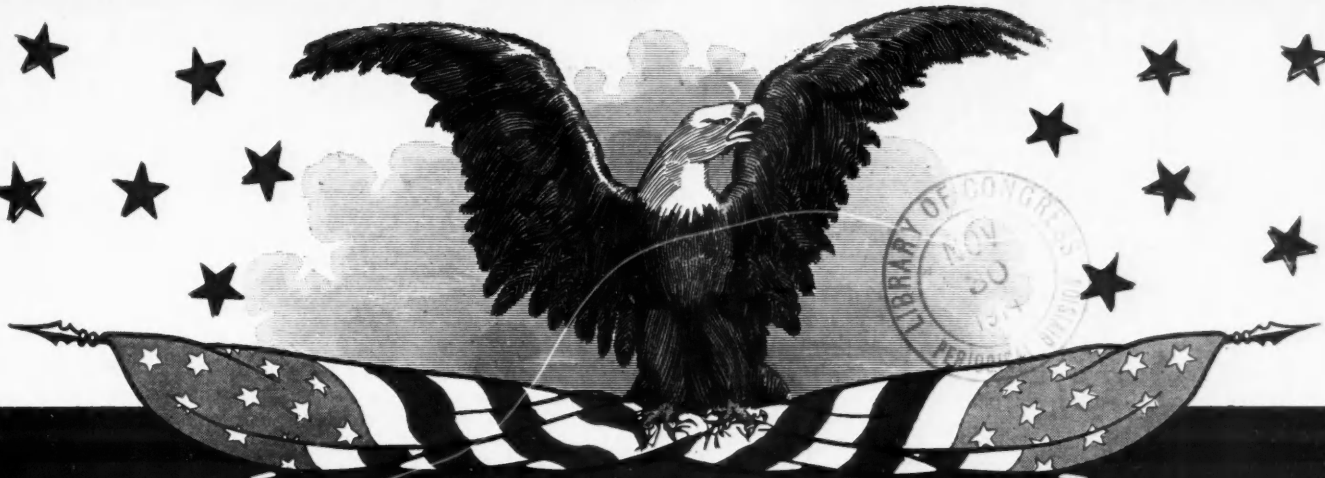
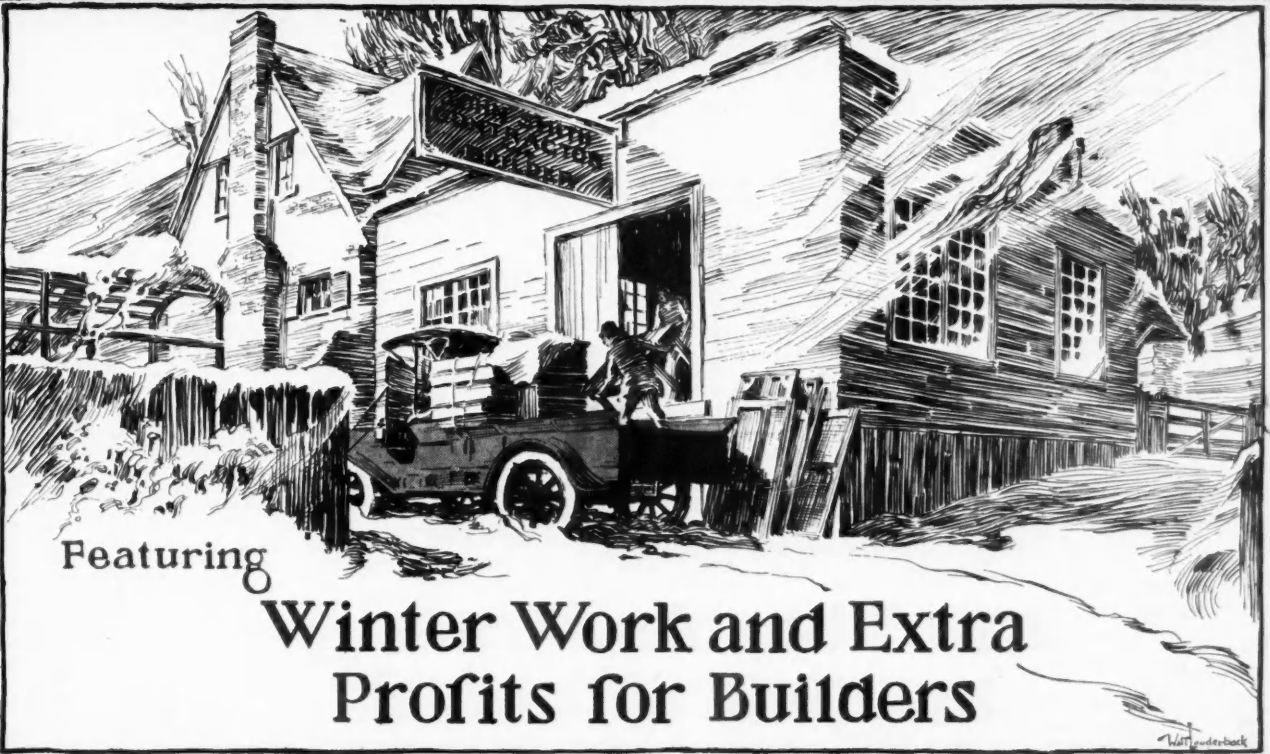


NOVEMBER 1914

# AMERICAN CARPENTER AND BUILDER



THE WORLD'S GREATEST BUILDING PAPER



Featuring

Winter Work and Extra  
Profits for Builders

Price 20 Cents

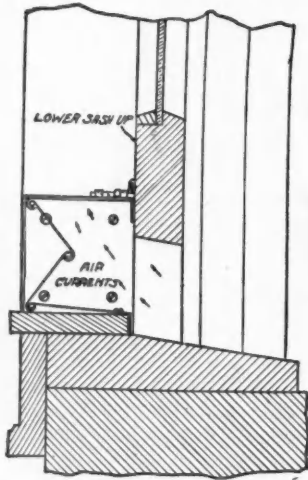
# FRESH AIR

WITHOUT  
*Draft, Dirt, Rain or Snow*

By the use of

## BERRY WINDOW VENTILATORS

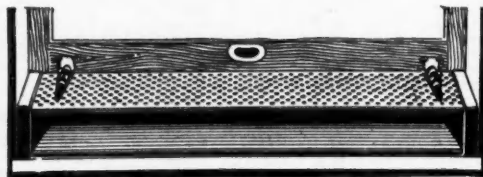
*PERFECT VENTILATION*



Cross section of window showing ventilator open

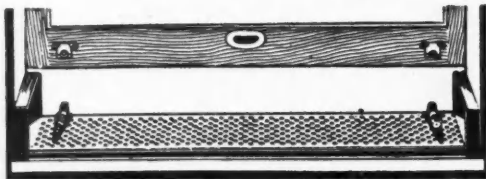
for the living room, bedroom, office, kitchen, nursery or shop is assured by the use of Berry Window Ventilators.

The supply of fresh air is admitted through the ventilator and deflected upward, eliminating all chance of draft, while the impure air is forced out through the opening between lower and upper sashes. Any room equipped with a Berry Ventilator has a complete Ventilation System and is absolutely burglarproof.



Showing window open with ventilator in use

### Construction of Berry Ventilator



Showing window open with ventilator closed and not in use

Ventilators are constructed of a new process galvanized metal, finished with two coats of heavy enamel and come in stock sizes of 3 inches apart, from 17 inches to 71 inches—finished in black, mahogany or oak, or white enamel. Adjustments furnished with each ventilator, permitting same to fit any opening any part of 3 inches greater than stock sizes. The Berry Ventilator is collapsible, operating like an accordion, and the amount of air admitted can be regulated by raising or lowering the window. (We can furnish

ventilators in special sizes or finishes. Send us your specifications.) Ventilators are easily applied and the only tool required is a screw-driver.

### TAKE ADVANTAGE

of the popular demand for fresh air that is growing stronger every day.

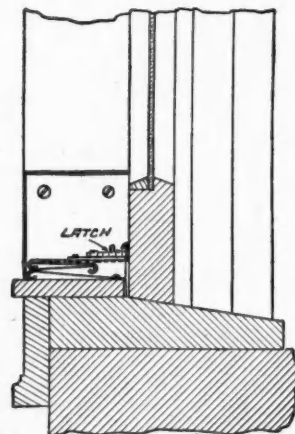
### BECOME OUR AGENT

We have a liberal proposition that will interest you, put them on your houses, schools, churches, offices, etc. Establish yourself in your locality as the ventilating man, and handle a ventilator that has been proven by experts as scientifically correct. Write for special proposition to all *American Carpenter and Builder* readers.

**BERRY**  
**WINDOW VENTILATOR SALES CO.**

14-16 West Randolph Street . . . . . CHICAGO

Cross section of Window showing ventilator closed





**EVEREADY  
SAW RIGS**



We're  
Handing  
You a Hot  
"Hunch"

Let the Eveready Saw Rig

**MAKE YOU BIG EXTRA PROFITS**

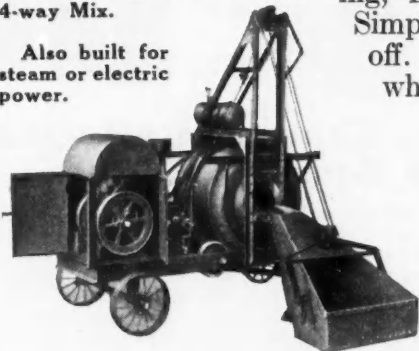
EXTRA profits! Did you get that? We mean just what we say. You make a fair profit on the job *without* an OSHKOSH EVEREADY SAW RIG, but *with* it you are bound to make the *extra* money that it saves in time and work. An "EVEREADY"

**SAVES THE WAGES OF SIX MEN**

With it two ordinary men can tire out any saw gang you ever saw. Can be easily skidded anywhere on the job. With help of the set of free attachments, the

The Mixer with the Effective 4-way Mix.

Also built for steam or electric power.



"EVEREADY" does ripping, cross-cutting, jig-sawing, dadoing, mitering, beveling, boring, sanding, tool grinding, etc. Simple, easy to operate. Just a whirl of the wheel and she's off. Costs about 5c an hour when at work—nothing when idle.

**OSHKOSH MIXERS**

Absolutely supreme in their field. Always "there" with the "goods." It will pay any Contractor to learn the OSHKOSH MIXER record of *results*. A letter or penny postal inquiry brings all the facts free. Send for them today.

**Oshkosh Mfg. Co., 316 S. Main St., Oshkosh, Wis.**

**Chicago Office: 1440 Monadnock Bldg.**



**YOU LOST THAT BIG JOB  
BECAUSE YOUR BID WAS TOO HIGH**

YOU ALSO LOST THE ADVERTISING WHICH THAT JOB WOULD HAVE GIVEN YOU. IT HURTS, BUT NEXT TIME

**REDUCE YOUR BID \$400.00 TO \$700.00**

AND DEPEND UPON THIS FLOOR MACHINE TO MAKE GOOD EVERY CENT OF IT. IT RUNS BY ELECTRICITY.

*THINK THIS OVER—THEN WRITE US—NOW.*

**THE AMERICAN FLOOR SURFACING MACHINE CO.  
TOLEDO, OHIO**

**THE IDEAL**

**Electric Floor Sander**

For surfacing all grades of wood floors, works equally well on new or old floors. Removes paint, varnish, dirt, grime. Will surface 5,000 square feet once over in eight hours.

The lowest priced and most efficient floor sander on the market.

The Ideal Floor Sander is simplicity itself and built mechanically correct to withstand years of hard service.

Write for our **FREE TRIAL** proposition

**Ideal Floor Sander Co.**  
Not Inc.  
105-109 N. Canal St.  
CHICAGO




**FREE TRIAL  
15,000 in use**

**RAPID, FLEXIBLE, SELF-PROPELLING WHEN RAISING HANDLE**

Send for our new list and free trial proposition.

**M. L. Schlueter**  
225 W. Illinois St.  
Chicago, Ill.

Edge Roller easily adjusted to either side.



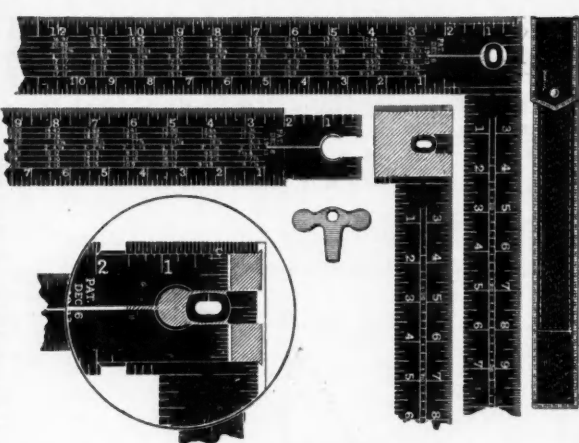
**Quick Clamp**

**HARGRAVE** **H** **QUALITY**

The Hargrave new Quick Clamp is for rapid work. Close notched bar of manganese steel ( $1\frac{1}{2} \times \frac{1}{4}$ ) allows quick, rough adjustment. Once adjusted, can't slip, yet may be removed in an instant. Screw fitted with either wing or wheel, as desired. Gives great pressure. Deep jaws take in difficult work. Flat head allows use of brace or other tools close to clamp. For extra heavy work this clamp is furnished with  $1\frac{3}{4} \times \frac{3}{8}$  manganese steel bar.

Like all Hargrave tools, it makes you money because it does better work in less time. Write for catalog of complete line. Please address Dept. H.

**THE CINCINNATI TOOL COMPANY**  
Norwood, Cincinnati, Ohio



**Nicholls Expansion Fit Take Down Square No. 500-R**

Eccentric Cam expands end of body in milled portion of tongue, making an absolutely solid joint, also taking up wear.

Long bearings assure accuracy. Strength where tongue joins on to body. All other Take Down Squares are cut half into at this point.

These are stamped with our **Rafter Framing Rule**, giving cuts for seventeen different pitches of roof.

Send for our **Little Book** on Rafter Framing. It is **Free**.

We re-finish and re-true old Squares, **35c** each. Include enough postage for their return.

**NICHOLLS MFG. CO.**  
OTTUMWA, IOWA



**IMPERVITE** is Guaranteed to Waterproof Walls: Cellars & Pits.

A facing of **IMPERVITE MORTAR** on the inside will resist water on the outside.

ASK FOR BOOK No. 62 **The Standard Paint Co.** NEW YORK BOSTON CHICAGO



**The AUTOMATIC BALLBEARING Electric FLOOR SURFACING MACHINE**

Patented Oct. 15, 1912. Made in several sizes.

will save you money by rapidly finishing your new or old floors just the way you want them. Is self-propelling—you simply guide.

Write today for Booklet telling all about the machine, our **free trial offer**, and list of users near you.

**WAYVELL CHAPPELL & CO.**  
Dept. D. 4847E Ravenswood Ave. CHICAGO



**The FOX Floor Scraper**

is conceded by Carpenters and Contractors to be the most perfect and practical tool of its kind in use. It will do the work.

Sold on its merits for 10 years.

We ship on ten days approval.

**FOX SUPPLY COMPANY**  
Dept. A. BROOKLYN, WIS.

Scraping Outfit Consists of  
1 Clamp Block for resharpening blades. 1 Wrench.  
1 Burnishing Steel. 1 File.  
4 Crown Blades. 3 Roughing Blades.  
1 Finishing & Polishing Blade & Complete set of Instructions for operating Scraper & resharpening blades.  
Complete Outfit **\$25.00**

Let the **ADJUSTABLE FLOOR FINISHER and SANDER** make money for you



The greatest time-saver—money-maker for the builder at anything like the price.

Price of Finisher complete with six blades, burnisher wrench, etc., \$22.00; Sander, \$2.50 with ten days' **FREE TRIAL** besides.

Or, all for only \$22.00 if you send cash with order. All machines subject to my perpetual guarantee. Read it.

**Guarantee**  
If for **ANY REASON** or at **ANY TIME** through fault of the machine you are not well pleased, you may have your money back if you want it.

**H. P. DIDRIKSEN**  
Anderson, Ind.



The Adjustable Floor Finisher



**\$13.95**  
per doz. 4 footers  
—if you send cash with order.

**Absolutely Safe;** two of them will carry a ton, and they last a lifetime. Think of the time you save! One man alone can put them up and take them down easily and quickly.

**No Side Swing** if you purchase our new fixtures at 80c extra per dozen brackets: these keep the brackets absolutely rigid.

Write for Catalog of Builders' Specialties!



Save minutes for your workmen and you will save money for yourself. A man's time costs just so much per hour; use clamps that will increase his output.

Moreover, **TAYLOR CLAMPS** cut down the amount actually expended for tools. In the Brooklyn Navy Yard **TAYLOR CLAMPS** have lasted more than twice as long as the next best clamps made.

Catalogue No. 11 shows 22 styles. Free on request.

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

# WHY WE HAVE SOLD SO MANY TRIPLE "A" FLOORSMOOTHERS



Carpenters and Builders quickly saw an ideal floor scraper embodied in the Triple "A". They saw its money-making possibilities, its wide range of work, its economy of operation. They took note of its wonderful features of adjustability, its ease of operation and simplicity. They saw that the same results could be obtained in a SPRING DRIVEN scraper as in an expensive power driven machine; there would be nothing to get out of order and the initial investment small. In short they recognize the Triple "A" as a machine that can deliver the goods and the large quantity of our machines all over the country bear out our statements. That's WHY.

## The TRIPLE "A" FLOORSMOOTHER SPRING DRIVEN

It finishes an average of 1500 square feet of floor a day. Works equally well on old, new, painted, varnished, oiled or grimy floors. Adjustable in weight and depth of cut. The SPRING MOTOR gives the TRIPLE "A" as great efficiency as a power machine because the powerful spring motor does two-thirds of the work.

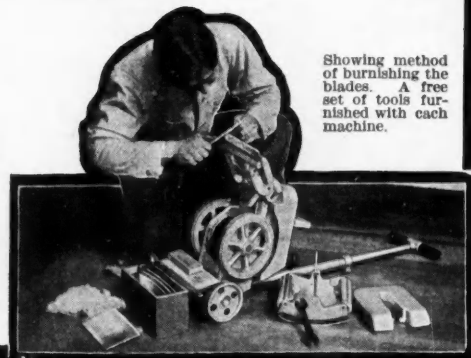
The TRIPLE "A" Floor smoother is carefully made and balanced, and the full-gear, wide faced, rubber-tired wheels run so easily that a child can push the machine. Six double edged blades and a full set of tools are furnished free with each machine.

Send your name and address and get full information about this wonderful scraper. Address

**TRIPLE "A" MACHINE CO.**

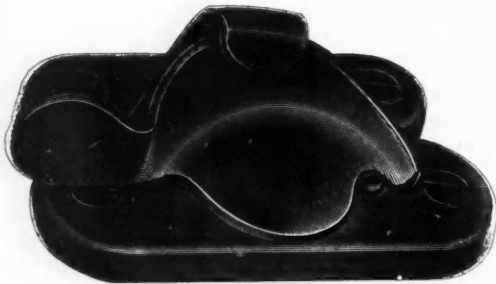
Room 329

300 W. Grand Ave., CHICAGO



Showing method of burnishing the blades. A free set of tools furnished with each machine.

## MONITOR SASH LOCKS



(PATENTED)

### NEVER BREAK

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

If the upper plate drops, the Monitor "Never Break" Sash Lock will pick it up from a lower point than any other, adjust the sashes perfectly, prevent all vibration and lock securely, so it cannot be opened from the outside.

MADE IN TWO SIZES AND ALL FURNISHED BY

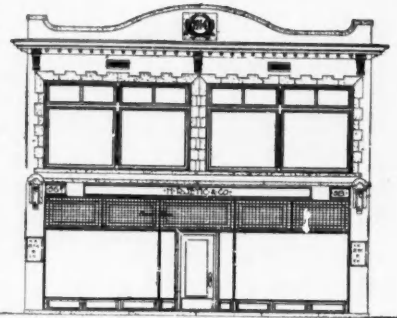
**The Champion Safety Lock Co.**  
Geneva, Ohio

## Get Our Help

With That New Store Front

Don't make your plans until you have written us for full information and description of the famous Petz Bars.

On account of their strength, ease of installation, and beauty of outline and finish, Petz Bars are preferred above all others by leading architects and con-

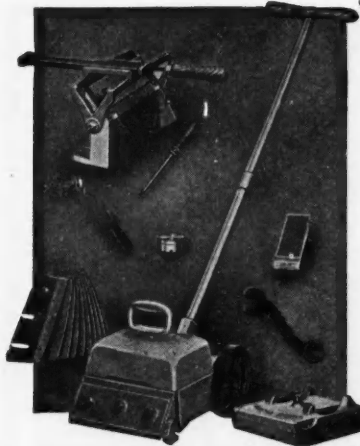


tractors. They will not break glass, and have held glass unharmed in the severest wind storms, when all other bars failed.

Lots of good solid information in our booklet on "Modern Store Front Construction." Let us send you a copy. We have a blue print showing the detail of our construction in full size which will be sent any architect or building contractor upon request.

**Detroit Show Case Company**  
Sole Makers

491 West Fort St. Detroit, Mich.



**Use this Floor Scraper for One Week at My Expense**

and if it does not do the work to your entire satisfaction, return it and you are under no obligation.

**THE ACME FLOOR SCRAPING OUTFIT**

is the most complete hand operated floor scraping equipment on the market. Thousands in daily use and all give perfect results.

Write to me now for particulars of my free trial offer and catalog.

**JOS. MIOTKE, 247 Lake Street, MILWAUKEE, WIS.**

**STERN FLOOR SCRAPER**

Whether you can afford a larger, more expensive machine is not the question. Cost and size are not indications of better work. No machine made will scrape floors better than the Stern. Quality is the first consideration. Price? The Stern is **low-priced**. So much the better. You save money and get a machine that will do the work as well or better.

**STERN MFG. CO.**  
LANCASTER, PA.

Holds any Blade Up to 3 1/2 x 7 Inch

For your own benefit let us tell you our side of the story. We're prejudiced in favor of our machine. We know what it has done under every condition. Your opinion is unbiased. Let us send you our circulars. Use your own judgment as to the merits of the Stern. Write today or tomorrow—Better today.

**NO MONEY IN ADVANCE**

**5 DAYS FREE TRIAL**

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

**The WEBER DOUBLE ACTING Floor Scraper**

**"Grand Rapids"**

**BALL BEARING ALL STEEL Sash Pulleys**

Fasten automatically. No Nails. No Screws. Just bore four holes.

No. 10 Ball Bearing

The automatic saw tooth fastening feature and the simple and easily made mortise will save in labor enough to pay for the pulleys. The Bearing contains eleven 1/4-inch Solid Steel Balls running in lubricant.

**NOISELESS EVERLASTING**  
Write for **FREE** Samples

**Grand Rapids Hardware Co.**  
MANUFACTURERS

158 Eleventh St. :: Grand Rapids, Mich.

**This Beats the "YANKEE" No. 30**

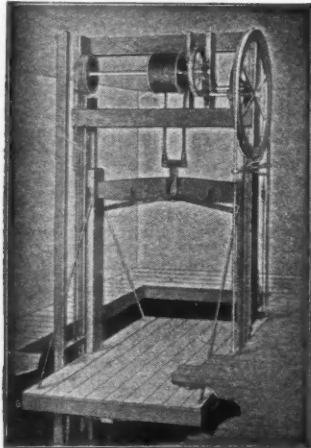
For overhead work, any place out of reach—and all ordinary work, the New "Yankee" No. 130 and 131 are better than any tool made for this purpose.

The spring in the handle holds the tool extended in any position—keeps the bit in the slot—drives the handle back quickly for the next thrust. To see one is to want it. Let us send you the "Yankee" Tool Book. A postal brings it.

**NORTH BROS. MFG. CO.**  
Philadelphia, Pa.

# A Good Elevator

Is a Good Investment  
Saves Time and Labor



Our product includes *Dumb-Waiters, Carriage, Auto and Store Elevators* — Hand and Power.

These machines are serviceable and will pay for themselves in a very short time. Being practically self-contained, they can be erected by any carpenter or "handy man" in a few hours' time. Plans for erecting furnished with each elevator.

## The Reasonable Cost Will Interest You

Write to us today stating your requirements, giving style of machine wanted, size of platform and number of feet travel and we will name you a money-saving price on equipment made to serve you well.

**SIDNEY ELEVATOR MFG. WORKS, SIDNEY, OHIO**

# C. E. JENNINGS & CO'S

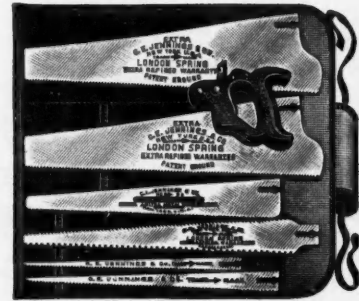
71-73 MURRAY ST., N. Y., U. S. A

TRADE MARK.

## COMBINATION SET OF SAWS No. 131

This set of saws is just what you need. Takes up very little room in the kit and is less expensive than if you bought all the saws separately.

Each blade is fully backed by our guarantee both as to quality and workmanship. The saws are hand-forged from extra refined spring steel, hand filed and set. Warranted to hold edge and set for longest possible time and to run smoothly and easily.



An adjustable lever in the handle operates the screw that holds the blade. Blades may be removed from the handle instantly and another blade substituted. Blade is held firmly and evenly.

Combination Set No. 131 consists of:

- 1—Garland Adjustable Handle
- 1—18-inch Hand or Panel Saw
- 1—18-inch Rip Saw
- 1—16-inch Double Edge Pruning Saw
- 1—15-inch Hack Saw
- 1—14-inch Compass Saw
- 1—12-inch Keyhole Saw

A Waterproof Canvas Case for this set with seven pockets—one for each blade and one for the handle, will be furnished at a slight extra cost.

Ask your hardware dealer to show you Set No. 131. It is so handy and the price so reasonable that you'll like it. Write us for descriptive Circular.

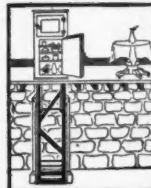
# STORM Dumbwaiters and Hand Elevators

No stock sizes. Built to fit the place. Ask your hardware dealer and write us for catalog. Let us send you our new Catalog with Discounts.

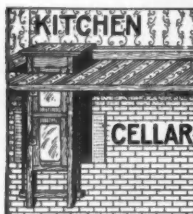
**THE STORM MFG. CO.**

Herman & Vesey St.,

NEWARK, N. J.



**CARPENTERS AND BUILDERS** make extra money by installing this practical necessity in new and old homes. It saves 3650 trips to the cellar each year. "WIFE'S JOY" DUMBWAITER—Ball Bearing—Disappearing Operates quickly by a press of the button. Takes up no room. Top lies flush with floor; can be walked on. Practical for any home. Keeps food perfectly. Can be installed complete in 2 hours. WRITE FOR CIRCULARS. Fifteen Days' Free Trial Without Any Deposit. AMERICAN ELEVATOR CO. - - Bloomsburg, Pa.



**CARPENTERS WANTED AS AGENTS**  
During Fall and Winter Months. Big Money; Ready Seller.

## SANITARY AUTOMATIC DUMBWAITER

saves carrying food to and from the cellar. Perfectly ventilated; screened openings; finished inside with durable white enamel. Keeps food perfectly. Top lies flush with kitchen floor. You can walk over it. Operates with push button or lever. Also furnished as a Refrigerated Dumb Waiter. Cost of installation nominal. Write for new catalog just now

York Automatic Dumbwaiter Works, 639 W. Market St., York, Pa.

# HOISTS & ELEVATORS

Columbia Dumb-Waiters  
Pavement or Cellar Hoists  
Jumper Disappearing Dumb-Waiters  
Chain Blocks, Cranes and Trolleys

Send for Catalog

**J. G. SPEIDEL** Reading, Pa.

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. ✠

"Last a Lifetime and Give Satisfaction To the End"



## BUTT CHISEL

TRADE MARK



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

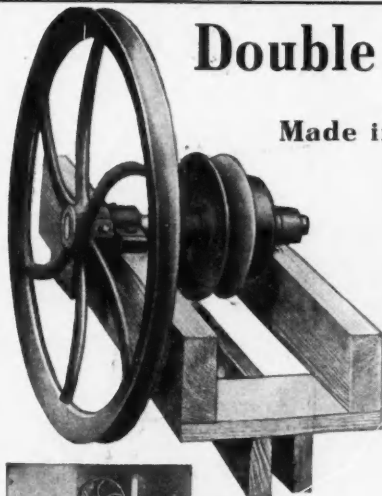
**THE CELEBRATED BARTON TOOLS**

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

**MACK & COMPANY,**

20 BROWN'S RACE  
ROCHESTER, N. Y.





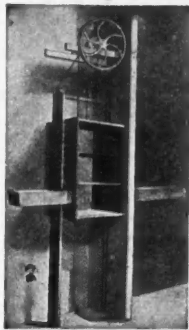
# Double Automatic Brake Dumbwaiter

PATENT APPLIED FOR

Made in the U. S. A.

Shipped or Erected Anywhere

No.	Type	Car-Size, in inches	Shaft, Size, Single Face	Shaft, Size, Double Face	Capacity in pounds	CompleteShipping Weight, Approx.	Price Machine Only	Price Complete Outfit, Height 20 ft. or less	Price Machine Extra Double Face	Add each extra ft. Single Face	Add each extra ft. Double Face
5-A	Automatic Brake	22x18	26x21	26x22	75	275	18.00	36.00	6.00	0.25	0.33
5-B	Automatic Brake	26x22	30x25	30x26	100	350	22.00	43.50	6.50	0.27	0.35
5-C	Automatic Brake	30x24	35 1/2 x 27	35 1/2 x 28	150	450	25.00	52.00	8.00	0.28	0.40
5-D	Automatic Brake	34x28	39 1/2 x 31	39 1/2 x 32	200	635	30.00	61.00	8.00	0.32	0.45



No. 5. AUTOMATIC BRAKE DUMBWAITER  
75 to 200 lbs. capacity

This Dumbwaiter is the most modern manufactured, and the workmanship and material is backed by 40 years' experience. 13 different Dumbwaiters are illustrated, named, numbered and described and we tell you the best service each is adapted for, we illustrate hand and power elevators also in our catalog which we will gladly send you free.

SEND FOR OUR CATALOG "C"

**CHELSEA ELEVATOR COMPANY** 334 West 26th St. NEW YORK CITY

## REPUTATION and PROFITS

The very best **DUMBWAITERS** are none to good! Inferior **DUMBWAITERS** are a nuisance.

Some Dumbwaiters get constant service.

Some Dumbwaiters are abused.

Some Dumbwaiters are neglected.

**SEDGWICK DUMBWAITERS** are designed and built to give satisfaction under all these conditions.

The **SEDGWICK DUMBWAITERS** are guaranteed by the makers and the makers stand back of their guarantee.

Send for catalogue L and keep it at hand for reference—all sizes and types carried in stock.

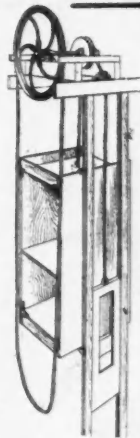
You can select what you want and get what you select without delay.

**SEDGWICK MACHINE WORKS**

132 Liberty Street

::

New York



## Excelsior Dumb-Waiters

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

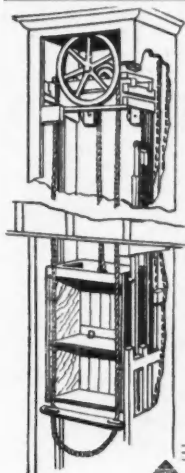
**Up-to-Date in Every Particular**

**Hardwood Car, Self Retaining Machine, Adjustable Weight, Guide 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.**

74 Emerson Place - - Brooklyn, N. Y.



## A. B. C. DUMBWAITERS

Called This For Their Simplicity And Perfection

They can be relied on to give permanent satisfaction. The design is right, the workmanship and materials of the best. Our broad experience and reputation stands back of all our Dumbwaiters. Why not handle King Dumbwaiters. They will net you a good profit and make all your customers boosters.

**The King "Safety Check"**

is part of the equipment of all our Dumbwaiters. It will hold load at any floor. Our catalog describes it. Send us your specifications and let us figure them. Send for catalog now.

**WM. F. KING**

20 Kingsland Ave. Brooklyn, N. Y.

## WARNER ELEVATORS and DUMB-WAITERS

We give you more good material—good workmanship—good Elevator and good service than any elevator builder on earth—for your money.

Send for Catalogue

The Warner Elevator Mfg. Co. : Cincinnati

# Now—

**NOT** tomorrow, next week or next month, but now—

Now is the time to get a "Big-an-Little"; will pay for itself in added profits during balance of the season, and you'll have the assurance you have the very best mixer your money can buy for beginning next season's work right.

Get a "Big-an-Little" now! Lose no more time!!



Capacity, 5 cu. ft. of concrete. Will produce up to 75 cu. yd. a day.

Strong in design, properly built and economical to operate.

Our catalog will give you more on this subject of medium-sized mixers.

Sent on request.

## THE JAEGER MACHINE COMPANY

318 West Rich Street

COLUMBUS, OHIO



### We Can Save You Money In Your Mortar Mixing

Mr. G. Ed. Berry, a Harrisburg, Ill., contractor, writes us that with the Blystone Mixer, "One man has slaked my lime and made mortar for eight and ten masons besides having time to spare for other work. I have saved the cost of at least one man's wages and a gain of ten per cent more mortar per barrel of lime over the old way of mixing."

Is YOUR mortar or plaster mixing a profit eater. Why not make it a profit producer? Our Blystone Batch Mixer is a mortar and plaster mixer as well as a concrete mixer. It can save you time, labor and material on every mortar or plastering job you do.

The Blystone Mixer operates very easily. It is filled while in motion and material is discharged while machine is in motion. It mixes material in full view, insuring an absolutely accurate mix. The reverse spiral paddle system of the Blystone mixes rapidly, turning material over forty times in ONE minute. Blystone Mixers are furnished with gasoline engine power equipment, or for belt driving. Mounted on skids or portable hand trucks.

**BUILDERS—Get The Facts About The Blystone**

Let us send you our catalogs and other matter explaining in detail just how the Blystone can save YOU money. Write us for this information right now—while you have it in mind. Asking us for details puts YOU under NO obligations.

**THE BLYSTONE MACHINERY CO.**  
19 Carpenter St. : CAMBRIDGE SPRINGS, PA.

### ARCHER CONCRETE MIXER

Capacity  $4\frac{1}{2}$  cubic feet wet concrete per batch. Just the mixer for economical work on large or Small Jobs.



### Saves the Work of 5 Men

The Archer Mixer by fast mixing and by discharging the concrete directly into the forms saves the work of five men. No wheeling is necessary. Loading platform is low. Barrow dumps into the charging hopper which is strongly braced so it will not bend or "give" under weight.

The price of the Archer makes it an attractive investment for the Carpenter and Contractor. It is built of first quality iron and steel with blue annealed steel plate drum.  $3\frac{1}{2}$  H. P. Gasoline Engine. Platform 5 feet long by 38 inches wide and 21 inches high. Can be used anywhere on the job—in the basement or on the roof. We agree to refund your money if the Archer does not do all we claim. Write for full description and price.

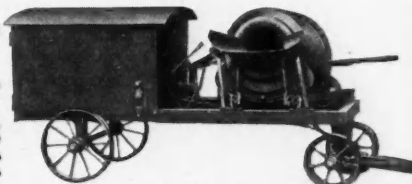
**Archer Iron Works**  
2430 West 34th Place

CHICAGO,  
ILLINOIS

**JUST RIGHT**  
in Price, Capacity and Construction

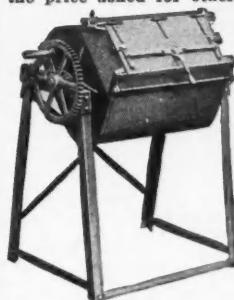
That's the beauty of buying a Northwestern machine. You can get a mixer that will suit you in capacity, construction, and price. All our machines are built to satisfy and they do it. By ordering a Northwestern Mixer you avoid a big initial investment and all future worry and expense.

**Northwestern Special Batch Mixer**



Capacity 5 cu. ft. per batch. 40 to 50 cu. yards a day. This is a speedy and durable mixer that will soon pay for itself. Has the sturdiness, simplicity, and mechanical perfection that makes it a winner. Low Charging. High Closed Discharge. Combined cone and cylindrical drum. Strongly braced truck. Wide face truck wheels. 2 1/2 H. P. Engine. Let us send you a complete description of this mixer which can be bought at about half the price asked for other machines of the same quality.

**Carpenter's Hand Batch Mixer**



An especially strong, well-made little machine for handling small batches of concrete quickly and with a small amount of labor. 3 cu. ft. of loose material per batch. Perfect mixing guaranteed. Best iron and steel construction. Weight 220 pounds. PRICE...\$23.00

Get Our Complete Catalog of Mixers, Hoists, Moulds, Brick and Block Machines, Crushers, and all Concrete Machines and Supplies.

Northwestern Steel & Iron Works  
625 Ball Street - - - Eau Claire, Wis.

Let  
Concrete  
Increase  
Your  
Winter  
Income



Patent No. 842262 and 782700

Dunn No. 1 Concrete Mixer

Don't be idle this winter—there's no need to be. There's too much business to be had—right in your own town—supplying the demand for concrete products. Get posted—get in line for the sure profits.

Write us for information on manufacturing costs, selling prices and profits on Concrete Porches, Cement Block and Brick, Concrete Fence Posts, Concrete Columns, Vases, Chimneys, etc. This data costs you nothing.

**Use Dunn Equipment**

Dunn Machines and Molds boost your profits, keep your investment down, and are sold on 15 days' trial. Mixers from \$67.50, Porch Molds, \$39; Block Machines, \$40—everything else correspondingly low.

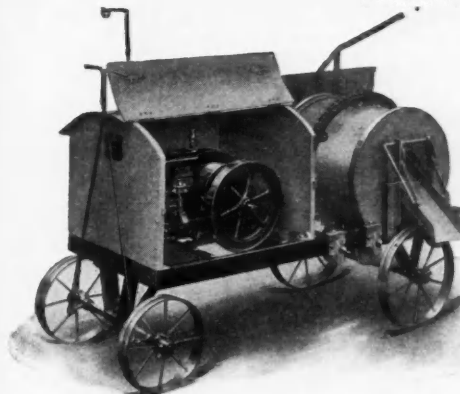
**W. E. Dunn Mfg. Co.**

4132 Fillmore St., Chicago



Write for catalog, stating what branch of the concrete business you are particularly interested in.

**THE Atlas MIXER**



CAPACITY—5-ft. batch, easily fifty cubic yards per day.

Contractors everywhere are enthusiastic in endorsing its wonderful adaptability to any size job and any kind of work.

They tell us that two 5-foot **Low Charging** Atlas Mixers do considerably more work than one 10-foot machine and the cost is no greater.

**Atlas Mixers**

Portable Durable  
Simple Dependable

Sold at a price you can afford to pay

**How the Atlas is built**

Channel iron frame—heavy boiler plate drum—splendid lubricating system—expanding ring clutch—very low charging hopper and, last but not least, an exceptionally sturdy, powerful engine—the kind used on machines that sell at much higher prices.

Every contractor and every dealer will find the Atlas Mixer Book interesting. Just ask for it.

**Atlas Engineering Company**

783 Thirtieth St. MILWAUKEE, WIS.



**The NORTHFIELD Hand Batch Mixer**

(Power attachment if desired)

Has more than double the capacity of any other hand mixer. Mixes more thorough than any revolving drum mixer. The greatest small job mixer ever invented.

**Every contractor needs them**

*Write direct to factory for catalog*

**NORTHFIELD IRON COMPANY**  
402 Water Street NORTHFIELD, MINN., U.S.A.

**Supplies the Demand for a Small Perfect Mixer**



Capacity  
3 to 5 Cubic Feet  
Per Batch

Weight, 800 Lbs.

On Trucks,  
1000 Lbs.

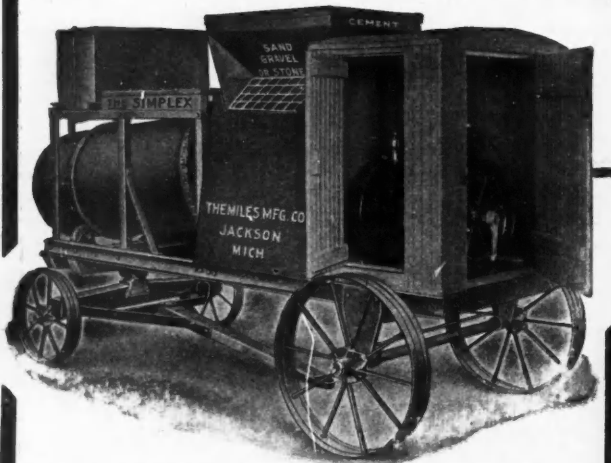
On Trucks  
with  
Engine,  
1400 Lbs.

**The McCracken Portable Batch Mixer**

is designed and built to meet the demand for a strong, simple, durable and practical mixer, that is large enough for all ordinary contract work, yet light enough to be profitable on the small job as well as on the large. Mounted on good steel trucks, EXTRA LARGE DRUM OF THE PROPER SHAPE, equipped with our own high-grade 2-HP. SIOUX engine, enclosed in a good steel housing (not a cheap box), also has friction clutch, so that drum can be started and stopped without stopping the engine. Capacity, thirty to forty yards per day. Cost for power, twenty-five cents per day. The largest, best and most complete mixer on the market for the money.

Write for Further Particulars  
**SIOUX CITY ENGINE & MACHINERY COMPANY** 9th and Division Sts. SIOUX CITY, IOWA

**Buy The SIMPLEX 1914 Model MIXER**



Combining the good features of both batch and continuous mixers in the one machine.

The best feature of the Batch Mixers is the rolling of the materials. The greatest advantage of the Continuous Mixer is the automatic measuring and feeding of the materials.

Only one machine combines these two features—the **SIMPLEX**. It's the happy medium between the two types of mixers, giving the points of advantage claimed by each, and eliminating the faults of both.

*Write for New Complete Catalog.  
Reliable Agents Wanted.*

**The Miles Mfg. Co.**  
300 E. Franklin St. JACKSON, MICH.

**THE WINNER MIXER**

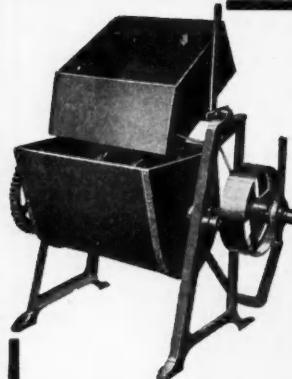


Will make money for you even if you don't have work enough to keep it running all the time. The cost is very small, and one gallon gasoline will run it a day.

Mixes 4 and 5 cubic feet per batch  
Daily capacity. 30 to 40 cubic yards

Ask for our **FREE Catalog**  
**THE CEMENT TILE MACHINERY CO.**  
133 Rath Street Waterloo, Iowa

**Think of It!**



This **HELPER** mixer that will mix mortar and concrete, only **\$35.00**

It will mix two cubic feet at a time. The measuring box enables you to get another batch ready while one batch is being mixed. Requires 1½ h.p. engine to run it. Daily capacity 15 to 20 cubic yards.

Send us your order now, or ask for **FREE** catalog giving more information.

**THE CEMENT TILE MACHINERY CO., 132 Rath St., Waterloo, Iowa**

## “THE STANDARD” LOW-CHARGING

A Chicago contractor once owned no concrete mixer—today he owns six of “The STANDARDS.” The illustration shows one of four of his mixers which are working on the largest contract ever let by the State of Illinois for foundation work, being at the State Infirmary, Dunning, Ill.

Why did he get the contract? He took a chance, bought one mixer and now not “chance” but “increased work” has compelled him to buy the others. He is reaping the benefit of being properly equipped. You can do the same and accomplish the same,

Know more about “The STANDARD” than you do. Are you familiar with the Low-Charging principle of our mixers, the method of charging which means lower labor costs and a successful bid on every contract?

Look at this mixer on the job—see the extremely simple method of charging—up a short incline and the batch is dumped. You do not have to wait after dumping the materials for a loading skip to gently, slowly and possibly raise the load.

Besides this great advantage there is—

The large opening in the drum, permitting constant inspection.

The batch type design which municipal engineers demand.

The semi-automatic discharge, operated at either side of drum by the wheelers, etc., etc.

Do you want to change your habits?

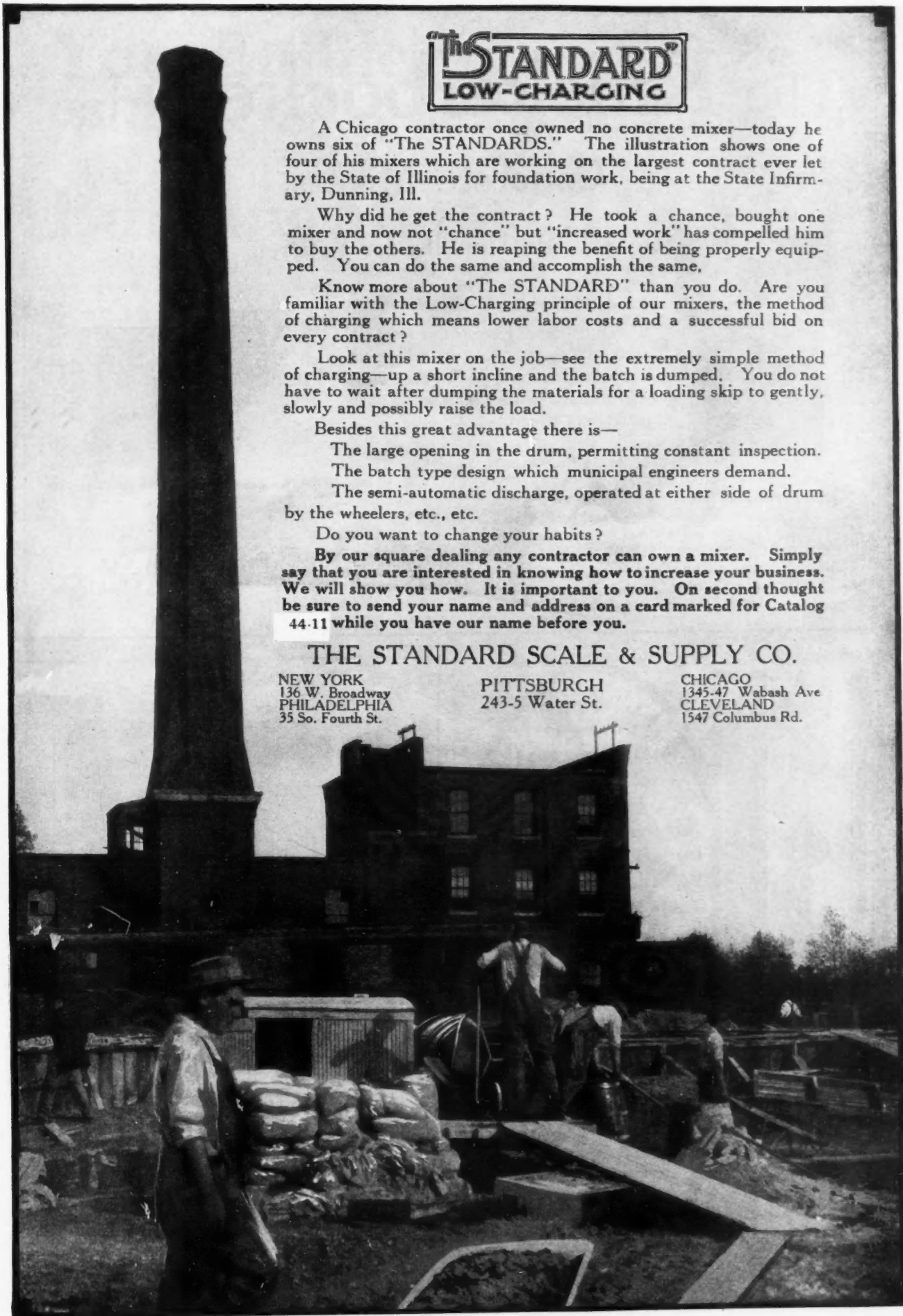
By our square dealing any contractor can own a mixer. Simply say that you are interested in knowing how to increase your business. We will show you how. It is important to you. On second thought be sure to send your name and address on a card marked for Catalog 44-11 while you have our name before you.

### THE STANDARD SCALE & SUPPLY CO.

NEW YORK  
136 W. Broadway  
PHILADELPHIA  
35 So. Fourth St.

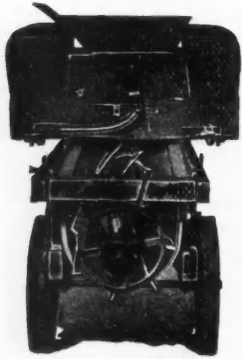
PITTSBURGH  
243-5 Water St.

CHICAGO  
1345-47 Wabash Ave  
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1547 Columbus Rd.



# The Knickerbocker Line

## Concrete Mixers

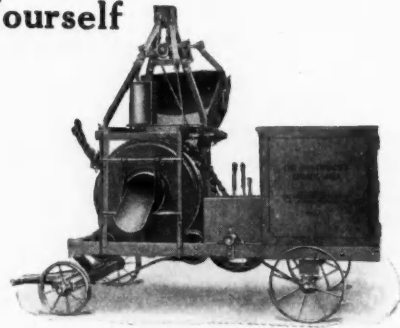


The "Coltrin" with Automatic Measuring Hopper

Do a Little Thinking for Yourself

### Convince Yourself

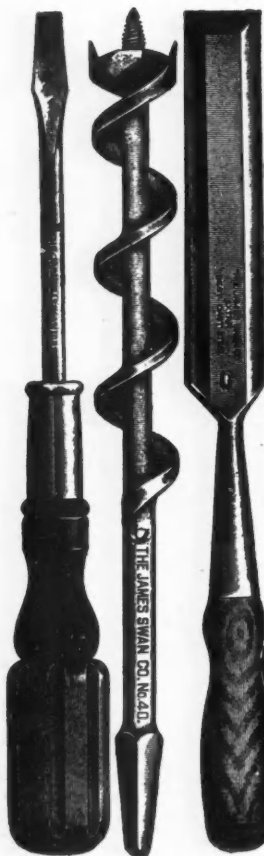
By comparing any competing machine part with part, that we will give you the best value in **material, workmanship** and **efficiency** your money can buy.




The "Knickerbocker" with or Without Loading Skip

Shipped Anywhere on Trial  
Write for Catalog

THE KNICKERBOCKER CO.  
Jackson, Michigan

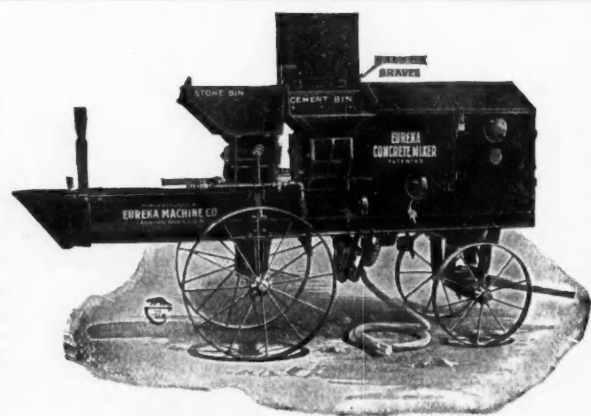


When you want tools of any kind — tools that you can bank on to be just the kind and quality you want them to be, insist on the Swan Trade Mark.



It's a plain guide to all that is best in carpenters' tools and your assurance that you are dealing with an old, reliable firm that makes tools as good and solid as its reputation.

ASK FOR CATALOG  
The JAMES SWAN CO.  
Seymour, Conn.



We have some mighty interesting facts for you about the

## EUREKA SELF MEASURING MIXER

"WHERE GUESS WORK ENDS"

May we show you these things in a clean cut way—one business man to another—no extravagant claims, no glittering generalities, **JUST PROOFS AND FACTS THAT HAVE AN IMPORTANT BEARING ON YOUR WORK.**

### GASOLINE, STEAM OR ELECTRIC POWER

- It costs you less than half as much to buy it!
- It costs you less than a third as much to run it!
- It costs you less than a fifth as much to move it!

The Eureka Mixer, capacity for capacity, with any standard batch mixer, weighs less than half as much.

Powerful, Simple, Easy to Operate. Its Cost is Surprisingly Low. Send for the Facts Now.

EUREKA MACHINE CO., 12 Case Street, Lansing, Michigan

# You Builders Of Homes, Skyscrapers, Factories

Should Certainly Visit the Permanent Exposition and

# Building Material Exhibit

Come to the Building Show. Come and bring your friends. Come as often as you can. Come every time you want to get Building information. If you are interested in any kind of building you can learn more and see more at this show in a short time than in weeks of scattered visiting

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The country's greatest manufacturers have brought their products to one central point for display. You can see the good things for your house, flat, bungalow, factory, warehouse or office

building—all in one place at a great saving of time and expense. The value of this exposition in dollars and cents is important to you as a builder. It *doesn't cost you a cent.*

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Art Metal Fireproof Trim Co.	Metal Trim & Doors.	Milw'k'e Reliance Boiler Wks.	Water Purifier and Stge. Tanks
Anasco Asbestos & Asphalt Product Co.	Waterproofing Material.	Maine & New Hampshire Granite Corporation.	Granite.
Atlas Portland Co.	Cement.	McNulty Bros.	Plastering.
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CHICAGO No. 10 VARIETY SAW

We have the largest line of high grade

## Wood Working Machines

in the United States, and we are in shape to supply an equipment that will meet any requirement or pocketbook. We can figure on the entire outfit, including the machinery, line shafting, belting, motors or gasoline engines, and will also plan your shop.

We also have a separate department carrying a large stock of second-hand machines that are offered at bargain prices. Very often you can select a mixed outfit of new and good second-hand tools and get an excellent combination for comparatively little money.

## Chicago Machinery Exchange

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Carpenters and Builders are using the  
**FAY-EGAN No. 254**  
**"LIGHTNING" Bench Hand Planer**  
to advantage

They use it to plane, joint, rabbet, etc. It is handy, quickly adjustable, takes up small space, consumes little power and operating cost is low.

Circular safety cylinder with thin, air-hardened steel knives, runs true and produces perfectly smooth work.

Any carpenter can afford a No. 254—it pays for itself quickly.

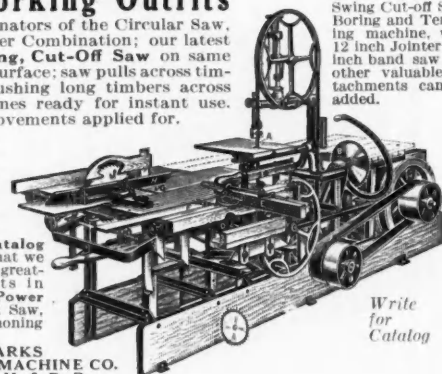
Write for Bulletin H-7  
**J. A. FAY & EGAN CO.**  
545-565 W. Front Street, CINCINNATI, OHIO

### Parks Portable Single and Combination Wood Working Outfits

We are the originators of the Circular Saw, Band Saw, Jointer Combination; our latest innovation, **Swing, Cut-Off Saw** on same base; long table surface; saw pulls across timber instead of pushing long timbers across saw. All machines ready for instant use. Patents on improvements applied for.

Machines are made in large quantities which enables us to sell at lowest prices and make immediate shipment. Ask for catalog and you will find that we have also let in the greatest improvements in **Foot and Hand Power Circular Saw, Band Saw, Mortising and Tenoning Machines.**

THE PARKS  
BALL BEARING MACHINE CO.  
Fugus St. & C. H. & D. Ry.  
Cincinnati, Ohio, :: U. S. A.



Circular Rip and Cross-Cut Saw, Swing Cut-off Saw, Boring and Tenoning machine, with 12 inch Jointer; 22 inch band saw and other valuable attachments can be added.

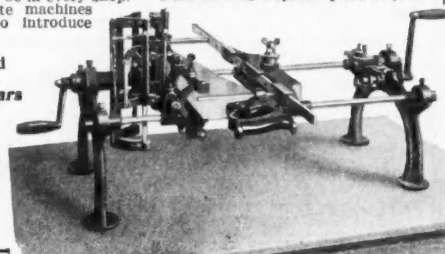
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## HOLMES SAW FILING & SETTING MACHINE (Patented 1914)

Our Machines are guaranteed to accurately file and set, all fine saws such as Hand Circular, Band, Gig Saws and Butcher Saws, either for Cross-Cutting or Rippling. This Handy, time-saving device is made especially for Carpenters and Builders, and should be in every shop. I am making a special price of \$50.00 for the two complete machines and attachments, to introduce the same.

Agents Wanted  
Write for Circulars and Details

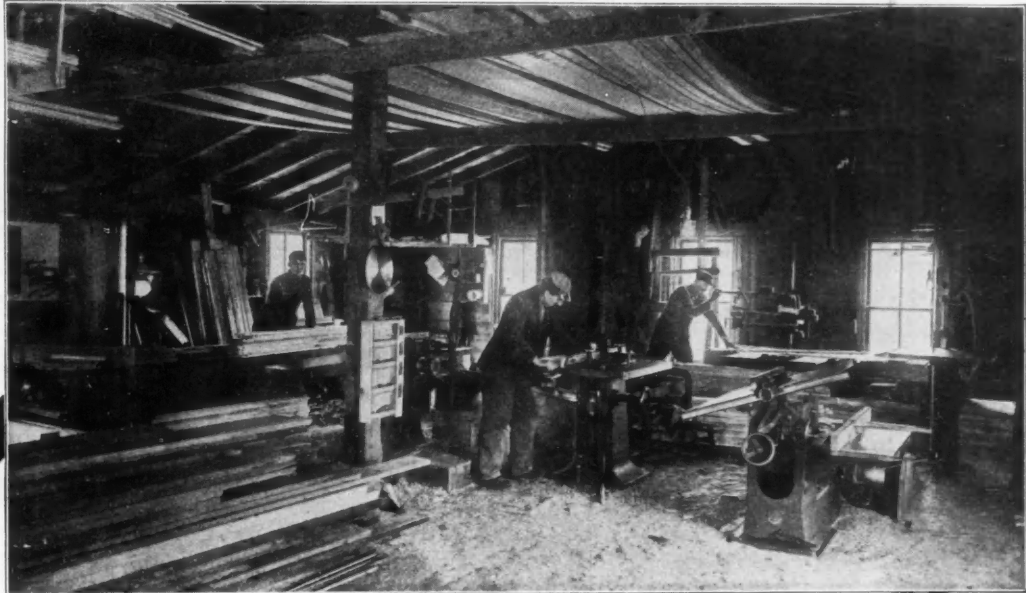
**W. J. HOLMES**  
679 Michigan St.  
BUFFALO N. Y.





# Crescent

This Photograph shows a Crescent Jointer, a Crescent Combination Saw Table and a Crescent Band-Saw in a progressive Builder's Shop.



## Machines in the Shop

Here's a Builder that has installed four Crescent Woodworkers. He makes all his own millwork such as doors, door and window frames, sash, mouldings, stair-rails, spindles, newel posts and all kinds of interior trim. He makes an extra profit that the millwork man usually gets. He also gets big jobs because he can deliver the goods himself. Doesn't have to depend on somebody else. He's got the equipment. This is a fine example of an up-to-date Builders Shop, all power-driven machines and ALL CRESCENTS.

## THE CRESCENT LINE

Includes six models of Band Saws, five models of Saw Tables, two Shapers, six Jointers, four models of Planers, two Surfacers, Disk, Grinders, Post Borers, Universal Borers and our Famous Crescent Line of Universal Woodworkers. These machines can be furnished for either gasoline or individual motor drive.

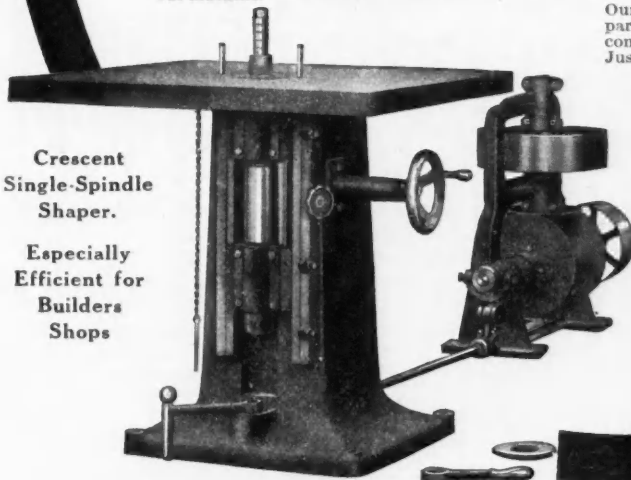
### The Crescent Universal Woodworker

This machine is a combination of five woodworking machines—a Band Saw, a Jointer, a Shaper, a Saw Table and a Borer. A complete planing mill in one compact machine. All five units can be operated independently of each other. Four men can work on a Crescent Universal without inconvenience. Investigate this wonderful machine.

Our large Catalogue fully illustrates all machines, their parts and gives detailed descriptions. It shows their construction and merits. Your FREE copy is waiting. Just send us your name and address.

Crescent  
Single-Spindle  
Shaper.

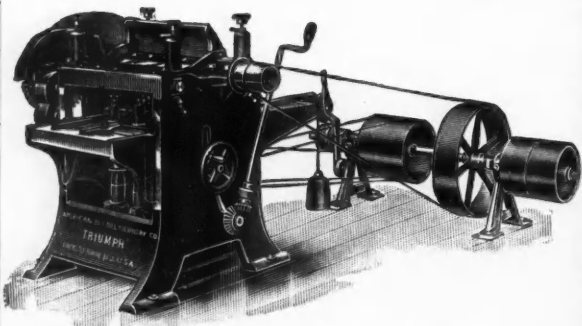
Especially  
Efficient for  
Builders  
Shops



## The Crescent Machine Co.

224 Main St.

Leetonia,  
Ohio



## How Often is Your Order Held Up at the Mill?

You know from bitter experience what it is to have a hurry job delayed by failure of the planing mill to get out your order on time.

When the building season gets in full swing, you're likely to be up against this many a time—and then you have to make explanations and excuses to your customer.

What you want is a

## “TRIUMPH” PLANER, MATCHER AND MOULDER

Right in your own shop—under your own control—working for you alone—making money for you alone.

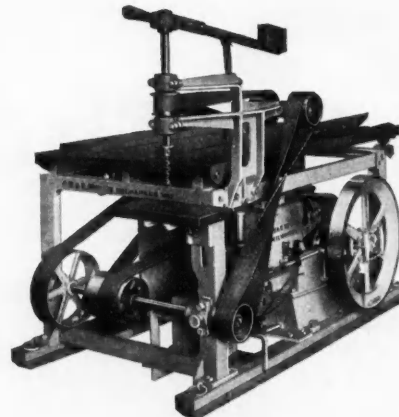
Then you're independent. You can make your own flooring, ceiling, siding, wainscoting, casing, trim and other machine work—just as good as you can get at the mill. And the profits stay in your pockets.

Send for the “Triumph” Pamphlet

## American Saw Mill Machinery Co.

80 Main Street  
HACKETTSTOWN  
NEW JERSEY

1360 Hudson Terminal  
NEW YORK CITY  
NEW YORK

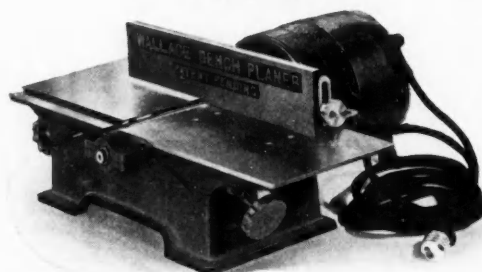


## C. H. & E. Portable SAW RIGS

Hoists, Elevators,  
Pumps, Mixers,  
Engines

C. H. & E. Manufacturing Co., Inc.  
322 Mineral St. Milwaukee, Wis.

## A Portable Bench Planer



## WALLACE BENCH PLANER

Either Belt or Motor Driven

Easily portable, can be carried to the job.  
Stands on bench without fastening.  
Table adjustable to any depth of cut.  
Fence adjustable to any angle.  
Runs from an electric light socket.  
Capacity, any length, and up to 4 inches wide.  
Length of tables over all, 18 inches.  
Weight of machine with motor, 50 pounds.

Here is a machine that will save its cost over and over in the course of a season. It sells at **two-thirds** the price of any other planer. Sturdy and durable as the largest machines, has all their adjustments and will do far more accurate work.

Our descriptive folders give full information.

J. D. WALLACE

525 W. Van Buren Street - - - CHICAGO



# 5 COMPLETE MACHINES, Independent in 1 operation—economically combined in 1 UNIVERSAL WOODWORKER

with nearly a score of extra attachments— including

## PRACTICAL POWER-FEED PONY PLANER

The Famous Universal offers a number of advantages and features not found in other woodworkers. The removable head on the jointer is an important one, as it allows the use of special sticker heads and sand drums, etc., and the power feed planing attachment is undoubtedly the most important as it enables the operator to convert his hand jointer into a practical pony planer. The variety of attachments of this machine make it possible to furnish a combination that comprises just what is needed.

1

Do you note the strong construction of the band saw? This frame is one mighty casting—firmly secured to the main frame. See that heavy column directly under the center? It rests squarely on the floor. The design is exceedingly compact—but also very strong. Table tilts to 45 degrees. Lock it where you want it.

2

### JOINTER

This Jointer has **removable head**. A standard "Famous" attachment which can be provided in either 12" or 16" size. Remember, this device is ready to use—even when the other four parts are busily engaged. Be sure that you get a jointer with a removable head—this is an important feature.

3

### SAW TABLE

The 28x40 saw table will take rip or cut-off saws up to 16" in diameter. Dado heads and different groover heads may be used. This will serve the purpose of any regular variety saw. Driven by clutch pulley below. Controlled by convenient lever. A thoroughly reliable attachment.

4

### SHAPER

The Single Spindle Reversible shaper is ready for immediate use. No waiting to change. Independent in operation. The iron table—being between the two—is in direct line with Saw and Jointer Tables—an extensive surface for large work! Adjusted and operated quickly and conveniently.

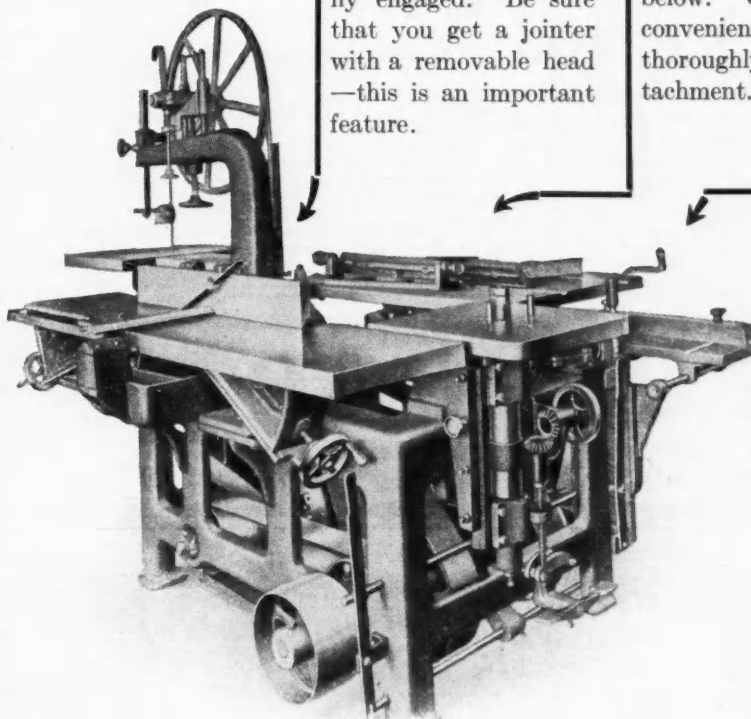
In the average shop the five attachments—which form the standard machine—have been found most desirable. Nearly a score of special attachments, however, are built for the Special No. 31—and if you will ask for list of attachments—we will quote on any arrangement that suits your needs. Thus, at the

cost of a STANDARD machine—or but little extra—you can have a SPECIAL machine assembled for your work.

5

A good Borer is essential in the well equipped shop. This is one of the finest of "Famous" types—it's a part of the regular machine.

Ask for the catalog No. 12, which gives interesting information on machinery and special details on the "Famous" line.



**Sidney Tool Company**  
SIDNEY, OHIO



4" to 5" cut by 1/4 inches which size do you want?

## Special Offer

Good for November and December Only

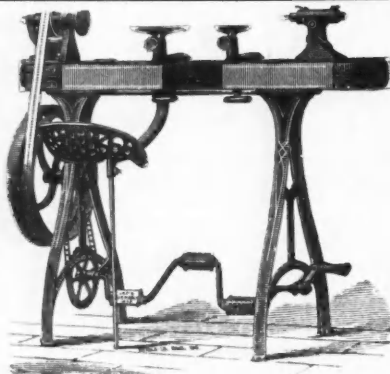
Have you ever used a WHITE ADZE? To those who have not, we will send parcels post paid one of our adzes, with handle, for \$2.00. This means a saving of at least 50c to 75c. This ad must be sent with your order, and post office order for \$2.

Our adze are the high grade line and will wear twice as long as the cheap kind, and we want every carpenter to try them—then tell your dealer how good they are and buy thereafter from him as we will only ship one adze to one party.

*We Guarantee Absolute Satisfaction.*

Established 1837.  
77 Years' Old.

**THE L. & I. J. WHITE CO., 10 Columbia St., BUFFALO, N. Y.**



### COMPLETE OUTFIT

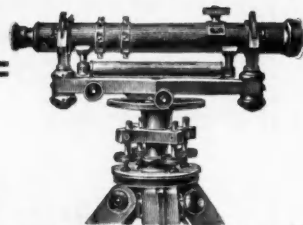
Hand and Foot-Power MACHINERY

Our No. 3 Wood Turning Lathe can be speeded from 1,000 to 2,000 revolutions a minute with perfect ease. Stopped or reversed at will of operator.

Write for Particulars

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**Architects  
Builders  
Contractors**

insure against mistakes in leveling by using our Architects' and Builders' Level. We make a specialty of this instrument. It will give positive, accurate service. Saves its cost in a short time.

We manufacture a complete line of surveying instruments in various sizes and at a wide range of prices.

Our circular No. 27 will explain our instruments to you in detail. It will pay you to get it before deciding upon any surveying instruments.

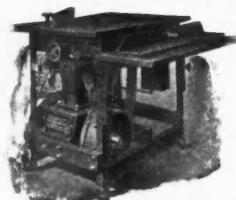
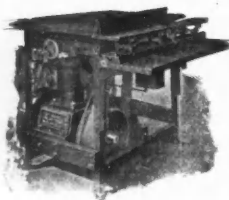
**KOLESCH & CO.**  
Surveying Instrument Makers. Established 1885.  
138 Fulton St. NEW YORK

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**Roofing Slate  
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Large Facilities, Prompt Deliveries  
**EAST BANGOR CONSOLIDATED SLATE CO.**

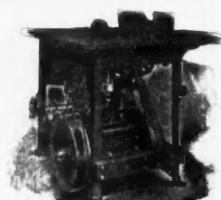
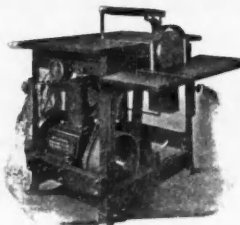
**East Bangor, Pa.**

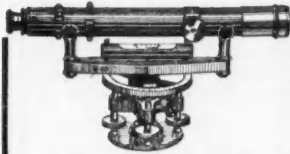


**Standard Portable  
Combination  
Woodworker**

9 Machines in 1  
6 H. P. ENGINE

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**Builders' \$35<sup>00</sup> Level**

A simple, accurate, well-made instrument, with 12-inch telescope, magnifying 20 diameters—very sensitive level with graduated vial—improved eye-piece—horizontal circle—complete in mahogany finished case with plumb bob adjusting pins, metal tri vet and hardwood tripod—\$35

Write for booklet, "How to Use Levels."

**THE L. BECKMANN CO.** **BECKMANN INSTRUMENTS**  
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**WHITE'S IMPROVED LEVEL**

**SHIPPED ON APPROVAL**—Our No. 2011 improved level, illustrated herewith, is



especially designed for work where a general purpose level is required. Telescope is 12 inches long with magnifying power 25 diameters, and is capable of detecting an error of 1-16 inch in 300 feet. We ship this level out on approval, express prepaid, in order that you may try it out on your own work before deciding to keep it. Ask for particulars and catalogue illustrating Builders' levels and transits at a wide range of price. Ask today!

**DAVID WHITE COMPANY**  
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**In Building Construction**

the necessary accuracy of lines, levels, etc., demands the use of a reliable transit or level. Our Model No. 35



**"STERLING" Builders' Transit**

exactly fills this requirement and at a price within your reach.

Write today for Circular No. 35 and details of **FREE TRIAL OFFER.**

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Makers of

"Sterling" Transits and Levels

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**Two Instruments for the Price of One**

When in need of an Architect's Level or a Builder's Transit do not fail to investigate our

**Transit-Level**

It is convertible and will serve as a first class Builder's Transit as well as an Architect's Level. If you should have use for an instrument at all you should buy this accurate, durable and most serviceable instrument which is without question the leader as to general usefulness among all instruments on the market. It has no equal for Efficiency and Economy.

To keep abreast of up-to-date methods send for Catalogs and Circulars and be informed as to the latest and best.

**GEIER & BLUHM**

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(Pat. Pending)

**Rent This Level 10 Months Then It's Yours**

**Builders and Contractors**

This is not an old style Level. It is the newest model convertible level. There is not a single Builder or Contractor who has not almost daily need of this instrument. For laying out buildings, locating foundation piers, leveling up foundations, walls and floors, aligning shafting, walls, piers, etc., for getting angles, locating levels anywhere, ditching, laying streets and walks, running straight lines, and a hundred other uses.

**Intruction Book Free**

Complete illustrated booklet, telling how a builder or contractor can use the convertible level, sent free on request.



**WARNING**

The Level we offer is the new Aloc Convertible Level. Don't confuse the Convertible Level with the ordinary style Architect's Level. The only work that can be satisfactorily done with the ordinary Architect's Level, is the determining of elevations. But the Convertible Level, besides its use as a level, is a modified transit and broadens the use of the level 100%. You can't afford to buy any but the Aloc Convertible Level.

**HALF CENTURY REPUTATION**

We have been manufacturers of transits and levels since 1863, and our instruments are the standard of the world.

**FREE TRIAL**

We allow you to convince yourself by a trial of the instrument before you obligate yourself.

**THE RENT BUYS IT**

No large cash outlay needed. Just pay the rent for a few months and the instrument is your absolute property.

**Send Coupon---No Obligation**

Send the attached coupon today and we'll send illustrated booklet and complete details of how you can own the Aloc Convertible Level for 10 months' rent.

**A. S. Aloe Co., 621 Olive St., St. Louis, Mo.**

**COUPON**

A. S. Aloe Co., 621 Olive St., St. Louis, Mo.

Please send free instruction book on the use of the Convertible Level and complete details of your rental plan. This request in no way obligates me.

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Occupation .....

Street .....

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

Am.C.&B.-Nov.'14

# The Easiest Way to Cut Through a Floor

## D 19 FLOORING SAW



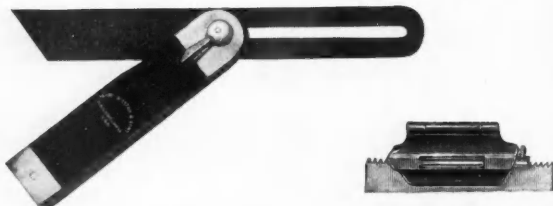
**T**HE old method of boring holes and chiseling when it was necessary to cut out sections in floors, partitions or ceilings was time-consuming and troublesome.

This work can now be done quicker and easier by the use of our new D 19 Flooring Saw, especially designed for the purpose. Not only is the work done rapidly and with less trouble, but sections cut out with it can be replaced in the original position if desired.

This saw has an adjustable cherry handle, carved and polished, which permits blade to be set in various positions. The blade itself is reversible and interchangeable. It is held firmly in place by patent bolt and ratchet.

Special attention is called to the reversible feature of the blade. In this way either the straight or curved edge of the blade, both of which are toothed, can be used to the best advantage.

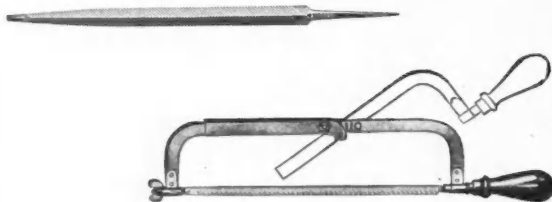
Sizes 16, 18 and 20 inches.



Hand Saw Jointer

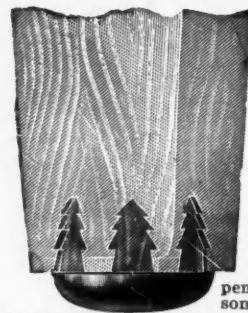


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QUALITY GUARANTEED



**HENRY DISSTON & SONS**  
Incorporated

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PHILADELPHIA, U. S. A.



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What can I do when not working a few weeks or a few months.

### THE ANSWER—

Sell Evergrip Gliding Casters and **MAKE MORE MONEY** than when working at your trade—**MUCH MORE!**

J. R. Stretesky, a carpenter of Bonne Terre, Mo., made in 24 working hours \$51.00. Can you beat it? Hundreds of other carpenters doing as well—some better.

Send for a **FREE Trial Set** and Particulars showing no capital required,  
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## BETTER ROOFS and BIGGER PROFITS



Send for free samples of  
**SIMPLEX ROOFING NAILS**  
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## Ideal Fastenings

When attaching joists, beams, scantlings, fixtures or apparatus of any kind to hard substances such as brick, stone or concrete, use

### SEBCO

#### Expansion Bolts or Screw Anchors

They insure a quick, neat and absolutely dependable job.

The **Bolts** are for heavy work.

The **Anchors**, for smaller work, are non-rusting, which especially adapts them for work in marble and tile.

Send for Samples and Catalog

Sold by Dealers Everywhere

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# GREYHOUND SUPERIOR SAWS



## BISHOP'S BEST

We offer to Carpenters and Builders the final result of years of experimenting and experience in producing good saws. This superior saw is known as our "GREYHOUND". We have satisfied ourselves that a better saw cannot be made. The GREYHOUND is a saw that will hold its sharpness and set longer than any other good saw. This saw should be in the hands of every mechanic who appreciates a good tool. We are proud of this saw and its easy running quality. Its symmetrical lines, toughness and fine adjustment typify its name "GREYHOUND".

### 30 DAYS TRIAL---MONEY BACK IF NOT SATISFIED

We are so confident that this saw will meet with your approval that we offer it on trial for 30 days. If it does not come up to your expectations or fails to satisfy you in any way we will refund your money.

Made in Both Straight and Skew Back also Ship Carpenters Pattern

Length	18	20	22	24	26	28	30	inches
Each	\$2.35	\$2.50	\$2.65	\$2.80	\$3.00	\$3.30	\$3.65	net

PACKED ONE IN A BOX



GEO. H. BISHOP AND COMPANY

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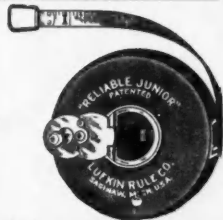
Lawrenceburg, Ind.

## Articles Every Carpenter Needs

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Rules

Spring Joint  
Rules

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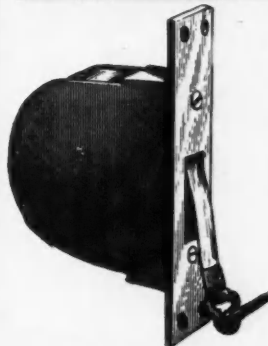
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When in need of these  
say to the hardwareman

THE LUFKIN RULE CO.  
New York Saginaw, Mich.

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Does away with weights  
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more durable.

Makes sashes work per-  
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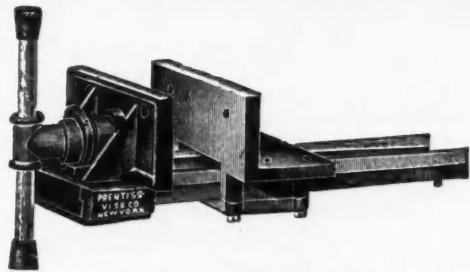
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May be applied to old  
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sashes or frames.

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For Cabinet Makers and Wood Workers. Simplest—Strongest  
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Will cut an opening in a door for a mortise lock  
IMPROVED AND UP-TO-DATE  
cuts true, in any kind of wood for any size lock  
from 1/2" to 1 1/2" thick. Easy to operate; durable  
in construction. Builders  
use it everywhere.



Sent subject to trial.

A. W. Miller Mfg. Co.  
Riverside, Calif. 1-1 Cincinnati, Ohio  
Our Butt Mortiser and Rule Gauge for 75c., Postpaid

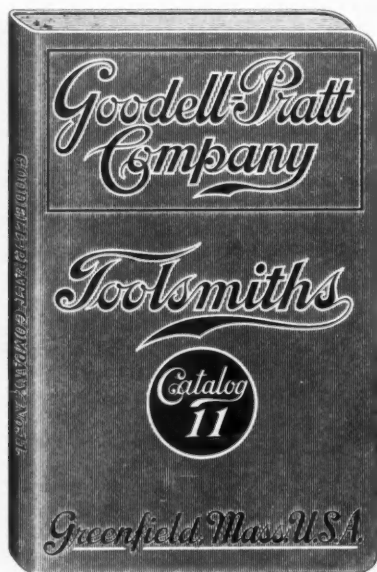
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Goodell-Pratt tools cost more than some other tools.

There is a reason--  
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Goodell-Pratt tools compared with other tools will convince you there is no comparison.

Goodell-Pratt's Catalog will teach you this moral: It pays to study every page.



**FREE**

FOR THE ASKING

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*Toolsmiths*

Greenfield, Mass., U. S. A.

**DIAMOND EDGE TOOLS**  
for Originality, Quality and Service



**SOMETHING NEW**

Just on the Market. The "DIAMOND EDGE" Improved Brace will hold Round Shank and Taper Drills as well as Auger Bits and Expansive Bits.

The working parts are case hardened. The Chuck is long, which allows a good grip. Full nickel plated and ball bearing head. Knurled Chuck Sleeve. Ratchet Button at inner end of Chuck. Operates either right or left.

This is another improvement added to the celebrated line of "DIAMOND EDGE" Tools.

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"DIAMOND EDGE IS A QUALITY PLEDGE"



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Sample of

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We want to acquaint all Carpenters and Builders with this new invention, so we will send without obligation a free sample to those sending us their name and address. Make your own demonstration; we know you will be satisfied with the result. We have solved the Screw Hole Problem. Send today.

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Chisels, Gauges, Drawing Knives, are covered by a TWO YEAR Insurance Bond


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**EXCELLENT CHRISTMAS PRESENT** for mechanics, architects, etc.—Interlocking Master Slide Rule  
**MEASURES BOTH INSIDE AND OUTSIDE ACCURATELY**  
 A Carpenter's practical rule that will take inside and outside measurements correctly. Two Rules in One. Made of select boxwood trimmed with brass plated steel. Strong, Rigid and convenient. Made in all lengths—two to eight feet. Low priced. Send 15 cents a lineal foot (in U. S. A.) if your dealer cannot supply you, and get one by mail.



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3 sizes—2-32"—3-32"—4-32" points—Price 10 cents each.

is the price of "SYRACUSE" Superior Nail Sets. Each point carefully cupped and tested on steel. Knurling is sharp and clear cut to give firm grip. Give maximum service. If your hardware dealer cannot supply you we will send any number at 10 cents each. State size wanted.

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**Hammer Insurance**



**SPECIAL**

Our "VANDOR VANADIUM" Nail Hammers in four sizes, No. 21 1/4, 16 oz. Standard; No. 22, 13 oz. General Purpose; No. 22 1/4, 10 oz. Finishing; No. 721 1/4, 16 oz. Rippling Style. We will send either size Parcel Post for your Dealer's name and \$1. This Hammer we insure for life. Made for hard work and lots of it. You can return it any time if it proves defective and get a new one.

This Hammer is warranted to draw anything from a headless brad to a spike.

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Fine Beveled Edge Shank and Socket

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GA. FOX "UNIVERSAL TRIMMER"

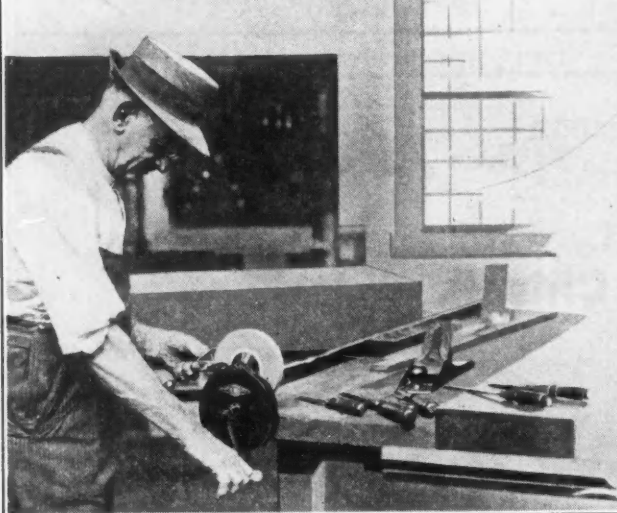
**You Will Never Know What Perfect Work is Until You Use a Fox "Universal"**

The fitting of interior finish is greatly improved by using a Fox Universal.

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**FOX Machine Co.**  
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**THE RIGHT GRINDER WITH  
THE RIGHT WHEEL  
CARBORUNDUM  
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**A**CCURATELY cut gears make it smooth and easy running—ground-to-a-fit castings make it oil and dust-proof—the malleable handle and clamp give it strength—superior workmanship assures careful assembling—and every machine is equipped with a

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**Use the ABC Protractor Square**  
The only sure way of getting correct lengths, bevels and cuts of all rafters and other framing timbers.  
The Only Correct Tool for Stair Work  
Gives the length, bevel and pitch at the same time. You cannot make mistakes with the ABC Protractor Square. It pays for itself on the first job by preventing errors and speeding up work.  
Simple as the steel square but handier to use and quicker in giving correct readings and measurements. Fine for the man who cannot do complicated figuring. Folds up so you can carry it in the tool kit. Complete instructions with each Protractor Square.  
Special sample price this month.....each \$1.50  
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AGENTS WANTED  
Write for sample at once

The Protractor Square open and ready for use

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Counter Railings  
Elevator Enclosures  
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Brass and Bronze Work

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**RELIABLE FOLDING  
Scaffold Bracket**



Strong and safe; requires only a few minutes to attach. No holes to bore. Four 10-d or 16-d nails fasten them securely. Positively rigid; no vibration.

The Low Price of these Brackets can be saved in time and material on the first two jobs.

**ELITE MFG. COMPANY  
100 Ohio Street ASHLAND, O.**

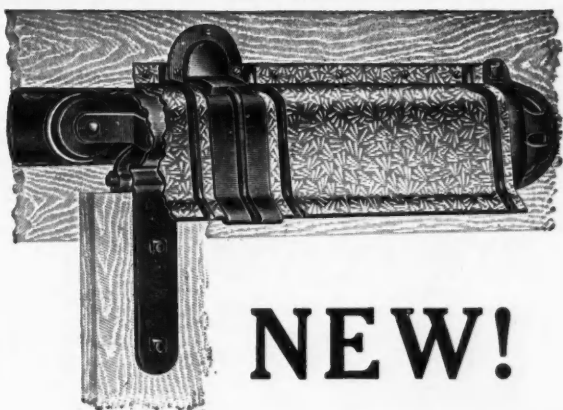
**GOODELL MITRE BOX**  
Made Of Steel—Cannot Break

For years this Box has been recognized as being first in quality and improvements, and the new **Steel Bottom Plates with Angular Serratures** to prevent the work from slipping add still more to its convenience and attractiveness.



Write for new **Circular C** describing this and many other features

**Goodell  
Mfg. Co.  
Greenfield, Mass.**



**NEW!**

You know the old, reliable Cannon Ball Barn Door Hanger—competitors have been trying to equal it for years and haven't hit the mark yet.

Well—if such a thing is possible—we've improved the Cannon Ball—made an addition which gives the user protection plus.

A cover for Cannon Ball track—as illustrated above, is now to be had at nominal cost with new track. It gives the finishing touch of protection—makes the outfit positively weatherproof in every respect—keeps rain and weather away from the hanger and top of the door itself—and adds but little to the cost.

**New Track For Cannon Ball Barn Door Hangers  
Now Furnished With Cover if Desired**

Write for detailed information—prices, etc. In addition to the largest line of door hangers, we make the best barn equipment, too. Ask us.

**Hunt, Helm, Ferris & Company**

304 Hunt St. HARVARD, ILL.

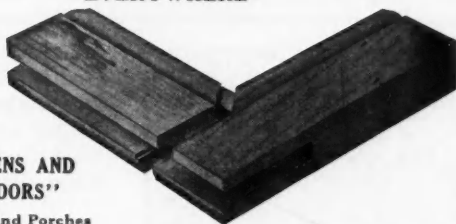
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EVERYWHERE**

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**MADE TO  
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**"FLY SCREENS AND  
SCREEN DOORS"**



For Dwellings and Porches

*Nice Proposition and Exclusive Territory — WRITE AT ONCE*

We use the best grade of wire, black enamel, galvanized, pearl, peerless and copper bronze, fastened by the improved **Standard Shoulder Strip Method**, which makes the wire drum tight and firm, cannot sag or pull away.

**STANDARD SCREEN CO., 1848-58 Hastings St., Chicago**



No. 5155

**37c  
For This Lock Set**

**No. 5155 Antique  
Copper Finish**

**FREE—No. 5.** Builders  
Hardware Catalog and net  
price list to Contractors and  
Material Men.

**We do not sell to contractors or  
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Tools**



No. 239 Dado Plane

**A New Stanley Tool**

This Plane has an extra narrow cutter, only  $\frac{1}{8}$  of an inch wide, making it an ideal tool for blind wire grooving as well as for many other purposes.

It is fitted with a double spur which prevents splintering when working across the grain and insures a smooth, clear cut.

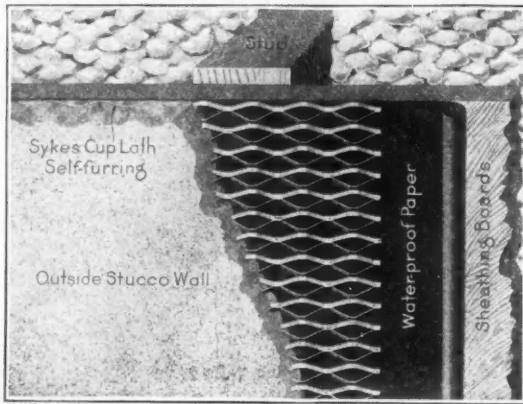
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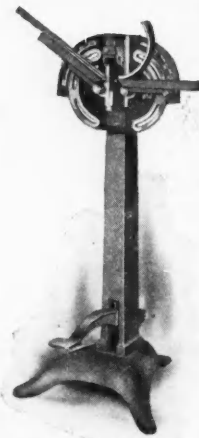
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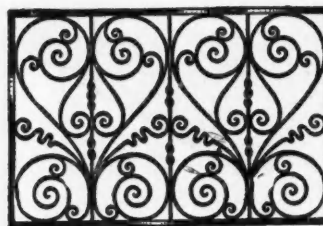
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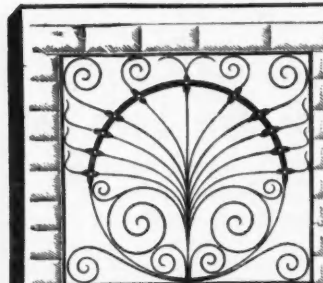
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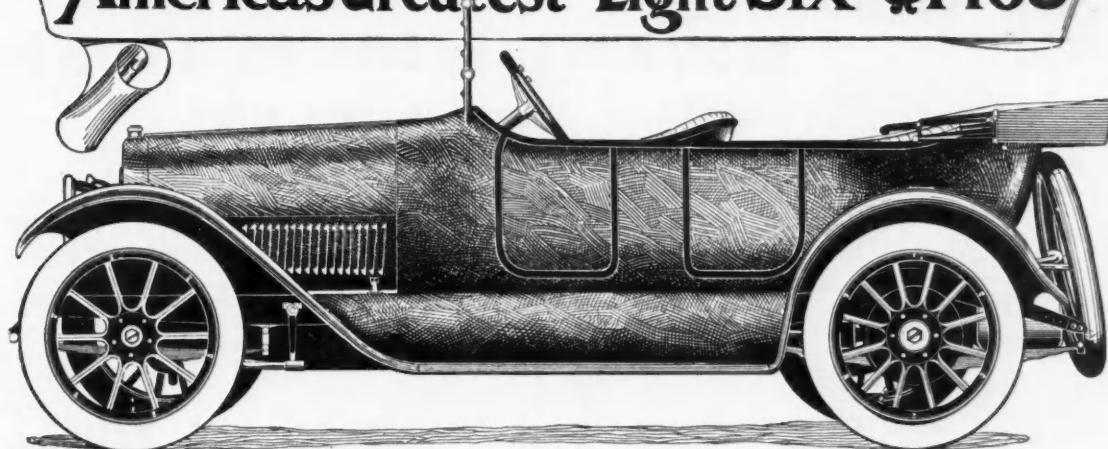
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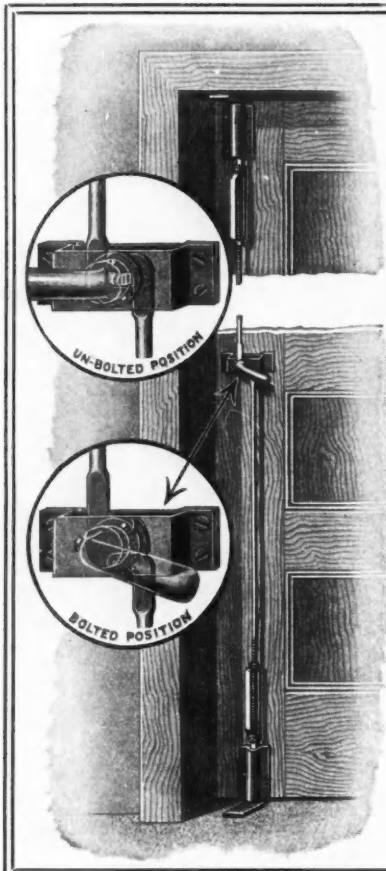
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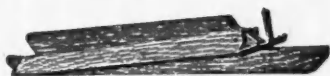
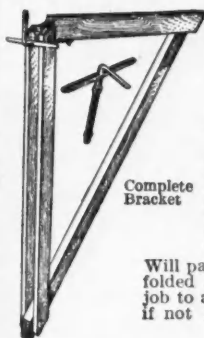
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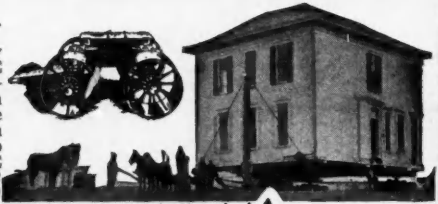
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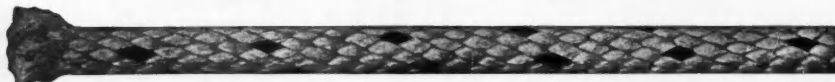
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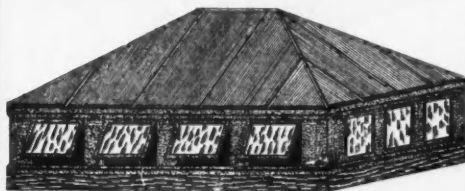
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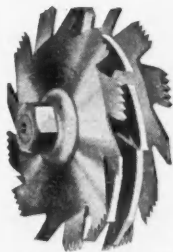


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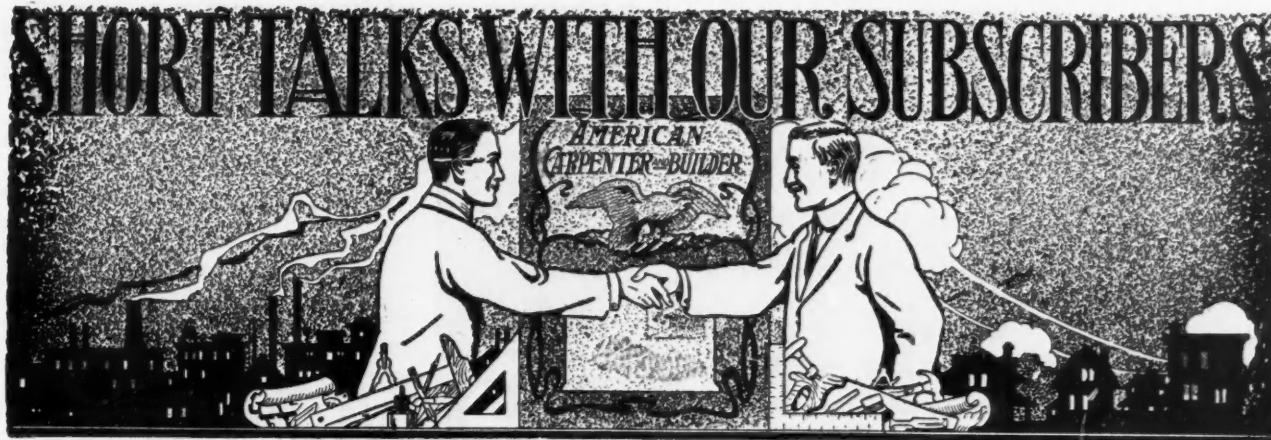
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42-255



**"I Invest My Spare Time"**

OF all the suggestions received in our big Winter Work competition, appearing in another part of this issue, we believe the best, all things considered, pertains to investing one's spare time. When we invest anything we expect to get back again at some future time *more* than we put in now.

You invest money on good first mortgage security and get it back at the end of the period plus 6 per cent interest.

Now, about this investing time by carpenters and builders; it is evident from these winter work letters from successful men—and we have heard the same story before from other successful builders—that a good deal more than 6 per cent is returned when a man invests his spare time in the study of his business.

In no other line of work are the upward steps so plain to view and so easily climbed by those equipped with knowledge to make the ascent. In no other line of work does study so promptly start one on the upward road.

**Study the American Carpenter and Builder**

The carpenter, or any other building mechanic, who will carefully read and study his monthly building magazines and the practical home study books on

architecture and building that are so easily obtainable, will see immediate results.

Hundreds of builders have written us how they have invested their spare time by studying architectural drawing, estimating, use of the steel square, concrete construction, plumbing, heating, etc. They have seen their earnings and their profits increase at once.

Invest your spare time now. Spend these long winter evenings in study. You will find the AMERICAN CARPENTER AND BUILDER full of practical building plans that you can use in your business. You will find dozens of instructive articles that deserve careful study. Perhaps you have already read them through once. Go back now and go over them again. Get out your pencil and paper, your T-square, triangle and scale, and work them out carefully.

**Home Study Books of Tested Worth**

ALSO do not overlook or neglect your home study reference books on building.

"Radford's Estimating and Contracting" will repay you for all the study you can give it.

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"Radford's Cyclopedia of Construction," our great twelve volume set of books covering completely the modern building and architectural field, is well known to thousands of practical men who willingly testify to its great value.

To those who already have these books we urge a careful study and review of them at this time. Invest your time in studying your business. Make full use of these priceless helps you have.

To the others who have not yet secured these books, we sincerely urge you to send for them at once. The cost is only a trifle when compared with the money-making value of these books to carpenters and builders. We have put the price away down so that every one of our readers can afford the assistance these books will give.

**Here's to the man who can say next Spring: "Yes, I invested my spare time throughout the winter in studying my business." He is the builder who will have most to show for his winter's work!**

Yours for advancement,  
Editor AMERICAN CARPENTER AND BUILDER, Chicago.

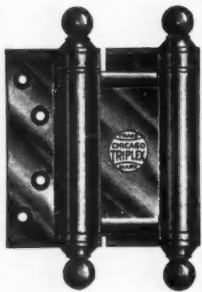
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# CHICAGO SPRING BUTTS

## A SUGGESTION

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



### Chicago "Triplex" Spring Butts

offer this advantage to you. The appearance, durability and finish of this article are unsurpassed, and in consideration of prices that are conservative in respect to value, the up-to-date builder cannot afford to risk his reputation with goods that are unsatisfactory.

Send for Catalogue C 29. It illustrates and describes the most complete line of Spring Hinges manufactured.

**Chicago Spring Butt Company,**

CHICAGO

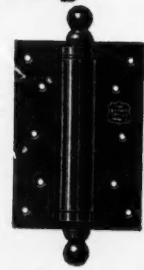


NEW YORK

## Yes! the World does Move! Facts are Stubborn Things



**Don't Buy  
SPRING HINGES  
OF  
OBSOLETE  
CONSTRUCTION  
ONLY**



# BOMMER

## Double Acting Spring Butt Hinges

have the weight-supporting bearings correctly located to liberate the action of the springs, reducing breakage and increasing spring power, preventing unequal wear of the barrels, and giving practically unlimited durability. Bommer double-acting spring hinges open alike at both casings and both doors when both doors are opened.

The carpenter can avoid guesswork and save time when hanging double-acting doors in pairs, as he can scribe and fit both doors of a pair from the same side of the opening.

**YOUR HARDWARE MERCHANT CAN SUPPLY THEM  
Bommer Bros., Manufacturers Brooklyn, N. Y.**



## Cabot's Sheathing and Resdening Quilt

The Cold-proof, Heat-proof, Sound-proof and Fire-retarding Lining "Quilt" is a matting filled with dead air spaces, and one layer is as warm as twenty-eight layers of common building paper. A house lined with it will always be warm and save coal. Floors and partitions lined with it will stop the passage of sound. Roofs lined with it will keep cool

in summer and prevent heat from escaping in winter. It will save coal enough to pay for itself every two winters as long as the house stands.

Send for a sample and catalog.

**SAMUEL CABOT, Inc., Manufacturing Chemists, Boston  
24 W. Kinzie St., Chicago - 1133 Broadway, N. Y.**

Cabot's Greenote Shingle Stains; Stucco and Brick Stains, Conserve Wood Preservative.

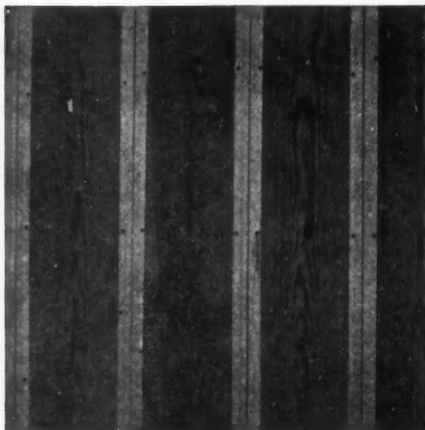
## STANDARD

for 30 years  
**MORRILL  
Saw Set**



*The Morrill Special Saw Set* accurately sets any hand saw; takes out the wrong and puts in the right set at one operation. Send for Free Booklet: "Saw Points."

**CHAS. MORRILL, 98 Lafayette Street  
NEW YORK**



## METALLIC BATTEN STRIPS

PRACTICAL—EVERLASTING—ECONOMICAL

These Batten Strips of Galvanized Metal will never warp, split, or draw away from the boards. Offer no obstruction to sliding doors. Allow for expansion and contraction of the siding. Made in 8-foot and 10-foot length with interlocking joint. Easily cut; no waste. Nailed directly to siding with small nails.



End view showing joint closed. A perfect fitting Batten at all times, in all weathers. Beautifies any building.



End view showing joint open. Provides for expansion or contraction of the siding so nails will not work loose.

Metallic Batten Strips make strong, neat joints. They make the building wind-proof, weather-proof and rat-proof. Also valuable for lining grain bins or wagon boxes.

Write for Free Sample and see for Yourself

**METALLIC BATTEN COMPANY**

**Owensville, Indiana**

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*The*  
**World's Greatest  
Building Paper**

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*The*  
**World's Greatest  
Building Paper**

**American Carpenter and Builder**

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

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**PROTECTION FOR OUR READERS**

The publishers of the American Carpenter and Builder will not knowingly publish any advertisement of a misleading character nor accept advertising from any individual, firm or company whose business methods are open to question.

We often receive inquiries from readers who desire information about concerns that formerly used the advertising pages of the American Carpenter and Builder, but are no longer doing so. They want to know if these former advertisers are still in business, if they can send them orders with the assurance that they will be filled, and a variety of other questions.

The American Carpenter and Builder will use every legitimate means to safeguard the interests of its readers and to protect them from fraudulent or unreliable concerns. Where the slightest doubt exists our readers should write the publishers for information. It may save them money, time and worry.

In all cases in writing to advertisers say: "I saw your advertisement in the American Carpenter and Builder."

VOL. XVIII

NOVEMBER, 1914.

No. 2

**Winter Work for Builders**

**B**UILDING is usually considered the barometer of business. It is the first to feel the effects of an approaching slump. A study of construction statistics for any season gives a pretty clear idea of the state of general business during the same period.

On the other hand, a view of the work in architects' offices and on the drawing boards and estimating desks of contractors and builders throughout the country, gives a look ahead to the coming building season. Such a view, if it could be made by an all-seeing eye, would be without question the surest gauge of future business conditions.

In addition to the quiet times that occasionally strike all business, building goes by seasons. There are busy times and quiet times. In the early summer it is a problem to get enough men to handle the work offered. In the winter it is a much greater problem to find business to keep organizations together and the skillful, reliable men employed.

Winter work for builders is a question of many sides. Practically every one connected in any way with the building industry is effected in some way by the winter slack time. The small contractor's problem differs from the large contractor's, but it is

just as real and important. Some workmen face the necessity of simply looking out for themselves, of supplementing their personal earnings in special, out-of-the-ordinary ways. Other builders have not only themselves but large gangs of skilled men whom they must keep busy or turn off.

No matter what one's winter work problem is, we believe there are ideas and suggestions in the frank letters from other contractors and builders, appearing on the next ten or twelve pages, that will help.

We rejoice to see that so many of Our Folks have solved the winter-work problem. The methods they have found successful they have very generously explained. While conditions are seldom exactly alike in any two localities, it stands to reason that what has worked one place will yield some measure at least of success, if used somewhere else.

We cannot thank too heartily those of our readers who have contributed from their personal experiences to this winter work exposition. You deserve the gratitude of all other builders, and this gratitude will be demonstrated, we are sure, by the care with which your letters and the suggestions contained in them are studied.

In our December issue also we will set aside a number of pages for further discussion of winter-work problems. We would like to hear from all who have not yet written. How do you make good use of the winter months? And which do you consider the best suggestion offered in this issue?

# To keep the coming in during the winter months

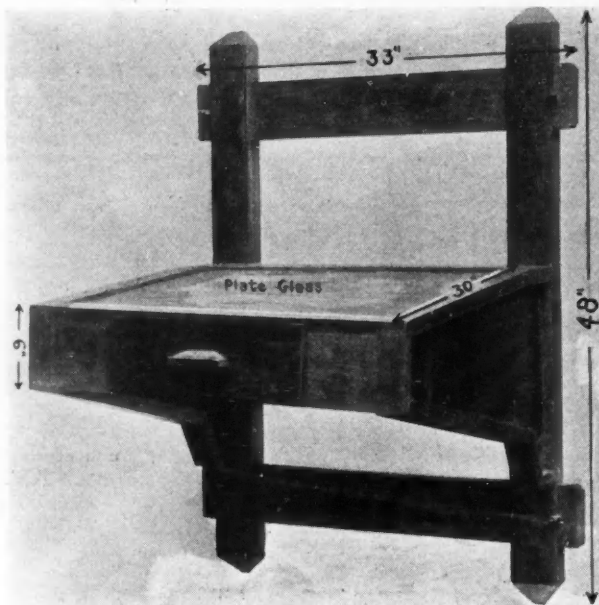
## FIRST PRIZE LETTER: Here Are the Methods That in Two Years Have Increased My Steady Gang from One to Thirty Men

By **W. C. Marsh**  
Contractor & Builder

Winter Work Editor: Fort Madison, Iowa.

I HAVE often wanted to answer the question in your correspondence department, "How Can I Turn My Spare Time to Profit During the Winter Season?" but owing to lack of time delayed writing sooner, though will give the readers of your Welcome Journal letter No. 2. My first one appeared in your issue of November, 1912.

During the winter 1913 and 1914 I employed six men. We made a number of Kitchen Cabinets; beautiful and very latest Office Fixtures, Manager's Office, Counting Department costing \$450.00, also Dry Goods Counters, Tables, etc. We made a number of Writing Desks. This Desk is made to fasten against the wall, leaving no obstruction in cleaning the floors. See photograph enclosed. They have proved to be a great



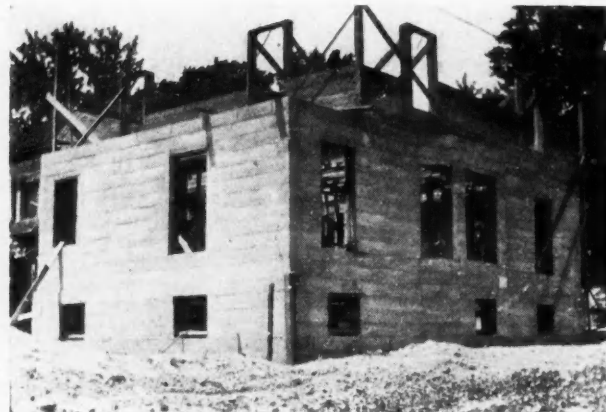
Wall Writing Desk That Sells Readily to Hotels, Banks, Etc.

success for Hotels, having supplied the largest hotel here.

We repair Chairs, etc., and have had several dozen from hotels here.

I save all our rippings and during the winter run them into moulds, etc.

In May, 1913, my shop was destroyed by fire. I rebuilt, but larger, and installed an Electric Motor and more machinery. We make our Stairs, Newels, Plate Rails, Balasters, Colonnades, etc., Screens of all kinds, window and door frames, odd size Doors, Sash,



Hollow Wall Concrete Building Erected by W. C. Marsh.

etc. Have also made a number of Medicine Cabinets. We are just completing an order for three sets of Colonnades; we usually change style to suit purchaser. We made several Book-case Colonnades with art glass which could also be used for Music or China Cabinet.

Show Counters and Cases are one of the best specialties to my shop; we delivered three last week—two 16 ft. long with plate glass fronts, sliding panel doors in back; one grocer counter with glass doors in front for special show, closed bins in back. I use maple flooring for tops and worked down to a polished top.

These tops have proved to be the best; have used nearly every kind of wood.

Stair Cases are another profitable shop specialty. Have built a number of oak panelled cases with circle starting steps, etc., by use of machinery; can make a nice profit on this class of work.

Here is another help to me in my contracting. I purchased at Chicago Cement Show a 6 cubic foot cement mixer. Started out first of April with five men and have been in constant use ever since. Have just

Have more than all competitors. Why is it? Be prepared to do the work. Have a power shop, if possible. Have good tools and do good work. Be it ever so small—Do it—it will grow.

Hoping that the manner in which I turn my spare time to profit during the winter season as stated will assist my fellow brothers in doing likewise, I am,

W. C. MARSH,

Contractor and Builder and Manufacturer of  
Wood Specialties.

WINDOW SCREENS AND SCREEN DOORS IN STOCK	<h3 style="margin: 0;">W. C. MARSH</h3> <h2 style="margin: 0;">CONTRACTOR AND BUILDER</h2> <p style="margin: 0; font-size: small;">AND MANUFACTURER OF</p> <h3 style="margin: 0;">WOOD SPECIALTIES</h3> <p style="margin: 0; font-weight: bold;">FORT MADISON, IOWA</p>	WINDOW FRAMES DOOR FRAMES AND STORM SASH MADE ON ORDERS
OFFICE 331 FOURTH STREET BELL PHONE 465		

Business Letter Head that Shows the Activities and Interests of Bro. Marsh.

finished a floor 82 by 154 feet; put in an average of 1,200 feet per day.

I have built two Hollow Wall Cement Houses, stuccoed on outside, also one of 5 by 8 by 12 Hollow Tile stuccoed on outside; one of 5 by 8 by 12 Hollow Tile veneered with pressed brick; one of wood, metal lathed and stuccoed, and one of brick and stuccoed on outside. All of these are modern and the plans for these I made.

I have two men busy nearly all year laying  $\frac{3}{8}$  by  $1\frac{1}{2}$ -inch hardwood floors and finishing same. We use paste filler and wax and polish. I have a good size emery wheel on the job to sharpen scraper blades. Saves more time and best way to sharpen. We use a good power scraper and then go over with hand scraper and have a good job.

I employ two painters the year round. In many dwellings we are using tinted wall paint, stenciled borders, etc., for interior decoration, changing colors to suit.

*Furnaces.* This is another line which is increasing fast. I have two men installing hot air furnaces as the orders come in. Have sold ten this fall and expect that many more.

Store fronts and display windows are a good specialty. We put in six modern fronts this last summer; two plain, with prism top; six with center entrance set back 9 ft. to 13 ft. Use  $\frac{1}{4}$ -inch 3-ply oak veneers for panel in back of show window, using cypress or oak rails, and give a light oak stain and finish like interior work.

I have never solicited any kind of work. My time is taken up in figuring, making plans and laying out the different classes of work.

Brother Carpenters, only a few years ago I started contracting (see letter No. 1, Nov., 1912, issue AMERICAN CARPENTER AND BUILDER) with one man and now have from twenty-five to thirty on my pay-roll.

### PRIZE LETTER—Study Architectural Drafting at Home and Get Above "Winter Work Problem"

By E. B. Harshberger  
Architect and Builder

Winter Work Editor: Minot, N. Dak.

To keep the money coming in during the winter or in the dull season cannot be accomplished by one method for all localities. Small shops with one or two machines will solve the problem in towns where there are no sash and door factories that take in small jobs, but even where there are no factories the work of a small shop is limited. This is not a knock for I believe that every jobbing carpenter should have a shop. There are always jobs to be done on rainy days, and if Mr. Carpenter is a hustler he can pick up enough work to keep his best men on hand so that he always has a more efficient crew than the man who "hires and fires" just as he happens to strike a job or not.

However, it is up to Mr. Carpenter to work his gray matter to its fullest capacity if he expects to make a success of his business. To this end I know of no better application of his spare time than by home study. There are a number of Correspondence Schools advertising in THE AMERICAN CARPENTER AND BUILDER that are offering courses in architecture and the various branches of the building business that will help a man to climb above the "Winter Work Problem." I can explain this better by telling my own experience.

I have worked in various cities from Pensacola, Fla., to Edmonton, Alta., in at least twenty different states, and I have worked at every branch of the building business from "Mud Hodler" to general foreman, and I have gained nothing except experience, while several of the boys who started to learn the trade when I did, but who stayed at home and studied, are set-

tled comfortably in business. Jim is a contractor doing a business of fifty or sixty thousand a year. Bill is an architect; he cleared \$40,000 in six years during the boom in Moose Jaw, Canada; and George is a structural engineer in Minneapolis. They may not know how to do all the different kinds of work that I can do, but they have succeeded.

Five years ago I took a tumble to myself, so I decided to try the home study stunt. Bill told me to take a short course in drawing as a starter, so I enrolled for a course in architectural drawing and mathematics. I finished that up in a year, as working with instruments and figures seemed right in my line. Then I took up an advanced course. I have been a long time at that, and I must admit that I came near

falling down more than once, but I am getting along all right with it now, and am beginning to get the benefit.

I have planned and built twenty-one house, two stores and an Odd Fellows Hall in the past five years. All the work on plans was done evenings and days when I had no work at my trade. I have made \$160.00 this year all on spare time. I feel that I am getting above the "Problem of Winter Work," and the future looks very bright.

I would like to see every carpenter studying architecture because it would give him better ideas of building, and the whole country would have a more substantial and a more artistic class of buildings as a result.

E. B. HARSHBERGER.

## FIRST PRIZE LETTER: Business Getting Methods Tried Out in Buffalo But Good Anywhere

By George M. Petersen

Contractor & Builder

Winter Work Editor:

Buffalo, N. Y.

**A**S I have not laid a single carpenter off for so much as an hour in the last two years, out of a gang of about ten men, I thought that you might be interested in some of my remedies for "Winter Leisure" and prescriptions for "Winter Work."

First. Always try to get a good sized building lined up so that the foundations can be laid the early part of November. This will give a sort of "main idea" on which to work when the weather is too bad for outside work and can usually be worked to advantage as the owner seldom cares to move in before late in the spring.

Second. Have your family and friends on the lookout for repair work. Hardly a day passes but someone calls my office and says that "the veranda on \_\_\_\_\_ Street needs fixing up" or "the roof on \_\_\_\_\_ Street looks pretty bad to me." Getting

the name of the owner from the Assessor's Rolls is only a matter of minutes and writing a letter does not take long. My letters are usually worded about as follows:

"The writer has been informed that you are contemplating some repairs to your (veranda, roof or whatever has been reported) and desires to call your attention to the job done by him at (give street and number of some house in the neighborhood that you have worked on). If you will look at this job, talk to the owner, Mr. \_\_\_\_\_, and then call me up I will be pleased to give you an estimate on the work you desire done."

Of course, shingling cannot be done every day during the winter, but there are mighty few days my men won't get out on a roof job. We always keep long strips of 60-inch canvass on a winter roofing job so that we can open up a fair amount of roof ahead and at the same time be prepared for a sudden snow storm. This jobbing work, as most of the boys realize, pays better than the majority of new work, and the money is generally "there" when the work is finished. Many times I have gone after some little repair job and landed a good fat remodeling job. In this connection let me say that any carpenter or contractor can well improve his winter time studying up plan drawing.

Third. Metal weather strip is now an established factor in modern building construction. I not only get the job of installing metal weather strips on work done by me, but also on work done by the big building companies and speculators. There is always a lot of weather strip to put on as soon as the first icy blasts come out of the north; and this work can be done in the winter by tacking a piece of canvass over the window frame before removing the sash. This work I get by a little newspaper advertising and a small ad. in the classified section of the telephone directories.

Fourth. Wooden display fixtures for shoes, ties, hats, etc., are easy to make and easy to sell. I generally have a bunch of orders ahead of me from the



I Make Fancy Display Stands and Have No Trouble Selling Them.



local retail trade (and this in the face of two large fixture houses right in the city). This business requires a little soliciting.

Fifth. My long winter evenings are spent in perus-

to *make* people connect your name and your business. There is absolutely no excuse for any contractor with a force of less than twenty men to lay any of them off when winter comes along.

**GENERAL CONTRACTS  
PLANS AND ESTIMATES FURNISHED**

**CARPENTER WORK—REMODELING  
PULLMAN METAL WEATHER STRIPS  
YORK AUTOMATIC DUMB WAITERS  
WINDOW SCREENS**

**PHONES  
SENECA 3816-W  
FRONTIER 29252**

**GEORGE M. PETERSEN  
CONTRACTOR AND BUILDER  
17 EAST MOHAWK STREET  
BUFFALO, N. Y.**

**This Letter Head Commands Attention and Respect and Gets Business.**

ing the year's output of AMERICAN CARPENTER AND BUILDER, and any plans in them that look good I change to meet my own ideas and then work them up so that when the spring rush comes I always have a fresh lot of plans on hand and do not have to take much time to get them out.

Sixth. There are any number of stores in the cities and towns of the United States whose cellars are "cellars." Last winter I took hold of six "cellars" and changed them into "basements," where the store



**I Turn Store Cellars Into Basement Sales Rooms.**

keeper now displays his merchandise. The transformations cost from \$200 to \$600, and the merchant who pays big rent gets from 50 per cent to 100 per cent more display space without any extra compensation to the landlord.

Seventh. Don't forget that your business is just the same as that of any retail merchant, and that you must keep continually on the lookout for ways and means

My motto is: "Get men you can trust, and devote *your* own time to getting work to keep *them* busy." Personally, when I do a job I try to get acquainted with the adjoining property owners so that when I do get to where I have only a few weeks work ahead I can either call on or write to them and state that if they have any work in mind I am prepared to give them special prices during the winter so that I can keep my organization together. This system works surprisingly well. Try it for yourself.

These are only suggestions that I have carried out myself and from them other schemes can be worked out to keep the dollars rolling in during the "dull" winter months.

Yours very truly,  
GEORGE M. PETERSEN.  
Contractor and Builder.



**PRIZE LETTER: Weather Strip Soliciting  
Lands Other Work  
By J. Nebb**

Winter Work Editor: Woodstock, Ont., Can.

Like many other carpenters, I have had to study the problem, "How shall I keep employed during the winter months so as to provide for my family and myself?"

Well, had I not been taking the AMERICAN CARPENTER AND BUILDER during the past year, this problem would have been doubly hard to solve, but, I am thankful to say, ways and means that I had never thought of presented themselves to me through this valuable journal. Not only this, but I have been greatly helped along practical lines as well.

Now, this is the way I have started the slack winter months which are already upon us. Of course, I always read the advertisements in the AMERICAN CARPENTER AND BUILDER, and some months ago I saw the "Golden" Metal Weatherstrip advertised with these words, "Send for Samples and further information." Although it was still summer time and lots of work was going on, I sent for samples and was promptly attended to.

I have been canvassing for some time now with good

success, and in passing, I might say there is better money in it than in ordinary carpenter and joiner work. When I call on a person with my working models and explain them, in many cases the answer is,

"It's the best thing I've seen yet, but I cannot afford it. Times are hard."

Then, knowing it is useless to press any harder, I thrust my second dart, which is nearly always effective.

"Seeing you cannot take my weatherstrip, is there any little job in the carpentry line you would like done?"

"Oh, are you a carpenter?"

"Yes."

"Well, I have some sash cords I have wanted all summer to have fixed, but everybody seemed too busy."

So I get that job.

Another, when informed, will say, "I have some pictures that I want framed. Can you do them?"

"Yes, madam."

Another, "I have some chairs that need a little repairing."

There are other little odd jobs too numerous to mention that a fellow can get in this way and which are not procurable in the ordinary way. I might say for the benefit of those who do not see good prospects of selling weatherstrips, that there are lots of other articles in the advertising columns of the AMERICAN CARPENTER AND BUILDER that will bring equal returns.

Trusting that this will help some brother in the work, I remain,

J. NEBB.



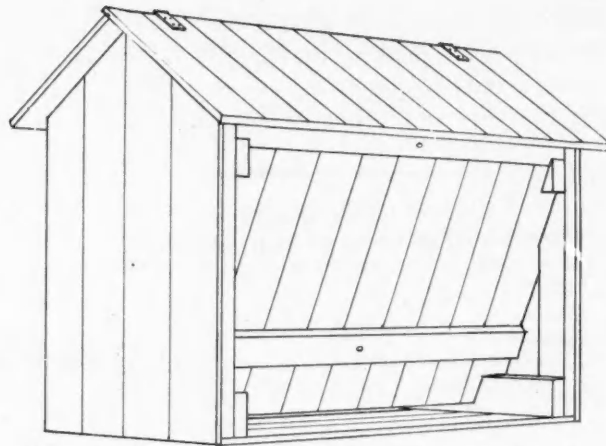
**PRIZE LETTER: Hog Feeders Go Well with Farmers**

By C. H. Comstock  
Contractor & Builder

Winter Work Editor:

Logan, Iowa.

Here goes for the ten dollar prize on "How Can I Turn My Spare Time to Profit During the Winter Season?"



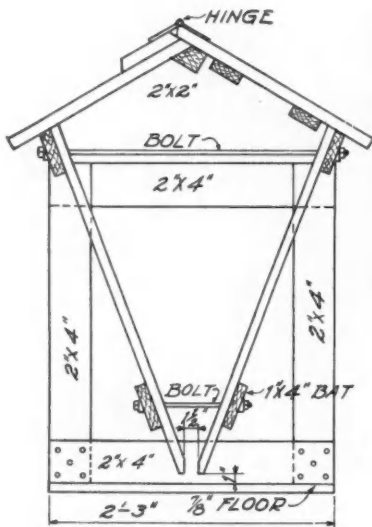
Perspective Sketch of Hog Feeder.—These Get the Farmers' Dollars.

thing new which I picked up from the farmers around the country. The first one was a poor success, the farmers pointed out the faults and I remedied them. The one I sell the most of holds about six bushels. They feed dry feed of all kinds, and are just the thing to feed ashes, oil meal, etc. The farmers are just taking hold of it. If I sell one to a person I know he will come back for more. I have eleven orders hanging on a hook now in the shop, waiting for a cold day to make them.

The ironing board is a dandy, and sells easily for \$2.00. It stands up good and solid. (The machine-made ones are too flimsy.) That is why I beat them. It is nothing to sell one in a home where they already have one.

The weatherstrip I handle is called the "Common Sense Weatherstrip," made at Cedar Bluffs, Nebr. It is a success and reasonable in price. I have never seen it advertised in the AMERICAN CARPENTER AND BUILDER, I am sorry to say—sorry for the company that makes it.

I am busy nearly all the time, but I have had to build most anything to be so. I am building a brick veneer studio just at present. The location of the



Section Through Hog Feeder.

## COMSTOCK & SONS

### ESTIMATING, CONTRACTING & BUILDING

Logan, Iowa.

Neat Business Letter Head for Contractors.

I do not simply answer ads, but I build hog feeders, ironing boards and put in weatherstrips. The hog feeders are some-

shop helps me as it is an old store building right in the main part of town, so it catches lots of odds and ends for me.

Hoping this will help someone, I remain,

An old subscriber,

C. H. COMSTOCK,  
Contractor and Builder.

## PRIZE LETTER: Plenty of Chance Now for Extra Earnings and Profits

By John Upton

Winter Work Editor: LaFargeville, N. Y.

The way to keep the money coming in during the winter months is to keep moving. There are many pleasant days during the winter months when, if one has a job under way he may accomplish considerable outside work and do the inside work during the stormy days.

I have always been able to find some way to bring in some money. Have gone into the woods and cut logs which were later sawed into timbers and lumber. The waste parts went for firewood.

One needs new scaffold brackets almost every year and these can be made during cold weather. Stock sizes of window frames are always good to have on hand. One may get second hand sash and repair them. Paint them and build the frames and have them ready to sell in the spring or whenever called for.

If one knows he is to erect a house during the sum-

mer he may get lots of the material ready for use. In many towns one can buy a lot just to have a place to build such a house, getting it inclosed sometime during the fall and completing the interior work during the winter.

For myself, considerable time has been spent in making furniture, both movable and built-in. I guess I have built almost everything except the stove and piano.

If you can secure the material you can make some ladders. Make plain, straight ones, short and long step ladders, or try saw horses and high staging horses.

There are always small jobs like storm doors, storm sash, new windows, inclosed porches, hard wood floors, dumb waiters, and what not, to be put in. In order to get one's share of such work one must get out and do some talking and keep moving.

What are you doing with the long evenings when you might be planning and studying for the future work?

JOHN UPTON.

## A Thousand and One Winter Income Helpers

Methods Used Successfully by Other Builders

### Make What the Farmers Want

Winter Work Editor: Jeffersonville, Ohio.

As I live in a small country village of perhaps a thousand inhabitants, I find the short winter months nearly as busy as the long summer ones. Here is the way I do it:

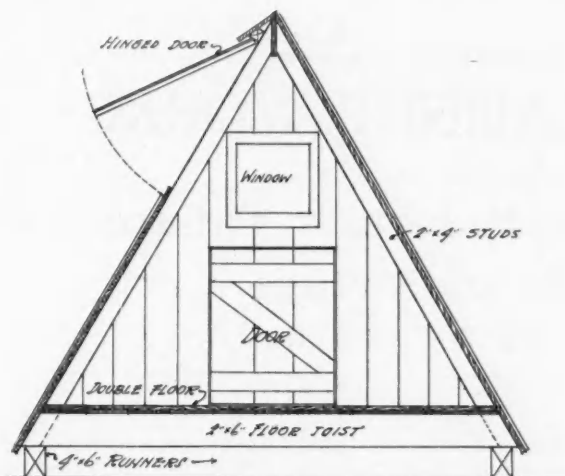
I convert my wagon shed into a general work shop. I make and repair sleds, build hog boxes, make and rebuild spring wagons, and I have built a number of house wagons or cars on trucks. These cars are equipped with home-made table, bench and cupboard. The laundry stove and cots are furnished by the farmer.

My sleds are made in 12, 14 and 16-foot lengths to suit the purchaser, and are used in Fayette, Green and Madison counties. My hog houses are square type built on runners with solid floor and half of top removable to let in sun-

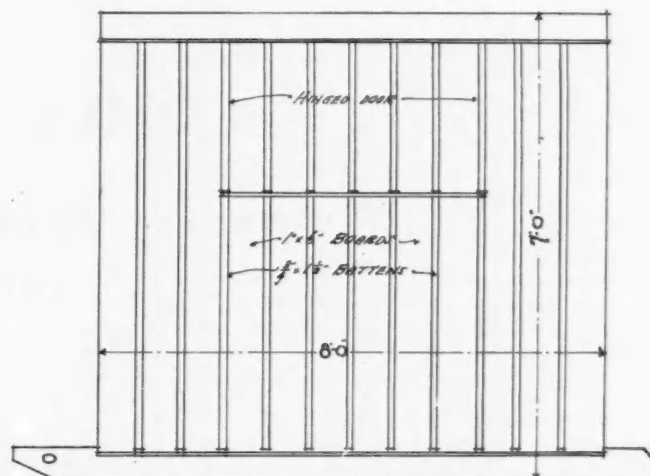
shine. Many farmers have from twelve to fifteen of my hog boxes.

Of course, I did not build my trade in one winter. When first starting out I made one fourteen-foot sled and a hog box, painted them nicely, and placed them on the street for display during a farmers' institute. This was all the advertising I did, as the farmers know a paying proposition when they see it. I do my work well, finishing it to the smallest detail, and January and February are busy months, as the farmers want their boxes for March.

I also have a request for a laying and sitting place for poultry, with two rows of nests and roof over them, so as to be used independent of hen house. Every farmer needs one, and I hope the AMERICAN CARPENTER AND BUILDER will show some plans for same.

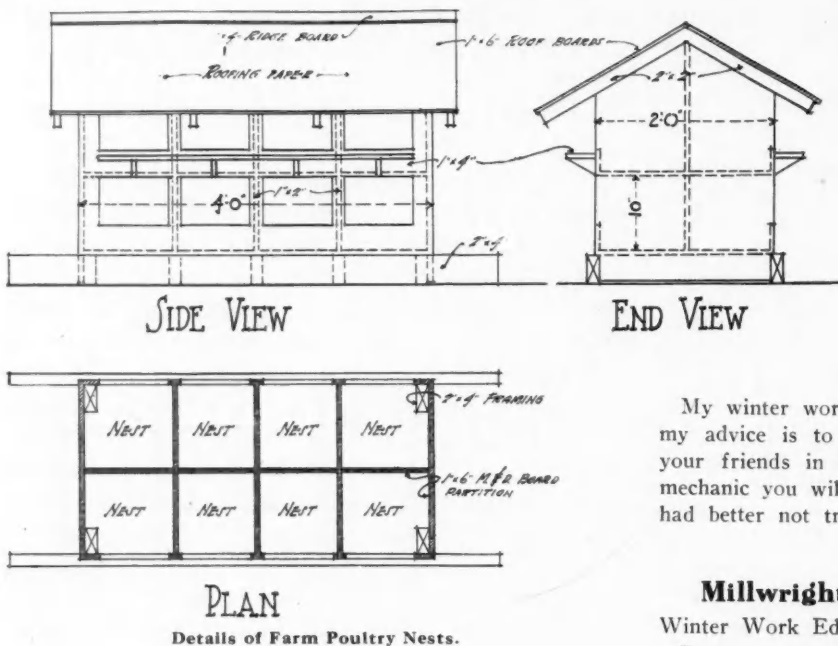


SECTION



SIDE VIEW

Working Details of one Style of Hog Box That Sells Readily to Farmers.



Details of Farm Poultry Nests.

I build buffets and kitchen cabinets, and the one I built in my own house has been a live advertisement for me. I have four orders waiting, and I will build them during inclement weather.

I also set and file a number of saws during the winter months, and, while this seems a small item to mention, it helps to buy dresses for the twins, for they are nearly a year old now.

Hoping my letter may help someone, I remain,

P. W. LINTHICUM.



### Power Machines Solve Problem

Winter Work Editor: Peru, Ind.

I will try to give you my solution of the winter work question.

Four years ago the winter work problem was some nut for me to crack, and it was hard work to pull through and come out in the spring without being in the hole. I would go to the country and cut cordwood and trap for fur-bearing animals, and do all kinds of hard work. This would put a man to thinking. I did do some thinking and this is the result:

I began by making for myself a kitchen cabinet. Some of my friends saw my work and they told others, and that got my name started as a cabinet maker. The result was that orders came in and I began to do work for other people. This continued all winter. I did all kinds of repairing of woodwork.

My winter work grew until I could not handle it by hand, so I bought a Parks Combination Woodworker and a 4 h. p. Detroit Gasoline Engine. This increased my work until my profit averaged \$70 a month for myself, and helped the other boys in the gang at good wages. I have added machinery from time to time until I have machinery to do any kind of work that can be done in a first-class planing mill. My motto is "If it can be made of wood I can do it."

Here is a list of some of the things that I have built: Bookcases, library tables, Morris chairs, writing desks, pedestals, tabarettes, counters, magazine stands, music cabinets, cupboards, screens, etc., and I have repaired almost everything you can think of. One thing, especially, was an old clock that was one of the first of the Colonial clocks. I had to make a piece of moulding by hand to match one of the old timers' make.

Every shop goes by some name and mine is Comet Cabinet Works.

My winter work has been a success from the start, and my advice is to build something for yourself and invite your friends in to see what you can do. If you are a mechanic you will get by; if you are a wood butcher you had better not try.

R. H. ARMANTROUT.



### Millwrighting and Turning Help Out

Winter Work Editor:

Danville, Pa.

I see you want to know how I spend my spare time. I will say I started in the world as a laborer and a poor man. When I was 19 years old I began to learn the carpenter and millwright trades. Well, I have worked at these trades for 38 years and have built many houses, barns, churches and mills.

There were three of us brothers. I worked part of the time at the trade and then we bought a sawmill, which my two brothers ran. Later we added a shingle mill and a shaving mill to our saw mill. We then bought some land, and at the death of one brother I had to stop some of the carpentry work and help with the farm and mill. I learned to do wood turning such as making rollers, bed posts, chairs, porch posts, and almost all kinds of turning.

I now make land rollers, hay ladders, sinks, and put wood splint bottoms in chairs. I make plans of houses and almost any kind of buildings, and I also make bills of material.

In the winter time when not busy with saw mill I do shop work. I always have all the work I want, but do not depend on one kind of work.

I would say a man should know how to use tools and learn how to read blue prints, and have some good building books and monthly papers, from which he will get a lot of good ideas.

A carpenter who does not care to give away what he

## COMET CABINET WORKS

MANUFACTURERS OF

**Library Tables, Pedestals, Tabarettes  
and Porch Swings**

**NOVELTIES OF ALL KIND**

Woodworking Shop is Given Catchy Name so It is Easily Remembered.

knows about houses never amounts to much. You might take a man and tell him how to do all kinds of work, and an hour after he will forget all you told him. Let him try to find out for himself and he will learn it better.

JAMES F. WELLIVER.

## Ingenuity Helps this Builder

Winter Work Editor:

Little Rock, Ark.

My dear brother carpenters and readers, please stop this ever-lasting hard-time talk. Meet your fellowmen cheerfully; don't be always complaining.

I am a jobber and don't class myself as a contractor, but I get some nice work to do. There is much to do in the way of surfacing new and old floors. Now, let me tell you, my dear brother, the first floor I ever surfaced was with my own machine. I was not able to buy one, so I made my own patterns, carried them to the foundry, had them cast, drilled and bolted, and trued it up myself evenings after dark. I had seen a scraper only once, but my determination to succeed at any price brought me out victorious, thanks to perseverance.

Don't let anyone tell you you are looking too far ahead; the far sight is what prepares you for the journey across the mire.

The most essential things to constant work are to be always prompt, as accurate as possible, neat and quick at

your work. Don't be a drone until you die; you will lie still long enough then.

Boys, fifteen years ago I started out for myself, a green lad of 18 years with \$12.50 and no railroad ticket. After 18 months of service for Mr. Contractor, he made me his foreman, and I served in that capacity until I quit of my own free will. When he was not busy, many people who knew me had odd jobs waiting for me—tables, beds, special orders, chairs, sea coast shell cases, corner china cases, a fence to build.

Don't be too proud to do anything if there is an honest dollar in it. When you finish, charge a good, but not high, price, and there will be another job waiting for you.

Now I am living at home and have enough around me to be comfortable. You often hear people say, "If he is a carpenter he has nothing." Nevertheless, I move my tools from job to job in a nice five-passenger Studebaker machine, of which I am the possessor; I also carry a U. B. card. Every man is just what he makes himself.

There are many things I could mention, but I don't want to tire the Editor. And say, don't forget to get a Radford's Cyclopedia! It is a very great help.

L. V. HINSON.



## Hidden Treasures All Around Us

Winter Work Editor:

Grayville, Ill.

If you want to see all men (women, too) from the most conservative bank president down to the \$3-a-week office boy sit up and take notice, let them pick up the morning paper and see a headline across the front page that looks something like this:

### HIDDEN TREASURES DISCOVERED IN OUR MIDST.

As the subject of Hidden Treasures is one that is always interesting, I am going to try to tell how we profited by them one winter.

It was only a few years ago that two young carpenters, one of them myself, found that they were without a job just about the beginning of winter. We had the use of an empty building, about 20 by 30 feet; an uncle of my partner gave us an old second-hand heating stove; we bought a second-hand foot-power mortising machine, and four cabinet clamps; moved in our carpenter tools and work bench; built a fire in the old stove, and went to work.

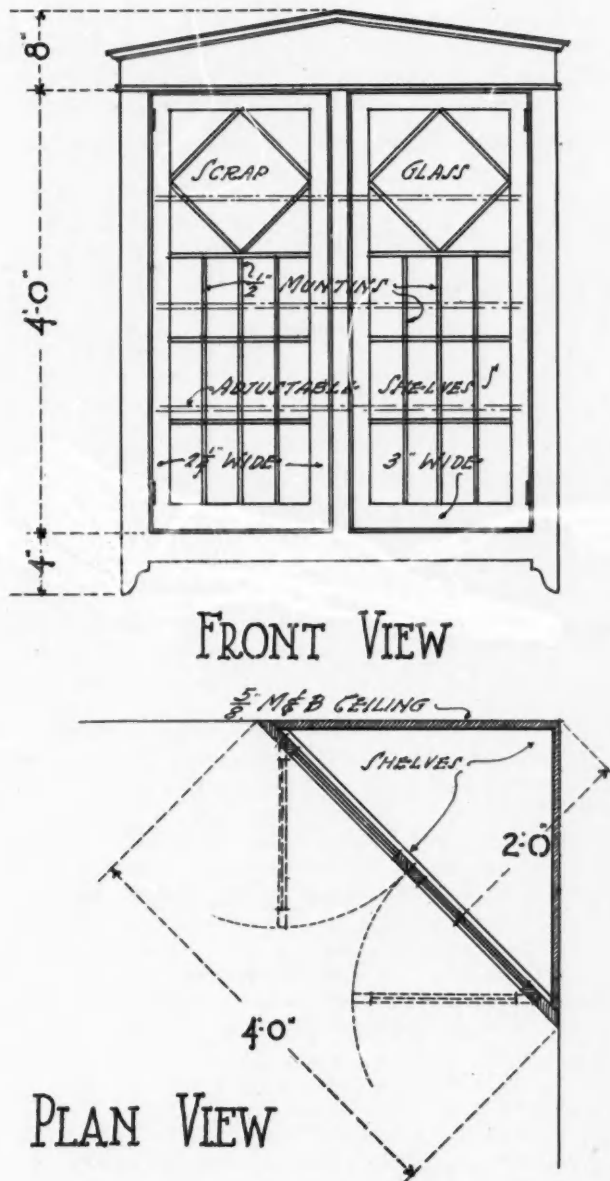
The first thing we did was to partition off one corner and line it on the inside with building paper, for a paint room. Right here I want to say that from my experience to make a success in the furniture line the carpenter should either finish his furniture or have a painter finish it for him, so that the buyer will have nothing to do but open the door and show the delivery men where to place the furniture.

As soon as we finished our paint room we went to work at most anything that came along in the furniture line. We made most everything, from a chicken brooder to a pulpit, and in the spring put together a number of door and window screens.

But to get back to the starting point, our specialty was rebuilding old furniture. It would no doubt be a surprise to most people if they could see the amount of old walnut, cherry, veneered mahogany and rosewood furniture that is stored in attics, outbuildings and in some instances set out in the fence corner with maybe an old board or two thrown on top to half-way protect it from the elements.

In working over old furniture we would first take it to pieces, clean off the old finish either with a cabinet scraper, blow torch or paint remover, then we would go to work and build from the start whatever our customers wanted, give it a coat of filler, then varnish or wax, as desired.

We had our "ups and downs," of course, but as the Editor



Corner Cabinet for Dining Room, Kitchen, or Parlor. Make up Some of These Thru the Winter—They are Winners.

wants ideas here they are:

1st. It requires only a very small investment.

2nd. It is often difficult to obtain new lumber that is properly seasoned for first-class cabinet work.

3rd. It is easy to make plain Mission furniture; often-times easier to make it than it is to sell it.

4th. Last, but not least important, is the fact that a number of people who would either slam the door in your face or sic the dog on you if you were to try to take an order for "Brand new furniture," would welcome you with open arms and pocketbooks if you could suggest a way to turn the "junk up in the attic" into furniture that is not only useful, but will be an ornament to any home.

R. C. RANDLE.



### \$800 to \$1500 a Winter Framing Pictures

To the Editor:

Charleston, Ill.

Speaking about side lines for a carpenter, I have often wondered why more don't take up the one I am engaged in—that is, picture framing. I have been framing pictures for 12 years, and in the winter it is one of the best things yet, especially from December 1st to April 1st. As nearly all the framing is done during the winter, I have made a good living through the winters ever since I started out.

I have earned from \$800 to \$1,500 a year by picture framing, and, of course, made a good profit by buying my moulding and glass right. I use all French glass, paper packed, and buy all mouldings direct. It doesn't cost much to get

stalling private water systems. Every time you pass a house look for the old wooden coal chute that is busted to pieces, and sell them a new steel, burglar-proof chute. Look after the new and modern garbage receivers, sell them one on trial; they are fire, fly-proof, fool-proof and sanitary.

Other good side lines are: Retiling the old fireplace, installing vacuum cleaner systems, taking orders for screening, also for all steel window screen frames, make up all orders while you are idle from steady employment. There are a hundred different ways for the ambitious man to keep busy. Make pieces of furniture for your own home; it's the very best advertisement you can get. The old motto: If at first you don't succeed, try and try again, is sure a fine one.

C. B. M.

(Name withheld by request.—EDITOR.)



### All Summer is Jotting Down Likely Winter Work Customers

Winter Work Editor:

East Sparta, Ohio.

In the first place, it will be well to say that I have a small shop with the following machines: A 3 horsepower gasoline engine and a rip saw, a band saw and a turning lathe—the last three made by myself.

As I go about on different jobs during the summer I keep my eyes open to see what the different people are likely to need, and make a note of same. In the fall, as soon as the carpentry work closes, I hike for the shop,

PICTURES AND PICTURE FRAMES  
MASTIC ROOFING

## CLARENCE B. MUCHMORE CONTRACTOR AND BUILDER

SHOP, SEVENTH STREET, BETW  
JACKSON AND VAN BUREN.

CHARLESTON, ILL.

Business Letter Head Used by Bro. Muchmore.

started and soon grows into a fine business, especially for anyone who has a little shop in a convenient location.

Any good shop man can make a first-class picture frame with a little experience, as he naturally can make a good mitre joint. I will be glad to put anyone next to buying his stock and what to buy if he will write me.

I also handle window glass, plate glass and two or three grades of roofing, which bring in a good many extra dollars on the side.

CLARENCE B. MUCHMORE,

Contractor and Builder.



### Study Ad Pages for Suggestions

Winter Work Editor:

La Grange, Ore.

In answer to your call for suggestions for extra profits for winter, I don't feel capable of advising any one particular idea to carry out. Any reader of the "A. C. & B." can get out his last year's books and find the very best of suggestions. He can take his October, 1914, issue, look through the advertisements and find a dozen different ways to keep the dollars coming in, viz.: ventilators, floor dressing, installing dumbwaiters and refrigerators for early spring, furniture making, selling and putting in place window and door weather strips, selling and putting on metallic batens, selling and installing acetylene lights, selling and in-

and if it is cold, make a roaring fire, and then out comes my notebook. Under the heading of Wheelbarrows there will likely be found half dozen or more names. Then comes the homes with broken, torn, twisted and dilapidated screen doors. I go after all of these people and get as many orders as possible.

It is surprising to find how many people, especially in the rural districts, need and will buy a 12 to 18-foot ladder or a stepladder when they are offered a good one at a fair price. Along before Christmas time I try to have a few foot rests of a fancy design. These have sold well at a fair profit. There is always furniture repairing to do, for which people will gladly pay a fair price if the work is good. After exhausting all other resources, the carpenter (if he has a wood lathe) can turn out a few stair balusters or porch balusters and spindles, and he might make a couple of stair newels. All of the above-named articles you will be likely to sell in the spring to someone who is going to build.

By this method I keep busy during the winter and when spring comes I find there is still more work that could be done in the shop if time would permit.

A constant reader of the AMERICAN CARPENTER AND BUILDER.

"HAPPY JACK."

(Name withheld by request.—EDITOR.)

# Official Test Shows Metal Lath Wall Fireproof

FULL REPORT OF FIRE AND WATER TEST ON A 2½ INCH SOLID CEMENT PLASTER AND METAL LATH WALL, MADE AT THE COLUMBIA FIRE TESTING STATION, NEW YORK CITY, JULY 17, 1914

By James S. MacGregor, M. S.

**T**HE prime purpose in undertaking the experiments described by Professor MacGregor in his report which follows, was that it might be determined whether the solid wall of metal lath and plaster is suitable for the enclosure of stairs and elevators and other important openings in a building.

The partition tested was installed by the Associated Metal Lath Manufacturers following their regular recommended specification for 2½-inch solid cement plaster and metal lath walls. The test was conducted in accordance with the Proposed Rules of Industrial Board of the New York Department of Labor.

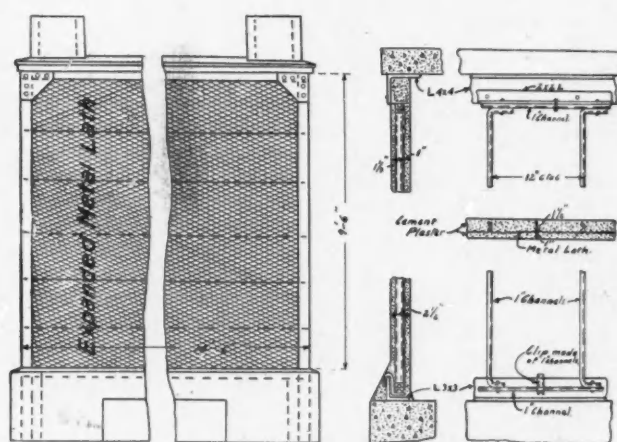


Plate 1. Details of Metal Lath and Cement Plaster Walls of Test House.

The data developed as described by Professor MacGregor, together with the portrayal of results by the official photographs which are a part of the report, would seem to indicate that this construction may properly be classified as affording full protection. A careful reading and analysis by students of fire protection is invited and we should particularly welcome criticism.

ASSOCIATED METAL LATH MANUFACTURERS,  
H. B. McMASTER,  
Commissioner.  
Youngstown, Ohio.

## Method of Construction

**T**HE partition was erected in test house No. 2, which is designed exclusively for partition tests. It is the standard size required in the proposed rules of the Industrial Board, New York State Department of Labor, for the testing of fireproof partitions, viz.: 14 feet 6 inches by 9 feet 6 inches on the outside and 9 feet 6 inches from grate to ceiling.

The foundation walls are 2 feet 4

inches above the ground level, and their inside edges support the grate. A 4 by 4-inch angle iron framework supports the roof and the walls of the building are attached to this. Draft openings and chimney flues of dimensions required are provided.

Construction details are shown in plate No. 1.

The partition under test which formed one side wall of the building was made in accordance with the following specifications:

## Specifications for Test Specimen to be Tested at Green Point, Brooklyn—East Wall

*Two and one-half inch solid metal lath wall.*

**Studding.** The channel iron used in this work shall be one inch, weighing not less than .76 per lineal foot. The studding is to be set 12 inches center to center, well secured top and bottom to the construction.

**Lath.** All lath used in this work to be 24-gauge metal lath, painted both sides and weighing not less than 3¼ pounds per square yard. This partition to be lathed on one side only. The lath is to be sewed to the channel iron with No. 18 gauge annealed galvanized tie wire. One tie every 4 inches vertical and one tie between each stud or vertical channel. Each tie to receive two twists. The sheets of lath are to lock, or lap at least 1 inch all edges.

**Plastering.** The first (scratch) coat shall be 1 part Portland cement, 1/10 hydrated lime and 2½ parts clean sharp sand, all parts by volume, a sack of cement being counted as 1 cubic foot. The cement and hydrated lime should be mixed together until the mixture is of a uniform color, and the 2½ parts of sand mixed with one part of this mixture. Add about 1 pound of long cattle hair per bag of cement used. Apply with considerable pressure, getting a good key and completely covering the metal lath and then roughen the sur-

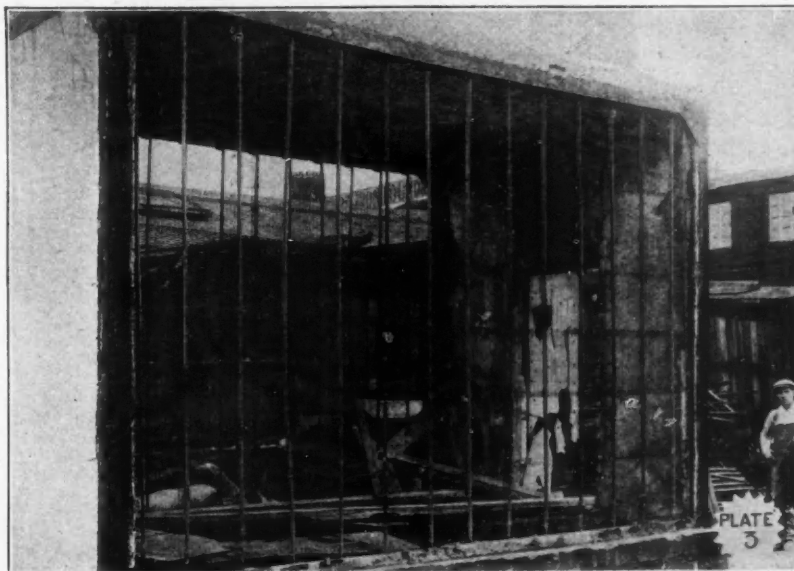


Plate No. 3. Shows the Studding and Lath in Place.

face by scratching diagonally in both directions.

The second (brown) coat should be of the same mixture as the first coat, with the hair omitted, and should be applied to the first coat after the latter has hardened sufficiently but before it has become dry.

Immediately before the application of the second coat, or any subsequent coat, the preceding coat should be well drenched with water, applied with a brush or through a hose provided with sprinkler nozzle. Bring to a true and even surface within  $\frac{1}{8}$  inch to  $\frac{3}{16}$  inch of the face of the grounds. After this coat has been darbied and straightened in all directions, lightly scratch the same with a scratcher.

The Finish Coat should be 1 part Portland cement and  $2\frac{1}{2}$  parts of clean, sharp sand. After the brown coat has set firm and hard but while still green (within 12 hours after the wall has been browned out) apply a finish coat of the above mixture with a trowel and float it with a cork or carpet float to a true and even granular surface, using plenty of water in floating to bring the same to an even surface.

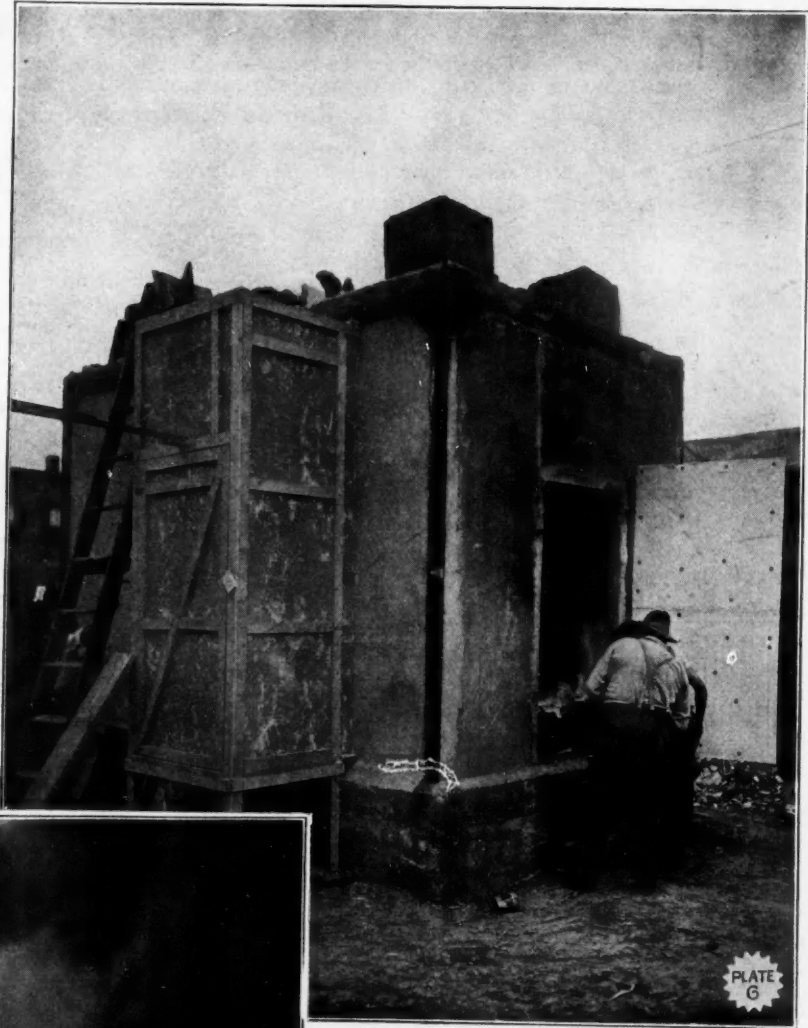


Plate No. 6. Starting the Fire.

The above mixture to be used in building up a back plastered wall  $2\frac{1}{2}$  inches over all.

**F**OUR different types of Expanded Metal Lath, all conforming to the specification, were used.

The plaster was applied as a scratch, three inside and three outside coats having composition, thickness, and time of application as follows:

Coat	Composition	Thickness	Time of Application
Scratch	inside as per specification	$\frac{1}{8}$ " to $\frac{1}{2}$ "	June 10, P. M.
First brown	outside as per specification	$\frac{3}{4}$ " to 1"	June 11, A. M.
Second brown	outside as per specification	$\frac{1}{4}$ " to $\frac{1}{2}$ "	June 11, P. M.
First brown	inside as per specification	$\frac{1}{4}$ " to $\frac{3}{8}$ "	June 11, P. M.
Second brown	inside as per specification	$\frac{1}{4}$ "	June 12, A. M.
Finish coat	inside	$\frac{1}{4}$ " scant	June 12, A. M.
Finish coat	outside	$\frac{1}{4}$ " scant	June 12, A. M.

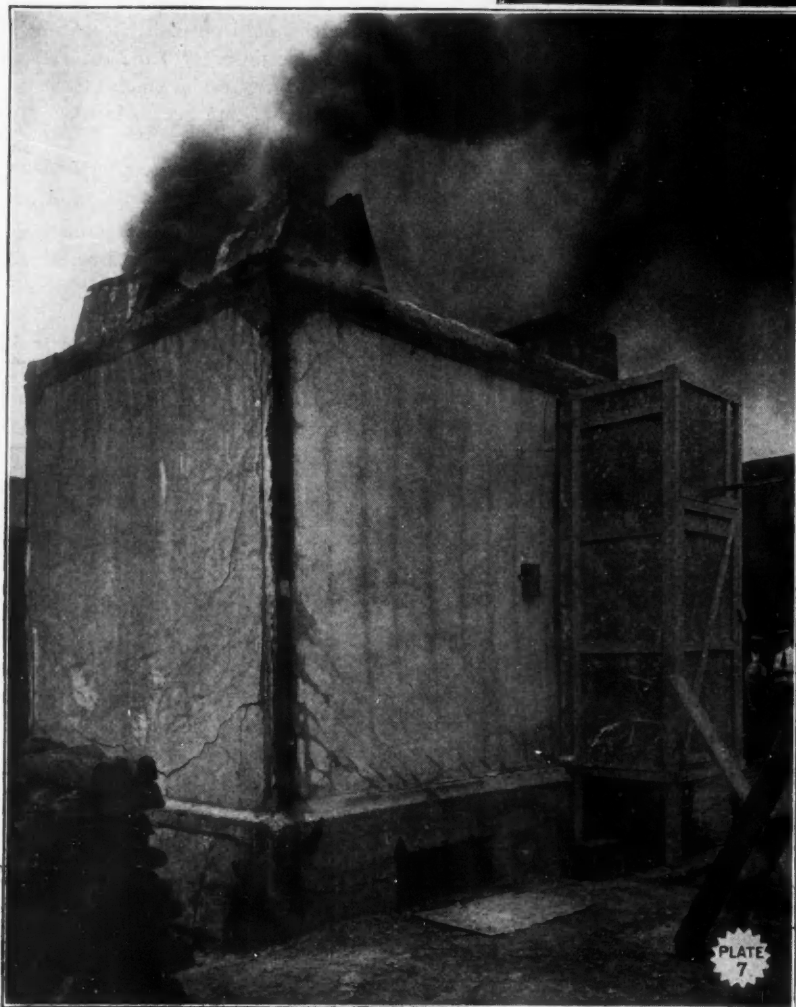


Plate No. 7. During the Test. The Test had been in Progress Over an Hour When This Photograph was Taken.



## Metal Lath Wall Proved Fireproof

49

### Purpose of the Test

The purpose of the test was to determine the effect produced by subjecting the partition to heat and water by first gradually raising the temperature of the test chamber to 1700° F. in one-half hour and maintaining an average temperature of approximately 1700° F. for two and one-half hours, making the total fire test three hours; and second, at the end of this period applying a stream of cold water at hydrant pressure, which at this location varies from 25 to 30 pounds through a 1½" nozzle for two and one-half minutes.

### Temperature

The temperature of the chamber was determined by the use of three thermo-couples connected to a Le Chatlier pyrometer. One couple was suspended

and forth over the whole surface and not allowed to strike continuously in one spot. The nozzle was held an average distance of two feet from the firing door.

### Results of Test

*Cracks.* Four minutes after the start hair cracks along the two central channel studs and also two diagonal cracks in the lower back corner of the wall developed.

At the end of ten minutes cracks had appeared along eight channel studs, and two diagonal cracks were noticed in the front lower corner of the partition. All cracks were emitting steam freely, which was formed by the moisture in the wall.

Additional cracks along the studs and also diagonal

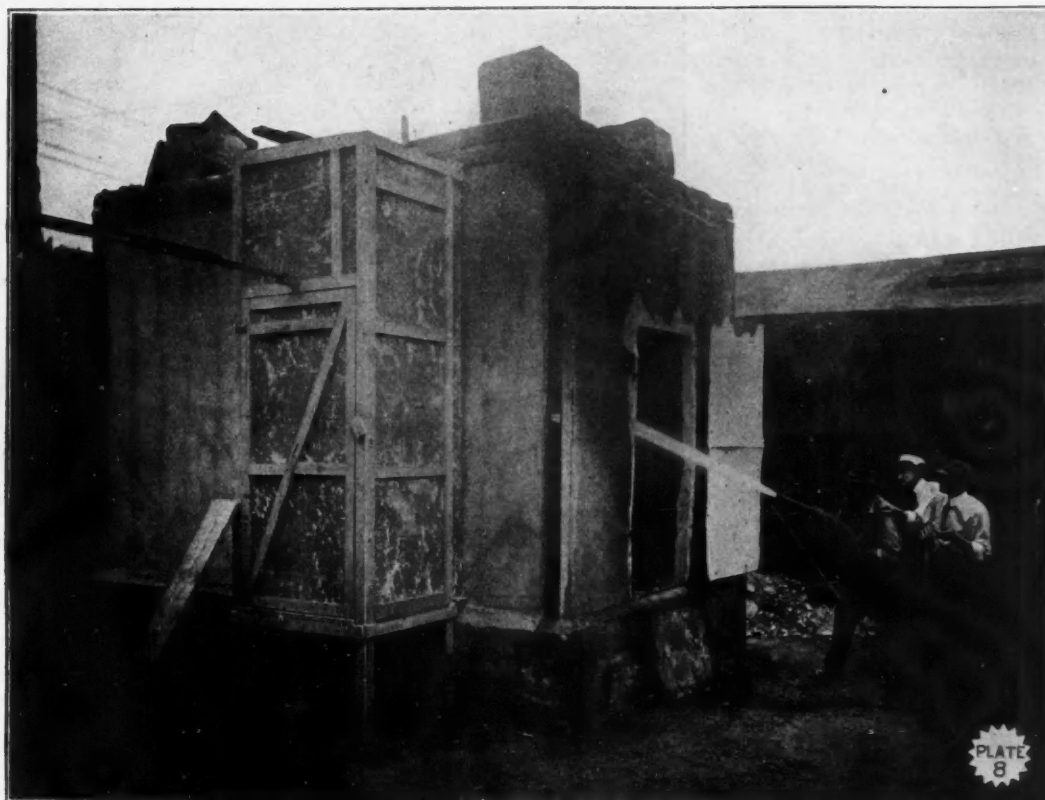


Plate No. 8. Applying Water After the Fire Test.

through the center of the roof with its junction six inches below the ceiling, and one was placed in the middle of each side wall seven feet above the grate level the junction being six inches from the inner face of the wall.

The frequency of firing was determined by the temperatures recorded.

The "Log of Temperature Readings" shows temperatures within 15 minutes after the fire started ranging from 1600° to 1903° Fahrenheit. The average for the last 2½ hours of the test was respectively 1732°, 1740°, and 1768° for the three pyrometers.

### Water

The water pressure at the nozzle just before the start of the test was found to be twenty-five pounds.

In applying the water the stream was thrown back

cracks at the corners both top and bottom developed as the test progressed. Photograph No. 7 gives some idea of their location and number after the expiration of one hour.

On the inside the wall appeared to be in perfect condition, and no cracks were noted during the first hour and one-half. At the end of this time four cracks appeared in the lower front corner of the wall. They averaged about two feet in length. Nothing further was noted until two hours and forty minutes of firing and passed when the inner surface of wall became crazed with innumerable hair cracks extending in all directions.

Photograph No. 9 shows the cracks on the outside of the wall after the test. The maximum crack opening was one-sixteenth of an inch and subsequent ex-

amination showed that none of them were deep seated.

*Deflections.* The partition started to deflect inwardly almost immediately after the test was started. The following tables gives the deflections recorded at the center of the wall throughout the test.

Time	Deflection Ins.
1:00 P. M. (start)	0
1:08	13/16"
1:14	1 3/4 "
1:20	2 3/16"
1:30	2 1/2 "
1:40	2 13/16"
1:50	3 1/16"
2:00	3 3/16"
2:10	3 3/8 "
2:20	4 1/16"
2:30	4 1/16"
2:40	4 3/16"
2:50	4 5/16"
3:00	4 3/16"
3:10	4 3/16"
3:20	4 3/16"
3:30	4 3/16"
3:40	4 3/16"
3:50	4 3/16"
4:00	4 3/16"
Deflection 15 minutes after water was applied	3 3/4 "
Deflection 30 minutes after water was applied	3 3/16"
Deflection 24 hours after water was applied	2 7/16"

It will be noted that the maximum inward deflection was 4 5/16" and that upon cooling the wall recovered to a deflection of 2 7/16".

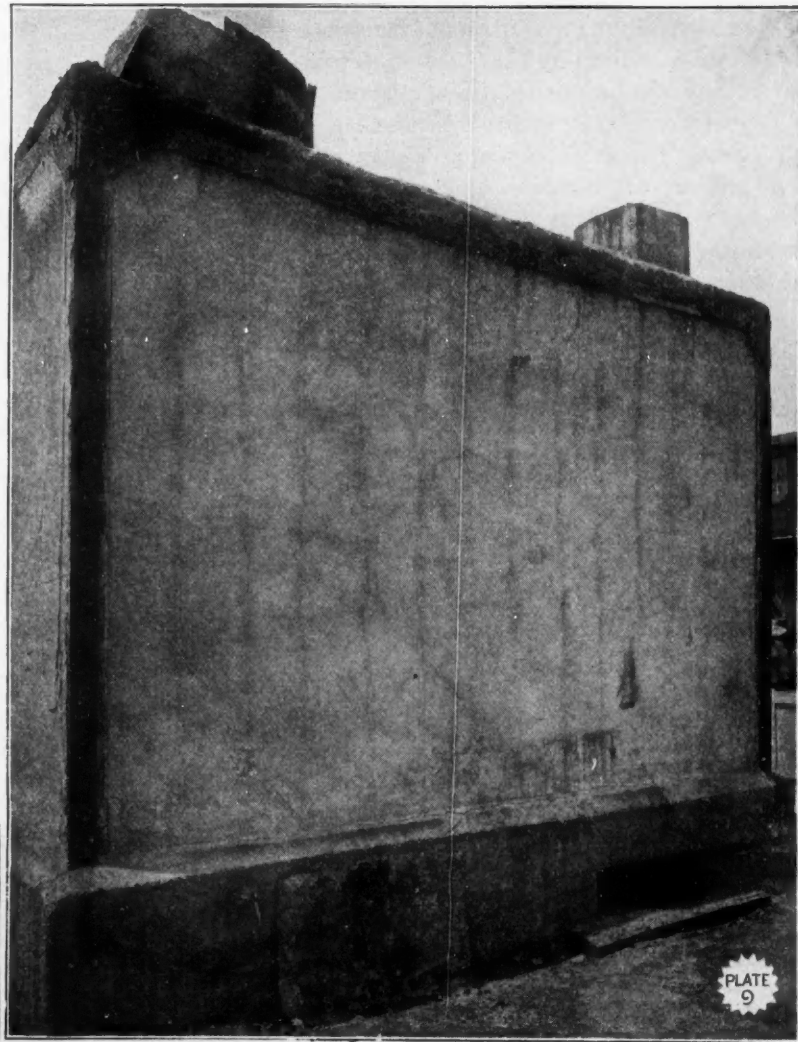


Plate No. 9. The Outside of the Wall the Day Following the Test.



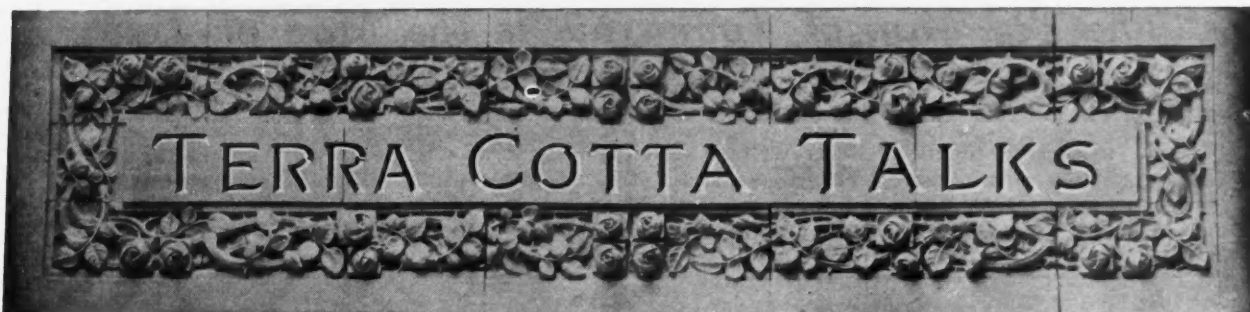
Plate No. 10. The Inside of the Partition the Day Following the Test.

*Temperature.* The temperature recorded by the middle couple at the end of the first half hour of test was 1723° F., and the average temperature of the three couples for the last two and one-half hours was 1746° F. Additional recorded data in reference to conducted heat not essentially a part of the test is given in Appendix C (of complete report).

*Water.* The application of water washed away a goodly portion of the finish coat as shown in Photograph No. 8, and also of the second inside coat in patches over a total area of about sixteen square feet. *No metal whatever was exposed.*

*No fire, smoke or water came through the partition and after it had dried out it was firm and solid and gave a good ring when struck with a hammer.*

Respectfully submitted,  
JAMES S. MACGREGOR.



## Terra Cotta for Residence Trim

**E**VERY brick house has always required a certain amount of cut stone trim. The amount was usually not very large. In fact, it often seemed too little to bother about. Just enough to make trouble; a small jag of cut stone to be ordered and looked after and protected. If all went well—measurements made exactly right, and no mishaps befell the order at the stone yard, in transit or on the job, a nice appearance could be expected, for a time. The white color of freshly cut limestone makes a nice contrast with brickwork.

The trouble is, though, it so soon weatherstains and blackens. When it gets too bad it can be sand blasted back to its clean whiteness, but that is expensive and so is seldom done.

With the introduction of white enameled terra cotta, architects and builders have been coming more and more to displace cut stone with terra cotta. As trim for brick buildings it seems a little more appropriate to use a burned clay material. The expense is the same or less, and the hard, smooth surface of the

terra cotta keeps its brilliant white color indefinitely. Soap and water and a scrubbing brush freshen it up like new at any time.

With the introduction of stock terra cotta this has become the real hurry-up

material. Numerous appropriate designs and standard pieces are carried for immediate delivery. This means a good deal to the builder of a small or medium sized brick house. For the more pretentious dwellings specially designed



Modest Brick Bungalow Home Trimmed with Stock Terra Cotta.



Beautiful and Expensive Brick Residence Trimmed with White Enameled Terra Cotta of Special Design.

terra cotta is being used. The architects are certainly producing some tasty and distinguished effects.

As an example, note the photograph to the left. In this beautiful brick residence with special terra cotta work, designed by W. L. Klewer & Sons, Architects, the terra cotta work is the central motif of the design.

All members that show white in either one of these photos are terra cotta. The results are truly artistic. With this material now so available, and with brick construction becoming more popular, we may look for a good many other houses combining these two materials.



To remove old wall paper from walls—it makes no difference how many layers are on the wall—the following is recommended: Take two gallons of cold water and 10 cents worth of sal-soda. Dissolve the sal-soda in the water. Then use the brush, putting elbow grease to it and then use scraper and it will come off in strips without trouble.

## "The Big Man of Tomorrow is the Man of Today Who Grows"

—THE MAN FROM THE LUMBER YARD

Being interested in the general welfare and success of our readers, we have engaged the services of a man of broad experience and extended observations to talk important matters over with you. We know you will profit from the visits of "The Man From the Lumber Yard."—EDITOR.

**A** BOY is mighty fortunate if he has a lumber yard to play in. My Father's lumber yard was to provide the meal-ticket for the family, but it had a great deal to do with my future. There is something in the clean smell and the bigness of a lumber yard that makes for wholesomeness. Most of my "future" is now behind me, but I will never forget the contractors who made headquarters in the yard office. They were real men—not because they chewed tobacco, nor did they talk big, but I remember that they impressed me as people who *did things*.

I have nothing against bankers (in fact, I consider them a necessity), nor have I any feeling against the pill roller; but dealers in medicines, money or machinery, to say nothing of gowns and groceries, never impressed me like the builders of houses.

### Get Solid with Future Home Builders

Did you ever notice how an impression, especially if made in youth, stays by you? Two men made lasting impressions on my youthful mind. One was a successful builder in our town. He had a very trite way of expressing his confidence in the Almighty by saying, "If you have something to do, start it, keep pushing, and trust in the Lord for the finish." The other man, whom I remember most kindly, always said "Good Morning" to me just as if I were somebody worthy of notice. It doesn't hurt even us of the bald headed number to notice the boys. We can help make better men of the rising generation. They will be building houses after a while.

### Opportunities for Observation

I did not develop my observing faculties until I worked with a telephone construction gang. You can see much more from the TOP than from the bottom of a pole.

While I have reformed from the telephone business, I have kept up my "pole top qualities" and am going to pass my observations on to you.

I will visit you each month and if you don't get the price of your year's subscription out of this visit, you surely will if you let me come in regularly.

### Are You Taking a Risk?

I have just learned of the narrow escape a friend of mine had. He lives about a hundred and fifty miles southwest of my desk, and employs three workmen. He took out casualty insurance about sixty days since. Last month one of his men met with an accident and lost the use of his hand. The Insurance Company (in place of my friend) is putting up twelve dollars

(\$12.00) per week for one hundred and fifty weeks.

Do you know the law regarding your responsibility? If you have an employee in Illinois and in case of accident he lost a thumb it would cost somebody half his wages for sixty weeks. The loss of an arm sets you back two hundred weeks, a little finger fifteen weeks, etc.

Each State has its own casualty laws, and many



One Contractor I know of Thinks so much of Accident Insurance that he has made the Following Line a Part of his Business Letter-head "Employees and the Public Fully Protected by Insurance."

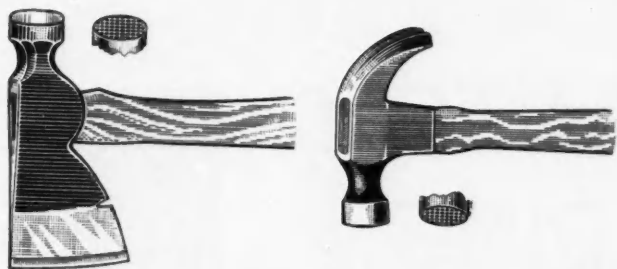
are very intricate. It would take a book to cover all. I will be pleased to cover in personal letters any inquiries my readers may wish to make on this subject.

If your work is hazardous, you can't afford to carry your own risk. If you chance to live in Ohio, Virginia, or Washington, your State will supply you with insurance, at a fixed rate. If you live or employ workmen in any other State than the above and want specific data on Casualty Insurance, I will secure it for you.

### An Injury to an Employee Injures the Employer

It is pleasing to note that most employers are providing every possible safeguard for their men. This is done primarily because of their interest in their men. Even if this is the age of commercialism, employers have a feeling for humanity more than ever before. It is also mighty good business.

A convention of manufacturers was held in Chicago, October 13, 14, 15. Hundreds of men from all parts



Safety Hatchet and Hammer Made with Scored Head Which Prevents Accidents from Glancing Blows.

of the Union were in attendance, to learn of and discuss accident prevention. This is a subject worthy the study of all. The large employers of labor, such as the International Harvester Co., The Pullman Co., etc., will not let a man take a risk. It is remarkable the small percentage of accidents they now have.

I note the hammers and hatchets they use, except in finishing work, have safety heads. Note illustrations. These heads engage the nail so as to drive it even if it is not struck fair. Thumbs are not crushed by glancing blows, when this kind of a hammer is used. A crushed thumb may lay a man up for a week and it might cost you some good money.

**Chance for Everyone to Grow**

One reason I am proud of Uncle Sam's country is because everyone who is willing to pay the price in work and brains can climb. Are you a climber? There is a noticeable number of men who have come up from the ranks during the last ten years. I desire to mix up with the big men of tomorrow. The big man of

tomorrow is the man of to-day who GROWS.

I find that the lack of a mercantile rating is a handicap to many. I know that many of my friends who are men of property and are doing a good business have to buy their supplies through middle men, who do not have either the knowledge of the goods nor the financial assets of the buyers, but they have a RATING.

My father always made quite a distinction between reputation and character. There is the same distinction between rating and worth. Worth is wanted, it is the substance, but a proper rating is very desirable.

However, that is the talk for December. We will also discuss getting ready for the New Year and the laying of the campaign for Spring work.

Yours for success,

THE MAN FROM THE LUMBER YARD.

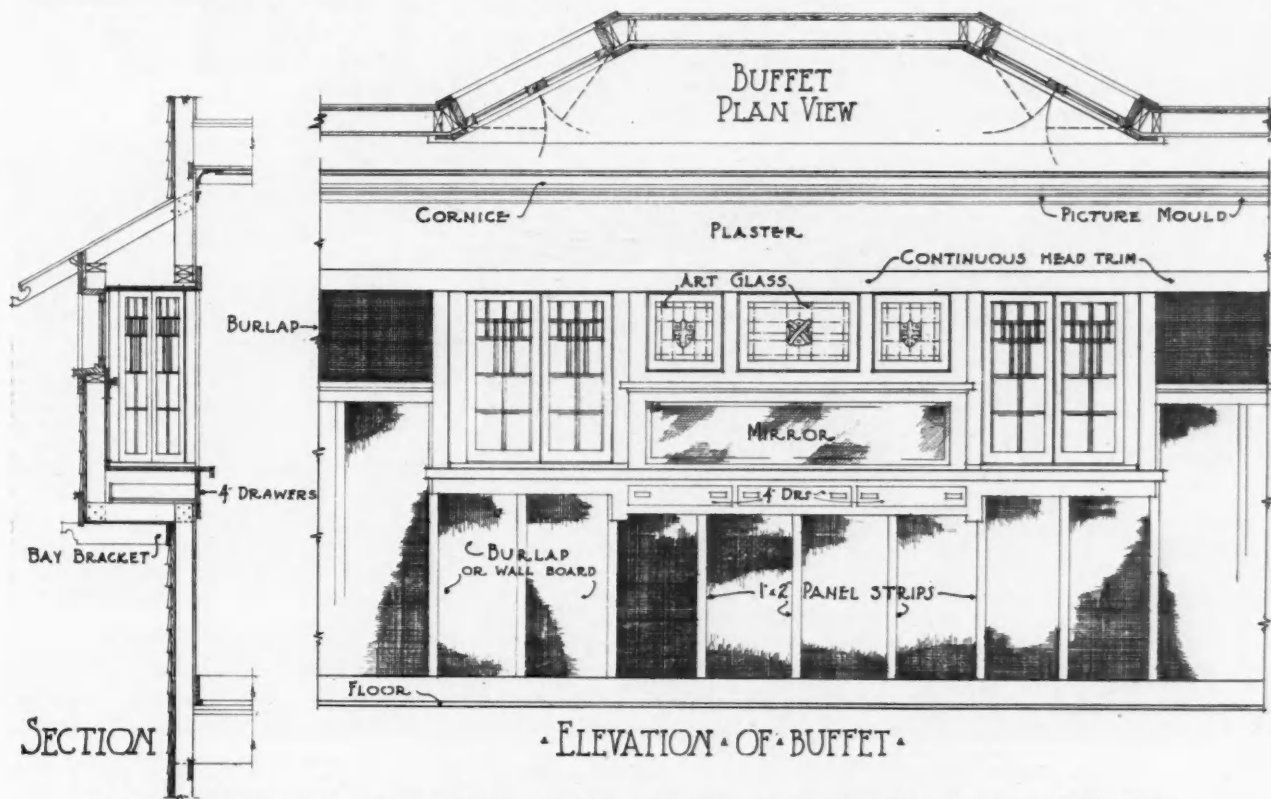


**Bay Window Buffet**

We nose around new buildings a good deal and occasionally see new ideas that are worth passing along to other architects and builders. Here is one, recently noted in a three-room Chicago apartment (to rent for \$45 a month!). There being no room for the ordinary projecting built-in sideboard, a dining room bay window was provided with three 4-inch drawers for silverware, and the broad window sill became the buffet top, backed with beveled plate glass mirror.

As a decorative space saver it looks all right. Here are details of it.

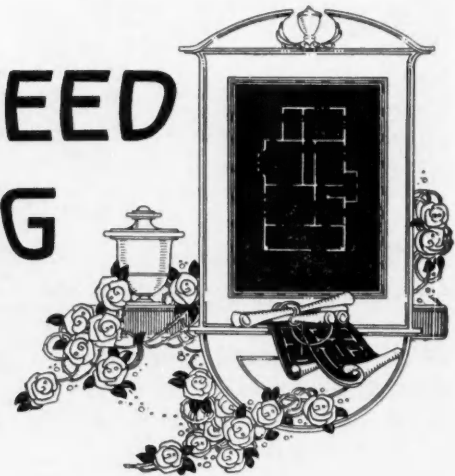
EDITOR.



Details of Combination Bay Window and Dining Room Buffet Observed in a New Chicago Apartment Where Every Cubic Inch of Space is Valuable.



# GUARANTEED BUILDING PLANS



## Low-Roof Japanese Bungalow

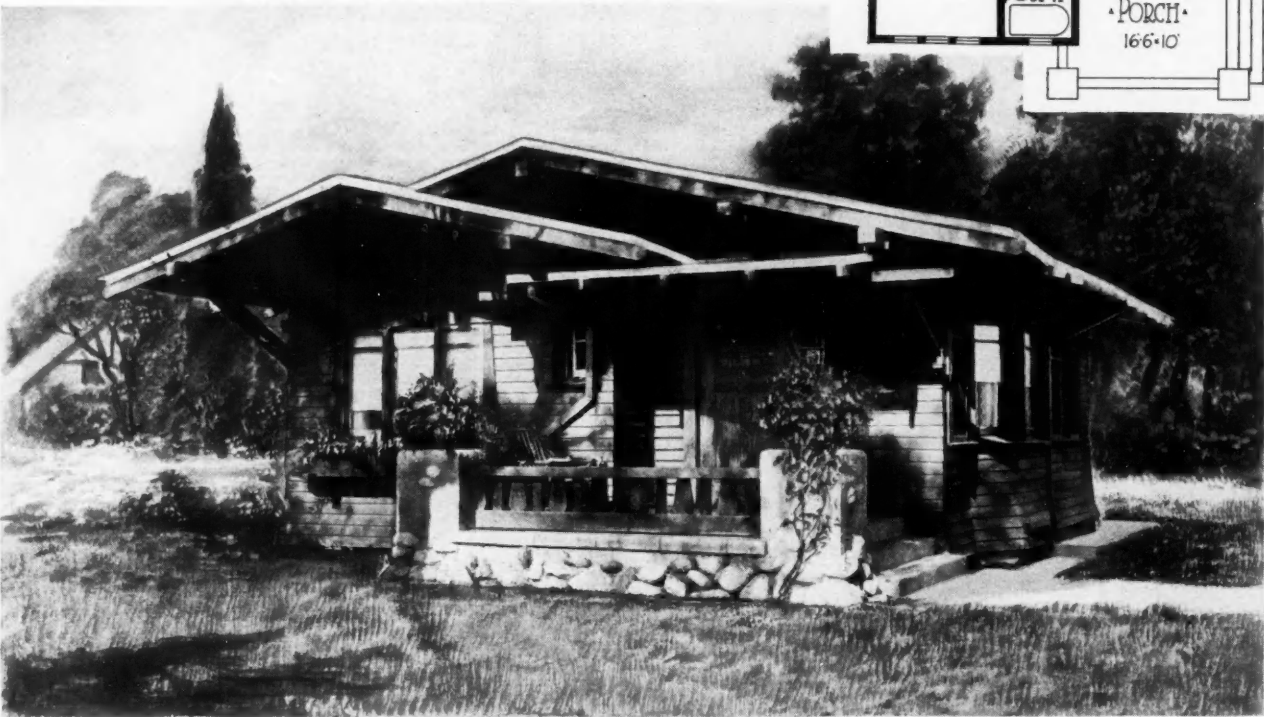
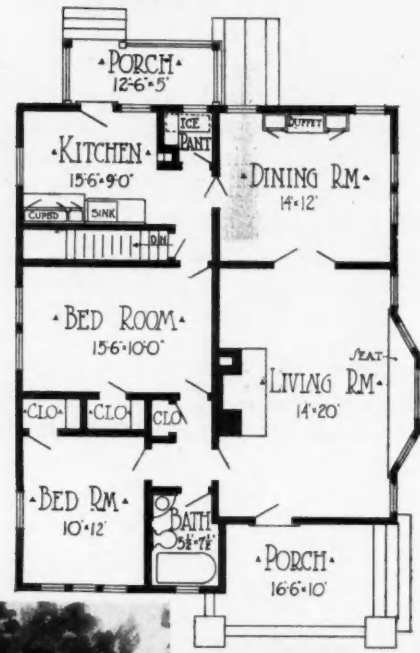
A perfect bungalow of true far western atmosphere is shown in Design 6634. It is 31 feet wide and 39 feet in depth, exclusive of the porch projections. There are two bedrooms, a dining room, a kitchen and a fine living room, 14 by 20 feet, with a bay window seat and a very attractive fireplace. About three-fourths of the space has been worked into living rooms, and what might be called the business portion of the house. This brief description conveys the idea at once that utility and comfort have been combined, together with a very artistic appearance.

The flat, bracket-supported roof, with

its extra wide projection of cornice and the color scheme account for the attractive outside appearance.

The construction is of concrete, studding, clap boards, lath and plaster. A good concrete wall reaches above the ground sufficient for cellar windows. The sills and woodwork are started from this and built up in the usual way. The low bungalow effect is secured by terracing the front and by putting a step in the concrete sidewalk that passes around to the rear.

What appears to be a small front porch is really larger than it looks. The size is 10 by 16 feet, 6 inches, which gives room enough for porch furniture.



A beautiful five-room bungalow of Western flavor. Size 31 by 39 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$5.00 per set. Blue-prints consist of basement plan; roof plan; main floor plan; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6634.



A seven-room story and one-half house; 38 feet in width by 25 feet, 6 inches in depth. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$8.00 per set. Blue prints consist of basement plan; roof plan; first and second floor plans; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6635.

**Comfortable Town Home**

A story and one-half house of neat design and attractive appearance is shown in design 6635. It is 38 feet in width by 25 feet, 6 inches in depth, exclusive of the front porch. This front porch is unusual by being merged into an open air extension that reaches to the corner of the building with a total length of 38 feet by 8 feet in width. There is a cement floor which slopes slightly outward to carry off the water from rain or melting snow.

Dark colored brick are used for the corners of the porch wall and square roof supporting columns. The same kind of brick are used in the exposed chimney at the end of the house. Uniform caps for all the columns are made of high grade cement, carefully moulded to the proper size to project slightly beyond the brick work. A similar chimney top is used for the finish of the large chimney.

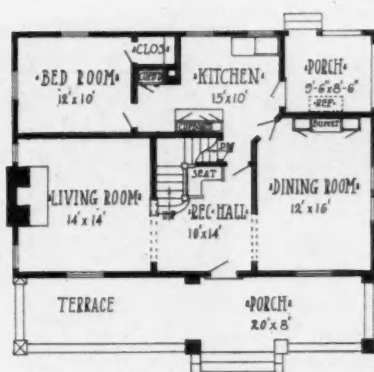
This style of house is what might be called a story and one-half cottage design; but it is quite roomy. The floor plans show the usual living rooms on the first floor, besides an extra bedroom. The living room, reception hall and dining room are connected by wide archways, so the three rooms are almost like one big room extending across the house. A handsome stairway in the reception

hall with a seat in the corner gives the impression of size. A passage way from the reception hall to the kitchen is closed by a doorway built under the turn in the stair. The entrance door to the cellar is also in this little passageway, and is easily reached from the front part of the house.

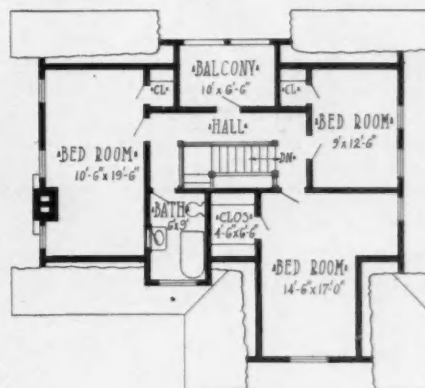
There is no regular pantry, but there are plenty of cupboards and a kitchen cabinet to provide necessary storage for kitchen paraphernalia. There also is a

set and the mullion window to provide additional storage for china.

In building an open stairway, such as this plan calls for, there is a splendid opportunity to select millwork designs that harmonize with the trim throughout the house. Certain kinds of woods are used for inside finish, and these kinds differ in different parts of the country. Millwork is made in patterns to match. The exact designs may differ, but the general idea is carried through to in-



First Floor.



Second Floor.

Arrangement of House, Size 38 feet by 25 feet, 6 inches.

splendid buffet sideboard built across the end of the dining room. It is supposed that a glass cabinet will be placed at the side of the dining room between the buf-

clude window and door trim, cornice mouldings, and exposed parts of the stairway. It costs no more to have woodwork matched up properly.

### A House of Extra Comforts

A plan that is well nigh perfect for a small house is given in Design No. 6631. This little house is only 30 by 24 feet, and one and a half stories, but the arrangement of the rooms is so complete that it might be called a "little, big house." It is constructed of light scantling in the usual way, covered with clapboards.

The perspective, however, shows careful treatment for outside appearances, while the floor plans reveal a very carefully laid out arrangement of rooms. One of the distinctive features is the large brick chimney, embellished with terra cotta shoulder pieces and chimney cap. These pure white finishing touches contrast splendidly with the dark red brick of the chimney, while harmonizing with the white mortar lines.

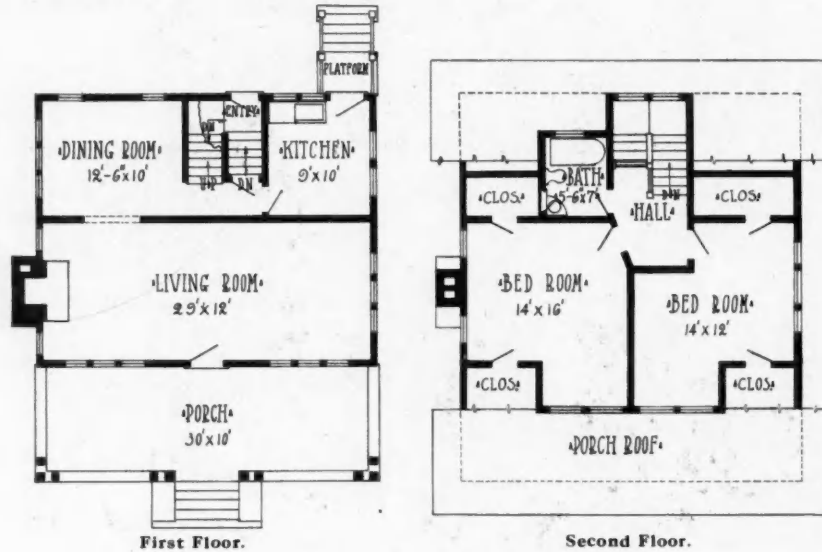
One main, straight-away roof covers the house and front veranda. The manner in which the veranda is built in under the front of the house roof adds a sense of solidity to the structure, and apparently increases the size of the house. The front veranda steps are enclosed between solid looking side walls, which may be used either for seats or to support flower boxes, or as pedestals for heavy plant urns.

Such a veranda is a great addition to a house in summer time, because there is room enough for modern porch parlor furniture in one end and a large swinging seat in the other end.

A great living room, 29 by 12 feet, with a splendid fireplace in one end, is the main feature of the first floor. There is also a comfortable, medium sized kitchen and a good dining room, besides

stairways leading both up and down.

Upstairs there are two bedrooms and a bathroom very conveniently arranged. In this plan advantage is taken of four corners under low parts of the roof for four good clothes closets, two for each bed room, which arrangement leaves nothing to quarrel about. No room is wasted in hallways, either upstairs or downstairs.



First Floor.

Second Floor.

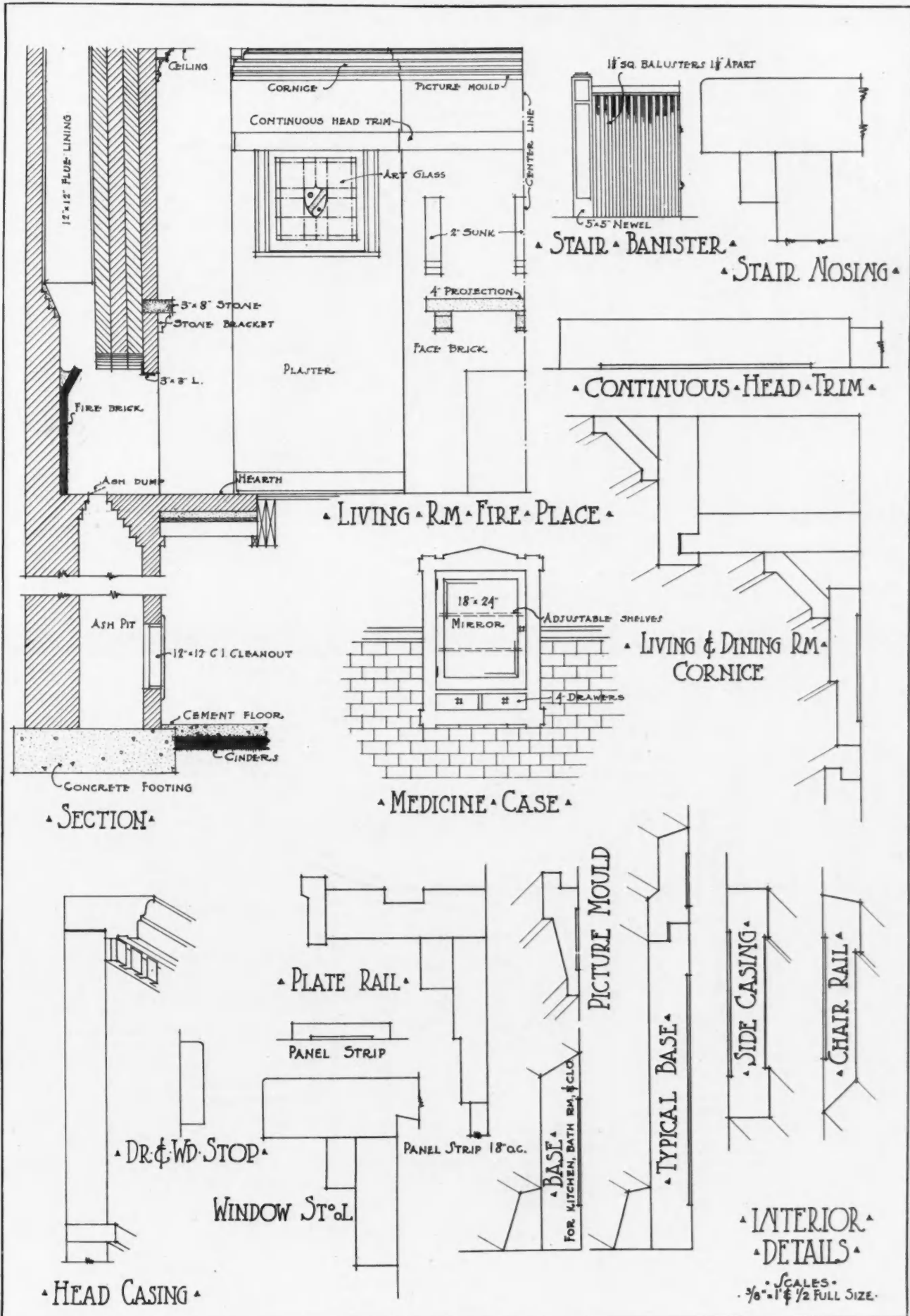
Arrangement of House, Size 30 feet by 24 feet.



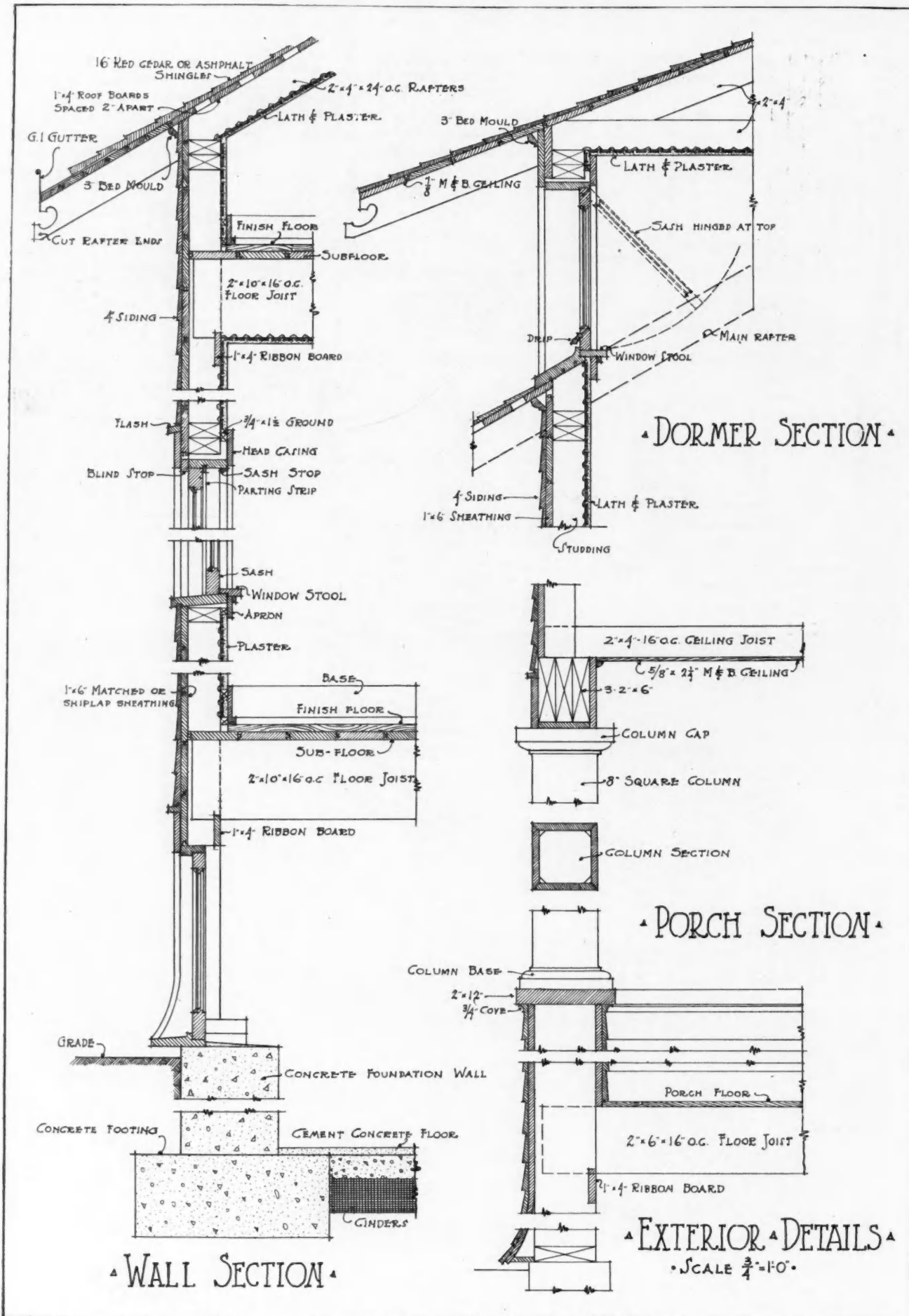
Small house of five rooms with an exceptionally pleasing arrangement. Size 30 by 24 feet. We can furnish complete blue-printed working plans and typewritten specifications for only \$7.00 per set. Blue-prints consist of basement plan; roof plan; first and second floor plans; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6631.

*For Interior and Construction Details of this House see next two pages.*

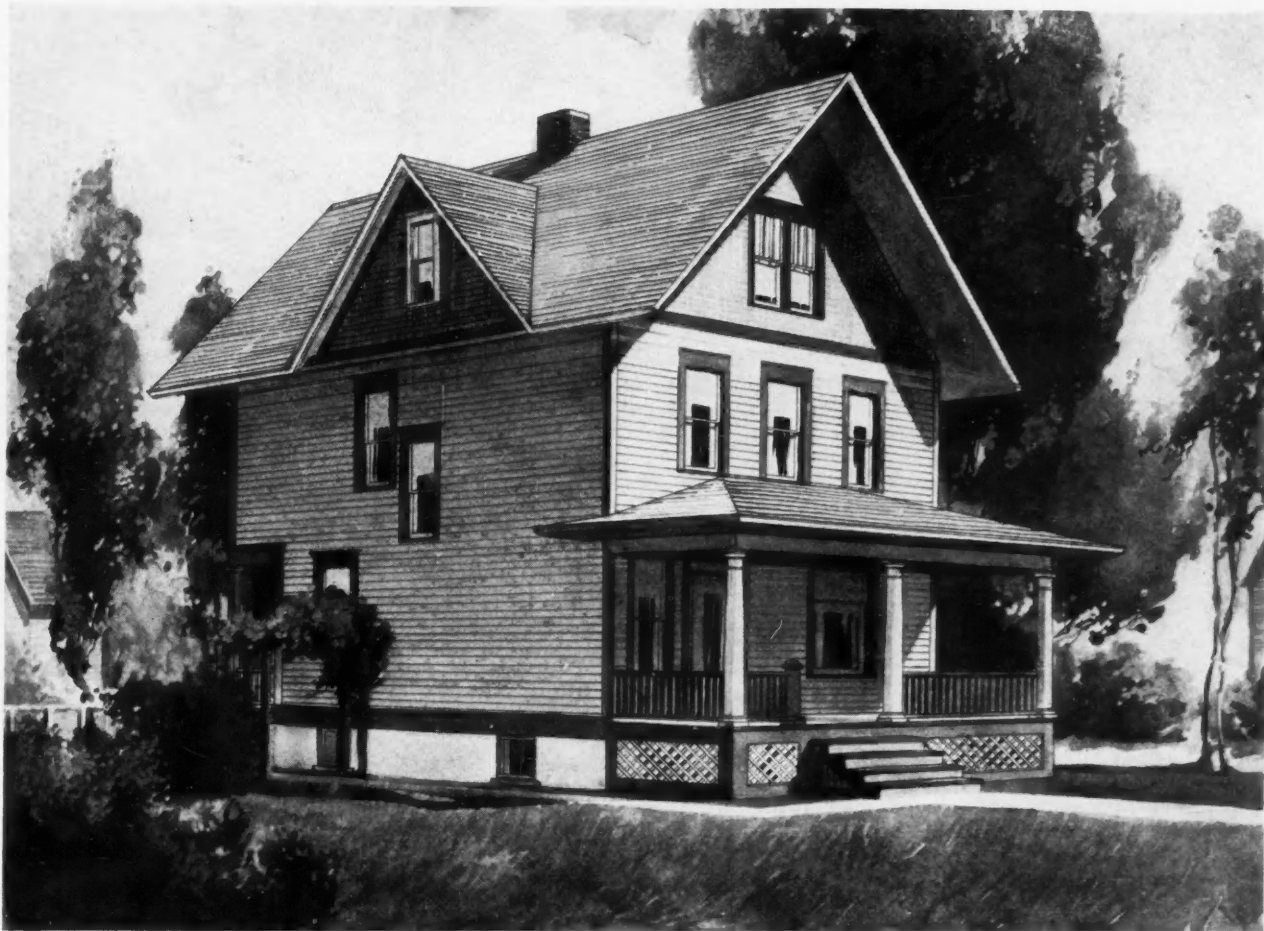




COMPLETE DETAILS OF INTERIOR FINISH FOR COMPACT SIX-ROOM RESIDENCE (DESIGN 6631) SHOWN ON OPPOSITE PAGE.



EXTERIOR DETAILS OF CONSTRUCTION, TO SCALE, OF COMPACT SIX-ROOM RESIDENCE (DESIGN 6631) SHOWN ON PAGE 56.



House of six rooms and attic, 26 by 30 feet in size. We can furnish complete blue-printed working plans and typewritten specifications for only \$8.00 per set. Blue-prints consist of basement plan; roof plan; first and second floor plans; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6579.

**Practical Six-Room House**

House plans that survive and are duplicated many times year after year must possess considerable merit or they would die out. Design 6579 is one of this sort.

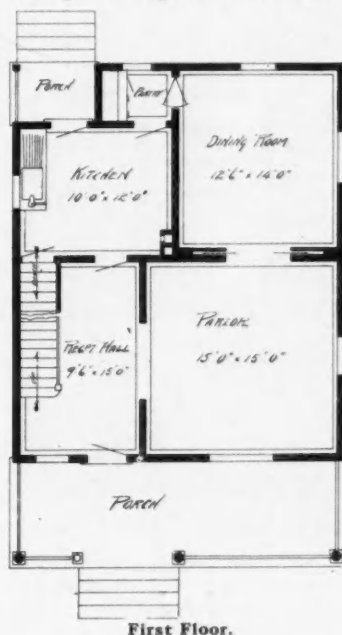
It is a square two-story house with attic, plain and simple in construction, which makes for low cost, because of the plain, straight work. There is a good seven and one-half foot concrete cellar wall for foundation, which gives the necessary height for head room and ventilation and to install a furnace with ample slope to the pipes.

There is also sufficient room for good, deep cellar windows to admit plenty of light to the basement. The side hall, with the stairway against the outside wall, gives a well lighted, comfortable appearing front entrance, with easy steps leading upstairs. This arrangement also provides the same width of stair with the same easy tread and riser to go down into the cellar from the kitchen. These are features in house building that have been sanctioned by good American housekeepers for generations.

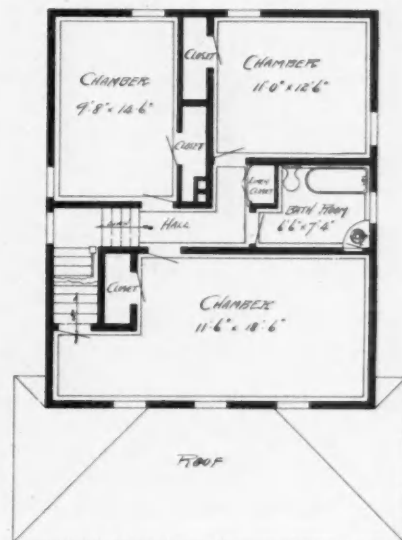
A house of this design is easily lighted, because light is admitted from every

side. There is a window over the kitchen sink, which also is directly in front of the kitchen range. Another window in the pantry admits considerable light through into the kitchen when

the door is open. This arrangement of the pantry doors gives a passage into the dining room that is well liked by most women because there are two doors, either or both of which may be kept shut.



First Floor.



Second Floor.

Arrangement of House, Size 26 feet by 31 feet.



An elegant home of generous propositions. Size 36 feet, 6 inches by 32 feet. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$8.00 per set. Blue-prints consist of basement plan; roof plan; first and second floor plans; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6633.

### Elaborate Cement Stucco Bungalow

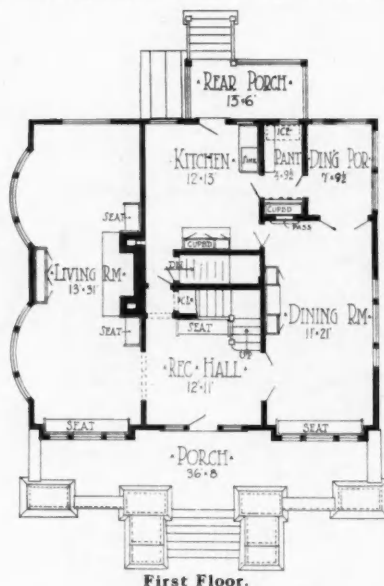
Chief among the special features of this beautiful bungalow is the great living room, 31 feet long, and occupying about one-third of the first floor. Two rounded bay windows with round roofs give a distinctive outside appearance to the sunny side of the house. This large living room is supposed to look toward the most interesting scenery. In the rear of this great room is a window set with fancy art glass, placed high enough above the floor to accommodate large pieces of heavy furniture underneath. There is a large fireplace in the center of the north side of this great room, which is designed especially to harmonize with its surroundings.

The wide roof projection over this end of the building is about equal to the projection of the small circular roof over the bays. The same effect is maintained in the front roof dormer, the corner gable and veranda projections.

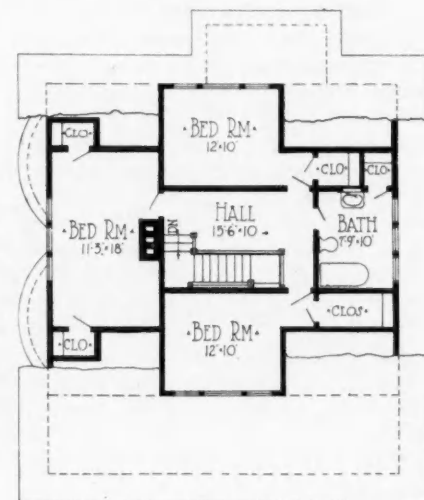
The front veranda is especially interesting from the manner in which it is built. The heavy front wall, with its corner piers and stepped center piers, present a massive front, which is both artistic and imposing. Spanning this front from one corner pier to the other, a distance of 30 odd feet, is an archway which supports the roof. This archway leaves the view through the front windows free from obstruction, and the artistic effect is especially pleasing.

The wide spreading bungalow roof style of dormer, the windows of which light the front bedroom upstairs, is another very pleasing feature in the construction of this splendid house. This dormer and the two large gable ends of the house are finished in the same

rooms is practically all stolen from the attic. The expense is principally in the foundation and lower story. While the bedrooms are well planned and nicely arranged with plenty of room, the idea of planning them in this way is a noticeable economy.



First Floor.



Second Floor.

Arrangement of House, Size 36 feet 6 inches by 32 feet.

general manner, but are not exactly alike.

To match cornices without making exact copies is an art in building that is being studied by leading architects.

In this house, the space for the bed-

The first floor plan shows a large reception hall of elegant appearance, due partly to the fine open stairway built of carefully designed artistic millwork.

Another interesting feature of this plan is the loggia dining porch.

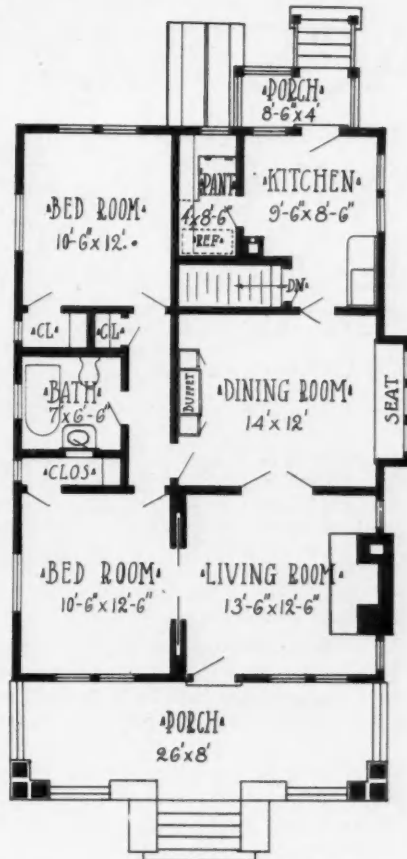
**Bungalow for Small Family**

Three good sized family rooms and two splendid bedrooms are laid out on the floor diagram of this attractive bungalow. The main part is only 25 by 38 feet, 6 inches in size, but the veranda across the front adds another ten feet to the depth of the building.

This veranda, by the way, makes an interesting summer addition to the bungalow, both as regards comfort and looks. Being covered by extending the main roof, it snuggles up close to the house proper in a comfortable, sociable manner, suggestive of ease and luxury.

This plan provides a good cellar with walls high enough to provide head room for a warm air furnace. There is an outside entrance to the cellar at the back, which is a great convenience when putting fuel into the cellar and when carrying out ashes. Again, on wash-days, an outside entrance is appreciated. It is much better than a window to let air into the laundry and to let the sudsy smell from the clothes boiling float out into the atmosphere instead of penetrating up through the house. Also it makes an easy exit to the clothes line in the back yard.

Bungalow cellars are larger than house cellars, and they should be well used to get returns for the extra excavation and cost of walls.



Main Floor Plan.  
Size 26 feet by 38 feet 6 inches.

The construction of this beautiful bungalow above the cellar wall is of the usual sills, joist and 2 by 4 studding, boarded outside with ship lap. Next is layer of building paper, worked around the windows in such a way as to double the important places. The window frames are made to include shingles under the outside casings, so the shingles are fitted close up to the frames and the casings close against the shingles. The shingles are nailed on the same as the roof, except that a greater butt surface is exposed to the weather.

Rough finish, dark brown brick are used for the chimney, because the effect matches up well with the shingle siding. The roof has a little steeper pitch than the regular bungalow construction calls for. Typical bungalow construction requires a very low ridge pole with roofs of slight pitch, but practically the rainfall must decide how a roof should be inclined.

The living rooms are on the sunny side of the house, with one doorway and an archway connection between the living rooms and sleeping rooms. The archway is built for the purpose of making the front bedroom into a library when only one bedroom is required. Both bedrooms are corner rooms, which gives an abundance of light and ventilation.



A pretty bungalow of five rooms, 26 feet by 38 feet, 6 inches. We can furnish complete set of blue-printed working plans and typewritten specifications for only \$5.00 per set. Blue-prints consist of basement plan; roof plan; main floor plan; front, rear, two side elevations; wall sections, and all necessary interior details. Specifications consist of twenty-two pages of typewritten matter. When ordering, ask for Design No. 6632.

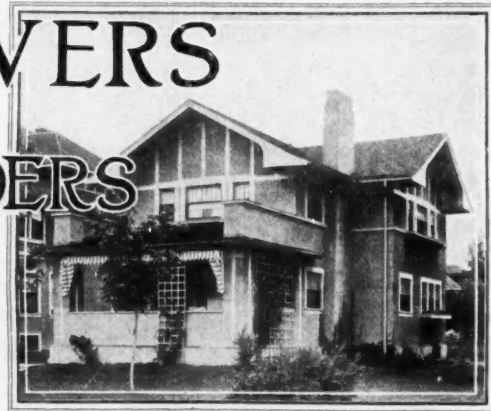


# SPACE SAVERS

for

## HOME BUILDERS

Model Building  
Designs Containing  
Newest Devices.



### Built-In Refrigerator is Iced from the Outside

Up-To-Date Home Design of Six Rooms and Three Screened Porches Featuring Extra Convenient Special Kitchen and Pantry Refrigerator Iced from Back Porch

IT has often been remarked that the fireplace with its cheery blazing fire is the *heart* of the home. If we may be permitted to carry this anatomical figure a little further we will declare that the kitchen refrigerator is the *stomach*. And even more important it is to the health and well-being of the family.

Physicians have constantly urged the necessity of clean, cold refrigerators for food storage. This, of course, is of first importance; yet even a sanitary refrigerator can be poorly placed,—in fact, very often is in many homes we see. So the consideration of *convenience* be-

With the outside icing door the iceman and his muddy feet are banished from the kitchen forever.

Realizing the importance of the refrigerator and its proper placing, we have prepared the accompanying set of plans, working in just the opposite from the ordinary way. Instead of beginning at the front of the house and working back, assigning whatever odds and ends of space there might be left (after planning the front rooms) to the kitchen and pantry, we began by laying out a model kitchen and pantry containing a built-in-place refrigerator, all planned exactly as we believe the business end

of the home should be planned; and after that was accomplished the remainder of the design got what was left. The result is certainly a model of a six-room modern residence.

Note that the refrigerator is built right in between kitchen, pantry and rear porch. There is a door to the food compartment on the kitchen side and also doors in the pantry to the food compartment. The box is iced from the porch. Ice-boxes usually take up a good deal of valuable space, but this one was planned for in advance and is fitted right into the wall and partition, so that it occupies the smallest possible space.



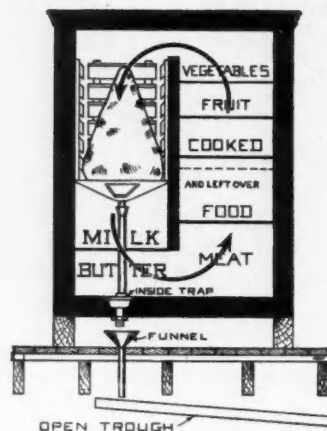
The New Way with Outside Icing Door. The Iceman Outside. No Dirt, No Bother.

comes highly important also.

In the planning of every house, the location of the refrigerator should be carefully thought out and determined in advance. It should not be placed in an exposed position where the sun will beat down on it, or placed close to the cook stove. The iceman with his monthly bill is the only one who benefits by a mistake of this kind. Also, the refrigerator should be placed where it is convenient to get at. It should be convenient to both kitchen and pantry; and according to the best approved modern ideas is iced from the outside.



Old Way with Refrigerator in Kitchen. Iceman Tracks Mud and Water on the Floor.



Section thru Built-in Ice Box, showing arrangement of Drain.

Of course, it is not necessary for a builder to attempt to construct this refrigerator himself. That would be neither desirable nor economical. Prominent refrigerator manufacturing concerns furnish a great variety of stock sizes and styles which are shipped "in the white" to be set in place by the builder and finished by him to harmonize with the rest of the woodwork. They also build many special made-to-order refrigerators to fit any special needs.

The cost of a built-in refrigerator is not more than one expects to pay for an ordinary well-built refrigerator. The

## Space Saving Built-in Refrigerator

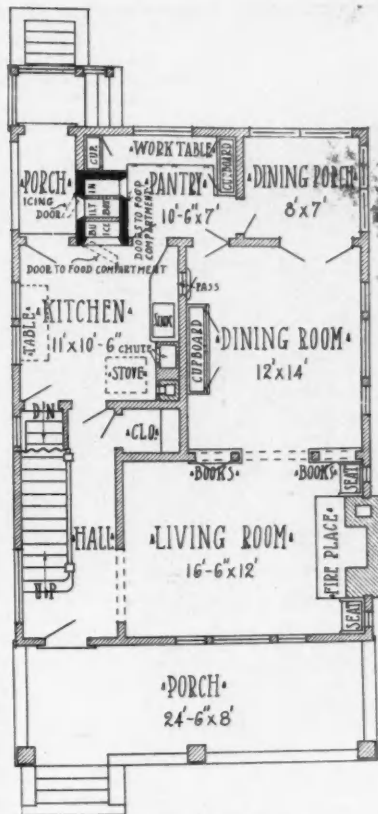
63

advantage in convenience and saving of space is all to the good.

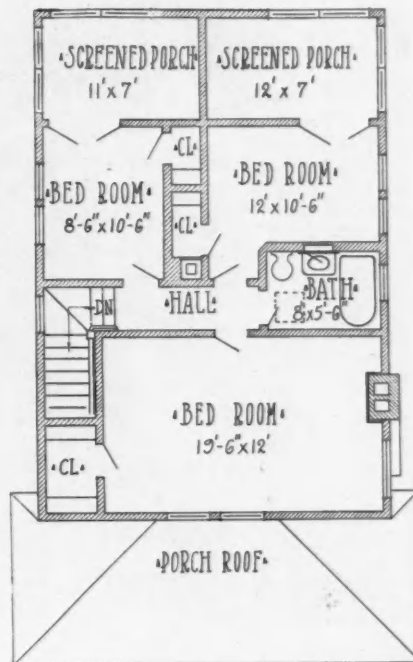
There is another advantage, too, attaching to the outside icing feature that is quite an economy. In the winter time no ice is needed. It is only necessary to leave the outside door open to keep the refrigerator and its contents cold enough. Usually, if a refrigerator is conveniently placed it is in the warm kitchen and must be iced the year round.

Make a careful study of the accompanying floor plans. Note the convenient arrangement of the kitchen with its well-lighted work table, sink and drain-board right by the range; see the extra large, well-lighted pantry with work table and cupboards, and equally short distance into either dining room or screened porch, which is used as a dining room in warm weather. The cellar stairs go down out of the kitchen, and there is also a clothes chute to the laundry below.

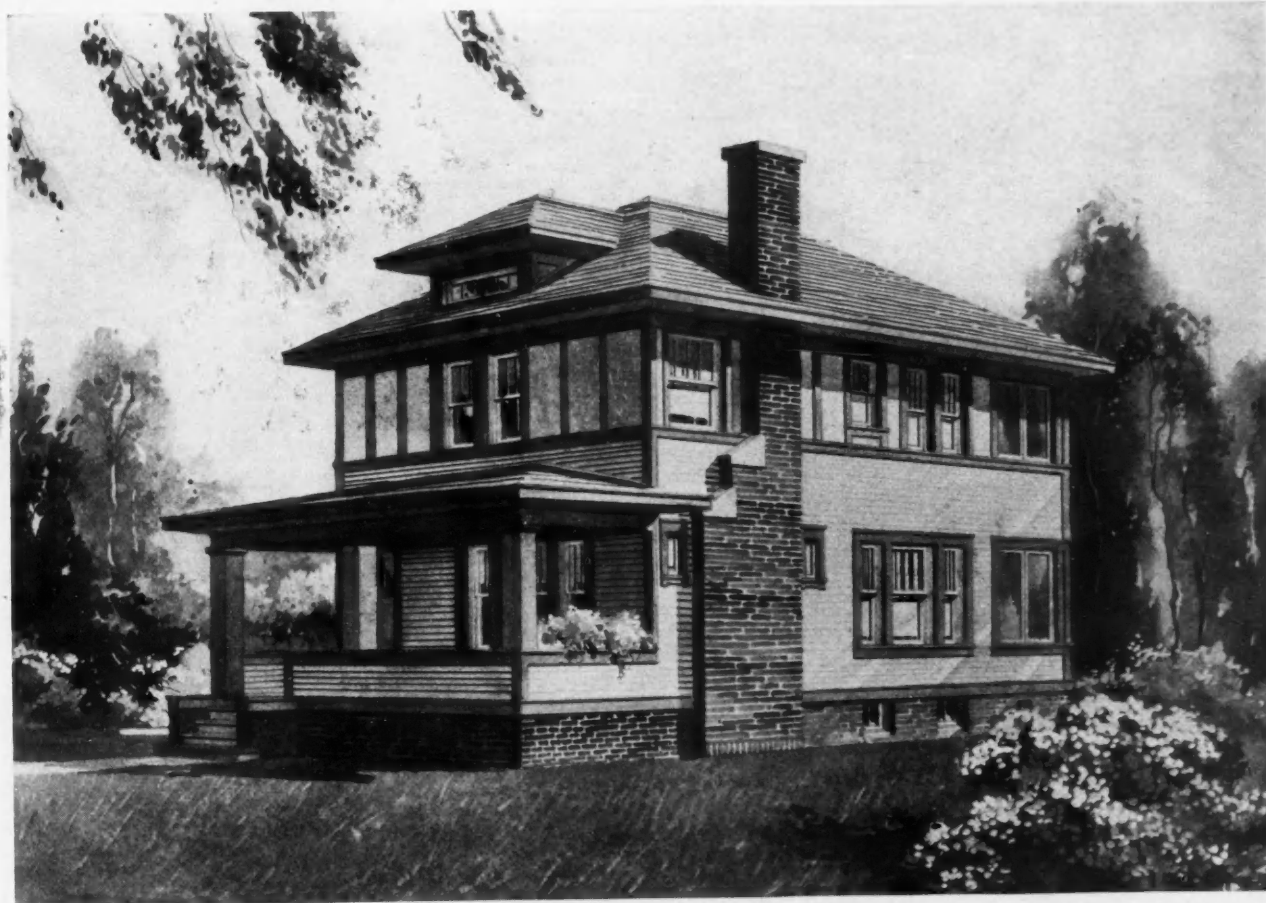
The dining room and living room are large and cheerful. On the second floor are three bedrooms, the front one very large, and the two smaller bedrooms each with a screened porch adjoining. These are features that are extremely popular and decidedly worth while.



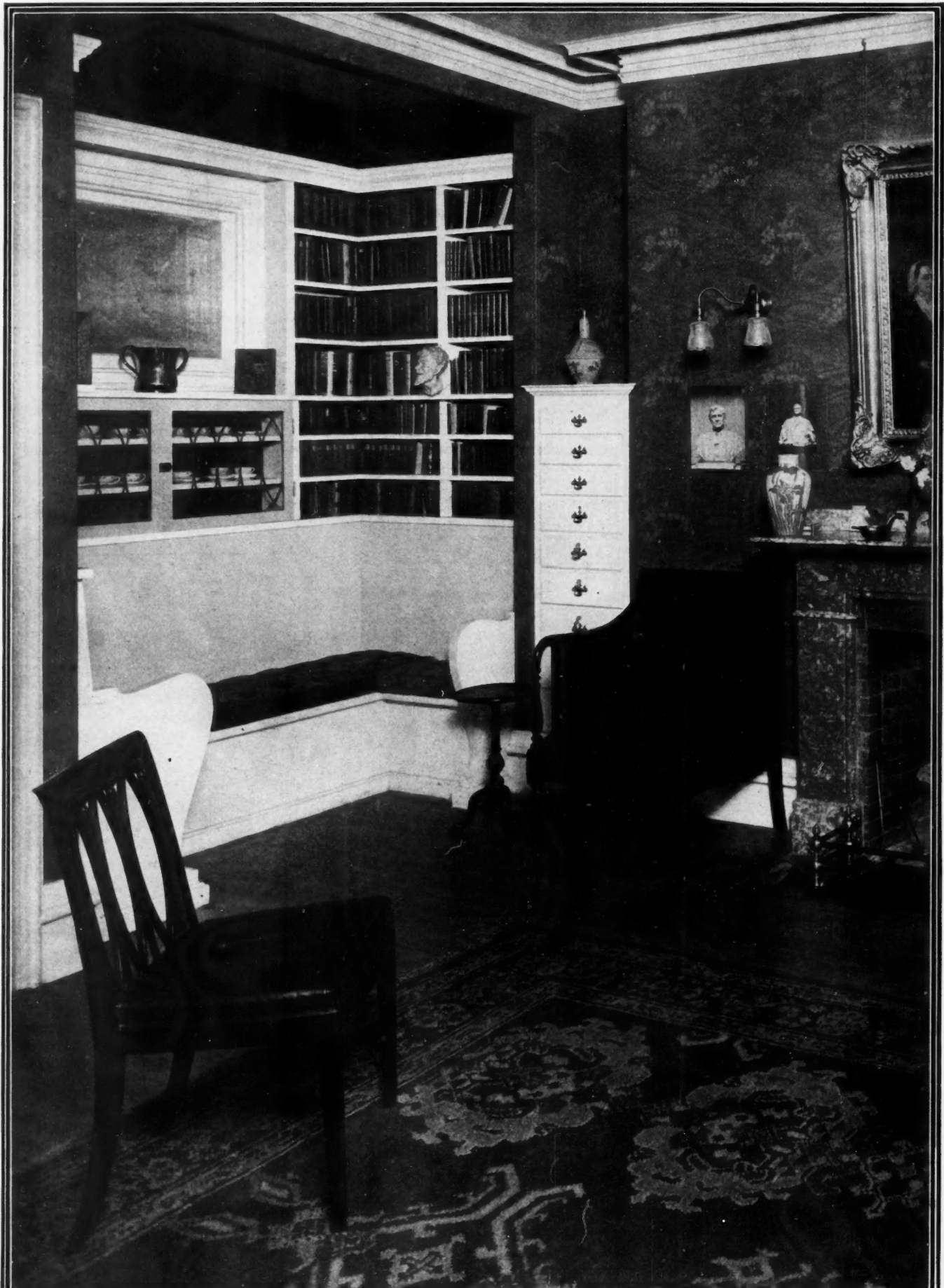
First Floor Arrangement of Residence Size 24 Feet 6 Inches by 35 Feet.



Second Floor Arrangement of Residence

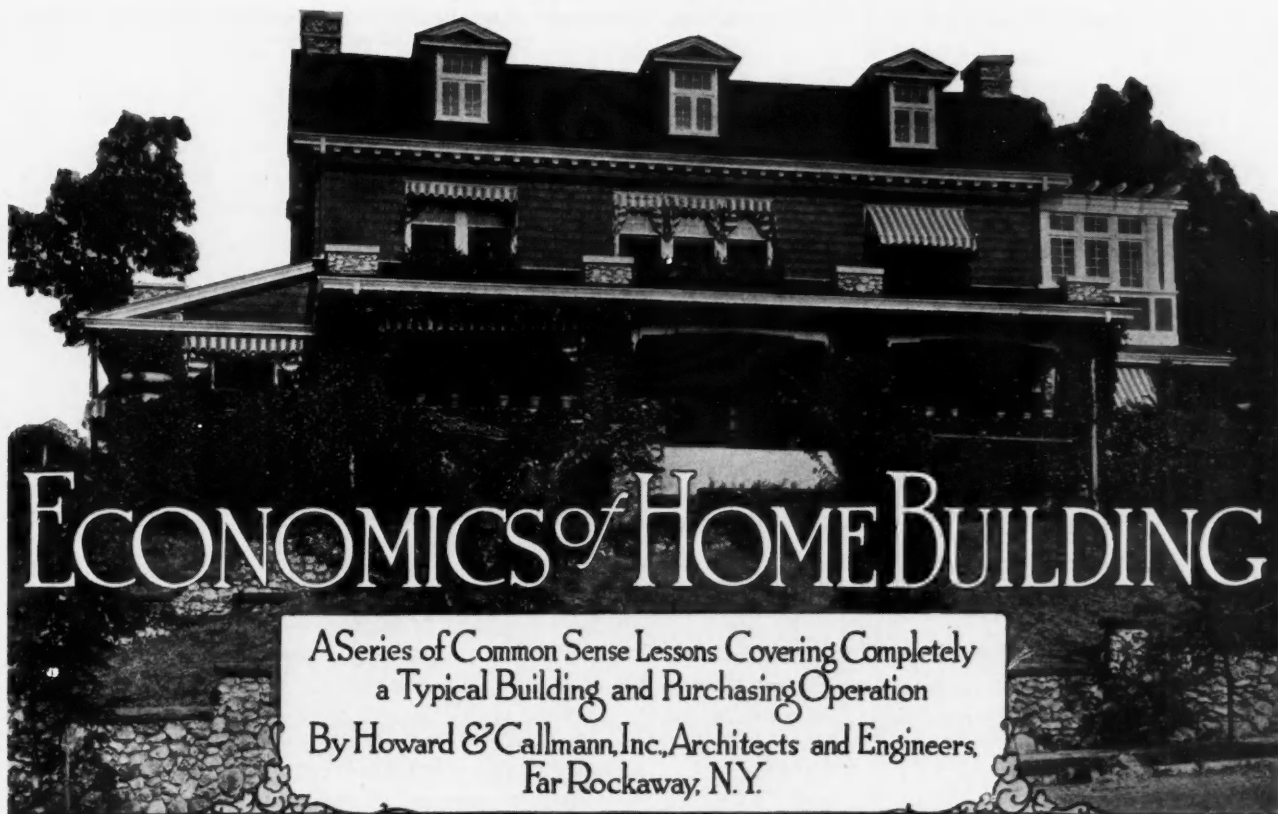


Modern Six-Room Residence Featuring Built-in Refrigerator of Special Convenience. A Very Interesting Design, Size 24' 6" by 35'. We Can Furnish Complete Set of Blue Printed Working Plans and Typewritten Specifications for Only \$7.00 Per Set. Blue Prints Consist of Basement Plan; Roof Plan; First and Second Floor Plans; Front, Rear, Two Side Elevations; Wall Sections; and All Necessary Interior Details. Specifications Consist of Twenty-two Pages of Typewritten Matter. When Ordering, Ask for Design No. 6629.



Photograph of Colonial Cozy Corner in a Connecticut Home. This is an Ideal Library of Just About the Capacity the Average Home Needs. The Open Book Shelves Invite the Use of the Volumes. The Nook is Lighted by a Broad High Window; a Trophy Cupboard is Built-in Below. The Big Upholstered Bench Clear Around the Nook Makes this a Much Used Corner of the Home.





# ECONOMICS OF HOME BUILDING

A Series of Common Sense Lessons Covering Completely  
 a Typical Building and Purchasing Operation  
 By Howard & Callmann, Inc., Architects and Engineers,  
 Far Rockaway, N.Y.

IN TWELVE PARTS—PART II

## How to Finance a Home Building Project

**L**AST month we selected a suitable building site for our new home; and then, after making sure the title was clear, proceeded to close the deal. We will now explain in detail how the building project is to be financed.

### A Purchase Money Mortgage

(32) When a purchase money mortgage is arranged for, the purchaser has to pay to the seller a further percentage of the purchase price in cash above the 10 per cent. deposit, which amount is agreed upon between the purchaser and the seller (30 per cent. additional should be the minimum). The purchaser then gives back a mortgage on the property to the seller for the balance of the purchase price, upon which the purchaser pays an annual interest of from 5 to 6 per cent., due in two installments semi-annually. It should be stated in the mortgage that the mortgagee will accept payment at any time during the term of the mortgage. These mortgages are usually made for a period of three years.

To illustrate: A purchaser buys a piece of property for \$2,500.00, paying to the seller in actual cash \$1,-

Explanation of "Purchase Money Mortgage"—Explanation of "Building Loan" and How to Apply for Same—Explanation of "Permanent Mortgage"—How to Work Out and Finance a House Building Operation (With Example)

000.00; he then owes a debt to the seller of \$1,-500.00 and he gives back to the seller a mortgage

on the property for this amount which secures the debt. (40 per cent. cash—60 per cent. mortgage.)

(33) *Building Loans.* When the property owner desires to build with the aid of a building loan, the purchase money mortgage has to be paid off. Building loans are procured from companies or individuals who make a specialty of this form of loan. The money is advanced to the borrower from time to time as the building is being constructed, and the interest commences from the date of each payment.

(34) Building loans are not attractive to the average investor in mortgages, owing to the investment being made in installments, the sliding scale of interest and the time necessary for the transaction. Loaning companies are organized for this purpose. They make building loans and on completion of the building they merge them into first mortgages, which they sell to private investors, as guaranteed mortgages, at a smaller rate of interest which compensates them for the guarantee and collection of interest and taxes.



Closing the Purchasing Deal.

The building loan should merge into a permanent mortgage without additional expense.

(35) *Commencing Work Without a Loan.* In case an owner has a certain amount of cash and desires to build, he can pay off the purchase money mortgage if there is one and commence the work. Payments can be made to the contractor up to the amount in hand; then a building loan can be procured to pay the balance due on the contracts. When possible this is the better way, as the mortgagee has an opportunity to see the character of the work.

**Mortgages**

(36) A mortgage is an instrument which secures a debt.

The giving of a mortgage works no change in the ownership of the property. The giver of the mortgage is still the owner.

Mortgages are usually made for a term of one to five years.

(37) The mortgagor should pay the interest, taxes and fire insurance promptly. Each installment should be paid on the day it becomes due, but in most mort-



The money is advanced to the borrower from time to time as the building is being constructed, and the interest commences from the date of each payment.

gages twenty to thirty days grace are allowed for payment of interest.

(38) When the interest and taxes are not paid it practically increases the mortgage, which reduces the security, and it becomes necessary for the mortgagee to "foreclose."

(39) Foreclosure means that the mortgagee brings an action at law to compel the mortgagor to pay the principal and interest, or the property is sold at public auction.

(40) If the mortgage is a safe one and the interest and taxes are promptly paid, the mortgagee may extend it for another term at maturity, or another mortgage can be procured by which this mortgage can be paid off.

(41) If the mortgage is extended, the cost of extension is slight, but if a new mortgage has to be procured, the expense will be about 3½ per cent on the amount of the mortgage.

(42) A safe mortgage means that it is not more than 60 per cent of the value of the house and grounds.

**Example showing How to Finance a Purchasing and Building Operation**

(43)

Purchase price for the plot of ground.....	\$2,450.00
Expense: Tax, search, and recording fee..	50.00
	<hr/>
	\$2,500.00
Cost of building complete, with all expenses (see itemized list).....	7,500.00
	<hr/>
	\$10,000.00
60% of \$10,000.00.....	\$5,000.00
Amount of building loan.....	6,000.00
	<hr/>
	6,000.00
Cash required .....	\$ 4,000.00

**EXPENSES IN CONNECTION WITH THE BUILDING LOAN OF \$6,000.00.**

Brokerage and legal fees, approximately 3½% on amount of loan, \$6,000.00.....	\$210.00
Interest on each advance of the loan:	
6% for 6 months on \$2,000.00.....	\$60.00
6% for 3 months on 1,300.00.....	19.50
6% for 3 months on 1,300.00.....	13.00
	<hr/>
	92.50
	<hr/>
	\$302.50

The final advance is made when the building loan is merged into a first mortgage, and the interest from that date is not part of the cost of the building.

**ITEMIZED LIST SHOWING COST OF BUILDING**

Carpenter and Mason work.....	\$4,849.00
Plumbing and Gasfitting.....	700.00
Steamfitting .....	450.00
Painting and Finishing work.....	300.00
Electric wiring and bell work.....	130.00
Gas and Electric fixtures.....	125.00
Full length fly screens.....	100.00
Grading and Paths.....	150.00
	<hr/>
	\$6,804.00
Architect's fees, 5% on \$6,804.00.....	340.20
Expense of Building Loan.....	302.50
Insurance .....	19.28
Contractor's bond, ½ of 1% on \$6,804.00..	34.02
	<hr/>
	\$7,500.00

If the plot of ground has increased in value since the purchase, it will reduce the amount of cash the owner has to supply at the rate of 60 per cent for every dollar the value has increased above the \$2,500.00 purchase price.

**THE ANNUAL CARRYING CHARGES**

5½% on \$6,000.00.....	\$330.00
Taxes, approximate .....	100.00
Fire Insurance .....	19.28
Water Tax .....	30.00
	<hr/>
	\$479.28
Rent .....	\$900.00
Carrying Charges .....	479.28
	<hr/>
Balance .....	\$420.72
Less Repairs and Painting.	

(44) A house and ground costing \$10,000.00 should bring in an annual rental of at least \$900.00. Thus it will be seen that there is \$420.72 return on a total outlay of \$4,000.00 (over 10 per cent). The owner

therefore could live in a house for \$479.00 per year that would cost him \$900.00 to rent, by investing \$4,000.00 in cash.

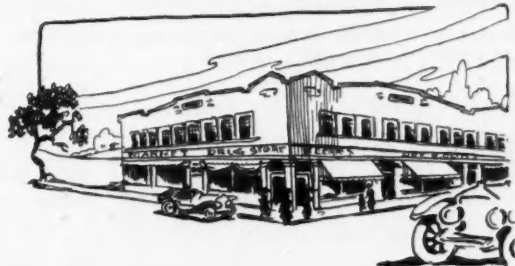
If the right site has been selected and the building built economically, there is always the possibility of the property increasing in value.

**Example.**

- If the cost of a house and plot of ground is \$8,000.00
- What should the ground cost?
- What should the building cost?
- Figure out the expenses.
- Figure out the amount of mortgage.
- Figure out the carrying charges.

**The Subordination of a Purchase Money Mortgage**

(45) In some cases those who make a business of building have two mortgages on their property. This is done to reduce the amount of cash necessary for



Special Inducements are Often Offered to Builders of Store Buildings as they Encourage other Building.

the operation. For instance, some development companies who desire builders to erect buildings on their property to create activity and induce the public to buy land, are willing to accept a percentage of the purchase price in cash, and subordinate the balance to a building loan and permanent mortgage.

(46) To illustrate: A purchaser buys a piece of property for \$2,500.00 and pays in cash 40 per cent of this amount, which is \$1,000.00, the seller accepts a second mortgage for \$1,500.00, which is subordinated to a first mortgage up to a specified amount. The object of specifying the amount is to prevent the first mortgage being made so large that the second mortgage would be without sufficient security.

(47) For instance: Suppose a house and plot is valued at \$10,000.00; and an exceptionally large first



The Loan Companies Require a Survey of the Plot showing the actual location of the Building.

mortgage was given for \$7,500.00 and the seller subordinated to the \$7,500.00 first mortgage a second mortgage of \$1,500.00 for part of the purchase price; the second mortgage would be without sufficient security.

**How to Apply for a Building and Permanent Loan (48)**

APPLICATION FOR LOAN ON BOND AND MORTGAGE TO THE ..... COMPANY

Application is hereby made for a Building and Permanent Loan of \$6,000.00 for Three Years on First Mortgage.

If the cost of a house and plot of ground is \$8,000.00  
 Owner: John Smith, Broadway, New York.  
 Bond of: Mary Smith, Broadway, New York.  
 Location of Property: West side of Linden Avenue.  
 Distance from Nearest Cross Street: 100 feet N. from N. W. corner of Elm Street.

Size of Ground: 50 x 100.

No. of Stories: Two and Basement.  
 Building Material: Concrete Foundation, Frame and Stucco.

To be Used: For a Dwelling.

Cost of Building.....\$ 7,500.00  
 Value of Grounds..... 2,500.00

Total .....\$10,000.00

Signature of Applicant: John Smith.

A set of plans and specifications must be submitted with the application.

A three or five-year mortgage is called a permanent loan to distinguish it from a building loan which terminates at the completion of the building.

The company to whom the application is made employs experts who place a value on the proposed building from the plans submitted, visit the site to ascertain its value and usually offer a 60 per cent mortgage on the house and ground.

*Advances by the Loaning Company to the Owner.*  
 The first advance by the loaning company to the owner is made on the rough enclosure; second, on the brown mortar; third, on the standing trim and the balance upon completion. Before making the first payment the loaning companies require a survey of the plot showing the actual location of the building. This is to show that the building does not encroach beyond the restricted lines or on the adjoining property. When the brown mortar is on, about 50 per cent of the loan is advanced. The company is safe in advancing this amount, as they have the building and the ground as security.



To be continued in December  
 American Carpenter and Builder



**AT RANDOM.** Is there any one working on an invention that will take care of mill waste, such as to throw stops and blocks into a vat of some sort and be treated so they will become a sort of gelatine and solidity, into a workable wood? Yes?

I saw a stair builder put a large drum sander on the fritz once, by running treads through with the return nosings tacked on—only he did not have them tacked on strong enough. Two of the returns came off, got down on the rolls and made a wreck that looked like a nigger that tried to start something at a Hibernian picnic.

WM. C. JASBURY.



## Noon Hour Talks by the Boss Carpenter

### Talk No. 28—Stresses in Queen and Scissors Trusses

THE BOSS SHOWS HOW TO CONSTRUCT SNOW AND WIND LOAD STRESS DIAGRAMS FOR A QUEEN TRUSS, AND DEAD LOAD STRESS DIAGRAM FOR A SCISSORS TRUSS

“IN Talk No. 26,” said the Boss, “I showed you fellows how to find the dead load stresses in an ordinary six-panel queen truss. In Talk No. 27, I gave you a table showing the snow load to be used in a given locality for a roof of a given pitch, also a table of wind pressures to be used in finding the loads for the wind diagram. These tables are to be used in connection with our talk today and will be handled in just the same manner that they were in the truss which was worked out last time.

“You saw that the snow load stress diagram shown in Fig. 17, Talk No. 27, was just the same in detail of construction as the dead load diagram for this same truss shown in Fig. 12, Talk No. 24, except that the loads at the joints of the upper chord were different. Instead of actually constructing another case of this kind for the queen truss, all that is necessary is to find the proper joint loads from the table of snow loads in Talk No. 27 and the dimensions of the truss, and use these loads just as the dead loads were used in Fig. 16, Talk No. 26. For example, if the truss shown in Fig. 16 is  $1\frac{1}{4}$  pitch and used on a building in the Central States, the snow load per sq. foot of roof surface given in the table is 20 pounds. If

the trusses are space 12 feet apart on centers on the building, and if the distance between joints on the upper chord is 10 feet, then the load per joint would be  $12 \times 10 \times 20 = 2400$  pounds. As before, each end joint of the truss would carry one-half of this load, or 1200 pounds. These values would be used in laying out the load line for the stress diagram due to snow. I do not believe that we need to go into this matter with greater detail.

“On account of the different shape of the wind load stress diagram, we will follow out the principles shown in Fig. 19. As you will find by turning back to Fig. 16, Talk No. 26, the truss is the same one that we have worked with before. Since all of the reasoning which was given in connection with Fig. 18, Talk No. 27, will apply equally well in this case, we will omit that part of the talk and go straight to the construction.

“The loads at the joints are obtained from the table of wind pressures in Talk No. 27, and the area of roof to be supported by one joint. If the dimensions are

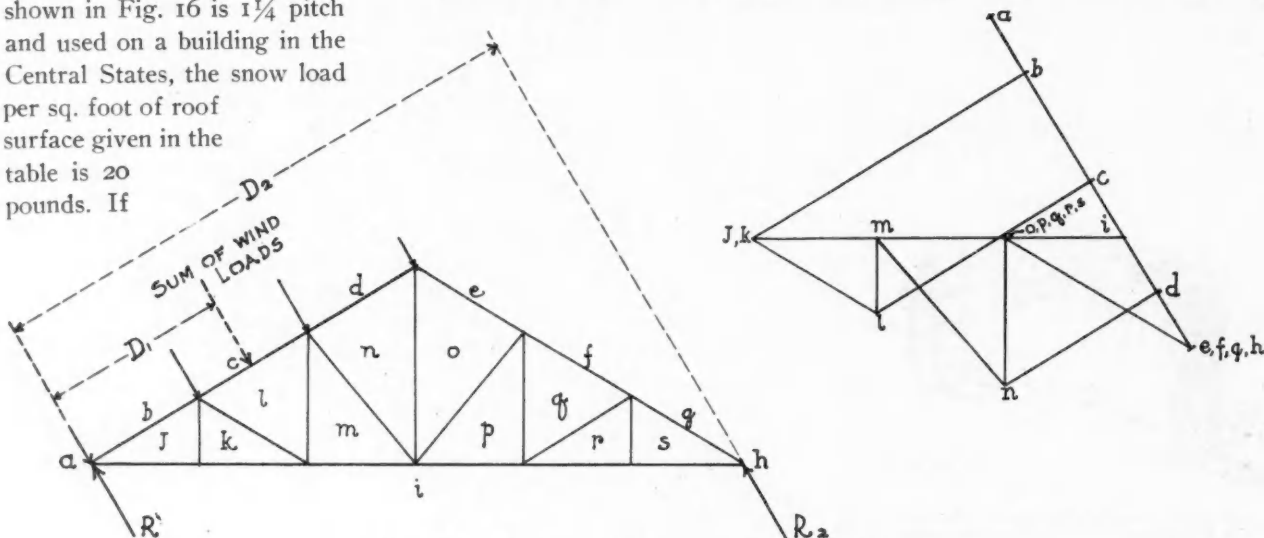


Fig. 19. Wind Load Stress Diagram for Six-Panel Queen Truss.

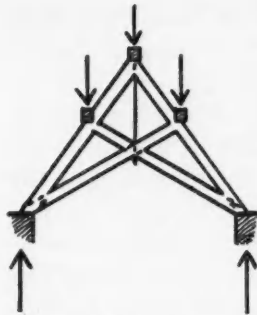


Fig. 20. Simple form of Scissors Truss.

as given above, the full joint loads would be  $12 \times 10 \times 24 = 2880$  pounds. The value 24 is taken from the table of wind pressures and corresponds to a  $\frac{1}{4}$  pitch roof. Again, the joint loads at the leaves and the ridge are each one-half of 2880, or 1440 pounds.

“Draw the load line in a direction perpendicular to the slope of the roof and lay of the joint loads to scale. This procedure is shown in Fig. 19. The load line is easily handled until the supporting force, *hi*, is reached. At this point it is necessary to make use of the graphical construction shown in Figs. 18 and 19, and also the rule for calculating the reactions or supporting forces which was given near the close of Talk No. 27. The distances  $D_1$  and  $D_2$ , shown in Fig. 19, are to be measured direct from the scale drawing of the truss. The supporting forces  $R_1$  and  $R_2$  are perpendicular to the slope of the roof and parallel to the large dotted arrow which represents the total wind pressure on the side of the roof as acting like one force located at the middle point of the side of the roof. Construction for

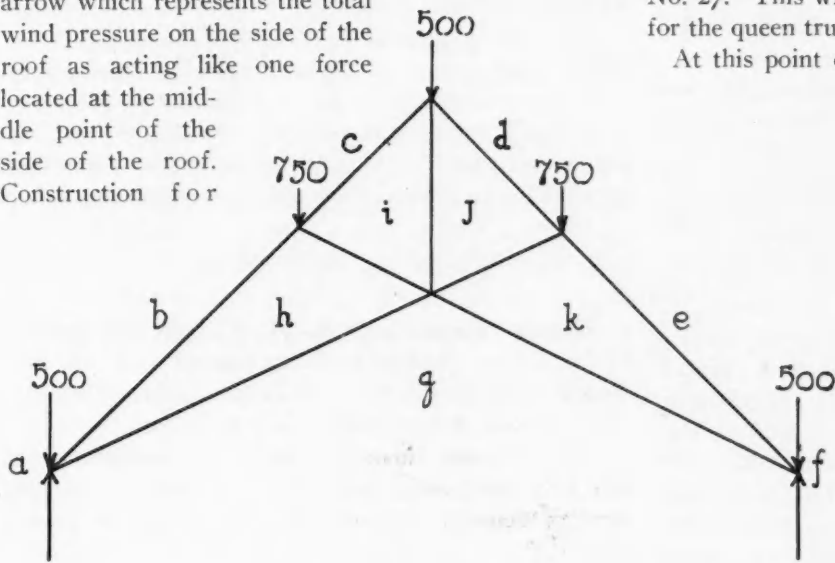


Fig. 21. Dead Load Stress Diagram for Simple Scissors Truss.

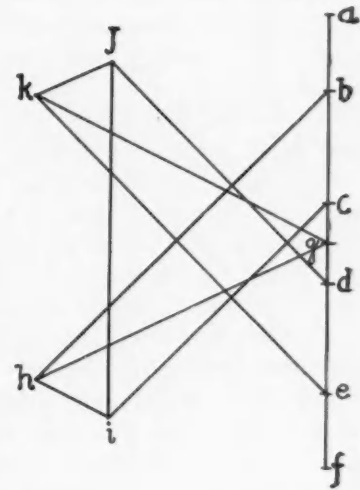
the distances  $D_1$  and  $D_2$  should be made very carefully if your results are to be of value. After  $R_2$  is found by the rule given, lay off the value to scale up the load line. This will locate the point *i* on the load line. The value of  $R_1$  should be calculated also to serve as a check. If  $R_1$ , when laid off to scale from the point *i*, does not check back into the point *a*, something is wrong with the laying out of the load line or the calculation of  $R_2$ . These matters should be checked carefully before attempting to complete the stress diagram.

“The lines *bj*, *cl*, *dn*, *kl*, etc., are drawn parallel to their respective members in the truss just as in previous cases. It will be noticed that the stress in the tie *jk*, due to the wind, is zero. The fact that the letters *j* and *k* fall on the same point, indicates that

the line in the stress diagram which represents the stress in the member *jk* has no length, therefore this member has no stress in it, since the amount of stress in a member is found by reducing the length of the line representing the member to pounds according to the scale used in laying out the load line. Similarly, the fact that the letters *o*, *p*, *q*, *r*, and *s*, all fall at the same point indicates that there is no stress in the web members of the truss to the right of the middle tie rod when the wind is blowing on the left side of the roof. Also, since *p*, *r* and *s*, all fall at the same point it indicates that the stress in the lower chord is equal at all parts to the right of the center tie rod when the wind is blowing on the left side of the roof. A similar statement can be made in regard to the stress in the upper chord, based upon an inspection of the stress diagram.

“After the diagram is completed and all letters accounted for, all that remains to be done is to measure the length of the lines, multiply them by the scale used, examine as to tension or compression by Bow’s notation which has been explained in detail, and insert the values in a stress table like that shown in Talk No. 27. This will complete the work on the diagrams for the queen truss.”

At this point one of the men asked the Boss if he



did not have time to work out the dead load diagram for the simplest form of scissors truss which is often used on buildings where the roof is  $\frac{1}{2}$  pitch or over and not over 30 feet in span. He referred to Fig. 6, Talk No. 22, as an example of this form of truss. (See Fig. 20.)

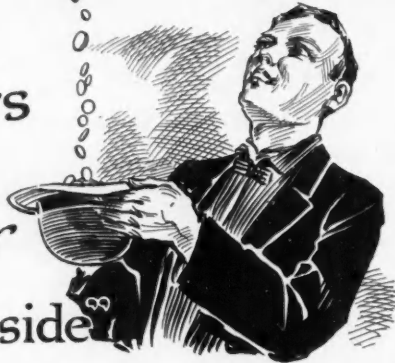
The Boss turned back the pages of the “log book” until he reached the truss referred to, and copied an outline of the truss on a fresh sheet, as shown in Fig. 21.

“Since we have no real loads,” said the Boss, “we will take an imaginary set. These will serve our purpose just as well, in order to see how the diagram should be constructed, and you all know how to find

(Continued to Page 71)

# Extra Profits

How  
Builders  
make  
Money  
"On the side"



## PRIZE LETTER: Big Profits in Metal Weather Stripping

Extra Profits Editor, \_\_\_\_\_, W. Va.

AMERICAN CARPENTER AND BUILDER:

This evening is the first opportunity I have had to look over the October AMERICAN CARPENTER AND BUILDER, and I note your Extra Profits Department. I have had an experience in this line which I feel I ought to tell you.

The better part of my building experience of some twenty odd years was acquired in a shop making odd size sash, doors, blinds, etc. We are experiencing now, and have been for some time, a local business depression in our line, and do not have much to do. I was shown a bill for \$115.00 paid for some metal weatherstripping done for an attorney friend of mine; for thirty-eight openings, some of which were transoms, and I came to the conclusion that someone was making some profit. I noticed in the September AMERICAN CARPENTER AND BUILDER three metal weatherstrip ads. I immediately wrote to all of them, and received their information, samples, etc. I selected the one I thought the best and sent a deposit for models and also for material for the north and west sides of my house. I also established a credit with the house through one of our local banks.

When the models arrived I started to solicit orders for work, and in 15 hours (not including time spent after working hours I had signed up over \$250.00 worth of work, not including my own house. I finished installing my first job yesterday, for which I received \$56.00. The material, freight and drayage cost me \$17.85. The time I spent selling and installing the work was 54 hours. My wages, when working in the shop, have been for several years 30c per hour. The job referred to was an old house, and it took one day to prepare six doors for the weatherstrips.

I am sure I shall make even more on some of the other jobs and I am sure I will get enough work to last me at least a goodly part of this winter.

A CHARTER SUBSCRIBER.

(Name and address withheld by request.—EDITOR.)

## Sells Window Ventilators at Good Profits

Extra Profits Editor, Topeka, Kan.  
AMERICAN CARPENTER AND BUILDER.

I have always been a great lover of fresh air. Being somewhat delicate when a boy, and on the advice of our family doctor always slept either outdoors or in a well ventilated room; this probably accounts for my firm belief in fresh air all the time. Deeming it wise to choose an outside occupation, I decided upon the carpenter trade. This brings me to the point I am trying to bring out in this extra profits letter. During the past three or four years, or ever since sleeping porches have become such a fad, I have made it a practice to visit parties who I think would be interested in a good system of ventilation during the winter months when the use of sleeping porches in this climate is impracticable. I specialize with the Berry window ventilator, advertised in the AMERICAN CARPENTER AND BUILDER, and always carry a small sample with me and give prospective customers telephone or residence number of satisfied patrons. I find that during dull times in the carpenter trade I am able to pick up neat little sums from this source. The work is pleasant and the Berry Ventilator is not hard to apply.

Not much argument is necessary and it is not essential that one be a fluent talker, because nearly everyone realizes that fresh air is absolutely necessary to maintain one's health properly. With a Berry Ventilator and ambition there is no reason why extra dollars cannot be made during otherwise dull times.

W. W.

(Name withheld by request.—EDITOR.)



## Home Building—Real Estate—Rental Agency—Insurance

Extra Profit Editor, Winston-Salem, N. C.  
AMERICAN CARPENTER AND BUILDER.

In combining home building, real estate, rental agency, and insurance we have a combination that brings home the bacon when it comes to "extra profits."

As for real estate we exchange, buy, or sell everything in real estate, but at all times put emphasis on "building lots," "beautiful home sites," etc. In this way we attract and get in touch with home seekers. Some of these home seekers have property in other parts of our city and "will buy a nice building lot and build if I can dispose of my property." While the building fever is running high in our prospect we get his lowest price on his property and look for a buyer. If we handle his property it is at a profit, and if we sell him another lot it is for another profit, or if another dealer handles his property we still have a good chance to sell him our lot, for we have interested him in building.

Our prospect has now bought a lot through us or another dealer—it matters not—he has the lot and wants to build. Yours truly must now make a noise

and having a training in architecture, and am a draftsman, I go after the building of the house. Sketches, plans, and finally working drawings are made without obligating our prospect, but with the understanding that he will pay for the drawings at an "extra profit" should we not get the job. Drawings and specifications are complete and bids are in order. If our bid is right we get the job, because of the price and of the merit of our work.

Before I go into our system of building I want to introduce a man who is "a jack at all trades and good at just as many," originally a plumber of reputation but now a salesman, still a plumber, a collector, and can do anything he has seen a mechanic do once. "Mac" is on the job as well as being on a salary.

Our carpenter work is sublet to a boss carpenter or contractor who works himself and figures his profit to amount to the equivalent to good wages for himself. We then turn the plumbing and wiring over to this man, "Mac," from which we get more profit than if it were done by sub-contract. If we get the job we make a nice profit, and if we lose it we get a profit on the drawings, which yours truly has prepared while officiating as Secretary and Treasurer of the company.

Being rental agents we have rents to collect. Not everybody can collect rents, but this man, "Mac," has the gift of gab that brings forth the rents when due and splits his time between this and plumbing. Any ordinary repair work to be done to any tenement house, this man does it and we get an "extra profit" from the owner.

Insurance might be called our side line. We do not spend any time or good money pushing insurance, but when we complete a house we gain an "extra profit" by writing a policy.

A few months ago we sold a young man a lot, on which he intended building a house when he paid for his lot. We charged him a good price, for he bought on easy terms, and we gained an "extra profit" when he sold his farm and paid for his lot a few weeks later. We prepared plans for his house and wrote specifications, but we lost the job. He is a plumber and his father a contractor.

We can build a house for any man who owns a lot. We let him pay on easy terms, and in case we get more on our book than we can conveniently carry we turn him over to a building and loan association

## Cash Prizes for Personal Experience Letters About EXTRA PROFITS

There are many ways in which carpenters and builders pick up considerable money "on the side." There are any number of popular building novelties and pieces of modern equipment for buildings that are being sold by carpenters and builders.

For the best letter each month we will pay \$10.00 (in goods selected from our advertising pages); also \$1.00 (in advertised goods) for every other letter published.

Study through our advertising pages and note the variety of interesting offers for carpenters and builders to act as local agents. There seems to be good opportunities for profits in connection with each of the following:

Dumbwaiters	Metal Ceilings	Door and Window
Store Fronts	Metal Shingles	Screens
Ventilators	Weatherstrips	Lighting Systems
Skylights	Wood Mantels	Lightning Rods
Silos	Wall Board	Detachable Hinges
Furnaces	Floor Finishing	Keyless Locks
Bath Room Outfits	Steel Roofing	Shingler's Chairs
Vacuum Cleaners	Waterproofing	Clothes Driers
Coal Chutes	Gliding Casters	Popcorn Machines

We would like to hear from builders who have had experience in handling any of these. Your advice and encouragement may be worth many dollars to other builders. Address EXTRA PROFITS Editor, AMERICAN CARPENTER AND BUILDER, Chicago.

and get our money, letting our client make his payments to the building and loan association. An "extra profit" for us.

With these four lines we have only three men on a regular salary, and the amount of work we do determines the expense.

"Extra profits" worth mentioning are outside drawing at odd times, small plumbing jobs when convenient, and Notary Public fees.

C. S. NOBLE,  
Secy. & Treas.,  
Realty Exchange, Inc.

P. S. I am like the

little boy who sat on the block of ice, "My tale is tole." I hope you can use it.



## Stresses in Queen Trusses

(Continued from page 69.)

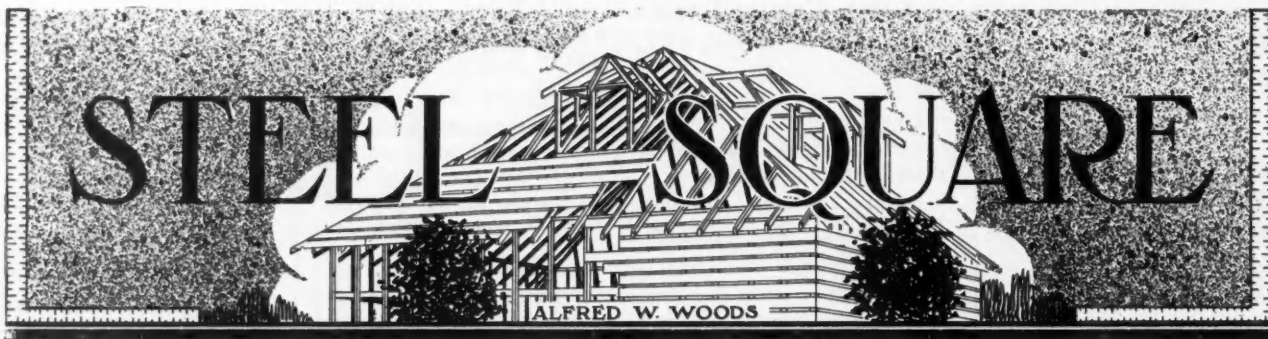
real loads in any case when you have the dimensions of the building and kind of roof given. You will remember that Talk No. 25 explained this part of the work.

"After we have the outline showing the true shape of the truss drawn to a given scale, lay off the joint loads on the load line according to another scale as already explained and as we have been doing in our other problems. The lines of the dead load stress diagram should then be drawn in the following order, taking care that they are exactly parallel to their respective members of the roof truss: Draw *bh* and *gh* (*g* is half-way up the load line in this case); then *ci* and *hi*; *ij* and *dj*; *jk* and *ek*; and close the diagram by drawing *gk*. The lengths of these lines measured off to the same scale as the load line will give you the stress in the members due to the dead load.

"Bow's notation tells us that the kinds of stress are:

<i>bh</i> , compression	<i>ij</i> , tension
<i>ci</i> , compression	<i>dj</i> , compression
<i>hg</i> , tension	<i>ek</i> , compression
<i>ih</i> , compression	<i>jk</i> , compression
	<i>gk</i> , tension

"The snow and wind load diagrams would be drawn in just the same way as those which we have constructed in the last two talks, and should give you no trouble. Try them tonight, and if they do not come out as you think they should, bring your diagrams to me tomorrow and I will tell you what your trouble is."



## Freak Roof Framing

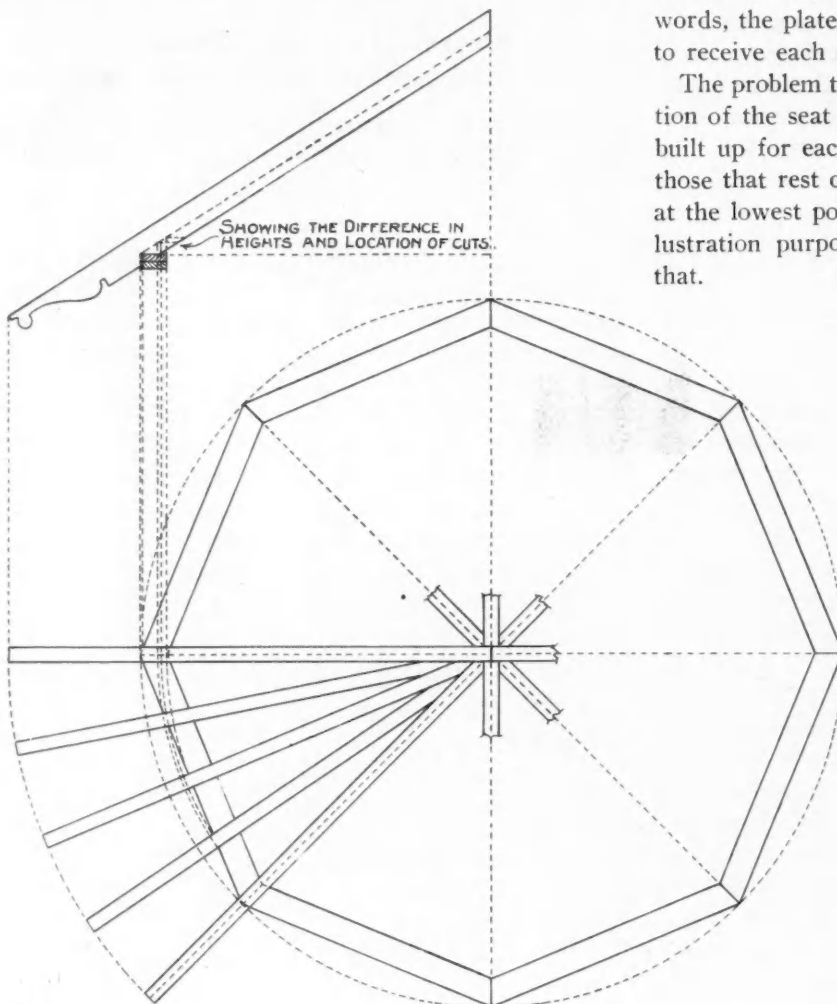
FREAKS ARE TO BE FOUND EVERYWHERE IN ALL LINES OF WORK AND CERTAINLY ROOF FRAMING IS NO EXCEPTION—POSSIBILITIES OF THE STEEL SQUARE

By A. W. Woods

**R**ECENTLY we were asked how to proceed to frame a circular roof to rest on an octagon base and to have a raking cornice with exposed ends of the rafters. To carry out the scheme, it will be noted that while the rafters will remain the same length and pitch, the seat cut must vary in location for each set of rafters. That is, there would be eight (8) like rafters to rest on the corners of the octagon

and sixteen (16) for the rafters that rest next to the corners and sixteen (16) for the next set and continue at that number, unless there happens to be an odd number of rafters between those that rest on the corners. Now, as we said before, we have a problem of the same length and pitch of rafters, but with a shifting seat cut to catch the plate; and to do this the plate cannot be on a level, but must vary for each set of rafters to meet the shifting of the seat cut. In other words, the plate must be built up to the proper height to receive each set of rafters, as above mentioned.

The problem then is how to arrive at the proper location of the seat cut and the height the plate should be built up for each set of rafters. Now, as the seat of those that rest on the corners of the octagon will rest at the lowest point, we will take that as a base for illustration purposes and work out the problem from that.



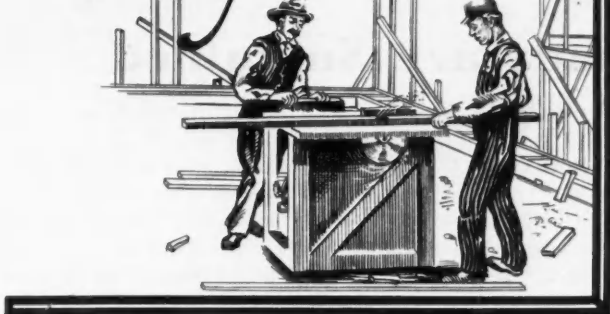
Details of Roof Framing of Eight-Sided Tower.

Since the method applies to any pitch, we will not take a specific example, but proceed on the broad rule that the run and rise will give the seat and plumb cut.

However, this example presents an unusual problem of different runs and rises in the same roof and yet all of the same pitch, consequently the run and rise of any of the rafters will give the seat and plumb cut for all of the rafters itself as a question of location of the cuts to one another. So we start out with the elevation of the rafter that rests on the corner, as shown in the illustration, and from it determine by scale, say one inch to the foot,—which if accurately done, will answer for practical purposes the proper points involved in framing a roof of this kind. This needs no further explanation.



# Making Power Woodworkers Pay



## Hard Work Brings Success

WIDE-A-WAKE COUNTRY CARPENTER DEVELOPS A  
PORTABLE POWER WOODWORKER THAT  
BRINGS HIM THE BUSINESS

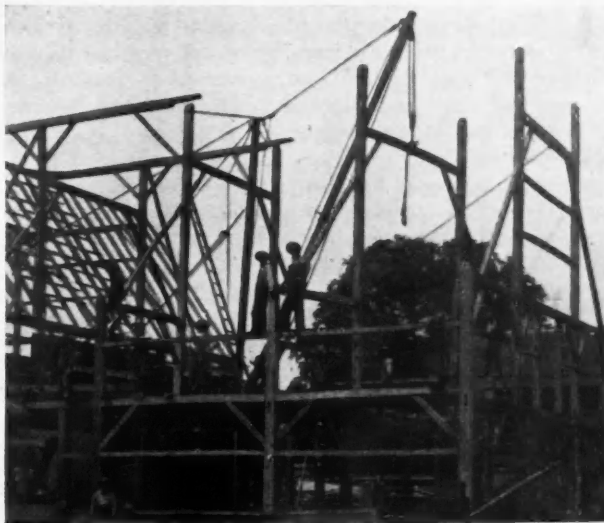
UP through northern Indiana, where farm land sells at from \$150 to \$200 per acre, there has been a great demand for new houses and barns of the most up-to-date pattern. Topeka is a small town in the heart of this farming section. One of the leading carpenters and builders of the place and all the surrounding territory is Floyd E. Peck. He is still a young man and a hustler. A few points as to his business career show how successful builders are made.

Following his own narrative, it appears that having saved up a little money he bought a lot in a promising location in the town, and with the help of some practical building books, drew up a set of plans for a house. He determined to have it a little different from the ordinary, and so constructed the lower story of concrete blocks and the upper part of frame. He proceeded to erect this house, building it honestly and

adding attractive little touches here and there. Almost before it was finished it was sold at a good profit.

That was the beginning of a series of home building operations, one satisfied customer bringing another, and reputation gradually growing.

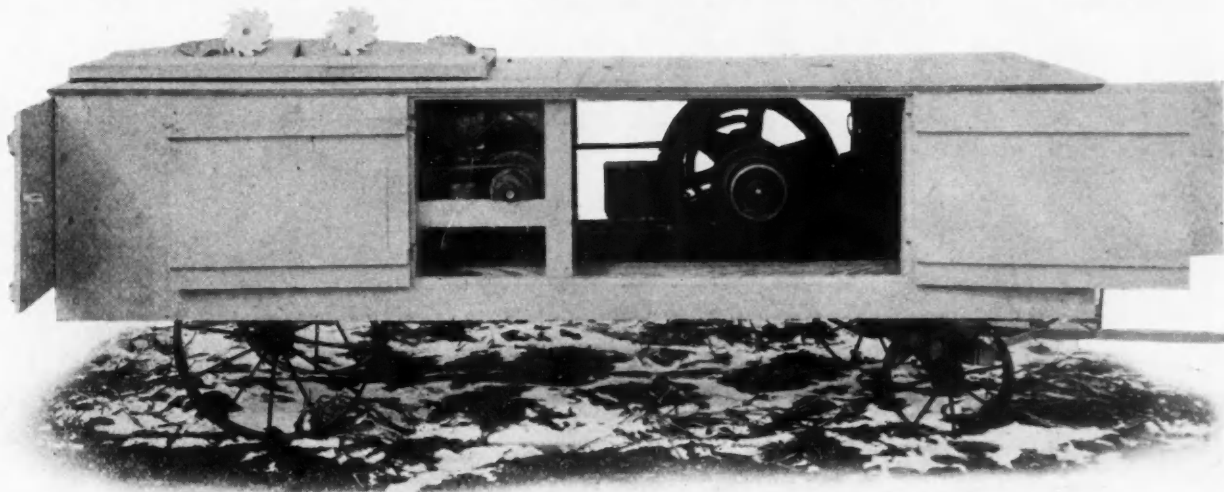
Next, being of an inventive turn of mind, Contractor Peck decided that hand sawing and smoothing was too slow and expensive. He got busy and produced a power woodworking machine mounted on wheel trucks with small but powerful gasoline engine. This he could haul around to his various building operations. A stout housing protects the machinery on all sides so that everything can be locked up snug and tight, protected from the weather as well as from



Special Barn from Derrick Hoist used by Contractor Peck.

meddlers. The top of the housing he made extra strong to serve as a work bench.

This power woodworker proved a business getter from the very start. Farmers for miles around sent for "that man with the power building rig," and then on the job the machine would fairly eat up the work; and this always pleased the man having the work done.



Portable Power Woodworker with Storm-Tight, Thief-Proof Housing that also serves as a work bench. Floyd E. Peck Builder.

Contractor Peck calls his woodworker "The Modern," and its fame has spread around until other contractors in other towns wanted and would have a machine like it. Peck didn't propose to let any chances like this slip by, so he arranged to manufacture machines to supply whoever wanted one.

In other ways, too, Mr. Peck has shown himself a believer in power equipment. A Coultrin Concrete

Mixer has for some time been part of his equipment.

He has also developed a special derrick for handling barn timbers and raising barn bents. The mast is 24 ft. long and the boom 36 ft., staid with 1/2-inch steel rods. The illustration shows this derrick in use on a big barn which required 70,000 shingles to cover. With the help of four men and "The Modern" woodworker he says he framed barn complete in seven days.

## How Dumbwaiter Loads are Sustained

By Robert M. Sypher

President Chelsea Elevator Co., New York

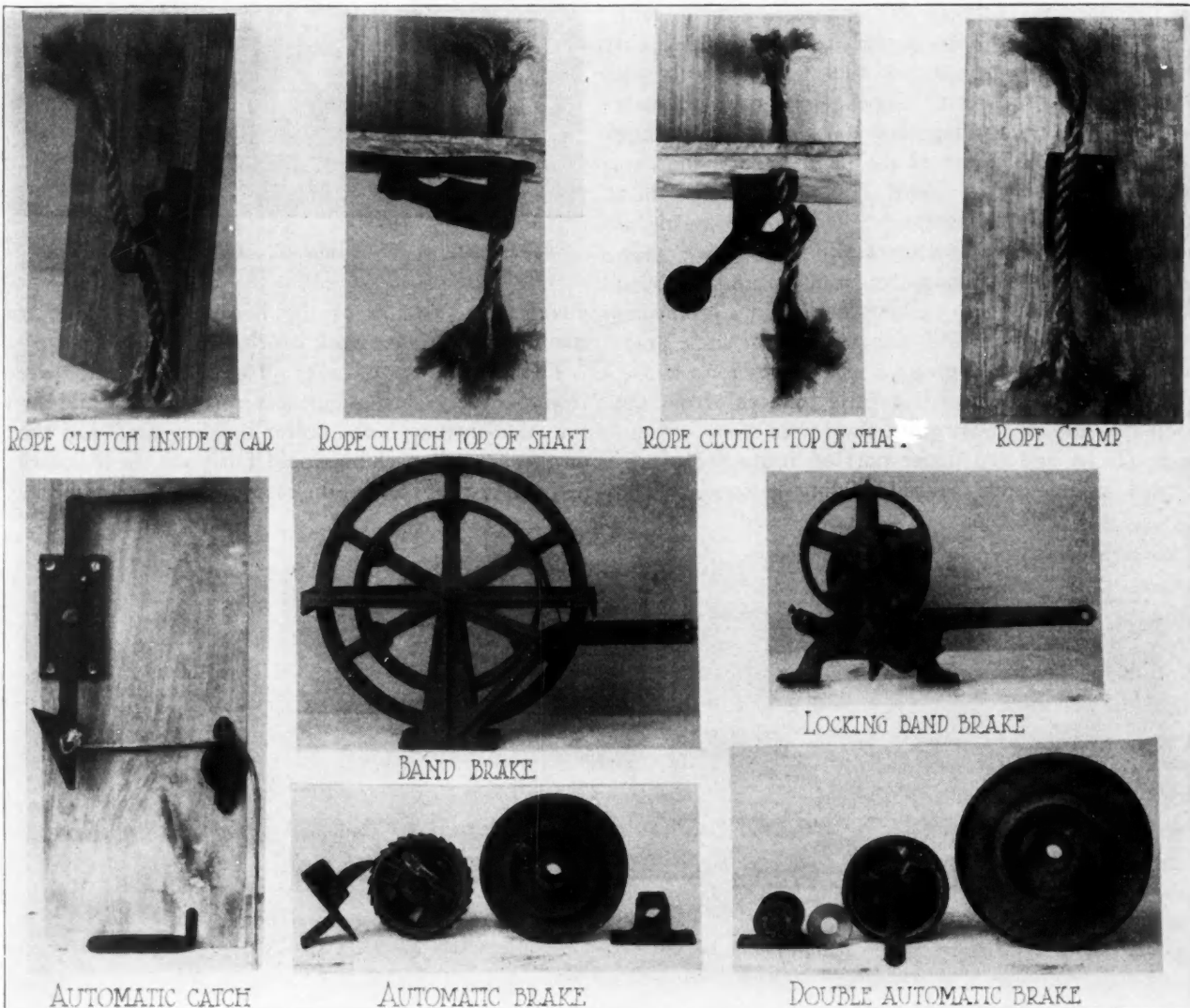
**T**HE modern hand operated dumbwaiter has evolved very slowly. In general principles no direct change has been made for many years, but now and then an improvement suggests itself, an attachment is made to do the required work and henceforth this attachment becomes an essential part of the equipment.

This not only adds to the worth of the dumbwaiter to the buyer, seller, and user, but also proves of worth to the manufacturers as the demand for dumbwaiters increases with every added improvement.

Most dumbwaiters are supplied with some form of attachment to prevent the car from falling when loaded.

Next to the reduction of friction in dumbwaiters perhaps this point, this sustaining of loads, or, in other words, the overcoming of gravity has received more attention from dumbwaiter manufacturers desiring to improve their products than any other point.

Various attachments are in use for this purpose, among them being the rope clutch, the rope clamp, the automatic catch, the band brake, the self-locking band brake,

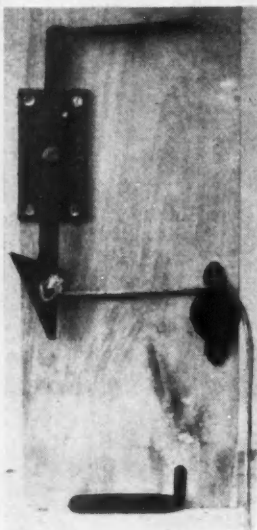


ROPE CLUTCH INSIDE OF CAR

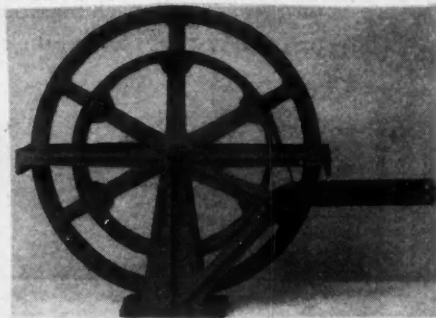
ROPE CLUTCH TOP OF SHAFT

ROPE CLUTCH TOP OF SHAFT

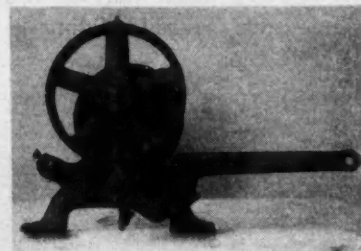
ROPE CLAMP



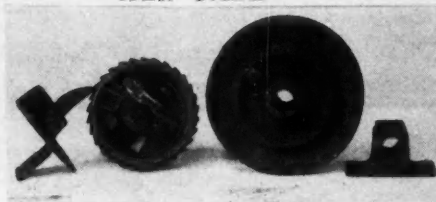
AUTOMATIC CATCH



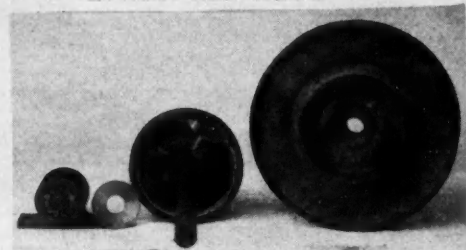
BAND BRAKE



LOCKING BAND BRAKE



AUTOMATIC BRAKE



DOUBLE AUTOMATIC BRAKE

Details of Various Types of Dumbwaiter Mechanism.

automatic brake and the double automatic brake.

The rope clutch somewhat resembles a hinged two-tined fork. One type of rope clutch is fastened inside the car. When the car reaches the operator's landing the hand rope is placed between the tines, the weight of the load in the car pulls the hand rope taut and the car is held stationary.

In another type of rope clutch the clutch is fastened near the top of hatchway; a pull on a hand cord attached to the clamp throws the tines into the hand rope, the rope becomes taut and the car remains stationary until released.

In another form of rope clutch the hand rope runs between the tines and the hand rope is always held taut until the operator pulls the hand cord and straightens the tines; the hand rope is then allowed to run free.

When the rope clamp is used, one clamp is usually fastened at the side of hatchway at each landing; the hand rope is placed against the flat surface and clamped by pressing down on a handle having an eccentric end.

The automatic catch is usually fastened to the side of hatchway at the top landing and when the car comes to this point a small rod on the car is caught in the catch and the car remains stationary until released by a pull on a check line.

The brake band is a portion of the machinery. A strap

encircles a ring and is tightened or loosened by the operator by means of a brake line extending down the hatch. Usually a push upwards in the line releases, or a pull downward on the line tightens the brake.

The locking band brake is similar to the band brake, except that when the operator tightens the strap it is locked in place by means of a toggle arrangement.

The automatic brake is a portion of the machinery. There are many types of automatic brake dumbwaiter machines manufactured. The general principal in all types varies but slightly and consists of a lock on the driving shaft. When the operator pulls on the hand rope in either direction the lock becomes inoperative and the car moves; but when the hand rope is released the lock immediately becomes operative and holds the car stationary.

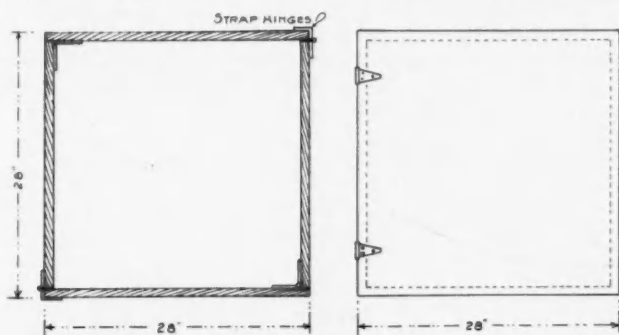
The double automatic brake is a great improvement in hand power dumbwaiter machines of the flywheel type. It is similar to the automatic brake in many ways except that it consists of a double lock so that the car is held stationary on the up direction as well as on the down direction. This permits the car to be overbalanced, thus helping the loads. The counterweight may be placed on any side of the hatchway without change in the lock.

Illustrations furnished by Chelsea Elevator Co.

## More Shop Kinks

By Wm. C. Jasbury

**N**OW that I have a rest from swatting flies, killing mosquitoes and other summer pastimes, I hope to be able to make a noise like a real wood worker. Sometime before the European Battle Royal, I had a box to make for a man who was to take a steamer to Germany. The idea was, a collapsible box, so that he could carry it to New York,

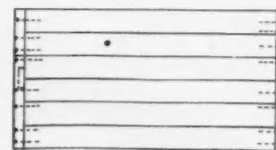
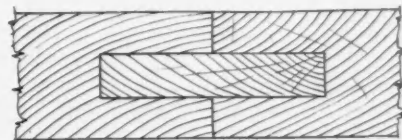


Details of Baby Box—"So He Can't Roll Overboard."

embark, open the box and put a baby in it on the trip over. The dimensions were 28 by 28 by 28 inches, made of 7/8-inch white pine. The bottom was also hinged to one of the sides, the strap hinge being bent so that the bottom would flap around against the side when collapsed. I made the box, and it was taken away, and by this time may be in the land of sauer kraut and powder. So much for the baby box.

**NEVER SAY "CAN'T."** It seems it is not safe any more to say a certain thing is not right, or it will not work, or it cannot be done, because there are so many peculiar things pulled off now days, a fellow has to keep trying his spark every now and then, or some one will pull down the shades on him.

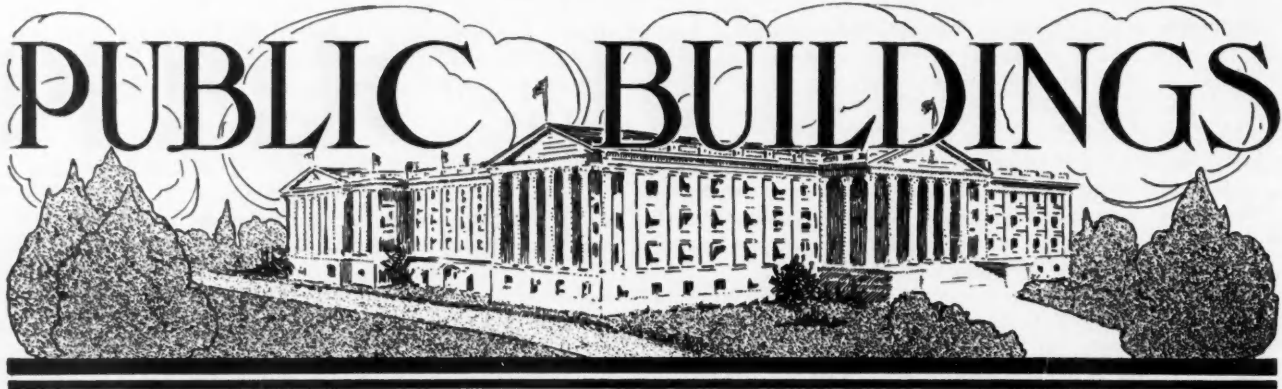
**NO-WARP KNEADING BOARD.** I saw a cabinet maker making a bread-kneading board for a local baker, the wood of which was ash, as is much used for bakers, plank shad, refrigerators, etc., because ash does not make the eatables taste woody. This particular board was 3 feet wide, 6 feet long, 1 1/8 inches thick, glued up of six 6-inch pieces, and slip tongued. On the ends he put a cleat 2 inches wide, to keep said board from warping. The odd part of the construction, he put a tenon, 2 inches wide, on each end of the board and a mortise in the center of the cleat; the rest of the distance he nailed the cleat. When asked why the lone tenon on each end, he explained that the board would shrink sidewise, both edges toward the center, the tenon would



A No-Warp Bread Board.

hold the cleat from coming off. That may be so, but I am from the State where England gets her artillery mules from. Here is a panorama of it.

**AT RANDOM.** I once knew a mill foreman that said a New York hotel man told him, the best house carpenter to get was a mill man, as he could fix anything from a chandelier to a coal chute. I agree with that man, because a mill man, if he is an all around hand, can play machinist, glazier, painter, carpenter or most any old vocation.



## Factory Building for Modern Efficiency

NEW FIREPROOF CONCRETE FACTORY BUILDING AT STERLING, ILL., CONTAINS MANY INTERESTING FEATURES

STERLING, ILL., is becoming clearly the middle-west center for the builders' hardware manufacturing industry. One of the youngest of its hardware manufacturing concerns, the Frantz Mfg. Company, has had a remarkably successful growth, and they do not by any means expect to stop now. They are looking the future squarely in the eye with high hopes and large plans. One only needs to look at their new factory building to appreciate this.

A year ago the management came to G. W. Ashby, the well known Chicago architect, and commissioned him to prepare plans for a three story reinforced concrete factory building, modern in every particular. The design was at once prepared and accepted and the contract let. Schmidt Bros. Construction Company of Chicago were the successful bidders and have handled the work in a most efficient way.

The architect's perspective drawing gives a good idea of what this modern factory building is. The exterior is reinforced concrete combined with reddish

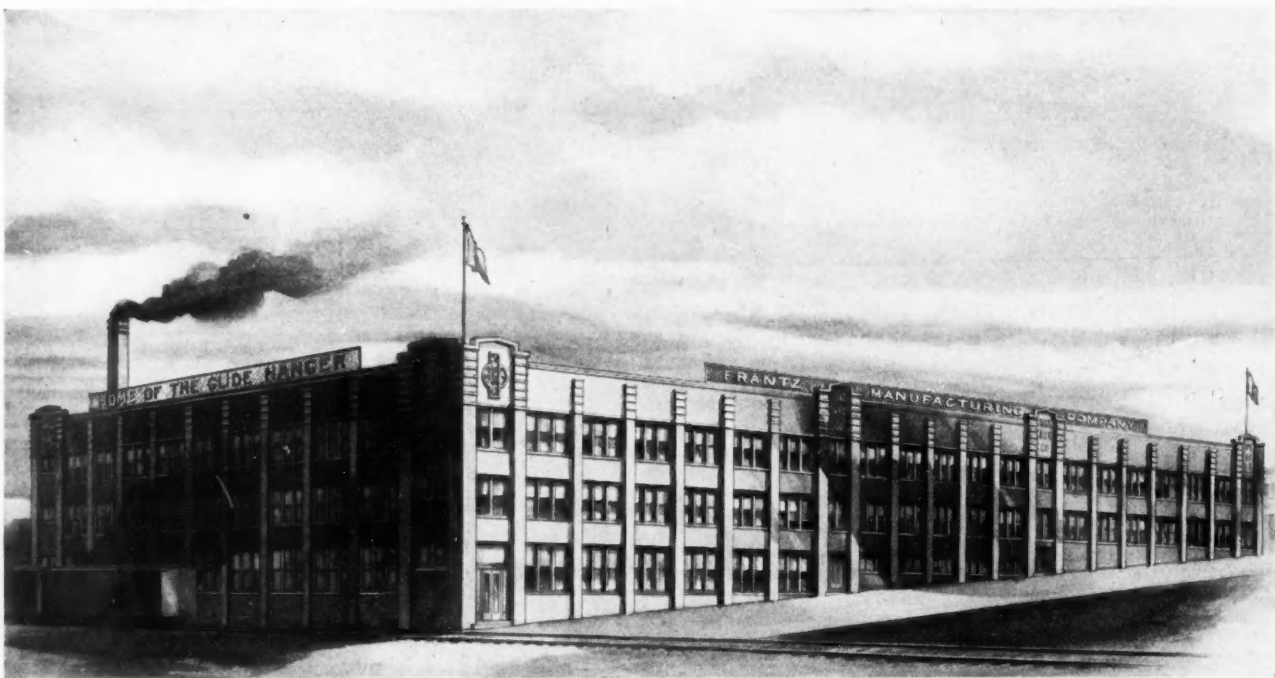
brown vitrified paving brick laid in black mortar; the exterior trim is Bedford limestone. The building is absolutely fireproof, with floors and stairs of reinforced concrete. The windows are the modern factory type, steel sash, giving a very large light area. This will be in all strictness a *daylight* factory.

The boiler room is a one-story detached building at the rear, not shown in this view. A special feature of the factory interior is the series of large size freight elevators for convenient service between the several floors.



Authentic records show that cinders, from a forest fire in the tree tops in northern Washington this fall, were carried a distance of twenty miles.

According to the latest available figures, Pennsylvania stands fifth in the production of wood pulp, and is second to West Virginia in the amount of slabs and other sawmill waste used for pulp; Maine stands third.



New Modern Daylight Fireproof Factory Building at Sterling, Ill., as It Will Appear When Completed.

# Locking Garage Doors

PART II. ARRANGEMENTS FOR LOCKING PARALLEL DOORS

By E. J. G. Phillips

Engineer with the Richards-Wilcox Mfg. Co.

## Parallel Doors

Four parallel door plans are shown in Figs. 5, 6, 7 and 8. The two parallel doors in Fig. 5 may be locked by several methods: First, lock the doors to the jambs, *F* and *G*, with mortise or half mortise garage door locks; second, use a mortise or half mortise lock at *F*



Fig. 5. Plan of Parallel Doors—Can be Locked at "G" and "F".

and lock door No. 1 from the inside at the bottom with a floor bolt; third, lock door No. 1 at *G* to the jamb with a parallel door bolt (see Fig. 9), and use a mortise or half mortise garage door lock at *F*. The parallel door bolt is designed to bind the doors tightly to the jamb or to bind two doors together by oper-

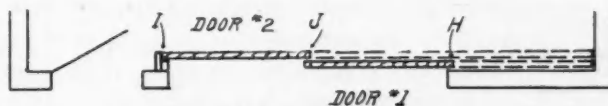


Fig. 6. Plan of Parallel Doors—Locked at "I" and "H" and Guided at "J".

ating the lever handle. The handle is held positively in position when the doors are bolted and when unbolted it is used as a handle to move the door into open or closed position.

It is suitable for doors  $1\frac{3}{4}$  to 3 inches in thickness, but the minimum lap of the door over the jamb is 2 inches.

A double floor guide should be used at the center of the opening where the doors lap to hold them in position. When metal weatherstrip guides are used on the bottom of the doors, other guides and stops are unnecessary. The weatherstrip floor guides are of special value in handling doors built after the plans in Figs. 6, 7 and 8.

In Fig. 6 is illustrated a pair of parallel doors, which when opened are moved back parallel with the front wall. With this arrangement a little different means of locking is used. If necessary to lock from the outside, set a flush floor bolt into the door No. 1 at *H* and lock No. 2 to the jamb at *I* with a mortise garage door lock. If metal weatherstrip guides are not used, a double floor guide should be set at *J*, but a little extra care must always be taken in closing the doors to lead them into the guide. This guide can be omitted however if it is only necessary to lock the doors from

the inside, by using a parallel door bolt at *J*, a flush floor bolt at *H* and a combination floor stop and guide at *I*.

The third parallel door plan, Fig. 7, illustrating four doors, two of which slide back to each side parallel with the front wall, presents two conditions, depending upon whether or not weatherstrip floor guides are used. If used, a center stop track bracket is applied directly over the center of the opening for the doors No. 1 and No. 3 to bump against, then a mortise garage lock at *K* and flush bolts at *L—L* complete the job for doors locking from either side. If to be locked from the inside only, parallel door bolts at *M—M* meet all requirements.

To meet the second condition, for doors without weatherstrip guides, use a floor center stop at *K*, flush floor bolts at *L—L* and parallel door bolts at *M—M* for inside locking. Wide doors would probably require a double floor guide or an additional floor bolt at *N* and *N*. To lock from the outside, a floor center stop at *K*, flush floor bolts at *L—L*, double floor guides at *M* and *M* and a mortise lock at *K* complete the job.

The fourth parallel door plan (Fig. 8) requires

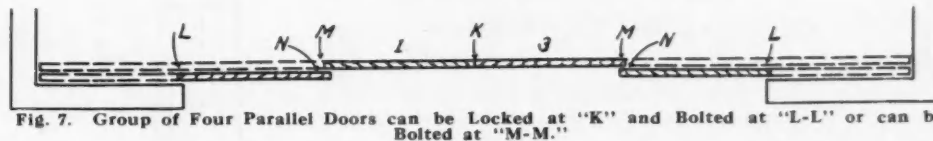


Fig. 7. Group of Four Parallel Doors can be Locked at "K" and Bolted at "L-L" or can be Bolted at "M-M."



Fig. 8. Group of Three Parallel Doors which Require Bolt at "O" and Locks at "P" and "P"

three locks, a parallel door bolt at *O* and a mortise or half mortise lock at *P* and *P*. Two double floor guides should also be used. If desired, flush bolts may be used at *O* and *P* instead of the locks mentioned. With the use of weatherstrip guides the double floor guides of course are omitted.

Next Month Mr. Phillips will discuss some other locking arrangements for other forms of sliding Garage Doors.

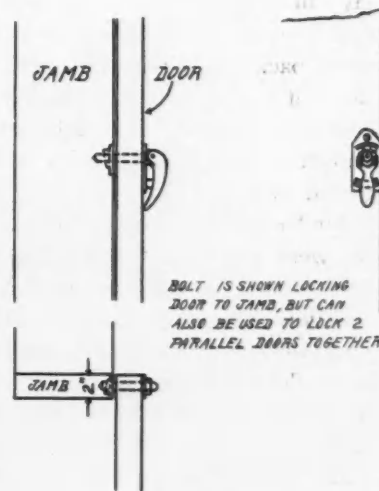


Fig. 9. Detail of Parallel Door Bolt.



### Based on Actual Experience

By W. F. Schaphorst

"Safety First"—that's the cry today; and it comes not a bit too soon. We would like to hear from other of our readers, also, who have had instructive experiences along the line of preventing accidents. Let's make this new department helpful.—Editor.

I WAS working on a job in San Bernardino, Cal., as "rough carpenter" in the erection of a large concrete precooling plant. I had had but little experience in the carpentering line—that's why I was just a rough carpenter. Walking around on high scaffolding and hanging on by the skin of my teeth were tricks of the trade that I didn't relish. I was tender at the job, you see.

One day Charlie, the boss, beckoned to another fellow and me to "come up" and lay out some boards for scaffold flooring, which we did. But I was not quite so bold as was Williams, the "other fellow." He would lay out a board and walk upon it instantly in sheer recklessness—so it looked to me. I couldn't help but stand back and admire his nerve, and I even remarked about it to him. He just laughed at me though when I hinted at danger. He said there was "absolutely no danger"—that it was just a matter of getting accustomed to it.

He had no more than said that, however, when down he went. He had stepped upon a board in which there was a knot that weakened the board sufficiently to allow him to go through. He fell about 20 feet, striking a concrete beam with his back, and the concrete floor with his head. It was a very hot day—about 107 deg. F.—as is usual in the summer time in San Bernardino, which made blood flow easily. The shock did not knock him unconscious exactly, but he got up and pranced around like a maniac, pawing the

air with his hands, uttering sounds that cannot be described by my pen, and blood flowing out of his ears and nose like rivers—so it seemed to me, a tenderfoot.

Save for a weak back for several weeks, Williams pulled through all right. But if I was tender before that accident I was even tenderer afterwards. Knots in boards loomed up about twenty times their actual size. Whenever I stepped upon a board in which there was a knot I felt as though my hour had come. Mental pictures of Williams pawing the air in his bloody face were ever in my mind.

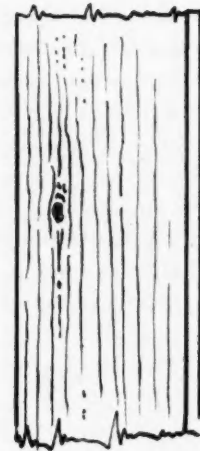
I worked at the job a long while after that and gradually became hardened into the danger. The fact that the other carpenters seemed to think nothing of knots and weak scaffolding had a telling effect, and bye and bye even I became reckless. It isn't easy to always bear the SAFETY FIRST sign in mind, although at that time the Safety First slogan did not exist.

Nevertheless, the fact remains, that right after an accident such as I have described, the knots look powerfully large and dangerous, even though the boards may be amply safe.

It is evident to me now, though, that carpenters in those days were unnecessarily careless—if carelessness is ever necessary. In our endeavor to do as much as possible in one day's work we virtually risked our lives many times. Rather than spend extra time searching for a sound board or plank for scaffolding we took the first thing that came along, and if any man



As it Looks on the Scaffold  
—Board Small, Knot Big.



As it Usually is—Plank Big,  
Knot Small.

had the temerity to suggest danger he would be called a coward, not only by the boss, but by his fellow laborers.

There is a happy medium, of course, in this Safety First crusade. Don't try to make yourself ridiculously safe and don't be foolishly reckless. Be moderate. But if a man calls you a coward for taking out a dangerous board and replacing it with a safe one, pay no attention to him.—Woolworth Bldg., New York City.



**E**VEN if your work is classed as "Extra Hazardous" you might as well be careful and be protected.

## Concealed Ceiling Ventilators

DETAILS OF FAVORITE METHODS FOR VENTILATING HALLS AND AUDITORIUMS THROUGH ORNAMENTAL AND CONCEALED OPENINGS IN CEILING DOME AND AROUND CORNICES AND BEAMS

By Harold L. Alt

THERE are many constructions in common use for the purpose of ceiling ventilation in halls and auditoriums, almost all of these being capable of reversing, *i.e.*, either supplying fresh air or exhausting foul air. One of the most common as well as the oldest type of ceiling openings consists of the open grille in the center of the dome, as shown in Fig. 1. This may be, and often is, made of very ornamental design suitably bronzed or painted to tone in with the interior decorations. This style of opening is especially suitable for exhaust ventilation as indicated in the drawing, but for supplying fresh air, however, this single ceiling inlet is not nearly as good as a larger number of smaller inlets located in various portions of the dome or some of the slot inlets shown in the other drawings. This is owing to the fact that the best results in ventilation are attained when a considerable number of reasonably sized openings are used rather than a single inlet, so as to get the air equally distributed throughout the audience.

Still it is not considered necessary, or even desirable, to go to the extent of installing mushrooms in the

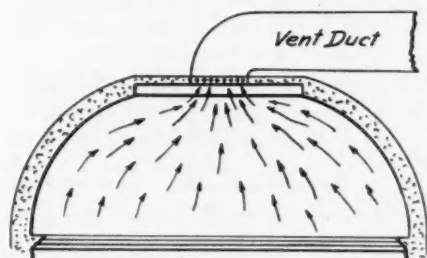


Fig. 1. Central Dome Ventilating Duct.

ceiling even when supplying fresh air from this location. Owing to the distance that the breathing line is usually located below the ceiling, ample opportunity is secured for the air to diffuse and equalize before reaching the occupants. This is an entirely different proposition from the matter of floor supply where the air only rises some 4 feet or so before reaching the breathing line, and has, in this 4 feet, only the restricted space between occupants in which to rise, making distribution below this line an impossibility.

Where air is supplied from the ceiling, more satisfactory results are attained with a "ventilating cornice," such as is shown in Fig. 2. This cornice is usually run around the four sides of the hall or auditorium, although oftentimes it is omitted across the wall above the stage. The air is fed into, or taken out of, this cornice by a duct somewhat as indicated; the air velocity is usually figured at 250 feet per minute through such an opening. In a hall, say 50 by 60 feet, and seating about 250 people, we would require (at 30 cubic feet per minute per occupant) about 7500

cubic feet. This, at 250 feet per minute velocity, would require an entrance area of  $7500/250$ , which equals 30 square feet. If the cornice ran around the four sides of the hall it would be 50 plus 60 times 2 or 220 lineal feet long. The total area divided by the

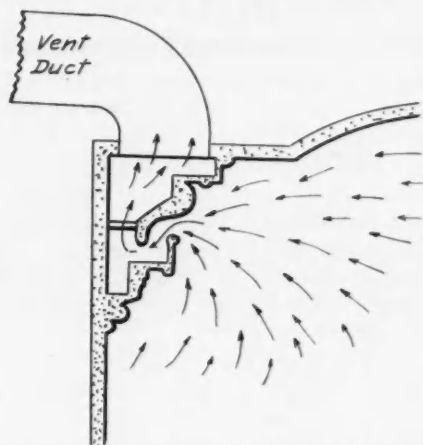


Fig. 2. Efficient Concealed Vent Duct in Cornice.

length gives the height, so  $30/220$  equals .13 feet height or  $1\frac{5}{8}$  inches. Ordinarily the cornice would probably be run on three sides only, or would be obstructed for part of its length so as to give a total lineal footage of only about one-half of what we have assumed. In this case the height of the opening would be approximately double, or about 3 inches; this is close to the customary height that these openings are made.

Still better distribution is obtainable where the ceiling is partitioned off by false beams such as is indicated in Fig. 3. In this case the air can be supplied not only around the sides with a cornice and in the center along the beams, but the cornice may be omitted entirely and good distribution obtained from the ceiling beams alone. Of course the type of ceiling opening is largely dependent on the ceiling construction, it

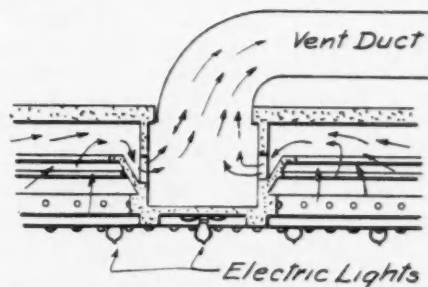


Fig. 3. Ornamental Ceiling Beams as Concealed Vent Ducts.

being manifestly impossible to use beam openings in a domed ceiling such as is shown in Fig. 1, while the single outlet shown in Fig. 1 would hardly be decided upon where a flat beamed ceiling is used.

# CORRESPONDENCE



Questions Answered and Ideas Exchanged.

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.

## Let's Use Less Red

To the Editor:

Wausau, Wis.

Not long ago I sent a list of questions regarding the use of birch to some of the leading architects and other experts in the use of woods. I think you will be interested in the following reply, made by a professor of manual training in a prominent state university:

"I believe considerable birch is used in making school desks. During my practice I built several schools and had always to fight hard against the use of 'cherry red' desks and seats. Since you inquired in your circular as to preferences of color in the use of birch, it may be that you will have an opportunity at times (should you have the inclination also) to say a word against such a mistake. Red is an excellent color in its place, but is vicious when used for the bed of a school desk, reflecting into the eyes of developing children the color that brings out all the worst side of their character. You know the effect of red on a bull, and you know the expression—'He saw red.' If you can discourage such a misuse of birch it will be doing a big service."

The point raised seems to be an excellent one and I am passing it on to you in order that it may secure greater publicity if you approve of the suggestion, which seems to be well founded. Personally, I may say that I have never very much liked the strong reds in woodwork, and am doing what I can to increase the use of appropriate shades of gray and brown, which I judge are not likely to get on anyone's nerves.

R. S. KELLOGG,

Secy. Northern Hemlock and Hardwood Mfrs. Assn.



## System of Emergency Lights

To the Editor:

Keypoint, N. J.

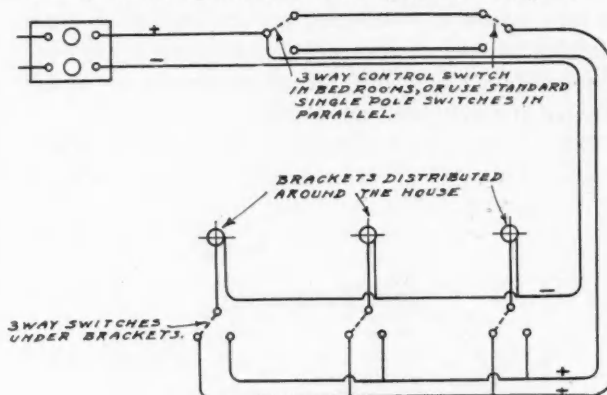
In looking over some of my back numbers of your paper I saw in the October, 1910, number an article called "Light as a Burglar Expeller" and I would like to ask you if you can publish a diagram of how to install this system, as I feel that there are others like myself who would be glad to know how to install this system of lighting.

BENJ. R. BUSH,  
General Contractor.

*Answer.*—Below is an explanation by M. V. Lyon, estimating engineer for the Commonwealth Edison Company, Chicago, for "Emergency Lights for Residences," as shown on enclosed blue-print:

"In the wiring up of residences, it is very desirable to install a number of emergency lights distributed around the house and controlled by a switch or switches in the bedrooms, so that the general illumination throughout the entire

house may be had at a moment's notice in case of emergency. Heretofore, the chief objection to this plan was that these special lights were not available for any but emergency purpose. This is objectionable, as it looks bad to have certain lights in the room which cannot be lighted for general illumination purposes. This defect may be overcome by installing the wiring as shown on the attached blue-print.



KEYLESS LOCK SOCKETS TO BE USED WITH 3 WAY SWITCHES.

Wiring Plan for Emergency House Lights.

"The idea is that emergency lights have three wires run to them. The first wire being a common negative; the second wire being positive and connected up to the emergency switch or switches in the bedroom, and the third wire also positive, but shunting around the emergency switches in the bedrooms. Each emergency light is provided with a three-way switch, which acts as a throw-over switch, so that in order to use the emergency light for general illumination, current is supplied to it by means of the common neutral and the third positive wire which is shunted around the emergency switch as described above. It is obvious when an individual emergency light is turned off by means of the three-point switch directly under it, it is thrown on to the emergency circuit so that it can be controlled from the emergency switches in the bedrooms." EDITOR.



## Openings for Weights in Window Frames

To the Editor:

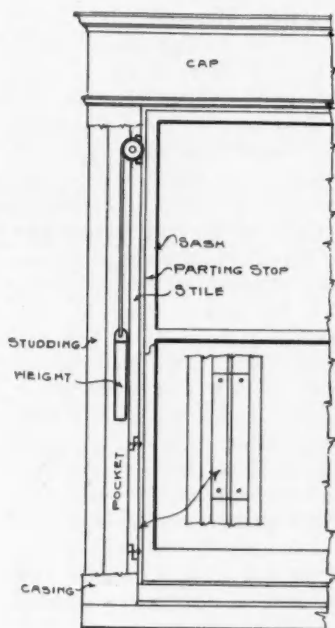
Lamberton, Minn.

Am sending a sketch showing how the pockets or openings are made in the window stiles or frames, which I put in a new house completed two months ago. I do not think that these frames were made right. Can you suggest some way to change them so that water will not enter the opening leading into the weight box?

WM. C. KRENGEL.



*Answer*—In looking at your design we do not see any need of the double opening shown, providing there is a movable partition between the two weights in the box. One opening located near the bottom on the room side of the parting stop would serve the purpose desired and be covered up by the lower sash when window is closed, thus keeping out the rain and preventing leakage.



Details of Window Sash.

If there are two openings in the stile, one on the outside of the parting stop and one on the room side of the stop, we would suggest that the exterior opening might be calked with white lead, or white lead and oakum or cotton string, and then painted over like the rest of the frame. This would prevent water from leaking in through the cracks which are now exposed to the weather.

More than likely the trouble lies in the way you have constructed your window sills. If you have cut out the ends of same and let the jambs run down and nailed onto the end of the sill, the water will naturally follow down through the crack if not very carefully made, and thereby cause a bad leak that will be hard to stop. The better way is to dado the end of the jamb into the sill and set the jamb into same after painting with thick white lead. The nailing should be done from the bottom of the sill. Then again, it is not necessary to make the pocket opening wider than to the outer edge of the parting strip. EDITOR.



**Wants to Make Mover's Capstan**

To the Editor: Varna, Ill.  
Many thanks for the premium "Brick Houses and How to Build Them." I will soon have one copy each of all your books, without which I could scarcely get along.

With your kind invitation to make free use of your Correspondence Department, in mind, I will come forward and ask for some information from practical men who do house moving. What I want to know is, how can I make a practical and dependable capstan out of wood? I have seen and used different ones, but never liked the construction of them. We moved two heavy buildings last summer, but the capstan we used had such a high spool that it was very difficult for the horses to step over the rope. What is the objection, if any, to having a shorter spool, so as to prevent the rope from climbing so high?

I would appreciate it very much if some of the experienced brothers would submit sketches through the correspondence department. Perhaps it would be of value to others as well.

I have contracted the moving of two more buildings, and intend to have my own equipment after this, but can't afford to buy ready-made, all-steel capstan at present. I can't remember having seen anything about capstans in the Correspondence Department so far

What do the brothers think is the most economical size and length of rope to use for buildings about 24 by 40 feet?

OLIVER B. EXSTROM,  
Contractor and Builder.

**To Determine Corresponding Curves**

To the Editor: Slaughterville, Ky.

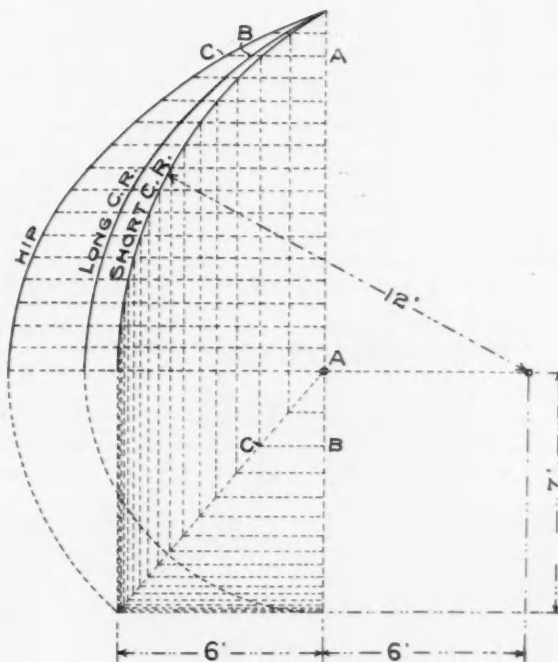
I wish to ask for some information concerning the framing of a Gothic roof for a room 12 by 44 feet. The common rafter is laid out with a radius of 12 feet. Now, by what rule will I find the corresponding curve to cut the hip rafter to make it fit?

W. L. GENTRY,  
Contractor and Builder.

*Answer*—We presume the above has reference to a groined ceiling with the hips and common rafters running to a common center and in that case there will be three different curves, as it will require different curves for the common rafters on the two sides on account of the room being longer one way than the other.

The radius for the short common rafter being a part of a true circle is easily arrived at, but the others to co-incide with it must be developed in some other way; and there are a number of ways.

The illustration shows how it may be done with a system of lines by first laying off lines parallel with short run and from these at right angles to the run of the hip, thence to the run of the long common rafter. The points of intersection on these lines when swung around parallel with the lines from whence they started will show the proper extension of like lines for developing the curves, as from A to B and A to C, as shown on plans and elevation. These points



How to Develop Curved Hip.

should be checked, and after all have been thus extended, run an off-hand curve through the check marks and the curve is determined. To do this requires a large space to lay it off on, as it must be a full size working drawing to arrive at the curve.

Then there is the backing in connection with the hip or valley rafter, which furnishes no small problem to the average carpenter to correctly solve, as it is constantly changing. But this may be easily obtained by setting the dividers at the amount of wood to be removed from the side of the rafter where it rests on the plate and by measuring back this amount from the curve along each of the parallel lines will show the amount of wood to be removed from there to the center of the rafter.

A. W. WOODS.



**Dead Air Space in Ice House Construction**

To the Editor—

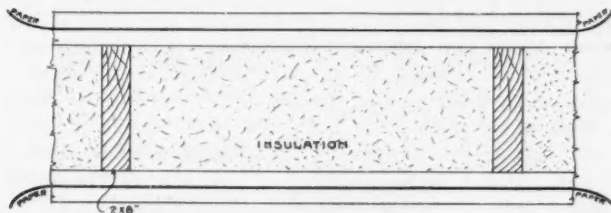
Meetze, Va.

I wish to build an ice house of about 12 by 14 ft. floor dimensions which will accommodate approximately 85 tons of ice. Had thought of building a stone or concrete wall about 3 ft. below the ground line and extending 2 ft. above the surface of the ground. Sills and studding will rest upon this foundation wall. What size studding would you advise me to use, 2 by 6 or 2 by 8 inch?

Is sawdust satisfactory for filling in the wall space?

G. H. DACY.

*Answer*—We believe that 2 by 8 inch studding would give



Section Through Ice House Wall Showing Four Thicknesses of Sheathing, Two of Building Paper, and 8 Inches Dead Air Space.

better insulation space and a stronger wall than 2 by 6 inch.

Sawdust is a very good material to use for insulation, but must be kept dry by the use of waterproof building paper placed between the sawdust and the interior and exterior sheathing.

EDITOR.



**Spontaneous Combustion of Oily Rags**

To the Editor:

Maple Creek, Sask., Can.

I would like to have your valued opinion as to the following:

Along in the Spring we had carpenters working in a new store. They had been staining some woodwork and left their wiping rags in a heap. They left work about 6 p. m. and all seemed well. About 8 p. m. I had occasion to go down to the store and found the rags smoldered through and just ready to burst into flame.

The Boss thinks spontaneous combustion caused the rags to smolder. (I have my doubts, although I myself saw some rags do the same thing saturated with some patent furniture polish. That was last summer and they were in a window with the hot sun pouring down on them.)

The stain the painters were using was composed of oil, turps, Japan drier and color. The pile of rags was not near any fire or window. An answer through the columns of your valuable paper might be the means of saving a building some time.

WALTER C. ROBINSON.

*Answer* — Spontaneous combustion was undoubtedly the cause. Oil rags or waste will invariably cause trouble. This is a well rec-

ognized fire hazard, so much so that fire inspectors always require covered metal cans in factories where waste is used. Oil waste has to be thrown into these cans.

There is something about the oil or grease in its finely divided state on cloth or waste that rapidly accumulates heat and will soon smolder and burst into flame. If in the sun or in a warm place this heating action is more rapid, but in any temperature and in any place there is danger.

We have seen sawdust on which oil had been spilled, smolder and burn. Spontaneous combustion is a real thing. Look out for it every time and never leave oil or paint stained cloths where they can make trouble.

EDITOR.



**Size of Weights for Sash**

To the Editor:

Indianapolis, Ind.

Will you give in your columns as near as possible a rule for determining the size of weights required for ordinary sash for both single and double strength glass, also for trim to work best when framing opening?

J. C. C.

*Answer*—The size and weights of sash are given in all of the leading sash and door manufacturers' catalogs, which may be easily obtained from your lumber dealer. They list weights in the open and glazed with both single or double strength glass. It would take up too much space to copy it here.

EDITOR.



**Interesting Cabinet Work**

To the Editor:

Wakefield, Kan.

I am sending you two pieces of cabinet work I have done during spare time. One is a music cabinet and is made of solid walnut and is all paneled and is finished in the natural wood. It has a mirror 8 by 22. The music cabinet is 16 by 28 by 4 feet.

The cellarette is made of solid oak and is stained and finished in the dull fumed oak. It is 18 by 18 by 4 feet.

I have been a reader of the AMERICAN CARPENTER AND BUILDER for over a year now and I can say it is the finest building magazine I ever read.

ROY A. WOODBURY,  
Carpenter and Builder.



Music Cabinet of Walnut and Cellarette of Oak Made by Ray A. Woodbury.

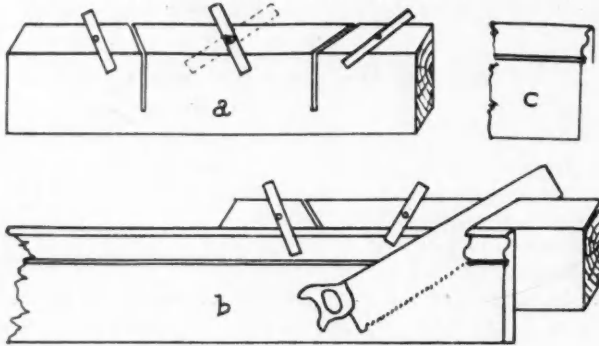
### New Zealand Method of Doing Fast Work

To the Editor:

Auckland, New Zealand.

In the June issue, I read an article by I. P. Hicks on "How to do work fast; putting down base," which contains some splendid advice. Now, I know that you like to hear from your subscribers about their different methods of working, so would like to describe my method of scribing base, which I have found from experience is quicker and nine times out of ten will fit first cut.

Make a mitre block (a) out of 2x4 or 2x6 inch stuff, say



Improved Miter Block for Working Base.

fifteen inches long; and nail cleats on top with one nail in each. Stand base on edge, hang block over top edge, cut thru moulding to flat portion, as seen at b. Then place on saw stools and with tri-square mark across square portion of base and scribe in usual way, removing shaded portion, as shown at c. Now, with rod, mark neat length required, allowing about  $\frac{1}{8}$  inch longer; square other end and spring into place. The compasses are not required and with reasonably square corners, I usually find that when the base leaves the saw stools for the first time, it never returns. Notice that the block is not as deep as base, so it will always lie snugly on top edge. To cut an external mitre for chimney breast, simply turn block end for end when placing on base.

Have been a reader of the AMERICAN CARPENTER AND BUILDER for some time, and must say I enjoy every number.

LEONARD E. RHODES.



### Location of Cold Air Register

To the Editor:

Norton, Kan.

I am a Charter Member of your great A. C. & B. family, and I gain much by it. Now, I would like to have you tell me something in regard to the location of the cold air register in a house which I am building. The owner thinks this register should be located at the foot of the stairs leading to the second floor, although these stairs are closed off from the first floor by a door and passageway. It seems to me that it would be better to locate this register near the outside door, but I am not sure.

Is it necessary to have a return pipe from each room to the furnace, or would the air circulate sufficiently without these pipes where there is no open hall in the house? Is it advisable to put double registers, that is, one on each side of the wall, so as to heat two rooms from the same hot air pipe?

WM. B. STAPP.

Answer: Personally we would advise the use of an outdoor duct instead of attempting to return the cold air from the dwelling rooms back to the furnace. Our reason for this is on account of the construction of the house. There does not seem to be any one place which will remove air from all parts of the house, as would be the case where the residence had a front hall which opened freely to both stories of the house. Of course, two flues might be installed, one opening from the lower floor just outside the stair door

in the dining room and one just inside the stair door leading to the upper story, but we would not consider this to be advisable since it would mean the returning of air from the sleeping rooms to the furnace, to be heated again and sent back to these same rooms.

If you wish to have a cold air flue to open into the house itself, you might arrange a flue with two openings—one leading from outdoors and one leading from either the parlor or the dining room inside. If this construction is used, some form of damper should be arranged in each flue so that either one may be used independent of the other. We would not advise the installation of a cold air duct in or near any sleeping room, since in case of sickness, contagion from the room in question might be drawn down with the air into the furnace and distributed afterwards to all parts of the house. While the outdoor flue scheme is not quite as economical in the amount of coal used, it is far better from a sanitary standpoint, owing to the better ventilation which is obtained by such a scheme. An outdoor cold air flue should be placed so that it will open through a cellar window or some similar opening located on the side of the house which is most exposed to winds during the cold season.

We would not advise the use of double registers spoken of, but would advise that each room be provided with a separate register which may be opened or closed from the top at will.

EDITOR.

### Width of Maple Flooring

To the Editor:

Glenwood, Minn.

I have been in business 25 years and up to now have always figured maple flooring,  $\frac{13}{16}$  inch by  $1\frac{1}{2}$  inches, as being equal to a 2-inch face before dressing; or rather, in figuring the amounts I receive from time to time from lumber dealers, I have always multiplied the lineal length by 2 where the  $\frac{13}{16}$  by  $1\frac{1}{2}$  maple flooring came done up twelve pieces in a bundle.

I am building a large residence, and after having it nearly completed the lumber dealers wish to charge me more, or rather figure up more feet than formerly, multiplying the lineal length by  $2\frac{1}{4}$  instead of 2, claiming that it is figured  $2\frac{1}{4}$  inches face in the rough instead of 2 inches.

Please give me the correct rule for  $\frac{13}{16}$  by  $1\frac{1}{2}$  maple flooring where bought in large quantities, so that I may see that I have the full amount for which they charge me and whether correct to multiply by 2 or  $2\frac{1}{4}$ . Also please give the correct rule for figuring oak and black walnut flooring of the same size, as I have used some of the above in this building.

ALBERT WELLAN.

Answer: We understand that flooring of this type is generally measured  $\frac{1}{2}$  inch wider than the finished flooring and 1 inch thick. This would make the measured width of your flooring 2 inches.

EDITOR.



### Repairing an Old Concrete Floor

To the Editor:

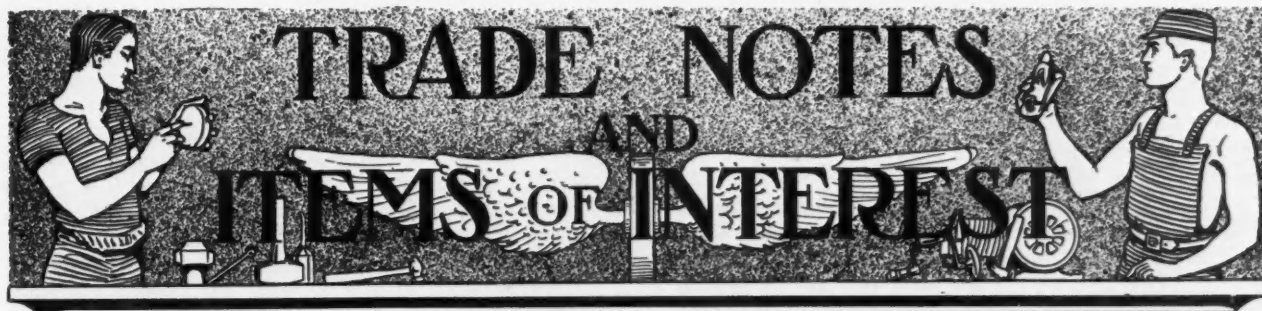
Morristown, Ind.

Please give me an idea as to the method used in putting a dressing over an old floor where the cement has been standing for a few years.

JNO. T. WORTMAN.

Answer: It will be necessary for you to clean this floor completely, removing all dirt and loose particles of cement or concrete, grease, or other foreign materials, wetting the floor thoroughly but not allowing water to stand on it; then painting on a coat of neat cement grout mixed to the consistency of thick cream, before attempting to put new wearing coat on the floor. The new top coat should consist of a 1:2 mixture of cement and sand placed in position before the grout coat has had a chance to harden thoroughly, and then after finishing, keep moist for several days while the work is taking on its full strength.

EDITOR.



Through this department the Editors aim to keep builders, contractors, carpenters and architects in touch with what their friends, the manufacturers, are doing for them in new or improved tools and machinery, methods and materials—pertaining to building. Items for these columns must have real news value; they are offered here as interesting information for our readers; they are not advertising. No matter will be printed here simply because some advertiser wishes it. Likewise, no matter will be excluded simply because the article described is not advertised in this magazine. Suggestions for the betterment of this department are requested of our readers.

Statement of Ownership, Management, Circulation, etc., required by the Act of August 24, 1912, of AMERICAN CARPENTER AND BUILDER, published monthly at Chicago, Ill., for October 1, 1914:

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Business Manager, E. L. Hatfield, Chicago, Ill.

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Wm. A. Radford, Jr., 5341 East End Ave., Chicago, Ill.

E. L. Hatfield, 1255 Thorndale Ave., Chicago, Ill.

G. W. Ashby, Berwyn, Ill.

There are no bonds or other securities outstanding against the AMERICAN CARPENTER AND BUILDER.

E. L. HATFIELD, Gen. Manager.

Sworn to and subscribed before me this 18th day of September, 1914.

JEANETTE A. NICHOL, Notary Public.

[SEAL]

(My commission expires July 6, 1915.)



### Plan for Biggest Good Road Show

Among the prominent educational features to be presented at the American Good Roads Congress, at the International Amphitheatre, Chicago, December 14 to 18, inclusive, will be a model boulevard, 20 feet wide and more than 400 feet long, extending around the arena.

The boulevard will be divided into sections, each of which will be built of different materials or by different methods, so that practically every modern standard type of road and street construction will be shown. This feature in itself will constitute a valuable source of information for those who are in search of practical knowledge.

In addition to the exhibits of several states and cities, a number of universities and colleges have signified their intention of presenting the exhibits which they have assembled in connection with their courses in highway engineering. All these will add greatly to the educational value of the exhibition.

Although the International Amphitheatre is the largest structure of its kind in America, with over 100,000 square feet of floor area, present indications are that the entire space will be filled with educational and commercial exhibits. Requests for space already cover more area than the entire amount available at Philadelphia last year. Even with this vast space, present indications point to a demand which will exceed the supply. That the exhibition as a whole will far surpass all previous efforts is fully assured. It will be a liberal education on the subject of streets and roads.

Work on the program is progressing as rapidly as the circumstances will permit. The leading road builders of the

United States and Canada have consented to prepare papers or participate in the discussion on the phases of the subject on which they are best posted. This fact insures the presentation of all the latest developments in the lines of road organization, construction and maintenance. It also assures the wider and more comprehensive educational value of the proceedings.

Officials of the American Road Builders' Association are in receipt of many letters commending the selection of Chicago for the convention. In addition to the attendance from every part of the United States and Canada, that location will permit the attendance of county, township and city highway officials from Illinois and nearby states, where the road laws are of comparatively recent enactment and where practical information as to the most approved methods may be conveyed at first hand to those who will be able to make the most immediate use of it.

To a greater extent than any previous convention or congress, that at Chicago promises to furnish a practical education in road and street building.



### Architects and Builders Get Together

A joint meeting of the American Institute of Architects and the National Association of Builders' Exchanges was held in Philadelphia the latter part of September. Both organizations were represented by committees, which were composed of officers and men from Boston, New York, Baltimore, Washington, Philadelphia, and Louisville, who are prominent in their respective organizations.

The object of the meeting, which lasted three days, was to consider and recommend changes in the present practices of building construction, and to formulate and standardize building specifications, contracts, etc., on more modern and equitable lines.

It is understood that all who were present approached the subject with broad views of equity, and with distinct and clear business principles. As a result a unanimous recommendation was readily reached. This joint recommendation will be properly referred to each National organization for approval, and it is reasonable to suppose that this approval will be readily forthcoming, and the present methods which are now being used in building operations, and which are so expensive and uncertain to owners and all interested parties, will be shortly relieved and these operations will be conducted along the lines of modern business principles and methods.



### A Winter's Occupation

There has been a great deal of consideration given to the matter of the carpenter, contractor and builder profitably using his spare time in the slack season and also during the winter time. There are thousands and thousands of houses

throughout this country which have been built without pocket frames in the window openings, and, as a result, when the sash is to be lifted either a stick must be placed under it as a prop, or some kind of a nail method is stuck in the side of the sash, allowing the sash to be lifted from the bottom only to a given height where this nail again sticks into an opening in the frame.

All these windows could, with a little expenditure, be made to operate—either the top sash or the bottom sash—as wide as desired by installing Automatic sash holders, which are inexpensive, simply constructed and hold the sash at any place desired. Just a mortise in the frame or sash, the installation of the Automatic sash holder, replace the sash and the sash is then ready to operate up and down and hold securely at any point. These holders are manufactured by the Automatic Sash Holder Manufacturing Company, 52 Church Street, New York, who will gladly furnish information on request.



### Look into This

We have never known or heard of a builder who would object to making extra profits. If he can figure a reasonably sure income from a small investment of money and some work, there is no one more keen for it. A builder friend of ours, we'll call him Mr. F., thought he saw possibilities for himself in the concrete burial vault business. He called on the Norwalk Vault Co., 40 Seminary St., Norwalk, Ohio, for details; and the following conversation he had with their salesman, Mr. Barrett, is interesting:

"Why," asked Mr. F., "should I be interested in the National Vault?"

"\$3,000 a year profit!" answered Mr. Barrett.

Mr. F.—On what investment? That would be 10 per cent on \$30,000.

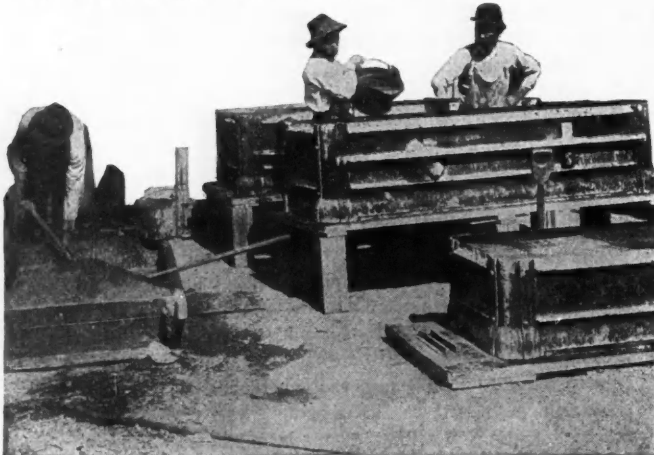
Mr. Barrett—An investment of less than \$500 would be nearer your need.

Mr. F.—What? Do you expect me to believe that any man can honestly make \$3,000 a year on a \$500 investment?

Mr. Barrett—There's a man down in Georgia—in one of the smaller cities, too—who is clearing \$5,000 a year—and he tells us his business is still growing.

Mr. F.—How do you figure it?

Mr. Barrett—Let's see. How many funerals do you have here in a year? Not alone in your town, but in your whole County, for it's easy to ship anywhere in the neighborhood. The man in Georgia has about 1,500 to draw from.



Filling the Steel Vault Molds.

Mr. F.—I don't know exactly, but taking the whole County, we have at least that many.

Mr. Barrett—All right. Now for how many of these funerals could you sell a reasonably-priced vault—not a patent casket, or a metal box, but an honest cement vault that is not

only waterproof but air-tight, a vault as smooth and clean cut as your desk there, yet as solid as if it were hewn out of granite.

Mr. F.—That would depend. How—

Mr. Barrett—The man in Georgia sells one in every six funerals. But out in a little Michigan town a man is selling three out of every four! He writes us that his sales started at 5 per cent five years ago and have never stopped increasing since.

Mr. F.—I could never sell 75 per cent of the funerals here.

Mr. Barrett—Not at first, anyway; but suppose you could sell, say, 5 per cent, one in twenty—as the Michigan man did when he started. That would be 75—not even two a week. At \$40 each—the regular price—your gross income would be \$3,000 the very first year.

Mrs. F.—How about my expenses?

Mr. Barrett—You can keep them as low as you wish; all you really need is materials, a shed to manufacture in, and somebody to do the work.

Mr. F.—I guess maybe I could make the vaults all right, but how would I sell them?

Mr. Barrett—The best way is right through the undertakers. It costs you only \$5 or \$6 to manufacture the vault, and they sell easily for \$40 or \$50. So, you see, there is plenty of clean profit for you even after paying a big commission to the undertaker.

Mr. F.—But will the undertaker handle them?

Mr. Barrett—They are doing it by the thousands all over the United States. All the biggest undertakers and jobbing houses in New York City are handling them.

Mr. F.—Suppose our local undertaker can't sell them fast enough?

Mr. Barrett—Unless he's a slower undertaker than any I've ever seen, he will sell them lots faster than you can make them. But if he doesn't you can advertise.

Mr. F.—I don't know anything about advertising.

Mr. Barrett—That's where our Home Office comes in! The Norwalk Vault Company isn't selling "blue sky"; we're not even selling molds; we are selling vaults, all over the country, and we want you to sell them for us in your neighborhood. You've seen some of our advertising, haven't you?

Mr. F.—Yes, I've noticed it.

Mr. Barrett—Well, that advertising is selling goods for us, and it will sell goods for you. Part of our service—which we gladly give free—is advice and assistance in solving your own local sales problem. If you run up against snags, all you have to do is to write out to Norwalk.

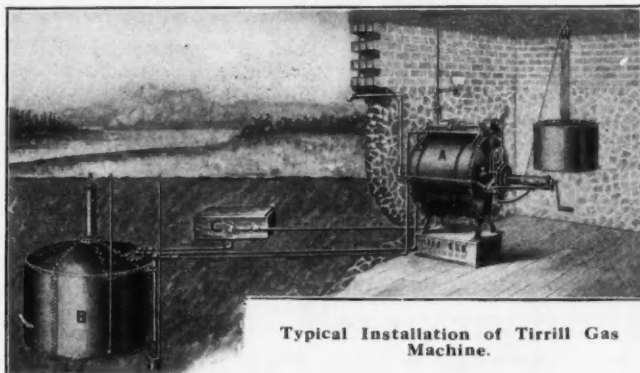


### Gasoline Lighting and Cooking Offer Big Possibilities

People living in the country would like city conveniences, but as a rule they cost too much. Those not having city gas, or those forced to pay exorbitant prices for it, would welcome private gas plants, but the trouble has been that after the installation the cost of manufacturing has been prohibitive. Tirrill gas machines for lighting, cooking and heating overcome this objection. One thousand feet of gas manufactured by this wonderful apparatus costs only 60 cents. From hundreds of actual records which can be shown, it is found that an average family, using a 25-light machine for illuminating, cooking and heating, will not spend more than \$18 per year for this purpose.

A great many people who have electricity in their homes use the Tirrill gas machine for cooking only, and find an enormous saving in money, time and health.

The most important factor, as important as cost to users of private plants, is safety. In 1864, the first Tirrill gas machine was made and there never has been an explosion caused by one since. In fact, there can't be, as one of its:



Typical Installation of Tirrill Gas Machine.

chief features is that all the manufacturing and mixing of gas is done underground, 30 feet from the house, so that there is no gas made inside the house. No other machine has this feature, it is claimed. Even when there is a fire in a house, the gas machine is found intact. It is for this reason that the underwriters recognize its absolute safety, and that insurance rates are not only not raised, but the companies do not even require a special inspection when the Tirrill gas machine is installed.

The Tirrill machine is a gasoline gas machine, and as such its manufacturers claim many advantages over acetylene gas machines. With the Tirrill gasoline generator, the gasoline is kept in a tank buried a short distance from the house, filling is done only once a season, and no cleaning is required. Generator may be filled to the top without hindrance or loss. With the Tirrill machine, gasoline liquid never enters the building and the mixture of gasoline vapor and air is also made outside. Three gallons of gasoline will produce 1,000 feet of gas, gasoline costing from 10 to 20c a gallon.

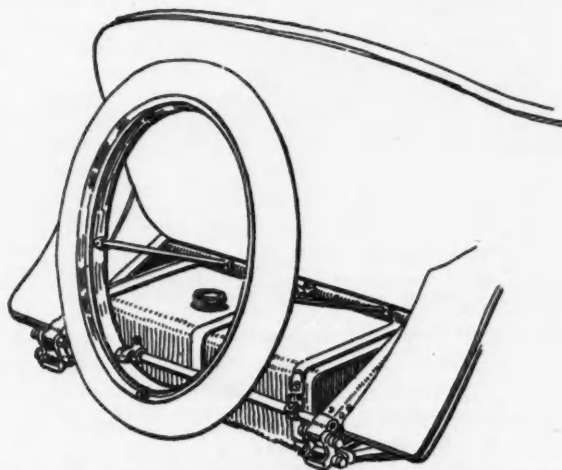
These factors ought to make the Tirrill gas machine a very profitable one for carpenters and builders to handle. The main office of the company, the Tirrill Gas Machine Lighting Co., is 103 Park Ave., Corner 41st St., New York City. This company is looking for good agents and has a special proposition to make to readers of this publication. Write them for prices, catalog, etc.



### 1915 Model Haynes

"The new model Haynes light six cylinder car contains many new and unique features in automobile design," states A. G. Seiberling, General Manager, The Hayne Automobile Co., Kokomo, Ind.

"The Haynes car is the first one in America to employ the arch frame construction, which permits the lowering of the



Strapless Tire Carrier and Gasoline Tank at Rear of Chassis, on the Haynes "Light Six"

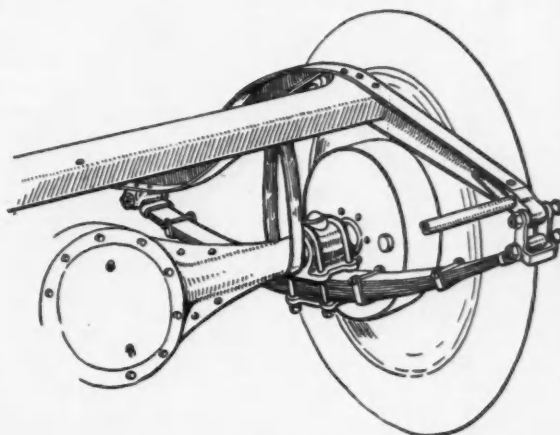
body and the use of the extra long, 54-inch underslung elliptic spring in the rear. The rear seat is as comfortable as the front seat.

"The speedometer is driven from a gear mounted on the propeller shaft immediately behind the unit power plant, where the driving and pinion gears are protected from the mud and dirt of the road. This feature insures long life and quiet running of the gears.

"The starting motor of the separate unit starting and lighting system is direct-connected to the crankshaft of the engine, so that no gears have to be shifted into mesh to crank the engine. A small button on the floor starts the motor by pressure of the foot and cranks the engine without any clashing or disagreeable noises.

"The en bloc 3½ by 5-inch six cylinder motor is very flexible, and the car can be driven from one mile per hour to sixty miles per hour on direct drive. The carburetor is mounted high up on the motor and the manifold proper is dispensed with. The intake passages are entirely surrounded by the warm water inside the cylinder casting, so that the gasoline is vaporized and kept in a gaseous state until it reaches the cylinders. This construction, along with the use of the Rayfield carburetor, gives the economical gasoline consumption of twenty to twenty-two miles per gallon. The vacuum system of gasoline feed to the carburetor is used, with a sixteen gallon supply tank on the rear of the chassis where it may be readily filled.

"The full streamline body is pressed out of sheet steel and the seams are electrically welded to form a single piece, substantial and rigid construction. The crowned fenders add much to the elegance and refinement of the car. The top is of the one-man type. Either a five passenger touring car



Arch Frame Construction Over Rear Axle with 54 Inch Elliptic Springs on the Haynes "Light Six"

or a two passenger roadster body may be had. With the 121-inch wheel base, there is generous foot room in both the forward and rear compartments. The battery is placed in a pressed steel box immediately below the floor in the rear compartment, where it may be readily reached. The running boards are entirely clear.

"A special feature provided for the driver's convenience is the strapless device for carrying the extra rim and tire at the rear end of the chassis. One bolt only securely holds the rim in position, and when loosened, allows the rim to be slid off at once. Standard Firestone rims are regular equipment.

"The car weighs but 2950 pounds. This light weight has been made possible by the simplified design, the use of drop forgings in place of the heavy castings, and the use of lighter reciprocating parts. The number of moving parts is reduced to the minimum."

### A Few More Ideal Tools at Half Price

About once every year there comes a chance to get in on a good thing by acting promptly. In our October issue the Ideal Tool Works announced that in order to quickly introduce their new rafter square, try square and mitre square they would ship out 200 into each state at just half price. First come, first served, was to be the rule until the introductory supply for each state is used up.

A recent letter from the company states that these tools are going fast, but that a few are still left and will be sent out to wide-awake carpenters and builders at the low price if ordered at once. Those who have already received the Ideal square are delighted with it. They are recommending the tool to their

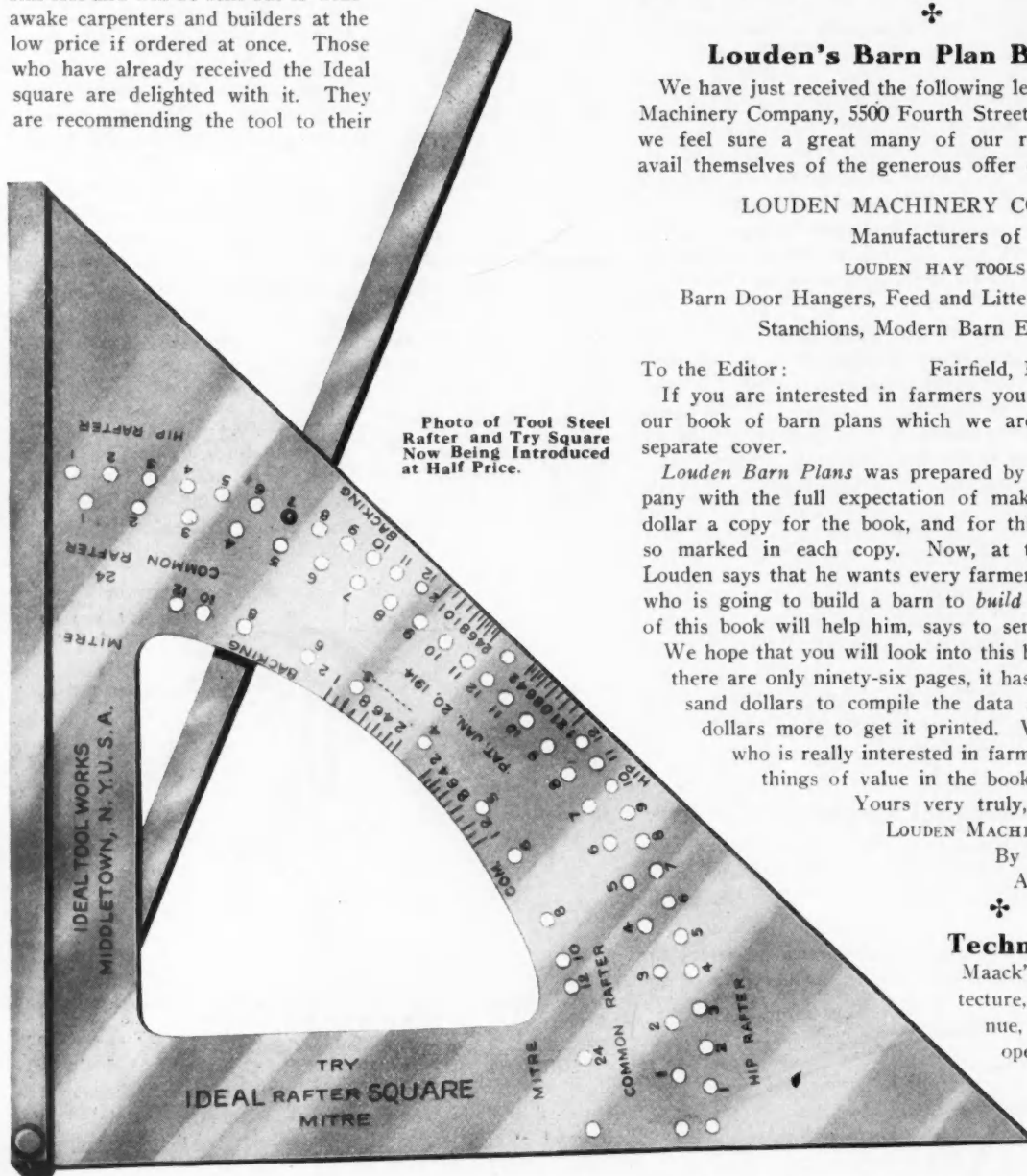


Photo of Tool Steel Rafter and Try Square Now Being Introduced at Half Price.

fellow builders, and it seems certain that before long this new labor-saving framing tool will be in very general use.

One cannot appreciate all of the different uses of this "Three-in-One" square without actually using it. Its value grows on one with use. Luckily, through this generous offer of the manufacturers, carpenters and builders are able to personally examine and use the Ideal square. They do not have to depend on the published description and illustrations. With the Ideal three-in-one square any man can lay out accurately cuts for any style rafter, something that takes years of study by the steel square method. A little book of simple, clear instructions comes with every tool, and it

explains thoroughly the various markings on the face of the square and how the tool is used in its many ways.

Ambitious men who have climbed up to positions of boss carpenter, building contractor and architect, invariably mention their mastery of roof framing problems as being the first important step in their advancement. It is predicted that the Ideal square will raise the wages of thousands of ambitious carpenters and builders this coming year.

Write the Ideal Tool Works, Middleton, N. Y., for full information, or, better still, turn to their announcement on another page of this issue.



### Louden's Barn Plan Book Free

We have just received the following letter from the Loudon Machinery Company, 5500 Fourth Street, Fairfield, Iowa, and we feel sure a great many of our readers will want to avail themselves of the generous offer contained in it:

#### LOUDEN MACHINERY COMPANY

Manufacturers of

LOUDEN HAY TOOLS

Barn Door Hangers, Feed and Litter Carriers, Stalls, Stanchions, Modern Barn Equipment

To the Editor: Fairfield, Iowa, Oct. 29, 1914.

If you are interested in farmers you will be interested in our book of barn plans which we are sending you under separate cover.

*Louden Barn Plans* was prepared by experts of our company with the full expectation of making a charge of one dollar a copy for the book, and for this reason the price is so marked in each copy. Now, at the last minute, Mr. Loudon says that he wants every farmer in the United States who is going to build a barn to *build right*, and as a copy of this book will help him, says to send it out free.

We hope that you will look into this book carefully. While there are only ninety-six pages, it has cost us several thousand dollars to compile the data and several thousand dollars more to get it printed. We believe any editor who is really interested in farm topics will find many things of value in the book.

Yours very truly,

LOUDEN MACHINERY COMPANY,

By Clyde L. Clarke,  
Advertising Manager.



### Technical Training

Maack's Academy of Architecture, 1742 Chouteau Avenue, St. Louis, Mo., has opened its thirtieth school year. The technical field offers great inducements and high

salaries. Draftsmen are continuously in demand. Master builders with a technical education as offered by this institute have a great advantage over their competitors without such training. Journeymen are prepared for foremanship. There is a day and an evening class. Students may enter at any time, as individual instruction is adhered to; every student has in this mode a chance to advance as rapidly as talents and previous training permit him, not being hindered by students of less capacity. The time to complete a course varies; it is six months for foremen, one year for draftsmen and two years for building technicians. Those interested should apply for a free prospectus to the principal, H. Maack.



# Now is the Time To Order Storm Sash

**Prepare for Winter Early!!**

**Sash 72c Up—Doors \$1<sup>43</sup> Up**  
**Also 5000 Bargains Shipped Anywhere!**



### Jap-a-Top Roofing

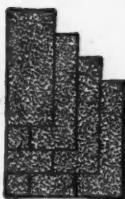
Beautiful—Durable. Surfaced with genuine Slate. 2 colors—Red and Grayish Green.  
**\$2.25 Per Roll of 108 Square Feet**

Price per sq. of  
**Jap-a-Top Shingles**

424 Shingles \$4.75

**Also Other Quality Roofing**

as low per roll of 108 square feet, 90c.



### Windows and Glass

Check Rail Windows, 74c up. Plain rail, glazed, 66c up. Transoms, 40c each. 8 x 10 window glass, 3½c per light. Any size at equally low prices. Safe Delivery Guaranteed. Dealers charge 5 to 10 times our prices.

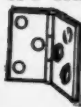


**FREE**  
**5000 Bargain Catalog—**

**No one else can give you Quick Action—Quality and Prices Such as Gordon-Van Tine offer you under Guarantee of Satisfaction—or Money Back.**

### Everything In Builder's Hardware

Everything in Builder's Hardware direct to you at wholesale—hinges, locks, door sets, window sets, etc., 3½ x 3½ inches, 14c per pair.



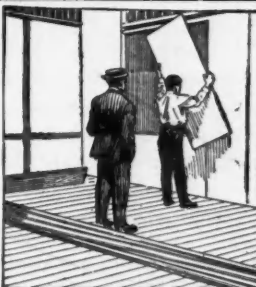
### Storm Sash and Storm Doors

Make snug for winter NOW. All sizes. All styles. Also builder's hardware, hinges, knobs, locks, catches, buttons, etc. "A" Quality and Painted.

All White Pine **STORM SASH** as low as 72c. **STORM DOORS** as low as \$1.43.



Storm Window attached with peerless hanger and equipped with Sash Fastener. Open.



### Wallboard Bargains

Wallboard is the Great Modern Substitute for Lath and Plaster. Also fine for partitions to finish off rooms, attics, etc. Comes in sheets ready for use. Goes on dry. Cold-proof, vermin-proof, handsome, durable. **Beats Plaster. Costs Less.** Wallboard costs 50 per cent less to lay. Lasts as long as the building.

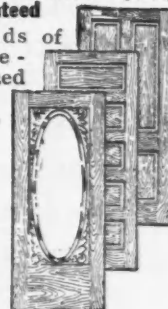
**Quality Wallboard 1000 Square Feet, \$22**

See Special Wallboard offers in Grand FREE CATALOG.

### Doors as Low as 77c

All Styles and Sizes—Quality Guaranteed

Hundreds of special designs, glazed and unglazed. Oak, White and Yellow Pine, Cypress, Fir, Oak Veneer, Solid Yellow Pine and Front Doors.



### Lumber IN CAR LOTS

**SAVE \$100 TO \$300!** Our Special Latest Lumber List and FREE Catalog offer choice to you of Millions of feet of clear, dry, clean, seasoned lumber at Wholesale Prices. Dimension, heavy Joists and Timbers, Drop Siding, Beveled Siding, Ceiling, Partition, Wainscoting, Finishing Lumber, Laths, Shingles, Boards, Posts, Poles, Battons, etc. All lumber graded in accordance with rules of the Lumbermen's Association. All Millwork of High Quality Standards, established by the Northwestern Sash, Door and Blind Mfrs. Assn. Every stick guaranteed up to standard quality. Estimates furnished FREE on guaranteed costs to you. **BARGAINS** in Moulding and Finish. Many special designs. All latest new stock. See Big Reductions in 1914-1915 Grand Free Millwork Catalog, just out.



### Shingles

Extra "Star A Star" 6 to 2 inches. Washington Red Cedar Shingles, price per thousand, \$3.10. Special prices on Bevel Siding or Clap Boards, Red Cedar Siding, White Pine Siding, etc.

## GORDON-VAN TINE COMPANY

734 Federal St., Davenport, Iowa

Send me your Building Material Catalog FREE

Name \_\_\_\_\_

Address \_\_\_\_\_

**Write a Postal or Send This Coupon**

**Quality  
Is  
Economy**

*Architects  
Should  
Specify  
Varnish*

Specification is the only way  
to make sure of a good Finish.  
When no Varnish is specified,  
you take chances on the Finish.

No Architect will specify  
a fraudulent or a decidedly  
inferior material---  
if he knows the materials.  
When he puts his name back of  
a Varnish, self-interest demands  
that he consider it to be  
a reputable Varnish.

Suppose it were Trim,  
instead of Varnish:  
If an Architect required  
merely that the Trim  
be of first-class wood---  
leaving the Contractor to select  
what wood he pleased---  
do you really believe,  
or faintly imagine,  
that you'd get Quartered Oak?

Human Nature being what it is,  
why should anybody expect  
a Fine and Durable Finish,  
when no Varnish capable of  
producing it is specified?

The Varnish **Murphy Varnish Company** NEWARK  
That Lasts FRANKLIN MURPHY, President AND  
Longest Associated with Dougall Varnish Company, CHICAGO  
Limited, Montreal, Canada

### Typewriter on Easy Terms

Harry A. Smith, Room 702, No. 231 N. Fifth Avenue, Chicago, is making a special offer on typewriters that should interest a good many of our readers, as business men, contractors and builders ought to use a typewriter. Time is lost, money is lost, and contracts are lost because of letters, estimates and bids written out in hard-to-read handwriting.

One of the surest marks of the wide-awake business contractor is that all his letters go out neatly typewritten on good, business letter head paper. Such letters always receive the best attention. It is easy to learn how to use a typewriter. No carpenter or builder need be timid about starting in to use one. With a few hours' practice one "gets the hang of it."

Now, in regard to this special easy-payment proposition that Mr. Smith is making, his machines are the genuine Standard Complete Visible Writing Model No. 2 L. C. Smith Typewriter. A limited number are offered Our Folks at less than half the catalog price, and payments can be made by the month. By the terms of his generous offer you rent a high-grade typewriter for a few months and then it is yours. Write Harry A. Smith for full particulars, or refer to his announcement on another page of this issue.



### "Iona" Ventilators

The Iona Ventilator Co., 2317 N. Laura St., Philadelphia, Pa., offer to demonstrate to the satisfaction of any of our readers—architects, contractors, or building owners—that the "Iona" Ventilator will, under all conditions, exhaust an excess of hot or vitiated air. They make this interesting test by means of an air meter. They are also prepared to furnish prospective customers illustrations of buildings equipped with "Iona" Ventilators together with names of satisfied customers.



"Iona" Ventilator.

Write today for their instructive booklet illustrating different styles of ventilators, and giving much good ventilator advice. The accompanying illustration shows the patented "Iona" Ventilator Top. These ventilators are made of Toncan metal, an extremely durable material, at a moderate price.

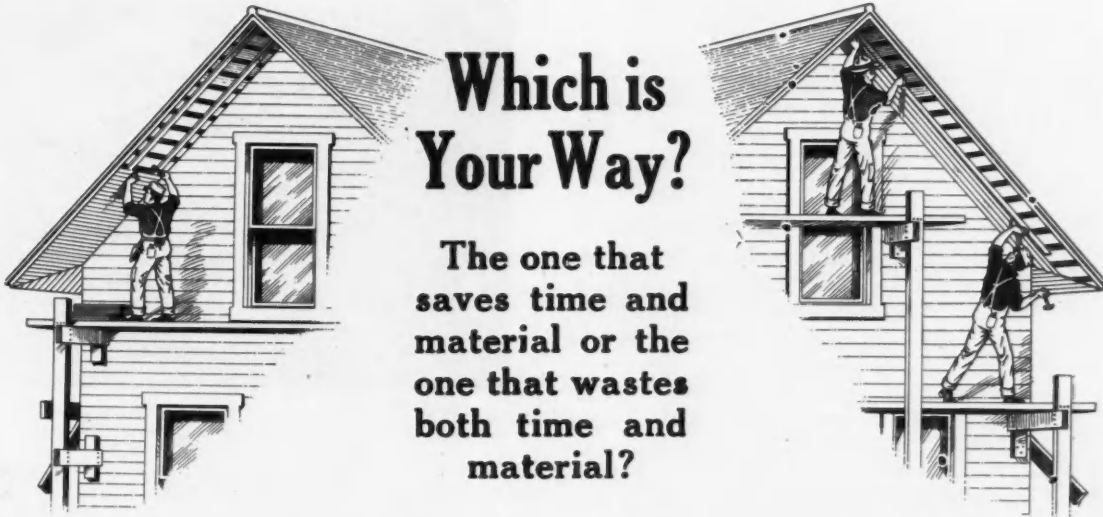


### All About Acetylene Lighting

The most complete outfit of instruction booklets on the subject of acetylene gas that we have yet examined may be obtained from the Oxweld Acetylene Company, Jasper Place, Chicago, Ill. There is a good deal to this acetylene lighting and cooking proposition. It is an interesting subject to study into, none the less interesting because there is chance for some nice profits to be made by builders who are well posted in regard to acetylene generators, fixtures and the gas itself.

One of these booklets is entitled, "How Uncle Sam Will Light the Panama Canal." It may not be generally known, but acetylene has been selected by the Government Light House Service for all of the Canal lights and beacons. This only goes to show how dependable acetylene has come to be.

In connection with this particular booklet the Oxweld Acetylene Company offer to send their new Aeroplane Map of the Panama Canal in colors, a unique map worth having. This will be sent free of charge, together with full information about house lighting, to any of our readers who will fill out and mail back the post card contained in this booklet. The questions asked on the post card are only those needed by the information department of the Oxweld Acetylene Company in order to furnish proper details to



## Which is Your Way?

The one that saves time and material or the one that wastes both time and material?

It takes two men to install Arkansas Soft Pine ceiling when used for plancier and run lengthwise the cornice. One man can do the work quicker if the ceiling is run crosswise.

In the first case the lines run in the wrong direction. The second method is correct from architectural and common sense view points.

*Ask Your Dealer for information about*

## Arkansas Soft Pine Short Length

Ceiling, siding, flooring. They cost less than standard lengths, their use involves less waste and requires less time.

**Quality--** This is genuine Arkansas Soft Pine Stock of superior value. There is no method by which the contractor can make money so easily as by insisting on adequate quantities of 4, 5, 6, 7, 8 and 9 foot stock, ordering such quantities as can be used to advantage.

**Send for your copy of "The Use Book." It contains much information of value to the contractor.**

## ARKANSAS SOFT PINE BUREAU

1738 Transportation Building

Chicago, Illinois

contractors and builders in regard to installation of acetylene lighting in any building.

Other booklets in this collection describe in detail the "Pilot" generator, the effect of acetylene light on plants and persons, fixtures and supplies for acetylene, the calcium carbide from which the acetylene gas is made, and many other subjects of interest.

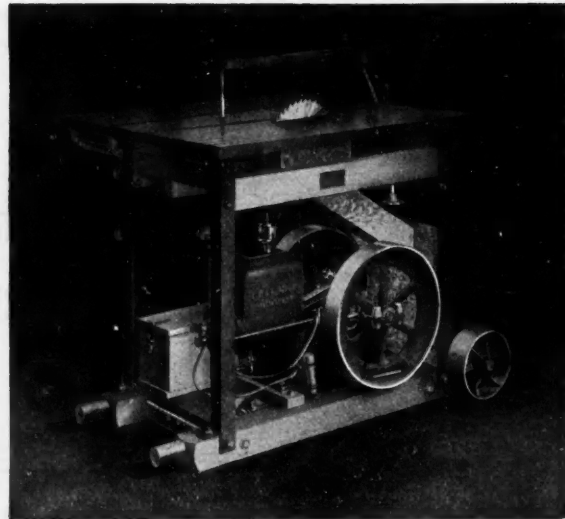
We suggest our readers correspond with the Oxweld Acetylene Company and secure a supply of these interesting booklets. This company is making an agency proposition to contractors and builders that is also worth looking into.



### C. H. & E. Contractors' Equipment

Were the inside history of almost any successful business to be written up it would be found that it has grown, at times, almost without the conscious effort of the proprietors. It took a natural direction and kept on growing, because that was the thing to do. A manufacturer starts out to build some particular machine. It proves a success. Through his association with important customers, other wants are suggested, and before the manufacturer realizes it he is deep into the manufacture of some other specialty, the making of which he did not originally contemplate. Growth of that nature is usually solid and safe, because it proceeds step by step, and with full knowledge.

An interesting illustration of that sort of growth is afforded by the C. H. & E. Manufacturing Company, 322 Mineral Street, Milwaukee, Wis. Their catalog now reads "Contractors' Equipment," and very properly so, for the manufactures are varied and might be called the keystone of requirements, or the little coterie of central needs, about which the work of every contractor necessarily revolves—pumps, and pumps by the way of many sorts, hoists, and hoists, too, of divers



The Popular C. H. & E. Saw Rig.

kinds, plain material hoists and powerful hoisting engines, concrete mixers, presses, saws, etc. As the manufacturers themselves say in their catalog, "Aside from being the pioneer manufacturers of Portable Saw Rigs, we are large manufacturers of Builder's Hoists, Material Elevators, Power Driven Diaphragm Bilge Trench Pumps, Centrifugal Pumps, Piston Pumps, Man-hole and Force Pumps, Concrete Chutes, Mortar Mixers, Tar Kettles and Gasoline Engines."

Illustration is presented herewith of one of their popular saw rigs. This and many more products of this growing Wisconsin concern are handsomely illustrated and fully described in their catalog, which will be mailed on application.



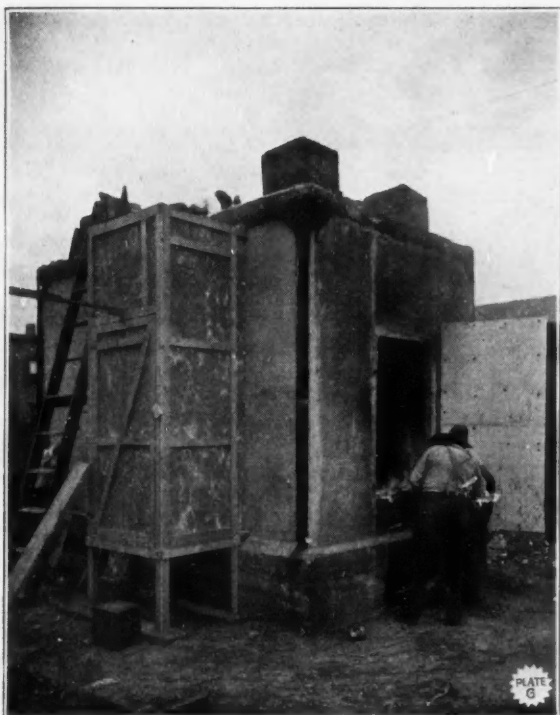
We use JUST AS MUCH CARE in making  
MIDLAND STOCK TERRA COTTA

as in filling any special order;

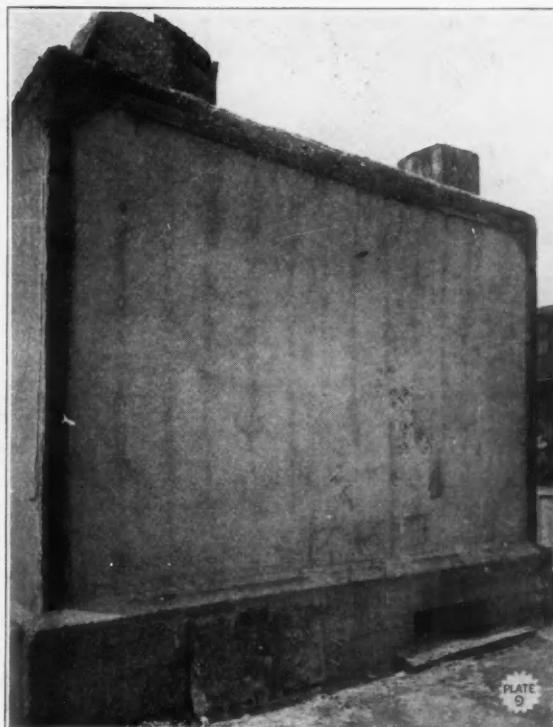
and you know our Reputation for GOOD Terra Cotta.

"WRITE FOR A PORTFOLIO"

**MIDLAND TERRA COTTA COMPANY**  
1120 CHAMBER OF COMMERCE :: CHICAGO, ILLINOIS



Starting the Fire for the Test.



The Outside Wall 24 Hours After the Test

# Metal Lath Wall Pronounced Fireproof!

*Read the Details on Page 47, 48, 49, 50 of This Issue*

**T**HIS New York fire test proves just what you want to know, Mr. Builder---that metal lath as a plaster base will stand the toughest sort of fire and water test. Figure it out for yourself! A standard metal lath and plaster wall stood the fierce heat---maximum 1903 degrees Fahrenheit---for three hours with absolutely no damage except a slight deflection of the wall and a few hair line cracks on the inside. And when they gave it the water---25 lbs. hose nozzle pressure---there was only a little surface washing.

*Metal Lath is pronounced FIREPROOF*

## *Kno-Burn* Expanded Metal Lath

is not only fireproof; but it is rigid on wide spacing, easy to apply, and made with the most efficient mesh possible for clinching the plaster permanently.

*Send for Our Free Booklet, "Metal Lath Details"*  
describing in detail various uses and methods of applying  
metal lath. A post card will bring it to you.

**NORTH WESTERN EXPANDED METAL COMPANY**

903 Old Colony Building - - - - - CHICAGO, ILLINOIS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER



Featuring "Morgan" Interior Design No. 28  
Can be made from any kind of wood

Copyright 1914 Morgan

YOURS FOR THE ASKING—A COPY OF OUR  
1914 SUGGESTION BOOK

Featuring Morgan Hardwood Doors, showing complete Layouts and Glass Sizes for all Hardwood Doors of Stock Design, also a double-spread color chart showing actual reproduction from Finished Wood Panels treated in accordance with our Specifications.

*Morgan Doors are architecturally correct, and we are so proud of our product that we stamp the name "MORGAN" on the top-rail of every Hardwood Door we manufacture.*

MORGAN SASH & DOOR COMPANY,

Department C-28,

CHICAGO, ILL.

Factory: Morgan Company, Oshkosh, Wis.

Distributed by Morgan Millwork Co., Baltimore, Md.

New York Office: Craftsman Bldg., No. 6 E. 39th St., New York City.

Architects see Sweet's Index, pages 972-973

**Hess Furnace Profits**

The Hess Steel Furnaces are being sold direct to carpenters and builders under an attractive profit-sharing arrangement by which the builder not only shares in the profits from every furnace bought and installed by him, but also there is a commission on sales closed by the office as a result of information sent in by the builder.

Many of our readers are helping themselves and the Hess Warming and Ventilating Company at the same time under this arrangement. The sales manager of the company desires to hear from all contractors who would be interested in receiving full information in regard to this profit-sharing arrangement.

The Hess people also say, "Send us a sketch of any building requiring heat and we will furnish complete plan showing how the furnace equipment should be arranged, and will quote you a price on the complete outfit, ready to install, delivered at your station." They guarantee satisfaction, even permitting a two months' cold weather trial before furnace is paid for.

Send for their 48-page booklet on furnace heating, addressing the Hess Warming & Ventilating Co., 1220 Tacoma Bldg., Chicago.



**Pearson's Automatic Tacker**

Pearson's shingle nailer has become pretty well known to carpenters and builders. It has saved shinglers thousands of dollars and much weariness during the past ten years. The Pearson shingle nailer has been a great success. Carpenters and especially shingling specialists would not want to get along without it.

It may not be so generally known that the Pearson Manufacturing Company have also perfected an automatic tacking

machine. These tackers will handle 4-oz., 6-oz. and 8-oz. wire tacks. Each tack is driven down with a single blow of the hammer, and the machine has a tack always ready, no matter how fast the hammer blows fall. The machine is of light and handy size, so that it is easy to use. For tacking screens or canvas one of these automatic tackers will pay for itself in two or three days' time. All the year round and more especially during the winter shop season carpenters and builders will find this a very useful machine. Write the Pearson Manufacturing Company, Robbinsdale, Minn., today for full particulars.



**New Style Shingling Gauge**

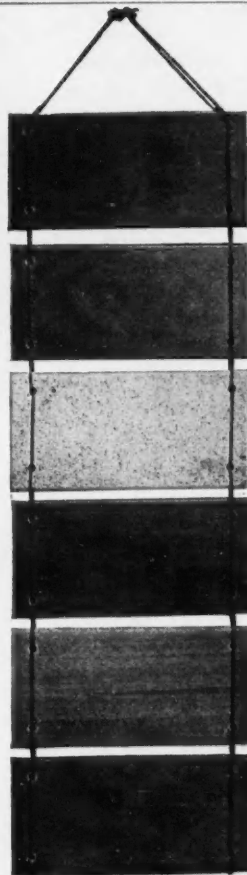


L. A. Sayre & Son, 8 Oliver Street, Newark, N. J., are just bringing out the new shingling-gauge as illustrated. This is known as their No. 54. It will be attached to their pattern hatchet which has a somewhat wider blade than the regular shingling hatchet, and this leaves more cutting surface free. They are making this hatchet and gauge to gauge the lap in a shingle by 1/4 inch from 4 inches to 5 1/4 inches. This will meet the growing demand for shorter lap. Full particulars will be mailed on request.



**Agents Wanted**

The Stransky Mfg. Co., Dept. V, 20 Warren St., New York City, want agents and distributors everywhere to sell their chair tips, or gliding casters. They are cheap and there's a neat little profit in it. Write these people for their proposition to carpenters. They also send a sample set free of charge.



**"Birch Interiors"**

A big new book of 40 beautiful pages illustrating modern halls, stairways, living rooms, dining rooms, fireplaces, and floor plans—shows styles of interior finish and color schemes that every contractor and builder is looking for.

**Six Birch Panels**

each 3x5 inches in size, as here illustrated, carrying the following reliable stains:

- |                    |                       |                        |
|--------------------|-----------------------|------------------------|
| <b>Silver Gray</b> | <b>Brown Mahogany</b> | <b>Dutch Brown</b>     |
| <b>Filipino</b>    | <b>Light Oak</b>      | <b>Medium Mahogany</b> |

The Book and Panels will interest and please you. They are sent postpaid.

*Write today for Birch Book "C" and the Panels*

**The Northern Hemlock & Hardwood  
Manufacturers' Association**

Dept. C.

WAUSAU, WIS.

## Suppose You Made \$10

—every time a person died in your county!

WOULDN'T worry much about your income, would you? European wars, bad crops, hard times never affect the death rate. People stop building, they may stop buying, but they never stop dying.

Now, suppose you could go into partnership with all your local undertakers—they to sell, you to manufacture—an airtight, waterproof, steel reinforced cement vault that does away absolutely with the present barbarous and unsanitary method of burial.

WOULD you, for example, allow anyone that belongs to you to moulder unprotected in the muddy bottom of a six-foot cistern? Neither will anybody else—the moment they learn about the Norwalk Vault!

FOR seven years the Norwalk Vault Company has been in business. Very slowly at first, but more and more rapidly every month now, the cement vault idea is growing. Undertakers everywhere are waking up to it. In the last six months we have helped establish factories in New York, Boston, Bridgeport, Providence, Albany, Syracuse, Trenton, Nashville, New Orleans, and a dozen other smaller cities in the East. Now we are moving westward again.

OUR experience has led us to be willing to make this proposition to any man in or about the building trade:

**NO MATTER WHAT NET PROFIT YOU ARE EARNING NOW, WE BELIEVE WE CAN SHOW YOU HOW TO ADD 18% A YEAR—1½% MORE PROFIT A MONTH.**

THAT is to say, a man struggling along now with only 6% on his capital should clear 24% with this new proposition, while a firm with energy and ability enough to clear 20% in any ordinary business should make 38% with ease.

How conservative are these figures you may see for yourself when you realize that after paying all manufacturing and overhead expenses, you can clear at least 100% on every vault delivered, and even then leave the undertaker an equally generous margin of profit for doing the selling for you.

ON the other hand, this is no get-rich-quick game. To go into it, a man must have a little capital and be willing to work hard to build up the business. For the right kind of a man there is a real opportunity; no technical experience is necessary; no expensive factory; no big payroll; no fancy running expenses of any kind.

ABOUT half the territory in the United States is now taken, the rest we expect to assign during the coming year. Even as it is, letters come in every day asking for territory already filled. Moreover, prices are going up again January 1st, 1915.

So, if the proposition looks good to you on the surface, don't lose any time before making us prove it out for you. We'll be glad to show you figures, lists, maps, original letters, or to take you to the nearest factory and let you see the vaults themselves. Ask anything you want to know—our office and sales force are at your service—no obligations whatever.

**The Norwalk Vault Company**

40 Seminary Avenue ..... Norwalk, Ohio

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

## "The Standard" Helps to Earn \$17,000 in Bonuses

Again "The Standard" low charging concrete mixer has shown its dependability by making it possible for its owner to earn a big bonus for speedy work in the installation of weighing equipment for the Government of Uruguay at the Port of Montevideo.

The specifications provided that the furnisher of the weighing equipment had to make delivery and to have erected all the equipment within three months. The contract also contained a proviso that a bonus of Five Dollars (\$5.00) per weighing device was to be paid for each day the specified date of completion was anticipated and a like penalty be forfeited for every day beyond the specified date for completion of contract.

Much depended on "The Standard" when you consider that it required about six weeks to transport the equipment together with the mixer. Materials had to be assembled, pits had to be dug and foundations laid before any of the weighing equipment could be installed. The work had to be done with the utmost care when you consider the fact that the entire imports and exports of Uruguay, amounting to \$85,000,000, pass through this port, and all must be weighed.

In this case an advantage was derived by "The Standard" being ready to run onto the job upon its arrival. These concrete mixers are very simple in design and are completely assembled ready for operation when they leave the factory.

Another important feature of these mixers: they are designed so that the drums are charged low at the base. By being built so low, that direct charging from the barrows saves the need of having a loading skip. The point of charging is only 24 inches above the ground.

By conferring with the manufacturers, The Standard Scale & Supply Co. of Pittsburgh, Pa., with branches in New York, Philadelphia, Chicago and Cleveland, they will be very glad to send information and illustrations of their big line of mixers.



## 1915 Boss Mixer to Have Hyatt Roller Bearings

It has leaked out that the American Cement Machine Company, Keokuk, Iowa, have a number of surprises in store for the coming year—in fact, it is said the 1915 Model Boss Mixer will make something of a sensation in concrete mixer circles. One of the features will be the famous Hyatt roller bearings which will not require oiling more than twice in a season. In our December issue we hope to be able to make full announcement regarding this new model.



## Building Materials Now Made of Rock

The marked increase in disastrous fires is directing more attention every day to the need of fireproof building materials that can be relied upon. The failure of many so-called fireproof materials when subjected to the intense heat of large conflagrations suggests the need of more careful judgment in the choice of these materials, as well as a more stringent interpretation of fireproof building regulations.

The demand for building materials that would not be affected by fire has encouraged manufacturers to experiment with all kinds of materials, but the only one that has thus far successfully withstood all tests is a peculiar rock known as asbestos.

Asbestos runs in veins usually nearly parallel to the ground, in various thicknesses from a mere line to three or four inches thick. Some of these veins, however, reach a depth of



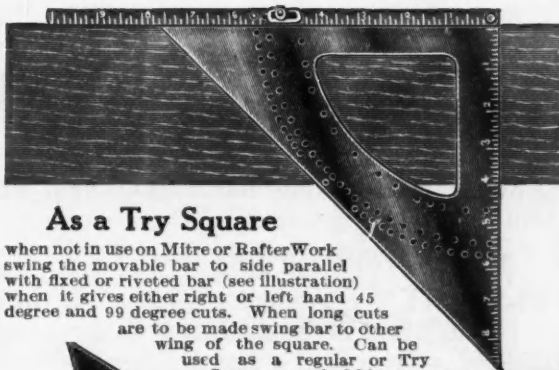
# HURRY! Last Chance to Get this Tool for \$1.<sup>00</sup>

## GOING FAST

Did you see our Great Introductory Offer last month? Carpenters and Builders quickly took advantage of this special offer to distribute and introduce 200 tools in each state at half price, \$1.00. Already we have received enthusiastic letters from practical builders who have received and used this wonderful tool.

### There are a Few Left

to be distributed in each state for \$1.00. After the 200 have been placed the regular price will be \$2.00 through dealers; \$1.00 does not cover the cost of manufacture and shipping, but we have made this offer to place in the hands of Carpenters and Builders the Ideal Rafter Square, Try Square and Mitre Square. After using this Tool pass the good word along and you will be doing your fellow builders a real service. We will then feel well repaid for giving you this tool at half-price, \$1.00.



#### As a Try Square

when not in use on Mitre or Rafter Work swing the movable bar to side parallel with fixed or riveted bar (see illustration) when it gives either right or left hand 45 degree and 99 degree cuts. When long cuts are to be made swing bar to other wing of the square. Can be used as a regular or Try Square and Mitre or Rafter Square at the same time.



#### Cutting a Hexagon

**Rafter Work** The Ideal will cut all forms of rafter—Common—Hip—Valley—Jack or Cripples, having a rise from 1 inch to 12 inches per foot. The scale is double for right or left hand work. A number is stamped by each hole showing the number of inches rise that hole will cut when the pin is locked there.

Free Instruction Booklet with each Tool

### The IDEAL Rafter Square, Try Square and Mitre Square

With this Three-in-one Square *any man* can cut all forms of rafters—Common—Hip—Valley—Jack or Cripples and all Bevel and Backing Cuts, having a rise from one inch to twelve inches per foot. No figuring necessary, book of instructions with each tool. All figuring and calculation to make all these cuts, has been done and laid out in scales on this square. Simply loosen set screw and shift movable bar to hole which shows number of inches rise you wish to cut. Lock-nut is shifted only when changing scales. Any change made in five seconds. The Ideal will lay out Bay Windows or figures having 3-4-5-6-8-10-12 or 24 equal sides. Will cut 81 different angles. A number is stamped by each hole and mitre scale giving number of sides the square will cut with pin in that hole. Square has 3 scales marked Common Rafter, Hip Rafter and Mitre. All scales plainly marked and easily understood.

#### Avoid Disappointment

Send Order Now if you want to get this tool for \$1.00. After 200 have been placed in your state the price will be \$2.00—through Dealers.

#### Ideal Tool Works

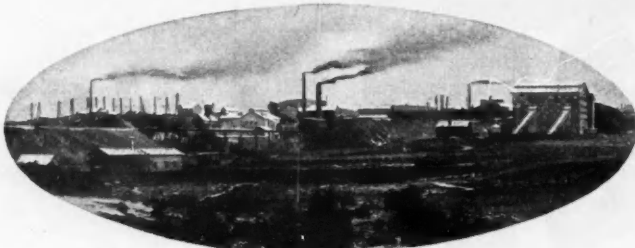
Middletown,  
New York

**SPECIAL INTRODUCTORY OFFER**

Ideal Tool Works, Middletown N. Y.

Gentlemen— I wish to take advantage of your special advertising offer and am enclosing \$1.00, for which I am to receive, prepaid, your regular \$2.00 Ideal Rafter Square, Try Square and Mitre Square.

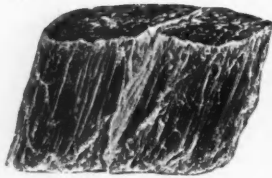
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Town.....  
State.....



MINES, DANVILLE, P. Q.

200 feet. In mining this rock, after removing the surface of the earth, the rock is drilled and blasted, the same as granite or any other stone.

Deposits of asbestos, in one or more of its allied species, are found to a limited extent in Russia, Italy, Egypt, India, South Africa, and, in fact, in all parts of the world. But that which is mined in Canada is about all that is of much commercial value, as other varieties are either too brittle to utilize or too hard to mine. By far the largest of these Canadian mines is owned by the H. W. Johns-Manville Company, of New York.



Sample of Asbestos Rock.

This asbestos rock, when properly worked, produces long silk fibres, which are manufactured into fireproof goods of various kinds, the most familiar of which, no doubt, is the asbestos theatre curtain.

These asbestos rock fibres are made into felt, much along the line that the felt for hats is manufactured. This felt is then saturated with Trinidad Lake asphalt, after which several of these sheets are cemented together with

this material and thus made into ready roofings.

For shingles, these same rock fibres are mixed with Portland cement and other ingredients, put into moulds of various sizes and shapes, and subjected to intense hydraulic pressure. The various colors are mixed with these ingredients, producing shingles of a number of handsome shades.

Asbestos wood or lumber is also made in very much the same manner as the shingles. This is furnished in slabs of varying sizes, so that it can be easily used for making fire-proof partitions, fire doors, booths for moving picture machines, etc.

Another use that is made of this material is in stucco, also wall plaster. Here the asbestos fibres take the place of hair ordinarily used and the asbestos rock takes the place of sand.

Then there are pipe coverings and a number of other things used in building construction made of this peculiar material.

Another material which is fast gaining favor, chiefly because of its fire-retarding qualities, is mastic for floors.

The importance of fireproof construction cannot be over-estimated, and that architects and builders are fast realizing this is shown by the big increase in the substitution of fire-proof building materials for those of an inflammable nature.



### To Cut Taper Grooves in Stair Stringers

The Huther Bros. Saw Manufacturing Company, 1101 University Avenue, Rochester, N. Y., advise all those operating power saw rigs to cut the taper grooves of their stair stringers with a Huther Brothers dado head.

"Make your saw table earn more money, and at the same time turn out better and smoother work," they say.

## Use Con-Ser-Tex on Every Job



The owner whose home has a **CON-SER-TEX** roof will always be grateful to the carpenter or builder who recommended it.

**CON-SER-TEX** is weather proof. It never rots or stretches. It hugs the roof or roof surface tightly. It makes a handsomer roof than wooden shingles, slate or tile, and is more economical.

The Scientific chemical treatment of **CON-SER-TEX** makes it practically proof against deterioration. It gives lasting protection under all conditions of weather and climate.

Write for sample and complete information.

## William L. Barrell Company

8 Thomas Street

::

NEW YORK CITY

Chicago Distributors

Geo. B. Carpenter & Co.  
430-4 WELLS STREET

California Distributors

Waterhouse & Price Co.  
LOS ANGELES

California Distributors

The Pacific Building Mat. Co.  
SAN FRANCISCO

# Get H-L-F Lumber Prices without bill of materials

**A BIG HIT**

**Get our price on H-L-F Stud and Wall Board**

Better than back plaster at 25% to 50% less cost. The double dead-air space keeps in the warmth, keeps out the cold. This patented H-L-F construction is easy to use. Everything furnished exact size.

Get a price on this construction for the jobs you're figuring on. We ask no royalty—furnish materials at our *usual* low prices.

**Write for prices today**



**Get our price**

**Let us help you plan houses**

Send 10c for the H-L-F Prize Plan Book of over 100 good homes. See what original and thorough plan work we do. Complete blue prints, plans, specifications and delivered quotation on any plan in the book, \$2. Special plans at very small charge.

Send 4 cents for H-L-F Barn Builder's Guide. Shows latest ideas in barn designing and construction.

The H-L-F Silo Folder tells about our wonderful new double wall freeze-proof silo. Price half that of stave silos.

The H-L-F Millwork Catalog is a book of real bargains.

**Send the coupon today indicating with an X just what you want**

**Hewitt-Lea-Funck Company**

Not in any trust or combine—Capital \$1,000,000  
308 Crary Building Seattle, Wash.

**Send for H-L-F House Pricer**

**FREE to you.**

**Mail coupon today**

Here's another big H-L-F idea! When you want a lumber estimate quick, don't wait to take off bill of materials—but use the H-L-F House Pricer.

Its use will enable us to send you by *return mail* our delivered price on lumber, millwork, hardware and paint. We guarantee enough of everything. Nothing overlooked. **NO EXTRAS.** Your profit insured.

Carpenters and contractors who have seen the H-L-F House Pricer, are delighted. It's a wonderful time saver—something you have always needed. Use the coupon and send for the H-L-F House Pricer today.

**Prices still low—shipments double quick**

The low summer and fall schedule of prices still in force. Our prices underbid everyone else, because we control the forests and mills—sell you direct—no middlemen. Every day we're saving carpenters and contractors high as \$200 on bills running from \$600 to \$800. That's going some! Means double profits for the contractor.

Shipments take only two or three weeks in transit. We guarantee grades, satisfaction, full count—allow you to see lumber before accepting. Get our proposition to you.

**Use the coupon today.**

**Hewitt-Lea-Funck Co.**  
308 Crary Bldg.,  
Seattle, Wash.

Gentlemen—Please send me the following:

- Approximate cost of H-L-F Stud and Wall Board construction for house I intend to build. Width of house \_\_\_\_\_ ft.; length \_\_\_\_\_ ft.; height of walls \_\_\_\_\_ ft.; No. of outside doors \_\_\_\_\_; No. of windows \_\_\_\_\_
- Prize Plan Book (send ten cents.)
- Barn Builder's Guide (send four cents.)
- Delivered, freight-paid price on enclosed list of materials (no charge.)
- H-L-F House Pricer (free.)  Plan Sheet (free.)
- H-L-F Silo Folder (free.)  Millwork Catalog (free.)
- Freight-paid price H-L-F Silo. Diameter \_\_\_\_\_ ft.; height \_\_\_\_\_ ft.

Name \_\_\_\_\_

Street or R. F. D. No. \_\_\_\_\_

Post Office \_\_\_\_\_

State \_\_\_\_\_

Business \_\_\_\_\_

Note the smooth, clean edges of this section of stair stringer with taper groove cut on an ordinary saw table in a few minutes with a Huther Brothers dado head.

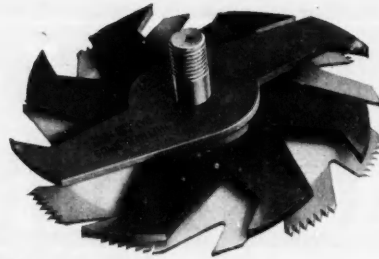
You can depend upon this head to do all of your rabbeting, grooving and special work, and every carpenter will find plenty of work for the Huther head to do.

It will pay for itself in a few days.

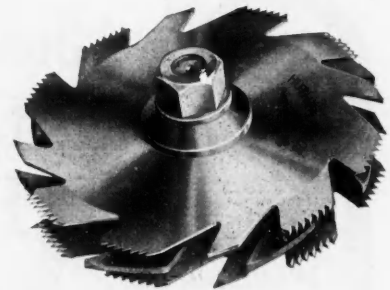
In making this cut, first cut a tongue and groove joint in some suitable soft lumber and drive two nails through the tongue to protrude, as shown.



Stair Stringer Worked on Huther Dado Head.

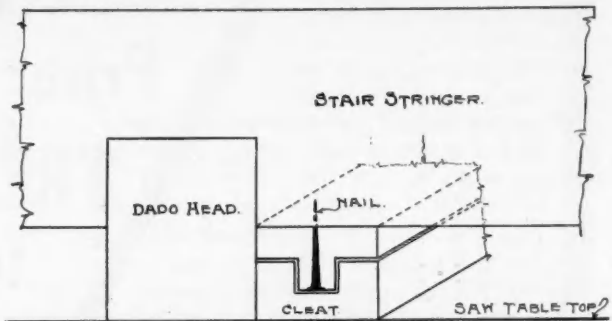


Two Styles of Huther Dado head.



by moving stringer on cleat.

The excellence of this Huther dado head is witnessed by the Huther guarantee—"If our dado head does not, after ten days' trial, do your work satisfactorily, return at our expense."



Detail of Jig for Working.

Secure this tongue and groove cleat alongside saw and place stair stringer on nails. Run groove to circular holes and then groove again to holes on angle. Obtain angle

# VULCAN-TILE

**The New  
Vulcanite Roofing**

Here is a high grade, fire-resisting durable asphalt roofing, combined with the beautiful patterns and soft natural colorings of slate and tile at a cost of roll roofing.

**MAKES HOMES BEAUTIFUL**

Every roll of Vulcanite is made to meet all sorts of adverse and extreme conditions, whether it be Fire-Cold-Hail or tempests. This is accomplished by using only the best Vulcanite Asphalt to saturate the all-wool felt which forms the base of Vulcanite. The figures and patterns are part of the crushed granite rock surface and are as durable as the roof itself. Pattern illustrated is Style "P." Vulcanite comes in one square rolls, five soft rich colorings, including red and green.

*Send for our samples and catalogues, telling how we assist, by advertising helps, such as individual letters, general publicity, etc. Address*

**Patent Vulcanite Roofing Co.**

Birmingham, Ala.      Cincinnati, Ohio      San Francisco, Cal.  
Kansas City, Mo.      New York City, N. Y.

**CHICAGO, ILLINOIS**

## Durable      Ornamental

# \$1500<sup>00</sup> In One Month By This Man



THAT'S what Mr. Eakin made with a "Long" Crispette Machine. Paid his last \$10.00 for rent of a store window; at the end of 30 days he had \$1,500.00 in the bank. Today he is independent. A Crispette Machine and Crispettes did it. Perrine, Cal., took in \$380.00 in one day. Every nickel brought him also 4 cents profit. What are you going to make of the future—just barely earn a living—keep wishing for something better to turn up? DON'T DO IT.

## I Am Looking for Other Men Who Want a Business of Their Own

LISTEN! Take that money you have saved up against the day of opportunity, invest it in a Long Popcorn Crispette Machine, and make fortune smile on you—build up a big paying business.

Think of the fortunes made in 5c pieces—street cars, moving picture shows, 5c and 10c stores! Everybody will spend a nickel. Everybody likes Crispettes—children, parents, old folks. You don't need any experience. You can start anywhere—in a store window, a small store room where the rent is cheap, or the kitchen of your home.

The Crispette Machine and Long's secret formula to the man of limited means is a safe and strong—a sure way to independence and fortune. Make money right from the start.

## ALMOST 400 PER CENT PROFIT

Every 20c spent returns you \$1.00 cash—NOT THEORY, not guesswork, not imagination, but the actual, bona-fide proven record of profits of Crispette producers from Coney Island to Oregon, from Canada to Argentine Republic.

The world today hungers for the "different," and it pays millions of dollars every year to satisfy this desire. Why not be the one to satisfy this demand in your locality and reap your share of the golden harvest now ripe and ready for you?

## Come to Springfield at My Expense

Up to a distance of 300 miles I'll pay your expenses if you buy a machine. Let me prove every word in this advertisement. No greater, better opportunity can be put up to you offering such **certainty of success**, producing the enormous, honest, legitimate profits, requiring such small investment, so light running expenses. Any man of ordinary intelligence, ambitious, progressive, energetic, who wants to get ahead in the world should make a Crispette Machine pay for itself in a few weeks.

**SEND FOR FREE BOOK**

\$100.00 A DAY MADE BY THIS MACHINE



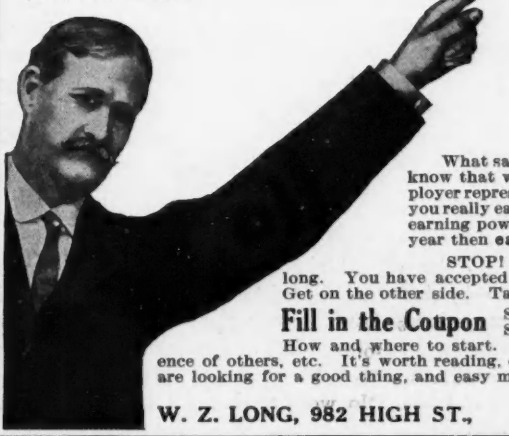
There is room for one of these Crispette Machines in every city and town of 500 population in U. S.

The 8th Great Wonder of the World—The Famous Crispette Machine

Every nickel you take in nets you almost Four Cents profit.

I want to start you in the same business that made me wealthy.

—W. Z. LONG



## Follow Carefully the Amazing Facts. ANSWER TO YOURSELF THESE PERTINENT QUESTIONS.

W. A. Phillips: "I started the 9th of last month and have cashed in up to date \$1435 with the season just starting. I thank the lucky stars I have taken hold of this business.

E. H. H., Penn., 12,000 rolls in two weeks, \$600.00; profits, nearly \$400.00. Feltmans' Pavilion, Coney Island, makes 500 pieces every 7 1/4 minutes; earns \$400.00 in ten hours. One man living 3,000 miles from Springfield bought an outfit and shortly after ordered another to come by express. Business was so good he could not wait to have the second machine shipped by freight.

What salary do you earn? What salary do you get? Stop a minute and consider. You know that what you receive from your employer represents but a small portion of what you really earn. Get on the other side! If your earning power amounts to thousands every year then **earn it and keep it to yourself.**

**STOP!** You have followed the rut too long. You have accepted only what others cared to give. Get on the other side. Take only what you want.

**Fill in the Coupon** Send for free book "Dollars and Sense." It tells the whole story. How and where to start. How to succeed. Gives experience of others, etc. It's worth reading, even if you don't start. If you are looking for a good thing, and easy money, send today for this book.

Use the coupon →  
**W. Z. LONG, 982 HIGH ST., SPRINGFIELD, OHIO**

**W. Z. LONG CO., 982 Springfield, Ohio.**

Without any obligation at all, please send me free your book, "Dollars and Sense In The Crispette Business."

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



## For Hard Service KisselKar Trucks Are The Best

**D**EALERS in building material must seek the utmost sturdiness and **reliability** in the motor trucks they buy.

They find that KisselKar Trucks live longer than other trucks and are laid up less frequently. They find too, that they are easier and less expensive to operate.

# KISSELKAR TRUCKS

KisselKar Trucks are built to fit the particular service expected of them. Individual conditions are studied, and the size, capacity, body construction and other details made accordingly.

There are six sizes of KisselKar Trucks—1500 lb. 1, 12, 2½, 3½ and 6 ton capacities.

KisselKar Trucks are used in more than 200 lines of business. Send for illustrated portfolio showing 350 of them in action—its convincing.

### Kissel Motor Car Company

546 Kissel Avenue - - Hartford, Wis.  
New York, Chicago, Philadelphia, Boston, St. Louis, Milwaukee, Minneapolis, St. Paul, San Francisco, Kansas City, Los Angeles, Dallas and 300 other leading American and Canadian points.

### New Flooring Saw

The old method of boring holes and chiseling when it was necessary to cut out sections in floors, partitions and ceilings was time consuming and troublesome. The work can now be done more quickly and easily by the use of the new D19 Flooring Saw recently designed by Henry Disston & Sons especially for this purpose. Jobbing carpenters will find this saw very useful. It has a strong blade brought to a sharp point at the end, and carries teeth over the curve and half way up the back edge. The blade is reversible, interchangeable and adjustable to various positions. The blade is held firmly in place by patent bolt and ratchet.

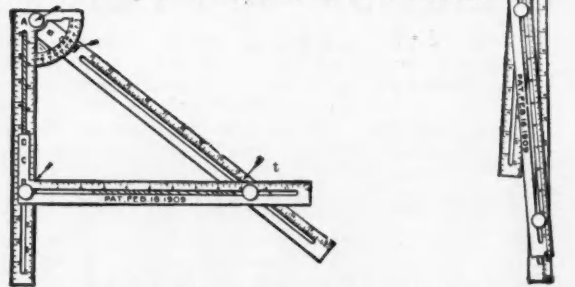
This new flooring saw comes in three sizes, 16, 18 and 20 inches. With this saw the work is done more rapidly and with less trouble and also better, as the sections cut out with it can be replaced in their original positions, if desired. Henry Disston & Sons Co., Philadelphia, Pa., will send full particulars on request.



### A B C Protactor Square

As was recently stated in this magazine by Steel Square Expert A. W. Woods, the ordinary steel square contains within itself—for the steel square specialists—the easy solution of all framing problems. To read and make use of the information contained, however, takes a great deal of skill and technical knowledge, more, in fact, than the majority of builders possess or feel that they can take time to acquire.

We all know how difficult it is to read and apply the steel square. We also know the immense handicap a workman is under who does



A B C Protactor Square Open and Closed.

not understand its use. The A B C Protactor Square has been on the market for a number of years, and has come into quite general use among wide-awake carpenters. It has been offered as the easy simplified road to steel square framing. Those who are familiar with this tool say that all framing problems are easily handled by means of it. The A B C Protactor Square gives lengths, bevels and degrees. It is also valuable in stair work. It folds into a small, compact size, so as to be easily carried in tool kit or chest.

The Stamping & Tool Co., La Crosse, Wis., are selling this tool, and are looking for carpenter agents to help them interest other carpenters and builders. Write the company, addressing Dept. 7. They will send full particulars about the A B C Protactor Square, how it is used, and how it is being sold.



### Barn Gable Door Fixtures

Several styles of gable doors for hay barns have been developed by barn builders. Home-made rigs of various and sundry kinds have been put up. Like most home-made contrivances, some have worked and others have not. Some gable doors we have seen have been strangely and wonderfully made. No wonder they got out of kilter every little while.

# Bringing in the Evidence

**Paying For Itself Hauling Builders' Supplies**  
 Far Hills, N. J., August 27, 1914.  
 The Reo Truck purchased from you about three months ago is giving us perfect satisfaction, taking the place of four or five horses and giving no trouble whatsoever. We find that the cost of upkeep has been very small in comparison with what we expected before we purchased the truck. It has already saved us considerable money towards the purchase price that we paid for it. We feel that perhaps we could be persuaded, without a great deal of effort, to purchase another of the same kind.  
 L. V. LUDLOW & CO.,  
 Coal, Lumber and Builders' Supplies.

**A Satisfied Builder**  
 Paterson, N. J., May 28, 1914.  
 Replying to your favor of May 22nd, in regard to the Reo Motor Truck, which we purchased some time ago, we take pleasure in stating that we have been using this truck for a number of months, and have found it very satisfactory in connection with our work and will recommend same to any one who is desirous of purchasing a truck of this description.  
 THE DAVID HENRY BUILDING CO.,  
 Per S. Williams, Secy. & Treas.

**Reo's Versatility Shown in the General Trucking Business**  
 Madison, Wis., June 18, 1914.  
 My Reo Model J Truck has frequently carried three tons, but recently I hauled 181 cases of pop at one time, weighing about four tons, and the manner in which the truck handled it astonished me. You list it at two-ton capacity. It seems to me it will carry as much as can be put on, regardless of weight. I believe that it can safely be called a three-ton truck. I am so well pleased with my truck that I can't say anything too good for it. I have used it throughout the past winter daily for all kinds of general trucking. Machines costing twice as much do not give anywhere near such good service.  
 JOHN H. ENDRES,  
 General Trucking.

**Giving Exemplary Service—Will Install Another Model J**  
 Bristol, Va.-Tenn., August 10, 1914.  
 We have had a Reo Model J two-ton truck in continued service since March, and are making an average of 48 miles per day with it in our delivery. The oil and grease consumption has been very light. Our average load is from 2,000 to 3,000 pounds. We have had no trouble whatever, and have not spent a cent for repairs. It has been doing our work to our satisfaction, and in all probability we will put another one of these trucks in service next spring.  
 BRISTOL ICE CREAM COMPANY,  
 By A. E. Fuller.

**94 Miles a Day in the Paint Trade**  
 Jersey City, N. J., May 28, 1914.  
 Our Reo Motor Truck is doing very well, some days making as many as seven trips, long and short, and covering as much as 94 miles a day. It has given us very good satisfaction. We trust it will do even better service for us in the hot weather, when horses give out so quickly.  
 NEW JERSEY PAINT WORKS,  
 Per H. C. Louderbough.

**Garment Makers' Truck Never Out of Commission**  
 Huntington, W. Va., August 29, 1914.  
 The Reo Truck which we have in use, and which we purchased from you, is in splendid shape. With it we are doing the work which required one team all the time and an additional team part of the time, and the work is being gotten out much more promptly with the truck than it was formerly. It has never been out of commission a single day since we purchased it over a year ago.  
 WATTS, RITTER & COMPANY,  
 Manufacturers of Peerless Overalls, Shirts and Pants, and Jobbers of Dry Goods.

**Lumber Dealer Enthusiastic**  
 Benton Harbor, Mich., August 27, 1914.  
 I am more than pleased with my two Reo trucks, and do not see how I could get along without them. I do not make a practice of overloading my trucks, but once in a while it is necessary, and I have hauled as high as 8,500 pounds of lime on one load—just to see what the Reo would do. Have not spent one cent for repairs on either truck.  
 W. A. PRESTON,  
 Manufacturer and Dealer in Lumber.

The thousands of merchants who have found the solution of their hauling and delivering problems in the Reo two-ton truck were doubtless one-time skeptics.

Quite possibly they once looked askance at its claimed superiorities—the saving in time, the efficiency it adds to every department of the business, and its ability to key up an entire institution to a quicker step.

But once tried, and personally compared with the old fashioned team hauling, these Reo truck owners are of one voice in their testimony.

The verdict is unanimous. In over 175 lines of business, the Reo truck has become a permanent factor of efficiency and economy, and its well earned fame has made it the leading two-ton truck, in point of sales, in America.

It is no source of surprise that merchants everywhere, benefited by the Reo, should express their satisfaction without reserve; and their experience should have the utmost weight with intending purchasers of motor trucks.

**REO MODEL J**  
 Two Tons Capacity  
**\$1,650**

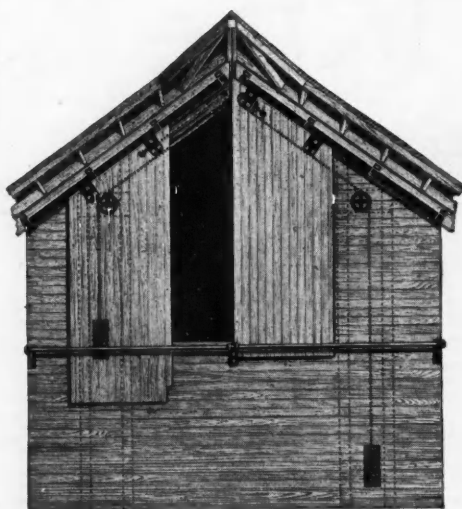
F. O. B. Lansing  
 Chassis with Driver's Cab, Body Extra

Write for catalog and booklet of users' experience

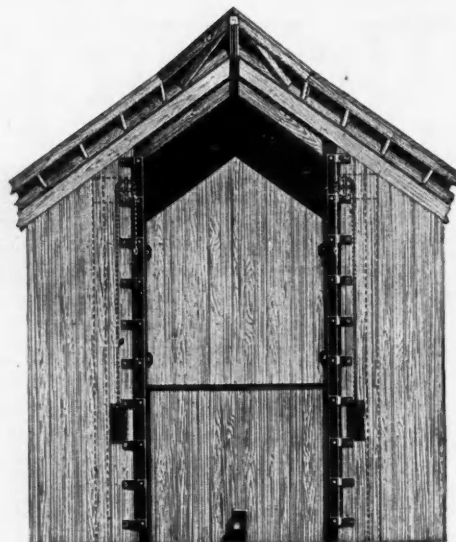
**Reo Motor Truck Co.**  
**LANSING, MICH.**



Barn builders will be glad to know that a regular line of gable door fixtures is now on the market. The Richards-Wilcox Manufacturing Company, Aurora, Ill., have gone after this proposition in their characteristically thorough way. Two styles of gable doors fitted with R-W fixtures are illustrated. The first is a pair of double sliding doors. The track is mounted parallel with roof and the hangers are attached in a similar manner as on any barn door. Each door is counterbalanced by a weight attached to the steel cable which passes over a cable pulley located above the door. Doors can be lowered or raised easily, permitting the use of all or part of the opening as desired. A steel guide holds bottom of doors against building and also acts as a stop when doors are opened. No. 20 R-W Gem roller bearing trolley hangers with No. 31 track are used for hanging these double sliding doors.



Double Sliding Hay Doors.



Vertical Sliding Hay Doors.

The other illustration shows a vertical sliding gable door. For this a special guide track is provided which comes in 6, 8 and 10-foot lengths. The top of the door is fitted to the slope of the room and an iron stop catches the door at the bottom. The door is counterbalanced by weights attached to steel cables which pass over two cable pulleys located above the door. The door operates vertically. These fixtures have

been designed to meet the demand for a good, low-priced outfit.

For either of these doors the counterbalance weights can be made of any convenient material. Concrete weights are good, as they can always be made on the job. Concrete weights, 137 pounds to the cubic foot. Where 2 by 6-inch studding is used for the barn framing, weights should be 8 inches wide, 5 inches thick, and in length, according to the weight of the door.

The Richards-Wilcox Manufacturing Company, Aurora, Ill., will send full particulars on request to any of our readers writing them.

# INTERNATIONAL Asphalt Shingles

Durable—Rich in Color—Economical—Fire-resisting

A practical roofing material that will make a satisfactory roof for the Mansion—Residence—Bungalow. Wherever you want a real roof that will stand up under all sorts of adverse weather conditions.

Easy to Lay—once laid will not leak, curl or warp. Add Tone and Dignity. Harmonize with the architecture and above all please the owner.



MAGNIFIED SECTION

Made of the Best materials obtainable by a special process. Will resist Heat, Cold and are absolutely Waterproof. Made in standard size, 8"x12", packed in cartons. Because of their fire-resisting qualities, they go a long way in lessening fire insurance premiums.

We want all builders to have our complete line of samples and prices. Write Now.

SEVEN STYLES

Costs Less than Wood Shingles

## INTERNATIONAL ROOFING & MFG. CO.

5305 to 21 So. Western Ave.

CHICAGO





# If You Were Up in an Aeroplane

you could see the advantages of a good tin roof. No leaking—no warping—no cracking—no clogging of gutters—and last but not least—*fireproof*. Such has been the record of MF Roofing Tin for almost a century.



C.B. OPEN HEARTH  
1 1/2  
32 POUNDS COATING

Those interested in Roofing should have our booklet "Copper—Its Effect Upon Steel for Roofing Tin."

## American Sheet and Tin Plate Company

General Offices: Frick Building, Pittsburgh, Pa.

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, San Francisco, Los Angeles, Portland, Seattle

## The Survival of the Fittest

If you ever have compared the roofs of old houses that have seen years of service it is plainly seen that slate holds this position among roofing materials. A Slate roof is the roof that will resist the ravages of Time and the Elements without showing any signs of wear or decay. A Slate roof will outlast the Building while other roofing materials decay, Rust out, Crumble or wear through.

There are all kinds of roofings on the market claiming some of the advantages of Slate, but they do not possess all the merits of Slate combined in one such as Durability—Beauty—No Cost of upkeep and Fireproof Qualities.

We want all Builders who have not our FREE Samples to let us send them. Investigate Slate—its cost—its beauty and Matchless Durability. We will gladly send full information and our FREE Samples. Send us your name.

**Bangor Slate Mining Co.**

Trust Bldg., Bangor, Penn.



## Getting More Business

You cannot often do business with the same people. Building is too much a "once-a-lifetime" affair.

You must largely depend on recommendations from one home builder to another. Your business growth, there-

fore, depends on your reputation.

You can largely safeguard it, if you use

## Genuine Bangor Slate

It means not only more economy and satisfaction for the roof, but for the entire house from the garret to the cellar (for a defect in the roof may cause a crack in the foundation).

Our slate has been used for generations, both on flat and steep roofs.

We have a profitable proposition for you. Let us send you particulars—without obligation.

Send the attached coupon now—while you think of it.

**GENUINE BANGOR SLATE CO.**

Easton, Pa.

Signed.....  
Address.....  
City.....State.....  
November, 1914

Genuine Bangor Slate Co., EASTON, PA.

Please send information.



## This Roof is Weather Proof

When you complete the laying of a Rex-tile roof you can give the house-owner a weather and time-proof guarantee.

**Rex-tile**  
TRADE MARK

*"The Scientific Shingle"*

can't flap, warp or curl—on to stay—water can't leak through. Fastened at the bottom through a patented turn-under fold that gives a double butt-end and protects the nails from moisture and rust.

No painting is necessary. The color is a part of the shingle, and is there to stay.

Builders will appreciate the ease of handling Rex-tile Shingles. Much lighter than slate and tile—not sticky like some prepared roofing.

Rex-tile Shingles are sold at one price. No fear of price-cutting competition if you use them on your roofing jobs, because the turn-under fold for nailing—at bottom—no flapping or warping—nails perfectly covered—is patented and exclusive.

Rex-tile Shingles are being advertised in a country-wide campaign. We'll be glad to send you sample advertisements and shingles with full information, prices, etc.

### Flintkote Manufacturing Co.

90 Pearl Street, Boston, Mass.

659 Peoples' Gas Bldg., Chicago, Ill.

Also manufacturers of Paradux—a waterproof canvas covering for all surfaces on which walking will be done—such as sleeping porches, piazza roofs, roof gardens, balcony roofs, boat decks, etc. Easier to lay than tin or metal—far more durable—requires no special preparation of the surface to be covered. Can be painted any color desired.

### The ABC Dumbwaiter

In the construction of dumbwaiters one of the desirable features is an arrangement which will hold the car at any point desired, and in the King dumbwaiter, which is offered to the trade as a strictly high-grade construction, yet moderate in price, one of the points on which the manufacturer bases his claims to superiority is a safety check for holding the load at any floor. The car is constructed of selected chestnut, is properly ironed and braced and has a folding shelf. The outfit includes special guide wheels which insure a thoroughly noiseless movement of the dumbwaiter. Emphasis is laid upon the fact that there are no wooden pins to break in the weight. The dumbwaiter in question is made by William F. King, 20 Kingsland Avenue, Brooklyn, N. Y., and any reader of AMERICAN CARPENTER AND BUILDER, who may be interested can secure full particulars on application to that address.



### A New Gray Engine Book

Advance copies of the new Gray engine book have just been received.

Some might call it a catalog, but to our way of thinking it is more than a catalog. The catalog is usually a list of the manufacturer's products with illustrations, specifications and sometimes prices.

The Gray people apparently have a different idea of what a manufacturer's catalog should be and they have proceeded upon wholly different lines.

There is nothing elaborate or pretentious about the book—it is simple and plain, but full of meat from cover to cover; in



Reproduction of Engine Book Cover.

fact, a good, terse adviser on power questions, both for the buyer and the man who handles machinery.

This book covers power questions from all important angles. The Gray Motor Company call their line of engines a line of "Thoroughbreds," and one of their most telling features is the silence of the motor in operation and its lasting qualities.

Even the cover is used to convey this message, and every page on the inside is used with good effect, too.



# 100 per cent Efficiency

W. & C. Metal Shingles is the 100 per cent efficient fire proof roofing material and has been for the last 32 years. Not only is this roofing material fire proof, but it is wind, rain, snow, storm, lightning, rust and decay proof, and its use makes a decided reduction in insurance premiums. The best of all roofings.

This shows three houses 10 feet apart; the roof of the central house—a wooden roof—was burned entirely off, with no damage to the houses on either side which were covered with the time proven W. & C. metal shingles.



## Walter's & Cooper's Metal Shingles

Those who handle these Shingles do very well from a profit-gaining standpoint. We need a few more red-blooded representatives, one in your town. Here is one fine chance to get in on a good thing, National and the sooner the better. Ask for plan.

### Sheet Metal Roofing Co.

339-888 Grand Street, Jersey City, N. J.



G  
F  
T

**For Service**                      **For Price**

## GENUINE FRANKLIN TUNNEL ROOFING SLATE

During its life, you will probably roof a building four or five times. The expense is great. Use G. F. T. Slate and only one roof is necessary. The cost? Practically the same as any good shingle. Cleaner and more artistic, too; also fire-proof.

Send for the **FREE BOOK** that gives real facts about G. F. T. Roofing Slate. Samples and Prices, too.

**SLATINGTON SLATE CO.**                      Slatington, Pa.

G                      F  
T                      T

## MONTROSS METAL SHINGLES



When you buy our shingles, you buy a roofing material that can be depended upon to give satisfactory service. We have made metal shingles for 34 years—and some of our first shingles are in service today. You buy experience not an experiment.

**Montross VICTOR SHINGLE**

Our shingles all have the Montross telescope joint on all vertical seams, which makes a rust-resisting non-corroding joint. Montross shingles are Fireproof—Lightning-proof—Non-rattling—Beautiful and Durable.

Write for prices and free samples.

**MONTROSS METAL ROOFING CO., 110 Erie St., CAMDEN, N. J.**



## We Want to Send You FREE Samples

of

# HUDSON Asphalt Shingles

See for yourself. Note the High quality felt which forms the base, how it is thoroughly saturated with asphalt and surfaced with Red or Green Crushed Slate. A Durable Artistic Roofing. Low in cost and very economical as it needs no painting and does not require heavy timbering.

We will mail you, FREE Samples as soon as we receive your name and address. Send it now.

**Asphalt Ready Roofing Company**  
9 Church St.                      New York, N. Y.



## The Stormproof Roof

**A**BSOLUTE protection from the elements is assured the house roofed with Cortright Metal Shingles.

They interlock and overlap so that no snow or rain, spark or ember, can penetrate.

There's no solder used on a Cortright roof, and not a nail exposed to the weather. No expansion or contraction from heat or cold can pull it apart, or lightning harm the house under it.

## CORTRIGHT Metal Shingles

have all the virtues of other roofings with none of their defects. They last indefinitely and never need repairs.

Contractors and Builders everywhere are recognizing that wood shingles are rapidly becoming obsolete and are dropping them for the storm proof, fireproof, and inexpensive Cortright Metal Shingles.

There's more money for you in Cortright than in wood shingles, and you do your client a real service in recommending them. Easy to lay, expert help not necessary. Write today for samples, prices and our interesting new catalog.

**Cortright Metal Roofing Co.**  
PHILADELPHIA  
AND  
CHICAGO



In addition to the engine there are many vital points to be considered—the company back the product, its standing and policy toward engine users and the trade; the factory, experience and the quality of its work.

Then follow some splendid illustrations of the various lines of engines—in fact, the book is just cram-jammed full of good, clear half-tones.

One brief chapter, entitled "Facts on Power Sizes," is particularly valuable in explaining just what work may be expected from each and every size.

A copy of the book can be had free by addressing the factory offices, Gray Motor Company, Detroit, Mich.



### The "Alamo" Heater

The "Alamo" Schoolroom Heater is constructed of heavy anti-trust steel, and, being welded by the acetylene process, has no joints. As the firepot, grate and ash pit are all inside the steel body no gas or smoke can escape. No cement is required with the "Alamo" heater, as is the case where a steel drum is placed on a cast-iron firepot.

The *Humidifier* is a new, special, and very valuable feature of the "Alamo" heater. It realizes results that conform with the opinions of the best medical authorities, such men as Dr. Evans, ex-Health Commissioner of Chicago, and Prof. Watts, authority in school hygiene, both men of national reputation.

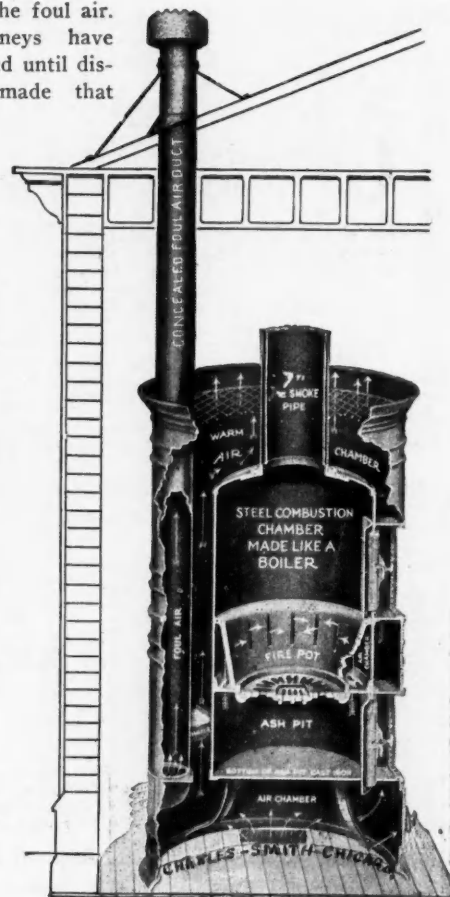
Another valuable feature of the "Alamo" is the concealed *foul air duct* shown in the illustration. It is not an obstruction in the room, and this fact alone is sufficient to recommend it.

But the fact of greatest value in the foul air duct of the "Alamo" is that it does not injure or affect the draft of the chimney, for it is not connected to the chimney, but the heater itself is the power that removes the foul air.

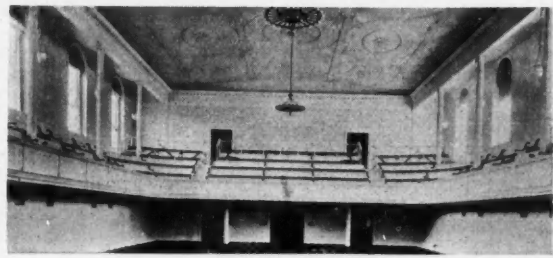
Many chimneys have been condemned until discovery was made that troubles were caused by the foul air duct being connected with it.

The "Alamo" heater is not a cheaply constructed modified stove, or an old style furnace worked over for a heater, but it is built expressly for the purposes required, after many years' experience in the heating business.

Address the "Alamo" Heater Co., 70 W. Lake St., Chicago, for full information.



Section thru Building and Heater—showing Construction.



Auditorium of Vassar College, Poughkeepsie, N. Y., McKim, Mead & White, Architects, J. M. Method of Acoustical Treatment Employed.

**Architects Now Specify it in Their Plans  
J-M Method of Acoustical Treatment**

That there is nothing experimental about this scientific method for the insuring of correct acoustics is demonstrated by the fact that Architects everywhere are specifying it in their original plans.

This confidence on the part of Architects is undoubtedly largely due to the great number of successful treatments already made, aside from the fact that we guarantee satisfactory results.

It is advisable to have the J-M Method of Acoustical Treatment applied during the course of construction. However, it can also be successfully utilized to correct faulty acoustics in old buildings.

Write nearest Branch if you desire the co-operation of our acoustical experts.

**H. W. JOHNS-MANVILLE CO.**

- |            |              |             |              |                |
|------------|--------------|-------------|--------------|----------------|
| Atlanta    | Cleveland    | Kansas City | Newark       | Portland       |
| Baltimore  | Columbus     | Los Angeles | New Orleans  | St. Louis      |
| Boston     | Denver       | Louisville  | New York     | Salt Lake City |
| Buffalo    | Detroit      | Memphis     | Omaha        | San Francisco  |
| Chicago    | Galveston    | Milwaukee   | Philadelphia | Seattle        |
| Cincinnati | Indianapolis | Minneapolis | Pittsburgh   | Toledo         |
- THE CANADIAN H. W. JOHNS-MANVILLE CO., Limited  
 Toronto Montreal Winnipeg Vancouver 2847



The rapidly increasing use of cement for garages, barns, corncribs, stables and other buildings has created a big demand for

**WAGNER  
Studding Sockets  
for Cement Floors**

—the easiest-to-use, most durable and best all around way of anchoring studding in cement floors.

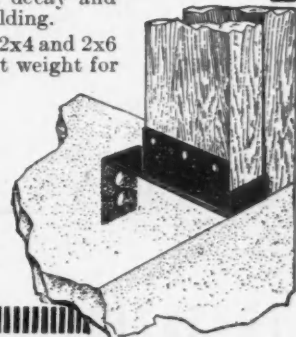
Set into the cement while fresh, they are tightly secured and hold with a grip of steel. Protect ends of studding against decay and insure long life to the building.

Made in two sizes—for 2x4 and 2x6 or 2x8 studding; also light weight for partitions.

*Your Dealer Can Supply You*

We fill orders direct where we have no dealers. Write today for descriptive folder.

**Wagner Mfg. Co.**  
Dept. F CEDAR FALLS, IA.



Home of J. J. Cleary, Charlotte Blvd., Rochester, N. Y. Architect, H. B. Nurse, Rochester, N. Y.

25,000 CREO-DIPT Red on roof; 17,000 CREO-DIPT Brown on side-walls; Perfection 18-inch shingles.

**Secure Artistic "CREO-DIPT" Stained Shingles Effect with**

Whether you reshingle or build a new home, use "CREO-DIPT" Stained Shingles and the work is done for a lifetime.

**14 Grades, 16, 18, 24-inch. 25 Different Colors.**  
*Save Muss and Cost of Staining on Job.*

"CREO-DIPT" Shingles come in bundles ready-to-lay. We select Red Cedar shingles, dip them in creosote and stain them any color desired. No poor shingles—no wedge-shaped shingles. They lay faster and look better.

Write for FREE Color Pad and "CREO-DIPT" Booklet Today. It shows different types of "CREO-DIPT" houses selected from all parts of the country.

DISCOUNTS TO THE TRADE.

**Standard Stained Shingle Co.**

1028 Oliver Street  
NORTH TONAWANDA, N. Y.



**REYNOLDS ASPHALT SHINGLES**

*Guaranteed for 10 Years*

will last many years longer—Natural colors of garnet, red, gray and green, which never fade  
 We are the ORIGINAL MAKERS of Flexible Asphalt Slate Shingles and tested our product for ten years before putting it on the market. Let us send you a booklet.

"Fire Resisting—Approved by National Board of Underwriters"

**H. M. Reynolds Asphalt Shingle Co.**

Established 1868

West Grant St. GRAND RAPIDS, MICH.

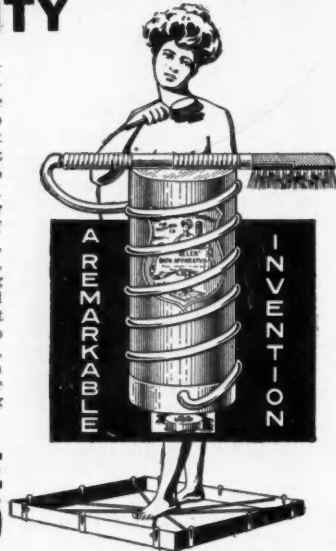


# \$1200 IN COLD CASH Made, Paid, Banked in 30 Days by Stoneman--\$15,000 To Date

Reader, this offer is open to you—this money—the cold cash—can be yours. You, and you alone, by waiting too long can lose it. Investigate today—get the proof. Send your name and address—but **NO MONEY**—this very minute.

## \$1000.00 PER MAN PER COUNTY

Don't worry—don't find excuses—no experience is necessary—business supplies the capital. You don't have to wait a month—not even a week—payments can start the first day—and continue daily up to \$1,000.00 per month per county. For years we have been quietly picking men from all walks of life, ministers, clerks, farmers, preachers, doctors, lawyers, teachers and so on—enabling them with our co-operation and \$50,000 appropriation to get what we here offer and can do for you—\$1,000.00 per man, per county. Some of these men you may know—possibly have envied without understanding the reason of their prosperity.



## INVESTIGATE AND BE AMAZED

Demand absolute proof—accept no other kind. Either we have the best thing that ever happened or we're colossal liars. Ask Schleicher, minister, whether it's true that he received

## \$195 TWELVE HOURS AFTER APPOINTMENT

Langley, liveryman, \$115 first day; Rasp, agent, \$1,685 in 73 days; Beem, solicitor, \$164.25 weekly for 12 weeks; Korstad, farmer, \$2,212 in a few weeks; Zimmerman, farmer, \$3,856 in 30 days; Juell, clerk, \$6,800; Hart, farmer, \$5,000; Wilson, cashier, \$3,000 in 30 days. Let us refer you to these men, to the U. S. Government, to banks, business houses, noted people at home and abroad. Heed this caution from Chas. Starr, of Mich., who writes, "Sorry this field is closed. Should have acted sooner, but was skeptical. Your local man's great success has set everybody talking and proves I was a chump. Wonderful what a man can do with a real opportunity." Then read this from Lodewick, who acted quickly: "Lucky I answered ad. It's great. Money coming fast." Which will you be, Starr, a victim of "neglected opportunities," or Lodewick, the "early bird"? To escape Starr's fate, send your proposal this very minute—

## SPEND ONE CENT TO MAKE THOUSANDS

Strange invention startles world. Gives every home that long desired blessing, a modern bath-room with hot and cold running water facilities for only \$6.50. No plumbing—no water works—self-heating. Only ten minutes to install. Gives cleansing plus friction, massage and shower baths in any room. Equivalent to any \$200 bathroom. Over 200,000 delighted users. Used by U. S. Government.

More remarkable than this invention is our startling plan of universal distribution through special representatives who become virtually profit sharing partners in a business that's immense—exciting—fascinating—dignified—and above all, has enabled them, will enable you, to get \$1,000.00 per month, per county. Asking to be shown doesn't obligate you one bit. Investigate today by all means.

**ALLEN MFG. CO**  
3968 Allen Bldg. - Toledo, O.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN CARPENTER AND BUILDER

## Quick Unloading Car Chute

A quick unloading car chute is being manufactured by the Dow Wire & Iron Works, Louisville, Ky., which our builders and contractors will find worth while investigating. With this chute you can quickly unload freight cars into wagons. It will handle crushed rock, sand, gravel, coal, etc., at the rate of a wagon-load a minute, all without the aid of complicated machinery or skilled labor. These chutes are made in three sizes,  $\frac{3}{4}$ , 1 and  $1\frac{1}{2}$  cubic yards, respectively. The chute is



Labor Saving Car Unloader.

made of sheet steel well stayed with angle and flat irons. It is hung on the car as shown in the illustration. It is filled by a laborer, and when the wagon arrives and is driven under the chute it is emptied in a minute's time and the wagon drives on. It is said that fully one-third more work can be done with the same teams since there is no waiting for wagons or wagons waiting for loads. This will mean a big saving to contractors handling the materials mentioned.



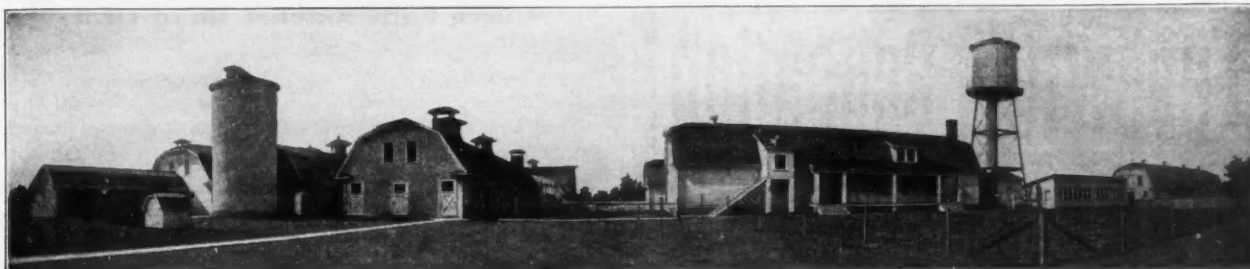
## New Opportunities Offered to Users of Roberds "Ideal" Wall Board

Readers of this magazine who are actively engaged in contracting and building should be interested in the advertisement of Roberds Manufacturing Company which occupies another page in this issue.

Roberds "Ideal" wall board has for many years been favorably known to the building trades. It is a 4-ply board with three layers of fire-proof, adhesive cement and is said by those builders who are most familiar with the wall board proposition to be wonderfully satisfactory.

We are advised that contractors and builders, especially in Michigan and other northern States right in the heart of the timber country are using this material very extensively for sheathing purposes in place of the ordinary sheathing boards covered with building paper. The arguments they advance in favor of this method of construction are the extreme simplicity and ease with which this board can be applied, the large area covered by each strip, absolutely tight and weather-proof joints and perfect fitting about all openings. It is affirmed that this material, although costing about the same price per thousand square feet as sheathing lumber, is, in reality, very much more economical sheathing material, owing to the tremendous saving in time and labor.

The Roberds Manufacturing Company have enjoyed a remarkably healthy growth from a comparatively small beginning, until today it has trade representation in practically all parts of the country. We urge our readers to investigate the proposition which this firm is now advertising so extensively.



(Louden-Planned Barns at Moline, Illinois)

## GET INTO THE BARN BUSINESS

While city folks are worrying about the High Cost of Living, the farmer is smiling over the High Price of Farm Products, and telling Mary that "We'll build that new barn now".

### WHAT ARE YOU DOING?

The Louden national advertising Campaign is interesting thousands of farmers in new barns, Modern Barns—**Louden Barns.**

### GET BUSY BUILDING BARN!

We've been specializing on barns for nearly half a century, and never before has there been such an opportunity for the carpenter of the small town as there is right now.

**Write and ask us how to get into this money-making field.** Let us help convince your farmer friend that what he needs is a Modern barn—a Money-Making barn—a barn that will be a constant pride as well as economy. As for you—

**Build a Modern barn under Louden guidance and you will build a monument that will stand as a LIVE, FORCEFUL advertisement of your Ability as a Builder.**

**Fill in the attached coupon with names of farmers you think will build or SHOULD build, and We'll start things MOVING.**

STEEL STALLS—  
LITTER AND  
FEED CARRIERS—  
BARN DOOR  
HANGERS—  
HAY TOOLS.

## Louden Machinery Company

(Est. 1867)

5500 Fourth St.

FAIRFIELD, IOWA

Louden Machinery Co.,  
5500 Fourth St., Fairfield, Iowa.

Please give me full information regarding your Barn Building Proposition. I believe the following named persons are prospective barn builders:

Mr. ....  
P. O. .... State .....

Mr. ....  
P. O. .... State .....

Mr. ....  
P. O. .... State .....

Mr. ....  
P. O. .... State .....

Mr. ....  
P. O. .... State .....

Signed .....

P. O. .... State .....

# FREE!

To Contractors Who Build Dairy Barns

## This Valuable Reference Book

Here's a 126 page pocket size book bound in durable Keratol leather—packed from cover to cover with information that's bound to save you time and money. The "How Book" for Contractors is yours free of all cost if you'll write for it and give us the names of folks in your neighborhood who are going to build new barns—remodel old ones or put in concrete floors.

### Pocket Size—Encyclopedia Contents

The "How Book" for Contractors tells how to figure life, strength and quantities on all kinds of building materials. Safe loads—bending stresses, crushing strength—timberweights—waste—shrinkage—roof pitches—labor costs in roofing, carpentry and masonry work, etc.—tells how to figure them all. It's a ready reckoner too—compiled from authoritative sources. A wealth of practical, usable, every-day information that you as a contractor can't afford to be without. And it's free to you. Write for it.

Our drafting department is at the service of our contractor friends. We furnish special blue prints for your customers at no cost to you.

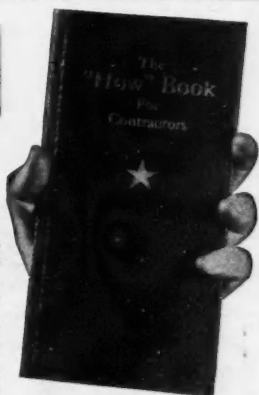
### Read This—Write Us

Write today—sending us the names of folks in your neighborhood who are going to build new barns—remodel old ones or put in concrete floors and we'll send you a copy of the "How Book for Contractors" bound in keratol leather and details of our Free Blue Print Service.

## HUNT, HELM, FERRIS & CO.

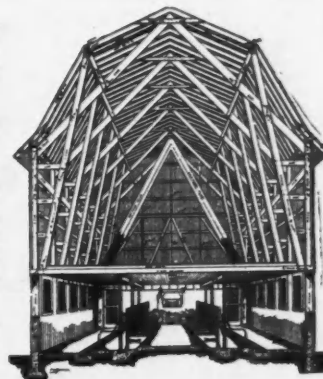
304 Hunt St.

HARVARD, ILL.



## How to Make More Money Building Barns

Every man in the building business can have the benefit of W. D. James' barn knowledge and use it to his own advantage and profit. There's more money in building up-to-date, properly equipped barns on scientific principles than in putting up the old type. The right kind of a barn means an enthusiastic owner, and that means more jobs in the same neighborhood.



## Get Our Special Blue Print and Building Service Offer

Mr. James is the foremost authority on dairy barn building, and he wants to make you a special offer of complete working blue prints of several practical dairy barns of different sizes and types. In addition to Mr. James' personal co-operation, you can have help from our architectural department, conducted by experts. Write today for all the facts regarding this service.

## James Manufacturing Co.

A. H. 75 Cane Street

Ft. Atkinson, Wis.

### This Valuable Book Free

—tells about new and better construction—lighting—size—site—drainage—general equipment—King system of ventilation; gives floor plans of successful barns. Your copy—**Free**—if you answer these questions: For whom do you expect to build or remodel dairy barns? (Give names and addresses). When? For how many cows? Send your application now for book and complete information.



# Typewriter Sensation

## 3 Dollars A Month



**Buys a Genuine  
Standard Complete  
Visible Writing  
Model No. 2  
L. C. SMITH  
TYPEWRITER**

**and at less than half the catalogue price**

Never before has anything like this been attempted. Dealers get more than this for simply renting this make of machine, not nearly as perfect as the one I will send you, and you pay only Three Dollars a month and own it. **USE AS YOU PAY.**

### A--GUARANTEED--TYPEWRITER--\$48.30

Perfect machines only. Complete outfit, nothing extra to buy, no strings of any kind to this offer. Just think of buying such a typewriter for \$9.30 down and \$3.00 a month. Thousands of people have paid \$100.00 cash for L. C. Smiths. It's Standard, by many considered the best typewriter ever built. Has the backspacer, tabulator, two-color ribbon, automatic line spacer, will write on ruled lines, speed dog escapement, insuring equal spacing between letters, even at the greatest speed. Stencil cutting adjustment, adjustable margin stops, margin release key, adjustable paper and platen release, ball bearing carriage, ball bearing basket shift, single shift standard universal keyboard, writing 84 characters, the entire line of writing completely visible, every practical improvement, every modern operating convenience of the latest standard machines; comes to you with instruction book and operating instructions, tools, cover, practice paper, everything ready. It runs beautifully. Writes as perfect and clean-cut a letter as quickly and as easily as any machine bought for \$100.00. It's wonderfully simple; a child can operate it with half an hour's practice and rapidly attain speed. It's strongly built and will give you years and years of honest service and complete satisfaction.

### Send No Money—Only Mail Coupon and I Will Ship You This L. C. Smith Typewriter

When the typewriter arrives, deposit with the Express Agent \$9.30 and take the typewriter five days and try it. If you find it to be the best typewriter bargain you ever saw, satisfactory in every respect, keep it and send me \$3.00 each month until the special price of \$48.30 is paid. If you don't want to keep it, return it to the express agent, and he will give you back your \$9.30 and return the machine to me. I will pay the return express charges.

You won't want to send this beautiful typewriter back after you have seen it and tried it. You can't imagine the perfection of this typewriter until you see it. The price is less than half the catalogue price; you use it while you pay for it, and it is guaranteed just as if you paid \$100.

The supply at this price is very limited, the price will probably be raised when next advertisement appears so don't delay. There is no red tape. I employ no solicitors—no collectors—no chattel mortgage. You cannot lose. It is the greatest typewriter opportunity you will ever have. Without sending any money, let me ship you this typewriter for free trial.

#### COUPON

**HARRY A. SMITH,**

Room 702, No. 231 North Fifth Avenue, CHICAGO, ILL.

Ship me a No. 2 L. C. Smith f. o. b. Chicago, as described in this advertisement. I will pay you the \$39.00 balance of the SPECIAL \$48.30 purchase price at the rate of \$3.00 per month. The title to remain in you until fully paid for. It is understood that I have five days in which to examine and try the typewriter. If I choose not to keep it, I will carefully repack it and return it to the express agent. It is understood that you give the standard guarantee for one year.

Name .....

Address .....

Shipping Point.....

A. C. & B. 11.

### Millers Falls Ratchet Hand Drill

The Millers Falls Company have recently added some attractive and ingenious drills to the already extensive variety of such articles. One of the most striking of these is Drill No. 306, handsomely finished with stained hardwood, nickel, and distinctive painting of large gear. It is strong and correctly proportioned, with solid steel frame.



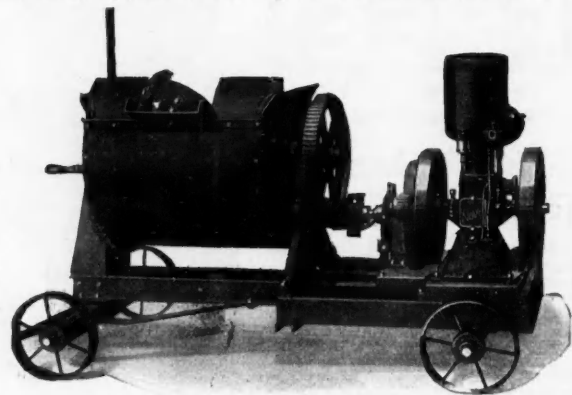
New Ratched Hand Drill.

This drill has a ratchet of new design which is very simple and effective, operating either to right or left by lifting and turning to the right or left, respectively, the cap to a small boss on the crank handle. This is convenient in cramped places or when doing delicate work. The main handle is hollow and quickly detached, and holds twist drills up to the capacity of the chuck; namely, 1/4 inch. The gears are cut, small ones being of steel and almost totally enclosed as protection against dust and dirt. The small gears comprise a working one and an idler to equalize the outward thrust of large gear. The chuck contains three jaws operated by springs that are protected from injury and will not get out of order, and hold and center accurately, round shanks from 0 to 1/4 inch in diameter. The length of entire tool is 12 1/2 inches; without handle, 8 inches; and weight 1 1/2 pounds.



### Blystone Mixeret

The Blystone Mfg. Co., 286 Carpenter St., Cambridge Springs, Pa., have recently brought out a machine of smaller capacity than their well-known Blystone Mixer. They have named it the Mixeret. It is made of the same materials and from the same patterns as their standard Quarter-Yard Mixer. The drum is the same diameter, but about one-third shorter. The shovel system is made up of four shovels instead of six.

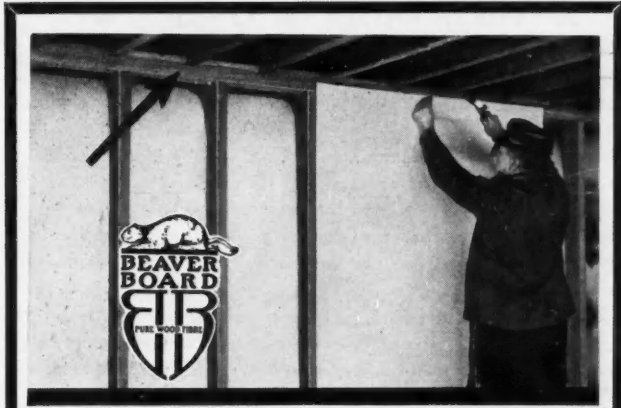


New Small Size Blystone Mixer.

Otherwise the Blystone Mixeret is exactly the same as the standard Blystone Mixer. The manufacturers recommend the Mixeret as being just as efficient as the larger machine. The batch receives the same reverse shoveling and troweling motion. These little machines have been thoroughly tested, working under all sorts of conditions. The manufacturers are now ready to offer them, with all confidence that they will make good and uphold the Blystone reputation.

The Blystone Mixeret is furnished mounted on trucks with gasoline engine as illustrated, or mounted on skids equipped with 18-inch tight and loose pulleys to be operated from line shaft. The capacity is 5 cubic feet. The standard machine equipment is 2 1/2 h.p. Novo Engine. If you can use a mixer handling a half-bag batch, the Blystone Mixeret will fill the bill.





### It Lasts as Long as the House

You can add to your reputation by always building walls and ceilings that last as long as the house without need of repair. BEAVER BOARD makes it easy for you.

You'll find it profitable to know BEAVER BOARD thoroughly. Its 41 advantages over lath and plaster have made it a standard building material in eight years. Today it is used in every type of building, residence or commercial, instead of lath and plaster.

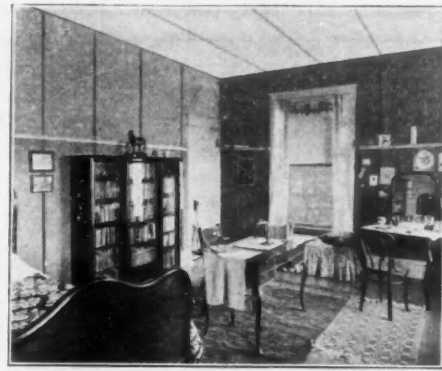
The Builders' Service Department will keep you posted on every phase of BEAVER BOARD construction.

Your name on our mailing list will entitle you to all literature furnished by this Department. Write today.

**The Beaver Board Companies**  
 United States: 336 Beaver Road, Buffalo, N. Y.  
 Canada: 536 Wall St., Beaverdale, Ottawa  
 Great Britain: 4 Southampton, Row, London, W.C.

## BEAVER BOARD

Walls & Ceilings



Interior of modern residence; Cornell Board on all walls and ceilings, from basement to attic.

### Better Wall Board for Less Money

Cornell Board is made from wood, not paper. It is without question the longest lasting, best looking and most economical wall board made.

Has a beautiful pebbled surface; can be stained or painted without any preliminary coating. Makes wall paper unnecessary. Boards are 32" and 48" wide, from 6 to 16 feet long. The most practical successor to lath and plaster for all interior walls and ceilings.

Our low prices will surprise you; write for them today—also information on how Cornell Board will increase business. Catalog and sample sent upon request.

**Cornell Wood Products Co.**  
 9th Floor, Advertising Bldg. " Chicago

# Several Weeks Under Water Fails to Injure UTILITY WALL BOARD

## Read What This Firm Says About UTILITY

May & Vansikle, Cairo, Ill.,  
 September 19, 1914.

The Heppes Co.,  
 Chicago.

Gentlemen:

We think your wall board is the best material that is manufactured for this purpose, as we placed it on an office building in the Drainage District of this city and in 1912 when the river overflowed this district, the water came up into this office about five feet above the floor and remained in there for several weeks. After the water went down, we found that the wall board was damaged very little and all straightened out nicely as soon as it dried.

We expect to use your Wall Board wherever we have occasion to do so.

Yours truly,

May & Vansikle,  
 (Signed) Per R. G. May.

Naturally we do not guarantee Utility to remain perfect under such severe conditions as are mentioned in the above letter. But we do say this: Utility is good Wall Board and will give you absolute satisfaction.

Hundreds of tests in years of actual service have proved just how good Utility really is.

### Neither Does Heat Affect UTILITY WALL BOARD

Heywood Brothers and Wakefield of Chicago, furniture manufacturers, line their lumber dry kilns as well as their varnish dry rooms with Utility Wall Board exclusively. They now have 40,000 square feet of perfect satisfaction in Utility. The Packard Motor Car Company has many thousands of square feet of Utility in its factories. These and scores of other big concerns have chosen Utility because it stands the severest tests of heat, dryness, dampness.

The five layers of asphalt give the giant strength and durability for which Utility, is noted. Utility won't check, chip, crack or come off.

### Samples Free—Write Today

Get Utility in your own hands and actually see and test its strength and quality  
 Just say "Send Utility samples and literature"

## THE HEPPE'S COMPANY, 4503 Fillmore St., Chicago

Makers also of Flex-A-Tile Asphalt Shingles, Asphalt Paint and Asphalt Roofing in any Finish

**Improved Master Slide Rule**

The Master slide rule, made with the improved interlocking feature, has now been in use long enough to have been thoroughly tested. Everyone doing any sort of inside measuring finds this rule indispensable, as it instantly shows the exact inside measurement without any figuring. When the rule is closed the interlocking feature securely locks all sides except the first one, which, when pulled out, releases the second slide; the second releases the third, and so on. This interlocking device makes the rule absolutely "fool proof," as it prevents any possible error in taking measurements. When the rule is fully extended it is held perfectly rigid in every joint by a dead lock.

The Master slide rule is being used for taking all inside measurements, as for doors, windows, boilers, furnaces, etc. Architects, builders, carpenters and inspectors are finding



**Improved Model Master Slide Rule.**

this rule so handy, that once using it they are forever after unwilling to go back to the old clumsy way.

The Master slide rule is two rules in one. One side is used for inside measuring, and here the reading is at the point indicated by the arrow. This gives the exact inside dimensions between the two ends of the rule without figuring. The other side of the rule is marked in the ordinary way and is used for ordinary measuring.

The price of the Master slide rule is reasonable. Write the Dahl Manufacturing Company, 51-GE 42nd Street, New York, N. Y., for full particulars.

**KisselKar Trucks for Greek Army**

Should Greece be drawn into the European war, the Kissel Motor Car Company will have the distinction of being the first American manufacturers to supply a fleet of motor trucks for use in the greatest war of the world's history.

His excellency, Agamemnon Schliemann, Grecian minister to the United States placed his official signature on an order for fifty 1½-ton KisselKar trucks to be delivered in New York for transit to Greece the middle of September. The Kissel factory put on an extra night force of men to fulfill its contract.

The trucks are intended for the commissary department of the Greek army. Greece is evidently determined to be fully prepared for any eventuality, whether it be merely localized warfare against the Turks, or a broader participation in the general European struggle.

The order is especially interesting on account of the important part which motor-driven vehicles are already playing in the war. In fact, aside from the sensational operations of air craft, there is no new feature of the modern plan of warfare attracting more attention than the work of motor trucks.



**Use More Columns**

The good taste and attractiveness of wood columns have never been questioned. Dating clear back to the perfection of Greek architecture, columns have always been looked upon with highest favor. At the present time there is a decided tendency to use more of them.

In residences and in public buildings, for outside work such as porches and pergolas, and for interior use for colon-

**The IRWIN Bit**  
*is imitated as regards pattern, but Irwin Quality cannot be imitated. Look for the trademark (illustrated below) stamped on the shank of every genuine Irwin Bit.*

**The IRWIN Bit**  
 Reg. U.S. Pat. Office

**You Men Who Use Tools!**

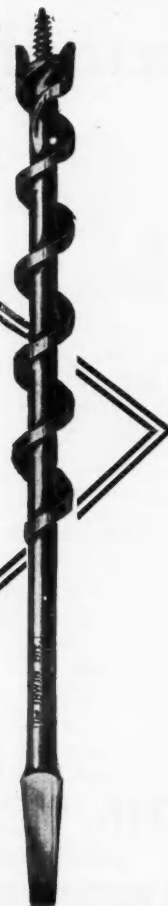
**Make Your Work Easy!**

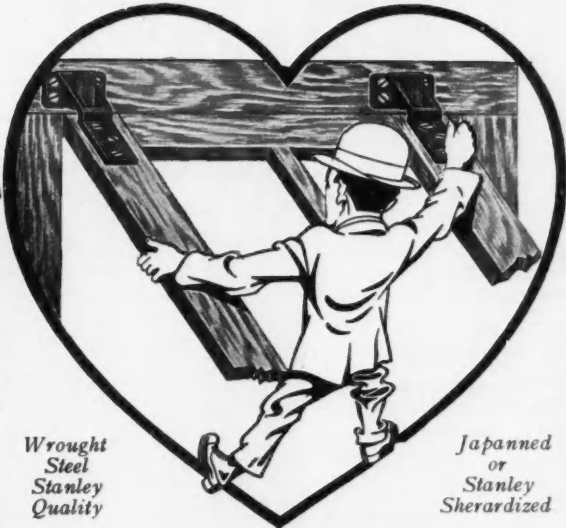
You know that good work demands the best you are capable of. You can't afford to be handicapped by inferior tools that won't stand up to the work. Try out a genuine Irwin Bit. Use it on hard lignum vitae; use it on soft pine—it will turn out as clean a job of boring as you could wish for.

The solid centre means greatest strength—no danger of snapping where the twist joins the shank, where other bits are weak. But be sure you get the genuine Irwin. The word "IRWIN" guarantees a bit well worth your money.

**Demand the Genuine IRWIN Bit**

**The Irwin Auger Bit Company**  
 Wilmington, Ohio





Wrought  
Steel  
Stanley  
Quality

Japanned  
or  
Stanley  
Sherardized

**"PEERLESS"**

**Storm Sash Hangers and Fasteners**

No. 1717 Hangers. No. 1719 Fasteners.  
The No. 1719 Fastener is made in 5-inch and 10-inch sizes. The 5-in. for 4-ft. windows and smaller; and the 10-in. for windows over 4 feet.

Just the hardware you want for your Storm Sash. Once applied, no tools are needed to take down or put up the sash. Full length screens can be hung on the same hooks. The Fasteners hold the Sash firmly in place, either open or closed.

Write for Circular "A." It tells the whole story

**THE STANLEY WORKS**

New York New Britain, Conn. Chicago



**Here's  
A Rattling  
Combination**

When a Keen Kutter chisel and a Keen Kutter oil stone come together—that's a combination of real quality. You ought to have both in your kit. An outfit of Keen Kutter chisels is the best, for they're remade for hard work and long use. The

**KEEN KUTTER**

trade mark means that the dealer is authorized to refund the money for any piece that bears it if not satisfactory.

*"The Recollection of Quality Remains Long After the Price is Forgotten."*

Trade Mark Registered.

—E. C. SIMMONS.

If not at your dealer's, write us.



**Simmons Hardware Company**

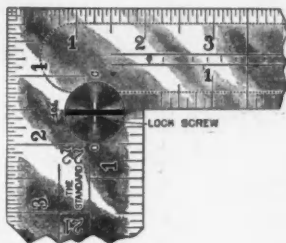
St. Louis, U. S. A.



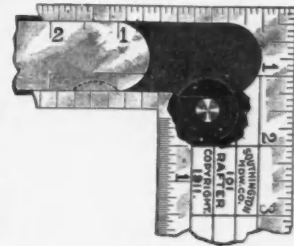
No. KMS. Price \$1.25  
Oil Stone



No. KSD. Price \$0.65  
Chisel



**The "STANDARD"  
Take-Down-Square**



is the most satisfactory take-down-square that has been produced; satisfactory to the user because when "locked" the tongue cannot slip; easily and quickly taken apart or put together.

Ask your nearest dealer about it—But send for our NEW BOOKLET describing it.

**The Southington Hardware Co.**

**SOUTHINGTON, CONN.**

**Building Books  
Absolutely Free**

Postage Prepaid

Your Choice of Any One of Twenty Building and Plan Books

Write for Descriptive Circular Telling About Our Great FREE Offer

**AMERICAN CARPENTER AND BUILDER**  
1827 Prairie Ave., CHICAGO



**How to Get Lumber at Mill Prices**

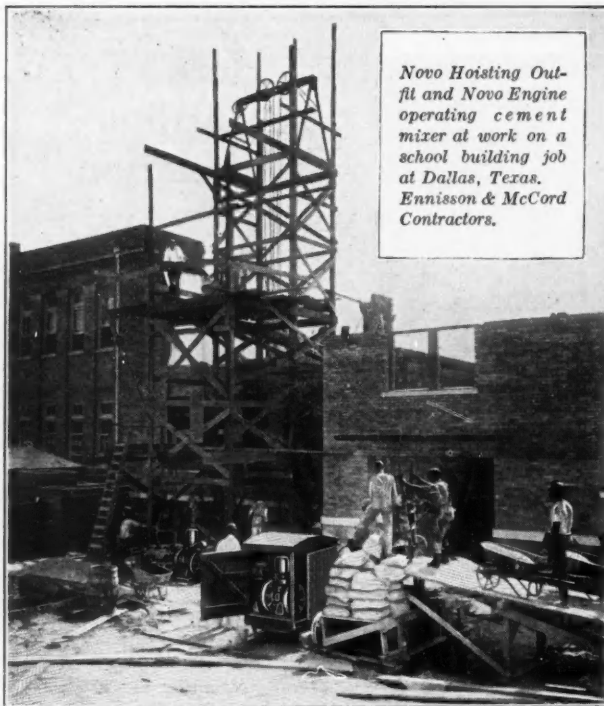
We ship direct from our Yellow Pine Mills, at Mill Prices to you. We carry in stock over 25 million feet of dry, bright lumber and the capacity of our mills is over 75 million feet annually.

**Contractors Home Builders** We can furnish promptly, lumber for building of every character. We can cut and dress timber up to 24 x 30 in. 40 feet long. Can ship quickly form lumber for all kinds of concrete structures. Contractors and home builders write us for delivered prices.

**Send No Money**

We guarantee the quality of our lumber and ship subject to inspection and approval to all responsible parties.

Home Lumber & Supply Co. 343 S. Dearborn St., Chicago, Ill. Dept. 6083



*Novo Hoisting Outfit and Novo Engine operating cement mixer at work on a school building job at Dallas, Texas. Ennisson & McCord Contractors.*

**You can get Gas Engines cheaper—but the experience is painful and costly**

Read what one contracting firm has to say:—

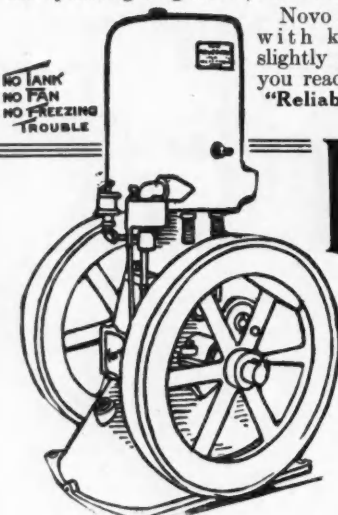
"Dallas, Texas, Sept. 15, 1914.  
"The 6 H. P. Novo Gasoline Hoist which you sold us proves very satisfactory and operates the double cage perfectly. It is very economical, both from an operating standpoint as well as its first cost. Its fuel consumption is small and the outfit is light and compact. The engine is one of the best we have ever seen."  
"Ennisson & McCord"

Yes; you can buy gas engines cheaper than the NOVO. But you can't buy **Reliable Power** a single cent cheaper than a NOVO Engine delivers it. After all, what you want is **delivered** power. This is the only kind of power that you can use—that pays.

Nothing shows up a poorly designed and meanly built engine so quickly as contracting work. There's a big lesson in NOVO Efficiency and NOVO Economy right here—over 60% of the best cement mixers in the world are run by NOVO Engines.

There is a NOVO Pumping Outfit, Hoisting Outfit, Saw Rig and Air Compressor for **practically every requirement** up to 15 H. P. Novo Engines can be furnished for operating on gasoline, kerosene, alcohol or distillate.

Novo Engines can be supplied with kerosene carburetors at slightly additional cost. Have you read our valuable booklet, "**Reliable Power?**"



**NOVO**  
REG. U.S. PAT. OFF.  
**ENGINES AND OUTFITS**

**NOVO ENGINE CO.**

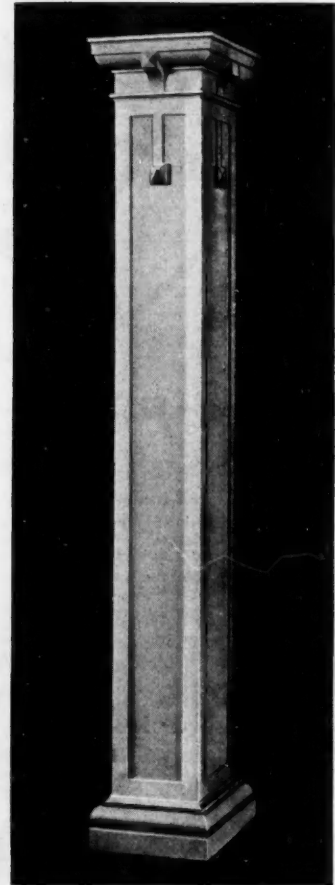
Clarence E. Bement  
Sec'y. and Mgr.  
443 Willow St.  
LANSING, MICH.

nades, consoles, etc., wood columns are coming into style more than ever.

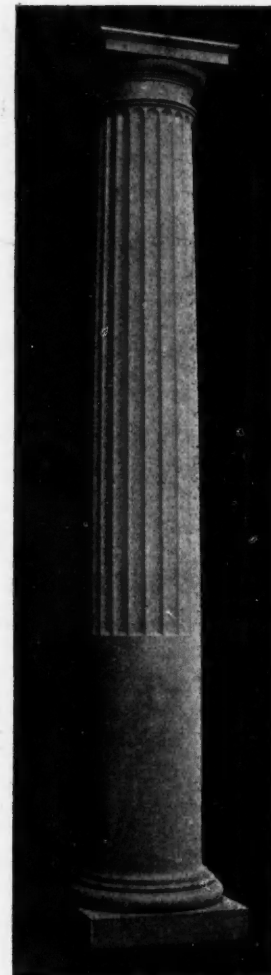
The Colonial or classic style of architecture has always made use of columns in considerable number. These, of course, are the round columns, either plain or fluted, and carrying the several styles of conventional classic capitals. With the coming of modern styles we now have square columns with cubist ornaments worked in a variety of ways; also octagon columns, panel square columns, square fluted columns, etc.

There is no single feature that so dresses up a building as well-designed, well-made columns. Considering their ornamental effect and their utility, the cost is very little.

Looking through the new portfolio just received from the Hartman-Sanders Company, whose main office and factory are at Elston and Webster Avenues,



**Modern Square Column with Pendant Ornaments**



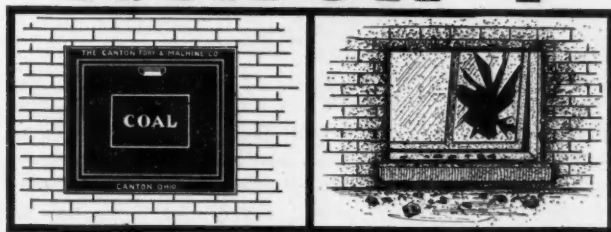
**Popular Classic Column.**

Chicago, we are impressed with the wonderful grace and beauty of columned architecture. No architect or builder can fail being inspired by merely looking at the illustrations in this portfolio. A number of large photographs are included, showing schools and churches, hotels and private residences, both large and small, each one featuring Hartman-Sanders wood columns.

Another part of the portfolio illustrates in detail every style of wood column they make; and prices are quoted for every diameter and length of each one they carry in stock. These columns are well designed, in close conformity to the best architectural standards. In construction they are the well-known Koll's patent lock-joint stave columns. "**They Cannot Come Apart.**"

This portfolio will be mailed free on request to any of our readers. They also have a special catalog on columned openings that they will send to those interested.

# WHICH ?



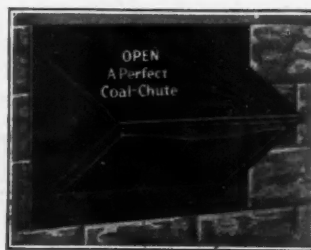
## CANTON COAL CHUTES

positively prevent all such conditions shown in second illustration. No battered foundations, broken windows and sash, no blackened wall and dirty lawns. Removes all the disagreeable features that make coaling a nuisance.

Builders should install these on all buildings. They are neat and attractive and keep the building clean and unmarred. The Canton is the highest in quality. A good solid, well-made chute. ABSOLUTELY BURGLAR-PROOF. Can be made to lock on inside or outside to suit owners convenience.

Send for our FREE Booklet B-1 which gives details. It also shows our complete line of Builders' Iron Work. All we need is your name and address.

Canton Foundry & Machine Co., CANTON, OHIO



## If You Build Buy Own

Be up to date and have the world's best  
**The Window Chute**  
for your coal bin.

Thousands in Use

The Very Best

Write for Booklet C.



**Holland Furnace Company**  
Holland, Mich.

World's Largest Direct Installers of Furnaces.

## "OTTOMATIC" COAL CHUTE

Fireproof Burglar-Proof Fool-Proof

### Only One Operation Required

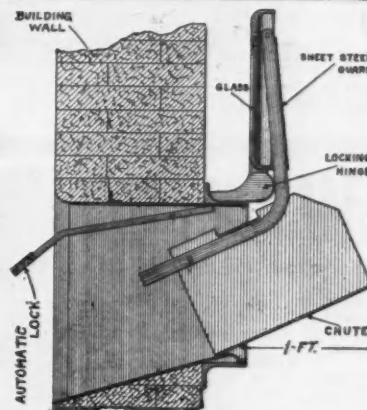
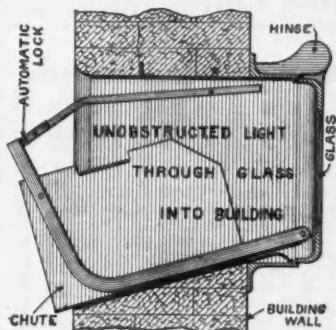
One operation opens the window, places a guard over the glass, and pulls the Chute out more than a foot. It will prevent marring your building, it will prevent coal falling on the ground, and can be placed in the wall before or after the building is completed.

The "OTTOMATIC" Coal Chute comes in two sizes. Size No. 1 measuring outside of the frame 17x24 inches. Size No. 2 measuring 22x33 inches outside the frame.

Write for Complete Description and Prices.

**THE MAXIMILIAN COMPANY**

844 Monadnock Block, Chicago



## WATERLOO CAST IRON Coal Chutes



Protect the houses from marauding coal men. They are burglar proof—lock only from the inside.

Being made of cast iron, are not affected by the weather.

Wire glass in door furnishes light to cellar. When door is open, the glass is protected by heavy steel, which operates automatically.

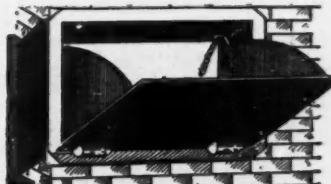
The watertable at the top of chute protects the inside of foundation from moisture. Doors are extra heavy, with three hinges at top, and are made with a beaded edge which extends over the border opening, making a tight joint. Are made to fit any depth wall.

Send for catalog, which quotes special prices to contractors.

**The Waterloo Register Co.**

114 Rath Street

Waterloo, Iowa



## Shultz All Steel, Burglar-Proof Coal Chute

Clean, sanitary, without rods, bolts or screws in the hinges. No glass to break. Solid, strong and can be used for coal, wood or vegetables.

### THREE SIZES—THREE DEPTHS

12" x 18", 16" x 20" and 18" x 24" depths, 9, 13 or 18 inches.

Gives positive protection because it is steel and cannot possibly be opened from the outside. Very reasonable in price. Send for Circular and Prices.

Shultz All Steel Corner Post Co.  
St. Joseph, Missouri

C. H. SHULTZ.

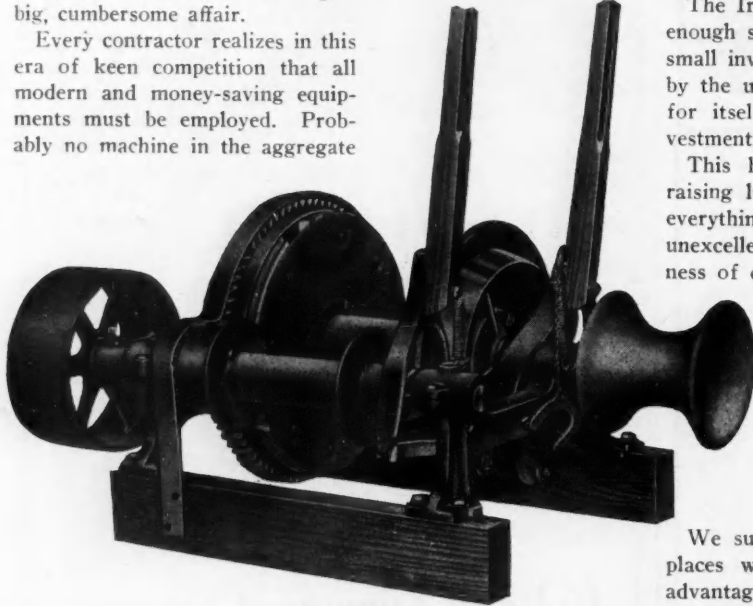
PAT. SEPT. 24-07

ST. JOSEPH, MO

**Hoist a Contractor Can Afford to Operate**

A good many contractors think that they cannot afford to operate a hoist on their small contracts, but they probably have this idea because they have never thoroughly investigated the hoist field and they look upon the hoist for carpenters and builders as being a big, cumbersome affair.

Every contractor realizes in this era of keen competition that all modern and money-saving equipments must be employed. Probably no machine in the aggregate



Ireland Geared Hoist.

means such a great saving of time and labor as does the hoist. There is one which is advertised in this issue which should appeal especially to every carpenter and builder. It's a special hoist, made by the Ireland Machine & Foundry Company of Norwich, N. Y. Every contractor should write this concern for their advertising literature.

The Ireland geared hoist is wonderfully light. It is small enough so that it may be moved about very easily. A very small investment is required—so small that the money saved by the use of the Ireland geared hoist soon buys and pays for itself and thereafter makes big dividends on the investment.

This hoist does the work of several men and teams, raising lumber, bricks, mortar, heavy timbers, and, in fact, everything that goes to make up a building. It is a hoist unexcelled in economy of operation, simplicity and ruggedness of construction. It especially is the ideal hoist for the small contractor. It consists of a large drum for pulling loads, an automatic brake for holding the load and a small drum for returning the carrier to load. When the lever is released the clutch releases automatically by a spring and the drum is free to turn as nothing is attached to it excepting the adjustable friction blocks which operate inside of the rim of the large gear.

We suggest to all our readers that they think of all the places where they could use the Ireland geared hoist to advantage and then write the manufacturers and give them an opportunity of proving their claims.



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, 20, and 40 parts. Also free catalog on request. Mention this paper.

**Andrews Heating Co.,** 1431 Heating Bldg. Minneapolis, Minn.

**WANTED AGENTS - SALESMEN - MANAGERS WANTED**  
**STARTLING OPPORTUNITY TO MAKE MONEY FAST**  
**At Home or Traveling--All or Spare Time**

Experience not necessary. Honesty and willingness to work all we ask. We will give you an appointment worth \$50 to \$75 every week. You can be independent. Always have money in abundance and pleasant position selling greatest labor saving household invention brought forth in fifty years. LISTEN:—One man's orders \$2,650.00 one month, profit \$1,650.00. Sylvester Baker, of Pa., a boy of 14 made \$9.00 in 2½ hours. C. C. Tanner, Ia., 80 years old, averages five sales to seven calls. See what a wonderful opportunity! Room for YOU, no matter what your age or experience, or where you are located—if you are square and will act quick. But don't delay—territory is going fast. Read what others are doing and be influenced by their success. **WORK FOR US AND GET RICH.**

"I do not see how a better seller could be manufactured," writes Parker J. Townsend, Minn. "Called at twenty homes, made nineteen sales."—E. A. Martin, Mich. "Most simple, practical, necessary household article I have ever seen" says E. W. Melvin, San Francisco. "Took six dozen orders in four days."—W. R. Hill, Ill. "Went out first morning, took sixteen orders."—N. H. Torrence, New York. "Started out 10 a. m., sold thirty-five by 4 o'clock."—J. R. Thomas, Colo. "Sold 131 in two days."—G. W. Handy, New York. "I have sold goods for years, but frankly, I have never had a seller like this."—W. P. Spangenberg, N. J. "Canvassed eleven families, took eleven orders."—E. Randall, Minn. "SOLD EIGHTEEN FIRST 4½ HOURS." Will start one man working for me today, another Saturday."—Elmer Menn, Wis.

These words are real—they are honest. Every order was delivered, accepted and the money paid in cash. Every letter is right here in our office, and we will give the full postoffice address of any man or woman we have named if you doubt. This is a big, reliable, manufacturing company, incorporated under the laws of the State of Ohio, and every statement we make is absolutely sincere and true. **YOU CAN MAKE THIS MONEY:** You can make

**\$3000.00 in 3 Months**

selling this great invention—The Easy-Wringer Mop—the biggest money maker of the age. Think of it!

**A Self-Wringing Mop.** No putting hands into the dirty water. No aching backs. No slopping against woodwork. No soiled clothes. No contracting deadly disease from touching hands to filth and germs that come from floor. Can use scalding water containing strong lye. Two turns of crank wrings out every drop of water. Makes house-keeping a pleasure—Makes the day happy. Simple, practical, reliable, it lasts for years. Every woman is interested—and buys. No talking necessary—it sells itself. Simply show it and take the order. Could you imagine an easier, quicker, better way to make money than supplying this demand already created.

We want more agents, salesmen, managers, to fill orders, appoint, supply control sub-agents, 150 per cent profit. No investment required. We own patents and give you exclusive territory, protection, co-operation, assistance. You can't fail, because you risk nothing. **HUNDREDS ARE GETTING RICH.** Act quick. Write for your county today. **WE WANT A THOUSAND MEN AND WOMEN.**

**Send no Money:** Only your name and address on a postal card for information, offer and valuable booklet FREE. Tomorrow belongs to the one behind—the opportunity is open TODAY. Write your name and address clearly, giving name of county.

**THE U. S. MOP COMPANY, 225 MAIN ST., TOLEDO, OHIO.**

**TURN CRANK TO WRING THE NEW EASY WRINGER MOP**



The above cut shows mop wrung up dry, and pictures the good, strong, substantial material used thru-out. When mop is raised from floor it automatically straightens out ready for wringing.

This smaller picture shows mop on floor. It spreads out and is held down to floor at all points.

**New Low Priced Household Article.**



**Contractor Agents Make Big Money!**

Every country home, church, school and store, old as well as new, needs a JENNE Lighting Plant. Oil lamps, with their soot and smoke and smell, their trouble, inconvenience and danger, no longer satisfy intelligent people. Lighting plants installed inside the house are always dangerous and seldom efficient. This is why our contractor agents are coining money selling the



*"Sunlight from a Cistern"*

Installed outside the house in the ground with pipe connections to every room, this system is absolutely safe. Its construction of steel and reinforced concrete (patented) appeals to everyone, for it makes the plant practically everlasting. The careful design, liberal dimensions, and the simplicity of the JENNE make it most economical and dependable.

It is easy to install. It is guaranteed for 15 years.

The modern JENNE System has NONE of the trouble, inconvenience and danger of other lighting systems, be they acetylene, electric, gasoline or kerosene, and it has all their advantages. There are no "come backs" when you install a JENNE. Thousands in use and every JENNE user is a booster.

Passed by the National Board of Fire Underwriters.

Will you act as our salesman? We sell a complete, guaranteed lighting system; we carry the account; we offer terms that will suit your customers; we pay you a liberal commission.

Write for our Contractor Agent Proposition at once

**The Jenne Acetylene Gas Machine Co.**

313 N. PENNA ST., . . . INDIANAPOLIS, INDIANA



**The New Home and the Garbage Can**

Include it in your plans. No new home or bungalow complete without the **Majestic Built-In Garbage Receiver**. Keeps the can in the kitchen but out of sight. Saves hundreds of steps. Is handy, clean, odorless, convenient, and sanitary—fly and insect proof. Can is removed and emptied from outdoors.

**MAJESTIC Built-In Garbage Receiver**



There is nothing like it. Absolutely sanitary because every time used a supply of disinfectant automatically is sprinkled over contents. Has vent pipe connection. Container is substantially built of cast iron. Can is durable galvanized iron sheeting. Investigate, get particulars and low price.

**FREE BOOKLET**

Write at once for descriptive booklet that describes it in detail and explains its many advantages. It can be easily installed in any house in course of construction or with little trouble can be built into any completed home.

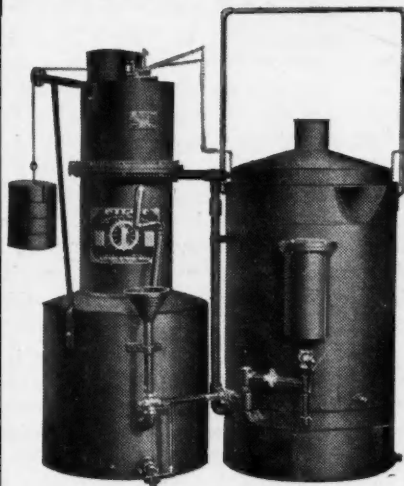
**WRITE TODAY**

**THE MAJESTIC CO., 505 Erie St., Huntington, Ind.**

**Winter Profits for You**

There are hundreds of home owners right here in your vicinity that want an Acetylene Lighting Plant and are waiting for YOU to sell it to them. Your work is slack during winter months. You can easily sell

**PILOT GENERATORS**



**The Pilot**

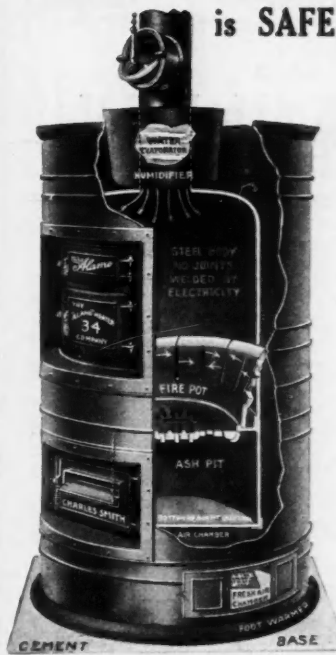
World's standard of merit in Acetylene Generator construction. Adaptable for church, school or home.

More than 250,000 country homes are enjoying city lighting and cooking service, furnished the **PILOT** way. Make the winter season profitable—Keep the dollars rolling in.

Write us today for our proposition and we will show you how

**OXWELD ACETYLENE COMPANY**  
Jasper Place Chicago, Illinois

**THE "Alamo" School-Room Heater is SAFE for SCHOLARS**



**Gas Proof**

welded by acetylene, has no joints, cannot leak gas or smoke.

**Sanitary**

The **Humidifier**, a new feature, makes a temperature of 65° more healthful and more comfortable than 75° would be without it.

**Warms Fresh Air Only**

Air supplied from outside air duct.

**Removes All Foul Air**

Separate duct not interfering with chimney draft.

**Prevents Danger of Fire**

Ash pit sets 8" above the floor.

**Cannot Burn Scholars**

All exposed castings set back from face of heater.

The "Alamo" Heater is used for Churches and Halls and has special features unlike stoves and furnaces. **WE WANT RESPONSIBLE AGENTS.**

**The "Alamo" Heater Company**  
Charles Smith's Specialties.  
72 West Lake Street, Chicago

*Send for Catalogue and Prices*

# Straight Talks

on

## Durametal Weatherstrips

¶ You contractors—carpenters and building owners—why not buy weatherstrips direct from the manufacturer and do your own installing?

¶ By our unique plan, we have cut out the usual big selling expenses, which enables you to buy direct from us, make a profit on the strip and good money on the installation besides.

¶ Durametal Weatherstrips have been successfully sold for over 10 years and have stood every possible test. Their durability and simplicity makes them superior to all others.

¶ Made of best heavy zinc, and fully guaranteed. Write for samples and prices now before you turn another page. There's money in this for YOU.

*A few agencies open to responsible, live, local contractors and carpenters.*

**Durametal Weatherstrip Co.**  
10 E. Austin Ave. CHICAGO, ILL.

## Saws Thru Bank Vault with Hand Saw

Recently a very unusual letter was received by the Shapleigh Hardware Company of St. Louis, from a carpenter in Silver City, N. M.

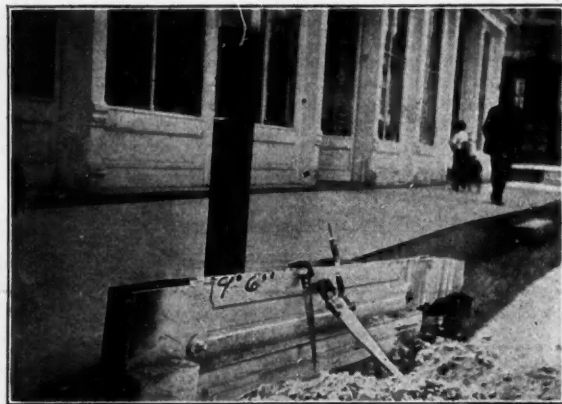
He tells in a characteristic way how, in an emergency, he used a Diamond Edge hand saw—



Hand Saw that stood Remarkable Test.

to saw off a 5/16-inch steel bank vault casting and cast-iron corners.

He states he could not use a hack saw and when he first proposed the use of the hand saw he was laughed at, but the Diamond Edge did the work.



9 Feet 6 inches of Steel Door Sawed with Hand Saw.

He sawed the 5/16-inch steel bank vault door, 9 feet 6 inches, in exactly twenty-one hours.

This again demonstrates the wonderful "performance" of the Diamond Edge saw.



## The Importance of Appearance of Floors

By W. L. Claffey

When one enters a home, the very first thing that comes under observation is the floor. Oak floors are most generally used in homes for the reason that its appearance is of the best. It creates a friendly atmosphere and lends refinement and dignity to any room. Its natural color being of a golden tone, harmonizes particularly well with most anything that may be in a room. Maple and beech are generally used in kitchens, for which they are very adaptable. Nature has given a peculiar favor to oak and it is considered one of the most substantial of all our American hardwoods. Its very name stands for durability and when made into flooring, its natural beauty stands unexcelled. There is a solid satisfaction and lasting pleasure in the substantial and dignified appearance of oak floors.

When a house is rented or sold, the very first thing that is taken into consideration is the amount of floor space, therefore the appearance of the floor plays a very important part. No other part of the construction is used or talked about as much as the floor. When agents advertise a house for sale or for rent, if oak flooring has been used, they invariably emphasize it.

The appearance of oak floors is very often abused by the improper use of finishing, waxing or varnishing. To bring out its natural beauty, it is very necessary to apply the proper fillers and finishes. In order to get the right finish, both in wax and varnish, I recommend the following for:

This double hung window is equipped with

### PULLMAN ALL METAL WEATHER STRIP

It is one of several hundred. The man who had the contract to install the complete order made a profit of a dollar and a quarter on each window.

Here is an opportunity for YOU to get into a profitable business.

*We protect you by giving exclusive territory.*

---

The demand has been created. We want live men to sell and install

### PULLMAN STRIP

You buy the strip direct from us at

### FACTORY PRICE

and make the

### BIG PROFITS

Write today for information.

**Pullman Metal Weather Strip Co.**  
22 York Place, York, Pa.



# Johnson's Prepared Wax

is a complete finish for all woodwork, floors and furniture. Apply with a cloth and in five or ten minutes polish with a dry cloth. Gives perfect results over any finish—varnish, shellac or oil. For polishing automobile bodies and bar tops it has no equal.

## Johnson's Flat Wood Finish

Gives that artistic, hand rubbed effect at one-third the expense. Requires no rubbing or polishing.

### Generous Samples Free

Address  
**S. C. Johnson & Son**  
 "The Wood Finishing Authorities"  
 Dept. ACB11  
 Racine, Wis.

Johnson's Prepared Wax is a lasting artistic finish for floors—new or old—soft or hard





New-Feed Underfeed Furnace



New-Feed Underfeed Boiler

## Cutting the High Cost of Heating

is a simple proposition—if you heat by the Underfeed method. In thousands of buildings—large and small—Williamson Improved *New-Feed* Underfeed Furnaces and Boilers are saving  $\frac{1}{2}$  to  $\frac{3}{4}$  of coal bills, besides giving *more* and *cleaner* heat with *less* trouble than any other heating system in existence. Over 30,000 Underfeed users have *proved* these claims.



**WILLIAMSON**  
 NEW-FEED  
**UNDERFEED**  
 Furnaces and Boilers

**Cut Coal Bills  $\frac{1}{2}$  to  $\frac{3}{4}$**

With the Underfeed coal is fed from below. All the fire is on top, causing perfect combustion. Smoke and gases are burned up, making more heat with no smoke, smell, clinkers and very little ashes. You can use cheap slack soft coal or pea and buckwheat hard coal and secure same heat as highest priced coal. Adapted to warm air, steam and hot-water systems.

MAIL THIS TODAY—NOW!

**THE WILLIAMSON HEATER CO.**  
 (Formerly The Peck-Williamson Co.)  
 513½ W. Fifth St., Cincinnati, Ohio

I would like to know *how* to cut my coal bills from one-half to two-thirds with an Underfeed.

Warm Air... Steam or Hot Water...  
 (Mark an X after system interested in)

Name.....

Address.....


..... (51)

My Dealer's Name is.....

50 Per Cent Saving Guaranteed

We guarantee a saving of 50 per cent in coal bills with a properly installed and operated Underfeed. Let us tell you more about this. The coupon brings all the information—use it now.

# EXTRA PROFITS FOR CONTRACTORS



**H**ESS FURNACES are not offered to dealers but are sold direct to consumers and to contractors. We have a Profit Sharing arrangement for contractors, under which they receive not only a share of our profits on their purchases from us, but we make them an allowance also on information they give us of other work which may lead to a sale.

Very many contractors are helping themselves and us under this arrangement. If you are in the contracting business write us for full information.

Send us a sketch of any building requiring heat, and we will furnish a complete plan showing how the furnace equipment should be arranged, and will quote you a price on the complete outfit, ready to install, delivered at your station.

There are no middleman's profits to pay, but only the factory profit.

We guarantee the efficiency of our equipments fully, and allow **two months cold weather trial** before we are paid.

We will be glad to send you our 48 page booklet on Furnace Heating.

**HESS WARMING AND VENTILATING CO.**  
 1220 TACOMA BUILDING, CHICAGO

Makers also, of White Enameled Steel Medicine Cabinets.

**Finishing Oak Floors**

The finishing of an oak floor is a very important feature, upon which authorities fail to agree, but the question resolves into a matter of cost, as to the color or brilliancy of finish desired. Personal taste, artistic or decorative effects are the guide for the floor finisher.

The "clear" grade of oak flooring should have a natural oak filler—color of oak. For the "Select" and "Sap Clear" grades, a light golden oak filler should be used, and after the floor is filled, it should be gone over with a little burnt umber mixed with turpentine to darken light streaks. This will make the "Select" and "Sap Clear" grades look like the "Clear" grade, except that it will be slightly darker in color. In filling the "No. 1 Common" grade, a dark golden oak filler should be employed, and the light streaks should be darkened in the same manner as the "Select" and "Sap Clear" grades. If a little care is used in laying this grade, splendid results can be obtained.

*First:* Treat the floor with a paste filler of desired tone, to fill up the pores and crevices. To thin the filler for application, one has a choice of using turpentine, benzine, wood alcohol or gasoline to get the right consistency. When the gloss has left the filler, rub off with excelsior or cloth, rubbing against the grain of the wood. This will make a perfectly smooth and level surface. It keeps out dirt and forms a good foundation, which is the key note for successful

treatment of floors. Allow the filler twelve hours to set or dry before applying a wax or varnish finish. Never use a liquid filler on any floor.

A wax or varnish finish can be used. The wax finish is preferred by many, due to economy and ease of renewing places that show the wear. The renewing can be easily applied by housekeeper or servant.

*Wax Finish:* The best method for applying the wax is to take cheesecloth and double it to get a little more thickness; then make it into a sort of bag; put a handful of wax inside of this and go over the floor thoroughly. You will find that you can work the wax through the meshes of the cheesecloth to give an even coating over the floor. This prevents too much wax in spots and wasting it. After the floor has been gone over with the wax and allowed to dry, say about twenty minutes, it is ready for polishing. Rub to a polish with a weighted floor brush, first across the grain of the wood, then with it. (A clean, soft cloth can be used in place of the brush if desired); then a piece of woolen felt or carpet should be placed under the brush to give the finishing gloss. After waiting an hour, a second coat of wax should be applied in the same way as the first and rubbed to a polish.

*Varnish Finish:* This is usually more expensive than the wax finish, but it gives a very hard surface, yet at the same time it is elastic. Two or three coats should be applied after

the application of the paste filler. Each coat should be thoroughly rubbed with oil and pumice. Any of the standard hardwood flooring varnishes are recommended.

*Floor Oil Finishes:* When a high-class finish is not desired, a very economical finish can be had by the use of a light flooring oil, that is made expressly for this purpose by many paint and varnish houses and oil makers; it serves as a filler as well as a finish and is strongly recommended for oak flooring in public institutions, office buildings and stores. This oil keeps the dust from rising and preserves the floor.

Not many years ago the average building owner left the designing and entire construction of his proposed buildings to the architect, but of late years the owner, himself, has grasped the renting possibilities of the different kinds of materials used in modern buildings and has profited from experience. The most notable of materials used in buildings are flooring, wood trim and doors. There is a feeling among the average owners that oak is the only true American type of hardwood, and when made into flooring, it is considered "America's Best Flooring." There is a beauty about oak flooring and oak trim which is not possible to duplicate with other more expensive wood.

The durability, and therefore the true economy, in oak flooring is said to make it the cheapest wood for residences, apartment buildings, clubs, hotels and office buildings. Oak flooring gives a fine finish under a treatment of floor wax or varnish and look well all the time.

**If You Knew the Real Quality of My Engines As Well As You Know the Price You'd Buy One Sure!**



Because, horse power for horse power, the price of a WITTE is considerably less than that of any other strictly high grade gas engine. But there are other considerations besides price which should have influence in an engine purchase—its fit to your particular needs—the cost of operating—the ease of starting and running it—its strength and durability—these are a few of the things you want to be sure about when you buy an engine.

**WITTE ENGINES**  
Kerosene, Distillate, Gasoline & Gas

Whatever size or style you select, it is guaranteed to stand up under years of hard wear and deliver steady power for the lowest fuel cost. So simple in construction that you can easily understand, start and run it whether you are experienced with an engine or not. I have manufacturing advantages, among them natural gas from my own well that gives me free power, light, heat, and recently I have expended many more thousands of dollars for specially designed machinery for a lower cost of production while still maintaining the high standard WITTE quality. These increased factory facilities together with my direct from factory to user plan of selling, explain my present low prices.

**LOOK AT THESE LATEST WITTE PRICES:**  
2 H-P \$34.95 6 H-P \$ 99.35 12 H-P \$219.90 16 H-P \$298.90 22 H-P \$399.65  
4 H-P 69.75 8 H-P 139.65 Portable and Saw-rig Outfits proportionately low.

I'll send you any WITTE Engine you select for a fair trial to prove that it is all I claim for it. Under my plan you are sure of knowing what any engine OUGHT to do, besides knowing what my engine CAN do, before you decide to buy.

**My FREE BOOK Tells the Whole Story**  
Mail Coupon for a FREE copy of my new Engine Book, the finest in the business. Tells how to start and run an engine—how to get maximum power from least amount of fuel—how to judge an engine—and all about my liberal easy terms and sales plan.

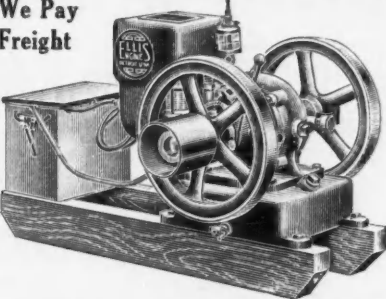
**ED. H. Witte, Witte Iron Works Co.**  
1775 Oakland Ave., Kansas City, Missouri

**Mail Coupon Today**  
Send me, Free, a copy of your Engine Book and full particulars of your selling plan.

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



**We Pay Freight**



**Don't Pay For Your "Ellis" without getting it**

Every carpenter or contractor who does not use a reliable engine is paying for the engine without getting it. He pays for it in lost time, and in labor costs. You can buy an Ellis Engine out of two weeks' wages to one workman; and your Ellis will give you reliable service for many years.

Ellis Engines are America's favorite with carpenters, contractors and builders. Very compact in design; light in weight in proportion to power. Easy to operate; no cranking. Run either way; reversible while running. They work successfully on common cheap lamp oil at a fuel cost of **6 cts. for 10 hours** for each horsepower developed. Just the thing for wood-workers, rip-saws, planers, cement mixers, hoists; in fact for every job where power can be used. Write for free book "Engine Facts" giving valuable information and full details of our 30 Days' Free Trial Offer, with opinions of users from all parts of the world.

**Ellis Engine Co., 2863 E. Gd. Boulevard, Detroit, Mich.**

All sizes for all purposes. 1½ to 18 H. P. Vertical and horizontal. Guaranteed 10 years.

**Build With**

**ALPHA THE GUARANTEED PORTLAND CEMENT**

**and it will be EVERLASTING**

**ALPHA PORTLAND CEMENT CO.**

General Offices: Easton, Pa.

Branch Offices:

New York, Hudson Terminal Bldg.	Philadelphia . . Harrison Bldg.
Chicago . . . . . Marquette Bldg.	Buffalo . . . Builders Exchange
Boston . . . . Board of Trade Bldg.	Baltimore . Builders Exchange
Pittsburgh . . . . . Oliver Bldg.	Savannah National Bank Bldg

**THE FOOS**

Gas and Oil Engines for Pumping, lighting, hoisting and power service.

1½ to 400 H. P.



THE FOOS GAS ENGINE CO. SPRINGFIELD, OHIO



**Contractor Jones,** "Well Winter is getting on the job again and that means we get off. Winter makes a big hole in a man's profits."

**Contractor Smith,** "Not for me. I've got the livest proposition for dead ones you ever saw. I'll put you next."

**Contractor Jones,** "Alright anything to make some money during these slack months."

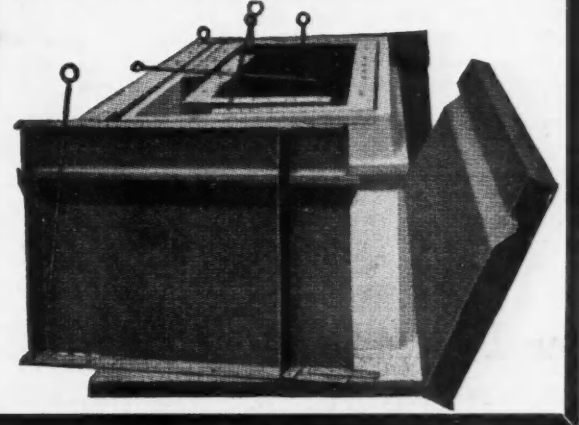
**Contractor Smith,** "Start making the Automatic Sealing Cement Burial Vault, over in your town, I'm making more money than ever and the cost to start in is the price of one set of molds. Why they took our town by storm and it keeps me hopping to look after business. Write to the Automatic Sealing Vault People. They'll give you full details. Well so long Jones."

**The Automatic Sealing Vault**

Can be easily made, no experience or capital necessary. It is beautiful in design and is made to protect caskets from Decay, Dampness and Water. They are everlasting and are very popular with the public. Now if you want to make money not only this winter, but the year round, take "Contractor Smith's" advice and write to us for particulars and details. Don't delay. Be the first man in your town.

**Automatic Sealing Vault Company**

36 East River Street     ::     PERU, INDIANA



**OUR AGENCIES ARE ALWAYS BUSY**

**Diamond Flexible All Metal**

**WEATHER STRIP**

Has built up a permanent, profitable business for Contractors and Carpenters in all parts of the country. If you have not secured an agency Get busy at once. Some fine territory still open. The thousands of satisfied users testify to the superiority of our strip.

**Diamond Flexible Metal Weather Strips**

are easier to sell than the old style rigid strip because they are so much better in use—and it doesn't take much argument to convince owners why they're so much better. Carpenters and Builders can develop a big business selling these. \$3,000 to \$5,000 a year is quite possible, because every purchaser of Diamond Strips will be so satisfied that he will gladly boost them to other owners and tenants.

Diamond Weather Strips mean so much more added comfort that no prospective purchaser will begrudge their small price.

**Every Door and Window Needs a Diamond**

Where Diamond Strips are used the windows don't stick or bind, and the sash can be removed when necessary without displacing the Flexible Weather Strip. Another thing is that all openings are made air tight and wind, dust, moisture and noise hasn't a chance to get in. They have been known to effect an economy of from 20% to 40% in fuel alone, because less heat is required in rooms protected by Diamond Weather Strips.

And it's not only residences that use them. Large public buildings—schools, churches, hospitals, etc., are always in the market for these products. We make all kinds, suitable for all styles of windows and doors.

Being made of zinc and highest grade spring bronze, they never rust, and last for years. Can be put in old buildings as well as new ones.

**Description of Cuts**

Top cut—The dotted lines show the flexible and adjustable features. Center cut—This section shows how sash and strip can be removed at the same time. Lower cut shows the Diamond Metal Weather Strip in place.

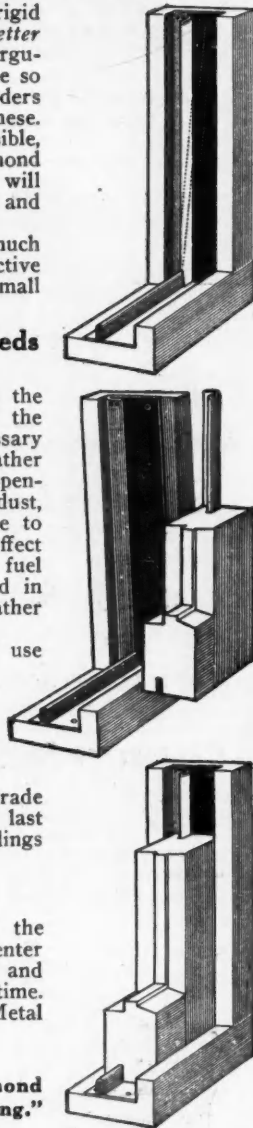
Write today for our Booklet "Diamond Way of Practical Weather Stripping."

It's of Interest to Everyone Who Owns a Building

**The Diamond Metal Stamping Co.**

626 Kerr Street

Columbus, Ohio



**Highgrade Sash Pulleys**

The American Pulley Company has recently put on the market sash pulleys which have been approved by the Supervising Architect of the United States Government.

These pulleys have been used in some of the most prominent buildings in this country, and were recently installed in the

new post office at Washington, D. C. They have heavy solid bronze or brass face plates, with solid bronze or brass wheels and roller or ball bearings and steel races; they are made with a combination groove suitable for either rope or chain, or with a square groove for chain only, whichever is preferred. The cases are finished in baked black japan, and are thoroughly rust proof.

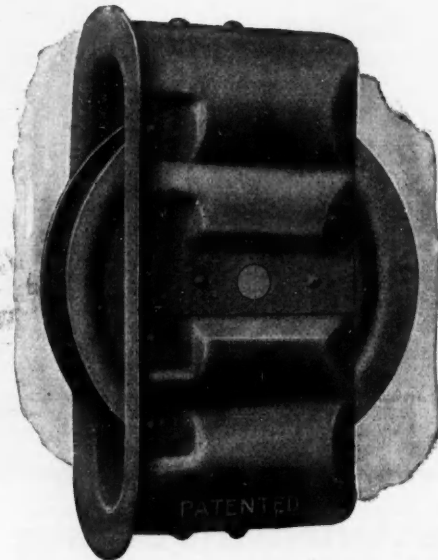
They also manufacture a full line of labor-saving sash pulleys, which are known to the trade as "Top-Notch" pulleys. These pulleys are made with plain axles, or with ball bearings with either solid or hollow axles.

Besides this, they have added to their line of Eagle brand sash pulleys, which were formerly made with solid axles only, while now this pulley is

made as well with the hollow axle with either plain or ball bearings. The face plates of these pulleys can be made with solid or plated finishes to match any hardware, and for a high



"Government-Approved" Patent



The "American" Top Notch Labor-Saving Sash Pulley

grade pulley sold at a low price, they have few equals and no superiors.

The steel wheels and bushings in all of The American Pulley Company's pulleys are electrically welded, giving great strength and a remarkably neat appearance.

They have, in all probability, the largest and most complete line of sash pulleys in this country; a well assorted stock is always on hand at the factory in Philadelphia, insuring prompt shipment.

# FRESH AIR AND PROTECTION!



## The Ives Window Ventilating Lock

A Safeguard for Ventilating Rooms, allowing windows to be left open at the top, the bottom, or both top and bottom, with entire security against intrusion.

*Descriptive circular mailed on application.*

## THE H. B. IVES CO.

SOLE MANUFACTURERS

NEW HAVEN - - CONNECTICUT

**This  
Much  
Is  
Admitted  
THEN**

There are times when the work of the contractor and builder is slack, when building operations cease almost entirely.

This is peculiarly true in the smaller towns. It is a wise man who has a side-line for fall and winter, the time when contracting work is dead. What does fall and winter suggest? Dark nights?

Then a lighting plant is the thing to sell.

The Davis Generator has been proven out through fifteen years' use to be efficient, economical and to give satisfaction.

Made by a reliable, well-rated ACETYLENE Company. The generator that is easiest to sell.

*Write for our profitable proposition.*

**Davis Acetylene Company**  
90 Crawford Street, ELKHART, INDIANA

Lorenzen Money Makers  
will

Increase Your Profits  
Fire Places  
Tiles and  
Mosaics  
for Floors  
and Walls



Write today for our large and well illustrated Free catalog, describing the most complete line of Fire Places, in Tile, Wood and Brick; Andirons, Gas Logs, Consoles, Collonnades, on the market today.

A postal card will bring it.

*Write for Our Special Discount to Carpenters and Builders.*

**Chas. F. Lorenzen & Co.**  
103 N. Clark St., :: :: Chicago, Ill.

# WINTER BARGAINS

## in Millwork and Builders' Supplies

We can quote remarkably low prices on all Interior Trim, Mantels, Hardware, Paints and Varnishes, Weather Strips, Wall Boards, Flooring, etc.

The Quality of all our goods is of the highest and we are sure you will favor us with a repeat order once you become acquainted with our Goods and Service. We have listed a few items out of our large Catalogue. They are representative of our low prices on everything.

Cabinet Sideboards.....	\$28.00 to \$30.00	
Mantels (Prices on Application)...		
Building Paper (per roll).....	.35 to 1.50	
Shellac (per gallon).....	1.75	
Putty (bucket 12½ or 25 lbs., per lb.)	.04	
Liquid Wood Filler (Gallon Cans).....	.94	
Paste Wood Filler (per lb.).....	.09½	
Stair Treads (Yellow Pine-Oak).....	.40 to .58	
Stair Risers (Yellow Pine-Oak).....	.20 to .25	
Grilles (per lineal foot).....	.75 to .95	
Shingles (per M).....	4.55 to 5.10	
Four Panel Door (all sizes in various woods).....	.93 to 3.81	
Stair Rail	Colonnades	Medicine Cabinets
Newels	Spindles	Lath
Roofing	Window Bead	Fireplaces

We will send our Large Millwork Catalogue and Mantel Book FREE. We are sure after looking them over you will favor us with an order. Write for them now.

**THE HUBER BUILDERS MATERIAL CO.**  
45-49 Vine Street - Cincinnati, Ohio

**GET OUR CATALOGUES**

# ROYAL



Highest Efficiency

## Ventilators

are so constructed as to exhaust the maximum amount of air per minute.

You can readily see that this high ventilating efficiency combined with best materials and workmanship results in a Ventilator that is Durable—Economic and Best in the Long Run. Such a Ventilator is the Royal.

There is a profit in Royal Ventilators for you, put them on your Barns, Schools, Factories, Churches, Warehouses, etc. Write us for Catalog giving full information.

**Royal Ventilator Co.**  
417 Locust St. :: Philadelphia, Penna.

### The Wallace Bench Planer

A portable power planer which weighs only 50 pounds, including its direct-connected electric motor, is an epoch-making machine recently marketed by a Chicago woodworker.

Its maker, J. D. Wallace, prophesies that before another season is over it will be considered as necessary to a carpenter as a try square, and will actually eliminate the hand plane from the tool kit.

In view of these unusual claims, a detailed description of this machine is interesting and to the point.

The Wallace Bench Planer stands on the bench without fastening, and runs from an electric light socket. It is furnished with either direct or alternating current motor, but, if desired, can be arranged for belt drive from counter-shaft. It can be carried right onto the job and put into operation at a moment's notice.

The Wallace Bench Planer will plane end grain, miters, and rabbets. It is valuable for interior finish work. It will take the heaviest cuts in hard as well as in soft wood, and in addition will take a fine cut that will not show the knife marks.

Its fence is adjustable to any angle, and the table to any depth of cut. Its tables are ground true to a thousandth of an inch, and can never get out of adjustment. Its cutting knives are 4 in. wide, but by removing the fence, stock up to 12 in. wide can be roughed off.

The Wallace Bench Planer is as safe as a power planer can ever be made. The cutter head is cylindrical, and the throat opening averages only one inch in width, half the usual size. It is impossible to have a serious accident with the bench planer.

There are no attachments for doing other work. It's a planer, and Chicago carpenters who have been using them



Wallace Bench Planer in Use.

for some time say that it is working so often that they wouldn't get a chance to put on any attachments.

Planing is by long odds the most frequent operation in carpentry, and this fact justifies the purchase of a machine for this purpose alone. Besides, the price is so astonishingly low that anyone who is paying a carpenter to push a hand plane cannot afford to be without it. The price and other details may be had from the maker, J. D. Wallace, 525 W. Van Buren St., Chicago, Ill.

## Plan Your Buildings For Outside Icing



**S**PECIFY Herrick Refrigerators for outside icing. This feature of building and refrigeration makes it possible to fill the ice compartment from the outside, and does away with the icemen entering the house at all.

¶ Herrick Refrigerators are perfectly sanitary, extremely economical in consumption of ice, and the method of construction assures perfect air circulation and proper insulation of walls.

¶ Building contractors should install Herrick Refrigerators in apartment and residence buildings by including them in the specifications. We co-operate with builders in the preparation of plans and specifications for fine residence work, hotel and store refrigerators, etc.

*See special article and plans on pages 62 and 63.*

*Catalog No. 24-A contains many useful plans and specifications for outside icing, and a lot of useful refrigerator information. Free upon request.*

**Herrick Refrigerator Co.**

**:::**

**Waterloo, Iowa**



### How Much Money

do you make when two of your best men are busy playing checkers and the others are busy watching them? At such time the wise Contractor reads

**"More Work for the Winter"** and then goes out to get his share of it. That is what you will do as soon as you have learned how to get orders for new floors.

**Your Men Will Prefer Laying Maple, Beech or Birch** floors to loafing about the shop. Their work will keep you in touch with people who want things and bring those people to you for them.

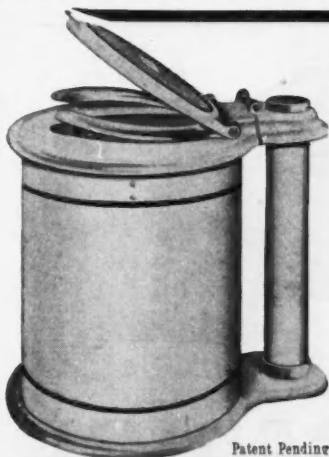
**You Will Make Lifelong Friends** of every person for whom you put in a modern hardwood floor. Your lumber dealer has the flooring—or can get it—you have the labor and the owner of the building has the money to pay for the job.

**Anyone visiting your shop** ten days after you decide to get busy will not recognize the place. You CAN do this for others ARE doing it.

Write **TODAY** for instructions.

## Maple Flooring Manufacturers' Association

Stock Exchange Building  
CHICAGO, ILLINOIS



Patent Pending

## HYPACO ASEPTIC CLOSETS

will be the means of netting you a handsome profit this winter if there are no sewerage facilities in your vicinity and you secure your territory.

### Communities without Sewerage

welcome these closets. They sell readily during the winter months because of their convenience. Once introduced in your locality their merits will at once be appreciated and future sales thus rendered easy.

#### You Can Be Our Representative

in your locality. We will give you exclusive territory with such price as will make quick sales and furnish a most attractive proposition. Why not make this money during the winter? Write to us for details.

### THE HYGIENIC PROMOTION CO., (Inc.)

279 John R. Street - - DETROIT, MICHIGAN

# Save 50%

## on Your Building Material Bill!

**N**O shrewd Contractor or Builder can afford to be without our newest catalog of guaranteed Millwork and Building Material. It's the best thing of its kind ever published. Has 3,000 superb illustrations and 8,000 dollar-saving prices—Buy your material from us, we ship direct to you and there are no jobber's or middleman's profits to pay. We sell at wholesale, guarantee satisfaction and safe delivery.

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### 8000 BARGAINS

Everything in Lumber, Flooring, Doors, Windows, Mouldings, Porchwork, Building Paper, Hardware, Tinwork, Roofing, Paint—All at Wholesale Prices! Buy From Us Direct And You'll Save 33 1-3% to 50% On Everything You Buy.

#### PLAN BOOK OF MODERN HOMES

Illustrates 50 up-to-date modern houses and barns ranging in price from \$400.00 up and tells how to secure free blue prints, specifications, itemized bill of materials, complete with price. Our method of furnishing material complete saves 50% in price and 100% in trouble and worry. Get our 2 Great Books Today.

#### Hardware

Get our money-saving prices on reliable building hardware—You take no risk—our designs are standard and every item is fully guaranteed—Our regular lock sets carried both in genuine bronze and steel—Just get our prices.



**\$838** We will furnish complete all lumber, shingles, millwork, hardware, spouting, paint—everything except masonry and labor to build 6-room house. Plans free. 113.

#### Economy Rubber

**Roofing**  
2 Ply, 45 Lbs. Guaranteed 7 Yrs. **\$1.35**  
3 Ply, 55 Lbs. Guaranteed 10 Yrs **\$1.60**  
Rolls Contain 108 Sq. Ft.  
Free from tar. Made from long woolen felt saturated and coated with pure asphalt.

#### Storm Sash

Double windows save their cost each season in coal bills. All sizes in stock. Clear White Pine, Glazed. 72c Net up. Storm Doors \$1.50 Net up. Write for FREE BOOK.

**CHICAGO MILLWORK SUPPLY CO.**  
1422 W. 37th Street Chicago

Fill in This Coupon Now DATE  
Mail It To Us .....

Chicago Millwork Supply Co.,  
1422 W. 37th Street  
Chicago, Ill.

Gentlemen—Please send your Books checked below, to—

Name .....

Address .....

- Catalog—No. 43, of Building Material
- Plan Book—No. 53, House and Barn Plans

### "Wife's Joy" Dumbwaiter

The American Elevator Company, Bloomsburg, Pa., are now distributing their new catalog which features their disappearing dumbwaiter. A number of our carpenter and builder readers are making extra money installing this convenience in new and old homes. Many others will doubtless want to write for this new catalog and investigate the proposition at this time.

The "Wife's Joy" dumbwaiter takes up no room in the kitchen, as the top lies flush with the floor and can be walked on. It keeps food perfectly, saves innumerable trips between the kitchen and cellar, and all around is an appreciated home comfort. The elevator can be installed complete in two hours.



### Profitable Specialties for Carpenter Agents

Any carpenter or builder who is thinking of helping out his regular income by doing agency work should write Jos. G. A. Barnett & Co., Riverside, Iowa. They manufacture a number of very popular specialties that work in well with the building business. Lightning rods, clothes reels, vacuum cleaners, table lamps—these are items in their line that go well. All of their goods are backed by a reliable guarantee. We understand their proposition to carpenters and builders is very attractive, including exclusive territory rights and a liberal percentage of profits. Write for their circulars.



Gasoline Table Lamp.

### New Edition "Hendricks" Out

The twenty-third annual edition of "Hendricks' Register of the United States for Buyers and Sellers" has just been issued. It is by far the most complete edition of this useful work that has been published. Many new features have been added; thousands of trade names and titles of identification have been inserted and numerous duplications expunged.

"The Assistant Buyer," formerly published by the Sullivan System, has been incorporated with it, and the entire work has been thoroughly revised and improved in every detail.

The publication contains lists of architects, building and general contractors, steam and hot water heating contractors, concrete steel constructors, steel structural workers, and many other valuable mailing lists and it includes the names and addresses of manufacturers of every kind of material, machine, tool, and supply used in the erection, equipment and furnishing of modern factory and office buildings.

Manufacturers of every specialty required by the architect, builder, engineer and contractors are listed in its pages and it is invaluable for the purpose of circularizing and as a buyer's guide.

It numbers some 1,600 pages and contains about 350,000 names and addresses, with upwards of 45,000 business classifications; 138 pages are required to index its contents.

"Hendricks Commercial Register" has been in existence nearly a quarter century. It is owned and published solely by S. E. Hendricks Company, Inc., whose only address is 2 W. Thirteenth Street, New York City. It is used extensively throughout the United States and many foreign countries for purchasing purposes by corporations, governments, associations, manufacturers, exporters, purchasing agents, and sales managers and it is considered the best of all similar works published.

## Plan the Refrigerator with the house

Determine in advance, during the planning of the house, the location of the refrigerator. Arrange for it along with the placing of the sink and range. The Refrigerator should be made practical, convenient to the Kitchen or Pantry, laid out so it can be iced from the outside. Be particular about the Kitchen and rear door and porch plan. Specify a stock size or a made-to-order



# McCRAY Refrigerator

## Built-in, to be iced from the outside

You will win the everlasting gratitude of your customer for the Kitchen arrangement and it will prove a splendid advertisement for you in the community where you operate.

McCray Refrigerators are scientifically built. Their patented system of air circulation keeps a pure, cold, dry current of air constantly passing over ice and contents, all odors and impurities being automatically discharged through a water-sealed drain pipe. They keep perishable foods fresh and wholesome. Linings are sanitary and easy to clean—choice of porcelain, white enamel, opal glass or odorless white wood.

### Let our draughtsmen assist you—Free Plan Service

We co-operate with contractors and builders and will help you, without charge. Send us a rough plan of kitchen arrangement and dimensions and our draughtsmen will furnish you complete blue-prints and specifications for refrigerator arrangement.

Send Now for the Following Catalogs for Your Files:

- |  |   |
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| No. 91. Regular sizes for residences.    | No. 60. For Meat Markets.               |
| No. 73. For Florists.                    | No. 69. For Grocers.                    |
| No. 50. For Hotels, Clubs & Institutions | No. A.H. Built to Order for residences. |

**McCray Refrigerator Co., 606 Lake St., Kendallville, Ind.**

For Branch Salesrooms in Principal Cities, See Your Local Phone Directory







Applied by JOE THORP—Contractor.

## WHY NOT USE WALL-BOARD?

That's the suggestion you carpenters and contractors want to make to your customers. But be sure you specify

**PLASTERCON**  
TREATED WOOD FIBRE  
**WALL-BOARD**

"EVERY PANEL GUARANTEED"

The protection we give the wood fibre by our chemical treatment insures dependability and protects you in the recommendation and use of it.

Send your name to our Service Department for full information and samples to give your trade.

PLASTERCON WALL BOARD CO., 101 Fillmore Ave., Tonawanda, N. Y.

THE ONLY ROOF THAT STAYS THE ONLY ROOF THAT PAYS THE ONLY ROOF YOU CAN AFFORD TO CONSIDER

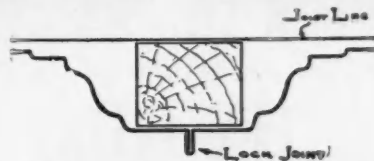
for pleasing results and endless freedom from roof troubles and costly repair bills is

RED GREEN **SHELDON'S SLATES** PURPLE BLACK

The use of any artificial substitute means endless expense and dissatisfaction. Our booklet "The Reason Why," tells every reason why SHELDON'S SLATES ON YOUR ROOF WILL PUT DOLLARS IN YOUR POCKET. Post a postal and get posted.

F. C. SHELDON SLATE CO., Granville, N. Y.

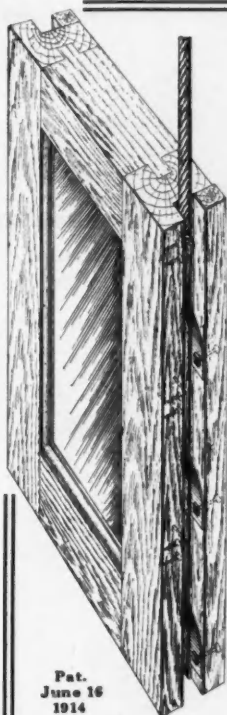
## METAL CEILING



See that Joint?

The Acme of perfect construction. Don't nail or slip the joints. Lock them. Full information in catalogue E.

S. KEIGHLEY METAL CEILING & MFG. CO. PITTSBURGH, PA.



Pat. June 16 1914

## Better than Weatherstrip The ERLINDER Window Sash Patent

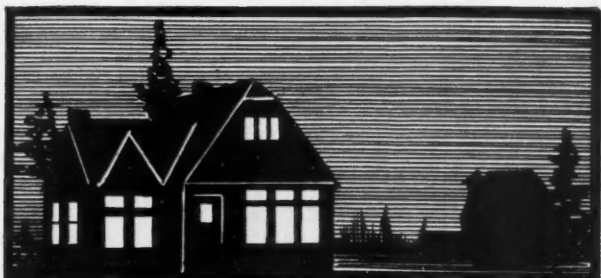
can be applied to all sliding windows. It absolutely prevents rattling—keeps out draughts and dust. Here is a device that will last as long as the sash, does the same things weatherstrip does and is invisible. Nothing to rust or wear out. Nothing to get out of order or break.

We want all Carpenters and Builders to become Agents for this appliance. Good Money Maker. Equip all your sliding windows with it. Once used you will never think of using unsightly weatherstrip. Easy to install and once installed its in for good.

Send for Descriptive Circular giving full information and details. Write to

**P. E. ERLINDER**

7922 Harvard Ave. Chicago



## GAS Lighting and Cooking

for Country Homes, Churches, Factories, etc. The most wonderful Gas System for Lighting, Cooking and Heating on the market. Our machine will furnish Light and Heat, Cheaper and Better than city gas or electricity. There are thousands of machines in use all over the country. Our Carpenter Agents receive liberal commissions and discounts for selling and installing these Systems.

### ECONOMY TALK BRINGS BUSINESS

If it isn't only talk.

That's why Tirrill Gas Machine Representatives are coining money. It costs only 60c per 1000 feet to manufacture gas of the best quality, a gas that does everything that city gas does.

Thousands in use. Send for catalogue. Agents wanted. Exceptional proposition to the right man.

**Tirrill Gas Machine Lighting Co.**

Terminal Bldg., 103 Park Ave., at 41st St., New York  
Established 1864

We Want Good Agents



Plastering Hy-Rib Partition, 18 feet high

## HY-RIB

### The Standard Construction for Permanence at Low Cost

The extensive use of Hy-Rib is due to its fireproofness and permanence combined with the savings effected in time, labor and materials. Hy-Rib, a deep ribbed steel sheathing, is a unit of reinforcement forms, lath and studs, and is used generally in concrete, plaster and stucco.

**-In Partitions**

Hy-Rib eliminates channels and the expense of wiring lath to them. Being only 2 inches thick, these partitions add 3% to the floor space of offices. Fireproof, rigid, soundproof, economical and quickly erected.

**-In Roofs**

Hy-Rib eliminates forms for the concrete. The light weight of the slab saves in structural supports. Strong, permanent, simply erected and economical.

**-In Walls and Sidings**

Hy-Rib affords monolithic permanent construction at half the cost of brick. The use of the two-inch wall adds fully a foot to the interior dimensions of the building. Hy-Rib eliminates forms, channels and wiring.

**-In Ceilings, Floors, Furring, Tanks, Culverts, etc.**

Hy-Rib effects marked economy and provides the best construction. Hy-Rib is furnished in various types and gauges to meet all requirements of heavy or light construction.

In plaster and stucco, Rib Lath permits of two coat work in place of three and allows wider spacing of supports. Furnished in four types and twelve weights.

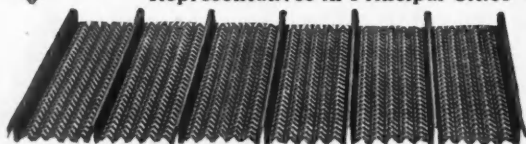
Any one interested in any building work should write for valuable Hy-Rib Book and suggestions---**FREE**.



### Trussed Concrete Steel Co.

Armor Plates, Waterproofings, Specialties  
Reinforcement, Metal Lath, Steel Sash,

Dept. H-44 - Youngstown, Ohio  
Representatives in Principal Cities



## Investigate This!

Have you ever investigated the advantages of Bayonne?

Do you know that it is the best covering for porch roofs and floors, and all other uses where an absolutely waterproof and wearproof material is required?

That Bayonne is superior to tin, tar and other prepared coverings?

And that its advantages over untreated canvas is that it can be laid on dry boards, and does not require laying in wet paint?

### JOHN BOYLE & COMPANY, Inc.

112-114 Duane Street 70-72 Reade Street, NEW YORK CITY  
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Send for Sample Book "N" with laying instructions and prices.



## A Housetop That Tops Them All



For artistic appearance and defiance of the elements there is no roofing that can equal

## MULLINS METAL TILE ROOFING

It is built-in insurance against fire, rain, wind, acid fumes and lightning. It is guaranteed, when put on according to directions, to remain in perfect condition for years. Expansion and contraction, which are the main faults with most metal tile roofings, have been overcome in MULLINS Metal Tile Roofing.

Architects, Builders, Cornice Makers and Roofers will find our prices the lowest possible consistent with good work and prompt shipments. Special discounts to the Trade.

We are the largest manufacturers in the world of stock and special designs in Sheet Metal Statuary, Cornices, Building Fronts, Capitals, Finials, Tympanum Panels, Enriched Moldings, Rosettes, Garlands and Ornamental Metal Stampings for Cornices.

MULLINS Fireproof Windows reduce insurance rates, as they are approved by the national Board of Underwriters. Estimates on Architects' drawings gladly and promptly submitted. Write for catalog.

### THE W. H. MULLINS CO.

214 Franklin Street Salem, Ohio, U. S. A.

## Come Out Ahead on that Contract by *All* Means but not by *Any* Means

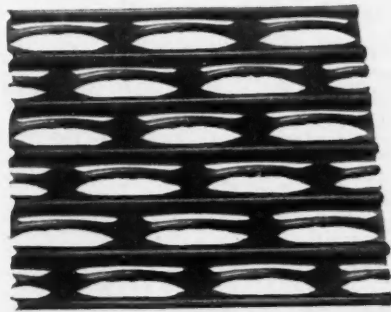
Not by reducing the weight of the Metal Lath and impairing the strength of construction, but by using a material so efficient that you can cut your cost of finished plastered surface 16 2/3% and give double the weight of re-enforcement.

## Bostwick Truss-Loop

is the Lath

WRITE OR WIRE

THE BOSTWICK STEEL LATH CO., Niles, O.



**AGENTS WANTED FOR OUR FULL LINE OF MONEY-MAKING SPECIALTIES**

All big sellers. Big profits for you. Every home a possible customer. Absolutely necessities. Simple demonstration sells them. Every housewife wants them.

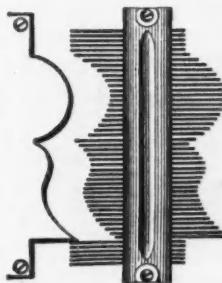
**Barnett Vacuum Cleaner**—Absolutely new. Easy to operate. Lasts a lifetime. Best and cheapest on market. **Guaranteed for one year.** Powerful suction.

**Barnett Clothes Line Reel**—Convenient, handy and dust proof. Just what every house wife has been looking for.

**Barnett Gasoline Lamp**—Best, safest, and most economical lamp on market. A child can operate it. **GUARANTEED.** Write immediately for price, territory, and literature on all our lines.

Jos. G. A. Barnett & Co., Riverside, Iowa

## Reinhardt Profile Gauge or Adjustable Templet



is a special tool that **YOU** need to take profiles or to reproduce irregular curves and surfaces. Made in various styles and sizes to meet every want.

If not sold by your dealer, write us for illustrated price list.

Little Brother (demonstrator) mailed on receipt of 15c

**Warren Profile Co.**  
103 Chambers Street, New York

## Is the Money Always There?



Your special training—or lack of it—hits you right in the money pocket. With everything but the salaries of untrained men going up, with competition becoming keener all the time, with the many wants that each day brings, and the time when there'll be nothing coming in—with all these conditions staring you in the face, you've got to decide mighty quick whether you're a success or not—and if not, how you can make friends with success and bid failure "good-by."

It's a serious proposition when you stop to think about it—this big spending and little earning. Yet, it needn't worry you one bit if you can increase your earning capacity far beyond your spending requirements. It's simply a matter of making your brain work instead of your body. Head work earns more than body work.

You've got some good ideas—and you know it. The International Correspondence Schools will help you turn those ideas into cash.

Select from the attached coupon the well-paid occupation you like best, mark the coupon as directed, and mail it today. That's all you have to do to learn how the I. C. S. can train you at home and in your spare time—no matter where you are, what you do, what your age. If you can only read and write, the way is open.

Don't worry as to how the I. C. S. can help you. The I. C. S. have already helped so many other ambitious men that it surely can do the same for you. The I. C. S. removes all obstacles—makes everything easy—smooths the road.

You can't afford to overlook this opportunity to increase your salary.

### Mark and Mail the Coupon NOW

### International Correspondence Schools

Box 910, SCRANTON, PA.

Please explain, without further obligation on my part, how I can qualify for a larger salary and advancement to the position, trade, or profession before which I have marked X.

Architect	Estimating Clerk	Automobile Runn'g
Arch'l Draftsman	Civil Engineer	Foreman Machinist
Contract'g & Build.	Surveying	Sh.-Met. Pat. Drafts.
Building Inspector	Mining Engineering	Textile Manufact'g
Structural Eng.	Mechanical Eng.	Bookkeeper
Structural Draftsman	Mechanical Drafts'n	Stenographer
Plum. & Heat. Con.	Stationary Eng.	Advertising Man
Supt. of Plumbing	Electrical Engineer	Window Trimming
Foreman Steam Fit.	Electric Lighting	Commer'c'l Illustrat'g
Plumbing Inspector	Electric Railways	Civ. Service Exams.
Heat. & Vent. Eng.	Concrete Const'r'n	Chemist

Name \_\_\_\_\_

St. and No. \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Present Occupation \_\_\_\_\_



### Build For Permanent Profit

When you have a job of interior finishing, whether in an office building, a factory or a private home, don't forget that every dollar you save for your client will be appreciated and that his continued patronage depends on the value you put into the first job. You will please your patron and make a satisfactory profit for yourself when you use

### Roberds Ideal Wall Board

Unlike many substitutes for lath and plaster, Roberds Ideal Wall Board is not a make-shift but is a substantial, time-tried and thoroughly practical interior finish that does not shrink or bulge, does not pull off or warp. It goes on in a truly workman-like manner and stays where you put it. Properly applied, it makes the most handsome, durable and permanent form of interior finish. Our proposition to contractors makes this a most profitable line to handle. Write for territory, booklet, samples and prices.

Roberds Manufacturing Company, 100 Railroad St., Marion, Ind.



Trade Mark Registered U. S. Patent Office, No. 94745

### A Money-Saving Repair Material

That hurry-up repair job — he wants it cheap, and quickly. Compo-Board is the answer.

Of course Compo-Board is the best wall lining you can find for a new building. But for the repair job where speed is essential, you can "deliver" best by finishing walls, partitions, etc., with Compo-Board.

You can get exactly the amount you need, in strips 4 feet wide and up to 18 feet long. No waste—no muss from plastering and no waste of valuable time. The decorator can take a room the day you're thru with it.

The corner of this advertisement shows the construction of Compo-Board, the "Wood-Core" wall board. It is non-porous, hence resists temperature changes and fire very well. And the chances are it will outlast the rest of the finishing woodwork.

Sold by dealers almost everywhere. Send for booklet and free sample. Test it yourself.

### Northwestern Compo-Board Company

5777 Lyndale Ave. No. MINNEAPOLIS, MINN.



## OAK FLOORING

"AMERICA'S BEST FLOORING"

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 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 dull periods. 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 Booklet

THE OAK FLOORING BUREAU, 890 Hammond Bldg., DETROIT, MICH.



### MAPLE FLOORING

Thoroughly kiln-dried, side and end matched, hollow backed, bored for blind nailing, and STEEL POLISHED. Guaranteed to give best results under hard continuous wear.

Do not be satisfied with ordinary flooring. You can get DIAMOND HARD MAPLE FLOORING.

You'll receive full value in wearing service and permanent finish.

Write us. We'll Tell You More.

J. W. WELLS LUMBER CO.  
Menominee, Michigan



## BERGER'S

RIB-TRUS

Reinforcing and Furring Plates

WRITE FOR CATALOG

The BERGER MFG. CO., CANTON, O.

FOR THE BEST SERVICE ADDRESS NEAREST BRANCH  
NEW YORK BOSTON CHICAGO MINNEAPOLIS  
ST. LOUIS SAN FRANCISCO PHILADELPHIA

# \$50 Saved \$50

BY BUYING A

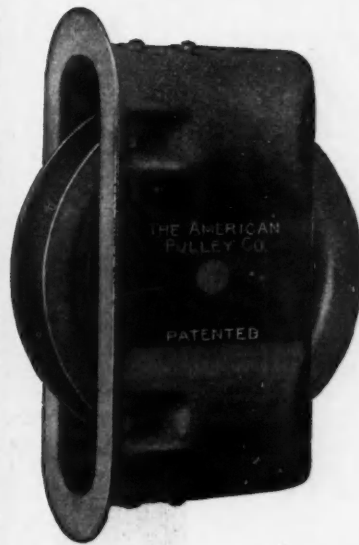
## Bovee Economy Furnace

at Manufacturers' Prices



Has large combustion chamber.  
Saves one-third of the fuel.  
Has perfect Ventilating System.  
**Most perfect hot air plant sold.**  
Send pencil sketch of floor plan for our manufacturers' price and illustrated catalog. Address

**Bovee Furnace Works**  
50 8th St., Waterloo, Iowa



**"TOP NOTCH"**  
No. 3

**Labor Saving**

*Over 30,000 dozen sash pulleys a month are made and sold by*

**The American Pulley Co.**  
Philadelphia, Pa.  
New York Boston Chicago

**Courtney Scaffold Brackets**  
Are Safe

They carry a ton—Last a Lifetime—They save enough on tire jobs to pay for themselves—Easily and quickly put up and taken down by one man.

Our crosshead keeps the scaffold from swinging—no extra charge for this feature.

**\$13.50** per dozen for three foot brackets—if cash comes with order.

To Save Money, Order While This Advertisement is in Your Mind.

**American Steel Scaffold Co., Dept. 5, Detroit, Mich.**

**PROFITS**  
will be large and sure if you are using an **IRELAND GEARED HOIST**

An Ireland Geared Hoist does the work of several men, more efficiently at a fraction of the cost. In these days of strong competition and high labor costs, a contractor has to use up-to-date-money-saving equipment. In this rank, the Ireland Geared Hoist requires the best investment and pays the biggest dividends in the way of increased profits.

Let us acquaint you with facts. Write **Ireland Machine and Foundry Co.**  
31 State St., NORWICH, N. Y.

**THE NEW SASGEN PORTABLE 1-TON STIFF LEGGED DERRICK**  
THE ONLY DERRICK OF ITS KIND ON THE MARKET

Built Strong and Light of all Crucible Steel Fittings, including Double Drum Geared Winch. Can be used hand or power. Price very low, according to length of boom.

**SASGEN PEERLESS STEEL DERRICK**  
For hand and power. Full Circle Swing. 1800 lb. capacity, with self Lubricating Bushings.

**SASGEN DERRICK CO.**  
2053 N. Racine Ave., Chicago.  
Canadian Office, 1 Wabash Ave., Toronto

Price only **\$45.00** complete ready for use, **\$43.00** for hand power only. Write for Circular No. 2 Satisfaction—Prompt Shipment Guaranteed.

# PHOENIX

## INSIDE SLIDING BLINDS

WILKES BARRE, PA.

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

**Comfort!  
Economy!  
Convenience!** PHOENIX SLIDING BLIND CO.  
BRIDGE & CANAL STS. PHOENIX, N. Y.

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

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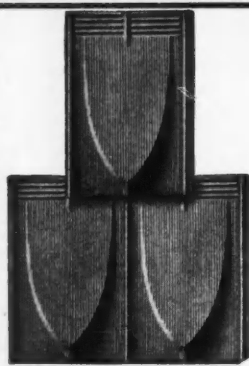
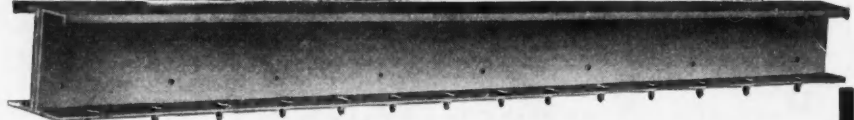
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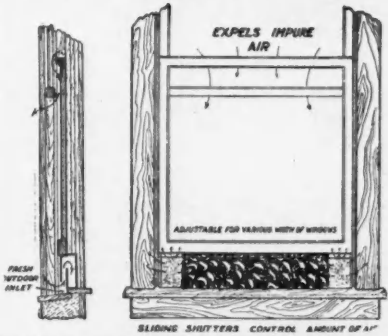
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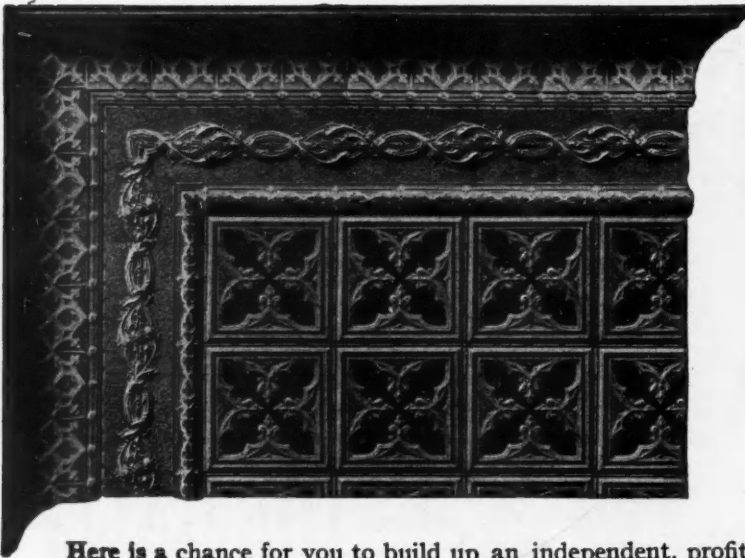
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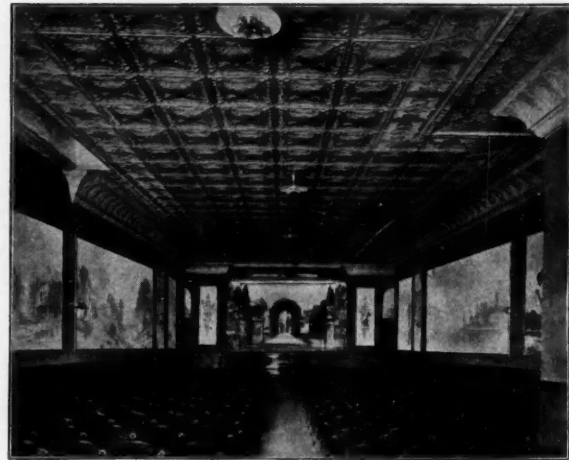
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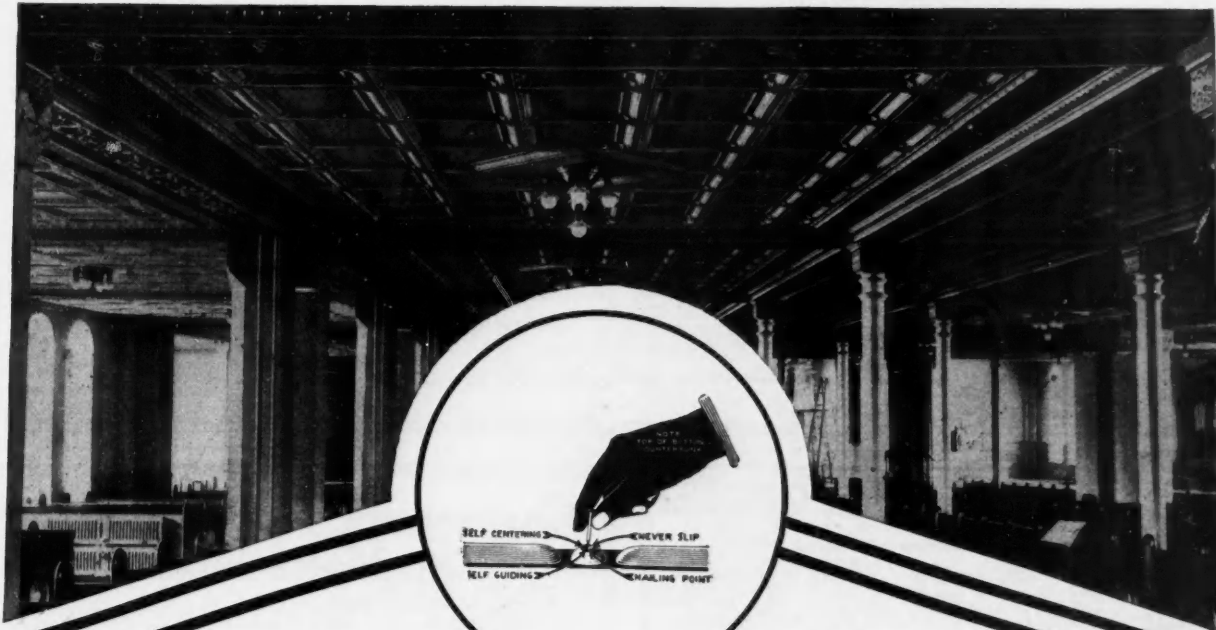
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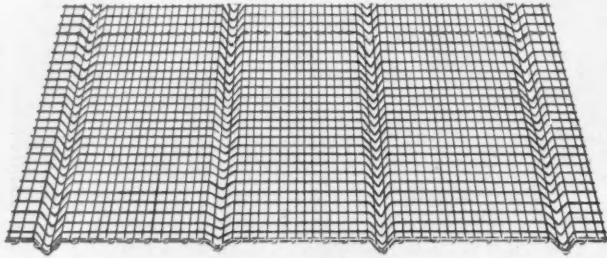
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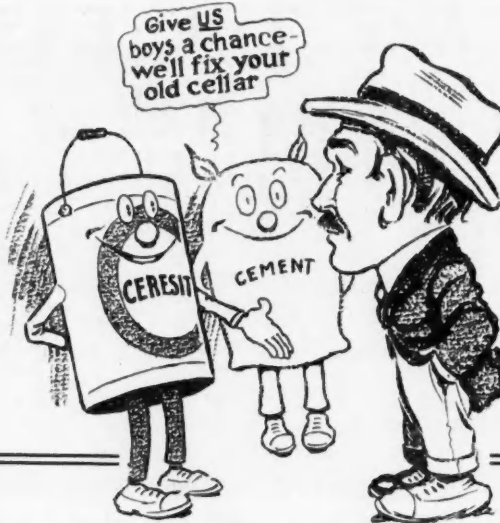
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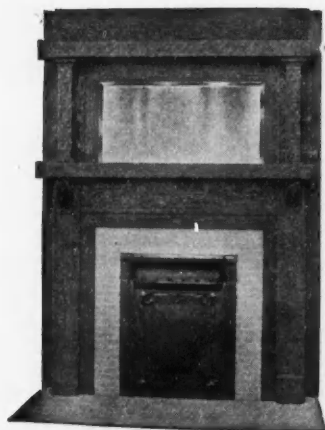
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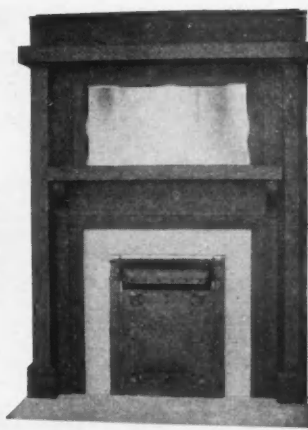
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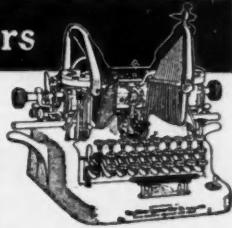
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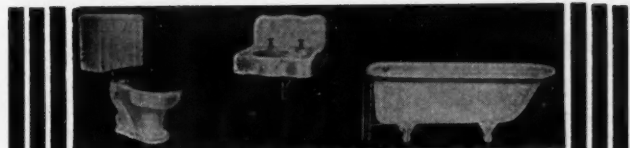
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**EXPERIENCED SUPERINTENDENT** wants to connect with architect or contractor. Eighteen years' experience. Trained as architect. Past 12 years have been devoted to superintending work, large and small. Have acted as architect and contractor. Thorough knowledge of building construction and engineering. Superintendent, care American Carpenter and Builder, 345 Fifth Ave., New York.

**WANTED**—Agents (carpenters and builders) to make extra profits handling two very latest window ventilators. Splendid sellers. Right in your line. UNIVERSAL VENTILATING CO., 14th & Oak, Kansas City, Mo.

### For Sale

**FOR SALE**—Cabinet Planer, Mortising Machine, Turning Machine, Swinging Saw, Sander, Shaper, Jointer, Boring Machine, Rod Machine. W. A. REINEKE, Perry, Ill.

**FOR SALE**—Chest of carpenter's tools. Used only six weeks. Cost \$85.00. Write for price and description. H. HACKMAN, Clinton, Minn.

**NEW MITER BOX PATENT No. 1,076,072 FOR SALE**—Entirely new construction, can turn the saw in 45 angle, both horizontal and vertical. Table extension and other great improvements. Write G. SWENSON, 936 S. Third St., Rockford, Ill., for copy of patent letter.

**FOR SALE—ROOFING**—Durable, 85 cents roll, 108 feet; Nails Cement, Asphalt Shingles, highest quality, \$5.00 square. RUBBER ROOFING MFG. CO., 5 Cortlandt St., New York.

**FOR SALE OR PARTNER WANTED**—Patented hand power saw set. Will sell on sight. The blow being the same, the teeth must be uniform. Push sets are out of date; they press the teeth twice the distance required. That causes breakage and uneven teeth. Ours is the coming set. Inquire GERSTNERS HARDWARE STORE, 634 Eighth Ave., New York City.

### Miscellaneous

**TWELVE SKELETON KEYS**, will unlock almost any door, 50 cents. Just what carpenters and property owners need to replace missing keys. AMERICAN MANTEL, TILE & GRATE CO., Hamilton, Ohio.

### Miscellaneous

**FREE**—\$1.00 Certificate and 4-inch rule. See Ad Page 143. GAGE TOOL CO., Vineland, N. J.

**AGENTS**—500 per cent profit; free sample. Our new gold and silver sign letters for store fronts and office windows. Easily applied. Big demand everywhere. Write today for liberal offer to agents. UNIVERSAL LETTER CO., 447 N. Clark, Chicago.

**THE UNIVERSAL PITCH GAUGE** finds and marks more roof-framing in less time than any other tool or method known. More pitches—dozens. More cuts, etc. For each pitch, 22. Any pitch in 5 minutes. Irregular and octagon hips. Much other framing. Simplest to use. Stair gauge. Description free. \$1.00, delivered. Money back if returned. JOHN PARKHILL, Rochester, Minn.

**A TRADE THAT PAYS**—You can learn the plumbing-heating trade in a short time from practical work with a proper instructor with business methods, and avoid mistakes which will pay for the course at THE LITCHFIELD TRADE SCHOOL, Libertyville, Ill. Write for particulars.

### The "IONA" Ventilator

Provides ideal ventilation for all buildings, factories, barns, theatres, etc. Simple, natural, best ventilation, because we use the straightest and shortest way out. The only ventilator, for which test demonstration is offered and given.

Write for our catalog.

**Iona Ventilator Company**  
2317 N. Laura St., Philadelphia, Pa.



### JOHNSTON'S Patent SHELF PIN

1 DOZ. 15¢  
1 GROSS 85¢  
These Pins are used for supporting movable shelves in Book Cases. Cannot fall out or sag down. The best shelf pin made. Easily put in place by any one.  
Send for free sample to J. D. JOHNSTON, NEWPORT, R. I.

### Triumph Light

**EVERYBODY WANTS BETTER LIGHT. HERE IT IS**

This new 100 to 700 candle power light turns up and down like gas. One-third cost of electricity, gas or kerosene. For home, church or store. Anyone can operate. Perfection guaranteed or money back. Write for catalog (A. C. B.) Dept. 20, Agents Wanted, BRILLIANT GAS LAMP COMPANY, 1009 S. Wabash Av., Chicago, Illinois

## ROOFING SLATE

OF QUALITY

MINERS      MANUFACTURERS

**The AULD & CONGER Co.**

ESTABLISHED      DEPT. B.      1870

CLEVELAND, OHIO.



**DON'T ORDER  
Lignine (Wood) Carvings**  
UNBREAKABLE—INVESTIGATE  
Send postal for free sample and catalog.  
One cent investment, saves dollars.  
Let us prove this.  
**ORNAMENTAL PRODUCTS COMPANY**  
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**F**OR durable painting, inside and outside,  
use Dutch Boy White Lead and Dutch  
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**THE ZIMMERMAN IRON BASE**

is the ONLY BASE having a CENTER  
BEARING.

It carries the required weight without  
allowing the corner supports to sink into  
the floor and prevents the base of column  
and floor from rotting.

See "SWEET'S" page 958.

**S. CHENEY & SON, MANLIUS, N Y**



Bottom  
View  
Showing  
Center  
Bearing



**The Eau Claire Chalk Line Reel**

Always ready; holds chalk and line together;  
uses solid chalk, no powder. We furnish no line.  
Sent to any address prepaid, 75c. We handle  
Eau Claire chalk. Agents wanted.

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**CYPRESS**

(OF COURSE)

**BECAUSE IT'S "THE WOOD ETERNAL"  
& LASTS & LASTS & LASTS & LASTS**

**BLUE VALLEY  
UNFADING ROOFING SLATE**

World's Fair Premium Slate Blackboards

Write for Prices Before Placing Your Order

**BLUE VALLEY SLATE MFG., Ltd., Box 472, Slatington, Penn.**

**ONLY SELF-SETTING PLANE**

Sent on trial as per circular

Our \$1.00 certificate if  
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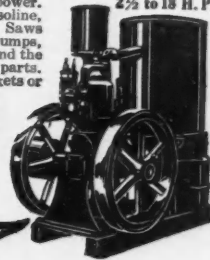


**\$18.30 PER HORSEPOWER**

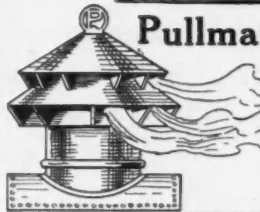
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Yet you can get a six horsepower

**DETROIT FARM ENGINE**

for \$18.30 per horsepower.  
Runs on Kerosene, Gasoline,  
Alcohol or Distillate. Saws  
wood, grinds feed, pumps,  
etc., does any job around the  
farm. Only 5 moving parts.  
No cams, gears, sprockets or  
valves. Positive satisfac-  
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antee. 30 day money  
back trial. We want  
farmer agents every-  
where. Write for par-  
ticulars.  
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**Pullman Roof Ventilators**



are the best exhaust medium on the market.  
Provide for removing the foul air by using  
Pullman Ventilators on the roof. Write for  
booklet. Ask us to solve your Ventilating  
problems. The Pullman System means Nat-  
ural Ventilation

Special System for Moving Picture Theatres.

**Pullman Automatic Ventilator  
Mfg. Co., 21 York St., York, Pa.**

**"As Near Rust Proof as Metal Can Be Made—"**



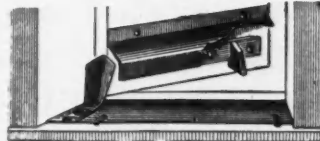
Insist upon the genuine. Look for the 2 Copper Wires in the Selvage.

**THE GILBERT & BENNETT MFG. CO.**

Chicago; New York; Georgetown, Conn.; Kansas City

Over 1,000,000

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People Want

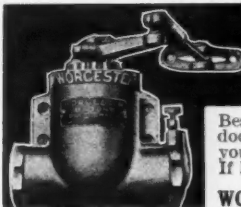


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Strip for bottom of doors and swing-  
ing windows. Saves sill from wear-  
ing and can be put on any door in  
5 minutes at 200% profit. Sells at  
eight wherever shown. Our prices  
will interest you. Write us.

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BLOUNT DOOR CHECK**

Best workmanship and material used. Every  
door check guaranteed to give satisfaction. Ask  
your hardware dealer for the **Worcester Blount**  
If he doesn't have it, write us.

**WORCESTER MFG. CO., Worcester, Mass.**

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YOU WANT**

*In Roofing Slate. Slate Blackboards  
Structural and Plumbers' Slate*

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ASK FOR DELIVERED PRICES

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R. J. KICHLIN, Sales Agent

# “--now I *know* that Flex-a-Tile Roofing is *Best*”

Read what this buyer of carload lots says about Heppes roofing:---

“I live and do business in Wisconsin. Some time ago I ordered a carload of roofing from the Heppes Company. On inspection I thought the roofing was too stiff and hard. I complained about this to one of their salesmen. He suggested that I go down to Chicago and see just how this roofing is built.

“Well, I went—and now I know that stiff roofing is in every way better than softer, more pliable kinds. Here’s what I saw:

“I saw that it requires big machines, big brains and a vast deal of ‘Honest Abe’ labor and effort to take this pure, hard asphalt mined from the heart of the Rockies, combine it with the long strands of wool felt and produce this stiff, solid roofing. I learned that it would be much easier to mix oil with the asphalt and to make a more pliable, less durable roofing. I learned that it is the hard asphalt that makes Flex-a-Tile so tough and durable. Softer roofing to some extent, melts and decomposes in the sun. This durability was brought home

to me strongest when I saw that it is almost impossible to tear the heavy 5-ply Rubbertex Roofing Heppes makes, while it is easy to tear the softer, thinner kinds. It would be easy to turn out a more pliable roofing by adding oil to the asphalt. And it would be a whole lot cheaper, too—oil costs about one-fifth as much as asphalt.

“I saw the long stretches of wool felt taking a saturation of twice their own weight of this oil-free asphalt. They have to heat the big kettles up to 390° Fahrenheit before this asphalt melts. I understand that no other roofing maker uses this process.

“Then I saw heaps of Vermont slate in beautiful shades of green and red and brown. I saw great quantities of this slate sifted three times and then crushed by giant rollers under tons of pressure into both sides of the rubbery sheets.

“—And so now I *know* that Flex-a-Tile Roofing is ‘Honest Abe’ and *right*.”

**Hundreds of carpenters, builders and household owners the country over know that Flex-a-Tile Roofing is RIGHT. Let us convince you. Write TODAY for specimen of Giant Flex-a-Tile. You assume no obligation.**

## THE HEPPE'S COMPANY

1010 SOUTH KILBOURNE AVENUE, CHICAGO

Manufacturers also of ASPHALT PAINT, ASPHALT ROOFING in any Finish and UTILITY WALL BOARD



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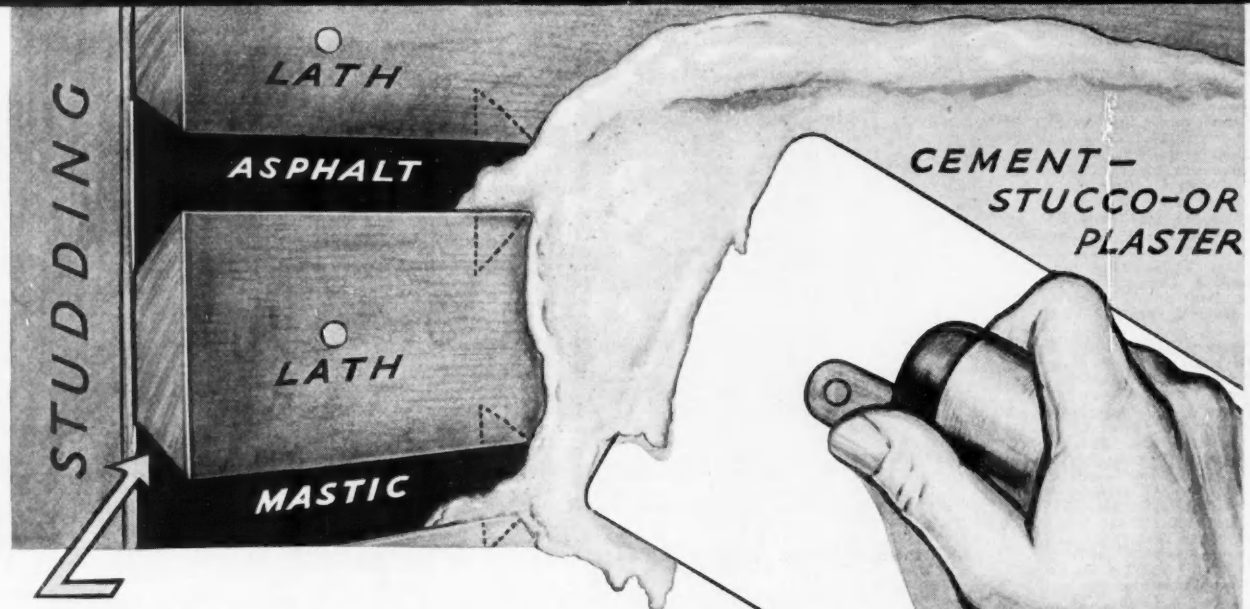
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NOTICE TO ADVERTISERS

Forms for the December number of the American Carpenter and Builder will close promptly on November 20. New Copy changes and orders for omissions of advertisements must reach our business office, 1827 Prairie Ave., Chicago, not later than the above date. If new copy is not received by the 20th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

AMERICAN CARPENTER & BUILDER CO.

# THE DOVETAILED LATH



Drive a nail through a board and then *clinch* it on the other side—that nail will never work loose, it can't fall out, you can't pull it out!

The cement, stucco or plaster is *clinched* in the dovetail in Bishopric Stucco or Plaster Board.

It can't work loose, fall out or crack or crumble. *It's there to stay!*

The principle of the dovetail joint is *centuries old*—as old as the art of building—and as effective as it is old.

It's this *combination* of old, time-tested principles and materials forming a modern building product that accounts for the reliability and superiority of Bishopric Stucco or Plaster Board. There's nothing about it that every architect, builder, mechanic or carpenter will not pronounce *absolutely dependable* and *best adapted* to the purpose intended.



*"Built on the Wisdom of Ages"*

The creosoted lath that withstands all exposure, that does not swell, shrink or warp—the Asphalt Mastic that is moisture and vermin proof—the sized fibre board that protects against heat and cold and effectively deadens sounds; all these have been used separately for ages.

And now, united in Bishopric Board, they form a background for Stucco or Plaster that is proof against cracking or crumbling, dampness or changes in temperature, that lasts as long as the house and always looks artistic.

**There is no metal in Bishopric Board to rust and break away from its fastenings**

Bishopric Stucco or Plaster Board costs *less* than other backgrounds and saves in both material and labor. From *any* and *every* viewpoint it's an *economical* proposition.

Our free book "Durable Homes by the Bishopric System" illustrates homes, apartments, factory and public buildings on which Bishopric Board has been used. It contains letters from builders, architects and users, and furnishes facts and figures to prove that Bishopric Board cuts the cost at least 25%.

Don't take our word for this—investigate for yourself—be convinced! Send today for book and free samples of Bishopric Stucco or Plaster Board.

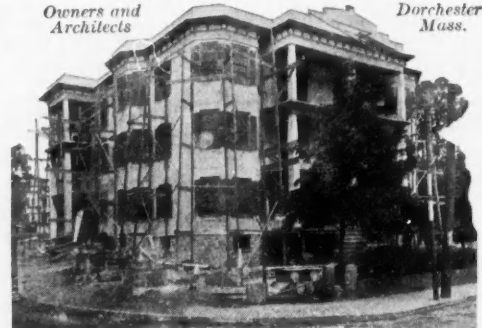
**The Mastic Wall Board & Roofing Co.**

607 Este Avenue, CINCINNATI, OHIO

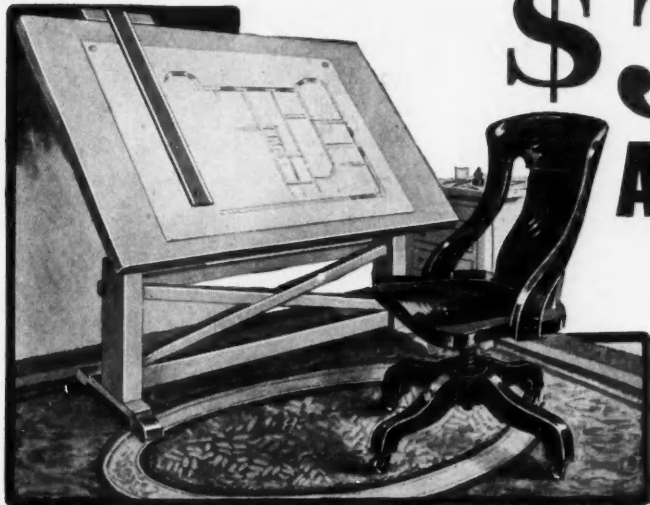
CENTRAL DOOR & LUMBER CO., Portland, Oreg.

Licensed Manufacturers and Distributors for Pacific Slope

*Built with Bishopric Stucco Board*  
Robert Hamilton and J. C. Cameron  
Owners and Architects  
Dorchester, Mass.



## CUTS THE COST 1/4



# \$3,000 A Year to Fill this Chair

There's many a vacant chair like this waiting for you. I am training young men to fill them. Will you send your name to me? Many a man who has written to me now earns \$3,000 a year—or more. The draftsman's training they got from me gave them the power to demand this price. There will be no obligations on you if you send me your name. I'll tell you just exactly how I train you personally, and tell you about the golden opportunities that await men in the drafting profession.

## DRAFTING I'll teach you drafting in your own home. I'll teach you personally—

give you private instruction. This instruction is given to you by me. I make you see how I do it. For 20 years I have been doing the highest paid expert drafting work as Chief Draftsman of a large and well known Company. One day the manager said to me, "Why is it that there are not more high quality men like you? I would pay thousands of dollars a year if I could get them." Right there I made up my mind that I would give to ambitious men the highest quality, personal instruction in the very things which had enabled me to earn my big salary.



So the kind of training I will give you is the practical kind. The kind you need to hold one of the big paying positions. I know what the big firms demand and this is what I teach you. I do it all during your spare time in your own home. Remember you get my personal training. Don't hesitate about sending me your name—just cut out the coupon below—write in your name and you'll hear from me at once. You will not be obligated in any way, shape or manner.

### Positions Open Right NOW

Right now—this very minute—there are many positions open which pay \$3,000 and more per year to the right men who have learned drafting. There is lots of room at the top. I got there myself but have found all around incompetent men holding poor positions. They had not been trained right. The thing I want to do is to train you in the practical way you ought to be trained; to show you what to avoid and how to do things right. YOU can get into one of these chairs soon. The first step is to send me your name and address on the free coupon below.

### Earn Money While Learning

I have even perfected a plan which gives you an opportunity to begin earning money as soon as you have enrolled as one of my personal and private students. This enables a few young men or older men who could not otherwise take up this practical, personal training which I give, to pay their way as they go along. Write for this plan today. Put your name on the coupon at the bottom and get it in to me right away.

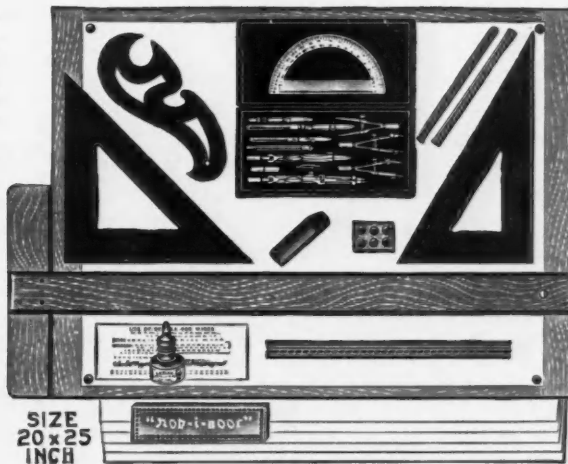
### Tear Off This Coupon and Mail Today

It will positively help you to find out all about the things which I can do for you. I will tell you what I have done for other men. Then you can make up your own mind about what I can do for you. I say I can put you into a chair paying a big salary. If you want to sit in this chair

### Put Your Name Right Here

There are no obligations in your sending your name and address to me on this free coupon. Send it today. I will mail you absolutely free and prepaid my new book, "Successful Draftsmanship." This tells you about the wonderful opportunities there are in this great profession. About the big jobs that are open. The big future ahead for the man who gets in now and knows what to do. Now, the first thing to do is to send the coupon. Do it today. Now!

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Div. 1698 Engineers Equipment Co., (Inc.) CHICAGO, ILL.



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## This \$15.00 Draftsman's Working Outfit FREE

Yes, I give this working outfit to my students absolutely free. They are genuine working instruments—the kind I use myself—and they do not cost you a penny. Send me the coupon—now—and find out about my liberal offer to ambitious men.

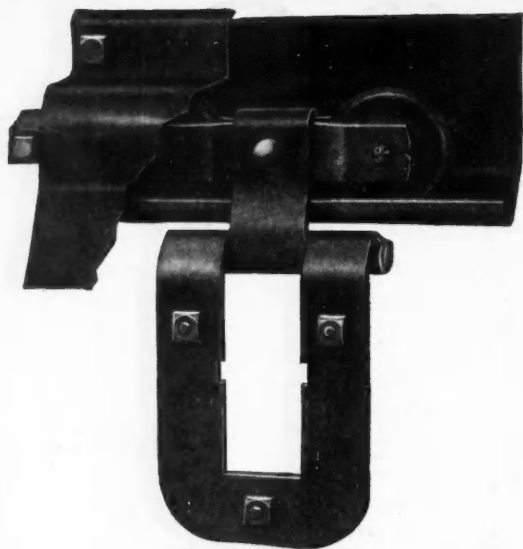


**CHIEF DRAFTSMAN DOBE**  
Engineer's Equipment Co. Div. 1698  
CHICAGO, ILL.

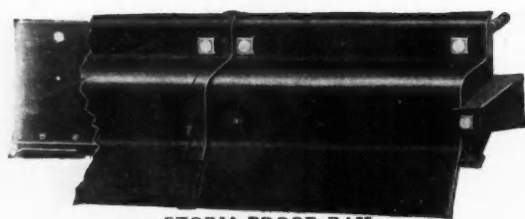
Without any obligation to me whatsoever, please mail your book, "Successful Draftsmanship" and full particulars of your liberal "Personal Instruction" offer to a few students. It is understood that I am obligated in no way whatever.

Name .....

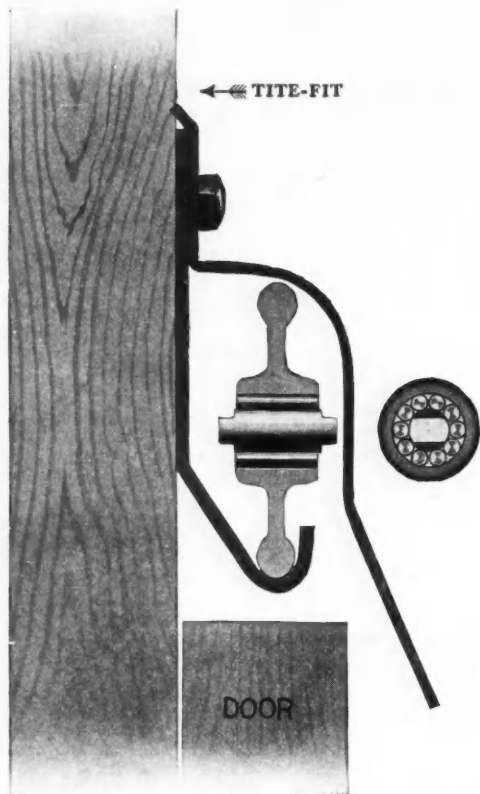
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STORM PROOF RAIL



The above sectional view clearly illustrates the Storm-Proof feature of this Rail; the perfect tread for the wheels and the roller bearings with which each wheel is equipped.

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as a reliable contractor or carpenter depends largely on the satisfactory service rendered by materials which you use, plus your knowledge of the proper method of installing such materials. If any part of the completed building goes wrong, your customer kicks not only to you but usually to everybody who will listen. As a result your reputation as a reliable contractor suffers.

There is nothing about a barn used more than the sliding doors. There is nothing causes more annoyance than sliding doors which do not work easily.

You can avoid a lot of trouble by using Storm-Proof Hangers and Rail. They are easily installed and give long and satisfying service.

Storm-Proof Rail requires no housing—a saving to you in labor and lumber. It is strong and sturdy, and will support all the weight the hangers will carry. Holds hangers firmly in place and is bird—and storm-proof. Made in convenient lengths.

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