete with the MASTER SLIDE RULE. Can be extended and closed instantly. When opened, is kept in place by strong steel springs and cannot get out of order. One side of rule is marked for inside measurement. Reverse side of rule is the same as any ordinary rule, but is particularly valuable for quick measurement of ceilings and walls, etc. Made in lengths from 2 to 6 ft.

Ask your hardware dealer, or write us for particulars and price list. Send name of hardware dealer. Agents wanted.

Send 15c per lineal ft. for 4, 5 or 6 ft. rule, which will be sent you prepaid. Remittance by money order or cash preferred.

**Dahl Manufacturing Co.**  
Childs Building, 1 East 42nd St.  
NEW YORK



Showing lower slide extended 2 1/2 inches — making distance between extreme ends 10 1/4 inches.



*Woodworking Machinery*



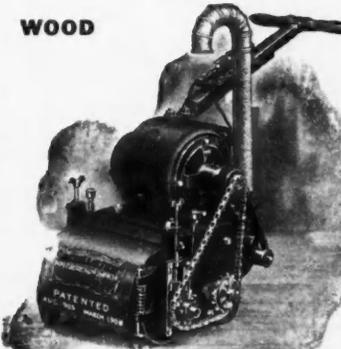
This New Jointer stands on Three Feet and is fitted with Round Combination Head. It has every necessary adjustment and Satisfaction is Guaranteed.

— ADDRESS —

**H. B. Smith Machine Co.**  
SMITHVILLE, N. J., U. S. A.

New York Chicago Atlanta San Francisco

**WOOD**



**FREE TRIAL**

**Perfect Results Are Easily Obtained By  
Using Schlueter Rapid Floor Surfacer**

This machine is built on the only correct principle. It is guaranteed to be The Best machine with which to produce an even, smooth surface on any kind of large or small 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 Schlueter will remove all joints or warped edges, and oil, wax, lime stains, or the "muck" from skate wheels, in a most satisfactory manner. (Earning capacity \$20.00 to \$25.00 per day.)

Send for prices and FREE TRIAL PROPOSITION.

**M. L. SCHLUETER, Chicago, Ill.**  
107 N. Canal St., Chicago N. Y. Office, 1001 Flat Iron Bldg.

**CONCRETE**



Made in three sizes: 8 x 18, 8 x 15 and 8 x 12 in. Flexible Roller. Edge Roller easily adjusted to either side.

Rapid and Flexible Stone Floor Surfacers for Concrete with Terrazzo, Mosaic Tile, Cement, etc.

**50c FOR THIS Clamp Fixture**

*It is Unequaled for Strength—  
Quick Action and Lasting Qualities*



Write for Catalog of Sheldon's Clamps and Vises.

**E. H. SHELDON & CO.**  
84 N. May Street CHICAGO, ILL.

Don't Ask the Dealer for Sash Cord. Ask for

**“SILVER LAKE”**

and see that he gives it to you. It is impossible to



substitute as our name is stamped on every foot of 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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==== A ====  
**Good Tool**  
 — is a source of —  
**Satisfaction**

It is so much easier to turn off a good quantity of work each day when efficient labor saving tools are used; tools that will stand up and do what you expect of them.

It adds to your peace of mind for the poor or slow work of poor tools frets a good workman.

**The No. 111  
 Spiral Ratchet  
 Screw Driver**

is such a tool, it does its work so well.

The angle slant of the spiral has been calculated so carefully that the tool is fully as powerful as others that are much larger and heavier.

The interior mechanism is so carefully constructed from superior materials that with proper use it is practically indestructible.

**Remember  
 the  
 number is  
 111**

**Goodell-Pratt Company**

*Toolsmiths*

Greenfield, Mass., U. S. A.

**Special**

**Carpenters Make  
 BIG MONEY**



*Selling  
 our tools on  
 the side.*  
**BE OUR  
 AGENTS.**

**Crown Miter Box**

Formerly manufactured by the Nicholls Mfg. Co. and sold for \$12.50 our agents price \$8.95. We allow the agents price when ordering a sample. Mark tools needed and send in this ad and we will quote you.

- Saws
- Ratchet Brace
- Squares
- Saw Sets
- Expansive Bits
- Marking Gauges
- Draw Knives
- Automatic Screw Driver or Hand Drill

**Crown Tool Mfg. Co. :: Ottumwa, Iowa**

**Commonwealth Hotel**

INC.



Opposite  
 State  
 House

**BOSTON,  
 MASS.**

Offers rooms with hot and cold water for **\$1.00** per day and up, which includes free use of public shower baths.

**Nothing to Equal This in New England**

Rooms with private baths for **\$1.50** per day and up; suites of two rooms and bath for **\$4.00** per day and up. Dining Room and Cafe First-Class. European Plan.

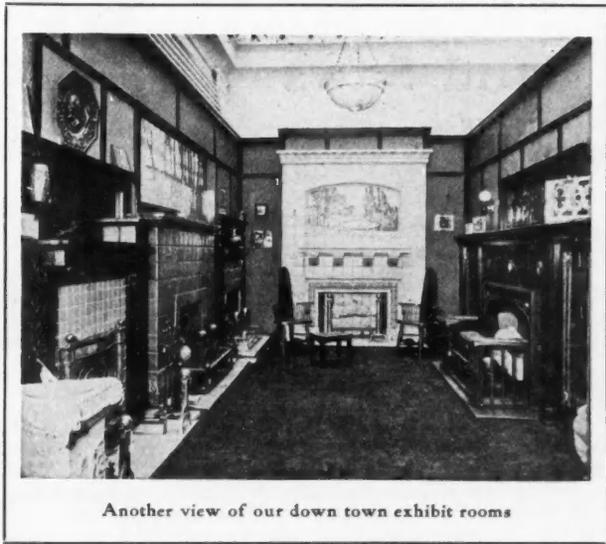
**ABSOLUTELY FIREPROOF**

Stone floors; nothing wood but the doors. Equipped with its own Sanitary Vacuum Cleaning Plant.

**Strictly a Temperance Hotel**

*Send for Booklet*

**STORER F. CRAFTS, General Manager**



Another view of our down town exhibit rooms

## Fire Places, Tile, Brick and Wood

— ALSO —

## Grilles, Colonnades and Consoles

Send for our large new Catalogue  
now ready. Mailed free. Tiles  
for—"Anywhere and Everywhere"

### CHAS. F. LORENZEN & COMPANY

General Office and Show Rooms: 701-709 N. Sangamon Street, CHICAGO

Down Town Office and Tile Display—Room 128 Reaper Block, Cor. Clark and Washington Streets



### 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 fine screens.

Our screens are made from kiln dried lumber and have waterproof coped joints and the frames are weather proofed before finishing coats are applied.

Best grades of Wire Cloth, enameled, galvanized, genuine bronze, fastened by the most approved method.

The new "Ironwood" screen is the cheapest good custom made screen yet produced. Intending purchasers may have free, by mail, samples of woods, finishes, wire cloth and a copy of catalogue. Agencies in nearly all large cities. Agents wanted in smaller cities.

Special terms to contractors and builders.

**A. J. PHILLIPS & CO., FENTON, MICH.**  
28 YEARS' EXPERIENCE 3 1-2 ACRES FLOOR SPACE

### Time Saved is Money Earned



Use  
**"STERLING"**  
Builder's Levels  
And Save Both

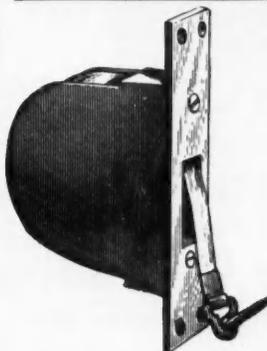
The Contractor who prides himself on the Accuracy of his work will tell you that the "STERLING" Transits and Levels are without an equal and will satisfy the most particular.

There is a reason why.

Write today for  
ILLUSTRATED  
CATALOG, SPECIAL  
PRICES and SHIP-  
PING TERMS

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136 N. 12th St., Philadelphia, U.S.A.

### CALDWELL SASH BALANCE



Does away with weights and cords, and VASTLY more durable.

Makes sashes work perfectly.

Permits greater window space in new work, as box frames are not necessary.

May be applied to old windows without altering sashes or frames.

Write for circular to the

**Caldwell Mfg. Co.**  
15 Jones Street, Rochester, N. Y.

### "Last a Lifetime and Give Satisfaction To the End"



#### BUTT CHISEL

The celebrated Barton Planes and Edge Tools for carpenters and all other woodworkers are unequaled by any other made for keen, hard, smooth cutting edges. If your hardware dealer does not handle



#### THE CELEBRATED BARTON TOOLS

Send direct for catalogue and our free story book, True Stories. Be sure to specify "CARPENTER'S CATALOGUE."

**MACK & COMPANY, 20 BROWN'S BACH  
ROCHESTER, N. Y.**

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**GEO. H. BISHOP & CO.,** Lawrenceburg, Indiana, U.S. A.

Makers of

**Fine Hand Made Hand Saws**

The Purest of Quality Our  
"GREYHOUND" Hand Saw



**I**N introducing our "GREYHOUND" brand of Saws to the trade, we have departed from our usual custom in naming instead of numbering the saw. This saw will be known as our "GREYHOUND" and will be the only Bishop brand of saw known by name.



We have had a Chemist experimenting for years to originate a purity of steel with a fine grain and tough body that would stand up under such a fearless warranty as we place on our "GREYHOUND" brand of saws. We now have it. We know its worth as well as its value. As workers of steel we understand it. We had to name it and we have christened it Bishop's Refined "GREYHOUND" Steel, associating our trade mark with its name. We have in this "GREYHOUND" Saw blade a purity of steel that is tough, tempers accurately and even—together with the special way it is made—enables us to guarantee that this "GREYHOUND" brand of Saws will cut faster and run easier in all kinds of wood, hold its sharpness and set longer than any other makes of good Saws in the world. We Refund the Money if 30 days' trial does not prove our guarantee. Our pride is quality with an honest opportunity for the purchaser to judge. Each Saw is tagged with our warranty on it. No expense has been spared to make this Saw the most perfect in the world. We invite correspondence with anyone who has our "GREYHOUND" brand of saws in use.

Made in both straight and skew back. Packed One in a Box.

In workmanship this saw possesses all the skilled mechanical features known to the art of saw making. The hang of the blade has been carefully studied and adjusted, to suit the fancy of the most critical.

If this saw cannot be found in the Hardware Store and they will not order it for you, write to us. Price for 26 in. saw, \$3.00 delivered. We make anything in Carpenters' Saws.

**HESS MEDICINE SANITARY LOCKER**



**The Only Modern, Sanitary STEEL Medicine Cabinet**

or locker, finished in snow-white, baked everlasting enamel, inside and out. Beautiful beveled mirror door. Nickel plate brass trimmings. Steel or glass shelves.

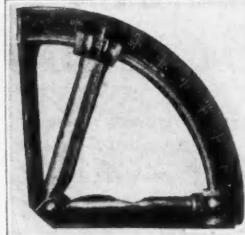
**Costs Less Than Wood**

Never warps, shrinks nor swells. Dust and vermin proof, easily cleaned.

Should be in Every Bath Room Four styles—four sizes. To recess in wall or to hang outside. Send for illustrated circular.



**HESS, 920L Tacoma Bldg., CHICAGO**  
Makers of Steel Furnaces Free Booklet The Outside Street Cabinet



**\$1.00** BY MAIL ONLY  
**Positively the Best Level Made**

Guaranteed to Pay for Itself on First Job

KEEP 30 DAYS

RETURN IF NOT SATISFACTORY

**J. D. WEAVER**  
JACKSONVILLE, ILLINOIS



Send us two or more names of persons who are interested in or want to buy Hot Water Heating Plants and we will send you this scale. Back inches are divided into 6, 10, 12, 16, 20 and 40 parts. Also free catalog on request. Mention this paper.

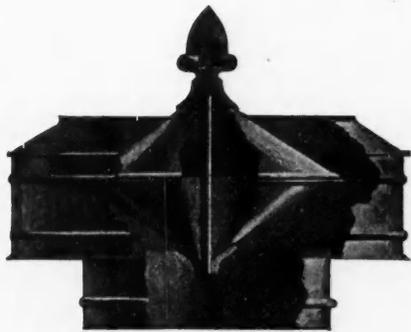
**Andrews Heating Co.,** 1288 Heating Bldg., Minneapolis, Minn.

**ROOF SLATES**  
**BLACKBOARDS**

**E. J. JOHNSON**  
38 Park Row, New York  
**Quarry Operators**  
BLACK, GREEN, PURPLE, RED

Booklet, Samples and Prices on Application

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**"XL" Skylights, Cornices,  
Ventilators and Special  
Sheet Metal Work**

Stock designs or made to order  
from Plans and Specifications.  
We Solicit Your Inquiries.



Metal Shingles in Two Styles

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**The Canton Art Metal Co.**  
"Quality Products"  
**CANTON, OHIO**

New York Branch  
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206 S. 3rd St.

**FILMWOOD**

*Oak, Mahogany, Walnut*  
**A Real Wood Veneer  
Mounted on Paper**

Enables paper hanger to  
make panel work, wain-  
scots, dados, entire walls.  
No need to call in carpen-  
ter. Finer grain effects than  
thick lumber. Good for  
fireproof construction.  
Stained, filled or polished  
same as thick wood.

*Send for Circular B.*

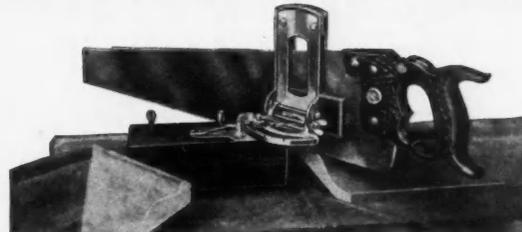
We also make *Magic Wall Size* and  
"Cott-a-lap" Sunproof Burlap. If inter-  
ested in Wall Burlaps we will send  
samples of these also.

**The Cott-a-lap Co.**

Chicago Office: 108 W. Lake St.

MAIN OFFICE AND MILL **SOMERVILLE, N. J.**

**THE CROWN SAW GAUGE**



Here we have a miter-box that supplies a long felt want. It is compact, light and  
durable, can be folded up and tucked away any place in tool-box. Unsurpassed for  
weather boarding, cornice work, inside finish, hopper cuts, etc. Instantly adjusted  
to any angle or miter and compound miter, can be used on scaffold around dor-  
mars, bay windows and any awkward place, always on the job, weighs two pounds.

Sent anywhere on receipt of \$2.50

L. R. Bender, - - - Elizabethville, Pa.

**PLUMBERS' SUPPLIES**  
AT WHOLESALE



When in the market for Plumb-  
ing Supplies and you wish to

**SAVE  
20 to 40 Per Cent**

on every article, write for my  
free illustrated Catalog. The  
only house that sells first class  
guaranteed goods at wholesale  
prices direct. Shipments are  
promptly made from a very  
complete stock.

Small orders are as carefully  
handled as large ones.

**B. B. KAROL, 768-772 W. Harrison St., Chicago, Ill.**

## Here, Mr. Contractor---Read

*What a Minnesota Contracting Firm Say about the Baby Grand Mixer*



HAVREBERG & ELVERUM, Contractors and Builders  
Jackson, Minnesota, March 8, 1912

HALL-HOLMES MFG. COMPANY, Jackson, Mich.  
Gentlemen:—The "Baby Grand" mixer we bought last year, we have used on different kinds of work and are very well satisfied with it. We find it is very accurate in proportioning and it mixes very thoroughly and being light in weight can be used in places where a heavier machine would be out of the question. We find it very easy for three men to mix four cubic yards an hour with this machine.

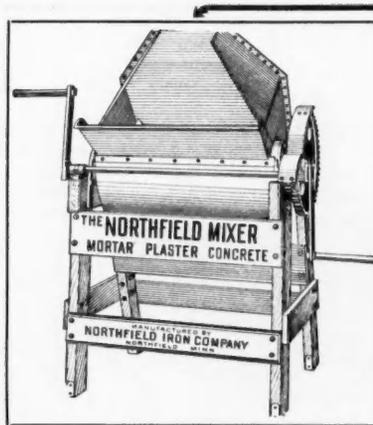
Yours respectfully,  
HAVREBERG & ELVERUM (Signed.)

**"The Baby Grand Runs Like a Watch"**

Every Contractor who has had experience with any of our Baby Grand Machines will tell you they are the best mixers on the market. They are of the continuous type. They have a mechanical proportioning and feeding device. They eliminate guess-work and make mistake impossible. No matter what kind of concrete work you do a Baby Grand Mixer can and will do better work and make more money for you.

We manufacture Baby Grand Mixers, also Hartwick Mixers, "the two trough mixers" in many various sizes and for any type of concrete construction work. Write for catalogues, prices, etc., and find out about our mixers—first hand—before buying any mixing machines. Learn what they are doing for others—they'll do as well for you.

Hall-Homes Manufacturing Co., 428 Oak St., Jackson, Mich.



Mixes 4 cubic foot batches at the rate of one batch per minute; 1 1/2 horse engine runs it, 2 men turn it easily and don't work as hard as the shovelers. It successfully mixes surfacing, color blending, mortar, hair plaster and all kinds of concrete. It weighs only 300 lbs. Can always be set to discharge direct into forms.

Sold on trial  
Send for FREE catalogue

Manufactured by  
**NORTHFIELD IRON COMPANY**

402 Water St., NORTHFIELD, MINN.

## The H. & B. HAMMER



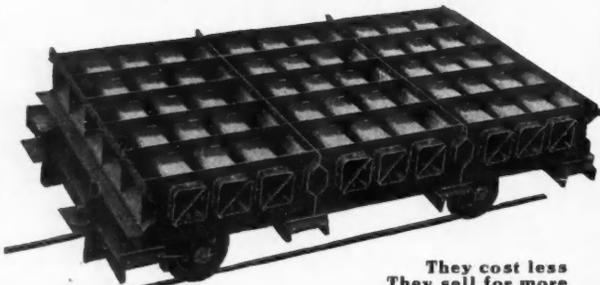
For Carpenters, Tool Makers and Machinists.

For sale by the Hardware Trade

Humason & Beckley Mfg. Co.  
New Britain, Conn.

G. Ruhling  
Chicago Representative.  
57 West Lake Street.

## ZAGELMEYER SYSTEM of Casting Hollow Cement Building Blocks



They cost less  
They sell for more  
You sell more of them

The Zagelmeyer System uses a SLUSH CONCRETE for body of block and a patented process of applying the facing, which gives the block the most NATURAL STONE EFFECT of any block made. Blocks made by this system are GUARANTEED ABSOLUTELY WATER PROOF, have THREE TIMES THE CRUSHING STRENGTH and are the handsomest blocks in the world. They sell for 25% more than the best dry tamp block and can be MADE CHEAPER than any other block on any other system.

### THE MOLDS IN THE ZAGELMEYER SYSTEM

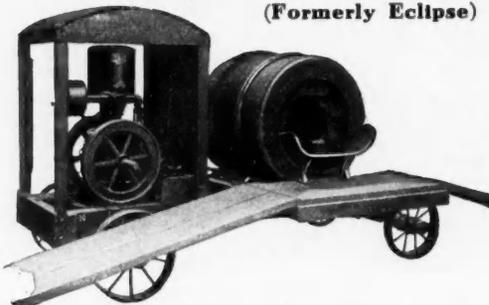
are so PERFECTLY CONSTRUCTED that the faces of block are guaranteed not to vary the ONE-HUNDRETH PART OF AN INCH IN SIZE. THE CORES pass through from one side of the car to the other; they are NONTAPERING AND COLLAPSIBLE and withdraw with perfect ease after cement has set. It is THOROUGHLY PROTECTED BY PATENTS which enable us to give EXCLUSIVE TERRITORY. Secure your own city BEFORE SOMEONE ELSE DOES and get into A BUSINESS THAT PAYS. This is positively the best Cement proposition in the United States to-day.

A postal brings our Catalog and Proof of our Assertions.

**Zagelmeyer Cast Stone Block Machinery Co.**  
406 CRUMP AVENUE, BAY CITY, MICH.

## "THE STANDARD" Low Charging Concrete Mixer

(Formerly Eclipse)



"THE STANDARD" will be used in the future as the name of the mixer which we manufacture.

This corresponds with our firm name as well as with "THE STANDARD" Scales which are so largely used all over the world.

We find that while we have been selling our mixer under the name of Eclipse, it is known very largely by the public in general as "THE STANDARD" machine.

"THE STANDARD" Mixers will be of the same high grade construction as heretofore, using all improvements and best designs from our many years of experience as manufacturers in this and other lines of machinery.

"THE STANDARD" Mixer will have our patented low charging arrangement and also our semi-automatic discharge, which together with other special features has enabled us to build up our large volume of business and have made our machinery so popular with contractors and users.

"THE STANDARD" Mixer will be built following out our general plans, to produce a high grade, simple constructed machine at moderate price, omitting all complicated and unnecessary mechanism and producing by a very simple method, the thorough mixing required for high grade concrete.

"THE STANDARD" Low Charging Mixer is offered to the contractor and user as a machine of large mixing capacity and low first cost, low operating cost, and low expense for repairs, avoiding expensive "shut downs" and delays which are so frequent with complicated mixing machinery, even when this complicated machinery is in the hands of high priced experts.

"THE STANDARD" Mixer will merit the good record already built up for the Eclipse.

Write for catalogue No. 144 which gives full information regarding this low charging machine.

**The Standard Scale and Supply Co.**  
CHICAGO, 1345-47 Wabash Ave. PITTSBURGH 243-245 Water St.  
PHILADELPHIA, 35 S. Fourth St. NEW YORK, 136 W. Broadway



**MONEY MAKING CONCRETE**

## Mr. Block-Maker

Wet Process is Right.  
Face down is Right.  
Three blocks at a time is Right.  
Triple Tiering is Right.  
Damp Curing is Right.

### The Mogul Invincible Block Machine

COMBINES ALL THESE

## IT IS RIGHT

It is 46 inches long and will make three 16" or two 24" blocks at one operation. It makes sills, caps, copings, rails and steps, faster and better than a special sill machine. It has every adjustment that any other machine has and many that no other machine has.

PRICE—Machine and Outfit, \$75.00

WRITE FOR CATALOG

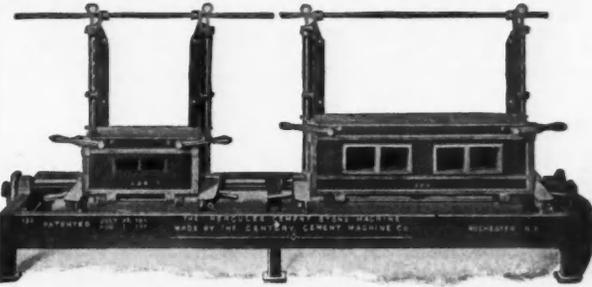
### THE PETTYJOHN COMPANY

634 No. 6th St., TERRE HAUTE, IND.

## WHY THE Hercules Concrete Block Machine

is the **BEST** for **YOU** to buy

The man who is about to take up the manufacture of concrete blocks, should exercise the greatest care in selecting a block machine. The biggest mistake to make is to buy a small machine that will always remain a small machine. Why not buy a machine large enough for your immediate needs and capable of being expanded to make more and larger blocks as your business expands.



You can buy a **HERCULES** equipped to make whatever size of block you need when you start. Parts for other sizes are added as you require them. Your machine is a plant in itself. When you expand you don't have to throw away old equipment—you merely add at small cost to what you have.

There are many other important points connected with Hercules Machines that you ought to know.

We have just issued a little book full of information. Send for it today.

### CENTURY CEMENT MACHINE CO.

290-300 St. Paul St. ROCHESTER, N. Y.



## Excelsior Dumb Waiters

The only Knock-Down Dumb-Waiter ever offered, shipped complete to a nail, with explicit directions for erecting, for ..... **\$18.50**

Up-to-Date in Every Particular

Hardwood Car, Self Retaining Machine, Adjustable Weight, Guides, Ropes, Timbers and Hardware. Ropes joined by coupling. No Splicing. Will fit any ordinary opening up to 24" x 30"

Send for Printed Matter

### R. M. RODGERS & CO.

173-175 Washington Ave. - Brooklyn, N. Y.

## The Myers New-Way Adjustable Tandem Door Hanger

Is adjustable to and from buildings and permits the door to be raised or lowered as desired. This is a very important feature in cold weather when the ground is frozen and heaved up. It is absolutely dust proof and can be adjusted to keep out all snow and rain. Owing to its construction it will carry a heavier load than any other style tubular track. Another very important feature is its flexibility which permits the door to pass over uneven surfaces.

Write us for information and catalog.

### F. E. MYERS & BRO.

ASHLAND, OHIO




## TRUS-CON Joist Hangers

Made in all sizes and styles, for use with brick or concrete block walls or with wooden or steel beams

Avoid cutting away and weakening of timbers and walls—save labor, time and money.

Trus-Con Joist Hangers are made from open hearth steel plates, and are proven by actual test to be the strongest on the market. Note the bulb-shaped reinforcement at upper angle.

We also furnish Post Caps Post Bases, Wall Plates and Base Plates made in rolled steel, malleable iron, or cast iron.

Write for catalog and prices

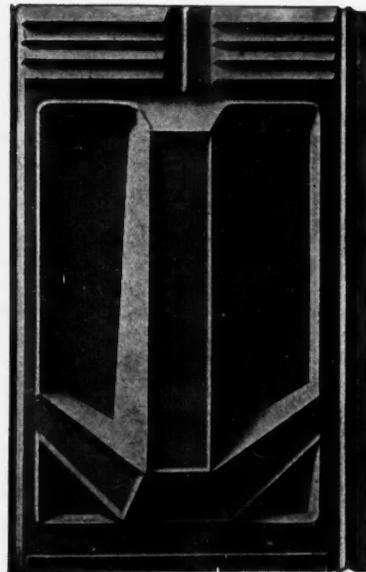
### TRUSSED CONCRETE STEEL CO., 344 Trussed Concrete Bldg., Detroit, Mich.



Trus-Con Pressed Steel Inserts are imbedded in the concrete during construction, saving expensive drilling after completion of the work. The long slots allow a wide variation in position. Special washers prevent bolts from turning in the slots. Write for details and prices.

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**A NEW METAL TILE**  
 ABSOLUTELY WATER TIGHT—PERFECT FITTING  
 OF THE WELL KNOWN  
**KANNEBERG QUALITY**  
 Best Roofing in the World. Also Various Artistic  
 Designs in Metal Ceiling  
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Made in two sizes:  
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 Your Home and Church  
 With F. & B. Co.'s  
**ART WINDOWS**  
 Designs and Estimates on Application Without Charge.  
 Beveled Plate, Metal Sash, Memorial Figure Windows and Residence Work Our Specialty  
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TRADE **FOX** MARK

**6-E Universal Wood Trimmer**

Height of Cut . . . 6"  
 Width of Cut . . . 12 1/2"  
 Size Bed . . . 18"x39"  
 Weight . . . 420 lbs.  
 Price . . . \$90.00  
 F. O. B. Grand Rapids

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**'Universal Wood Trimmers**

**To Meet Every Demand**

**4-A Universal Wood Trimmer**

Height of Cut . . . 4"  
 Width of Cut . . . 5"  
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EVERY PATTERN SHOP, INTERIOR FINISH MILL, FURNITURE FACTORY, and others doing work requiring **perfect glue joints** and **angles** should have our Trimmers or Miter Machines to produce the best results

WRITE TODAY FOR COMPLETE CATALOG OF OUR TOOLS

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A strong, durable, and well balanced tool, of the same high quality as other "Yankee" Tools which to-day are without equal. The blade and ferrule are highly polished, the handle of hardwood finished in dull black, making a handsome appearance. Each tool is thoroughly tested and the blades are positively guaranteed not to turn in the handle.

**Fourteen Sizes  
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**Have You  
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The time saved by the "Grand Rapids" will actually pay for the pulleys.

You can't afford to use old style pulleys.

Write for free samples and prices.

**Grand Rapids Hardware Co.**  
Manufacturers  
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This fastening is more secure than any number of screws or nails could make it. Saves about 15 per cent. too. **8 CENTS COST MONEY**

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**PRYIBIL No. 5  
Parallel Swing Saw**

Also for grooving, gaging, rabbeting, tenoning, etc. Send for prices and catalog.

**P. PRYIBIL**  
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NEW YORK



This Machine Cuts ..... (Parallel with Table)

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## Berger's Metal Lumber

insures against fire, tornado and earth-shock losses. Architects call it

### THE GIBRALTAR OF CONSTRUCTION

and specify it where all that is perfect in residence, or medium-size building, is demanded. It is economically, easily and quickly erected, the numbered members, with the simple erection drawing, enabling any experienced mechanic to do the work.

If unacquainted with Berger's Metal Lumber let us demonstrate the efficiency and adaptability more fully. Address us at once.

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Canton, Ohio

WRITE NEAREST BRANCH: *New York, Boston, Philadelphia, Chicago, Minneapolis, San Francisco, Atlanta, St. Louis*



*A Residence of Metal Lumber*

## You would'nt expect

slate to stay on a roof without nails.

When galvanized roofing nails rust out, there's nothing left to hold the roof on.

Copper Clad steel nails drive like galvanized but they don't rust out.

TRADE MARK



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*Best for all Walls*

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*Beware of Worthless, Cheap and  
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The Mechanic Using  
**DISSTON SAWS, TOOLS AND FILES**

obtains those full and satisfying results which make him an earnest advocate of the

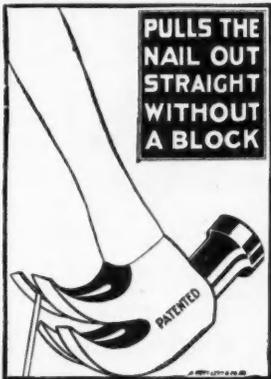
**DISSTON BRAND**



ESTABLISHED 1840

**HENRY DISSTON & SONS**  
 INCORPORATED  
 Keystone Saw, Tool, Steel and File Works  
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**GET THIS!**



**PULLS THE NAIL OUT STRAIGHT WITHOUT A BLOCK**

Time and strength are worth money. With the **Double Claw Hammer** you save both. It pays for itself many times over. It pulls the nail up instead of rolling it out. You drive the same nail right in again. You never smash your fingers in high nailing, and your left hand is free to hold the board to be nailed. The carpenter who got this up knew his job and saved himself a lot of trouble.

**Free Delivery to Your Address on Receipt of \$1.50**

The **Double Claw Hammer** will pay for itself many times over in the time and strength it saves the user. It is indeed a pleasure to work with it. If you are not satisfied with this hammer send it back at our expense and we will refund your money. Not one returned yet. Remember—It costs three times as much to make this hammer.

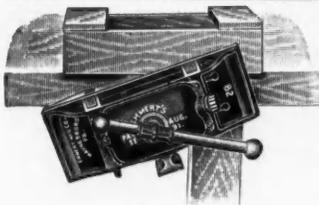
SEND FOR IT NOW

**DOUBLE CLAW HAMMER CO.,**



**USE ONLY ONE HAND FOR HIGH NAILING**

Broadway and Hewes St.  
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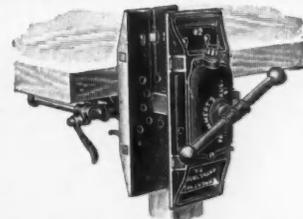


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are recognized as the greatest Time-Savers and conveniences ever offered the woodworker. Convenient and easy in operation. Will hold work in any desired position. More than 50,000 in use today. Sold on approval and guaranteed satisfactory.

Write for full description and prices.

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**Rustless NAILS**

A Chain is no Stronger Than It's Weakest Link

**Insure Your Roof**  
 A Good Roof is Often Ruined by a Poor Shingle Nail.

**Solid Zinc Nails are Rust-Proof**  
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**W. H. MAZE & CO.,**

**TRADE MARK ON EVERY HEAD**

**PERU, ILL.**

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CHICAGO  
MARK**

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Do you specify a spring hinge with distinctive features which will appeal to your client and assure satisfaction to all concerned?



**Chicago "Relax" Spring Hinges**

are in great demand. They are substantial in construction and readily applied. The EXCLUSIVE FEATURE of spring action release, allowing the door to be placed at any desired position and automatically re-engaging when the door is closed, is of recognized merit and utility.

Send for Catalogue C 26. It fully illustrates and describes the most complete line of Spring Hinges manufactured.

**Chicago Spring Butt Company**

CHICAGO  NEW YORK

# BOMMER

## SPRING HINGES

ARE

# Quality Goods

BUT COST NO MORE THAN THE  
SUBSTITUTES



*This trade mark*



Reg. U. S. Pat. Office

*on every genuine  
Bommer Hinge*

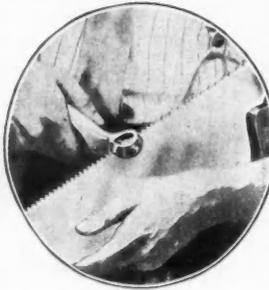


**Durable—Neat—Reliable**

# BOMMER SPRING HINGES

ARE THE BEST

Bommer Bros., Mfrs., Brooklyn, N. Y.



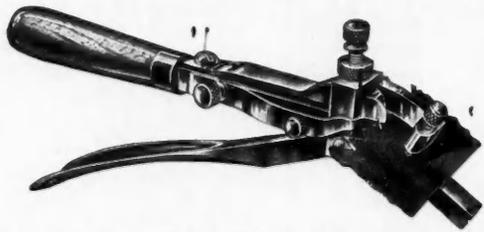
**The Morrill Saw Set—**

A mechanically perfect Saw-Set made with a rotating anvil that is gauged so as to set any saw not over 16 gauge. The gauge screw and check nut insure the right angle and uniformity of set. It will take the wrong set out of a saw and put in the right set at one operation.

Our book No. 9 "Saw Points" tells all about saws—How to set them, etc. It's FREE if you'll write for it.

**CHAS. MORRILL, 275 BROADWAY  
NEW YORK**

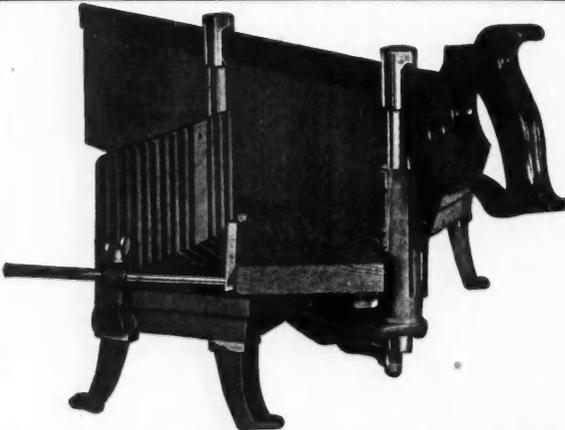
WE ARE SURE THAT ONE TRIAL OF OUR



**NEW "COMPLETE" SAW SET**

will convince you of its extreme merit. Order of your dealer or we will send sample by mail.  
Black.....75c. Nickel.....\$1.00.

**OTIS A. SMITH Box 95 Rockfall, Conn.**



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## Marsh Ayer Miter Box

**Because:**

- It is absolutely accurate.
- It is so convenient to use.
- It is built to last.
- It has an unusually large capacity.
- The price is right.

*Let us send you our illustrated circular.*

**H. C. Marsh Company**

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**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 on the first day of each month by  
**AMERICAN CARPENTER AND BUILDER COMPANY**  
178 W. JACKSON BOULEVARD, CHICAGO

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E. B. WOLFROM, EASTERN REPRESENTATIVE

VOL. XIII.                      APRIL, 1912.                      No. 1.

**SUBSCRIPTION RATES**

One Year, \$2.00; six months, \$1.00; payable always in advance. Single Copies, 20 cents. Canadian Subscriptions, \$2.50. Foreign Subscriptions, \$3.00.

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Furnished on application. Advertisements, to insure insertion should reach our Chicago office not later than the 20th of the month preceding date of publication.

**Our Seventh Anniversary Number**

*Dedicated to the Goodwill and Support of our Subscribers*

**I**T is not *how long* one has lived—but *how much*. We have worked much and have lived much, have studied, worried, sweat blood, and spent much, in our brief seven years of life to produce an interesting, instructive, helpful journal for progressive "carpenters and builders" which could, in all truth, be called "The World's Greatest Building Paper."

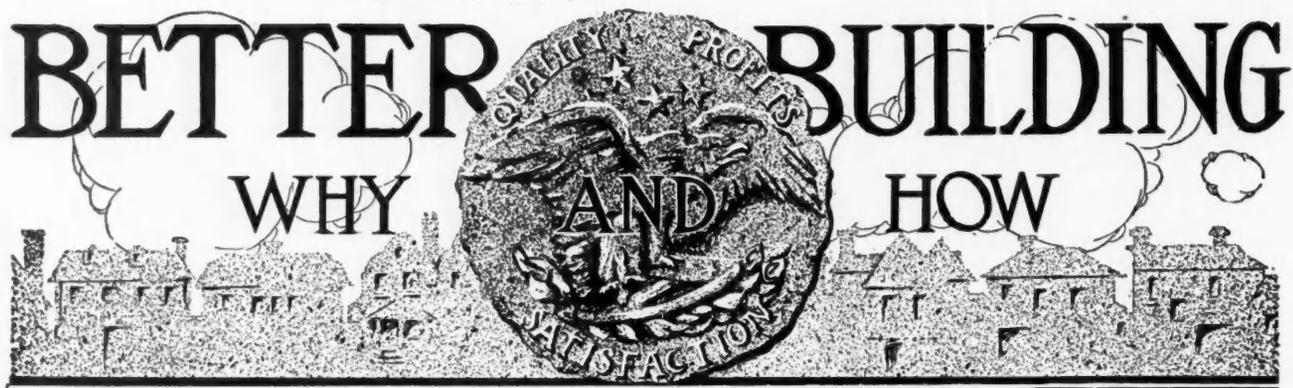
Nearly Fourty Thousand satisfied subscribers tell us we have succeeded. We thank you. It is only through your loyalty and help this has been done. And by your further leave our work is only just begun. May seven times seven see us all still wide awake, aggressive and open minded.

**Creosoted Timber**

**T**HE results of careful tests have proved that the soft and inferior pine, shown to the trade as "bull" or "lobolly" pine, under the proper sort of creosote treatment becomes hard to a degree that it can hardly be cut with a knife.

There is a world of building and construction lore in regard to the proper treatment of creosoted lumber, in many forms. If creosoted ties are placed in dry ground immediately after treatment the oil will be drawn through the ties into the soil, and then washed away by the first rain; whereas if the ties are carefully stacked for sixty to ninety days after treatment the creosote will remain in the timber. The same condition will apply to creosoted poles and piling. If at once placed in a vertical position the liquid oil will immediately gravitate to the bottom of the stick. If these timbers are placed on skids, horizontally, and the solidification of the creosote constituents allowed to take place (while the creosote will in any case eventually gravitate to the base of the poles when placed perpendicularly in the ground) the process will be much slower and enough of the oil will remain in the body of the poles to preserve them from rot. When high voltage is to be carried on creosoted poles it is best to place the poles in position for use immediately after treatment, allowing the creosote to accumulate at the base, thereby overcoming the objection advanced by many that a creosoted pole will conduct the current to the discomfiture of the linemen who have to climb them.

There is one experiment that has been tried and that has upset one theory set forth by the trade. It has long been contended that paint will not adhere to creosoted wood. However, the superintendent of a western plant three years ago creosoted all of the material for a fence around his home in Galveston. The wood, after creosoting, was given in some cases one and in other cases two coats of white paint. The final result was a shade of beautiful cherry red, deeper than the usual red shade. This has lasted for three years, and demonstrates that the uses of creosoted timber are not confined alone to rough marine and railroad construction.



## Consider the Question of Nails

THE NAIL. IT IS A LITTLE THING; BUT THE LIFE AND STRENGTH OF EVERY BUILDING DEPEND ON THE NAILS WITH WHICH IT IS PUT TOGETHER.

*The Satisfaction and Security Which Come from "Better Nails" Remain Long After Their Slight Extra Cost is Forgotten*

**A**LREADY in this campaign for Better Building, which has been carried on through these columns during the past six months, several of our readers have commented on the nail question. Practical carpenters and builders, especially the older men who like to remember back to the "good old days" when the hand wrought iron nails were the only kind there was, seem to feel that the common ordinary wire nail of to-day is about the weakest part of the building.

They feel very strongly on the subject. All they want is the moral support of their brothers, the carpenters and builders generally (including even the younger men who know not the good old days) to return again to the good old durable, non-rusting nails.

Whether this will ever come about or not, or if so, whether it would be the wholly desirable thing expected, the Observer is not prepared to say. Possibly the road to long-lasting quality in nails leads not backward to the old style, but rather forward to the new, to the newer improvements in nail production. But be that as it may, the subject is worth the thought and investigation of every conscientious builder, to find out what the "Better Nails" are and why, and how much they cost.

For instance, the Observer notes there has been a decided turning against wood shingles for roofs; yet shingle roofs fail not because the wood shingles decay, but because the wire shingle nails rust out. The life of a good red cedar shingle may be 25 or 30 years. How foolish then it seems to nail them on with nails which will rust entirely away in one-third of that time! What if roofing nails of non-rusting metal, or nails so protected that they will not rust, do cost 30 per cent more? Are they not worth it many times over if they hold the shingles to their work for the full period of years, extending the life of the roof to perhaps thirty years, as against the now customary ten?

The Observer recalls the yarn of "The Deacon's Masterpiece," the wonderful one hoss shay. A wonderful story that, containing a first class moral for carpenters and builders, viz., every part of the old buggy was made as strong as every other part. If it had had a shingle roof (which it did not) you'd better believe the shingles would not have blown off while still sound and good, through the fault of short-life nails rusting out. Carpenters and builders who are enlisted in the Better Building campaign, should pattern after Dr. Holmes "Deacon," and make every part just as strong and good as every other part.

As with shingle nails, the same with all other nails used in building. A prominent producer of zinc coated nails has expressed the situation tersely. "Frame buildings are being erected every day and millions of pounds of nails are consumed, but beyond the fact that nails are necessary, few realize the highly important functions they perform.

"A man decides to put up a frame building, residence, shop, barn, etc., etc. He will be particular about the lumber. If a residence he will be exacting about the hardware, the plumbing, the heating apparatus, the paint; but nine times out of ten he will trust the selection of the nails to the contractor, who is usually only interested in buying the cheapest material that his contract will permit.

"This man then will not understand why the shingles on his roof had to be replaced in so short a time, or why the paint on his clapboards showed stains of rust, or why his veranda floors had to be renewed owing to the rusting of the nails, and the consequent enlargement of the holes made by driving them. It is not too much to say that the permanence of frame buildings depends absolutely on the nails."

In view of these facts, and they are undisputed, it is certain that the progressive readers of the AMERICAN CARPENTER AND BUILDER should study up on the question of nails, to see just what they can best afford to use to meet the various requirements

and provide for the lasting satisfaction of their work. The old-fashioned cut iron nails are still obtainable on the market and many prefer them. There are also cut steel nails, hardened and polished. A nail of Swedish charcoal iron is offered, said to be absolutely rust proof. Then coming to the protected nails we have the zinc coated or galvanized. The best of these are completely covered with zinc which is non-rusting, galvanizing being done by the old-fashioned hot dip process. Then there are the nails, especially shingle nails, of solid zinc, solid copper, and steel center with copper covering. These are much in demand for slate, tile, and asbestos shingle roofs, because of their extreme durability.

The cost of these "Better Nails" will be found to be not very much more than for the ordinary kind. You will find nails pretty interesting little things, if you will only inquire into them.

In addition to these, already mentioned, there are

also a number of special nails on the market which deserve attention; for instance, the roofing nails with extra large heads, especially designed for nailing on ready roofing and sheathing paper. Another special nail is self-clinching. It is used for attaching grounds, etc., to hollow tile walls. It is so made that the process of driving clinches the nail securely from the back side of the wall. Carpenters who have used this nail are enthusiastic for it; great time and money saver. Another nail is especially intended for form work. It has a double head so that it can easily be drawn and both lumber and nail used over again.

These are a few of the thoughts on "Better Nails" and better nailing. There should be thought and investigation along these lines.

We will be very glad to have letters from our readers giving their experiences and feelings on the nail question. Write now.

## Who Shall Handle the Silo Business? —THE LOCAL CARPENTER AND BUILDER—

**T**HOUSANDS of silos are going to be built this season.

The farmers have all become silo converts. They know that the silo is a money-maker for them. It makes the crop from their corn lot go three times as far as it used to.

Yes, the farmer to-day must and will have a silo. With the prospects of a bumper crop this season, Mr. Farmer will build more silos than ever before in the history of this country.

What kind of a silo will he have? Where will he buy it? Who will put it up for him?

These are the three great questions which concern the silo manufacturers, the local retail lumber dealers, and the carpenters and builders.

The wooden or stave silo has in the past been most popular with the farmers. Without doubt it will continue to be so. Certain it is that the wooden or stave silo has much to recommend it. It is the cheapest silo to buy, keeps the ensilage in first rate condition, and, *when properly constructed*, is probably as durable as any other form of silo.

Note what we say "*when properly constructed*."

So ultimately the final success of the wooden or stave silo depends on the local carpenter and builder. If he is allowed to do this work (and he will do it well), a workman-like, durable, satisfactory job will result—a piece of work which will breed many more like it in the same neighborhood.

Otherwise who can guarantee the permanency of the stave silo business?

### The Carpenter's Share in the Silo Business

We take the stand squarely on the position that the

**It makes no difference whether the silo is ordered direct from the silo manufacturer or through the local retail lumber yard, the condition is the same—the services of the local carpenter and builder are required to erect the silo if a permanently satisfactory, workman like job is to be had.**

local carpenter and builder should handle the stave silo business.

It makes no difference whether he is able to deal directly with the silo manufacturer, acting as his local agent, or whether he has to get his silo through the local retail lumber dealer. The nub of the situation is the same in either case. The local carpenter and builder stands closest to the farmers, knows when new silos are needed,

gets around and lands the business, and then is *personally responsible* for the erection of the silo.

The average farmer and his hired man are not qualified to put up a silo. The retail lumberman in the adjoining town can not do it. The local carpenter and builder has to be called on to do this work and he soon becomes an expert in silo construction—a silo specialist who is called on as a matter of course when any silo building is to be done anywhere in the locality.

Here is a big field for development. Thousands of silos are going to be built. The readers of the AMERICAN CARPENTER AND BUILDER, especially those living in the smaller towns and country districts, are going to have a chance at this work, and from their qualifications and position they can do more of this work and do it better than anyone else.

If you are not posted on this silo building business already, now is the time to look into it and study it up. For skilled carpenters the work will be found very simple. But do the work well; then the "next farmer down the road" will want you to build him a silo, too.

The feeling of many of the (Continued to page 49)

# IDEAS FOR HOME BUILDERS

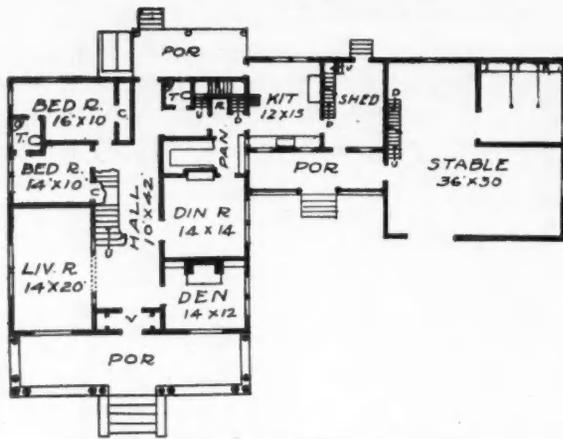
## Eight New Houses and How They Were Built

FACTS AND DETAILS WHICH WILL APPEAL TO ALL—WHAT OTHERS HAVE FOUND PRACTICAL AND SATISFACTORY OFFERED AS SUGGESTIVE MATERIAL FOR PROSPECTIVE BUILDER

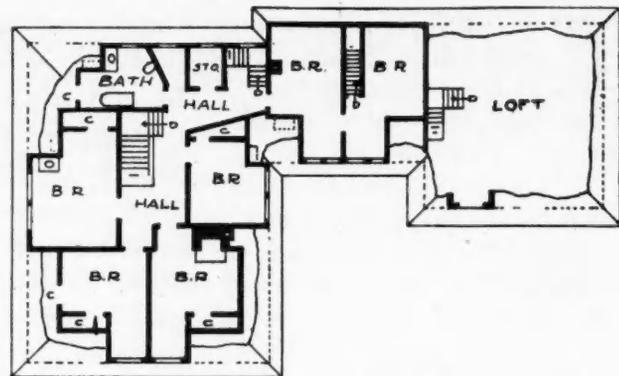
**E**ARLY spring finds house planning the all absorbing feature in the daily life of thousands of families. A goodly portion of the long winter evenings have been consumed in discussing and re-discussing the home—the building of which is now soon to be commenced.

est expectations are to be realized—we are presenting the photographs and black and white floor plans of several modern attractive, practical homes with which this article deals, offering them as tangible material which is worthy of serious consideration by all.

The planning and designing of our typical Amer-



First Floor Plan of Hersey House



Second Floor Plan of Hersey House

With the knowledge that spring acts as a certain stimulus to the many about to reach a definite decision—and yet who are not positively certain their full-

ican homes has, within the last few years, experienced a decided trend toward a permanent basis of construction, embodying attractiveness of exterior as well as



Built at Phillips, Me., for Mr. O. H. Hersey, by Mr. W. J. White of Rumford Falls, Me.

attractiveness and practicality of interior, in which substantialness of construction is a positive not an incidental element.

Architects, contractors and builders, everywhere, are united in the one idea of continuing this development. Consulted by the prospective home builder as final

will show that ample space has been allotted each room. While the court and pool arrangement within the center of the house has long been used in "the South," especially in the extreme southwest, the idea is both new and distinctive for a moderate size Illinois bungalow. It will be noted that every room save



Practical Bungalow Built Around Central Court and Pool—Residence of Dr. J. H. Ray, Kankakee, Ill.

authority they are, and should be, eager to work into suitability for practical adoption the ideas and suggestions of the man whose money is to pay for the home.

With all this in mind—with the certain knowledge of what is being accomplished in the matter of home building throughout the country—we devote the following pages in showing through illustration and descriptive matter the varying style of houses which have proven in every way a true delight to their owners, designers and builders.

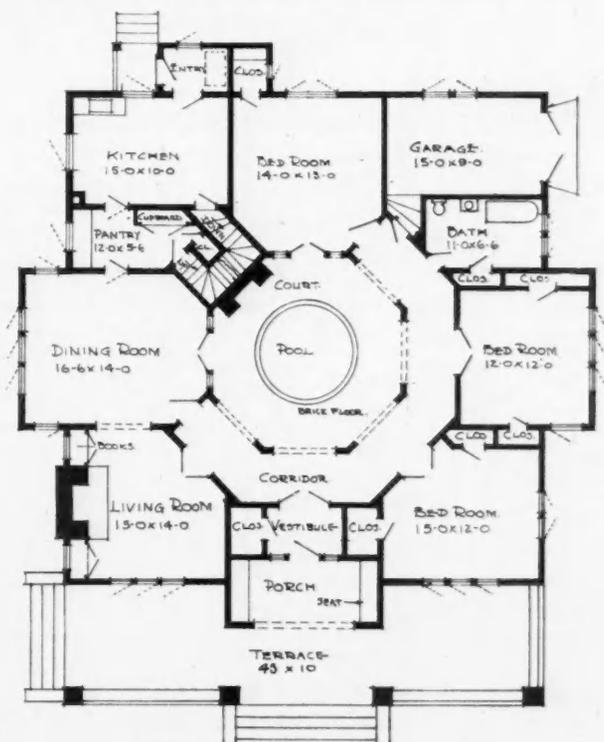
#### A Maine Home

The first dwelling shown was planned and built by Mr. W. I. White of Rumford Falls, Maine, for Mr. O. H. Hersey at Phillips, Me. It is a "Bungalow Style," two story dwelling with L and connecting stable. As the floor plans indicate, the rooms are all of good size and light. Every convenience is provided for.

Interior finish of first floor is in oak and birch. The second in basswood. Floors throughout are of birch. Foundation is solid concrete block construction. Steam system heating plant. There is no opening whatever between the L and stable except by way of the porch. Porches are ample.

#### New Idea—Bungalow with Patio

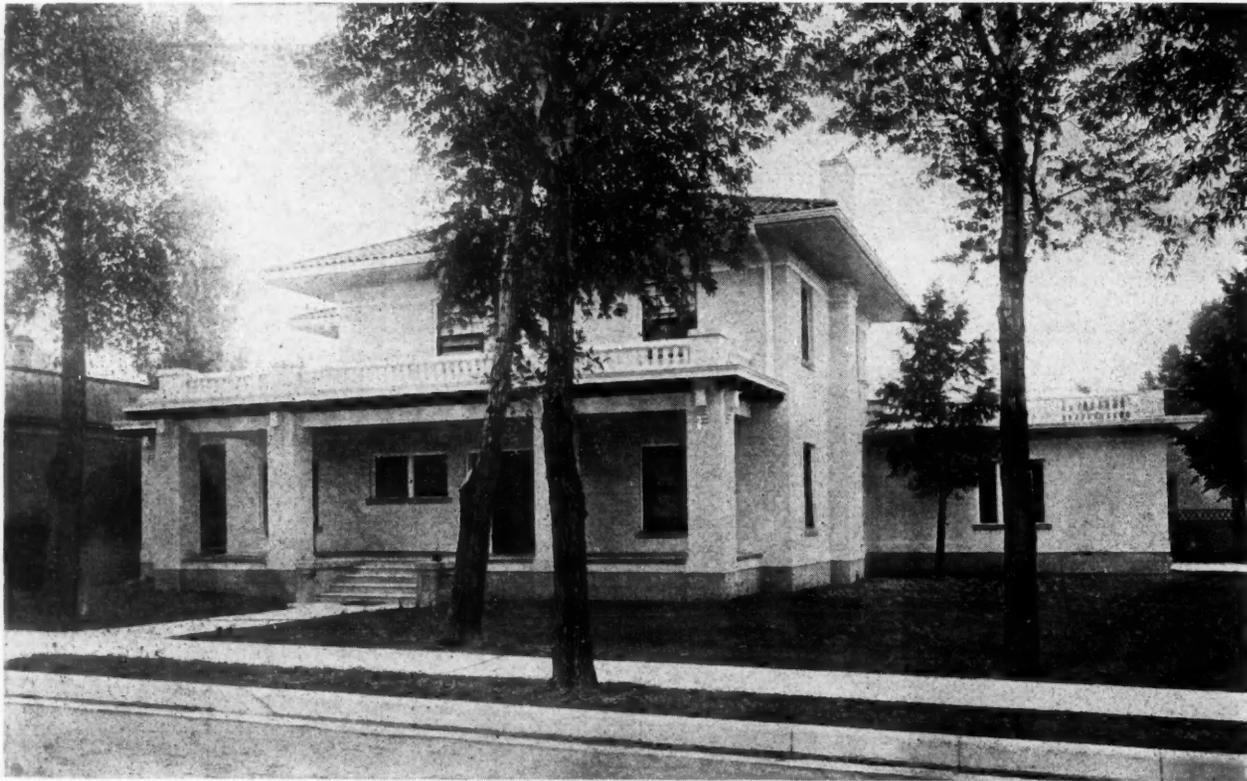
The distinctive arrangement as provided in the bungalow built for Dr. J. H. Ray of Kankakee, Ill., affords opportunity for study of a unique, yet entirely pleasing and homey type. Reference to the floor plan



Floor Plan of Dr. J. H. Ray's Bungalow

the kitchen is directly accessible from the corridor leading around the court and pool.

A portion of the porch—that directly before the front door—has been covered and this conveys an impression that a part of the vestibule, rather than the



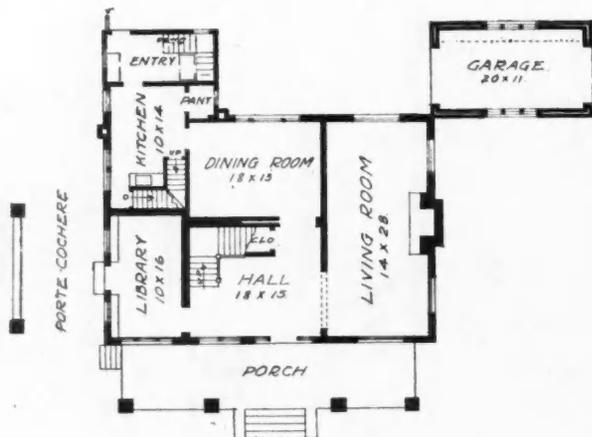
Substantial Nine-Room House Built by John A. Heckert and Son, of Salida, Colorado.

porch, was appropriated for covered use. Casement windows have been used very generally. Exterior finish is of cement stucco; the roof is stained shingles. Stone capped porch walls and posts carry out in full the desired effect.

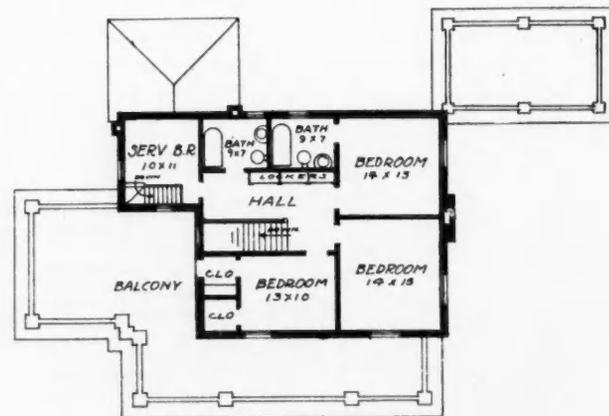
Excellent closet and pantry provision has been made.

the plans and built the residence illustrated on this page. We are informed by them that a good many of the ideas incorporated in it were gained from the pages of the AMERICAN CARPENTER AND BUILDER containing advice and suggestions upon home building.

As can be seen from the floor plans, the interior



First Floor Plan of House Constructed by John A. Heckert and Son



Second Floor Plan of House Constructed by John A. Heckert and Son

Laundry, heating equipment, etc., are placed in basement. The right hand rear corner of this house includes garage space, to which direct connection to corridor is made. Of course, this space could be utilized for other purposes, to do which only minor changes in plans would be needed.

**Many "A. C. & B." Ideas in this House**

John A. Heckert and Son, of Salida, Colorado, drew

arrangement of both first and second stories is thoroughly convenient. Two baths are provided. The one story part to the right is a garage. No direct connection to the house has been made. This home is furnished in birch and oak, with oak floors throughout. The large, long living room and spacious hall are well liked. Hot water heating plant, laundry, etc., are located in basement. Roofing is tile.

### Pleasing Story-and-Half Cottage

From Mr. Charles J. Goodpasture of Anita, Iowa, we learn that the house illustrated here is the fourth he has built for himself within the past three years—the three preceding this being sold, even before entirely completed. Mr. Goodpasture is his own architect, contractor, carpenter, brick mason, plasterer and painter. He does all of the work—from the excavating for the foundation to putting on of finishing coat himself.

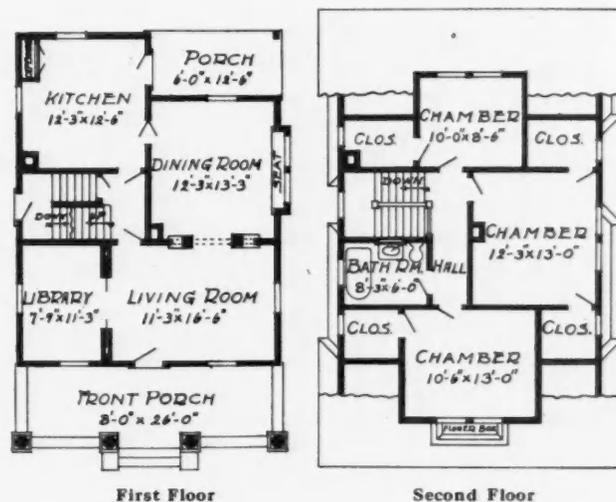
The accompanying floor plans show both a convenient and pleasing interior arrangement. Particular attention is directed to the closet space provided.

Foundation is of concrete and face brick construction—basement has a cement floor and is partitioned off the same as first floor plan. Floors and trim of up-stairs and kitchen are yellow pine. Through the balance of the house plain red oak has been used. All plastered walls are tinted with cold water paint.

The exterior of the house is painted white, with siding on gables in chocolate brown. Stained shingle roof. Heating system is to be installed in basement, every provision being made for same in construction. A medicine chest with mirror door was built in wall in bath. The dining-room has built-in seat in bay window. An entrance to the basement from without is provided through grade door, upon left side of building. The cost of this house ranged about \$2,500.

### The English Gambrel Type

Many novel features of design and construction have been adopted by Mr. O. S. Lang, 699 Seventh Street, Buffalo, New York, in his planning and building of an English gambrel roof, cottage type bungal-



Floor Plans of Mr. Goodpasture's House

low, in Syracuse, N. Y., for Mrs. Henry O. Schwarz, at a cost of approximately \$3,590.

From the photos and floor plans shown on page 42 the general comfort of this house is readily seen. All



House Designed and Built by Mr. Charles J. Goodpasture of Anita, Iowa—Cost \$2,500



Seven-Room House Built for Mrs. Henry O. Schwarz,  
Syracuse, N. Y.; Cost \$3,570

rooms are comparatively large and light. The second floor projecting out over the veranda, with the gambrel in the roof, makes an especially roomy upstairs.

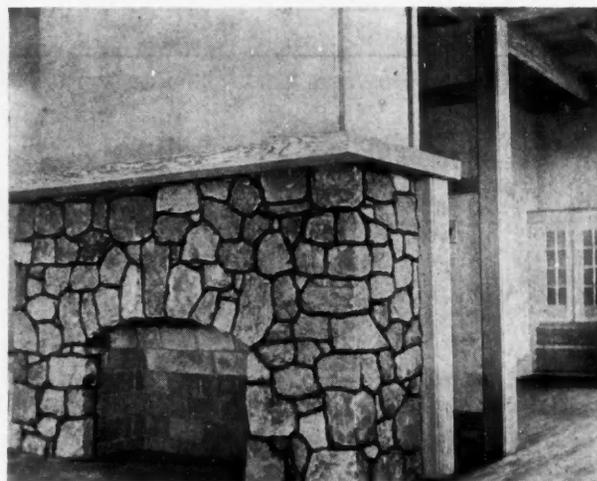
Both the living and dining-rooms have beamed ceilings. Living room has built-in bookcase and seat. Dining-room contains built-in buffet. English casement windows, with a wide sill inside, are used throughout.

The arrangement of this bungalow is entirely convenient in every respect. A spacious pantry leads from the kitchen, and upon the second floor five commodious closets are provided for.

The exterior is covered with shingles stained a dark moss green. A lighter shade of stain is used upon the roof. Bands, cornices, etc., are painted a light

The trim and floors of first floor are of oak; the second floor of yellow pine. All floors are double. Woodwork is finished in mission shades. Plastering is rough cast and tinted. All hardware is of the dull brass type, using old-fashioned thumb latches upon all doors, with casement adjusters and fasts upon the windows.

The illustration featuring the fire-place shows a

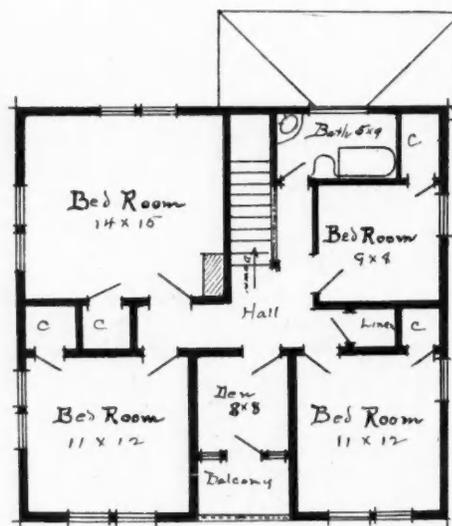
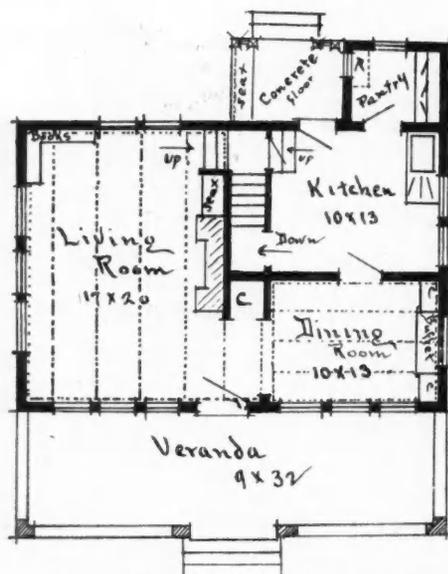


Fireplace in Mrs. Schwarz's Home

portion of the dining-room as seen from the living room. This fire-place is built of cracked cobbles, with tuck painted black. It is lined with fire brick and expressly intended for log burning.

#### Bungalow Built for \$3,000

On page 43 is the home which was built by Mr.



Floor Plans of the Bungalow Built by O. S. Lang for Mrs. H. O. Schwarz

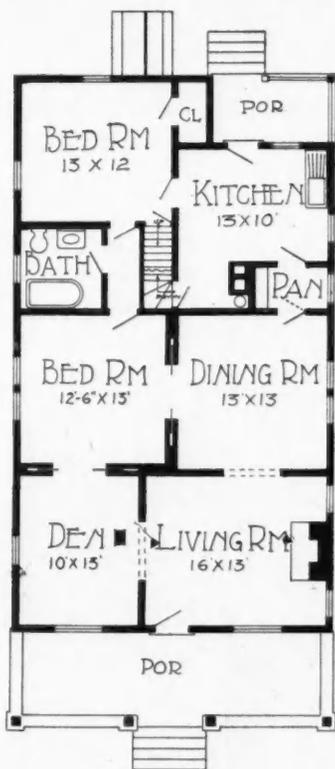
buff. The basement extends under the entire house, including the porch. There are ten cellar windows, all in the woodwork, as the concrete foundation wall comes only to the grade line. A concrete floor rear porch has a lattice screen, and seat is provided.

A. J. Hoffman, an Edwardsville, Ill., contractor, for Mr. Herbert C. Crocker of that city. Mr. Crocker informs us that the house was designed by his wife.

This seven-room bungalow is 28 feet in width and 54 feet long. The entire general arrangement pro-



Six-Room Bungalow, Built by A. J. Hoffmann for Herbert C. Crocker, at Edwardsville, Ill.; Cost \$3000



Main Floor Plan

vides spacious rooms with excellent light. It must be noted, however, that the provision made for closet space appears very limited, in fact, the front bedroom is not equipped in this particular at all.

The interior of this home is in oak of dark finish; the exterior a dark brown. Porch extending across front of house has 6-inch concrete floor and concrete

rail. Fire-place in living room is of Roman brick and is built to ceiling.

Casement windows in living room and den. Sliding doors between den and bedroom; five foot arches between den, living room and dining-room.

Foundation is built with paving brick using a face brick in exposed portions. Basement is seven feet deep and provided with hot air heating system; coal and kindling bins which are constructed of ship-lap and dust-proof; laundry, etc. A signal feature is the fruit and vegetable cellar, which is under front porch from basement.

The cost of this home was \$3,000, which, according to Mr. Crocker, can be brought to between \$2,500 and \$2,700, if desired to hold down the expense

#### Four-Room Cottage for \$1200

Mr. L. J. Eklund, of Spartanburg, South Carolina,

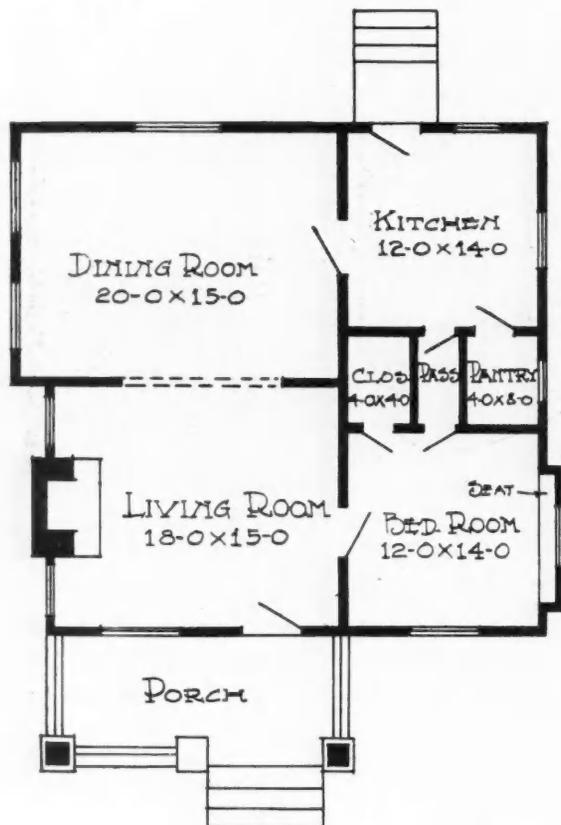


Rear View of Mr. Crocker's House

writes that he built the four-room bungalow, the floor plan and exterior perspective of which is reproduced on this page, for \$1,200. As will be seen by reference to the floor plan, the rooms of this little home are exceptionally large. The house is not equipped with a bathroom or a heating system, either of which could,

however, be installed without a great deal of change in the working plans.

This bungalow style will doubtless appeal to a great number who have been interested in the thought of a four or five-room house, which could be erected for a moderate sum. As practical evidence of what can be accomplished in a four-room structure of modest cost, this little bungalow is offered for inspection.



Floor Plan of Mr. P. J. Eklund's Bungalow

#### Model Bungalow

Reproduced on page 45 are the perspective view and floor plan of a five-room bungalow which is offered as a suggestive and practical type to follow, in both design and construction. The entire arrangement of this home provides for every convenience.

Rooms are large with ample closet and pantry space. The porch has concrete floor, is entirely covered and exceptionally spacious. Both living and dining-rooms have beamed ceilings. Heating system and laundry in basement are provided.

Prospective builders—upon contract or for themselves—will find in this design and type of construction many pleasing features. It is entirely practical for any locality.

The foregoing pages have been prepared solely to afford the many AMERICAN CARPENTER AND BUILDER readers an opportunity to see through illustration and type what is actually being done by those numbered among themselves—co-readers and co-workers.

They should prove to be a valuable guide in the planning, designing and construction of practical, comfortable homes.

The AMERICAN CARPENTER AND BUILDER is indebted to and takes this opportunity of thanking, all those who have, in responding to our requests to let



Four-Room Bungalow Built by Mr. P. J. Eklund, Spartanburg, S. C. Cost \$1200



Architect's Perspective View of Model Five-Room Bungalow

us know their ideas and suggestions concerning home building, furnished us the material upon which these few pages are based.



### The Cost of Solomon's Temple

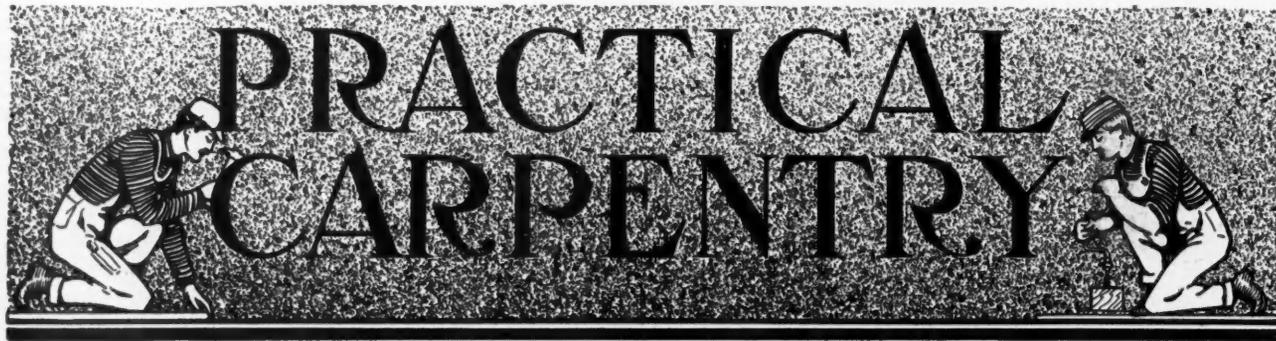
Few people, even in these days of palmy extravagance and millionaire displays, have any adequate impression of the cost of the great temple of Solomon. According to Villapandus, the "talents" of gold, silver and brass were equal to the enormous sum of \$34,399,111,000. The worth of the jewels is generally placed at a figure equally as high. The vessels of gold, according to Josephus, were valued at 140,000 talents, or \$2,876,481,015.

The vessels of silver, according to the same authorities, were still more valuable, being set down as worth \$3,231,720,000. Priests' vestments and robes of singers, \$10,050,000; trumpets, \$1,000,000. To this add the expense of building materials, labor, etc., and we get some wonderful figures. Ten thousand men hewing cedars, 60,000 bearers of burdens, 80,000 hewers of stone, 3,300 overseers, all of whom were employed for seven years, and upon whom, besides their wages, Solomon bestowed \$73,669,850. If their daily food was worth fifty cents each, the sum total for all was

\$319,385,440 during the time of building. The materials in the rough are estimated at \$12,726,685,000.—*Brush and Pail.*



Floor Plan of Model Bungalow



## Raising the Roof

A DIFFICULT PROPOSITION IN CARPENTRY WORK AND HOW IT WAS HANDLED

By Owen B. Maginnis

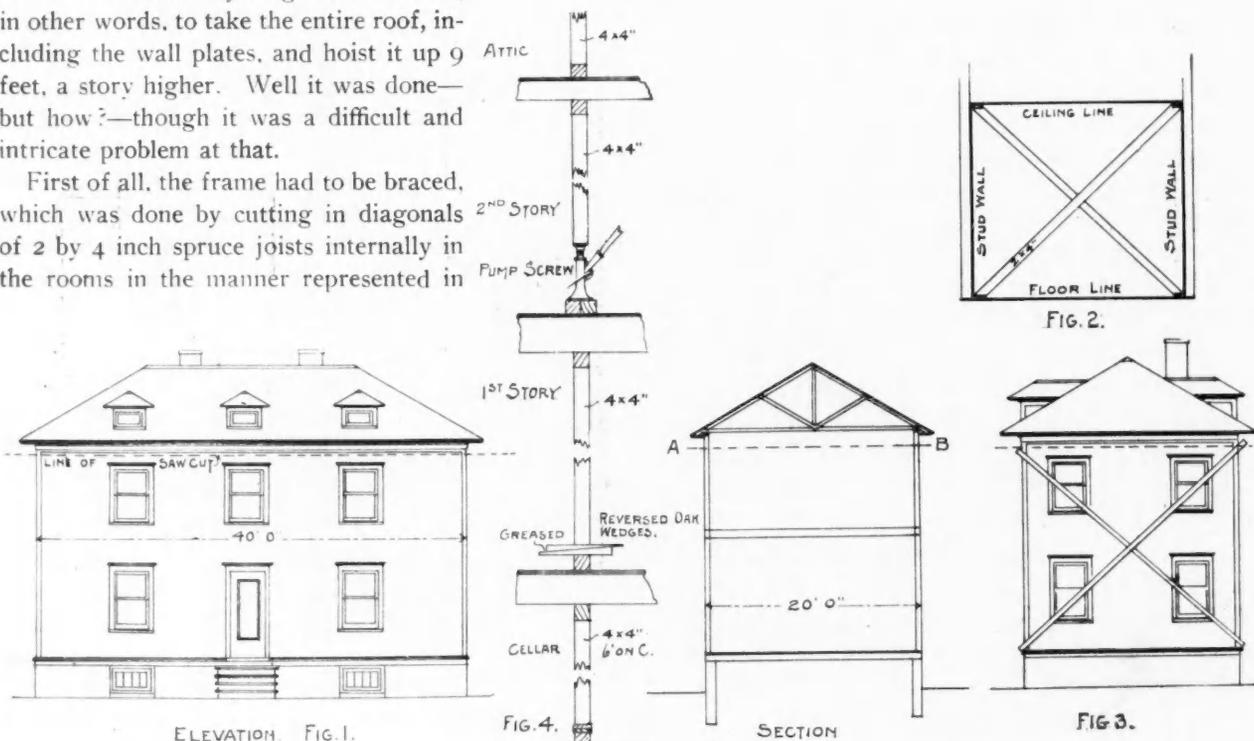
If the practice of mechanical exercise were easy; if the trade of a carpenter, forsooth, were like a machine, simply a continuous similar repetition, it would cease to be an art or trade and be then a mechanism. But this may never be, because every job differs more or less. In fact, it may be said no two jobs are ever alike; which leads us to the matter of difficult propositions and what they are in carpentry.

Apart from straight work here is an example, where the carpenter had to raise the roof, not metaphorically, but really, like in Fig. 1. Here is shown the elevation and section of an old frame building, with a good, sound shingle roof, boards, rafters and frame, but out of date. The owner wanted to improve it; and so came to his builder, who was presumably a carpenter, and asked him if it would be possible to put another story to it, using the same roof and without injuring the structure; in other words, to take the entire roof, including the wall plates, and hoist it up 9 feet, a story higher. Well it was done—but how?—though it was a difficult and intricate problem at that.

First of all, the frame had to be braced, which was done by cutting in diagonals of 2 by 4 inch spruce joists internally in the rooms in the manner represented in

Fig. 2; they extended from floor to ceiling and from corner to corner, diagonally, and the work was done gently and without cracking the plastering, also without nailing exteriorly. The brace was as in Fig. 3, consisting of 2 by 4 inch long joists spiked outside to the corner boards, the 6-inch spikes penetrating into the solid wood of the corner posts. Wire spikes were used as they were easiest drawn after the job was completed.

In raising the roof two courses of the siding below the wall plates were taken off and all the outside wall studs sawed level through the whole way around, the weight of the roof being meanwhile lifted on uprights and pump screws, as shown in Fig. 4; similar lines of shoring and screws being placed and operated 12 inches from the inside surfaces of the front and rear walls.



Illustrating an Unusual Roof Raising Job

At the shrill blast of a whistle all the bar levers were slowly turned until the saw cuts showed quarter of an inch openings, when another whistle stopped the raising.

To prevent lateral overturning, wire cables with triple blocks and falls were then attached to the wall plates at each of the four corners, the ground ends being secured to 2-inch wrought iron stakes 3 feet long, driven on a slope into the ground. These cables were kept taut as the roof gradually rose. The raising was completed by introducing longer uprights and pumps every six inches, alternating with the previous lengths until the desired height was attained. The plates were then accurately and carefully leveled all around, and the new third story studding, with win-

dow and door openings, cut, braced and placed. Thus with the addition of the diagonal rough boarding and siding, a job was finished which might seem hazardous, but was, however, easily done by twenty carpenters and helpers without strain or accident and very little injury to the plastering.

As to the economy of the operation, opinions may differ, but it will be conceded that much money and time were saved, apart from the sentimental value of the property which the owner did not wish prejudiced, as his father and grandfather before him had lived and died in the house.

As an unusual proceeding in building operations, it is well worthy of record and deserves the study of those who may some day be called in a similar case.

## How To Do Work Fast

By I. P. Hicks

**I**F there is any one thing about carpenter work that is of great interest to the carpenter, it is the art of doing work fast. Doing work fast does not necessarily mean that it is poorly executed. Work that is done quickly is not always what may be called poor work. There are ways of doing work quickly and at the same time doing it well.

Some of the things I am about to tell at this time may not meet with universal favor because some of the things can only be done by thoroughly skilled mechanics. Some of them, however, ought to be done by any mechanic of ordinary ability.

### One Pencil Mark Is Enough

It is a very common thing to see workmen when working about a building, set up a timber or a board in some place and in marking it for a length, draw a pencil across it two to four times for a mark. Watch men at work and in five minutes you will see some of them do this trick. It takes twice as long to mark twice as once, three times as long as to mark three times and four times as long to mark four times. One mark is all that is required, all that can be of any use and the rest of the time spent in marking is just that much time wasted. Any pencil that is of any good at all will make a mark at the first stroke and it is the height of folly to try to cut off a stick of timber by sawing on it with a lead pencil. Get out of the habit of drawing your pencil two, three and four times in the same place for a mark, for all over once is a waste of time.

### Learn to Cut Square Without Squaring

Again some use a square to cut studding by, for every cut they make when they are trimming in around openings. Now this is not necessary with the skillful man with the saw. A real skillful man with the saw can cut a 2 by 4 or a 2 by 6 off near enough square for this kind of work, and look at the time saved; the man with the saw will have the stick half cut off by

the time the other fellow has picked up his square, made his marks, laid down the square again and picked up his saw; and all this time there has really been nothing done towards cutting off the stick. It certainly pays to exercise your skill on parts of the work like this. You will be surprised what a little practice in this line will do. A good mechanic will, on an average do better cutting this way than many do even when they use the square to mark every piece by. These are facts that I have seen tried out. I have seen men right along make better cuts without a square than others could with it. This is of course on account of their natural ability. Some have natural mechanical ability while others are very much lacking in it. I have seen 6 by 6's cut off, without the aid of a square so perfect that the ordinary apprentice would have to take a back seat with his square and saw.

I do not wish to be misunderstood in this matter; I do not recommend doing away with the square only in such places where the man of ordinary skill can get along just as well and faster without using it for every little thing where it is not necessary. And these places are quite a few, each consuming more or less unnecessary time.

### Sawing Sheathing Boards

Take the rough sheathing on a frame. Any man of ordinary ability ought to be able to cut boards 8, 10 or 12 inches wide near enough square to make a job without using a square; and see how much quicker it is, no square to pick up and lay down every board you cut, just pick up the saw and cut the board and save the time marking by the square. Some may say this is not mechanical, but to make good cuts without a square shows better mechanical ability than is often shown by the one who uses it to cut everything by. Then again it is worth something to be always in the lead while the other fellow is always behind, because of so much of his time being consumed in making his

marks. Use the square where it is necessary, but don't make a business of using it where it is not at all needed. Some places it will save time, other places it will lose time, and the machanic should be able to judge for himself where he can use it to advantage and where not.

#### Quick Floor Laying Without Using Try Square

I have seen mechanics lay  $3\frac{1}{4}$  inch face flooring without using a try-square and do a good job. Once in a while they would have to cut a board a second time to get a fit, but this would not happen any oftener than it would with many who used the try-square to mark every board by. Although some can cut flooring quite successfully without the try-square, I do not think it is a matter of policy to dispense with the square in laying floors. But it does pay the carpenter to make cuts often without using the square, because it trains him to greater accuracy and greater ability in many ways and in many cases it will enable him to do bigger days work and it is the big days work that swells the bank account most.

#### Quit the Old-Fogey Way of Siding

The fastest way to put siding on a house is with three or four men working as follows: First make spacing sticks from the bottom to top, one or more, as may be required, and let the men mark up the spaces all around on the corner boards and casings. Then put on as much of the building paper as is convenient. While this is being done let one man get the lengths required and begin cutting the boards by squaring the left hand end of the boards, leaving the board about two inches long so that the men putting the boards on will have only the right hand end to cut. The way of spacing as mentioned above is much faster than each man spacing for himself with dividers, and is much more accurate.

The old fogey way of putting on siding used to be to drive in a set nail at the end of each board to hold it while it was being marked. This is almost entirely unnecessary, as it is only necessary to do this under some peculiar circumstances that arise at times. Driving these two nails and pulling them out for each board consumes half the time and makes the progress twice as slow. It is seldom necessary to use a set nail if you are on to your job. With marks on the corner boards and casings that you can see, and the left hand end of the board already cut, you can put the board right to the marks, with your left hand hold your siding hook in place to mark the right hand end. Push against the board to the left sufficient to keep it in place while you mark the cut with the right hand. This plan will work fine on all lengths up to 12 ft. On longer spaces let two men work together, one at each end of the board. On short spaces let each man take a space. As before stated let one man get lengths and square the left hand ends. Working this way the man who squares the boards can square 20 to 30 at a time without laying down the square; the same when

he cuts them, he can cut the 20 or 30 without laying down his saw. This way of working is system, and its advantages as to speed are very great. As to the quality of work, that depends upon the men, for there is nothing about the system whatever to impair the quality of the work performed. One good cutter can square and cut boards for three men to nail up, and this system will be found just about twice as fast as where each man goes to the lumber pile, gets the boards and does all the cutting for himself.

#### Fast Cornice Work

It is the same in putting up cornice, let one man dress out the material and make every cut that he can on the bench or on the ground and pass it up to two men on the scaffold to put on, so that these men only have to cut to get a length; then when they get to returns or very short spaces, they should each take a short space. In this way there is no time lost by one waiting for the other, as is always the case more or less in putting on cornice. The idea is to do away with one waiting for the other except where it is actually necessary. There are many ways to push work along without slighting it in any way and it is up to the carpenter to get next to as many of them as he can. The more work he can do and the better he does it, the more and better jobs he will have and at better pay.



#### Stucco on Brick

In applying stucco over brick chimneys a  $\frac{1}{2}$ -inch painted or galvanized steel furring strip not lighter than 22 gauge, should be fastened to the brick at 12-inch centers with galvanized staples 2 inches by No. 9 gauge, driven into the mortar joints. The lath is fastened to the furring with No. 18 gauge galvanized wire, run through under the furring and the same material used for lacing the ends of the sheets together between furring strips.

The same mixture for plaster is recommended for this work as on the metal lath on studding, as specified last month. Before plastering, the brick should be well wetted to prevent its absorbing the moisture from the plaster, and the first coat should be forced through thoroughly so that the entire space back of the lath is filled with the Portland cement plaster, and the lath enveloped.

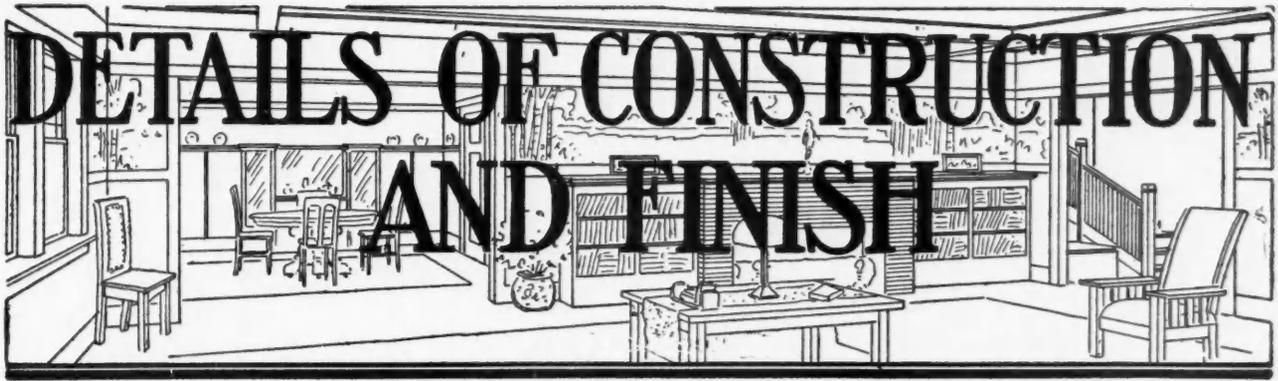


**A Flush Job of Lattice Work.** Here is a good little piece of forethought I saw done recently. A fellow was building some back yard lattice, three pieces 6 feet high and 8 feet long. The lattice material was  $\frac{1}{4}$  by  $1\frac{1}{8}$  inch, 2-inch mesh; the frame was  $1\frac{1}{8}$  by 4 inches. The frame was to be rabbeted to receive the lattice. Now, two sides of the lattice frame (top and bottom) were rabbeted  $\frac{1}{4}$  inch deep, and the two ends were rabbeted  $\frac{1}{2}$  inch. This was because the top and bottom received only one thickness of lattice, while the two ends received two thicknesses.



End Support for Lattice

WM. C. JASBURY.



## Living Room with Built-in Features

PRACTICAL SUGGESTIONS FOR PLANNING THAT MOST IMPORTANT ROOM IN PRESENT DAY DWELLINGS, THE LIVING ROOM

Detail Drawings By C. E. Schulze

**I**T has been only within the past few years, that any considerable amount of attention has been given to the details of finish and construction in the design of homes of moderate cost.

The home builder of moderate circumstances was expected to take, without a whimper, just what was prescribed for him in the way of a residence. His desires appeared to be of a minor consideration—with what result?

From the day the family moved into the new place they commenced discovering things which did not particularly appeal to them. This ought to be changed and that should have been different and so it goes, not a nook or corner of the place escaping. They would build the next time to suit themselves, not the architect and contractor!

You will not have to go back many years to reach the period in which such a state of affairs existed. Happily in this age such is not the case. Mr. House-builder, regardless of his means or what the cost of his home—palatial residence or modest bungalow—may be, receives every aid in the form of advice and suggestions, tending to improve the plans he has partially formulated in his own mind.

Now-a-days the big living room is the thing—and has been almost universally adopted in home building construction. It is in every sense the one room of the house and should be carefully and completely planned.

The living room is really a room about which the rest of the house is built. If it fails—the remainder of the home fails. To be a constant success it must be at once attractive; of practical, substantial design and with a cozy, homey atmosphere pervading it.

With this idea in mind and with a belief that carpenters and builders generally, want to receive practical suggestions which they can use in their plans, or refer to the prospective builder for his criticism; we are presenting on the following two pages complete working plans of a most practical and attractive living room, detailing all the features of interior trim.

Reference to the details on the following pages will

show their entire suitability and effectiveness. The first plate is of a living room with details of angle and stairway—drawn to the scale of one-quarter inch equals one foot.

From the plan of the room, which, by the way, is of ample size, it will be seen that everything essential to the make-up of a successful room of this type is provided for. There is the large log burning fireplace, with tiled floor; commodious, built-in, cozy seats at each side; and at end of room, between seat and stair approach to landing, is a built-in bookcase. This plate shows in detail the style of finish employed. Note the continuous head trim and shelf or plate rail running even with top of mantel and bookcase.

Particular stress is laid upon the built-in features of the room and what can be accomplished by their use. When these pieces are built-in the room is half furnished and it is unnecessary to purchase handsome and expensive pieces of furniture. More than that these pieces have an attractiveness all their own that is not to be duplicated in movable furniture.

The second plate is devoted to the various details of construction used in bookcase, seat and trim. The scale used here is 3 inches equal one foot.



### Who Shall Handle the Silo Business?

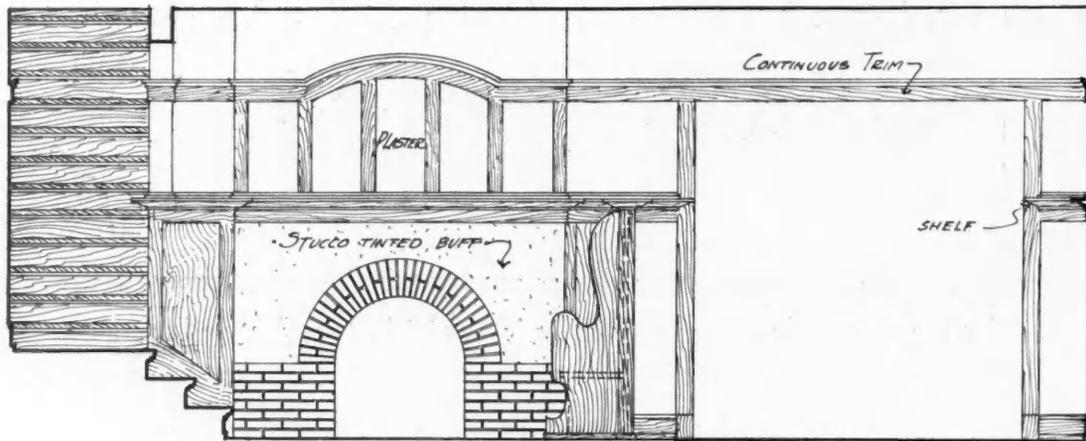
(Continued from page 37.)

carpenters and builders on this subject has been accurately shown us by many letters received from them already this year. One of them, from a progressive carpenter and builder living in a thriving Iowa town, serves as an example.

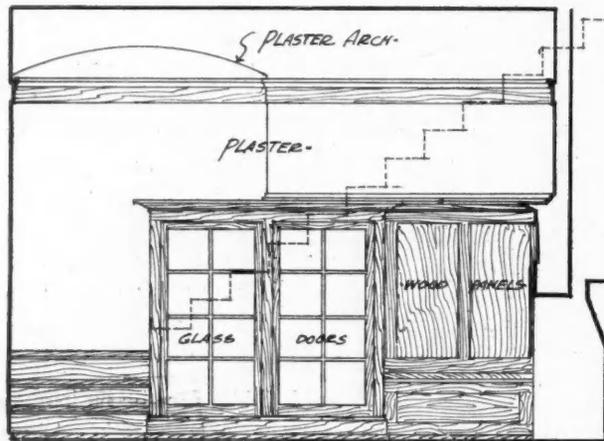
"I am a subscriber to your valuable paper and enjoy it very much. Will you kindly send me the address of one or more firms manufacturing good silos? I believe I can handle a few good silos the coming year, and would like to correspond with companies making them."

We feel sure that the wood silo manufacturers and distributors will be sufficiently wide awake to take advantage of the growing demand for silos among the farmers, that they will lend our readers, the carpenters and builders, their best assistance in working up this line of business.

FULL PAGE PLATES SHOWING COMPLETE DETAILS ARE PRESENTED ON THE TWO PAGES FOLLOWING

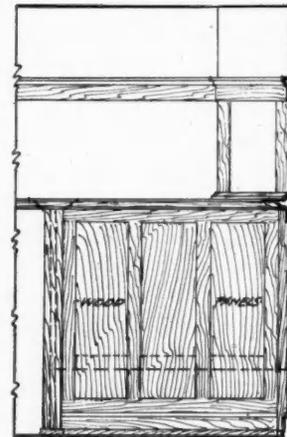


ELEVATION OF SIDE OF ROOM.

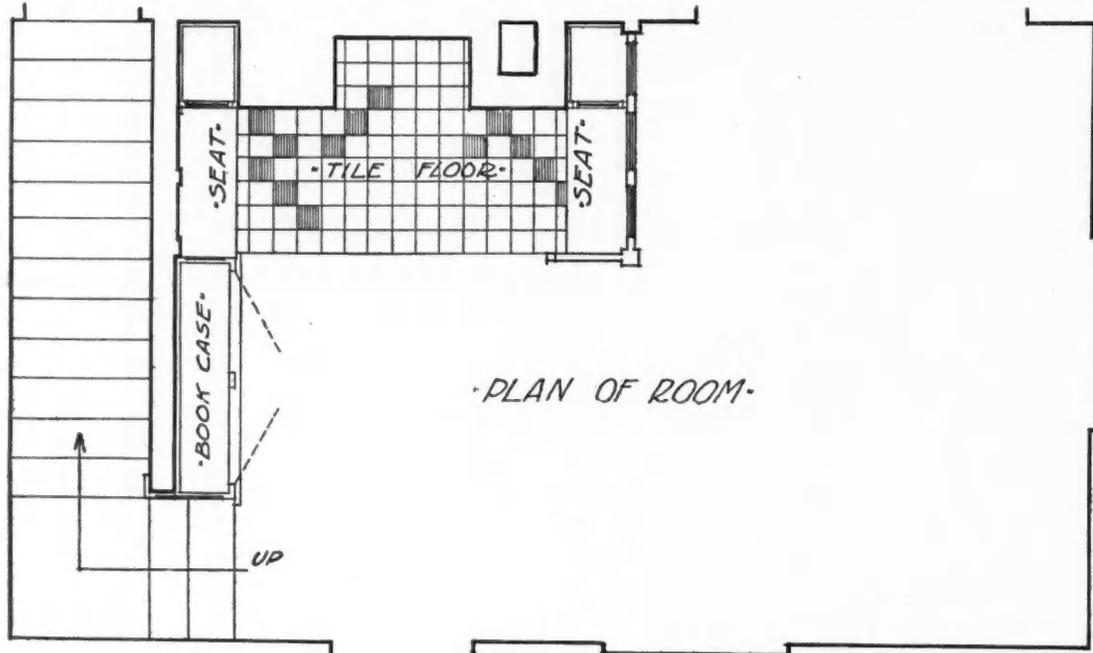


ELEVATION OF END OF ROOM.

A  
LIVING  
ROOM  
WITH  
DETAILS  
OF  
INGLE  
AND  
STAIRWAY  
SCALE  
1/4" = 1'0"

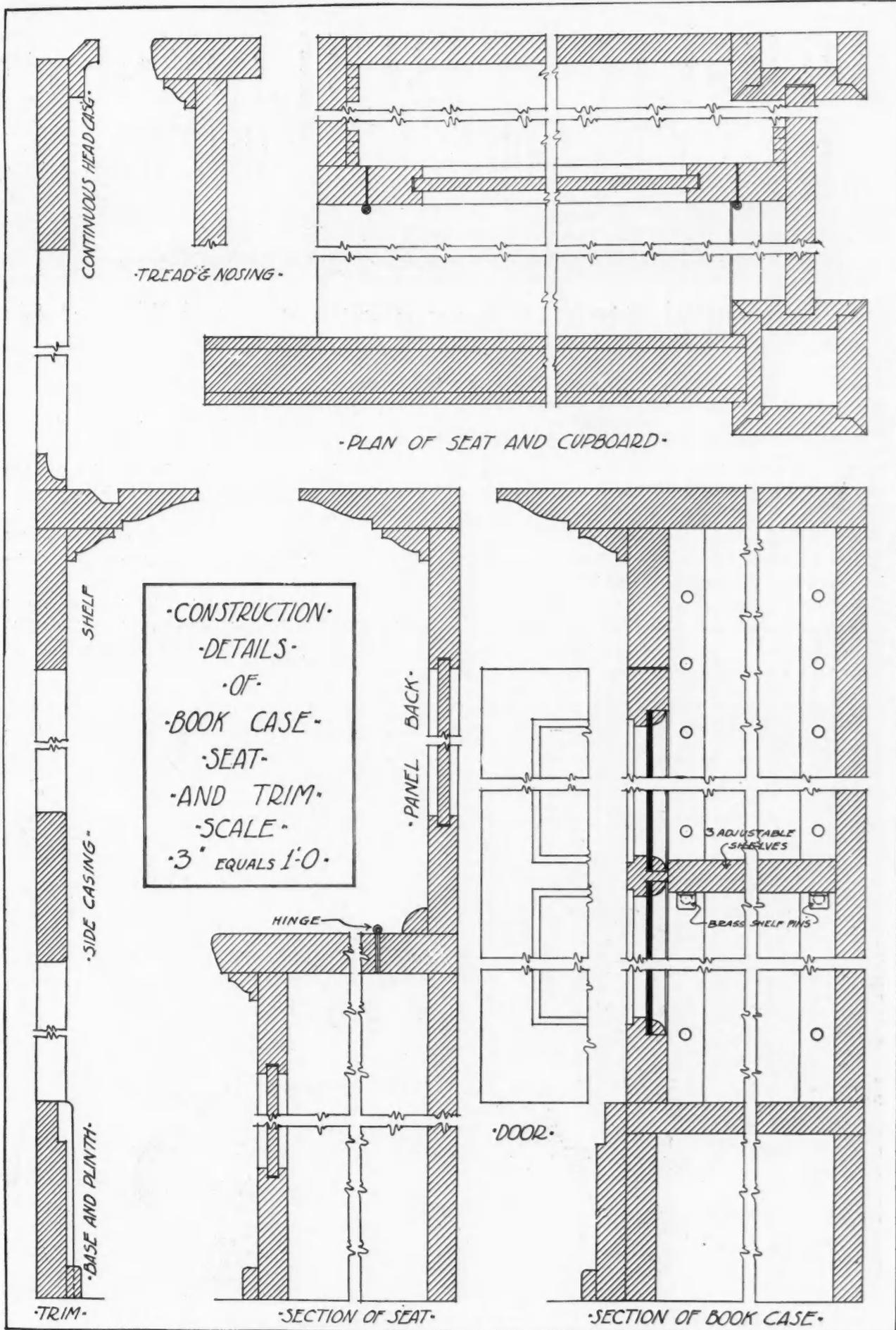


BACK OF SEAT.

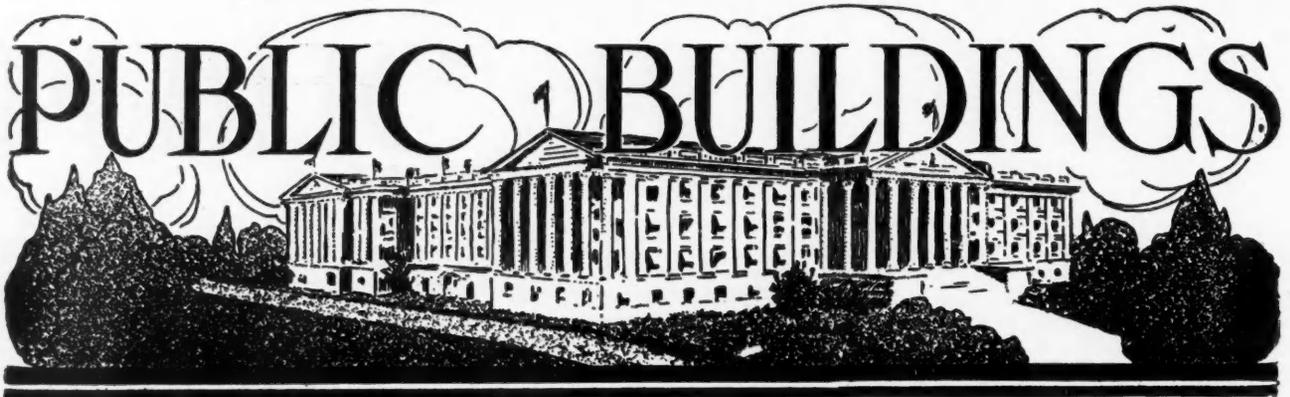


PLAN OF ROOM.

LIVING ROOM WITH INGLE, BUILT-IN CASE AND STAIR



DETAILS OF BUILT-IN CASE, SEAT, ETC.



## A Forward Step in Grammar School Housing

GRADE-LEVEL BASEMENT ROOMS FOR CLOTHES LOCKERS AND RECREATION PLACES—KEEPING SCHOOL CHILDREN PHYSICALLY SOUND

By J. Porter Adams

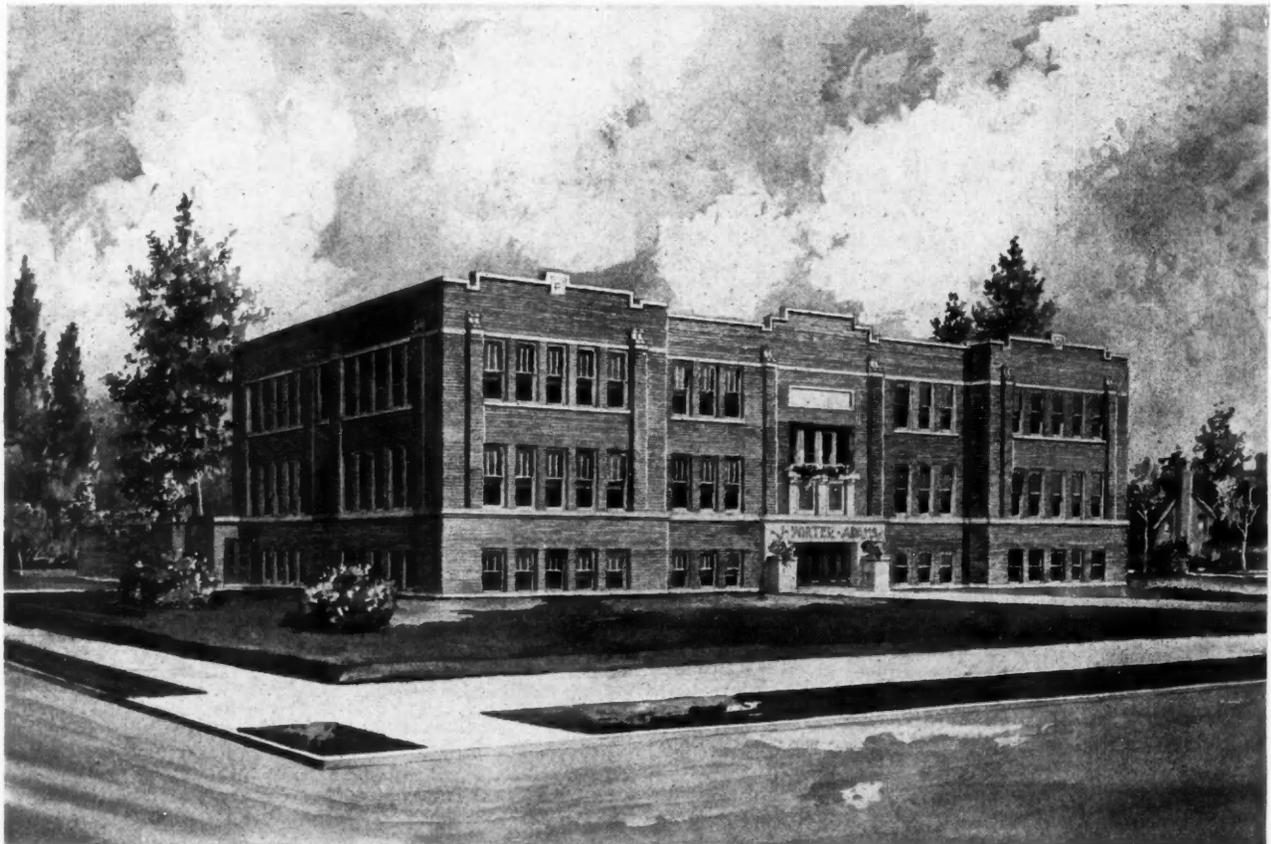
*Superintendent of Schools, Maywood, Ill.*

*Note: Mr. Adams has collaborated with the well known school house architect, G. W. Ashby, to the end that many of the ideas here advanced have been embodied in the design here illustrated—Editor.*

**W**ITH intelligent men of forceful character, such as Doctors Wiley, Evans and Young, setting the pace and blazing the way, not alone the leading men and women but the masses of the population of this country are becoming intensely interested in every suggestion and in every move that makes for a healthy community and provides for each individual's physical well being. Great credit is due to the medical profession, stirred as it has been in recent years by a few of their truly great men to study and

work out civic as well as individual health problems. From just such intellectual leadership in matters that require the greatest care and the most expert attention, sanitary conditions are bound to become better and the vigor and vitality of the present and future generations greatly improved.

Progressive Boards of Education have caught the spirit of this awakening, and are insistent on having the best school environments their available funds can secure.



Modern Grammar School Building, Designed by G. W. Ashby, Architect, Chicago, to Work out the Advanced Ideas of Supt. Adams

School architects are planning and superintending the erection of the best and most practical school buildings the educational world has ever seen. The lighting, heating, ventilation, floor space and general accommodations of these modern school buildings are most excellent, while at the same time, they are very substantially and in their simplicity, artistically constructed.

However, the city problem of school architecture is vastly different from that of a suburban or rural district where an eight or a twelve room structure affords ample accommodations for the few hundreds of pupils there are to attend. These smaller buildings, with a few exceptions, are intended only for scholastic training, while dependence is placed on short recess periods for out of door recreation.

For the major portion of the school year, which custom has set from September to June, field play is impracticable, and the pupils are less efficient for the lack of relaxation and proper physical training.

In these smaller buildings the basements are usually unsanitary and used solely for heating plants, storage, and toilet rooms. Either for economical reasons or because it is the custom, excavations are made to a depth of several feet for these basements. They are gloomy, damp, filled with foul air and generally very unhealthful.

A basement floored throughout with paving brick or tile, practically built on a level with the ground so that every inch of its interior is well lighted and capable of being kept absolutely clean, warm and attractive, and used as much as or more than any other part of the building, would prove of inestimable advantage in the general conduct of any public or private school.

Pupils could enter the building by way of this basement or ground floor, remove their outer clothing and leave it, together with lunch packages and books not to be immediately used, in individual lockers. They could also very advantageously, with regard to the sanitary condition of the class rooms and for their own comfort, change their street shoes for gymnasium slippers, and place those removed in the lockers.

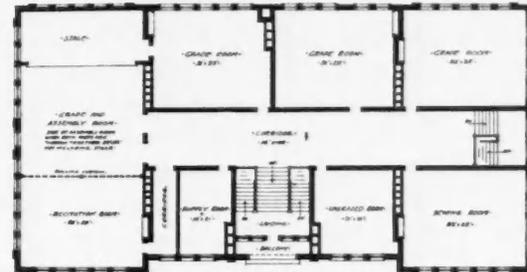
The unavoidable carrying of vast quantities of dirt into class rooms by pupils' shoes would thus be avoided. Even from our well cemented and paved streets this one thing makes for a most untidy and unhealthful condition against which no amount of janitor work with or without pneumatic sweepers, floor compounds, or wizard dust rags can successfully compete.

The care of coats and hats in well ventilated lockers in the basement, would tend to prevent infection caused by garments hung near or over each other. And then too, in an eight room building, the ordinary eight accompanying cloak rooms are expensive both for construction and for maintenance, and they require a very large amount of floor space.

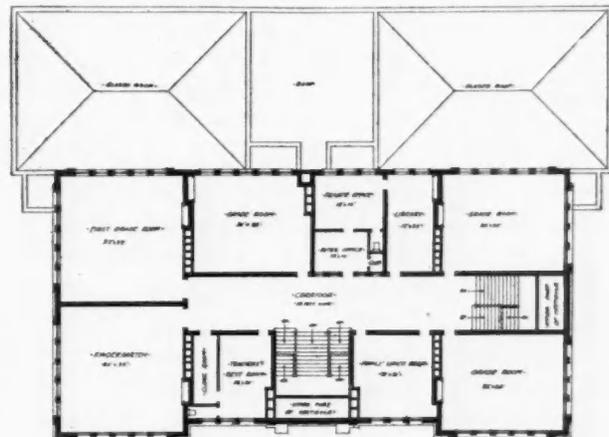
Properly constructed and rationally used basements

could well assign these modern cloak rooms to historical oblivion.

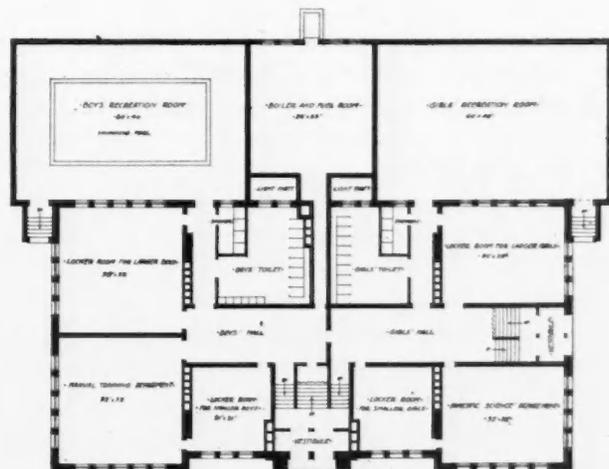
The furnace and fuel rooms would be ideally located from a sanitary standpoint, if placed in an annex outside the walls of the main building. But little dust, smoke or coal gas from this source would then permeate throughout the building as is now the case, mak-



Second Floor Plan—Note Absence of Pupil's Cloak Rooms



First Floor Plan



Ground Floor Plan, Showing Recreation and Locker Rooms

ing grimy the floors, wall and ceiling decorations, furniture, books and papers, as also impairing the health of teachers and children.

The boys' and girls' recreation rooms, so constructed as to be healthful and comfortable in all seasons, should contain suitable playground apparatus, possibly a swimming pool and running tracks, and ample accom-

modations for trained team work and games. Skillful instructors, prepared for this special work, should be the leaders of the games, and they should devote all their time and attention to the physical welfare of the pupils.

Having lockers for the care of each pupil's books and extra clothing, an eight room school building together with the two recreation rooms, could accommodate more than the usual number of pupils. By constant, well managed use of regular class rooms and at the same time, of rooms assigned for sewing, domestic science, manual training, music, and recreation, an eight room building could be made to do the work of at least a ten room structure, and the children would be much more contented, happy and interested in their work.

The plan of having pupils move by groups from room to room at the end of recitation periods has its very great merits in that it brings into these various rooms, at intervals, different sets of teachers and pupils, who by way of comparison, consciously or otherwise, would judge of their general sanitary or unhealthful condition and pass effective comment thereon.

The very motion of pupils as they pass from hall to hall and into and about the various rooms, not only stirs the stagnant air into action but what is of more consequence, affords opportunity for pupils to get away from definitely assigned seats and thereby get relaxation and rest.

Today's system of education requires too little physical activity. Neither brawn nor brain develops under conditions of too pronounced passivity. Boys and girls educated solely to think and not to do, acquire little dependable initiative ability.

When the ideal school building is erected and amply furnished and equipped throughout, the whole boy and the whole girl, physically, mentally and morally, will be developed for life's work as never before, and the present serious problems of delinquency, non-promotions, and early-age withdrawals, will be considered of far less momentous importance than other matters of a more constructive nature.



### The Building of Homes

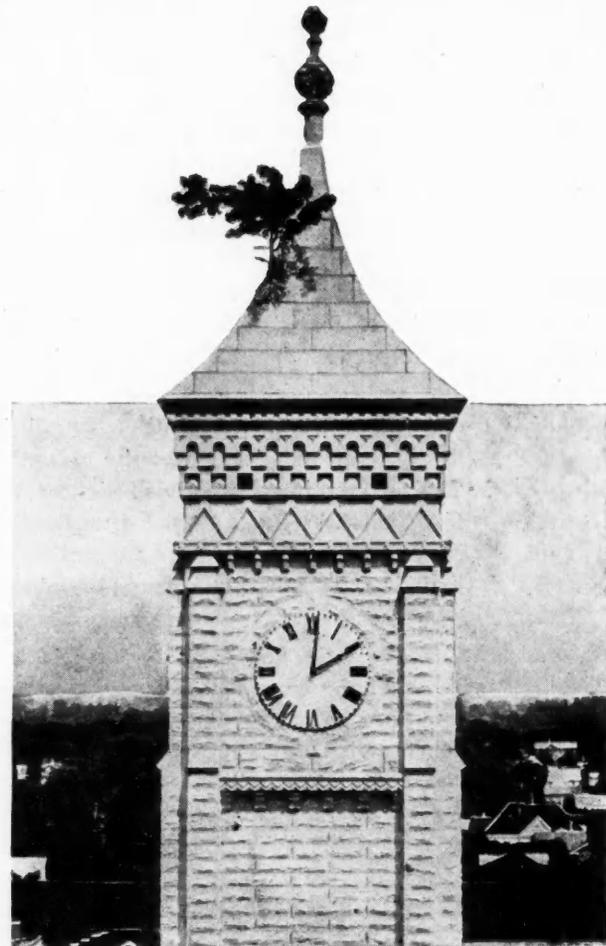
Dwelling houses may be constructed of anything from paper to concrete. When built of paper they consist of ground plans, front elevations and mortgages. When they progress to something more substantial they do not resemble in any way the front elevation or the ground plan of the paper stage and are therefore disappointing in these particulars. The mortgage, however, always comes up to expectations. The houses of the elect may be distinguished by the butler's pantry, the middle classes by the reception hall, and those of the *hoi polloi* by the parlor. Houses are useful to eat in, sleep in, bathe in, dress in, hide in, be

seen in, die in, store junk in, insure and burn down. Dignity in houses is typified by a parking enclosed English country place, romance by a southern planter's mansion, poetry by a rose embowered cottage and humor by a modern flat.—*Life*.



### Tree Grows on Tower

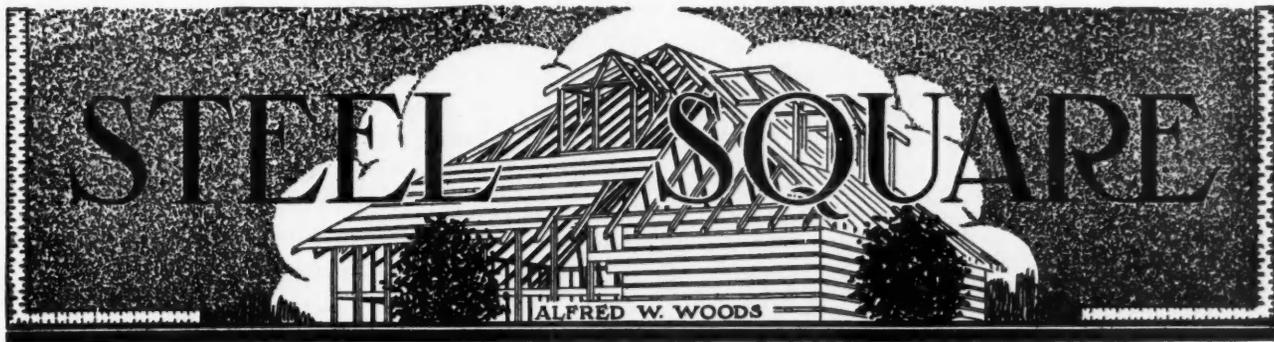
The lone tree (soft maple) on the top of the 110-foot tower of the court house at Greensburg, Ind., is a curiosity which is said to have no duplicate in the world. There were formerly four trees, but when the court house was remodeled in 1887, the largest tree, then about 15 feet high, was removed, as its



Curiosity at Greensburg, Ind.  
15 Ft. Thirty Year Old Maple Tree Growing on Tower of Court House

size was thought to render the tower unsafe. Two others on the south side perished from the intense heat.

The grove on the tower is supposed to have been started by the wind blowing the winged maple seeds between the crevices of the slate shingles where, catching root in the sediments of dust and watered by the rain, they sprouted. The trees were first noticed sprouting more than 30 years ago, and the one remaining tree is now about 15 feet high, and four inches in diameter.



## Practical Uses of the Steel Square

ILLUSTRATING ROOF FRAMING BY THE CUBE SYSTEM, SHOWING THE PARTS TO TAKE ON THE STEEL SQUARE TO OBTAIN THE CUTS

**I**N our last article, we illustrated roof framing by the cube system, showing the whole roof in the cube and the parts to take on the square to obtain the lengths, cuts and bevels that enter into the common square hip and valley roof. In this article, we will continue the subject along the same lines, but illustrate the cuts and the part each occupies in the cube.

In Fig. 1 is shown the plan with a cube covering one-fourth of same. Now, working to a full scale to one foot run, the base of the cube would be 12 inches square; and its height is governed by the desired rise of the roof to the foot run. In this we will take, for example, a 10-inch rise, and it will be seen that one side of the cube represents the run; its height the rise and a diagonal line across its face represents the length of the common rafter. Then 12 and 10 on the square will give the seat and plumb cuts for the common rafter, and the length from 12 to 10 will represent its length per foot run. Now, for the side cuts of the jack 12 is taken on the tongue of the square again—not because it is equal the run, but because it equals the length of the base the other way; in fact in the case of a square cornered building, the cube is equal each way and for that reason many fail to grasp the general rule that applies to any shaped corner the building may have. Thus for the side cut of the jack

for the square cornered building, it is 12 on the tongue and the length of the diagonal across the face of the cube (which in this case is  $15\frac{5}{8}$  inches) taken on the blade; and the latter will give the proper angle for the cut. These figures will also give the side cut for the hip if the same has been backed. They also give the face cut across the roof boards to fit over the hip.

In Fig. 2 is shown the parts to take on the square for the cuts of the corresponding hip, as follows:

17 is taken on the tongue because it represents the length of the diagonal through the base of the cube, and 10 on the blade because it represents its height. These proportions give the seat and plumb cuts of the hip.

For the side cut of the unbacked hip, it is 17 on the tongue (not because it is equal the run of the hip but because it is the tangent which in the case of a square cornered building is equal the run) and the length of the diagonal line through the cube taken on the blade, which in this case is  $19\frac{3}{4}$  inches and represents the length of the hip per one foot run of the common rafter; the blade giving the correct angle. This same scheme could just as well be worked out to a scale of one inch to the foot, and in that case the lengths of the rafters would be as per that scale instead of the length for one foot run, as shown in

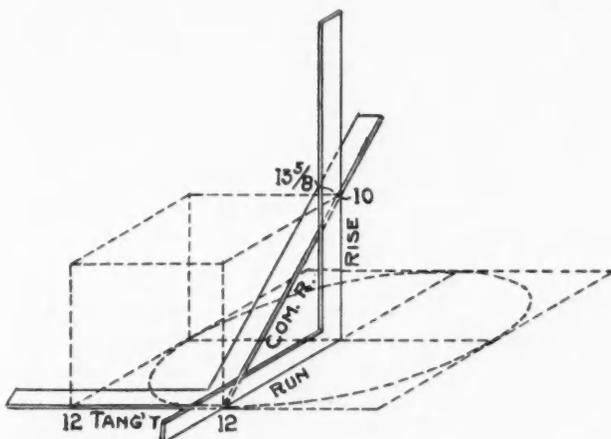


FIG. 1.

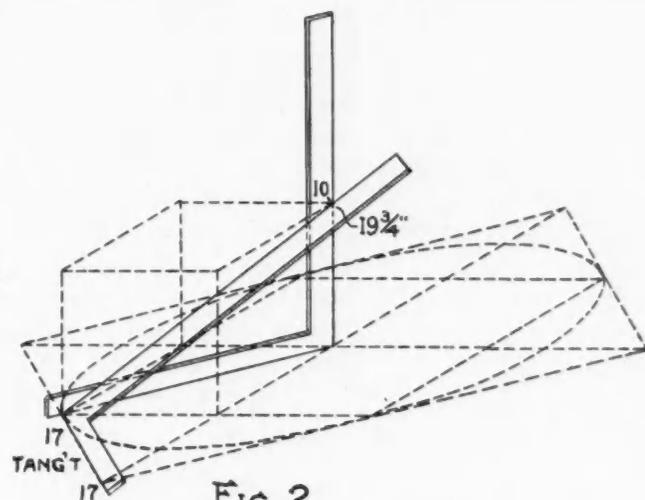


FIG. 2.

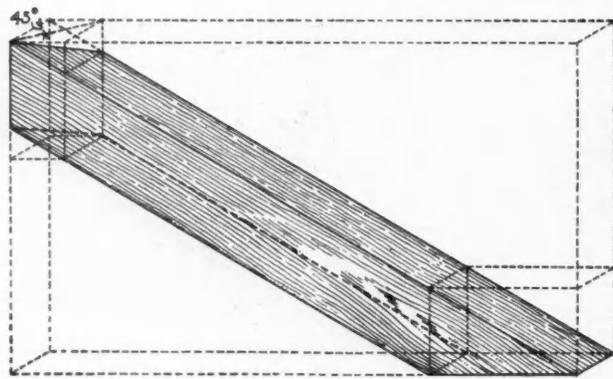


FIG. 3

the illustrations, Figures 1 and 2 shown on page 55.

Now carrying the subject a little further, the cuts are represented as applied directly to the cube. In Fig. 3 is shown a common rafter. The seat cut covers the base of the cube, while the plumb cut covers a part of the face of one of the sides. The side cut of the jack is defined by a diagonal line across the top of the cube—which in the case of the square cornered building is at an angle of 45 degrees—and where this line falls directly under it on the back of the rafter defines the line for the cut, and as the rafter rests at an incline from the top of the cube, the angle is necessarily sharper than 45 degrees; and the steeper the pitch, the sharper the angle will be.

In the case of an octagon corner, the angle across the top of the cube would be at 22½ degrees and the part to take on the tongue to obtain the cut would be 5 instead of 12 and otherwise proceed the same as for the square cornered building. In this illustration, the whole rafter is shown as though cut out of a board of dimension equal to thickness of the rafter, with length equal to its run and width equal to its rise. Now, by beveling the end of this monster board to an angle of 45 degrees and then by cutting on the line representing the rafter, it would be found that the rafter would be complete with side cut and all ready

to set in place. But this, of course, is not a practical solution, but rather to illustrate the relative position of the rafter in space which must be reckoned though seemingly not in evidence.

In Fig. 4 is shown eight cubes set four on top of the others. The shaded part in the upper tier shows that of a hip roof in its relative position in the cubes.

In Fig. 1 is shown what figures to use on the square to obtain the cut across the face of the roof boards to fit over the hip, but in Fig. 4 are shown the actual parts that those proportions represent as: CE represents the tangent, and EG the length of the common rafter. But there is another cut that must be reckoned with, and that is the miter of the roof boards to make a perfect fit, which is not always done or even necessary since it is covered up; but assuming that a perfect fit is required, the same as for a hopper which in reality it is. Now, the question is, what are the parts to take on the square to obtain this cut? There are a number of ways of arriving at this that apply to the square corner, but a universal rule is what we want that will apply to a three, five or a thirteen corner, if the occasion demands. So again we enter into the unseen for the parts to take on the square to obtain this cut. This is obtained in the cubes directly under the roof, as shown in Fig. 4. However, only one of the cubes is necessary to arrive at the proportions to use as they are all alike. The height of the lower cubes is regulated by the height of those above as the diagonal (pitch of the common rafter) across the face is at a right angle to that on the cube below. Thus, if the pitch is one-half or 45 degrees the lower cubes would be of the same height as the upper ones, and all of the parts to take on the square for all of the cuts are contained in the one cube. But in this case,

(Continued to Page 62)

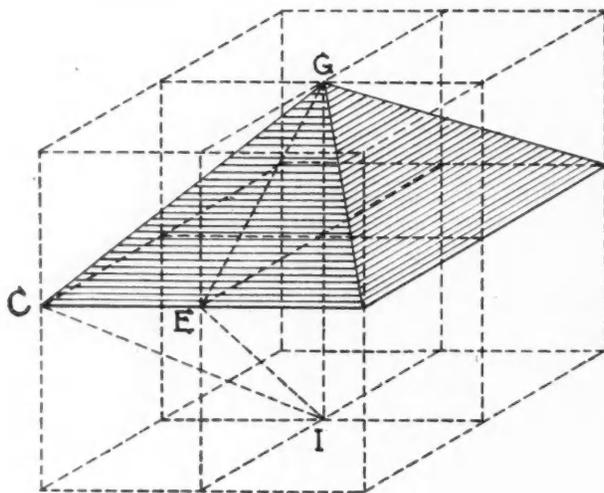


FIG. 4.

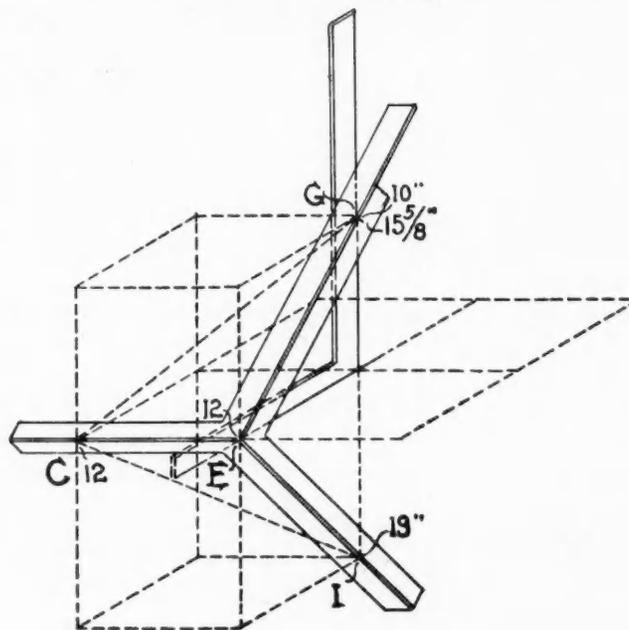
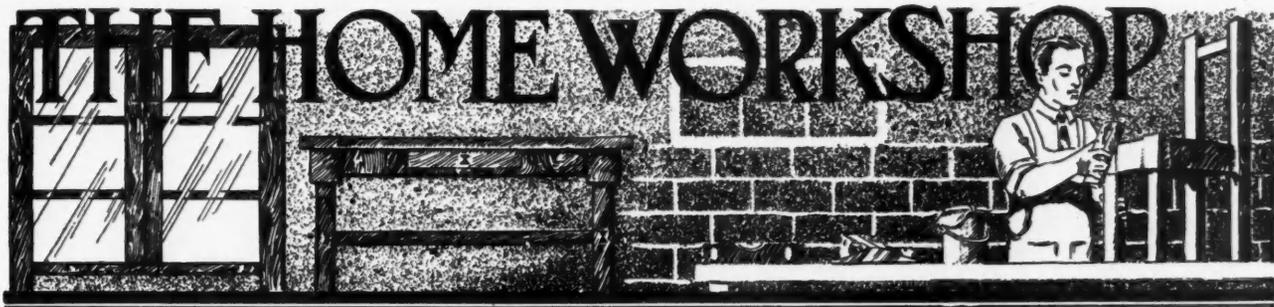


FIG. 5.



## Taborets and Stools with Pierced Ornamentation

PHOTOS, WORKING DRAWINGS AND COMPLETE DIRECTIONS FOR MAKING AND FINISHING THESE SIMPLE PIECES OF HOMEMADE FURNITURE

By Ira S. Griffith

THE pieces shown this month are the result of two rather interesting problems in design worked out in the Cleveland Elementary Industrial School, under the instruction of Mr. S. D. Hendershott. They illustrate well what can be done in the direction of pierce ornamentation when handled by an



Taborets of Several Designs

instructor who understands the principles of good line and good form.

### How to Make the Taboret

The square taboret is of very simple construction. The two sides are made sufficiently narrow to permit the other sides to be fastened to them in a butt joint. The fastenings are covered so as to conceal any metal so used. The following pieces of stock will be needed:

Sides, 4 pieces,  $\frac{5}{8}$  by  $13\frac{1}{2}$  by  $18\frac{1}{2}$  inches, S-2-S.  
Top, 1 piece,  $\frac{3}{4}$  by  $14\frac{1}{2}$  by  $14\frac{1}{2}$  inches, S-2-S.

Begin work by squaring up the top to the size indicated in the working drawing. In a similar manner form a face edge on each of the sides and from these edges square up the two ends of each piece, putting on the bevel as required.

Before putting on the slanting edges, lay out and work the decorative designs. Where a jig saw is at hand, the four sides may be fastened together and worked as one piece, the nails being placed in the waste that is to be removed later.

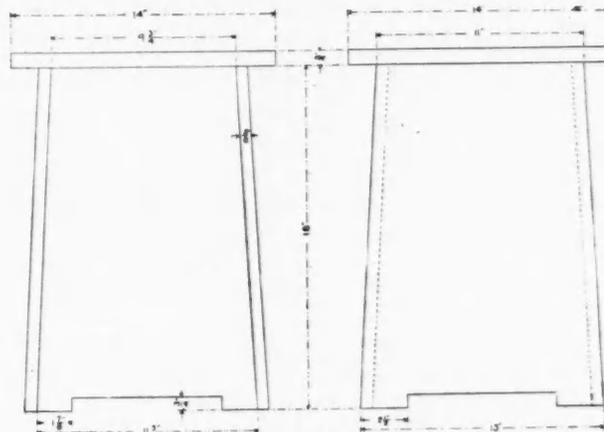
Next lay out and shape the sloping sides and fit and



Stools or Leg Rests, Artistically Ornamented

fasten them together. Fasten the top to the sides covering the fastenings as were the side fastenings. One method of concealing these fastenings is to raise a triangular sliver, without breaking it, from the member. Bend this to one side and insert and set a finishing nail. Afterward replace the sliver, using glue to hold it in place. Of course the grain will match perfectly in this way.

Some hard wood, such as oak or walnut, should be used. For walnut, the easiest finish to apply and one that is very satisfactory, is obtained by giving the wood a coat of boiled linseed oil. Allow this to stand for a short time, then wipe off the surplus oil and allow the surface to dry over night. Upon this apply a very thin coat of shellac and allow it to harden. Sandpaper



TABORET  
TO BE DECORATED WITH PIERCED ORNAMENTATION

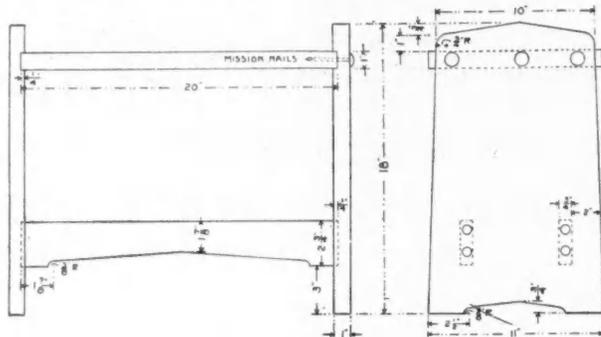
the shellac with fine paper, number 00, and then apply several coats of some good wax.

If the wood is oak, it will be necessary to apply a coat of paste filler in the manner described upon the can label. Allow this to harden over night, then sandpaper lightly and apply the shellac and wax as on the walnut. Fillers may be purchased ready colored if desired, or the natural color may be purchased and colored. A mission or soft brown will look well upon such designs as these.

### To Make the Stool

The stool shown may be used as a leg rest in connection with a Morris chair, or it may be used as a

utility seat in a living room, or as a plant stand. If used as a leg rest the top should be upholstered. This may be done by placing a padding of hair or felt upon the top. Fasten a stout canvass to one edge of the top



STOOL  
END TO BE DECORATED WITH PIERCED ORNAMENTATION

and stretch it over the padding to the other edge, fastening it there. Over this canvas place a leather of a color suited to that of the wood finish applied. Orna-

mental headed nails should be used to cover the heads of the common tacks that have been used to fasten the leather. For a finish the same treatment as was suggested for the taborets will be suitable for similar woods.

#### STOCK BILL FOR STOOL.

Top, 1 piece, 1 by 11½ by 20½ inches, S-2-S.  
Sides, 2 pieces, 1 by 11½ by 18½ inches, S-2-S.  
Stretchers, 2 pieces, ¾ by 20½ inches, S-2-S.

Square up the top, rounding the top arrises slightly. Prepare a face edge on each of the sides and from these square up the ends and the pieces to length.

Before cutting the slanting edges lay off the various joints and the decoration.

Square up and shape the under sides of the stretchers as indicated. After all the joints have been laid out and cut the sloping sides of the legs and the tops may be shaped.

All parts should be thoroughly sandpapered before being put together. The same type of fastening may be used upon these stools as was described for the taborets.

## Improving a City Building Code

RECOMMENDATIONS MADE BY THE CARPENTERS OF INDIANAPOLIS—POINTS WHICH SHOULD BE PROVIDED FOR IN THE ORDINANCES OF EVERY TOWN AND CITY

**F**OLLOWING the recent collapse of the Prest-O-Lite building in Indianapolis, Ind., in which three carpenters lost their lives and six others were seriously injured, a committee was appointed by Carpenters' Union No. 75, of that city, to draw up a set of recommendations and suggestions for the improvement of the city building code and department.

This committee was composed of Frank Duffy, General Secretary of the United Brotherhood of Carpenters and Joiners of America; S. P. Meadows and S. S. Willoughby. They waited on the Mayor and other authorities, including the Chief Building Inspector and presented the following report:

December 29, 1911.

Hon. S. L. Shank, Mayor,  
Indianapolis, Indiana.

Dear Sir: In conformity with your request of December 11th, 1911, for recommendation, etc., for the improvement of the Building Department of the city of Indianapolis and for the protection and preservation of life and limb of workmen engaged in the construction, alteration or repairs of buildings, we, the committee representing Carpenters' Union No. 75 of this city, herewith offer for your consideration the following suggestions, with the hope that they may be favorably acted upon by yourself and the City Council, so that catastrophes such as that which occurred at the new buildings of the Prest-O-Life Company near South and Delaware Streets may be prevented and avoided.

1st. In the office of the Building Department there should be a superintendent, a practical civil engineer, a stenographer and other necessary help.

2nd. Plans and specifications for construction of all buildings within the city limits, and for alterations, repairs, improvements, changes and additions to present buildings must be submitted to the Building Department for approval, no work to be proceeded with until plans and specifications are approved and permit granted.

After work is begun, if the owner should decide to change, alter, add to or take from the building, all work must immediately cease until amended plans and specifications are filed with and approved by the Building Department and permit granted.

In all cases, however, whether new buildings or changes or alterations thereto, or improvements or repairs to old buildings, copy of plans and specifications must remain in the possession of the Building Department and become the property thereof.

3rd. Reinforced concrete buildings of the mushroom head beamless system should be prohibited.

We raise no objection, however, to steel frame buildings properly put together, with reinforced concrete floors and outside walls of brick, stone, granite, marble, terra cotta, or a combination of all these, provided the materials used can stand the test and carry the weight.

Foundations should be given particular attention, as without a good foundation the structure will be unsafe and liable to collapse, no matter what materials may be used in the construction. In places where quicksand, shifting sand, loam, swamp or unsound ground appears, caissons should be sunk until solid ground is reached. If there should be much unsafe ground of the description herein mentioned, caissons should be sunk and piers built therein at regular intervals to be decided on by the Building Department, and the space between these caisson piers to be bridged by steel girders of sufficient strength to carry the weight of the building as per its height.

4th. For the protection of life and limb each floor should be put in as the building progresses, that is, in the rough. In a steel frame building where that is not done, each floor should be temporarily planked. In buildings where wooden floor timbers are used, temporary floors must be lain.

5th. In the down-town business section of the city, within certain limits designated by the Building Department and approved by the Mayor and the City Council, all new buildings must be of fireproof construction. Beyond said limits to the city line, frame buildings may be erected, provided the ma-

terial used conforms to the laws of the Building department. In this respect all floor timbers should not be less than 2 by 9, set 16-inch centers, corner posts, ties, girths, wall plates and the like should be 4 by 6, tenoned and mortised, bored and pinned together by wooden pins at least one inch in diameter. All wall studding and partition studdings to be 2 by 4, set 16-inch centers. Party walls to be filled in with brick and mortar.

All roof rafters to be not less than 2 by 6, set 16-inch centers.

6th. Eight building inspectors to be employed by the city of Indianapolis under the direction, supervision, control and authority of the Building Department, each inspector to be assigned to duty by the superintendent of buildings, each inspector to report daily to the superintendent jobs visited and inspected, jobs stopped and reasons therefor, work started and where located, and any other information that the superintendent should have.

The Department, with the inspectors, to have full power and authority to immediately stop work on all buildings they consider unsafe, unsound and dangerous, no matter from what the cause. Work not to be resumed until the objectional feature or features are removed and the department is satisfied that the laws and ordinances are observed and obeyed.

Contractors, builders, superintendents, architects, and owners refusing to stop work when so ordered by the building inspectors to be held liable for endangering the lives of workmen and to be subject to prosecution under the criminal code. They may be fined or imprisoned, as the court decides or may be subject to both.

The Building Department, with its inspectors, to have authority to examine all buildings—old or new—and to condemn any that may be found to be unsafe and dangerous.

Those unsafe to be repaired without delay to the satisfaction of the department; those in dangerous condition to be torn down. If the owner refuses to repair unsafe buildings or tear down dangerous ones, the Department to have authority to immediately proceed with the work at the owner's expense. Any owner of unsafe, unsound or dangerous buildings refusing to comply with the orders of the Building Department to be held liable for criminal negligence and be criminally punished.

All buildings of a public or semi-public nature, such as hotels, halls, churches, schools, libraries, hospitals, institutions for the blind, the aged, the infirm and the like, within the city limits, must be of fireproof construction, with sufficient exits, fire escapes, etc., to give everybody an opportunity to get out in safety.

For the protection of life and limb, too much attention cannot be given to scaffolding. The method of construction as well as the material used in the building of the scaffolding, should come under the combined personal control and supervision of the superintendent, the architect and the employer.

Negligence in this respect should be punishable under the criminal law, as the lives and persons of not only those who work on the building, but of those who may be passing by, are in danger.

(Signed) FRANK DUFFY,  
S. P. MEADOWS,  
S. S. WILLOUGHBY,

Committee representing Carpenters' Union No. 75.

In presenting this report the Committee also laid emphasis on the following points:

1st. That a given time should be set before the forms should be removed in concrete work.

2nd. Condemned buildings should not be used for

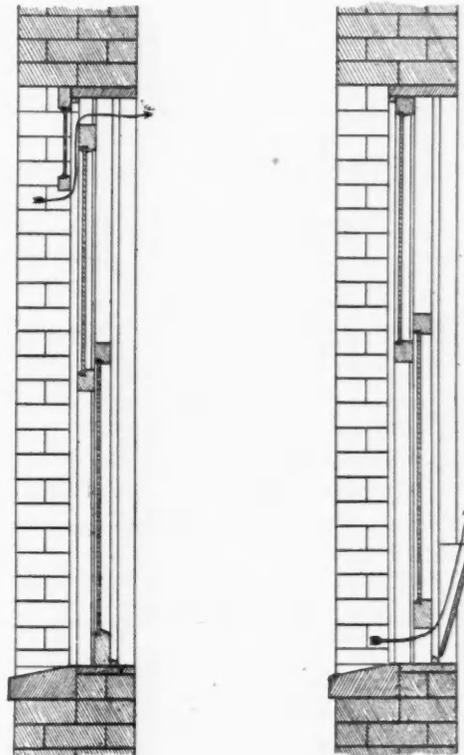
any purpose. People should not be allowed to live in them nor should they be used as places of shelter for animals, nor for storage purposes

3rd. The overloading of floors should be prohibited and ordinances should be passed giving the Building Department authority to cope with matters of this kind under the instructions of the Inspector



### Window Ventilators

It often happens that direct ventilation by means of an open window is objectionable because of draught playing upon those sitting near by. To overcome this difficulty two forms of deflectors are



Outside Wind Deflector for  
Upper Sash of Window

Inside Wind Deflector for  
Lower Sash of Window

proposed, as illustrated herewith. One of them is applied to the outside of the upper sash of a window, the other to the inside at the lower sash. The arrow indicates the direction of the entering air in each case. Deflectors of this kind may be made of glass, wood or metal.



### Architectural Publicity

The American Institute of Architects announces that it will advertise extensively in the future on the theory that publicity on all matters affecting the aesthetic taste of a community is valuable. The institute is preparing the way to use the newspapers as a medium through which to give the general public some idea of the varied activity of architects and to bring the people into a frame of mind which will find expression through suggestion, approval or criticism of building projects for their communities.



## Correct Detailing for Casements Opening In

CERTAIN HARDWARE MUST BE PROVIDED FOR—GIVE IT A FAIR CHANCE—THE PROBLEM OF WEATHER TIGHTNESS—FRENCH WINDOWS OPENING OUT

By Our Hardware Expert

THE Hardware Editor in the March number wrote some strenuous words of advice relative to the use of Cremorne bolts on French windows, opening in.

He takes great pleasure in advising his readers that Detail Number 10, found herewith, is the proper thing for French windows, *opening out*.

The wide tongue and groove is suggested because it has been found practical. These open-out windows usually do not swing more than 90 degrees; and narrow butts are generally used. If these windows are to swing around against the wall and butts of extra width are demanded, then Detail Number 9 is better; but the tongue and groove must be on line with the inside of the sash.

Note that the thickness of the extended part of the sash, to which the bolt is applied, must be at least one-half inch.

You will note that the screws on one side of the bolt are shorter than the screws on the other side. Great care must be exercised in seeing that the hardware manufacturer supplies screws which will not have to be cut off by the carpenter.

If this line of screws is shortened by the carpenter, the Cremorne bolt can easily be torn loose from the sash.

The hardware trimmers and the architects must be cautioned against the use of surface strikes or keepers. Casings are almost in universal use in the United States, hence a flush strike or keeper can be applied with better success.

Detail Number 9 shows a flush strike applied to the sill. This same strike can be applied to the top jamb equally as well.

Architects and mill men must be cautioned against the use of the tongue and groove jamb. If this kind of jamb is favored, care must be exercised in allowing at least one and one-quarter inches of surface to which the butts are attached. The regular typical rabbeted plank jamb is the best practical detail and cannot be improved on.

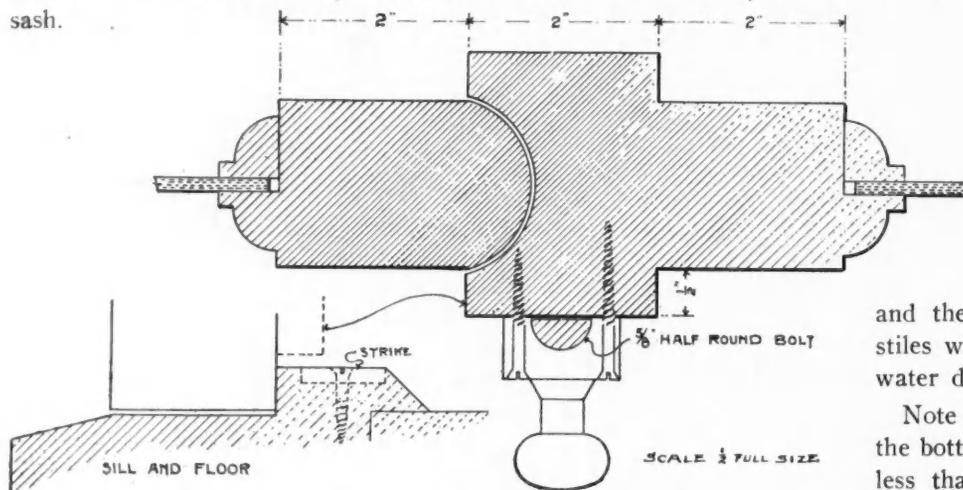
The writer, without fear and trembling, is now about to tackle the most serious problem confronting the modern house builder, the *open-in casement windows*.

The women, bless them, will have them, and the writer deems it his duty to please them.

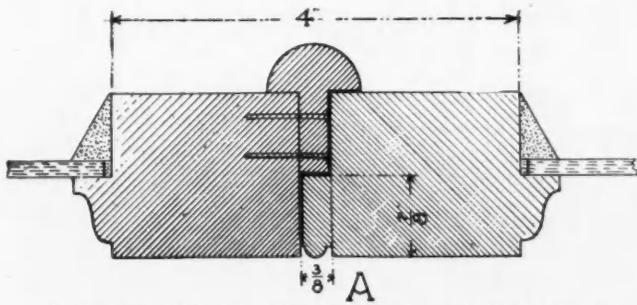
Mr. Architect and Mr. Millman, it's up to you to supply the open-casement sash just like Detail Number 11, and the Hardware Editor will guarantee that trimmers can supply simple stock hardware, manufactured by all of the leading makers, that will make this casement window a thing of beauty and a joy forever.

Please note drawing A. The T Astragal on the outside of the standing leaf is designed to keep out the driving rain. Wood will shrink and the regular rabbeted meeting stiles will allow the wind to drive water down over the rabbeted sill.

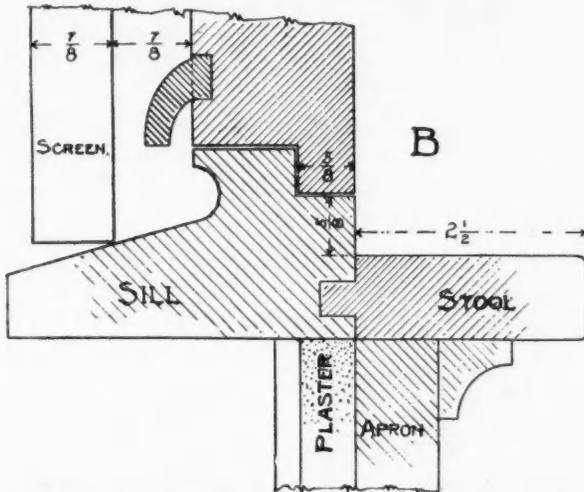
Note drawing B. The rabbet at the bottom of the sash must not be less than five-eighths of an inch, because a flush bolt having an



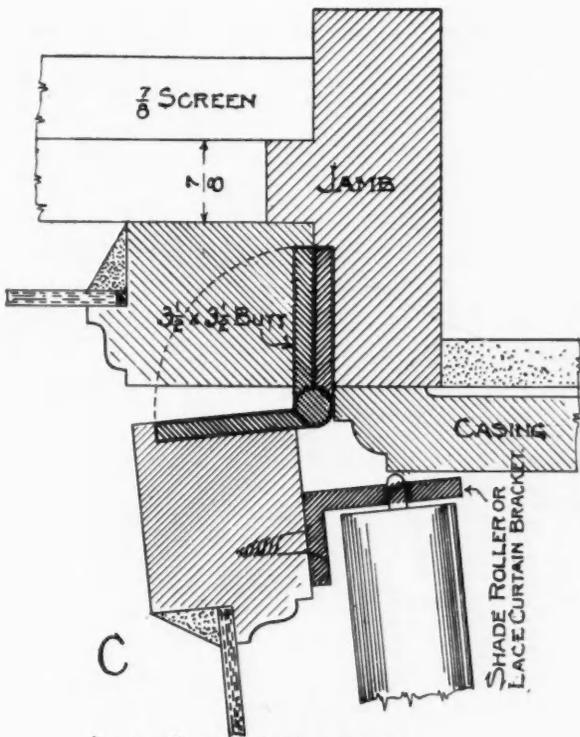
Detail No. 10—1½" Double French Window, Opening Out



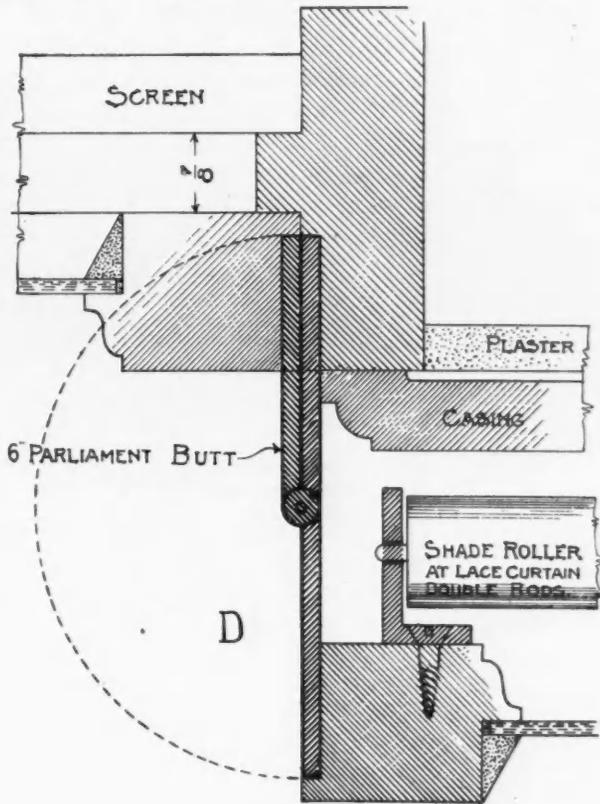
Section Through Meeting Rails of Pair of Inward Opening Casements—Note—T-Astragal on Outside to Keep Out the Rain



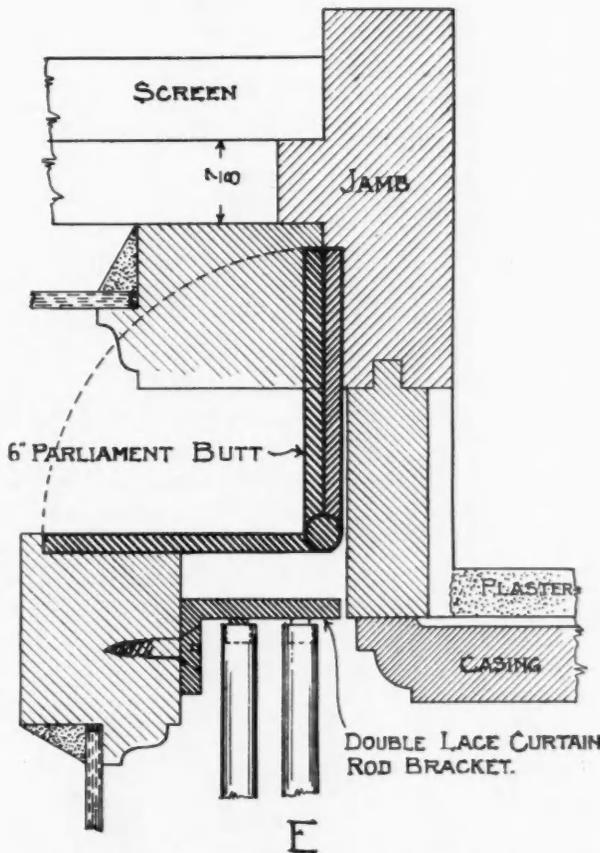
Section Through Sill—Warranted Proof Even Against Driving Rain. Note—That Standard Flush Bolt Requires Sill Rabbit to Be at Least 1"



SASH OPEN 90 DEGREES. Section Through Window Jamb, Flush With Plaster



SASH OPEN 180 DEGREES. Section Through Window Jamb—Use of 6" Parliament Butts Permits Opening 180 Degrees



Section Through Recessed Jamb—Use of 6" Parliament Butts Gives Room For Curtain Rod Brackets

DETAIL NO. 11. INWARD OPENING CASEMENTS

All Details 1/2 Full Size

angle narrower than this cannot be had.

Note: The width of the stool must be not less than two and one-half inches, if an adjuster is to be applied.

Detail C shows the sash hung on a jamb which is flush with the plaster. A butt less than three and one-half by three and one-half cannot be used, because the draper attaches the lace curtain rods and the shade roller to the upper stile of the sash, and this drawing shows that the sash cannot open much over 90 degrees.

Detail D shows this same sash opening around against the wall, this shows that a six inch parliament butt is required.

Detail E shows the sash hung to a jamb which is recessed.

This shows that a six inch parliament butt is required to open the sash 90 degrees.

Great care should be taken by the architect and hardware trimmer to ascertain from the lady of the house and the draper, where these lace curtain rods and shade rollers are to be applied to the sash. The hardware trimmer should be advised, so butts of proper width can be supplied.

The question of adjusters is becoming of vital importance because all of the doctors are advocating fresh air.

Note that the depression of stool detail B must be at least five-eighths of an inch, so an adjuster can be successfully applied, if desired.

The AMERICAN CARPENTER AND BUILDER will be pleased to furnish full size details of the above mentioned drawings. They also stand ready to furnish full size illustrations showing correct application of casement adjusters so they will do the work designed for them.

The manufacturers are at fault in this regard, they do not furnish the carpenter directions for application, hence most all of these adjusters are misapplied.



### Keen-Eyed Engineer

An old engineer in the north of England was getting his sight tested by a doctor who lived in a house facing a large park. The doctor used to say to his patients, "Look over there and tell me what you can see." When the engineer learned that his sight was to be tested he arranged with his son to take his bicycle half a mile into the park and be oiling it. In due time the old man was led to the window, the doctor saying as usual:

"What do you see?"

The old man, peering out, said: "I see a young man stooping beside his bicycle."

"Do you?" said the doctor. "I don't see anything at all."

"Nonsense," said the engineer. "Why, he is oiling it."

The doctor took up a pair of field-glasses and plainly saw the same.

"Magnificent sight!" he said.

The engineer is still drawing his wages.

### Clay Tiles for Ornamenting Cement Work

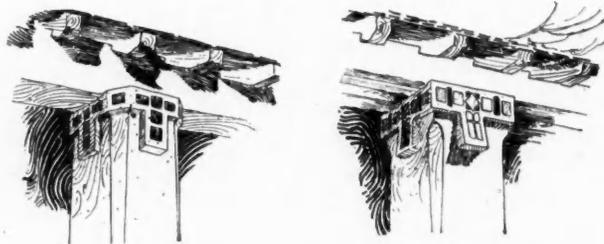
In the recent number of *The Brick Builder*, by Mr. Wm. L. Price, the Philadelphia architect, contributes an interesting article on the decorative treatment of plaster walls. He states that there is no modern method of construction so fertile in its possibilities for varied and artistic treatment as cement work combined with ornamental tile.

Just because there is no precedent in ancient architecture for this, is no argument against it, says Mr. Price. Modern builders should be bold enough to meet modern problems in their own way. To quote his own words, "living men build in architecture living ideals, dead men in the name of culture paw over the scrap heaps of the past."



Chimney of Cement, Brick and Tile

The accompanying illustrations are shown as ex-



Cement Plaster Pillars with Capitals Inlaid with Tile

amples of the combined use of cement plaster and tiles. Clever designers will doubtless discover great possibilities along these lines.



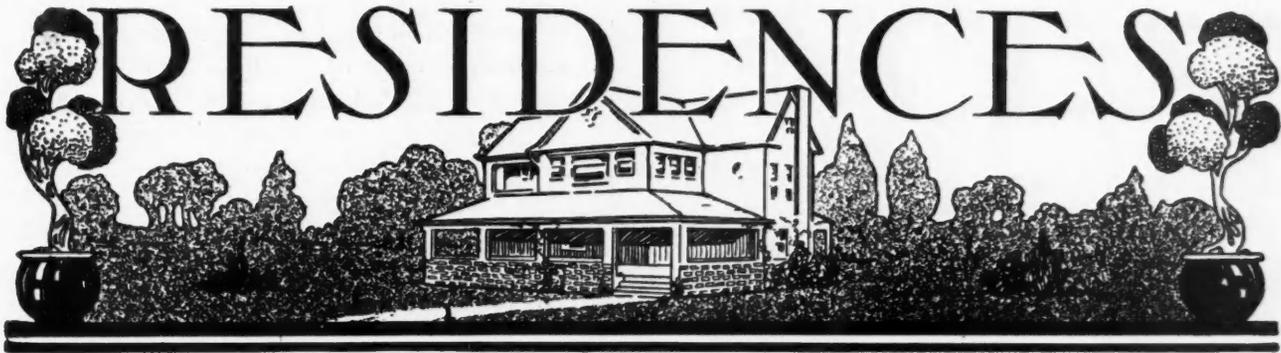
### Practical Uses of the Steel Square

(Continued from Page 56)

the pitch is a 10-inch rise or  $5/12$  pitch, and therefore the parts to take on the square for the miter are C E on the tongue and E I on the blade, and the tongue will give the proper angle.

In Fig. 5 this is shown more clearly as directly applied to the square per full scale for a one-foot run. Note the upper cube contains all that is contained in Fig. 1 with the addition of the parts to use for the miter.

These illustrations, as we said before, apply to the square cornered building, but the formula applies to any other shape. The parts to substitute for C E would be the figures that give the level miter for the desired angle when 12 is used on the other arm of the square. Thus for the octagon, it would be 5, triangle  $20\frac{3}{4}$ , hexagon  $6\frac{15}{16}$ , and so on to the end.



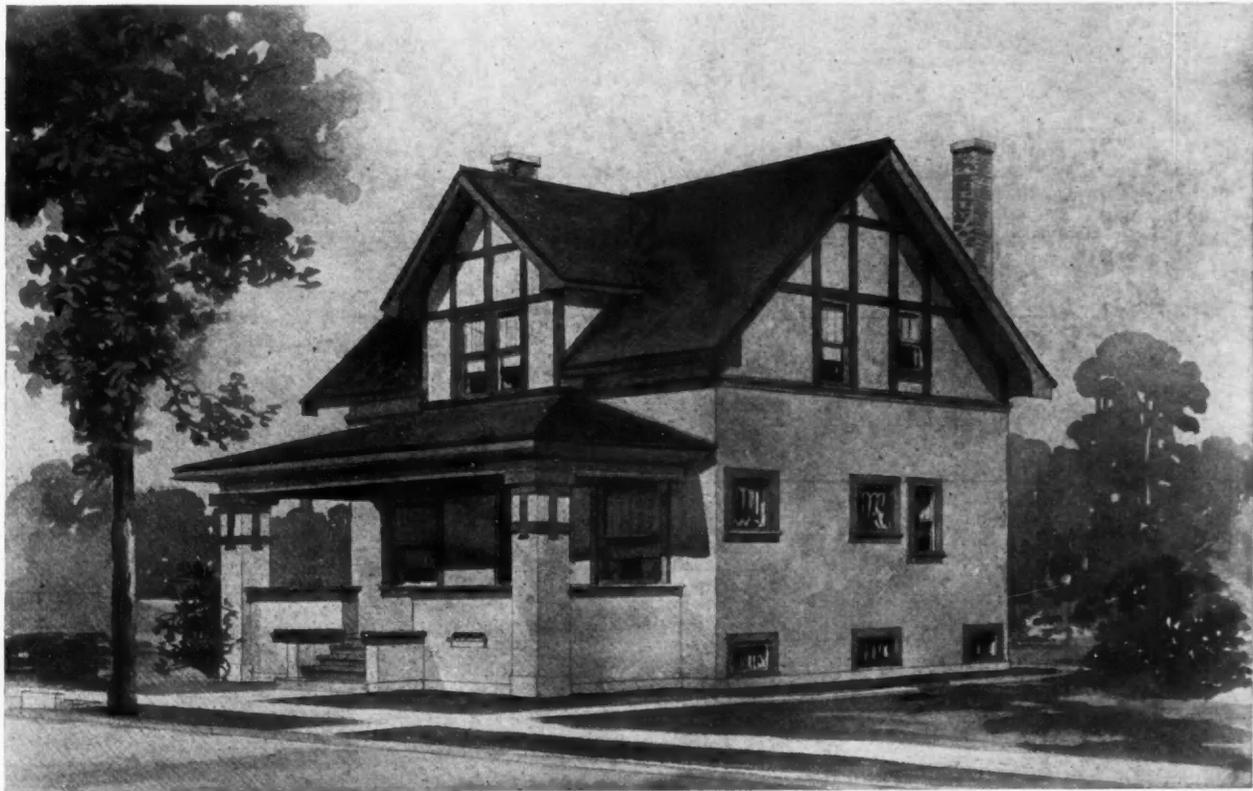
## Dignified and Attractive House Design

ARCHITECT'S PERSPECTIVE AND COMPLETE SET OF WORKING DRAWINGS FOR A CONVENIENTLY ARRANGED SIX-ROOM RESIDENCE OF CEMENT STUCCO CONSTRUCTION

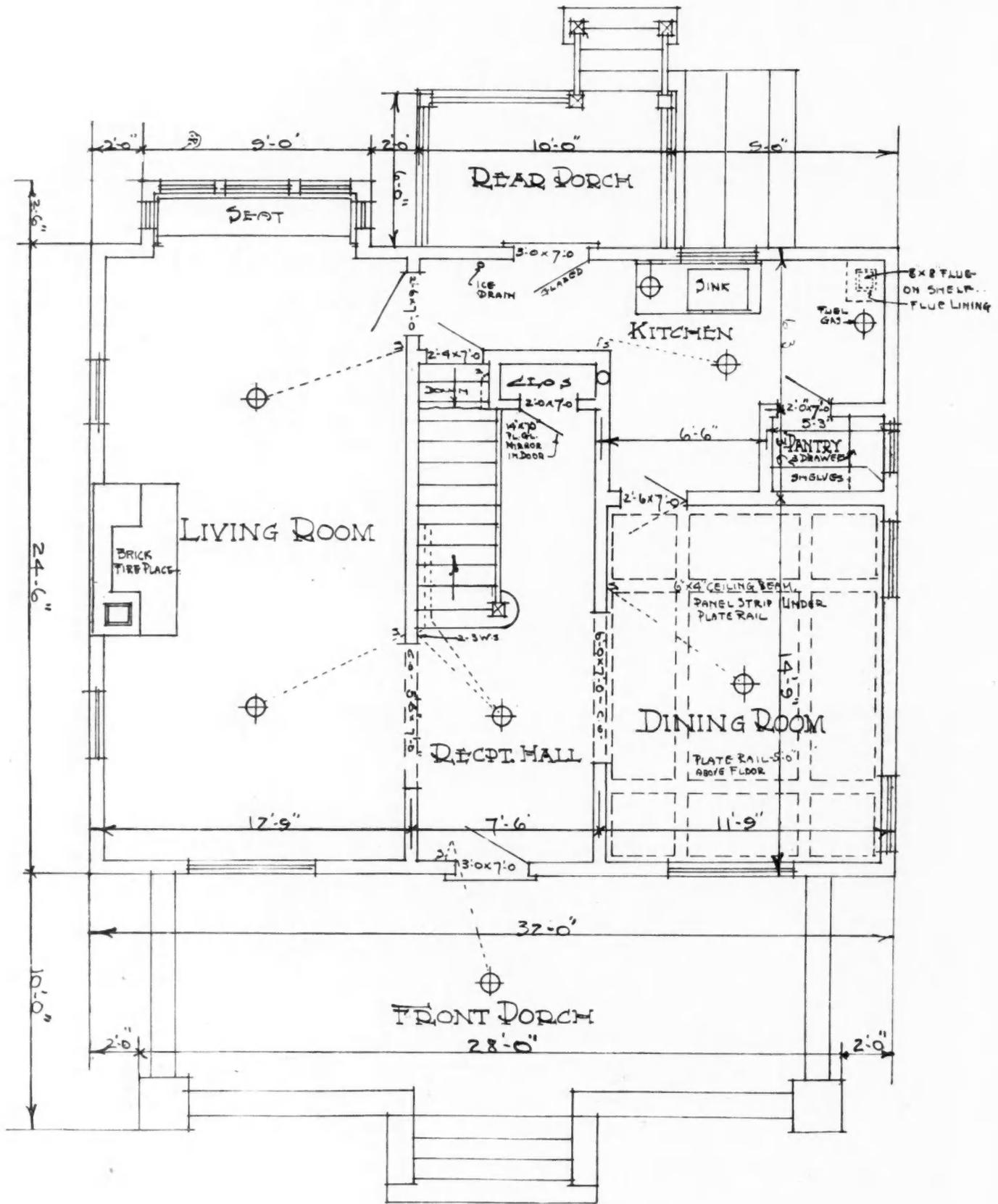
**T**ASTES differ in house choosing as in everything else; and this old world would be a dreary, monotonous place to live in, if this were not so. The cement house is certainly coming more and more into favor; and we are glad to be able to present this month an exceptionally attractive design for a modern six-roomed cement stucco cottage, which is not only available to prospective home builders, but should be kept on file for ready reference by contractors and building material dealers, and will offer many practical suggestions to those who may be trying to work out the nesting problem for themselves or others.

From the front porch, we enter the large, central

reception hall with its bullnose stairway leading to the second floor. To the right lies the beamed-ceiling dining room, connected with the kitchen at the rear by a swinging door. On the left of the hall is a commodious living room occupying the entire side of the house, with a large brick fireplace at one side and a window seat at the rear. On the upper floor are three well-lighted bedrooms with ample closet accommodation, a bathroom, and a balcony over the closed-in rear porch. The plans call for electric lighting, and in every respect the equipment and finish are up-to-date and abreast of the most advanced modern requirements.

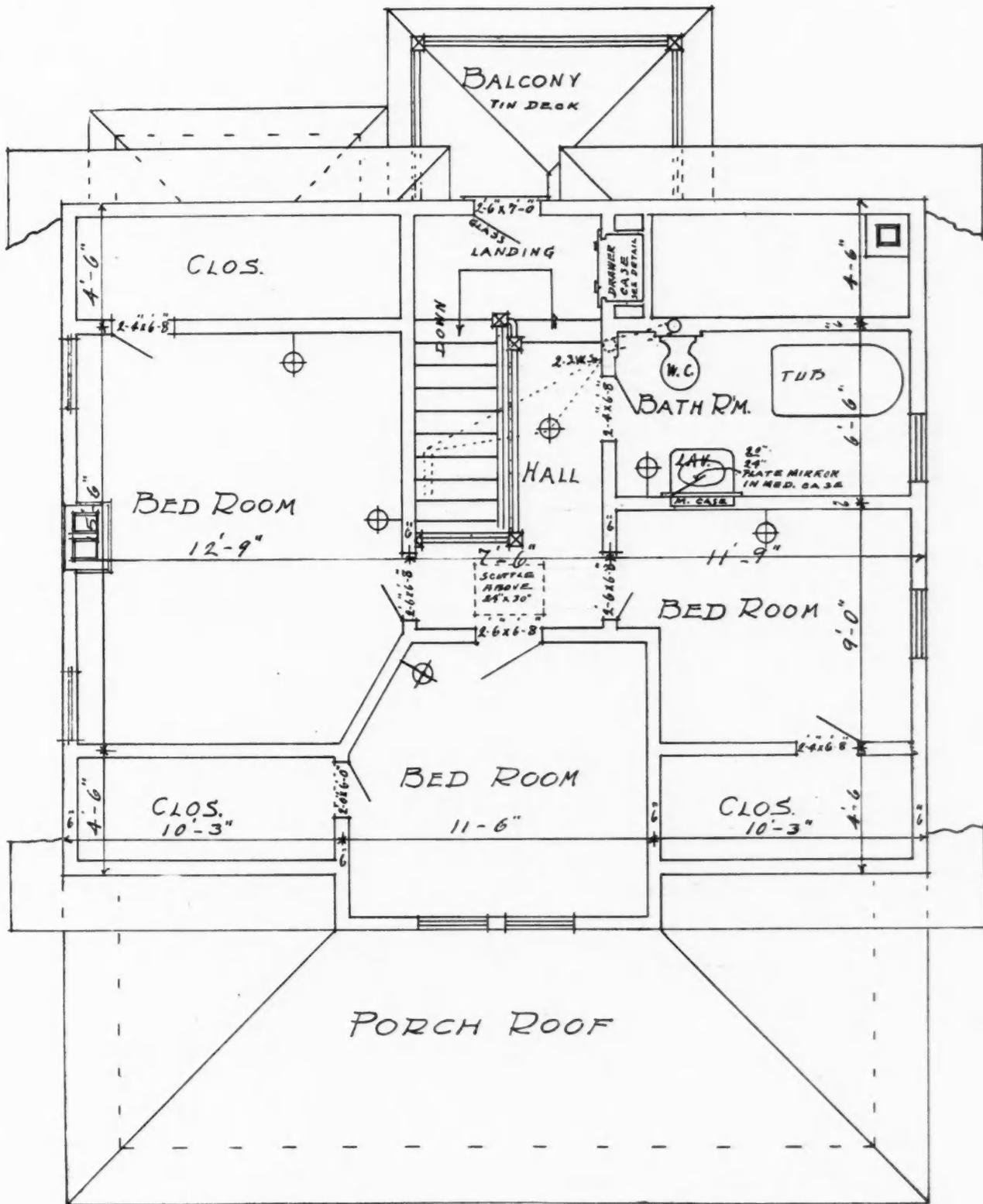


Attractive Modern-Sized House of Cement Stucco Construction, Designed for Mr. A. G. Young of Chicago  
COMPLETE WORKING DRAWINGS FOR THIS HOUSE ARE PRESENTED ON THE 6 PAGES FOLLOWING



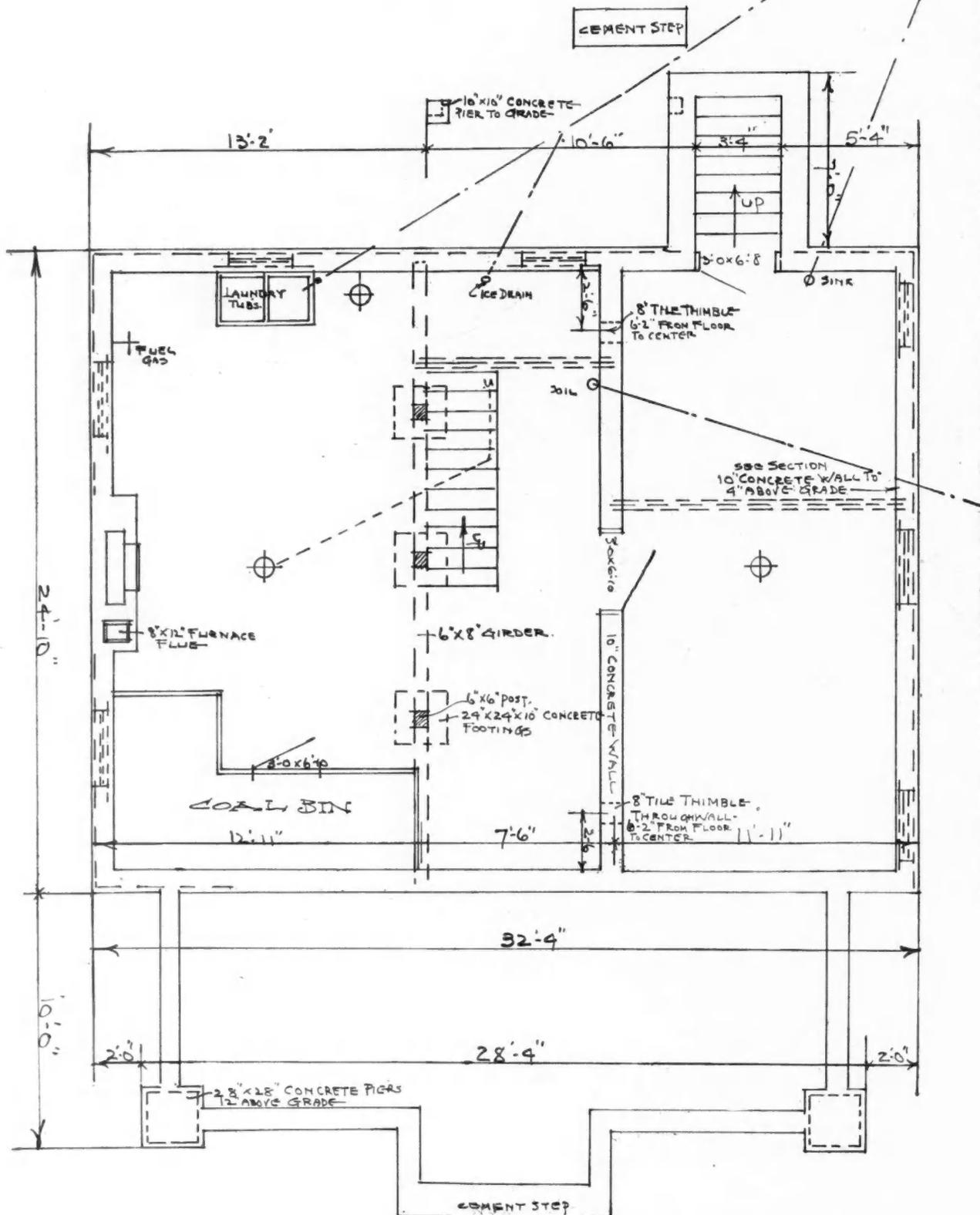
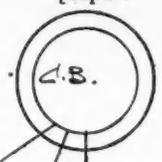
FIRST-FLOOR PLAN

(House, Page 63)



SECOND-FLOOR PLAN

(House, Page 63



FOUNDATION AND BASEMENT PLAN  
(House, Page 63)



LEFT SIDE ELEVATION



RIGHT SIDE ELEVATION

(House, Page 63)







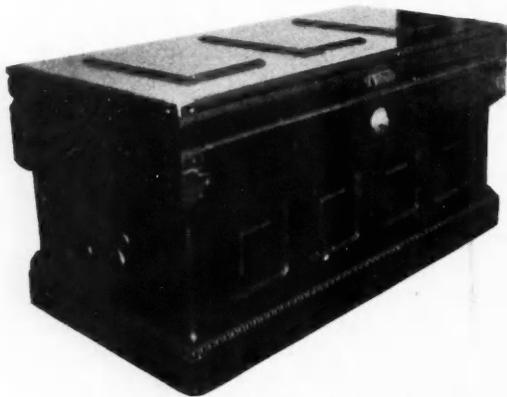
Our Readers are Requested and Urged to Make Free Use of These Columns for the Discussion of all Questions of Interest to Carpenters and Builders

### Convenient Tool Chest

To the Editor:

Perrysville, Ohio.

For several years I have been gathering many valuable kinks from your unparalleled paper, but as yet have never contributed anything to its columns; I have often thought I would, for very often in reading over some of the Brother Craftsmen's ideas thought I might add something and thus



Tool Chest Built by J. C. Smythe

help the good cause along, but simply neglected to do so.

I noticed lately some requests for a handy tool chest, and have also noticed some plans offered by different ones, so realizing that there is a demand for such an article, I am sending you a photograph of my chest, open, and closed. It



Chest Open Showing Arrangement

is one which I think is the handiest chest I have seen yet.

The lid holds all the planes, six in all, and any one of them can be taken out without disturbing another by simply turning a button. The brace also, and any one of the bits are taken out the same way.

This overcomes the disagreeable feature of having your planes and other tools mixed together in the bottom of the chest. There are two sliding tills sufficient to accommodate all the other small tools needed by any carpenter. There is also a saw till in the front of the chest which can be lifted out if necessary, which holds seven saws, any one of which may be taken without even touching another as they hang in slots which prevent them from injuring the points.

This is my original design and has been greatly admired by all who have ever seen it. It is a handsome case; I made it of select Cypress and finished it natural (Golden Oak), being paneled all around and trimmed in solid cast brass and with a combination lock so there are no keys to lose or forget. A chest like this would be worth \$25.00 at least, but the same plan can be adopted and made as reasonable in price as any ordinary chest.

J. C. SMYTHE,  
Building Contractor.



### Mr. Moorehead Sticks by His Figures

To the Editor:

Lexington, Mo.

Through another source I am in receipt of copy of a letter written by Mr. Wm. L. Munn, contractor and builder, at South Amboy, New Jersey (and published in the March AMERICAN CARPENTER AND BUILDER), in which he intimates that some figures which I recently gave on the cost of a house in this town are a juggling of the facts and figures. While of course I did not expect everyone to agree with what I had to say in that article, I shall in reply to Mr. Munn, through your columns if so obliged, say that what I said, and the figures which I gave therein were exactly true, that no deductions which Mr. Munn has made in his article disproved anything I said in the least.

Mr. Munn undertakes to figure upon the cost of a \$3000.00 house "without improvements" and the same kind of a house twenty-six years ago. I wish to ask who would build a three thousand dollar house today "without improvements"? No such house has been built in this part of the country, so far as I know, in recent years. People do not build three thousand dollar houses "without improvements" any longer. I stated in my former article that I had agreed to furnish the lumber bill for a specific house for \$900.00, which was only \$100.00 more than the bill figured at prices made by me twenty-six years ago. That is a fact, and it is a further fact that the lumber bill was sold in this house for \$800.00, one hundred dollars less than I offered it for, and it makes very little difference what prices Mr. Munn paid for lumber or building material in 1886 or 1912, and it is a further fact that the same bill figured up \$803.00 in 1886. These are facts.

Now, as to Mr. Munn's prices on lumber and building

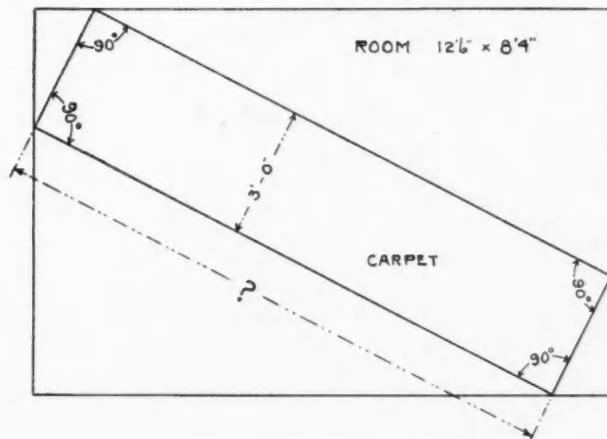
material, in his table for 1886 and 1912, I wish to say that at no time near the year 1886 was I able to buy lumber at the prices he gives therein, much less sell it, and I wish to say further that the prices which he gives for 1912 are out of all reason and proportion to the prices which I have been receiving for the last few years, including 1911, in this Missouri River Valley, which is supposed to be by Attorney General Wickersham, and others, the seat and head center of the so-called Lumber Trust. He figures hemlock timber at \$30.00 per thousand. We do not sell hemlock in this country at any price, it not being used as building material here. I have never at any time received any such a price as \$30.00 for white pine or yellow pine dimension, the latter being used here exclusively. He figures shingles at \$6.00 per thousand. I am selling the best sawed shingles today which have ever been manufactured, the 5 to 2 Red Cedar shingles, for \$3.75. Cypress or Western finishing lumber, \$50.00 per thousand, where he claims he is paying \$70.00. Lath for \$3.75, his price \$4.75. His price on doors and sash for 1912 do not materially differ from the prices received in this country, but at no time in my twenty-six years' experience in selling lumber have I ever been able to buy panel doors for \$1.25, or sash fit to go in a modern house for \$1.00, as he indicates he purchased them in 1886.

My statement still stands, that a house can be erected today without the modern improvements which everyone requires, within 10 to 25 per cent of the prices of 1886. And I further state that with all the modern improvements, which the modern house builder requires, such a house cannot be erected today if the lumberman, no matter where he lives—New Jersey or Missouri—should make the owner a present of all the lumber necessary to build the same. Mr. Munn should come West and buy his lumber. He is paying too much for it in New Jersey. I am thinking of moving my yard to New Jersey

J. R. MOOREHEAD.  
Retail Lumber.

✦  
**For the Mathematically Inclined**

To the Editor: Minneapolis, Minn.  
Enclosed find problem that I would like to see worked out in full by some of the brother chips. N. W. RUSSELL.



How Long a Piece of Carpet will be Needed?

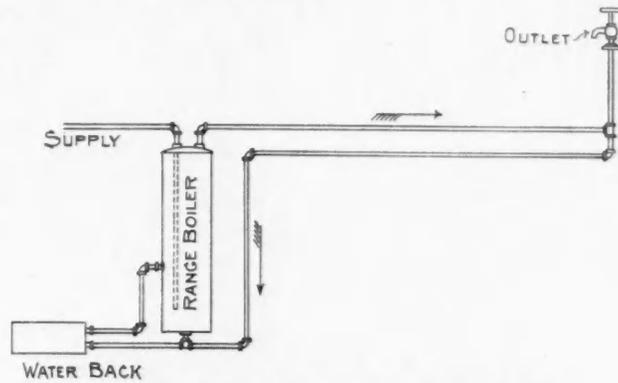
✦  
**Blue Vitriol and Salt**

To the Editor: Tekamah, Neb.  
As our friend, J. B. Robertson, has had some difficulty with nitric acid in marking tools, I would suggest that he try blue vitriol and common salt, equal parts dissolved in water, and apply in the same manner as the acid. I have used this preparation for a number of years and find it very effective.

L. C. COLEMAN.

**How to Arrange Water Pipes**

To the Editor: Philadelphia, Pa.  
The following plan may help Benj. R. Rush to get "Instantaneous Hot Water" on the second floor. It will require a return pipe which has a fall from the highest outlet. There should be traps in this line of pipe. The water will circulate



Piping to Keep Hot Water on Tap all the Time

through the system of pipes as long as there is hot water in the range boiler, and will remain hot up to the point where the outlets are taken off.

HENRY G. ORMSBY, JR.

✦  
**Plane Oiling Kink**

To the Editor: Monroe Falls, Ohio.  
I have been a silent reader of your valuable paper for nearly a year, and I think it is O. K. I saw something in a back number about oiling the plane. Now I wish to say that I think I have this plane oiling right up to snuff. I take the bits out of the plane and in the frog there are two set screws to adjust the frog with, and where those screws are, there are two pockets. Fill these up with some good fine packing or waste and keep saturated with a mixture of 1/3 coal oil and 2/3 machine oil. I use corrugated bottom planes, because I think the oil works to a better advantage on these. Brother carpenters try this and see how it works. E. J. SPRIGGEL.

✦  
**A Contractor Speaks**

To the Editor: Sterling, Idaho.  
I wish, as a subscriber to your most valuable paper, to take up the hatchet, so to speak, with Brother A. W. Warner. In reading the correspondence portion of the paper I find a good many of the Brother carpenters grumbling about the contractor. Now I have been a contractor for about fourteen years and in that time I have observed a good many things relating to contractors generally and I have my first one to see try the job of holding any carpenter back or, as Mr. Warner puts it, "putting his foot on him."

Most contractors encourage any and all who will half way show any desire, let alone ability, to rise in the trade. In fact it is my opinion the contractor is just as essential to the carpenter as the carpenter is to the contractor; and they should cooperate instead of fighting. I find in the West here that the older men are the best, both in mechanical ability and steadiness. I can put the older men on the job and if necessary go away feeling every thing will go all O. K.; but in dealing with the younger men I have to be constantly on hand to keep them going to avoid mistakes.

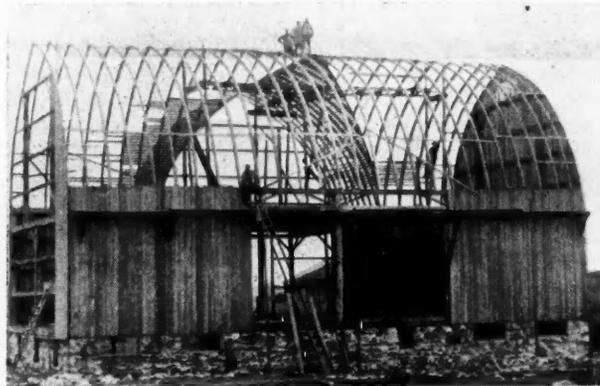
Wages here are from \$3.50 to \$6.00 per day, and it isn't always the contractor that gets rich. I have on some jobs made less money than my poorest paid mechanic. Let us be fair, one with another, and work for the best interest of all.

W. HAYES,  
Manager of Idaho Lumber Co.

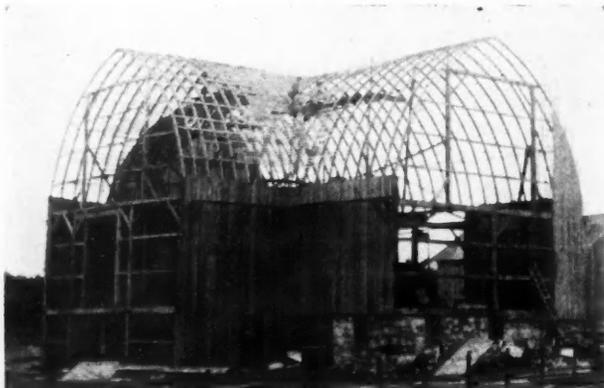
**T-Shaped Gothic Roofed Barn**

To the Editor: Highland, Michigan.  
 I send you herewith photograph and floor plan of the T-shaped Gothic roofed barn I built last spring. This is the barn I wrote about in the correspondence department last April, telling how I got the proper curve for the valley rafters, also how to get the lengths and cuts of jacks.

This is the finest looking barn I know of. ALBERT GONNE.  
 NOTE—In order to make this interesting subject more clear, we are republishing here a part of Mr. Gonne's previous communication with illustrative diagrams, showing how the prob-



Front View, Barn Built by Albert Gonne of Highland, Mich.



Rear View of T-Shaped Gothic Roof Barn

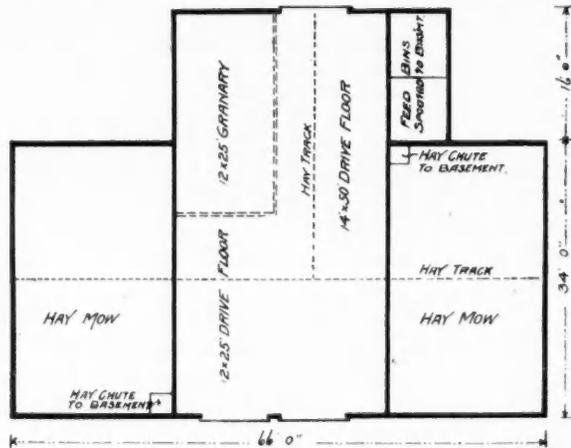
lems connected with the framing of this roof were worked out.  
 "The gothic roof for barns is a style that is going to become popular and in some sections a large number have already been built. I have already taken one large barn to build this year with Gothic roof, and this will have an addition on one side, same width and height as barn proper, making it necessary to frame valley and jack rafters and (by Heck) we can do that too. I am going to try to explain how I expect to get the shape, length and cuts of the various rafters used in the valleys.

"This barn will be 34 feet in width and the roof will have a rise of 19 feet above the plate line.

"In the February (1911) number I tried to show how I developed the rafter by bisecting from face of purlin and main plates and using a 24-foot radius. But for this barn I am going use the rise and run of roof, which will be more simple and easy to understand, but of course more figuring to get position of purlin plates.

"Fig. 1 shows how to get common and valley rafters. To

get lengths and cuts of jack rafters, the diagram will have to be spaced according to width and distance apart of the rafters (Fig. 2), and as many jack rafters of each length built as will be required. By squaring across face and under side of jacks from the parallel line on floor representing the thickness of rafters, and then marking diagonally top and side of jack, I will have the plumb cut of each, Fig. 3. You



Main Floor Plan of Barn

can readily see that each length jack will have a different plumb cut from the others.

"The same method will work for hips; and do not forget to reverse for opposite sides." EDITOR.

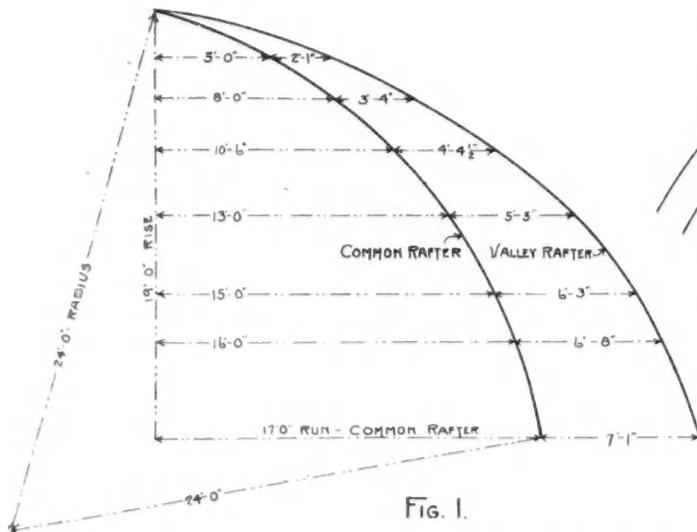


FIG. 1.

How the Rafter Lengths and Cuts were Figured

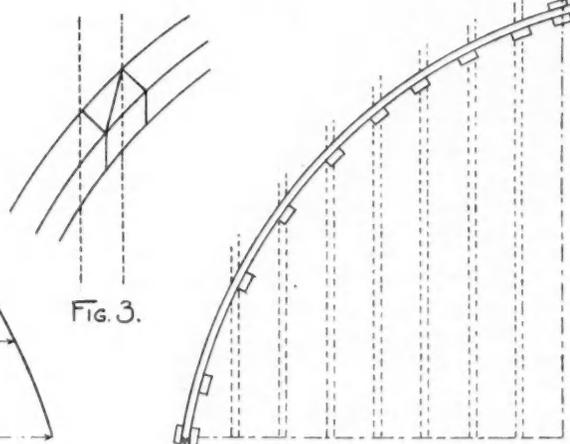


FIG. 3.

FIG. 2.

### Placing Concrete in Cold Weather

To the Editor:

Chicago, Ill.

Many builders will not allow concrete to be placed in any of their work when the thermometer stands anywhere around the freezing point. It is a little more expensive, but the ultimate result can be made to equal that placed in warmer weather.

The most satisfactory way has been to heat the water, but do not let it reach the boiling point. Boiling water has a tendency to kill the cement, and a very inferior grade of concrete will result. This heating of the water is satisfactory if the workmen will take pains that no frozen lumps of sand are thrown into the mixer, as it takes too long for the water to penetrate a quantity of any size sufficiently to drive out the frost. Combined with this, some contractors undertake to heat the sand and gravel before putting it into the mixer. This can be accomplished by steam pipes in the bottoms of the bins, or by using a 24-in flue and building a fire in it. This is expensive, and is not enough of an improvement over the heated water method to be recommended in view of the extra cost of installing a plant for the purpose.

When the work is brought to a point where the placing of concrete must stop for the time being, it is necessary to retain this heat to allow the surface of the concrete to set before it is nipped by frost. If only a canvas is laid over this, high enough to allow an air space of about six inches, it will produce the desired effect. This method works most satisfactory in heavy foundation work where the frost cannot penetrate the forms at the sides, thereby preventing any surface scaling. By this method the heat is retained in the concrete until it has enabled the initial setting to take place, by which time the concrete is entirely impervious to the cold.

It is sometimes preferable, because it will prevent surface scaling on walls above ground, to add salt or calcium chloride to lower the freezing point of the water. Authorities disagree as to the proper proportion of salt for this purpose, but the most conservative proportion is about ten per cent of salt to the weight of water. Care should be taken not to use a greater percentage of salt than this, for where appearance is an object, the wall would be slightly disfigured by the salt at times showing on the surface. Salt is inclined to retard the setting of the concrete, and for short periods will weaken it, but ultimately it becomes as hard as when no salt is used.

Another method is to erect a skeleton frame work and cover it with a tarpaulin to enclose the work, the high temperature being maintained by the use of stoves or salamanders. This is so expensive in most cases that it is not recommended, but there are cases where it can be performed more economically than by the method of heating the ingredients before mixing.

C. W. OLDER.



### Doesn't Swallow the Fast Shingling Stories

To the Editor:

Providence, R. I.

I am a new subscriber to your paper, but I read it all; like it very much. I noticed in the February number an article entitled "Some Fast Shingling." I wish I could believe it!

I have followed the carpenter business for the past 27 years as a journeyman and a contractor, and in all this time I have never seen a man who could lay 3500 shingles in a day and lay them properly—either to a line or a straight edge. When a shingle is laid properly it will be with the grain so as to shed the water, and the joint broken at least three courses, and have 2 nails in every piece. A shingle is supposed to be from 16 to 18 inches long and 6 inches wide, but they come from 2½ to 12 inches in width. Shingles over 7 inches should be split to make a good job.

Now if we average the width at say 4 inches there would be

about 350 pieces in a bunch. This would require 700 nails; and to lay 14000 or 40 bunches would require 28000 nails! To drive these in 8 hours would mean that the man nailing would drive 3500 nails per hour, or about 1 every second! He would have to keep this up all day allowing no time for shifting staging, lining off, or moving straight edge as the case might be, getting up shingles, etc. I think these people had better take more time, do their work properly, get paid for what they do, and not try to kill the business.

People read these articles and wonder why it is that shingling costs so much. We pay here from \$2 to \$3.50 per thousand to lay shingles, depending on the style of roof. I can lay almost as many as any ordinary man and I never laid more than 3 thousand in a day. I am not from Missouri, but from Providence, Rhode Island, and can lay some shingles. I have never yet seen two men lay (and lay properly) 7500 in any one work day of 8 hours. W. M. MACKENZIE.



### To Clean Emery Wheel

To the Editor:

Surprise, Nebr.

I would like to ask you or any of the readers of the paper if there is any way of taking the oil out of an emery wheel used for grinding tools. C. S. SCOVELL.



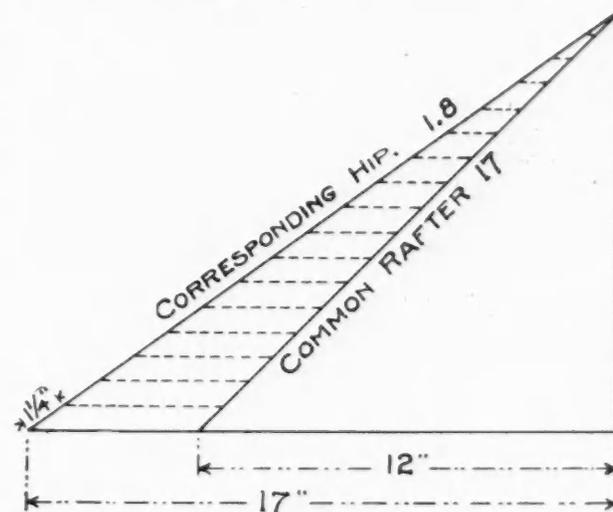
### Lockett Is Correct

To the Editor:

Novety, Mo.

In the December AMERICAN CARPENTER AND BUILDER, Wm. C. Jasbury gives his method of finding the corresponding rafter ends for hips and valleys. He says for every inch on common rafter, take 1 5/12 inches on the hip or valley and get it correct every time. Now, I would like to know how he arrives at such a result.

My way is to divide the length of the hip for 17 inch run by the length of common rafter for 12 inch run and the quotient will represent the proportional length per inch of the hip, to that of the common rafter. For example: take the one-half pitch roof; the hip rafter for 17 inch run is 20.8



For Getting Lengths

inches, and that of the common rafter for 12 inch run is practically 17 inches. Then 20.8 divided by 17 equals 1.223, or practically 1¼ inches. Then for each inch of the common rafter, measure off 1¼ inch for the hip or valley.

THOMAS LOCKETT.

Note: The method given by Mr. Jasbury is correct for brackets where they are set on a level and is probably what he had in mind. The accompanying illustration shows the method as described by Mr. Lockett. EDITOR.

### How to Construct a Gutter

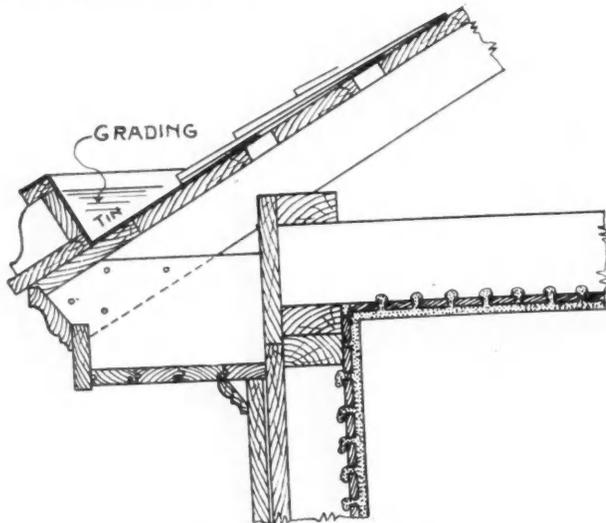
To the Editor:

Vassar, Kansas.

I have a house to build for a party, who wants a gutter, or eave trough, built on top of roof to come out to fascia mold, with back part to extend up under the shingles. Could you give me a plan, showing how to build it as I have never seen any constructed in that way. How much fall should it have and how connected to the roof?

JOHN W. REDENBAUGH.

Answer: The accompanying illustration clearly shows the construction of such a gutter. It is put on level and the incline, or fall, is formed by a false bottom on the inside of the gutter, as shown. This style of gutter works best where the roof is hipped in from all sides, as it does not allow for a neat finish on gable ends, but on a hipped roof, it forms part of the cornice and looks well. It has its advantage in having the shingles start above the gutter, making it an easy matter to repair or renew roof, since there are no shingles below or under it to rot out.



Eaves Gutter Construction

It is quite the custom to set the gutter from two to a half dozen courses, or more, above the eave; we have even seen them set so high that when a leak occurred, the water ran down on inside of the building, but with this construction, no such thing can occur. If it should leak, it cannot damage the interior, besides it catches all of the water that falls on the roof. It has its advantage in construction, for its simplicity. The carpenter can build it in connection with the cornice. He does not have to start the shingling and then build the gutter and another wait for a tinner to show up on the job to line it before he can proceed with the shingling. In short, its advantages are many and disadvantages none.

EDITOR.

### Raising Heavy Trusses

To the Editor:

Gary, Ind.

In reply to Mr. C. M. Radley's query of how to place heavy trusses, I will give the following suggestion:

Place your trusses inside of building with the center on the line of where the truss sits on wall. Of course they will be lying across the line. Then have your derrick set between the first two; make your hitch so the blocks will be sure not to come together or they will make you some trouble. When the truss is high enough to clear the wall it will be an easy task to swing it in place, then you must lift your derrick over the next truss or you will be obliged to take your derrick down to get it under the truss which is not easy to do. You can lift them with jin pole and tackle if

you have no derrick, but with it you should have a safety lift.

In reply to R. T. Kasten's query, of how to get the bevel of the staves of an 8-ft. tank, will say that the easiest way would be to make a circle and take the width of the stave and draw a line to the center. It would then give the exact bevel. Of course the width of the staves makes a difference with the bevel.

F. A. CRANDALL.



### Removing Blistered Paint from Weatherboards

To the Editor:

Latrobe, Pa.

I have an old frame house to re-paint, the old paint being badly blistered and cracked, the surface being very rough. I would like to know whether there is any way of removing the old paint but burning it off.

A. L. KUHN.

Answer: Yes, you can use concentrated lye, dissolve in water to form a strong solution. First, however, remove all the old paint you can by scraping, after which apply the lye. A mixture of the lye with fresh lime, making a paste, is even better than the lye alone. Paint removers, as sold in the store, are too costly for your purpose, nor would they prove as good as lye and lime, although the latter is an ugly stuff to handle, and care must be exercised not to get it on your flesh, particularly about the eyes.

A. ASHMUM KELLY.



### Getting Ahead in the World

To the Editor:

Wilburton, Okla.

I enjoyed very much reading the comments on "The Boy and the Hammer." I am one that believes that the carpenter trade is a trade worth learning. A man has as much opportunity to learn the principles of business as a carpenter as any other trade.

I will start out by saying that I believe mechanics are born; that is, some have inherited a natural inclination for mechanical pursuits, the same as the Jew has for merchandising; and boys with that natural endowment (if he is sober, painstaking, and industrious, and makes use of the present facilities for becoming proficient in his trade), will have lots of opportunity to become a contractor, architect, superintendent, or real estate dealer; and many fortunes have been made in each one of the above lines of business.

Of course his success from a financial point of view will depend on his judgment. Good business judgment is not guess work, but is acquired by hard study and observation. The habit of saving and properly investing same is the foundation upon which any poor man's fortune is made, no matter what his occupation may be. Saloons, pool halls, electric parks and picture shows don't go hand in hand with success.

My advice to a young man would be, never to be content with what you already know. Keep abreast of the times, not only as regards your trade, but of the affairs of the world generally. It will broaden your mind so you will be able to determine when fortune knocks at your door. Start a bank account at once, and when you have \$100.00 on hand invest or loan it out. If you are afraid of your judgment your banker will advise you. Not one banker in a hundred will advise you wrong. Your returns will be small but your investment will be safe. There are good, sound building and loan associations in almost every town in the country that will earn from 8 to 12 per cent. You can take out as many shares as you can conveniently keep up at \$1.00 per month per share, and if you get hard up for a time and can't meet your payments you can be carried on the books for the time being or can cash out. There are many other safe ways of investments for the wage earner.

But as my article is getting too long I will quit, hoping that what I have said will stimulate some discontented craftsman to greater activity.

J. P. McLARTY.

### Comment on Many Matters

To the Editor:

Stonington, Maine.

I wish to add my mite of appreciation for what we are getting from what you justly style "The World's Greatest Building Paper." I started with you with No. 1 and have not yet got a number that has not been well worth its cost to me; and I have got ideas from it that have brought me dollars. I consider the correspondence the best part of the paper. Exchanging ideas is good for us.

I would say to Mr. Cornell the screen door signs will tell him what to do. If he wants to learn the carpenters' trade he can be pretty sure of a fair position in life if he takes his lesson from the (Push) side. But if he is looking for million dollar paths, the (Pull) side is what comes in handy.

Ed Collins ironing board closet is a good thing, so is Olinger's method of cleating doors. Saunders and Welch, in regard to Jasbury—if you will show me a man who never made a mistake, I'll show you one who never did anything. He may not get everything right but on the whole he's a pretty good fellow. To the 10M shingling man—I have a man in my employ I expect to lay 25M tomorrow (on a cart). Gun, you're all right. A man can be a man without being driven to it. Shoot again.

I use Mr. Martin's method of mitering siding, but put a 2 by 4 2 inches from the corner on the flat, which gives me a nailing; then after cutting, put in a 2 by 6 from the other side of the corner and spike them together, making a strong corner and stiffer to work on.

How many have ever framed a house bottom with the sill  $\frac{3}{8}$  inch outside of the stud line, thus not only saving a row of boarding, but giving a good starting point for the boarding? I find sills last better too, put in this way, as the point of decay is between the boarding and timber usually. If you try this don't cut your flooring timbers too short; remember to add the  $\frac{3}{8}$  inch.

In regard to the better building. If you want to stand in well with the ladies don't be afraid to put a few extra \$ into better hardware. It pays.

H. B. SMITH,

Building Contractor.



### Necessary to Study

To the Editor:

Sioux City, Ia.

I have been a subscriber to the AMERICAN CARPENTER AND BUILDER for 3 years, and have read the exchange of ideas with pleasure and profit to myself. I have your books, "Framing" and "Details of Building Construction" and I find them very useful in my business.

I have this to say about books that pertain to our trade, most of the trouble is when a person gets a book pertaining to his trade he will read it over in a hurry, trying to learn all there is in it at once—which he cannot do. I would say to such a one if you will commence at the beginning of the book to study as well as read and go into your shop and take your steel square and a 2 by 4 or a board with straight edge and put into practice just what the book tells you, until you understand each one of the rules, and then take up the next and so on, you will find out that the book is all right. There is no author going to put his works on the market unless they are correct. All we have to do is to study them; we cannot expect to gain knowledge without study.

I want to give a little advice to the younger class of carpenters. What I want to say is this: If you have a good education in mathematics you have one of the main accomplishments necessary to the carpenters' trade. My advice to you is to procure one of the sets of books advertised in the AMERICAN CARPENTER AND BUILDER pertaining to the carpenter trade and study them well and put into practice what they teach. At the end of one year you will be surprised at the amount of knowledge you will have stored away for future

use, and in a few years' study and practice you will be able to handle any proposition that will come up in your business.

I admire Mr. Jasbury's "Shop Kinks." I have used some of them and they are alright, even if he did get a little off on the stairs business. We can all help one another by our exchange of ideas and advice. What our trade needs is more competent carpenters and less wood butchers.

F. N. MAPES,

Practical Carpenter.



### Wants a Good Paint

To the Editor:

Rockville, Ind.

We have a house in town that has been painted several times, and the paint is scaling off in flakes. We renewed the weatherboarding about eight years ago, and it scales the same. What is the best paint, and what is the best way to treat it?

H. G. HOWES.

Answer: The questions are not very definite, though the trouble with the old paint is. The old paint was bad, maybe; and maybe the wood was not in good condition. Maybe the painting was not done at a good time, and maybe the painter was not competent. However, it is not difficult to make a good paint, which should be formed from pure white lead and pure raw linseed oil, with just enough drying japan to make it dry within 24 hours. Some prefer to add from 10 to 25 per cent of white zinc to the white lead. Color also may be added. The paint should be strained, and left to stand, after mixing, for 24 hours. Never add any driers until ready to paint. It is quite possible to get a very good paint ready made, by getting that bearing the brand of some well known, reputable, paint making firm. It is also advised to get a first-class painter to do the work, and also to mix the paint, for a paint should be made to fit conditions that exist.

A. ASHMUM KELLY.



### A Flat Roof Question

To the Editor:

Russell, Kansas.

I have been a subscriber to your paper for some time. I have never taken advantage of the question department and if you or any of your subscribers can give me any idea as to how to build a porch roof that will be water tight with only about 4 inch fall to ten feet, it will be thankfully received.

I just completed the house last fall, except to build the



Farm Home of Mr. Jacoby, Which is to Have a New Porch

porch, which I expect to do this spring. The building is 40x40 feet; the porch will be built on three sides, and will have circular corners, cement floor and stone railing about three and one-half feet high.

This is a country house and enclosed you will find picture of same.

H. J. JACOBY.

Answer: A roof as flat as mentioned above, should be covered with tin. The boards should be laid close and of six inch flooring, or shiplap, and well nailed. It is a good idea to cover this with a layer of felt paper before putting on the tin for the purpose of deadening the sound of rain drops and also for the insulation of the hot sun rays on the tin.

As to the height of the porch rail, will say that three and one-half feet is too high. From 26 to 30 inches is the proper height for porches of this kind.

EDITOR.

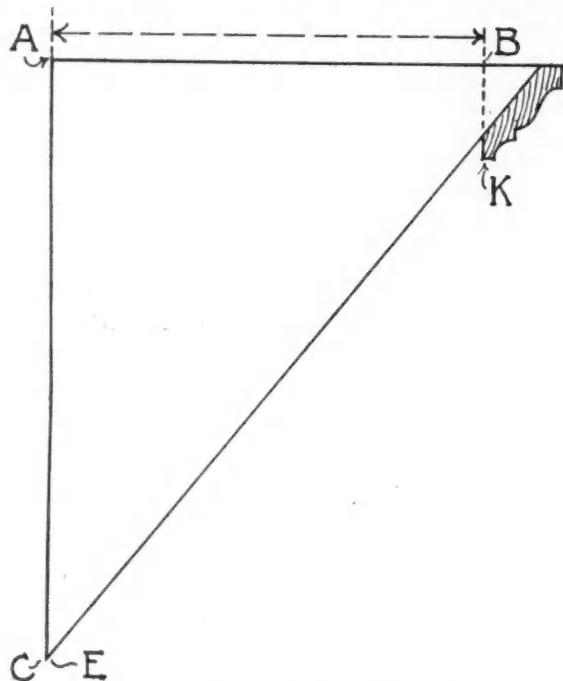
### To Make a Mould for Circular Work

To the Editor:

Topeka, Kansas.

In regard to D. A. Roberts' inquiry in the February number, I desire to give a method of making the crown mould mentioned by sawing a piece of circle mould to member with the straight mould. I have used this method for a number of years with moulds from a four foot radius upward, and it always gives perfect satisfaction.

Lay off to full size or scale the lines A and B. Make AC of indefinite length and make the distance from A to B equal to the given radius of the porch to the point shown. Set a piece of the straight mould to be used, in the position shown and outline it with a sharp pencil. Continue the line of the back bevel until it intersects the line AC, as shown at E.



Working Straight Mould to Circular Corner

The distance along this line from E to K, will give the inside radius of the mould. This piece of mould when sawed out to the radius found by this method and kerfed on the back, will exactly fit the porch or other part of the construction to which it is fitted.

In kerfing it is not necessary to go very deep; the kerfs should be made on radial lines but the distance apart varies with the size of the mould.

JOSEPH B. LODGE.

NOTE: Mr. Roberts' question was, how to kerf the common straight mould to work on a circular corner.

EDITOR.



### Five Questions Answered

To the Editor:

Troy, Penn.

To get bevel for tank staves is easy, if you know how. Take a thin piece of board, say 4 by 7 inches, lay it on your bench and strike a circle on it the size of your tank bottom, the convex side cutting the board about 1 inch from the edge farthest from your center. Then lay a straight edge from this segment to the center of your circle and mark along the edge over the board to the circular line. Carefully saw out the interior and you have your bevel. In using this bevel the circular part lies on the outside of the stave and the straight part gives you the bevel on edge of stave. This bevel will work on any width of stave within the scope of the bevel. But a new one must be made for every different diameter of tank.

To C. M. Radley I would say that I have always built my trusses on the floor and then hoisted them to place with a gin pole and crab.

Mr. W. L. Munn is onto his job regarding cost of lumber in building construction. Twenty-six years is a long time. I bought lumber at the mill for \$7.00 per M. then. I paid \$20.00 yesterday. I bought lath for \$1.25 then; they cost \$4.50 now, and all other lumber in proportion.

Regarding the baluster spacing I can't see where the size has any "butt in." Divide the space by number of balusters plus 1 and go ahead.

I think J. Selmer Lee can buy a car of cement from any manufacturer. They usually charge a contractor 5 cents more per barrel than they charge a dealer; at least that is the custom here.

C. J. CASE,

Contractor and Builder.



### Some Good Advice

To the Editor:

Milton, Iowa.

I have read with the greatest interest the March correspondence department; am amused and surprised at the variety of views in regard to learning the carpenter trade. Now I have been working at it 24 years and certainly think it's as good or better than any other trade, and there are lots of opportunities for men of all ages, if they will only fit themselves for better jobs, as there is always an opening for a good man.

As Bro. Hicks says, the carpenter has to furnish the brains for the rest of the push. I find I have to understand masonry, plastering, painting, etc.—in fact, every thing that enters into the construction of a building. I have all standard works on construction,—last but not least, "Radford Cyclopaedia of Construction," and book of "Details," and have read everything I can find regarding the building trades. I also read the ads of the different things used in construction; then put in practice what I read. In framing roofs I use Nichols framing square and by it any kind of roof can be framed very easily. I believe every man sets his own age limit, so I never expect to grow old.

So to all Bros. I say don't booze; but read, meditate, and put at work what you learn. People have got to have homes, and lets try to build better and consequently make everyone, including ourselves, wiser, better and happier. Every cloud has a silver lining and there is prosperity in store for the carpenter that knows and is sure of it.

W. M. WORKMAN,

Contractor and Builder.



### What Have You to Suggest?

To the Editor:

Petit Goane, Haiti.

Beg to announce to you the arrival of your book, "Details of Building Construction." Many thanks to you for your valuable present to your subscribers. It is a very up-to-date work for all those who are interested in the building operation from carpenter to architect.

Will the gentlemen allow me to say that it seems to me there is a field for the AMERICAN CARPENTER AND BUILDER to furnish information touching school and ecclesiastical architecture. Pray will the editors give a lending hand and thought toward inducing AMERICAN CARPENTER AND BUILDER readers to offer their ideas on works of this sort, from the school bench to the pulpit.

Sometimes carpenters and builders are called upon to execute something for the school or church and I am quite sure that details and ideas concerning same will be of great benefit to us all. I should be very glad to see some published correspondence on this matter and I believe others will too.

S. A. WILLIAMS.

### What Are the Principles of Dry Kiln Construction?

To the Editor:

Marshall, Ills.

I have received my paper regularly since April 1905, which was the first number. I look forward to its coming every month as I think it the best work of its kind published. At the conditions under which you offer it, no foreman or workman should be without it.

I am in planing-mill work now and am having trouble getting the lumber dried. Would like to have some of the AMERICAN CARPENTER AND BUILDER readers give me the details of the principles of a practical dry kiln. I would like one that would take care of from 5,000 to 10,000 feet per day. My location is a small town of 2500 that is not very modern.

MARTIN O. HENRY.



### Water-Tight Barn Floors

To the Editor:

Roachdale, Ind.

Should like to hear from you as to the best way to put a water-tight floor over basement of a bank barn. I want to make stalls on this floor and want plans as to the disposal of the water which would accumulate here and where to carry it out of building.

Have never before asked a favor through the columns of your paper, though I follow the answers printed each month.

Would like to have some light on this bank barn floor over basement proposition from other readers. I have never been called on before for a job of this kind.

J. R. GRIDER.

Answer: Either of the following plans can be used successfully and readers having further suggestions to offer on this subject are urged to do so.

One way is to lay a tight floor of  $\frac{7}{8}$  inch matching, then cover that, first with asphalt, about  $\frac{1}{2}$  to  $\frac{3}{4}$  inch and on that lay a  $1\frac{3}{4}$  inch matched floor. This floor should be properly graded so as to drain to a trough for carrying off fluids.

Another and possibly a better way would be to lay a rough floor on the joists and put on this floor 4 or 5 inches of good concrete, well laid down, not leaving more than 25 sq. feet in one block, using 1-inch expansion joints filled with pitch. This will keep the floor from cracking and will also be water-tight. There should be a gutter just behind the horses, and the floor should have at least  $\frac{1}{2}$  inch fall to each foot. The floor should not be troweled, but left rough, except in the gutter. Put on this concrete (after it has been down six or seven days) about 2 inches of clay. Wet it thoroughly and tamp it lightly into place. Clay is one of the best materials for horses to stand on.

If it seems preferable to have wood for the animals to stand on, lay a floor of rough planks somewhat open, over the concrete, leaving cracks wide enough so that all liquid will immediately run through to the concrete and be drained to the desired points.

EDITOR.



### For Marking Tools

To the Editor:

Lomax, Ill.

In reply to J. B. Robertson's inquiry regarding acids for lettering on steel, I have found the following produce desired results.

To write inscription of metals take  $\frac{1}{2}$  oz. of nitric acid and 1 oz. of muriatic acid. Mix, shake well together and it is ready for use.

For use on copper: 2 oz. of aquafortis and 5 oz. of water. Aquafortis is a dilution of nitric acid, the proportions being 1 oz. of strong nitric acid to 9 oz. of clear water. This makes the solution for copper usage really 2 oz. of nitric acid to 23 oz. of water.

For steel: Iodine 1 oz., iron filings  $\frac{1}{2}$  dr., water 4 oz.;

digest until the iron is dissolved. Cover that part of the iron it is desired to mark with melted beeswax. When cold write your inscription plainly in the wax clear to the metal with a sharp instrument. Carefully fill the inscriptions with the mixed acids, using a feather. In 1 to 10 minutes wash with water and clean off the wax.

GEO. F. MOORE,  
Carpenter and Joiner.



### For Oiling Tools

To the Editor:

Winnipeg, Canada.

Enclosed please find subscription from a new subscriber, who, after seeing the magazine and premium, didn't hesitate to become a subscriber.

I am sure we readers all value the plans published in the magazine each month, but if I may make a suggestion, I think plans of a small cottage to be built on a lot 25 ft. frontage, say about 20 ft. by 26 ft., would be greatly appreciated by my brother chips who would like to have a place of their own.

Here is a little kink which I haven't noticed anything about in the magazine, unless it was in one that I was so unfortunate as to miss. It is just a handy little rig for oiling tools or to dab a nail on before driving into hardwood. Procure a small tin box, say a shaving soap box, and fill with a piece of felt, which should stand a little above the sides of box, saturate with oil, and there you have a useful article and clean.

GRIFF THOMAS.



### Largest Livery Barn

To the Editor:

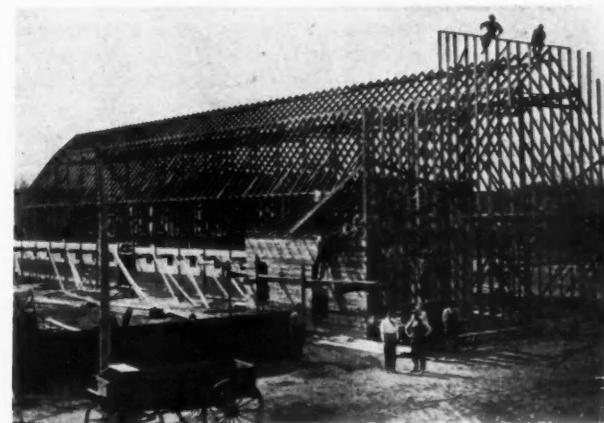
Valentine, Neb.

Enclosed find two postals of a livery barn, which I completed last August. I think it is the largest barn in north-western Nebraska. I like your paper just fine, and wouldn't be without it any more.

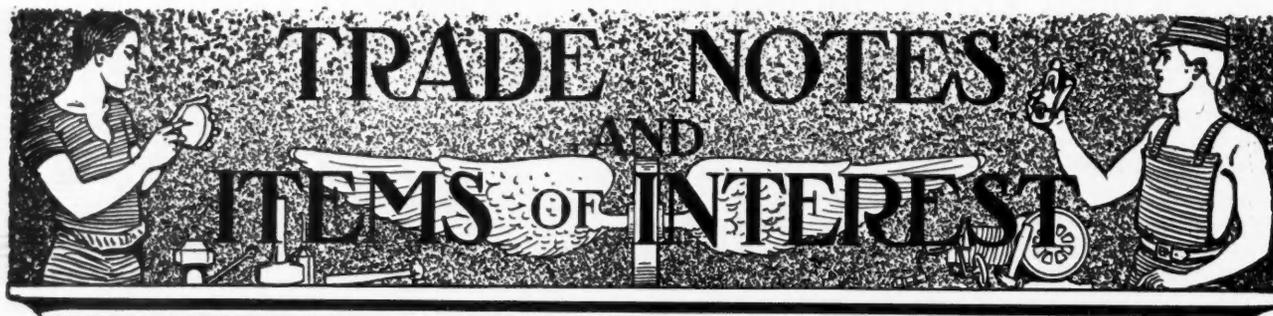
G. B. FEHMERLING,  
Contractor and Builder.



Livery Barn Nearing Completion



Framing for Large Livery Barn



### The U. S. Gravity Level

Here it is! Another candidate for popular favor! A labor-saving, precision instrument for building mechanics, a gravity level just brought out by The U. S. Gravity Level Company, of Toledo, Ohio.

This level is the result of many years of patient, persistent effort by the inventor to perfect a gravity level. His level will record upon a surface dial, positively, absolutely and accurately to the most minute fraction of an inch, the amount of which anything is out of plumb or level. This is said to be the only invention of its kind in the world.



Dial Face of U. S. Gravity Level

The arrangement of parts in this level is such as to make the level automatically indicate horizontal and vertical positions, and the angle of any deviation correctly, without any adjusting whatsoever.

It is simple in construction, and as the name implies, is operated by the laws of gravitation, as exemplified in a plumb-bob. This plumb-bob, or pendulum, is suspended from a shaft or arbor which rotates in three-disk roller bearings, journaled in a brass barrel. This arrangement of the pendulum, arbor and disk roller bearings produces, it is claimed, 75 per cent more power than is lost by friction. What is understood by this is, if one end of a level stock is raised one-sixteenth of an inch to the foot, the indicator will instantly move one-sixteenth of an inch on the graduated dial, which is graduated the same as a rule or square.

Fastened on the shaft, or arbor, is a multiple gear-wheel of brass in which are cut one hundred and fifty-teeth, so accurately spaced as not to vary one-half thousandth of an inch. The teeth of this multiple gear-wheel mesh in a pinion, and to one end of this pinion staff is attached an indicator, which points to the graduations on the dial, showing whether the work is level or plumb.

The many uses of this tool can not be told here; it has to be seen to be appreciated. The U. S. Gravity Level Co., Dept. H, 1341-48 Nicholas Bldg., Toledo, Ohio, are offering this tool to our readers under the positive guarantee of satisfaction or money back. They say "If you can part with it after you've used it, we'll take it back."

Send today for full descriptive matter and actual size picture of this improved level.



### Chance to Become Deputy Factory Inspector

The Illinois Civil Service Commission intends to hold examinations sometime during April or May of 1912 to fill present and future vacancies in the Department of Factory Inspection. Special examinations, open to men and women, will be held for each of the following branches of the Fac-

tory Inspection Service and applicant must indicate on application the examination he desires to take, viz:

**General Inspector:** Should have general knowledge of the text and principles of all laws enforced by the Department, including the Child Labor Law, Ten Hour Law for Women, Butterine and Ice Cream Laws, and laws for the protection and safety of persons in the construction and repair of buildings.

**Metal Polishing and Grinding:** Should have experience in metal polishing and grinding establishments and be able to detect infringements of the law relating to them and governing the carrying away of fumes and dust.

**Electrical:** Should have practical knowledge of electrical generating apparatus and methods in wiring and installation.

**Ventilation:** Should have both technical and practical training in ventilation and sanitation; understand the occupational disease law, be able to locate and analyze industrial poisons.

**Mechanical:** Should be especially experienced in shop work and be able to detect infringements of laws governing the protection of workmen about machinery.

**Structural Iron Work:** Should be experienced in building construction and able to supervise the construction of buildings, bridges and viaducts and the testing of all material and apparatus used in such work.

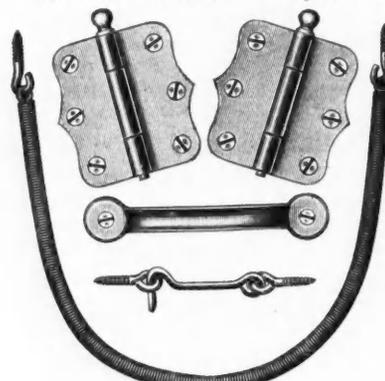
These positions will pay \$100. per month with necessary expenses allowed when traveling. Requests for application blanks and inquiries relative to the examination should be addressed to W. R. Robinson, Secretary of the Illinois Civil Service Commission, Springfield, Illinois.



### Stanley's Screen Door Sets

Practically all hardware dealers carry Stanley's screen door sets, which at this season of the year carpenters and builders will find particularly useful.

These sets consist of one pair of 3 by 3 ornamental loose pin butts to screw on the surface of the door; one 5 inch door pull strongly made and designed to fit the hand comfortably; one No. 3 steel wire spring of the highest quality; one gate hook and eye; together with necessary screw eyes and wood screws to put up the door.



Screen Door Set

Each set is packed neatly in a strong telescope paper box, which insures the complete set reaching the consumer in good condition, clean and free from rust.

The well known Stanley trade mark  is printed on the

labels and prevents the substitution by the dealer of inferior goods.

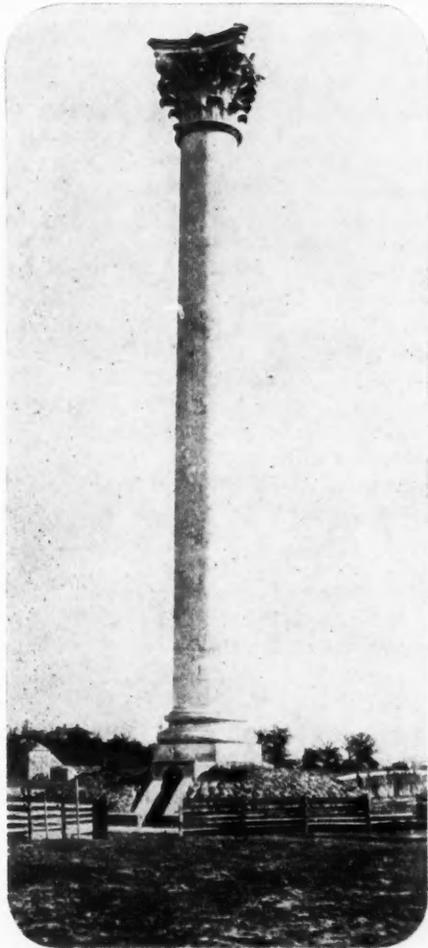
These sets are finished in Japan, antique copper or dull brass plate, or the new "Stanley" Sherardizing. The last finish is considered to be the best method yet discovered for preventing iron and steel from rusting and is particularly suitable for hardware exposed to the weather.

An attractive circular describing these sets will be mailed to any carpenter or builder who writes to The Stanley Works, New Britain, Conn., asking for circular "A."



### An Ornamental Water Tower

The city of St. Louis boasts the possession of what is probably the largest Corinthian column in existence. The strangest part of this is, too, that it is also the city water tower.



Largest Corinthian Column Water Tower,  
St. Louis, Mo.

When George I. Barnett, the well known architect, was called on to design this water tower, he chose to make it in the form of this monumental Corinthian column. It is a magnificent piece of work, one of the show points of St. Louis.

### A Practical Stirring Stick

The mixing stick shown in the sketch has better stirring qualities, says *The Colorist*, than the usual single stick, because the V-shape formed by the two flat pieces of wood draws the liquid to one point in the center, and forms two spaces behind the stick when it is kept in motion. The



Stirring Stick for Mixing Paints

liquid flowing through the opening between the sticks comes in contact with that passing around the outside, thus causing the unmixed portions to come together from both sides.

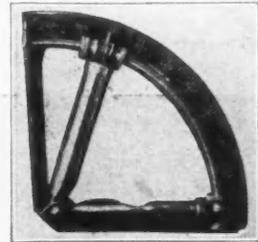
The handle part is made from a square block of wood turned on one end for a handhold. Two strips of wood are nailed or screwed to the sides of the square at right angles, allowing a space of one-half inch between them. The stick is easily made and will be found to be a great improvement.



### Weaver's Patent Adjustable Level and Plumb

A very handy little tool is illustrated herewith—Weaver's Patent Adjustable Level and Plumb, manufactured by J. D. Weaver, Jacksonville, Ill. It consists of a spirit level adjustable on a quadrant; it is accurate. It will be found serviceable for numerous uses connected with building, leveling, etc.

The manufacturer feels so much confidence in this tool, that he is putting it out with the guarantee that if the purchaser is not satisfied in 30 days, the tool can be returned and money refunded. We believe our readers will be interested in this proposition, and would suggest they write Mr. J. D. Weaver, Jacksonville, Ill., requesting full particulars on this adjustable level and plumb.



Adjustable Level and Plumb



### P. & F. Corbin Club Holds Annual Banquet "CORBIN QUALITY" SLOGAN FOR YEAR

"Corbin Quality"—that was the slogan adopted by the P. & F. Corbin Club at its sixth annual banquet held at Harry Bond's cafe in Hartford, Conn., Feb. 15th. Enthusiasm for that slogan permeated the atmosphere, and it was emphasized again and again during the course of the evening. The officials of the company and the "men behind the guns" out in the factory, who, together, make the "Corbin Quality" what it is, gathered around the festive board in the best of good fellowship. There was a general feeling of shoulder to shoulder co-operation to make P. & F. Corbin products occupy a still higher position in the world of hardware, if such a feat is possible. It is not difficult to understand why a concern is great when it is realized that every employee, from the highest official to the common workman, is just teeming with enthusiasm for the company. One of the speakers struck the keynote of the success of the house of Corbin when he said that it is not necessary to draw any lines between officials and workmen; all men who do honest work are masters.

The banquet far surpassed any of the previous similar occasions given by the club. The committee had orders to make arrangements for the "best dinner ever," and there is not the slightest doubt that they made good. About ninety men boarded the special car which left the Triangle at 7:07 for Hartford. Alighting at the cafe they were greeted by the members of the committee, who had everything in readiness. The following officials of the American Hardware corporation were given seats at the head table with Manlius H. Norton, president of the club: Charles H. Parsons, Charles E. Wetmore, Charles Glover, C. H. Baldwin and A. N. Abbe. Others at the head table were Charles B. Parsons, manager of the P. & F. Corbin division of the corporation, Clayton A. Parker, J. R. Fletcher, Fred Hausman, Philip Corbin, and special invited guests, including ex-Mayor Bryon Phelps of Seattle, the inventor of the unit lock, and Editor James H. Kennedy and Advertising Manager Blakeslee of the *Hardware Dealers' Magazine*.

The menu cards represented the acme of perfection of the printing department of the P. & F. Corbin division. The first two pages were devoted to handsome P. & F. Corbin monograms. A sketch of the office of the company and salutations for the banquet took up the next two pages. Then came full-page portraits of prominent officials of the corporation and company as follows: Charles M. Jarvis, Charles H. Parsons, Andrew J. Sloper, Charles E. Wetmore, Charles Glover, Carlisle H. Baldwin, Albert N. Abbe, Charles B. Parsons, James R. Fletcher and Frederick J. Hausman.

The large photographs were reproduced at the top of each page, while the lower portion of the page was given over to a delicately worked-out sketch of each official in characteristic pose at his desk.—*New Britain Daily Herald*.



### Large Manufacturers of Metal Ceilings

The Indianapolis Corrugating Company are manufacturers of metal ceilings upon an extensive scale. They are exceptionally well equipped in every particular for this class of



Strong "Indianapolis" Design

work and have been highly successful in developing it to large proportions. They have many very attractive designs for ceiling use—not one of which is in any way obsolete. Their ceiling plates fit accurately and are easy to install.

The material used for the manufacture of these plates is a specially prepared steel. It is extra soft annealed to allow of deep, clear, stamping and has the necessary toughness to keep it from breaking under the hammer. Their plates are trimmed close to the bead, leaving no rough edges to mar the ceiling. Beads fit perfectly and snugly and the joints they form are almost imperceptible.

Another feature of the ceiling plate manufactured by this company is that the plate is prime coated after the hammering and trimming is done. This method prevents any rusting and also gives a smooth surface for finishing coat. The company claims this gives, and is, a much more satisfactory plate than can be obtained through painting before hammering is done.

The use of metal ceilings seems to be greatly extending. When properly installed they most surely present an attractive appearance and in addition to this essential feature are thoroughly durable and can be kept clean very easily. When the type of construction will permit their use, the tendency seems to be to adopt them. The Indianapolis Corrugating Company have shipped material for ceiling use to practically every point in this country and they report entire satisfaction has always been obtained by those for whom this has been installed.

This company are manufacturers of everything in sheet metal building material, their big line including steel ceilings, eaves trough, conductor pipe, roof gutters, crestings, cornices, metal shingles, ornamental sheet metal work, tin plate, metal roofings and sidings, black and galvanized sheets and general metal accessories.

Their special catalogue B, upon Metal Ceilings or their various other descriptive matter, detailing their complete line, can be obtained by writing them at Indianapolis, Indiana.

### American Hardware Corporation Holds Annual Meeting

Stockholders of the American Hardware Corp., held their annual meeting Feb. 28 in the offices of the P. & F. Corbin division, New Britain, Conn. Immediately following the stockholders' meeting, the directors who were elected repaired to the sumptuous new executive offices of the concern in the Stanley residence at the corner of Park street and Franklin Square, and the new office building was formally opened with a meeting of the directors, at which officers for the ensuing year were chosen.

In the absence, because of illness, of the president, Colonel Charles M. Jarvis, First Vice-president Charles H. Parsons was in the chair at the annual stockholders' meeting. A very satisfactory report of the board of directors covering the activities of the past year was presented and accepted, and the proposed change in the by-laws adopted. The following were elected to constitute the board of directors for the corporation for the coming year.

Charles M. Jarvis, Andrew J. Sloper, Charles H. Parsons, Charles Glover, Sylvester C. Dunham, Frederick P. Wilcox, Charles Miller, Benjamin A. Hawley, Carlisle H. Baldwin, James S. Elton, Henry H. Peck, Charles F. Smith and Charles L. F. Robinson.

James P. Greer was then appointed auditor of the corporation, and A. N. Abbe purchasing agent, after which the meeting of the stockholders' adjourned. The members of the board of directors then repaired to the president's office in the new executive building, and there held their meeting for the election of officers.

The result of this election follows:

President—Charles M. Jarvis.  
 First Vice President—Charles H. Parsons.  
 Vice President—Charles Glover.  
 Vice President—Benjamin A. Hawley.  
 Vice President—Carlisle H. Baldwin.  
 Treasurer—Charles E. Wetmore.  
 Assistant Treasurer—Isaac D. Russell.  
 Secretary—Andrew J. Sloper.  
 Assistant Secretary—Charles B. Parsons.  
 Purchasing Agent—A. N. Abbe.



### Ornamental Concrete Illuminating Standards

The latest and highest development of the ornamental illuminating standard has resulted in the reinforced granite illuminating standard since in this can be readily combined beauty, utility and economy.

The artistic possibilities of reinforced concrete ornamental light-standards are practically unlimited. The Doric design illustrated opposite is a good example of what can be done. This standard was produced by the Pettyjohn Company, of Terre Haute, Indiana, and represents perhaps the highest development of the reinforced concrete standard. This standard has the granite finish, with all of the appearance and durability of granite.

In point of economy, it may be said that the cost of the ornamental granite concrete standards at Terre Haute is about one-tenth of the cost of natural granite, and about one-half the cost of cast iron. The freedom from painting and other repairs puts them in a class quite alone as to cost of maintenance.

Because of its many advantages, the ornamental reinforced concrete illuminating standard has come to us to stay. The sooner the advantages are studied and appreciated by those interested in civic improvement, the more artistic, the more durable, and the more economical will be the plans for beautifying the cities, parks, boulevards, streets, and residential

districts which are the objects of their endeavor.

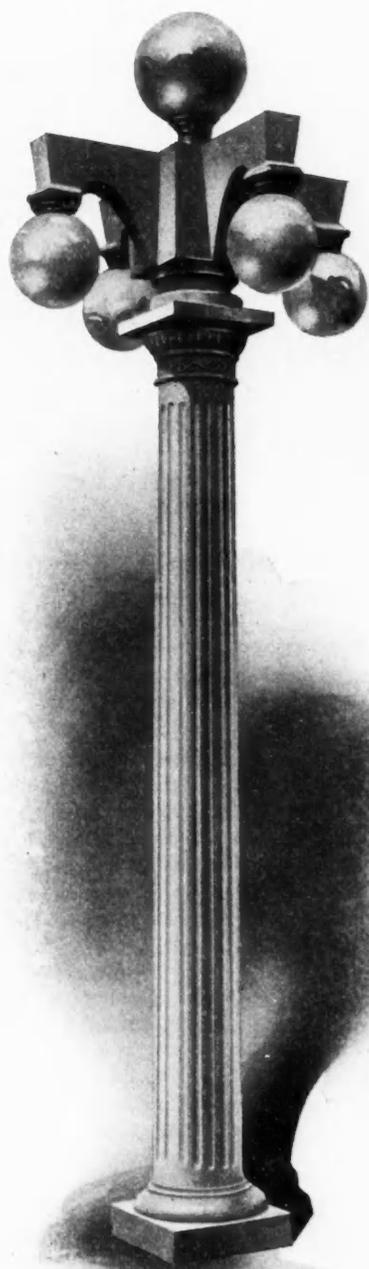
The standards here shown are moulded in heavy, substantial cast-iron moulds, from material of a special formula containing actual crushed granite which has been developed by the Pettyjohn Company after many years of experience in connection with the manufacture of ornamental concrete products. All members are reinforced during the process of manufacture, four corrugated bars of 1/2-inch diameter being used longitudinally, and seven 3/8-inch-diameter corrugated bars, bent to a circular shape, being placed horizontally a foot apart. The standards are moulded hollow so as to permit of the insertion of gas-pipe, electric wires, and conduits; and, when erected, this central space is filled with slush concrete and reinforcing rods, so that the standards are then solid and strengthened with three distinct systems of reinforcing, some of which run from the standard itself into the foundation, thus giving great strength and stability to the standards, and

effecting much economy in freedom from breakage of globes and of the filaments in electric bulbs.

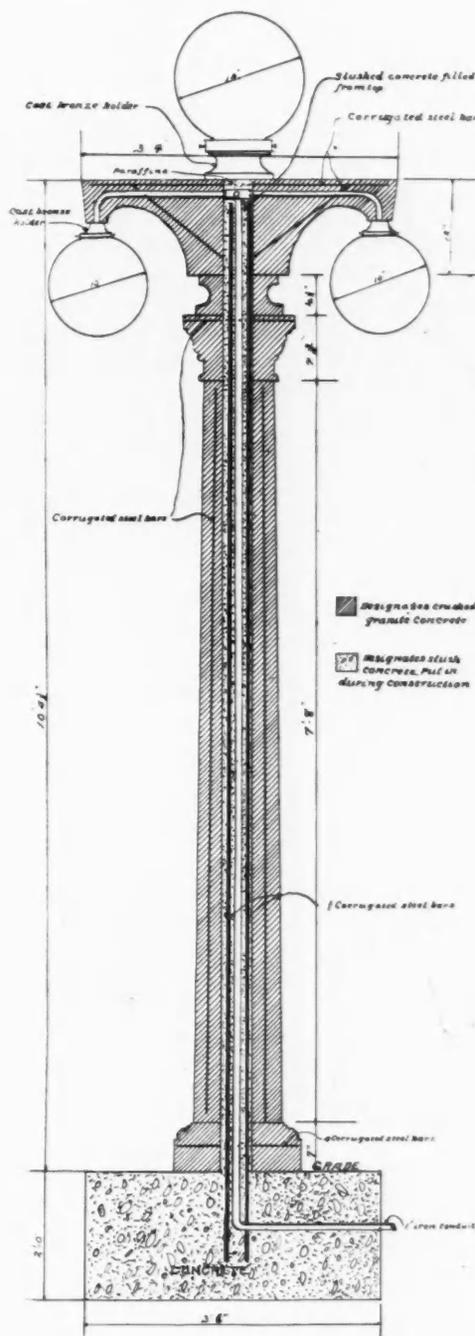
In the manufacture of the standards, after the moulds are removed, they are given a surface treatment which brings out the life, sparkle, and glisten of the natural granite; and later they are given another surface treatment which has the effect of rendering the standards thoroughly waterproof, sealing all the pores, and still further increasing the hardness of the exterior surfaces.

While but one design is here illustrated, the company has numerous other stock designs, and, in addition to this, is prepared to make standards in special designs and sizes with various surface textures, so that the possibilities are almost unlimited.

The Pettyjohn Company, Terre Haute, Ind., have issued an attractive booklet entitled "Ornamental Illumination," which will be mailed gratis to interested parties.



Pettyjohn Concrete Lighting Column. Doric Design With Five-light Cluster



Sectional View of Column. Showing Detail of Construction, and System of Reinforcing

**Pennsylvania Vanadium Steel Saws**

One of the largest manufacturers of hand saws and the only company making Vanadium Steel High Speed hand saws, is the Pennsylvania Saw Company of Frackville, Pa. Their line is very complete and includes various types of hand, panel and rip saws; compass saws; pruning, compass and keyhole blade combinations. All of their saws are manufactured from Vanadium steel and are hardened and tempered by a secret process owned exclusively by this company. Their claims for their saws are many.

The use of Vanadium in saw manufacturing, gives, so the



**High Speed Hand Saw of Vanadium Steel**

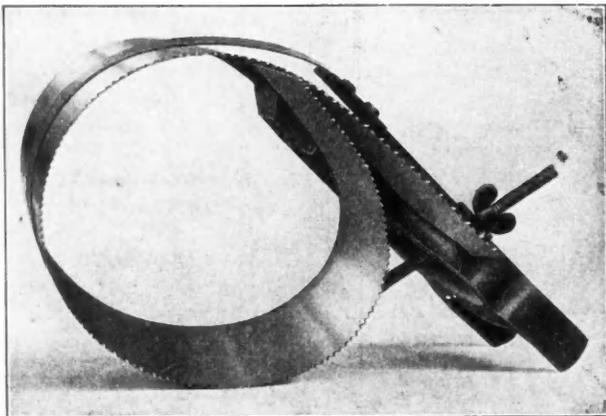
company asserts, the maximum attainable efficiency in speed and excellence of cutting. Any one of their saws can be easily set without breaking the teeth, and they do not require sharpening as often as saws made from other steels. They retain their keen cutting edge very long.

This Vanadium steel used in these saws is very close, tough and ductile and can be tempered perfectly. Considerable experimenting and experience in the use of these saws has conclusively proven that they will save any user much time and require very little care to maintain them in the best of working condition.

Illustrated here are two of the Pennsylvania's Vanadium steel saws. One indicates the strength and flexibility of the blades of these saws; when released this blade returns to its natural position and shows in no way that it has been subjected to such strain.

The other illustration shows one of their high speed hand, panel and rip saws. This saw has extra thin back, highly polished blade and carved handle.

Pennsylvania saws will constantly hold up under work



**Interesting Test of Pennsylvania Saw Co's. Vanadium Steel**

carrying them through nails and various gritty coverings without the necessity of constantly filing and setting them. They will cut through inch gas pipe several times before requiring filing and setting.

This company issue a very attractive booklet upon the saws of their manufacture. A copy of this catalog can be had for the asking. Address Pennsylvania Saw Co., Frackville, Pa.

**Prominent Cement Manufacturer Dies**

It was with extreme regret that we observed the death of Mr. David D. Drummond, announced in the Chicago press of March 9.

Mr. Drummond was one of the early cement manufacturers in the Middle West, his connection with the Chicago Portland Cement Company, of which he was latterly Vice-President and Manager, dating back fully thirteen years. An enthusiastic and untiring worker, he was always a prominent figure at the meetings of the Association of American Portland Cement Manufacturers, and during his entire lifetime was

also actively interested in the work of the National Association of Cement Users and kindred bodies.

For the past few years, Mr. Drummond had experienced very indifferent health, and was occasionally compelled to sojourn in the South. Recently his health showed some improvement, admitting of a brief trip to the Panama Canal Zone, while his presence at the recent Chicago Cement Show was very gratifying to his wide circle of friends.

Born in Scotland, Mr. Drummond lived in this country since his boyhood. He died in his 52d year, and is survived by a widow and three sons, Douglas, Ralph, and Kenneth. The funeral service was held March 11, at the residence of Mr. Norman D. Fraser, 2928 Washington Boulevard, Chicago, and interment was at Rosehill cemetery.



**Competition for Concrete Houses**

An interesting competition is being advertised by the Blaw Steel Centering Company, Pittsburgh, who offer six prizes ranging from \$100 to \$25 for the best plans and specifications for small poured concrete residences. Designs must be in their hands by May 15th.

The competition is to be conducted under the rules of the American Institute of Architects, and it is open to everybody. It is stated that awards will be made on the basis of merit, it being the desire of the Blaw company to have presented for the consideration of owners, suggestive designs that will give the greatest value for the expenditure, and also new ideas tending to stimulate the construction of poured concrete houses.

Following the award of the prizes the plans of the successful contestants with names and addresses will be published in a booklet which will be given wide circulation among prospective builders to encourage the construction of concrete houses.

The basis for estimating cost on these poured concrete houses is interesting. A detailed estimate of cost must be given in each case, the following unit cost being assumed for the concrete work:

Reinforcing steel in place, per pound.....	\$0.03
Concrete in place, exclusive of forms, per cu. ft..	.20
From cost where Blaw Steel Forms are used	
per sq. ft. ....	.01½
Form cost where wooden forms are used, per	
sq. ft. ....	.15

Those interested can obtain full information concerning the submission of drawings, etc., by addressing the Blaw Steel Centering Company, Pittsburgh, Pa.

## Open Air Schools

By W. H. Radcliffe

Open air schools have become an established part of the educational facilities provided for physically defective school children.

Starting in a small way a few years ago in Chicago, with a group of limp, pallid and physically blighted children, the success of the movement was evident after only a month's trial when it was discovered that their weight had increased by an average of four pounds each. That favorable recog-



Open Air School on the Roof of the Boys' Club, Hull House, Chicago, Constructed Entirely of Fireproof Materials Supplied by H. W. Johns-Manville Co., Chicago

nition and approval have been given this new method of education is evident from the open air schools now in successful operation in Chicago, Providence, Boston, New York, Brooklyn, Pittsburgh, Cambridge, Rochester and Hartford.

The fact of the matter is, that we are in the midst of a gradual change of conception regarding our duties to school children. Schooling under conditions injurious to health makes assimilation of knowledge difficult, and sometimes impossible. Experience shows that different methods must be used with various groups of children to secure the best results—that the application of one system to all works injury to many.

Children with tubercular tendencies, as well as anaemic and debilitated children require all the fresh air and sunshine they can get. To place these children at a rigid desk in an unnatural position in an overheated school-room with the dried air sapping their already wilted systems, and the windows rarely open, is not only injurious to them but renders their minds dull, feeble, and inactive.

Mental and physical progress under these conditions is impossible, and to provide a suitable remedy is the object of the open air school. Here in the open air a proper adjustment of hours is given for study, rest, and recreation; and there is a thorough medical inspection service, and ample provision for a liberal diet. Through these means, conducted in part by the public schools, and in part by tuberculosis institutions and public health associations, hundreds of physically deficient pupils are being improved bodily as well as mentally.

One of the more recent open air schools is that on the top of the Boys' Club at Hull House, Chicago, shown in the accom-

panying illustration. In addition to the pupils, the Chicago Superintendent of Schools, the Dean, and the Health Commissioner are present in the group. Special interest is centered in this school by reason of its fireproof construction.

Over the original roof of the school building, a J-M Asbestos Built-Up Roofing, serves as the floor. This is an all-mineral roofing, built-up on the roof of successive layers of pure asbestos felt and genuine Trinidad Lake asphalt. Being composed entirely of minerals, it never needs painting, and is fire-proof, rust-proof, acid-proof, gas-proof, heat-proof and cold-proof and is especially recommended for flat surfaces. It was used in this particular case as a flooring on account of its great durability.

The sides of the enclosure are built of J-M Transite Asbestos Wood,—a material that is all-mineral in character and made from asbestos fibre and Portland cement. It has similar physical characteristics to ordinary wood but is absolutely fire-proof. It was used as siding in this open air school on account of its fire-proof qualities, the small space it required, and because it is practically unaffected by weather conditions.

The roof covering on the remainder of the building, which can be seen at the edge of the enclosure, is J-M Transite Asbestos Shingles. These shingles are composed of asbestos (rock) fibres and Portland cement—two minerals—molded into a homogeneous mass under hydraulic pressure. The fact that it is impossible to ignite or burn these shingles, coupled with their weather-proof and lasting qualities, led to their being used here.

All of the J-M fire-proof materials used in the construction of this open air school were supplied by the H. W. Johns-Manville Company, Chicago.

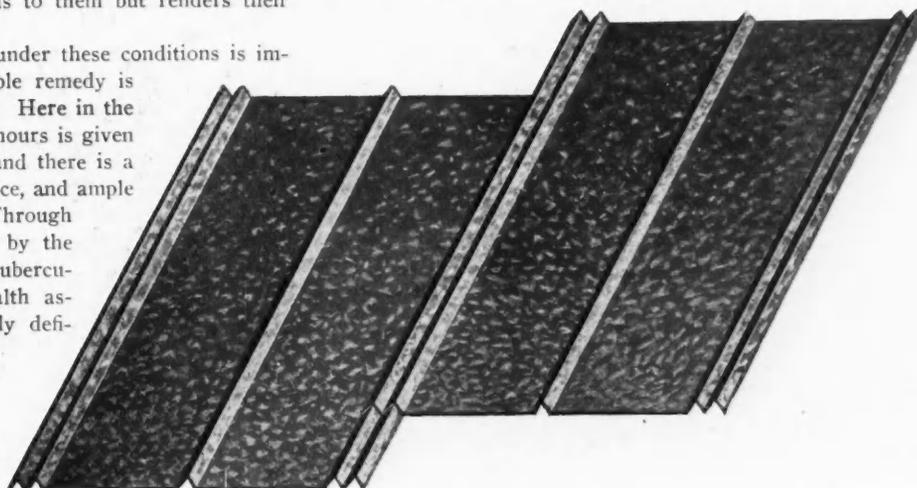


## "Justright" Metal Roofing

A particular feature of the "Justright" galvanized roofing which is manufactured by the large sheet metal building material firm—The Moeschl-Edwards Corrugating Company of Covington, Kentucky—is that no wood strips are required in applying it.

Sheet metal roofing continues to grow in popularity and manufacturers of this sort of material claim a great portion of its added use is due to the knowledge that buildings covered with sheet metal have never been known to have been struck by lightning, which fact, coupled with its many other recognized merits, viz., moderateness of cost, ease of application, fireproofing qualities, etc., etc., make it a highly practical roofing for any type of construction.

The Moeschl-Edwards' "Justright" galvanized roofing is made in lengths of from 5 to 12 feet, 24 inches in width.



"Justright" Galvanized Roofing Made by The Moeschl-Edwards Corrugating Co.

The accompanying illustration of two lengths indicates clearly the entire idea of construction and manner of applying this very successful roofing.

The purpose of the two Vs at the sides is for the second V to act as a water guard. If water should pass or be driven by high winds over the first or outside V (as is often the case in common V Crimp), it is impossible for it to pass the second V. "Justright" Roofing is applied without wood sticks. The nails are driven through the top of the first or outside V. The Vs are rigid enough that this may be done without mashing them down. This roofing is very easily applied. Anyone who can drive a nail can put it on. No special tools required. It is adapted to roofs of both high and low pitch. The center V adds rigidity to the sheet and affords a place for additional nailing, thus overcoming all rattling. As "Justright" Galvanized Roofing is more rigid than common V Crimp, sheeting-boards may be placed farther apart, thus decreasing the cost of the frame structure and reducing fire risk. With this roofing the company recommends the use of their "Never Rust" galvanized nails.

The Moeschl-Edwards Corrugating Company, Covington, Ky., will forward descriptive matter concerning their "Just-right" roofing and many other sheet metal products to all AMERICAN CARPENTER AND BUILDER readers addressing them.



### Van Wie Tile Construction for Carpenters

The accompanying illustration shows a model modern home being erected at Hammond, Indiana, with Van Wie hollow tile. This is only one of several houses being built from this new novel building material. The tile are very similar to ordinary drain tile. They are eight inches in diameter and twelve inches long. In each end of each tile slots are cut three inches deep and one and one-half inches wide. There are four slots in both ends of each tile, all slots being an equal distance apart.

In putting up the wall the tile are interlocked by means

of these slots, making a very substantial wall and furnishing a dead air space which is conceded to be a great advantage in building construction. After the tile are laid in the wall they are stuccoed outside and in, furnishing an unusually strong stiff wall. The inventor claims a number of advantages for these blocks over the ordinary hollow block, and especially so where the ordinary block is set on end, in which case there is only the narrow web to furnish a thin mortar joint, while in the Van Wie tile the interlocking device is sufficient alone to make a substantial wall, and the stuccoing is an added strength feature. The contractor building these homes says that a house of this type will cost about the same as a frame house of the same size and that a Van Wie hollow tile house can be built at ten per cent saving over the ordinary brick house.

Mr. Van Wie makes a particular claim for his tile in the construction of silos. The play in each slot is just sufficient to allow a complete circle to be made on a diameter of eight feet.

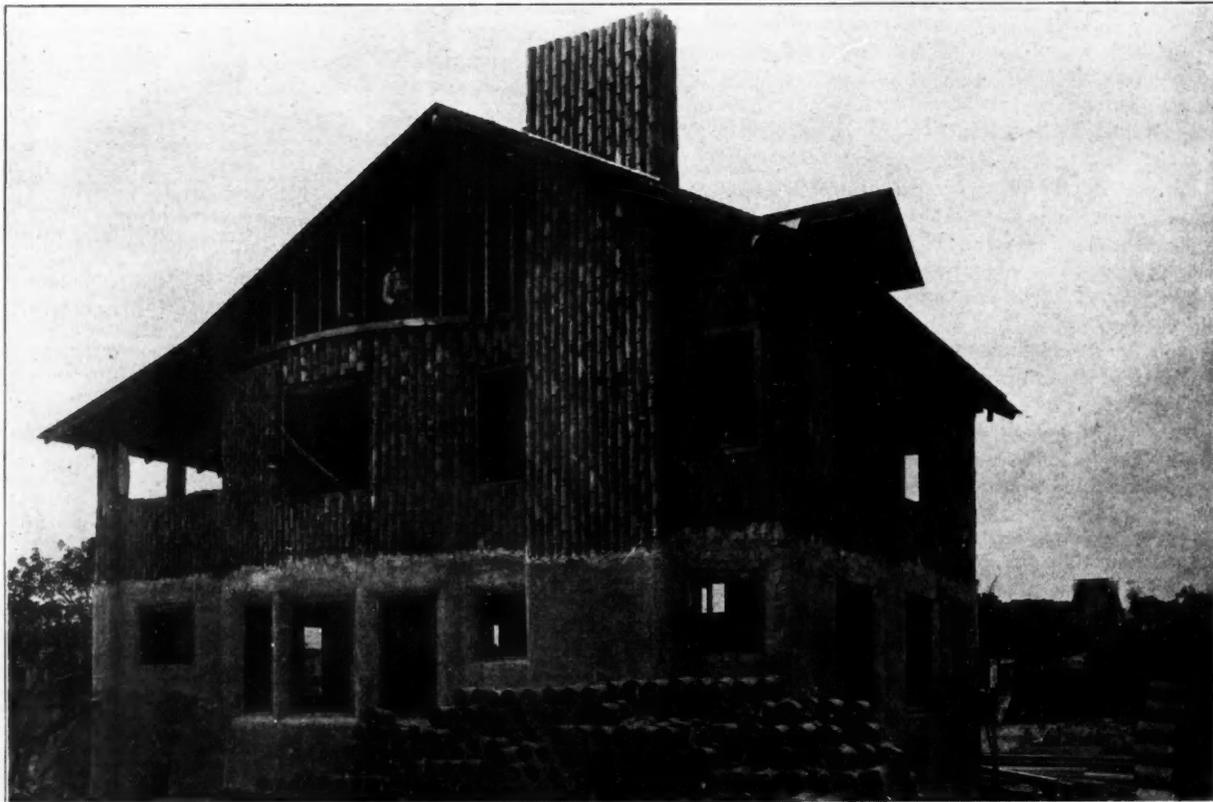
Elmer E. Van Wie, of Kenosha, Wisconsin, who owns the patent, sells yard rights for the manufacture of these tile on a royalty basis.



### Valuable Book Free

To the lover of nature, no sight is more beautiful than the snow-laden landscape as viewed in the sunshine of the morning after a heavy snow-storm, but to the electrician such a sight is suggestive of trouble. He knows that the burden of snow, beautiful though it may be on the branches of trees, imposes a load on the electric wires which will severely try their strength and the strength of the poles supporting them. Many such wires, strung across roads and fields carry deadly voltages, and the fall of one of them may endanger the safety of people and property. Their security, therefore, is a matter of great consequence.

In "Mechanical Stresses in Transmission Lines" by A. Guell,



House at Hammond, Ind., Being Constructed of Van Wie Hollow Tile. The Carpenter and Builder Simply Stacks up the Tiles, Setting Door and Window Frames and Hooking in Floor Joists as He Goes Along. Cost is Very Low.

# Save 50% on Your SCREENS!!!

## Western White Pine Screen Doors and Windows

Gordon-Van Tine Screen Doors and Screen Windows are unusually solid and substantial. Made from best Soft Western White Pine, specially kiln-dried and yard-seasoned. Artistic styles.

**Doors** have very wide side rails and heavy supporting rails. Will not come loose at the joints. Put together with secret blind tenons. All sizes carried in stock for quick shipment. Note the low prices. Our **SCREEN WINDOWS** are solid, well made from best Soft Western White Pine, with highest grade screen wire.

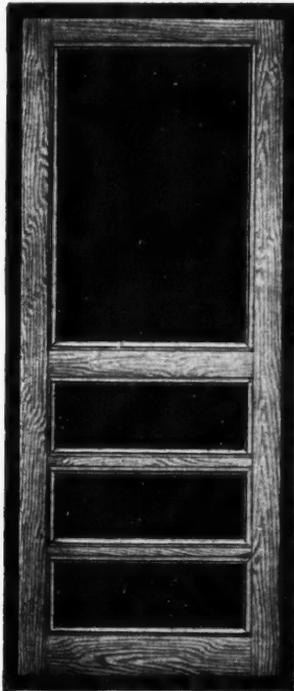
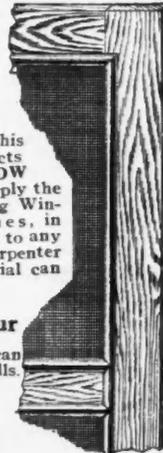
**Superior Workmanship, Highest Grade Materials and QUICK SHIPMENT Guaranteed!**

**It Pays Big  
to Build Window Screens from  
Ready-to-Use Screen Material**

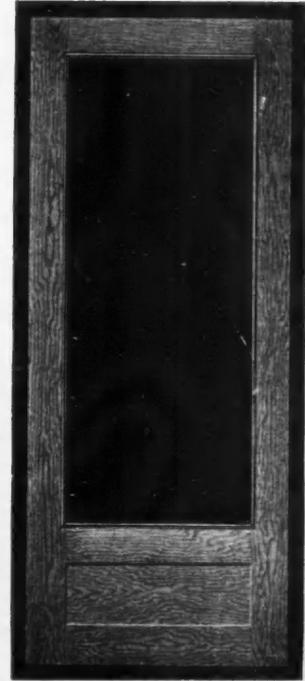
**No. E 303**  
Made of best Western White Pine. Filled one coat, varnished one coat. Furnished in Bronze, Galvanized or Black Wire Cloth. 1 1-8 inch thick.

	Black Wire	Galva- nized Wire	Bronze Wire
2- 8x6- 8...	\$1.59	\$1.83	\$2.34
2-10x6-10...	1.77	1.94	2.52
2- 8x7- 0...	1.82	1.99	2.57
3- 0x7- 0...	1.85	2.00	2.63

Make big money this spring taking contracts for building **WINDOW SCREENS**. We supply the material for making Window Screen Frames, in strips, ready to cut to any desired size. A carpenter who uses our material can easily make **6 to 10 Window Screens Per Hour**



No. E 303



No. E 306

Made of best Western White Pine. Filled one coat, varnished one coat. Furnished in Bronze, Galvanized or Black Wire Cloth. 1 1-8 inch thick. Side rails 5 1-2 inches wide.

	Black Wire	Galva- nized Wire	Bronze Wire
2- 8x6- 8...	\$2.00	\$2.30	\$2.65
2-10x6-10...	2.12	2.42	2.77
2- 8x7- 0...	2.13	2.43	2.78
3- 0x7- 0...	2.20	2.50	2.85

Put in a few hundred feet of the items listed below and you can turn out finished screens for less money than local planing mills.

### Prices on "Ready-to-Use" Strips

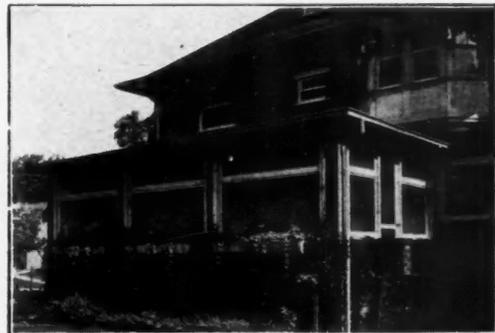
Top Rail and Side Rail, per 100 lineal feet	\$0.88
Grooved Stile, per 100 lineal feet	.88
Bottom Rail, per 100 lineal feet	1.32
Screen Moulding, per 100 lineal feet	.30
Slide, per 100 lineal feet	.43

## Porch Screens at Lowest Prices

Everybody wants screened-in porches. Our **Porch Screen Sections**, made to fit your measurements, are very inexpensive.

Made of Western White Pine Lumber, dressed and sanded two sides, carefully mortised, tenoned and pinned together with steel pins. Wired with our best wire cloth, Galvanized or Copper Bronze wire.

Easily taken down for storage in winter. Write for Porch Screen Prices.



Nothing so Popular as a Screened-in Porch

## Screen Windows

Gordon-Van Tine Screen Windows are made from best Soft Western White Pine, 1 1/4 inches thick, with rails 2 inches wide, and highest grade screen wire. Choice of three kinds of wire, namely—Black Wire, standard 12 mesh to the inch; Galvanized Wire and Copper Bronze Screen Cloth, absolutely the highest grade screen cloth manufactured. Window Screens are interchangeable with storm sash by the use of our patented hangers. Screens made full size, to cover entire window.

### Specimen Prices

Screen Window to fit 2-light windows, glass size 12x20, size of opening 1-4 1/4 x 3-11 1/4. Price with Black Wire, 53c; with Galvanized, 60c; with Copper Bronze, 77c.  
Screen Window to fit 4-light and 8-light windows, glass 10x16, opening 2-1 x 3-3 1/4. Price with Black Wire, 66c; Galvanized, 72c; Copper Bronze, 90c.  
Price for special window screens to order, 5c per square foot.

Send for Special Screen Circular

## Write for Grand FREE Catalog and Special Screen Circular

Gives full information regarding our money-saving prices on screens, screen wire and 5,000 Building Material Bargains. Write for it. Send for Special Screen Circular, giving full list of prices and designs.

## Gordon-Van Tine Co.

605 Federal Street (185) Davenport, Iowa

When Writing Advertisers Please Mention the American Carpenter and Builder.

just issued by the Engineering Experiment Station of the University of Illinois as Bulletin No. 54, is given a careful mathematical discussion of the strength of spans of electric wire or cable under the action of wind, ice, snow, cold and heat. Methods of calculating the necessary size for foundations for poles and towers for carrying spans of wire are also given. While much of the discussion involves the use of the higher mathematics, yet some simple approximate methods of calculation are given. The bulletin will be especially useful to persons interested in the design of electric transmission lines.

Copies of Bulletin No. 54 may be obtained gratis upon application to W. F. M. Goss, Director of the Engineering Experiment Station, University of Illinois, Urbana, Illinois.

### The 1912 National Catalog

Complete and perfect in every detail of the printer's and engraver's art, is the 1912 catalog of those extensive builders' hardware manufacturers—The National Manufacturing Company of Sterling, Illinois.

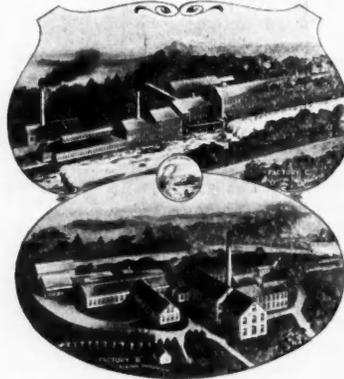
Eighty pages are devoted to illustrating and describing their varied line, and each and every article is dealt with in a thoroughly understandable manner.

Among this company's products at the present time are included rigid storm-proof door hangers, flexible storm-proof door hangers, storm-proof rails, barn door bumper, "Washburne" door latches, door pulls, various types of hasps and staples, hinges for any purpose, foot scrapers, screen and storm door sets, sash hangers, cupboard turns, drawer pulls, ornamental butts and hinges, chimney caps, the "Best" fuel chutes, and the "Handy" automatic stock fountains.

The National company's lines are well known and widely in use. Hardware dealers, carpenters and builders everywhere, should be especially interested in this new 1912 catalog, a copy of which can be obtained by addressing the National Manufacturing Co., at Sterling, Ill.

### Swan Tools

The illustrations herewith show the two factories of the James Swan Company at Seymour, Conn. These factories have a working space of about 90,000 square feet and are devoted entirely to the manufacturing of the high grade Swan line of mechanics' tools. The Swan Company make the largest variety of tools under one name of any concern in the United States.



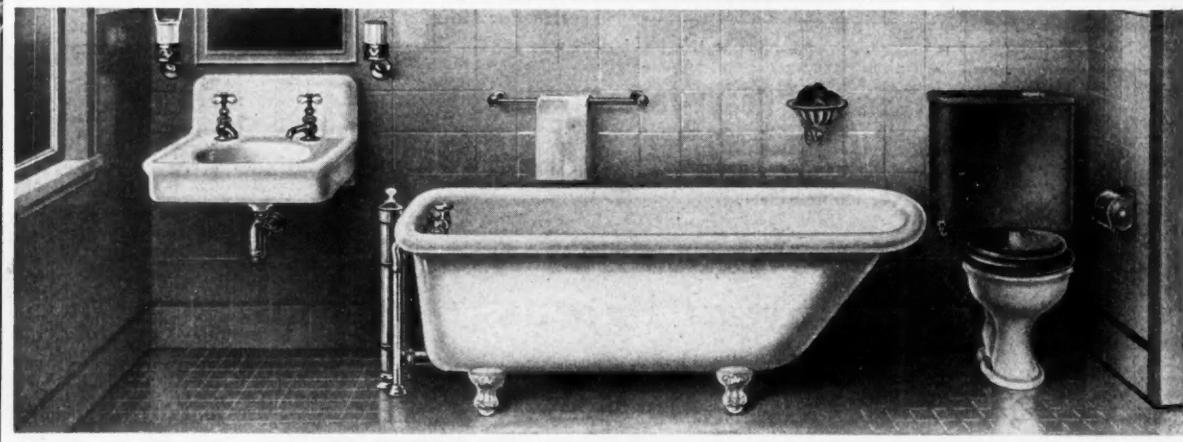
Plants of James Swan Co.

For the past 40 years the Swan tools have been sold through the Russell & Erwin Manufacturing Company. Since Jan. 1, 1912, this arrangement has been discontinued and the James Swan Company is now marketing its own goods under its own name; and dealers and jobbers can obtain any of the Swan tools direct.

The James Swan Company have been manufacturing tools since 1810. Every care is taken to furnish tools of the very best quality. One-third of the men employed in the Swan factories have been with the Company for 25 to 30 years. This experience naturally is of great benefit to the production of mechanics' tools.

The Swan Company have recently opened a new store in New York City at 100 Lafayette St. This store is in charge of C. C. Haselton and a full line of Swan goods are carried in stock.

Carpenters and mechanics who are interested in good tools,



The rent agent calls attention to the Wolff Plumbing Fixtures as the best guarantee to the prospective tenant of the high grade of the plumbing system—indeed, the type of the whole building is many times inferred from the use of WOLFF material throughout.

The worries from "assembled" plumbing, contrasted with the perfect service of the all-built-by-one-house Wolff Plumbing, makes it easy for the architects to use Wolff specifications.

## L. WOLFF MANUFACTURING COMPANY

MANUFACTURERS OF

PLUMBING GOODS EXCLUSIVELY

The Only Complete Line Made by Any One Firm

General Offices  
601-627 W. Lake St., Chicago  
Trenton, N. J.

Showrooms  
111 N. Dearborn St., Chicago  
Denver, Colo.

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Omaha, Neb  
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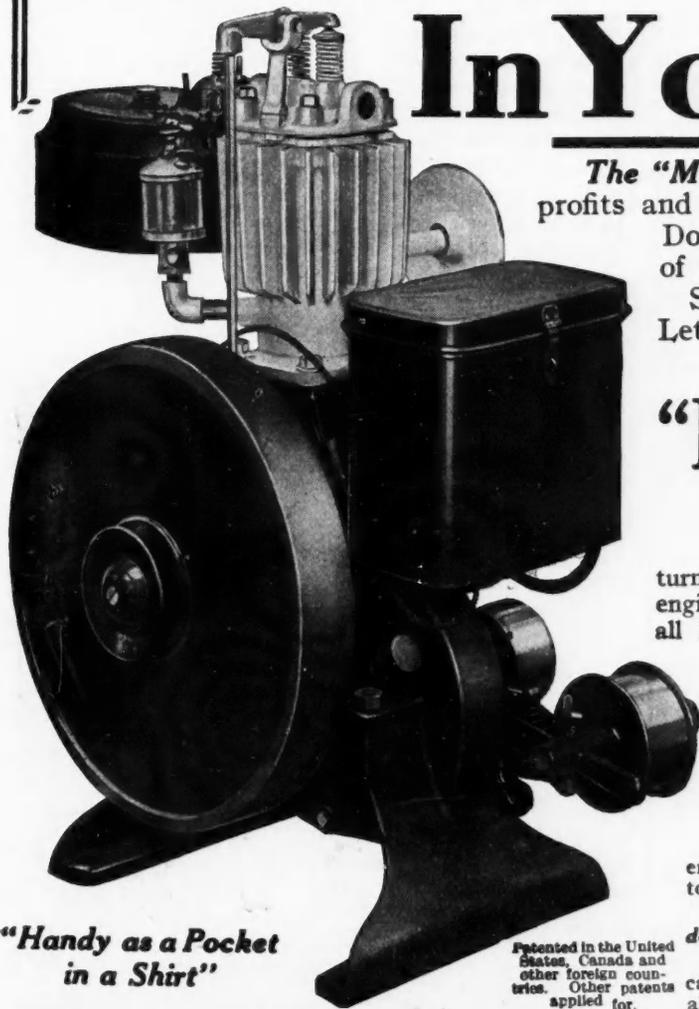
Cleveland, Ohio  
Washington, D. C.

Kansas City Mo.  
Cincinnati, Ohio

Buffalo, N. Y.  
Dallas, Texas

When Writing Advertisers Please Mention the American Carpenter and Builder.

# Put It At Work In Your Shop



**"Handy as a Pocket  
in a Shirt"**

Patented in the United States, Canada and other foreign countries. Other patents applied for.

The **"Multimotor" Shop Engine** increases your profits and keeps down the size of your pay-roll. Does the work of three men at an expense of *less than a cent an hour*.

Stop pedal-pushing and crank-turning  
Let the

## Fuller & Johnson "Multimotor" Shop Engine

turn the wheels in *your* shop. This wonderful engine is small in size but a giant in power. Runs all hand-power or foot-power machines—jig saws, lathes, emery wheel, grindstone, drills, etc. Just the thing for carpenters, contractors and owners of small workshops.

### Perfectly Simple Absolutely Safe

Simplest, neatest, strongest, most reliable little engine ever built. Comes to you *complete*—nothing to add but gasoline.

Easily moved anywhere. For *indoor* use has *out-door* fuel tank, insuring perfect safety.

Important working parts protected by dust-proof case. Needs no attention while running. Works steadily all day on a few cents' worth of grocery-store gasoline. It is air-cooled, fool-proof, cannot freeze or overheat.

The "Multimotor" in design, material and construction equals the best automobile engines. Every engine is thoroughly tested before leaving the factory, and is *guaranteed!*

### Fuller & Johnson Farm Pump Engine

Practically the same as "Multimotor," with pumping gears added. Can be hooked up to any pump in 15 minutes. Needs no belts, arms, jacks or special platform. Pumps 270 to 2,450 gallons every hour. Perfectly adapted to farm and suburban use

### Engine Book Sent Free!

Book, giving full information about "Multimotor" and Farm Pump Engine, sent FREE on request. Let us tell you more about these amazing little power-producers. Let us send you the name of the nearest dealer, who will show you the engine and *explain* what it can do. (264)

If interested in larger engines, ask for Catalog of Fuller & Johnson's Famous Double-Efficiency Engines.



Fuller & Johnson  
**"MULTIMOTOR"**  
Works Like Ten Men

**FULLER & JOHNSON MFG. CO.** 4 Ames Street (Established 1840) **Madison, Wis., U. S. A.**

When Writing Advertisers Please Mention the American Carpenter and Builder.



**"I Tell You,  
It's a Great Saw!"**

Every one who owns a Simonds Saw is proud of it—proud of its looks, but a whole lot prouder of its work. You've probably noticed that the

## SIMONDS SAW

(Pronounced Si-monds)

you have will keep sharp for many years with ordinary home use. Simonds Steel is so tough and hard the teeth hold their sharp, quick-cutting points and do not lose their set. For the professional or amateur carpenter the best tools are the only ones worth while, and the best saw means a Simonds.

Simonds Special Crucible Steel is the basis of the extraordinary wearing quality of Simonds Saws. We make and temper our own steel by a special process to get the quality we can guarantee. You don't get it in other saws. That's why so many good carpenters choose Simonds Saws. Ask a good carpenter about them—or your dealer. Send for

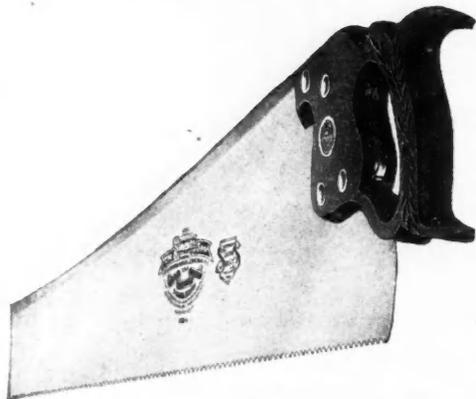
**"Simonds Carpenter Guide"—Free**

Tells all about filing a hand-saw.

Remember, Simonds Hack-saw Blades and Files are most efficient. Simonds Circular, Band and Cross-cut Saws are the American and Canadian lumberman's accepted standard.

**SIMONDS MFG. CO. (Founded 1832) Fitchburg, Mass.**

Chicago    Portland    San Francisco    New Orleans  
New York    Seattle    Montreal    Lockport, N. Y.

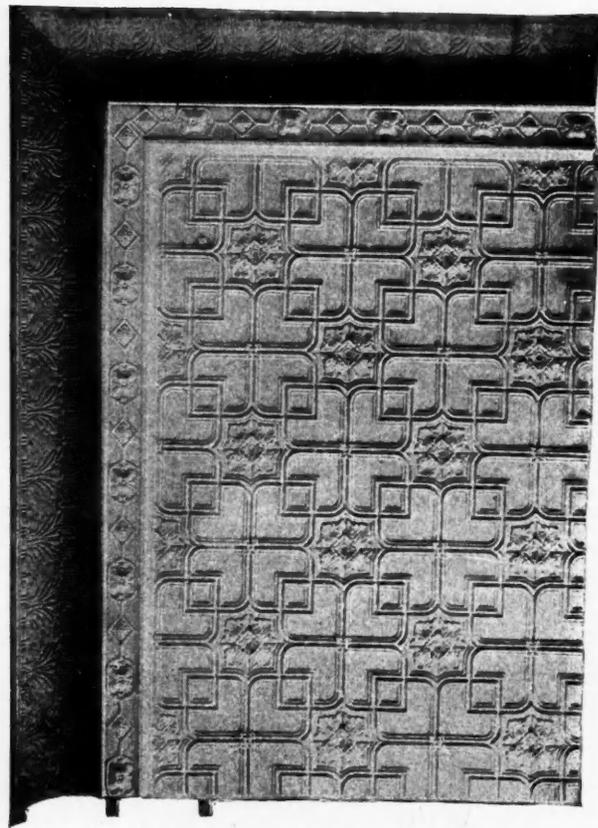


When Writing Advertisers Please Mention the American Carpenter and Builder.

including augers, bits, chisels, drawing knives, gimlets, screw drivers, etc., should write to the James Swan Company, Seymour, Conn., asking them for their catalog. \* This catalog is new and every good carpenter and mechanic should have a copy. In writing the James Swan Company also give the name of your hardware dealer.

### Metal Ceilings for Residences

We are not writing of anything new to most of our readers when we go into the subject of stamped steel ceilings; but our friends, Messrs. Northrop Coburn & Dodge Co., of No. 29 Cherry St., New York, have such a choice number of designs especially adapted for the ceilings of private houses, that we wish to show them up. There are some twenty-five manufacturers of metal ceilings, an industry only 30 years old, of which the head of the above company is the pioneer. This shows its popularity and growth, but on looking over many of their catalogs you would perhaps think their patterns better adapted for halls of fame than for their own parlor or ballroom.



"NoCodo" Tudor Design Steel Ceiling

Not so, however, with those of this company. They, indeed, have patterns for large rooms—for business and public buildings—but they have many also to be recommended for private houses. The above illustration—scale  $\frac{1}{2}$  inch to the foot—shows their No. 21, a clean cut Tudor design, suitable for a library or dining-room. The Northrop designs join perfectly on the pattern, and are not cut up into squares or obliterated by "beads" or joint lines. Many of them form one continuous interlacing design from cornice to cornice. The use of wide and irregular borders on margins is thus avoided.

Metal ceilings are not only desirable for a new house, but are the best and quickest to put up in place of an old plaster ceiling. As the putting up of the scaffold and furring is strictly carpenters' work, they can also finish the work as well or better than anyone else. The important thing is to select for a house a pattern for a house, and not one common to the grocery store or the cafe.

# CAST IRON COLUMNS

IN ALL LENGTHS UP TO 12 FEET  
CARRIED IN STOCK

CHEAPER  
THAN WOOD,  
STRENGTH  
AND  
DURABILITY  
CONSIDERED



A-5  
Special Cap

FIRE AND  
WEATHER  
PROOF  
PRACTICALLY  
INDES-  
TRUCTIBLE

Immediate shipment will be made on orders for cast iron columns from our stock as follows:

Net Prices F. O. B. Foundry, Coshocton, Ohio

		A-3 Plain Cap and Base	A-4 Moulded Cap and Base
5 inch columns	12 feet long, . . . . . each	\$ 6.40	\$ 7.10
7 " " "	12 " " " " " " " " " " " "	9.60	10.60
9 " " "	12 " " " " " " " " " " " "	13.00	14.50

The above prices are given on a column 12 feet long over all including cap and base. For columns of different lengths deduct per foot

5 inch columns . . . . .	\$ .25
7 " " " " " " " " " " " "	.35
9 " " " " " " " " " " " "	.50

A-5 Special Cap, each, 5-inch \$1.75, 7-inch \$2.50, 9-inch \$3.25

Prices on larger size columns on application.

A-3 Plain Cap  
and Base

A-4 Moulded  
Cap and Base

## Safe Load in Pounds for Cast Iron Columns

Made Up from Base and Top Castings	5-inch Column		7-inch Column		9-inch Column		
	Cap and Base 10 in. Square	Cap and Base 12 in. Square	Cap and Base 14 in. Square	Approximate Weight	Capacity	Approximate Weight	Capacity
Length	Approximate Weight	Capacity	Approximate Weight	Capacity	Approximate Weight	Capacity	Capacity
6 Feet	135 Pounds	38,400	222 Pounds	71,800	288 Pounds	90,500	
6 Feet 6 inches	145 "	37,000	239 "	69,800	310 "	90,500	
7 Feet	155 "	35,600	256 "	69,200	332 "	90,500	
7 Feet 6 inches.	165 "	34,200	273 "	67,600	354 "	90,500	
8 Feet	175 "	32,900	290 "	65,500	376 "	90,500	
8 Feet 6 inches.	185 "	31,500	307 "	64,500	398 "	90,500	
9 Feet	195 "	30,300	324 "	62,900	420 "	90,500	
9 Feet 6 inches.	205 "	29,000	341 "	61,300	444 "	89,100	
10 Feet	215 "	27,800	358 "	59,700	466 "	87,400	
10 Feet 6 inches.	225 "	26,600	375 "	58,100	488 "	85,700	
11 Feet	235 "	25,500	392 "	56,500	510 "	84,200	
11 Feet 6 inches.	245 "	24,400	409 "	54,900	532 "	82,500	
12 Feet	255 "	23,300	426 "	53,400	554 "	81,000	

# JAMES B. CLOW & SONS

HARRISON STREET BRIDGE, CHICAGO

FOUNDRIES: COSHOCTON, OHIO.

NEW COMERSTOWN, OHIO.

SAVE THIS PAGE FOR FUTURE REFERENCE.

OTHER CAST IRON SPECIALS WILL FOLLOW

When Writing Advertisers Please Mention the American Carpenter and Builder.

### Spring Is Here

and with the flowers that bloom in the spring come the candidates, ornithological, political, etc. Promises are as abundant as buds on the peach tree. The point we make is, what will be the performance, the fruit, for like Harriman, "we are practical men."

The sparrow begins at dawn with a brave chirp but up to dewy eve he has not evolved anything fuller than a repetition of that noise, thin as tin.

The lustrous starling sits on our fence, opens his great yellow bill and promises something wonderful, but to date it has amounted to nothing more than a raucous disappointment. Robin red-breast on our lawn, and spotted thrush in our wood, trill out music that satisfies from promise to performance. Next spring we will choose these two ornithological candidates without giving the others even a trial, for they have made a record.

The political candidates are springing up everywhere. Their promises fill the air. The people will choose the man who will be strong on performance. Will it be the pedagogue from Jersey, Teddy, the perpetual candidate, the lion of the Buckeye State, the Epictetus of New York, the trumpet of Wisconsin, Clark, Underwood, favorite sons, a dark horse, or Billiken, who says he is the "God of things as they ought to be"?

The paint candidates also bloom in the spring. Examine their composition and record. The National Hardware Bulletin of October, 1911, urges users to shun protective paints that use petroleum or its products as a vehicle or adulterant. Dixon's Silica-Graphite Paint uses only pure, boiled linseed oil as its lasting and elastic vehicle. There is a persistent cling and resistance to abrasion about it because of the paint's silica ingredient. The graphite in it makes it a peerless paint for unctuousness and resistance to gases, brine, acids, ice, damp, heat and cold. It costs a little more but is economical

because of longer service, thus saving in labor and material. The Joseph Dixon Crucible Co. have made Dixon's Silica-Graphite Paint in one quality only for nearly fifty years—four colors. Use it in original cans, and see that contractor does not adulterate, and that he steel-brushes the surface. Used around the circle of the world on leading railroads, bridges, buildings, pipes of all sorts, fences, gas tanks, water towers, trolley poles and trucks, roofs, steel cars, and wherever there is steel or iron to protect from corrosion.

Spring is here. You will be examining your steel work after the winter's wear. The makers urge you to use Dixon's Silica-Graphite Paint to protect it. Made in Jersey City, New Jersey, for all the world.



### The "Ironwood" Sliding Window Screen

Fenton, Michigan, is the location of the A. J. Phillips Company, large woodenware manufacturers, who have lately put upon the market a combination wood-metal sliding window screen, which they term the "Ironwood."

This company have been extensive screen manufacturers for the past 29 years. They thoroughly know the many good features of well made properly jointed and finished wood screens.

After considerable experimenting they have at last succeeded in working together a combination of the metal and wood frame types—the "Ironwood"—and it has proven a big success in all respects.

The one particular feature of metal screens has always been in their general appearances in the window. Unless the frames are made of brass or bronze they will eventually rust out, so it is claimed, and if those metals are used, it is hard to make a frame that is stiff. They are usually "wiggly," frail and unable to withstand continuous heavy usage.

In the "Ironwood," the Phillips Company have adopted





**YOU** who are abusing your delicate Knee-tissues: Drop us a postal asking for information about

**"KNEEMATICS"**  
(Patents Pend'g.)

They will pay for themselves twice over annually in their saving of trousers and overalls, to say nothing of the physical comfort.

**No More Calloused and Torn Knee Tissues**  
"Walk Erect on Sundays"

"Kneematics" are made of the finest, toughest and most pliable bi-chrome black leather. They are guaranteed to be trouble-proof. The best of automobile inner-tubing used. Will bear any weight up to a thousand pounds. Weigh 6 ounces, and their presence on the knee is never manifest until you kneel; then you forget you are kneeling. Each pair packed in a neat box together with a small pocket-size pump. Three plunges—they're inflated.

Drop a postal today, merely saying "Kneematics". We'll know you want information

**M. M. M. M. Co., Inc.**      -      -      -      **Marshalltown, Ia.**

When Writing Advertisers Please Mention the American Carpenter and Builder.



## CORBIN GLASS KNOBS

are like beautiful jewels in fine settings. Circular BK87 tells about them. Sent on request.

**P. & F. CORBIN**

Division

The American Hardware Corporation  
NEW BRITAIN, CONN.

P. & F. CORBIN of Chicago    P. & F. CORBIN of New York    P. & F. CORBIN DIVISION, Philadelphia

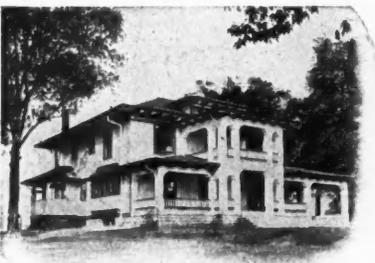
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## Climax Wood Mortar

Will solve all of your plastering troubles for all time Mr. Contractor and Builder. We know this as a positive fact.

Our Climax Wood Mortar is the best plaster made. It is being extensively used under all sorts of conditions and has yet to fail to give entire satisfaction. Specify and use Climax Wood Mortar and be certain of results.

We have been manufacturing plaster for fifty years. During that time we have kept thoroughly



Residence of E. H. Tripp, North Vernon, Ind.  
Built with Grand Rapids Plaster Co's Products

the improvements and developments of wall plasters and wall coverings of all kinds. We have spent lots of money in perfecting our products. Climax Wood Mortar is our crowning effort. It makes a wall that for toughness, strength and lightness cannot be obtained with the old fashioned sand and lime

mortar or the ordinary sanded hard wall plasters.

Climax Wood Mortar is a wood fiber plaster made of pure gypsum rock. This rock comes from our own quarries near Grand Rapids, Mich. The fiber adds about one-third to the bulk of the plaster, making it cover a greater area with less weight and maximum solidity and tensile strength. Our Climax Wood Mortar is absolutely fire-proof. Its density prevents vermin. It is not affected by water. It is durable, flexible and pliable. Plastic and very easy to spread—any plasterer can apply it. It is very adhesive and permanent—does not contain one particle of sand.

## Hercules Wall Plaster

is a gypsum rock, hair fibre plaster, not sanded at the factory. It makes a wall that is dense, durable, hard, tough

and economical. It is absolutely fire-proof. It dries quickly after being applied. We use only high grade hair in its manufacture. It spreads better and with less waste than any other wall plaster. Contains no chemicals, acids or vegetable matter.

Let us tell you in detail about our CLIMAX WOOD MORTAR: SUPERIOR

WOOD FIBER PLASTER; HERCULES WALL PLASTER; GYPSUM WALL PLASTER; SACKETT PLASTER BOARD—also have us send our room measurement booklet to you. It is a handy reference, vest pocket size guide, by which you can tell at a glance the number of square yards in a room.

Write us now for our catalogues, name of dealer, etc.

**Grand Rapids Plaster Company**  
GRAND RAPIDS, MICH.



"Remember the  
TRADE MARK"

GRAND RAPIDS  
PLASTER COMPANY  
GRAND RAPIDS, MICHIGAN

N. B. We solicit inquiries from Michigan, Ohio, Indiana, Illinois, Wisconsin, Kentucky, Tennessee, West Virginia and Pittsburgh district, Pa., only. Freight rates will not permit shipment to other territory.

wood where it is best—in the stiff side rails, and iron where it is best—in the top and bottom rails. General materials in the construction of this "Ironwood" screen include top and bottom rails of heavy sheet iron 9/16 by 1 inch after folded. Stile or side rails of hardwood 1 3/8 by 3/4 inches; lifts wrought steel.

The ends of the wire cloth are folded into the iron top

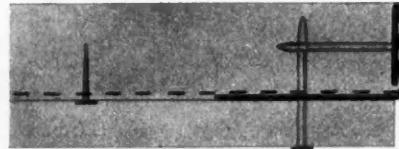


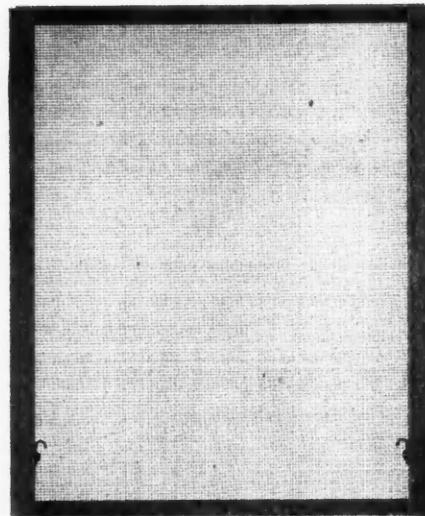
Fig. "B"—Corner Section of Screen Frame

and bottom rails, which are "L" shaped, in cross sections, as shown by the black line in figure "B."

No detailed explanation is necessary as to why "L" shaped construction is stiff. Figure "B" represents a corner section of the frame, looking at the edge. The dotted line shows the wire cloth lying between the two parts of the hardwood stile.

The wire cloth can not get away, being folded into the top and bottom rails, then tacked onto one half of the side rail, and further fastened by nailing on the other half of the side rail.

After the screen is made, the frame part is dipped in black water-proof paint several times, until every tiny crevice and



"Ironwood" Screen

corner is filled with paint, and there is absolutely no chance for a drop of moisture to get into the joints or rails.

Slides or runners are half the height of the window (same height as the screen). The Screen slips onto the slides at the top. The slides are bored for nails, which are furnished for nailing to window stops.

Each Screen bears its number pressed into the side rail and a corresponding brass number tack is furnished for the sill. Screens more than 36 inches wide have vertical center rails or muntins. Screens more than 24 inches high have horizontal cross rails one inch above the center. Only black wire cloth 12 and 14 mesh is used. Also 14 and 18 mesh galvanized black—"Rustless".

The advent of this "Ironwood" gives a thoroughly satisfactory custom-made screen, at a price very close to that at which the average department store adjustable screens are sold. It is well worth knowing about and the A. J. Phillips Company will forward their pamphlet illustrating and describing it to all requesting same.

When Writing Advertisers Please Mention the American Carpenter and Builder.

ESTABLISHED 1875



CLEVELAND, O.

PLEASE ADDRESS YOUR REPLY TO  
**ARCHITECTURAL**  
 DEPARTMENT

This advertisement is not written by an advertising specialist or expert, but by a varnish man - one who knows his business as you know yours. We must confess that Architects and Builders, as a rule, are considered hard to interest - chiefly because they will not listen. As a rule they are too busy to talk to a supply man.

Did it ever occur to you that without varnish or enamel your work would lack beauty and the finishing touches so necessary to the completeness of the job? We can help you if you will let us. The finish is the first thing one looks at upon entering, and the last thing one looks at when leaving a building, therefore, it is of vital importance and should be given careful attention.

Let us take care of this vital matter for you. Send us a description of just one of your jobs, and we will write the specifications for you. We know how. Isn't it worth a moment's time? We ask for only one job to show you what we can do.

THE GLIDDEN VARNISH COMPANY

Factories: Cleveland, Ohio - Toronto, Canada.  
 Branches: New York - Chicago - London.

When Writing Advertisers Please Mention the American Carpenter and Builder.

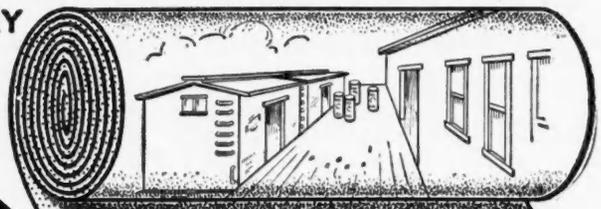


FROM  
\$1.10  
TO  
\$1.80  
PER ROLL

# BEST-OF-ALL ROOFING

SAMPLES MAILED FREE ON REQUEST

FROM FACTORY DOOR TO YOU



**Thickest, Heaviest and Most Durable Smooth Finished Roofing Made**

**Don't Buy Roofing From Anybody Without First Making These Tests**

PLEASE COMPARE:

1. THICKNESS—Best-of-all is from 10 to 15 per cent thicker.
2. WEIGHT—Weighs from 10 to 15 per cent heavier.
3. FLEXIBILITY AND STRENGTH—Ours exceeds others by 25 per cent actual test.
4. QUALITY—We use pure asphalts and long fiber felts. You won't find tar or oil in this roofing.

After you make these four tests there can be but one result. Whether it be for house or barn you will buy Best-of-all Roofing. There is no doubt about Best-of-all wearing longest. The Four Tests, simple as they may seem, tell the difference between good and bad roofing.

Best-of-all Roofing has stood the test in all climates from Alaska to the Gulf of Mexico. It is made of heavy, strong, long fibered wool felt, saturated with the best grades of asphalt. Best-of-all Roofing is elastic, pliable and tough, not affected by changes in climate, vapors, steam or gas and will not rust. Unlike most other kinds of prepared roofing, it is free from odor and will not discolor rain water; it can be used on either steep or flat roofs. Anyone can lay it, the only tools required being a knife and a hammer. Samples mailed free on request. Best-of-all Roofing is Heavier, Thicker and Stronger than any standard make.

It is a Proven Fact that prepared roofing of good quality like Best-of-all will outwear shingles. Here's your chance to buy it at a fraction of their cost.

**CARPENTERS AND BUILDERS.** Here's a roofing that you can FULLY GUARANTEE TO YOUR CUSTOMER to give the full length service as explained on this page. Over 500,000 buildings covered with Best-of-all Roofing (every one giving full service). Best-of-all roofs have given 12 years' service and will last many more. YOU TAKE NO RISK. We stand back of you—a written guarantee if you wish.

To reduce your freight charges and to avoid delays in transit we will ship your order from our factory or one of the warehouses nearest you. Warehouses in Cincinnati, Ohio; Pittsburgh, Penn.; Kansas City, Mo.; Atlanta, Ga., and factory at Chicago, Illinois. We charge you no more no matter from which point your roofing is shipped.

We furnish free with every roll of our Best-of-all Roofing large headed GALVANIZED roofing nails and plenty of cement for lapping seams or joints. Galvanized nails will not rust, hence will last for many years. Best-of-all Roofing is fire resisting and waterproof. Better and cheaper than shingles, tin, tar and gravel, or any other kind of roofing, and WILL OUTWEAR THEM ALL.

BEST-OF-ALL ROOFING ALSO FURNISHED IN THE FOLLOWING WEIGHTS:

1-Ply.	35-Lb. Grade	2-Ply.	45-Lb. Grade	3-Ply.	55-Lb. Grade
No.	\$1.10	No.	\$1.35	No.	\$1.60
63AC2941	A ROLL	63AC2942	A ROLL	63AC2943	A ROLL

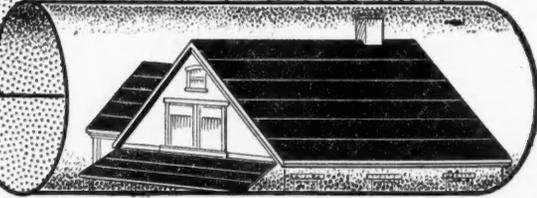
ALL ROLLS ARE 32 INCHES WIDE AND CONTAIN 108 SQUARE FEET.

Make up your order from these pages. If not the best roofing value you ever saw, return it to us and we will cheerfully return your money, together with any freight charges you have paid. OUR FREE SPECIAL ROOFING CATALOG quotes prepared roofing as low as 50 cents a roll (108 square feet), also steel roofing and eaves trough, pipe and gutter at factory prices.

**3 1/2 Ply** 108 Square Ft. Weight 60 Lbs. 32 Inches Wide  
No. **\$1.80** Per Roll  
**63AC3033**  
EXTRA HEAVY GRADE  
GUARANTEED TO WEAR 12 YEARS

**2 1/2 Ply** 108 Square Ft. Weight 50 Lbs. 32 Inches Wide  
No. **\$1.50** Per Roll  
**63AC3032**  
HEAVY GRADE  
GUARANTEED TO WEAR 10 YEARS

**1 1/2 Ply** 108 Square Ft. Weight 40 Lbs. 32 Inches Wide  
No. **\$1.25** Per Roll  
**63AC3031**  
MEDIUM GRADE  
GUARANTEED TO WEAR 7 YEARS



Address All Orders to SEARS, ROEBUCK AND CO., CHICAGO, ILLINOIS



**\$2.25**  
PER ROLL

# ORIENTAL SLATE SURFACED ROOFING

FURNISHED IN TWO COLORS, RED AND GREENISH GRAY.  
GUARANTEED TO WEAR FIFTEEN YEARS. COLORS WILL NOT FADE.



ORIENTAL SLATE SURFACED ROOFING is the most beautiful roofing made. Its color is permanent. Fine enough for the most expensive residence, yet low enough in price for the most humble cottage. Made from a long fiber pure wool felt, saturated with an asphalt composition and heavily coated with hard asphalt in which the crushed slate is thoroughly embedded. We guarantee the high quality of every ingredient used in making this roofing. It positively needs no coating nor attention after it is laid. It is fire resisting and for this reason makes an excellent roofing for buildings near factories, foundries, etc., as it will not catch fire from flying embers.

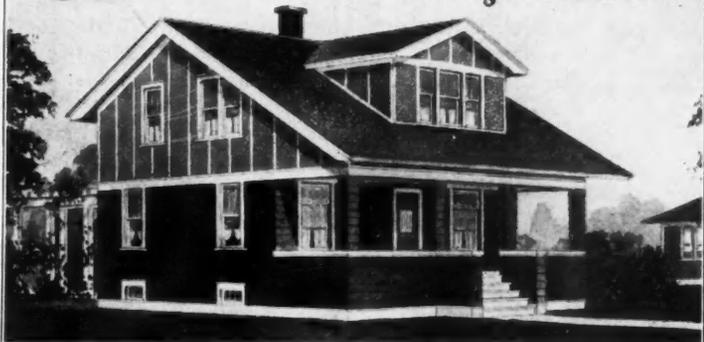
Your choice of two colors, red and greenish gray. These colors are permanent, as they are the natural colors of the slate just as it is quarried.

**MAKES A BEAUTIFUL ROOF.** Red Slate Surfaced Roofing is a dull rich red and makes a beautiful roof for any building.

**FOR SIDING OF HOUSES AND OTHER STRUCTURES IT CAN'T BE BEAT.** Gray Slate Surfaced Roofing is a greenish gray color, having just a slight tinge of green. This roofing makes an excellent siding when battens are used over the joints and cannot be distinguished from stucco or cement. Used as a roofing and siding with very pleasing effects.

Here's a chance to reduce the cost of your building, adding to its beauty, reducing its cost of upkeep, as no painting is ever required and with the satisfaction of knowing that it will wear equally as long as wood siding. We recommend using Red and Greenish Gray Slate Roofing together, as pretty a color combination as can be had and you have the satisfaction of knowing that the colors are permanent and that neither roofing nor siding need be touched for at least fifteen years.

**\$62.25 Saved** by using Oriental Roofing on this House



**MR. CARPENTER, FIGURE IT OUT FOR YOURSELF.**

By using Oriental Roofing you save \$62.25 on an average roof of 16 squares. Roofing and labor amount to \$44.00. Shingles and cost of laying shingles amount to \$106.25, a clear saving of \$62.25, and you have a roof that is guaranteed to wear fifteen years without any attention whatever, which is worth more to you than the saving.

**WE FURNISH FREE** with every roll large headed galvanized roofing nails and plenty of cement for lapping seams or joints. A good roof depends on its being firmly secured to the roof boards. Galvanized nails will never rust, hence will last for many years.

**Price of Red and Greenish Gray Slate Surfaced Roofing.**

No. 63AC3063 Red Slate Surfaced Roofing, 108 square feet. Weight 80 pounds. Price, per roll.....**\$2.25**

No. 63AC3062 Greenish Gray Slate Surfaced Roofing, 108 square feet. Weight, 80 pounds. Price, per roll.....**\$2.25**

**TO REDUCE YOUR FREIGHT CHARGES AND TO AVOID DELAYS IN TRANSIT,** we will ship your order from our factory in Chicago or the one of our warehouses nearest you. Warehouses in Cincinnati, Ohio; Pittsburgh, Penn.; Atlanta, Ga., and Kansas City, Mo. The price is the same no matter from which point your roofing is shipped. Samples will be mailed free on request.



## Carpenters and Builders

do you know that samples of these shingles shown to your trade means a ready sale at \$10.00 to \$12.00 per square laid? Better send a trial order or at least get a free sample. **BIGGER profits and BETTER ROOFS** by using Oriental Shingles. When laid resembles slate.

### FURNISHED IN RED AND GREENISH GRAY

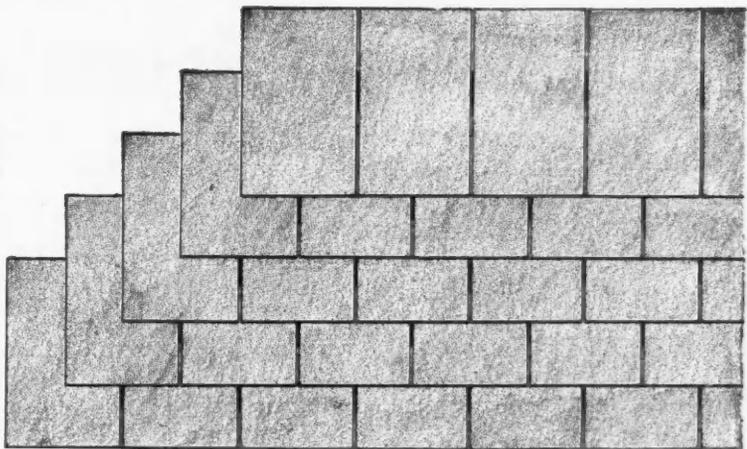
**WILL NEVER CHANGE COLOR.** Oriental Asphalt Shingles retain their rich color always, because they are surfaced with real red or greenish gray crushed slate in their natural colors. Absolutely no paint or artificial color used in making these shingles.

**GUARANTEED TO OUTWEAR WOOD SHINGLES,** because they are waterproofed clear through. The crushed slate not only furnishes the never fading color, but is the actual wearing surface of the roof.

**REQUIRE NO ATTENTION AFTER BEING LAID. WE GUARANTEE THESE SHINGLES TO WEAR FIFTEEN YEARS WITHOUT PAINTING OR ANY ATTENTION WHATSOEVER.**

**ALL SHINGLES ARE OF UNIFORM SIZE, 8x12 3/4 inches.** Unlike wood shingles, there are no culls to be thrown away; every shingle being of uniform size there is no labor wasted in selecting the proper size shingles for the proper place. Oriental Shingles can be laid with less labor than wood shingles and after they are laid have the appearance of slate shingles. Oriental Asphalt Shingles should be laid 4 inches to the weather and 1/2 inch apart.

**ORIENTAL ASPHALT SHINGLES are packed in bundles,** each bundle containing enough shingles to cover 25 square feet when laid 4 inches to the weather and 1/2 inch apart; 425 shingles will lay one square, or 100 square feet, 425 Oriental Asphalt Shingles will cover as much surface as 900 wood shingles laid 4 inches to the weather. Oriental Shingles can be laid on the same sheathing as wood shingles, even if roof boards are from 1 to 2 inches apart. Shipped from Chicago.



Catalog No.	Surfaced With	Price per Square of Shingles (One Square)	Weight, per Square, Pounds
63AC3048	Crushed Red Slate	\$4.35	210
63AC3049	Crushed Greenish Gray Slate	4.35	210

Address All Orders to **SEARS, ROEBUCK AND CO., CHICAGO, ILLINOIS**

### "Korelock Door Designs"

The new complete catalog of the Paine Lumber Co., Ltd., Oshkosh, Wis., has just come to hand. It is called "Korelock Door Designs," Gold Medal Series.

And as to that it is surely well named, for a catalog more worthy of the gold medal has never come into the editorial rooms of the AMERICAN CARPENTER AND BUILDER. One does not wonder, in looking through such a book as this, so beautifully gotten out and illustrating in such a satisfactory way the line of products described, that the Paine Lumber Co. has been able to place themselves in the commanding position in the hardwood veneered door industry which they occupy to-day.

This is a large high grade finished trade catalog, treating of a large high grade line, "Korelock" doors.

The cover is an exact reproduction, in all the natural markings and coloring, of a beautiful piece of mahogany veneer. The 150 pages of the book illustrate the complete line of "Korelock" hardwood veneered doors. The construction of these doors is accurately shown. A very interesting section of the book is devoted to the finishing of woodwork.

According to this book the principle contribution this year by the Paine Lumber Company to the decorative possibilities of a modest home is their "Paluco" finish. There is Paluco mahogany and Paluco quartered oak. By a patented machine process, owned and controlled by this company, perfect reproduction is made of the finest figured mahogany or quartered oak upon the surface of our native woods, as of birch. Both the Paluco Mahogany and Paluco Quartered Oak are illustrated in this Gold Medal Series catalog, by full page plates in color.

It is stated that these products will be offered at a price in full accord with the established policy of the Paine Lumber Company of low cost to the consumer. Every reader of the

AMERICAN CARPENTER AND BUILDER should write at once for a copy of this Gold Medal Series "Korelock Door Designs." It will be sent to carpenter-contractors free on request.



### Moore & Galloway Hardwood Doors

Oshkosh is not the only city making hardwood veneered doors. Its near neighbor, Fond du Lac, Wis., boasts the presence of the Moore & Galloway Lumber Company. Their fine new large plant, well equipped with the latest machinery, is turning out "M. & G." hardwood veneered doors and mill work second in quality to none.

A recent catalog from Moore & Galloway Lumber Company illustrates the leaders of their line. There are both glazed front doors and interior doors. The styles are all most attractive, some of them possessing a distinctive appearance not often seen in stock doors. The beauties of grain and finish developed in these doors makes very evident the reason for their popularity among home builders.

Every wide awake carpenter and builder should have a copy of this Moore & Galloway door catalog at hand to show the "man who is going to build." Those who are building this season are willing to pay for the best. They are not satisfied with cheap interior finish, but are willing to pay the slight extra cost for high grade hardwood doors and finish in their new houses. Only let this matter be brought to the attention of the intending builder and he agrees at once that hardwood doors are the only kind he would have. The Moore & Galloway doors are known to be reliable, giving permanent satisfaction.

Write for a copy of this catalog to-day, addressing Moore & Galloway Lumber Co., Fond du Lac, Wis. It will be mailed to you free of charge.

## Every Room Comfortable

No matter how cold or how hot the weather is, or how noisy the neighbors are, every room in a building lined with KEYSTONE HAIR INSULATOR can be kept comfortable. The coldest wind cannot pierce it—the hottest sun cannot penetrate it—noise cannot go through it.

## Keystone Hair Insulator

is the most effective insulator against heat, cold or sound, because it confines the greatest amount of dead air. It is made of a heavy layer of cleaned and sterilized cattle hair, securely fastened between two sheets of strong, non-porous building paper.

It will not pack down or settle. Will not dry out and split. Will not rot or attract moisture. Will not carry flame. Is absolutely inodorous and vermin-proof.

Write nearest Branch for Sample and Booklet

### H. W. JOHNS-MANVILLE CO.

MANUFACTURERS OF ASBESTOS  
AND MAGNESIA PRODUCTS

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ASBESTOS ROOFINGS, PACKINGS,  
ELECTRICAL SUPPLIES, ETC.

Baltimore  
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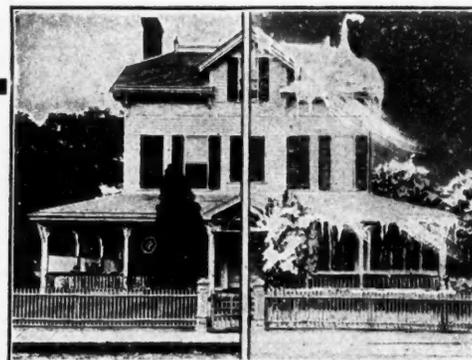
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SUMMER

WINTER

When Writing Advertisers Please Mention the American Carpenter and Builder.

# Cut Your Coal Bill in Half THE UNDERFEED *Does It*

## To Contractors and Builders

EVERY TIME you recommend the installation of the Peck-Williamson Underfeed Heating System—either Furnace or Boiler—you **add** to your own reputation as a builder of **always comfortable** buildings.

The Underfeed does **more** than cut coal bills in half. Because clean, **even** heat is assured at **least** cost, Underfeed Heating Systems **ADD** to the renting and selling value of **any** building.

Our National advertising is **continuous**. Every month of the twelve we pound away on the proved economy of Underfeed maintenance, using whole pages in magazines of national circulation. This creates a continual and increasing demand **everywhere** for the Underfeed.

Send us your building plans and the expert services of our Engineering Corps are Yours—**FREE**.

Underfeed Systems are adapted for little houses and big houses, apartments, flats, residences, stores, churches, armories, halls and theatres. It will pay YOU to get in touch with

## The Peck-Williamson Underfeed HEATING SYSTEMS FURNACES - BOILERS

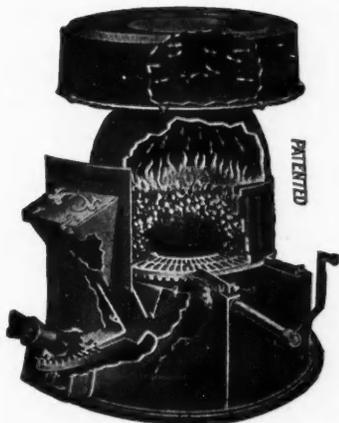
In our April advertising in leading national publications we make the following convincing points:

In the Underfeed, cheaper grades of soft siack coal and pea and buckwheat size of hard and soft coal yield as much clean, even heat as highest priced coal in other heaters. Coal is fed from below—pumped up underneath the fire by an easily operated lever, acting on a plunger.

Fire is on top and sides, **BETWEEN** the fresh coal and radiating surface of fire pot and dome.

This principle insures greatest heating efficiency. Smoke and gases, wasted in ordinary heaters, pass up through the fire in the Underfeed, are consumed, yielding more heat. Perfect combustion results. No clinkers. The few remaining ashes are easily removed by shaking the grate bar.

The Underfeed Furnace, with casing removed, cut away to show how coal is forced up under fire which burns on top.



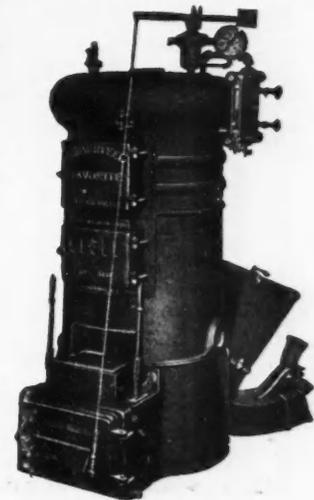
R. C. Harris, Pres., Century Saw Mill Co., 810 Olive St., St. Louis, Mo., Feb. 17, wrote: "I have used the Underfeed two winters, the last the severest ever experienced here. Had no trouble whatever in keeping the house above 70 while my neighbors had difficulty in getting heat at all. **Have cut my coal bill from \$85 to \$45 each winter** and have not skimped coal either. Have looked after the firing of the furnace since I was a youngster and have never come in contact with one which equals the Underfeed in satisfactory results."

You will be interested in the fac-simile letters of Underfeed users, which we will be glad to send you with Underfeed Furnace Booklet or Boiler Catalog—all FREE.

**THE PECK-WILLIAMSON CO.,**  
436 W. Fifth Avenue  
CINCINNATI . OHIO

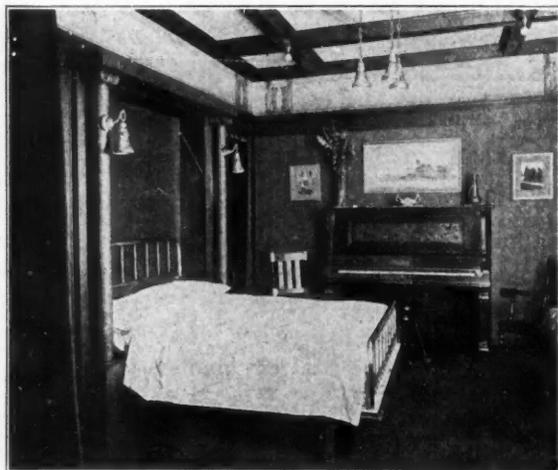
When Writing Advertisers Please Mention the American Carpenter and Builder.

This illustration shows the Underfeed Boiler



How to Utilize Every Inch of Space to  
the Greatest Advantage

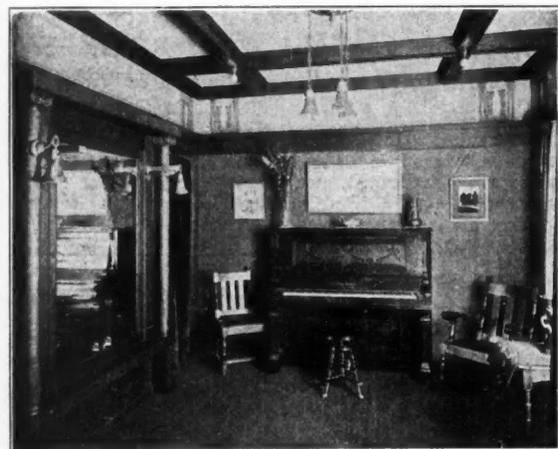
## PERFECT WALL BEDS Solve the Space Question



Space utilization means increased area for the builder, consequently increased income. It means that the owner can provide a more attractive and convenient home for tenants with greater profits to him.

### Three Rooms Equal to Five

Require less furnishing and are made more attractive by the richly finished console or side board which conceals the bed.



Ample ventilation is provided—More sanitary than the old style bed, for the reason that the space beneath can be kept clean without the laborious moving of the bed.

Prospective tenants will appreciate builders efforts to give them the best.

**Builders:—** Investigate before building. Let us plan for you how to utilize every inch.

**PERFECT WALL BED CO.**

430-2 S. Wabash Ave.

CHICAGO, ILL.

### Not Furniture—And It's Made in Grand Rapids

Though it may be queen of the furniture industry, the entire city is not, as yet, involved in that particular line of endeavor, for among its varied manufacturing organizations, Grand Rapids, Mich., numbers with the foremost a company of its name and which makes—plaster.

Of course! You couldn't miss it. The Grand Rapids Plaster Company is the concern we have in mind and as they have been helping to advertise the Michigan city for more than fifty years and their products are widely known they need no introduction.

This company, among the first to manufacture hard wall plaster, are now enjoying the fruits of their early efforts and are kept constantly on the jump handling the business their A No. 1 products develop.

The Grand Rapids line of hard wall plaster includes Climax Wood Mortar, Hercules Wall Plaster and Hovey's Eagle Calcined Plaster. Each has certain distinctive elements, and each is best suited and adaptable for certain conditions of use.

Their Climax Wood Mortar is a wood fibre plaster for use on plaster board, wood or metal lath. The use of wood fiber imparts a certain flexibility or pliability to the plaster which is not obtainable in any other way. This Climax Wood Mortar is made of pure gypsum rock, which the company quarries from their own mines near Grand Rapids. It is all plaster, mixed with a finely fibered tough wood and other ingredients, making it a plastic, easy spreading material.

The Grand Rapids Company particularly claim for their Climax plaster that any mason or plasterer can successfully apply it; that its density prevents vermin; that it is absolutely fire-proof and not in the least affected by water. The fiber adds about one-third to the bulk of the plaster, making it cover greater area with less weight and maximum solidity and tensile strength. It is very adhesive and can be thoroughly relied upon. This plaster may be sawed, dented with a hammer and banged by furniture, without cracking.

This company's Hercules wall plaster is a hair-fibered plaster which is not sanded at the factory. It makes a strong, hard, durable wall—dense and fire-proof. A high grade of hair is used for fibering. It is claimed that this plaster will spread better, go farther and with less waste, than any other wall plaster.

The "Hovey's Eagle" and "Green A" brands calcined plaster are made by this company from the purest quality of gypsum rock. Their plasters are very generally used for finishing or white coats. They are uniform in strength, cool-working and very durable.

The Grand Rapids Company issue interesting booklets upon the plasters of their manufacturing, which they will forward upon request.



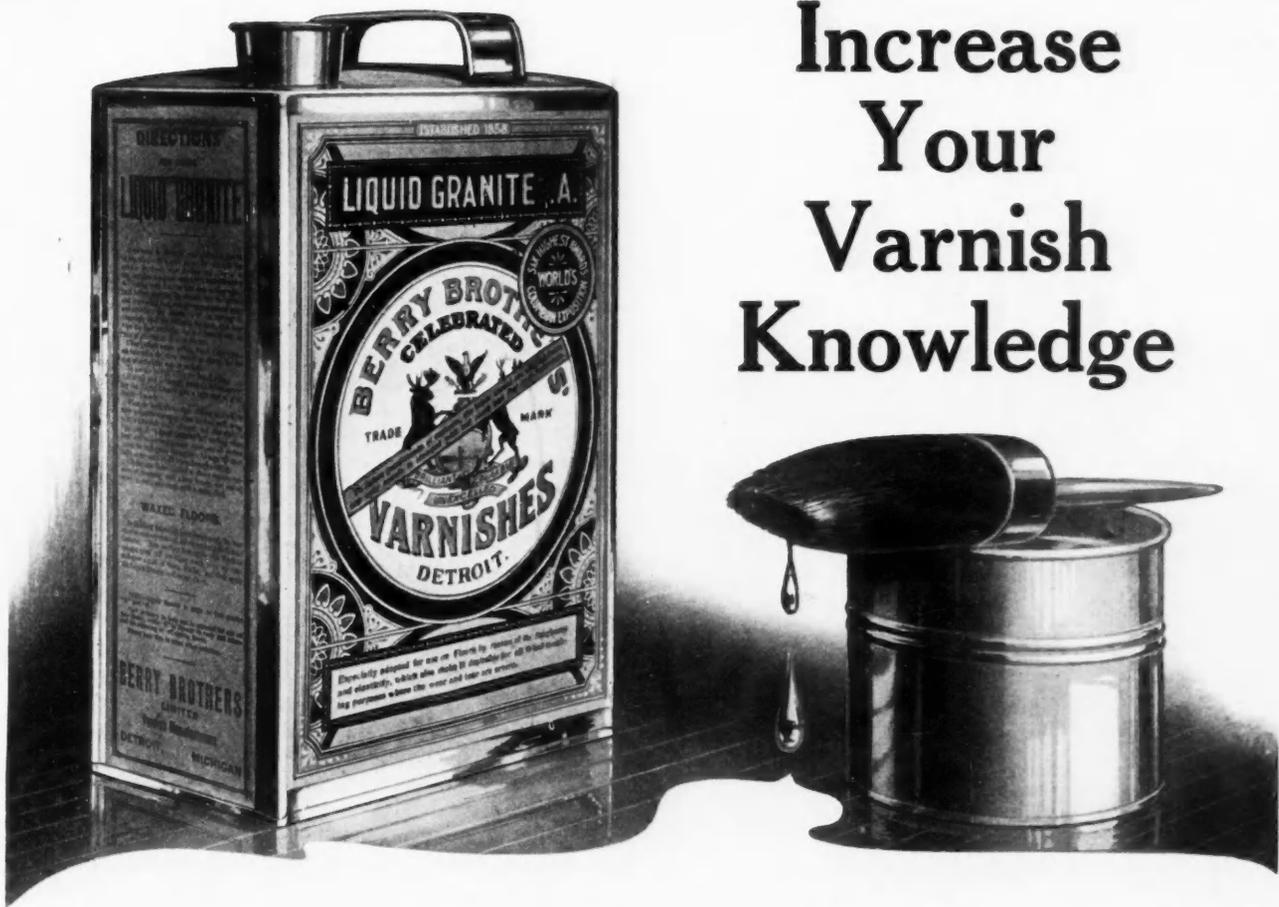
### Don't You Want a Book on Oak Flooring?

From Mr. William L. Claffey, 403 Hammond Building, Detroit, Michigan, comes word that his booklet on Oak Flooring, upon which he has been working for some time past, is now ready for distribution and will be sent free to all those requesting a copy.

It is a work which should appeal to every one at all interested in Oak Floors. In a clear, concise manner it gives valuable information concerning the laying, scraping, finishing care of floors of this wood. In addition to the floor matter it contains several special items of interest.

All AMERICAN CARPENTER AND BUILDER readers can obtain this booklet by addressing Mr. Claffey, and they should most surely find it a serviceable piece of printed matter to have on hand. It is free.

When Writing Advertisers Please Mention the American Carpenter and Builder.



# Increase Your Varnish Knowledge

Even though you don't wield the brush yourself—get varnish-wise.

Sometimes you sub-let the varnishing.

Sometimes you have nothing to do with it.

But *everytime* it's your own handiwork the varnish is used on.

So—know good varnish—and know something about the way it should be used.

Our book: "*Natural Woods and How to Finish Them*," will be a great help to every good carpenter.

Sent free. Write for it today.

**BERRY BROTHERS, Ltd., Detroit**  
Established 1858

Largest Manufacturers of Varnishes, Shellacs, Air Drying and Baking Japans, Lacquers, Stains, Fillers and Dryers

When Writing Advertisers Please Mention the American Carpenter and Builder.

**BERRY  
BROTHERS  
VARNISHES**

### A Combination Saw Jointer and Pencil Gauge

From the city of Randolph, Massachusetts, comes word concerning a most interesting and useful article. It is a combination saw jointer and pencil gauge now being manufactured by the Campagna Saw Jointer Company of that city.



In Use as Saw Jointer

These saw jointer-pencil gauges have met with considerable favor wherever introduced and the company reports their sales steadily increasing. Carpenters and mechanics everywhere are welcoming this little device and putting it to immediate good use.

We illustrate this saw jointer-pencil gauge here. Its operation is very simple as may be gathered from the following: It holds and guides the file perfectly, and by means of it an inexperienced person can quickly and accurately true up the teeth of a saw. It is made with two resilient sides shaped to receive between them a three-cornered file, and when the operator grasps the two sides between the thumb and forefinger and pinches them together on the saw, such action firmly holds the file in position. The file can be easily inserted or withdrawn, and when the jointer is not in use it can be conveniently carried in one's vest pocket. To be used as a gauge for enabling a person to draw a line at any desired distance from the edge of a board merely involves inserting a pencil through the loop at the top.

Mr. E. W. Campagna of the Campagna Saw Jointer Company is also the inventor of a simple measuring instrument, by which the length of both common and hip rafters for any size building and any pitch roof can be instantly com-

puted, the length of circumference of a circle and various other small puzzling problems easily solved. Rights for the manufacture of this measuring instrument may be leased or bought from the Campagna Saw Jointer Company.

Circular descriptive matter, prices, etc., upon their saw jointer-pencil gauge may be had by writing this company at Randolph, Mass.



### "Max-Royal" Veneered Doors

The R. McMillen Company of Oshkosh, Wis., have issued their catalog, number 27, illustrating and describing their complete line of hardwood veneered doors. The "Max-Royal" doors, as the hardwood veneered products of the R. McMillen Company are called, are winning for themselves a worthy name for staunch, thorough construction and durability of artistic finish.

Carpenter-contractors who have used "Max-Royal" hardwood veneered doors, made lasting friends of their clients. Half a century of success lies back of the product of the McMillen Company, guaranteeing to the users of "Max-Royal" doors, the integrity of these doors. It matters not whether it is front doors or interior doors, glazed or unglazed, oak, birch or ash, the quality is there in every case.

This new catalog is truly a worthy representative of a high grade line of hardwood veneered doors, of an old established house. The variety of style shown is amazing. There is everything from the old stand-by designs to the modern "bungalow" doors, "slab" sanitary doors, etc. Quite a large section of this catalog is printed in colors so that the various coloring effects obtainable are accurately portrayed.

This is a book that should be in the collection of every progressive carpenter and builder. We understand that it will be mailed free of charge to our readers writing the R. McMillen Company, Oshkosh, Wis., for it.

# STANDARD

## Lock-Joint

# Metal Shingles

Are the quickest laid shingles made, Mr. Contractor and Builder, and they give absolute satisfaction and service. These are proven facts and don't ignore them.

Our metal shingle are made in either

**Painted Tin**  
or **Galvanized**

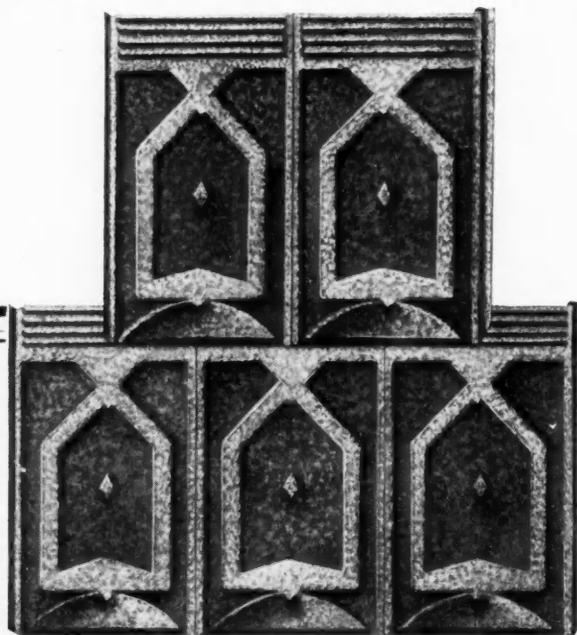
They are twice as quickly applied as those of any other make. In using them you are saving time and saving time means saving money. Can you afford NOT to investigate them.

Our Standard Lock-Joint Metal Shingles have a continuous seal at end of side-lock. It is impossible for rain, snow or sleet to blow up under them. Our's is the only shingle made having this feature. And they lock—lock so that they will always keep in one, and only one, position. Another feature that you will not find on other shingles.

Let us send you our general instruction roofing booklet. You'll find it very handy to have and it explains all about our Standard Metal Shingles. Drop us a line about it. It's free.

Further: We have an attractive proposition to make to agents in territory in which we are not represented. Write us regarding terms, etc., etc.

**The Moeschl-Edwards Corrugating Co.,** COVINGTON, KY.  
(Opposite Cincinnati)



When Writing Advertisers Please Mention the American Carpenter and Builder.

# The "ABC" of BEAVER BOARD Construction

The fourth of a series of twelve monthly talks to carpenters about the practical use of *Beaver Board*, the pure-wood-fibre wall and ceiling material that is durable, economical, artistic; has none of the disadvantages of lath, plaster and wall-paper; and is appropriate to any type of building new or old.\*

*Beaver Board is essentially a proposition for Carpenters and Builders*

## CHAPTER IV

### Beaver Board for Attics and Cellars

Take the man with the seven-room house.

He needs more room — wishes he had it — can't get it — a new house is out of the question — so is an addition, for either his pocketbook or his lot is too small.

"See here," you say to him, "Let me build two or three new rooms *within* your house. With *Beaver Board*."

"I'll make you in your attic a bedroom, or two of them; a study; a billiard-room, a maid's room — whatever you want."

"Down cellar I'll build you a store-room, laundry, summer kitchen, toilet — whatever you want."

"All out of *Beaver Board* — and attractive, warm in winter, cool in summer, dry and cheerful."

"Cost? Only a trifle."

### You Can Put Up Beaver Board; Any Carpenter Can

*Beaver Board's* application to walls and ceilings is simply a case of hammer, nails and ordinary intelligence.

In old buildings, nail it over the lath and plaster, or, if the studding is exposed, directly upon it. In new buildings, of course, the studding is always exposed.

There's no trick in *Beaver Boarding*; and no perplexing list of rules to follow. We only advise a few precautions, of which these are samples:

Don't fail to work out your panel arrangement.

Don't nail *Beaver Board* closer than  $\frac{1}{2}$  of an inch from the edge of the panels.

Don't place nails at edges more than 3 inches apart.

Don't place *Beaver Board* before using where it will absorb moisture.

Don't put up *Beaver Board* until all necessary headers and furring strips have been set in between the studs and rafters.

Don't paint *Beaver Board* until it has been well sized.

#### We Won't Permit You to Make Mistakes

We maintain an expensive Architectural Department for your benefit. For the asking we'll plan the whole job for you and give you estimates also.

*Beaver Board's* endless possibilities for all kinds of uses are fully described in our free booklet "*Beaver Board and its Uses*", with many pictures of different interiors. Write for it today.

The BEAVER COMPANY of BUFFALO

434 Beaver Road, Buffalo, N. Y., U. S. A.

The BEAVER COMPANY, LIMITED

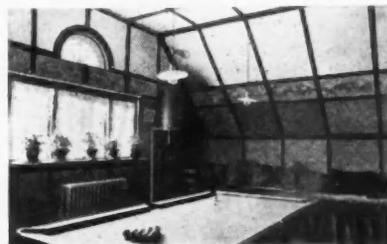
374 Beaver Avenue, Ottawa, Canada

16 Eastcheap, London, E. C.

When Writing Advertisers Please Mention the American Carpenter and Builder.



This cheery *Beaver Board* attic bedroom is in the home of Mr. Harry Lewis, Beaver Falls, N. Y.



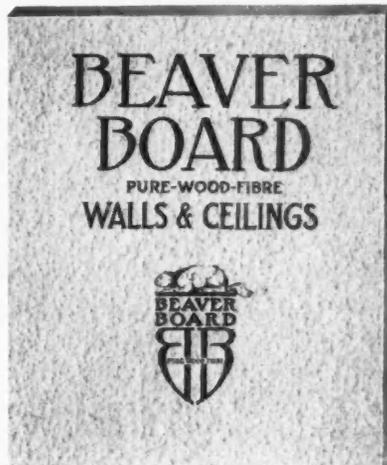
This is another bit of attic-transformation. *Beaver Board* was responsible for in the home of Mr. Lewis.



This is one of the many attics that have been made pleasant and livable by *Beaver Board* walls and ceilings.

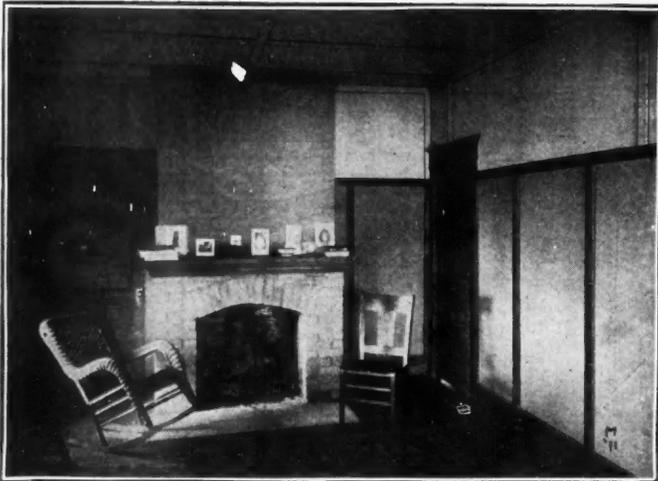


In this case, the owner has used *Beaver Board* in his cellar, for walls, partitions, fruit closet and other convenient purposes.



A sample of *Beaver Board*, showing its pebbled surface, which so lends itself to painting.

Look for this trademark on the back of every panel.



*You need to know  
about*

# I d e a l W a l l B o a r d

**I**T IS your duty in the interest of your customers and in the name of building progress, to have intimate knowledge of this material.

You ought to be able to recommend ideal Wall Board as better and more durable than plaster; as more convenient and economical to apply; as more sanitary and lending itself to a greater range of decorative effects.

And you will gladly recommend it after you have seen a sample and read our booklet.

All we ask of you is a chance to give you the necessary information.

Ideal Wall Board is being more and more widely used, instead of plaster in residences, churches, stores, public buildings, apartment houses, garages, office buildings, etc., etc.

*Write today for the sample and  
the booklet*

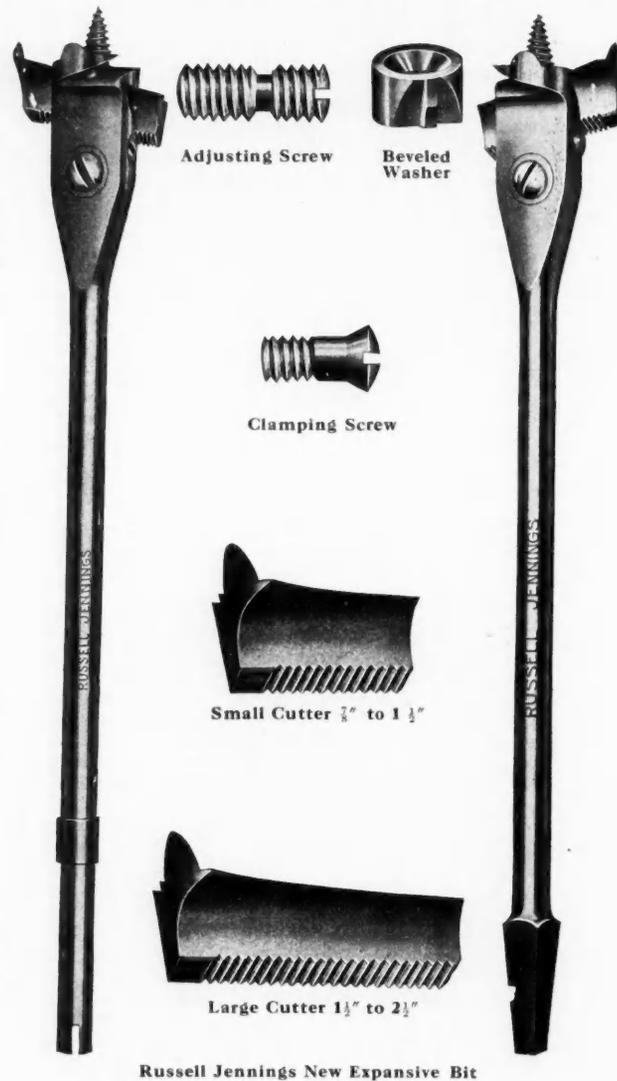
**The Roberds  
Manufacturing Company**  
MARION, INDIANA

## Russell Jennings Solid Head Expansive Bit

A new expansive bit possessing several features of value to workmen is being placed on the market by the Russell Jennings Mfg. Co., Chester, Conn., well known makers of auger bits.

This expansive bit has a solid head; the cutter is easily and accurately adjusted, and once adjusted, positively cannot creep.

The solid head makes the bit very strong and also prevents the chips from choking in under the cutter. The cutter is regulated by an adjusting screw which meshes with a rack formed on the side of the cutter. The pitch of the adjusting



screw is such that one turn moves the cutter 1/16th of an inch, changing the diameter 1/8th of an inch. This does away with the need of trying and changing the cutter several times before the right size is attained.

Again, after the cutter of the Russell Jennings bit is set, a very slight pressure on the clamping screw prevents the cutter from creeping for the clamping screw will prevent the adjusting screw from turning, and the adjusting screw is in mesh with the rack on the cutter and never lets the cutter slip. This non-creeping feature of the Russell Jennings bit is one of the most important as workmen are relieved of the annoyance of finding the cutter has moved after boring but a short while.

The new precision bit is being made with either the ordinary bit shank or the new precision turned shank which latter

When Writing Advertisers Please Mention the American Carpenter and Builder.

“PUT A STOP TO DEPRECIATION—BUILD WITH CYPRESS AT FIRST!”



The Wood That *Lasts* Shall Be *First* With Wise  
**CONTRACTORS**



By honest and intelligent advice on **woods** we are not only saving losses to people who are going to **build anyhow**—but we are also



**CAUSING MORE PEOPLE TO BUILD**

This is going to be of more and more benefit to **you** month by month. It is **up to you** to intelligently take advantage of this by **learning for yourself** that **CYPRESS** is not only the **ONE BEST INDOOR AND OUTDOOR WOOD** for the owner—but also the **ONE BEST WOOD FOR YOU**. Cypress **‘makes good.’** That helps your reputation. Cypress is **easy to work**—that’s **good for your tools**.

We are giving away complete working plans and specifications for **THIS CYPRESS SHINGLE HOUSE No. 2**. Many thousands of people **ALL OVER THE U. S.** are writing for them. **THEY WILL HAVE TO GET YOU TO DO THE WORK.**

**THEY WILL INSIST ON CYPRESS**

It will be **MONEY IN YOUR POCKET TO HELP THEM GET JUST WHAT THEY WANT.**



**CYPRESS** is the “comer” in your territory. **Listen For It.**

Why not **FIND OUT** what **CYPRESS** can do for **YOU, NOW?** WRITE US—ASK YOUR OWN QUESTIONS—about your own needs, big or little. You can rely on detailed and reliable **CYPRESS** information if you address our “**BUILDERS’ HELPS DEPT.**” We will recommend **CYPRESS ONLY FOR USES WHERE IT IS THE BEST WOOD TO USE.**

**Southern Cypress Manufacturers’ Association**

1216 HIBERNIA BANK BUILDING, NEW ORLEANS, LA.

We are producing **CYPRESS**—and talking it—but not retailing it. **BUY IT NEAR HOME.** ASK your lumber man if he sells **CYPRESS**: if he does not, ask him **WHY.** Then **WRITE US.** We will tell you where you **CAN** get **CYPRESS.**

When Writing Advertisers Please Mention the American Carpenter and Builder.

makes the tool quicker and easier to place in the brace chuck and which can't wobble or pull out.

The expansive bit is sold separately or as a part of the precision sets, which include full set of turned shank bits, bit brace with precision chuck for turned shank tools, or Universal precision chuck for either ordinary bit shank, or turned shank bits; bit extension, screw drivers, countersinks, and expansive bits.

The various parts of the expansive bit as well as a view of the precision set are shown on page 102.



### To the Man with the Abused Knee Cap

A little contrivance which certainly fills the long felt want has recently been placed on the market. It will appeal especially to carpenters and others of our readers who have suffered the aches and even incapacity for work due to the necessity of having to kneel much in the course of their daily work. This is nothing more nor less than a recently patented set of pneumatic knee pads. The name given them by the manufacturers, the M. M. M. Co. Inc., of Marshalltown, Iowa, is "Kneematics."

The manufacturers say that with one of these little pneumatic pads strapped to each knee, even the man who scrapes hardwood floors by hand, can do his work with so little fatigue that he can "walk erect on Sundays." No more caloused and torn knee tissues, is the slogan of the manufacturers of "Kneematics."

"Kneematics" are made of fine, tough, pliable black leather, guaranteed to be trouble proof. An inner tube to hold the air is made of fine, strong rubber. These little "Kneematic" pads weigh only six ounces each and their presence on the knee is never felt until the workman kneels; then he forgets he is kneeling.

Each pair of "Kneematics" is packed in a neat box together with a small pocket sized air pump for inflating them.

You who are abusing your delicate knee tissues, should drop a postal to-day to the M. M. M. Co., Inc., Marshalltown, Iowa, and ask for complete information concerning this knee saving convenience. Let "Kneematics" take the bumps; you can kneel on air.



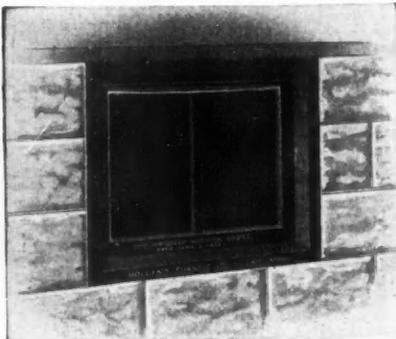
### A Pivot Check for Double Acting Doors

Bang! The tray of costly dishes hits the floor, scattering in pieces, expensive china ware, over the clean rug or carpet to every nook and corner of the room. The maid has fallen to the floor and is boo-hoo-ing to her heart's content. The little child, following the maid from the room, gives vent to its feelings and hurts in a series of lusty calls.

"What in the world can have happened," thinks Mama and rushes to the seat of trouble. Of course, it is the dining-room, and, of course, it is that pesky, old, swinging door which is the direct cause of the accident.

Explanations follow, bruises are bandaged and—the same thing happens a few days later. It's expensive comedy-drama. Every housewife knows it. Every housewife wonders how she can avoid it.

When they seek your advice, as they surely will, Mr. Architect, Mr. Contractor, Mr. Builder, Mr. Carpenter, tell them about the new Standard Pivot Check for double acting doors, or the new Standard Checking Spring Floor Hinge for double acting doors, and don't forget, either, when preparing those plans for the new house or building, in which it is purposed to use swinging doors, that these Standard products will solve and prevent all those exceedingly unpleasant accidents, the wild, slam bangety, swinging door causes.

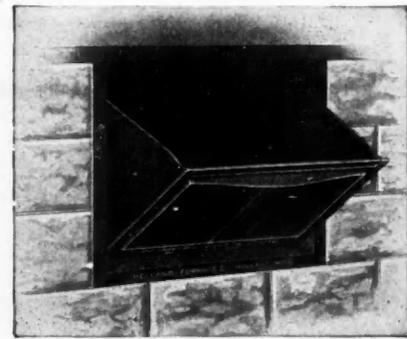


The Window-Chute Closed

## The Window-Chute IS USEFUL

Every Day in the Year

It is a piece of hardware that  
should be in every building



The Window-Chute Open

Our Window-Chute is the only real window, combination hopper, coal-chute on the market. It is absolutely burglar proof. It locks itself automatically when closed and can not be opened from the outside. It unlocks from the inside very easily.

This Window-Chute is not an ugly disfigurement to the wall but an attractive looking basement window without hinges, bolts, etc., etc., showing on the outside. Opened it is a practical chute—a heavy steel sheet completely covering and absolutely protecting the glass.

Install this Window-Chute and save the cost of a frame and sash. It is the easiest chute made to set. Has neither slanting top or bottom. It will not rust (rust-proof) and is strong enough to support the wall above it without buckling. It is entirely suitable for either frame, brick, stone or concrete walls.

#### Sizes

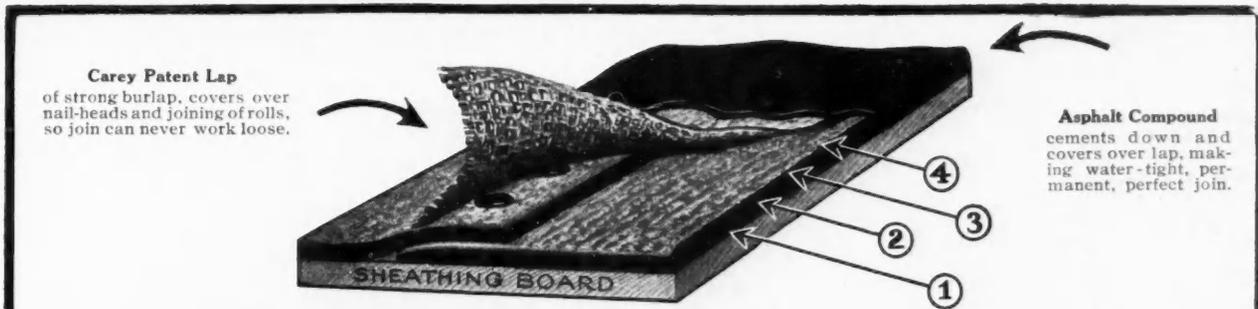
Size "B" 18" wide by 22 $\frac{3}{4}$ " deep, 1 Light 14x16

Size "E" 24" " " 22 $\frac{3}{4}$ " " 2 " 10x16

Our Window-Chute booklet illustrates and explains in detail just why the Holland Window-Chute is the best. Send for a copy.

**HOLLAND FURNACE COMPANY**  
HOLLAND MICHIGAN

When Writing Advertisers Please Mention the American Carpenter and Builder.



**Carey Patent Lap**  
of strong burlap, covers over nail-heads and joining of rolls, so join can never work loose.

**Asphalt Compound**  
cements down and covers over lap, making water-tight, permanent, perfect join.

①  
**Foundation of Wool Felt**  
Specially made of best materials in our own mill. Saturated with oily cement to render water-tight and permanently flexible.

②  
**Heavy Body of Asphalt Cement**  
The most durable and suitable cement composition ever produced for roofing purposes. This cement body is laid on the woolen felt foundation and is the "heart" of the Carey Roof.

③  
**Outer Cover of Heavy Burlap**  
Imbedded over cement body, protects it and gives great tensile strength to the Carey Roof.

④  
**Asphalt Compound Imbedded into Burlap**  
Preserves Burlap, hermetically seals cement body, and forms outer surface of the Carey Roof.

## One Roofing Time Cannot Destroy

CAREY'S Flexible Cement Roofing, after nearly 30 years of service on buildings of every character throughout the United States, has clearly proved to be the *one* roof that fulfills *all* requirements of a perfect roofing—*Safety, Economy of upkeep, Protection and Durability.*

Wherever careful study and comparison of all known roofing materials are made by building owners, superintendents and architects, with the idea of obtaining the *best value for dollar*, the Carey Roof is *invariably selected.*

Carey's Flexible Cement Roofing is the highest type of modern roof construction—the result of years of labor and experiments. It consists of a heavy, flexible cement body placed between a substantial woolen felt foundation and an outer covering of strong Calcutta Burlap, in which, in turn, is imbedded a heavy asphalt compound.

The *life and flexibility* of this cement body are *permanently preserved* by the woolen felt foundation and the outer covering of Burlap. This strong burlap gives great *tensile strength* to the Carey Roof and is itself preserved by the asphalt compound imbedded in its meshes.

The Carey Patent Lap (illustrated above) makes the joints of the roofing perfectly

*Carey's Flexible Cement Roofing*

water-tight. This patent lap consists of an extension of the burlap which covers over the nails, and when cemented down, makes the Carey Roof a

*solid sheet* over the entire top of the building.

Thus the Carey Roof is *absolutely time-proof*. It cannot *dry-out, crack or deteriorate*, because its "heart" of flexible asphalt cement is *hermetically sealed* from the action of the elements, *all the wear coming upon the outer surface of asphalt compound.*

When Carey's Roofing leaves the factory it is *finished complete*, ready for *instant* laying. No workman can alter its construction. No special skill or experience is needed to lay it. And once laid, it will last as long as the building.

*We invite and urge every building owner, architect or superintendent, to make a thorough comparison of all other roofings with Carey's before reaching a decision. Our complete booklet, together with a generous sample of Carey's Flexible Cement Roofing, will be mailed you on request.*

## The Philip Carey Company

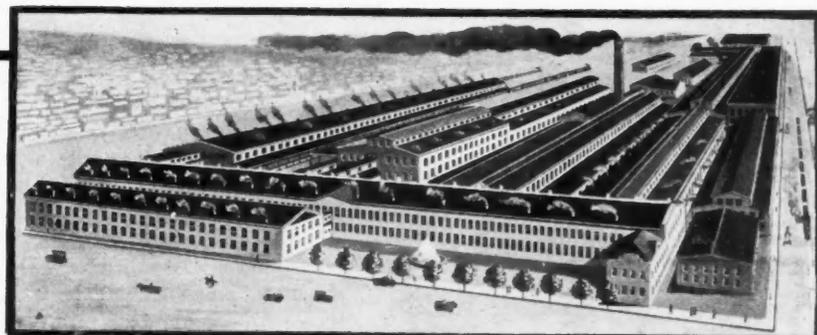
General Offices and Factories 58 Wayne Avenue Lockland, Cincinnati

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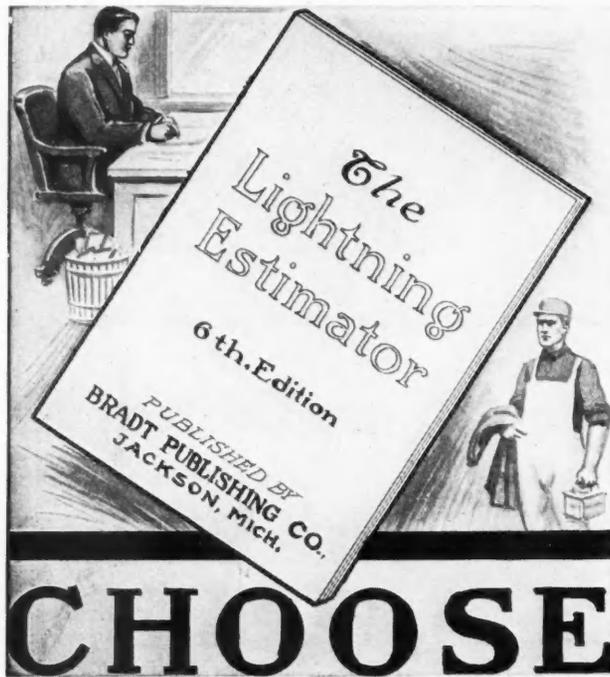


Carey Roofs cover this magnificent plant—the Favorite Stove and Range Co., Piqua, O.



Carey's Roofing has given 18 years of continuous service on these buildings.

When Writing Advertisers Please Mention the American Carpenter and Builder.



# CHOOSE

**I**T'S up to you to be the man at the top instead of the man with the dinner pail.

Don't hesitate to grasp this opportunity to win success, for there's always room at the top for the man who knows how.

## The LIGHTNING ESTIMATOR

stops worry, lying awake nights, over or under estimating and guessing—in fact, by showing you how to estimate the cost correctly, it spells the word **\$ucce\$\$** for you. Don't do yourself an injustice by passing up the greatest opportunity ever offered to Carpenter, Contractor or Builder.

## The New Sixth Edition of the LIGHTNING ESTIMATOR

will teach you: How much time and material involved in each part of your work; how to figure on unfamiliar work; how to estimate quickly and correctly on a large job; how to estimate on time, material and prices in all parts of the country.

This Book is written by a man who has made good in this profession, and is based on hard, solid facts, secured by the knocks of experience, making it an invaluable guide to any one engaged in or those about to enter the building business.

If you are just starting out, here is your chance to get a firm foot hold. If you are an old timer and getting a little behind the times, here's your chance to brighten up and get some new ideas.

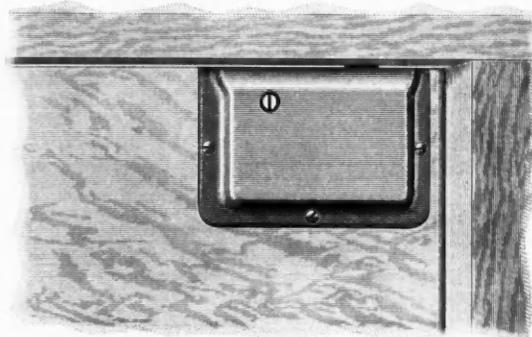
This Edition is bound in cloth, profusely illustrated—a feature not found in other books of this kind. The price, \$1.00. Don't delay. Send for it today.

## BRADT PUBLISHING CO.

1260 Michigan Avenue

JACKSON, MICH.

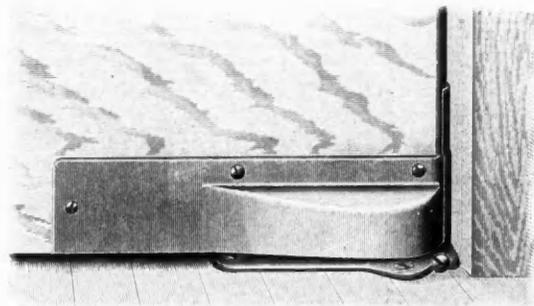
These "Standard accident preventers" are manufactured by The Standard Manufacturing Company of Shelby, Ohio. The "Standard" Pivot Check, which we illustrate here, is designed for use on doors where the regular double-acting spring floor hinge has already been applied to give the same control and check to the door as with a double-acting checking hinge. It perfectly checks and controls the swing of the door, bringing it to a stop at center without oscillation.



"Standard" Pivot Check for Double Swing Doors

One distinctive feature of the "Standard" Pivot Check is that it is adapted for use in connection with any make of double-acting spring floor hinges, since it can be placed in position at the top of the door to bring the pivot in line with the hinge post at the bottom of the door. The distance of hinge post from edge of the door not being the same on different makes of hinges, it is necessary to have a pivot check that can be universally used in connection with the different makes of floor hinges upon the market. The check is regulated with screw valve through the hole in finish plate as shown.

Their Standard checking double acting spring floor hinge is



"Standard" Checking Spring Floor Hinge

a practical checking hinge for double acting doors, between dining-room to pantry or kitchen, in private residences also for use in apartment buildings, hospitals and for vestibuled doors in churches and public buildings.

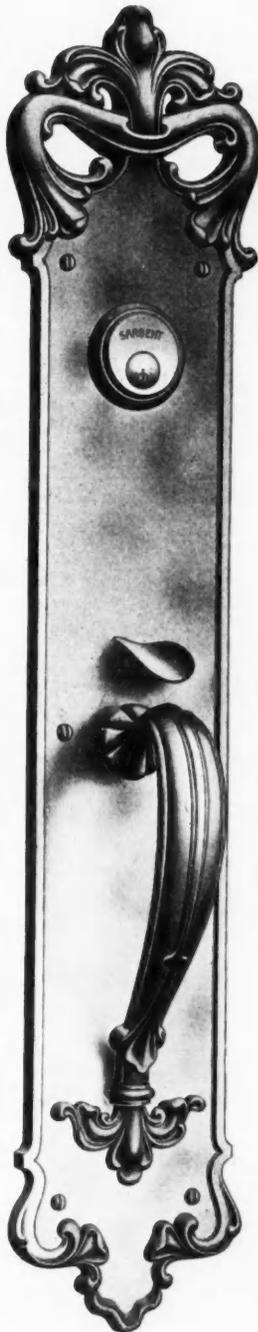
This Standard hinge combines all the advantages of the old-style double acting hinge, with the all important door check feature—an ingenious device, so constructed that the door always swings slowly, stopping at dead center. There is no swing bang motion which is invariably the case with the old-fashioned double acting spring. This Standard automatically closes the door without slam; it will hold the door open at position desired; it acts noiselessly in its entire operation.

The Standard company also manufacture a complete line of double acting hinges without the checking device. Their printed matter, illustrating and detailing fully the various hinges and devices for same they are making, can be obtained by addressing the company—The Standard Manufacturing Company—at Shelby, Ohio.

When Writing Advertisers Please Mention the American Carpenter and Builder.

# SARGENT

## Store Door Handles For the New Stores of Your City



Do not be satisfied to use the common patterns which make every store entrance look alike, but apply **Sargent** Cylinder Store Door Locks and Handles that will work easily, give absolute security and always prove satisfactory. From the many patterns different designs can be used for the different owners that will give individuality to each store.

You will also receive credit for using good taste and the considerable advantage of having many pleased customers in your neighborhood.

### SARGENT

### Hardware and Lock

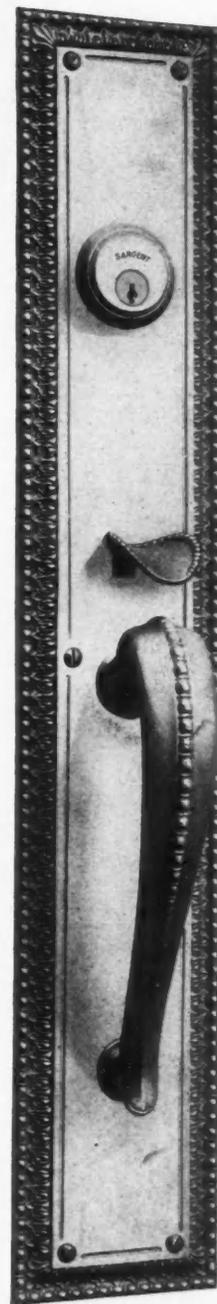
by persistent and extensive advertising and satisfactory service have become well and favorably known, but these are not the only reasons for the excellent reputation they have throughout the world. The experience of three generations, the well organized body of craftsmen, the use of right materials, correct construction and care in manufacture, all count in the production of these satisfaction-giving goods.

Sargent Hardware and Locks are obtainable from representative hardware merchants in all parts of the world. The Sargent Catalogue, a large and comprehensive volume, may be consulted at any hardware store.

## SARGENT & COMPANY

Makers of Dependable Hardware

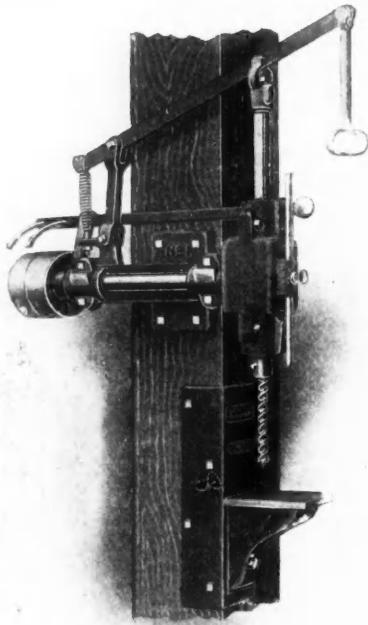
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### A Substantial Post Borer

Anybody who has worked around a carpenter and builder's shop knows just what an advantage it is to have a boring machine. To meet the demand for a first class machine of



J. A. Fay & Egan Co.'s No. 1 Post Borer

this type, J. A. Fay & Egan Co., have brought out a series of post borers.

The Fay-Egan No. 1 post borer, shown herewith, is such a tool. It is for general work in all kinds of plants, and

can be quickly and easily installed in any part of the shop by bolting it to a post. It bores holes up to 1½ inches in diameter, rapidly and accurately. The mandrel is always in one position, and is driven by encased gearing. The stroke of the spindle is 9 inches; the table bracket has a vertical adjustment of 7 inches. It is equipped with tight and loose pulleys, and makes 650 revolutions per minute.

It is made of the best material, well built, strong and substantial, and is said to be in every way a perfect post borer.

For further information, prices, etc., on this or other types of post borers, address J. A. Fay & Egan Co., 545-565 W. Front Street, Cincinnati, Ohio.



### Book of Wood Panels Free

S. C. Johnson & Son of Racine, Wisconsin, have gotten out a very novel and attractive method of showing their stains and paint products on the actual wood. The panels are pasted in a three-fold cloth binder, which when folded is 11 by 5¾ inches. They are sending these binders out in large quantities to contractors, painters and other large users of their finishes.

The binders are so constructed that they are very attractive, and at the same time neat and durable and convenient for the artisan to carry around with him.

S. C. Johnson & Son have kindly consented to furnish those of our subscribers who wish it, with one of these useful books of wood panels. If you haven't as yet procured yours, drop them a card advising them that you are one of our subscribers, and they will send it to you promptly, free and post-paid.

We are sure that you will find this folder of great assistance in securing contracts, as you can show your clients the effect of different shades of Johnson's Wood Dye on various woods.



## How Carpenters Can Make Money

A little **tall hustling** for a **day** will keep you busy for a week or two when other carpenters are **idle**

Every spring a lot of folks in your neighborhood put new screening into their windows, doors, porches.

Why don't you "corner" this business where you live?

**Pearl Wire Cloth** plus your own **reputation**, will enable you to do this **profitably**. If **regular** carpentering is a little quiet, **you** can keep **busy**.

Your friend the local hardware dealer will be glad to furnish you samples of this sanitary dust-proof screening and tell you its advantages.

Good **tools**, good workmanship and good **materials** mean **prosperity**. But it takes **action** to push them into **prominence**.

**Go See What Your Dealer Says About Pearl Wire Cloth**

If your hardware dealer does not keep Pearl Wire Cloth let us tell you where and how you can get it.

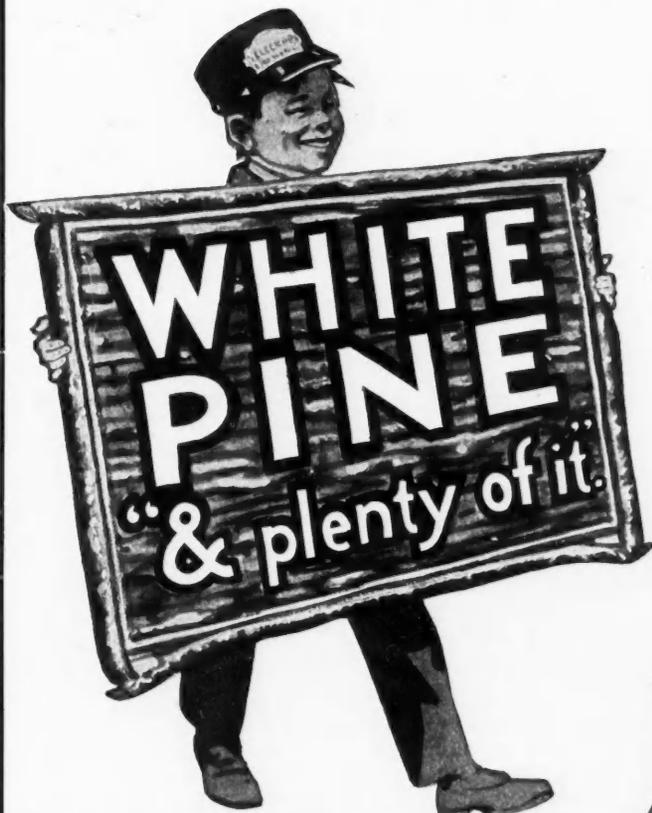
**The Gilbert & Bennett Manufacturing Co.**  
Georgetown, Conn. Chicago, Ill. New York City Kansas City

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# GOOD NEWS: "Tell It Again!"

*"WHITE PINE—AND PLENTY OF IT."*

There's *no way to make THIS Good News too strong* to suit the skilled and experienced *Carpenter or Contractor*. When he hears that HE (and YOU) CAN GET ALL THE WHITE PINE HE (or YOU) CAN WISH FOR—GET IT in any quantity—any place—any time—HE and YOU are GLAD. (YOU KNOW VALUES.) You may have to do some *INSISTING*—and some *refusing of substitutes*—but *WHITE PINE is Worth All the Insisting that's Necessary*.



**The One Best Wood For Your Tools.  
The One Best Wood For Your Customers.  
The One Best Wood for Your Reputation.**

When you know what you want —  
and what you want is good old  
WHITE PINE (or NORWAY)  
"The Wood America is Mostly Built Of"  
DON'T TAKE ANY SUBSTITUTES  
Write us today for "Why-When-WHITE PINE" Free

**NORTHERN PINE  
Manufacturers' Association**

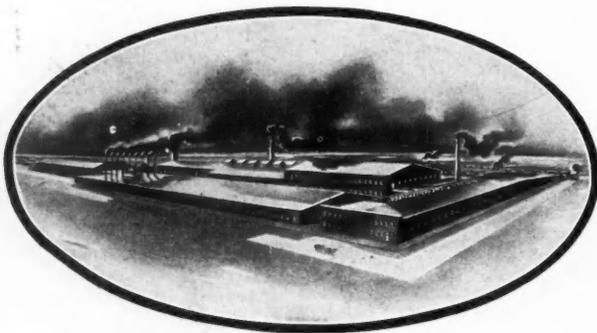
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# Wholesale prices on all Concrete Machinery

**S**AVE 15% to 50% on concrete machinery, tools, forms and moulds. No matter what you want to buy in the concrete machinery line we can make this big saving for you on price. Our low prices are the result of manufacturing economies, tremendous output and the elimination of extra charges for patented features, exclusive rights, etc. Every part of every Northwestern product is built in our own pattern and machine shops, foundries, engine works, etc., and when you buy the Northwestern kind, your saving of 15% to 50% is legitimate without any slighting of quality.



## No Money Down Ten Days Free Trial

Every machine or mould shipped on ten days free trial with return privilege. We guarantee absolute satisfaction on every machine, mould or tool purchased from us, and don't want your money unless you are satisfied. Write for our special trial proposition on the entire line.

## Get Our Wholesale Prices

Be sure and send for our wholesale catalogs before you buy anything in the concrete machinery line. Tell us what you are interested in so we can send you proper catalogs and full information, with no obligation whatever to buy. Tell us your requirements and about your work as we may be able to save you a good many dollars on equipment.

**Northwestern Steel & Iron Works**  
1054 Spring Street, EAU CLAIRE, WIS.

### NOTICE THE LIST OF PRICES ON THIS SPLENDID LINE

Block Machines .....	\$10	to	\$ 250
Brick Machines .....	22	to	75
Mixers .....	24	to	1,000
Porch Column and Baluster Outfits .....	15	to	75
Cap and Sill Moulds.....	12	to	35
Lawn Vases .....	15	to	25
Ball Moulds .....	2	to	17
Grave Stone Moulds .....	7	to	69
Well Curbing Moulds .....	4	to	7
Drain & Sewer Tile Moulds..	6	to	83
Block Cars .....	11	to	17
Fence Post Moulds .....	7	to	12
Silo Moulds .....	14	to	150
Coping Moulds .....	18		
Hitching Post Moulds .....	20		
Baluster Moulds .....	6	to	18
Jardinieres .....	12		
Special Gate Post Moulds..	10	to	30
Newel Post Moulds .....	14		
Grave Markers .....	7		
Burial Vaults .....	90		

Complete line of Cinder Crushers, Rock Crushers, Sand and Gravel Elevators, Sand Screens in both Revolving and Stationary Type, Mortar Gauges, Wheelbarrows, Jointers, Groovers, Edgers, Corner Tools, Curb and Gutter Tools, Corrugating and Radius Tools, Roller Jointers, Brick Tongs, Curb Clamps, Curbing Edgers, Hawks, Floats, Line and Indentation Rollers, Tampers, Rammers, Name Stamps, Indentation Letters, Wall Plugs, Expanded Metal and Water Proofing Flower Pots, etc.

# Northwestern

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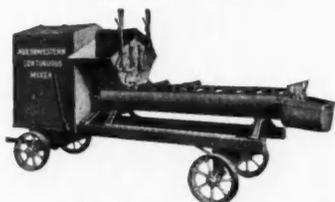
# Save half on your Mixer Equipment

**Y**OU will probably need a new concrete mixing machine of some kind or style this season. Get posted on the most modern and up to date line of concrete mixing machines: the Northwestern kind. Catalogs show complete mixing machines of every style, size and description from the smallest type of hand mixers for odd jobs to the largest contractors power mixing machines; hand mixers, combined hand and power mixers, special sidewalk mixers, continuous mixers, mortar mixers, and rotary batch mixers in all sizes and with any kind of equipment desired. Send for special Northwestern catalogs today. It will be the means of saving you many dollars on your mixer equipment. Say what size you are interested in.

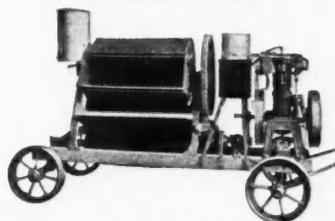
## NORTHWESTERN MIXING MACHINES



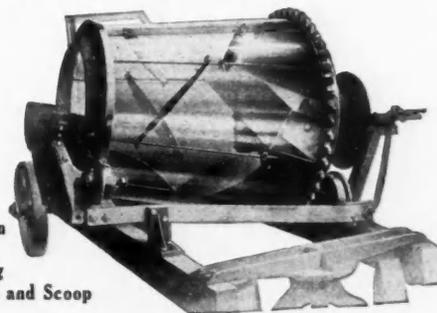
Cone Batch Mixer



Continuous Mixer



Sidewalk Mixer



Phantom View Showing Paddles and Scoop

### The Low Down Northwestern Cone Batch Mixer

The Northwestern Cone Batch Mixer is so low down that you can load directly into the drum with shovels or erect a small platform and load with wheelbarrows. Power side loaders also supplied if desired. The low waist high intake allows several men to shovel or charge from wheelbarrow. Platform only 28 inches high saving \$60 to \$100 a month alone for labor costs. A variable discharge mixer which will dump any amount from shovel to cartload with each revolution, with mix always in sight, self cleaning features with no pockets for cement to collect. Shower and whirlpool effect giving great capacity and large quantity of mixed material in short time. Paddles adjustable and easily removable. Mixer combines mixing principles of cone, cube and polygon with material always in sight, but slopping eliminated. Note X-ray view above showing adjustment of paddles and discharge chute. Few wearing parts, making economical machines to run and insignificant cost for repairs.

The speed of the Northwestern Cone Mixer enables the use of a smaller size as compared with other makes. This together with low selling prices enables the saving of about one half on the cost of your mixer equipment. Built in all sizes with any kind of power and designed to suit the most particular and exacting requirements.

**Northwestern Steel & Iron Works**  
1054 Spring Street, EAU CLAIRE, WIS.

# Concrete Machinery

When Writing Advertisers Please Mention the American Carpenter and Builder.

**—ANY MAN CAN—  
GET \$1,000.00  
Who Joins Fritter's \$1,000 Class**

For goodness sake  
listen to me.



Reader,  
I Fritter, am  
talking to  
**YOU!**

—Am saying, that you; yes, you, can get \$1,000; but be warned—only 5,000 can be accepted. So get mighty busy—write Fritter today. It costs nothing to investigate this remarkable \$1,000 class.

**5,000 Men Will Get \$1,000 Each**

You, by acting now—today—can get the thousand allowed to your section. This money—\$1,000 or more, per man—goes to mechanics, clerks, farmers, preachers, doctors, lawyers, teachers—people from all walks of life—any man, anywhere—up to 5,000, who is willing to join Fritter's \$1,000 class. Nobody barred. Not a fairy tale, fake or humbug; for listen—it's going on daily—hundreds have received their thousand—some many thousands. If you can use \$1,000—real money—payable \$35 to \$75 weekly—say so—don't hesitate—don't delay a minute; but get the thousand-dollar hustle—get your first \$1,000—first start, first taste of real independence—power, influence, luxuries—get these through Fritter, just as hundreds have done. Poor men joining his wonderful \$1,000 class

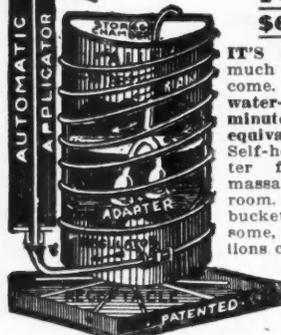
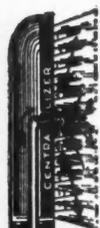
**Without Capital—Without Experience**

—starting with only their nerve—finishing with thousands; yes, thousands of dollars. You, if willing to join hands with Fritter, can easily enjoy same abundant prosperity. Knowing the reason dispels all doubt—creates confidence—enthusiasm.

**Class Getting Over \$2,000.00 Per Man**

Korstad (Minn. farmer) received \$2,212.13 in 2 weeks; Zimmerman (Ind. farmer) \$3,856 in 30 days; Stoneman (Nebr. photographer) \$3,841.68 in 60 days; Rasp (Kansas agent) \$1,685 in 73 days; Juell (Canada clerk) \$6,800; Oviatt (Iowa minister) \$4,000; Hart (Va. farmer) \$2,000; Wilson (Ky. cashier) \$3,000 in 30 days; Beem (Kans.) averaged \$164.25 weekly for 3 months; Langley (Dak.) liveryman) \$115 first day. No wonder these men bless the day they joined Fritter's \$1,000 class. Reads like fiction, yet it's the gospel truth. Proven by sworn statements—investigation—personal interviews.

**10 MINUTES' WORK  
\$6.50 CASH, PRESTO!**



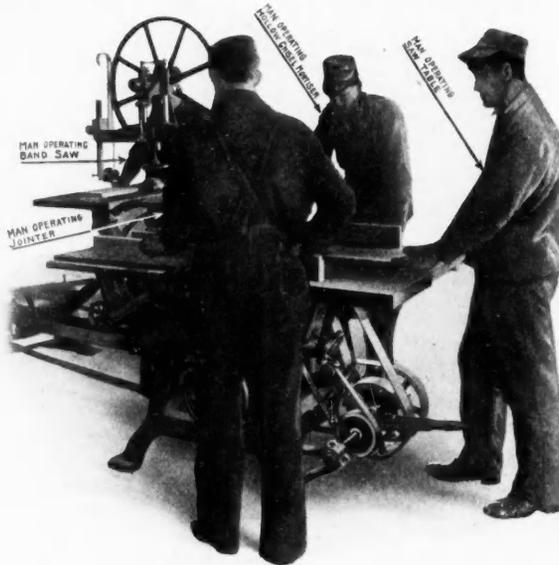
Sectional View of "Energizer." much wanted, universal bathroom has come. Requires no plumbing, no water-works—no water systems. 10 minutes to install—\$6.50 to buy. The equivalent of any \$200 bathroom. Self-heating—hot or cold running water facilities. Cleansing, friction, massage and shower baths in any room. No tubs to clean, bowls or buckets to fill. Simple, durable, handsome, sanitary. The dream of millions come true. Modern homes, modern bathing facilities within the easy reach of every man, woman and child in the land. No experiment. Used by U. S. Government. Over 200,000 delighted customers. With such an article, with exclusive selling rights, with Fritter's help and your nerve you're bound to make from \$1,000 to \$5,000 this year. It's not a question of ability, location or capital (for we give credit to active workers) but whether you act quick enough to get into Fritter's \$1,000 class. Once in you're good for \$1,000 anyhow. Reese solicited 60 people—sold 55; MacDaniels 20—sold 19; Lodewick 41—sold 39—17 orders in one day; Hart "16 in 3 hours;" Wilson, "102 in 14 days."

Address Fritter personally today—make him prove his claims and above all that you too can get \$1,000. Don't accept anything without proof. First get Fritter's entire proposition—it's free. Then decide. Just a postal will do.

**M. FRITTER, Secretary and Manager  
ALLEN MFG. CO., 3542 Allen Bldg., Toledo, O.**

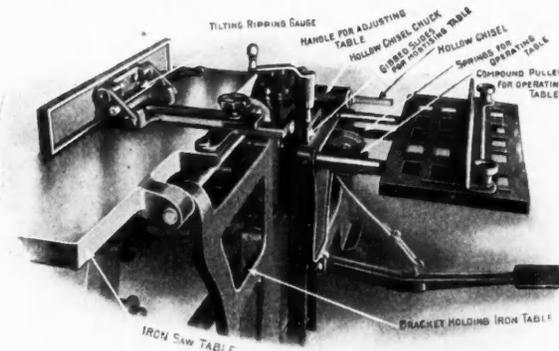
**Important Improvement in Famous  
Universal Woodworkers**

The substitution of an iron saw table, for one of wood, marks the latest improvement in the "Famous" Universal Woodworker; a similar change has also been effected in regard to the ripping gauge. While these improvements were



not absolutely necessary, the builders installed them because they showed promise of increased durability, and to conform with their "all-steel-and-iron-construction." The increase in quality has made no increase in price.

The importance of this branch of the woodworking machinery business can be realized by the fact that over eleven hundred "Famous" Universal Woodworkers are in use today. Carpenters and contractors are beginning to realize and understand the advantages offered by a machine of this character



over the older styles of machines. The man of moderate capital is placed in a position to do his own millwork, without paying exorbitant prices to local planing mills and without their delays.

The "Famous" was the pioneer woodworker, and, though of comparatively recent origin, is now recognized as one of the greatest woodworking machines of the present day. Three or four years ago there were less than a hundred in use; now there are more than eleven hundred. The novelty of 1908 is the necessity of 1912, simply because it fills a want.

The working qualities of sixteen various machines are embodied in the operation of the "Famous" Universal Woodworker, thereby permitting this number of different kinds of work to be accomplished on the one machine. Four men can work at the same time when desired. Further information will be sent upon request to the builders, The Sidney Tool Co., Sidney, Ohio.

When Writing Advertisers Please Mention the American Carpenter and Builder.

# Don't Miss This Opportunity



We Want One Carpenter or Builder in Every Community to Demonstrate, Take Orders for and Apply Our EDWARDS METAL SPANISH TILE ROOFING on a Liberal Commission.

Here is a chance to build up an independent, profitable business for yourself right at home. Many carpenters are now devoting their entire time to selling our metal roofing. Others have made big profits simply devoting part of their time to selling and laying our Metal Spanish Tile.

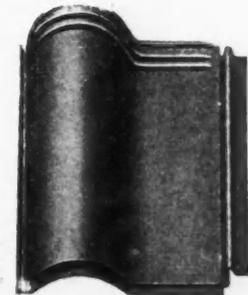
## Edwards Metal Spanish Tile

Is being advertised in the leading magazines and is now known to thousands of home builders and owners everywhere. Wherever it has been used it has made a decided "hit" because it shows off to good advantage on the roof and has numerous points of superiority over any other style of roofing.

Architects are specifying Edwards Metal Spanish Tile, for they know it will do away with roofing "troubles." Builders like it because of the finished appearance it gives any house on which it is used.

Our Metal Tile are stamped out of the highest quality Worcester terne plate in exact imitation of the most expensive Terra Cotta Spanish Tile. They come either "dip" painted or heavily galvanized size 10x14 inches. Our patented interlocking side lock makes it possible to make a perfectly moisture-proof roof without soldering. Edwards Metal Spanish Tile afford the fireroof advantages of Terra Cotta Tile, but are much lighter in weight, cost but a trifle more than ordinary roofing and will last a life time.

WRITE US TO-DAY ABOUT YOUR TERRITORY. Our business is growing so rapidly that it is necessary to have an agent in every community. The territory is going fast. One day's delay may mean that some one else will be given your territory. DON'T DELAY. WRITE TO-DAY FOR OUR SPECIAL AGENTS' PROPOSITION.



Note the construction of patented interlocking device, protecting nail heads from weather and providing perfectly for expansion and contraction of the metal.

## The Edwards Manufacturing Co.

"THE SHEET METAL FOLKS"

401-417 Eggleston Ave.

CINCINNATI, OHIO

THE WORLD'S LARGEST METAL ROOFING, METAL SHINGLES AND METAL CEILING MANUFACTURERS

When Writing Advertisers Please Mention the American Carpenter and Builder.

### "The Door Beautiful"

Morgan Doors have come to be synonymous with all that is good in hardwood veneered door construction. In variety of styles as well as thoroughness of construction, these doors have made a lasting place for themselves in the estimation of carpenters, builders and owners.

A new edition of the illustrated book on Morgan Doors, Portfolio D of "The Door Beautiful," has recently been issued by the Morgan Co., the manufacturers of Morgan Doors, Oshkosh, Wis. Every reader of the AMERICAN CARPENTER AND BUILDER should have a copy of this book for his own information on the subject of hardwood veneered doors, and for the benefit of his customers, the men who are going to build and who want to know just what the hardwood veneered doors will look like that are to go into "the new house."

This book illustrates all the various styles of doors made by the Morgan Company, showing the well known craftsman style of door, among others. The characteristic graining of the various hardwoods employed in door making is also very satisfactorily reproduced. These woods are birch, oak, ash, etc. A very interesting and instructive section of the book is devoted to the construction of Morgan hardwood veneered doors. There is also the valuable treatise on the care of hardwood doors.

This Portfolio D of "The Door Beautiful" will be sent free of charge to any of our readers requesting a copy. Write for it today.



### Crimpedge Gutter Patented

Under date of March 12, 1912, patent of Crimpedge Gutter was allowed to the Milwaukee Corrugating Co., of Milwaukee, Wisconsin, with a branch at Kansas City, Mo., covered by Patent No. 1020087.

### "Filmwood," the New Low-Cost Wood Paneling

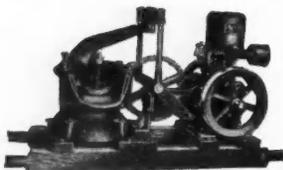
There is being manufactured by The Cott-a-lap Company of Somerville, New Jersey, a substitute for wood paneling which is meeting with considerable success. "Filmwood" is the name of this product and we are reproducing here two illustrations showing it on the wall.

In these two instances—"Filmwood" Oak, in Card Room of Chicago Athletic Club and "Filmwood" quartered Oak for hall treatment—the cost of Filmwood was but one-third that of what the cost of wood paneling would have amounted to.



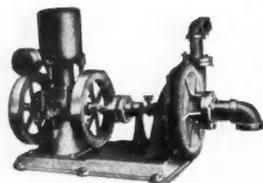
"Filmwood" Quartered Oak for Hall Treatment Showing the Grain of Wood

This Filmwood is a very thin veneer of real wood, backed with a suitable paper through a special process; and it can be hung like any wall paper. After hanging, it is finished as if it were solid wood. It can be sand papered, filled, oiled, waxed or varnished and either rubbed or polished.



Novo Contractor's Trench Pump Outfit

The Novo Engine is simple, easy to start and run, guaranteed free from freezing troubles. It is the lightest engine for power developed—making it readily portable and especially valuable for contractors. Made in 1 to 10 H. P.



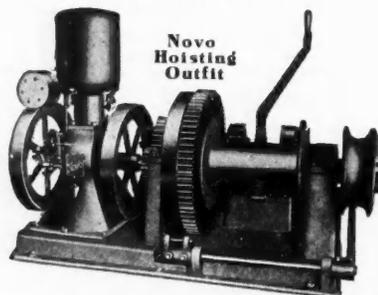
Novo Engine and Centrifugal Pump Direct-Connected

"The Engine for Every Purpose"

## NOVO ENGINE

### and Hoisting and Pumping Outfits

will do your power work—hoisting, water pumping, cement and mortar mixing, rock crushing, etc.—better and more economically than either steam or electricity.



Novo Hoisting Outfit

NO TANK  
NO FAN  
NO FREEZING  
TROUBLE

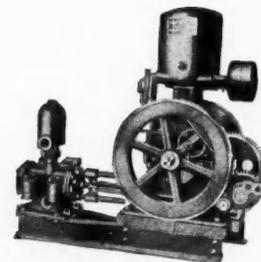
Novo Hoisting and other outfits are built for hard service. The gears are large and strong, bearings are wide—everything is made in the way that long experience has proved to be the best.

Send for Novo Equipment Catalog

and give us the opportunity of convincing you. It will be your benefit as well as ours. At least do your business the favor of looking into this proposition.

**Novo Engine Co.,** Clarence E. Bement,  
236 Willow St. Sec'y and Gen'l Mgr.  
Lansing, Mich.

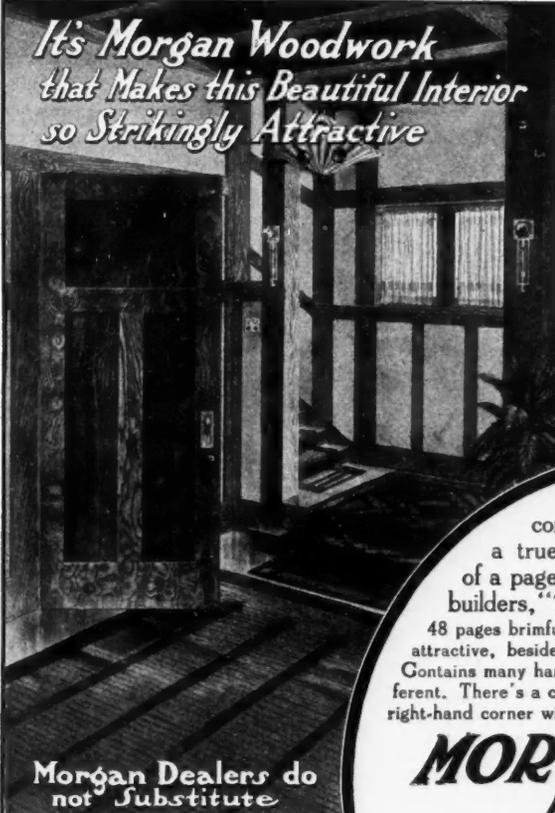
We can offer an attractive contract to dealers in new territory. Write us for details.



Novo Engine Direct-Connected to Pump

When Writing Advertisers Please Mention the American Carpenter and Builder.

*It's Morgan Woodwork that Makes this Beautiful Interior so Strikingly Attractive*



**Morgan Dealers do not Substitute**

Read What a Delighted Owner Says About Morgan Doors  
 Detroit, Mich., Oct. 17, 1911.  
 Morgan Sash & Door Co., Chicago, Ill.  
 Gentlemen: I have copies of your book, "Door Beautiful," and our house is completed. We have the most beautiful doors—none other than "Morgan." We recommend them to every one, they are so fine. Thanks. EVA M. LEVENS.  
 P. S. Our contractor got doors through Grace Harbor Lumber Co.,

This elegant, correct Craftsman design is a true photographic reproduction of a page in our *de luxe* book for home-builders, "The Door Beautiful." Just think! 48 pages brimful of splendid suggestions for making home attractive, besides a wealth of necessary expert information. Contains many handsome interior and exterior designs—all different. There's a copy for you—it's free—the coupon in upper right-hand corner will bring it. *Mail it today.*

**MORGAN GUARANTEED PERFECT HARDWOOD DOORS**

are specified by experienced builders and reliable architects everywhere, because there is no other door made that can even approach them for splendid style and masterly construction—none "just as good." Perfect match for every style of architecture. Scores of letters like the one at the left attest their supremacy. Don't think of building or remodeling without consulting "The Door Beautiful. Send the coupon today, the book will respond tomorrow.

**MORGAN COMPANY, Dept. B7 Oshkosh, Wis.**  
 Distributed by  
 Morgan Sash & Door Co., Chicago, Ill.  
 Morgan Millwork Co., Baltimore, Md.

All genuine Morgan Doors are branded like this — Look before you buy.

Dept. B7  
 Morgan Co.  
 Oshkosh, Wis.  
 I intend to remodel with  
 in the next ..... months  
 Kindly send me a copy of your book  
 for home builders "The Door Beautiful"  
 I am not obligating myself in any way by mak-  
 ing this request.  
 Name.....  
 Town.....  
 Co. or St. No.....  
 State.....  
 Fill in, tear off and mail today.

## This Advertisement Will Bring You Business

A HOST of prospective home-builders, with ample means to buy the best of everything, will read about **MORGAN Guaranteed Perfect Doors**, as told in the beautiful illustration and convincing text reproduced above, in Craftsman, Country Life in America, House Beautiful, American Homes and Gardens, House and Garden, and Keith's Magazine on home Building for April.

Many hundreds of these readers will specify **MORGAN Doors**. Could you ask for a better opportunity than this for stimulating your business?

Write for our artistic illustrated book, "Door Beautiful," showing many handsome designs of interior and exterior **MORGAN Doors**, in all woods for every style of architecture. Write today—it's free.

Best Dealers Everywhere Sell Morgan Doors

**MORGAN COMPANY** Dept. B7 **Oshkosh, Wis.**

Distributed by

"Architects: Descriptive details of Morgan doors may be found in Sweet's Index, pages 910 and 911."

**Morgan Sash & Door Co., Chicago, Ill.**  
**Morgan Millwork Co., Baltimore, Md.**

When Writing Advertisers Please Mention the American Carpenter and Builder.



You can't do justice to yourself or the job if your tools are not in perfect condition—

## Carborundum Sharpening Stones

Are helping more carpenters every day to do better, faster, cleaner work—A Carborundum Stone will keep every edge tool clean and smooth—It will give an edge that will stand up—

Carborundum Stones do not fill or slick over—They are always fast and free cutting, uniform, durable—There are several shapes and sizes for the carpenter's use—The Round Combination Bench Stone is just the thing for general work—

Carborundum Round Combination Stone, No. 107.....	\$1.00
Quartered oak box holder.....	.50
Carborundum Oblong Combination Stone.....	1.25
A handy little pocket stone in case.....	.35

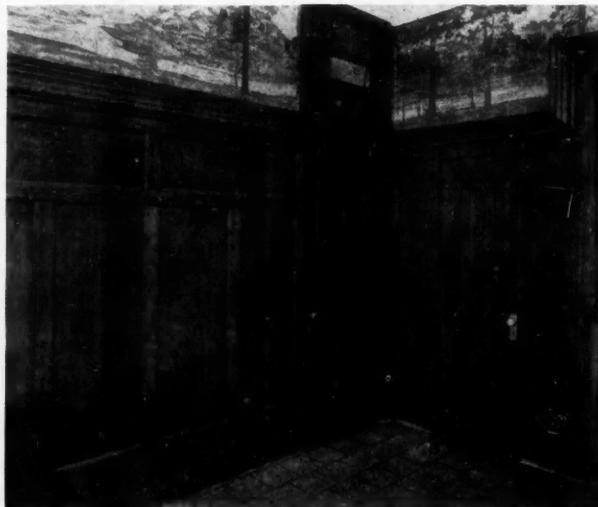
From your hardware dealer or direct.

**The Carborundum Company**  
Niagara Falls, N. Y.

It is easily applied to wood plaster, plaster board, paste-board, asbestos, sheet metal or any material having a smooth surface, and is especially effective in the making of paneled surfaces, whether wainscot or ceiling.

Filmwood is supplied in figured mahogany, quartered oak or black walnut. With this assortment of woods and the large variety of stains and wood finishes it is now possible to procure, a wide range of effects can be produced.

The Cott-a-lap Company lay special stress upon the almost numberless uses of Filmwood, and further, that it is quickly



"Filmwood" Oak in Card Room of the Chicago Athletic Club

and easily applied. For use in veneering household furniture, etc., anyone can apply it successfully. In wall work any paper hanger will have no difficulty in using or applying it.

Filmwood is sold by the square foot, as the size of the sheets in which it is made up are limited by the size of the log from which cut and therefore no uniform size can be maintained. As perfect joints are easily made the size of the sheets is of no consequence.

The Cott-a-lap Company have issued an interesting folder descriptive of their Filmwood, which they will mail to any one upon request. For this, address either the home office at Somerville, N. J., or their Chicago branch, 108 West Lake Street.



### Are You on the List?

The current number of The J-M Roofing Salesman, one of the two house organs of the Cleveland branch of the H. W. Johns-Manville Co., is largely devoted to pictures showing the many different classes of buildings covered with "The Everlasting Roofing."

A particularly interesting full-page view is that of The Republic Stamping and Enameling Co., of Canton, Ohio, who have used J-M Asbestos Roofing on both flat and saw-tooth construction for now more than 12 years and have just contracted for another 600 squares for new buildings.

Other illustrations include the Birmingham, Ala., plant of the American Steel and Wire Co., now covered with nearly 10 acres of J-M Asbestos Roofing; Christ Episcopal Church, West Side Municipal Market, Collinwood Memorial School, Randall Race Track, National League Base Ball Park, all of Cleveland; also the Union Depot, Columbus; the largest potato storage house in the world at Mars Hill, Me.; the cattle barn of the Columbus, Ohio, State Asylum; and the home of Mrs. Kircher at Llanerch, Pa., the latter roofed with J-M Transite Asbestos Shingles, "The Roof Beautiful."

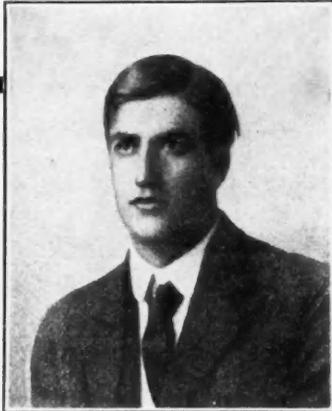
The J-M Roofing Salesman is mailed free of cost to builders upon application to the H. W. Johns-Manville Co., Cleveland, Ohio.

When Writing Advertisers Please Mention the American Carpenter and Builder.

# Three Salary Increases

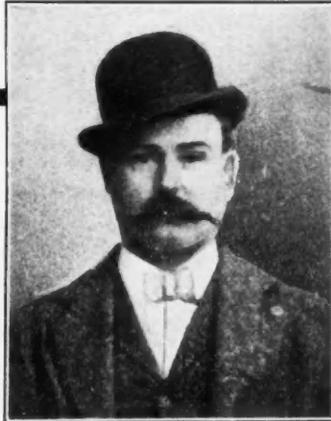
## Amount to

# Over \$12,000 a Year



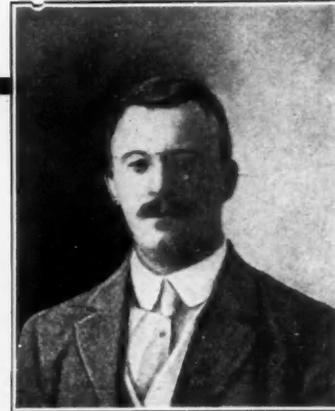
When I enrolled for the Building Contractors' Course I was working for the Arizona Smelting Company. After studying the Course I went into the general contracting business and have had all the work I can do. All the technical education I have in building I have gotten from the I. C. S. My income will run from \$500 to \$1,000 a month besides my living expenses.

WILLIAM G. REED,  
Twin Falls, Idaho



I enrolled for a Course in Architectural Drawing and within a few months was doing actual work drawing plans for buildings. Besides my regular work I have made from \$200 to \$300 a year extra drawing plans in spare time. I am very grateful to the I. C. S. for taking me, a carpenter, earning \$3 a day, and making an architect of me with the assurance of from \$3,000 to \$10,000 a year income.

N. R. ADAMS,  
Corvallis, Ore.



When I enrolled for your Complete Architectural Course I was working as a carpenter for \$2.50 a day. A few months later I felt qualified to go into contracting for myself on a small scale. I kept on studying and my business increased. For the last few years, I have been an architect, employing two draftsmen and one stenographer. Last year my income was about \$5,800.

EMIL ERICSON,  
16 Court Street, Brooklyn, N. Y.

Would you be willing to give part of your spare time to study that would increase your salary \$1,000, \$2,000, or \$5,000 a year?

The letters that are here reproduced are only a few of the many thousands of such advancement letters that we have in our files. These men are not men of genius—they are not the sort of men known as "gifted," "naturally bright," etc. They are plain men who have applied themselves diligently to their work and their rise in the world is due solely to spare-time study. The lives of such students should be your inspiration. These men are now making their mark in the architectural field; they have sown the seed of education by enrolling for I. C. S. Courses; they have cultivated knowledge by using their spare time on their Course; and today they are reaping a harvest of dollars, happiness, and contentment.

If you are not entirely satisfied with your present position mark and mail the attached coupon. Doing so will cost you only postage and will place you under absolutely no obligation; it will bring to you the I. C. S. catalog of Architecture, describing in detail these courses of study that are helping thousands of men to better positions.

**Send the Coupon TODAY**

### 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, trade, or profession before which I have marked X.

Architect	Estimating Clerk	Automobile Running
Arch'l Draftsman	Civil Engineer	Foreman Machinist
Contract'g & Build.	Surveying	Sh.-Met. Pat. Drafts.
Building Inspector	Mining Engineering	Textile Manufact'g
Structural Engineer	Mechanical Engineer	Bookkeeper
Structural Draftsman	Stationary Engineer	Stenographer
Plum. & Heat. Con.	Electrical Engineer	Advertising Man
Supt. of Plumbing	Electric Lighting	Window Trimming
Foreman Steam Fit.	Electric Railways	Commerci'l Illustrat'g
Plumbing Inspector	Concrete Construct'n	Civil Service Exams.
Heat. & Vent. Eng.		Chemist

Name \_\_\_\_\_

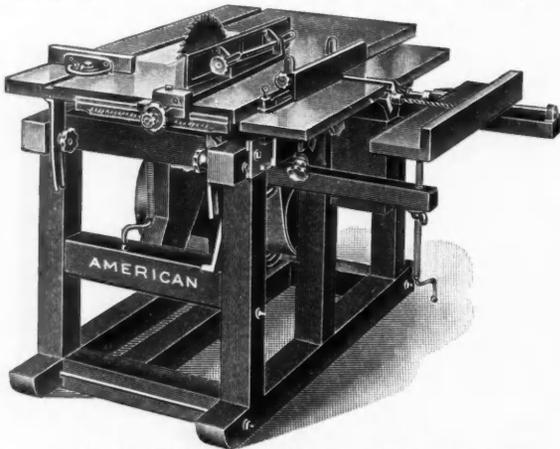
Street and No. \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

When Writing Advertisers Please Mention the American Carpenter and Builder.

**"American" Contractors' Portable Variety Wood Worker**

A most encouraging sign of the times is the disposition shown by the best machinery builders to improve their product, to enlarge its usefulness, or to bring out entirely new machines in which the purchaser will find elements pointing



**A Money Maker for Carpenters and Contractors**

the way to larger money-making possibilities. When, as is sometimes the case, these better machine can be had at a price but little, if any, in advance of that asked for other, less capable tools, the public would seem have no legitimate reason for not taking every advantage of the larger opportunities offered.

A case in point is that of the portable saw bench which has established itself so firmly, in recent years in building economics. Something over a year ago the American Saw Mill Machinery Company of Hackettstown, New Jersey,

placed on the market its "American" Contractors' Portable Saw Bench—a high-class machine built for permanent service with a view to bringing mill facilities right onto the building or concrete job. This tool contained many important features marking it as an advance over former practise. But no one realized more clearly than the builders that it had certain limitations making it fall short of the ideal contractors' machine. And while busily engaged in filling orders, the Company gave its attention to a new machine of still greater capabilities. This new tool, but recently offered to the trade, is designated as the "American" Contractors' Portable Variety Wood Worker, its name suggesting its larger scope of work.

It is really a development of the portable saw bench idea of combining in one machine a number of the functions ordinarily performed by several distinct machines; with the further great advantage that it can be carried right to the job, and is equipped with necessary motive power, saving time in waiting for work to be brought from the mill. In fact, the "American" Variety Wood Worker is a miniature planing mill, complete in it several details and capable of doing a wide variety of work.

One of the short-comings of saw benches heretofore has been that but one man could work upon them at one time. This necessarily limited the capacity of the machine and, to some extent, handicapped its usefulness. In this new machine, three men may work at one time on three different jobs. One can be working the rip-saw, cut-off saw, mitre saw or dado heads, on the table. Another can be jointing or planing. While the third may be boring. And this combination requires no change in the machine or its adjustments. This is perhaps the strongest feature of the new "American" Variety Wood Worker.

Coming now to details of construction and equipment, we find a top or table of carefully planed cast iron, hinged in the

**Burmite Quality Counts**



**Burmite Built-Up Construction**

Licensed under Shroder Patent No. 1,007,146.

*Ready-to-Lay*  
**Burmite**

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

**FLEXIBLE-CEMENT-BURLAP INSERTED ROOFING AND SIDING**

FOR

**Strength, Beauty and Service**

Guaranteed for 10 Years Without Coating or Painting. It has superior Fire-Retardative and Storm-Resisting Qualities—Sparks, Hail, Sleet, Sliding Ice, Rain, Snow, or Wind Storms do not effect Burmite, which is made in two separate and distinct surfaces, i. e.

**Bird-Sand and "Twolayr" Red or Green Slate Chips**

costs less, lays smoother, looks nicer. Eminently satisfactory for covering roofs of all kinds—can be laid over old Shingles or Tin.

**WRITE TODAY FOR OUR BOOKLET**

containing illustrations showing effect of "BURMITE" applied as a Roofing and Siding; Send for Samples. Mailed free of all charges and obligations.



**BERMINGHAM & SEAMAN CO.**

Paper and Roofing Manufacturers, CHICAGO Dept. 1212

General Offices: 1208-26 Tribune Bldg. Plant: 56th, 57th, Armitage and Grand Avenues  
Distributors of BEAVER BOARD

When Writing Advertisers Please Mention the American Carpenter and Builder.

## The Handiest Machine in the Shop--30 DAYS' FREE TRIAL

The new Luther Tool Grinder is a workshop in itself. Extra attachments convert it into 17 different machines, such as turning lathe, force feed drill, jig and circle saws, forge, etc. The low price of these attachments enables you to get a full workshop equipment at a tremendous saving of what it would cost you to buy separate machines to do the same work.

### Dimo-Grit wheels cut steel as emery does copper

Wheels of the new artificial diamond abrasive, Dimo-Grit, peel steel away in tiny shavings instead of wearing it away like emery wheels or grindstones. No need of cooling with water, no danger of drawing temper. Carborundum wheels also furnished. Grinding wheels make 4000 revolutions per minute—takes but a few minutes to do grinding that would take an hour any other way. Tool rests and patent attachments give perfect bevel to twist drills, chisels and other tools.

## Luther Shop Tool Grinder Foot and Engine Power

All steel and iron—bevel gear shaft drive in dust-proof housings—dust-proof bearings—mechanically perfected and runs easy as a sewing machine. We will send complete shop outfit consisting of grinder and 14 sharpening attachments and accessories, for 30 days free trial—no money needed, no red tape, write today.

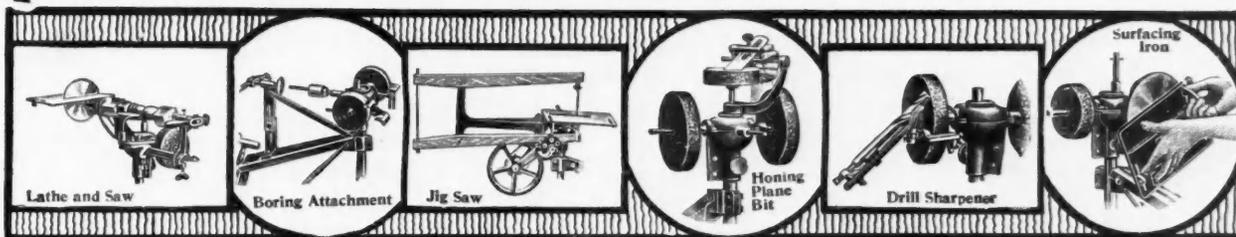
### WRITE FOR 30 DAY FREE TRIAL OFFER!

Send us your name so we can send 40 page free book from which you can select an outfit for 30 days free trial. Book also contains the story of artificial diamond abrasives as it appeared in McClure's Magazine. Write today.

**Luther Grinder Mfg. Co., 705 Michigan St., Milwaukee**



14 Machines in one, including wheels and attachments for all shop grinding, gumming saws, sharpening chisels, plane bits, etc.



# FAR CHEAPER THAN WOOD VAN WIE TUBES

## The Carpenter-Contractors Best Opportunity

The simplicity of the Van Wie Tubes—the one piece throughout for corners and everything—their interlocking feature, their certainty in time saving, make them *practical for the carpenter to use.*

*Van Wie Tubes*, made of burnt clay, are used for foundations, or for entire walls.

They are very unlike bricks, or blocks, in construction, as no mortar is used between them when setting them up, and until the plasterer commences, the carpenter may do all the work in connection with them.

Common labor is all that is necessary in placing them. The carpenter directs the work only and keeps the lines true.

**There is no time lost.** There is no mason-work on the job. The foundation can be made ready without waiting; there is no trouble or delay in putting up joints, plates, etc., as the work goes right on in a practical, economical way.

Buildings so constructed have been long tried out with results that have established entire certainty as to their desirability. The finished building, with its hollow wall, is strong and durable at moderate cost.

The field for this construction is large, the possibilities are great, the opportunity is **YOURS.**

*Carpenters, Contractors and others interested in building should write for further particulars.* Useful and valuable information will be cheerfully furnished.

**ELMER E. VAN WIE, - - Kenosha, Wisconsin**

When Writing Advertisers Please Mention the American Carpenter and Builder.

## Speaking of Stormproof Roofs

Here's a letter from one in your own line that will interest you Contractors and Builders.

Patricksburg, Indiana  
Cortright Metal Roofing Co.,  
Gentlemen:

The roofing which I did last year with your Cortright Shingles is all O. K. I am highly pleased with them. They are absolutely **stormproof**, and I can't praise them too highly.

Yours respectfully,  
F. W. POPE,  
Carpenter and Builder.

### SEE HOW CORTRIGHT METAL SHINGLES

overlap and inter-lock with each other. They're just as easy to lay as wood shingles. They'll give your customer more satisfaction, and you more profit and less trouble, for it's hard to get wood shingles now-a-days. The solution is CORTRIGHT METAL SHINGLES.

Write for our proposition to Contractors and Builders.



**Cortright**  
Metal Roofing Co.  
Philadelphia and Chicago



Clip, sign and return this coupon right away

**Cortright Metal Roofing Company** Phila., Pa.

You may send me book "Concerning that Roof" as advertised in A. C. & B.—4-12.

Name.....

Street Address.....

City.....

Business.....

When Writing Advertisers Please Mention the American Carpenter and Builder.

rear, raised or lowered by a hand-screw, and clamped in any position. This rests on a frame of seasoned hard wood, strongly framed and bolted.

The adjustable ripping gauge opens out to 14 inches from the saw. It has a tilting fence for bevel sawing and a rapid, accurate adjustment with a positive lock. The cut-off gauge slides in a groove the full length of the table, adjustable to cut squares, mitres or any angle. The regular rip and cut-off saws are 12 inches in diameter, but 14-inch saws can be used. Two dado heads, 1/2 and 7/8 inch, are also furnished.

The jointer or planer is entirely independent of the top of the machine, being separately supported on the frame. Its tables are 7 1/2 inches wide with a combined length of 43 inches and are adjustable to any desired position. On the side of the table is an adjustable fence tilting to any desired bevel for such work as chamfering. The jointer has a steel cutter head fitted with two 6-inch knives with two extra slots to receive matcher bits or moulding cutters for working a large variety of shapes. A sander drum is provided which can be substituted for the jointer head.

The boring table is outside of the jointer and has travel of 6 inches in line with the spindle and an up-and-down adjustment of 3 1/2 inches. The bits are held in the end of the saw mandrel by a hollow safety set screw. A sander disk can be mounted on the mandrel and also an emery wheel.

One very valuable feature of the "American" Variety Wood Worker is the fact that the mandrel boxes are strongly yoked together in a single casting, insuring permanent alignment and cool running bearings. A belt tightener with an adjustable spring take-up to insure proper belt tension is provided and this tightener can be instantly released to let the belt slip on the mandrel pulley when it is desired to stop the machine quickly without shutting off the power.

The "American" is furnished with either gasoline engine or electric motor built in. The standard equipment is 3 H. P. but for extra heavy work using 14-inch saws a 6 H. P. engine or a 5 H. P. motor is furnished, at extra cost.

The machine has a full complement of tools and accessories for performing its various functions, including a rip saw and cut-off saw, two dado or grooving heads, jointer head with knives, half and inch auger bits, one sander drum, one sander disk and one emery wheel with arbor. Its capacity with the standard engine motor is 75 to 125 lineal feet of 1 1/4-inch lumber per minute or 30 to 60 feet of 2-inch lumber. It will rip 3-inch lumber easily and heavier stock can be worked by feeding slowly. With larger power 4-inch stock or even heavier can be handled. The machine combines a rip-saw, cut-off saw, mitre saw, dado machine, gaining machine, grooving machine, rabbeting machine, a jointer, a planer, a boring machine, a matcher, a molder and sander. It brings mill facilities right on to the job in all kinds of building operations; and in concrete work it has a special value in cutting up lumber for forms.



### Improvements on Level and Grade Finder

Readers of the AMERICAN CARPENTER AND BUILDER will be interested in learning that a substantial improvement has been made in the "American Combined Level and Grade Finder" manufactured by Edward Helb, Railroad, Pa., without, however, raising the price of the instrument.

Mr. Helb informs us that he is now placing a spirit level glass in the middle of the instrument, which can be seen more readily from the side, when the instrument is placed at an elevation. He also states that the pointer on the dial is now arranged so that it will give three guides for leveling.

Mechanics of all kinds, carpenters, brick layers, plumbers, millwrights, road surveyors, farmers, etc., will find this a most interesting tool, worth investigating. The manufacturer will send illustrated circulars on request.



### Specifications for the Treatment and Finishing of Concrete Floor Surfaces

By F. P. Foster, Jr.

Of recent years unusual attention has been given to the developmen of special materials for the perfection, protection and decoration of modern building construction, with special referene to concrete surfaces. For the benefit of master painters as well as for architects, builders, and contractors, it is well to furnish detailed specifications relative to proper use of such materials. The subject of the present paper being the treatment of concrete floor surfaces, the writer will not attempt to describe any complete line of finishes for waterproofing or decorating concrete, but will be limited to the subject in hand.

While there are numerous materials for treating concrete floors on the market, made by various manufacturers, it is well, after experimenting, to learn the value of one special material and to become absolutely familiar with the best method of using it. One of the best known materials for this purpose is Glidden's Concrete Floor Dressing, which is made in

the following colors: light drab, dark drab, terra cotta, tan, white, green and also in transparent. This floor dressing has splendid covering capacity, the first coat covering from 300 to 350 square feet to the gallon. The second or finishing coat will cover from 350 to 400 square feet to the gallon, and its cost of application is by no means excessive, as the cost of the material itself is approximately  $\frac{1}{2}c$  per square foot to each coat; the cost of labor varying from  $2\frac{1}{4}c$  to  $3\frac{1}{4}c$  per square foot for the finished job which includes two coats, and any touching up which is necessary, or about  $\frac{7}{8}c$  to  $1\frac{3}{8}c$  per square foot for each coat, according to the rate per hour paid for the labor.

The transparent floor dressing is of particular value for the floors of factories, warehouses, mills, or any other floors which are subjected to extremely severe conditions of wear. In this connection it is essential to know that concrete floors should never be treated or dressed until they are thoroughly dry and well seasoned, and the dressing should be applied before they have been subjected to traffic or wear. In some instances it is necessary to use an acid wash, or some other neutralizing medium before applying and dressing to concrete floors, but in the case of Glidden's Concrete Floor Dressing, this is not necessary, owing to the fact that this material is

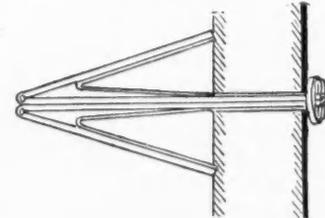


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These Nails fasten direct to Hollow Tile and save the time, expense and anxiety of preparing Fireproof Walls to receive Nailing Grounds. They do away with the necessity of burying combustible wooden nailing blocks in the heart of the wall and afford full freedom for changing plans or correcting errors in the location of interior woodwork. Also used for attaching fixtures to all types of finished hollow walls.

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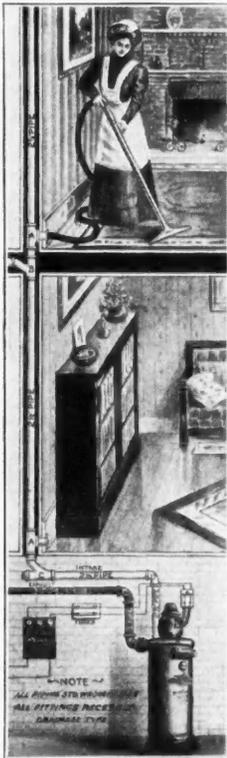
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that a pipe 2½ inches in diameter will carry a larger volume of air than a pipe only 1½ inch across. It is equally evident that the most efficient system of air cleaning will be the one that moves the largest volume of air in the shortest time.

Therefore, it is economy to pipe your building with 2½" pipe and install the

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The Tuec does better work than any other system and does it in less time and with less labor, because it does move the largest volume of air per minute.

The Tuec uses larger tools than other systems and requires less power. It runs without noise, and, owing to its two perfect ball bearings, it is practically frictionless. It works on the principle of the enclosed centrifugal fan, and has no diaphragms, valves or other complicated parts like the ordinary pump system. There is nothing about the TUEC to get out of order or to require repairs. It is the last word in simplicity of design and construction.

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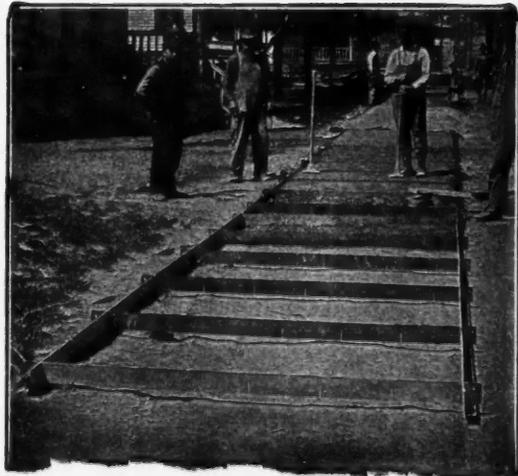
There is a Tuec machine perfectly suited to the requirements of the building you are now interested in, whether it be a great office building, a hotel, an apartment house, a factory, school, church, hospital, store or private home. We make a special truck machine for the building that can not be piped.

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**THE UNITED ELECTRIC COMPANY,** 30 Hurford Street  
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Our new Hand-Book is just out of press, containing all points, and specifications relative to sidewalk, curb and gutter construction. This book is written by one of the most practical sidewalk men in the country.

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- Details of Ubbink All Steel Adjustable Sidewalk Forms.
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Order an Outfit—use it 10 days. Abuse it in any way and after using 10 days if it doesn't prove to be superior to all other makes, pack and return at our expense. You run no risk.

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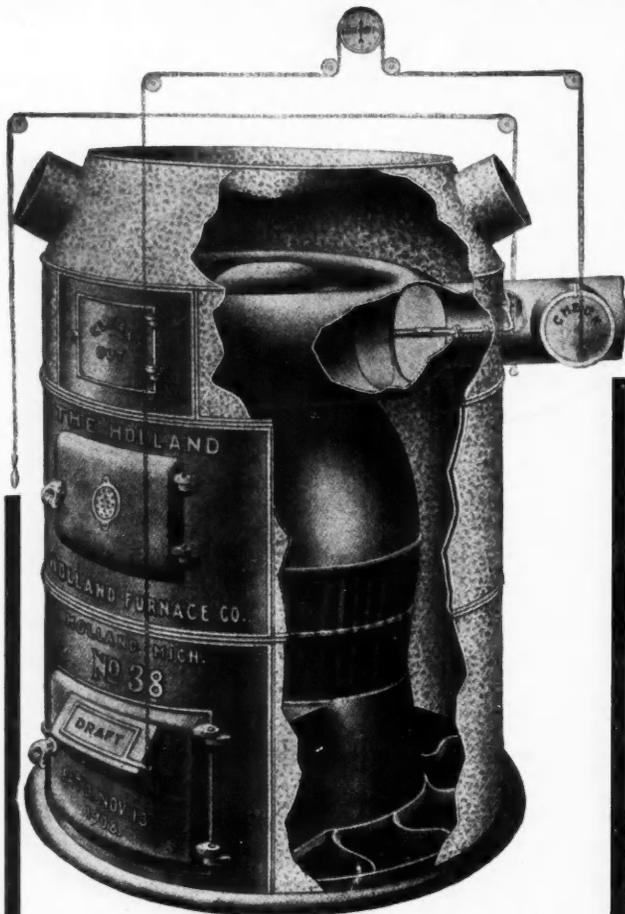
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for any Contractor and Builder. It is a furnace built for heat and comfort. It is manufactured by a complete, competent, organization—an organization that vouches for and stands back of every Holland installed. What better combination could you want?

Ours is no sell and forget proposition. We make friends of you and for you through our furnace and policy.

We have a special service department to which you can refer floor plans (with instructions as to which rooms are to be heated), of any house, new or old. Our heating engineers will submit to you detailed plans, specifications, prices, etc., by return mail. There is absolutely no charge for this service.

You can install any Holland furnace easily. Everything comes ready to set up—cut to proper size and fitted. You will do a far neater and better job with a Holland and Holland Service than the average tinner.

The Holland is a furnace that is built in every respect of the best materials and upon a practical common sense heating principle. It burns all the fuel—from the side and over the top—the natural and right way. It cuts coal bills in half because it burns everything combustible. It is always clean and is practically repair proof. Its fire-pot, the Holland fire-pot, may be equalled but can not be excelled.

Our Holland Cone Grate; Our Holland Air Admitting Fire-pot; Our Holland One-Piece all cast iron Radiator are exclusive features in our furnaces and a guarantee to you of quality and satisfaction.

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Write us today about the furnace jobs you will have this season. Let us tell you just how and where we can be of help to you. Get our catalogue and the complete details of our service. You do not place yourself under any obligation in asking and you certainly ought to know all about our furnaces and our service before making any definite arrangements elsewhere. We'll be glad to hear from you any time—we'd rather hear NOW.

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HOLLAND, MICH.

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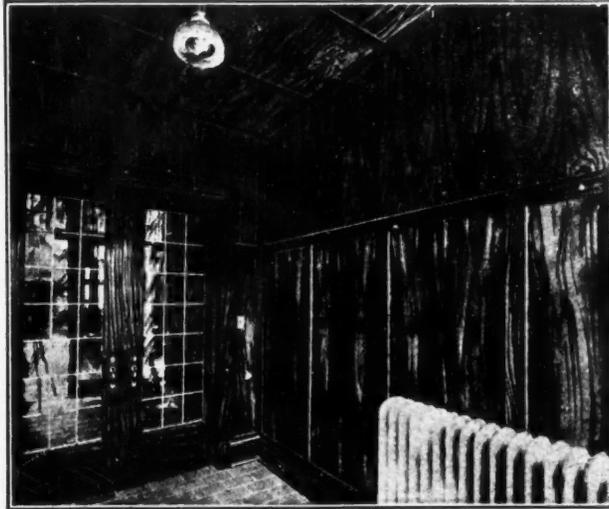
**DAMP FLOORS.** Glidden's Concrete Floor Dressing should not be used upon damp floors or floors which are subject to seepage. A coat of Glidden's Liquid Rubber applied over the floor surface will overcome such conditions. This Liquid Rubber is a black, elastic bitumen, and is applied by means of a brush over which an inch top coat of concrete, waterproofed with Glidden's Mass Waterproofing should be applied, using two and one-half pounds of waterproofing to each bag of cement used in the concrete aggregate, adding same after the water has been added. When the concrete is thoroughly dry and seasoned, two coats of concrete floor dressing should be applied in accord with the above specifications—this same specification may be used upon damp basement walls, which are subject to seepage, making a cement mortar veneer of one-half inch thickness, and applying two coats of Glidden's White Liquid Cement (Coating) upon the surface, after the same is thoroughly dry, in place of two coats of floor dressing. This specification will serve for damp basement floors and walls, and it produces a sanitary and light radiating basement.

**CONCRETE FLOORS OF FINE, CLOSE TEXTURE.** Concrete floors having exceedingly fine, close texture, floated to a dense surface, which carry at times a semi-gloss finish, should be treated as follows: The surface should be gone over lightly with a Carborundum Rubbing Brick in order to establish a bonding surface that will enable the Concrete Floor Dressing to knit close to the floor structure and practically become integral with it. This will prevent scaling and peeling of the floor dressing. The floors should, of course, be cleaned, thoroughly dry, and well seasoned before the first or priming coat of concrete floor dressing is applied. Transparent floor dressing or any other color desired may be used. It should be applied by means of a suitable brush. The dressing should be worked well into the pores of the concrete, spreading it well over the floor surface to develop a thin film. The temperature conditions during the periods of application and drying should not be under 70 degrees F. to insure the best results. The second coat should not be applied until the first or priming coat is thoroughly dry, which under proper temperature conditions requires from two to three days. The second coat should be brushed out evenly and uniformly over the surface in the same manner as one would apply a finishing coat of floor varnish, and it should be given from four to six days for thorough hardening. Two coats develop a very satisfactory result, though three coats should be used where floors are submitted to unusual wear, such as floors that are used as passages, aisles, and run-ways over which heavy trucking is done.

**CONCRETE FLOORS OF COARSE TEXTURE.** Concrete floors of exceedingly coarse texture should be cleaned, thoroughly dry, and well seasoned before the first or priming coat of Glidden's Concrete Floor Dressing is applied. Either the transparent floor dressing or any color desired may be used, and should be applied by means of a suitable brush, such as is described for use on concrete floors of fine texture. The dressing should be worked well into the pores of the concrete in order to bond and bind it thoroughly. The temperature conditions during periods of application and drying should not be under 70 degrees F. to insure the best results. After the first coat is thoroughly dry all surface areas or spots which may show unusual absorption or penetration of floor dressing should be "touched up" or gone over with an additional coat of dressing, in order to prepare a uniform surface for the finishing coat. After the first coat is thoroughly dry, the finishing coat should be applied, brushing same out evenly and uniformly over the surface, as described in the specification for concrete floors of fine texture. The finishing coat should be allowed to harden from four to six days.

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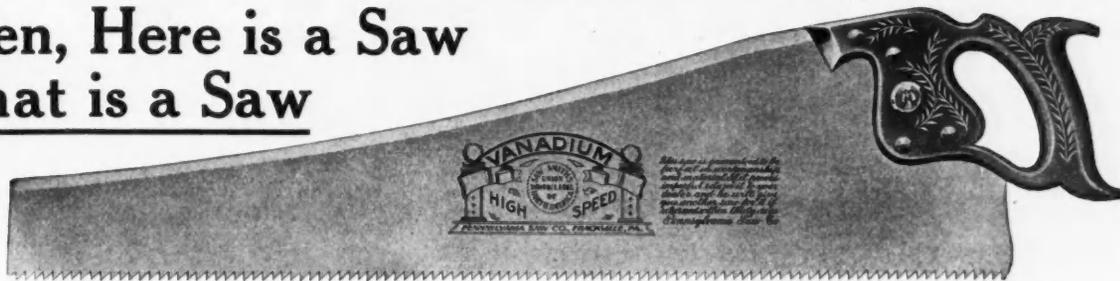
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The carpenter who once uses our Vanadium Steel hand saw will never use any other. It is beautiful in appearance, will outwear any other saw, is easily filed and set, and is sold at a very moderate price.

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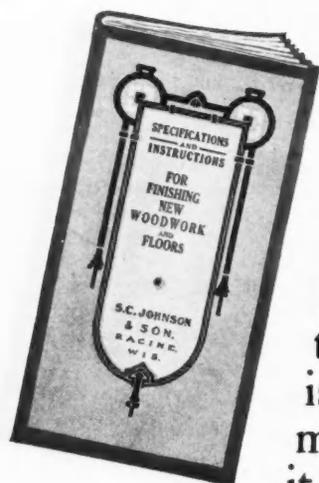
We have a handsome new catalog describing and illustrating the various kinds of Vanadium High Speed steel saws made by us. Write us for this catalog. Ask your dealer to show you this saw. If he doesn't have it, send us his name and write us for prices.

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Gallons \$3.00—Half-Gallons \$1.50

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is a liquid—an easy spreading preparation, manufactured especially for finishing interior woodwork of new residences and buildings—as well as furniture—and equally valuable for refinishing old surfaces.

This flat wood finish opens a new field for the contractor and builder. By the use of Johnson's Flat Wood Finish, you can make estimates on hand-rubbed effects that will land the contract every time—give your customer perfect satisfaction—and make you a good profit besides.

Don't fail to secure Instruction Book No. A. C. B. 4 and samples at once. If your dealer isn't supplied, write us and we will send them direct on receipt of postal or coupon.

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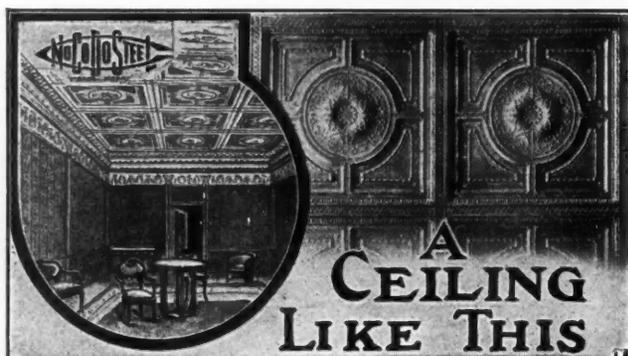
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Plastergon is moisture proof and fire retarding. It is the *only* treated pulp wall board on the market; it will stand up under all conditions.

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The Stanley Rule and Level Company of New Britain, Conn., recently sent in a copy of the new bulletin they have issued on "Breast Drills." It is an attractive pamphlet and thoroughly covers through illustration and descriptive matter the company's varied line of Breast Drills.

The Stanley Steel frame, single and double speed; Stanley iron frame, double speed; and "Victor," double speed, drills are detailed completely.

The many uses to which breast drills can be applied make them a very valuable addition to the tool kit of any carpenter. Their use insures both a saving of time and positive results that can not be obtained through the use of any hand tool.

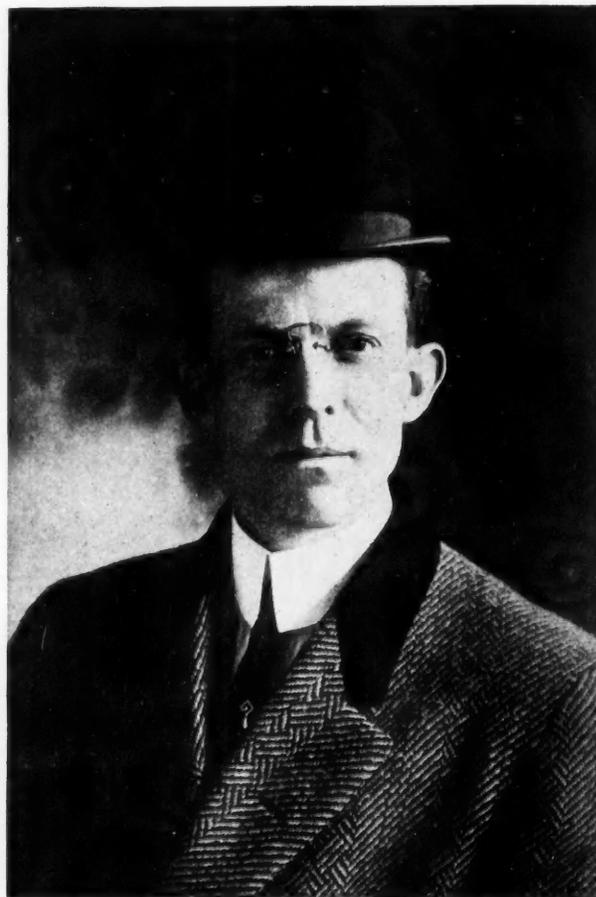
The Stanley Company are large manufacturers of drills of various types, and their products are well known.

This company will be pleased to forward a copy of their latest bulletin upon Breast Drills to all AMERICAN CARPENTER AND BUILDER readers. New Britain, Conn., is their address.



### "The Standard" Mixer

Visitors to the booth of The Standard Scale & Supply Company of Chicago, at the Kansas City Cement Show, found Mr. William A. Browning, the Mechanical Engineer of the com-

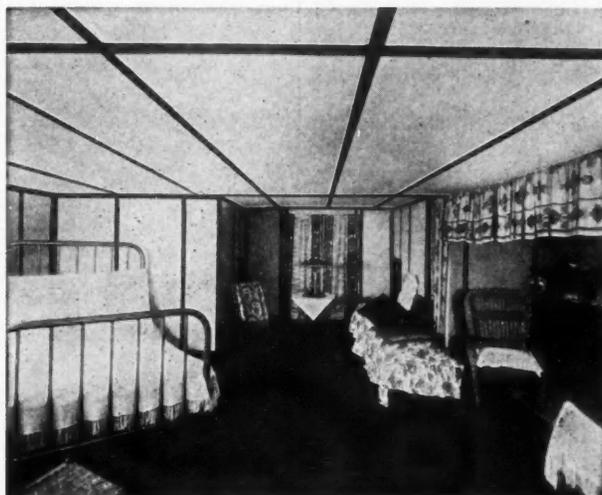


W. A. Browning, Mechanical Engineer with the Standard Scale & Supply Co., of Chicago, Ill.

pany, in charge. Demonstrations were given of the special advantages of "The Standard" (formerly the "Eclipse") type of low-charging concrete mixers.

Mr. Browning, who is widely known among contractors throughout the West, makes it a point to reach all cement exhibitions held in Western territory, so as to keep in active touch with his many friends.

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## Five Thousand Carpenters Have Asked and Received Samples of **UTILITY WALL BOARDS**

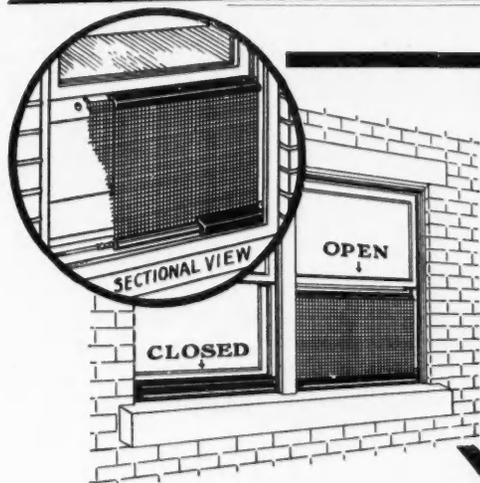
A large majority of them are using Utility Wall Board in the houses and other buildings that they are putting up—

Every wide awake carpenter and builder appreciates the convenience and economy of Utility Wall Board—It appeals to him because it is so easy to put on—So tough and durable—So easily adapted to every type of building—Because it does away with all the muss and bother and delay of lath and plaster—Because it gives universal and lasting satisfaction wherever it is used—

Utility Wall Board is moisture proof—It does not warp or crack—It is put on directly over the studding—or over old plaster—It will stay on as long as the building lasts—

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No matter how elaborate or simple a house you may build you will find that its appearance will be greatly improved and its value enhanced if you will recommend Rust Proof Roller Window Screens.

Fasten to either top or bottom of window frame. Work like an ordinary window blind—raise automatically when the sash is raised. They are never before the window, giving unobstructed view when the window is closed.

Write today for our special proposition for carpenters and contractors.

**RPR  
SCREENS**

Made of finest copper wire. Guaranteed not to rust. Can be left on all winter. Look better, last longer and cost no more than ordinary screens which keep out the light and require painting or replacing every year.

**The Rust Proof Roller Window Screen Company Dept. B Clyde, Ohio**

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"Made in Baltimore"

Sheds, Boat Houses, Outing Cottages.

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### Anyone Can Erect Them

They require no frame, no woodwork, nor any foundation. When put up they are very rigid, sanitary, weather-proof and fire-proof. They will not rust and when dissembled occupy very compact space.



**Contractors and Builders!** The erection and sale of these buildings open a new and profitable field for you

Write for prices, catalogues and discounts.

**C. D. PRUDEN & CO.,** SOLE MANUFACTURERS STATION C  
BALTIMORE, MD., U. S. A.

### Chance to Make Money.

It is rather a startling fact, when you come to think of it, that with all the progress that has been made in sanitation and in the matter of household conveniences of other kinds, there has been no improvement for the great majority of families in the matter of bathing facilities.

Most people are still obliged to use the same crude appliances that were used hundreds of years ago. For everyone knows the sorrowful fact that modern bathrooms are possible only where there is running water, supplied either by public water works or private water pressure systems, and then only at great expense.

The vast number of people living in small communities or in rural districts where water pressure systems are unknown still have to rely on the old bothersome and unsatisfactory utensils of long ago.

Any one who has experienced the inconvenience of carrying water to pour into a tub or basin, the nuisance of slopping water, to say nothing of the incompleteness of the old cleansing process, will appreciate at once the wonderful advantages of a simple equipment now offered by the Allen Mfg. Co., 3542 Allen Bldg., Toledo, O.

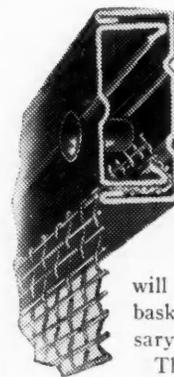
This apparatus has proved so efficient in operation so simple in construction and so easily used, at the same time being extremely moderate as to cost, that its use is quickly spreading throughout all parts of the country. It is now stated that after having been thoroughly tested throughout a considerable period of years, a quarter of a million of these portable bath outfits have been sold.

M. Fritter, Sec. and Treas. of The Allen Manufacturing Company, is now making a very attractive offer to readers of the AMERICAN CARPENTER AND BUILDER to act as district agents for the Allen Portable Bath Apparatus. It will pay you to drop him a line requesting details of their agency plan and information concerning the apparatus itself. You will find this very interesting and well worth investigating.



### All-Metal Fly Screens

This is the All-Metal fly screen made along correct lines that is being recommended by architects, contractors and builders. It is the only all-metal fly screen that can be re-



wired without returning to the factory. Note the soft copper rivets or screws that can be easily removed for rewiring. The wire cloth is firmly held by rounded corners which prevents cutting by vibration and forms a perfect water shed. All bearings on this fly screen are made of copper, the reinforced corners as well as the improved turned edge guides. It will defy the evils of inclement weather,

will not rot, warp, shrink or swell; can be made basket, oval, segment, round, or any shape necessary to properly fly proof a house.

The Cincinnati Fly Screen Company of Cincinnati, Ohio, are the manufacturers and are prepared to quote prices and take care of orders promptly. They have prepared a booklet giving much information on this subject which will be mailed on request.

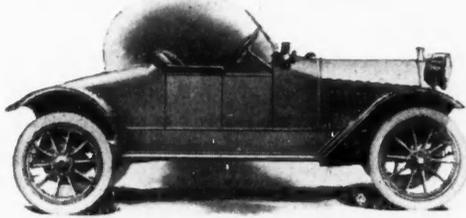


### New Price List Issued

The Milwaukee Corrugating Co. are circulating a revised net price list which became effective on March 1st. This book has been prepared with a great deal of care and is exceptionally complete. All dealers should be very sure that they have one in their possession.

When Writing Advertisers Please Mention the American Carpenter and Builder.

# The secret of the increased pulling power of the Long-Stroke "32" Hupmobile



Long-Stroke "32" Roadster, \$900

F. O. B. Detroit, including equipment of windshield, gas lamps and generator, oil lamps, tools, and horn. Three speeds forward and reverse; sliding gears. Four cylinder motor, 3 1/4 inch bore and 5 1/2 inch stroke. Bosch magneto, 106 inch wheel-base, 32x3 1/2 inch tires. Color, Standard Hupmobile Blue. Touring Car \$900.

A motor car's ability to get over the road—to make the grades—to haul the load—is truly defined by its pulling power, and by nothing else. Thus, because rated power is merely a mathematical computation, based on the motor's bore and stroke, it cannot be an accurate indication of what the Hupmobile Long-Stroke "32", or any other car, can actually do. On the other hand, pulling power is increased or decreased by these most important factors:—

1. Relation of Piston stroke to cylinder bore.
2. Motor design.
3. Efficiency of the carburetor.
4. The degree of simplicity attained in the general chassis construction.
5. The degree to which friction is reduced in the working parts.
6. Weight of the car.

Let us see how and why it is greater in the Long-Stroke "32"

## 15,000 Runabout Owners

The Hupmobile Runabout, from the very first, was considered the standard of the runabout type; and it still retains that distinction. It has the enthusiastic friendship of 15,000 owners in all parts of the world. It is Mr. Nelson's first Hupmobile; and today is manufactured, in all essentials, on his original designs. In fact, economy of operation and efficiency of service have never shown it necessary to make radical changes in those designs.

Every Runabout motor is the duplicate of that which drove the Hupmobile World-Touring Car on its notable globe-girdling tour. It is one of the simplest, most sturdy and most efficient automobile engines ever designed. Cylinders cast in pairs, valves at the side and three-bearing crankshaft. It is combined with the clutch and transmission into a unit power plant.

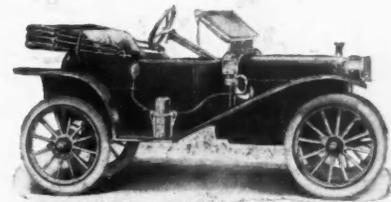


1. A stroke neither too long nor too short, but in ratio to the bore as 1.7 to 1—the mean average of the most widely used European practice.
2. A motor with cylinders cast en bloc; valves at the side, protected from dust and dirt. The adaption of the best European designs to American conditions. The Long-Stroke "32" goes a step farther by providing three liberal crank shaft bearings instead of the two usual in unit cylinder construction—shutting out the possibility of undue crank shaft strains.
3. Absolutely automatic carburetion—assuring correct mixture at all speeds and under all loads, without resort to adjustments.
4. A chassis stripped clean of every complication. Motor, clutch, and transmission a compact, space- and weight-saving unit, permanently aligned and dispensing with a shaft and universal joints between clutch and transmission.
5. Friction reduced to the last limit by the finest domestic and imported ball and roller bearings in all important bearings outside of the motor. One universal joint between transmission and the full-floating rear axle, instead of two. Practically straight line drive.
6. Weight 200 to 300 pounds under that of many cars of equal size and rating. That much less dead weight to dissipate power.

Each of these is a distinct and unusual advantage in itself. Collectively, and because they enable a greater proportion of the engine's power to do its real work—they set the Hupmobile Long-Stroke "32" apart from and above cars of its price. Their incorporation in the \$900 Long-Stroke "32" Hupmobile is the result of the work of a homogeneous engineering and factory organization, held intact since the inception of the company; and the designs of E. A. Nelson, who designed the original Hupmobile and all succeeding models.

Catalog mailed on request. Hupmobiles are now being built in the new factory, which in point of equipment and facilities, ranks among the finest motor car plants in the world.

HUPP MOTOR CAR CO., 1255 Jefferson Avenue, Detroit, Michigan



Standard 20 H. P. Runabout, \$750

F. O. B. Detroit, with same power plant that took the world touring car around the world—4 cylinders, 20 H. P. sliding gears, Bosch magneto, gas lamps and generator, oil lamps, tools and horn. Roadster \$850.

## Adele Automatic Door Stop and Holder

is a simply constructed device, neat in appearance and absolutely durable, having no part that can wear out. It does the work of the old wooden door stop, and of the various devices for holding the door back, such as hooks, weights, wedges, chairs, etc. What is more it works automatically; when the door is thrown back it catches it and holds it fast without you having to touch it, preventing the door from striking anything that may be behind it or from slamming closed again. When you want to close your door, do so as if the *Automatic Door Stop and Holder* was not there—all you need do is to shut it; you do not have to release it—why, it works automatically.

Can be used on any door with or without spring and can be attached to Wood, Marble, Stone or Tiling. Made with either wall or floor attachment.

### Stop That Banging Door!

The builder can use this device as a talking point for an up-to-date house. It is an article that's exposed—it "shows up." Finished in any style. Write for circular and prices

Agents Wanted

ADELE MFG. CO., 313 Grand Av., Brooklyn, N.Y.

ONE HALF SIZE

Style No. 1. For Attachment to Wall.

**1 1/2 H. P.—1 1/2 c.—1 1/2 Hrs.**

**THE** greatest engine value on the market—*The Caille Perfection Special*—simplest in construction—most economical in fuel, kerosene or gasoline. Built by automobile men with automobile machinery, all parts of the highest grade materials, every moving part runs with the smoothness of perfect construction.

**Caille Perfection Motor**

Delivered complete and ready to run. You will never need "tinker" with this motor. Nothing about it that can get out of order. It delivers the service you need at all the times you need it—under all conditions.

**15 Days' Free Trial**

To prove to you its economy, reliability and unailing service. Write today for Free Book and Free Trial Offer.

**Caille Perfection Motor Co.**  
317-2nd Ave., Detroit, Mich

**ONLY \$48**

## Sea Green and Purple Roofing Slate

is the finest slate produced for medium priced dwellings, barns, and factories. *It never wears out.* Write to us immediately for delivered prices on all grades of Roofing Slate, Slaters' Tools and Supplies. We are the oldest and largest roofing slate concern in the U. S. Send 50c for our 96 page Slate Manual full of rules, tables and instructions. Invaluable to Roofers and Architects. There is a big demand for slate roofs. Get after this profitable business.

Write for prices today—NOW.

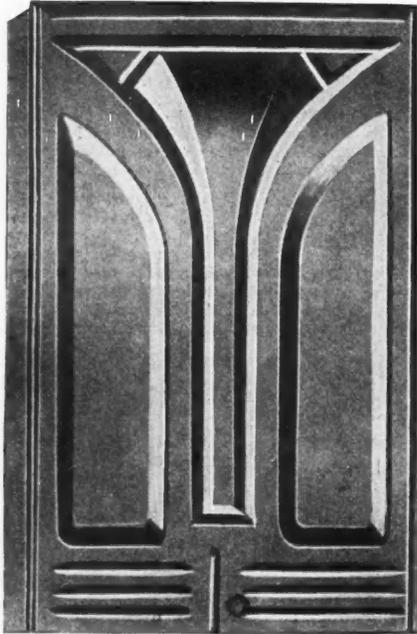
**THE AULD & CONGER CO.**  
150 Prospect Ave. Cleveland, Ohio

**SLATE ROOFS NEVER WEAR OUT**

When Writing Advertisers Please Mention the American Carpenter and Builder.

### "TileLike" Metal Shingles

The Tiffin Art Metal Co., Tiffin, Ohio, has produced a line of metal shingles which they claim make the most handsome and durable roof covering on the market. These are their "TileLike" metal shingles. They are simple of construction, easily and rapidly applied and have a perfect storm-proof side lock. These shingles come in painted tin and galvanized iron. They will not rot, split, warp, break or absorb moisture.



"TileLike" Metal Shingle

Progressive carpenters and builders have always been ready to adopt the good things in the building material market and use them wherever possible in their work. The experimental stage of metal tiles is past. This form of roofing has established a sure place for itself. The metal shingle enthusiasts claim that the cost per year of

service with metal shingles is less than that of any other form of fireproof roofing.

The Tiffin Art Metal Company, Tiffin, Ohio, will gladly send samples and quote prices to all interested parties. They are looking for active agents among the readers of the AMERICAN CARPENTER AND BUILDER to handle these goods locally.



### A New Baby Born in the "Red Devil" Family

Frankly speaking, we think that the Smith & Hemenway Co., New York, have joined the Roosevelt Club because they believe in large families. Almost every issue there is a new baby born in the "Red Devil" family at Smith & Hemenway Co.'s factory.

The new baby referred to is the "Red Devil" Mitre Box. The advantage of this is that it cuts a 22½, a 30 and a 45 degree right or left angle and instead of using a mitre saw you use the ordinary hand saw. You can cut equally as well right or left hand without removing the saw.

It has a bow on the side whereby special angles of any degree can be cut. Something said to have never before been accomplished in mitre box construction.

It is also capable of being folded and carried in the tool chest.

The total weight of same is only 2 lbs.

You can cut any width or depth of mitre. It makes a perfect joint. It is light, simple and accurate.

We are informed by the company that they have disposed of over 100,000 of the Seavey Pattern Mitre Box and this is an improvement on this.

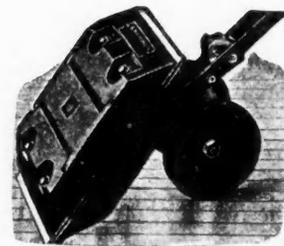
Jobbers, retailers and users will be materially benefitted by getting posted on this article.

They carry out the true color by enameling it red, thereby making the article apply to its name—"Red Devil."

## Unheard of Price for First Class Machine

Cash \$15.50 Complete, F. O. B. Factory  
\$20.00, 30 Days Time

OUR REGULAR CHAMPION OUTFIT. 12 KNIVES, 24 EDGES.



Order now to insure delivery for Spring work. Circular "A" on request.

We make the Union Mitre Box.

**Dosch Manufacturing Co. BRIDGEPORT, CONN.**

When Writing Advertisers Please Mention the American Carpenter and Builder.

# Amatite ROOFING

## Why the Buyer of Amatite Never Complains

When a man buys ordinary ready roofing he usually neglects to paint it and after three or four years he comes back to the dealer with a protest. It is human nature to neglect painting roofs.

When a man buys Amatite Roofing he lays it on his building and in three or four years it is still as good as new and does not need any paint. He forgets he has such a roof but no harm is done by that.

There is nothing to neglect in the case of Amatite. Amatite has a peculiar surface—a sort of plastic concrete made of pitch and mineral matter.

This surface is plastic enough so that the material can be rolled up into handy rolls in the usual manner and handled just like any other ready roofing. When unrolled on the roof and nailed down it presents to the weather a continuous surface of mineral matter and pitch. On this surface wind, rain, storm, heat and cold, have little effect. Year after year it looks up to the sky undisturbed and unaffected. It costs nothing to maintain and relieves the owner from all responsibility.

Dealers can improve their business by selling Amatite and buyers make a good bargain when they buy it. The price of Amatite is less than that of most painted roofings of less weight and durability.

Sample free on request.

Address our nearest office.

## Barrett Manufacturing Company

New York Chicago Philadelphia Boston  
St. Louis Cleveland Pittsburgh Cincinnati Kansas City  
Minneapolis New Orleans Seattle London, Eng.



Administration Building and Power House at Sault Ste. Marie Locks, Michigan. Asbestos "Century" Shingles specified by the U. S. Engineer Corps—applied by the Saginaw Sheet Metal Works. Illustration reproduced from an Artist's sketch.

The professional opinion of the United States Engineer Corps is back of you every time you recommend

## Asbestos "Century" Shingles

*"The Roof that Outlives the Building"*

The Engineers designed the Administration Building at Sault Ste. Marie Locks for their own occupancy. They specified the Asbestos "Century" Shingle roof.

Furthermore, those Shingles were submitted to the most searching test ever imposed on a roofing. They were plunged into cold water while red-hot.

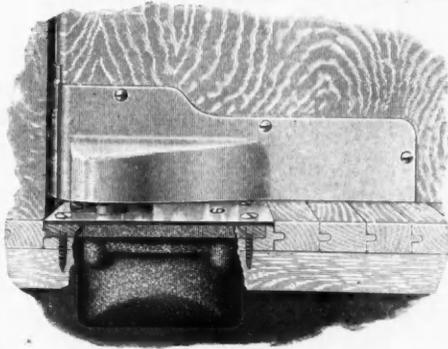
The United States Government is one of the largest consumers of Asbestos "Century" Shingles in the world.

You can get Asbestos "Century" Shingles in shapes to suit any architectural style—in several sizes—and in three colors: Newport Gray (silver gray), Slate (blue black) and Indian Red. Send for Quotations and Booklet "EVERLASTING 1912".

**Keasbey & Mattison Company, Factors**  
Ambler, Pennsylvania

Branch Offices in Principal Cities of the United States

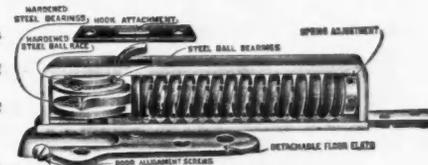
## STANDARD DOUBLE ACTING SPRING FLOOR HINGES



CHECKING.

- It is a door check and hinge combined.*
- It automatically closes the door without a slam.*
- It prevents children from being knocked down.*
- It prevents injury to hands if caught when door is closing.*
- It stops door exactly at center.*
- It holds door open automatically when desired.*
- It renders the action of door absolutely noiseless.*
- It will outwear three of the spring hinges now in common use.*

We also make pivot check for double-acting doors.



UNCONTROLLED KIND

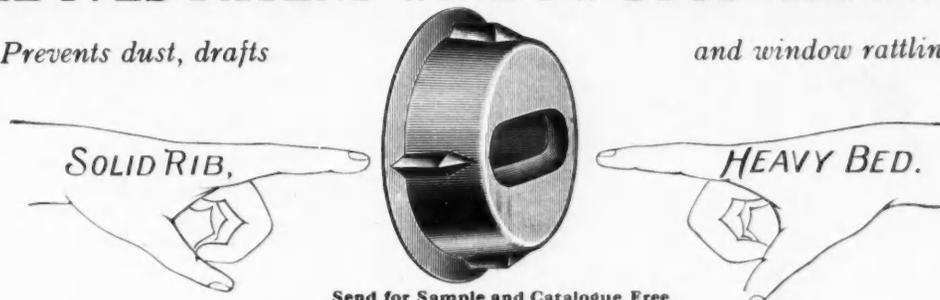
Sold by the Hardware Trade.

**THE STANDARD MFG. CO.**  
SHELBY, OHIO, U. S. A.

## THE IVES PATENT WINDOW STOP ADJUSTER

Prevents dust, drafts

and window rattling



Send for Sample and Catalogue Free

1 piece of metal, will not cup, bend or turn in tightening screw.

**THE H. B. IVES CO., Sole Mfrs. New Haven, Conn, U. S. A.**

When Writing Advertisers Please Mention the American Carpenter and Builder.

## THESE SHINGLES ARE FULLY GUARANTEED



**T**HOUSANDS of buildings, homes, schools, churches, etc., are today covered with Reynolds Asphalt Shingles. Many of these have stood the heave of frost and the wear and tear of storm for 10 years and are in every way as good as when first laid.

Reynolds Asphalt Shingles have "made good"—they have stood the test. So satisfactory are they in durability and appearance that leading architects and builders are specifying them for new work on the best class of modern homes.

### Reynolds Flexible Asphalt Slate Shingles

Reynolds Asphalt Shingles *last*. They are 8x12 in. and lay 4 in. to the weather. They are fire resisting and weather-proof. Never split, warp nor rot. Cannot color rain water. These shingles are mineral surfaced and laugh at wind and weather. No better shingles are made than these. If you want to enjoy life, roof your home with Reynolds Asphalt Shingles and—"forget it." We also make strictly high grade granite surfaced roofing in rolls.

**H. M. REYNOLDS ASPHALT SHINGLE CO.**

(Original Makers of Asphalt Shingles)

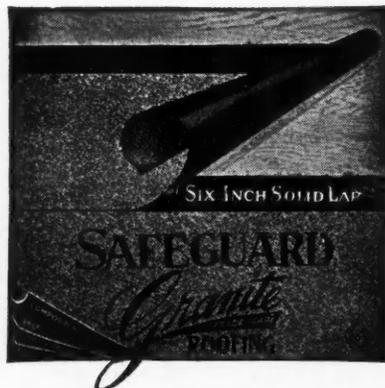
180 OAKLAND AVENUE - GRAND RAPIDS, MICH.

Reynolds Asphalt Shingles *last*. They are 8x12 in. and lay 4 in. to the weather. They are fire resisting and weather-proof. Never split, warp nor rot. Cannot color rain water. These shingles are mineral surfaced and laugh at wind and weather. No better shingles are made than these. If you want to enjoy life, roof your home with Reynolds Asphalt Shingles and—"forget it." We also make strictly high grade granite surfaced roofing in rolls.

# Granite

TRADE MARK

## ROOFING



A six inch lap is better than a three inch lap. It gives better protection against leaks and permits nailing down on the under sheet only, so that no nail heads appear on the surface. Otherwise this is the same Granite Roofing that we have sold for 25 years for use on great factories. It is immune from damage by coal smoke or cinders, and it has a sea grit surface which makes painting entirely needless. Behind it is a reputation that has Passed the Quarter Century Mark.

**EASTERN GRANITE ROOFING CO.**

Chicago

19 Battery Place, New York

Pittsburgh

### Cordesman-Rechtin Band Resaw

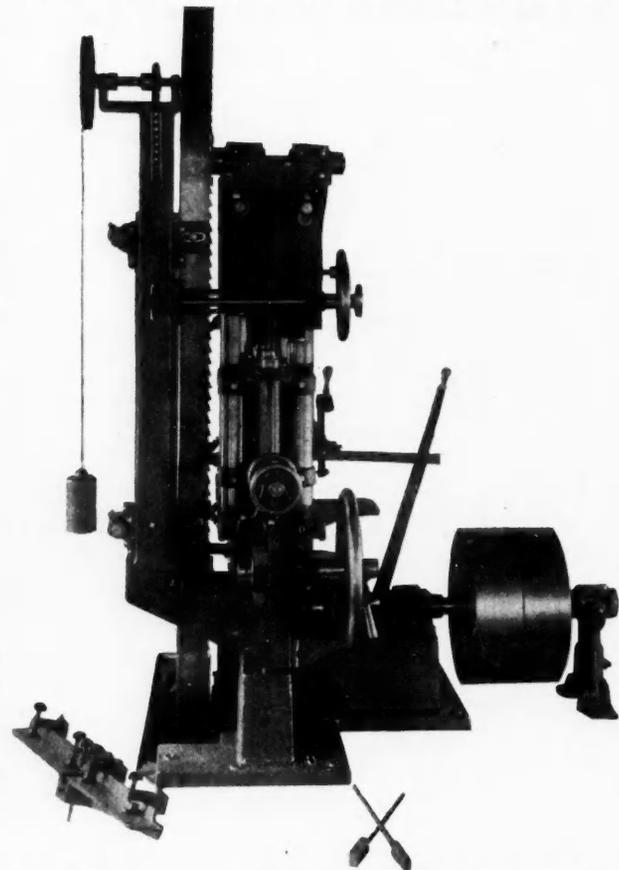
A machine needed in every woodworking establishment, whether big or little, is the band resaw. One machine of this type which has met with more than ordinary favor is the Cordesman-Rechtin No 3½ resaw shown in the accompanying engraving.

Two important features of this machine are the use of a 19-gauge blade and the close proximity of the band saw to the feed-rolls. These features secure a number of advantages. The thin saw blade secures economy through reducing the waste in stock, and also secures a higher operating speed and a saving in power. In explanation of the saving in material, a 19-gauge blade will make a kerf less than 1/16 in., or in other words, about 17 cuts to the inch. Inasmuch as a 13-gauge saw, which is quite generally used, when swaged to 11-gauge, makes a 1/8-in. kerf, or 8 cuts to the inch, there is a comparative saving of nearly 50 per cent in the amount of stock which goes to dust.

The saving in power and increase in the rate of feed is secured by the decrease in resistance through the use of the 19-gauge blade in place of the usual 13-gauge blade. The contention is that the resistance of the 19-gauge blade, compared with the resistance of a 13-gauge blade, is in proportion to the kerf, and that accordingly the 19-gauge blade meets with but half the resistance of a blade twice as thick.

As an indication of the economy in the use of stock, it is claimed that the Cordesman-Rechtin No. 3½ resaw will split a so-called 1-inch rough stock plank into two pieces fully ½ inch thick, or, when planed, a scant ½ inch thick; ½-inch rough lumber may be split to obtain two pieces planed on both sides, one 7/32 and the other 5/32 inch thick.

The close proximity of the feed-rolls to the band saw is of particular advantage in handling short stock. It means not only greater safety to the operator in handling stock of this character, but in handling all stock. Band saws, in gen-

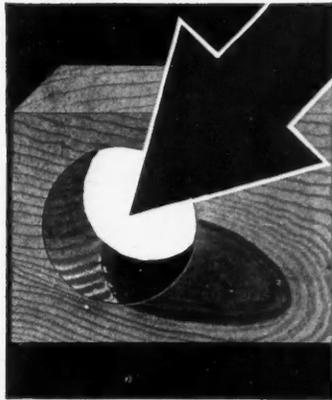


Side View of the Cordesman-Rechtin No. 3½ Band Resaw, Showing the Compact Construction, and Close Proximity of the Feed Rolls to the Saw, which Secures Safe and Economical Resawing of Short as well as Long Stock

When Writing Advertisers Please Mention the American Carpenter and Builder.

Through hard, soft or knotty wood the IRWIN Auger Bit bores swift and true

A MAN wants a perfect tool when he buys an Auger Bit. Men who *live* by their tools buy the original IRWIN for its unequalled efficiency. There are imitations cheaper than the IRWIN. They are too costly for the expert. He must get the work right the first time.



**This Brand Guarantees Your Work —**

a clean, smooth hole through soft or hard wood. The IRWIN takes knots. No bending or breaking. Made in one piece of extra high-grade crucible auger-bit steel, "headed" and formed in the rough. Put through fifty distinct handlings.

Every IRWIN is sold on a Money-Back Guarantee. The only, solid-center-stem bit made in all sizes and styles for every purpose.

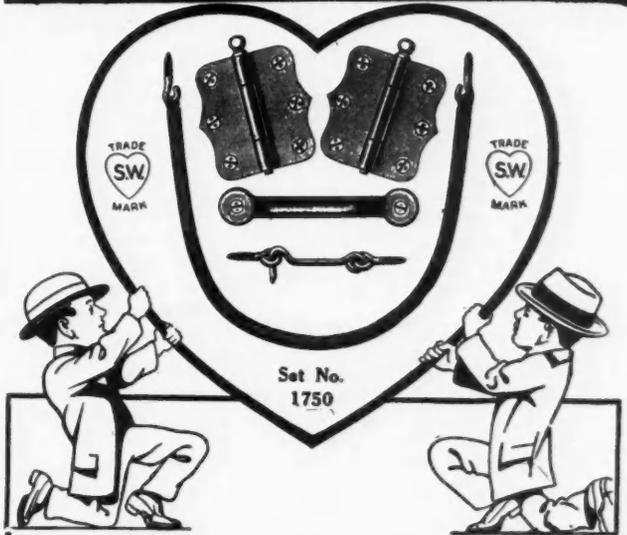
If your dealer hasn't the *Genuine, Guaranteed* IRWIN write us.

**IRWIN AUGER BIT CO.**  
Largest in the World  
Station D18  
**WILMINGTON, - OHIO**



Be sure this identical brand is on the bit you buy

**STANLEY'S**



**SCREEN DOOR HARDWARE**

Each Set in a separate box complete with screws

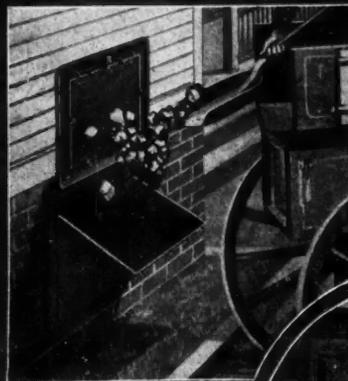
Well made of high grade Wrought Steel and handsomely finished in Japan, Antique Copper or Dull Brass, or the "Stanley" Sherardized rust proof finish.

Write for Circular "A" giving full information

**THE STANLEY WORKS**

New York NEW BRITAIN, CONN. Chicago

**MAJESTIC FOUNDATION COAL CHUTE**



Protects the building just where most needed — above the opening.

The heavy steel hopper catches all the coal.

When not in use, the hopper lies in the bottom of the chute body. The door locks automatically either open or closed. Strictly burglar-proof. With 1/4-inch wire glass or steel panel in door.

Write for circular and address of nearest dealer.

**MAJESTIC FURNACE CO.**  
Huntington, Indiana

**ROOF INSURANCE**

Tamco Metal Galvanized Roofing

Guaranteed for 20 Years, or a New Roof Free of Charge — Think of it! — No Painting — No Worry — the Old Fashioned Process — Rust Resisting — Life Long Lasting.

TAMCO Metal Galvanized Roofing is made by the old fashioned process. The basic metal sheets first receive a non-corrosive, protective coating that works itself into the metal like linseed oil into wood. Then comes the Galvanizing or Spelter coating, taking hold of the undercoating in the same way that the undercoating does of the basic sheet—Result—A Galvanized Metal Roofing with a double coating, known as Tamco Metal Galvanized Roofing. It must last a life-time. We know it will.



Within the past ten or fifteen years many Galvanized Roofs have been put on in your vicinity that have already rusted out. Why? Because the material was common or open hearth steel, poorly coated.

You know, perhaps, of some Roofs, so do we, put on thirty to forty years back that even now will last a lifetime longer. The demand for a

low priced product drove good material from the market. We have brought it back. We guarantee it.

Write for Catalog (Sixth Edition), Samples and prices

**THE TIFFIN ART METAL CO., Broad Ave., Tiffin, Ohio**

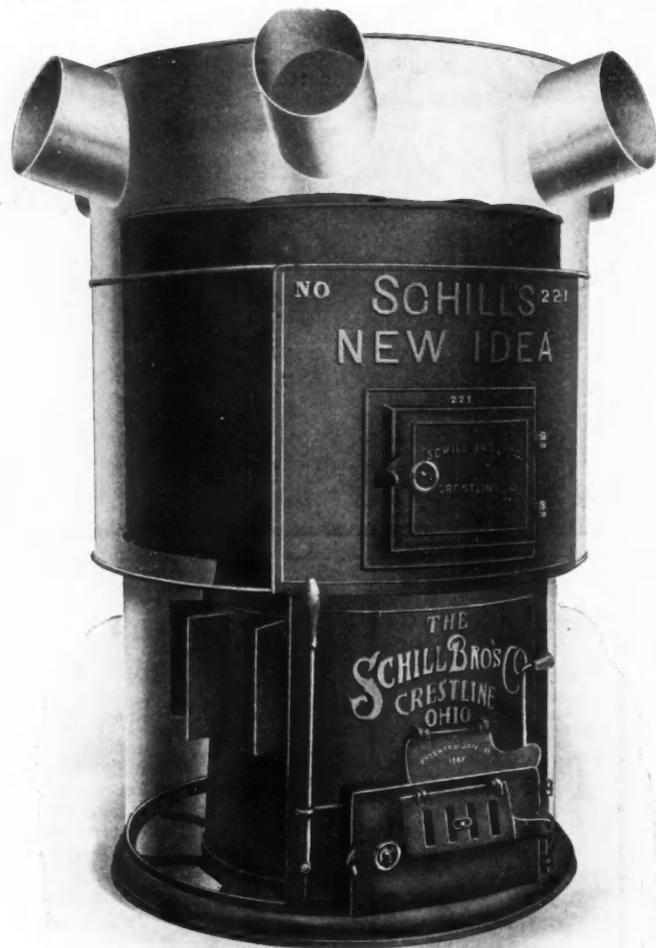
When Writing Advertisers Please Mention the American Carpenter and Builder.

eral, are more safe than circular saws and saws of other types, because the travel of the blade is continuously downward through the stock, practically eliminating "fly backs." This is not only the case with Cordesman-Rechtin No. 3½ resaw, but even the slight possibility of a "fly back" is reduced by the proximity of the feed-rolls and saw.

It is impossible to present a complete description of the band resaw in the space available. It is, however, perhaps worthy of mention that the No. 3½ band resaw is self-contained except for the outside support for the lower wheel shaft. The wheel shafts with their bearings are adjustable to maintain perfect alignment at all times. There is an improved method of attaching wheels truly and securely to their shafts. The top wheel has a universal adjustment which allows the

operator in his natural position to give the desired feed to the saw while it is in motion. The feed can be instantly adjusted to run fast or slow, and may be instantly stopped or started without change of position on the part of the operator. The back half bronze feed-rolls journals which take the pressure of the rolls in contact with stock while it is being resawed, are adjustable for wear where it actually occurs.

The No. 3½ band resaw is built by the Cordesman-Rechtin Company, Cincinnati, Ohio. This company also put out a dependable "Universal Woodworker" which owners of small shops will be interested in. Readers of the AMERICAN CARPENTER AND BUILDER should write at once for their illustrated catalogs on these improved woodworking machines.



## Heating Satisfaction

with a Schill New Idea  
Furnace in that House

# is a Certainty

You want to be absolutely positive of that Mr. Contractor and Builder, in any furnace that you specify or install

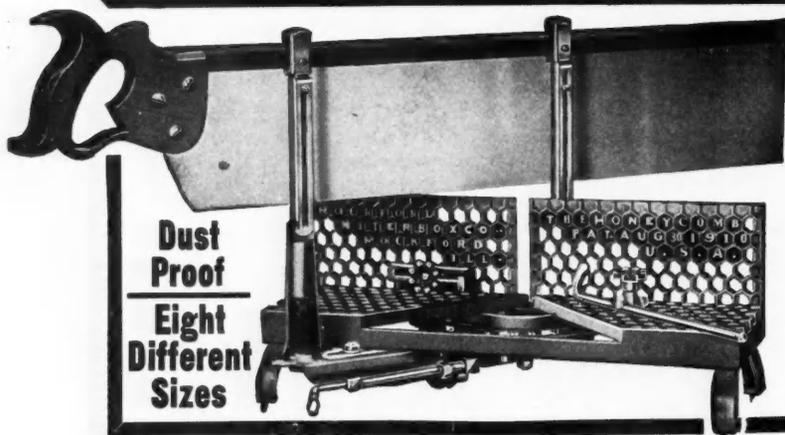
Don't take any chances. You have too much at stake.

Our New Idea Furnace has given continuous satisfactory service for twenty years.

Special features are—our double fire pot, large double self-cleaning radiator, famous drop center roller bearing grate. In principle of construction it is as good as twenty years of experience can make it. This is the furnace you want, Mr. Contractor, to strengthen your reputation.

*Be sure you get our furnace catalogue about the New Idea and five other furnaces before reaching any definite furnace decision.*

**THE SCHILL BROS. CO.**  
Crestline - - - Ohio



## Honey-Comb Mitre Box

Combines greatest strength with extreme lightness.  
Back Detachable—the only way in which boxes can be made mechanically perfect for all time.

Lever can be adjusted off square if necessary for filing or other exceptional requirements.

There is an intermediate gib to take up the wear, thus keeping THE GIB ALWAYS FLUSH WITH THE BED PLATE.

The index is conveniently placed for accurate adjustment.

THE LEVER LOCKS AT ANY DEGREE OR FRACTION OF DEGREE. The lock is positive, working on the principle of an eccentric—no springs used. As shown in cut, the length and clamp gauges are subject to thousands of variations, always assuring a perfect clamp on the material.

Easily moved from place to place. Will stand securely without fastening.

ALL WEARING PARTS MADE OF MALLEABLE STEEL.

Special prices to contractors and carpenters in localities where our tools are not handled.

Rockford Mitre Box Co., Rockford, Ill.

When Writing Advertisers Please Mention the American Carpenter and Builder.





**32 POUNDS COATING**

# ROOFING TIN

*"The terne which turns the elements"*

Your building is as good as its roof. When MF is on the roof you are well insured against the elements. Made to last—the years have proved it. Write for full information.

We also manufacture other high-grade Redipped Terne Plates, Black and Galvanized Sheets, Corrugated and Formed Metal Roofing and Siding Materials, Cambridge Rigid Reversible Metal Lath, Etc. Send for Catalog.

## American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

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DISTRICT SALES OFFICES:

Chicago   Cincinnati   Denver   Detroit   New Orleans   New York   Philadelphia   Pittsburgh   St. Louis

Export Representatives: UNITED STATES STEEL PRODUCTS COMPANY, New York City

Pacific Coast Representatives: UNITED STATES STEEL PRODUCTS COMPANY, Los Angeles, Portland, San Francisco, Seattle

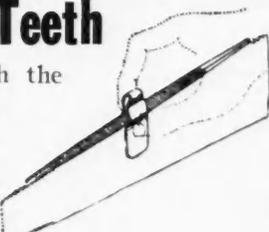
## True Your Saw Teeth

True your saw teeth with the **Campagna Jointer**—it holds and guides any 3 cornered  $\frac{3}{8}$ x6" file so thoroughly that even an inexperienced person can accurately true up his saw.

The Jointer can also be used as a **pencil gauge**, by inserting the pencil through the loop in the top. Carry it in your vest pocket.

The complete Combined Saw Jointer and Pencil Gauge will be sent postpaid by mail on receipt of twenty-five cents (25c). (Money order or silver preferred.)

Agents Wanted **Campagna Saw Jointer Co., Randolph, Mass.**

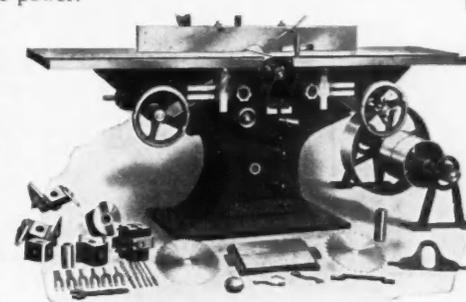


## The Royal Standard Universal Woodworker

is a practical woodworking machine applicable to almost any manufacturing plant. It is complete in equipment. Requires little power.

Let us send you our illustrated catalog detailing 19 different ways of manipulating material on this machine. Learn all about it before buying any other.

**CORDESMAN-RECHTIN CO.**  
215 Butler St.  
CINCINNATI, O.




Can be used as a

### Music Cabinet Book Case or China Cabinet

Measurements:  
Width 26 inches  
Height 42 inches  
Face 11 inches  
Veneered Columns

**Chicago Grille Works**  
828-838 Wells Street  
CHICAGO :: ILLS.

## Fly Screens

**Metal Frame  
REWIRABLE CIN-MAN-CO.**

See method of securing wire cloth, held by rounded corners, which prevents cutting by vibration.

**Special inducements to  
Carpenters and Builders**

Booklet Free

**The Cincinnati Fly Screen Co.**  
1010-1026 Evans St., Cincinnati, O.



When Writing Advertisers Please Mention the American Carpenter and Builder.

**We Sell the  
JOB T. PUGH  
Celebrated  
AUGERS and BITS**

Hand made. Guaranteed not to break.  
Rapid boring. Will last longer than any  
bit made.

**AUGER BITS**

A complete stock always on hand.  
**Special:** A complete set of 13 auger  
bits, 4 to 16 sixteenths in a fine  
hard wood box . . . . . Price \$7.20

**GAS AUGERS**

For boring holes in dirt. Used when lay-  
ing gas pipe under walks, walls, etc.

**CAR BITS**

6 inch, 9 inch, and 12 inch twists.

**ORR & LOCKETT**  
Established 1872 **HARDWARE CO.**  
14-16 W Randolph St. :: CHICAGO

**THE STRONGEST**



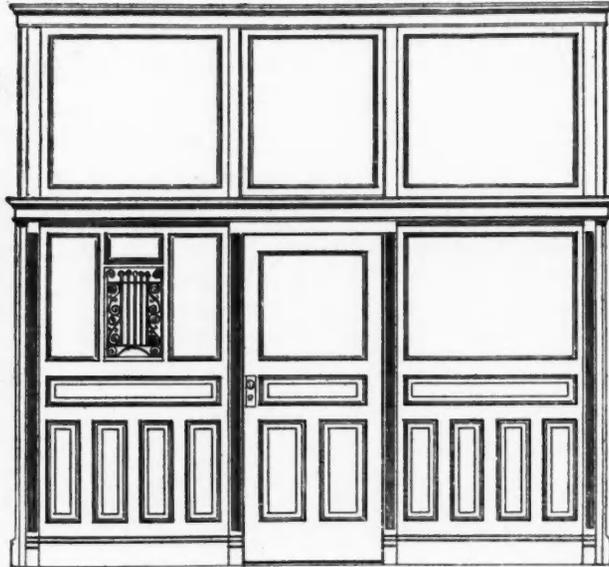
**the easiest boring  
auger bit made**

Absolutely guaranteed.  
Any auger bit made by us  
not found perfect in every  
particular will be replaced  
with a new bit or money  
refunded. If your dealer  
does not handle these goods,  
write us direct for catalogue  
and prices.

**Jackson Manufacturing Co.**  
Jackson, Ohio

**Place to Buy Office Partitions**

Carpenters and builders who have call for office partitions should write Mount & Robertson, 53 Beaver St., New York, for quotations. They claim they can furnish these partitions in oak, or mahogany, at prices 50% lower than can be obtained elsewhere. Mount & Robertson make office partitions literally by the mile, and sell them by the foot; for this season they are able to quote low prices.



Office Partition Carried in Stock by Mount & Robertson

These partitions are made in sections, from 12 to 60 inches wide. These 48 different sizes are carried in stock and carpenters and builders can always obtain quick delivery to almost any point in the United States. These partitions are made to fit any sized room, in oak and mahogany. Write to Mount & Robertson, 53 Beaver St., New York, for quotations and further particulars.



**Remodeled Homes**

There are thousands of old-fashioned, inconvenient farm-houses that can easily and at small expense be made thoroughly modern and attractive.

Is your house one of them? Spring is a good time to remodel. A new front porch, an up-to-date stairway, new hardwood floors, a big art-glass window for the front room and last, but not least, a fresh coat of paint, will work wonders, and the actual value added to your property will far exceed the cost of the improvements.

It is not necessary to have the materials for new porches, stairways, etc., made to order at the planing mill or to pay the high prices demanded by local lumber dealers. The grand free Millwork Catalog of the Gordon-Van Tine Company of 605 Case St., Davenport, Iowa, offer everything for remodeling old or building new houses, at a substantial reduction from retail dealers' prices.

This concern sells enormous quantities of millwork and lumber direct to the actual user, at mill prices. For instance, they claim their prices will save you \$50 to \$100 on a complete stairway. Proportionate savings are offered all along the line.

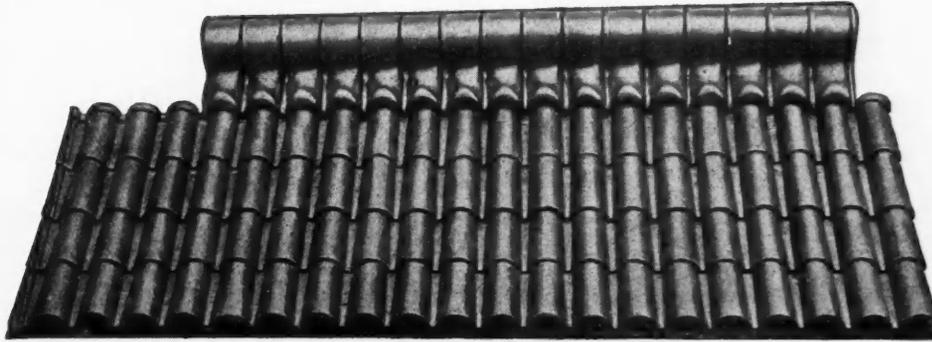
Over 5,000 bargains in millwork and building material are contained in the Gordon-Van Tine Catalog. The company employ a staff of architects, whose advice is available to its customers. We suggest to all who contemplate making improvements this spring, either in the way of remodeling or building new houses, the advisability of consulting with the Gordon-Van Tine Company as to plans, materials, etc.

When Writing Advertisers Please Mention the American Carpenter and Builder.

## Mullins Metal Tile Roofing

has won widespread and lasting favor because of its many superior qualities. Beauty, simplicity, durability—these are its salient characteristics. Absolutely storm-proof and water tight.

When put on according to directions, Mullins Metal Tile Roofing is guaranteed to keep in perfect condition for years. No other roofing can equal it for all-round satisfaction. Many of the finest buildings in this country are equipped with it.



We also make Cornices, Building Fronts, Finials, Tympanum panels, Rosettes, Faces and other architectural ornaments. Many thousands of designs to select from.

Ours is the largest and best equipped factory of its kind in the world. We use

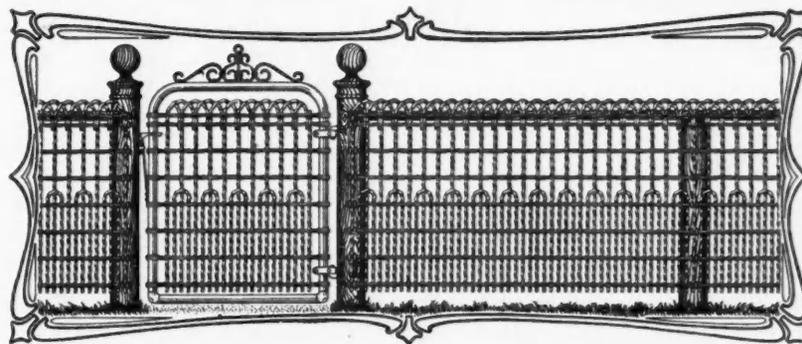
only the finest materials. Every artisan in our employ is a masterhand. Our prices are attractive, our services prompt. Glad to submit quick estimates on special jobs.

Catalogue along any desired line will be sent you by return mail.

### The W. H. Mullins Co.

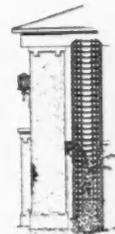
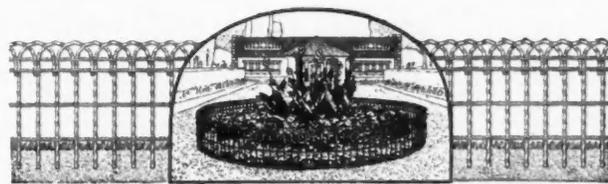
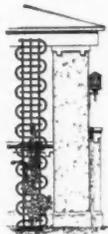
214 Franklin St.

SALEM, O.



**CYCLONE LAWN FENCING** is chosen by the most particular buyers because of its design and by the most careful because it out-lasts any other. At a small cost this fencing will add more to the value of the home than any other improvement that can be made and provides positive and permanent protection for lawns and gardens. Being uniformly made, our products are easy to erect straight and tight. Many porches and lawns can be wonderfully improved by the use of our Trellis Wires and Flower Bed Fabrics.

Complete catalog is yours for the asking.



**CYCLONE FENCE CO.,** Dept. A. C. **WAUKEGAN, ILL.**

When Writing Advertisers Please Mention the American Carpenter and Builder.

### Moisture Proof Wall Board

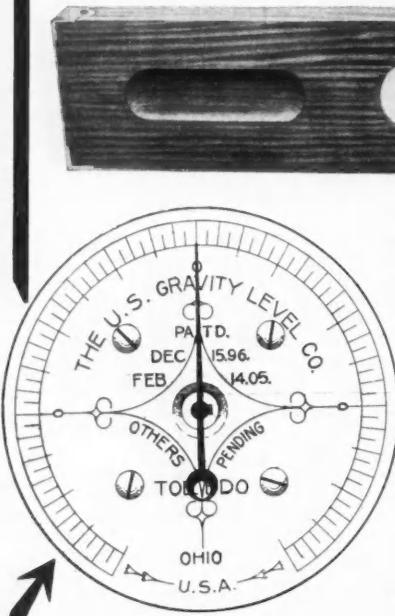
"The general use of wall board continues on the increase and it apparently is confined to no particular class or type of buildings. There can be no question but that it is growing in favor both with the general and the building public. Practically the only objection advanced against its use—that of not being entirely moisture proof—has been entirely overcome in "Plastergon," so write the manufacturers of that wall board, the Plastergon Wall Board Company of Tonawanda, N. Y. In an examination of the little "Plastergon" booklet they forwarded us we find features concerning this board of especial interest.

"Plastergon" is made of wood pulp, which is bone dry before pressure is applied to it. It is then impregnated by a patented process, used exclusively by this company, which counteracts the action of the weather on it and makes it practically moisture proof. By so treating, "Plastergon" is

given the quality that results in service and makes it possible for them to guarantee every panel.

"Plastergon" is put up in panels, the sizes of which depend on the requirements. It is easily applied in new construction by nailing the panels direct to the studding or joists with  $1\frac{1}{8}$  inch flat head nails. It can also be put on old walls or ceilings without removing the lath or plaster. After it is applied it is painted with either oil or water colors depending on the conditions. The oil finish makes a perfectly waterproof and sanitary surface which can be washed down and kept clean with little effort, while the water colors make an inexpensive yet satisfactory surface, but of course, is not waterproof.

"Plastergon" adapts itself perfectly to all styles of architecture. This is one of its greatest advantages. The Plastergon Wall Board Company, Tonawanda, N. Y., will mail their descriptive matter concerning their Plastergon Wall Board to all requesting same.



## The Level That Talks

Abandon the old spirit level. Put it on the dump heap along with the other back number tools you have discarded for the new and better kind.

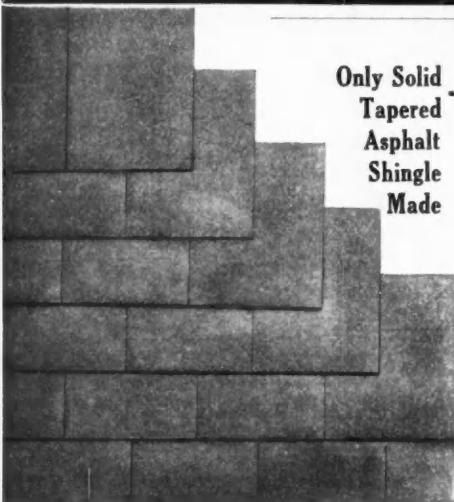
**Watch the dial on the U. S. Gravity Level.** It talks to you—unerringly registers just the conditions that exist. It tells you **how much you're out** and where you're out.

### This Is How It Works

As its name implies, the U. S. Gravity Level operates by the law of gravitation. A plumb-bob or pendulum is suspended from a shaft which rotates three roller bearings, journaled in a brass barrel. If you raise one end of a 24-in. level  $1/16$ th of an inch the indicator will instantly move  $1/16$ th of an inch on the graduated dial, which is graduated the same as rule or square. Same accuracy is obtained as with old style plumb-bob. It not only shows when your work is out of level as a whole but **how many inches** or fractional part of an inch.

It is Ball-Bearing—rigid in construction—and so simple a child can read the dial. Can be used for any degree. For stair cases, pitch of roofs, etc., etc. But we can't tell the whole story here. Get one—that tells the tale. Our guarantee of satisfaction or money back takes up all slack. No need to ponder or wonder. Just try it. If you can part with it after you've used it, we'll take it back. Send today for full descriptive matter and actual size picture of the Level.

**U. S. GRAVITY LEVEL CO., Dept. H. 1341-48 Nicholas Bldg., TOLEDO, OHIO**



Only Solid  
Tapered  
Asphalt  
Shingle  
Made

## IT'S TAPERED

Here's a shingle to make your heart glad—The durability of Asphalt—The fine appearance of slate—The light weight and small cost of wood

### WINTHROP ASPHALT SHINGLES

are not made of ready roofing—The Asphalt is put where it is needed—on the exposed butt of the shingle—This feature is patented—No other maker can use it.

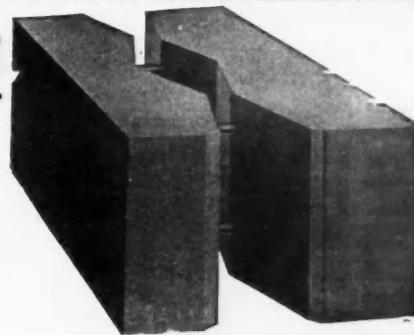
Colors are Red, Green and Natural Slate  
GET A SAMPLE—WRITE TODAY

**The Winthrop Asphalt Shingle Co., 8 61st St., Argo, Ill.**



## DOUBLE YOUR OUTPUT

You can double your output and make a perfect block at less cost with



### The Anchor Automatic Tamper and Block Machine

Two men can easily turn out 400 to 500 blocks in ten hours, doubling the output and saving cost of the machine in 30 days.

The Anchor Tamper does not require any room in your factory except the space directly above Mold Box. The machine is constructed of solid steel and everlasting.

It requires only one horse power to operate.

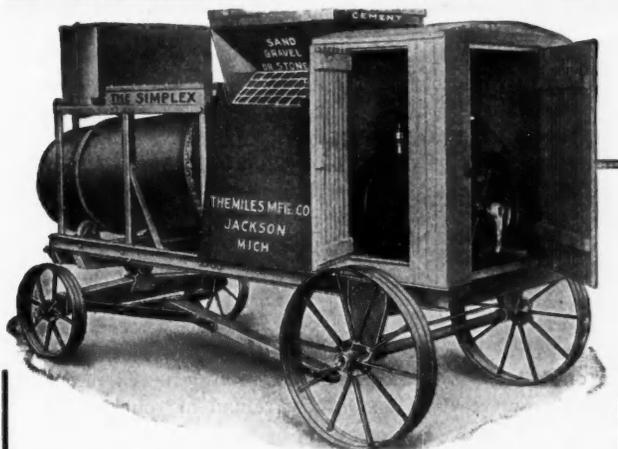
The Anchor Block Machine makes a double continuous air space block in one operation and inserts the ties or anchors in the process of construction where they become more firmly imbedded in the concrete than if done in any other way.

### FROST AND MOISTURE PROOF

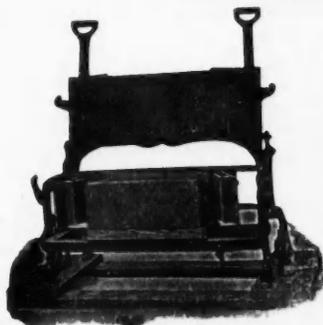
Anchor Blocks produce walls that are impervious to frost and moisture. Dampness can't get through them. You can plaster directly on the inner surface of the block, and know that you will have DRY WALLS all the time. You don't even have to use furring strips.

For further information write

**THE ANCHOR CONCRETE STONE CO., Rock Rapids, Iowa**



### THE SIMPLEX IMPROVED MIXER 1912 MODEL



3-Hoppers, Continuous feed Rolling Mix, Low down Steel frame. Simple Strong and Accurate.

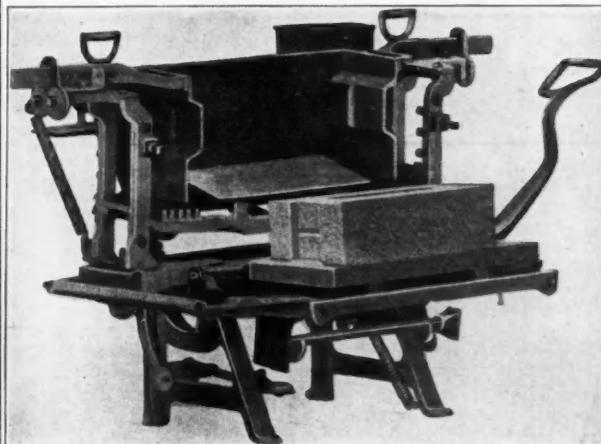
#### "The Miles" No. 5, Down Face, Wet Concrete Block Machine

Makes Stone in Lengths, 4', 6', 8', 10', 12', 16', 18', 20', 22', 24'; in Width: 4', 6', 8', 10', 12'; in Height, 4', 6', 8'. Also Angle Stone, Circle Stone, Gable Stone, Hollow or Solid Stone. The Contractor's Friend, Simple, Strong and Rapid. Lowest in price.

WRITE FOR NEW 1911 CATALOGUE

THE MILES MFG. CO., Inc. 309 E. Franklin St. JACKSON, MICHIGAN

## Mr. Block Manufacturer

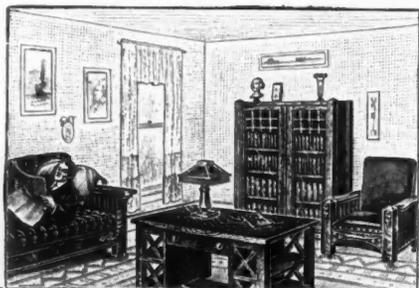


The OLIVER Automatic (P. B. Miles' latest production) is a self convincer. It will stand the closest investigation.

Study the cut carefully and write for catalog and prices, which will be mailed to you at once.

Yours respectfully,

**Oliver Concrete Mach'y Co.**  
Des Moines, Iowa



## Yours for 3 Cents a Day

Whatever you want for your home can be had at once, *on credit*. You can pay as convenient, a little each month—by saving a few cents daily.

This means Furniture, Carpets, Draperies, Dishes, Refrigerators, Baby Cabs—everything. Our Bargain Book pictures over 3,000 articles.

Everything is sent on approval. You keep it a month before deciding to buy. If it isn't wanted we pay freight both ways.

In this way we have furnished a million homes for men who have limited incomes.

### New-Style Credit

Our credit plan involves no old-style contract. There is no interest, no security, no red tape or publicity. It is simply an open account.

Our credit prices are the same as for cash. They will actually save you from 30 to 50 per cent under the lowest cash prices in stores.

Why go without the best things in life when a million homes get them in this easy way?

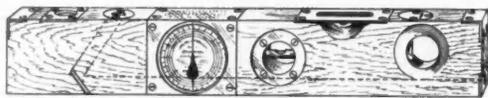
### 3,031 Bargains

Our 1912 Bargain Book shows splendid pictures of 3,031 new things for the home. It is like an exposition. Send us your name and address—a postal will do—and the mammoth book will be mailed you free. Write us now. (228)

**Spiegel-Mau-Stern Co.**  
3107 Wall Street, Chicago

## The American Combined Level and Grade Finder

SIDE VIEW



TOP VIEW



All progressive and up-to-date Carpenters, Contractors and Mechanics are getting one of our levels and grade finders.

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 one time, and will at once give the exact distance needed to plumb up to a true level.

The longitudinal recess shown in cut is well worth the low price of the instrument. Note the additional level glass, now placed in middle of instrument, giving with pointer or hand on dial three guides for leveling. The most practicable, durable and convenient instrument of the day.

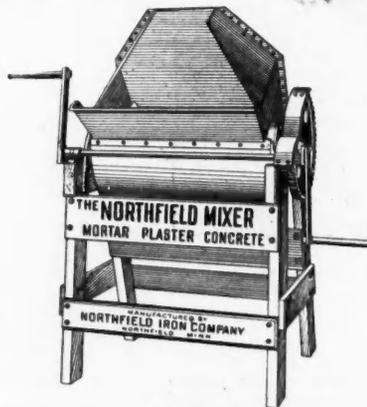
Write at once for large list of testimonials and special introductory price given only to first applicants with privilege of taking agency.

**American Level & Grade Finder Co.,** Box 255, RAILROAD, PA.

## Quick Hand Power Mixer

The Northfield Iron Co., of Northfield, Minn., are now manufacturing the "Northfield" mixer, which appears to be one of the most effectual and quickest machines in use. Those desiring a handpower concrete mixer would certainly do well to look up the advantages claimed for this machine.

Huschka & Dake, contractors for the Cannon Falls (Minn.) high school building, own and use "Northfield" mixers exclusively on all their contracts. They say that every bit of mortar, concrete and plaster that went into the Cannon Falls



Hand Power Concrete Mixer

High School building was mixed in a "Northfield" mixer. This concern claim that they had three men who put in the entire concrete basement floors in just two days, working nine hours per day. These floors contained 6,500 square feet of surface and the cubic contents were over 60 cubic yards. The aggregate had to be wheeled in through hall and doorways, at a great disadvantage, and yet the machine easily turned out  $3\frac{1}{2}$  cubic yards per hour, and, Mr. Huschka says, of the finest mixed concrete he had ever seen. He says the machine is the best for surface mixing of anything he has ever tried.

This handy little mixer has also been used exclusively on several other large building contracts. The \$9,000 high school building just completed in the City of Northfield had all the mixing that went into it done in a little "Northfield" mixer, and Albert Bjarass, the contractor of Chippewa Falls, Wis., who just completed the all concrete, fire proof, four story ladies' dormitory at St. Olaf College, Minnesota, used "Northfield" mixers exclusively on that job and says that he will never look any further for a satisfactory mixer. He has decided to discard his big heavy power mixer altogether. This goes to show that this wonderful little light-weight mixer will do on ordinary work, and the manufacturers sell it on trial and guarantee satisfaction or the refund of your money.



## "Big Stick" Dixon Graphite

The Joseph Dixon Crucible Company of Jersey City has just put on the market a new chain graphite, especially intended for lubricating the chains of motor trucks and pleasure cars.

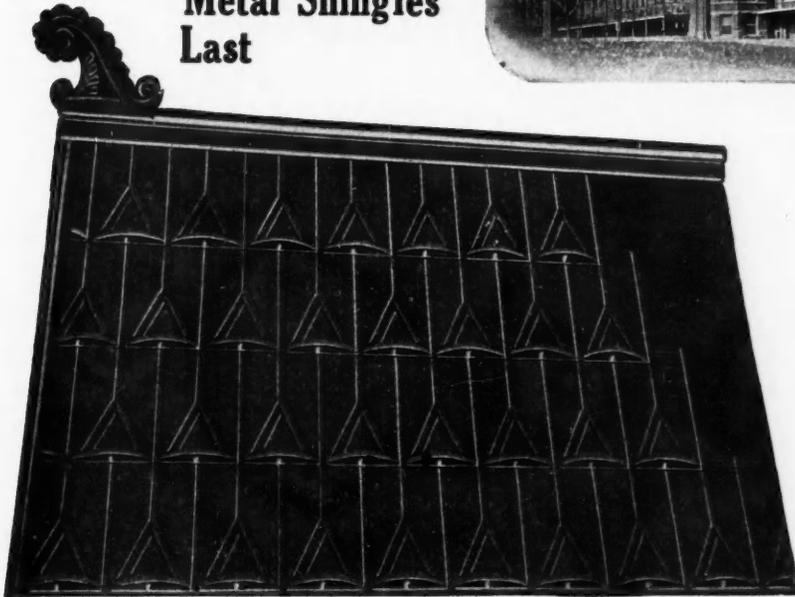
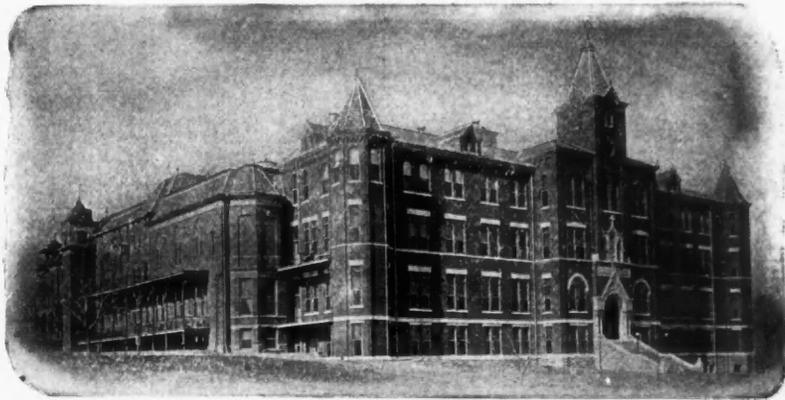
This preparation is put up in sticks, cylindrical shape, 2 by 8 inches, encased in a neat cardboard carton and weighing about one pound each. It is made of the same material as the Dixon Bicycle Stick Graphite with which every bicycle owner is familiar.

It is one of the most convenient chain lubricants on the market, for a bar may be carried on the car ready for use at any time. To apply, it is simply necessary to rub the bar against the sprocket side of the chain. The "big stick" makes it easy to keep automobile driving chains in first class condition. Unlike oils and greases, it will not collect dust and dirt.

When Writing Advertisers Please Mention the American Carpenter and Builder.

**S**T. FRANCIS HOSPITAL, Colorado Springs, Colorado, is a very fine building, as this photograph shows. No expense or care was spared to make it THE BEST AND MOST SANITARY hospital in the West. After exhaustive competitive tests, the authorities decided to roof it with THE BEST COVERING FOR ROOFS KNOWN—for

**Walter's Galvanized Metal Shingles Last**



INVENTED AND PLACED ON SALE BY THIS COMPANY IN 1885

Here is a sample of the roofing accepted by this Hospital and by thousands of other public and private builders. IT WAS THE ORIGINAL DESIGN OF THE INVENTOR IN 1885 AND IS THE FIRST SHINGLE COATED WITH PURE ZINC EVER MADE. Hand dipped so that every crevice is FILLED. No chance for rust to creep in EVER. Send for free sample and confidential information. Might as well have THE BEST.

**NATIONAL SHEET METAL ROOFING COMPANY**

Inventors of the FIRST Metal Shingle  
JERSEY CITY, NEW JERSEY

**Mr. Contractor:**

What do you think of cheap roofings?  
Do you not believe that if you recommend them you are injuring your business?  
Is it not a fact that the experience of the past few years has shown that low price most certainly means low quality?  
Don't you want the name of knowing and using only roofings of proven value?

MASTIC ROOFING stands for PERMANENCE. It has been fully tried out. Our customers know that when MASTIC is put on a building, it is on to STAY.



Why not take this matter up with us?  
We know what you need and will give it to you. There are many ways in which we can help you to such extent that your roofing work will mean a steady income. Several of our contractor friends are giving their whole time to this one line.

Get in touch with us now. Our proposition is a good one. You should have it.

Write us today. The season is now opening better than for several years.

**National Roofing Materials Co.**  
EDWARDSVILLE, ILL.

**FOR CANVAS ROOFS**



Order the Scientifically Prepared—

**BAYONNE ROOF AND DECK CLOTH**

Easiest to lay—  
Lasts longest.  
Requires but ONE COAT OF PAINT. The treatment permeates the fabric and preserves the fibre.

BEST FOR PIAZZA ROOFS AND PORCH FLOORS

Ask for Sample Book A-6 and Prices

**JOHN BOYLE & CO.**, 112-114 Duane Street New York  
202 and 204 Market Street, ST. LOUIS

The Standard Brand of White Canvas  
All Widths—All Weights—Any Quality  
Our co-operative department gives complete instruction for laying  
**BAYONNE or GULF STREAM**

John Boyle & Co.'S Awning Stripes have been the Standard for fifty years



When Writing Advertisers Please Mention the American Carpenter and Builder.

## Does the Paint You Use Add to Your Reputation?

*"The evil men do lives after them; The good is oft interred with their bones."*—Shakespeare.

Mr. Contractor, Carpenter, or Builder—you should remember that after you've finished a job and gone, it is the quality of the paint you've used that is going to influence the final decision either for or against you.

It pays to specify and use the best. When you use

### Lowe Brothers High Standard Liquid Paint

*"The Paint of Performance"*

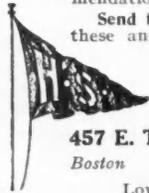
the good you do lives after you, a constant advertisement of the high quality of your work; it makes the best possible reputation for you.

And for the interiors

#### MELLOTONE

is the "High Standard" product, producing the most beautiful and artistic effects in washable, durable and fadeless colors. You will build reputation and business through the recommendation and use of Mellotone.

Send for free catalogue, booklet and color cards of these and the other "Little Blue Flag" products. There's a Lowe Brothers Paint, Varnish, Enamel or Stain for every purpose.



#### The Lowe Brothers Company

457 E. Third Street DAYTON, OHIO

Boston New York Chicago Kansas City

Lowe Brothers, Limited, Toronto, Canada



## This Modern Wall Lining Makes Good Under Severest Tests

By every test, Compo-Board has proven itself the most satisfactory wall lining. It has stood the test of time for periods of ten to twelve years in hundreds of homes. It resisted earthquake shocks in California, which crumbled plaster walls. It kept the bitter cold out of log cabins in Alaska. Furniture manufacturers using it in their products found that it will not warp. In apartment houses it has stood rough usage, the knocks of furniture and the kicks of children without injury—without peeling or crumbling. It has made thousands of homes everywhere better places in which to live.

Our booklet and sample will explain why every user of Compo-Board, including the U. S. government, well known Universities, big hotels and apartment house owners, home owners, contractors and builders prefer it to any other wall lining. There are money making hints in this book for you. Just send your address on a postal.

### Northwestern Compo-Board Co.

5777 Lyndale Ave., No.

Minneapolis, Minn.



# Montross Metal Shingles

## Are Needed Most in Spring---Become Our Agent Now

THE strong March winds, aided by the heavy Spring rains play havoc with the roofs of residences, barns, churches and other large buildings, not covered with Montross Metal Shingles. Good Agents find this time of the year the most profitable in selling Montross metal roofing.

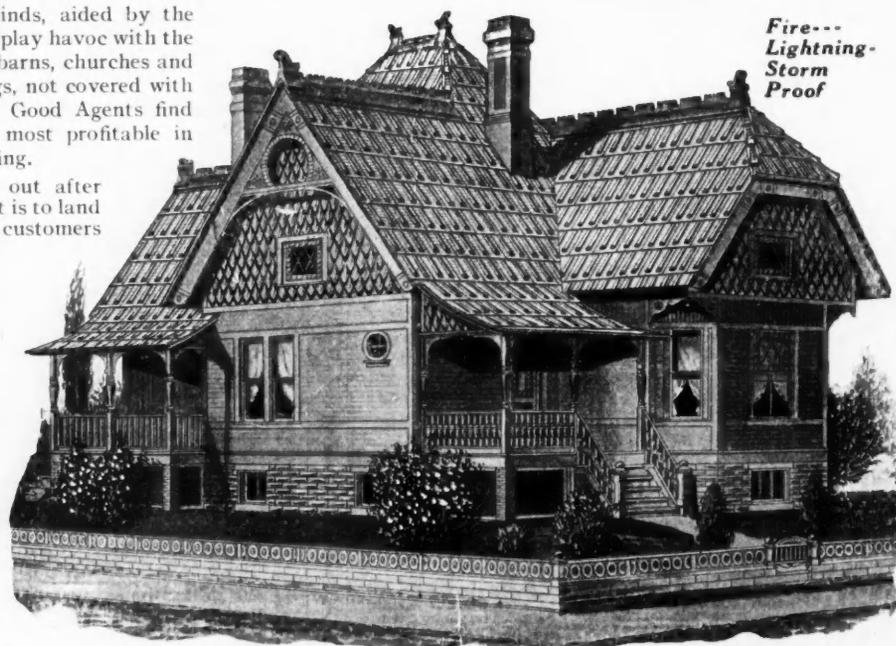
Take our agency—get out after business and see how easy it is to land orders. Show prospective customers that Montross Metal Shingles will last longer than any wooden or composition shingle made; tell them that they are the

#### Most Economical Roofing Made

Can't rattle, crack or blow off. Easily laid—no soldering. Carpenters and builders all over the United States are taking the Agency for Montross and making a big side issue out of it.

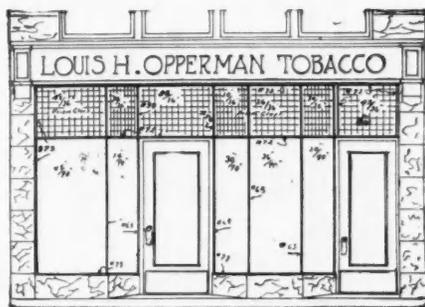
Send for our proposition, price list, catalogue, etc. Hundreds of unsolicited testimonials shown.

Montross Metal Shingle Co.  
2nd. & Erie Street, CAMDEN, N. J.



Fire---  
Lightning-  
Storm  
Proof

When Writing Advertisers Please Mention the American Carpenter and Builder.



FRONT ELEVATION.

## You Can Be Perfectly Safe

When you use or specify **Petz Bars**, you have the satisfaction of knowing that you are using the recognized standard construction for metal store fronts. They are strong and rigid, ventilate perfectly, and have never been known to break glass.

## Easy To Install

Leading architects, builders and merchants have found the **Petz Bar** exactly suited to their requirements. Send for our booklet: "Metal Store Front Construction," and we will leave the rest to your judgment

**DETROIT SHOW CASE COMPANY**

— Sole Makers —

491 Fort Street West     --     DETROIT, MICH.

## COMPLETE MODERN BATHROOM OUTFIT \$38<sup>95</sup>



I sell direct to you a strictly high grade \$60 outfit, guaranteed to give satisfaction or I refund money instantly. Beautiful white-porcelain enameled cast-iron **bath-tub**, 5 feet long. Latest design golden oak **closet**. One-piece sanitary porcelain enameled **lavatory**. Easy to install—full instructions free

## RUNNING WATER IN YOUR HOME \$42

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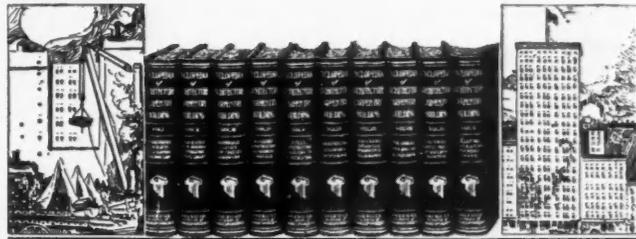


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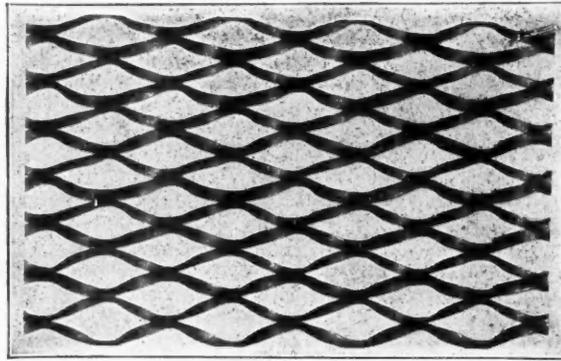
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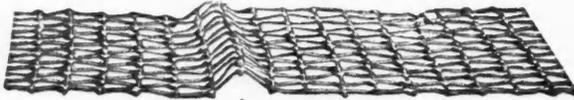
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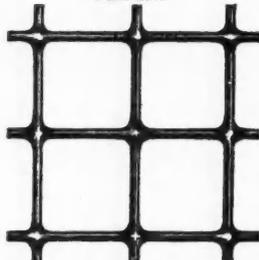
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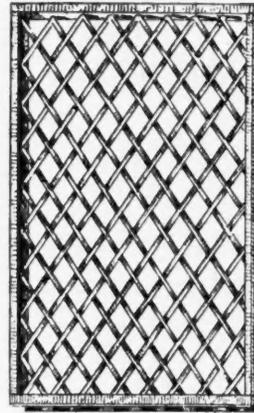


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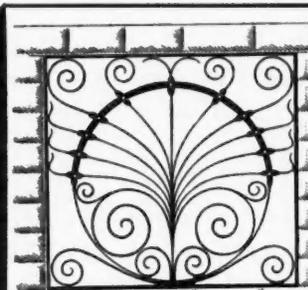
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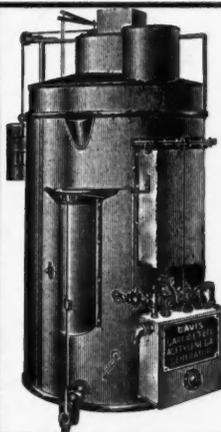
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Write us for cost of equipping a building and for our terms as salesmen.

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In use in all large cities. No builder should be without one

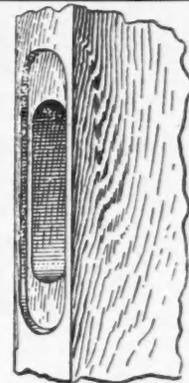


Will cut lock mortises, including setting in of face plate, in any desired size, in hard, soft or cross-grained wood of every description, in from 3 to 6 minutes. No boring or chiseling required. Every machine guaranteed. Makes a perfect job. Easily operated. Agents wanted where not represented. Testimonials and descriptive booklets furnished on application to

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Showing lock mortise cut, including face plate setting

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The advantages of this Type are many, in addition to the maximum efficiency thus obtained. Adapted to Large or Small requirements, without change in design of fixture or method of installing.

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Minimum cost of operation (service considered.)

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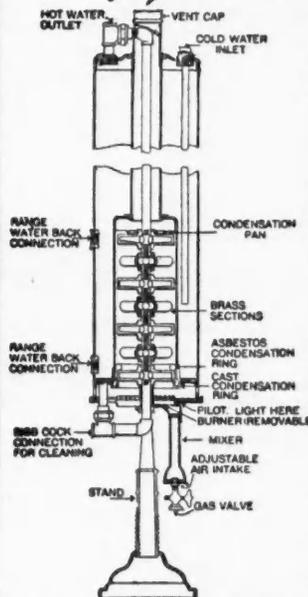
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This type represents one-twentieth of total number of Gas Water Heaters in service, and is essential if water heaters are to be popularized.



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Simply incomparable with old fashioned styles. They add immensely to the Beauty, Utility and Rental Values of Buildings.

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Architects, Contractors and Owners are invited to write me for descriptive literature, prices or estimates.

All Steel Cork Bedded and Ventilated Bottom Bar.

Also Shultz Patent Burglar Proof Coal Chute.

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Roofing nails are for paper, not metal, hence a large head is required. The Simplex has a head surface four times that of a so-called large headed nail. Head surface is what holds down roofing. Insist that the roofing comes to you with Simplex Nails. They are time savers as well as having head surface. Made with 1 inch and 1 3/8 inch lengths of stem, and both plain and galvanized. Shipped in cans in prepared roofing—store stock in 100 lb. kegs. Sold by dealers and jobbers.

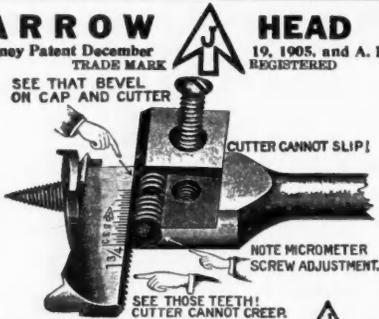
Made by H. B. SHERMAN MFG. CO., Battle Creek, Michigan

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After once setting the cutter for any given sized hole, the mechanic can bore Any Number of Holes and Every hole will be the Same Size.

By means of the micrometer screw the cutter can be instantly adjusted to one thousandth of an inch.



PRICE INCLUDING TWO CUTTERS AS FOLLOWS:

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Our No. 1 Bit will take the place of 35 Auger Bits Costing \$35.00.

When you cannot procure from your local Hardware Dealer, we will mail, prepaid, on receipt of P. O. order, for above price.

These Bits are put up in a neat waterproof canvas Scabbard with extra pocket for cutters.

Special Information regarding our C. E. Jennings' Arrow Head Expansive Bits. The cutters are graduated in 32nds of an inch. By moving the cutter 1-32 in. the diameter of the hole is increased 1-16 inch; or one-half turn of the micrometer adjusting screw will move the cutter 1-32 in., and increase the size of the hole 1-16 in. To bore a perfectly smooth hole, remove the bit as soon as the screw point pricks through; insert the screw point into this prick-mark from the opposite side from which the hole was started and bore until the hole is finished.

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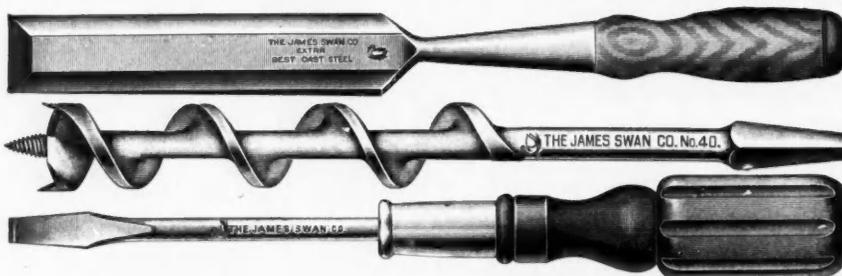
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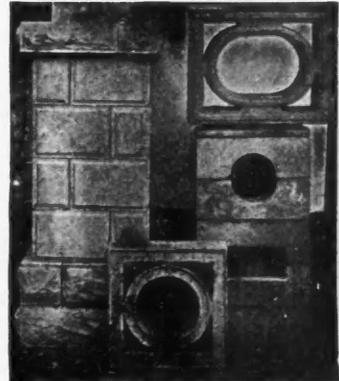
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Stairway When Not In Use.

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We Allow Contractors a Commission.

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**Chisels**



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Plain and Beveled Edges

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**NEVER BREAK**

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

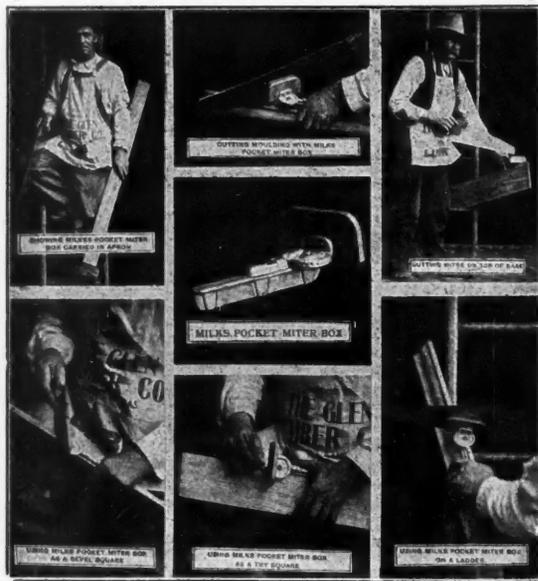
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Milks Pocket Miter Box and six of the many ways it can be used

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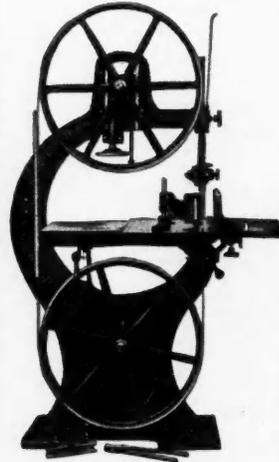
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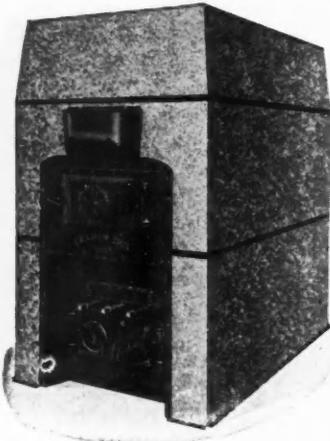
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The best columns for porches, pergolas or interior use.

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Light, Medium, Dark Shades  
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to be remembered when you are purchasing auger bits.

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Precision Bits  
Have Turned Shanks**

This is important, for these bits are more easily and quickly placed in the brace chuck than any bits you ever saw, and after they're placed you don't have to worry about them—they will stay put.

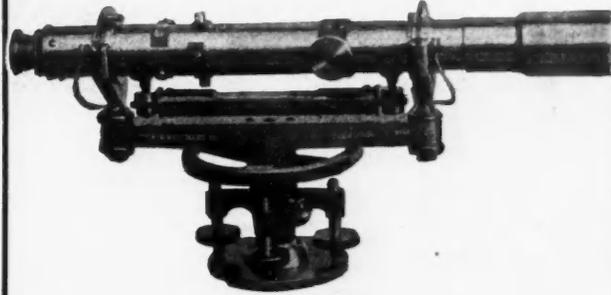
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**Russell Jennings Mfg. Co.**  
CHESTER CONNECTICUT

21-81

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Send for Circular Y for full particulars.

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Get my Free Literature. See my Machines at all Cement Shows  
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Represents quality both in color and durability. We use only the very best elastic and preserving oils, thoroughly mixed by the latest improved machinery.

### COVERING CAPACITY

One gallon will cover 150 square feet when applied with a brush. Dipping requires 2 gallons for 1000 shingles.

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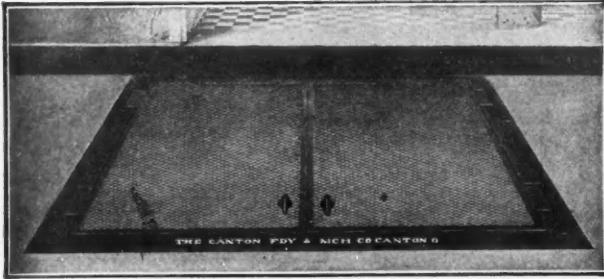
Superior shingle stain is sold under our absolute guarantee never to crack, scale, peel or flake off as paint does, and to retain its color as well or better than any stain on the market.

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Made in 45 Sizes

**THE CANTON FOUNDRY & MACHINE CO., Canton, Ohio**

Are a credit to any building and an everlasting advertisement to the Contractor who installs them.

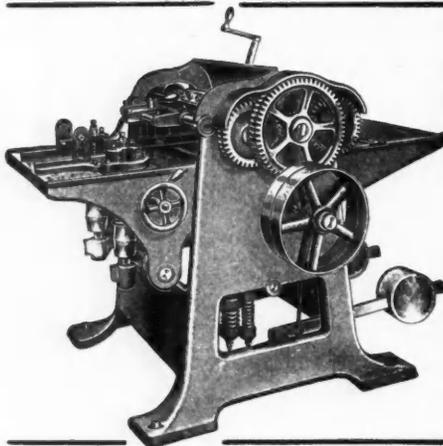
**OUR SOLID IRON AND STEEL DOORS**

**ARE ALWAYS FLUSH, FIRM AND NEAT**—No obstructions to stomp your toes. Locked and unlocked from either side. When open, passers-by are protected. Have water-drain to carry water to the curb. Illuminated doors also furnished.

**WE ALSO MANUFACTURE**

Coal Hole Rings and Covers, Coal Chutes, Cast Iron Conductor Connections, Area Gratings, House Movers Jacks, Cast Iron Columns, Auto Turntable etc.

Write today for Booklet "B-1" illustrating and describing above and many other builders accessories of interest to you.



A high grade modern

**WOOD WORKING MACHINE**

for Contractors, Builders, Planing Mills and general use.

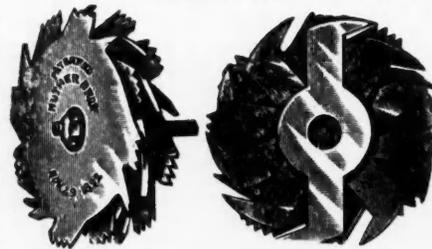
Many exclusive features

Send for Catalog and get posted. It will pay you.

**CORDESMAN, MEYER & CO.**  
41-45 Central Ave.  
CINCINNATI, O.

**Huther Bros. Patent Groover or Dado Head**

(Will save it's cost in three days' time)



Showing Arrangement of Cutters

Can be used on any Circular Saw Mandrel

For cutting any width groove from 1/4" to 2" or over. Will cut a perfect groove, either with or across the grain, and leave edges smooth. Will ship to any responsible firm on ten days' approval; if not satisfactory you are at liberty to return at our expense. We also make a specialty

of concave ground smooth cutting circular Mitre Saws, for either rip or cross cut; Grooving Saws for all kinds of special work; Lock, Corner Cutters Concave Saws, etc.

Try our Scraper Blades and you will use no others.

**HUTHER BROS. SAW MFG. CO.**  
1000 University Ave. ROCHESTER, N. Y.

**Contractors**

*You can easily make your Building Material with a Sterling*

You need a Sterling Combination Cement Brick and Block Machine. It will make and save money for you. You can make more brick or blocks in a day, with less labor and cost, than can be made by any other machine.



The Sterling Machine has the advantage in that it will not only make standard size brick, but will also make almost any size block that you may want.

A wall built of blocks made on a Sterling machine has a complete air space throughout. Positively no dampness can draw through. These blocks save lathing and furring.

Our machines are made in a large modern factory and we sell them to you at a very reasonable price. Our price means a big saving of money to you.

**Endorsed by U. S. Trade Reports**  
(Copied from U. S. Trade Reports)

"There is no make of Combination Cement Brick and Block Machine on the market to-day superior to those manu-

factured by the Sterling Machine Company of La Crosse, Wis. These Combination Cement Brick and Block Machines are made of the best materials, are durable in use, and will give entire satisfaction at all times. The Company is thoroughly reliable in every respect and can be depended upon."

Don't make the mistake of not investigating the Sterling. Let us send you our "Letters from Satisfied Customers". Write for catalogue, prices, etc.

**Sterling Machinery Co.**  
LA CROSSE, WISCONSIN

**PEERLESS Cement Brick Machine**

Big money is being made in the production of **Cement Brick**. Thousands of carpenter-contractors have already entered this field. Equip yourself **NOW** with THE **PEERLESS**—the original hand power brick machine with automatic Tampers.

Makes Brick Face-down and delivers them Face-up. One man operation.

Large variety of face plates with machine.

Learn all about the Cement Brick business. It pays others. It will pay you. One booklet will tell you more about it. Write for it **NOW**.



**PEERLESS BRICK MACHINE CO.**  
19 North Sixth Street MINNEAPOLIS, MINN.

# Save 1/2 Your Lumber Money

## Better Lumber—Lower Prices—Prompt Shipment

We recognize that there is a prejudice on the part of contractors and builders against buying from Mail Order Lumber Houses—and in some cases this prejudice has been justified. In our case, however, we are going to nail this mistaken idea right now. We can do you a big service and save you money—give you better lumber than your local dealer at a much lower price—and to **prove** it, we are going to have you come to Dubuque at our expense for hotel bill and railroad fare both ways, just to get to **show** you our lumber and **prove** what we are saying.

We have **20,000,000 feet of bright, fresh, new lumber** here for you to choose from—a bigger stock than half a dozen average wholesale yards combined.

Every foot of it is cut from our own timber, manufactured in our own mills and graded by our own specifications—we guarantee it to be better grade than **any** local yard **can** give you.

We sell direct to you—Cut out all the middleman's profits and 20% to 50% of the cost, in addition to higher grading.

Now a saving in lumber to you means a saving and better satisfaction to the man you are building for—and that means more business for you through his recommendations.

So the next time you need as much as a car of lumber, get on the train and come to Dubuque as our guest and pick it out yourself. With roofing its the same story—

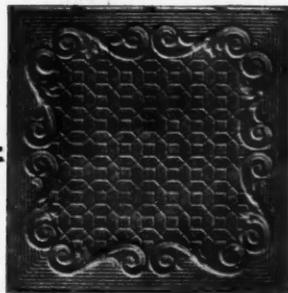
## DUX-BAK PREPARED ROOFING

is fully equal to any on the market selling at 30% to 70% higher and is better than we know at two or three times our price. An interesting and valuable book of testimonials and information free. Let's get acquainted—it means money to you. **WRITE TODAY.** Inquiries solicited only from Ohio, Indiana, Illinois, Minnesota, Iowa, Wisconsin, Northern Missouri, Eastern Nebraska, and South Dakota.

**PETER J. SEIPPEL LUMBER COMPANY, 212 S. Locust St., Dubuque, Iowa**



## WE ARE Metal Ceiling Specialists



Metal ceilings are growing in favor daily. They are especially attractive—thoroughly durable—easy to put in and comparatively low in cost. You will no doubt install several this season. Its to your advantage to know what we can do for you in this line. Our designs are up-to-date and pleasing. Our plates are made from Steel especially prepared for ceiling use.

You most certainly want to let us figure with you before you buy any material. We are large manufacturers of everything in sheet metal building material in addition to our steel ceiling work, viz., Eaves Trough, Conductor Pipe, Roof Gutters, Cornices, Metal Shingles, Ornamental Metal Work, Roofing Materials and accessories.

Let us send you our very interesting Metal Ceiling catalogue. Mention what other metal lines you're interested in and we'll send you our general descriptive booklet. It will be to your interest to know us and keep in touch with us.

**INDIANAPOLIS CORRUGATING CO.**

Indianapolis, Indiana

**PRICE \$50.00**  
Without Setting  
Attachment **\$35.00**

The cut herewith represents the only Automatic Band Saw Filer, Setter and Jointer on the market that will accurately Set, File and Joint a Band Saw during one and the same operation. No personal attention required after the Saw is placed in the machine. Six Minutes does the Complete Job.

Guaranteed satisfactory in every respect. Sent on 30 days' free trial. If not satisfactory, return at our expense. Manufactured by the

**FOLEY MFG. CO., 1230-32 E. 3rd St., Cleveland, O.**

Manufacturers of all kinds of Saw and Machine Knife Fitting Tools.

## Not Yet, But Soon!

The sound of the saw and hammer will be token the bustle of building. Don't worry about your heating, just specify.

## GILT EDGE Furnaces and Boilers

That's what the best builders are doing. They know that they will make good next winter as they have last winter and every winter for 30 seasons back. Write us for information.

**R. J. Schwab & Sons Co.,**  
295 Clinton Street  
**MILWAUKEE WIS.**

When Writing Advertisers Please Mention the American Carpenter and Builder.

**ASHBY'S**  
**Designs of Schools and Libraries**

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 which can be executed to the smallest details into a building that can be built within your means and to your entire satisfaction.

Ashby's "Designs of Schools and Libraries" will be sent to parties interested in the erection of a school building or library for which plans have not yet been procured.

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

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**"U.S. CHAMPION"  
CEMENT ROOFING  
TILE MACHINE**

Makes tile that are absolutely water - fire and storm - proof, in any color desired.

*Cheap, Handsome, Permanent. It is a money-maker for any man.*

**Little Investment!**

**Big Profit!**

*Write today.*

**L. Hansen & Co.,  
2036 Penn Street  
KANSAS CITY MO.**



**Take a Course in  
Architectural  
Perspective**

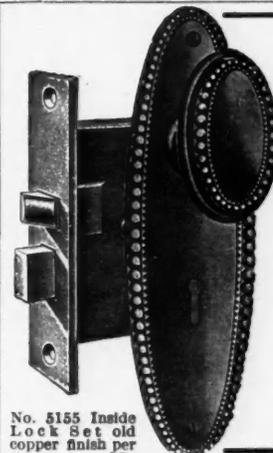
**And You will Then be Able to Close Many a Contract that Would Otherwise be Lost**

The demand for Architectural Perspective is increasing yearly because those who build are demanding, in addition to the plans, perspective drawings of their buildings. A well made perspective drawing, properly shaded and set off by a little landscape and secondary detail, pleases the eye, and is a valuable adjunct to the regular plans and elevations. Our correspondence course in ARCHITECTURAL PERSPECTIVE and DRAWING OF BUILDINGS is complete, practical, and can be learned at home at odd times. Instruction likewise given in twelve separate, complete Art Courses, for pecuniary profit, or pleasure only, as desired. Year Book sent upon request.

**SCHOOL OF APPLIED ART  
Battle Creek, Mich. U.S.A.**

**675 APPLIED ART BUILDING**

We are the only CUT NAIL manufacturers  
**GALVANIZING**  
BY THE  
**OLD HOT DIP PROCESS**  
Pay a little more for your roof and use nails that will  
outlast the shingles  
THE HOLDING POWER  
OF A  
**CUT NAIL** OVER A **WIRE NAIL**  
IS  
**MORE THAN 70%**  
According to Government Test  
SPECIFY THE "WILLIAMSPORT NAIL"  
Made by WILLIAMSPORT IRON AND NAIL CO.  
WILLIAMSPORT, PA.



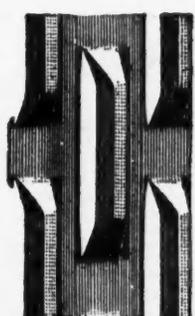
**That Price ought  
to make You sit  
up and take notice**

Send for our No. 5 Catalog and Price list Free to Contractors and Material Men. When sending for Catalog state whether Contractor, Carpenter or Material Man.

*We do not sell to Contractors or Carpenters in Cook County.*

**Rehm Hardware Co.  
1501 Blue Island Ave. Chicago, Ill.**

No. 5155 Inside  
Lock Set old  
copper finish per  
set..... 35c



**Easily Erected  
A Great  
Plaster Saver**

**WHEN  
YOU  
NEED**

**METAL LATH**

(“Sykes Trough”) Either Sheet or Expanded and Want the Best (“Expanded Cup”) Manufactured

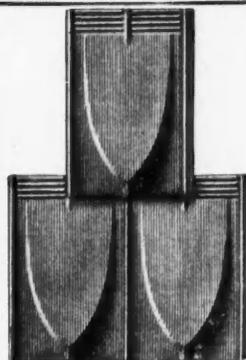
Made in all gauges from all kinds of sheets,  
“Anti-Rust” “Painted” “Galvanized.”

Address

**Sykes Metal Lath and Roofing Company  
NILES, OHIO**



**The Best for  
Stucco or Cement  
No furring  
strips required**



Style "B"—Showing Method of Laying

**PLACE YOURSELF ABOVE YOUR COMPETITOR**

AND SELL **"TITELOCK"** THE BEST

**METAL SHINGLES** made. They are business-getters and money makers. FIRE, WATER AND LIGHTNING PROOF.

Write for Samples and Prices

**MILWAUKEE CORRUGATING COMPANY  
MILWAUKEE, WIS. KANSAS CITY, MO.**

## The Shelby "Chief"

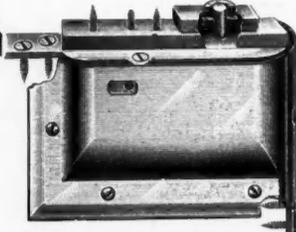
### Double-Acting Door Check and Floor Hinge

The Shelby Chief Double-Acting Door Check and Floor Hinge, for operating and controlling double-acting doors. This combination when properly installed prevents many accidents that often occur where the ordinary double-acting hinges are used. Instead of the door swinging violently, bumping and pinching children, or knocking dishes out of the cook's hands, it will close with ease and without noise, and stops on positive center.

This new combination consists of a double-acting ball-bearing Surface Floor Hinge, which goes on the lower corner of the door, and a compact liquid check which is placed on the upper corner of the door, serving for a pivot as well as a check.

It can also be used to swing a door but one way, by placing a stop on the jamb.

Take time and ask your dealer or us to tell you more about The Shelby Chief Door Check and Floor Hinge, also our line of Builders Hardware.



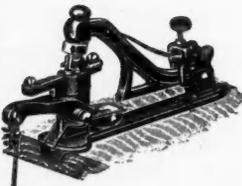
**THE SHELBY SPRING HINGE CO. - Shelby, Ohio**

## Buckeye Foot Power Hammer Saw Set



This Saw Set is so constructed that a uniform blow is given to each tooth, as it works on the trip hammer principle, thus insuring a perfectly even set throughout the blade. No danger of breaking the points of the most highly tempered saws. A novice can set a saw as perfectly as a mechanic with this set, as there is no guesswork as to the amount of set to be given. It is adjustable to any amount of set desired, and will set the finest tooth to the two man cross cut saw as perfectly as when the saw was new. Being operated by foot power, there is no strain on the wrist and no guess work as to the degree of set to be given and leaves both hands free to guide the saw. Ask your dealer to get it for you, or will be sent direct to any address on receipt of \$1.50, express prepaid. We also manufacture the New and Easiest Adjustable Plane on the Market, the "BUCKEYE IRON PLANE." Write for circular.

**BUCKEYE SAW VISE CO., Sole manufacturers, 2044-50 W. 55th St., Cleveland, Ohio**



# GENUINE BANGOR

**Roofing Slate  
Structural Slate  
Blackboards**

**Large Facilities, Prompt Deliveries**

**EAST BANGOR CONSOLIDATED SLATE CO. - East Bangor, Pa.**



## Office Partitions

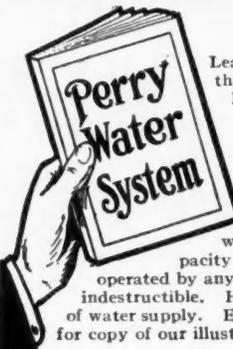
(Oak and Mahogany)

**MADE BY THE MILE  
—SOLD BY THE FOOT**

**PRICES 50% LOWER THAN YOU CAN GET ELSEWHERE**

Write for quotations and further particulars

**MOUNT & ROBERTSON**  
53 BEAVER ST., NEW YORK



## Send for This Book

Learn all about the only system of water supply that eliminates the storage of water. That delivers water fresh from the well. The

### Perry Water System

provides all the conveniences of a city water works system. It is designed for large or small capacity; is easy to install in any old or new building—operated by any kind of power—economical and practically indestructible. Has more advantages than any other system of water supply. Every reader of this publication should write for copy of our illustrated catalogue. Address

**UNITED PUMP & POWER CO.**  
495 Old Colony Building, CHICAGO

**SEND  
POSTAL  
TO DAY**

## A FREE BOOK

### On Concrete Machinery

**BUILDING BLOCKS  
BRICK  
PORCHES  
CHIMNEYS  
DRAIN TILE  
SEWER PIPE  
SILO BLOCKS  
AND OTHERS**

It isn't exactly a catalogue because it gives you the cost of making concrete Blocks, Bricks, Porches, and Chimneys. It tells all about the profits in making Drain Tile for farmers. The advantage of drainage, etc.

You ought to have this book if you are interested in concrete. Sixty-four pages of illustrations and interesting reading. Send at once, today, a postal will do.



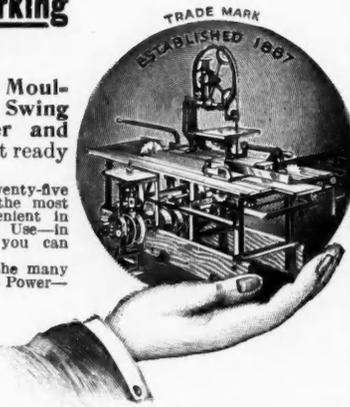
**W. E. DUNN MFG. CO., 4132 Fillmore St., Chicago**

## PARKS Woodworking Machines

Circular Saw, Jointer, Moulder, Band Saw, Shaper, Swing Cut Off Saw, Groover and Boring Machine—all set ready for Use.

It is PARKS who, for twenty-five years, has been putting out the most practical Combinations—convenient in operation and most effective in Use—in large quantities, at a price you can afford to pay.

Ask for Catalogues and see the many designs of Foot, Hand, and Belt Power—also our Portable Outfit.



**PARKS' BALL BEARING MACHINE COMPANY**  
Fergus St. & C. H. & D. Ry.  
CINCINNATI, OHIO, U. S. A.

When Writing Advertisers Please Mention the American Carpenter and Builder.



## OAK FLOORING

*Increases the Renting and Selling Values and Attracts a Better Class of Tenants*

Builders and owners will find it a clinching argument to say "It's floored with OAK FLOORING." It is the biggest single feature to look for in any house or apartment building. It imparts an air of refinement and elegance. It is the modern flooring.

OAK FLOORING 3/4 inch thickness by 1 1/2 inch or 2 inch faces can be laid over old floors in old homes or over cheap sub-floors in new homes at a very low cost. It is cheaper than carpets or pine flooring. When laid it has all the appearance of heavy flooring.

There is a solid satisfaction and lasting pleasure in the substantial and dignified appearance of OAK FLOORING.

Contractors and carpenters find it very profitable to lay 3/4 inch stock over old floors in old homes during the Winter Season. A little canvassing is all that is necessary to secure jobs. A carpenter or handy man can lay OAK FLOORING successfully.

For durability, OAK is the best. OAK FLOORING laid thirty years ago, after very hard use, is still in good condition.

Write for Catalog

THE OAK FLOORING BUREAU, 871 Hammond Bldg., DETROIT, MICH.



Making ready to insert the floor beams.

### Van Guilder Hollow Wall Concrete Machine-- Continuous Air Chamber from Cellar to Roof

Steel Reinforced Throughout  
Completely revolutionizing building methods.  
We manufacture and build with one operation; saving manufacturers' profits, transportation charges and half the labor cost, producing a more durable and up-to-date building. Only one machine needed for each job.

Van Guilder Houses Cost Less than Wood and Sell Quick at a Wonderful Advance  
They have stood the test for over four years and are long past the experimental stage.

This superior construction was immediately approved by the building department of the city of New York, one of the most severe and conservative boards in the world.

SILO WALLS  
Our curved silo machine produces a silo which is waterproof and frostproof, greatly improving the quality of the ensilage. The most economical and durable construction in the world.

Send for Descriptive Booklet NOW

Van Guilder Hollow Wall Company  
717 Chamber of Commerce Bldg. - ROCHESTER, N. Y.

## Use KEROSENE Engine Free!

Amazing "DETROIT" Kerosene Engine shipped on 15 days' FREE Trial, proves kerosene cheapest, safest, most powerful fuel. If satisfied, pay lowest price ever given on reliable farm engine; if not, pay nothing. No waste, no evaporation, no explosion from coal oil.

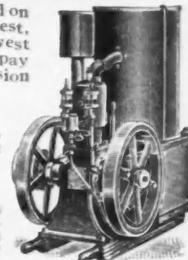
### Gasoline Going Up!

Gasoline is 9c to 15c higher than coal oil. Still going up. Two pints of coal oil do work of three pints gasoline.

### Amazing "DETROIT"

—only engine running on coal oil successfully; uses alcohol, gasoline and benzine, too. Starts without cranking. Only three moving parts—no cams—no sprockets—no gears—no valves—the utmost in simplicity, power and strength. Mounted on skids. All sizes, 2 to 20 h. p., in stock ready to ship. Engine tested before crating. Cylinders cannot carbonize. Comes all ready to run. Pumps, saws, threshes, churns, separates milk, grinds feed, shells corn, runs home electric light plant. Prices (stripped), \$29.50 up. Sent any place on 15 days' Free Trial. Don't buy an engine till you investigate money-saving "DETROIT." Thousands in use. Costs only a postal to find out. If you are first in your neighborhood to write, you get Special Extra-Low Introductory price. Write! (138)

Detroit Engine Works, 495 Bellevue Ave., Detroit, Mich.



## 365 Days Trial

Our service department will co-operate with any Builder, Contractor or Architect who wishes to specify or install a dependable heating equipment. The



JAHANT DOWN-DRAFT FURNACE solves the heating problem for residences, schools, hotels, churches and similar structures. Our 365 day "Guaranty Bond" insures absolute satisfaction. Don't take the risk of spoiling your plans by specifying the ordinary "stock" furnace. Send us details, sketches or blue prints of the building to be erected, and we will furnish, without cost, special plans, specifications and blue prints of a heating equipment guaranteed to furnish plenty of heat at a minimum cost for fuel. We will tell you the cost of this special Jahant Down-Draft Furnace. If you include the Jahant in your finished plans we will pay freight on the complete shipment, including furnace, pipes, registers, all fittings and the necessary tools. The special plans we send give full directions for installing.

Write for our free Specification Hand Book. It tells all about the Jahant and our co-operative plan. The Jahant Heating Co., 85 Mill St., Akron, O. Furnace Builders for over 30 years

DOWN DRAFT

\$10 DOWN \$10 A MONTH



### REGAL SASH CORD

This illustration is an exact reproduction of a stock hank. REGAL Sash Cord has been tested and approved by the United States government. Every inch is perfect in construction, consequently there is no waste in using it. All REGAL Cord is marked with the two blue strands. CONTRACTORS: If your dealer does not keep this cord in stock, write us for prices.

PURITAN CORDAGE MILLS, Louisville, Ky.

When Writing Advertisers Please Mention the American Carpenter and Builder.

**THE ZIMMERMAN IRON BASE**

is the ONLY BASE having a CENTER BEARING.

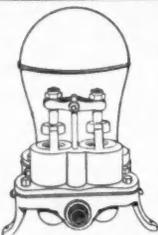
It carries the required weight with out allowing the corner supports to sink into the floor and prevents the base of column and floor from rotting.

See "SWEET'S" page 876.  
Write for Circular E.

Syracuse Corner Block Factory, Syracuse, N. Y.



Bottom View of Patent Iron Base Showing Center Bearing



**Our Double-Acting Hydraulic Rams**

are just the thing for your water supply. No stopping. Self adjusting. Run in all kinds of weather.

Write for circular.

**WILCOX MACHINE CO.**  
Marlboro, N. H.

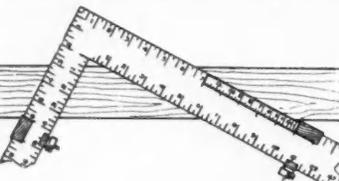
**Christiansen's Steel Screw Vise**

is the handiest ever out which every Carpenter ought to have. It can be attached to a plank or a heavy table top in 5 minutes. Send for Booklet.

**C. Christiansen,** 2221 Grand Av. CHICAGO, ILL.



Price is only \$2.00



**For Roof-framing**

This gauge is the easiest and quickest tool or method in existence. Any one of 100 pitches in 5 minutes. Is unexcelled as Stair Gauge. Sent prepaid for \$1.50. Returnable with money back. Full description free. Good terms to good Agents.

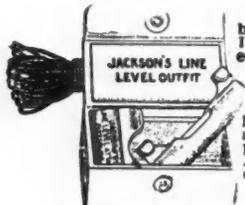
**JOHN PARKHILL**  
Rochester - Minn.

**A UNIQUE TIME SAVER.**

The Jackson Aluminum Line Level is a mighty small device but it brings about a tremendous saving of both time and labor. It takes the place of the old-fashioned sixteen foot straight edge, yet it can be carried in your vest pocket.

No contractor, builder, carpenter, mason, bricklayer, architect or plasterer, etc. can afford to be without one. Just stretch your line and hang the level on it—it's positively accurate. The complete outfit is put up in a neat leatherette case and consists of the level with a 40-ft. line also a spring clamp for attaching the level to a steel square or pocket rule, thereby serving as a plumb rule or bench level. Ask your hardware dealer or send \$1.00 for the Level outfit complete post paid. Send for our Catalogue of Tools.

**JOS. WOODWELL CO., Sole Agents**  
201-203 Wood St., Pittsburgh, Pa



**Lathing Hatchet No. 140**

Oval Head. 144 Points. Extra Quality Tool Steel.

Warranted against all defects. Send \$1.60 for sample. Express Paid.

**L. A. SAYRE & SON**  
8 Oliver St. NEWARK, N. J.

**SANDOW \$37<sup>50</sup>**  
2½ H. P. Stationary Engine—Complete

Gives ample power for all farm uses. Only three moving parts—no cams, no gears, no valves—can't get out of order. Perfect governor—ideal cooling system. Uses kerosene (coal oil), gasoline, alcohol, distillate or gas. Sold on 15 days' trial. **YOUR MONEY BACK IF YOU ARE NOT SATISFIED.**

Five-year ironclad guarantee. Sizes 2½ to 20 H. P., at proportionate prices, in stock, ready to ship. Postal brings full particulars free. Write for proposition on first engine in your locality. (116)

Detroit Motor Car Supply Co.  
196 Canton Ave., Detroit, Mich.



**Washes Like Tile with Soap and Water**

Good taste and good health both decree wall finishes in soft satin-like tints that are cleanly, sanitary, healthful—that will not harbor disease germs like paper, that do not contain poisons like lead paints, that will not flake and peel like kalsomines and other water paints.

**Johnston's Dull Kote Paint**

is the ideal wall covering for any room in the house. Not only does it give a most charming restful appearance to the room but it can always be kept fresh and clean. And this makes it the most economical finish you can possibly have. It comes in 24 tints or colors that lend themselves to the most tasteful combinations, with stencilled borders where desired.

Send for color card and be sure our label, shown below, is on every can you buy. At all dealers, or



**The R. F. Johnston Paint Co.**  
Pearl and Main Streets, Cincinnati, Ohio

Watch for this Label



**Do You Sell or USE ROOFING?**

If so, you should investigate our *Interlocking*

**Galvanized Iron & Tin Shingles.**

The only shingle locking on all four edges, making a roof weather, lightning and fireproof. Write for our Catalog & Agent's Proposition.



SIDE LOCK (They lock together like side of slide body and cannot pull apart)



This cut illustrates how the bottom lock hooks into top lock and covers nail heads

**The Metal Shingle Company**  
320 Jefferson Ave. W. DETROIT, MICH.

**ITS WORTH INVESTIGATING**

You examine perhaps several different Shingle Stains seeking the best.

**Nebraska Non-Fading Shingle Stain**

Gets next to the Architects, Contractors, Builders, Painters, and every real live buyer. Think it over. Samples and delivered prices on inquiry.

We will send you on approval upon request a five or ten gallon can, prepay the freight, charge nothing for the package, and sell you the stain at barrel price and if upon test this stain is not entirely satisfactory to you, you might return it at our expense.

We want your Shingle Stain business, if prices, quality and service have anything to do with it we will get it.

Prices on Mixed Paints, Varnishes, Fillers, Dry Paints, and Painters Supplies furnished upon request. Send us your name and we will place you on our mailing list and keep you informed at all times relative to current prices on Pure White Lead, Pure Linseed Oil and Pure Turpentine.

**Nebraska Paint & Lead Company, Manufacturers**  
Lincoln, Nebraska U. S. A.

**SOMETHING NEW FOR YOU**

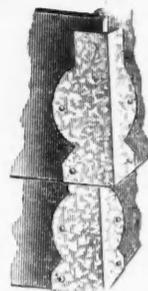
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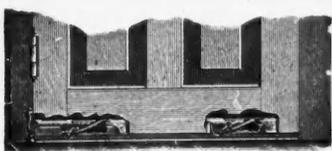
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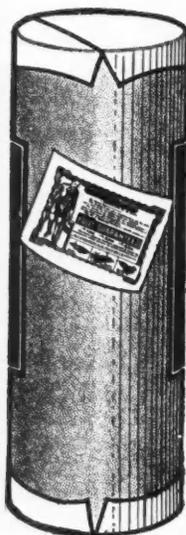
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(Put up in rolls and shingles)

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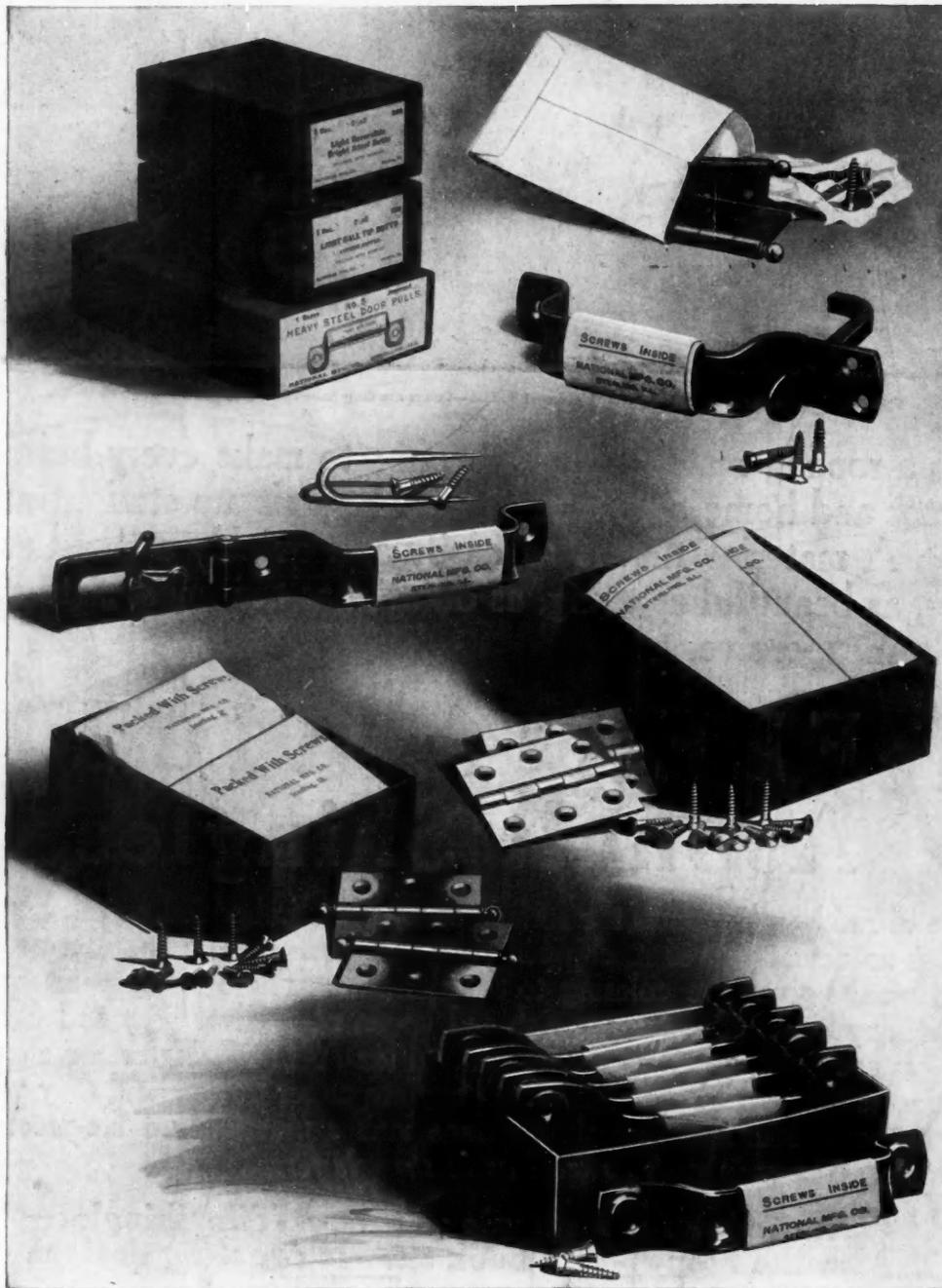
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CHICAGO, ILL.



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